SAR EVALUATION REPORT

FCC 47 CFR § 2.1093
IEEE Std 1528-2013

For
SMARTPHONE

FCC ID: BCG-E3547A
Model Name: A2407, A2408, A2409

Report Number: 13259319-S1V2
Issue Date: 9/25/2020

Prepared for
APPLE INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014-2084

Prepared by
UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888

NVLAP LAB CODE 200065-0

Revision History

Rev.	Date	Revisions	Revised By
V1	9/22/2020	Initial Issue	--
V2	9/25/2020	1. Sec. 6.2: Updated Wi-Fi 5 GHz table. 2. Sec. 6.6: Updated table. 3. Updated Appendix H	Devin Chang

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Table of Contents

1. Attestation of Test Results 6

2. Test Specification, Methods and Procedures 7

3. Facilities and Accreditation 8

4. SAR Measurement System & Test Equipment 9

4.1. SAR Measurement System 9

4.2. SAR Scan Procedures 10

4.3. Test Equipment 12

5. Measurement Uncertainty 14

6. Device Under Test (DUT) Information 15

6.1. DUT Description 15

6.2. Wireless Technologies 16

6.3. General LTE SAR Test and Reporting Considerations 18

6.4. LTE (TDD) Considerations 21

6.5. General 5G NR(FR1) SAR Test and Reporting Considerations 22

6.6. Time-Average Feature 24

7. RF Exposure Conditions (Test Configurations) 27

8. Dielectric Property Measurements & System Check 28

8.1. Dielectric Property Measurements 28

8.2. System Check 61

9. Conducted Output Power Measurements 74

9.1. GSM 74

9.2. W-CDMA 77

9.3. CDMA 89

9.4. LTE 94

9.5. LTE Up-Link Carrier Aggregation 162

9.6. LTE Down-Link Carrier Aggregation 174

9.7. 5G NR(FR1) 175

9.8. Wi-Fi 2.4GHz (DTS Band) 206

9.9. Wi-Fi 5GHz (U-NII Bands) 208

9.10. Bluetooth 213

10. Measured and Reported (Scaled) SAR Results 215

10.1. GSM850 217

10.2. GSM1900 218

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.3. W-CDMA Band 2 219
10.4. W-CDMA Band 4 220
10.5. W-CDMA Band 5 221
10.6. CDMA BC0 221
10.7. CDMA BC1 222
10.8. CDMA BC10 223
10.9. LTE Band 5 (10MHz Bandwidth) 224
10.10. LTE Band 7 (20MHz Bandwidth) 225
10.11. LTE Band 12 (10MHz Bandwidth) 228
10.12. LTE Band 13 (10MHz Bandwidth) 229
10.13. LTE Band 25 (20MHz Bandwidth) 230
10.14. LTE Band 26 (10MHz Bandwidth) 232
10.15. LTE Band 30 (10MHz Bandwidth) 233
10.16. LTE Band 41 Power Class 3 (20MHz Bandwidth) 235
10.17. LTE Band 41 Power Class 2 (20MHz Bandwidth) 238
10.18. LTE Band 48 (20MHz Bandwidth) 239
10.19. LTE Band 66 (20MHz Bandwidth) 242
10.20. 5G NR Band n5 (20MHz Bandwidth) 244
10.21. 5G NR Band n12 (15MHz Bandwidth) 244
10.22. 5G NR Band n25 (20MHz Bandwidth) 245
10.23. 5G NR Band n41 (100MHz Bandwidth) 246
10.24. 5G NR Band n41 Power Class 2 (100MHz Bandwidth) 246
10.25. 5G NR Band n66 (20MHz Bandwidth) 247
10.26. 5G NR Band n77 (100MHz Bandwidth) 248
10.27. Wi-Fi (DTS Band) 250
10.28. Wi-Fi (U-NII Band) 251
10.29. Bluetooth 253

11. SAR Measurement Variability 254

12. Simultaneous Transmission Conditions 255

12.1. Sum of the SAR for WWAN Cell-off & Wi-Fi & BT results 257
12.2. Sum of the SAR for WWAN Cell-on(ANT1) & Wi-Fi & BT results 257
12.3. Sum of the SAR for WWAN Cell-on(ANT2) & Wi-Fi & BT results 258
12.4. Sum of the SAR for WWAN Cell-on(ANT3) & Wi-Fi & BT results 259
12.5. Sum of the SAR for WWAN Cell-on(ANT4) & Wi-Fi & BT results 260
12.6. Sum of the SAR for WWAN Cell-on(ANT7) & Wi-Fi & BT results 261
12.7. Sum of the SAR for WWAN Cell-on(ANT8) & Wi-Fi & BT results 262
12.8. Sum of the SAR for WWAN Cell-on(ANT9) & Wi-Fi & BT results 263

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Appendixes 264

Appendix A: SAR Setup Photos 264

Appendix B: SAR System Check Plots 264

Appendix C: SAR Highest Test Plots 264

Appendix D: SAR Tissue Ingredients 264

Appendix E: SAR Probe Certificates 264

Appendix F: SAR Dipole Certificates 264

Appendix G: LTE Down-Link Carrier Aggregation 264

Appendix H: Body Detect Validation 264

Appendix I: Wi-Fi Time-Averaged SAR(TAS) 264

This report shall not be reproduced without the written approval of UL Verification Services Inc.

1. Attestation of Test Results

Applicant Name		APPLE, INC.			
FCC ID		BCG-E3547A			
Model Name		A2407, A2408, A2409			
Difference in Model Name		Model A2408, A2409 is electrically identical to Model A2407. Three model numbers are allocated for marketing and logistic purposes only			
Applicable Standards		FCC 47 CFR § 2.1093 Published RF exposure KDB procedures IEEE Std 1528-2013			
Exposure Category		SAR Limits (W/Kg)			
		Peak spatial-average(1g of tissue)	Extremities (hands, wrists, ankles, etc.) (10g of tissue)		
General population / Uncontrolled exposure		1.6	4		
RF Exposure Conditions		Equipment Class - Highest Reported SAR (W/kg)			
		PCE	DTS	NII	DSS
Head		0.997	1.100	1.178	0.739
Body-worn (Dist.= 5 mm)		0.998	1.060	1.136	0.708
Hotspot (Dist.= 5 mm)		0.999	1.040	1.178	0.785
Simultaneous TX	Head	1.356	1.346	1.322	1.356
	Body-worn	1.563	1.563	1.531	1.531
	Hotspot	1.566	1.566	1.531	1.531
Date Tested		6/29/2018 to 9/15/2020			
Test Results		Pass			

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released By:	Prepared By:
Devin Chang Senior Test Engineer UL Verification Services Inc.	Chakrit Thammanavarat Senior Test Engineer UL Verification Services Inc.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

2. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE STD 1528-2013, the following FCC Published RF exposure KDB procedures:

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 447498 D03 Supplement C Cross-Reference v01
- 648474 D04 Handset SAR v01r03
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D01 3G SAR Procedures v03r01
- 941225 D05 SAR for LTE Devices v02r05
- 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
- 941225 D06 Hotspot Mode v02r01

In addition to the above, the following information was used:

- TCB workshop October 2014; RF Exposure Procedures (Other LTE Considerations)
- TCB workshop April 2015; RF Exposure Procedures (Overlapping LTE Bands)
- TCB workshop October 2015; RF Exposure Procedures (KDB 941225 D05A)
- TCB workshop April 2016; RF Exposure Procedures (LTE Carrier Aggregation for DL)
- TCB workshop October 2016; RF Exposure Procedures (LTE Carrier Aggregation for UL)
- TCB workshop October 2016; RF Exposure Procedures (Bluetooth Duty Factor)
- TCB workshop October 2016; RF Exposure Procedures (DUT Holder Perturbations)
- TCB workshop May 2017; RF Exposure Procedures (Broadband Liquid Above 3 GHz)
- TCB workshop May 2017; RF Exposure Procedures (LTE Band 41 Power Class 2)
- TCB workshop November 2017; RF Exposure Procedures (LTE UL/DL Carrier Aggregation SAR)
- TCB workshop April 2018; RF Exposure Procedures (LTE DL CA SAR Test Exclusion)
- TCB workshop October 2018; RF Exposure Procedures (LTE Inter-Band Uplink Carrier Aggregation – Interim Procedures)
- TCB workshop April 2019; RF Exposure Procedures (802.11ax SAR Testing)
- TCB workshop November 2019; RF Exposure Policy Updates (5G NR FR1 NSA EN-DCUE SAR Evaluations)

This report shall not be reproduced without the written approval of UL Verification Services Inc.

3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at

47173 Benicia Street	47266 Benicia Street
SAR Lab A	SAR Lab 1
SAR Lab B	SAR Lab 2
SAR Lab C	SAR Lab 3
SAR Lab D	SAR Lab 4
SAR Lab E	SAR Lab 5
SAR Lab F	SAR Lab 6
SAR Lab G	SAR Lab 8
SAR Lab H	SAR Lab L1
	SAR Lab L2
	SAR Lab L3
	SAR Lab L4
	SAR Lab L6

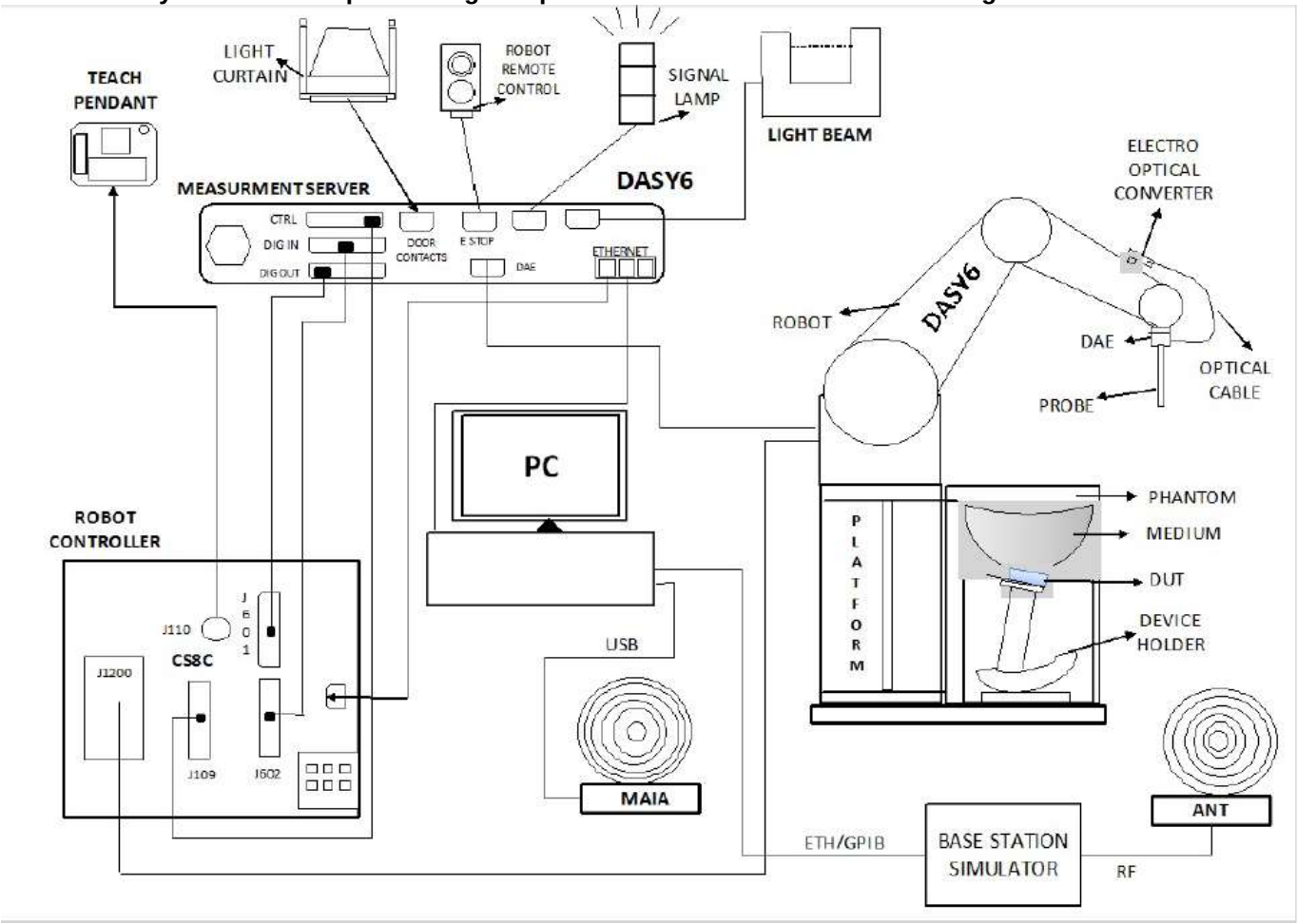
UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

The DASY5 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

4.2. SAR Scan Procedures

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2.1 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Step 3: Zoom Scan

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1 g and 10 g and displays these values next to the job's label.

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

4.3. Test Equipment

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the manufacturers' recommendations, and is traceable to recognized national standards.

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	Rohde & Schwarz	ZNLE6	101273	2/27/2021
Dielectric Probe kit	SPEAG	DAK-3.5	1103	1/16/2021
Shorting block	SPEAG	DAK-3.5 Short	SM DAK200BA	11/19/2020
Thermometer	Fischer Scientific	4242	140493798	6/5/2021
Network Analyzer	Rohde & Schwarz	ZNLE6	101274-mn	2/26/2021
Dielectric Probe kit	SPEAG	DAK-3.5	1082	10/8/2020
Shorting block	SPEAG	DAK-3.5 Short	SM DAK200DA	10/8/2020
Thermometer	Fischer Scientific	4242	140562250	6/5/2021

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Signal Generator	Rohde & Schwarz	SMB 100A	180969-yC	2/18/2021
Power Sensor	Rohde & Schwarz	NRP18A	100994-RE	2/18/2021
Signal Generator	Rohde & Schwarz	SMB 100A	180970-zC	2/18/2021
Power Sensor	Rohde & Schwarz	NRP18A	100995-hs	2/18/2021
Signal Generator	Rohde & Schwarz	SMB 100A	180968-gX	2/18/2021
Power Sensor	Rohde & Schwarz	NRP18A	100992-iu	2/18/2021
MXG Analog Signal Generator	Agilent	N5181A	MY50140630	1/21/2021
Power Sensor	Agilent	8481A	2237A31744	2/26/2021
Power Sensor	Agilent	8481A	2702A60780	2/12/2021
Power Meter	HP	437B	3125U16345	1/22/2021
Power Meter	HP	437B	3125U12345	1/22/2021
Regulated DC Power Supply	Ametek	XT15-4	1802A01877	N/A
MXG Analog Signal Generator	Agilent	N5181A	MY50140610	1/21/2021
Power Meter	HP	437B	3125U11364	1/22/2021
Power Meter	HP	437B	3125U09516	1/22/2021
Power Sensor	Agilent	8481A	1926A27048	2/12/2021
Power Sensor	Agilent	8481A	3318A92374	2/12/2021
DC Power Supply	HP	6296A	2841A-05955	N/A

Note(s):

*Equipment not used past calibration due date.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Lab Equipment

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
E-Field Probe (SAR Lab A)	SPEAG	EX3DV4	7463	7/18/2020 *
E-Field Probe (SAR Lab A)	SPEAG	EX3DV4	3929	4/23/2021
E-Field Probe (SAR Lab A)	SPEAG	EX3DV4	3794	2/14/2021
E-Field Probe (SAR Lab B)	SPEAG	EX3DV4	7356	4/23/2021
E-Field Probe (SAR Lab B)	SPEAG	EX3DV4	7463	7/24/2021
E-Field Probe (SAR Lab C)	SPEAG	EX3DV4	7569	5/7/2021
E-Field Probe (SAR Lab D)	SPEAG	EX3DV4	3773	3/20/2021
E-Field Probe (SAR Lab E)	SPEAG	EX3DV4	3989	1/23/2021
E-Field Probe (SAR Lab E)	SPEAG	EX3DV4	7578	2/10/2021
E-Field Probe (SAR Lab F)	SPEAG	EX3DV4	7482	7/18/2020 *
E-Field Probe (SAR Lab F)	SPEAG	EX3DV4	3902	5/15/2021
E-Field Probe (SAR Lab G)	SPEAG	EX3DV4	7498	4/24/2021
E-Field Probe (SAR Lab H)	SPEAG	EX3DV4	7500	4/24/2021
E-Field Probe (SAR Lab 1)	SPEAG	EX3DV4	7483	11/25/2020
E-Field Probe (SAR Lab 2)	SPEAG	EX3DV4	3749	1/23/2021
E-Field Probe (SAR Lab 3)	SPEAG	EX3DV4	7501	5/15/2021
E-Field Probe (SAR Lab 4)	SPEAG	EX3DV4	3885	10/16/2020
E-Field Probe (SAR Lab 4)	SPEAG	EX3DV4	7356	4/23/2021
E-Field Probe (SAR Lab 5)	SPEAG	EX3DV4	3686	9/26/2020
E-Field Probe (SAR Lab 6)	SPEAG	EX3DV4	3772	2/21/2021
E-Field Probe (SAR Lab 8)	SPEAG	EX3DV4	7335	2/21/2021
E-Field Probe (SAR Lab L1)	SPEAG	EX3DV4	7585	5/7/2021
E-Field Probe (SAR Lab L2)	SPEAG	EX3DV4	7587	5/8/2021
E-Field Probe (SAR Lab L3)	SPEAG	EX3DV4	7589	5/8/2021
E-Field Probe (SAR Lab L4)	SPEAG	EX3DV4	7586	5/8/2021
E-Field Probe (SAR Lab L6)	SPEAG	EX3DV4	7572	5/7/2021
Data Acquisition Electronics (SAR Lab A)	SPEAG	DAE4	1258	5/13/2021
Data Acquisition Electronics (SAR Lab B)	SPEAG	DAE4	1439	7/11/2020 *
Data Acquisition Electronics (SAR Lab B)	SPEAG	DAE4	1545	4/15/2021
Data Acquisition Electronics (SAR Lab C)	SPEAG	DAE4	1620	5/7/2021
Data Acquisition Electronics (SAR Lab D)	SPEAG	DAE4	1433	3/17/2021
Data Acquisition Electronics (SAR Lab E)	SPEAG	DAE4	1377	10/10/2020
Data Acquisition Electronics (SAR Lab E)	SPEAG	DAE4	1239	7/29/2021
Data Acquisition Electronics (SAR Lab F)	SPEAG	DAE4	1352	11/15/2020
Data Acquisition Electronics (SAR Lab G)	SPEAG	DAE4	1544	3/16/2021
Data Acquisition Electronics (SAR Lab H)	SPEAG	DAE4	1548	4/15/2021
Data Acquisition Electronics (SAR Lab 1)	SPEAG	DAE4	1257	10/10/2020
Data Acquisition Electronics (SAR Lab 2)	SPEAG	DAE4	1472	3/12/2021
Data Acquisition Electronics (SAR Lab 3)	SPEAG	DAE4	1546	5/15/2021
Data Acquisition Electronics (SAR Lab 4)	SPEAG	DAE4	1547	5/15/2021
Data Acquisition Electronics (SAR Lab 5)	SPEAG	DAE4	1540	2/21/2021
Data Acquisition Electronics (SAR Lab 6)	SPEAG	DAE4	1380	8/27/2020
Data Acquisition Electronics (SAR Lab 6)	SPEAG	DAE4	1259	7/16/2021
Data Acquisition Electronics (SAR Lab 8)	SPEAG	DAE4	1359	2/26/2021
Data Acquisition Electronics (SAR Lab L1)	SPEAG	DAE4	1618	5/7/2021
Data Acquisition Electronics (SAR Lab L2)	SPEAG	DAE4	1621	5/7/2021
Data Acquisition Electronics (SAR Lab L3)	SPEAG	DAE4	1619	5/7/2021
Data Acquisition Electronics (SAR Lab L4)	SPEAG	DAE4	1622	5/8/2021
Data Acquisition Electronics (SAR Lab L6)	SPEAG	DAE4	1617	5/7/2021

Note(s):

*Equipment not used past calibration due date.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Lab Equipment

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
System Validation Dipole	SPEAG	D750V3	1071	11/20/2020
System Validation Dipole	SPEAG	D835V2	4d002	11/20/2020
System Validation Dipole	SPEAG	D835V2	4d142	8/23/2020*
System Validation Dipole	SPEAG	D1750V2	1053	10/10/2020
System Validation Dipole	SPEAG	D1750V2	1050	4/21/2021
System Validation Dipole	SPEAG	D1750V2	1077	10/10/2020
System Validation Dipole	SPEAG	D1900V2	5d163	10/14/2020
System Validation Dipole	SPEAG	D1900V2	5d043	11/20/2020
System Validation Dipole	SPEAG	D1900V2	5d140	4/21/2021
System Validation Dipole	SPEAG	D2300V2	1002	4/17/2021
System Validation Dipole	SPEAG	D2300V2	1058	10/14/2020
System Validation Dipole	SPEAG	D2450V2	899	4/17/2021
System Validation Dipole	SPEAG	D2450V2	706	5/8/2021
System Validation Dipole	SPEAG	D2450V2	748	3/12/2021
System Validation Dipole	SPEAG	D2600V2	1036	4/17/2021
System Validation Dipole	SPEAG	D2600V2	1006	10/14/2020
System Validation Dipole	SPEAG	D3500V2	1011	4/17/2021
System Validation Dipole	SPEAG	D3500V2	1060	3/12/2021
System Validation Dipole	SPEAG	D3700V2	1039	5/11/2021
System Validation Dipole	SPEAG	D3900V2	1052	8/3/2021
System Validation Dipole	SPEAG	D5GHzV2	1168	11/23/2020
System Validation Dipole	SPEAG	D5GHzV2	1138	8/26/2020*
System Validation Dipole	SPEAG	D5GHzV2	1003	3/12/2021

Note(s):

*Equipment not used past calibration due date.

OTHER

Name of Equipment	Manufacturer	Type/Model	T Number	Serial No.	Cal. Due Date
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	959	137873-WG	2/19/2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	953	135390-WS	2/23/2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	957	134852-cy	2/25/2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	949	134851-LL	2/20/2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	970	137875-DZ	2/26/2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	259	124594-HX	2/21/2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	960	135384-pJ	2/26/2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	978	137877-ms	2/20/2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	268	124593-ss	2/19/2021
Power Meter	Keysight	N1912A	1273	MY55196007	1/22/2021
Power Sensor	Keysight	N1912A	309	MY52270022	2/13/2021
Power Sensor	Rohde & Schwarz	NRP85	211886	109115-nc	4/20/2021
Lab Thermometer	Keysight	Traceable	1819	170024401	3/11/2021

5. Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

Therefore, the measurement uncertainty is not required.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

6. Device Under Test (DUT) Information

6.1. DUT Description

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G, CDMA, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wideband, GPS, NFC and WPT. All models support at least one UICC based SIM. The second SIM is either an UICC based p-SIM (physical SIM) or e-SIM (electronic SIM). The device supports a built-in inductive charging transmitter and receiver. The rechargeable battery is not user accessible.

The device utilizes two power modes: Mode A(DSI=0) and Mode B(DSI=1). Power selection is determined by the device's positioning and use case as described in Sec. 10. Mode A power is used when the device is used against the user's head, or away from the body. Mode B is used when the device is used in a body-worn configuration by the user.

The WWAN transmit antenna switching mechanism between WWAN antennas is implemented with a physical "break-before-make" switch so that only one antenna can be used for WWAN transmission at one time.

In Airplay mode, the device uses same power and power control mechanism as Wi-Fi. Airplay is not supported in hotspot mode. Airplay utilize the same 802.11 modes, modulation, MIMO, Channel Bandwidth, etc. as Wi-Fi does. Therefore Airplay usage is categorized by the Wi-Fi SAR testing contained in Section 10.

There are two vendors of the Wi-Fi/Bluetooth radio modules: variant 1 and variant 2. The Wi-Fi/BT radio modules have the same mechanical outline (e.g., the same package dimension and pin-out layout), use the same on-board antenna matching circuit, have an identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances. It is confirmed that Variant 1 represents the worst case.

This product utilizes a time-averaged power control mechanism – Wi-Fi Time-Averaged SAR(TAS) within the Wi-Fi chipset – that ensures total power across all Wi-Fi transmitters does not exceed applicable regulatory limits. For further details, refer to the technical description document and Appendix I.

Device Dimension	Overall (Length x Width): 146.72 mm x 71.52 mm Overall Diagonal: 163.07 mm (6.42 inch) Display Diagonal: 153.9 mm (6.06 inch)
Back Cover	The Back Cover is not removable
Battery Options	The rechargeable battery is not user accessible.
Accessory	Headset
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its WWAN data connection with other Wi-Fi-enabled devices. ☒ Mobile Hotspot (Wi-Fi 2.4 GHz) ☒ Mobile Hotspot (Wi-Fi 5.2/5.8 GHz)
AirPlay	AirPlay mode enabled devices transfer data directly between each other ☒ AirPlay (Wi-Fi 2.4 GHz) ☒ AirPlay (Wi-Fi 5 GHz)
Bluetooth Tethering (Hotspot)	BT Tethering mode permits the device to share its cellular data connection with other devices. ☒ BT Tethering (Bluetooth 2.4 GHz)

This report shall not be reproduced without the written approval of UL Verification Services Inc.

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EDGE (8PSK)	GSM Class : B Multi-Slot Class: Class 10 - 2 Up, 4 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25%
		Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No		
CDMA (CDMA2000)	BC0 BC1 BC10	1xRTT (Voice & Data) 1xEV-DO Rel. 0 1xEV-DO Rev. A 1xAdvanced		100%
		Does this device support SV-DO (1xRTT-1xEVDO)? ☐ Yes ☒ No		
W-CDMA (UMTS)	Band 2 Band 4 Band 5	UMTS Rel. 99 (Voice & Data) HSDPA (Rel. 5) HSUPA (Rel. 6) HSPA+ (Rel. 7) DC-HSDPA (Rel. 8)		100%
LTE[4]	FDD Band 2 FDD Band 4 FDD Band 5 FDD Band 7 FDD Band 12 FDD Band 13 FDD Band 17 FDD Band 25 FDD Band 26 FDD Band 29 (DL Only) FDD Band 30 TDD Band 41[2] TDD Band 46 (DL Only) TDD Band 48 FDD Band 66 **Carrier Aggregation**[3] FDD Band 5B FDD Band 7C TDD Band 41C[2] TDD Band 48C	QPSK 16QAM 64AQM 256QAM Carrier Aggregation (2 Uplinks and 6 Downlinks)		100% (FDD) 63.3% (TDD) Power Class 3 43.3% (TDD) Power Class 2 Refer to §6.4
		Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No		
5G NR (FR1)	FDD band n2 FDD band n5 FDD band n12 FDD band n25 TDD band n41[2] FDD band n66 TDD band n77	CP-OFDM: Pi/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM DFT-s-OFDM: QPSK, 16QAM, 64QAM, 256QAM		100% (FDD) 100% (TDD) Power Class 3 50% (TDD) Power Class 2
Wi-Fi	2.4 GHz[1]	802.11b 802.11g 802.11n (HT20) 802.11ac (HT20) 802.11ax (HE20)		100% (802.11b) 99.0% (802.11g/n 20MHz BW)
	5 GHz[1]	802.11a 802.11n (HT20) 802.11n (HT40) 802.11ac (VHT20) 802.11ac (VHT40) 802.11ac (VHT80) 802.11ax (HE20) 802.11ax (HE40) 802.11ax (HE80)		98.7% (802.11a/n/ac 20MHz BW) 96.8% (802.11n/ac 40MHz BW) 95.1% (802.11n/ac 80MHz BW)
		Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No		
		Does this device support Band gap channel(s)? ☒ Yes ☐ No		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Bluetooth	2.4 GHz	BR, EDR, LE, and HDR	100%
NFC	13.56 MHz	Type A/B/F and ISO15693	N/A [4]
UWB (Ultra-Wideband)	6.24 GHz and 8.2368 GHz	BPM-BPSK	N/A [4]

Note(s):

1. Duty cycle for Wi-Fi and BT is referenced from the DTS and U-NII and BT reports.
2. This device supports Power Class 2 and Power Class 3 for LTE Band 41 and 5G NR(FR1) band n41.
3. LTE Uplink 2CA is the total combined power of the UL CA.
   LTE Uplink Cat 13, LTE 3GPP Rel-13 (LTE 3GPP Rel-14 for B41 PC2)
4. Measured Duty Cycle is not required due to SAR test exemption.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

6.3. General LTE SAR Test and Reporting Considerations

Item	Description					
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 2	Frequency range: 1850 - 1910 MHz (BW = 60 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	**18700 /1860**	18675/ 1857.5	18650/ 1855	18625/ 1852.5	18615/ 1851.5	18607/ 1850.7
	Mid	**18900/ 1880**	18900/ 1880	18900/ 1880	18900/ 1880	18900/ 1880	18900/ 1880
	High	**19100/ 1900**	19125/ 1902.5	19150/ 1905	19175/ 1907.5	19185/ 1908.5	19193/ 1909.3
	Band 4	Frequency range: 1710 - 1755 MHz (BW = 45 MHz)					
		Channel Bandwidth					
		20 MHz [1]	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	20050/ 1720	20025/ 1717.5	20000/ 1715	19975/ 1712.5	19965/ 1711.5	19957/ 1710.7
	Mid	**20175/ 1732.5**	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5
	High	20300/ 1745	20325/ 1747.5	20350/ 1750	20375/ 1752.5	20385/ 1753.5	20393/ 1754.3
	Band 5	Frequency range: 824 - 849 MHz (BW = 25 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	5 MHz	3 MHz	1.4 MHz
	Low			20450/ 829	20425/ 826.5	20415/ 825.5	20407/ 824.7
	Mid			**20525/ 836.5**	20525/ 836.5	20525/ 836.5	20525/ 836.5
	High			20600/ 844	20625/ 846.5	20635/ 847.5	20643/ 848.3
	Band 7	Frequency range: 2500 - 2570 MHz (BW = 70 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	**20850 2510**	20825 2507.5	20800 2505	20775 2502.5		
	Mid	**21100 2535**	21100 2535	21100 2535	21100 2535		
	High	**21350 2560**	21375 2562.5	21400 2565	21425 2567.5		
	Band 12	Frequency range: 699 – 716 MHz (BW = 17 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	5 MHz	3 MHz	1.4 MHz
	Low			23060/ 704	23035/ 701.5	23025/ 700.5	23017/ 699.7
	Mid			**23095/ 707.5**	23095/ 707.5	23095/ 707.5	23095/ 707.5
	High			23130/ 711	23155/ 713.5	23165/ 714.5	23173/ 715.3
	Band 13	Frequency range: 777 - 787 MHz (BW = 10 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	5 MHz [1]	3 MHz	1.4 MHz
	Low				23205/ 779.5		
	Mid			**23230/ 782**	23230/ 782		
	High				23255/ 784.5		
	Band 17	Frequency range: 704 - 716 MHz (BW = 12 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	5 MHz [1]	3 MHz	1.4 MHz
	Low			23780/ 709	23755/ 706.5		
	Mid			**23790/ 710**	23790/ 710		
	High			23800/	23825/		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

				711	713.5		
	Band 25	Frequency range: 1850 - 1915 MHz (BW = 65 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	**26140/ 1860**	26115/ 1857.5	26090/ 1855	26065/ 1852.5	26055/ 1851.5	26047/ 1850.7
	Mid	**26365/ 1882.5**	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5
	High	**26590/ 1905**	26615/ 1907.5	26640/ 1910	26665/ 1912.5	26675/ 1913.5	26683/ 1914.3
	Band 26	Frequency range: 814 - 849 MHz (BW = 35 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low			26740/ 819	26715/ 816.5	26705/ 815.5	26697/ 814.7
	Mid			26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5
	High			26990/ 844	27015/ 846.5	27025/ 847.5	27033/ 848.3
	Band 30	Frequency range: 2305 - 2315 MHz (BW = 10 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	5 MHz [1]	3 MHz	1.4 MHz
	Low				27685/ 2307.5		
	Mid			**27710/ 2310**	27710/ 2310		
	High				27735/ 2312.5		
	Band 41[2]	Frequency range: 2496 - 2690 MHz (BW = 194 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	**39750 / 2506.0**					
	Low-Mid	**40185 / 2549.5**					
	Mid	**40620 / 2593.0**					
	Mid-High	**41055 / 2636.5**					
	High	**41490 / 2680.0**					
	Band 48	Frequency range: 3550 - 3700 MHz (BW = 150 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	**55340/ 3560**	55315/ 3557.5	55290/ 3555	55265/ 3552.5		
	Mid-Low	**55773/ 3603.3**	55765/ 3602.5	55757/ 3601.7	55748/ 3600.8		
	Mid-High	**56207/ 3646.7**	56215/ 3647.5	56223/ 3648.3	56232/ 3649.2		
	High	**56640/ 3690**	56665/ 3692.5	56690/ 3695	56715/ 3697.5		
	Band 66	Frequency range: 1710 - 1780 MHz (BW = 70 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	**132072/ 1720**	132047/ 1717.5	132022/ 1715	131997/ 1712.5	131987/ 1711.5	131979/ 1710.7
	Mid	**132322/ 1745**	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745
	High	**132572/ 1770**	132597/ 1772.5	132622/ 1775	132647/ 1777.5	132657/ 1778.5	132665/ 1779.3
LTE transmitter and antenna implementation	LTE can transmit from either ANT1, ANT2, ANT3, ANT4, ANT7, ANT8, and ANT9 Then antenna switching is implemented with a physical, "break-before-make" switch such that only one antenna can be used for LTE transmission at a time.						

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Maximum power reduction (MPR)	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3** MPR Built-in by design The manufacturer MPR values are always within the 3GPP maximum MPR allowance but may not follow the default MPR values. A-MPR (additional MPR) was disabled during SAR testing
Spectrum plots for RB configurations	A properly configured base station simulator was used for the SAR and power measurements; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

Notes:

1. Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices.
2. LTE band 41 test channels in accordance with October 2014 TCB workshop for all channels bandwidths.
3. SAR Testing for LTE was performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

This report shall not be reproduced without the written approval of UL Verification Services Inc.

6.4. LTE (TDD) Considerations

According to KDB 941225 D05 SAR for LTE Devices, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

LTE TDD Bands support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$	$7680 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$
5	$6592 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-
10	$13168 \cdot T_s$	$13152 \cdot T_s$	$12800 \cdot T_s$	-	-	-

Table 4.2-2: Uplink-downlink configurations & Calculated Duty Cycle

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.3%
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.3%
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.3%
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.7%
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.7%
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.7%
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.3%

Calculated Duty Cycle = Extended cyclic prefix in uplink * (T_s) * # of S + # of U / period

Note(s):

This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used for SAR Testing: configuration 0 at 63.3%(Power Class 3) and configuration 1 at 43.3%(Power Class 2) duty cycle.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

6.5. General 5G NR(FR1) SAR Test and Reporting Considerations

Item	Description											
Frequency range, Channel Bandwidth, Numbers and Frequencies	n2	Frequency range: 1850 - 1910 MHz (BW = 60 MHz)										
		Channel Bandwidth (MHz)										
		100	90	80	60	50	40	30	25	20	15	10	5
	Low									372000 /1860	371500 /1857.5	371000 /1855	370500 /1852.5
	Mid									376000 /1880	376000 /1880	376000 /1880	376000 /1880
	High									380000 /1900	380500 /1902.5	381000 /1905	381500 /1907.5
	n5	Frequency range: 824 - 849 MHz (BW = 25 MHz)										
		Channel Bandwidth (MHz)										
		100	90	80	60	50	40	30	25	20[1]	15[1]	10[1]	5
	Low									166800 /834	166300 /831.5	165800 /829	165300 /826.5
	Mid									167300 /836.5	167300 /836.5	167300 /836.5	167300 /836.5
	High									167800 /839	168300 841.5	168800 /844	169300 /846.5
	n12	Frequency range: 699 – 716 MHz (BW = 17 MHz)										
		Channel Bandwidth (MHz)										
		100	90	80	60	50	40	30	25	20	15[1]	10[1]	5
	Low										141300 /706.5	140800 /704	140300 /701.5
	Mid										141500 /707.5	141500 /707.5	141500 /707.5
	High										141700 /708.5	142200 /711	142700 /713.5
	n25	Frequency range: 1850 - 1915 MHz (BW = 65 MHz)										
		Channel Bandwidth (MHz)										
		100	90	80	60	50	40	30	25	20	15	10	5
	Low									372000 /1860	371500 /1857.5	371000 /1855	370500 /1852.5
	Mid									376500 /1882.5	376500 /1882.5	376500 /1882.5	376500 /1882.5
	High									381000 /1905	381500 /1907.5	382000 /1910	382500 /1912.5
	n41[3]	Frequency range: 2496 - 2690 MHz (BW = 194 MHz)										
		Channel Bandwidth (MHz)										
		100[1]	90[1]	80[1]	60	50	40	30	25	20	15	10	5
	Low	509200 /2546	508200 /2541	507200 /2536	505200 /2526	504200 /2521	503200 /2516			501200 /2506			
	Mid- Low	513900 /2569.5	513400 /2567	512900 /2564.5	511900 /2559.5	511400 /2557	510900 /2554.5			509900 /2549.5			
	Mid	518600 /2593	518600 /2593	518600 /2593	518600 /2593	518600 /2593	518600 /2593			518600 /2593			
	Mid- High	523300 /2616.5	523800 /2619	524300 /2621.5	525300 /2626.5	525800 /2629	526300 2631.5			527300 /2636.5			
	High	528000 /2640	529000 /2645	530000 /2650	532000 /2660	533000 /2665	534000 /2670			536000 /2680			
	n66	Frequency range: 1710 - 1780 MHz (BW = 70 MHz)										
		Channel Bandwidth (MHz)										
		100	90	80	60	50	40[1]	30[1]	25[1]	20	15	10	5
	Low									344000 /1720	343500 /1717.5	343000 /1715	342500 /1712.5
	Mid									349000 /1745	349000 /1745	349000 /1745	349000 /1745
	High									354000 /1770	354500 /1772.5	355000 /1775	355500 /1777.5
	n77	Frequency range: 3700 - 3980 MHz (BW = 280 MHz)										
		Channel Bandwidth (MHz)										
		100	90	80	60	50	40	30	25	20	15	10	5
	Low	650000 /3750	649666 /3744.99	649334 /3740.01	648666 /3729.99	648334 /3725.01	648000 /3720			647334 /3710.01			
	Mid- Low	653000 /3795	652834 /3792.51	652666 /3789.99	652334 /3785.01	652166 /3782.49	652000 /3780			651666 /3774.99			
	Mid	656000 /3840	656000 /3840	656000 /3840	656000 /3840	656000 /3840	656000 /3840			656000 /3840			
	Mid- High	659000 /3885	659166 /3887.49	659334 /3890.01	659666 /3894.99	659834 /3897.51	660000 /3900			660266 /3903.99			
	High	662000 /3930	662334 /3935.01	662666 /3939.99	663334 /3950.01	663666 /3954.99	664000 /3960			664666 /3969.99			
SCS	15 kHz (n2, n5, n12, n25, n66) 30 kHz (n41, n77)												
NR(FR1) transmitter and antenna implementation	Refer to section 7 and Appendix A.												

This report shall not be reproduced without the written approval of UL Verification Services Inc.

A-MPR(Additional MPR) disabled for SAT testing?	Yes
EN-DC Carrier Aggregation Possible Combinations	
LTE Anchor Bands for NR band n2	LTE Band 5/12
LTE Anchor Bands for NR band n5	LTE Band 2/7/30/48/66
LTE Anchor Bands for NR band n12	LTE Band 2/66
LTE Anchor Bands for NR band n25	LTE Band 12
LTE Anchor Bands for NR band n41	LTE Band 2/25/41/66
LTE Anchor Bands for NR band n66	LTE Band 5/12/13/48
LTE Anchor Bands for NR band n77	LTE Band 41

Notes:

1. Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per FCC Guidance.
2. SAR test for NR bands and LTE anchor Bands were performed separately due to limitations in SAR probe calibration factors. And, due to test setup limitations, SAR testing for NR was performed using test mode software to establish the connection.
3. FR1 supported standalone.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

6.6. Time-Average Feature

The equipment under test (EUT) incorporates the Smart Transmit (SmartTX) SAR averaging algorithm provided by Qualcomm for cellular technologies. Smart Transmit controls the Tx power of the cellular-based wireless device in real-time to maintain the time-averaged Tx power, and in turn, time-averaged RF exposure, below the predefined time-average power limit characterized for each technology and band.

The purpose of the Part 1 test in this report is to demonstrate that the EUT meets the FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target or PD_design_target, below the predefined time-average power limit, for each characterized technology and band.

Smart Transmit allows the device to transmit at higher power instantaneously as high as P_{max}, when needed, but enforces power limiting to maintain time-averaged transmit power to P_{limit}. Below table shows P_{limit} EFS settings and maximum tune up output power P_{max} configured for this EUT for various transmit conditions (DSI – Device State Index).

The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G NR WWAN technology band, and DSI = minimum of "P_{limit} EFS" and "Maximum tune up output power P_{max}" includes device uncertainty.

SAR values in this report were scaled to the maximum time-averaged output power to determine compliance following KDB 447498 D01.

P_{design}	The power level that corresponds to the exposure design target (SAR_design_target) after accounting for all device design related uncertainties.
P_{limit}	Maximum tune-up output power for SAR Mode A and Mode B
P_{max}	Maximum tune-up output power for RF
SAR Characterization	Table containing P_{limit} for all technologies and bands

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Characterization

Exposure Scenario		factor	Head				Body-worn & Hotspot				P_{max} (dBm) Tune-up power table	
Spatial-average			1g				1g					
Test Distance			0 mm				5 mm					
Power Mode (DSI)			Mode A (DSI=0)				Mode B (DSI=1)					
Antenna	Tech/Band		P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table		
	Transmit Average		Burst Average		Frame Average		Burst Average		Frame Average		Burst Average	Frame Average
ANT1	GSM 850 2 slots[1]	0.25	38.49	32.50	32.47	26.48	32.38	31.50	26.36	25.48	32.50	26.48
	GSM 1900 2 slots[1]	0.25	39.26	31.00	33.24	24.98	23.89	23.50	17.87	17.48	31.00	24.98
	W-CDMA B2	1	31.09	25.70	31.09	25.70	17.46	17.00	17.46	17.00	25.70	25.70
	W-CDMA B4	1	32.97	25.70	32.97	25.70	17.66	17.25	17.66	17.25	25.70	25.70
	W-CDMA B5	1	32.61	25.70	32.61	25.70	26.17	25.70	26.17	25.70	25.70	25.70
	CDMA BC0	1	31.52	25.70	31.52	25.70	26.93	25.70	26.93	25.70	25.70	25.70
	CDMA BC1	1	32.28	25.70	32.28	25.70	17.10	17.00	17.10	17.00	25.70	25.70
	CDMA BC10	1	31.68	25.70	31.68	25.70	27.17	25.70	27.17	25.70	25.70	25.70
	LTE Band 5	1	32.16	25.70	32.16	25.70	26.47	25.70	26.47	25.70	25.70	25.70
	LTE Band 7	1	27.60	25.70	27.60	25.70	19.83	19.75	19.83	19.75	25.70	25.70
	LTE Band 12/17	1	32.55	25.70	32.55	25.70	27.33	25.70	27.33	25.70	25.70	25.70
	LTE Band 13	1	32.67	25.70	32.67	25.70	26.93	25.70	26.93	25.70	25.70	25.70
	LTE Band 25/2	1	30.76	25.70	30.76	25.70	17.26	17.00	17.26	17.00	25.70	25.70
	LTE Band 26	1	32.02	25.70	32.02	25.70	26.77	25.70	26.77	25.70	25.70	25.70
	LTE Band 30	1	26.45	25.70	26.45	25.70	20.43	20.25	20.43	20.25	25.70	25.70
	LTE Band 41[1]	0.633	29.69	25.70	27.70	23.71	21.89	21.75	19.90	19.76	25.70	23.71
	LTE Band 66/4	1	31.58	25.70	31.58	25.70	17.61	17.25	17.61	17.25	25.70	25.70
	NR n5	1	32.91	25.70	32.91	25.70	27.43	25.70	27.43	25.70	25.70	25.70
	NR n12	1	34.80	25.70	34.80	25.70	28.74	25.70	28.74	25.70	25.70	25.70
	NR n25/2	1	33.42	25.70	33.42	25.70	17.32	17.00	17.32	17.00	25.70	25.70
	NR n41[1]	1	34.00	25.70	34.00	25.70	20.94	19.75	20.94	19.75	23.70	23.70
	NR n66	1	32.34	25.70	32.34	25.70	18.87	17.25	18.87	17.25	25.70	25.70

Spatial-average		factor	1g				1g				P_{max} (dBm) Tune-up power table	
Test Distance			0 mm				5 mm					
Power Mode (DSI)			Mode A (DSI=0)				Mode B (DSI=1)					
Antenna	Tech/Band		P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table		
	Transmit Average		Burst Average		Frame Average		Burst Average		Frame Average		Burst Average	Frame Average
ANT2	GSM 850 2 slots[1]	0.25	33.19	31.00	27.17	24.98	34.67	31.00	28.65	24.98	31.00	24.98
	GSM 1900 2 slots[1]	0.25	26.75	26.25	20.73	20.23	26.15	26.00	20.12	19.98	28.50	22.48
	W-CDMA B2	1	21.08	20.25	21.08	20.25	20.18	20.00	20.18	20.00	23.10	23.10
	W-CDMA B4	1	21.29	21.00	21.29	21.00	19.86	19.75	19.86	19.75	23.10	23.10
	W-CDMA B5	1	25.38	23.90	25.38	23.90	26.58	23.90	26.58	23.90	23.90	23.90
	CDMA BC0	1	25.06	23.90	25.06	23.90	27.13	23.90	27.13	23.90	23.90	23.90
	CDMA BC1	1	20.40	20.25	20.40	20.25	20.58	20.00	20.58	20.00	23.10	23.10
	CDMA BC10	1	25.02	23.90	25.02	23.90	27.84	23.90	27.84	23.90	23.90	23.90
	LTE Band 5	1	25.70	24.50	25.70	24.50	26.23	24.50	26.23	24.50	24.50	24.50
	LTE Band 7	1	17.03	17.00	17.03	17.00	18.26	18.25	18.26	18.25	22.80	22.80
	LTE Band 12/17	1	25.75	23.90	25.75	23.90	28.89	23.90	28.89	23.90	23.90	23.90
	LTE Band 13	1	25.20	23.90	25.20	23.90	27.27	23.90	27.27	23.90	23.90	23.90
	LTE Band 25/2	1	20.72	20.25	20.72	20.25	20.40	20.00	20.40	20.00	23.10	23.10
	LTE Band 26	1	25.11	24.50	25.11	24.50	26.85	24.50	26.85	24.50	24.50	24.50
	LTE Band 30	1	19.00	18.50	19.00	18.50	20.44	20.00	20.44	20.00	22.80	22.80
	LTE Band 41[1]	0.633	19.05	19.00	17.07	17.01	21.11	21.00	19.12	19.01	22.80	20.81
	LTE Band 66/4	1	21.01	21.00	21.01	21.00	20.27	20.25	20.27	20.25	23.10	23.10
	NR n5	1	27.56	24.50	27.56	24.50	28.21	24.50	28.21	24.50	24.50	24.50
	NR n12	1	27.54	23.90	27.54	23.90	30.13	23.90	30.13	23.90	23.90	23.90
	NR n25/2	1	22.65	20.25	22.65	20.25	22.57	20.00	22.57	20.00	23.10	23.10
	NR n41[1]	1	17.09	17.00	17.09	17.00	20.46	19.00	20.46	19.00	25.70	25.70
	NR n66	1	22.19	21.00	22.19	21.00	22.33	20.25	22.33	20.25	23.10	23.10

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Exposure Scenario		factor	Head				Body-worn & Hotspot				P_{max} (dBm) Tune-up power table	
Test Distance			0 mm				5 mm					
Power Mode (DSI)			Mode A (DSI=0)				Mode B (DSI=1)					
Antenna	Tech/Band		P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table		
	Transmit Average		Burst Average		Frame Average		Burst Average		Frame Average		Burst Average	Frame Average
ANT3	GSM 1900 2 slots[1]	0.25	33.78	30.00	27.76	23.98	25.59	25.50	19.57	19.48	30.00	23.98
	W-CDMA B2	1	28.09	24.70	28.09	24.70	19.94	19.50	19.94	19.50	24.70	24.70
	W-CDMA B4	1	32.16	24.70	32.16	24.70	20.90	20.25	20.90	20.25	24.70	24.70
	LTE Band 7	1	25.01	24.70	25.01	24.70	18.67	18.50	18.67	18.50	25.00	25.00
	LTE Band 25/2	1	26.90	24.70	26.90	24.70	20.24	19.50	20.24	19.50	25.00	25.00
	LTE Band 30	1	25.76	24.70	25.76	24.70	20.57	20.50	20.57	20.50	25.00	25.00
	LTE Band 41[1]	0.633	27.84	24.70	25.86	22.71	20.04	20.00	18.05	18.01	25.00	23.01
	LTE Band 66/4	1	30.60	24.70	30.60	24.70	21.08	20.25	21.08	20.25	25.00	25.00
	NR n25/2	1	27.88	24.70	27.88	24.70	21.02	19.50	21.02	19.50	25.00	25.00
	NR n41[1]	1	28.96	25.00	28.96	25.00	18.40	18.00	18.40	18.00	22.00	22.00
	NR n66	1	31.44	24.70	31.44	24.70	23.26	20.25	23.26	20.25	25.00	25.00

Exposure Scenario		factor	Head				Body-worn & Hotspot				P_{max} (dBm) Tune-up power table	
Spatial-average			1g				1g					
Test Distance			0 mm				5 mm					
Power Mode (DSI)			Mode A (DSI=0)				Mode B (DSI=1)					
Antenna	Tech/Band		P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table		
	Transmit Average		Burst Average		Frame Average		Burst Average		Frame Average		Burst Average	Frame Average
ANT4	GSM 1900 2 slots[1]	0.25	24.61	24.50	18.59	18.48	26.23	25.50	20.21	19.48	28.00	21.98
	W-CDMA B2	1	18.65	18.25	18.65	18.25	19.39	19.25	19.39	19.25	22.70	22.70
	W-CDMA B4	1	20.33	20.00	20.33	20.00	22.28	21.75	22.28	21.75	22.70	22.70
	LTE Band 7	1	17.57	17.50	17.57	17.50	21.44	21.25	21.44	21.25	22.50	22.50
	LTE Band 25/2	1	18.83	18.50	18.83	18.50	19.39	19.25	19.39	19.25	23.00	23.00
	LTE Band 30	1	17.72	17.50	17.72	17.50	20.82	20.50	20.82	20.50	22.50	22.50
	LTE Band 41[1]	0.633	20.15	20.00	18.17	18.01	23.09	22.20	21.10	20.21	22.50	20.51
	LTE Band 48[1]	0.633	22.48	21.75	20.49	19.76	23.26	22.70	21.28	20.71	22.70	20.71
	LTE Band 66/4	1	20.19	20.00	20.19	20.00	21.75	21.75	21.75	21.75	23.00	23.00
	NR n25/2	1	19.96	18.50	19.96	18.50	20.12	19.25	20.12	19.25	23.00	23.00
	NR n41[1]	1	18.32	18.00	18.32	18.00	22.72	20.25	22.72	20.25	25.50	25.50
	NR n66	1	20.79	20.00	20.79	20.00	22.93	21.75	22.93	21.75	23.00	23.00
	NR n77[1]	1	19.15	19.00	19.15	19.00	19.65	19.25	19.65	19.25	22.70	22.70

Exposure Scenario		factor	Head				Body-worn & Hotspot				P_{max} (dBm) Tune-up power table	
Spatial-average			1g				1g					
Test Distance			0 mm				5 mm					
Power Mode (DSI)			Mode A (DSI=0)				Mode B (DSI=1)					
Antenna	Tech/Band		P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table	P_{design} (dBm) corresponding to 1.0 W/kg (SAR_design_target)	P_{limit} (dBm) Tune-up power table		
	Transmit Average		Burst Average		Frame Average		Burst Average		Frame Average		Burst Average	Frame Average
ANT7	LTE Band 48[1]	0.633	30.14	25.70	28.16	23.71	22.02	22.00	20.04	20.01	24.10	22.11
	NR n77[1]	1	28.66	25.70	28.66	25.70	19.07	19.00	19.07	19.00	25.70	25.70

Exposure Scenario		factor	Head				Body-worn & Hotspot				P_{max} (dBm) Tune-up power table	
Spatial-average			1g				1g					
Power Mode (DSI)			Mode A (DSI=0)				Mode B (DSI=1)					
Antenna	Tech/Band		Pdesign (dBm) corresponding to 1.0 W/kg (SAR_design_target)	Plimit (dBm) Tune-up power table	Pdesign (dBm) corresponding to 1.0 W/kg (SAR_design_target)	Plimit (dBm) Tune-up power table	Pdesign (dBm) corresponding to 1.0 W/kg (SAR_design_target)	Plimit (dBm) Tune-up power table	Pdesign (dBm) corresponding to 1.0 W/kg (SAR_design_target)	Plimit (dBm) Tune-up power table		
	Transmit Average		Burst Average		Frame Average		Burst Average		Frame Average		Burst Average	Frame Average
ANT8	LTE Band 48[1]	0.633	22.60	22.25	20.61	20.26	19.51	19.50	17.52	17.51	23.50	21.51
	NR n77[1]	1	20.57	20.50	20.57	20.50	17.29	17.00	17.29	17.00	23.50	23.50

Exposure Scenario		factor	Head				Body-worn & Hotspot				P_{max} (dBm) Tune-up power table	
Spatial-average			1g				1g					
Power Mode (DSI)			Mode A (DSI=0)				Mode B (DSI=1)					
Antenna	Tech/Band		Pdesign (dBm) corresponding to 1.0 W/kg (SAR_design_target)	Plimit (dBm) Tune-up power table	Pdesign (dBm) corresponding to 1.0 W/kg (SAR_design_target)	Plimit (dBm) Tune-up power table	Pdesign (dBm) corresponding to 1.0 W/kg (SAR_design_target)	Plimit (dBm) Tune-up power table	Pdesign (dBm) corresponding to 1.0 W/kg (SAR_design_target)	Plimit (dBm) Tune-up power table		
	Transmit Average		Burst Average		Frame Average		Burst Average		Frame Average		Burst Average	Frame Average
ANT9	LTE Band 48[1]	0.633	33.73	25.20	31.75	23.21	22.03	22.00	20.04	20.01	23.90	21.91
	NR n77[1]	1	34.86	25.20	34.86	25.20	19.54	19.00	19.54	19.00	25.50	25.50

Note(s):

1. All P_{limit} EFS and maximum tune up output P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (for e.g., GSM & LTE TDD).
2. Measurement Condition: All conducted power and SAR measurements in this report (Part 1 test) were performed by setting Reserve_power_margin (Smart Transmit EFS entry) to 0 dB.
3. Only P_{limit} is considered for SAR Evaluation.
4. LTE B48 and 5G NR n41 was SAR tested at P_{limit}. LTE B48 and 5G NR n41 conducted power values are listed for information but this device will only transmit in this band up to P_{max} power levels. For these test configurations $P_{max} < P_{limit}$. Therefore, testing was conducted at ta level higher than P_{max}.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

7. RF Exposure Conditions (Test Configurations)

This device has a total of 9 antennas. From Front of the device, antennas and supported frequencies are described and located as follows:

Antenna	Band	Rear	Front	Edge 1 (Top Edge)	Edge 2 (Right Edge)	Edge 3 (Bottom Edge)	Edge 4 (Left Edge)
ANT1	GSM 850/1900 WCDMA B2/4/5 CDMA BC0/1/10 LTE B2/4/5/7/12/13/17/25/26/30/41/66 5G(FR1) n2/n5/n12/n25/n41/n66	Yes	Yes	No	Yes	Yes	Yes
ANT2	GSM 850/1900 WCDMA B2/4/5 CDMA BC0/1/10 LTE B2/4/5/7/12/13/17/25/26/30/41/66 5G(FR1) n2/n5/n12/n25/n41/n66	Yes	Yes	Yes	Yes	No	Yes
ANT3	GSM 1900 WCDMA B2/4 LTE B2/4/7/25/30/41/66 5G(FR1) n2/n25/n41/n66 Wi-Fi 2.4GHz Bluetooth	Yes	Yes	No	No	Yes	Yes
ANT4	GSM 1900 WCDMA B2/4 LTE B2/4/7/25/30/41/48/66 5G(FR1) n2/n25/n41/n66/n77 Wi-Fi 2.4GHz Bluetooth	Yes	Yes	Yes	Yes	No	No
ANT5	Wi-Fi 5GHz	Yes	Yes	No	No	Yes	Yes
ANT6	Wi-Fi 5GHz	Yes	Yes	Yes	Yes	No	No
ANT7	LTE B48 5G(FR1) n77	Yes	Yes	No	Yes	Yes	No
ANT8	LTE B48 5G(FR1) n77	Yes	Yes	Yes	No	No	Yes
ANT9	LTE B48 5G(FR1) n77	Yes	Yes	No	No	Yes	Yes

Note(s):

1. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hotspot Mode.
2. The Body-worn minimum separation distance is 5 mm. To cover both body-worn and hotspot RF exposure conditions testing was performed at a separation distance of 5 mm.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

8. Dielectric Property Measurements & System Check

8.1. Dielectric Property Measurements

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized.
The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.
Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.
The dielectric constant (εr) and conductivity (σ) of typical tissue-equivalent media recipes are expected to be within ± 5% of the required target values; but for SAR measurement systems that have implemented the SAR error compensation algorithms documented in IEEE Std 1528-2013, to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, the tolerance for εr and σ may be relaxed to ± 10%. This is limited to frequencies ≤ 3 GHz.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Target Frequency (MHz)	Head		Body	
	ε_r	σ (S/m)	ε_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5000	36.2	4.45	49.3	5.07
5100	36.1	4.55	49.1	5.18
5200	36.0	4.66	49.0	5.30
5300	35.9	4.76	48.9	5.42
5400	35.8	4.86	48.7	5.53
5500	35.6	4.96	48.6	5.65
5600	35.5	5.07	48.5	5.77
5700	35.4	5.17	48.3	5.88
5800	35.3	5.27	48.2	6.00

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

IEC 62209-1

Refer to Table A.3 within the IEC 62209-1

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Dielectric Property Measurements Results:

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
A	6/29/2020	2600	Head	2600	39.09	39.01	0.20	1.93	1.96	-1.44
				2495	39.22	39.14	0.20	1.84	1.85	-0.41
				2690	38.87	38.90	-0.07	2.00	2.06	-2.94
A	7/6/2020	2600	Head	2600	37.25	39.01	-4.51	1.90	1.96	-3.22
				2495	37.39	39.14	-4.48	1.81	1.85	-2.31
				2690	37.07	38.90	-4.70	1.96	2.06	-4.64
A	7/9/2020	2600	Head	2600	39.05	39.01	0.10	1.97	1.96	0.25
				2495	39.18	39.14	0.09	1.87	1.85	1.37
				2690	38.88	38.90	-0.04	2.04	2.06	-1.09
A	7/13/2020	2600	Head	2600	37.76	39.01	-3.21	1.99	1.96	1.37
				2495	37.86	39.14	-3.28	1.89	1.85	2.40
				2690	37.57	38.90	-3.41	2.07	2.06	0.37
A	7/17/2020	3500	Head	3500	37.96	37.93	0.08	2.82	2.91	-3.04
				3600	37.78	37.82	-0.09	2.92	3.01	-3.12
				3700	37.59	37.70	-0.30	3.02	3.12	-3.22
A	7/21/2020	3500	Head	3500	39.31	37.93	3.64	2.78	2.91	-4.45
				3600	39.14	37.82	3.50	2.88	3.01	-4.58
				3700	38.96	37.70	3.34	2.97	3.12	-4.69
A	7/25/2020	3500	Head	3500	39.68	37.93	4.61	2.77	2.91	-4.73
				3600	39.54	37.82	4.56	2.87	3.01	-4.81
				3700	39.35	37.70	4.37	2.97	3.12	-4.72
A	7/25/2020	2600	Head	2600	40.82	39.01	4.64	1.91	1.96	-2.76
				2495	41.01	39.14	4.77	1.82	1.85	-1.55
				2690	40.65	38.90	4.51	1.97	2.06	-4.25
A	7/28/2020	3500	Head	3500	39.15	37.93	3.22	2.80	2.91	-3.97
				3600	38.97	37.82	3.05	2.89	3.01	-4.14
				3700	38.78	37.70	2.86	2.98	3.12	-4.37
A	7/29/2020	2600	Head	2600	38.85	39.01	-0.41	1.94	1.96	-1.03
				2495	39.00	39.14	-0.37	1.85	1.85	-0.14
				2690	38.70	38.90	-0.51	2.02	2.06	-2.16
A	8/2/2020	2600	Head	2600	40.37	39.01	3.48	1.89	1.96	-3.78
				2495	40.48	39.14	3.42	1.79	1.85	-3.01
				2690	40.20	38.90	3.35	1.96	2.06	-4.88
A	8/4/2020	3500	Head	3500	37.31	37.93	-1.63	2.91	2.91	-0.19
				3600	37.07	37.82	-1.97	3.00	3.01	-0.33
				3700	36.86	37.70	-2.23	3.11	3.12	-0.17
A	8/6/2020	2600	Head	2600	37.62	39.01	-3.57	1.94	1.96	-1.18
				2495	37.85	39.14	-3.30	1.85	1.85	-0.14
				2690	37.45	38.90	-3.72	2.01	2.06	-2.45
A	8/9/2020	2600	Head	2600	38.87	39.01	-0.36	1.93	1.96	-1.69
				2495	39.01	39.14	-0.34	1.84	1.85	-0.41
				2690	38.70	38.90	-0.51	1.99	2.06	-3.28

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
A	8/11/2020	1900	Head	1900	38.58	40.00	-3.55	1.44	1.40	2.50
				1850	38.67	40.00	-3.33	1.41	1.40	0.64
				1920	38.53	40.00	-3.68	1.44	1.40	3.14
A	8/13/2020	1900	Head	2600	38.24	39.01	-1.98	1.97	1.96	0.14
				2495	38.40	39.14	-1.90	1.88	1.85	1.48
				2690	38.04	38.90	-2.20	2.03	2.06	-1.33
A	8/18/2020	2600	Head	2600	37.96	39.01	-2.69	2.02	1.96	2.79
				2495	38.17	39.14	-2.49	1.93	1.85	4.56
				2690	37.78	38.90	-2.87	2.09	2.06	1.48
A	8/19/2020	3500	Head	3700	39.30	37.70	4.24	2.99	3.12	-4.08
				3900	38.97	37.47	3.99	3.16	3.32	-4.96
				4000	38.88	37.36	4.07	3.27	3.42	-4.45
A	8/24/2020	3500	Head	3700	39.39	37.70	4.48	3.02	3.12	-3.18
				3900	38.92	37.47	3.86	3.19	3.32	-3.97
				4000	38.84	37.36	3.96	3.24	3.29	-1.70
A	9/1/2020	3500	Head	3700	36.85	37.70	-2.26	3.03	3.12	-2.70
				3900	36.42	37.47	3.26	3.26	3.32	-1.74
				4000	36.16	37.36	-3.21	3.33	3.42	-2.72
A	9/5/2020	3500	Head	3700	36.92	37.70	-2.07	3.17	3.12	1.63
				3900	37.56	37.47	0.23	3.38	3.32	1.69
				4000	37.27	37.36	-0.24	3.58	3.42	4.46
A	9/9/2020	3500	Head	3700	36.72	37.70	-2.60	3.01	3.12	-3.47
				3900	36.36	37.47	-2.97	3.21	3.32	-3.25
				4000	36.17	37.36	-3.18	3.32	3.42	-3.16

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
B	6/29/2020	750	Head	750	42.49	41.96	1.26	0.88	0.89	-1.79
				660	42.89	42.42	1.10	0.85	0.89	-4.59
				800	42.29	41.71	1.40	0.89	0.90	-0.28
B	7/1/2020	3500	Head	3500	39.77	37.93	4.85	2.79	2.91	-4.24
				3600	39.59	37.82	4.69	2.89	3.01	-4.18
				3700	39.41	37.70	4.53	2.98	3.12	-4.31
B	7/6/2020	3500	Head	3500	38.25	37.93	0.84	2.78	2.91	-4.59
				3600	38.10	37.82	0.75	2.88	3.01	-4.38
				3700	37.90	37.70	0.53	2.97	3.12	-4.66
B	7/6/020	750	Head	750	43.58	41.96	3.86	0.90	0.89	0.86
				660	43.75	42.42	3.13	0.86	0.89	-2.77
				800	43.24	41.71	3.68	0.92	0.90	2.38
B	7/10/2020	3500	Head	3500	39.39	37.93	3.85	2.78	2.91	-4.69
				3600	39.21	37.82	3.69	2.87	3.01	-4.77
				3700	39.01	37.70	3.47	2.96	3.12	-4.92
B	7/13/2020	3500	Head	3500	37.71	37.93	-0.58	2.78	2.91	-4.59
				3600	37.56	37.82	-0.68	2.87	3.01	-4.64
				3700	37.39	37.70	-0.83	2.97	3.12	-4.82
B	7/13/2020	750	Head	750	40.71	41.96	-2.98	0.93	0.89	3.63
				660	41.00	42.42	-3.35	0.89	0.89	0.11
				800	40.48	41.71	-2.94	0.94	0.90	4.96
B	7/17/2020	3500	Head	3500	37.73	37.93	-0.53	2.87	2.91	-1.36
				3600	37.49	37.82	-0.86	2.97	3.01	-1.39
				3700	37.27	37.70	-1.14	3.07	3.12	-1.64
B	7/20/2020	3500	Head	3500	39.67	37.93	4.59	2.77	2.91	-4.83
				3600	39.52	37.82	4.51	2.86	3.01	-4.97
				3700	39.35	37.70	4.37	2.96	3.12	-4.95
B	7/25/2020	3500	Head	3500	39.59	37.93	4.38	2.77	2.91	-4.79
				3600	39.44	37.82	4.30	2.87	3.01	-4.77
				3700	39.25	37.70	4.11	2.97	3.12	-4.76
B	7/29/2020	3500	Head	3500	39.82	37.93	4.98	2.84	2.91	-2.46
				3600	39.63	37.82	4.80	2.93	3.01	-2.72
				3700	39.42	37.70	4.56	3.03	3.12	-2.70
B	8/2/2020	3500	Head	3500	38.27	37.93	0.90	2.89	2.91	-0.88
				3600	38.15	37.82	0.88	2.99	3.01	-0.89
				3700	37.87	37.70	0.45	3.09	3.12	-0.87
B	8/6/2020	3500	Head	3500	37.80	37.93	-0.34	2.78	2.91	-4.38
				3600	37.59	37.82	-0.60	2.88	3.01	-4.58
				3700	37.39	37.70	-0.83	2.98	3.12	-4.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
B	8/10/2020	3500	Head	3500	37.91	37.93	-0.05	2.81	2.91	-3.66
				3600	37.77	37.82	-0.12	2.92	3.01	-3.28
				3700	37.63	37.70	-0.19	3.01	3.12	-3.47
B	8/11/2020	3900	Head	3900	36.42	37.47	-2.81	3.21	3.32	-3.37
				3700	36.72	37.70	-2.60	3.02	3.12	-3.02
				4000	36.30	37.36	-2.84	3.38	3.42	-1.17
B	8/14/2020	3500	Head	3500	38.62	37.93	1.82	2.81	2.91	-3.63
				3600	38.35	37.82	1.41	2.90	3.01	-3.85
				3700	38.08	37.70	1.00	2.98	3.12	-4.31
B	8/14/2020	3900	Head	3900	37.86	37.47	1.03	3.19	3.32	-3.88
				3700	38.08	37.70	1.00	2.98	3.12	-4.37
				4000	37.58	37.36	0.59	3.30	3.42	-3.72
B	8/18/2020	3900	Head	3700	39.42	37.70	4.56	3.18	3.12	2.05
				3900	39.01	37.47	4.10	3.41	3.32	2.74
				4000	38.81	37.36	3.88	3.52	3.42	2.86
B	8/19/2020	3500	Head	3500	39.33	37.93	3.69	2.90	2.91	-0.47
				3600	39.16	37.82	3.56	3.00	3.01	-0.53
				3700	39.00	37.70	3.44	3.10	3.12	-0.46
B	8/24/2020	3500	Head	3500	39.34	37.93	3.72	2.78	2.91	-4.49
				3600	39.27	37.82	3.85	2.89	3.01	-4.21
				3700	39.12	37.70	3.76	2.99	3.12	-3.92
B	8/24/2020	3900	Head	3700	39.12	37.70	3.76	2.99	3.12	-3.92
				3900	38.67	37.47	3.19	3.17	3.32	-4.63
				4000	38.61	37.36	3.35	3.28	3.42	-4.33
B	9/1/2020	3900	Head	3700	38.94	37.70	3.29	3.22	3.12	3.33
				3900	38.43	37.47	2.55	3.45	3.32	3.77
				4000	38.26	37.36	2.41	3.55	3.42	3.82
B	9/5/2020	3900	Head	3700	37.90	37.70	0.53	3.16	3.12	1.24
				3900	37.43	37.47	-0.12	3.38	3.32	1.72
				4000	37.16	37.36	-0.53	3.50	3.42	2.33
B	9/5/2020	3500	Head	3500	38.32	37.93	1.03	2.96	2.91	1.59
				3600	38.07	37.82	0.67	3.07	3.01	1.79
				3700	37.90	37.70	0.53	3.16	3.12	1.24
B	9/9/2020	3900	Head	3700	38.66	37.70	2.54	3.00	3.12	-3.67
				3900	38.32	37.47	2.26	3.19	3.32	-3.97
				4000	38.18	37.36	2.20	3.30	3.42	-3.63

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
C	7/17/2020	750	Head	750	42.94	41.96	2.33	0.90	0.89	0.50
				660	43.28	42.42	2.02	0.86	0.89	-2.43
				800	42.70	41.71	2.39	0.91	0.90	1.99
C	7/17/2020	835	Head	835	42.66	41.50	2.80	0.92	0.90	2.64
				805	42.70	41.68	2.45	0.92	0.90	2.13
				850	42.67	41.50	2.82	0.93	0.92	1.40
C	7/20/2020	750	Head	750	41.78	41.96	-0.43	0.89	0.89	-0.64
				660	42.47	42.42	0.11	0.87	0.89	-1.36
				800	41.67	41.71	-0.08	0.92	0.90	2.81
C	7/20/2020	835	Head	835	41.68	41.50	0.43	0.93	0.90	3.79
				805	41.69	41.68	0.03	0.92	0.90	3.01
				850	41.63	41.50	0.31	0.94	0.92	2.78
C	7/23/2020	750	Head	750	39.93	41.96	-4.84	0.90	0.89	0.38
				660	40.63	42.42	-4.23	0.86	0.89	-2.51
				800	40.07	41.71	-3.92	0.91	0.90	1.58
C	7/23/2020	835	Head	835	39.97	41.50	-3.69	0.93	0.90	2.86
				805	40.05	41.68	-3.91	0.91	0.90	1.82
				850	39.91	41.50	-3.83	0.93	0.92	1.77
C	7/27/2020	750	Head	750	40.11	41.96	-4.41	0.88	0.89	-2.02
				660	40.44	42.42	-4.67	0.85	0.89	-4.35
				800	39.99	41.71	-4.11	0.89	0.90	-0.86
C	7/27/2020	835	Head	835	40.05	41.50	-3.49	0.90	0.90	0.14
				805	40.00	41.68	-4.03	0.89	0.90	-0.70
				850	40.05	41.50	-3.49	0.91	0.92	-0.90
C	7/31/2020	750	Head	750	42.16	41.96	0.47	0.89	0.89	0.18
				660	42.72	42.42	0.70	0.87	0.89	-2.26
				800	42.04	41.71	0.80	0.91	0.90	1.29
C	7/31/2020	835	Head	835	42.03	41.50	1.28	0.92	0.90	2.21
				805	42.02	41.68	0.82	0.91	0.90	1.45
				850	42.04	41.50	1.30	0.93	0.92	1.13
C	8/2/2020	1900	Head	1900	39.34	40.00	-1.65	1.44	1.40	3.14
				1850	39.05	40.00	-2.38	1.41	1.40	0.86
				1920	39.34	40.00	-1.65	1.45	1.40	3.64
C	8/4/2020	750	Head	750	40.77	41.96	-2.84	0.90	0.89	0.71
				660	41.84	42.42	-1.37	0.87	0.89	-1.63
				800	40.98	41.71	-1.74	0.91	0.90	1.71
C	8/4/2020	835	Head	835	40.62	41.50	-2.12	0.93	0.90	3.09
				805	40.91	41.68	-1.85	0.91	0.90	1.96
				850	40.65	41.50	-2.05	0.94	0.92	2.22

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
C	8/6/2020	1900	Head	1900	38.27	40.00	-4.32	1.43	1.40	1.93
				1850	38.38	40.00	-4.05	1.40	1.40	0.00
				1920	38.21	40.00	-4.48	1.44	1.40	2.79
C	8/8/2020	750	Head	750	41.03	41.96	-2.22	0.87	0.89	-2.62
				660	41.51	42.42	-2.15	0.84	0.89	-4.79
				800	40.93	41.71	-1.86	0.89	0.90	-0.97
C	8/8/2020	835	Head	835	40.92	41.50	-1.40	0.89	0.90	-1.31
				805	40.93	41.68	-1.80	0.89	0.90	-0.77
				850	40.90	41.50	-1.45	0.91	0.92	-0.96
C	8/10/2020	1900	Head	1900	38.15	40.00	-4.63	1.41	1.40	0.36
				1850	38.37	40.00	-4.08	1.38	1.40	-1.64
				1920	38.14	40.00	-4.65	1.42	1.40	1.14
C	8/12/2020	750	Head	750	41.34	41.96	-1.48	0.91	0.89	1.89
				660	41.97	42.42	-1.07	0.88	0.89	-0.86
				800	41.32	41.71	-0.92	0.92	0.90	3.03
C	8/12/2020	835	Head	835	41.28	41.50	-0.53	0.94	0.90	3.99
				805	41.30	41.68	-0.91	0.93	0.90	3.20
				850	41.27	41.50	-0.55	0.94	0.92	2.85
C	8/16/2020	750	Head	750	42.52	41.96	1.33	0.89	0.89	0.08
				660	42.93	42.42	1.19	0.86	0.89	-2.88
				800	42.33	41.71	1.50	0.91	0.90	1.57
C	8/16/2020	835	Head	835	42.23	41.50	1.76	0.92	0.90	2.57
				805	42.31	41.68	1.51	0.91	0.90	1.76
				850	42.19	41.50	1.66	0.93	0.92	1.31
C	8/17/2020	1750	Head	1750	41.71	40.08	4.05	1.32	1.37	-3.87
				1710	41.78	40.15	4.07	1.29	1.35	-4.19
				1755	41.70	40.08	4.05	1.32	1.37	-3.70
C	8/20/2020	750	Head	750	43.92	41.96	4.67	0.90	0.89	0.62
				660	44.35	42.42	4.54	0.87	0.89	-2.30
				800	43.78	41.71	4.98	0.92	0.90	2.09
C	8/20/2020	835	Head	835	39.61	41.50	-4.55	0.92	0.90	1.72
				805	39.70	41.68	-4.75	0.90	0.90	0.80
				850	39.56	41.50	-4.67	0.92	0.92	0.64
C	8/21/2020	2300	Head	2300	38.75	39.47	-1.83	1.70	1.66	2.24
				2350	38.92	39.38	-1.18	1.73	1.71	1.48
				2400	38.41	39.30	-2.26	1.76	1.75	0.19
C	8/24/2020	1750	Head	1750	40.60	40.08	1.29	1.36	1.37	-1.02
				1710	40.65	40.15	1.26	1.33	1.35	-1.07
				1755	40.59	40.08	1.28	1.37	1.37	-0.20

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
C	8/26/2020	2600	Head	2600	37.56	39.01	-3.72	1.94	1.96	-1.28
				2495	37.72	39.14	-3.64	1.85	1.85	0.13
				2690	37.41	38.90	-3.82	2.01	2.06	-2.55
C	9/1/2020	1750	Head	1750	38.47	40.08	-4.03	1.32	1.37	-3.94
				1710	38.52	40.15	-4.05	1.29	1.35	-4.04
				1755	38.46	40.08	-4.03	1.32	1.37	-3.92
C	9/3/2020	1900	Head	1900	39.76	40.00	-0.60	1.44	1.40	2.57
				1850	39.58	40.00	-1.05	1.42	1.40	1.29
				1920	39.58	40.00	-1.05	1.44	1.40	2.57
C	9/3/2020	2600	Head	2600	38.32	39.01	-1.77	1.94	1.96	-1.08
				2495	38.58	39.14	-1.44	1.86	1.85	0.67
				2690	38.49	38.90	-1.05	2.01	2.06	-2.45
C	9/6/2020	2600	Head	2600	38.12	39.01	-2.28	1.91	1.96	-2.51
				2495	38.26	39.14	-2.26	1.81	1.85	-2.25
				2690	37.93	38.90	-2.49	1.97	2.06	-4.30

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
D	6/29/2020	835	Head	835	42.72	41.50	2.94	0.92	0.90	2.29
				805	43.01	41.68	3.19	0.89	0.90	-1.06
				850	42.57	41.50	2.58	0.94	0.92	2.30
D	7/1/2020	750	Head	750	43.45	41.96	3.55	0.88	0.89	-0.99
				660	43.96	42.42	3.62	0.85	0.89	-4.18
				800	43.38	41.71	4.02	0.90	0.90	-0.02
D	7/6/2020	750	Head	750	41.16	41.96	-1.91	0.87	0.89	-2.52
				660	41.92	42.42	-1.19	0.84	0.89	-4.94
				800	41.27	41.71	-1.04	0.89	0.90	-0.93
D	7/7/2020	835	Head	835	41.60	41.50	0.24	0.93	0.90	2.84
				805	41.70	41.68	0.05	0.91	0.90	1.70
				850	41.53	41.50	0.07	0.93	0.92	1.64
D	7/9/2020	750	Head	750	40.58	41.96	-3.29	0.89	0.89	-0.40
				660	41.27	42.42	-2.72	0.86	0.89	-3.17
				800	40.62	41.71	-2.60	0.91	0.90	1.27
D	7/10/2020	1900	Head	1900	38.28	40.00	-4.30	1.46	1.40	3.93
				1850	38.40	40.00	-4.00	1.42	1.40	1.71
				1920	38.26	40.00	-4.35	1.47	1.40	5.00
D	7/13/2020	1900	Head	1900	38.23	40.00	-4.43	1.45	1.40	3.64
				1850	38.30	40.00	-4.25	1.42	1.40	1.36
				1920	38.23	40.00	-4.43	1.47	1.40	4.86
D	7/14/2020	1750	Head	1750	38.88	40.08	-3.01	1.36	1.37	-0.73
				1710	38.93	40.15	-3.03	1.34	1.35	-0.55
				1755	38.87	40.08	-3.01	1.36	1.37	-0.71
D	7/14/2020	835	Head	835	40.66	41.50	-2.02	0.90	0.90	0.00
				805	40.73	41.68	-2.28	0.89	0.90	-0.81
				850	40.61	41.50	-2.14	0.91	0.92	-0.34
D	7/17/2020	2600	Head	2600	37.15	39.01	-4.77	1.93	1.96	-1.64
				2495	37.28	39.14	-4.76	1.84	1.85	-0.36
				2690	36.96	38.90	-4.98	2.01	2.06	-2.35
D	7/21/2020	2600	Head	2600	38.96	39.01	-0.13	1.99	1.96	1.27
				2495	39.10	39.14	-0.11	1.87	1.85	1.15
				2690	38.77	38.90	-0.33	2.05	2.06	-0.41
D	7/25/2020	2600	Head	2600	39.98	39.01	2.48	1.99	1.96	1.52
				2495	40.12	39.14	2.50	1.89	1.85	2.45
				2690	39.80	38.90	2.32	2.06	2.06	0.03
D	7/29/2020	2600	Head	2600	37.70	39.01	-3.36	1.98	1.96	1.01
				2495	37.86	39.14	-3.28	1.89	1.85	2.07
				2690	37.55	38.90	-3.46	2.06	2.06	-0.12

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
D	8/2/2020	2600	Head	2600	38.04	39.01	-2.49	1.93	1.96	-1.59
				2495	38.13	39.14	-2.59	1.84	1.85	-0.58
				2690	37.87	38.90	-2.64	2.02	2.06	-1.92
D	8/6/2020	2600	Head	2600	39.42	39.01	1.05	1.91	1.96	-2.81
				2495	39.60	39.14	1.17	1.82	1.85	-1.71
				2690	39.25	38.90	0.91	1.98	2.06	-4.00
D	8/9/2020	2600	Head	2600	37.72	39.01	-3.31	1.97	1.96	0.50
				2495	37.86	39.14	-3.28	1.86	1.85	0.56
				2690	37.51	38.90	-3.57	2.02	2.06	-1.92
D	8/13/2020	2600	Head	2600	39.01	39.01	0.00	1.95	1.96	-0.62
				2495	39.20	39.14	0.14	1.86	1.85	0.61
				2690	38.80	38.90	-0.25	2.01	2.06	-2.40
D	8/15/2020	1900	Head	1900	38.64	40.00	-3.40	1.41	1.40	0.93
				1850	38.72	40.00	-3.20	1.38	1.40	-1.14
				1920	38.63	40.00	-3.42	1.42	1.40	1.36
D	8/19/2020	1900	Head	1900	38.71	40.00	-3.23	1.39	1.40	-0.50
				1850	38.89	40.00	-2.78	1.36	1.40	-2.57
				1920	38.77	40.00	-3.07	1.41	1.40	0.36
D	8/22/2020	2600	Head	2600	37.99	39.01	-2.62	1.95	1.96	-0.87
				2495	38.19	39.14	-2.44	1.86	1.85	0.72
				2690	37.85	38.90	-2.69	2.01	2.06	-2.21
D	8/26/2020	2600	Head	2600	37.49	39.01	-3.90	1.90	1.96	-2.96
				2495	37.66	39.14	-3.79	1.82	1.85	-1.82
				2690	37.34	38.90	-4.00	1.98	2.06	-3.91

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
E	6/29/2020	5200	Head	5200	35.21	35.99	-2.17	4.52	4.65	-2.77
				5150	35.37	36.05	-1.88	4.44	4.60	-3.43
				5350	34.95	35.82	-2.43	4.70	4.80	-2.24
E	7/6/2020	5200	Head	5200	34.50	35.99	-4.14	4.58	4.65	-1.50
				5150	34.59	36.05	-4.04	4.42	4.60	-3.82
				5350	34.25	35.82	-4.38	4.66	4.80	-2.99
E	7/9/2020	5200	Head	5200	35.17	35.99	-2.28	4.46	4.65	-4.15
				5150	35.29	36.05	-2.10	4.39	4.60	-4.67
				5350	34.91	35.82	-2.54	4.62	4.80	-3.80
E	7/13/2020	5200	Head	5200	35.58	35.99	-1.14	4.70	4.65	0.95
				5150	35.73	36.05	-0.88	4.62	4.60	0.44
				5350	35.29	35.82	-1.48	4.88	4.80	1.47
E	7/17/2020	1900	Head	1900	38.15	40.00	-4.63	1.46	1.40	3.93
				1850	38.25	40.00	-4.38	1.43	1.40	2.14
				1920	38.14	40.00	-4.65	1.47	1.40	4.93
E	7/20/2020	1900	Head	1900	38.12	40.00	-4.70	1.45	1.40	3.71
				1850	38.21	40.00	-4.48	1.43	1.40	1.86
				1920	38.11	40.00	-4.73	1.47	1.40	4.71
E	7/24/2020	1900	Head	1900	39.07	40.00	-2.33	1.45	1.40	3.29
				1850	39.13	40.00	-2.17	1.41	1.40	0.93
				1920	39.06	40.00	-2.35	1.46	1.40	4.50
E	7/28/2020	1900	Head	1900	38.23	40.00	-4.43	1.45	1.40	3.21
				1850	38.36	40.00	-4.10	1.41	1.40	1.00
				1920	38.20	40.00	-4.50	1.46	1.40	4.29
E	8/1/2020	1900	Head	1900	38.04	40.00	-4.90	1.45	1.40	3.29
				1850	38.12	40.00	-4.70	1.42	1.40	1.21
				1920	38.01	40.00	-4.98	1.46	1.40	4.07
E	8/5/2020	1900	Head	1900	38.12	40.00	-4.70	1.46	1.40	3.93
				1850	38.17	40.00	-4.58	1.43	1.40	2.21
				1920	38.05	40.00	-4.88	1.47	1.40	4.79
E	8/9/2020	1900	Head	1900	38.38	40.00	-4.05	1.45	1.40	3.64
				1850	38.43	40.00	-3.93	1.42	1.40	1.50
				1920	38.40	40.00	-4.00	1.46	1.40	4.36
E	8/13/2020	1900	Head	1900	38.86	40.00	-2.85	1.46	1.40	4.36
				1850	38.89	40.00	-2.78	1.43	1.40	2.21
				1920	38.83	40.00	-2.93	1.47	1.40	4.86
E	8/17/2020	1900	Head	1900	41.88	40.00	4.70	1.40	1.40	0.14
				1850	41.94	40.00	4.85	1.37	1.40	-2.29
				1920	41.88	40.00	4.70	1.41	1.40	0.71

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
E	8/21/2020	1900	Head	1900	39.51	40.00	-1.23	1.43	1.40	2.29
				1850	39.55	40.00	-1.13	1.40	1.40	-0.07
				1920	39.50	40.00	-1.25	1.44	1.40	2.86
E	9/3/2020	3500	Head	3700	37.37	37.70	-0.88	3.07	3.12	-1.35
				3900	36.99	37.47	-1.29	3.29	3.32	-0.99
				4000	36.81	37.36	-1.47	3.40	3.42	-0.82
E	9/8/2020	3500	Head	3700	37.22	37.70	-1.28	3.09	3.12	-0.97
				3900	36.81	37.47	-1.77	3.31	3.32	-0.48
				4000	36.61	37.36	-2.01	3.41	3.42	-0.38

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
F	6/29/2020	1750	Head	1750	40.13	40.08	0.11	1.39	1.37	1.24
				1710	40.17	40.15	0.06	1.36	1.35	1.31
				1755	40.11	40.08	0.08	1.39	1.37	1.33
F	7/6/2020	1750	Head	1750	40.64	40.08	1.39	1.36	1.37	-1.02
				1710	40.71	40.15	1.40	1.33	1.35	-1.22
				1755	40.63	40.08	1.38	1.36	1.37	-1.01
F	7/6/2020	1900	Head	1900	40.38	40.00	0.95	1.44	1.40	3.00
				1850	40.45	40.00	1.13	1.41	1.40	0.71
				1920	40.37	40.00	0.92	1.46	1.40	4.07
F	7/9/2020	1750	Head	1750	39.49	40.08	-1.48	1.37	1.37	-0.22
				1710	39.54	40.15	-1.51	1.34	1.35	-0.18
				1755	39.48	40.08	-1.49	1.37	1.37	-0.28
F	7/9/2020	1900	Head	1900	39.28	40.00	-1.80	1.45	1.40	3.57
				1850	39.35	40.00	-1.63	1.42	1.40	1.57
				1920	39.28	40.00	-1.80	1.47	1.40	4.71
F	7/13/2020	1750	Head	1750	40.61	40.08	1.31	1.33	1.37	-3.21
				1710	40.64	40.15	1.23	1.30	1.35	-3.15
				1755	40.60	40.08	1.31	1.33	1.37	-3.19
F	7/13/2020	1900	Head	1900	40.39	40.00	0.98	1.42	1.40	1.07
				1850	40.45	40.00	1.13	1.39	1.40	-1.00
				1920	40.40	40.00	1.00	1.43	1.40	2.29
F	7/16/2020	2300	Head	2300	37.62	39.47	-4.69	1.71	1.66	2.72
				2350	37.53	39.38	-4.71	1.75	1.71	2.18
				2400	37.44	39.30	-4.72	1.77	1.75	1.05
F	7/20/2020	2300	Head	2300	37.84	39.47	-4.14	1.71	1.66	2.78
				2350	37.74	39.38	-4.18	1.74	1.71	2.01
				2400	37.62	39.30	-4.27	1.78	1.75	1.62
F	7/24/2020	2300	Head	2300	38.84	39.47	-1.60	1.72	1.66	3.08
				2350	38.75	39.38	-1.61	1.75	1.71	2.24
				2400	38.66	39.30	-1.62	1.79	1.75	1.96
F	7/28/2020	2300	Head	2300	39.45	39.47	-0.06	1.71	1.66	2.90
				2350	39.35	39.38	-0.09	1.75	1.71	2.36
				2400	39.24	39.30	-0.14	1.79	1.75	2.19
F	8/1/2020	2300	Head	2300	38.69	39.47	-1.98	1.69	1.66	1.40
				2350	38.60	39.38	-1.99	1.72	1.71	0.90
				2400	38.47	39.30	-2.10	1.76	1.75	0.48
F	8/5/2020	2300	Head	2300	37.77	39.47	-4.31	1.72	1.66	3.56
				2350	37.66	39.38	-4.38	1.76	1.71	2.77
				2400	37.57	39.30	-4.39	1.79	1.75	1.96

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
F	8/9/2020	2300	Head	2300	38.84	39.47	-1.60	1.74	1.66	4.82
				2350	38.72	39.38	-1.69	1.78	1.71	4.47
				2400	38.69	39.30	-1.54	1.82	1.75	3.96
F	8/13/2020	2450	Head	2450	38.25	39.20	-2.42	1.77	1.80	-1.78
				2400	38.30	39.30	-2.54	1.73	1.75	-1.41
				2480	38.26	39.16	-2.30	1.78	1.83	-2.97
F	8/13/2020	2600	Head	2600	40.33	39.01	3.38	1.95	1.96	-0.87
				2495	40.44	39.14	3.31	1.86	1.85	0.45
				2690	40.13	38.90	3.17	2.01	2.06	-2.30
F	8/17/2020	2450	Head	2450	38.09	39.20	-2.83	1.75	1.80	-2.72
				2400	38.14	39.30	-2.94	1.71	1.75	-2.55
				2480	38.08	39.16	-2.76	1.76	1.83	-3.95
F	8/25/2020	5600	Head	5600	34.79	35.53	-2.09	5.12	5.06	1.26
				5500	35.07	35.65	-1.62	5.03	4.96	1.51
				5725	34.57	35.39	-2.32	5.28	5.19	1.73
F	9/10/2020	5600	Head	5600	34.22	35.53	-3.70	5.02	5.06	-0.74
				5500	34.41	35.65	-3.47	4.88	4.96	-1.59
				5725	33.97	35.39	-4.02	5.22	5.19	0.59
F	9/14/2020	5600	Head	5600	33.92	35.53	-4.54	4.90	5.06	-3.11
				5500	34.09	35.65	-4.37	4.79	4.96	-3.47
				5725	33.65	35.39	-4.92	5.06	5.19	-2.57

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
G	6/29/2020	2300	Head	2300	40.24	39.47	1.94	1.62	1.66	-2.87
				2350	40.05	39.38	1.69	1.67	1.71	-2.44
				2400	39.82	39.30	1.33	1.72	1.75	-1.81
G	6/29/2020	2450	Head	2450	39.67	39.20	1.20	1.77	1.80	-1.44
				2400	39.82	39.30	1.33	1.72	1.75	-1.81
				2480	39.61	39.16	1.14	1.80	1.83	-1.66
G	7/6/2020	2300	Head	2300	38.75	39.47	-1.83	1.61	1.66	-3.17
				2350	38.57	39.38	-2.07	1.66	1.71	-2.68
				2400	38.33	39.30	-2.46	1.72	1.75	-1.98
G	7/6/2020	2450	Head	2450	38.18	39.20	-2.60	1.77	1.80	-1.44
				2400	38.33	39.30	-2.46	1.72	1.75	-1.98
				2480	38.12	39.16	-2.66	1.80	1.83	-1.61
G	7/9/2020	2300	Head	2300	40.24	39.47	1.94	1.71	1.66	2.78
				2350	40.06	39.38	1.71	1.76	1.71	3.24
				2400	39.85	39.30	1.41	1.82	1.75	3.79
G	7/9/2020	2450	Head	2450	39.69	39.20	1.25	1.87	1.80	4.00
				2400	39.85	39.30	1.41	1.82	1.75	3.90
				2480	39.63	39.16	1.19	1.90	1.83	3.91
G	7/13/2020	2300	Head	2300	40.12	39.47	1.64	1.69	1.66	1.46
				2350	39.97	39.38	1.49	1.75	1.71	2.24
				2400	39.77	39.30	1.20	1.80	1.75	2.65
G	7/13/2020	2450	Head	2450	39.59	39.20	0.99	1.85	1.80	2.89
				2400	39.77	39.30	1.20	1.80	1.75	2.65
				2480	39.55	39.16	0.99	1.88	1.83	2.81
G	7/16/2020	2450	Head	2450	38.42	39.20	-1.99	1.82	1.80	1.28
				2400	38.59	39.30	-1.80	1.77	1.75	1.10
				2480	38.37	39.16	-2.02	1.86	1.83	1.23
G	7/21/2020	2450	Head	2450	37.35	39.20	-4.72	1.81	1.80	0.67
				2400	37.51	39.30	-4.55	1.76	1.75	0.36
				2480	37.30	39.16	-4.76	1.84	1.83	0.52
G	7/24/2020	2450	Head	2450	37.48	39.20	-4.39	1.86	1.80	3.50
				2400	37.64	39.30	-4.22	1.81	1.75	3.05
				2480	37.43	39.16	-4.42	1.90	1.83	3.41
G	7/28/2020	2450	Head	2450	38.75	39.20	-1.15	1.85	1.80	2.89
				2400	38.91	39.30	-0.98	1.80	1.75	2.76
				2480	38.66	39.16	-1.28	1.88	1.83	2.76
G	8/1/2020	2450	Head	2450	38.79	39.20	-1.05	1.74	1.80	-3.39
				2400	38.95	39.30	-0.88	1.69	1.75	-3.46
				2480	38.68	39.16	-1.23	1.77	1.83	-3.35

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
G	8/5/2020	2450	Head	2450	40.22	39.20	2.60	1.81	1.80	0.28
				2400	40.22	39.30	2.35	1.81	1.75	3.05
				2480	39.95	39.16	2.01	1.90	1.83	3.74
G	8/9/2020	2450	Head	2450	38.25	39.20	-2.42	1.86	1.80	3.22
				2400	38.40	39.30	-2.28	1.80	1.75	2.47
				2480	38.19	39.16	-2.48	1.88	1.83	2.49
G	8/13/2020	2450	Head	2450	38.49	39.20	-1.81	1.80	1.80	-0.17
				2400	38.66	39.30	-1.62	1.74	1.75	-0.66
				2480	38.44	39.16	-1.84	1.82	1.83	-0.79
G	8/18/2020	2450	Head	2450	39.15	39.20	-0.13	1.81	1.80	0.61
				2400	39.33	39.30	0.08	1.75	1.75	0.08
				2480	39.09	39.16	-0.18	1.83	1.83	-0.02
G	9/3/2020	2450	Head	2450	40.15	39.20	2.42	1.80	1.80	-0.22
				2400	40.32	39.30	2.60	1.74	1.75	-0.49
				2480	40.06	39.16	2.29	1.81	1.83	-1.01
G	9/11/2020	2450	Head	2450	38.43	39.20	-1.96	1.75	1.80	-2.89
				2400	38.54	39.30	-1.93	1.69	1.75	-3.41
				2480	38.32	39.16	-2.15	1.77	1.83	-3.57

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
H	6/29/2020	5600	Head	5600	34.34	35.53	-3.36	4.88	5.06	-3.54
				5500	34.49	35.65	-3.25	4.76	4.96	-4.01
				5725	34.12	35.39	-3.59	5.01	5.19	-3.36
H	6/29/2020	5800	Head	5800	33.98	35.30	-3.74	5.08	5.27	-3.55
				5700	34.14	35.42	-3.61	4.99	5.16	-3.44
				5850	33.93	35.30	-3.88	5.15	5.27	-2.37
H	7/6/2020	5600	Head	5600	34.94	35.53	-1.67	4.84	5.06	-4.39
				5500	35.09	35.65	-1.57	4.73	4.96	-4.58
				5725	34.75	35.39	-1.81	4.98	5.19	-4.09
H	7/6/2020	5800	Head	5800	34.66	35.30	-1.81	5.05	5.27	-4.10
				5700	34.79	35.42	-1.78	4.95	5.16	-4.21
				5850	34.60	35.30	-1.98	5.09	5.27	-3.36
H	7/9/2020	5600	Head	5600	36.29	35.53	2.13	4.88	5.06	-3.52
				5500	36.42	35.65	2.17	4.77	4.96	-3.75
				5725	36.10	35.39	2.00	5.02	5.19	-3.24
H	7/9/2020	5800	Head	5800	36.02	35.30	2.04	5.10	5.27	-3.28
				5700	36.14	35.42	2.03	4.99	5.16	-3.27
				5850	35.94	35.30	1.81	5.15	5.27	-2.35
H	7/13/2020	5600	Head	5600	34.29	35.53	-3.50	5.00	5.06	-1.13
				5500	34.43	35.65	-3.42	4.90	4.96	-1.23
				5700	34.09	35.39	-3.68	5.15	5.19	-0.83
H	7/13/2020	5800	Head	5800	33.99	35.30	-3.71	5.22	5.27	-0.95
				5700	34.13	35.42	-3.64	5.12	5.16	-0.92
				5850	33.93	35.30	-3.88	5.27	5.27	-0.04
H	7/17/2020	2600	Head	2600	39.56	39.01	1.41	1.96	1.96	-0.11
				2495	39.89	39.14	1.91	1.84	1.85	-0.68
				2690	39.23	38.90	0.86	2.06	2.06	-0.07
H	7/20/2020	2600	Head	2600	39.03	39.01	0.05	2.04	1.96	3.87
				2495	39.36	39.14	0.55	1.91	1.85	3.21
				2690	38.68	38.90	-0.56	2.14	2.06	3.72
H	7/24/2020	5250	Head	5250	36.85	35.93	2.55	4.62	4.70	-1.73
				5150	37.07	36.05	2.84	4.53	4.60	-1.60
				5350	36.67	35.82	2.38	4.72	4.80	-1.76
H	7/24/2020	5600	Head	5600	36.22	35.53	1.93	4.93	5.06	-2.51
				5500	36.38	35.65	2.05	4.83	4.96	-2.68
				5725	36.00	35.39	1.72	5.07	5.19	-2.24
H	7/24/2020	5750	Head	5750	35.94	35.36	1.63	5.10	5.21	-2.28
				5700	36.06	35.42	1.81	5.05	5.16	-2.14
				5850	35.81	35.30	1.44	5.19	5.27	-1.52

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
H	7/28/2020	5250	Head	5250	36.92	35.93	2.75	4.80	4.70	2.08
				5150	37.09	36.05	2.89	4.69	4.60	1.87
				5350	36.73	35.82	2.54	4.92	4.80	2.34
H	7/28/2020	5600	Head	5600	36.39	35.53	2.41	5.18	5.06	2.43
				5500	36.38	35.65	2.05	5.14	4.96	3.61
				5725	36.17	35.39	2.20	5.34	5.19	2.83
H	7/28/2020	5750	Head	5750	36.15	35.36	2.23	5.37	5.21	2.96
				5700	36.22	35.42	2.26	5.31	5.16	2.78
				5850	36.02	35.30	2.04	5.47	5.27	3.85
H	7/31/2020	5250	Head	5250	37.34	35.93	3.92	4.75	4.70	1.02
				5150	37.48	36.05	3.97	4.64	7.60	0.92
				5350	37.19	35.82	3.83	4.86	4.80	1.18
H	7/31/2020	5600	Head	5600	36.82	35.53	3.62	5.12	5.06	1.10
				5500	36.97	35.65	3.71	5.00	4.96	0.93
				5725	36.62	35.39	3.47	5.27	5.19	1.48
H	7/31/2020	5750	Head	5750	36.58	35.36	3.44	5.29	5.21	1.44
				5700	36.67	35.42	3.53	5.23	5.16	1.36
				5850	36.44	35.30	3.23	5.40	5.27	2.39
H	8/3/2020	5250	Head	5250	37.24	35.93	3.64	4.51	4.70	-4.11
				5150	37.38	36.05	3.70	4.43	4.60	-3.67
				5350	37.06	35.82	3.46	4.60	4.80	-4.36
H	8/3/2020	5600	Head	5600	36.77	35.53	3.48	4.93	5.06	-2.63
				5500	37.12	35.65	4.13	4.81	4.96	-3.04
				5725	36.57	35.39	3.33	5.14	5.19	-1.02
H	8/3/2020	5750	Head	5750	36.81	35.36	4.09	5.16	5.21	-1.13
				5700	36.46	35.42	2.94	4.96	5.16	-3.94
				5850	36.37	35.30	3.03	5.34	5.27	1.35
H	8/7/2020	5250	Head	5250	36.93	35.93	2.77	4.70	4.70	0.04
				5150	37.10	36.05	2.92	4.58	4.60	-0.37
				5350	36.75	35.82	2.60	4.81	4.80	0.07
H	8/7/2020	5600	Head	5600	36.49	35.53	2.69	5.08	5.06	0.41
				5500	36.64	35.65	2.78	5.00	4.96	0.79
				5725	36.34	35.39	2.68	5.25	5.19	1.21
H	8/7/2020	5750	Head	5750	36.39	35.36	2.90	5.29	5.21	1.41
				5700	36.35	35.42	2.63	5.19	5.16	0.59
				5850	36.14	35.30	2.38	5.37	5.27	1.80

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
H	8/10/2020	5250	Head	5250	36.89	35.93	2.66	4.54	4.70	-3.49
				5150	37.01	36.05	2.67	4.44	4.60	-3.52
				5350	36.77	35.82	2.65	4.63	4.80	-3.65
H	8/10/2020	5600	Head	5600	36.47	35.53	2.63	4.85	5.06	-4.19
				5500	36.59	35.65	2.64	4.73	4.96	-4.52
				5725	36.30	35.39	2.57	4.96	5.19	-4.47
H	8/10/2020	5750	Head	5750	36.24	35.36	2.48	4.98	5.21	-4.46
				5700	36.31	35.42	2.51	4.93	5.16	-4.45
				5850	36.09	35.30	2.24	5.08	5.27	-3.61
H	8/14/2020	5250	Head	5250	36.80	35.93	2.41	4.62	4.70	-1.66
				5150	36.94	36.05	2.48	4.52	4.60	-1.76
				5350	36.66	35.82	2.35	4.73	4.80	-1.47
H	8/14/2020	5600	Head	5600	36.35	35.53	2.30	4.98	5.06	-1.68
				5500	36.37	35.65	2.03	4.93	4.96	-0.50
				5725	36.16	35.39	2.17	5.12	5.19	-1.31
H	8/14/2020	5750	Head	5750	36.09	35.36	2.06	5.15	5.21	-1.28
				5700	36.19	35.42	2.17	5.09	5.16	-1.50
				5850	35.96	35.30	1.87	5.25	5.27	-0.32
H	8/18/2020	5250	Head	5250	37.14	35.93	3.36	4.88	4.70	3.76
				5150	37.32	36.05	3.53	4.74	4.60	3.03
				5350	36.96	35.82	3.19	4.95	4.80	2.99
H	8/18/2020	5600	Head	5600	36.59	35.53	2.97	5.21	5.06	3.00
				5500	36.73	35.65	3.04	5.13	4.96	3.45
				5725	36.42	35.39	2.91	5.36	5.19	3.25
H	8/18/2020	5750	Head	5750	36.37	35.36	2.85	5.42	5.21	3.86
				5700	36.47	35.42	2.97	5.30	5.16	2.70
				5850	36.22	35.30	2.61	5.48	5.27	3.97
H	9/10/2020	5250	Head	5250	36.45	35.93	1.44	4.64	4.70	-1.28
				5150	36.63	36.05	1.62	4.53	4.60	-1.45
				5350	36.30	35.82	1.34	4.74	4.80	-1.42
H	9/10/2020	5750	Head	5750	35.79	35.36	1.21	5.17	5.21	-0.76
				5700	35.87	35.42	1.27	5.11	5.16	-0.94
				5850	35.67	35.30	1.05	5.28	5.27	0.09

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
1	7/27/2020	2300	Head	2300	37.84	39.47	-4.14	1.71	1.66	2.96
				2350	37.80	39.38	-4.02	1.75	1.71	2.65
				2400	37.79	39.30	-3.83	1.77	1.75	1.05

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
2	7/17/2020	2600	Head	2600	37.74	39.01	-3.26	1.91	1.96	-2.91
				2495	37.70	39.14	-3.69	1.84	1.85	-0.68
				2690	37.46	38.90	-3.70	1.98	2.06	-3.66
2	7/21/2020	2600	Head	2600	39.35	39.01	0.87	1.92	1.96	-2.05
				2495	39.32	39.14	0.45	1.83	1.85	-1.28
				2690	39.11	38.90	0.55	2.00	2.06	-2.94
2	7/25/2020	2600	Head	2600	39.95	39.01	2.41	1.96	1.96	-0.16
				2495	40.06	39.14	2.34	1.87	1.85	0.94
				2690	39.76	38.90	2.22	2.04	2.06	-1.04
2	7/29/2020	2600	Head	2600	39.57	39.01	1.43	1.92	1.96	-1.94
				2495	39.71	39.14	1.45	1.84	1.85	-0.41
				2690	39.40	38.90	1.29	1.99	2.06	-3.37
2	8/1/2020	2600	Head	2600	39.46	39.01	1.15	1.90	1.96	-3.27
				2495	39.57	39.14	1.09	1.81	1.85	-1.87
				2690	39.25	38.90	0.91	1.98	2.06	-3.71
2	8/5/2020	2600	Head	2600	37.14	39.01	-4.80	1.92	1.96	-2.40
				2495	37.26	39.14	-4.81	1.83	1.85	-1.01
				2690	37.02	38.90	-4.83	1.99	2.06	-3.23
2	8/8/2020	2600	Head	2600	40.16	39.01	2.95	1.88	1.96	-3.98
				2495	40.24	39.14	2.80	1.79	1.85	-3.17
				2690	40.00	38.90	2.83	1.97	2.06	-4.20
2	8/10/2020	2450	Head	2450	39.46	39.20	0.66	1.86	1.80	3.44
				2400	39.50	39.30	0.52	1.81	1.75	3.05
				2480	39.48	39.16	0.81	1.87	1.83	1.83
2	8/12/2020	2600	Head	2600	37.66	39.01	-3.46	1.93	1.96	-1.64
				2495	37.68	39.14	-3.74	1.83	1.85	-0.90
				2690	37.44	38.90	-3.75	2.01	2.06	-2.45
2	8/15/2020	2600	Head	2600	37.43	39.01	-4.05	1.92	1.96	-2.40
				2495	37.58	39.14	-3.99	1.83	1.85	-0.95
				2690	37.27	38.90	-4.18	1.98	2.06	-3.81
2	8/19/2020	2600	Head	2600	37.72	39.01	-3.31	1.95	1.96	-0.87
				2495	37.92	39.14	-3.13	1.86	1.85	0.56
				2690	37.52	38.90	-3.54	2.02	2.06	-2.16

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
3	7/17/2020	1750	Head	1750	38.80	40.08	-3.20	1.34	1.37	-2.19
				1710	38.85	40.15	-3.23	1.32	1.35	-2.11
				1755	38.79	40.08	-3.21	1.34	1.37	-2.17
3	7/21/2020	5200	Head	5200	35.19	35.99	-2.22	4.53	4.65	-2.69
				5150	35.23	36.05	-2.27	4.48	4.60	-2.65
				5350	34.88	35.82	-2.62	4.70	4.80	-2.17
3	7/21/2020	5600	Head	5600	34.48	35.53	-2.97	4.95	5.06	-2.12
				5500	34.65	35.65	-2.80	4.84	4.96	-2.38
				5725	34.19	35.39	-3.39	5.12	5.19	-1.33
3	7/21/2020	5800	Head	5800	34.10	35.30	-3.40	5.20	5.27	-1.31
				5700	34.29	35.42	-3.19	5.08	5.16	-1.64
				5850	34.03	35.30	-3.60	5.24	5.27	-0.49
3	7/25/2020	5250	Head	5250	34.73	35.93	-3.35	4.59	4.70	-2.47
				5150	34.95	36.05	-3.04	4.48	4.60	-2.56
				5350	34.60	35.82	-3.40	4.70	4.80	-2.15
3	7/25/2020	5600	Head	5600	34.27	35.53	-3.56	4.95	5.06	-2.24
				5500	34.41	35.65	-3.47	4.84	4.96	-2.44
				5725	34.01	35.39	-3.90	5.10	5.19	-1.72
3	7/25/2020	5800	Head	5800	33.93	35.30	-3.88	5.17	5.27	-1.84
				5700	34.10	35.42	-3.73	5.06	5.16	-1.99
				5850	33.86	35.30	-4.08	5.21	5.27	-1.16
3	7/29/2020	5250	Head	5250	35.73	35.93	-0.57	4.62	4.70	-1.79
				5150	35.90	36.05	-0.41	4.50	4.60	-2.26
				5350	35.54	35.82	-0.78	4.74	4.80	-1.26
3	9/4/2020	2600	Head	2600	37.97	39.01	-2.67	1.93	1.96	-1.74
				2495	38.12	39.14	-2.61	1.84	1.85	-0.41
				2690	37.80	38.90	-2.82	2.00	2.06	-3.03
3	9/7/2020	2600	Head	2600	39.01	39.01	0.00	1.96	1.96	-0.16
				2495	39.28	39.14	0.35	1.88	1.85	1.64
				2690	38.84	38.90	-0.15	2.04	2.06	-0.99

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
4	7/17/2020	835	Head	835	41.10	41.50	-0.96	0.91	0.90	1.22
				805	41.21	41.68	-1.13	0.90	0.90	0.75
				850	41.04	41.50	-1.11	0.92	0.92	0.12
4	7/17/2020	750	Head	750	40.84	41.96	-2.67	0.88	0.89	-0.96
				660	40.76	42.42	-3.92	0.87	0.89	-1.52
				800	40.25	41.71	-3.49	0.89	0.90	-1.11
4	7/19/2020	750	Head	750	41.28	41.96	-1.62	0.87	0.89	-2.04
				660	41.22	42.42	-2.84	0.84	0.89	-4.78
				800	41.04	41.71	-1.59	0.89	0.90	-1.02
4	7/21/2020	835	Head	835	40.56	41.50	-2.27	0.93	0.90	3.60
				805	40.58	41.68	-2.64	0.92	0.90	3.01
				850	40.54	41.50	-2.31	0.94	0.92	2.51
4	7/22/2020	750	Head	750	42.54	41.96	1.38	0.92	0.89	2.72
				660	42.47	42.42	0.11	0.90	0.89	1.63
				800	42.15	41.71	1.07	0.94	0.90	4.27
4	7/25/2020	835	Head	835	39.08	41.50	-5.83	0.85	0.90	-6.02
				805	39.05	41.68	-6.31	0.82	0.90	-8.34
				850	39.09	41.50	-5.81	0.85	0.92	-7.10
4	7/27/2020	750	Head	750	41.30	41.96	-1.58	0.87	0.89	-2.23
				660	41.76	42.42	-1.56	0.85	0.89	-4.49
				800	41.35	41.71	-0.85	0.89	0.90	-1.08
4	7/29/2020	835	Head	835	38.60	41.50	-6.99	0.90	0.90	-0.40
				805	38.70	41.68	-7.15	0.89	0.90	-0.86
				850	38.57	41.50	-7.06	0.90	0.92	-1.66
4	7/31/2020	750	Head	750	42.05	41.96	0.21	0.92	0.89	3.45
				660	42.23	42.42	-0.46	0.89	0.89	0.28
				800	41.71	41.71	0.01	0.93	0.90	3.19
4	8/2/2020	835	Head	835	40.84	41.50	-1.59	0.94	0.90	4.00
				805	40.78	41.68	-2.16	0.93	0.90	3.69
				850	40.77	41.50	-1.76	0.94	0.92	2.34
4	8/4/2020	750	Head	750	42.48	41.96	1.24	0.89	0.89	0.20
				660	42.93	42.42	1.19	0.87	0.89	-1.77
				800	42.22	41.71	1.23	0.91	0.90	1.94
4	8/5/2020	835	Head	835	41.20	41.50	-0.72	0.93	0.90	3.46
				805	41.24	41.68	-1.05	0.92	0.90	2.60
				850	41.17	41.50	-0.80	0.94	0.92	2.30
4	8/9/2020	835	Head	835	40.22	41.50	-3.08	0.90	0.90	0.50
				805	40.15	41.68	-3.67	0.89	0.90	-0.88
				850	40.26	41.50	-2.99	0.91	0.92	-0.51
4	8/10/2020	750	Head	750	40.95	41.96	-2.41	0.88	0.89	-1.48
				660	41.04	42.42	-3.26	0.85	0.89	-4.50
				800	40.65	41.71	-2.53	0.90	0.90	-0.11

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
4	8/13/2020	835	Head	835	41.96	41.50	1.11	0.92	0.90	2.11
				805	41.99	41.68	0.75	0.91	0.90	1.40
				850	41.19	41.50	-0.75	0.92	0.92	0.85
4	8/16/2020	750	Head	750	40.43	41.96	-3.65	0.92	0.89	3.32
				660	40.99	42.42	-3.38	0.89	0.89	0.57
				800	40.43	41.71	-3.06	0.94	0.90	4.48
4	8/17/2020	835	Head	835	41.01	41.50	-1.18	0.94	0.90	3.91
				805	41.06	41.68	-1.49	0.93	0.90	3.10
				850	40.99	41.50	-1.23	0.94	0.92	2.60
4	8/17/2020	1750	Head	1750	40.45	40.08	0.91	1.34	1.37	-2.41
				1710	40.52	40.15	0.93	1.32	1.35	-2.33
				1755	40.44	40.08	0.91	1.34	1.37	-2.32
4	8/19/2020	2600	Head	2600	38.48	39.01	-1.36	1.96	1.96	-0.26
				2495	38.64	39.14	-1.29	1.86	1.85	0.67
				2690	38.29	38.90	-1.56	2.03	2.06	-1.43
4	8/24/2020	1900	Head	1900	41.20	40.00	3.00	1.46	1.40	4.14
				1850	41.25	40.00	3.13	1.43	1.40	2.00
				1920	41.16	40.00	2.90	1.47	1.40	4.79
4	9/7/2020	1900	Head	1900	40.42	40.00	1.05	1.38	1.40	-1.43
				1850	40.41	40.00	1.02	1.35	1.40	-3.29
				1920	40.39	40.00	0.98	1.39	1.40	-1.00
4	9/4/2020	1900	Head	1900	38.54	40.00	-3.65	1.44	1.40	2.57
				1850	38.65	40.00	-3.38	1.41	1.40	0.79
				1920	38.50	40.00	-3.75	1.45	1.40	3.29

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
5	7/17/2020	750	Head	750	41.56	41.96	-0.96	0.88	0.89	-1.31
				660	41.52	42.42	-2.13	0.84	0.89	-4.82
				800	41.24	41.71	-1.12	0.89	0.90	-0.47
5	7/17/2020	835	Head	835	41.15	41.50	-0.84	0.90	0.90	0.54
				805	41.23	41.68	-1.08	0.89	0.90	-0.35
				850	41.11	41.50	-0.94	0.91	0.92	-0.37
5	7/19/2020	2600	Head	2600	40.12	39.01	2.84	1.90	1.96	-3.07
				2495	40.22	39.14	2.75	1.82	1.85	-1.33
				2690	39.94	38.90	2.68	1.99	2.06	-3.47
5	7/23/2020	2600	Head	2600	37.88	39.01	-2.90	1.94	1.96	-1.28
				2495	37.97	39.14	-3.00	1.86	1.85	0.34
				2690	37.64	38.90	-3.23	2.02	2.06	-1.72
5	7/27/2020	2600	Head	2600	40.34	39.01	3.41	1.89	1.96	-3.63
				2495	40.49	39.14	3.44	1.79	1.85	-3.12
				2690	40.19	38.90	3.32	1.96	2.06	-4.93
5	7/31/2020	2600	Head	2600	40.76	39.01	4.48	1.90	1.96	-3.37
				2495	40.92	39.14	4.54	1.81	1.85	-2.09
				2690	40.64	38.90	4.48	1.96	2.06	-4.93
5	8/4/2020	2600	Head	2600	37.59	39.01	-3.64	1.95	1.96	-0.67
				2495	37.83	39.14	-3.35	1.83	1.85	-0.90
				2690	37.40	38.90	-3.85	2.00	2.06	-2.74
5	8/10/2020	1900	Head	1900	40.80	40.00	2.00	1.42	1.40	1.43
				1850	40.92	40.00	2.30	1.39	1.40	-0.86
				1920	40.77	40.00	1.93	1.43	1.40	2.29

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
6	7/16/2020	1900	Head	1900	39.23	40.00	-1.93	1.35	1.40	-3.57
				1850	39.21	40.00	-1.98	1.33	1.40	-4.86
				1920	39.17	40.00	-2.08	1.36	1.40	-3.21
6	7/20/2020	1900	Head	1900	41.67	40.00	4.18	1.44	1.40	3.14
				1850	41.74	40.00	4.35	1.42	1.40	1.07
				1920	41.67	40.00	4.18	1.46	1.40	4.21
6	7/24/2020	1900	Head	1900	38.20	40.00	-4.50	1.43	1.40	1.79
				1850	38.30	40.00	-4.25	1.41	1.40	0.50
				1920	38.11	40.00	-4.73	1.44	1.40	2.50
6	7/28/2020	1900	Head	1900	40.26	40.00	0.65	1.39	1.39	-0.64
				1850	40.33	40.00	0.82	1.36	1.36	-2.79
				1920	40.26	40.00	0.65	1.40	1.40	0.29
6	8/1/2020	1900	Head	1900	38.22	40.00	-4.45	1.45	1.40	3.29
				1850	38.33	40.00	-4.18	1.41	1.40	0.79
				1920	38.19	40.00	-4.53	1.45	1.40	3.71
6	8/5/2020	1900	Head	1900	38.37	40.00	-4.08	1.45	1.40	3.71
				1850	38.43	40.00	-3.93	1.43	1.40	1.79
				1920	38.33	40.00	-4.18	1.46	1.40	4.21
6	8/10/2020	1900	Head	1900	38.87	40.00	-2.83	1.43	1.40	2.43
				1850	38.93	40.00	-2.68	1.41	1.40	0.79
				1920	38.85	40.00	-2.88	1.45	1.40	3.79
6	8/11/2020	1900	Head	1900	39.06	40.00	-2.35	1.44	1.40	2.50
				1850	39.16	40.00	-2.10	1.41	1.40	0.86
				1920	39.01	40.00	-2.48	1.45	1.40	3.21

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
8	7/28/2020	2600	Head	2600	38.62	39.01	-1.00	1.92	1.96	-2.05
				2495	39.09	39.14	-0.14	1.86	1.85	0.61
				2690	38.67	38.90	-0.58	2.03	2.06	-1.67
8	8/3/2020	2600	Head	2600	39.96	39.01	2.43	1.94	1.96	-1.33
				2495	40.11	39.14	2.47	1.85	1.85	-0.09
				2690	39.78	38.90	2.27	2.02	2.06	-1.92
8	8/7/2020	835	Head	835	40.44	41.50	-2.55	0.89	0.90	-1.27
				805	40.46	41.68	-2.93	0.88	0.90	-2.32
				850	40.42	41.50	-2.60	0.89	0.92	-2.20
8	8/10/2020	835	Head	835	39.56	41.50	-4.67	0.91	0.90	1.01
				805	39.61	41.68	-4.97	0.90	0.90	0.37
				850	39.51	41.50	-4.80	0.91	0.92	-0.07

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L1	7/16/2020	3500	Head	3500	38.01	37.93	0.21	2.90	2.91	-0.43
				3400	38.14	38.04	0.25	2.81	2.81	0.10
				3600	37.68	37.82	-0.36	3.00	3.01	-0.59
L1	7/16/2020	3700	Head	3700	37.46	37.70	-0.64	3.09	3.12	-0.84
				3500	38.01	37.93	0.21	2.90	2.91	-0.43
				3600	37.68	37.82	-0.36	3.00	3.01	-0.59
L1	7/20/2020	1900	Head	1900	41.77	40.00	4.43	1.41	1.40	0.79
				1850	41.85	40.00	4.63	1.35	1.40	-3.86
				1920	41.88	40.00	4.70	1.41	1.40	0.71
L1	7/20/2020	3500	Head	3500	37.51	37.93	-1.11	2.80	2.91	-3.87
				3700	37.03	37.70	-1.78	2.97	3.12	-4.60
				3600	37.23	37.82	-1.55	2.89	3.01	-4.18
L1	7/24/2020	1900	Head	1900	40.06	40.00	0.15	1.42	1.40	1.29
				1850	40.10	40.00	0.25	1.38	1.40	-1.14
				1920	40.01	40.00	0.02	1.43	1.40	1.86
L1	7/24/2020	3500	Head	3500	36.93	37.93	-2.64	2.98	2.91	2.32
				3700	36.39	37.70	-3.48	3.08	3.12	-1.26
				3600	36.44	37.82	-3.64	3.03	3.01	0.50
L1	7/29/2020	3500	Head	3500	39.10	37.93	3.09	3.02	2.91	3.69
				3700	38.49	37.70	2.09	3.18	3.12	1.92
				3600	38.63	37.82	2.15	3.10	3.01	2.89
L1	7/30/2020	2300	Head	2300	38.88	39.47	-1.50	1.67	1.66	0.14
				2350	38.81	39.38	-1.46	1.71	1.71	-0.16
				2400	38.75	39.30	-1.39	1.74	1.75	-0.72
L1	8/3/2020	2300	Head	2300	40.05	39.47	1.46	1.69	1.66	1.40
				2350	39.93	39.38	1.38	1.72	1.71	0.72
				2400	39.83	39.30	1.36	1.75	1.75	0.02
L1	8/4/2020	3500	Head	3500	37.48	37.93	-1.19	2.90	2.91	-0.40
				3600	37.21	37.82	-1.60	3.00	3.01	-0.39
				3700	36.90	37.70	-2.13	3.11	3.12	-0.14
L1	8/6/2020	3500	Head	3500	38.92	37.93	2.61	2.78	2.91	-4.59
				3700	38.51	37.70	2.14	3.00	3.12	-3.63
				3600	38.71	37.82	2.37	2.89	3.01	-4.08
L1	8/10/2020	3500	Head	3500	39.67	37.93	4.59	2.81	2.91	-3.42
				3700	39.35	37.70	4.37	2.97	3.12	-4.63
				3600	39.55	37.82	4.59	2.89	3.01	-4.01
L1	8/14/2020	3500	Head	3500	38.99	37.93	2.80	2.86	2.91	-1.87
				3700	38.68	37.70	2.60	3.05	3.12	-2.06
				38.85	38.85	37.82	2.74	2.95	3.01	-2.02

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L1	8/19/2020	3500	Head	3500	39.40	37.93	3.88	2.90	2.91	-0.54
				3700	39.02	37.70	3.50	3.10	3.12	-0.65
				3600	39.20	37.82	3.66	3.00	3.01	-0.59
L1	8/24/2020	3500	Head	3500	36.47	37.93	-3.85	2.81	2.91	-3.42
				3700	36.16	37.70	-4.09	2.98	3.12	-4.50
				3600	36.47	37.82	-3.56	2.90	3.01	-3.88
L1	9/5/2020	3500	Head	3500	36.61	37.93	-3.48	3.00	2.91	2.93
				3700	36.35	37.70	-3.58	3.21	3.12	2.98
				3600	36.44	37.82	-3.64	3.10	3.01	2.92

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L2	7/16/2020	5200	Head	5200	35.16	35.99	-2.31	4.69	4.65	0.73
				5150	35.18	36.05	-2.41	4.65	4.60	1.05
				5350	34.90	35.82	-2.57	4.86	4.80	1.16
L2	7/16/2020	5600	Head	5600	34.47	35.53	-2.99	5.08	5.06	0.35
				5500	34.63	35.65	-2.86	4.98	4.96	0.45
				5725	34.18	35.39	-3.42	5.26	5.19	1.31
L2	7/16/2020	5800	Head	5800	34.02	35.30	-3.63	5.35	5.27	1.50
				5700	34.29	35.42	-3.19	5.22	5.16	1.13
				5850	34.04	35.30	-3.57	5.41	5.27	2.62
L2	7/21/2020	5200	Head	5200	35.43	35.99	-1.56	4.44	4.65	-4.64
				5150	35.49	36.05	-1.55	4.38	4.60	-4.74
				5350	35.13	35.82	-1.92	4.60	4.80	-4.26
L2	7/21/2020	5600	Head	5600	34.76	35.53	-2.18	4.86	5.06	-4.02
				5500	34.92	35.65	-2.04	4.74	4.96	-4.44
				5725	34.47	35.39	-2.60	5.02	5.19	-3.30
L2	7/21/2020	5800	Head	5800	34.39	35.30	-2.58	5.10	5.27	-3.30
				5700	34.56	35.42	-2.43	4.98	5.16	-3.63
				5850	34.32	35.30	-2.78	5.14	5.27	-2.50
L2	7/25/2020	5200	Head	5200	36.42	35.99	1.19	4.46	4.65	-4.15
				5150	36.52	36.05	1.31	4.40	4.60	-4.45
				5350	36.19	35.82	1.04	4.64	4.80	-3.44
L2	7/25/2020	5600	Head	5600	35.90	35.53	1.03	4.88	5.06	-3.54
				5500	36.04	35.65	1.10	4.76	4.96	-3.91
				5725	35.67	35.39	0.79	5.04	5.19	-2.95
L2	7/25/2020	5800	Head	5800	35.58	35.30	0.79	5.11	5.27	-3.11
				5700	35.77	35.42	0.99	4.99	5.16	-3.28
				5850	35.49	35.30	0.54	5.17	5.27	-1.92
L2	7/29/2020	5200	Head	5200	35.98	35.99	-0.03	4.43	4.65	-4.75
				5150	36.02	36.05	-0.08	4.38	4.60	-4.76
				5350	35.68	35.82	-0.39	4.61	4.80	-4.15
L2	7/29/2020	5600	Head	5600	35.30	35.53	-0.66	4.86	5.06	-3.96
				5500	35.47	35.65	-0.50	4.74	4.96	-4.31
				5725	35.04	35.39	-0.99	5.03	5.19	-3.13
L2	7/29/2020	5800	Head	5800	34.92	35.30	-1.08	5.11	5.27	-3.09
				5700	35.13	35.42	-0.82	4.99	5.16	-3.42
				5850	34.85	35.30	-1.27	5.15	5.27	-2.22
L2	8/1/2020	5200	Head	5200	34.97	35.99	-2.83	4.46	4.65	-4.02
				5150	35.01	36.05	-2.88	4.43	4.60	-3.78
				5350	34.66	35.82	-3.24	4.64	4.80	-3.49
L2	8/1/2020	5600	Head	5600	34.27	35.53	-3.56	4.89	5.06	-3.46
				5500	34.43	35.65	-3.42	4.78	4.96	-3.65
				5725	34.01	35.39	-3.90	5.05	5.19	-2.64
L2	8/1/2020	5800	Head	5800	33.93	35.30	-3.88	5.13	5.27	-2.68
				5700	34.10	35.42	-3.73	5.02	5.16	-2.86
				5850	33.85	35.30	-4.11	5.17	5.27	-1.92

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L2	8/6/2020	5200	Head	5200	37.22	35.99	3.42	4.61	4.65	-0.88
				5150	37.26	36.05	3.36	4.56	4.60	-0.78
				5350	36.96	35.82	3.19	4.78	4.80	-0.61
L2	8/6/2020	5600	Head	5600	36.26	35.53	2.04	5.08	5.06	0.39
				5500	36.53	35.65	2.47	4.94	4.96	-0.38
				5725	35.89	35.39	1.41	5.26	5.19	1.46
L2	8/6/2020	5800	Head	5800	35.80	35.30	1.42	5.36	5.27	1.75
				5700	36.00	35.42	1.64	5.22	5.16	1.09
				5850	35.77	35.30	1.33	5.41	5.27	2.64
L2	8/10/2020	5200	Head	5200	35.30	35.99	-1.92	4.58	4.65	-1.63
				5150	35.34	36.05	-1.96	4.53	4.60	-1.58
				5350	35.00	35.82	-2.29	4.75	4.80	-1.05
L2	8/10/2020	5600	Head	5600	34.60	35.53	-2.63	5.00	5.06	-1.17
				5500	34.76	35.65	-2.49	4.89	4.96	-1.35
				5725	34.32	35.39	-3.03	5.17	5.19	-0.43
L2	8/10/2020	5800	Head	5800	34.22	35.30	-3.06	5.24	5.27	-0.49
				5700	34.42	35.42	-2.82	5.13	5.16	-0.63
				5850	34.18	35.30	-3.17	5.29	5.27	0.34
L2	8/14/2020	5200	Head	5200	35.23	35.99	-2.11	4.54	4.65	-2.36
				5150	35.24	36.05	-2.24	4.52	4.60	-1.67
				5350	34.85	35.82	-2.71	4.68	4.80	-2.51
L2	8/14/2020	5600	Head	5600	34.24	35.53	-3.64	4.94	5.06	-2.40
				5500	34.45	35.65	-3.36	4.83	4.96	-2.58
				5725	33.89	35.39	-4.24	5.13	5.19	-1.20
L2	8/14/2020	5800	Head	5800	33.87	35.30	-4.05	5.23	5.27	-0.85
				5700	34.00	35.42	-4.01	5.09	5.16	-1.35
				5850	33.75	35.30	-4.39	5.26	5.27	-0.28
L2	8/18/2020	5200	Head	5200	35.78	35.99	-0.58	4.59	4.65	-1.25
				5150	35.91	36.05	-0.38	4.53	4.60	-1.63
				5350	35.52	35.82	-0.83	4.77	4.80	-0.80
L2	8/18/2020	5600	Head	5600	35.09	35.53	-1.25	5.05	5.06	-0.30
				5500	35.27	35.65	-1.06	4.93	4.96	-0.62
				5725	34.86	35.39	-1.50	5.20	5.19	0.25
L2	8/18/2020	5800	Head	5800	34.73	35.30	-1.61	5.28	5.27	0.23
				5700	34.90	35.42	-1.47	5.16	5.16	0.03
				5850	34.63	35.30	-1.90	5.34	5.27	1.35
L2	8/19/2020	2600	Head	2600	37.85	39.01	-2.98	1.94	1.96	-0.98
				2495	37.95	39.14	-3.05	1.84	1.85	-0.36
				2690	37.68	38.90	-3.13	2.02	2.06	-2.06
L2	8/24/2020	2600	Head	2600	37.63	39.01	-3.54	1.90	1.96	-3.42
				2495	37.78	39.14	-3.48	1.82	1.85	-1.82
				2690	37.40	38.90	-3.85	1.97	2.06	-4.34

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L2	9/1/2020	2600	Head	2600	40.60	39.01	4.07	2.01	1.96	2.49
				2495	40.66	39.14	3.87	1.94	1.85	4.78
				2690	40.33	38.90	3.68	2.10	2.06	1.77
L2	9/5/2020	2600	Head	2600	39.99	39.01	2.51	2.03	1.96	3.25
				2495	40.11	39.14	2.47	1.93	1.85	4.35
				2690	39.74	38.90	2.17	2.13	2.06	3.23
L2	9/7/2020	2600	Head	2600	38.91	39.01	-0.26	2.02	1.96	2.69
				2495	39.12	39.14	-0.06	1.93	1.85	4.56
				2690	38.74	38.90	-0.40	2.10	2.06	2.07

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L3	7/16/2020	1750	Head	1750	40.48	40.08	0.99	1.33	1.37	-2.99
				1710	40.51	40.15	0.91	1.31	1.35	-2.85
				1755	40.48	40.08	1.01	1.33	1.37	-2.97
L3	7/20/2020	1750	Head	1750	39.47	40.08	-1.53	1.36	1.37	-0.44
				1710	39.62	40.15	-1.31	1.32	1.35	-2.26
				1755	39.49	40.08	-1.46	1.37	1.37	-0.35
L3	7/25/2020	1750	Head	1750	38.95	40.08	-2.83	1.32	1.37	-3.65
				1710	39.02	40.15	-2.81	1.30	1.35	-3.15
				1755	38.94	40.08	-2.84	1.32	1.37	-3.70
L3	7/29/2020	1750	Head	1750	38.17	40.08	-4.78	1.36	1.37	-0.51
				1710	38.27	40.15	-4.67	1.34	1.35	-0.18
				1755	38.17	40.08	-4.76	1.37	1.37	-0.50
L3	8/1/2020	1750	Head	1750	40.42	40.08	0.84	1.35	1.37	-1.53
				1710	40.48	40.15	0.83	1.33	1.35	-1.44
				1755	40.42	40.08	0.86	1.35	1.37	-1.44
L3	8/5/2020	2600	Head	2600	40.16	39.01	2.95	1.98	1.96	0.81
				2495	40.35	39.14	3.08	1.87	1.85	1.37
				2690	40.02	38.90	2.89	2.05	2.06	-0.31
L3	8/8/2020	2600	Head	2600	39.49	39.01	1.23	1.91	1.96	-2.71
				2495	39.59	39.14	1.14	1.82	1.85	-1.82
				2690	39.28	38.90	0.98	2.01	2.06	-2.64
L3	8/11/2020	1750	Head	1750	40.13	40.08	0.11	1.38	1.37	0.66
				1710	40.21	40.15	0.16	1.36	1.35	0.94
				1755	40.13	40.08	0.13	1.38	1.37	0.67
L3	8/11/2020	2300	Head	2300	40.48	39.47	2.55	1.73	1.66	3.80
				2350	40.36	39.38	2.48	1.77	1.71	3.82
				2400	40.23	39.30	2.37	1.81	1.75	3.27
L3	8/12/2020	2600	Head	2600	37.81	39.01	-3.08	2.01	1.96	2.34
				2495	37.88	39.14	-3.23	1.90	1.85	2.99
				2690	37.56	38.90	-3.44	2.09	2.06	1.48
L3	8/16/2020	2600	Head	2600	39.22	39.01	0.54	1.91	1.96	-2.56
				2495	39.38	39.14	0.60	1.82	1.85	-1.44
				2690	39.02	38.90	0.32	1.98	2.06	-3.86
L3	8/21/2020	3500	Head	3500	39.74	37.93	4.77	2.80	2.91	-3.90
				3600	39.56	37.82	4.61	2.89	3.01	-4.04
				3700	39.41	37.70	4.53	2.99	3.12	-4.18
L3	9/2/2020	3500	Head	3500	39.27	37.93	3.53	2.85	2.91	-2.15
				3400	39.39	38.04	3.54	2.75	2.81	-2.00
				3600	39.04	37.82	3.24	2.95	3.01	-2.22
L3	9/6/2020	3500	Head	3500	37.80	37.93	-0.34	2.85	2.91	-2.08
				3400	37.98	38.04	-0.17	2.78	2.81	-1.08
				3600	37.66	37.82	-0.41	2.94	3.01	-2.42

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L4	7/16/2020	3500	Head	3500	38.61	37.93	1.79	2.95	2.91	1.18
				3700	38.10	37.70	1.06	3.13	3.12	0.54
				3600	38.30	37.82	1.28	3.05	3.01	1.13
L4	7/20/2020	3500	Head	3500	37.30	37.93	-1.66	2.90	2.91	-0.33
				3600	36.93	37.82	-2.34	2.97	3.01	-1.46
				3700	36.73	37.70	-2.58	3.04	3.12	-2.51
L4	7/20/2020	1900	Head	1900	40.32	40.00	0.80	1.43	1.40	2.00
				1850	40.36	40.00	0.90	1.40	1.40	-0.29
				1920	40.24	40.00	0.60	1.45	1.40	3.50
L4	7/24/2020	1900	Head	1900	38.49	40.00	-3.78	1.39	1.40	-0.64
				1850	38.51	40.00	-3.73	1.36	1.40	-2.64
				1920	38.45	40.00	-3.87	1.40	1.40	-0.14
L4	7/24/2020	3500	Head	3500	38.16	37.93	0.61	3.02	2.91	3.62
				3600	37.68	37.82	-0.36	3.08	3.01	2.33
				3700	37.64	37.70	-0.16	3.13	3.12	0.31
L4	7/28/2020	1900	Head	1900	38.97	40.00	-2.58	1.43	1.40	2.29
				1850	39.03	40.00	-2.43	1.41	1.40	0.50
				1920	38.93	40.00	-2.68	1.44	1.40	2.79
L4	7/28/2020	3500	Head	3700	37.01	37.70	-1.83	3.00	3.12	-3.73
				3600	37.25	37.82	-1.50	2.91	3.01	-3.51
				3500	37.39	37.93	-1.42	2.80	2.91	-3.76
L4	8/1/2020	1900	Head	1900	40.21	40.00	0.53	1.41	1.40	0.64
				1850	40.26	40.00	0.65	1.36	1.40	-2.93
				1920	40.22	40.00	0.55	1.41	1.40	0.79
L4	8/3/2020	3500	Head	3500	39.67	37.93	4.59	2.80	2.91	-4.00
				3600	39.47	37.82	4.38	2.91	3.01	-3.38
				3700	39.30	37.70	4.24	3.03	3.12	-2.93
L4	8/6/2020	1900	Head	1900	40.14	40.00	0.35	1.44	1.40	3.07
				1850	40.23	40.00	0.57	1.42	1.40	1.43
				1920	40.06	40.00	0.15	1.45	1.40	3.86
L4	8/10//2020	3500	Head	3500	39.70	37.93	4.67	2.82	2.91	-3.15
				3600	39.49	37.82	4.43	2.93	3.01	-2.95
				3700	39.31	37.70	4.27	3.03	3.12	-2.83
L4	8/10//2020	1900	Head	1900	39.27	40.00	-1.82	1.43	1.40	2.38
				1850	39.37	40.00	-1.58	1.40	1.40	-0.14
				1920	39.24	40.00	-1.90	1.45	1.40	3.21
L4	8/12/2020	1750	Head	1750	38.32	40.08	-4.40	1.39	1.37	1.32
				1710	38.39	40.15	-4.37	1.34	1.35	-0.70
				1755	38.33	40.08	-4.36	1.40	1.37	1.69
L4	8/15/2020	1750	Head	1750	38.74	40.08	-3.35	1.34	1.37	-2.48
				1710	38.79	40.15	-3.38	1.31	1.35	-3.00
				1755	38.73	40.08	-3.36	1.34	1.37	-2.68
L4	8/19/2020	2600	Head	2600	37.16	39.01	-4.74	1.96	1.96	-0.37
				2495	37.39	39.14	-4.48	1.86	1.85	0.56
				2690	36.96	38.90	-4.98	2.03	2.06	-1.67

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L4	8/24/2020	1750	Head	1750	41.96	40.08	4.68	1.41	1.37	2.63
				1710	42.04	40.15	4.72	1.39	1.35	3.09
				1755	41.96	40.08	4.70	1.41	1.37	2.57
L4	9/2/2020	3500	Head	3500	36.50	37.93	-3.77	3.00	2.91	3.17
				3600	36.60	37.82	-3.21	3.11	3.01	3.22
				3700	36.12	37.70	-4.19	3.23	3.12	3.72
L4	9/7/2020	1750	Head	1750	38.99	40.08	-2.73	1.41	1.37	3.00
				1710	39.06	40.15	-2.71	1.39	1.35	3.16
				1755	38.99	40.08	-2.71	1.41	1.37	2.93
L4	9/7/2020	3500	Head	3500	39.30	37.93	3.61	2.84	2.91	-2.32
				3600	39.07	37.82	3.32	2.92	3.01	-3.12
				3700	39.07	37.70	3.63	3.01	3.12	-3.31

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
L6	7/17/2020	1750	Head	1750	39.62	40.08	-1.16	1.35	1.37	-1.61
				1710	39.68	40.15	-1.16	1.33	1.35	-1.37
				1755	39.60	40.08	-1.19	1.35	1.37	-1.66
L6	7/21/2020	1750	Head	1750	39.28	40.08	-2.01	1.32	1.37	-3.72
				1710	39.29	40.15	-2.13	1.30	1.35	-3.37
				1755	39.27	40.08	-2.01	1.32	1.37	-3.56
L6	7/27/2020	1750	Head	1750	38.88	40.08	-3.01	1.38	1.37	1.10
				1710	38.93	40.15	-3.03	1.39	1.35	3.31
				1755	38.88	40.08	-2.99	1.38	1.37	0.89
L6	7/31/2020	1750	Head	1750	39.36	40.08	-1.81	1.33	1.37	-3.14
				1710	39.46	40.15	-1.71	1.31	1.35	-2.78
				1755	39.36	40.08	-1.79	1.33	1.37	-3.05
L6	8/3/2020	2450	Head	2450	38.25	39.20	-2.42	1.73	1.80	-3.83
				2400	38.29	39.30	-2.56	1.69	1.75	-3.29
				2480	38.16	39.16	-2.56	1.74	1.83	-4.83
L6	8/5/2020	1750	Head	1750	38.25	40.08	-4.58	1.36	1.37	-0.36
				1710	38.27	40.15	-4.67	1.35	1.35	0.04
				1755	38.25	40.08	-4.56	1.37	1.37	-0.35
L6	8/7/2020	750	Head	750	40.20	41.96	-4.20	0.89	0.89	-0.24
				660	40.74	42.42	-3.97	0.89	0.89	0.74
				800	40.26	41.71	-3.47	0.90	0.90	0.80

This report shall not be reproduced without the written approval of UL Verification Services Inc.

8.2. System Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

System Performance Check Measurement Conditions:

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 ±0.2 mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
  For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 3 mm.
  For 5 GHz band - Distance between probe sensors and phantom surface was set to 2.5 mm
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

System Check Results

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within ±10% of the manufacturer calibrated dipole SAR target. Refer to Appendix B for the SAR System Check Plots.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
A	6/29/2020	Head	D2600V2 SN:1036	4/17/2021	6.000	60.00	56.53	6.14	2.700	27.00	25.23	7.02	
A	7/6/2020	Head	D2600V2 SN:1036	4/17/2021	5.900	59.00	56.53	4.37	2.670	26.70	25.23	5.83	
A	7/9/2020	Head	D2600V2 SN:1036	4/17/2021	5.990	59.90	56.53	5.96	2.680	26.80	25.23	6.22	
A	7/13/2020	Head	D2600V2 SN:1036	4/17/2021	5.810	58.10	56.53	2.78	2.600	26.00	25.23	3.05	
A	7/17/2020	Head	D3500V2 SN:1060	3/12/2021	7.060	70.60	64.89	8.80	2.700	27.00	24.80	8.87	1,2
A	7/17/2020	Head	D3700V2 SN:1039	5/11/2021	6.330	63.30	67.00	-5.52	2.330	23.30	24.10	-3.32	
A	7/21/2020	Head	D3500V2 SN:1060	3/12/2021	6.190	61.90	64.89	-4.61	2.380	23.80	24.80	-4.03	
A	7/21/2020	Head	D3700V2 SN:1039	5/11/2021	6.600	66.00	67.00	-1.49	2.450	24.50	24.10	1.66	
A	7/25/2020	Head	D3500V2 SN:1060	3/12/2021	6.090	60.90	64.89	-6.15	2.350	23.50	24.80	-5.24	
A	7/25/2020	Head	D3700V2 SN:1039	5/11/2021	6.250	62.50	67.00	-6.72	2.320	23.20	24.10	-3.73	3,4
A	7/25/2020	Head	D2600V2 SN:1006	10/14/2020	5.570	55.70	55.70	0.00	2.490	24.90	25.10	-0.80	
A	7/28/2020	Head	D3500V2 SN:1060	3/12/2021	6.670	66.70	64.89	2.79	2.560	25.60	24.80	3.23	
A	7/28/2020	Head	D3700V2 SN:1039	5/11/2021	6.770	67.70	67.00	1.04	2.520	25.20	24.10	4.56	
A	7/29/2020	Head	D2600V2 SN:1006	10/14/2020	5.740	57.40	55.70	3.05	2.560	25.60	25.10	1.99	
A	8/2/2020	Head	D2600V2 SN:1006	10/14/2020	5.510	55.10	55.70	-1.08	2.460	24.60	25.10	-1.99	
A	8/4/2020	Head	D3500V2 SN:1060	3/12/2021	6.960	69.60	64.89	7.26	2.670	26.70	24.80	7.66	
A	8/4/2020	Head	D3700V2 SN:1039	5/11/2021	7.100	71.00	67.00	5.97	2.630	26.30	24.10	9.13	
A	8/6/2020	Head	D2600V2 SN:1006	10/14/2020	5.930	59.30	55.70	6.46	2.660	26.60	25.10	5.98	
A	8/9/2020	Head	D2600V2 SN:1006	10/14/2020	6.010	60.10	55.70	7.90	2.680	26.80	25.10	6.77	5,6
A	8/11/2020	Head	D1900V2 SN:5d140	4/21/2021	4.180	41.80	38.77	7.82	2.130	21.30	19.90	7.04	7,8
A	8/13/2020	Head	D2600V2 SN:1036	4/17/2021	6.130	61.30	56.53	8.44	2.750	27.50	25.23	9.00	9,10
A	8/18/2020	Head	D2600V2 SN:1036	4/17/2021	5.330	53.30	56.53	-5.71	2.370	23.70	25.23	-6.06	
A	8/19/2020	Head	D3700V2 SN:1039	5/11/2021	6.910	69.10	67.00	3.13	2.580	25.80	24.10	7.05	
A	8/19/2020	Head	D3900V2 SN:1052	8/3/2021	7.120	71.20	70.10	1.57	2.540	25.40	24.30	4.53	
A	8/24/2020	Head	D3900V2 SN:1052	8/3/2021	6.750	67.50	70.10	-3.71	2.420	24.20	24.30	-0.41	11,12
A	9/1/2020	Head	D3900V2 SN:1052	8/3/2021	7.140	71.40	70.10	1.85	2.540	25.40	24.30	4.53	
A	9/5/2020	Head	D3900V2 SN:1052	8/3/2021	6.930	69.30	70.10	-1.14	2.490	24.90	24.30	2.47	
A	9/9/2020	Head	D3900V2 SN:1052	8/3/2021	7.190	71.90	70.10	2.57	2.610	26.10	24.30	7.41	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
B	6/29/2020	Head	D750V3 SN:1071	11/20/2020	0.869	8.69	8.52	2.00	0.574	5.74	5.56	3.24	
B	7/1/2020	Head	D3500V2 SN:1060	3/12/2021	6.410	64.10	64.89	-1.22	2.520	25.20	24.80	1.61	
B	7/6/2020	Head	D3500V2 SN:1060	3/12/2021	6.660	66.60	64.89	2.64	2.610	26.10	24.80	5.24	
B	7/6/2020	Head	D3700V2 SN:1039	5/11/2021	6.380	63.80	67.00	-4.78	2.460	24.60	24.10	2.07	
B	7/6/2020	Head	D750V3 SN:1071	11/20/2020	0.891	8.91	8.52	4.58	0.591	5.91	5.56	6.29	13,14
B	7/10/2020	Head	D3500V2 SN:1011	4/17/2021	6.820	68.20	68.87	-0.97	2.630	26.30	26.47	-0.64	
B	7/10/2020	Head	D3700V2 SN:1039	5/11/2021	6.750	67.50	67.00	0.75	2.510	25.10	24.10	4.15	
B	7/13/2020	Head	D3500V2 SN:1060	3/12/2021	6.410	64.10	64.89	-1.22	2.440	24.40	24.80	-1.61	
B	7/13/2020	Head	D3700V2 SN:1039	5/11/2021	6.910	69.10	67.00	3.13	2.570	25.70	24.10	6.64	
B	7/13/2020	Head	D750V3 SN:1071	11/20/2020	0.887	8.87	8.52	4.11	0.585	5.85	5.56	5.22	
B	7/17/2020	Head	D3500V2 SN:1060	3/12/2021	6.580	65.80	64.89	1.40	2.520	25.20	24.80	1.61	
B	7/17/2020	Head	D3700V2 SN:1039	5/11/2021	6.770	67.70	67.00	1.04	2.530	25.30	24.10	4.98	
B	7/20/2020	Head	D3500V2 SN:1011	4/17/2021	6.610	66.10	68.87	-4.02	2.530	25.30	26.47	-4.42	
B	7/20/2020	Head	D3700V2 SN:1039	5/11/2021	6.620	66.20	67.00	-1.19	2.470	24.70	24.10	2.49	
B	7/25/2020	Head	D3500V2 SN:1060	3/12/2021	6.640	66.40	64.89	2.33	2.570	25.70	24.80	3.63	
B	7/25/2020	Head	D3700V2 SN:1039	5/11/2021	7.090	70.90	67.00	5.82	2.650	26.50	24.10	9.96	
B	7/29/2020	Head	D3700V2 SN:1039	5/11/2021	7.010	70.10	67.00	4.63	2.620	26.20	24.10	8.71	
B	7/29/2020	Head	D3500V2 SN:1060	3/12/2021	6.610	66.10	64.89	1.86	2.560	25.60	24.80	3.23	
B	8/2/2020	Head	D3500V2 SN:1060	3/12/2021	6.820	68.20	64.89	5.10	2.660	26.60	24.80	7.26	
B	8/2/2020	Head	D3700V2 SN:1039	5/11/2021	6.660	66.60	67.00	-0.60	2.510	25.10	24.10	4.15	
B	8/6/2020	Head	D3500V2 SN:1060	3/12/2021	6.030	60.30	64.89	-7.07	2.360	23.60	24.80	-4.84	15,16
B	8/6/2020	Head	D3700V2 SN:1039	5/11/2021	6.410	64.10	67.00	-4.33	2.430	24.30	24.10	0.83	
B	8/10/2020	Head	D3500V2 SN:1060	3/12/2021	6.060	60.60	64.89	-6.61	2.380	23.80	24.80	-4.03	
B	8/10/2020	Head	D3700V2 SN:1039	5/11/2021	6.640	66.40	67.00	-0.90	2.500	25.00	24.10	3.73	
B	8/11/2020	Head	D3900V2 SN:1052	8/3/2021	7.350	73.50	70.10	4.85	2.640	26.40	24.30	8.64	
B	8/14/2020	Head	D3500V2 SN:1060	3/12/2021	6.750	67.50	64.89	4.02	2.650	26.50	24.80	6.85	
B	8/14/2020	Head	D3700V2 SN:1039	5/11/2021	6.82	68.20	67.00	1.79	2.60	26.00	24.10	7.88	
B	8/14/2020	Head	D3900V2 SN:1052	8/3/2021	7.040	70.40	70.10	0.43	2.570	25.70	24.30	5.76	
B	8/18/2020	Head	D3900V2 SN:1052	8/3/2021	7.380	73.80	70.10	5.28	2.670	26.70	24.30	9.88	17,18
B	8/19/2020	Head	D3500V2 SN:1011	4/17/2021	7.540	75.40	68.87	9.48	2.910	29.10	26.47	9.94	19,20
B	8/19/2020	Head	D3700V2 SN:1039	5/11/2021	6.650	66.50	67.00	-0.75	2.550	25.50	24.10	5.81	
B	8/24/2020	Head	D3500V2 SN:1011	4/17/2021	7.370	73.70	68.87	7.01	2.900	29.00	26.47	9.56	
B	8/24/2020	Head	D3700V2 SN:1039	5/11/2021	6.080	60.80	67.00	-9.25	2.320	23.20	24.10	-3.73	21,22
B	8/24/2020	Head	D3900V2 SN:1052	8/3/2021	7.210	72.10	70.10	2.85	2.620	26.20	24.30	7.82	
B	9/1/2020	Head	D3900V2 SN:1052	8/3/2021	6.720	67.20	70.10	-4.14	2.520	25.20	24.30	3.70	
B	9/5/2020	Head	D3900V2 SN:1052	8/3/2021	7.060	70.60	70.10	0.71	2.660	26.60	24.30	9.47	
B	9/5/2020	Head	D3500V2 SN:1060	3/12/2021	6.450	64.50	64.89	-0.60	2.620	26.20	24.80	5.65	
B	9/5/2020	Head	D3700V2 SN:1039	5/11/2021	6.540	65.40	67.00	-2.39	2.590	25.90	24.10	7.47	
B	9/9/2020	Head	D3900V2 SN:1052	8/3/2021	6.920	69.20	70.10	-1.28	2.600	26.00	24.30	7.00	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
C	7/17/2020	Head	D750V3 SN:1071	11/20/2020	0.886	8.86	8.52	3.99	0.583	5.83	5.56	4.86	
C	7/17/2020	Head	D835V2 SN:4d142	8/23/2020	1.000	10.00	9.61	4.06	0.654	6.54	6.22	5.14	
C	7/20/2020	Head	D750V3 SN:1071	11/20/2020	0.855	8.55	8.52	0.35	0.561	5.61	5.56	0.90	
C	7/20/2020	Head	D835V2 SN:4d142	8/23/2020	1.040	10.40	9.61	8.22	0.672	6.72	6.22	8.04	
C	7/23/2020	Head	D750V3 SN:1071	11/20/2020	0.836	8.36	8.52	-1.88	0.547	5.47	5.56	-1.62	
C	7/23/2020	Head	D835V2 SN:4d142	8/23/2020	0.957	9.57	9.61	-0.42	0.623	6.23	6.22	0.16	
C	7/27/2020	Head	D750V3 SN:1071	11/20/2020	0.858	8.58	8.52	0.70	0.558	5.58	5.56	0.36	
C	7/27/2020	Head	D835V2 SN:4d142	8/23/2020	0.966	9.66	9.61	0.52	0.623	6.23	6.22	0.16	
C	7/31/2020	Head	D750V3 SN:1071	11/20/2020	0.835	8.35	8.52	-2.00	0.542	5.42	5.56	-2.52	
C	7/31/2020	Head	D835V2 SN:4d142	8/23/2020	1.050	10.50	9.61	9.26	0.639	6.39	6.22	2.73	23,24
C	8/2/2020	Head	D1900V2 SN:5d140	4/21/2021	3.980	39.80	38.77	2.66	2.040	20.40	19.90	2.51	
C	8/4/2020	Head	D750V3 SN:1071	11/20/2020	0.862	8.62	8.52	1.17	0.561	5.61	5.56	0.90	
C	8/4/2020	Head	D835V2 SN:4d142	8/23/2020	1.010	10.10	9.61	5.10	0.656	6.56	6.22	5.47	
C	8/6/2020	Head	D1900V2 SN:5d140	4/21/2021	3.940	39.40	38.77	1.62	2.060	20.60	19.90	3.52	
C	8/8/2020	Head	D750V3 SN:1071	11/20/2020	0.853	8.53	8.52	0.12	0.552	5.52	5.56	-0.72	
C	8/8/2020	Head	D835V2 SN:4d142	8/23/2020	0.955	9.55	9.61	-0.62	0.580	5.80	6.22	-6.75	
C	8/10/2020	Head	D1900V2 SN:5d140	4/21/2021	4.160	41.60	38.77	7.30	2.140	21.40	19.90	7.54	
C	8/12/2020	Head	D750V3 SN:1071	11/20/2020	0.899	8.99	8.52	5.52	0.583	5.83	5.56	4.86	
C	8/12/2020	Head	D835V2 SN:4d002	11/20/2020	1.030	10.30	9.78	5.32	0.663	6.63	6.37	4.08	
C	8/16/2020	Head	D750V3 SN:1071	11/20/2020	0.937	9.37	8.52	9.98	0.610	6.10	5.56	9.71	25,26
C	8/16/2020	Head	D835V2 SN:4d002	11/20/2020	1.060	10.60	9.78	8.38	0.682	6.82	6.37	7.06	27,28
C	8/17/2020	Head	D1750V2 SN:1053	10/10/2020	3.440	34.40	37.20	-7.53	1.830	18.30	19.60	-6.63	29,30
C	8/20/2020	Head	D750V3 SN:1071	11/20/2020	0.911	9.11	8.52	6.92	0.592	5.92	5.56	6.47	
C	8/20/2020	Head	D835V2 SN:4d002	11/20/2020	1.060	10.60	9.78	8.38	0.641	6.41	6.37	0.63	
C	8/21/2020	Head	D2300V2 SN:1002	4/17/2021	5.410	54.10	49.76	8.72	2.590	25.90	23.64	9.56	31,32
C	8/24/2020	Head	D1750V2 SN:1050	4/21/2021	3.310	33.10	35.51	-6.79	1.870	18.70	18.91	-1.11	33,34
C	8/26/2020	Head	D2600V2 SN:1006	10/14/2020	5.98	59.80	55.70	7.36	2.69	26.90	25.10	7.17	35,36
C	9/1/2020	Head	D1750V2 SN:1050	4/21/2021	3.460	34.60	35.51	-2.56	1.820	18.20	18.91	-3.75	
C	9/3/2020	Head	D1900V2 SN:5d140	4/21/2021	4.210	42.10	38.77	8.59	2.180	21.80	19.90	9.55	37,38
C	9/3/2020	Head	D2600V2 SN:1036	4/17/2021	5.170	51.70	56.53	-8.54	2.340	23.40	25.23	-7.25	39,40
C	9/6/2020	Head	D2600V2 SN:1036	4/17/2021	5.490	54.90	56.53	-2.88	2.460	24.60	25.23	-2.50	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
D	6/29/2020	Head	D835V2 SN:4d142	8/23/2020	0.931	9.31	9.61	-3.12	0.610	6.10	6.22	-1.93	41,42
D	7/1/2020	Head	D750V3 SN:1071	11/20/2020	0.788	7.88	8.52	-7.51	0.517	5.17	5.56	-7.01	
D	7/6/2020	Head	D750V3 SN:1071	11/20/2020	0.774	7.74	8.52	-9.15	0.512	5.12	5.56	-7.91	43,44
D	7/7/2020	Head	D835V2 SN:4d142	8/23/2020	0.990	9.90	9.61	3.02	0.648	6.48	6.22	4.18	
D	7/9/2020	Head	D750V3 SN:1071	11/20/2020	0.792	7.92	8.52	-7.04	0.522	5.22	5.56	-6.12	
D	7/10/2020	Head	D1900V2 SN:5d043	11/20/2020	4.080	40.80	40.40	0.99	2.100	21.00	21.10	-0.47	
D	7/13/2020	Head	D1900V2 SN:5d043	11/20/2020	4.090	40.90	40.40	1.24	2.110	21.10	21.10	0.00	45,46
D	7/14/202	Head	D1750V2 SN:1077	10/10/2020	3.540	35.40	37.00	-4.32	1.880	18.80	19.40	-3.09	47,48
D	7/14/2020	Head	D835V2 SN:4d142	8/23/2020	0.981	9.81	9.61	2.08	0.642	6.42	6.22	3.22	
D	7/17/2020	Head	D2600V2 SN:1036	4/17/2021	5.600	56.00	56.53	-0.94	2.520	25.20	25.23	-0.12	
D	7/21/2020	Head	D2600V2 SN:1006	10/14/2020	5.310	53.10	55.70	-4.67	2.400	24.00	25.10	-4.38	
D	7/25/2020	Head	D2600V2 SN:1006	10/14/2020	5.870	58.70	55.70	5.39	2.630	26.30	25.10	4.78	
D	7/29/2020	Head	D2600V2 SN:1006	10/14/2020	5.210	52.10	55.70	-6.46	2.340	23.40	25.10	-6.77	49,50
D	8/2/2020	Head	D2600V2 SN:1006	10/14/2020	5.620	56.20	55.70	0.90	2.500	25.00	25.10	-0.40	
D	8/6/2020	Head	D2600V2 SN:1006	10/14/2020	5.660	56.60	55.70	1.62	2.570	25.70	25.10	2.39	
D	8/9/2020	Head	D2600V2 SN:1006	10/14/2020	5.600	56.00	55.70	0.54	2.500	25.00	25.10	-0.40	
D	8/13/2020	Head	D2600V2 SN:1036	4/17/2021	5.870	58.70	56.53	3.84	2.620	26.20	25.23	3.84	
D	8/15/2020	Head	D1900V2 SN:5d140	4/21/2021	4.160	41.60	38.77	7.30	2.130	21.30	19.90	7.04	51,52
D	8/19/2020	Head	D1900V2 SN:5d140	4/21/2021	3.920	39.20	38.77	1.11	2.020	20.20	19.90	1.51	
D	8/22/2020	Head	D2600V2 SN:1036	4/17/2021	5.950	59.50	56.53	5.25	2.650	26.50	25.23	5.03	53,54
D	8/26/2020	Head	D2600V2 SN:1036	4/17/2021	5.700	57.00	56.53	0.83	2.670	26.70	25.23	5.83	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
E	6/29/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.760	77.60	79.20	-2.02	2.250	22.50	22.50	0.00	55,56
E	7/6/2020	Head	D5GHzV2 SN:1138 (5.2 GHz)	8/26/2020	8.010	80.10	80.30	-0.25	2.320	23.20	23.00	0.87	
E	7/9/2020	Head	D5GHzV2 SN:1138 (5.2 GHz)	8/26/2020	8.270	82.70	80.30	2.99	2.420	24.20	23.00	5.22	
E	7/13/2020	Head	D5GHzV2 SN:1138 (5.2 GHz)	8/26/2020	8.310	83.10	80.30	3.49	2.420	24.20	23.00	5.22	57,58
E	7/17/2020	Head	D1900V2 SN:5d140	4/21/2021	4.110	41.10	38.77	6.01	2.120	21.20	19.90	6.53	
E	7/20/2020	Head	D1900V2 SN:5d140	4/21/2021	4.200	42.00	38.77	8.33	2.150	21.50	19.90	8.04	
E	7/24/2020	Head	D1900V2 SN:5d140	4/21/2021	4.160	41.60	38.77	7.30	2.120	21.20	19.90	6.53	
E	7/28/2020	Head	D1900V2 SN:5d140	4/21/2021	4.240	42.40	38.77	9.36	2.170	21.70	19.90	9.05	59,60
E	8/1/2020	Head	D1900V2 SN:5d140	4/21/2021	4.150	41.50	38.77	7.04	2.120	21.20	19.90	6.53	
E	8/5/2020	Head	D1900V2 SN:5d140	4/21/2021	3.880	38.80	38.77	0.08	1.970	19.70	19.90	-1.01	
E	8/9/2020	Head	D1900V2 SN:5d140	4/21/2021	4.200	42.00	38.77	8.33	2.140	21.40	19.90	7.54	
E	8/13/2020	Head	D1900V2 SN:5d140	4/21/2021	4.030	40.30	38.77	3.95	2.050	20.50	19.90	3.02	
E	8/17/2020	Head	D1900V2 SN:5d140	4/21/2021	3.940	39.40	38.77	1.62	2.030	20.30	19.90	2.01	
E	8/21/2020	Head	D1900V2 SN:5d140	4/21/2021	3.990	39.90	38.77	2.91	2.040	20.40	19.90	2.51	
E	9/3/2020	Head	D3900V2 SN:1052	8/3/2021	6.630	66.30	70.10	-5.42	2.370	23.70	24.30	-2.47	61,62
E	9/8/2020	Head	D3900V2 SN:1052	8/3/2021	7.110	71.10	70.10	1.43	2.590	25.90	24.30	6.58	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
F	6/29/2020	Head	D1750V2 SN:1077	10/10/2020	3.820	38.20	37.00	3.24	2.030	20.30	19.40	4.64	63,64
F	7/6/2020	Head	D1750V2 SN:1050	4/21/2021	3.660	36.60	35.51	3.07	1.930	19.30	18.91	2.06	65,66
F	7/6/2020	Head	D1900V2 SN:5d163	10/14/2020	4.280	42.80	40.30	6.20	2.200	22.00	21.10	4.27	67,68
F	7/9/2020	Head	D1750V2 SN:1053	10/10/2020	3.630	36.30	37.20	-2.42	1.910	19.10	19.60	-2.55	69,70
F	7/9/2020	Head	D1900V2 SN:5d043	11/20/2020	4.260	42.60	40.40	5.45	2.180	21.80	21.10	3.32	71,72
F	7/13/2020	Head	D1750V2 SN:1077	10/10/2020	3.590	35.90	37.00	-2.97	1.900	19.00	19.40	-2.06	
F	7/13/2020	Head	D1900V2 SN:5d163	10/14/2020	4.150	41.50	40.30	2.98	2.130	21.30	21.10	0.95	
F	7/17/2020	Head	D2300V2 SN:1002	4/17/2021	4.900	49.00	49.76	-1.53	2.330	23.30	23.64	-1.44	
F	7/20/2020	Head	D2300V2 SN:1002	4/17/2021	5.110	51.10	49.76	2.69	2.430	24.30	23.64	2.79	
F	7/24/2020	Head	D2300V2 SN:1002	4/17/2021	5.350	53.50	49.76	7.52	2.540	25.40	23.64	7.45	
F	7/28/2020	Head	D2300V2 SN:1002	4/17/2021	5.370	53.70	49.76	7.92	2.560	25.60	23.64	8.29	73,74
F	8/1/2020	Head	D2300V2 SN:1002	4/17/2021	4.890	48.90	49.76	-1.73	2.350	23.50	23.64	-0.59	
F	8/5/2020	Head	D2300V2 SN:1002	4/17/2021	4.840	48.40	49.76	-2.73	2.260	22.60	23.64	-4.40	
F	8/9/2020	Head	D2300V2 SN:1002	4/17/2021	5.320	53.20	49.76	6.91	2.500	25.00	23.64	5.75	
F	8/13/2020	Head	D2450V2 SN:899	4/17/2021	4.800	48.00	51.75	-7.25	2.250	22.50	24.12	-6.72	
F	8/13/2020	Head	D2600V2 SN:1036	4/17/2021	5.650	56.50	56.53	-0.05	2.560	25.60	25.23	1.47	75,76
F	8/17/2020	Head	D2450V2 SN:899	4/17/2021	5.680	56.80	51.75	9.76	2.610	26.10	24.12	8.21	77,78
F	8/25/2020	Head	D5GHzV2 SN:1003 (5.60 GHz)	3/12/2021	8.400	84.00	79.80	5.26	2.400	24.00	22.50	6.67	
F	9/10/2020	Head	D5GHzV2 SN:1003 (5.60 GHz)	3/12/2021	7.200	72.00	79.80	-9.77	2.210	22.10	22.50	-1.78	79,80
F	9/14/2020	Head	D5GHzV2 SN:1003 (5.60 GHz)	3/12/2021	7.540	75.40	79.80	-5.51	2.320	23.20	22.50	3.11	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
G	6/29/2020	Head	D2300V2 SN:1058	10/14/2020	4.520	45.20	48.70	-7.19	2.150	21.50	23.70	-9.28	81,82
G	6/29/2020	Head	D2450V2 SN:899	4/17/2021	4.800	48.00	51.75	-7.25	2.200	22.00	24.12	-8.79	83,84
G	7/6/2020	Head	D2300V2 SN:1058	10/14/2020	4.540	45.40	48.70	-6.78	2.140	21.40	23.70	-9.70	
G	7/6/2020	Head	D2450V2 SN:706	5/8/2021	4.990	49.90	52.80	-5.49	2.270	22.70	24.60	-7.72	
G	7/9/2020	Head	D2300V2 SN:1058	10/14/2020	4.740	47.40	48.70	-2.67	2.300	23.00	23.70	-2.95	
G	7/9/2020	Head	D2450V2 SN:748	3/12/2021	5.170	51.70	54.14	-4.51	2.460	24.60	25.24	-2.54	
G	7/13/2020	Head	D2300V2 SN:1058	10/14/2020	4.650	46.50	48.70	-4.52	2.200	22.00	23.70	-7.17	
G	7/13/2020	Head	D2450V2 SN:706	5/8/2021	5.060	50.60	52.80	-4.17	2.300	23.00	24.60	-6.50	
G	7/16/2020	Head	D2450V2 SN:706	5/8/2021	5.600	56.00	52.80	6.06	2.660	26.60	24.60	8.13	
G	7/21/2020	Head	D2450V2 SN:706	5/8/2021	5.560	55.60	52.80	5.30	2.580	25.80	24.60	4.88	
G	7/24/2020	Head	D2450V2 SN:706	5/8/2021	5.750	57.50	52.80	8.90	2.570	25.70	24.60	4.47	85,86
G	7/28/2020	Head	D2450V2 SN:706	5/8/2021	5.460	54.60	52.80	3.41	2.490	24.90	24.60	1.22	
G	8/1/2020	Head	D2450V2 SN:706	5/8/2021	5.320	53.20	52.80	0.76	2.450	24.50	24.60	-0.41	
G	8/5/2020	Head	D2450V2 SN:706	5/8/2021	5.590	55.90	52.80	5.87	2.520	25.20	24.60	2.44	
G	8/9/2020	Head	D2450V2 SN:748	3/12/2021	5.360	53.60	54.14	-1.00	2.430	24.30	25.24	-3.72	
G	8/13/2020	Head	D2450V2 SN:748	3/12/2021	5.560	55.60	54.14	2.70	2.530	25.30	25.24	0.24	
G	8/18/2020	Head	D2450V2 SN:748	3/12/2021	5.540	55.40	54.14	2.33	2.530	25.30	25.24	0.24	
G	8/22/2020	Head	D2450V2 SN:748	3/12/2021	5.790	57.90	54.14	6.94	2.620	26.20	25.24	3.80	87,88
G	9/11/2020	Head	D2450V2 SN:899	4/17/2021	5.210	52.10	51.75	0.68	2.400	24.00	24.12	-0.50	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
H	6/29/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.270	82.70	83.80	-1.31	2.320	23.20	23.70	-2.11	
H	6/29/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.390	73.90	79.60	-7.16	2.080	20.80	22.40	-7.14	
H	7/6/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.820	88.20	83.80	5.25	2.460	24.60	23.70	3.80	
H	7/6/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.240	72.40	79.60	-9.05	2.030	20.30	22.40	-9.38	
H	7/9/2020	Head	D5GHzV2 SN:1138 (5.6 GHz)	8/26/2020	8.440	84.40	85.50	-1.29	2.390	23.90	24.50	-2.45	
H	7/9/2020	Head	D5GHzV2 SN:1138 (5.8 GHz)	8/26/2020	7.440	74.40	81.50	-8.71	2.120	21.20	23.10	-8.23	89,90
H	7/13/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.760	87.60	83.80	4.53	2.460	24.60	23.70	3.80	
H	7/13/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.950	79.50	79.60	-0.13	2.220	22.20	22.40	-0.89	
H	7/17/2020	Head	D2600V2 SN:1006	10/14/2020	5.220	52.20	55.70	-6.28	2.290	22.90	25.10	-8.76	91,92
H	7/20/2020	Head	D2600V2 SN:1006	10/14/2020	5.630	56.30	55.70	1.08	2.450	24.50	25.10	-2.39	
H	7/24/2020	Head	D5GHzV2 SN:1138 (5.2 GHz)	8/26/2020	7.520	75.20	80.30	-6.35	2.150	21.50	23.00	-6.52	
H	7/24/2020	Head	D5GHzV2 SN:1138 (5.6 GHz)	8/26/2020	8.000	80.00	85.50	-6.43	2.250	22.50	24.50	-8.16	
H	7/24/2020	Head	D5GHzV2 SN:1138 (5.8 GHz)	8/26/2020	8.220	82.20	81.50	0.86	2.330	23.30	23.10	0.87	
H	7/28/2020	Head	D5GHzV2 SN:1138 (5.2 GHz)	8/26/2020	7.610	76.10	80.30	-5.23	2.160	21.60	23.00	-6.09	
H	7/28/2020	Head	D5GHzV2 SN:1138 (5.6 GHz)	8/26/2020	8.110	81.10	85.50	-5.15	2.260	22.60	24.50	-7.76	
H	7/28/2020	Head	D5GHzV2 SN:1138 (5.8 GHz)	8/26/2020	7.950	79.50	81.50	-2.45	2.240	22.40	23.10	-3.03	
H	7/31/2020	Head	D5GHzV2 SN:1138 (5.2 GHz)	8/26/2020	7.990	79.90	80.30	-0.50	2.310	23.10	23.00	0.43	
H	7/31/2020	Head	D5GHzV2 SN:1138 (5.6 GHz)	8/26/2020	8.090	80.90	85.50	-5.38	2.280	22.80	24.50	-6.94	
H	7/31/2020	Head	D5GHzV2 SN:1138 (5.8 GHz)	8/26/2020	8.160	81.60	81.50	0.12	2.320	23.20	23.10	0.43	
H	8/3/2020	Head	D5GHzV2 SN:1138 (5.2 GHz)	8/26/2020	7.450	74.50	80.30	-7.22	2.130	21.30	23.00	-7.39	
H	8/3/2020	Head	D5GHzV2 SN:1138 (5.6 GHz)	8/26/2020	8.140	81.40	85.50	-4.80	2.310	23.10	24.50	-5.71	
H	8/3/2020	Head	D5GHzV2 SN:1138 (5.8 GHz)	8/26/2020	8.060	80.60	81.50	-1.10	2.280	22.80	23.10	-1.30	
H	8/7/2020	Head	D5GHzV2 SN:1138 (5.2 GHz)	8/26/2020	7.540	75.40	80.30	-6.10	2.160	21.60	23.00	-6.09	
H	8/7/2020	Head	D5GHzV2 SN:1138 (5.6 GHz)	8/26/2020	8.440	84.40	85.50	-1.29	2.400	24.00	24.50	-2.04	
H	8/7/2020	Head	D5GHzV2 SN:1138 (5.8 GHz)	8/26/2020	7.960	79.60	81.50	-2.33	2.280	22.80	23.10	-1.30	
H	8/10/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.540	75.40	79.20	-4.80	2.150	21.50	22.50	-4.44	
H	8/10/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	7.730	77.30	83.80	-7.76	2.180	21.80	23.70	-8.02	
H	8/10/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.170	71.70	79.60	-9.92	2.040	20.40	22.40	-8.93	
H	8/14/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.660	76.60	79.20	-3.28	2.210	22.10	22.50	-1.78	
H	8/14/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.520	85.20	83.80	1.67	2.420	24.20	23.70	2.11	
H	8/14/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	8.040	80.40	79.60	1.01	2.310	23.10	22.40	3.13	
H	8/18/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	8.060	80.60	79.20	1.77	2.330	23.30	22.50	3.56	
H	8/18/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.760	87.60	83.80	4.53	2.500	25.00	23.70	5.49	
H	8/18/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	8.430	84.30	79.60	5.90	2.430	24.30	22.40	8.48	
H	9/10/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.190	71.90	79.20	-9.22	2.090	20.90	22.50	-7.11	93,94
H	9/10/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.890	78.90	79.60	-0.88	2.300	23.00	22.40	2.68	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
1	7/27/2020	Head	D2300V2 SN:1002	4/17/2021	4.630	46.30	49.76	-6.95	2.360	23.60	23.64	-0.17	95,96

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
2	7/17/2020	Head	D2600V2 SN:1036	4/17/2021	6.050	60.50	56.53	7.02	2.720	27.20	25.23	7.81	
2	7/21/2020	Head	D2600V2 SN:1036	4/17/2021	6.130	61.30	56.53	8.44	2.750	27.50	25.23	9.00	97,98
2	7/25/2020	Head	D2600V2 SN:1036	4/17/2021	6.110	61.10	56.53	8.08	2.740	27.40	25.23	8.60	
2	7/29/2020	Head	D2600V2 SN:1036	4/17/2021	5.460	54.60	56.53	-3.41	2.440	24.40	25.23	-3.29	
2	8/1/2020	Head	D2600V2 SN:1036	4/17/2021	6.080	60.80	56.53	7.55	2.750	27.50	25.23	9.00	
2	8/5/2020	Head	D2600V2 SN:1036	4/17/2021	6.120	61.20	56.53	8.26	2.750	27.50	25.23	9.00	
2	8/8/2020	Head	D2600V2 SN:1036	4/17/2021	6.050	60.50	56.53	7.02	2.730	27.30	25.23	8.20	
2	8/10/2020	Head	D2450V2 SN:899	4/17/2021	4.750	47.50	51.75	-8.21	2.200	22.00	24.12	-8.79	99,100
2	8/12/2020	Head	D2600V2 SN:1036	4/17/2021	5.930	59.30	56.53	4.90	2.650	26.50	25.23	5.03	
2	8/15/2020	Head	D2600V2 SN:1006	10/14/2020	5.640	56.40	55.70	1.26	2.530	25.30	25.10	0.80	
2	8/19/2020	Head	D2600V2 SN:1006	10/14/2020	5.890	58.90	55.70	5.75	2.630	26.30	25.10	4.78	101,102

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
3	7/17/2020	Head	D1750V2 SN:1077	10/10/2020	3.780	37.80	37.00	2.16	2.000	20.00	19.40	3.09	103,104
3	7/21/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	8.390	83.90	79.20	5.93	2.420	24.20	22.50	7.56	
3	7/21/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	7.680	76.80	83.80	-8.35	2.210	22.10	23.70	-6.75	105,106
3	7/21/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	8.590	85.90	79.60	7.91	2.450	24.50	22.40	9.38	
3	7/25/2020	Head	D5GHzV2 SN:1003 (5.25 GHz)	3/12/2021	8.440	84.40	80.10	5.37	2.430	24.30	22.90	6.11	107,108
3	7/25/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.960	89.60	83.80	6.92	2.580	25.80	23.70	8.86	
3	7/25/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	8.540	85.40	79.60	7.29	2.440	24.40	22.40	8.93	
3	7/29/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	8.070	80.70	79.20	1.89	2.380	23.80	22.50	5.78	
3	9/4/2020	Head	D2600V2 SN:1036	4/17/2021	5.600	56.00	56.53	-0.94	2.510	25.10	25.23	-0.52	
3	9/7/2020	Head	D2600V2 SN:1036	4/17/2021	5.910	59.10	56.53	4.55	2.640	26.40	25.23	4.64	109,110

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
4	7/17/2020	Head	D835V2 SN:4d002	11/20/2020	1.040	10.40	9.78	6.34	0.672	6.72	6.37	5.49	
4	7/17/2020	Head	D750V3 SN:1071	11/20/2020	0.851	8.51	8.52	-0.12	0.556	5.56	5.56	0.00	
4	7/19/2020	Head	D750V3 SN:1071	11/20/2020	0.833	8.33	8.52	-2.23	0.540	5.40	5.56	-2.88	
4	7/21/2020	Head	D835V2 SN:4d002	11/20/2020	1.070	10.70	9.78	9.41	0.694	6.94	6.37	8.95	111,112
4	7/22/2020	Head	D750V3 SN:1071	11/20/2020	0.893	8.93	8.52	4.81	0.582	5.82	5.56	4.68	
4	7/25/2020	Head	D835V2 SN:4d002	11/20/2020	0.964	9.64	9.78	-1.43	0.625	6.25	6.37	-1.88	
4	7/27/2020	Head	D750V3 SN:1071	11/20/2020	0.815	8.15	8.52	-4.34	0.532	5.32	5.56	-4.32	
4	7/29/2020	Head	D835V2 SN:4d002	11/20/2020	1.070	10.70	9.78	9.41	0.692	6.92	6.37	8.63	
4	7/31/2020	Head	D750V3 SN:1071	11/20/2020	0.906	9.06	8.52	6.34	0.587	5.87	5.56	5.58	113,114
4	8/2/2020	Head	D835V2 SN:4d002	11/20/2020	1.070	10.70	9.78	9.41	0.689	6.89	6.37	8.16	
4	8/4/2020	Head	D750V3 SN:1071	11/20/2020	0.863	8.63	8.52	1.29	0.557	5.57	5.56	0.18	
4	8/5/2020	Head	D835V2 SN:4d002	11/20/2020	1.060	10.60	9.78	8.38	0.684	6.84	6.37	7.38	
4	8/9/2020	Head	D835V2 SN:4d002	11/20/2020	1.040	10.40	9.78	6.34	0.666	6.66	6.37	4.55	
4	8/10/2020	Head	D750V3 SN:1071	11/20/2020	0.865	8.65	8.52	1.53	0.563	5.63	5.56	1.26	
4	8/13/2020	Head	D835V2 SN:4d002	11/20/2020	1.030	10.30	9.78	5.32	0.665	6.65	6.37	4.40	
4	8/16/2020	Head	D750V3 SN:1071	11/20/2020	0.887	8.87	8.52	4.11	0.576	5.76	5.56	3.60	
4	8/17/2020	Head	D835V2 SN:4d002	11/20/2020	1.040	10.40	9.78	6.34	0.671	6.71	6.37	5.34	
4	8/17/2020	Head	D1750V2 SN:1053	10/10/2020	3.930	39.30	37.20	5.65	2.070	20.70	19.60	5.61	115,116
4	8/19/2020	Head	D2600V2 SN:1006	10/14/2020	5.100	51.00	55.70	-8.44	2.270	22.70	25.10	-9.56	117,118
4	8/24/2020	Head	D1900V2 SN:5d163	10/14/2020	4.220	42.20	40.30	4.71	2.180	21.80	21.10	3.32	
4	9/4/2020	Head	D1900V2 SN:5d163	10/14/2020	4.370	43.70	40.30	8.44	2.260	22.60	21.10	7.11	119,120
4	9/7/2020	Head	D1900V2 SN:5d163	10/14/2020	3.900	39.00	40.30	-3.23	2.030	20.30	21.10	-3.79	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
5	7/17/2020	Head	D750V3 SN:1071	11/20/2020	0.828	8.28	8.52	-2.82	0.543	5.43	5.56	-2.34	121,122
5	7/17/2020	Head	D835V2 SN:4d002	11/20/2020	0.912	9.12	9.78	-6.75	0.595	5.95	6.37	-6.59	123,124
5	7/19/2020	Head	D2600V2 SN:1006	10/14/2020	5.240	52.40	55.70	-5.92	2.340	23.40	25.10	-6.77	125,126
5	7/23/2020	Head	D2600V2 SN:1036	4/17/2021	6.110	61.10	56.53	8.08	2.720	27.20	25.23	7.81	
5	7/27/2020	Head	D2600V2 SN:1036	4/17/2021	5.410	54.10	56.53	-4.30	2.410	24.10	25.23	-4.48	
5	7/31/2020	Head	D2600V2 SN:1036	4/17/2021	6.030	60.30	56.53	6.67	2.680	26.80	25.23	6.22	
5	8/4/2020	Head	D2600V2 SN:1036	4/17/2021	6.170	61.70	56.53	9.15	2.750	27.50	25.23	9.00	127,128
5	8/10/2020	Head	D1900V2 SN:5d043	11/20/2020	4.190	41.90	40.40	3.71	2.160	21.60	21.10	2.37	129,130

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
6	7/16/2020	Head	D1900V2 SN:5d043	11/20/2020	4.010	40.10	40.40	-0.74	2.070	20.70	21.10	-1.90	
6	7/20/2020	Head	D1900V2 SN:5d043	11/20/2020	4.210	42.10	40.40	4.21	2.180	21.80	21.10	3.32	
6	7/24/2020	Head	D1900V2 SN:5d163	10/14/2020	4.290	42.90	40.30	6.45	2.230	22.30	21.10	5.69	131,132
6	7/28/2020	Head	D1900V2 SN:5d163	10/14/2020	4.140	41.40	40.30	2.73	2.140	21.40	21.10	1.42	
6	8/1/2020	Head	D1900V2 SN:5d043	11/20/2020	4.280	42.80	40.40	5.94	2.200	22.00	21.10	4.27	
6	8/5/2020	Head	D1900V2 SN:5d043	11/20/2020	4.410	44.10	40.40	9.16	2.270	22.70	21.10	7.58	133,134
6	8/10/2020	Head	D1900V2 SN:5d043	11/20/2020	4.220	42.20	40.40	4.46	2.170	21.70	21.10	2.84	
6	8/11/2020	Head	D1900V2 SN:5d043	11/20/2020	4.370	43.70	40.40	8.17	2.250	22.50	21.10	6.64	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
8	7/28/2020	Head	D2600V2 SN:1006	10/14/2020	5.640	56.40	55.70	1.26	2.510	25.10	25.10	0.00	135,136
8	8/3/2020	Head	D2600V2 SN:1036	4/17/2021	5.690	56.90	56.53	0.65	2.520	25.20	25.23	-0.12	137,138
8	8/7/2020	Head	D835V2 SN:4d002	11/20/2020	1.010	10.10	9.78	3.27	0.673	6.73	6.37	5.65	139,140
8	8/10/2020	Head	D835V2 SN:4d002	11/20/2020	1.010	10.10	9.78	3.27	0.669	6.69	6.37	5.02	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
L1	7/16/2020	Head	D3500V2 SN:1011	4/17/2021	6.370	63.70	68.87	-7.51	2.430	24.30	26.47	-8.20	
L1	7/16/2020	Head	D3700V2 SN:1039	5/11/2021	6.590	65.90	67.00	-1.64	2.450	24.50	24.10	1.66	
L1	7/20/2020	Head	D1900V2 SN:5d043	11/20/2020	4.220	42.20	40.40	4.46	2.120	21.20	21.10	0.47	141,142
L1	7/20/2020	Head	D3700V2 SN:1039	5/11/2021	6.190	61.90	67.00	-7.61	2.290	22.90	24.10	-4.98	143,144
L1	7/20/2020	Head	D3500V2 SN:1060	3/12/2021	6.360	63.60	64.89	-1.99	2.420	24.20	24.80	-2.42	
L1	7/24/2020	Head	D1900V2 SN:5d043	11/20/2020	4.090	40.90	40.40	1.24	2.120	21.20	21.10	0.47	
L1	7/24/2020	Head	D3500V2 SN:1011	4/17/2021	6.610	66.10	68.87	-4.02	2.550	25.50	26.47	-3.66	
L1	7/24/2020	Head	D3700V2 SN:1039	5/11/2021	6.460	64.60	67.00	-3.58	2.440	24.40	24.10	1.24	
L1	7/29/2020	Head	D3500V2 SN:1060	3/12/2021	6.860	68.60	64.89	5.72	2.640	26.40	24.80	6.45	
L1	7/29/2020	Head	D3700V2 SN:1039	5/11/2021	7.010	70.10	67.00	4.63	2.640	26.40	24.10	9.54	
L1	7/30/2020	Head	D2300V2 SN:1058	10/14/2020	4.760	47.60	48.70	-2.26	2.270	22.70	23.70	-4.22	145,146
L1	8/3/2020	Head	D2300V2 SN:1058	10/14/2020	4.910	49.10	48.70	0.82	2.350	23.50	23.70	-0.84	
L1	8/4/2020	Head	D3700V2 SN:1039	5/11/2021	6.970	69.70	67.00	4.03	2.620	26.20	24.10	8.71	
L1	8/4/2020	Head	D3500V2 SN:1060	3/12/2021	6.930	69.30	64.89	6.80	2.690	26.90	24.80	8.47	
L1	8/6/2020	Head	D3500V2 SN:1011	4/17/2021	6.270	62.70	68.87	-8.96	2.420	24.20	26.47	-8.58	147,148
L1	8/10/2020	Head	D3500V2 SN:1060	3/12/2021	6.370	63.70	64.89	-1.83	2.470	24.70	24.80	-0.40	
L1	8/14/2020	Head	D3500V2 SN:1060	3/12/2021	6.360	63.60	64.89	-1.99	2.590	25.90	24.80	4.44	
L1	8/19/2020	Head	D3500V2 SN:1060	3/12/2021	5.860	58.60	64.89	-9.69	2.280	22.80	24.80	-8.06	149,150
L1	8/24/2020	Head	D3500V2 SN:1060	3/12/2021	6.230	62.30	64.89	-3.99	2.410	24.10	24.80	-2.82	
L1	9/5/2020	Head	D3500V2 SN:1011	4/17/2021	6.850	68.50	68.87	-0.54	2.640	26.40	26.47	-0.26	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
L2	7/16/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.780	77.80	79.20	-1.77	2.270	22.70	22.50	0.89	
L2	7/16/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.450	84.50	83.80	0.84	2.380	23.80	23.70	0.42	
L2	7/16/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	8.100	81.00	79.60	1.76	2.240	22.40	22.40	0.00	
L2	7/21/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.490	74.90	79.20	-5.43	2.170	21.70	22.50	-3.56	
L2	7/21/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	7.820	78.20	83.80	-6.68	2.210	22.10	23.70	-6.75	
L2	7/21/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.670	76.70	79.60	-3.64	2.190	21.90	22.40	-2.23	
L2	7/25/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.240	72.40	79.20	-8.59	2.100	21.00	22.50	-6.67	
L2	7/25/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.330	83.30	83.80	-0.60	2.350	23.50	23.70	-0.84	
L2	7/25/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.610	76.10	79.60	-4.40	2.180	21.80	22.40	-2.68	
L2	7/29/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.480	74.80	79.20	-5.56	2.160	21.60	22.50	-4.00	
L2	7/29/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.650	86.50	83.80	3.22	2.470	24.70	23.70	4.22	
L2	7/29/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.970	79.70	79.60	0.13	2.280	22.80	22.40	1.79	
L2	8/1/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.190	71.90	79.20	-9.22	2.160	21.60	22.50	-4.00	151,152
L2	8/1/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	7.680	76.80	83.80	-8.35	2.270	22.70	23.70	-4.22	
L2	8/1/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	7.980	79.80	79.60	0.25	2.280	22.80	22.40	1.79	
L2	8/6/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	8.340	83.40	79.20	5.30	2.420	24.20	22.50	7.56	
L2	8/6/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.470	84.70	83.80	1.07	2.420	24.20	23.70	2.11	
L2	8/6/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	8.020	80.20	79.60	0.75	2.290	22.90	22.40	2.23	
L2	8/10/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	8.240	82.40	79.20	4.04	2.400	24.00	22.50	6.67	
L2	8/10/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	8.140	81.40	83.80	-2.86	2.300	23.00	23.70	-2.95	
L2	8/10/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	8.440	84.40	79.60	6.03	2.420	24.20	22.40	8.04	
L2	8/14/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.210	72.10	79.20	-8.96	2.050	20.50	22.50	2.06	
L2	8/14/2020	Head	D5GHzV2 SN:1168 (5.6 GHz)	11/23/2020	7.800	78.00	83.80	-6.92	2.210	22.10	23.70	-6.75	
L2	8/14/2020	Head	D5GHzV2 SN:1168 (5.8 GHz)	11/23/2020	8.240	82.40	79.60	3.52	2.320	23.20	22.40	3.57	
L2	8/18/2020	Head	D5GHzV2 SN:1168 (5.2 GHz)	11/23/2020	7.75	77.50	79.20	-2.15	2.22	22.20	22.50	-1.33	
L2	8/18/2020	Head	D5GHzV2 SN:1138 (5.6 GHz)	8/26/2020	8.990	89.90	85.50	5.15	2.520	25.20	24.50	2.86	153,154
L2	8/18/2020	Head	D5GHzV2 SN:1138 (5.8 GHz)	8/26/2020	8.060	80.60	81.50	-1.10	2.270	22.70	23.10	-1.73	
L2	8/19/2020	Head	D2600V2 SN:1006	10/14/2020	5.910	59.10	55.70	6.10	2.660	26.60	25.10	5.98	155,156
L2	8/24/2020	Head	D2600V2 SN:1036	4/17/2021	5.780	57.80	56.53	2.25	2.600	26.00	25.23	3.05	
L2	9/1/2020	Head	D2600V2 SN:1006	10/14/2020	5.880	58.80	55.70	5.57	2.640	26.40	25.10	5.18	
L2	9/5/2020	Head	D2600V2 SN:1036	4/17/2021	6.120	61.20	56.53	8.26	2.740	27.40	25.23	8.60	157,158
L2	9/7/2020	Head	D2600V2 SN:1036	4/17/2021	5.780	57.80	56.53	2.25	2.570	25.70	25.23	1.86	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
L3	7/16/2020	Head	D1750V2 SN:1077	10/10/2020	3.480	34.80	37.00	-5.95	1.820	18.20	19.40	-6.19	
L3	7/20/2020	Head	D1750V2 SN:1077	10/10/2020	3.590	35.90	37.00	-2.97	1.910	19.10	19.40	-1.55	
L3	7/25/2020	Head	D1750V2 SN:1077	10/10/2020	3.490	34.90	37.00	-5.68	1.860	18.60	19.40	-4.12	
L3	7/29/2020	Head	D1750V2 SN:1077	10/10/2020	3.420	34.20	37.00	-7.57	1.810	18.10	19.40	-6.70	159,160
L3	8/1/2020	Head	D1750V2 SN:1077	10/10/2020	3.630	36.30	37.00	-1.89	1.920	19.20	19.40	-1.03	
L3	8/5/2020	Head	D2600V2 SN:1036	4/17/2021	5.660	56.60	56.53	0.12	2.540	25.40	25.23	0.67	
L3	8/8/2020	Head	D2600V2 SN:1036	4/17/2021	5.370	53.70	56.53	-5.01	2.400	24.00	25.23	-4.88	161,162
L3	8/11/2020	Head	D1750V2 SN:1077	10/10/2020	3.700	37.00	37.00	0.00	1.960	19.60	19.40	1.03	
L3	8/11/2020	Head	D2300V2 SN:1058	10/14/2020	5.100	51.00	48.70	4.72	2.420	24.20	23.70	2.11	163,164
L3	8/12/2020	Head	D2600V2 SN:1006	10/14/2020	5.830	58.30	55.70	4.67	2.620	26.20	25.10	4.38	165,166
L3	8/16/2020	Head	D2600V2 SN:1006	10/14/2020	5.370	53.70	55.70	-3.59	2.400	24.00	25.10	-4.38	
L3	8/17/2020	Head	D3500V2 SN:1060	3/12/2021	6.160	61.60	64.89	-5.07	2.390	23.90	24.80	-3.63	
L3	8/17/2020	Head	D3700V2 SN:1039	5/11/2021	6.840	68.40	67.00	2.09	2.550	25.50	24.10	5.81	
L3	8/21/2020	Head	D3500V2 SN:1060	3/12/2021	5.970	59.70	64.89	-8.00	2.280	22.80	24.80	-8.06	167,168
L3	8/21/2020	Head	D3700V2 SN:1039	5/11/2021	7.100	71.00	67.00	5.97	2.650	26.50	24.10	9.96	169,170
L3	9/2/2020	Head	D3500V2 SN:1060	3/12/2021	5.980	59.80	64.89	-7.84	2.350	23.50	24.80	-5.24	
L3	9/2/2020	Head	D3700V2 SN:1039	5/11/2021	6.580	65.80	67.00	-1.79	2.460	24.60	24.10	2.07	
L3	9/6/2020	Head	D3500V2 SN:1060	3/12/2021	6.620	66.20	64.89	2.02	2.550	25.50	24.80	2.82	
L3	9/6/2020	Head	D3700V2 SN:1039	5/11/2021	6.660	66.60	67.00	-0.60	2.490	24.90	24.10	3.32	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
L4	7/16/2020	Head	D3500V2 SN:1011	4/17/2021	6.610	66.10	68.87	-4.02	2.520	25.20	26.47	-4.80	
L4	7/16/2020	Head	D3700V2 SN:1039	5/11/2021	6.790	67.90	67.00	1.34	2.520	25.20	24.10	4.56	
L4	7/20/2020	Head	D3500V2 SN:1060	3/12/2021	6.730	67.30	64.89	3.71	2.580	25.80	24.80	4.03	
L4	7/20/2020	Head	D3700V2 SN:1039	5/11/2021	6.500	65.00	67.00	-2.99	2.410	24.10	24.10	0.00	
L4	7/20/2020	Head	D1900V2 SN:5d163	10/14/2020	4.110	41.10	40.30	1.99	2.120	21.20	21.10	0.47	
L4	7/24/2020	Head	D1900V2 SN:5d043	11/20/2020	4.080	40.80	40.40	0.99	2.120	21.20	21.10	0.47	
L4	7/24/2020	Head	D3500V2 SN:1011	4/17/2021	7.090	70.90	68.87	2.95	2.720	27.20	26.47	2.76	
L4	7/24/2020	Head	D3700V2 SN:1039	5/11/2021	6.870	68.70	67.00	2.54	2.550	25.50	24.10	5.81	
L4	7/28/2020	Head	D1900V2 SN:5d163	10/14/2020	4.160	41.60	40.30	3.23	2.120	21.20	21.10	0.47	171,172
L4	7/29/2020	Head	D3500V2 SN:1060	3/12/2021	6.960	69.60	64.89	7.26	2.680	26.80	24.80	8.06	
L4	7/29/2020	Head	D3700V2 SN:1039	5/11/2021	6.980	69.80	67.00	4.18	2.600	26.00	24.10	7.88	
L4	8/1/2020	Head	D1900V2 SN:5d163	10/14/2020	4.080	40.80	40.30	1.24	2.100	21.00	21.10	-0.47	
L4	8/3/2020	Head	D3500V2 SN:1011	4/17/2021	6.440	64.40	68.87	-6.49	2.460	24.60	26.47	-7.06	
L4	8/3/2020	Head	D3700V2 SN:1039	5/11/2021	7.000	70.00	67.00	4.48	2.600	26.00	24.10	7.88	
L4	8/6/2020	Head	D1900V2 SN:5d163	10/14/2020	4.150	41.50	40.30	2.98	2.140	21.40	21.10	1.42	
L4	8/10/2020	Head	D3500V2 SN:1011	4/17/2021	6.410	64.10	68.87	-6.93	2.450	24.50	26.47	-7.44	173,174
L4	8/10/2020	Head	D3700V2 SN:1039	5/11/2021	6.120	61.20	67.00	-8.66	2.280	22.80	24.10	-5.39	175,176
L4	8/10/2020	Head	D1900V2 SN:5d043	11/20/2020	4.160	41.60	40.40	2.97	2.150	21.50	21.10	1.90	177,178
L4	8/12/2020	Head	D1750V2 SN:1077	10/10/2020	3.780	37.80	37.00	2.16	2.000	20.00	19.40	3.09	
L4	8/15/2020	Head	D1750V2 SN:1077	10/10/2020	3.720	37.20	37.00	0.54	1.950	19.50	19.40	0.52	
L4	8/19/2020	Head	D2600V2 SN:1006	10/14/2020	5.720	57.20	55.70	2.69	2.570	25.70	25.10	2.39	179,180
L4	8/24/2020	Head	D1750V2 SN:1077	10/10/2020	3.660	36.60	37.00	-1.08	1.940	19.40	19.40	0.00	
L4	9/2/2020	Head	D3500V2 SN:1060	3/12/2021	5.980	59.80	64.89	-7.84	2.350	23.50	24.80	-5.24	181,182
L4	9/7/2020	Head	D3500V2 SN:1060	3/12/2021	6.500	65.00	64.89	0.17	2.490	24.90	24.80	0.40	
L4	9/7/2020	Head	D1750V2 SN:1077	10/10/2020	3.860	38.60	37.00	4.32	2.050	20.50	19.40	5.67	183,184

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
L6	7/17/2020	Head	D1750V2 SN:1077	10/10/2020	3.420	34.20	37.00	-7.57	1.820	18.20	19.40	-6.19	
L6	7/21/2020	Head	D1750V2 SN:1077	10/10/2020	3.340	33.40	37.00	-9.73	1.790	17.90	19.40	-7.73	185,186
L6	7/27/2020	Head	D1750V2 SN:1077	10/10/2020	3.530	35.30	37.00	-4.59	1.880	18.80	19.40	-3.09	
L6	7/31/2020	Head	D1750V2 SN:1077	10/10/2020	3.560	35.60	37.00	-3.78	1.900	19.00	19.40	-2.06	
L6	8/3/2020	Head	D2450V2 SN:899	4/17/2021	5.200	52.00	51.75	0.48	2.440	24.40	24.12	1.16	187,188
L6	8/5/2020	Head	D1750V2 SN:1077	10/10/2020	3.680	36.80	37.00	-0.54	1.950	19.50	19.40	0.52	
L6	8/7/2020	Head	D750V3 SN:1071	11/20/2020	0.879	8.79	8.52	3.17	0.576	5.76	5.56	3.60	189,190

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9. Conducted Output Power Measurements

Power measurements were performed in accordance to the device's two power modes, Mode A and Mode B for each antenna. Mode A power is used when the device is used against the user's head or away from the body. Mode B power is used when the device is used in a Body-worn configuration by the user.

The selection between antennas in the application is based on RSSI based antenna selection. The full details of power selections are described in the operational description. Refer to Sec. 7 and Sec. 10 for details of the testing. Test reductions have applied accordingly following the SAR KDB Procedure for the supported wireless technologies of the DUT. This is noted in detail for each technology in their respective Sections.

The Tune-up limit already includes component tolerance. KDB 447498 sec.4.1.(d) at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

9.1. GSM

Per KDB 941225 D01 3G SAR Procedures:

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

When different maximum output power applies to GSM voice or GPRS/EDGE time slots, GSM voice and GPRS/EDGE time slots should be tested separately to determine compliance by summing the corresponding reported SAR.

The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance

Per October 2013 TCB Workshop:
When the maximum frame-averaged powers levels are within 0.25 dB of each other, test the configuration with the most number of time slots.

Maximum Output Power (Tune-up Limit) for GSM

SAR is not required for EDGE (8PSK) mode because the maximum output power and tune-up limit is ≤ 1/4dB higher than GPRS/EDGE (GMSK) or the adjusted SAR of the highest reported SAR of GPRS/EDGE (GMSK) is ≤ 1.2W/kg.

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT1		ANT2		ANT3		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
GSM850	Voice/GPRS (1 slot)	33.50	33.50	32.00	32.00				
	GPRS 2 slots	32.50	31.50	31.00	31.00				
	EGPRS 1 slot	28.00	28.00	26.50	26.50				
	EGPRS 2 slots	27.00	27.00	25.50	25.50				
GSM1900	Voice/GPRS (1 slot)	32.00	26.50	29.25	29.00	31.00	28.50	27.50	28.50
	GPRS 2 slots	31.00	23.50	26.25	26.00	30.00	25.50	24.50	25.50
	EGPRS 1 slot	27.00	26.50	24.50	24.50	26.00	26.00	24.00	24.00
	EGPRS 2 slots	26.00	23.50	23.50	23.50	25.00	25.00	23.00	23.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

GSM850 Measured Results (ANT1)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	128	824.2	33.40	24.37	33.50	24.47	33.40	24.37	33.50	24.47
			190	836.6	33.50	24.47			33.50	24.47		
			251	848.8	33.30	24.27			33.30	24.27		
		2	128	824.2	32.10	26.08	32.50	**26.48**	31.20	25.18	31.50	**25.48**
			190	836.6	32.20	26.18			31.30	25.28		
			251	848.8	32.20	26.18			31.30	25.28		
EDGE (8PSK)	MCS5	1	128	824.2	27.90	18.87	28.00	18.97	27.90	18.87	28.00	18.97
			190	836.6	28.00	18.97			28.00	18.97		
			251	848.8	27.80	18.77			27.80	18.77		
		2	128	824.2	26.90	20.88	27.00	20.98	26.90	20.88	27.00	20.98
			190	836.6	27.00	20.98			27.00	20.98		
			251	848.8	26.80	20.78			26.80	20.78		

Note(s):

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

GSM850 Measured Results (ANT2)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	128	824.2	31.33	22.30	32.00	22.97	31.33	22.30	32.00	22.97
			190	836.6	31.38	22.35			31.38	22.35		
			251	848.8	31.45	22.42			31.45	22.42		
		2	128	824.2	30.81	24.79	31.00	**24.98**	30.81	24.79	31.00	**24.98**
			190	836.6	30.86	24.84			30.86	24.84		
			251	848.8	30.80	24.78			30.80	24.78		
EDGE (8PSK)	MCS5	1	128	824.2	25.78	16.75	26.50	17.47	25.78	16.75	26.50	17.47
			190	836.6	25.83	16.80			25.83	16.80		
			251	848.8	25.78	16.75			25.78	16.75		
		2	128	824.2	25.38	19.36	25.50	19.48	25.38	19.36	25.50	19.48
			190	836.6	25.43	19.41			25.43	19.41		
			251	848.8	25.50	19.48			25.50	19.48		

Note(s):

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

GSM1900 Measured Results (ANT1)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	512	1850.2	31.90	22.87	32.00	22.97	26.10	17.07	26.50	17.47
			661	1880.0	32.00	22.97			26.20	17.17		
			810	1909.8	31.80	22.77			26.20	17.17		
		2	512	1850.2	30.40	24.38	31.00	**24.98**	23.25	17.23	23.50	**17.48**
			661	1880.0	30.50	24.48			23.25	17.23		
			810	1909.8	30.50	24.48			23.25	17.23		
EDGE (8PSK)	MCS5	1	512	1850.2	26.90	17.87	27.00	17.97	26.15	17.12	26.50	17.47
			661	1880.0	27.00	17.97			26.25	17.22		
			810	1909.8	26.80	17.77			26.15	17.12		
		2	512	1850.2	25.90	19.88	26.00	19.98	22.65	16.63	23.50	**17.48**
			661	1880.0	26.00	19.98			22.75	16.73		
			810	1909.8	25.80	19.78			22.55	16.53		

Note(s):

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

GSM1900 Measured Results (ANT2)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	512	1850.2	28.30	19.27	29.25	20.22	28.30	19.27	29.00	19.97
			661	1880.0	28.30	19.27			28.30	19.27		
			810	1909.8	28.40	19.37			28.40	19.37		
		2	512	1850.2	26.00	19.98	26.25	**20.23**	25.75	19.73	26.00	**19.98**
			661	1880.0	26.00	19.98			25.75	19.73		
			810	1909.8	26.00	19.98			25.75	19.73		
EDGE (8PSK)	MCS5	1	512	1850.2	23.75	14.72	24.50	15.47	23.70	14.67	24.50	15.47
			661	1880.0	23.80	14.77			23.75	14.72		
			810	1909.8	23.75	14.72			23.70	14.67		
		2	512	1850.2	23.35	17.33	23.50	17.48	23.30	17.28	23.50	17.48
			661	1880.0	23.40	17.38			23.35	17.33		
			810	1909.8	23.47	17.45			23.42	17.40		

Note(s):

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

GSM1900 Measured Results (ANT3)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	512	1850.20	30.48	21.45	31.00	21.97	27.69	18.66	28.50	19.47
			661	1880.00	30.54	21.51			27.81	18.78		
			810	1909.80	30.61	21.58			27.98	18.95		
		2	512	1850.20	29.66	23.64	30.00	**23.98**	25.30	19.28	25.50	**19.48**
			661	1880.00	29.81	23.79			25.30	19.28		
			810	1909.80	29.80	23.78			25.30	19.28		
EDGE (8PSK)	MCS5	1	512	1850.20	25.21	16.18	26.00	16.97	25.40	16.37	26.00	16.97
			661	1880.00	25.81	16.78			25.52	16.49		
			810	1909.80	25.91	16.88			25.61	16.58		
		2	512	1850.20	24.54	18.52	25.00	18.98	24.52	18.50	25.00	18.98
			661	1880.00	24.68	18.66			24.67	18.65		
			810	1909.80	24.91	18.89			24.79	18.77		

Note(s):

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

GSM1900 Measured Results (ANT4)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A {dBm}				Power Mode B {dBm}			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	512	1850.2	26.81	17.78	27.50	18.47	27.60	18.57	28.50	19.47
			661	1880.0	27.19	18.16			27.60	18.57		
			810	1909.8	26.99	17.96			27.60	18.57		
		2	512	1850.2	24.50	18.48	24.50	**18.48**	25.00	18.98	25.50	**19.48**
			661	1880.0	24.50	18.48			25.00	18.98		
			810	1909.8	24.50	18.48			25.00	18.98		
EDGE (8PSK)	MCS5	1	512	1850.2	23.66	14.63	24.00	14.97	23.66	14.63	24.00	14.97
			661	1880.0	24.00	14.97			24.00	14.97		
			810	1909.8	23.88	14.85			23.88	14.85		
		2	512	1850.2	22.64	16.62	23.00	16.98	22.64	16.62	23.00	16.98
			661	1880.0	22.99	16.97			22.99	16.97		
			810	1909.8	22.61	16.59			22.61	16.59		

Note(s):

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.2. W-CDMA

Per KDB 941225 D01 3G SAR Procedures for W-CDMA:

Maximum output power is verified on the high, middle and low channels and using the appropriate 12.2 kbps RMC with TPC (transmit power control) set to all "1's"

Release 99 Setup Procedures used to establish the test signals

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1. A summary of these settings are illustrated below:

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 2
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	βc/βd	8/15

HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests were completed according to Release 5 procedures in table C.10.1.4 of 3GPP TS 34.121-1
A summary of these settings are illustrated below:

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

HSUPA Setup Procedures used to establish the test signals

The following 5 Sub-tests were completed according to Release 6 procedures in table C.11.1.3 of 3GPP TS 34.121-1. A summary of these settings are illustrated below:

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed}1: 47/15 β_{ed}2: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

DC-HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests for DC-HSDPA were completed according to Release 8 procedures in table C08.1.12 of 3GPP TS 34.121-1. A summary of subtest settings are illustrated below:

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Proces ses	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		

HSPA+ Setup Procedures used to establish the test signals

The following 1 Sub-test was completed according to Release 7 procedures in table C.11.1.4 of 3GPP TS34.121. A summary of these settings are illustrated below:

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	$\beta_{ed}1$: 30/15 $\beta_{ed}2$: 30/15	$\beta_{ed}3$: 24/15 $\beta_{ed}4$: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

Maximum Output Power (Tune-up Limit) for W-CDMA

SAR measurement is not required for the HSDPA, HSUPA, DC-HSDPA and HSPA+. When primary mode and the adjusted SAR is ≤ 1.2 W/kg and secondary mode is ≤ ¼ dB higher than the primary mode

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT1		ANT2		ANT3		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
W-CDMA Band 2	R99	25.70	17.00	20.25	20.00	24.70	19.50	18.25	19.25
	HSDPA	25.70	17.00	20.25	20.00	24.70	19.50	18.25	19.25
	HSUPA	25.70	17.00	20.25	20.00	24.70	19.50	18.25	19.25
	DC-HSDPA	25.70	17.00	20.25	20.00	24.70	19.50	18.25	19.25
	HSPA+	25.70	17.00	20.25	20.00	24.70	19.50	18.25	19.25
W-CDMA Band 4	R99	25.70	17.25	21.00	19.75	24.70	20.25	20.00	21.75
	HSDPA	25.70	17.25	21.00	19.75	24.70	20.25	20.00	21.75
	HSUPA	25.70	17.25	21.00	19.75	24.70	20.25	20.00	21.75
	DC-HSDPA	25.70	17.25	21.00	19.75	24.70	20.25	20.00	21.75
	HSPA+	25.70	17.25	21.00	19.75	24.70	20.25	20.00	21.75
W-CDMA Band 5	R99	25.70	25.70	23.90	23.90				
	HSDPA	25.70	25.70	23.90	23.90				
	HSUPA	25.70	25.70	23.90	23.90				
	DC-HSDPA	25.70	25.70	23.90	23.90				
	HSPA+	25.70	25.70	23.90	23.90				

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 2 Measured Results (ANT1)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	25.70	N/A	25.70	17.00	N/A	17.00
		9400	1880.0	25.70			16.90		
		9538	1907.6	25.70			16.80		
HSDPA	Subtest 1	9262	1852.4	25.10	0.00	25.70	16.60	0.00	17.00
		9400	1880.0	25.50			17.00		
		9538	1907.6	24.80			16.30		
	Subtest 2	9262	1852.4	25.20	0.00	25.70	16.50	0.00	17.00
		9400	1880.0	25.40			16.70		
		9538	1907.6	25.10			16.40		
	Subtest 3	9262	1852.4	24.80	0.50	25.20	16.10	0.50	16.50
		9400	1880.0	25.00			16.30		
		9538	1907.6	24.60			15.90		
	Subtest 4	9262	1852.4	24.70	0.50	25.20	16.00	0.50	16.50
		9400	1880.0	24.90			16.20		
		9538	1907.6	24.90			16.20		
HSUPA	Subtest 1	9262	1852.4	25.20	0.00	25.70	16.50	0.00	17.00
		9400	1880.0	25.10			16.40		
		9538	1907.6	24.90			16.31		
	Subtest 2	9262	1852.4	23.30	2.00	23.70	15.00	2.00	15.00
		9400	1880.0	23.00			14.80		
		9538	1907.6	22.90			14.70		
	Subtest 3	9262	1852.4	24.10	1.00	24.70	15.90	1.00	16.00
		9400	1880.0	24.00			15.80		
		9538	1907.6	23.90			15.70		
	Subtest 4	9262	1852.4	23.20	2.00	23.70	15.00	2.00	15.00
		9400	1880.0	23.00			14.80		
		9538	1907.6	22.90			14.70		
	Subtest 5	9262	1852.4	25.10	0.00	25.70	16.90	0.00	17.00
		9400	1880.0	25.00			16.80		
		9538	1907.6	24.90			16.70		
DC-HSDPA	Subtest 1	9262	1852.4	24.90	0.00	25.70	16.70	0.00	17.00
		9400	1880.0	25.20			17.00		
		9538	1907.6	24.80			16.60		
	Subtest 2	9262	1852.4	25.70	0.00	25.70	17.00	0.00	17.00
		9400	1880.0	25.00			16.30		
		9538	1907.6	25.30			16.60		
	Subtest 3	9262	1852.4	25.10	0.50	25.20	16.40	0.50	16.50
		9400	1880.0	25.10			16.40		
		9538	1907.6	25.20			16.50		
	Subtest 4	9262	1852.4	25.10	0.50	25.20	16.40	0.50	16.50
		9400	1880.0	25.20			16.50		
		9538	1907.6	24.90			16.20		
HSPA+	Subtest 1	9262	1852.4	23.10	2.50	23.20	14.00	2.50	14.50
		9400	1880.0	23.20			14.30		
		9538	1907.6	22.90			14.20		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 2 Measured Results (ANT2)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	20.20	N/A	20.25	20.00	N/A	20.00
		9400	1880.0	20.20			20.00		
		9538	1907.6	20.20			20.00		
HSDPA	Subtest 1	9262	1852.4	20.11	0.00	20.25	19.68	0.00	20.00
		9400	1880.0	19.80			19.78		
		9538	1907.6	19.94			19.92		
	Subtest 2	9262	1852.4	20.06	0.00	20.25	19.55	0.00	20.00
		9400	1880.0	19.33			19.71		
		9538	1907.6	19.43			19.87		
	Subtest 3	9262	1852.4	19.56	0.50	19.75	19.12	0.50	19.50
		9400	1880.0	19.35			19.24		
		9538	1907.6	19.42			19.36		
	Subtest 4	9262	1852.4	18.80	0.50	19.75	19.10	0.50	19.50
		9400	1880.0	19.02			19.24		
		9538	1907.6	19.11			19.36		
HSUPA	Subtest 1	9262	1852.4	20.10	0.00	20.25	19.64	0.00	20.00
		9400	1880.0	20.01			19.73		
		9538	1907.6	19.90			19.89		
	Subtest 2	9262	1852.4	17.98	2.00	18.25	17.65	2.00	18.00
		9400	1880.0	18.01			17.73		
		9538	1907.6	18.22			17.89		
	Subtest 3	9262	1852.4	19.09	1.00	19.25	18.60	1.00	19.00
		9400	1880.0	18.82			18.71		
		9538	1907.6	18.99			18.89		
	Subtest 4	9262	1852.4	17.78	2.00	18.25	17.64	2.00	18.00
		9400	1880.0	18.03			17.76		
		9538	1907.6	18.23			17.91		
	Subtest 5	9262	1852.4	19.65	0.00	20.25	19.18	0.00	20.00
		9400	1880.0	19.91			19.32		
		9538	1907.6	19.99			19.46		
DC-HSDPA	Subtest 1	9262	1852.4	20.12	0.00	20.25	19.64	0.00	20.00
		9400	1880.0	19.82			19.76		
		9538	1907.6	19.92			19.93		
	Subtest 2	9262	1852.4	20.08	0.00	20.25	19.65	0.00	20.00
		9400	1880.0	19.33			19.77		
		9538	1907.6	19.43			19.85		
	Subtest 3	9262	1852.4	19.58	0.50	19.75	19.14	0.50	19.50
		9400	1880.0	19.36			19.25		
		9538	1907.6	19.44			19.36		
	Subtest 4	9262	1852.4	19.60	0.50	19.75	19.15	0.50	19.50
		9400	1880.0	19.45			19.23		
		9538	1907.6	19.53			19.37		
HSPA+	Subtest 1	9262	1852.4	17.54	2.50	17.75	16.71	2.50	17.50
		9400	1880.0	17.57			16.82		
		9538	1907.6	17.58			16.89		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 2 Measured Results (ANT3)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.40	24.30	N/A	24.70	19.25	N/A	19.50
		9400	1880.00	24.40			19.25		
		9538	1907.60	24.40			19.25		
HSDPA	Subtest 1	9262	1852.40	23.80	0.00	24.70	18.60	0.00	19.50
		9400	1880.00	23.96			18.76		
		9538	1907.60	24.40			19.20		
	Subtest 2	9262	1852.40	24.00	0.00	24.70	18.80	0.00	19.50
		9400	1880.00	24.30			19.10		
		9538	1907.60	24.20			19.00		
	Subtest 3	9262	1852.40	23.22	0.50	24.20	18.02	0.50	19.00
		9400	1880.00	23.34			18.14		
		9538	1907.60	23.68			18.48		
	Subtest 4	9262	1852.40	23.20	0.50	24.20	18.00	0.50	19.00
		9400	1880.00	23.37			18.17		
		9538	1907.60	23.68			18.48		
HSUPA	Subtest 1	9262	1852.40	23.98	0.00	24.70	18.78	0.00	19.50
		9400	1880.00	24.24			19.04		
		9538	1907.60	24.30			19.00		
	Subtest 2	9262	1852.40	22.16	2.00	22.70	16.96	2.00	17.50
		9400	1880.00	22.36			17.16		
		9538	1907.60	22.66			17.46		
	Subtest 3	9262	1852.40	22.77	1.00	23.70	17.57	1.00	18.50
		9400	1880.00	22.88			17.68		
		9538	1907.60	23.19			17.99		
	Subtest 4	9262	1852.40	22.20	2.00	22.70	17.00	2.00	17.50
		9400	1880.00	22.31			17.11		
		9538	1907.60	22.64			17.44		
	Subtest 5	9262	1852.40	23.80	0.00	24.70	18.60	0.00	19.50
		9400	1880.00	23.99			18.79		
		9538	1907.60	24.34			19.14		
DC-HSDPA	Subtest 1	9262	1852.40	23.71	0.00	24.70	18.51	0.00	19.50
		9400	1880.00	23.99			18.79		
		9538	1907.60	24.29			19.09		
	Subtest 2	9262	1852.40	23.81	0.00	24.70	18.61	0.00	19.50
		9400	1880.00	23.96			18.76		
		9538	1907.60	24.21			19.01		
	Subtest 3	9262	1852.40	23.71	0.50	24.20	18.51	0.50	19.00
		9400	1880.00	23.88			18.68		
		9538	1907.60	24.19			18.99		
	Subtest 4	9262	1852.40	23.71	0.50	24.20	18.51	0.50	19.00
		9400	1880.00	23.94			18.74		
		9538	1907.60	24.18			18.98		
HSPA+	Subtest 1	9262	1852.40	21.99	2.50	22.20	16.79	2.50	17.00
		9400	1880.00	22.11			16.81		
		9538	1907.60	22.19			16.89		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 2 Measured Results (ANT4)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A {dBm}			Power Mode B {dBm}		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	18.25	N/A	18.25	19.25	N/A	19.25
		9400	1880.0	18.25			19.25		
		9538	1907.6	18.25			19.25		
HSDPA	Subtest 1	9262	1852.4	17.82	0.00	18.25	18.57	0.00	19.25
		9400	1880.0	18.03			18.73		
		9538	1907.6	18.06			18.74		
	Subtest 2	9262	1852.4	17.86	0.00	18.25	18.53	0.00	19.25
		9400	1880.0	18.07			18.75		
		9538	1907.6	18.06			18.75		
	Subtest 3	9262	1852.4	17.33	0.50	17.75	18.03	0.50	18.75
		9400	1880.0	17.51			18.23		
		9538	1907.6	17.54			18.22		
	Subtest 4	9262	1852.4	17.34	0.50	17.75	18.00	0.50	18.75
		9400	1880.0	17.53			18.23		
		9538	1907.6	17.54			18.22		
HSUPA	Subtest 1	9262	1852.4	17.81	0.00	18.25	18.52	0.00	19.25
		9400	1880.0	18.05			18.75		
		9538	1907.6	18.08			18.78		
	Subtest 2	9262	1852.4	15.81	2.00	16.25	16.54	2.00	17.25
		9400	1880.0	16.09			16.73		
		9538	1907.6	16.08			16.80		
	Subtest 3	9262	1852.4	16.82	1.00	17.25	17.47	1.00	18.25
		9400	1880.0	17.05			17.74		
		9538	1907.6	17.07			17.79		
	Subtest 4	9262	1852.4	15.81	2.00	16.25	16.53	2.00	17.25
		9400	1880.0	16.06			16.76		
		9538	1907.6	16.08			16.79		
	Subtest 5	9262	1852.4	17.37	0.00	18.25	18.25	0.00	19.25
		9400	1880.0	17.60			18.31		
		9538	1907.6	17.62			18.33		
DC-HSDPA	Subtest 1	9262	1852.4	17.78	0.00	18.25	18.55	0.00	19.25
		9400	1880.0	18.03			18.78		
		9538	1907.6	18.02			18.77		
	Subtest 2	9262	1852.4	17.87	0.00	18.25	18.57	0.00	19.25
		9400	1880.0	18.04			18.78		
		9538	1907.6	18.05			18.77		
	Subtest 3	9262	1852.4	17.33	0.50	17.75	18.04	0.50	18.75
		9400	1880.0	17.53			18.26		
		9538	1907.6	17.53			18.24		
	Subtest 4	9262	1852.4	17.35	0.50	17.75	18.03	0.50	18.75
		9400	1880.0	17.54			18.24		
		9538	1907.6	17.53			18.21		
HSPA+	Subtest 1	9262	1852.4	14.95	2.50	15.75	16.55	2.50	16.75
		9400	1880.0	15.16			16.48		
		9538	1907.6	15.16			16.56		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 4 Measured Results (ANT1)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	25.45	N/A	25.70	17.00	N/A	17.25
		1413	1732.6	25.40			17.15		
		1513	1752.6	25.28			17.03		
HSDPA	Subtest 1	1312	1712.4	25.20	0.00	25.70	17.00	0.00	17.25
		1413	1732.6	25.20			17.12		
		1513	1752.6	24.84			16.84		
	Subtest 2	1312	1712.4	25.23	0.00	25.70	17.00	0.00	17.25
		1413	1732.6	25.20			16.90		
		1513	1752.6	25.17			17.10		
	Subtest 3	1312	1712.4	24.85	0.50	25.20	16.05	0.50	16.75
		1413	1732.6	25.04			16.24		
		1513	1752.6	24.66			15.86		
	Subtest 4	1312	1712.4	24.76	0.50	25.20	15.96	0.50	16.75
		1413	1732.6	25.00			16.20		
		1513	1752.6	24.95			16.15		
HSUPA	Subtest 1	1312	1712.4	25.26	0.00	25.70	16.46	0.00	17.25
		1413	1732.6	25.18			17.18		
		1513	1752.6	24.97			16.97		
	Subtest 2	1312	1712.4	23.39	2.00	23.70	14.59	2.00	15.25
		1413	1732.6	23.03			15.03		
		1513	1752.6	22.99			14.99		
	Subtest 3	1312	1712.4	24.20	1.00	24.70	16.20	1.00	16.25
		1413	1732.6	24.07			16.07		
		1513	1752.6	23.97			15.97		
	Subtest 4	1312	1712.4	23.25	2.00	23.70	15.25	2.00	15.25
		1413	1732.6	23.07			15.07		
		1513	1752.6	22.97			14.97		
	Subtest 5	1312	1712.4	25.21	0.00	25.70	17.00	0.00	17.25
		1413	1732.6	25.03			17.03		
		1513	1752.6	24.96			16.96		
DC-HSDPA	Subtest 1	1312	1712.4	24.94	0.00	25.70	16.94	0.00	17.25
		1413	1732.6	25.24			17.00		
		1513	1752.6	24.90			16.90		
	Subtest 2	1312	1712.4	25.10	0.00	25.70	16.81	0.00	17.25
		1413	1732.6	25.06			16.26		
		1513	1752.6	25.20			16.59		
	Subtest 3	1312	1712.4	25.05	0.50	25.20	16.25	0.50	16.75
		1413	1732.6	25.15			16.35		
		1513	1752.6	25.19			16.39		
	Subtest 4	1312	1712.4	25.15	0.50	25.20	16.35	0.50	16.75
		1413	1732.6	25.09			16.29		
		1513	1752.6	24.94			16.14		
HSPA+	Subtest 1	1312	1712.4	23.18	2.50	23.20	14.38	2.50	14.75
		1413	1732.6	23.10			14.46		
		1513	1752.6	23.00			14.44		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 4 Measured Results (ANT2)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	20.90	N/A	21.00	19.75	N/A	19.75
		1413	1732.6	20.90			19.75		
		1513	1752.6	20.90			19.75		
HSDPA	Subtest 1	1312	1712.4	20.76	0.00	21.00	19.56	0.00	19.75
		1413	1732.6	20.45			19.25		
		1513	1752.6	20.59			19.39		
	Subtest 2	1312	1712.4	20.71	0.00	21.00	19.51	0.00	19.75
		1413	1732.6	20.00			18.78		
		1513	1752.6	20.08			18.88		
	Subtest 3	1312	1712.4	20.21	0.50	20.50	19.01	0.50	19.25
		1413	1732.6	20.00			18.80		
		1513	1752.6	20.07			18.87		
	Subtest 4	1312	1712.4	19.50	0.50	20.50	18.25	0.50	19.25
		1413	1732.6	19.67			18.47		
		1513	1752.6	19.76			18.56		
HSUPA	Subtest 1	1312	1712.4	20.75	0.00	21.00	19.55	0.00	19.75
		1413	1732.6	20.66			19.46		
		1513	1752.6	20.55			19.35		
	Subtest 2	1312	1712.4	18.63	2.00	19.00	17.43	2.00	17.75
		1413	1732.6	18.66			17.46		
		1513	1752.6	18.77			17.61		
	Subtest 3	1312	1712.4	19.74	1.00	20.00	18.54	1.00	18.75
		1413	1732.6	19.47			18.27		
		1513	1752.6	19.64			18.44		
	Subtest 4	1312	1712.4	18.43	2.00	19.00	17.23	2.00	17.75
		1413	1732.6	18.68			17.48		
		1513	1752.6	18.82			17.62		
	Subtest 5	1312	1712.4	20.30	0.00	21.00	19.10	0.00	19.75
		1413	1732.6	20.56			19.36		
		1513	1752.6	20.64			19.44		
DC-HSDPA	Subtest 1	1312	1712.4	20.77	0.00	21.00	19.57	0.00	19.75
		1413	1732.6	20.47			19.27		
		1513	1752.6	20.57			19.37		
	Subtest 2	1312	1712.4	20.73	0.00	21.00	19.53	0.00	19.75
		1413	1732.6	20.00			18.78		
		1513	1752.6	20.08			18.88		
	Subtest 3	1312	1712.4	20.23	0.50	20.50	19.03	0.50	19.25
		1413	1732.6	20.01			18.81		
		1513	1752.6	20.09			18.89		
	Subtest 4	1312	1712.4	20.25	0.50	20.50	19.05	0.50	19.25
		1413	1732.6	20.10			18.90		
		1513	1752.6	20.18			18.98		
HSPA+	Subtest 1	1312	1712.4	18.19	2.50	18.50	16.99	2.50	17.25
		1413	1732.6	18.20			16.32		
		1513	1752.6	18.20			16.43		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 4 Measured Results (ANT3)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	24.26	N/A	24.70	19.81	N/A	20.25
		1413	1732.6	24.31			19.80		
		1513	1752.6	24.27			19.82		
HSDPA	Subtest 1	1312	1712.4	23.78	0.00	24.70	19.33	0.00	20.25
		1413	1732.6	23.83			19.38		
		1513	1752.6	23.83			19.38		
	Subtest 2	1312	1712.4	24.27	0.00	24.70	19.33	0.00	20.25
		1413	1732.6	24.20			19.38		
		1513	1752.6	24.20			19.38		
	Subtest 3	1312	1712.4	23.25	0.50	24.20	18.80	0.50	19.75
		1413	1732.6	23.36			18.91		
		1513	1752.6	23.41			18.96		
	Subtest 4	1312	1712.4	23.24	0.50	24.20	18.79	0.50	19.75
		1413	1732.6	23.33			18.88		
		1513	1752.6	23.47			19.02		
HSUPA	Subtest 1	1312	1712.4	23.73	0.00	24.70	19.28	0.00	20.25
		1413	1732.6	23.81			19.36		
		1513	1752.6	23.77			19.32		
	Subtest 2	1312	1712.4	22.24	2.00	22.70	17.79	2.00	18.25
		1413	1732.6	22.25			17.80		
		1513	1752.6	22.26			17.81		
	Subtest 3	1312	1712.4	23.67	1.00	23.70	19.22	1.00	19.25
		1413	1732.6	23.62			19.17		
		1513	1752.6	23.62			19.17		
	Subtest 4	1312	1712.4	21.75	2.00	22.70	17.30	2.00	18.25
		1413	1732.6	21.77			17.32		
		1513	1752.6	21.74			17.29		
	Subtest 5	1312	1712.4	23.74	0.00	24.70	19.29	0.00	20.25
		1413	1732.6	23.85			19.40		
		1513	1752.6	23.83			19.38		
DC-HSDPA	Subtest 1	1312	1712.4	24.20	0.00	24.70	19.60	0.00	20.25
		1413	1732.6	24.30			19.80		
		1513	1752.6	24.30			19.70		
	Subtest 2	1312	1712.4	24.08	0.00	24.70	19.63	0.00	20.25
		1413	1732.6	24.21			19.76		
		1513	1752.6	24.10			19.70		
	Subtest 3	1312	1712.4	23.66	0.50	24.20	19.21	0.50	19.75
		1413	1732.6	23.85			19.40		
		1513	1752.6	23.97			19.52		
	Subtest 4	1312	1712.4	24.04	0.50	24.20	19.59	0.50	19.75
		1413	1732.6	24.08			19.63		
		1513	1752.6	24.18			19.73		
HSPA+	Subtest 1	1312	1712.4	21.51	2.50	22.20	17.06	2.50	17.75
		1413	1732.6	21.57			17.12		
		1513	1752.6	21.64			17.19		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 4 Measured Results (ANT4)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A {dBm}			Power Mode B {dBm}		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	19.75	0.00	20.00	21.25	N/A	21.75
		1413	1732.6	19.75			21.25		
		1513	1752.6	19.75			21.25		
HSDPA	Subtest 1	1312	1712.4	19.58	0.00	20.00	21.10	0.00	21.75
		1413	1732.6	19.45			20.99		
		1513	1752.6	19.30			20.80		
	Subtest 2	1312	1712.4	19.58	0.00	20.00	21.09	0.00	21.75
		1413	1732.6	19.47			20.96		
		1513	1752.6	19.23			20.81		
	Subtest 3	1312	1712.4	19.07	0.50	19.50	20.55	0.50	21.25
		1413	1732.6	18.91			20.46		
		1513	1752.6	18.77			20.29		
	Subtest 4	1312	1712.4	19.02	0.50	19.50	20.43	0.50	21.25
		1413	1732.6	18.91			20.45		
		1513	1752.6	18.77			20.40		
HSUPA	Subtest 1	1312	1712.4	19.59	0.00	20.00	21.10	0.00	21.75
		1413	1732.6	19.47			20.97		
		1513	1752.6	19.28			20.79		
	Subtest 2	1312	1712.4	17.62	2.00	18.00	19.09	2.00	19.75
		1413	1732.6	17.45			19.00		
		1513	1752.6	17.31			18.83		
	Subtest 3	1312	1712.4	18.57	1.00	19.00	20.10	1.00	20.75
		1413	1732.6	18.47			19.99		
		1513	1752.6	18.28			19.81		
	Subtest 4	1312	1712.4	17.60	2.00	18.00	19.12	2.00	19.75
		1413	1732.6	17.48			19.01		
		1513	1752.6	17.28			18.80		
	Subtest 5	1312	1712.4	19.12	0.00	20.00	21.00	0.00	21.75
		1413	1732.6	19.02			21.10		
		1513	1752.6	19.00			21.10		
DC-HSDPA	Subtest 1	1312	1712.4	19.62	0.00	20.00	21.07	0.00	21.75
		1413	1732.6	19.46			20.95		
		1513	1752.6	19.24			20.77		
	Subtest 2	1312	1712.4	19.60	0.00	20.00	21.09	0.00	21.75
		1413	1732.6	19.47			20.98		
		1513	1752.6	19.26			20.78		
	Subtest 3	1312	1712.4	19.08	0.50	19.50	20.59	0.50	21.25
		1413	1732.6	18.94			20.44		
		1513	1752.6	18.76			20.25		
	Subtest 4	1312	1712.4	19.09	0.50	19.50	20.59	0.50	21.25
		1413	1732.6	18.94			20.46		
		1513	1752.6	18.76			20.28		
HSPA+	Subtest 1	1312	1712.4	16.58	2.50	17.50	18.36	2.50	19.25
		1413	1732.6	16.53			18.28		
		1513	1752.6	16.65			18.39		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 5 Measured Results (ANT1)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	25.60	N/A	25.70	25.60	N/A	25.70
		4183	836.6	25.60			25.60		
		4233	846.6	25.70			25.70		
HSDPA	Subtest 1	4132	826.4	25.18	0.00	25.70	25.18	0.00	25.70
		4183	836.6	25.56			25.56		
		4233	846.6	24.82			24.82		
	Subtest 2	4132	826.4	25.21	0.00	25.70	25.21	0.00	25.70
		4183	836.6	25.44			25.44		
		4233	846.6	25.15			25.15		
	Subtest 3	4132	826.4	24.83	0.50	25.20	24.83	0.50	25.20
		4183	836.6	25.02			25.02		
		4233	846.6	24.64			24.64		
	Subtest 4	4132	826.4	24.74	0.50	25.20	24.74	0.50	25.20
		4183	836.6	24.98			24.98		
		4233	846.6	24.93			24.93		
HSUPA	Subtest 1	4132	826.4	25.24	0.00	25.70	25.24	0.00	25.70
		4183	836.6	25.16			25.16		
		4233	846.6	24.95			24.95		
	Subtest 2	4132	826.4	23.37	2.00	23.70	23.37	2.00	23.70
		4183	836.6	23.01			23.01		
		4233	846.6	22.97			22.97		
	Subtest 3	4132	826.4	24.18	1.00	24.70	24.18	1.00	24.70
		4183	836.6	24.05			24.05		
		4233	846.6	23.95			23.95		
	Subtest 4	4132	826.4	23.23	2.00	23.70	23.23	2.00	23.70
		4183	836.6	23.05			23.05		
		4233	846.6	22.95			22.95		
	Subtest 5	4132	826.4	25.19	0.00	25.70	25.19	0.00	25.70
		4183	836.6	25.01			25.01		
		4233	846.6	24.94			24.94		
DC-HSDPA	Subtest 1	4132	826.4	24.92	0.00	25.70	24.92	0.00	25.70
		4183	836.6	25.22			25.22		
		4233	846.6	24.88			24.88		
	Subtest 2	4132	826.4	25.59	0.00	25.70	25.59	0.00	25.70
		4183	836.6	25.04			25.04		
		4233	846.6	25.37			25.37		
	Subtest 3	4132	826.4	25.03	0.50	25.20	25.03	0.50	25.20
		4183	836.6	25.13			25.13		
		4233	846.6	25.17			25.17		
	Subtest 4	4132	826.4	25.13	0.50	25.20	25.13	0.50	25.20
		4183	836.6	25.07			25.07		
		4233	846.6	24.92			24.92		
HSPA+	Subtest 1	4132	826.4	23.16	2.50	23.20	23.16	2.50	23.20
		4183	836.6	23.14			23.14		
		4233	846.6	22.92			22.92		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

W-CDMA Band 5 Measured Results (ANT2)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	23.90	N/A	23.90	23.90	N/A	23.90
		4183	836.6	23.90			23.90		
		4233	846.6	23.90			23.90		
HSDPA	Subtest 1	4132	826.4	23.81	0.00	23.90	23.81	0.00	23.90
		4183	836.6	23.50			23.50		
		4233	846.6	23.64			23.64		
	Subtest 2	4132	826.4	23.76	0.00	23.90	23.76	0.00	23.90
		4183	836.6	23.03			23.03		
		4233	846.6	23.13			23.13		
	Subtest 3	4132	826.4	23.26	0.50	23.40	23.26	0.50	23.40
		4183	836.6	23.05			23.05		
		4233	846.6	23.12			23.12		
	Subtest 4	4132	826.4	22.50	0.50	23.40	22.50	0.50	23.40
		4183	836.6	22.72			22.72		
		4233	846.6	22.81			22.81		
HSUPA	Subtest 1	4132	826.4	23.80	0.00	23.90	23.80	0.00	23.90
		4183	836.6	23.71			23.71		
		4233	846.6	23.60			23.60		
	Subtest 2	4132	826.4	21.68	2.00	21.90	21.68	2.00	21.90
		4183	836.6	21.71			21.71		
		4233	846.6	21.82			21.82		
	Subtest 3	4132	826.4	22.79	1.00	22.90	22.79	1.00	22.90
		4183	836.6	22.52			22.52		
		4233	846.6	22.69			22.69		
	Subtest 4	4132	826.4	21.48	2.00	21.90	21.48	2.00	21.90
		4183	836.6	21.73			21.73		
		4233	846.6	21.87			21.87		
	Subtest 5	4132	826.4	23.35	0.00	23.90	23.35	0.00	23.90
		4183	836.6	23.61			23.61		
		4233	846.6	23.69			23.69		
DC-HSDPA	Subtest 1	4132	826.4	23.82	0.00	23.90	23.82	0.00	23.90
		4183	836.6	23.52			23.52		
		4233	846.6	23.62			23.62		
	Subtest 2	4132	826.4	23.78	0.00	23.90	23.78	0.00	23.90
		4183	836.6	23.03			23.03		
		4233	846.6	23.13			23.13		
	Subtest 3	4132	826.4	23.28	0.50	23.40	23.28	0.50	23.40
		4183	836.6	23.06			23.06		
		4233	846.6	23.14			23.14		
	Subtest 4	4132	826.4	23.30	0.50	23.40	23.30	0.50	23.40
		4183	836.6	23.15			23.15		
		4233	846.6	23.23			23.23		
HSPA+	Subtest 1	4132	826.4	21.24	2.50	21.40	21.24	2.50	21.40
		4183	836.6	21.37			21.37		
		4233	846.6	21.38			21.38		

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.3. CDMA

1x Advanced Setup Procedures used to establish the test signals

Call box setup procedure

- Protocol Rev > 6 (IS-2000-0)
- System ID: 331; NID: 65535, Reg. Ch. #.:
- Radio Config (RC) > Fwd11,Rvs8
- Service Option (SO) Setup > SO75 (Loopback)
- Traffic Data Rate > Full
- Rvs Power Ctrl > All Up bits (Maximum TxPout)
- Reverse Power Control Mode: 00-200 to 400 bps
- Smart blanking was disabled.

1xEV-DO Rev. B Setup Procedures used to establish the test signals

Call box setup procedure

- CMW 500 Signal Generator > 1xEV-DO Taskbar Enable
- CMW 500 1xEV-DO Signaling Configuration Window >
- 1xEV-DO Signaling On Window:
  Under Access Network Control:
  Band Class: BC0: US Cellular
  RF Channel: 31
  1xEV-DO Power: -70 dBm
  Release B

- 1xEV-DO Signaling Configuration Window

  Under RF Frequency Band / Channel: Enter Ch. Frequency
  - Under Carrier Configuration: RF Frequency
    For Two Carriers: Low Channel (1013)

	RF Channel	RF Channel Offset
Carrier [0]	31	0
Carrier [1]	1013	982

  - Under Carrier Configuration: RF Pilot

	Carrier Sector	Active on AN	Assigned to AT
Pilot [0]	C0/S0	✓	✓
	CA/S1	✓	✓

  For Three Carriers: Low Channel (1013)

	RF Channel	RF Channel Offset
Carrier [0]	72	0
Carrier [1]	31	-41
Carrier [2]	1013	941

  - Under Carrier Configuration: RF Pilot

	Carrier Sector	Active on AN	Assigned to AT
Pilot [0]	C0/S0	✓	✓
Pilot [1]	C1/S1	✓	✓
Pilot [2]	C2/S2	✓	✓

- Rvs Power Ctrl > All Up bits (to get the maximum power)

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Maximum Output Power (Tune-up Limit) for CDMA

SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55. The 3G SAR test reduction procedure is applied to RC1 with RC3 as the primary mode

Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 D01 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCHn), with FCH only as the primary mode.

When VOIP is supported by Ev-Do devices for next to the ear use, head exposure SAR is required.

SAR measurement is not required for the 1xEVDO Rev. A, Rev. B and 1x-Advanced. When primary mode and the adjusted SAR is ≤ 1.2 W/kg and secondary mode is ≤ ¼ dB higher than the primary mode

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT1		ANT2		ANT3		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
CDMA BC0	1xRTT	25.70	25.70	23.90	23.90				
	1xAdvanced	25.70	25.70	23.90	23.90				
	1xEVDO Rel. 0	25.70	25.70	23.90	23.90				
	1xEVDO Rev. A	25.70	25.70	23.90	23.90				
CDMA BC1	1xRTT	25.70	17.00	20.25	20.00				
	1xAdvanced	25.70	17.00	20.25	20.00				
	1xEVDO Rel. 0	25.70	17.00	20.25	20.00				
	1xEVDO Rev. A	25.70	17.00	20.25	20.00				
CDMA BC10	1xRTT	25.70	25.70	23.90	23.90				
	1xAdvanced	25.70	25.70	23.90	23.90				
	1xEVDO Rel. 0	25.70	25.70	23.90	23.90				
	1xEVDO Rev. A	25.70	25.70	23.90	23.90				

This report shall not be reproduced without the written approval of UL Verification Services Inc.

CDMA BC0 Measured Results (ANT1)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm}		Power Mode B (dBm}	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	1013	824.70	25.43	25.70	25.43	25.70
		384	836.52	25.38		25.38	
		777	848.31	25.26		25.26	
	RC3, SO55 (Loopback)	1013	824.70	25.18		25.18	
		384	836.52	25.56		25.56	
		777	848.31	24.82		24.82	
	RC3, SO32 (+F-SCH)	1013	824.70	25.21		25.21	
		384	836.52	25.56		25.56	
		777	848.31	25.15		25.15	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	25.43	25.70	25.43	25.70
		384	836.52	25.38		25.38	
		777	848.31	25.26		25.26	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	1013	824.70	25.18	25.70	25.18	25.70
		384	836.52	25.56		25.56	
		777	848.31	25.43		25.43	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	1013	824.70	25.20	25.70	25.20	25.70
		384	836.52	25.43		25.43	
		777	848.31	25.38		25.38	

CDMA BC0 Measured Results (ANT2)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm}		Power Mode B {dBm}	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	1013	824.70	23.30	23.90	23.30	23.90
		384	836.52	23.70		23.70	
		777	848.31	23.10		23.10	
	RC3, SO55 (Loopback)	1013	824.70	23.30		23.30	
		384	836.52	23.90		23.90	
		777	848.31	23.30		23.30	
	RC3, SO32 (+F-SCH)	1013	824.70	23.60		23.60	
		384	836.52	23.90		23.90	
		777	848.31	23.10		23.10	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	23.40	23.90	23.40	23.90
		384	836.52	23.40		23.40	
		777	848.31	23.40		23.40	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	1013	824.70	23.10	23.90	23.10	23.90
		384	836.52	23.90		23.90	
		777	848.31	23.30		23.30	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	1013	824.70	23.10	23.90	23.10	23.90
		384	836.52	23.00		23.00	
		777	848.31	23.10		23.10	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

CDMA BC1 Measured Results (ANT1)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm}		Power Mode B (dBm}	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	25	1851.25	25.31	25.70	16.87	17.00
		600	1880.00	25.26		16.82	
		1175	1908.75	25.14		16.70	
	RC3, SO55 (Loopback)	25	1851.25	25.06		16.62	
		600	1880.00	25.50		17.00	
		1175	1908.75	24.70		16.26	
	RC3, SO32 (+F-SCH)	25	1851.25	25.09		17.00	
		600	1880.00	25.50		17.00	
		1175	1908.75	24.88		17.00	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	24.72	25.70	16.28	17.00
		600	1880	25.02		16.58	
		1175	1908.75	25.14		16.70	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	25	1851.25	25.06	25.70	16.62	17.00
		600	1880.00	25.50		17.00	
		1175	1908.75	25.31		16.87	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	25	1851.25	25.08	25.70	16.64	17.00
		600	1880	25.31		16.87	
		1175	1908.75	25.26		16.82	

CDMA BC1 Measured Results (ANT2)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm}		Power Mode B {dBm}	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	25	1851.25	19.90	20.25	19.20	20.00
		600	1880.00	19.40		19.10	
		1175	1908.75	19.70		19.40	
	RC3, SO55 (Loopback)	25	1851.25	19.50		19.20	
		600	1880.00	19.60		19.30	
		1175	1908.75	19.40		19.10	
	RC3, SO32 (+F-SCH)	25	1851.25	19.90		19.50	
		600	1880.00	19.60		19.50	
		1175	1908.75	19.50		19.50	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	19.90	20.25	19.10	20.00
		600	1880	19.40		19.10	
		1175	1908.75	19.50		19.20	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	25	1851.25	19.30	20.25	19.00	20.00
		600	1880.00	19.30		19.00	
		1175	1908.75	19.70		19.40	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	25	1851.25	19.70	20.25	19.40	20.00
		600	1880	19.80		19.50	
		1175	1908.75	19.80		19.50	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

CDMA BC10 Measured Results (ANT1)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm)		Power Mode B (dBm)	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	560	820.00	24.72	25.70	24.72	25.70
	RC3, SO55 (Loopback)	560	820.00	25.14		25.14	
	RC3, SO32 (+F-SCH)	560	820.00	25.14		25.14	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	560	820.00	24.90	25.70	24.90	25.70
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	560	820.00	25.14	25.70	25.14	25.70
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	560	820.00	24.60	25.70	24.60	25.70

CDMA BC10 Measured Results (ANT2)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm)		Power Mode B {dBm}	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	560	820.00	23.28	23.90	23.28	23.90
	RC3, SO55 (Loopback)	560	820.00	23.90		23.90	
	RC3, SO32 (+F-SCH)	560	820.00	23.90		23.90	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	560	820.00	23.38	23.90	23.38	23.90
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	560	820.00	23.90	23.90	23.90	23.90
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	560	820.00	23.08	23.90	23.08	23.90

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.4. LTE

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of “NS_01”.

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (subclause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	N/A

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Maximum Output Power (Tune-up Limit) for LTE

According to April 2015 TCB workshop, SAR test exclusion can be applied for testing overlapping LTE bands as follows:

a) The maximum output power, including tolerance, for the smaller band must be ≤ the larger band to qualify for the SAR test exclusion.
b) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.
   - LTE Band 2 (1850-1910 MHz) is covered by LTE Band 25 (1850-1915 MHz)
   - LTE Band 4 (1710-1755 MHz) is covered by LTE Band 66 (1710-1780 MHz)
   - LTE Band 17 (704-716 MHz) is covered by LTE Band 12 (699-716 MHz)

Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices.

LTE QPSK configuration has the highest maximum average output power per 3GPP standard.

SAR measurement is not required for the 16QAM and 64QAM. When the highest maximum output power for 16QAM and 64QAM is ≤ ½ dB higher than the QPSK or when the reported SAR for the QPSK configuration is ≤ 1.45 W/kg.

Please refer to section 6.3. for LTE detail test channels.

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT1		ANT2		ANT3		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
LTE Band 2	QPSK	25.70	17.00	20.25	20.00	24.70	19.50	18.50	19.25
LTE Band 4	QPSK	25.70	17.25	21.00	20.25	24.70	20.25	20.00	21.75
LTE Band 5	QPSK	25.70	25.70	24.50	24.50				
LTE Band 7	QPSK	25.70	19.75	17.00	18.25	24.70	18.50	17.50	21.25
LTE Band 12	QPSK	25.70	25.70	23.90	23.90				
LTE Band 13	QPSK	25.70	25.70	23.90	23.90				
LTE Band 17	QPSK	25.70	25.70	23.90	23.90				
LTE Band 25	QPSK	25.70	17.00	20.25	20.00	24.70	19.50	18.50	19.25
LTE Band 26	QPSK	25.70	25.70	24.50	24.50				
LTE Band 30	QPSK	25.70	20.25	18.50	20.00	24.70	20.50	17.50	20.50
LTE Band 41 (PC3)	QPSK	25.70	21.75	19.00	21.00	24.70	20.00	20.00	22.20
LTE Band 41 (PC2)	QPSK	27.70	N/A	N/A	N/A	26.70	N/A	N/A	23.75
LTE Band 66	QPSK	25.70	17.25	21.00	20.25	24.70	20.25	20.00	21.75
RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT7		ANT8		ANT9		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
LTE Band 48	QPSK	25.70	22.00	22.25	19.50	25.20	22.00	21.75	22.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 5 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)				
				[redacted]	20525.00	[redacted]	MPR	Tune-up Limit	[redacted]	20525.00	[redacted]	MPR	Tune-up Limit
					836.5 MHz					836.5 MHz			
10 MHz	QPSK	1	0		24.83		0.00	25.70		24.83		0.00	25.70
		1	25		25.70		0.00	25.70		25.70		0.00	25.70
		1	49		24.76		0.00	25.70		24.76		0.00	25.70
		25	0		23.82		1.00	24.70		23.82		1.00	24.70
		25	12		24.70		1.00	24.70		24.70		1.00	24.70
		25	25		23.85		1.00	24.70		23.85		1.00	24.70
		50	0		23.80		1.00	24.70		23.80		1.00	24.70
	16QAM	1	0		23.97		1.00	24.70		23.97		1.00	24.70
		1	25		23.82		1.00	24.70		23.82		1.00	24.70
		1	49		23.85		1.00	24.70		23.85		1.00	24.70
		25	0		22.94		2.00	23.70		22.94		2.00	23.70
		25	12		22.98		2.00	23.70		22.98		2.00	23.70
		25	25		22.93		2.00	23.70		22.93		2.00	23.70
		50	0		22.84		2.00	23.70		22.84		2.00	23.70
	64QAM	1	0		22.94		2.00	23.70		22.94		2.00	23.70
		1	25		22.98		2.00	23.70		22.98		2.00	23.70
		1	49		22.93		2.00	23.70		22.93		2.00	23.70
		25	0		21.88		3.00	22.70		21.88		3.00	22.70
		25	12		21.77		3.00	22.70		21.77		3.00	22.70
		25	25		21.98		3.00	22.70		21.98		3.00	22.70
		50	0		21.90		3.00	22.70		21.90		3.00	22.70
	256QAM	1	0		19.94		5.00	20.70		19.94		5.00	20.70
		1	25		20.04		5.00	20.70		20.04		5.00	20.70
		1	49		20.02		5.00	20.70		20.02		5.00	20.70
		25	0		19.93		5.00	20.70		19.93		5.00	20.70
		25	12		19.94		5.00	20.70		19.94		5.00	20.70
		25	25		20.19		5.00	20.70		20.19		5.00	20.70
		50	0		20.04		5.00	20.70		20.04		5.00	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20425.00	20525.00	20625.00	MPR	Tune-up Limit	20425.00	20525.00	20625.00	MPR	Tune-up Limit
				826.5 MHz	836.5 MHz	846.5 MHz			826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	24.86	24.82	24.77	0.00	25.70	24.86	24.82	24.77	0.00	25.70
		1	12	24.91	24.89	24.81	0.00	25.70	24.91	24.89	24.81	0.00	25.70
		1	24	24.86	24.84	24.73	0.00	25.70	24.86	24.84	24.73	0.00	25.70
		12	0	23.92	23.82	23.80	1.00	24.70	23.92	23.82	23.80	1.00	24.70
		12	7	23.98	23.87	23.82	1.00	24.70	23.98	23.87	23.82	1.00	24.70
		12	13	23.95	23.83	23.90	1.00	24.70	23.95	23.83	23.90	1.00	24.70
		25	0	23.93	23.85	23.81	1.00	24.70	23.93	23.85	23.81	1.00	24.70
	16QAM	1	0	23.98	23.97	24.34	1.00	24.70	23.98	23.97	24.34	1.00	24.70
		1	12	24.11	23.99	24.42	1.00	24.70	24.11	23.99	24.42	1.00	24.70
		1	24	24.09	23.93	24.36	1.00	24.70	24.09	23.93	24.36	1.00	24.70
		12	0	22.95	22.87	22.98	2.00	23.70	22.95	22.87	22.98	2.00	23.70
		12	7	23.03	22.95	22.98	2.00	23.70	23.03	22.95	22.98	2.00	23.70
		12	13	22.98	22.92	23.04	2.00	23.70	22.98	22.92	23.04	2.00	23.70
		25	0	22.88	22.88	22.88	2.00	23.70	22.88	22.88	22.88	2.00	23.70
	64QAM	1	0	22.98	22.97	23.34	2.00	23.70	22.98	22.97	23.34	2.00	23.70
		1	12	23.11	22.99	23.42	2.00	23.70	23.11	22.99	23.42	2.00	23.70
		1	24	23.09	22.93	23.36	2.00	23.70	23.09	22.93	23.36	2.00	23.70
		12	0	21.95	21.87	21.98	3.00	22.70	21.95	21.87	21.98	3.00	22.70
		12	7	22.03	21.95	21.98	3.00	22.70	22.03	21.95	21.98	3.00	22.70
		12	13	21.98	21.92	22.04	3.00	22.70	21.98	21.92	22.04	3.00	22.70
		25	0	21.88	21.88	21.88	3.00	22.70	21.88	21.88	21.88	3.00	22.70
	256QAM	1	0	20.03	20.09	20.19	5.00	20.70	20.03	20.09	20.19	5.00	20.70
		1	12	20.12	20.08	20.19	5.00	20.70	20.12	20.08	20.19	5.00	20.70
		1	24	19.98	20.16	19.97	5.00	20.70	19.98	20.16	19.97	5.00	20.70
		12	0	19.99	19.99	19.93	5.00	20.70	19.99	19.99	19.93	5.00	20.70
		12	7	20.02	20.15	19.92	5.00	20.70	20.02	20.15	19.92	5.00	20.70
		12	13	19.99	19.95	20.00	5.00	20.70	19.99	19.95	20.00	5.00	20.70
		25	0	20.04	19.97	20.09	5.00	20.70	20.04	19.97	20.09	5.00	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 5 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				20415.00	20525.00	20635.00			20415.00	20525.00	20635.00		
				825.5 MHz	836.5 MHz	847.5 MHz			825.5 MHz	836.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	24.78	24.73	24.77	0.00	25.70	24.78	24.73	24.77	0.00	25.70
		1	8	24.80	24.72	24.84	0.00	25.70	24.80	24.72	24.84	0.00	25.70
		1	14	24.81	24.80	24.78	0.00	25.70	24.81	24.80	24.78	0.00	25.70
		8	0	23.85	23.81	23.79	1.00	24.70	23.85	23.81	23.79	1.00	24.70
		8	4	23.99	23.87	23.83	1.00	24.70	23.99	23.87	23.83	1.00	24.70
		8	7	23.99	23.89	23.91	1.00	24.70	23.99	23.89	23.91	1.00	24.70
		15	0	23.95	23.85	23.81	1.00	24.70	23.95	23.85	23.81	1.00	24.70
	16QAM	1	0	23.91	23.78	24.18	1.00	24.70	23.91	23.78	24.18	1.00	24.70
		1	8	23.93	23.74	24.20	1.00	24.70	23.93	23.74	24.20	1.00	24.70
		1	14	23.93	23.74	24.24	1.00	24.70	23.93	23.74	24.24	1.00	24.70
		8	0	22.95	22.94	22.85	2.00	23.70	22.95	22.94	22.85	2.00	23.70
		8	4	23.03	23.00	22.88	2.00	23.70	23.03	23.00	22.88	2.00	23.70
		8	7	23.01	23.01	22.97	2.00	23.70	23.01	23.01	22.97	2.00	23.70
		15	0	22.92	22.93	22.88	2.00	23.70	22.92	22.93	22.88	2.00	23.70
	64QAM	1	0	22.91	22.78	23.18	2.00	23.70	22.91	22.78	23.18	2.00	23.70
		1	8	22.93	22.74	23.20	2.00	23.70	22.93	22.74	23.20	2.00	23.70
		1	14	22.93	22.74	23.24	2.00	23.70	22.93	22.74	23.24	2.00	23.70
		8	0	21.95	21.94	21.85	3.00	22.70	21.95	21.94	21.85	3.00	22.70
		8	4	22.03	22.00	21.88	3.00	22.70	22.03	22.00	21.88	3.00	22.70
		8	7	22.01	22.01	21.97	3.00	22.70	22.01	22.01	21.97	3.00	22.70
		15	0	21.92	21.93	21.88	3.00	22.70	21.92	21.93	21.88	3.00	22.70
	256QAM	1	0	20.18	20.18	20.11	5.00	20.70	20.18	20.18	20.11	5.00	20.70
		1	8	19.92	19.99	19.98	5.00	20.70	19.92	19.99	19.98	5.00	20.70
		1	14	19.99	20.14	20.12	5.00	20.70	19.99	20.14	20.12	5.00	20.70
		8	0	20.15	20.03	19.98	5.00	20.70	20.15	20.03	19.98	5.00	20.70
		8	4	19.92	20.12	20.03	5.00	20.70	19.92	20.12	20.03	5.00	20.70
		8	7	20.10	19.93	20.04	5.00	20.70	20.10	19.93	20.04	5.00	20.70
		15	0	20.08	20.05	20.10	5.00	20.70	20.08	20.05	20.10	5.00	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				20407.00	20525.00	20643.00			20407.00	20525.00	20643.00		
				824.7 MHz	836.5 MHz	848.3 MHz			824.7 MHz	836.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	24.74	24.77	24.76	0.00	25.70	24.74	24.77	24.76	0.00	25.70
		1	3	24.80	24.78	24.91	0.00	25.70	24.80	24.78	24.91	0.00	25.70
		1	5	24.71	24.72	24.80	0.00	25.70	24.71	24.72	24.80	0.00	25.70
		3	0	24.71	24.77	24.80	0.00	25.70	24.71	24.77	24.80	0.00	25.70
		3	1	24.79	24.73	24.83	0.00	25.70	24.79	24.73	24.83	0.00	25.70
		3	3	24.78	24.72	24.84	0.00	25.70	24.78	24.72	24.84	0.00	25.70
		6	0	23.80	23.76	23.85	1.00	24.70	23.80	23.76	23.85	1.00	24.70
	16QAM	1	0	23.85	23.87	24.19	1.00	24.70	23.85	23.87	24.19	1.00	24.70
		1	3	23.89	23.96	24.27	1.00	24.70	23.89	23.96	24.27	1.00	24.70
		1	5	23.86	23.90	24.24	1.00	24.70	23.86	23.90	24.24	1.00	24.70
		3	0	23.98	23.81	24.05	1.00	24.70	23.98	23.81	24.05	1.00	24.70
		3	1	24.05	23.83	24.09	1.00	24.70	24.05	23.83	24.09	1.00	24.70
		3	3	24.06	23.84	24.06	1.00	24.70	24.06	23.84	24.06	1.00	24.70
		6	0	22.99	22.91	22.81	2.00	23.70	22.99	22.91	22.81	2.00	23.70
	64QAM	1	0	22.85	22.87	23.19	2.00	23.70	22.85	22.87	23.19	2.00	23.70
		1	3	22.89	22.96	23.27	2.00	23.70	22.89	22.96	23.27	2.00	23.70
		1	5	22.86	22.90	23.24	2.00	23.70	22.86	22.90	23.24	2.00	23.70
		3	0	22.98	22.81	23.05	2.00	23.70	22.98	22.81	23.05	2.00	23.70
		3	1	23.05	22.83	23.09	2.00	23.70	23.05	22.83	23.09	2.00	23.70
		3	3	23.06	22.84	23.06	2.00	23.70	23.06	22.84	23.06	2.00	23.70
		6	0	21.99	21.91	21.81	3.00	22.70	21.99	21.91	21.81	3.00	22.70
	256QAM	1	0	20.00	20.14	20.06	5.00	20.70	20.00	20.14	20.06	5.00	20.70
		1	3	20.11	20.11	19.91	5.00	20.70	20.11	20.11	19.91	5.00	20.70
		1	5	20.00	19.90	20.09	5.00	20.70	20.00	19.90	20.09	5.00	20.70
		3	0	19.98	20.17	20.11	5.00	20.70	19.98	20.17	20.11	5.00	20.70
		3	1	20.07	20.10	20.08	5.00	20.70	20.07	20.10	20.08	5.00	20.70
		3	3	19.90	19.94	20.08	5.00	20.70	19.90	19.94	20.08	5.00	20.70
		6	0	20.13	19.98	20.01	5.00	20.70	20.13	19.98	20.01	5.00	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 5 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)				
				[redacted]	20525	[redacted]	MPR	Tune-up Limit	[redacted]	20525	[redacted]	MPR	Tune-up Limit
					836.5 MHz					836.5 MHz			
10 MHz	QPSK	1	0		23.90		0.00	24.50		23.90		0.00	24.50
		1	25		24.50		0.00	24.50		24.50		0.00	24.50
		1	49		23.78		0.00	24.50		23.78		0.00	24.50
		25	0		23.25		1.00	23.50		23.25		1.00	23.50
		25	12		23.50		1.00	23.50		23.50		1.00	23.50
		25	25		23.26		1.00	23.50		23.26		1.00	23.50
		50	0		23.50		1.00	23.50		23.50		1.00	23.50
	16QAM	1	0		23.30		1.00	23.50		23.30		1.00	23.50
		1	25		23.18		1.00	23.50		23.18		1.00	23.50
		1	49		23.17		1.00	23.50		23.17		1.00	23.50
		25	0		22.26		2.00	22.50		22.26		2.00	22.50
		25	12		22.32		2.00	22.50		22.32		2.00	22.50
		25	25		22.29		2.00	22.50		22.29		2.00	22.50
		50	0		22.23		2.00	22.50		22.23		2.00	22.50
	64QAM	1	0		21.90		2.00	22.50		21.90		2.00	22.50
		1	25		21.78		2.00	22.50		21.78		2.00	22.50
		1	49		21.78		2.00	22.50		21.78		2.00	22.50
		25	0		21.25		3.00	21.50		21.25		3.00	21.50
		25	12		21.29		3.00	21.50		21.29		3.00	21.50
		25	25		21.26		3.00	21.50		21.26		3.00	21.50
		50	0		21.23		3.00	21.50		21.23		3.00	21.50
	256QAM	1	0		19.18		5.00	19.50		19.18		5.00	19.50
		1	25		18.90		5.00	19.50		18.90		5.00	19.50
		1	49		19.13		5.00	19.50		19.13		5.00	19.50
		25	0		19.06		5.00	19.50		19.06		5.00	19.50
		25	12		18.95		5.00	19.50		18.95		5.00	19.50
		25	25		19.16		5.00	19.50		19.16		5.00	19.50
		50	0		18.93		5.00	19.50		18.93		5.00	19.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20425.00	20525.00	20625.00	MPR	Tune-up Limit	20425.00	20525.00	20625.00	MPR	Tune-up Limit
				826.5 MHz	836.5 MHz	846.5 MHz			826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	23.76	23.84	23.71	0.00	24.50	23.76	23.84	23.71	0.00	24.50
		1	12	23.87	23.90	23.78	0.00	24.50	23.87	23.90	23.78	0.00	24.50
		1	24	23.82	23.89	23.77	0.00	24.50	23.82	23.89	23.77	0.00	24.50
		12	0	22.56	22.52	22.55	1.00	23.50	22.56	22.52	22.55	1.00	23.50
		12	7	22.66	22.63	22.63	1.00	23.50	22.66	22.63	22.63	1.00	23.50
		12	13	22.60	22.56	22.57	1.00	23.50	22.60	22.56	22.57	1.00	23.50
		25	0	22.61	22.59	22.60	1.00	23.50	22.61	22.59	22.60	1.00	23.50
	16QAM	1	0	22.60	22.69	23.04	1.00	23.50	22.60	22.69	23.04	1.00	23.50
		1	12	22.77	22.75	23.11	1.00	23.50	22.77	22.75	23.11	1.00	23.50
		1	24	22.74	22.73	23.02	1.00	23.50	22.74	22.73	23.02	1.00	23.50
		12	0	21.69	21.69	21.76	2.00	22.50	21.69	21.69	21.76	2.00	22.50
		12	7	21.80	21.80	21.88	2.00	22.50	21.80	21.80	21.88	2.00	22.50
		12	13	21.77	21.75	21.83	2.00	22.50	21.77	21.75	21.83	2.00	22.50
		25	0	21.63	21.70	21.71	2.00	22.50	21.63	21.70	21.71	2.00	22.50
	64QAM	1	0	21.60	21.69	22.04	2.00	22.50	21.60	21.69	22.04	2.00	22.50
		1	12	21.77	21.75	22.11	2.00	22.50	21.77	21.75	22.11	2.00	22.50
		1	24	21.74	21.73	22.02	2.00	22.50	21.74	21.73	22.02	2.00	22.50
		12	0	20.69	20.69	20.76	3.00	21.50	20.69	20.69	20.76	3.00	21.50
		12	7	20.80	20.80	20.88	3.00	21.50	20.80	20.80	20.88	3.00	21.50
		12	13	20.77	20.75	20.83	3.00	21.50	20.77	20.75	20.83	3.00	21.50
		25	0	20.63	20.70	20.71	3.00	21.50	20.63	20.70	20.71	3.00	21.50
	256QAM	1	0	19.05	19.10	19.03	5.00	19.50	19.05	19.10	19.03	5.00	19.50
		1	12	18.94	19.05	19.13	5.00	19.50	18.94	19.05	19.13	5.00	19.50
		1	24	19.03	19.02	18.92	5.00	19.50	19.03	19.02	18.92	5.00	19.50
		12	0	19.05	19.18	18.90	5.00	19.50	19.05	19.18	18.90	5.00	19.50
		12	7	19.01	19.12	19.10	5.00	19.50	19.01	19.12	19.10	5.00	19.50
		12	13	19.19	19.01	19.09	5.00	19.50	19.19	19.01	19.09	5.00	19.50
		25	0	19.16	19.11	19.02	5.00	19.50	19.16	19.11	19.02	5.00	19.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 5 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				20415.00	20525.00	20635.00			20415.00	20525.00	20635.00		
				825.5 MHz	836.5 MHz	847.5 MHz			825.5 MHz	836.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	23.73	23.73	23.74	0.00	24.50	23.73	23.73	23.74	0.00	24.50
		1	8	23.75	23.80	23.84	0.00	24.50	23.75	23.80	23.84	0.00	24.50
		1	14	23.76	23.82	23.78	0.00	24.50	23.76	23.82	23.78	0.00	24.50
		8	0	22.50	22.54	22.52	1.00	23.50	22.50	22.54	22.52	1.00	23.50
		8	4	22.64	22.61	22.61	1.00	23.50	22.64	22.61	22.61	1.00	23.50
		8	7	22.65	22.66	22.60	1.00	23.50	22.65	22.66	22.60	1.00	23.50
		15	0	22.60	22.58	22.60	1.00	23.50	22.60	22.58	22.60	1.00	23.50
	16QAM	1	0	22.56	22.57	22.93	1.00	23.50	22.56	22.57	22.93	1.00	23.50
		1	8	22.59	22.52	22.90	1.00	23.50	22.59	22.52	22.90	1.00	23.50
		1	14	22.60	22.50	22.94	1.00	23.50	22.60	22.50	22.94	1.00	23.50
		8	0	21.56	21.66	21.57	2.00	22.50	21.56	21.66	21.57	2.00	22.50
		8	4	21.66	21.71	21.68	2.00	22.50	21.66	21.71	21.68	2.00	22.50
		8	7	21.69	21.78	21.68	2.00	22.50	21.69	21.78	21.68	2.00	22.50
		15	0	21.55	21.62	21.57	2.00	22.50	21.55	21.62	21.57	2.00	22.50
	64QAM	1	0	21.56	21.57	21.93	2.00	22.50	21.56	21.57	21.93	2.00	22.50
		1	8	21.59	21.52	21.90	2.00	22.50	21.59	21.52	21.90	2.00	22.50
		1	14	21.60	21.50	21.94	2.00	22.50	21.60	21.50	21.94	2.00	22.50
		8	0	20.56	20.66	20.57	3.00	21.50	20.56	20.66	20.57	3.00	21.50
		8	4	20.66	20.71	20.68	3.00	21.50	20.66	20.71	20.68	3.00	21.50
		8	7	20.69	20.78	20.68	3.00	21.50	20.69	20.78	20.68	3.00	21.50
		15	0	20.55	20.62	20.57	3.00	21.50	20.55	20.62	20.57	3.00	21.50
	256QAM	1	0	18.94	18.93	19.02	5.00	19.50	18.94	18.93	19.02	5.00	19.50
		1	8	19.17	18.96	19.18	5.00	19.50	19.17	18.96	19.18	5.00	19.50
		1	14	19.18	19.01	19.16	5.00	19.50	19.18	19.01	19.16	5.00	19.50
		8	0	19.00	18.99	19.17	5.00	19.50	19.00	18.99	19.17	5.00	19.50
		8	4	18.97	19.16	18.91	5.00	19.50	18.97	19.16	18.91	5.00	19.50
		8	7	18.94	19.06	19.18	5.00	19.50	18.94	19.06	19.18	5.00	19.50
		15	0	19.09	19.12	18.98	5.00	19.50	19.09	19.12	18.98	5.00	19.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				20407.00	20525.00	20643.00			20407.00	20525.00	20643.00		
				824.7 MHz	836.5 MHz	848.3 MHz			824.7 MHz	836.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	23.71	23.67	23.69	0.00	24.50	23.71	23.67	23.69	0.00	24.50
		1	3	23.81	23.84	23.75	0.00	24.50	23.81	23.84	23.75	0.00	24.50
		1	5	23.78	23.75	23.66	0.00	24.50	23.78	23.75	23.66	0.00	24.50
		3	0	23.70	23.75	23.69	0.00	24.50	23.70	23.75	23.69	0.00	24.50
		3	1	23.75	23.77	23.74	0.00	24.50	23.75	23.77	23.74	0.00	24.50
		3	3	23.77	23.81	23.76	0.00	24.50	23.77	23.81	23.76	0.00	24.50
		6	0	22.55	22.50	22.52	1.00	23.50	22.55	22.50	22.52	1.00	23.50
	16QAM	1	0	22.54	22.84	22.50	1.00	23.50	22.54	22.84	22.50	1.00	23.50
		1	3	22.71	22.92	22.53	1.00	23.50	22.71	22.92	22.53	1.00	23.50
		1	5	22.62	22.88	22.51	1.00	23.50	22.62	22.88	22.51	1.00	23.50
		3	0	22.58	22.71	22.66	1.00	23.50	22.58	22.71	22.66	1.00	23.50
		3	1	22.58	22.77	22.71	1.00	23.50	22.58	22.77	22.71	1.00	23.50
		3	3	22.60	22.74	22.74	1.00	23.50	22.60	22.74	22.74	1.00	23.50
		6	0	21.66	21.53	21.65	2.00	22.50	21.66	21.53	21.65	2.00	22.50
	64QAM	1	0	21.54	21.84	21.50	2.00	22.50	21.54	21.84	21.50	2.00	22.50
		1	3	21.71	21.92	21.53	2.00	22.50	21.71	21.92	21.53	2.00	22.50
		1	5	21.62	21.88	21.51	2.00	22.50	21.62	21.88	21.51	2.00	22.50
		3	0	21.58	21.71	21.66	2.00	22.50	21.58	21.71	21.66	2.00	22.50
		3	1	21.58	21.77	21.71	2.00	22.50	21.58	21.77	21.71	2.00	22.50
		3	3	21.60	21.74	21.74	2.00	22.50	21.60	21.74	21.74	2.00	22.50
		6	0	20.66	20.53	20.65	3.00	21.50	20.66	20.53	20.65	3.00	21.50
	256QAM	1	0	18.90	19.20	19.14	5.00	19.50	18.90	19.20	19.14	5.00	19.50
		1	3	18.91	19.07	18.96	5.00	19.50	18.91	19.07	18.96	5.00	19.50
		1	5	19.16	19.09	19.16	5.00	19.50	19.16	19.09	19.16	5.00	19.50
		3	0	18.92	19.16	18.99	5.00	19.50	18.92	19.16	18.99	5.00	19.50
		3	1	19.16	19.09	19.15	5.00	19.50	19.16	19.09	19.15	5.00	19.50
		3	3	18.98	18.97	19.19	5.00	19.50	18.98	18.97	19.19	5.00	19.50
		6	0	19.14	19.14	19.11	5.00	19.50	19.14	19.14	19.11	5.00	19.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 7 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20850	21100	21350	MPR	Tune-up Limit	20850	21100	21350	MPR	Tune-up Limit
				2510 MHz	2535 MHz	2560 MHz			2510 MHz	2535 MHz	2560 MHz		
20 MHz	QPSK	1	0	25.60	25.54	25.14	0.00	25.70	19.34	19.25	19.18	0.00	19.75
		1	49	25.70	25.70	25.70	0.00	25.70	19.75	19.75	19.75	0.00	19.75
		1	99	25.53	25.47	25.45	0.00	25.70	19.25	19.15	19.12	0.00	19.75
		50	0	24.67	24.56	24.55	1.00	24.70	19.41	19.14	19.23	0.00	19.75
		50	24	24.70	24.70	24.70	1.00	24.70	19.75	19.50	19.50	0.00	19.75
		50	50	24.60	24.46	24.49	1.00	24.70	19.34	19.26	19.22	0.00	19.75
		100	0	24.57	24.70	24.46	1.00	24.70	19.31	19.50	19.16	0.00	19.75
	16QAM	1	0	24.59	24.52	24.46	1.00	24.70	19.44	19.38	19.31	0.00	19.75
		1	49	24.53	24.50	24.48	1.00	24.70	19.10	19.38	19.42	0.00	19.75
		1	99	24.46	24.50	24.41	1.00	24.70	19.05	19.32	19.23	0.00	19.75
		50	0	23.13	23.07	23.06	2.00	23.70	18.76	18.94	18.92	0.00	19.75
		50	24	23.62	23.60	23.55	2.00	23.70	18.80	18.97	18.91	0.00	19.75
		50	50	23.56	23.54	23.49	2.00	23.70	18.98	18.92	18.87	0.00	19.75
		100	0	23.56	23.53	23.44	2.00	23.70	18.96	18.89	18.80	0.00	19.75
	64QAM	1	0	23.37	23.38	23.33	2.00	23.70	19.20	19.11	19.04	0.00	19.75
		1	49	23.35	23.33	23.31	2.00	23.70	19.13	19.04	18.96	0.00	19.75
		1	99	23.33	23.36	23.31	2.00	23.70	19.11	19.01	18.98	0.00	19.75
		50	0	22.48	22.41	22.27	3.00	22.70	19.27	19.00	19.09	0.00	19.75
		50	24	22.48	22.41	22.37	3.00	22.70	19.25	19.17	19.12	0.00	19.75
		50	50	22.43	22.39	22.32	3.00	22.70	19.20	19.12	19.08	0.00	19.75
		100	0	22.42	22.33	22.21	3.00	22.70	19.17	19.07	19.02	0.00	19.75
	256QAM	1	0	19.93	20.08	20.11	5.00	20.70	19.40	19.33	19.34	0.00	19.75
		1	49	19.91	19.94	20.06	5.00	20.70	19.36	19.37	19.24	0.00	19.75
		1	99	20.06	19.95	19.99	5.00	20.70	19.27	19.15	19.20	0.00	19.75
		50	0	20.18	19.97	20.03	5.00	20.70	19.32	19.31	19.32	0.00	19.75
		50	24	20.20	19.93	20.05	5.00	20.70	19.32	19.42	19.36	0.00	19.75
		50	50	20.09	20.06	20.11	5.00	20.70	19.21	19.33	19.22	0.00	19.75
		100	0	20.12	19.91	20.08	5.00	20.70	19.33	19.26	19.34	0.00	19.75
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20825.00	21100.00	21375.00	MPR	Tune-up Limit	20825.00	21100.00	21375.00	MPR	Tune-up Limit
				2507.5 MHz	2535 MHz	2562.5 MHz			2507.5 MHz	2535 MHz	2562.5 MHz		
15 MHz	QPSK	1	0	25.69	25.54	25.51	0.00	25.70	19.40	19.20	19.19	0.00	19.75
		1	37	25.64	25.48	25.46	0.00	25.70	19.37	19.15	19.16	0.00	19.75
		1	74	25.62	25.46	25.51	0.00	25.70	19.33	19.17	19.17	0.00	19.75
		36	0	24.70	24.57	24.49	1.00	24.70	19.43	19.31	19.20	0.00	19.75
		36	20	24.69	24.60	24.50	1.00	24.70	19.42	19.30	19.19	0.00	19.75
		36	39	24.67	24.55	24.53	1.00	24.70	19.38	19.27	19.26	0.00	19.75
		75	0	24.61	24.54	24.41	1.00	24.70	19.33	19.23	19.15	0.00	19.75
	16QAM	1	0	24.14	24.51	23.94	1.00	24.70	19.45	18.94	19.28	0.00	19.75
		1	37	24.09	24.48	23.90	1.00	24.70	19.44	18.92	19.26	0.00	19.75
		1	74	24.09	24.47	23.88	1.00	24.70	19.42	18.83	19.23	0.00	19.75
		36	0	23.69	23.57	23.53	2.00	23.70	19.07	18.93	18.89	0.00	19.75
		36	20	23.67	23.59	23.53	2.00	23.70	19.05	18.94	18.89	0.00	19.75
		36	39	23.62	23.54	23.55	2.00	23.70	19.01	18.91	18.93	0.00	19.75
		75	0	23.62	23.51	23.29	2.00	23.70	19.00	18.89	18.80	0.00	19.75
	64QAM	1	0	23.48	23.33	23.30	2.00	23.70	19.26	19.06	19.05	0.00	19.75
		1	37	23.43	23.26	23.25	2.00	23.70	19.23	19.01	19.02	0.00	19.75
		1	74	23.40	23.25	23.30	2.00	23.70	19.19	19.03	19.03	0.00	19.75
		36	0	22.49	22.36	22.27	3.00	22.70	19.29	19.17	19.06	0.00	19.75
		36	20	22.48	22.38	22.28	3.00	22.70	19.28	19.16	19.05	0.00	19.75
		36	39	22.45	22.34	22.31	3.00	22.70	19.24	19.13	19.12	0.00	19.75
		75	0	22.40	22.33	22.20	3.00	22.70	19.19	19.09	19.01	0.00	19.75
	256QAM	1	0	20.16	19.96	20.01	5.00	20.70	19.45	19.35	19.26	0.00	19.75
		1	37	19.94	20.18	19.96	5.00	20.70	19.24	19.25	19.19	0.00	19.75
		1	74	20.18	20.04	19.99	5.00	20.70	19.31	19.36	19.39	0.00	19.75
		36	0	20.13	19.90	20.13	5.00	20.70	19.41	19.43	19.43	0.00	19.75
		36	20	20.04	19.99	20.04	5.00	20.70	19.38	19.24	19.25	0.00	19.75
		36	39	20.09	20.18	20.14	5.00	20.70	19.27	19.35	19.28	0.00	19.75
		75	0	19.95	19.90	20.12	5.00	20.70	19.32	19.28	19.32	0.00	19.75

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 7 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20800.00	21100.00	21400.00	MPR	Tune-up Limit	20800.00	21100.00	21400.00	MPR	Tune-up Limit
				2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz		
10 MHz	QPSK	1	0	25.59	25.59	25.54	0.00	25.70	19.32	19.25	19.21	0.00	19.75
		1	25	25.56	25.54	25.53	0.00	25.70	19.32	19.17	19.18	0.00	19.75
		1	49	25.54	25.57	25.52	0.00	25.70	19.27	19.26	19.19	0.00	19.75
		25	0	24.70	24.62	24.48	1.00	24.70	19.43	19.33	19.21	0.00	19.75
		25	12	24.69	24.62	24.58	1.00	24.70	19.44	19.34	19.29	0.00	19.75
		25	25	24.65	24.60	24.54	1.00	24.70	19.40	19.31	19.24	0.00	19.75
		50	0	24.63	24.55	24.43	1.00	24.70	19.36	19.25	19.11	0.00	19.75
	16QAM	1	0	23.75	23.94	23.95	1.00	24.70	19.17	19.12	19.31	0.00	19.75
		1	25	23.72	23.81	23.92	1.00	24.70	19.05	18.96	19.27	0.00	19.75
		1	49	23.71	23.81	23.93	1.00	24.70	19.07	18.92	19.28	0.00	19.75
		25	0	22.80	23.64	23.54	2.00	23.70	19.21	19.03	18.90	0.00	19.75
		25	12	22.80	23.61	23.61	2.00	23.70	19.20	19.00	19.00	0.00	19.75
		25	25	22.77	23.62	23.54	2.00	23.70	19.18	18.99	18.95	0.00	19.75
		50	0	23.64	23.52	23.43	2.00	23.70	19.06	18.92	18.83	0.00	19.75
	64QAM	1	0	23.37	23.38	23.33	2.00	23.70	19.18	19.11	19.07	0.00	19.75
		1	25	23.35	23.33	23.31	2.00	23.70	19.18	19.03	19.04	0.00	19.75
		1	49	23.33	23.36	23.31	2.00	23.70	19.13	19.12	19.05	0.00	19.75
		25	0	22.48	22.41	22.27	3.00	22.70	19.29	19.19	19.07	0.00	19.75
		25	12	22.48	22.41	22.37	3.00	22.70	19.30	19.20	19.15	0.00	19.75
		25	25	22.43	22.39	22.32	3.00	22.70	19.26	19.17	19.10	0.00	19.75
		50	0	22.42	22.33	22.21	3.00	22.70	19.22	19.11	18.97	0.00	19.75
	256QAM	1	0	20.10	19.94	19.96	5.00	20.70	19.33	19.26	19.17	0.00	19.75
		1	25	20.06	20.14	19.96	5.00	20.70	19.20	19.44	19.44	0.00	19.75
		1	49	20.12	19.91	19.90	5.00	20.70	19.24	19.17	19.42	0.00	19.75
		25	0	20.16	19.99	20.19	5.00	20.70	19.31	19.40	19.20	0.00	19.75
		25	12	20.08	20.19	20.19	5.00	20.70	19.29	19.19	19.19	0.00	19.75
		25	25	19.96	19.91	19.95	5.00	20.70	19.34	19.44	19.40	0.00	19.75
		50	0	19.99	20.20	20.01	5.00	20.70	19.38	19.42	19.42	0.00	19.75

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20775.00	21100.00	21425.00	MPR	Tune-up Limit	20775.00	21100.00	21425.00	MPR	Tune-up Limit
				2502.5 MHz	2535 MHz	2567.5 MHz			2502.5 MHz	2535 MHz	2567.5 MHz		
5 MHz	QPSK	1	0	25.45	25.69	25.50	0.00	25.70	19.30	19.23	18.97	0.00	19.75
		1	12	25.35	25.68	25.51	0.00	25.70	19.28	19.18	19.02	0.00	19.75
		1	24	25.39	25.67	25.50	0.00	25.70	19.32	19.23	19.04	0.00	19.75
		12	0	24.40	24.60	24.54	1.00	24.70	19.34	19.15	19.07	0.00	19.75
		12	7	24.50	24.64	24.57	1.00	24.70	19.37	19.19	19.09	0.00	19.75
		12	13	24.44	24.59	24.46	1.00	24.70	19.32	19.15	19.09	0.00	19.75
		25	0	24.68	24.59	24.54	1.00	24.70	19.31	19.19	19.08	0.00	19.75
	16QAM	1	0	23.90	23.84	24.10	1.00	24.70	19.17	19.16	19.34	0.00	19.75
		1	12	23.89	23.78	24.07	1.00	24.70	19.17	19.01	19.35	0.00	19.75
		1	24	23.88	23.83	24.08	1.00	24.70	19.19	19.05	19.33	0.00	19.75
		12	0	22.75	23.68	23.58	2.00	23.70	19.06	18.94	18.91	0.00	19.75
		12	7	22.80	23.68	22.70	2.00	23.70	19.09	18.96	18.98	0.00	19.75
		12	13	22.75	23.67	23.66	2.00	23.70	19.07	18.92	18.95	0.00	19.75
		25	0	23.65	23.62	23.59	2.00	23.70	18.97	18.81	18.92	0.00	19.75
	64QAM	1	0	23.24	23.48	23.29	2.00	23.70	19.18	19.11	19.07	0.00	19.75
		1	12	23.14	23.47	23.30	2.00	23.70	19.18	19.03	19.04	0.00	19.75
		1	24	23.18	23.46	23.29	2.00	23.70	19.13	19.12	19.05	0.00	19.75
		12	0	22.19	22.39	22.32	3.00	22.70	19.29	19.19	19.07	0.00	19.75
		12	7	22.29	22.43	22.36	3.00	22.70	19.30	19.20	19.15	0.00	19.75
		12	13	22.22	22.38	22.25	3.00	22.70	19.26	19.17	19.10	0.00	19.75
		25	0	22.47	22.38	22.33	3.00	22.70	19.22	19.11	18.97	0.00	19.75
	256QAM	1	0	20.06	19.99	19.96	5.00	20.70	19.33	19.21	19.26	0.00	19.75
		1	12	20.20	19.98	20.10	5.00	20.70	19.34	19.25	19.32	0.00	19.75
		1	24	20.08	20.05	20.10	5.00	20.70	19.34	19.24	19.27	0.00	19.75
		12	0	19.96	20.08	20.06	5.00	20.70	19.30	19.40	19.25	0.00	19.75
		12	7	19.95	20.09	19.94	5.00	20.70	19.32	19.15	19.26	0.00	19.75
		12	13	20.17	20.14	20.13	5.00	20.70	19.19	19.34	19.26	0.00	19.75
		25	0	20.02	20.04	20.09	5.00	20.70	19.29	19.31	19.17	0.00	19.75

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 7 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20850	21100	21350	MPR	Tune-up Limit	20850	21100	21350	MPR	Tune-up Limit
				2510 MHz	2535 MHz	2560 MHz			2510 MHz	2535 MHz	2560 MHz		
20 MHz	QPSK	1	0	16.66	16.77	16.78	0.00	17.00	17.91	18.02	18.03	0.00	18.25
		1	49	16.80	16.80	16.80	0.00	17.00	18.20	18.20	18.20	0.00	18.25
		1	99	16.64	16.79	16.72	0.00	17.00	17.89	18.04	17.97	0.00	18.25
		50	0	16.18	16.06	16.02	0.00	17.00	17.43	17.31	17.27	0.00	18.25
		50	24	16.80	16.80	16.80	0.00	17.00	18.20	18.20	18.20	0.00	18.25
		50	50	16.12	16.06	16.12	0.00	17.00	17.37	17.31	17.37	0.00	18.25
		100	0	16.08	16.80	16.06	0.00	17.00	17.33	18.20	17.31	0.00	18.25
	16QAM	1	0	16.49	16.54	16.68	0.00	17.00	17.74	17.79	17.93	0.00	18.25
		1	49	16.47	16.52	16.37	0.00	17.00	17.72	17.77	17.62	0.00	18.25
		1	99	16.48	16.58	16.42	0.00	17.00	17.73	17.83	17.67	0.00	18.25
		50	0	16.64	16.74	16.70	0.00	17.00	17.89	17.99	17.95	0.00	18.25
		50	24	16.66	16.75	16.68	0.00	17.00	17.91	18.00	17.93	0.00	18.25
		50	50	16.62	16.73	16.65	0.00	17.00	17.87	17.98	17.90	0.00	18.25
		100	0	16.60	16.70	16.59	0.00	17.00	17.85	17.95	17.84	0.00	18.25
	64QAM	1	0	16.56	16.67	16.68	0.00	17.00	17.91	18.02	18.03	0.00	18.25
		1	49	16.50	16.67	16.65	0.00	17.00	17.85	18.02	18.00	0.00	18.25
		1	99	16.54	16.69	16.62	0.00	17.00	17.89	18.04	17.97	0.00	18.25
		50	0	16.18	16.06	16.02	0.00	17.00	17.43	17.31	17.27	0.00	18.25
		50	24	16.14	16.09	16.00	0.00	17.00	17.39	17.34	17.25	0.00	18.25
		50	50	16.12	16.06	16.12	0.00	17.00	17.37	17.31	17.37	0.00	18.25
		100	0	16.08	16.02	16.06	0.00	17.00	17.33	17.27	17.31	0.00	18.25
	256QAM	1	0	16.52	16.33	16.22	0.00	17.00	17.05	17.10	17.07	0.45	17.80
		1	49	16.43	16.65	16.46	0.00	17.00	17.01	17.03	17.22	0.45	17.80
		1	99	16.77	16.12	16.75	0.00	17.00	17.22	17.30	17.14	0.45	17.80
		50	0	16.58	16.54	16.43	0.00	17.00	17.01	17.11	17.13	0.45	17.80
		50	24	16.33	16.34	16.38	0.00	17.00	17.05	17.11	17.03	0.45	17.80
		50	50	16.18	16.32	16.18	0.00	17.00	17.26	17.05	17.06	0.45	17.80
		100	0	16.25	16.47	16.56	0.00	17.00	17.24	17.05	17.05	0.45	17.80

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20825.00	21100.00	21375.00	MPR	Tune-up Limit	20825.00	21100.00	21375.00	MPR	Tune-up Limit
				2507.5 MHz	2535 MHz	2562.5 MHz			2507.5 MHz	2535 MHz	2562.5 MHz		
15 MHz	QPSK	1	0	16.61	16.59	16.68	0.00	17.00	17.96	17.94	18.03	0.00	18.25
		1	37	16.55	16.56	16.57	0.00	17.00	17.90	17.91	17.92	0.00	18.25
		1	74	16.60	16.57	16.62	0.00	17.00	17.95	17.92	17.97	0.00	18.25
		36	0	16.16	16.98	16.02	0.00	17.00	17.41	17.93	17.27	0.00	18.25
		36	20	16.18	16.99	16.02	0.00	17.00	17.43	17.94	17.27	0.00	18.25
		36	39	16.14	16.97	16.13	0.00	17.00	17.39	17.92	17.38	0.00	18.25
		75	0	16.12	16.96	16.08	0.00	17.00	17.37	17.91	17.33	0.00	18.25
	16QAM	1	0	16.33	16.61	16.18	0.00	17.00	17.78	17.86	17.63	0.00	18.25
		1	37	16.34	16.64	16.15	0.00	17.00	17.79	17.89	17.60	0.00	18.25
		1	74	16.28	16.58	16.11	0.00	17.00	17.73	17.83	17.56	0.00	18.25
		36	0	16.65	16.61	16.71	0.00	17.00	17.90	17.86	17.96	0.00	18.25
		36	20	16.67	16.66	16.71	0.00	17.00	17.92	17.91	17.96	0.00	18.25
		36	39	16.64	16.61	16.68	0.00	17.00	17.89	17.86	17.93	0.00	18.25
		75	0	16.62	16.58	16.66	0.00	17.00	17.87	17.83	17.91	0.00	18.25
	64QAM	1	0	16.71	16.69	16.78	0.00	17.00	17.96	17.94	18.03	0.00	18.25
		1	37	16.65	16.66	16.67	0.00	17.00	17.90	17.91	17.92	0.00	18.25
		1	74	16.70	16.67	16.72	0.00	17.00	17.95	17.92	17.97	0.00	18.25
		36	0	16.16	16.68	16.02	0.00	17.00	17.41	17.93	17.27	0.00	18.25
		36	20	16.18	16.69	16.02	0.00	17.00	17.43	17.94	17.27	0.00	18.25
		36	39	16.14	16.67	16.13	0.00	17.00	17.39	17.92	17.38	0.00	18.25
		75	0	16.12	16.66	16.08	0.00	17.00	17.37	17.91	17.33	0.00	18.25
	256QAM	1	0	16.35	16.32	16.28	0.00	17.00	17.17	17.24	17.16	0.45	17.80
		1	37	16.43	16.40	16.16	0.00	17.00	17.24	17.20	17.08	0.45	17.80
		1	74	16.31	16.53	16.25	0.00	17.00	17.10	17.03	17.29	0.45	17.80
		36	0	16.63	16.34	16.29	0.00	17.00	17.20	17.19	17.08	0.45	17.80
		36	20	16.50	16.39	16.35	0.00	17.00	17.25	17.08	17.22	0.45	17.80
		36	39	16.08	16.46	16.37	0.00	17.00	17.26	17.12	17.14	0.45	17.80
		75	0	16.17	16.34	16.55	0.00	17.00	17.10	17.05	17.13	0.45	17.80

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 7 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20800.00	21100.00	21400.00	MPR	Tune-up Limit	20800.00	21100.00	21400.00	MPR	Tune-up Limit
				2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz		
10 MHz	QPSK	1	0	16.47	16.61	16.67	0.00	17.00	17.82	17.96	18.02	0.00	18.25
		1	25	16.44	16.63	16.60	0.00	17.00	17.79	17.98	17.95	0.00	18.25
		1	49	16.43	16.66	16.60	0.00	17.00	17.78	18.01	17.95	0.00	18.25
		25	0	16.17	16.10	16.04	0.00	17.00	17.42	17.35	17.29	0.00	18.25
		25	12	16.19	16.12	16.07	0.00	17.00	17.44	17.37	17.32	0.00	18.25
		25	25	16.14	16.08	16.18	0.00	17.00	17.39	17.33	17.43	0.00	18.25
		50	0	16.10	16.05	16.12	0.00	17.00	17.35	17.30	17.37	0.00	18.25
	16QAM	1	0	16.16	16.04	16.44	0.00	17.00	17.41	17.29	17.69	0.00	18.25
		1	25	16.12	16.03	16.40	0.00	17.00	17.37	17.28	17.65	0.00	18.25
		1	49	16.16	16.14	16.45	0.00	17.00	17.41	17.39	17.70	0.00	18.25
		25	0	16.56	16.56	16.53	0.00	17.00	18.01	18.01	17.98	0.00	18.25
		25	12	16.57	16.57	16.54	0.00	17.00	18.02	18.02	17.99	0.00	18.25
		25	25	16.55	16.57	16.52	0.00	17.00	18.00	18.02	17.97	0.00	18.25
		50	0	16.43	16.48	16.47	0.00	17.00	17.88	17.93	17.92	0.00	18.25
	64QAM	1	0	16.47	16.61	16.67	0.00	17.00	17.82	17.96	18.02	0.00	18.25
		1	25	16.44	16.63	16.60	0.00	17.00	17.79	17.98	17.95	0.00	18.25
		1	49	16.43	16.66	16.60	0.00	17.00	17.78	18.01	17.95	0.00	18.25
		25	0	16.17	16.10	16.04	0.00	17.00	17.42	17.35	17.29	0.00	18.25
		25	12	16.19	16.12	16.07	0.00	17.00	17.44	17.37	17.32	0.00	18.25
		25	25	16.14	16.08	16.18	0.00	17.00	17.39	17.33	17.43	0.00	18.25
		50	0	16.10	16.05	16.12	0.00	17.00	17.35	17.30	17.37	0.00	18.25
	256QAM	1	0	16.14	16.22	16.28	0.00	17.00	17.29	17.21	17.10	0.45	17.80
		1	25	16.24	16.33	16.35	0.00	17.00	17.05	17.25	17.12	0.45	17.80
		1	49	16.20	16.15	16.17	0.00	17.00	17.14	17.22	17.22	0.45	17.80
		25	0	16.32	16.27	16.38	0.00	17.00	17.08	17.20	17.23	0.45	17.80
		25	12	16.24	16.24	16.36	0.00	17.00	17.09	17.16	17.10	0.45	17.80
		25	25	16.21	16.18	16.18	0.00	17.00	17.17	17.22	17.18	0.45	17.80
		50	0	16.38	16.30	16.36	0.00	17.00	17.11	17.12	17.12	0.45	17.80

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20775.00	21100.00	21425.00	MPR	Tune-up Limit	20775.00	21100.00	21425.00	MPR	Tune-up Limit
				2502.5 MHz	2535 MHz	2567.5 MHz			2502.5 MHz	2535 MHz	2567.5 MHz		
5 MHz	QPSK	1	0	16.60	16.76	16.61	0.00	17.00	17.85	18.01	17.86	0.00	18.25
		1	12	16.56	16.71	16.60	0.00	17.00	17.81	17.96	17.85	0.00	18.25
		1	24	16.59	16.73	16.61	0.00	17.00	17.84	17.98	17.86	0.00	18.25
		12	0	16.19	16.03	16.04	0.00	17.00	17.44	17.28	17.29	0.00	18.25
		12	7	16.24	16.08	16.09	0.00	17.00	17.49	17.33	17.34	0.00	18.25
		12	13	16.18	16.08	16.16	0.00	17.00	17.43	17.33	17.41	0.00	18.25
		25	0	16.20	16.07	16.16	0.00	17.00	17.45	17.32	17.41	0.00	18.25
	16QAM	1	0	16.34	16.29	16.58	0.00	17.00	17.59	17.54	17.83	0.00	18.25
		1	12	16.36	16.22	16.56	0.00	17.00	17.61	17.47	17.81	0.00	18.25
		1	24	16.40	16.25	16.57	0.00	17.00	17.65	17.50	17.82	0.00	18.25
		12	0	16.74	16.77	16.83	0.00	17.00	17.99	18.02	18.08	0.00	18.25
		12	7	16.80	16.79	16.84	0.00	17.00	18.05	18.04	18.09	0.00	18.25
		12	13	16.77	16.77	16.84	0.00	17.00	18.02	18.02	18.09	0.00	18.25
		25	0	16.65	16.70	16.74	0.00	17.00	17.90	17.95	17.99	0.00	18.25
	64QAM	1	0	16.50	16.66	16.51	0.00	17.00	17.85	18.01	17.86	0.00	18.25
		1	12	16.46	16.61	16.50	0.00	17.00	17.81	17.96	17.85	0.00	18.25
		1	24	16.49	16.63	16.51	0.00	17.00	17.84	17.98	17.86	0.00	18.25
		12	0	16.19	16.03	16.04	0.00	17.00	17.44	17.28	17.29	0.00	18.25
		12	7	16.24	16.08	16.09	0.00	17.00	17.49	17.33	17.34	0.00	18.25
		12	13	16.18	16.08	16.16	0.00	17.00	17.43	17.33	17.41	0.00	18.25
		25	0	16.20	16.07	16.16	0.00	17.00	17.45	17.32	17.41	0.00	18.25
	256QAM	1	0	16.19	16.12	16.33	0.00	17.00	17.22	17.13	17.11	0.45	17.80
		1	12	16.35	16.11	16.32	0.00	17.00	17.18	17.09	17.28	0.45	17.80
		1	24	16.33	16.15	16.29	0.00	17.00	17.23	17.13	17.20	0.45	17.80
		12	0	16.15	16.32	16.38	0.00	17.00	17.05	17.29	17.24	0.45	17.80
		12	7	16.18	16.23	16.16	0.00	17.00	17.12	17.03	17.19	0.45	17.80
		12	13	16.12	16.23	16.27	0.00	17.00	17.11	17.03	17.03	0.45	17.80
		25	0	16.29	16.32	16.21	0.00	17.00	17.11	17.01	17.06	0.45	17.80

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 7 Measured Results (ANT3)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20850	21100	21350	MPR	Tune-up Limit	20850	21100	21350	MPR	Tune-up Limit
				2510 MHz	2535 MHz	2560 MHz			2510 MHz	2535 MHz	2560 MHz		
20 MHz	QPSK	1	0	24.16	24.55	24.22	0.00	24.70	17.74	18.47	18.41	0.00	18.50
		1	49	24.70	24.70	24.70	0.00	24.70	18.03	18.46	18.36	0.00	18.50
		1	99	23.71	24.18	24.07	0.00	24.70	17.94	18.39	18.28	0.00	18.50
		50	0	22.96	23.38	23.15	1.00	23.70	17.98	18.38	18.16	0.00	18.50
		50	24	23.70	23.70	23.70	1.00	23.70	18.10	18.28	18.16	0.00	18.50
		50	50	23.02	23.21	23.09	1.00	23.70	18.05	18.24	18.10	0.00	18.50
		100	0	22.96	23.70	23.29	1.00	23.70	17.99	18.20	18.05	0.00	18.50
	16QAM	1	0	23.16	23.54	23.64	1.00	23.70	18.19	18.26	17.88	0.00	18.50
		1	49	23.47	23.20	23.52	1.00	23.70	18.47	17.93	17.73	0.00	18.50
		1	99	23.39	23.67	23.49	1.00	23.70	18.41	17.87	18.48	0.00	18.50
		50	0	22.43	22.20	21.97	2.00	22.70	17.65	18.43	18.19	0.00	18.50
		50	24	22.59	22.11	21.96	2.00	22.70	17.80	18.33	18.18	0.00	18.50
		50	50	22.51	22.03	21.91	2.00	22.70	17.73	18.25	18.11	0.00	18.50
		100	0	22.49	22.04	21.85	2.00	22.70	17.69	18.23	18.08	0.00	18.50
	64QAM	1	0	22.16	22.54	22.64	2.00	22.70	17.74	18.47	18.41	0.00	18.50
		1	49	22.47	22.20	22.52	2.00	22.70	18.03	18.46	18.36	0.00	18.50
		1	99	22.39	22.67	22.49	2.00	22.70	17.94	18.39	18.28	0.00	18.50
		50	0	21.43	21.20	20.97	3.00	21.70	17.98	18.38	18.16	0.00	18.50
		50	24	21.59	21.11	20.96	3.00	21.70	18.10	18.28	18.16	0.00	18.50
		50	50	21.51	21.03	20.91	3.00	21.70	18.05	18.24	18.10	0.00	18.50
		100	0	21.49	21.04	20.85	3.00	21.70	17.99	18.20	18.05	0.00	18.50
	256QAM	1	0	19.37	19.12	19.11	5.00	19.70	18.15	18.09	18.01	0.00	18.50
		1	49	19.24	19.11	19.26	5.00	19.70	18.11	18.18	18.02	0.00	18.50
		1	99	19.23	19.17	19.17	5.00	19.70	18.16	18.17	18.08	0.00	18.50
		50	0	19.37	19.13	19.34	5.00	19.70	18.01	18.09	18.11	0.00	18.50
		50	24	19.36	19.39	19.22	5.00	19.70	18.03	17.99	18.09	0.00	18.50
		50	50	19.15	19.15	19.39	5.00	19.70	18.19	17.97	18.06	0.00	18.50
		100	0	19.32	19.20	19.27	5.00	19.70	17.96	17.91	17.95	0.00	18.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20825.00	21100.00	21375.00	MPR	Tune-up Limit	20825.00	21100.00	21375.00	MPR	Tune-up Limit
				2507.5 MHz	2535 MHz	2562.5 MHz			2507.5 MHz	2535 MHz	2562.5 MHz		
15 MHz	QPSK	1	0	24.57	24.46	24.21	0.00	24.70	17.73	18.44	18.44	0.00	18.50
		1	37	23.78	24.20	24.11	0.00	24.70	17.99	18.43	18.33	0.00	18.50
		1	74	23.82	24.14	24.11	0.00	24.70	18.09	18.37	18.32	0.00	18.50
		36	0	22.88	23.35	23.16	1.00	23.70	17.94	18.37	18.18	0.00	18.50
		36	20	23.03	23.27	23.14	1.00	23.70	18.08	18.29	18.17	0.00	18.50
		36	39	23.02	23.20	23.11	1.00	23.70	18.03	18.25	18.13	0.00	18.50
		75	0	22.89	23.25	23.07	1.00	23.70	17.92	18.25	18.08	0.00	18.50
	16QAM	1	0	23.09	22.86	23.54	1.00	23.70	18.16	18.38	18.48	0.00	18.50
		1	37	23.34	23.65	23.47	1.00	23.70	18.37	18.18	18.48	0.00	18.50
		1	74	23.43	23.11	23.41	1.00	23.70	18.45	18.11	18.41	0.00	18.50
		36	0	22.38	22.15	22.00	2.00	22.70	17.64	18.38	18.20	0.00	18.50
		36	20	22.55	22.06	22.01	2.00	22.70	17.78	18.29	18.21	0.00	18.50
		36	39	22.51	22.01	21.95	2.00	22.70	17.73	18.23	18.16	0.00	18.50
		75	0	22.39	22.00	21.91	2.00	22.70	17.63	18.23	18.12	0.00	18.50
	64QAM	1	0	22.09	21.86	22.54	2.00	22.70	18.01	18.44	18.36	0.00	18.50
		1	37	22.34	22.65	22.47	2.00	22.70	18.13	18.47	18.29	0.00	18.50
		1	74	22.43	22.11	22.41	2.00	22.70	18.22	18.39	18.32	0.00	18.50
		36	0	21.38	21.15	21.00	3.00	21.70	17.60	18.49	18.19	0.00	18.50
		36	20	21.55	21.06	21.01	3.00	21.70	17.73	18.50	18.25	0.00	18.50
		36	39	21.51	21.01	20.95	3.00	21.70	17.67	18.46	18.22	0.00	18.50
		75	0	21.39	21.00	20.91	3.00	21.70	17.61	18.39	18.12	0.00	18.50
	256QAM	1	0	19.13	19.34	19.32	5.00	19.70	18.05	18.01	18.17	0.00	18.50
		1	37	19.25	19.36	19.29	5.00	19.70	18.13	17.94	18.09	0.00	18.50
		1	74	19.10	19.11	19.11	5.00	19.70	18.07	18.13	18.04	0.00	18.50
		36	0	19.10	19.24	19.24	5.00	19.70	18.11	18.17	18.18	0.00	18.50
		36	20	19.12	19.28	19.26	5.00	19.70	17.93	17.90	18.07	0.00	18.50
		36	39	19.20	19.13	19.13	5.00	19.70	18.01	17.98	18.12	0.00	18.50
		75	0	19.20	19.12	19.12	5.00	19.70	18.09	17.93	18.15	0.00	18.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 7 Measured Results (ANT3) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20800.00	21100.00	21400.00	MPR	Tune-up Limit	20800.00	21100.00	21400.00	MPR	Tune-up Limit
				2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz		
10 MHz	QPSK	1	0	23.77	24.47	24.24	0.00	24.70	17.61	18.38	18.46	0.00	18.50
		1	25	23.88	24.29	24.18	0.00	24.70	17.89	18.22	18.40	0.00	18.50
		1	49	23.80	24.32	24.18	0.00	24.70	18.05	18.23	18.38	0.00	18.50
		25	0	22.83	23.37	23.16	1.00	23.70	17.89	18.38	18.19	0.00	18.50
		25	12	23.00	23.32	23.18	1.00	23.70	18.05	18.33	18.19	0.00	18.50
		25	25	23.02	23.28	23.13	1.00	23.70	18.06	18.33	18.14	0.00	18.50
		50	0	22.92	23.22	23.11	1.00	23.70	17.97	18.26	18.12	0.00	18.50
	16QAM	1	0	22.76	22.91	23.56	1.00	23.70	17.82	18.40	18.39	0.00	18.50
		1	25	22.94	22.81	23.52	1.00	23.70	18.01	18.34	18.33	0.00	18.50
		1	49	23.18	23.21	23.50	1.00	23.70	18.20	18.22	18.31	0.00	18.50
		25	0	22.47	22.14	22.01	2.00	22.70	17.70	18.34	18.25	0.00	18.50
		25	12	22.62	22.12	22.01	2.00	22.70	17.86	18.34	18.22	0.00	18.50
		25	25	22.62	22.09	21.95	2.00	22.70	17.86	18.29	18.20	0.00	18.50
		50	0	22.46	22.02	21.94	2.00	22.70	17.74	18.26	18.16	0.00	18.50
	64QAM	1	0	21.76	21.91	22.56	2.00	22.70	17.73	18.44	18.44	0.00	18.50
		1	25	21.94	21.81	22.52	2.00	22.70	17.99	18.43	18.33	0.00	18.50
		1	49	22.18	22.21	22.50	2.00	22.70	18.09	18.37	18.32	0.00	18.50
		25	0	21.47	21.14	21.01	3.00	21.70	17.94	18.37	18.18	0.00	18.50
		25	12	21.62	21.12	21.01	3.00	21.70	18.08	18.29	18.17	0.00	18.50
		25	25	21.62	21.09	20.95	3.00	21.70	18.03	18.25	18.13	0.00	18.50
		50	0	21.46	21.02	20.94	3.00	21.70	17.92	18.25	18.08	0.00	18.50
	256QAM	1	0	19.31	19.14	19.36	5.00	19.70	17.96	18.02	18.19	0.00	18.50
		1	25	19.37	19.38	19.23	5.00	19.70	17.97	18.07	17.96	0.00	18.50
		1	49	19.28	19.40	19.24	5.00	19.70	18.03	17.95	17.95	0.00	18.50
		25	0	19.18	19.27	19.16	5.00	19.70	17.95	17.96	18.15	0.00	18.50
		25	12	19.36	19.26	19.12	5.00	19.70	18.05	18.14	18.15	0.00	18.50
		25	25	19.37	19.11	19.11	5.00	19.70	17.97	18.15	17.95	0.00	18.50
		50	0	19.23	19.29	19.39	5.00	19.70	17.98	18.04	18.14	0.00	18.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20775.00	21100.00	21425.00	MPR	Tune-up Limit	20775.00	21100.00	21425.00	MPR	Tune-up Limit
				2502.5 MHz	2535 MHz	2567.5 MHz			2502.5 MHz	2535 MHz	2567.5 MHz		
5 MHz	QPSK	1	0	23.79	24.53	24.19	0.00	24.70	17.79	18.49	18.47	0.00	18.50
		1	12	23.89	24.44	24.17	0.00	24.70	17.95	18.47	18.45	0.00	18.50
		1	24	23.75	24.46	24.20	0.00	24.70	18.02	18.47	18.46	0.00	18.50
		12	0	22.79	23.31	23.17	1.00	23.70	17.81	18.36	18.16	0.00	18.50
		12	7	22.92	23.32	23.19	1.00	23.70	17.92	18.37	18.23	0.00	18.50
		12	13	22.88	23.32	23.13	1.00	23.70	17.89	18.34	18.16	0.00	18.50
		25	0	22.84	23.34	23.15	1.00	23.70	17.88	18.32	18.13	0.00	18.50
	16QAM	1	0	22.90	23.12	23.68	1.00	23.70	18.01	18.44	18.36	0.00	18.50
		1	12	23.10	22.96	23.68	1.00	23.70	18.13	18.47	18.29	0.00	18.50
		1	24	23.17	23.53	23.66	1.00	23.70	18.22	18.39	18.32	0.00	18.50
		12	0	22.37	22.21	22.10	2.00	22.70	17.60	18.49	18.19	0.00	18.50
		12	7	22.48	22.24	22.14	2.00	22.70	17.73	18.50	18.25	0.00	18.50
		12	13	22.43	22.16	22.10	2.00	22.70	17.67	18.46	18.22	0.00	18.50
		25	0	22.29	22.12	22.02	2.00	22.70	17.61	18.39	18.12	0.00	18.50
	64QAM	1	0	21.90	22.12	22.68	2.00	22.70	18.16	18.38	18.48	0.00	18.50
		1	12	22.10	21.96	22.68	2.00	22.70	18.37	18.18	18.48	0.00	18.50
		1	24	22.17	22.53	22.66	2.00	22.70	18.45	18.11	18.41	0.00	18.50
		12	0	21.37	21.21	21.10	3.00	21.70	17.64	18.38	18.20	0.00	18.50
		12	7	21.48	21.24	21.14	3.00	21.70	17.78	18.29	18.21	0.00	18.50
		12	13	21.43	21.16	21.10	3.00	21.70	17.73	18.23	18.16	0.00	18.50
		25	0	21.29	21.12	21.02	3.00	21.70	17.63	18.23	18.12	0.00	18.50
	256QAM	1	0	19.33	19.13	19.36	5.00	19.70	18.03	18.13	18.18	0.00	18.50
		1	12	19.12	19.27	19.26	5.00	19.70	17.96	17.95	18.17	0.00	18.50
		1	24	19.22	19.40	19.17	5.00	19.70	17.92	17.93	18.16	0.00	18.50
		12	0	19.20	19.19	19.39	5.00	19.70	17.99	17.95	17.98	0.00	18.50
		12	7	19.35	19.31	19.24	5.00	19.70	18.20	18.09	17.98	0.00	18.50
		12	13	19.20	19.19	19.14	5.00	19.70	17.96	17.91	18.18	0.00	18.50
		25	0	19.38	19.27	19.15	5.00	19.70	17.95	17.91	18.03	0.00	18.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 7 Measured Results (ANT4)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				20850	21100	21350	MPR	Tune-up Limit	20850	21100	21350	MPR	Tune-up Limit
				2510 MHz	2535 MHz	2560 MHz			2510 MHz	2535 MHz	2560 MHz		
20 MHz	QPSK	1	0	16.88	17.00	16.99	0.00	17.50	21.08	21.09	21.08	0.00	21.25
		1	49	17.50	17.50	17.50	0.00	17.50	21.20	21.20	21.20	0.00	21.25
		1	99	17.04	16.93	16.94	0.00	17.50	21.12	21.00	21.03	0.00	21.25
		50	0	17.13	17.02	17.05	0.00	17.50	20.30	20.93	20.92	0.05	21.20
		50	24	17.50	17.50	17.50	0.00	17.50	21.20	21.20	21.20	0.05	21.20
		50	50	17.10	17.00	17.02	0.00	17.50	20.30	20.87	20.90	0.05	21.20
		100	0	16.98	17.50	16.99	0.00	17.50	20.29	21.20	20.94	0.05	21.20
	16QAM	1	0	17.11	17.17	17.31	0.00	17.50	20.25	20.95	21.07	0.05	21.20
		1	49	17.27	17.08	17.25	0.00	17.50	20.41	20.83	21.03	0.05	21.20
		1	99	17.44	17.08	17.25	0.00	17.50	20.42	20.87	21.03	0.05	21.20
		50	0	16.62	16.98	17.07	0.00	17.50	19.62	19.50	19.58	1.05	20.20
		50	24	16.61	16.96	17.08	0.00	17.50	19.62	19.49	19.59	1.05	20.20
		50	50	16.61	16.95	17.03	0.00	17.50	19.63	19.48	19.54	1.05	20.20
		100	0	16.52	16.94	16.99	0.00	17.50	19.53	19.44	19.50	1.05	20.20
	64QAM	1	0	16.88	17.00	16.99	0.00	17.50	19.25	19.95	20.07	1.05	20.20
		1	49	17.12	16.88	16.93	0.00	17.50	19.41	19.83	20.03	1.05	20.20
		1	99	17.04	16.93	16.94	0.00	17.50	19.42	19.87	20.03	1.05	20.20
		50	0	17.13	17.02	17.05	0.00	17.50	18.62	18.50	18.58	2.05	19.20
		50	24	17.12	17.02	17.06	0.00	17.50	18.62	18.49	18.59	2.05	19.20
		50	50	17.10	17.00	17.02	0.00	17.50	18.63	18.48	18.54	2.05	19.20
		100	0	16.98	16.96	16.99	0.00	17.50	18.53	18.44	18.50	2.05	19.20
	256QAM	1	0	16.94	16.94	17.00	0.30	17.20	16.92	16.75	16.76	4.05	17.20
		1	49	16.93	16.81	16.72	0.30	17.20	16.70	16.73	16.75	4.05	17.20
		1	99	16.89	16.82	16.76	0.30	17.20	16.94	16.96	16.71	4.05	17.20
		50	0	16.92	16.93	16.70	0.30	17.20	16.82	16.94	16.73	4.05	17.20
		50	24	16.97	16.80	16.86	0.30	17.20	16.84	16.84	17.00	4.05	17.20
		50	50	17.00	16.87	16.89	0.30	17.20	16.98	16.93	16.71	4.05	17.20
		100	0	16.80	16.97	16.83	0.30	17.20	16.93	16.81	16.81	4.05	17.20
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				20825.00	21100.00	21375.00	MPR	Tune-up Limit	20825.00	21100.00	21375.00	MPR	Tune-up Limit
				2507.5 MHz	2535 MHz	2562.5 MHz			2507.5 MHz	2535 MHz	2562.5 MHz		
15 MHz	QPSK	1	0	16.92	17.00	16.99	0.00	17.50	21.06	21.01	21.07	0.00	21.25
		1	37	17.08	16.92	16.95	0.00	17.50	21.10	20.92	21.03	0.00	21.25
		1	74	17.18	16.97	16.94	0.00	17.50	21.17	20.98	21.03	0.00	21.25
		36	0	17.08	17.01	17.08	0.00	17.50	20.31	20.92	20.95	0.05	21.20
		36	20	17.17	17.00	17.09	0.00	17.50	20.40	20.93	20.98	0.05	21.20
		36	39	17.12	17.00	17.05	0.00	17.50	20.32	20.89	20.94	0.05	21.20
		75	0	17.02	16.96	17.04	0.00	17.50	20.32	20.96	21.01	0.05	21.20
	16QAM	1	0	17.05	17.05	16.70	0.00	17.50	20.66	20.88	20.46	0.05	21.20
		1	37	17.22	17.13	16.71	0.00	17.50	20.85	20.89	20.46	0.05	21.20
		1	74	17.28	17.13	16.66	0.00	17.50	20.88	20.89	20.43	0.05	21.20
		36	0	16.66	16.99	17.05	0.00	17.50	20.17	19.52	19.56	1.05	20.20
		36	20	16.74	16.97	17.07	0.00	17.50	19.75	19.52	19.56	1.05	20.20
		36	39	16.66	16.94	17.04	0.00	17.50	19.66	19.49	19.54	1.05	20.20
		75	0	16.57	16.95	17.00	0.00	17.50	19.58	19.47	19.52	1.05	20.20
	64QAM	1	0	16.92	17.00	16.99	0.00	17.50	19.66	19.88	19.46	1.05	20.20
		1	37	17.08	16.92	16.95	0.00	17.50	19.85	19.89	19.46	1.05	20.20
		1	74	17.18	16.97	16.94	0.00	17.50	19.88	19.89	19.43	1.05	20.20
		36	0	17.08	17.01	17.08	0.00	17.50	19.17	18.52	18.56	2.05	19.20
		36	20	17.17	17.00	17.09	0.00	17.50	18.75	18.52	18.56	2.05	19.20
		36	39	17.12	17.00	17.05	0.00	17.50	18.66	18.49	18.54	2.05	19.20
		75	0	17.02	16.96	17.04	0.00	17.50	18.58	18.47	18.52	2.05	19.20
	256QAM	1	0	16.99	16.96	16.96	0.30	17.20	16.89	16.93	16.89	4.05	17.20
		1	37	16.96	16.87	16.92	0.30	17.20	16.94	16.93	16.98	4.05	17.20
		1	74	16.79	16.78	16.91	0.30	17.20	16.76	16.94	16.93	4.05	17.20
		36	0	16.81	16.92	16.88	0.30	17.20	16.76	17.00	16.96	4.05	17.20
		36	20	16.95	16.96	16.97	0.30	17.20	16.97	16.71	16.71	4.05	17.20
		36	39	16.86	16.99	16.90	0.30	17.20	16.73	16.77	16.86	4.05	17.20
		75	0	16.89	16.73	16.96	0.30	17.20	16.91	16.81	17.00	4.05	17.20

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 7 Measured Results (ANT4) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				20800.00	21100.00	21400.00	MPR	Tune-up Limit	20800.00	21100.00	21400.00	MPR	Tune-up Limit
				2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz		
10 MHz	QPSK	1	0	16.91	16.91	17.02	0.00	17.50	21.06	20.96	21.08	0.00	21.25
		1	25	17.08	16.88	16.96	0.00	17.50	21.11	20.92	21.04	0.00	21.25
		1	49	17.18	16.88	16.95	0.00	17.50	21.18	20.91	21.07	0.00	21.25
		25	0	17.08	17.03	17.09	0.00	17.50	20.30	20.93	20.95	0.05	21.20
		25	12	17.10	17.04	17.11	0.00	17.50	20.28	20.93	20.97	0.05	21.20
		25	25	17.11	16.99	17.07	0.00	17.50	20.33	20.91	20.95	0.05	21.20
		50	0	16.98	16.97	17.00	0.00	17.50	20.30	20.97	21.00	0.05	21.20
	16QAM	1	0	17.08	16.82	16.77	0.00	17.50	20.69	20.59	20.55	0.05	21.20
		1	25	17.22	16.73	16.69	0.00	17.50	20.81	20.50	20.44	0.05	21.20
		1	49	17.30	16.76	16.72	0.00	17.50	20.88	20.56	20.46	0.05	21.20
		25	0	16.63	17.10	17.09	0.00	17.50	20.17	19.65	19.58	1.05	20.20
		25	12	16.63	17.11	17.07	0.00	17.50	19.65	19.64	19.58	1.05	20.20
		25	25	16.64	17.11	17.08	0.00	17.50	19.66	19.62	19.55	1.05	20.20
		50	0	16.56	16.98	16.98	0.00	17.50	19.57	19.52	19.48	1.05	20.20
	64QAM	1	0	16.91	16.91	17.02	0.00	17.50	19.69	19.59	19.55	1.05	20.20
		1	25	17.08	16.88	16.96	0.00	17.50	19.81	19.50	19.44	1.05	20.20
		1	49	17.18	16.88	16.95	0.00	17.50	19.88	19.56	19.46	1.05	20.20
		25	0	17.08	17.03	17.09	0.00	17.50	19.17	18.65	18.58	2.05	19.20
		25	12	17.10	17.04	17.11	0.00	17.50	18.65	18.64	18.58	2.05	19.20
		25	25	17.11	16.99	17.07	0.00	17.50	18.66	18.62	18.55	2.05	19.20
		50	0	16.98	16.97	17.00	0.00	17.50	18.57	18.52	18.48	2.05	19.20
	256QAM	1	0	16.97	16.71	16.83	0.30	17.20	16.96	16.84	16.96	4.05	17.20
		1	25	16.98	16.85	16.94	0.30	17.20	16.71	16.96	16.98	4.05	17.20
		1	49	16.72	16.88	16.97	0.30	17.20	16.88	16.70	16.70	4.05	17.20
		25	0	16.94	16.73	16.91	0.30	17.20	16.94	16.96	16.93	4.05	17.20
		25	12	16.99	16.95	16.85	0.30	17.20	16.83	16.72	17.00	4.05	17.20
		25	25	16.87	16.88	16.70	0.30	17.20	16.77	16.77	16.80	4.05	17.20
		50	0	16.89	16.74	16.92	0.30	17.20	16.75	16.88	16.72	4.05	17.20
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				20775.00	21100.00	21425.00	MPR	Tune-up Limit	20775.00	21100.00	21425.00	MPR	Tune-up Limit
				2502.5 MHz	2535 MHz	2567.5 MHz			2502.5 MHz	2535 MHz	2567.5 MHz		
5 MHz	QPSK	1	0	16.95	17.11	17.00	0.00	17.50	21.11	21.11	21.10	0.00	21.25
		1	12	17.02	17.08	16.98	0.00	17.50	21.09	21.06	21.09	0.00	21.25
		1	24	17.14	17.10	17.03	0.00	17.50	21.19	21.13	21.12	0.00	21.25
		12	0	17.02	16.98	17.05	0.00	17.50	20.25	20.93	20.92	0.05	21.20
		12	7	17.13	17.02	17.08	0.00	17.50	20.34	20.98	20.95	0.05	21.20
		12	13	17.12	17.05	17.07	0.00	17.50	20.36	20.96	20.95	0.05	21.20
		25	0	17.06	17.01	17.07	0.00	17.50	20.39	21.04	21.04	0.05	21.20
	16QAM	1	0	16.85	16.99	17.34	0.00	17.50	20.45	20.77	21.10	0.05	21.20
		1	12	16.89	16.93	17.33	0.00	17.50	20.53	20.72	21.08	0.05	21.20
		1	24	17.06	16.99	17.32	0.00	17.50	20.66	20.79	21.08	0.05	21.20
		12	0	16.57	17.12	17.18	0.00	17.50	20.11	19.62	19.67	1.05	20.20
		12	7	16.65	17.12	17.25	0.00	17.50	19.70	19.68	19.71	1.05	20.20
		12	13	16.65	17.07	17.20	0.00	17.50	19.70	19.63	19.70	1.05	20.20
		25	0	16.52	17.01	17.10	0.00	17.50	19.58	19.57	19.58	1.05	20.20
	64QAM	1	0	16.95	17.11	17.00	0.00	17.50	19.45	19.77	20.10	1.05	20.20
		1	12	17.02	17.08	16.98	0.00	17.50	19.53	19.72	20.08	1.05	20.20
		1	24	17.14	17.10	17.03	0.00	17.50	19.66	19.79	20.08	1.05	20.20
		12	0	17.02	16.98	17.05	0.00	17.50	19.11	18.62	18.67	2.05	19.20
		12	7	17.13	17.02	17.08	0.00	17.50	18.70	18.68	18.71	2.05	19.20
		12	13	17.12	17.05	17.07	0.00	17.50	18.70	18.63	18.70	2.05	19.20
		25	0	17.06	17.01	17.07	0.00	17.50	18.58	18.57	18.58	2.05	19.20
	256QAM	1	0	16.84	16.97	16.80	0.30	17.20	16.96	16.81	16.78	4.05	17.20
		1	12	16.78	16.94	16.81	0.30	17.20	16.97	16.90	16.86	4.05	17.20
		1	24	16.95	16.78	16.71	0.30	17.20	16.71	16.97	16.85	4.05	17.20
		12	0	16.98	16.93	16.86	0.30	17.20	16.76	16.85	16.97	4.05	17.20
		12	7	16.78	16.82	16.99	0.30	17.20	16.75	16.74	16.88	4.05	17.20
		12	13	16.89	16.74	16.89	0.30	17.20	16.83	16.98	16.73	4.05	17.20
		25	0	16.91	16.73	16.89	0.30	17.20	16.71	16.90	16.75	4.05	17.20

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 12 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)				
				[redacted]	23095	[redacted]	MPR	Tune-up Limit	[redacted]	23095	[redacted]	MPR	Tune-up Limit
					707.5 MHz					707.5 MHz			
10 MHz	QPSK	1	0		24.81		0.00	25.70		24.81		0.00	25.70
		1	25		25.20		0.00	25.70		25.20		0.00	25.70
		1	49		24.76		0.00	25.70		24.76		0.00	25.70
		25	0		23.77		1.00	24.70		23.77		1.00	24.70
		25	12		24.20		1.00	24.70		24.20		1.00	24.70
		25	25		23.81		1.00	24.70		23.81		1.00	24.70
		50	0		23.83		1.00	24.70		23.83		1.00	24.70
	16QAM	1	0		23.92		1.00	24.70		23.92		1.00	24.70
		1	25		23.81		1.00	24.70		23.81		1.00	24.70
		1	49		23.82		1.00	24.70		23.82		1.00	24.70
		25	0		22.86		2.00	23.70		22.86		2.00	23.70
		25	12		23.02		2.00	23.70		23.02		2.00	23.70
		25	25		22.94		2.00	23.70		22.94		2.00	23.70
		50	0		22.89		2.00	23.70		22.89		2.00	23.70
	64QAM	1	0		22.81		2.00	23.70		22.81		2.00	23.70
		1	25		22.70		2.00	23.70		22.70		2.00	23.70
		1	49		22.76		2.00	23.70		22.76		2.00	23.70
		25	0		21.77		3.00	22.70		21.77		3.00	22.70
		25	12		21.90		3.00	22.70		21.90		3.00	22.70
		25	25		21.81		3.00	22.70		21.81		3.00	22.70
		50	0		21.83		3.00	22.70		21.83		3.00	22.70
	256QAM	1	0		19.92		5.00	20.70		19.92		5.00	20.70
		1	25		20.03		5.00	20.70		20.03		5.00	20.70
		1	49		19.96		5.00	20.70		19.96		5.00	20.70
		25	0		20.07		5.00	20.70		20.07		5.00	20.70
		25	12		19.95		5.00	20.70		19.95		5.00	20.70
		25	25		20.07		5.00	20.70		20.07		5.00	20.70
		50	0		19.98		5.00	20.70		19.98		5.00	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				23035.00	23095.00	23155.00			23035.00	23095.00	23155.00		
				701.5 MHz	707.5 MHz	713.5 MHz			701.5 MHz	707.5 MHz	713.5 MHz		
5 MHz	QPSK	1	0	24.78	24.87	24.80	0.00	25.70	24.78	24.87	24.80	0.00	25.70
		1	12	24.84	24.87	24.85	0.00	25.70	24.84	24.87	24.85	0.00	25.70
		1	24	24.83	24.85	24.89	0.00	25.70	24.83	24.85	24.89	0.00	25.70
		12	0	23.85	23.80	23.87	1.00	24.70	23.85	23.80	23.87	1.00	24.70
		12	7	23.93	23.88	23.91	1.00	24.70	23.93	23.88	23.91	1.00	24.70
		12	13	23.90	23.86	23.93	1.00	24.70	23.90	23.86	23.93	1.00	24.70
		25	0	23.89	23.83	23.87	1.00	24.70	23.89	23.83	23.87	1.00	24.70
	16QAM	1	0	23.97	24.00	24.35	1.00	24.70	23.97	24.00	24.35	1.00	24.70
		1	12	24.00	24.01	24.46	1.00	24.70	24.00	24.01	24.46	1.00	24.70
		1	24	24.03	23.97	24.47	1.00	24.70	24.03	23.97	24.47	1.00	24.70
		12	0	22.90	22.89	23.01	2.00	23.70	22.90	22.89	23.01	2.00	23.70
		12	7	22.98	22.97	23.02	2.00	23.70	22.98	22.97	23.02	2.00	23.70
		12	13	22.98	22.94	23.05	2.00	23.70	22.98	22.94	23.05	2.00	23.70
		25	0	22.84	22.89	22.92	2.00	23.70	22.84	22.89	22.92	2.00	23.70
	64QAM	1	0	22.78	22.87	22.80	2.00	23.70	22.78	22.87	22.80	2.00	23.70
		1	12	22.84	22.87	22.85	2.00	23.70	22.84	22.87	22.85	2.00	23.70
		1	24	22.83	22.85	22.89	2.00	23.70	22.83	22.85	22.89	2.00	23.70
		12	0	21.85	21.80	21.87	3.00	22.70	21.85	21.80	21.87	3.00	22.70
		12	7	21.93	21.88	21.91	3.00	22.70	21.93	21.88	21.91	3.00	22.70
		12	13	21.90	21.86	21.93	3.00	22.70	21.90	21.86	21.93	3.00	22.70
		25	0	21.89	21.83	21.87	3.00	22.70	21.89	21.83	21.87	3.00	22.70
	256QAM	1	0	20.03	20.12	20.10	5.00	20.70	20.03	20.12	20.10	5.00	20.70
		1	12	19.94	20.01	20.16	5.00	20.70	19.94	20.01	20.16	5.00	20.70
		1	24	20.04	20.20	20.15	5.00	20.70	20.04	20.20	20.15	5.00	20.70
		12	0	19.91	19.93	20.18	5.00	20.70	19.91	19.93	20.18	5.00	20.70
		12	7	19.95	20.01	20.00	5.00	20.70	19.95	20.01	20.00	5.00	20.70
		12	13	20.20	19.93	19.93	5.00	20.70	20.20	19.93	19.93	5.00	20.70
		25	0	20.06	19.92	20.19	5.00	20.70	20.06	19.92	20.19	5.00	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 12 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				23025.00	23095.00	23165.00			23025.00	23095.00	23165.00		
				700.5 MHz	707.5 MHz	714.5 MHz			700.5 MHz	707.5 MHz	714.5 MHz		
3 MHz	QPSK	1	0	24.74	24.75	24.84	0.00	25.70	24.74	24.75	24.84	0.00	25.70
		1	8	24.72	24.72	24.88	0.00	25.70	24.72	24.72	24.88	0.00	25.70
		1	14	24.79	24.82	24.86	0.00	25.70	24.79	24.82	24.86	0.00	25.70
		8	0	23.82	23.80	23.84	1.00	24.70	23.82	23.80	23.84	1.00	24.70
		8	4	23.91	23.88	23.87	1.00	24.70	23.91	23.88	23.87	1.00	24.70
		8	7	23.89	23.86	23.93	1.00	24.70	23.89	23.86	23.93	1.00	24.70
		15	0	23.88	23.88	23.87	1.00	24.70	23.88	23.88	23.87	1.00	24.70
	16QAM	1	0	23.88	23.80	24.27	1.00	24.70	23.88	23.80	24.27	1.00	24.70
		1	8	23.85	23.73	24.30	1.00	24.70	23.85	23.73	24.30	1.00	24.70
		1	14	23.84	23.76	24.30	1.00	24.70	23.84	23.76	24.30	1.00	24.70
		8	0	22.90	22.90	22.94	2.00	23.70	22.90	22.90	22.94	2.00	23.70
		8	4	22.96	22.93	22.94	2.00	23.70	22.96	22.93	22.94	2.00	23.70
		8	7	22.95	22.98	23.04	2.00	23.70	22.95	22.98	23.04	2.00	23.70
		15	0	22.85	22.87	22.91	2.00	23.70	22.85	22.87	22.91	2.00	23.70
	64QAM	1	0	22.74	22.75	22.84	2.00	23.70	22.74	22.75	22.84	2.00	23.70
		1	8	22.72	22.72	22.88	2.00	23.70	22.72	22.72	22.88	2.00	23.70
		1	14	22.79	22.82	22.86	2.00	23.70	22.79	22.82	22.86	2.00	23.70
		8	0	21.82	21.80	21.84	3.00	22.70	21.82	21.80	21.84	3.00	22.70
		8	4	21.91	21.88	21.87	3.00	22.70	21.91	21.88	21.87	3.00	22.70
		8	7	21.89	21.86	21.93	3.00	22.70	21.89	21.86	21.93	3.00	22.70
		15	0	21.88	21.88	21.87	3.00	22.70	21.88	21.88	21.87	3.00	22.70
	256QAM	1	0	19.93	20.01	20.14	5.00	20.70	19.93	20.01	20.14	5.00	20.70
		1	8	19.98	20.04	20.20	5.00	20.70	19.98	20.04	20.20	5.00	20.70
		1	14	20.06	19.91	20.07	5.00	20.70	20.06	19.91	20.07	5.00	20.70
		8	0	20.02	20.00	20.08	5.00	20.70	20.02	20.00	20.08	5.00	20.70
		8	4	19.98	20.02	19.99	5.00	20.70	19.98	20.02	19.99	5.00	20.70
		8	7	19.99	20.04	20.18	5.00	20.70	19.99	20.04	20.18	5.00	20.70
		15	0	19.97	20.17	19.90	5.00	20.70	19.97	20.17	19.90	5.00	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				23017.00	23095.00	23173.00			23017.00	23095.00	23173.00		
				699.7 MHz	707.5 MHz	715.3 MHz			699.7 MHz	707.5 MHz	715.3 MHz		
1.4 MHz	QPSK	1	0	25.66	24.73	24.77	0.00	25.70	25.66	24.73	24.77	0.00	25.70
		1	3	25.69	24.81	24.83	0.00	25.70	25.69	24.81	24.83	0.00	25.70
		1	5	25.66	24.80	24.85	0.00	25.70	25.66	24.80	24.85	0.00	25.70
		3	0	25.62	25.67	24.72	0.00	25.70	25.62	25.67	24.72	0.00	25.70
		3	1	25.69	24.74	24.76	0.00	25.70	25.69	24.74	24.76	0.00	25.70
		3	3	25.68	24.72	24.84	0.00	25.70	25.68	24.72	24.84	0.00	25.70
		6	0	23.72	23.74	23.85	1.00	24.70	23.72	23.74	23.85	1.00	24.70
	16QAM	1	0	23.76	23.81	24.20	1.00	24.70	23.76	23.81	24.20	1.00	24.70
		1	3	23.84	23.92	24.28	1.00	24.70	23.84	23.92	24.28	1.00	24.70
		1	5	23.75	23.89	24.19	1.00	24.70	23.75	23.89	24.19	1.00	24.70
		3	0	23.93	23.83	23.98	1.00	24.70	23.93	23.83	23.98	1.00	24.70
		3	1	23.96	23.87	24.03	1.00	24.70	23.96	23.87	24.03	1.00	24.70
		3	3	23.98	23.88	24.11	1.00	24.70	23.98	23.88	24.11	1.00	24.70
		6	0	22.92	22.90	22.77	2.00	23.70	22.92	22.90	22.77	2.00	23.70
	64QAM	1	0	23.66	22.73	22.77	2.00	23.70	23.66	22.73	22.77	2.00	23.70
		1	3	23.69	22.81	22.83	2.00	23.70	23.69	22.81	22.83	2.00	23.70
		1	5	23.66	22.80	22.85	2.00	23.70	23.66	22.80	22.85	2.00	23.70
		3	0	23.62	23.67	22.72	2.00	23.70	23.62	23.67	22.72	2.00	23.70
		3	1	23.69	22.74	22.76	2.00	23.70	23.69	22.74	22.76	2.00	23.70
		3	3	23.68	22.72	22.84	2.00	23.70	23.68	22.72	22.84	2.00	23.70
		6	0	21.72	21.74	21.85	3.00	22.70	21.72	21.74	21.85	3.00	22.70
	256QAM	1	0	20.10	20.14	20.07	5.00	20.70	20.10	20.14	20.07	5.00	20.70
		1	3	19.94	20.08	20.12	5.00	20.70	19.94	20.08	20.12	5.00	20.70
		1	5	19.97	19.99	19.99	5.00	20.70	19.97	19.99	19.99	5.00	20.70
		3	0	19.95	20.15	20.16	5.00	20.70	19.95	20.15	20.16	5.00	20.70
		3	1	20.19	20.10	19.96	5.00	20.70	20.19	20.10	19.96	5.00	20.70
		3	3	19.96	19.99	20.04	5.00	20.70	19.96	19.99	20.04	5.00	20.70
		6	0	20.00	20.15	19.94	5.00	20.70	20.00	20.15	19.94	5.00	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 12 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)				
				[redacted]	23095.00	[redacted]	MPR	Tune-up Limit	[redacted]	23095.00	[redacted]	MPR	Tune-up Limit
					707.5 MHz					707.5 MHz			
10 MHz	QPSK	1	0		23.73		0.00	23.90		23.73		0.00	23.90
		1	25		23.90		0.00	23.90		23.90		0.00	23.90
		1	49		23.69		0.00	23.90		23.69		0.00	23.90
		25	0		22.67		1.00	22.90		22.67		1.00	22.90
		25	12		22.90		1.00	22.90		22.90		1.00	22.90
		25	25		22.73		1.00	22.90		22.73		1.00	22.90
		50	0		22.90		1.00	22.90		22.90		1.00	22.90
	16QAM	1	0		22.86		1.00	22.90		22.86		1.00	22.90
		1	25		22.87		1.00	22.90		22.87		1.00	22.90
		1	49		22.83		1.00	22.90		22.83		1.00	22.90
		25	0		21.75		2.00	21.90		21.75		2.00	21.90
		25	12		21.90		2.00	21.90		21.90		2.00	21.90
		25	25		21.77		2.00	21.90		21.77		2.00	21.90
		50	0		21.84		2.00	21.90		21.84		2.00	21.90
	64QAM	1	0		21.03		2.00	21.90		21.03		2.00	21.90
		1	25		21.10		2.00	21.90		21.10		2.00	21.90
		1	49		21.01		2.00	21.90		21.01		2.00	21.90
		25	0		20.26		3.00	20.90		20.26		3.00	20.90
		25	12		20.32		3.00	20.90		20.32		3.00	20.90
		25	25		20.27		3.00	20.90		20.27		3.00	20.90
		50	0		20.25		3.00	20.90		20.25		3.00	20.90
	256QAM	1	0		18.64		5.00	18.90		18.64		5.00	18.90
		1	25		18.68		5.00	18.90		18.68		5.00	18.90
		1	49		18.84		5.00	18.90		18.84		5.00	18.90
		25	0		18.82		5.00	18.90		18.82		5.00	18.90
		25	12		18.66		5.00	18.90		18.66		5.00	18.90
		25	25		18.73		5.00	18.90		18.73		5.00	18.90
		50	0		18.73		5.00	18.90		18.73		5.00	18.90

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				23035.00	23095.00	23155.00	MPR	Tune-up Limit	23035.00	23095.00	23155.00	MPR	Tune-up Limit
				701.5 MHz	707.5 MHz	713.5 MHz			701.5 MHz	707.5 MHz	713.5 MHz		
5 MHz	QPSK	1	0	23.78	23.78	23.66	0.00	23.90	23.78	23.78	23.66	0.00	23.90
		1	12	23.78	23.80	23.70	0.00	23.90	23.78	23.80	23.70	0.00	23.90
		1	24	23.79	23.80	23.70	0.00	23.90	23.79	23.80	23.70	0.00	23.90
		12	0	22.80	22.73	22.70	1.00	22.90	22.80	22.73	22.70	1.00	22.90
		12	7	22.88	22.80	22.81	1.00	22.90	22.88	22.80	22.81	1.00	22.90
		12	13	22.84	22.76	22.75	1.00	22.90	22.84	22.76	22.75	1.00	22.90
		25	0	22.81	22.83	22.78	1.00	22.90	22.81	22.83	22.78	1.00	22.90
	16QAM	1	0	22.09	22.03	22.42	1.00	22.90	22.09	22.03	22.42	1.00	22.90
		1	12	22.14	22.10	22.44	1.00	22.90	22.14	22.10	22.44	1.00	22.90
		1	24	22.14	22.01	22.43	1.00	22.90	22.14	22.01	22.43	1.00	22.90
		12	0	21.27	21.26	21.30	2.00	21.90	21.27	21.26	21.30	2.00	21.90
		12	7	21.37	21.32	21.37	2.00	21.90	21.37	21.32	21.37	2.00	21.90
		12	13	21.29	21.27	21.33	2.00	21.90	21.29	21.27	21.33	2.00	21.90
		25	0	21.21	21.25	21.25	2.00	21.90	21.21	21.25	21.25	2.00	21.90
	64QAM	1	0	21.09	21.03	21.42	2.00	21.90	21.09	21.03	21.42	2.00	21.90
		1	12	21.14	21.10	21.44	2.00	21.90	21.14	21.10	21.44	2.00	21.90
		1	24	21.14	21.01	21.43	2.00	21.90	21.14	21.01	21.43	2.00	21.90
		12	0	20.27	20.26	20.30	3.00	20.90	20.27	20.26	20.30	3.00	20.90
		12	7	20.37	20.32	20.37	3.00	20.90	20.37	20.32	20.37	3.00	20.90
		12	13	20.29	20.27	20.33	3.00	20.90	20.29	20.27	20.33	3.00	20.90
		25	0	20.21	20.25	20.25	3.00	20.90	20.21	20.25	20.25	3.00	20.90
	256QAM	1	0	18.90	18.87	18.71	5.00	18.90	18.90	18.87	18.71	5.00	18.90
		1	12	18.83	18.87	18.85	5.00	18.90	18.83	18.87	18.85	5.00	18.90
		1	24	18.79	18.69	18.63	5.00	18.90	18.79	18.69	18.63	5.00	18.90
		12	0	18.61	18.80	18.82	5.00	18.90	18.61	18.80	18.82	5.00	18.90
		12	7	18.65	18.86	18.71	5.00	18.90	18.65	18.86	18.71	5.00	18.90
		12	13	18.72	18.62	18.63	5.00	18.90	18.72	18.62	18.63	5.00	18.90
		25	0	18.61	18.70	18.73	5.00	18.90	18.61	18.70	18.73	5.00	18.90

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 12 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				23025.00	23095.00	23165.00			23025.00	23095.00	23165.00		
				700.5 MHz	707.5 MHz	714.5 MHz			700.5 MHz	707.5 MHz	714.5 MHz		
3 MHz	QPSK	1	0	23.72	23.68	23.70	0.00	23.90	23.72	23.68	23.70	0.00	23.90
		1	8	23.67	23.68	23.72	0.00	23.90	23.67	23.68	23.72	0.00	23.90
		1	14	23.71	23.70	23.70	0.00	23.90	23.71	23.70	23.70	0.00	23.90
		8	0	22.77	22.74	22.73	1.00	22.90	22.77	22.74	22.73	1.00	22.90
		8	4	22.83	22.82	22.79	1.00	22.90	22.83	22.82	22.79	1.00	22.90
		8	7	22.86	22.83	22.78	1.00	22.90	22.86	22.83	22.78	1.00	22.90
		15	0	22.86	22.80	22.74	1.00	22.90	22.86	22.80	22.74	1.00	22.90
	16QAM	1	0	22.89	22.76	22.25	1.00	22.90	22.89	22.76	22.25	1.00	22.90
		1	8	22.84	22.74	22.22	1.00	22.90	22.84	22.74	22.22	1.00	22.90
		1	14	22.83	22.78	22.28	1.00	22.90	22.83	22.78	22.28	1.00	22.90
		8	0	21.25	21.27	21.21	2.00	21.90	21.25	21.27	21.21	2.00	21.90
		8	4	21.35	21.33	21.27	2.00	21.90	21.35	21.33	21.27	2.00	21.90
		8	7	21.33	21.35	21.31	2.00	21.90	21.33	21.35	21.31	2.00	21.90
		15	0	21.23	21.22	21.28	2.00	21.90	21.23	21.22	21.28	2.00	21.90
	64QAM	1	0	21.89	21.76	21.25	2.00	21.90	21.89	21.76	21.25	2.00	21.90
		1	8	21.84	21.74	21.22	2.00	21.90	21.84	21.74	21.22	2.00	21.90
		1	14	21.83	21.78	21.28	2.00	21.90	21.83	21.78	21.28	2.00	21.90
		8	0	20.25	20.27	20.21	3.00	20.90	20.25	20.27	20.21	3.00	20.90
		8	4	20.35	20.33	20.27	3.00	20.90	20.35	20.33	20.27	3.00	20.90
		8	7	20.33	20.35	20.31	3.00	20.90	20.33	20.35	20.31	3.00	20.90
		15	0	20.23	20.22	20.28	3.00	20.90	20.23	20.22	20.28	3.00	20.90
	256QAM	1	0	18.71	18.68	18.78	5.00	18.90	18.71	18.68	18.78	5.00	18.90
		1	8	18.89	18.61	18.74	5.00	18.90	18.89	18.61	18.74	5.00	18.90
		1	14	18.73	18.73	18.79	5.00	18.90	18.73	18.73	18.79	5.00	18.90
		8	0	18.70	18.86	18.73	5.00	18.90	18.70	18.86	18.73	5.00	18.90
		8	4	18.84	18.81	18.73	5.00	18.90	18.84	18.81	18.73	5.00	18.90
		8	7	18.80	18.61	18.67	5.00	18.90	18.80	18.61	18.67	5.00	18.90
		15	0	18.84	18.86	18.80	5.00	18.90	18.84	18.86	18.80	5.00	18.90

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				23017.00	23095.00	23173.00			23017.00	23095.00	23173.00		
				699.7 MHz	707.5 MHz	715.3 MHz			699.7 MHz	707.5 MHz	715.3 MHz		
1.4 MHz	QPSK	1	0	23.55	23.46	23.49	0.00	23.90	23.55	23.46	23.49	0.00	23.90
		1	3	23.56	23.56	23.58	0.00	23.90	23.56	23.56	23.58	0.00	23.90
		1	5	23.60	23.50	23.52	0.00	23.90	23.60	23.50	23.52	0.00	23.90
		3	0	23.54	23.49	23.44	0.00	23.90	23.54	23.49	23.44	0.00	23.90
		3	1	23.62	23.53	23.46	0.00	23.90	23.62	23.53	23.46	0.00	23.90
		3	3	23.60	23.54	23.53	0.00	23.90	23.60	23.54	23.53	0.00	23.90
		6	0	22.65	22.60	22.54	1.00	22.90	22.65	22.60	22.54	1.00	22.90
	16QAM	1	0	22.88	22.58	22.64	1.00	22.90	22.88	22.58	22.64	1.00	22.90
		1	3	22.84	22.72	22.75	1.00	22.90	22.84	22.72	22.75	1.00	22.90
		1	5	22.88	22.66	22.69	1.00	22.90	22.88	22.66	22.69	1.00	22.90
		3	0	22.81	22.79	22.57	1.00	22.90	22.81	22.79	22.57	1.00	22.90
		3	1	22.88	22.85	22.63	1.00	22.90	22.88	22.85	22.63	1.00	22.90
		3	3	22.89	22.84	22.65	1.00	22.90	22.89	22.84	22.65	1.00	22.90
		6	0	21.87	21.84	21.87	2.00	21.90	21.87	21.84	21.87	2.00	21.90
	64QAM	1	0	21.88	21.58	21.64	2.00	21.90	21.88	21.58	21.64	2.00	21.90
		1	3	21.84	21.72	21.75	2.00	21.90	21.84	21.72	21.75	2.00	21.90
		1	5	21.88	21.66	21.69	2.00	21.90	21.88	21.66	21.69	2.00	21.90
		3	0	21.81	21.79	21.57	2.00	21.90	21.81	21.79	21.57	2.00	21.90
		3	1	21.88	21.85	21.63	2.00	21.90	21.88	21.85	21.63	2.00	21.90
		3	3	21.89	21.84	21.65	2.00	21.90	21.89	21.84	21.65	2.00	21.90
		6	0	20.87	20.84	20.87	3.00	20.90	20.87	20.84	20.87	3.00	20.90
	256QAM	1	0	18.87	18.87	18.82	5.00	18.90	18.87	18.87	18.82	5.00	18.90
		1	3	18.80	18.71	18.63	5.00	18.90	18.80	18.71	18.63	5.00	18.90
		1	5	18.69	18.80	18.71	5.00	18.90	18.69	18.80	18.71	5.00	18.90
		3	0	18.83	18.80	18.65	5.00	18.90	18.83	18.80	18.65	5.00	18.90
		3	1	18.66	18.65	18.86	5.00	18.90	18.66	18.65	18.86	5.00	18.90
		3	3	18.77	18.85	18.88	5.00	18.90	18.77	18.85	18.88	5.00	18.90
		6	0	18.66	18.78	18.77	5.00	18.90	18.66	18.78	18.77	5.00	18.90

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 13 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				23230.00 782 MHz	MPR	Tune-up Limit	23230.00 782 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	24.86	0.00	25.70	24.86	0.00	25.70
		1	25	25.20	0.00	25.70	25.20	0.00	25.70
		1	49	24.87	0.00	25.70	24.87	0.00	25.70
		25	0	23.82	1.00	24.70	23.82	1.00	24.70
		25	12	24.20	1.00	24.70	24.20	1.00	24.70
		25	25	23.82	1.00	24.70	23.82	1.00	24.70
		50	0	23.79	1.00	24.70	23.79	1.00	24.70
	16QAM	1	0	24.25	1.00	24.70	24.25	1.00	24.70
		1	25	24.15	1.00	24.70	24.15	1.00	24.70
		1	49	24.26	1.00	24.70	24.26	1.00	24.70
		25	0	22.90	2.00	23.70	22.90	2.00	23.70
		25	12	22.89	2.00	23.70	22.89	2.00	23.70
		25	25	22.91	2.00	23.70	22.91	2.00	23.70
		50	0	22.86	2.00	23.70	22.86	2.00	23.70
	64QAM	1	0	23.25	2.00	23.70	23.25	2.00	23.70
		1	25	23.15	2.00	23.70	23.15	2.00	23.70
		1	49	23.26	2.00	23.70	23.26	2.00	23.70
		25	0	21.90	3.00	22.70	21.90	3.00	22.70
		25	12	21.89	3.00	22.70	21.89	3.00	22.70
		25	25	21.91	3.00	22.70	21.91	3.00	22.70
		50	0	21.86	3.00	22.70	21.86	3.00	22.70
	256QAM	1	0	20.12	5.00	20.70	20.12	5.00	20.70
		1	25	20.16	5.00	20.70	20.16	5.00	20.70
		1	49	20.01	5.00	20.70	20.01	5.00	20.70
		25	0	20.00	5.00	20.70	20.00	5.00	20.70
		25	12	20.13	5.00	20.70	20.13	5.00	20.70
		25	25	19.97	5.00	20.70	19.97	5.00	20.70
		50	0	20.01	5.00	20.70	20.01	5.00	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				23230.00 782 MHz	MPR	Tune-up Limit	23230.00 782 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	24.93	0.00	25.70	24.93	0.00	25.70
		1	12	24.80	0.00	25.70	24.80	0.00	25.70
		1	24	24.86	0.00	25.70	24.86	0.00	25.70
		12	0	23.81	1.00	24.70	23.81	1.00	24.70
		12	7	23.82	1.00	24.70	23.82	1.00	24.70
		12	13	23.83	1.00	24.70	23.83	1.00	24.70
		25	0	23.83	1.00	24.70	23.83	1.00	24.70
	16QAM	1	0	24.07	1.00	24.70	24.07	1.00	24.70
		1	12	24.04	1.00	24.70	24.04	1.00	24.70
		1	24	24.05	1.00	24.70	24.05	1.00	24.70
		12	0	22.89	2.00	23.70	22.89	2.00	23.70
		12	7	22.93	2.00	23.70	22.93	2.00	23.70
		12	13	22.94	2.00	23.70	22.94	2.00	23.70
		25	0	22.88	2.00	23.70	22.88	2.00	23.70
	64QAM	1	0	23.07	2.00	23.70	23.07	2.00	23.70
		1	12	23.04	2.00	23.70	23.04	2.00	23.70
		1	24	23.05	2.00	23.70	23.05	2.00	23.70
		12	0	21.89	3.00	22.70	21.89	3.00	22.70
		12	7	21.93	3.00	22.70	21.93	3.00	22.70
		12	13	21.94	3.00	22.70	21.94	3.00	22.70
		25	0	21.88	3.00	22.70	21.88	3.00	22.70
	256QAM	1	0	20.08	5.00	20.70	20.08	5.00	20.70
		1	12	20.12	5.00	20.70	20.12	5.00	20.70
		1	24	20.03	5.00	20.70	20.03	5.00	20.70
		12	0	20.09	5.00	20.70	20.09	5.00	20.70
		12	7	20.03	5.00	20.70	20.03	5.00	20.70
		12	13	19.93	5.00	20.70	19.93	5.00	20.70
		25	0	20.01	5.00	20.70	20.01	5.00	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 13 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm} 23230 782 MHz	MPR	Tune-up Limit	Power Mode B {dBm} 23230 782 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	23.48	0	23.9	23.48	0	23.9
		1	25	23.90	0	23.9	23.90	0	23.9
		1	49	23.46	0	23.9	23.46	0	23.9
		25	0	22.56	1	22.9	22.56	1	22.9
		25	12	22.90	1	22.9	22.90	1	22.9
		25	25	22.55	1	22.9	22.55	1	22.9
		50	0	22.90	1	22.9	22.90	1	22.9
	16QAM	1	0	22.84	1	22.9	22.84	1	22.9
		1	25	22.89	1	22.9	22.89	1	22.9
		1	49	22.87	1	22.9	22.87	1	22.9
		25	0	21.84	2	21.9	21.84	2	21.9
		25	12	21.81	2	21.9	21.81	2	21.9
		25	25	21.87	2	21.9	21.87	2	21.9
		50	0	21.77	2	21.9	21.77	2	21.9
	64QAM	1	0	21.84	2	21.9	21.84	2	21.9
		1	25	21.89	2	21.9	21.89	2	21.9
		1	49	21.87	2	21.9	21.87	2	21.9
		25	0	20.84	3	20.9	20.84	3	20.9
		25	12	20.81	3	20.9	20.81	3	20.9
		25	25	20.87	3	20.9	20.87	3	20.9
		50	0	20.77	3	20.9	20.77	3	20.9
	256QAM	1	0	18.71	5	18.9	18.71	5	18.9
		1	25	18.76	5	18.9	18.76	5	18.9
		1	49	18.67	5	18.9	18.67	5	18.9
		25	0	18.61	5	18.9	18.61	5	18.9
		25	12	18.81	5	18.9	18.81	5	18.9
		25	25	18.84	5	18.9	18.84	5	18.9
		50	0	18.71	5	18.9	18.71	5	18.9

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm} 23230 782 MHz	MPR	Tune-up Limit	Power Mode B {dBm} 23230 782 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	23.29	0	23.9	23.29	0	23.9
		1	12	23.27	0	23.9	23.27	0	23.9
		1	24	23.28	0	23.9	23.28	0	23.9
		12	0	22.21	1	22.9	22.21	1	22.9
		12	7	22.32	1	22.9	22.32	1	22.9
		12	13	22.29	1	22.9	22.29	1	22.9
		25	0	22.28	1	22.9	22.28	1	22.9
	16QAM	1	0	22.43	1	22.9	22.43	1	22.9
		1	12	22.48	1	22.9	22.48	1	22.9
		1	24	22.45	1	22.9	22.45	1	22.9
		12	0	21.59	2	21.9	21.59	2	21.9
		12	7	21.59	2	21.9	21.59	2	21.9
		12	13	21.54	2	21.9	21.54	2	21.9
		25	0	21.53	2	21.9	21.53	2	21.9
	64QAM	1	0	21.43	2	21.9	21.43	2	21.9
		1	12	21.48	2	21.9	21.48	2	21.9
		1	24	21.45	2	21.9	21.45	2	21.9
		12	0	20.59	3	20.9	20.59	3	20.9
		12	7	20.59	3	20.9	20.59	3	20.9
		12	13	20.54	3	20.9	20.54	3	20.9
		25	0	20.53	3	20.9	20.53	3	20.9
	256QAM	1	0	18.60	5	18.9	18.60	5	18.9
		1	12	18.89	5	18.9	18.89	5	18.9
		1	24	18.77	5	18.9	18.77	5	18.9
		12	0	18.65	5	18.9	18.65	5	18.9
		12	7	18.85	5	18.9	18.85	5	18.9
		12	13	18.85	5	18.9	18.85	5	18.9
		25	0	18.68	5	18.9	18.68	5	18.9

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26140.00	26365.00	26590.00	MPR	Tune-up Limit	26140.00	26365.00	26590.00	MPR	Tune-up Limit
				1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	QPSK	1	0	25.12	25.07	25.00	0.00	25.70	16.46	16.38	16.32	0.00	17.00
		1	49	25.70	25.70	25.70	0.00	25.70	17.00	17.00	17.00	0.00	17.00
		1	99	25.05	24.99	24.93	0.00	25.70	16.37	16.27	16.24	0.00	17.00
		50	0	24.16	24.11	24.05	1.00	24.70	16.49	16.40	16.33	0.00	17.00
		50	24	24.70	24.70	24.70	1.00	24.70	17.00	17.00	17.00	0.00	17.00
		50	50	24.18	24.14	24.07	1.00	24.70	16.49	16.36	16.31	0.00	17.00
		100	0	24.14	24.70	23.95	1.00	24.70	16.42	17.00	16.33	0.00	17.00
	16QAM	1	0	24.59	24.69	24.59	1.00	24.70	16.85	16.98	16.87	0.00	17.00
		1	49	24.59	24.68	24.52	1.00	24.70	16.85	16.90	16.82	0.00	17.00
		1	99	24.52	24.63	24.48	1.00	24.70	16.81	16.85	16.64	0.00	17.00
		50	0	23.58	23.59	23.52	2.00	23.70	16.43	16.42	16.31	0.00	17.00
		50	24	23.67	23.67	23.49	2.00	23.70	16.49	16.45	16.28	0.00	17.00
		50	50	23.62	23.60	23.53	2.00	23.70	16.46	16.44	16.33	0.00	17.00
		100	0	23.59	23.55	23.41	2.00	23.70	16.43	16.35	16.22	0.00	17.00
	64QAM	1	0	23.59	23.69	23.59	2.00	23.70	16.46	16.38	16.32	0.00	17.00
		1	49	23.59	23.68	23.52	2.00	23.70	16.41	16.33	16.29	0.00	17.00
		1	99	23.52	23.63	23.48	2.00	23.70	16.37	16.27	16.24	0.00	17.00
		50	0	22.58	22.59	22.52	3.00	22.70	16.49	16.40	16.33	0.00	17.00
		50	24	22.67	22.67	22.49	3.00	22.70	16.50	16.43	16.27	0.00	17.00
		50	50	22.62	22.60	22.53	3.00	22.70	16.49	16.36	16.31	0.00	17.00
		100	0	22.59	22.55	22.41	3.00	22.70	16.42	16.31	16.33	0.00	17.00
	256QAM	1	0	20.12	20.10	19.91	5.00	20.70	16.70	16.56	16.67	0.00	17.00
		1	49	19.94	19.97	20.16	5.00	20.70	16.50	16.53	16.74	0.00	17.00
		1	99	20.05	20.19	19.94	5.00	20.70	16.68	16.64	16.55	0.00	17.00
		50	0	20.05	20.04	19.90	5.00	20.70	16.49	16.58	16.56	0.00	17.00
		50	24	20.20	19.90	20.16	5.00	20.70	16.50	16.46	16.59	0.00	17.00
		50	50	20.13	19.91	20.17	5.00	20.70	16.72	16.67	16.71	0.00	17.00
		100	0	20.15	20.12	20.05	5.00	20.70	16.50	16.73	16.55	0.00	17.00
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26115.00	26365.00	26615.00	MPR	Tune-up Limit	26115.00	26365.00	26615.00	MPR	Tune-up Limit
				1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	QPSK	1	0	24.88	25.08	24.96	0.00	25.70	16.24	16.41	16.23	0.00	17.00
		1	37	25.09	25.07	24.95	0.00	25.70	16.36	16.37	16.20	0.00	17.00
		1	74	24.99	25.03	24.92	0.00	25.70	16.26	16.33	16.23	0.00	17.00
		36	0	24.17	24.01	23.96	1.00	24.70	16.41	16.27	16.21	0.00	17.00
		36	20	24.24	24.15	24.13	1.00	24.70	16.50	16.43	16.32	0.00	17.00
		36	39	24.21	24.14	24.09	1.00	24.70	16.46	16.39	16.30	0.00	17.00
		75	0	24.15	24.11	24.08	1.00	24.70	16.41	16.36	16.30	0.00	17.00
	16QAM	1	0	24.36	24.55	24.04	1.00	24.70	16.58	16.78	16.30	0.00	17.00
		1	37	24.60	24.56	24.01	1.00	24.70	16.83	16.77	16.21	0.00	17.00
		1	74	24.46	24.62	23.98	1.00	24.70	16.70	16.80	16.21	0.00	17.00
		36	0	23.67	23.46	23.40	2.00	23.70	16.44	16.27	16.24	0.00	17.00
		36	20	23.33	23.61	23.57	2.00	23.70	16.54	16.41	16.34	0.00	17.00
		36	39	23.32	23.56	23.52	2.00	23.70	16.52	16.38	16.31	0.00	17.00
		75	0	23.66	23.56	23.53	2.00	23.70	16.45	16.38	16.31	0.00	17.00
	64QAM	1	0	23.36	23.55	23.04	2.00	23.70	16.36	16.37	16.20	0.00	17.00
		1	37	23.60	23.56	23.01	2.00	23.70	16.26	16.33	16.23	0.00	17.00
		1	74	23.46	23.62	22.98	2.00	23.70	16.41	16.27	16.21	0.00	17.00
		36	0	22.67	22.46	22.40	3.00	22.70	16.50	16.43	16.32	0.00	17.00
		36	20	22.33	22.61	22.57	3.00	22.70	16.46	16.39	16.30	0.00	17.00
		36	39	22.32	22.56	22.52	3.00	22.70	16.41	16.36	16.30	0.00	17.00
		75	0	22.66	22.56	22.53	3.00	22.70	16.58	16.78	16.30	0.00	17.00
	256QAM	1	0	19.96	20.09	19.94	5.00	20.70	16.69	16.66	16.71	0.00	17.00
		1	37	19.92	19.99	19.98	5.00	20.70	16.62	16.70	16.58	0.00	17.00
		1	74	20.04	19.90	20.16	5.00	20.70	16.55	16.47	16.62	0.00	17.00
		36	0	19.99	20.03	20.16	5.00	20.70	16.74	16.60	16.52	0.00	17.00
		36	20	20.00	20.06	20.11	5.00	20.70	16.57	16.52	16.55	0.00	17.00
		36	39	19.99	20.18	20.08	5.00	20.70	16.54	16.65	16.63	0.00	17.00
		75	0	20.08	20.09	20.04	5.00	20.70	16.57	16.45	16.69	0.00	17.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26090.00	26365.00	26640.00			26090.00	26365.00	26640.00		
				1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
10 MHz	QPSK	1	0	24.88	24.70	24.89	0.00	25.70	16.48	16.27	16.49	0.00	17.00
		1	25	25.07	24.93	24.90	0.00	25.70	16.67	16.52	16.50	0.00	17.00
		1	49	24.90	24.73	24.89	0.00	25.70	16.42	16.24	16.50	0.00	17.00
		25	0	24.11	23.97	23.93	1.00	24.70	16.61	16.52	16.45	0.00	17.00
		25	12	24.24	24.14	24.08	1.00	24.70	16.29	16.17	16.10	0.00	17.00
		25	25	24.20	24.06	24.00	1.00	24.70	16.22	16.14	16.04	0.00	17.00
		50	0	24.18	24.05	24.02	1.00	24.70	16.21	16.10	16.03	0.00	17.00
	16QAM	1	0	24.33	23.93	24.04	1.00	24.70	16.89	16.46	16.50	0.00	17.00
		1	25	24.56	24.08	23.93	1.00	24.70	16.95	16.62	16.93	0.00	17.00
		1	49	24.31	23.85	23.95	1.00	24.70	16.85	16.40	16.98	0.00	17.00
		25	0	23.60	23.53	23.42	2.00	23.70	16.69	16.63	17.00	0.00	17.00
		25	12	23.32	23.68	23.55	2.00	23.70	16.34	16.25	16.15	0.00	17.00
		25	25	23.28	23.65	23.50	2.00	23.70	16.26	16.23	16.07	0.00	17.00
		50	0	23.66	23.57	23.45	2.00	23.70	16.26	16.17	16.04	0.00	17.00
	64QAM	1	0	23.33	22.93	23.04	2.00	23.70	16.48	16.27	16.49	0.00	17.00
		1	25	23.56	23.08	22.93	2.00	23.70	16.67	16.52	16.50	0.00	17.00
		1	49	23.31	22.85	22.95	2.00	23.70	16.42	16.24	16.50	0.00	17.00
		25	0	22.60	22.53	22.42	3.00	22.70	16.61	16.52	16.45	0.00	17.00
		25	12	22.32	22.68	22.55	3.00	22.70	16.29	16.17	16.10	0.00	17.00
		25	25	22.28	22.65	22.50	3.00	22.70	16.22	16.14	16.04	0.00	17.00
		50	0	22.66	22.57	22.45	3.00	22.70	16.21	16.10	16.03	0.00	17.00
	256QAM	1	0	20.12	19.98	20.17	5.00	20.70	16.55	16.26	16.26	0.00	17.00
		1	25	20.05	19.94	19.94	5.00	20.70	16.50	16.50	16.45	0.00	17.00
		1	49	20.10	20.04	20.02	5.00	20.70	16.34	16.37	16.49	0.00	17.00
		25	0	19.94	19.99	20.08	5.00	20.70	16.30	16.49	16.47	0.00	17.00
		25	12	19.91	19.93	20.10	5.00	20.70	16.33	16.41	16.34	0.00	17.00
		25	25	20.18	20.10	20.14	5.00	20.70	16.48	16.38	16.39	0.00	17.00
		50	0	19.94	20.04	20.08	5.00	20.70	16.43	16.46	16.43	0.00	17.00

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26065.00	26365.00	26665.00			26065.00	26365.00	26665.00		
				1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	QPSK	1	0	25.05	24.99	24.87	0.00	25.70	16.27	16.27	16.29	0.00	17.00
		1	12	25.15	25.09	24.91	0.00	25.70	16.34	16.34	16.31	0.00	17.00
		1	24	25.19	25.13	24.91	0.00	25.70	16.43	16.37	16.32	0.00	17.00
		12	0	24.19	24.01	23.99	1.00	24.70	16.43	16.30	16.24	0.00	17.00
		12	7	24.28	24.14	23.99	1.00	24.70	16.49	16.42	16.22	0.00	17.00
		12	13	24.21	24.13	24.04	1.00	24.70	16.50	16.41	16.29	0.00	17.00
		25	0	24.24	24.14	23.96	1.00	24.70	16.49	16.37	16.22	0.00	17.00
	16QAM	1	0	24.33	24.24	24.50	1.00	24.70	16.90	16.42	16.40	0.00	17.00
		1	12	24.46	24.26	24.63	1.00	24.70	16.93	16.49	16.43	0.00	17.00
		1	24	24.45	24.34	24.58	1.00	24.70	17.00	16.53	16.48	0.00	17.00
		12	0	23.66	23.58	23.56	2.00	23.70	16.60	16.36	16.27	0.00	17.00
		12	7	23.34	23.66	23.60	2.00	23.70	16.65	16.46	16.35	0.00	17.00
		12	13	23.35	23.68	23.65	2.00	23.70	16.61	16.44	16.38	0.00	17.00
		25	0	23.60	23.60	23.47	2.00	23.70	16.54	16.34	16.24	0.00	17.00
	64QAM	1	0	23.33	23.24	23.50	2.00	23.70	16.90	16.42	16.40	0.00	17.00
		1	12	23.46	23.26	23.63	2.00	23.70	16.93	16.49	16.43	0.00	17.00
		1	24	23.45	23.34	23.58	2.00	23.70	17.00	16.53	16.48	0.00	17.00
		12	0	22.66	22.58	22.56	3.00	22.70	16.60	16.36	16.27	0.00	17.00
		12	7	22.34	22.66	22.60	3.00	22.70	16.65	16.46	16.35	0.00	17.00
		12	13	22.35	22.68	22.65	3.00	22.70	16.61	16.44	16.38	0.00	17.00
		25	0	22.60	22.60	22.47	3.00	22.70	16.54	16.34	16.24	0.00	17.00
	256QAM	1	0	19.90	20.14	19.91	5.00	20.70	16.71	16.66	16.58	0.00	17.00
		1	12	20.20	19.94	20.03	5.00	20.70	16.59	16.57	16.48	0.00	17.00
		1	24	19.90	20.05	20.10	5.00	20.70	16.69	16.72	16.60	0.00	17.00
		12	0	20.13	20.12	19.96	5.00	20.70	16.55	16.63	16.68	0.00	17.00
		12	7	20.19	19.98	19.93	5.00	20.70	16.49	16.57	16.75	0.00	17.00
		12	13	20.03	19.96	19.91	5.00	20.70	16.74	16.75	16.51	0.00	17.00
		25	0	19.96	20.05	19.99	5.00	20.70	16.47	16.70	16.62	0.00	17.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26055.00	26365.00	26675.00			26055.00	26365.00	26675.00		
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3 MHz	QPSK	1	0	25.03	24.97	24.91	0.00	25.70	16.34	16.24	16.36	0.00	17.00
		1	8	25.02	24.93	24.92	0.00	25.70	16.37	16.21	16.36	0.00	17.00
		1	14	25.10	25.03	24.98	0.00	25.70	16.41	16.29	16.24	0.00	17.00
		8	0	24.21	24.09	23.99	1.00	24.70	16.42	16.32	16.26	0.00	17.00
		8	4	24.22	24.09	24.01	1.00	24.70	16.46	16.39	16.25	0.00	17.00
		8	7	24.24	24.18	24.05	1.00	24.70	16.49	16.39	16.33	0.00	17.00
		15	0	24.24	24.12	24.01	1.00	24.70	16.43	16.33	16.35	0.00	17.00
	16QAM	1	0	24.24	24.04	24.36	1.00	24.70	16.81	16.39	16.23	0.00	17.00
		1	8	24.22	24.00	24.32	1.00	24.70	16.76	16.34	16.24	0.00	17.00
		1	14	24.29	24.12	24.44	1.00	24.70	16.83	16.40	16.22	0.00	17.00
		8	0	23.67	23.62	23.52	2.00	23.70	16.50	16.41	16.36	0.00	17.00
		8	4	23.30	23.67	23.54	2.00	23.70	16.56	16.47	16.38	0.00	17.00
		8	7	23.32	23.68	23.59	2.00	23.70	16.56	16.46	16.44	0.00	17.00
		15	0	23.62	23.57	23.53	2.00	23.70	16.48	16.37	16.34	0.00	17.00
	64QAM	1	0	23.24	23.04	23.36	2.00	23.70	16.81	16.39	16.23	0.00	17.00
		1	8	23.22	23.00	23.32	2.00	23.70	16.76	16.34	16.24	0.00	17.00
		1	14	23.29	23.12	23.44	2.00	23.70	16.83	16.40	16.22	0.00	17.00
		8	0	22.67	22.62	22.52	3.00	22.70	16.50	16.41	16.36	0.00	17.00
		8	4	22.30	22.67	22.54	3.00	22.70	16.56	16.47	16.38	0.00	17.00
		8	7	22.32	22.68	22.59	3.00	22.70	16.56	16.46	16.44	0.00	17.00
		15	0	22.62	22.57	22.53	3.00	22.70	16.48	16.37	16.34	0.00	17.00
	256QAM	1	0	20.09	20.13	20.03	5.00	20.70	16.74	16.58	16.54	0.00	17.00
		1	8	20.16	20.13	20.00	5.00	20.70	16.63	16.58	16.50	0.00	17.00
		1	14	19.95	20.10	20.14	5.00	20.70	16.67	16.62	16.58	0.00	17.00
		8	0	19.97	19.90	19.98	5.00	20.70	16.56	16.74	16.72	0.00	17.00
		8	4	20.18	20.15	20.04	5.00	20.70	16.70	16.53	16.54	0.00	17.00
		8	7	20.09	20.10	19.99	5.00	20.70	16.60	16.56	16.46	0.00	17.00
		15	0	20.18	20.13	20.08	5.00	20.70	16.66	16.60	16.67	0.00	17.00

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26047.00	26365.00	26683.00			26047.00	26365.00	26683.00		
				1850.7 MHz	1882.5 MHz	1914.3 MHz			1850.7 MHz	1882.5 MHz	1914.3 MHz		
1.4 MHz	QPSK	1	0	24.93	24.96	24.78	0.00	25.70	16.32	16.35	16.25	0.00	17.00
		1	3	25.07	24.99	24.86	0.00	25.70	16.38	16.23	16.38	0.00	17.00
		1	5	24.98	25.00	24.83	0.00	25.70	16.32	16.20	16.32	0.00	17.00
		3	0	24.94	24.84	24.78	0.00	25.70	16.33	16.37	16.25	0.00	17.00
		3	1	25.02	24.92	24.89	0.00	25.70	16.37	16.22	16.33	0.00	17.00
		3	3	25.05	24.91	24.88	0.00	25.70	16.38	16.23	16.32	0.00	17.00
		6	0	24.53	24.47	24.33	1.00	24.70	16.37	16.26	16.30	0.00	17.00
	16QAM	1	0	24.16	24.11	24.24	1.00	24.70	16.73	16.26	16.21	0.00	17.00
		1	3	24.18	24.22	24.35	1.00	24.70	16.78	16.34	16.36	0.00	17.00
		1	5	24.20	24.14	24.29	1.00	24.70	16.75	16.34	16.30	0.00	17.00
		3	0	24.66	24.55	24.55	1.00	24.70	16.58	16.46	16.23	0.00	17.00
		3	1	24.40	24.59	24.61	1.00	24.70	16.62	16.51	16.27	0.00	17.00
		3	3	24.38	24.60	24.64	1.00	24.70	16.62	16.51	16.33	0.00	17.00
		6	0	23.64	23.61	23.25	2.00	23.70	16.31	16.48	16.27	0.00	17.00
	64QAM	1	0	23.16	23.11	23.24	2.00	23.70	16.32	16.35	16.25	0.00	17.00
		1	3	23.18	23.22	23.35	2.00	23.70	16.38	16.23	16.38	0.00	17.00
		1	5	23.20	23.14	23.29	2.00	23.70	16.32	16.20	16.32	0.00	17.00
		3	0	23.66	23.55	23.55	2.00	23.70	16.33	16.37	16.25	0.00	17.00
		3	1	23.40	23.59	23.61	2.00	23.70	16.37	16.22	16.33	0.00	17.00
		3	3	23.38	23.60	23.64	2.00	23.70	16.38	16.23	16.32	0.00	17.00
		6	0	22.64	22.61	22.25	3.00	22.70	16.37	16.26	16.30	0.00	17.00
	256QAM	1	0	19.90	20.12	19.95	5.00	20.70	16.52	16.57	16.56	0.00	17.00
		1	3	20.02	19.98	20.14	5.00	20.70	16.56	16.66	16.47	0.00	17.00
		1	5	20.01	20.19	20.14	5.00	20.70	16.48	16.50	16.47	0.00	17.00
		3	0	20.15	20.19	19.92	5.00	20.70	16.56	16.59	16.70	0.00	17.00
		3	1	20.07	20.18	19.97	5.00	20.70	16.69	16.68	16.54	0.00	17.00
		3	3	20.04	20.08	19.93	5.00	20.70	16.58	16.57	16.60	0.00	17.00
		6	0	20.03	20.01	20.05	5.00	20.70	16.55	16.67	16.62	0.00	17.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26140.00	26365.00	26590.00	MPR	Tune-up Limit	26140.00	26365.00	26590.00	MPR	Tune-up Limit
				1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	QPSK	1	0	19.79	19.70	19.58	0.00	20.25	19.79	19.70	19.58	0.00	20.00
		1	49	20.00	20.00	20.00	0.00	20.25	20.00	20.00	20.00	0.00	20.00
		1	99	19.68	19.59	19.46	0.00	20.25	19.68	19.59	19.46	0.00	20.00
		50	0	19.78	19.72	19.56	0.00	20.25	19.78	19.72	19.56	0.00	20.00
		50	24	20.00	20.00	20.00	0.00	20.25	20.00	20.00	20.00	0.00	20.00
		50	50	19.78	19.70	19.56	0.00	20.25	19.78	19.70	19.56	0.00	20.00
		100	0	19.73	20.00	19.47	0.00	20.25	19.73	20.00	19.47	0.00	20.00
	16QAM	1	0	19.46	19.38	19.43	0.00	20.25	19.46	19.38	19.43	0.00	20.00
		1	49	19.52	19.30	19.38	0.00	20.25	19.52	19.30	19.38	0.00	20.00
		1	99	19.40	19.25	19.27	0.00	20.25	19.40	19.25	19.27	0.00	20.00
		50	0	19.48	19.41	19.30	0.00	20.25	19.48	19.41	19.30	0.00	20.00
		50	24	19.54	19.37	19.28	0.00	20.25	19.54	19.37	19.28	0.00	20.00
		50	50	19.49	19.37	19.30	0.00	20.25	19.49	19.37	19.30	0.00	20.00
		100	0	19.43	19.29	19.27	0.00	20.25	19.43	19.29	19.27	0.00	20.00
	64QAM	1	0	19.46	19.38	19.43	0.00	20.25	19.46	19.38	19.43	0.00	20.00
		1	49	19.52	19.30	19.38	0.00	20.25	19.52	19.30	19.38	0.00	20.00
		1	99	19.40	19.25	19.27	0.00	20.25	19.40	19.25	19.27	0.00	20.00
		50	0	19.48	19.41	19.30	0.15	20.10	19.48	19.41	19.30	0.00	20.00
		50	24	19.54	19.37	19.28	0.15	20.10	19.54	19.37	19.28	0.00	20.00
		50	50	19.49	19.37	19.30	0.15	20.10	19.49	19.37	19.30	0.00	20.00
		100	0	19.43	19.29	19.27	0.15	20.10	19.43	19.29	19.27	0.00	20.00
	256QAM	1	0	17.47	17.42	17.31	2.15	18.10	17.47	17.42	17.31	1.90	18.10
		1	49	17.58	17.45	17.33	2.15	18.10	17.58	17.45	17.33	1.90	18.10
		1	99	17.46	17.47	17.47	2.15	18.10	17.46	17.47	17.47	1.90	18.10
		50	0	17.41	17.56	17.42	2.15	18.10	17.41	17.56	17.42	1.90	18.10
		50	24	17.41	17.36	17.58	2.15	18.10	17.41	17.36	17.58	1.90	18.10
		50	50	17.32	17.48	17.32	2.15	18.10	17.32	17.48	17.32	1.90	18.10
		100	0	17.50	17.33	17.56	2.15	18.10	17.50	17.33	17.56	1.90	18.10

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26115.00	26365.00	26615.00	MPR	Tune-up Limit	26115.00	26365.00	26615.00	MPR	Tune-up Limit
				1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	QPSK	1	0	19.56	19.76	19.54	0.00	20.25	19.56	19.76	19.54	0.00	20.00
		1	37	19.72	19.69	19.51	0.00	20.25	19.72	19.69	19.51	0.00	20.00
		1	74	19.61	19.63	19.47	0.00	20.25	19.61	19.63	19.47	0.00	20.00
		36	0	19.70	19.63	19.47	0.00	20.25	19.70	19.63	19.47	0.00	20.00
		36	20	19.85	19.71	19.56	0.00	20.25	19.85	19.71	19.56	0.00	20.00
		36	39	19.83	19.74	19.60	0.00	20.25	19.83	19.74	19.60	0.00	20.00
		75	0	19.74	19.63	19.47	0.00	20.25	19.74	19.63	19.47	0.00	20.00
	16QAM	1	0	19.58	19.76	19.49	0.00	20.25	19.58	19.76	19.49	0.00	20.00
		1	37	19.78	19.77	19.49	0.00	20.25	19.78	19.77	19.49	0.00	20.00
		1	74	19.62	19.68	19.36	0.00	20.25	19.62	19.68	19.36	0.00	20.00
		36	0	19.43	19.31	19.32	0.00	20.25	19.43	19.31	19.32	0.00	20.00
		36	20	19.62	19.38	19.26	0.00	20.25	19.62	19.38	19.26	0.00	20.00
		36	39	19.57	19.41	19.29	0.00	20.25	19.57	19.41	19.29	0.00	20.00
		75	0	19.51	19.34	19.33	0.00	20.25	19.51	19.34	19.33	0.00	20.00
	64QAM	1	0	19.68	19.86	19.49	0.00	20.25	19.68	19.86	19.49	0.00	20.00
		1	37	19.88	19.87	19.49	0.00	20.25	19.88	19.87	19.49	0.00	20.00
		1	74	19.72	19.78	19.36	0.00	20.25	19.72	19.78	19.36	0.00	20.00
		36	0	19.43	19.31	19.32	0.15	20.10	19.43	19.31	19.32	0.00	20.00
		36	20	19.62	19.38	19.26	0.15	20.10	19.62	19.38	19.26	0.00	20.00
		36	39	19.57	19.41	19.29	0.15	20.10	19.57	19.41	19.29	0.00	20.00
		75	0	19.51	19.34	19.33	0.15	20.10	19.51	19.34	19.33	0.00	20.00
	256QAM	1	0	17.55	17.35	17.37	2.15	18.10	17.55	17.35	17.37	1.90	18.10
		1	37	17.48	17.36	17.33	2.15	18.10	17.48	17.36	17.33	1.90	18.10
		1	74	17.31	17.56	17.50	2.15	18.10	17.31	17.56	17.50	1.90	18.10
		36	0	17.46	17.36	17.47	2.15	18.10	17.46	17.36	17.47	1.90	18.10
		36	20	17.38	17.50	17.39	2.15	18.10	17.38	17.50	17.39	1.90	18.10
		36	39	17.47	17.44	17.58	2.15	18.10	17.47	17.44	17.58	1.90	18.10
		75	0	17.34	17.38	17.57	2.15	18.10	17.34	17.38	17.57	1.90	18.10

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26090.00	26365.00	26640.00	MPR	Tune-up Limit	26090.00	26365.00	26640.00	MPR	Tune-up Limit
				1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
10 MHz	QPSK	1	0	19.39	19.38	19.54	0.00	20.25	19.39	19.38	19.54	0.00	20.00
		1	25	19.62	19.61	19.50	0.00	20.25	19.62	19.61	19.50	0.00	20.00
		1	49	19.36	19.37	19.47	0.00	20.25	19.36	19.37	19.47	0.00	20.00
		25	0	19.65	19.60	19.44	0.00	20.25	19.65	19.60	19.44	0.00	20.00
		25	12	19.81	19.67	19.59	0.00	20.25	19.81	19.67	19.59	0.00	20.00
		25	25	19.74	19.67	19.53	0.00	20.25	19.74	19.67	19.53	0.00	20.00
		50	0	19.73	19.59	19.54	0.00	20.25	19.73	19.59	19.54	0.00	20.00
	16QAM	1	0	19.44	19.40	19.83	0.00	20.25	19.44	19.40	19.83	0.00	20.00
		1	25	19.57	19.49	19.77	0.00	20.25	19.57	19.49	19.77	0.00	20.00
		1	49	19.37	19.33	19.81	0.00	20.25	19.37	19.33	19.81	0.00	20.00
		25	0	19.43	19.33	19.33	0.00	20.25	19.43	19.33	19.33	0.00	20.00
		25	12	19.60	19.39	19.32	0.00	20.25	19.60	19.39	19.32	0.00	20.00
		25	25	19.55	19.41	19.28	0.00	20.25	19.55	19.41	19.28	0.00	20.00
		50	0	19.46	19.28	19.31	0.00	20.25	19.46	19.28	19.31	0.00	20.00
	64QAM	1	0	19.64	19.60	19.83	0.00	20.25	19.64	19.60	19.83	0.00	20.00
		1	25	19.77	19.69	19.77	0.00	20.25	19.77	19.69	19.77	0.00	20.00
		1	49	19.57	19.53	19.81	0.00	20.25	19.57	19.53	19.81	0.00	20.00
		25	0	19.43	19.33	19.33	0.15	20.10	19.43	19.33	19.33	0.00	20.00
		25	12	19.60	19.39	19.32	0.15	20.10	19.60	19.39	19.32	0.00	20.00
		25	25	19.55	19.41	19.28	0.15	20.10	19.55	19.41	19.28	0.00	20.00
		50	0	19.46	19.28	19.31	0.15	20.10	19.46	19.28	19.31	0.00	20.00
	256QAM	1	0	17.58	17.38	17.54	2.15	18.10	17.58	17.38	17.54	1.90	18.10
		1	25	17.47	17.32	17.47	2.15	18.10	17.47	17.32	17.47	1.90	18.10
		1	49	17.46	17.56	17.50	2.15	18.10	17.46	17.56	17.50	1.90	18.10
		25	0	17.53	17.58	17.45	2.15	18.10	17.53	17.58	17.45	1.90	18.10
		25	12	17.58	17.33	17.59	2.15	18.10	17.58	17.33	17.59	1.90	18.10
		25	25	17.39	17.56	17.40	2.15	18.10	17.39	17.56	17.40	1.90	18.10
		50	0	17.33	17.43	17.49	2.15	18.10	17.33	17.43	17.49	1.90	18.10

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26065.00	26365.00	26665.00	MPR	Tune-up Limit	26065.00	26365.00	26665.00	MPR	Tune-up Limit
				1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	QPSK	1	0	19.78	19.84	19.84	0.00	20.25	19.78	19.84	19.84	0.00	20.00
		1	12	19.87	19.86	19.77	0.00	20.25	19.87	19.86	19.77	0.00	20.00
		1	24	19.90	19.90	19.79	0.00	20.25	19.90	19.90	19.79	0.00	20.00
		12	0	19.91	19.87	19.73	0.00	20.25	19.91	19.87	19.73	0.00	20.00
		12	7	19.70	19.56	19.48	0.00	20.25	19.70	19.56	19.48	0.00	20.00
		12	13	19.73	19.62	19.48	0.00	20.25	19.73	19.62	19.48	0.00	20.00
		25	0	19.69	19.55	19.45	0.00	20.25	19.69	19.55	19.45	0.00	20.00
	16QAM	1	0	19.80	19.39	19.33	0.00	20.25	19.80	19.39	19.33	0.00	20.00
		1	12	19.90	19.57	19.28	0.00	20.25	19.90	19.57	19.28	0.00	20.00
		1	24	19.91	19.56	19.32	0.00	20.25	19.91	19.56	19.32	0.00	20.00
		12	0	19.54	19.40	19.32	0.00	20.25	19.54	19.40	19.32	0.00	20.00
		12	7	19.63	19.45	19.34	0.00	20.25	19.63	19.45	19.34	0.00	20.00
		12	13	19.63	19.49	19.36	0.00	20.25	19.63	19.49	19.36	0.00	20.00
		25	0	19.55	19.31	19.29	0.00	20.25	19.55	19.31	19.29	0.00	20.00
	64QAM	1	0	19.80	19.39	19.33	0.00	20.25	19.80	19.39	19.33	0.00	20.00
		1	12	19.90	19.57	19.28	0.00	20.25	19.90	19.57	19.28	0.00	20.00
		1	24	19.91	19.56	19.32	0.00	20.25	19.91	19.56	19.32	0.00	20.00
		12	0	19.54	19.40	19.32	0.15	20.10	19.54	19.40	19.32	0.00	20.00
		12	7	19.63	19.45	19.34	0.15	20.10	19.63	19.45	19.34	0.00	20.00
		12	13	19.63	19.49	19.36	0.15	20.10	19.63	19.49	19.36	0.00	20.00
		25	0	19.55	19.31	19.29	0.15	20.10	19.55	19.31	19.29	0.00	20.00
	256QAM	1	0	17.48	17.44	17.34	2.15	18.10	17.48	17.44	17.34	1.90	18.10
		1	12	17.48	17.36	17.44	2.15	18.10	17.48	17.36	17.44	1.90	18.10
		1	24	17.34	17.39	17.45	2.15	18.10	17.34	17.39	17.45	1.90	18.10
		12	0	17.36	17.49	17.59	2.15	18.10	17.36	17.49	17.59	1.90	18.10
		12	7	17.42	17.53	17.33	2.15	18.10	17.42	17.53	17.33	1.90	18.10
		12	13	17.45	17.39	17.58	2.15	18.10	17.45	17.39	17.58	1.90	18.10
		25	0	17.53	17.53	17.42	2.15	18.10	17.53	17.53	17.42	1.90	18.10

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26055.00	26365.00	26675.00			26055.00	26365.00	26675.00		
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3 MHz	QPSK	1	0	19.85	19.73	19.62	0.00	20.25	19.85	19.73	19.62	0.00	20.00
		1	8	19.92	19.76	19.64	0.00	20.25	19.92	19.76	19.64	0.00	20.00
		1	14	19.97	19.81	19.74	0.00	20.25	19.97	19.81	19.74	0.00	20.00
		8	0	19.96	19.80	19.67	0.00	20.25	19.96	19.80	19.67	0.00	20.00
		8	4	19.98	19.92	19.71	0.00	20.25	19.98	19.92	19.71	0.00	20.00
		8	7	19.70	19.95	19.76	0.00	20.25	19.70	19.95	19.76	0.00	20.00
		15	0	19.98	19.83	19.70	0.00	20.25	19.98	19.83	19.70	0.00	20.00
	16QAM	1	0	19.81	19.33	19.73	0.00	20.25	19.81	19.33	19.73	0.00	20.00
		1	8	19.82	19.35	19.76	0.00	20.25	19.82	19.35	19.76	0.00	20.00
		1	14	19.92	19.43	19.78	0.00	20.25	19.92	19.43	19.78	0.00	20.00
		8	0	19.55	19.38	19.29	0.00	20.25	19.55	19.38	19.29	0.00	20.00
		8	4	19.58	19.47	19.34	0.00	20.25	19.58	19.47	19.34	0.00	20.00
		8	7	19.60	19.48	19.36	0.00	20.25	19.60	19.48	19.36	0.00	20.00
		15	0	19.51	19.32	19.27	0.00	20.25	19.51	19.32	19.27	0.00	20.00
	64QAM	1	0	19.81	19.33	19.83	0.00	20.25	19.81	19.33	19.83	0.00	20.00
		1	8	19.82	19.35	19.86	0.00	20.25	19.82	19.35	19.86	0.00	20.00
		1	14	19.92	19.43	19.88	0.00	20.25	19.92	19.43	19.88	0.00	20.00
		8	0	19.55	19.38	19.29	0.15	20.10	19.55	19.38	19.29	0.00	20.00
		8	4	19.58	19.47	19.34	0.15	20.10	19.58	19.47	19.34	0.00	20.00
		8	7	19.60	19.48	19.36	0.15	20.10	19.60	19.48	19.36	0.00	20.00
		15	0	19.51	19.32	19.27	0.15	20.10	19.51	19.32	19.27	0.00	20.00
	256QAM	1	0	17.36	17.36	17.48	2.15	18.10	17.36	17.36	17.48	1.90	18.10
		1	8	17.42	17.40	17.34	2.15	18.10	17.42	17.40	17.34	1.90	18.10
		1	14	17.56	17.34	17.43	2.15	18.10	17.56	17.34	17.43	1.90	18.10
		8	0	17.45	17.35	17.47	2.15	18.10	17.45	17.35	17.47	1.90	18.10
		8	4	17.42	17.42	17.35	2.15	18.10	17.42	17.42	17.35	1.90	18.10
		8	7	17.38	17.32	17.47	2.15	18.10	17.38	17.32	17.47	1.90	18.10
		15	0	17.33	17.42	17.50	2.15	18.10	17.33	17.42	17.50	1.90	18.10

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26047.00	26365.00	26683.00			26047.00	26365.00	26683.00		
				1850.7 MHz	1882.5 MHz	1914.3 MHz			1850.7 MHz	1882.5 MHz	1914.3 MHz		
1.4 MHz	QPSK	1	0	19.70	19.78	19.60	0.00	20.25	19.70	19.78	19.60	0.00	20.00
		1	3	19.78	19.82	19.64	0.00	20.25	19.78	19.82	19.64	0.00	20.00
		1	5	19.80	19.78	19.62	0.00	20.25	19.80	19.78	19.62	0.00	20.00
		3	0	19.78	19.80	19.67	0.00	20.25	19.78	19.80	19.67	0.00	20.00
		3	1	19.89	19.83	19.70	0.00	20.25	19.89	19.83	19.70	0.00	20.00
		3	3	19.90	19.85	19.73	0.00	20.25	19.90	19.85	19.73	0.00	20.00
		6	0	19.89	19.80	19.64	0.00	20.25	19.89	19.80	19.64	0.00	20.00
	16QAM	1	0	19.52	19.58	19.72	0.00	20.25	19.52	19.58	19.72	0.00	20.00
		1	3	19.54	19.66	19.75	0.00	20.25	19.54	19.66	19.75	0.00	20.00
		1	5	19.61	19.63	19.73	0.00	20.25	19.61	19.63	19.73	0.00	20.00
		3	0	19.68	19.50	19.51	0.00	20.25	19.68	19.50	19.51	0.00	20.00
		3	1	19.81	19.61	19.58	0.00	20.25	19.81	19.61	19.58	0.00	20.00
		3	3	19.82	19.59	19.58	0.00	20.25	19.82	19.59	19.58	0.00	20.00
		6	0	19.57	19.48	19.28	0.00	20.25	19.57	19.48	19.28	0.00	20.00
	64QAM	1	0	19.52	19.58	19.72	0.00	20.25	19.52	19.58	19.72	0.00	20.00
		1	3	19.54	19.66	19.75	0.00	20.25	19.54	19.66	19.75	0.00	20.00
		1	5	19.61	19.63	19.73	0.00	20.25	19.61	19.63	19.73	0.00	20.00
		3	0	19.68	19.50	19.51	0.00	20.25	19.68	19.50	19.51	0.00	20.00
		3	1	19.81	19.61	19.58	0.00	20.25	19.81	19.61	19.58	0.00	20.00
		3	3	19.82	19.59	19.58	0.00	20.25	19.82	19.59	19.58	0.00	20.00
		6	0	19.57	19.48	19.28	0.15	20.10	19.57	19.48	19.28	0.00	20.00
	256QAM	1	0	17.46	17.40	17.52	2.15	18.10	17.46	17.40	17.52	1.90	18.10
		1	3	17.49	17.54	17.38	2.15	18.10	17.49	17.54	17.38	1.90	18.10
		1	5	17.42	17.58	17.49	2.15	18.10	17.42	17.58	17.49	1.90	18.10
		3	0	17.45	17.55	17.59	2.15	18.10	17.45	17.55	17.59	1.90	18.10
		3	1	17.48	17.55	17.47	2.15	18.10	17.48	17.55	17.47	1.90	18.10
		3	3	17.57	17.41	17.54	2.15	18.10	17.57	17.41	17.54	1.90	18.10
		6	0	17.50	17.53	17.51	2.15	18.10	17.50	17.53	17.51	1.90	18.10

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT3)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26140	26365	26590	MPR	Tune-up Limit	26140	26365	26590	MPR	Tune-up Limit
				1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	QPSK	1	0	23.80	23.91	24.15	0.00	24.70	18.97	19.07	19.06	0.00	19.50
		1	49	24.20	24.20	24.20	0.00	24.70	19.25	19.25	19.25	0.00	19.50
		1	99	23.84	23.98	24.27	0.00	24.70	18.99	19.15	19.18	0.00	19.50
		50	0	23.54	23.64	23.17	1.00	23.70	19.00	19.09	19.06	0.00	19.50
		50	24	23.70	23.70	23.70	1.00	23.70	19.25	19.25	19.25	0.00	19.50
		50	50	23.60	23.66	23.29	1.00	23.70	19.05	19.18	19.14	0.00	19.50
		100	0	23.54	23.64	23.21	1.00	23.70	18.98	19.25	19.08	0.00	19.50
	16QAM	1	0	23.33	23.58	23.68	1.00	23.70	19.25	19.08	18.89	0.00	19.50
		1	49	23.33	23.62	23.69	1.00	23.70	19.24	19.13	19.01	0.00	19.50
		1	99	23.37	23.65	23.62	1.00	23.70	19.24	19.11	19.00	0.00	19.50
		50	0	21.91	22.07	22.18	2.00	22.70	19.00	18.55	18.50	0.00	19.50
		50	24	21.99	22.09	22.33	2.00	22.70	19.07	18.58	18.63	0.00	19.50
		50	50	21.95	22.16	22.29	2.00	22.70	19.02	18.65	18.59	0.00	19.50
		100	0	21.91	22.09	22.23	2.00	22.70	19.01	18.56	18.51	0.00	19.50
	64QAM	1	0	22.33	22.58	22.68	2.00	22.70	18.97	19.07	19.06	0.00	19.50
		1	49	22.33	22.62	22.69	2.00	22.70	18.97	19.14	19.09	0.00	19.50
		1	99	22.37	22.65	22.62	2.00	22.70	18.99	19.15	19.18	0.00	19.50
		50	0	20.91	21.07	21.18	3.00	21.70	19.00	19.09	19.06	0.00	19.50
		50	24	20.99	21.09	21.33	3.00	21.70	19.08	19.13	19.16	0.00	19.50
		50	50	20.95	21.16	21.29	3.00	21.70	19.05	19.18	19.14	0.00	19.50
		100	0	20.91	21.09	21.23	3.00	21.70	18.98	19.11	19.08	0.00	19.50
	256QAM	1	0	19.20	19.09	18.99	5.00	19.70	18.83	19.08	18.83	0.00	19.50
		1	49	19.19	18.99	19.07	5.00	19.70	18.85	19.00	19.03	0.00	19.50
		1	99	18.91	19.13	19.04	5.00	19.70	19.09	18.98	18.91	0.00	19.50
		50	0	18.97	19.07	19.10	5.00	19.70	18.82	19.05	19.03	0.00	19.50
		50	24	19.13	18.98	18.93	5.00	19.70	19.02	18.92	18.97	0.00	19.50
		50	50	18.96	19.18	19.04	5.00	19.70	18.83	18.86	18.98	0.00	19.50
		100	0	19.19	18.93	19.00	5.00	19.70	18.81	19.09	19.04	0.00	19.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26115.00	26365.00	26615.00	MPR	Tune-up Limit	26115.00	26365.00	26615.00	MPR	Tune-up Limit
				1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	QPSK	1	0	24.64	23.87	24.20	0.00	24.70	18.78	19.23	19.15	0.00	19.50
		1	37	23.80	23.89	24.22	0.00	24.70	19.03	19.25	19.19	0.00	19.50
		1	74	23.72	23.97	24.29	0.00	24.70	18.94	19.28	19.25	0.00	19.50
		36	0	23.41	23.56	23.12	1.00	23.70	18.95	19.11	19.13	0.00	19.50
		36	20	23.58	23.66	23.25	1.00	23.70	19.13	19.23	19.25	0.00	19.50
		36	39	23.57	23.61	23.32	1.00	23.70	19.14	19.30	19.31	0.00	19.50
		75	0	23.48	23.67	23.21	1.00	23.70	19.06	19.22	19.14	0.00	19.50
	16QAM	1	0	23.08	22.96	23.62	1.00	23.70	19.20	19.00	18.58	0.00	19.50
		1	37	23.36	23.04	23.65	1.00	23.70	19.14	19.03	18.68	0.00	19.50
		1	74	23.31	23.07	23.48	1.00	23.70	19.18	19.18	18.72	0.00	19.50
		36	0	21.79	21.95	22.19	2.00	22.70	19.02	18.53	18.51	0.00	19.50
		36	20	21.97	22.05	22.30	2.00	22.70	19.21	18.63	18.65	0.00	19.50
		36	39	21.94	22.13	22.36	2.00	22.70	19.18	18.68	18.69	0.00	19.50
		75	0	21.90	22.08	22.23	2.00	22.70	19.12	18.66	18.58	0.00	19.50
	64QAM	1	0	22.08	21.96	22.62	2.00	22.70	18.58	19.03	18.95	0.00	19.50
		1	37	22.36	22.04	22.65	2.00	22.70	18.83	19.05	18.99	0.00	19.50
		1	74	22.31	22.07	22.48	2.00	22.70	18.74	19.08	19.05	0.00	19.50
		36	0	20.79	20.95	21.19	3.00	21.70	18.75	18.91	18.93	0.00	19.50
		36	20	20.97	21.05	21.30	3.00	21.70	18.93	19.03	19.05	0.00	19.50
		36	39	20.94	21.13	21.36	3.00	21.70	18.94	19.10	19.11	0.00	19.50
		75	0	20.90	21.08	21.23	3.00	21.70	18.86	19.02	18.94	0.00	19.50
	256QAM	1	0	18.94	18.94	19.02	5.00	19.70	18.99	18.84	19.05	0.00	19.50
		1	37	19.17	19.12	19.15	5.00	19.70	19.01	18.90	18.93	0.00	19.50
		1	74	18.99	19.04	18.91	5.00	19.70	18.84	19.00	19.00	0.00	19.50
		36	0	19.01	19.15	19.11	5.00	19.70	19.06	19.08	18.95	0.00	19.50
		36	20	19.17	18.96	19.11	5.00	19.70	18.96	18.99	18.95	0.00	19.50
		36	39	19.07	19.13	19.06	5.00	19.70	18.94	19.06	18.89	0.00	19.50
		75	0	18.91	19.01	19.17	5.00	19.70	18.95	18.86	18.95	0.00	19.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT3) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26090.00	26365.00	26640.00	MPR	Tune-up Limit	26090.00	26365.00	26640.00	MPR	Tune-up Limit
				1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
10 MHz	QPSK	1	0	23.79	23.88	24.11	0.00	24.70	18.62	18.72	18.92	0.00	19.50
		1	25	23.73	23.84	24.17	0.00	24.70	18.80	19.01	18.97	0.00	19.50
		1	49	23.79	23.87	24.20	0.00	24.70	18.64	18.84	18.95	0.00	19.50
		25	0	23.42	23.53	23.19	1.00	23.70	18.86	18.94	18.95	0.00	19.50
		25	12	23.58	23.66	23.26	1.00	23.70	19.02	19.05	19.04	0.00	19.50
		25	25	23.54	23.69	23.28	1.00	23.70	18.95	19.08	19.06	0.00	19.50
		50	0	23.51	23.57	23.18	1.00	23.70	18.93	18.98	18.98	0.00	19.50
	16QAM	1	0	23.05	22.84	23.17	1.00	23.70	18.62	18.58	18.80	0.00	19.50
		1	25	23.27	23.04	23.19	1.00	23.70	18.85	18.83	18.75	0.00	19.50
		1	49	23.04	22.87	23.00	1.00	23.70	18.62	18.65	18.77	0.00	19.50
		25	0	21.86	22.06	22.19	2.00	22.70	18.87	18.50	18.77	0.00	19.50
		25	12	22.05	22.14	22.26	2.00	22.70	19.04	18.50	18.87	0.00	19.50
		25	25	21.97	22.19	22.31	2.00	22.70	18.97	18.55	18.90	0.00	19.50
		50	0	21.95	22.00	22.16	2.00	22.70	18.92	18.50	18.72	0.00	19.50
	64QAM	1	0	22.05	21.84	22.17	2.00	22.70	18.62	18.72	18.92	0.00	19.50
		1	25	22.27	22.04	22.19	2.00	22.70	18.80	19.01	18.97	0.00	19.50
		1	49	22.04	21.87	22.00	2.00	22.70	18.64	18.84	18.95	0.00	19.50
		25	0	20.86	21.06	21.19	3.00	21.70	18.86	18.94	18.95	0.00	19.50
		25	12	21.05	21.14	21.26	3.00	21.70	19.02	19.05	19.04	0.00	19.50
		25	25	20.97	21.19	21.31	3.00	21.70	18.95	19.08	19.06	0.00	19.50
		50	0	20.95	21.00	21.16	3.00	21.70	18.93	18.98	18.98	0.00	19.50
	256QAM	1	0	18.93	19.09	19.20	5.00	19.70	18.97	18.99	18.93	0.00	19.50
		1	25	19.00	19.08	19.17	5.00	19.70	19.02	19.04	19.04	0.00	19.50
		1	49	19.05	18.98	19.09	5.00	19.70	18.81	19.07	19.08	0.00	19.50
		25	0	18.97	19.03	19.15	5.00	19.70	18.88	19.07	19.06	0.00	19.50
		25	12	18.90	18.98	18.91	5.00	19.70	18.98	18.91	19.04	0.00	19.50
		25	25	19.09	19.17	19.06	5.00	19.70	18.83	18.94	18.82	0.00	19.50
		50	0	18.90	19.09	18.92	5.00	19.70	18.89	19.06	18.87	0.00	19.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26065.00	26365.00	26665.00	MPR	Tune-up Limit	26065.00	26365.00	26665.00	MPR	Tune-up Limit
				1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	QPSK	1	0	23.75	23.93	24.17	0.00	24.70	18.84	18.97	18.98	0.00	19.50
		1	12	23.84	24.00	24.20	0.00	24.70	18.91	19.05	19.03	0.00	19.50
		1	24	23.88	24.04	24.27	0.00	24.70	18.92	19.14	19.08	0.00	19.50
		12	0	23.49	23.59	23.25	1.00	23.70	18.88	18.99	19.01	0.00	19.50
		12	7	23.62	23.63	23.32	1.00	23.70	18.98	19.03	19.16	0.00	19.50
		12	13	23.56	23.66	23.35	1.00	23.70	19.01	19.12	19.17	0.00	19.50
		25	0	23.56	23.62	23.31	1.00	23.70	18.93	19.04	19.15	0.00	19.50
	16QAM	1	0	23.00	23.17	23.61	1.00	23.70	18.96	18.54	19.03	0.00	19.50
		1	12	23.09	23.24	23.66	1.00	23.70	19.00	18.60	19.07	0.00	19.50
		1	24	23.14	23.33	23.59	1.00	23.70	19.11	18.72	19.13	0.00	19.50
		12	0	21.96	22.10	22.36	2.00	22.70	18.95	18.50	18.88	0.00	19.50
		12	7	22.07	22.12	22.49	2.00	22.70	19.05	18.55	18.97	0.00	19.50
		12	13	22.05	22.20	22.47	2.00	22.70	19.06	18.60	19.01	0.00	19.50
		25	0	21.90	22.06	22.37	2.00	22.70	18.93	18.50	18.91	0.00	19.50
	64QAM	1	0	22.00	22.17	22.61	2.00	22.70	18.84	18.97	18.98	0.00	19.50
		1	12	22.09	22.24	22.66	2.00	22.70	18.91	19.05	19.03	0.00	19.50
		1	24	22.14	22.33	22.59	2.00	22.70	18.92	19.14	19.08	0.00	19.50
		12	0	20.96	21.10	21.36	3.00	21.70	18.88	18.99	19.01	0.00	19.50
		12	7	21.07	21.12	21.49	3.00	21.70	18.98	19.03	19.16	0.00	19.50
		12	13	21.05	21.20	21.47	3.00	21.70	19.01	19.12	19.17	0.00	19.50
		25	0	20.90	21.06	21.37	3.00	21.70	18.93	19.04	19.15	0.00	19.50
	256QAM	1	0	19.16	19.12	19.16	5.00	19.70	18.91	19.05	19.08	0.00	19.50
		1	12	19.01	18.98	19.16	5.00	19.70	18.92	18.83	18.92	0.00	19.50
		1	24	19.18	18.98	19.13	5.00	19.70	18.87	18.97	18.82	0.00	19.50
		12	0	19.10	18.90	19.02	5.00	19.70	18.84	19.06	18.96	0.00	19.50
		12	7	18.91	19.17	19.13	5.00	19.70	18.93	19.04	18.96	0.00	19.50
		12	13	19.14	18.93	19.19	5.00	19.70	18.97	18.96	18.99	0.00	19.50
		25	0	19.15	19.03	19.16	5.00	19.70	18.82	18.87	18.82	0.00	19.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT3) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26055.00	26365.00	26675.00	MPR	Tune-up Limit	26055.00	26365.00	26675.00	MPR	Tune-up Limit
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3 MHz	QPSK	1	0	23.79	23.83	24.18	0.00	24.70	18.76	18.88	19.02	0.00	19.50
		1	8	23.72	23.86	24.24	0.00	24.70	18.77	18.92	19.11	0.00	19.50
		1	14	23.79	23.98	24.30	0.00	24.70	18.88	19.06	19.13	0.00	19.50
		8	0	23.54	23.60	23.23	1.00	23.70	18.91	18.98	19.04	0.00	19.50
		8	4	23.57	23.66	23.32	1.00	23.70	18.94	19.05	19.13	0.00	19.50
		8	7	23.60	23.66	23.35	1.00	23.70	18.98	19.14	19.19	0.00	19.50
		15	0	23.56	23.65	23.31	1.00	23.70	18.95	19.06	19.12	0.00	19.50
	16QAM	1	0	22.93	22.94	23.63	1.00	23.70	18.90	18.50	18.80	0.00	19.50
		1	8	22.95	23.01	23.57	1.00	23.70	18.89	18.50	18.86	0.00	19.50
		1	14	23.04	23.06	23.51	1.00	23.70	19.00	18.50	18.94	0.00	19.50
		8	0	21.95	22.10	22.31	2.00	22.70	18.99	18.52	18.85	0.00	19.50
		8	4	22.03	22.18	22.40	2.00	22.70	19.02	18.56	18.94	0.00	19.50
		8	7	22.05	22.24	22.42	2.00	22.70	19.05	18.63	18.96	0.00	19.50
		15	0	21.94	22.11	22.38	2.00	22.70	18.92	18.50	18.90	0.00	19.50
	64QAM	1	0	21.93	21.94	22.63	2.00	22.70	18.76	18.88	19.02	0.00	19.50
		1	8	21.95	22.01	22.57	2.00	22.70	18.77	18.92	19.11	0.00	19.50
		1	14	22.04	22.06	22.51	2.00	22.70	18.88	19.06	19.13	0.00	19.50
		8	0	20.95	21.10	21.31	3.00	21.70	18.91	18.98	19.04	0.00	19.50
		8	4	21.03	21.18	21.40	3.00	21.70	18.94	19.05	19.13	0.00	19.50
		8	7	21.05	21.24	21.42	3.00	21.70	18.98	19.14	19.19	0.00	19.50
		15	0	20.94	21.11	21.38	3.00	21.70	18.95	19.06	19.12	0.00	19.50
	256QAM	1	0	19.00	19.01	19.17	5.00	19.70	18.93	18.95	19.06	0.00	19.50
		1	8	19.04	19.13	19.00	5.00	19.70	18.92	18.90	18.91	0.00	19.50
		1	14	19.19	18.95	18.90	5.00	19.70	18.89	18.95	18.82	0.00	19.50
		8	0	18.96	19.16	18.98	5.00	19.70	19.04	18.81	18.87	0.00	19.50
		8	4	19.04	19.04	19.12	5.00	19.70	18.94	18.88	19.00	0.00	19.50
		8	7	19.04	18.90	19.17	5.00	19.70	19.03	18.99	19.07	0.00	19.50
		15	0	19.01	19.03	19.01	5.00	19.70	18.93	19.00	18.94	0.00	19.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26047.00	26365.00	26683.00	MPR	Tune-up Limit	26047.00	26365.00	26683.00	MPR	Tune-up Limit
				1850.7 MHz	1882.5 MHz	1914.3 MHz			1850.7 MHz	1882.5 MHz	1914.3 MHz		
1.4 MHz	QPSK	1	0	23.99	23.88	24.17	0.00	24.70	18.75	18.83	19.01	0.00	19.50
		1	3	23.72	23.93	24.24	0.00	24.70	18.82	18.97	19.07	0.00	19.50
		1	5	23.98	23.94	24.20	0.00	24.70	18.80	18.95	19.03	0.00	19.50
		3	0	23.78	23.76	24.19	0.00	24.70	18.78	18.83	18.95	0.00	19.50
		3	1	23.71	23.82	24.22	0.00	24.70	18.80	18.89	18.97	0.00	19.50
		3	3	23.73	23.90	24.25	0.00	24.70	18.83	18.97	19.00	0.00	19.50
		6	0	23.48	23.57	23.26	1.00	23.70	18.84	18.93	19.05	0.00	19.50
	16QAM	1	0	22.91	23.08	23.60	1.00	23.70	19.18	18.50	18.81	0.00	19.50
		1	3	22.93	23.21	23.64	1.00	23.70	19.18	18.50	18.92	0.00	19.50
		1	5	22.93	23.13	23.42	1.00	23.70	19.19	18.50	18.88	0.00	19.50
		3	0	23.02	23.03	23.44	1.00	23.70	19.05	18.50	18.83	0.00	19.50
		3	1	23.09	23.08	23.48	1.00	23.70	19.07	18.56	18.79	0.00	19.50
		3	3	23.11	23.15	23.49	1.00	23.70	19.10	18.63	18.85	0.00	19.50
		6	0	22.08	22.11	22.17	2.00	22.70	18.78	18.51	18.90	0.00	19.50
	64QAM	1	0	21.91	22.08	22.60	2.00	22.70	18.75	18.83	19.01	0.00	19.50
		1	3	21.93	22.21	22.64	2.00	22.70	18.82	18.97	19.07	0.00	19.50
		1	5	21.93	22.13	22.42	2.00	22.70	18.80	18.95	19.03	0.00	19.50
		3	0	22.02	22.03	22.44	2.00	22.70	18.78	18.83	18.95	0.00	19.50
		3	1	22.09	22.08	22.48	2.00	22.70	18.80	18.89	18.97	0.00	19.50
		3	3	22.11	22.15	22.49	2.00	22.70	18.83	18.97	19.00	0.00	19.50
		6	0	21.08	21.11	21.17	3.00	21.70	18.84	18.93	19.05	0.00	19.50
	256QAM	1	0	18.95	19.16	19.09	5.00	19.70	18.92	18.94	18.83	0.00	19.50
		1	3	18.92	19.17	18.92	5.00	19.70	18.88	18.81	19.06	0.00	19.50
		1	5	19.05	19.12	18.92	5.00	19.70	18.88	18.89	18.93	0.00	19.50
		3	0	19.04	19.05	19.00	5.00	19.70	19.03	19.07	18.94	0.00	19.50
		3	1	19.10	18.94	18.93	5.00	19.70	18.89	19.03	18.95	0.00	19.50
		3	3	19.10	19.06	19.10	5.00	19.70	19.04	18.91	18.88	0.00	19.50
		6	0	19.06	19.19	19.04	5.00	19.70	18.94	19.05	19.08	0.00	19.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT4)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				26140	26365	26590	MPR	Tune-up Limit	26140	26365	26590	MPR	Tune-up Limit
				1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	QPSK	1	0	17.91	17.92	17.97	0.00	18.50	18.54	18.54	18.56	0.00	19.25
		1	49	18.25	18.25	18.25	0.00	18.50	19.00	19.00	19.00	0.00	19.25
		1	99	17.84	17.85	17.94	0.00	18.50	18.49	18.49	18.54	0.00	19.25
		50	0	17.93	17.92	17.94	0.00	18.50	18.53	18.53	18.56	0.00	19.25
		50	24	18.25	18.25	18.25	0.00	18.50	19.00	19.00	19.00	0.00	19.25
		50	50	17.94	17.94	17.99	0.00	18.50	18.56	18.55	18.60	0.00	19.25
		100	0	17.89	18.25	17.95	0.00	18.50	18.51	19.00	18.55	0.00	19.25
	16QAM	1	0	17.86	17.96	17.99	0.00	18.50	18.49	18.67	18.61	0.00	19.25
		1	49	17.83	17.95	17.94	0.00	18.50	18.45	18.62	18.73	0.00	19.25
		1	99	17.78	17.93	17.86	0.00	18.50	18.42	18.69	18.54	0.00	19.25
		50	0	17.89	17.95	17.95	0.00	18.50	18.38	18.45	18.35	0.00	19.25
		50	24	17.94	18.04	18.02	0.00	18.50	18.45	18.51	18.45	0.00	19.25
		50	50	17.91	17.98	18.02	0.00	18.50	18.40	18.47	18.41	0.00	19.25
		100	0	17.89	17.85	17.95	0.00	18.50	18.39	18.36	18.35	0.00	19.25
	64QAM	1	0	17.91	17.92	17.97	0.00	18.50	18.94	18.94	18.96	0.00	19.25
		1	49	17.90	17.90	17.94	0.00	18.50	18.91	18.94	18.94	0.00	19.25
		1	99	17.84	17.85	17.94	0.00	18.50	18.89	18.89	18.94	0.00	19.25
		50	0	17.93	17.92	17.94	0.00	18.50	18.63	18.63	18.66	0.00	19.25
		50	24	17.98	17.99	18.02	0.00	18.50	18.69	18.73	18.75	0.00	19.25
		50	50	17.94	17.94	17.99	0.00	18.50	18.66	18.65	18.70	0.00	19.25
		100	0	17.89	17.82	17.95	0.00	18.50	18.61	18.52	18.65	0.00	19.25
	256QAM	1	0	17.13	17.02	16.94	0.80	17.70	16.92	17.09	17.02	1.55	17.70
		1	49	17.05	16.95	17.00	0.80	17.70	17.07	17.10	16.99	1.55	17.70
		1	99	16.95	17.12	17.14	0.80	17.70	16.91	17.17	16.92	1.55	17.70
		50	0	17.20	17.01	16.91	0.80	17.70	17.16	17.04	16.91	1.55	17.70
		50	24	17.14	17.00	17.18	0.80	17.70	16.99	17.00	17.08	1.55	17.70
		50	50	17.16	17.06	17.12	0.80	17.70	17.16	16.93	17.19	1.55	17.70
		100	0	17.02	17.15	17.18	0.80	17.70	17.11	16.96	17.13	1.55	17.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				26115.00	26365.00	26615.00	MPR	Tune-up Limit	26115.00	26365.00	26615.00	MPR	Tune-up Limit
				1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	QPSK	1	0	17.64	17.95	17.92	0.00	18.50	18.32	18.52	18.59	0.00	19.25
		1	37	17.86	17.94	17.93	0.00	18.50	18.50	18.48	18.56	0.00	19.25
		1	74	17.77	17.91	17.92	0.00	18.50	18.42	18.49	18.58	0.00	19.25
		36	0	17.79	17.83	17.88	0.00	18.50	18.40	18.46	18.49	0.00	19.25
		36	20	17.96	17.92	17.97	0.00	18.50	18.57	18.54	18.58	0.00	19.25
		36	39	17.93	17.96	18.03	0.00	18.50	18.55	18.60	18.63	0.00	19.25
		75	0	17.87	17.82	18.00	0.00	18.50	18.49	18.46	18.61	0.00	19.25
	16QAM	1	0	17.58	17.80	17.62	0.00	18.50	18.30	18.27	18.52	0.00	19.25
		1	37	17.78	17.85	17.67	0.00	18.50	18.53	18.25	18.52	0.00	19.25
		1	74	17.64	17.92	17.62	0.00	18.50	18.39	18.60	18.50	0.00	19.25
		36	0	17.83	17.81	17.88	0.00	18.50	18.30	18.32	18.31	0.00	19.25
		36	20	18.00	17.89	17.96	0.00	18.50	18.43	18.43	18.42	0.00	19.25
		36	39	17.98	17.94	18.01	0.00	18.50	18.40	18.46	18.47	0.00	19.25
		75	0	17.93	17.85	17.99	0.00	18.50	18.38	18.34	18.41	0.00	19.25
	64QAM	1	0	17.64	17.95	17.92	0.00	18.50	18.72	18.77	18.99	0.00	19.25
		1	37	17.86	17.94	17.93	0.00	18.50	18.82	18.87	18.99	0.00	19.25
		1	74	17.77	17.91	17.92	0.00	18.50	18.86	18.95	19.01	0.00	19.25
		36	0	17.79	17.83	17.88	0.00	18.50	18.58	18.57	18.63	0.00	19.25
		36	20	17.96	17.92	17.97	0.00	18.50	18.67	18.60	18.73	0.00	19.25
		36	39	17.93	17.96	18.03	0.00	18.50	18.68	18.69	18.71	0.00	19.25
		75	0	17.87	17.82	18.00	0.00	18.50	18.64	18.62	18.68	0.00	19.25
	256QAM	1	0	17.01	16.96	17.06	0.80	17.70	17.02	16.91	17.06	1.55	17.70
		1	37	17.17	17.06	17.12	0.80	17.70	17.01	17.18	17.18	1.55	17.70
		1	74	17.14	17.17	17.13	0.80	17.70	17.06	17.19	17.05	1.55	17.70
		36	0	17.01	17.00	17.06	0.80	17.70	17.08	17.02	16.96	1.55	17.70
		36	20	17.15	17.00	17.12	0.80	17.70	17.17	16.98	16.98	1.55	17.70
		36	39	16.97	17.17	17.11	0.80	17.70	17.15	17.06	17.15	1.55	17.70
		75	0	17.02	17.07	16.97	0.80	17.70	17.18	17.11	17.15	1.55	17.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT4) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				26090.00	26365.00	26640.00	MPR	Tune-up Limit	26090.00	26365.00	26640.00	MPR	Tune-up Limit
				1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
10 MHz	QPSK	1	0	17.52	17.58	17.89	0.00	18.50	18.54	18.58	18.89	0.00	19.25
		1	25	17.77	17.78	17.88	0.00	18.50	18.80	18.77	18.91	0.00	19.25
		1	49	17.50	17.60	17.90	0.00	18.50	18.51	18.63	18.88	0.00	19.25
		25	0	17.76	17.82	17.85	0.00	18.50	18.80	18.81	18.86	0.00	19.25
		25	12	17.94	17.87	18.02	0.00	18.50	18.97	18.89	19.01	0.00	19.25
		25	25	17.88	17.89	17.94	0.00	18.50	18.90	18.91	18.97	0.00	19.25
		50	0	17.87	17.87	17.95	0.00	18.50	18.88	18.88	18.97	0.00	19.25
	16QAM	1	0	17.69	17.65	18.00	0.00	18.50	18.55	18.51	18.48	0.00	19.25
		1	25	17.84	17.83	18.00	0.00	18.50	18.71	18.64	18.46	0.00	19.25
		1	49	17.62	17.62	18.00	0.00	18.50	18.45	18.47	18.47	0.00	19.25
		25	0	17.85	17.85	17.92	0.00	18.50	18.89	18.81	18.31	0.00	19.25
		25	12	18.00	17.93	18.05	0.00	18.50	18.55	18.36	18.43	0.00	19.25
		25	25	17.94	17.94	18.01	0.00	18.50	18.49	18.42	18.37	0.00	19.25
		50	0	17.86	17.90	17.99	0.00	18.50	18.38	18.36	18.37	0.00	19.25
	64QAM	1	0	17.52	17.58	17.89	0.00	18.50	18.54	18.58	18.89	0.00	19.25
		1	25	17.77	17.78	17.88	0.00	18.50	18.80	18.77	18.91	0.00	19.25
		1	49	17.50	17.60	17.90	0.00	18.50	18.51	18.63	18.88	0.00	19.25
		25	0	17.76	17.82	17.85	0.00	18.50	18.50	18.51	18.56	0.00	19.25
		25	12	17.94	17.87	18.02	0.00	18.50	18.67	18.59	18.71	0.00	19.25
		25	25	17.88	17.89	17.94	0.00	18.50	18.60	18.61	18.67	0.00	19.25
		50	0	17.87	17.87	17.95	0.00	18.50	18.58	18.58	18.67	0.00	19.25
	256QAM	1	0	16.96	17.00	16.96	0.80	17.70	16.99	17.17	17.02	1.55	17.70
		1	25	17.05	17.01	17.12	0.80	17.70	16.95	17.15	16.95	1.55	17.70
		1	49	17.05	17.04	16.97	0.80	17.70	16.99	17.14	16.96	1.55	17.70
		25	0	16.94	17.20	17.18	0.80	17.70	16.92	17.02	17.15	1.55	17.70
		25	12	17.02	16.95	17.07	0.80	17.70	17.19	17.16	17.09	1.55	17.70
		25	25	17.15	17.10	16.91	0.80	17.70	17.00	17.13	16.96	1.55	17.70
		50	0	17.18	16.93	16.94	0.80	17.70	16.92	17.18	16.97	1.55	17.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				26065.00	26365.00	26665.00	MPR	Tune-up Limit	26065.00	26365.00	26665.00	MPR	Tune-up Limit
				1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	QPSK	1	0	17.77	17.81	18.00	0.00	18.50	18.52	18.57	18.79	0.00	19.25
		1	12	17.82	17.88	18.02	0.00	18.50	18.62	18.67	18.79	0.00	19.25
		1	24	17.88	17.91	18.03	0.00	18.50	18.66	18.75	18.81	0.00	19.25
		12	0	17.89	17.84	17.93	0.00	18.50	18.68	18.67	18.73	0.00	19.25
		12	7	17.97	17.92	18.01	0.00	18.50	18.77	18.70	18.83	0.00	19.25
		12	13	17.95	17.95	18.01	0.00	18.50	18.78	18.79	18.81	0.00	19.25
		25	0	17.91	17.91	17.97	0.00	18.50	18.74	18.72	18.78	0.00	19.25
	16QAM	1	0	17.79	17.50	17.65	0.00	18.50	18.49	18.26	18.25	0.00	19.25
		1	12	17.86	17.57	17.67	0.00	18.50	18.54	18.25	18.25	0.00	19.25
		1	24	17.96	17.63	17.67	0.00	18.50	18.59	18.28	18.29	0.00	19.25
		12	0	17.76	17.66	17.75	0.00	18.50	18.51	18.41	18.38	0.00	19.25
		12	7	17.83	17.72	17.83	0.00	18.50	18.60	18.47	18.47	0.00	19.25
		12	13	17.84	17.77	17.83	0.00	18.50	18.56	18.53	18.48	0.00	19.25
		25	0	17.71	17.66	17.76	0.00	18.50	18.47	18.36	18.39	0.00	19.25
	64QAM	1	0	17.77	17.81	18.00	0.00	18.50	18.72	18.77	18.99	0.00	19.25
		1	12	17.82	17.88	18.02	0.00	18.50	18.82	18.87	18.99	0.00	19.25
		1	24	17.88	17.91	18.03	0.00	18.50	18.86	18.95	19.01	0.00	19.25
		12	0	17.89	17.84	17.93	0.00	18.50	18.58	18.57	18.63	0.00	19.25
		12	7	17.97	17.92	18.01	0.00	18.50	18.67	18.60	18.73	0.00	19.25
		12	13	17.95	17.95	18.01	0.00	18.50	18.68	18.69	18.71	0.00	19.25
		25	0	17.91	17.91	17.97	0.00	18.50	18.64	18.62	18.68	0.00	19.25
	256QAM	1	0	17.13	17.06	17.01	0.80	17.70	17.03	17.00	17.17	1.55	17.70
		1	12	17.16	17.12	17.10	0.80	17.70	17.08	17.18	17.15	1.55	17.70
		1	24	16.96	17.10	17.03	0.80	17.70	17.14	16.92	16.92	1.55	17.70
		12	0	17.13	17.08	17.12	0.80	17.70	17.16	17.01	17.08	1.55	17.70
		12	7	16.92	17.04	16.98	0.80	17.70	17.02	17.06	17.02	1.55	17.70
		12	13	17.15	16.91	17.04	0.80	17.70	17.10	17.09	17.13	1.55	17.70
		25	0	17.15	16.94	16.93	0.80	17.70	17.16	16.99	17.11	1.55	17.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 25 Measured Results (ANT4) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				26055.00	26365.00	26675.00	MPR	Tune-up Limit	26055.00	26365.00	26675.00	MPR	Tune-up Limit
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3 MHz	QPSK	1	0	17.79	17.75	17.85	0.00	18.50	18.62	18.53	18.63	0.00	19.25
		1	8	17.83	17.76	17.87	0.00	18.50	18.64	18.55	18.64	0.00	19.25
		1	14	17.91	17.84	17.92	0.00	18.50	18.68	18.64	18.73	0.00	19.25
		8	0	17.89	17.83	17.91	0.00	18.50	18.65	18.63	18.70	0.00	19.25
		8	4	17.92	17.89	17.93	0.00	18.50	18.69	18.69	18.73	0.00	19.25
		8	7	17.97	17.96	18.03	0.00	18.50	18.72	18.76	18.82	0.00	19.25
		15	0	17.91	17.89	17.92	0.00	18.50	18.73	18.70	18.74	0.00	19.25
	16QAM	1	0	17.93	17.70	17.67	0.00	18.50	18.34	18.81	18.79	0.00	19.25
		1	8	17.95	17.66	17.66	0.00	18.50	18.35	18.79	18.81	0.00	19.25
		1	14	18.05	17.75	17.67	0.00	18.50	18.43	18.25	18.75	0.00	19.25
		8	0	17.94	17.89	18.02	0.00	18.50	18.49	18.37	18.40	0.00	19.25
		8	4	18.02	17.95	18.07	0.00	18.50	18.52	18.42	18.46	0.00	19.25
		8	7	18.00	18.04	18.00	0.00	18.50	18.53	18.50	18.53	0.00	19.25
		15	0	17.95	17.95	17.99	0.00	18.50	18.46	18.40	18.40	0.00	19.25
	64QAM	1	0	17.79	17.75	17.85	0.00	18.50	18.62	18.53	18.63	0.00	19.25
		1	8	17.83	17.76	17.87	0.00	18.50	18.64	18.55	18.64	0.00	19.25
		1	14	17.91	17.84	17.92	0.00	18.50	18.68	18.64	18.73	0.00	19.25
		8	0	17.89	17.83	17.91	0.00	18.50	18.55	18.53	18.60	0.00	19.25
		8	4	17.92	17.89	17.93	0.00	18.50	18.59	18.59	18.63	0.00	19.25
		8	7	17.97	17.96	18.03	0.00	18.50	18.62	18.66	18.72	0.00	19.25
		15	0	17.91	17.89	17.92	0.00	18.50	18.63	18.60	18.64	0.00	19.25
	256QAM	1	0	17.00	17.17	17.13	0.80	17.70	16.96	17.01	17.07	1.55	17.70
		1	8	17.19	17.13	17.06	0.80	17.70	17.07	16.92	17.01	1.55	17.70
		1	14	17.18	16.94	17.06	0.80	17.70	16.95	16.90	16.94	1.55	17.70
		8	0	17.01	17.08	17.06	0.80	17.70	17.07	17.10	17.08	1.55	17.70
		8	4	17.10	16.99	17.09	0.80	17.70	17.02	17.05	16.92	1.55	17.70
		8	7	17.15	17.18	16.98	0.80	17.70	17.17	16.96	16.92	1.55	17.70
		15	0	17.14	17.09	16.98	0.80	17.70	16.97	17.16	17.00	1.55	17.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				26047.00	26365.00	26683.00	MPR	Tune-up Limit	26047.00	26365.00	26683.00	MPR	Tune-up Limit
				1850.7 MHz	1882.5 MHz	1914.3 MHz			1850.7 MHz	1882.5 MHz	1914.3 MHz		
1.4 MHz	QPSK	1	0	17.67	17.78	17.76	0.00	18.50	18.64	18.78	18.78	0.00	19.25
		1	3	17.81	17.84	17.82	0.00	18.50	18.78	18.84	18.80	0.00	19.25
		1	5	17.73	17.83	17.81	0.00	18.50	18.77	18.82	18.84	0.00	19.25
		3	0	17.74	17.71	17.77	0.00	18.50	18.72	18.73	18.75	0.00	19.25
		3	1	17.80	17.76	17.78	0.00	18.50	18.76	18.78	18.79	0.00	19.25
		3	3	17.78	17.78	17.81	0.00	18.50	18.78	18.79	18.78	0.00	19.25
		6	0	17.82	17.84	17.83	0.00	18.50	18.82	18.84	18.82	0.00	19.25
	16QAM	1	0	17.75	17.97	17.96	0.00	18.50	18.71	18.87	18.33	0.00	19.25
		1	3	17.88	18.02	18.01	0.00	18.50	18.83	18.97	18.39	0.00	19.25
		1	5	17.85	17.99	18.02	0.00	18.50	18.79	18.89	18.38	0.00	19.25
		3	0	17.97	17.92	18.02	0.00	18.50	18.94	18.84	18.89	0.00	19.25
		3	1	18.03	17.94	18.08	0.00	18.50	19.04	18.90	18.91	0.00	19.25
		3	3	18.03	17.96	18.06	0.00	18.50	19.03	18.91	18.96	0.00	19.25
		6	0	17.97	17.97	17.76	0.00	18.50	18.52	18.46	18.25	0.00	19.25
	64QAM	1	0	17.67	17.78	17.76	0.00	18.50	18.64	18.78	18.78	0.00	19.25
		1	3	17.81	17.84	17.82	0.00	18.50	18.78	18.84	18.80	0.00	19.25
		1	5	17.73	17.83	17.81	0.00	18.50	18.77	18.82	18.84	0.00	19.25
		3	0	17.74	17.71	17.77	0.00	18.50	18.42	18.43	18.45	0.00	19.25
		3	1	17.80	17.76	17.78	0.00	18.50	18.46	18.48	18.49	0.00	19.25
		3	3	17.78	17.78	17.81	0.00	18.50	18.48	18.49	18.48	0.00	19.25
		6	0	17.82	17.84	17.83	0.00	18.50	18.52	18.54	18.52	0.00	19.25
	256QAM	1	0	17.07	16.94	16.92	0.80	17.70	17.09	17.14	17.16	1.55	17.70
		1	3	17.20	17.09	17.02	0.80	17.70	17.05	17.00	17.12	1.55	17.70
		1	5	17.05	17.05	17.20	0.80	17.70	17.19	17.12	17.09	1.55	17.70
		3	0	17.01	16.97	17.02	0.80	17.70	17.05	16.99	16.94	1.55	17.70
		3	1	16.93	17.18	17.10	0.80	17.70	17.01	17.02	17.16	1.55	17.70
		3	3	17.14	17.13	16.95	0.80	17.70	17.10	16.99	16.95	1.55	17.70
		6	0	17.12	17.00	17.17	0.80	17.70	17.11	17.05	16.91	1.55	17.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 26 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26740.00	26865.00	26990.00	MPR	Tune-up Limit	26740.00	26865.00	26990.00	MPR	Tune-up Limit
				819 MHz	831.5 MHz	844 MHz			819 MHz	831.5 MHz	844 MHz		
10 MHz	QPSK	1	0	25.01	25.08	25.05	0.00	25.70	25.01	25.08	25.05	0.00	25.70
		1	25	25.30	25.30	25.30	0.00	25.70	25.30	25.30	25.30	0.00	25.70
		1	49	24.91	25.01	24.97	0.00	25.70	24.91	25.01	24.97	0.00	25.70
		25	0	24.42	24.48	24.36	1.00	24.70	24.42	24.48	24.36	1.00	24.70
		25	12	24.70	24.70	24.70	1.00	24.70	24.70	24.70	24.70	1.00	24.70
		25	25	24.49	24.54	24.44	1.00	24.70	24.49	24.54	24.44	1.00	24.70
		50	0	24.49	24.70	24.38	1.00	24.70	24.49	24.70	24.38	1.00	24.70
	16QAM	1	0	24.63	24.60	24.33	1.00	24.70	24.63	24.60	24.33	1.00	24.70
		1	25	24.56	24.49	24.33	1.00	24.70	24.56	24.49	24.33	1.00	24.70
		1	49	24.53	24.49	24.28	1.00	24.70	24.53	24.49	24.28	1.00	24.70
		25	0	23.51	23.47	23.40	2.00	23.70	23.51	23.47	23.40	2.00	23.70
		25	12	23.66	23.63	23.60	2.00	23.70	23.66	23.63	23.60	2.00	23.70
		25	25	23.59	23.55	23.52	2.00	23.70	23.59	23.55	23.52	2.00	23.70
		50	0	23.55	23.51	23.42	2.00	23.70	23.55	23.51	23.42	2.00	23.70
	64QAM	1	0	23.63	23.60	23.33	2.00	23.70	23.63	23.60	23.33	2.00	23.70
		1	25	23.56	23.49	23.33	2.00	23.70	23.56	23.49	23.33	2.00	23.70
		1	49	23.53	23.49	23.28	2.00	23.70	23.53	23.49	23.28	2.00	23.70
		25	0	22.51	22.47	22.40	3.00	22.70	22.51	22.47	22.40	3.00	22.70
		25	12	22.66	22.63	22.60	3.00	22.70	22.66	22.63	22.60	3.00	22.70
		25	25	22.59	22.55	22.52	3.00	22.70	22.59	22.55	22.52	3.00	22.70
		50	0	22.55	22.51	22.42	3.00	22.70	22.55	22.51	22.42	3.00	22.70
	256QAM	1	0	19.99	20.13	20.10	5.00	20.70	19.99	20.13	20.10	5.00	20.70
		1	25	19.94	20.08	19.95	5.00	20.70	19.94	20.08	19.95	5.00	20.70
		1	49	20.12	20.15	19.91	5.00	20.70	20.12	20.15	19.91	5.00	20.70
		25	0	20.08	19.93	20.07	5.00	20.70	20.08	19.93	20.07	5.00	20.70
		25	12	20.03	20.04	20.18	5.00	20.70	20.03	20.04	20.18	5.00	20.70
		25	25	20.02	20.14	20.07	5.00	20.70	20.02	20.14	20.07	5.00	20.70
		50	0	20.19	20.00	19.90	5.00	20.70	20.19	20.00	19.90	5.00	20.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26715.00	26865.00	27015.00	MPR	Tune-up Limit	26715.00	26865.00	27015.00	MPR	Tune-up Limit
				816.5 MHz	831.5 MHz	846.5 MHz			816.5 MHz	831.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	24.93	25.11	24.97	0.00	25.70	24.93	25.11	24.97	0.00	25.70
		1	12	25.09	25.11	24.95	0.00	25.70	25.09	25.11	24.95	0.00	25.70
		1	24	25.03	25.16	24.97	0.00	25.70	25.03	25.16	24.97	0.00	25.70
		12	0	24.50	24.53	24.49	1.00	24.70	24.50	24.53	24.49	1.00	24.70
		12	7	24.61	24.59	24.60	1.00	24.70	24.61	24.59	24.60	1.00	24.70
		12	13	24.57	24.56	24.53	1.00	24.70	24.57	24.56	24.53	1.00	24.70
		25	0	24.55	24.57	24.48	1.00	24.70	24.55	24.57	24.48	1.00	24.70
	16QAM	1	0	24.64	24.19	24.49	1.00	24.70	24.64	24.19	24.49	1.00	24.70
		1	12	24.17	24.17	24.49	1.00	24.70	24.17	24.17	24.49	1.00	24.70
		1	24	24.69	24.23	24.23	1.00	24.70	24.69	24.23	24.23	1.00	24.70
		12	0	23.58	23.63	23.63	2.00	23.70	23.58	23.63	23.63	2.00	23.70
		12	7	23.64	23.10	23.13	2.00	23.70	23.64	23.10	23.13	2.00	23.70
		12	13	23.65	23.67	23.69	2.00	23.70	23.65	23.67	23.69	2.00	23.70
		25	0	23.54	23.59	23.56	2.00	23.70	23.54	23.59	23.56	2.00	23.70
	64QAM	1	0	23.64	23.19	23.49	2.00	23.70	23.64	23.19	23.49	2.00	23.70
		1	12	23.17	23.17	23.49	2.00	23.70	23.17	23.17	23.49	2.00	23.70
		1	24	23.69	23.23	23.23	2.00	23.70	23.69	23.23	23.23	2.00	23.70
		12	0	22.58	22.63	22.63	3.00	22.70	22.58	22.63	22.63	3.00	22.70
		12	7	22.64	22.10	22.13	3.00	22.70	22.64	22.10	22.13	3.00	22.70
		12	13	22.65	22.67	22.69	3.00	22.70	22.65	22.67	22.69	3.00	22.70
		25	0	22.54	22.59	22.56	3.00	22.70	22.54	22.59	22.56	3.00	22.70
	256QAM	1	0	20.10	20.01	19.97	5.00	20.70	20.10	20.01	19.97	5.00	20.70
		1	12	20.01	20.14	19.91	5.00	20.70	20.01	20.14	19.91	5.00	20.70
		1	24	19.94	20.00	19.91	5.00	20.70	19.94	20.00	19.91	5.00	20.70
		12	0	20.06	19.93	20.19	5.00	20.70	20.06	19.93	20.19	5.00	20.70
		12	7	20.15	20.09	20.12	5.00	20.70	20.15	20.09	20.12	5.00	20.70
		12	13	20.19	19.94	20.07	5.00	20.70	20.19	19.94	20.07	5.00	20.70
		25	0	19.92	20.11	19.95	5.00	20.70	19.92	20.11	19.95	5.00	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 26 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26705.00	26865.00	27025.00			26705.00	26865.00	27025.00		
				815.5 MHz	831.5 MHz	847.5 MHz			815.5 MHz	831.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	24.89	24.95	25.03	0.00	25.70	24.89	24.95	25.03	0.00	25.70
		1	8	24.94	24.99	24.97	0.00	25.70	24.94	24.99	24.97	0.00	25.70
		1	14	24.95	25.04	25.00	0.00	25.70	24.95	25.04	25.00	0.00	25.70
		8	0	24.52	24.55	24.51	1.00	24.70	24.52	24.55	24.51	1.00	24.70
		8	4	24.61	24.59	24.56	1.00	24.70	24.61	24.59	24.56	1.00	24.70
		8	7	24.58	24.61	24.55	1.00	24.70	24.58	24.61	24.55	1.00	24.70
		15	0	24.53	24.60	24.51	1.00	24.70	24.53	24.60	24.51	1.00	24.70
	16QAM	1	0	24.25	24.18	24.66	1.00	24.70	24.25	24.18	24.66	1.00	24.70
		1	8	24.26	24.22	24.58	1.00	24.70	24.26	24.22	24.58	1.00	24.70
		1	14	24.31	24.24	24.21	1.00	24.70	24.31	24.24	24.21	1.00	24.70
		8	0	23.23	23.35	23.28	2.00	23.70	23.23	23.35	23.28	2.00	23.70
		8	4	23.37	23.43	23.35	2.00	23.70	23.37	23.43	23.35	2.00	23.70
		8	7	23.37	23.43	23.36	2.00	23.70	23.37	23.43	23.36	2.00	23.70
		15	0	23.26	23.35	23.29	2.00	23.70	23.26	23.35	23.29	2.00	23.70
	64QAM	1	0	23.25	23.18	23.66	2.00	23.70	23.25	23.18	23.66	2.00	23.70
		1	8	23.26	23.22	23.58	2.00	23.70	23.26	23.22	23.58	2.00	23.70
		1	14	23.31	23.24	23.21	2.00	23.70	23.31	23.24	23.21	2.00	23.70
		8	0	22.23	22.35	22.28	3.00	22.70	22.23	22.35	22.28	3.00	22.70
		8	4	22.37	22.43	22.35	3.00	22.70	22.37	22.43	22.35	3.00	22.70
		8	7	22.37	22.43	22.36	3.00	22.70	22.37	22.43	22.36	3.00	22.70
		15	0	22.26	22.35	22.29	3.00	22.70	22.26	22.35	22.29	3.00	22.70
	256QAM	1	0	19.98	19.96	20.14	5.00	20.70	19.98	19.96	20.14	5.00	20.70
		1	8	19.93	20.05	20.00	5.00	20.70	19.93	20.05	20.00	5.00	20.70
		1	14	19.98	19.93	20.06	5.00	20.70	19.98	19.93	20.06	5.00	20.70
		8	0	20.04	20.09	20.11	5.00	20.70	20.04	20.09	20.11	5.00	20.70
		8	4	20.04	20.16	20.05	5.00	20.70	20.04	20.16	20.05	5.00	20.70
		8	7	20.00	20.20	19.98	5.00	20.70	20.00	20.20	19.98	5.00	20.70
		15	0	20.10	19.98	20.12	5.00	20.70	20.10	19.98	20.12	5.00	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26697.00	26865.00	27033.00			26697.00	26865.00	27033.00		
				814.7 MHz	831.5 MHz	848.3 MHz			814.7 MHz	831.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	24.92	24.86	24.90	0.00	25.70	24.92	24.86	24.90	0.00	25.70
		1	3	25.00	25.00	24.95	0.00	25.70	25.00	25.00	24.95	0.00	25.70
		1	5	24.97	24.95	24.92	0.00	25.70	24.97	24.95	24.92	0.00	25.70
		3	0	24.99	24.93	24.86	0.00	25.70	24.99	24.93	24.86	0.00	25.70
		3	1	25.03	24.94	24.89	0.00	25.70	25.03	24.94	24.89	0.00	25.70
		3	3	25.03	24.96	24.91	0.00	25.70	25.03	24.96	24.91	0.00	25.70
		6	0	24.48	24.53	24.21	1.00	24.70	24.48	24.53	24.21	1.00	24.70
	16QAM	1	0	24.53	24.22	24.17	1.00	24.70	24.53	24.22	24.17	1.00	24.70
		1	3	24.63	24.32	24.06	1.00	24.70	24.63	24.32	24.06	1.00	24.70
		1	5	24.59	24.31	23.79	1.00	24.70	24.59	24.31	23.79	1.00	24.70
		3	0	24.37	24.42	24.09	1.00	24.70	24.37	24.42	24.09	1.00	24.70
		3	1	24.45	24.46	24.04	1.00	24.70	24.45	24.46	24.04	1.00	24.70
		3	3	24.46	24.47	23.94	1.00	24.70	24.46	24.47	23.94	1.00	24.70
		6	0	23.14	23.44	23.15	2.00	23.70	23.14	23.44	23.15	2.00	23.70
	64QAM	1	0	23.53	23.22	23.17	2.00	23.70	23.53	23.22	23.17	2.00	23.70
		1	3	23.63	23.32	23.06	2.00	23.70	23.63	23.32	23.06	2.00	23.70
		1	5	23.59	23.31	22.79	2.00	23.70	23.59	23.31	22.79	2.00	23.70
		3	0	23.37	23.42	23.09	2.00	23.70	23.37	23.42	23.09	2.00	23.70
		3	1	23.45	23.46	23.04	2.00	23.70	23.45	23.46	23.04	2.00	23.70
		3	3	23.46	23.47	22.94	2.00	23.70	23.46	23.47	22.94	2.00	23.70
		6	0	22.14	22.44	22.15	3.00	22.70	22.14	22.44	22.15	3.00	22.70
	256QAM	1	0	19.91	20.10	20.07	5.00	20.70	19.91	20.10	20.07	5.00	20.70
		1	3	20.03	20.11	20.00	5.00	20.70	20.03	20.11	20.00	5.00	20.70
		1	5	19.98	20.17	19.97	5.00	20.70	19.98	20.17	19.97	5.00	20.70
		3	0	20.16	20.01	19.98	5.00	20.70	20.16	20.01	19.98	5.00	20.70
		3	1	20.14	19.97	20.19	5.00	20.70	20.14	19.97	20.19	5.00	20.70
		3	3	20.18	20.12	20.02	5.00	20.70	20.18	20.12	20.02	5.00	20.70
		6	0	19.99	19.99	19.98	5.00	20.70	19.99	19.99	19.98	5.00	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 26 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				26740.00	26865.00	26990.00	MPR	Tune-up Limit	26740.00	26865.00	26990.00	MPR	Tune-up Limit
				819 MHz	831.5 MHz	844 MHz			819 MHz	831.5 MHz	844 MHz		
10 MHz	QPSK	1	0	23.57	23.67	23.66	0.00	24.50	23.57	23.67	23.66	0.00	24.50
		1	25	24.25	24.25	24.25	0.00	24.50	24.25	24.25	24.25	0.00	24.50
		1	49	23.51	23.57	23.54	0.00	24.50	23.51	23.57	23.54	0.00	24.50
		25	0	22.82	22.87	22.82	1.00	23.50	22.82	22.87	22.82	1.00	23.50
		25	12	23.25	23.25	23.25	1.00	23.50	23.25	23.25	23.25	1.00	23.50
		25	25	22.93	22.95	22.89	1.00	23.50	22.93	22.95	22.89	1.00	23.50
		50	0	22.90	23.25	22.81	1.00	23.50	22.90	23.25	22.81	1.00	23.50
	16QAM	1	0	23.01	22.99	23.09	1.00	23.50	23.01	22.99	23.09	1.00	23.50
		1	25	22.94	22.94	23.02	1.00	23.50	22.94	22.94	23.02	1.00	23.50
		1	49	22.97	22.88	23.03	1.00	23.50	22.97	22.88	23.03	1.00	23.50
		25	0	21.91	21.88	21.82	2.00	22.50	21.91	21.88	21.82	2.00	22.50
		25	12	22.09	22.09	21.91	2.00	22.50	22.09	22.09	21.91	2.00	22.50
		25	25	22.04	22.00	21.87	2.00	22.50	22.04	22.00	21.87	2.00	22.50
		50	0	21.95	21.92	21.83	2.00	22.50	21.95	21.92	21.83	2.00	22.50
	64QAM	1	0	22.01	21.99	22.09	2.00	22.50	22.01	21.99	22.09	2.00	22.50
		1	25	21.94	21.94	22.02	2.00	22.50	21.94	21.94	22.02	2.00	22.50
		1	49	21.97	21.88	22.03	2.00	22.50	21.97	21.88	22.03	2.00	22.50
		25	0	20.91	20.88	20.82	3.00	21.50	20.91	20.88	20.82	3.00	21.50
		25	12	21.09	21.09	20.91	3.00	21.50	21.09	21.09	20.91	3.00	21.50
		25	25	21.04	21.00	20.87	3.00	21.50	21.04	21.00	20.87	3.00	21.50
		50	0	20.95	20.92	20.83	3.00	21.50	20.95	20.92	20.83	3.00	21.50
	256QAM	1	0	18.74	18.89	18.71	5.00	19.50	18.74	18.89	18.71	5.00	19.50
		1	25	18.72	18.84	18.72	5.00	19.50	18.72	18.84	18.72	5.00	19.50
		1	49	18.75	18.73	18.82	5.00	19.50	18.75	18.73	18.82	5.00	19.50
		25	0	18.79	18.65	18.71	5.00	19.50	18.79	18.65	18.71	5.00	19.50
		25	12	18.76	18.68	18.87	5.00	19.50	18.76	18.68	18.87	5.00	19.50
		25	25	18.74	18.87	18.87	5.00	19.50	18.74	18.87	18.87	5.00	19.50
		50	0	18.80	18.87	18.64	5.00	19.50	18.80	18.87	18.64	5.00	19.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				26715.00	26865.00	27015.00	MPR	Tune-up Limit	26715.00	26865.00	27015.00	MPR	Tune-up Limit
				816.5 MHz	831.5 MHz	846.5 MHz			816.5 MHz	831.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	23.55	23.73	23.56	0.00	24.50	23.55	23.73	23.56	0.00	24.50
		1	12	23.65	23.73	23.54	0.00	24.50	23.65	23.73	23.54	0.00	24.50
		1	24	23.59	23.74	23.51	0.00	24.50	23.59	23.74	23.51	0.00	24.50
		12	0	23.11	23.13	23.03	1.00	23.50	23.11	23.13	23.03	1.00	23.50
		12	7	23.24	23.22	23.17	1.00	23.50	23.24	23.22	23.17	1.00	23.50
		12	13	23.16	23.22	23.12	1.00	23.50	23.16	23.22	23.12	1.00	23.50
		25	0	23.13	23.21	23.06	1.00	23.50	23.13	23.21	23.06	1.00	23.50
	16QAM	1	0	22.73	22.90	22.86	1.00	23.50	22.73	22.90	22.86	1.00	23.50
		1	12	22.85	22.90	22.85	1.00	23.50	22.85	22.90	22.85	1.00	23.50
		1	24	22.77	22.93	22.91	1.00	23.50	22.77	22.93	22.91	1.00	23.50
		12	0	21.67	21.75	21.71	2.00	22.50	21.67	21.75	21.71	2.00	22.50
		12	7	21.72	21.81	21.81	2.00	22.50	21.72	21.81	21.81	2.00	22.50
		12	13	21.72	21.77	21.76	2.00	22.50	21.72	21.77	21.76	2.00	22.50
		25	0	21.60	21.76	21.64	2.00	22.50	21.60	21.76	21.64	2.00	22.50
	64QAM	1	0	21.73	21.90	21.86	2.00	22.50	21.73	21.90	21.86	2.00	22.50
		1	12	21.85	21.90	21.85	2.00	22.50	21.85	21.90	21.85	2.00	22.50
		1	24	21.77	21.93	21.91	2.00	22.50	21.77	21.93	21.91	2.00	22.50
		12	0	20.67	20.75	20.71	3.00	21.50	20.67	20.75	20.71	3.00	21.50
		12	7	20.72	20.81	20.81	3.00	21.50	20.72	20.81	20.81	3.00	21.50
		12	13	20.72	20.77	20.76	3.00	21.50	20.72	20.77	20.76	3.00	21.50
		25	0	20.60	20.76	20.64	3.00	21.50	20.60	20.76	20.64	3.00	21.50
	256QAM	1	0	18.82	18.78	18.61	5.00	19.50	18.82	18.78	18.61	5.00	19.50
		1	12	18.82	18.65	18.87	5.00	19.50	18.82	18.65	18.87	5.00	19.50
		1	24	18.71	18.74	18.65	5.00	19.50	18.71	18.74	18.65	5.00	19.50
		12	0	18.90	18.89	18.77	5.00	19.50	18.90	18.89	18.77	5.00	19.50
		12	7	18.74	18.74	18.88	5.00	19.50	18.74	18.74	18.88	5.00	19.50
		12	13	18.78	18.62	18.77	5.00	19.50	18.78	18.62	18.77	5.00	19.50
		25	0	18.76	18.73	18.78	5.00	19.50	18.76	18.73	18.78	5.00	19.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 26 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26705.00	26865.00	27025.00			26705.00	26865.00	27025.00		
				815.5 MHz	831.5 MHz	847.5 MHz			815.5 MHz	831.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	23.55	23.61	23.59	0.00	24.50	23.55	23.61	23.59	0.00	24.50
		1	8	23.55	23.62	23.58	0.00	24.50	23.55	23.62	23.58	0.00	24.50
		1	14	23.56	23.66	23.56	0.00	24.50	23.56	23.66	23.56	0.00	24.50
		8	0	22.89	22.97	22.91	1.00	23.50	22.89	22.97	22.91	1.00	23.50
		8	4	22.99	23.01	22.94	1.00	23.50	22.99	23.01	22.94	1.00	23.50
		8	7	23.00	23.02	22.93	1.00	23.50	23.00	23.02	22.93	1.00	23.50
		15	0	22.98	23.01	22.90	1.00	23.50	22.98	23.01	22.90	1.00	23.50
	16QAM	1	0	22.96	22.95	23.01	1.00	23.50	22.96	22.95	23.01	1.00	23.50
		1	8	22.98	22.93	22.96	1.00	23.50	22.98	22.93	22.96	1.00	23.50
		1	14	23.00	22.96	22.89	1.00	23.50	23.00	22.96	22.89	1.00	23.50
		8	0	21.92	21.70	21.96	2.00	22.50	21.92	21.70	21.96	2.00	22.50
		8	4	22.06	21.75	22.00	2.00	22.50	22.06	21.75	22.00	2.00	22.50
		8	7	22.06	21.76	22.02	2.00	22.50	22.06	21.76	22.02	2.00	22.50
		15	0	21.96	22.02	21.98	2.00	22.50	21.96	22.02	21.98	2.00	22.50
	64QAM	1	0	21.96	21.95	22.01	2.00	22.50	21.96	21.95	22.01	2.00	22.50
		1	8	21.98	21.93	21.96	2.00	22.50	21.98	21.93	21.96	2.00	22.50
		1	14	22.00	21.96	21.89	2.00	22.50	22.00	21.96	21.89	2.00	22.50
		8	0	20.92	20.70	20.96	3.00	21.50	20.92	20.70	20.96	3.00	21.50
		8	4	21.06	20.75	21.00	3.00	21.50	21.06	20.75	21.00	3.00	21.50
		8	7	21.06	20.76	21.02	3.00	21.50	21.06	20.76	21.02	3.00	21.50
		15	0	20.96	21.02	20.98	3.00	21.50	20.96	21.02	20.98	3.00	21.50
	256QAM	1	0	18.87	18.68	18.70	5.00	19.50	18.87	18.68	18.70	5.00	19.50
		1	8	18.63	18.89	18.60	5.00	19.50	18.63	18.89	18.60	5.00	19.50
		1	14	18.83	18.86	18.86	5.00	19.50	18.83	18.86	18.86	5.00	19.50
		8	0	18.81	18.90	18.71	5.00	19.50	18.81	18.90	18.71	5.00	19.50
		8	4	18.62	18.88	18.79	5.00	19.50	18.62	18.88	18.79	5.00	19.50
		8	7	18.68	18.85	18.68	5.00	19.50	18.68	18.85	18.68	5.00	19.50
		15	0	18.73	18.72	18.89	5.00	19.50	18.73	18.72	18.89	5.00	19.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				26697.00	26865.00	27033.00			26697.00	26865.00	27033.00		
				814.7 MHz	831.5 MHz	848.3 MHz			814.7 MHz	831.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	23.58	23.69	23.65	0.00	24.50	23.58	23.69	23.65	0.00	24.50
		1	3	23.63	23.61	23.75	0.00	24.50	23.63	23.61	23.75	0.00	24.50
		1	5	23.56	23.54	23.66	0.00	24.50	23.56	23.54	23.66	0.00	24.50
		3	0	23.60	23.54	23.63	0.00	24.50	23.60	23.54	23.63	0.00	24.50
		3	1	23.60	23.59	23.64	0.00	24.50	23.60	23.59	23.64	0.00	24.50
		3	3	23.58	23.57	23.69	0.00	24.50	23.58	23.57	23.69	0.00	24.50
		6	0	23.30	23.34	23.18	1.00	23.50	23.30	23.34	23.18	1.00	23.50
	16QAM	1	0	23.28	23.34	23.23	1.00	23.50	23.28	23.34	23.23	1.00	23.50
		1	3	23.30	23.42	23.09	1.00	23.50	23.30	23.42	23.09	1.00	23.50
		1	5	23.30	23.37	23.04	1.00	23.50	23.30	23.37	23.04	1.00	23.50
		3	0	23.09	23.15	23.41	1.00	23.50	23.09	23.15	23.41	1.00	23.50
		3	1	23.14	23.19	23.33	1.00	23.50	23.14	23.19	23.33	1.00	23.50
		3	3	23.14	23.18	23.18	1.00	23.50	23.14	23.18	23.18	1.00	23.50
		6	0	22.24	22.49	22.41	2.00	22.50	22.24	22.49	22.41	2.00	22.50
	64QAM	1	0	22.28	22.34	22.23	2.00	22.50	22.28	22.34	22.23	2.00	22.50
		1	3	22.30	22.42	22.09	2.00	22.50	22.30	22.42	22.09	2.00	22.50
		1	5	22.30	22.37	22.04	2.00	22.50	22.30	22.37	22.04	2.00	22.50
		3	0	22.09	22.15	22.41	2.00	22.50	22.09	22.15	22.41	2.00	22.50
		3	1	22.14	22.19	22.33	2.00	22.50	22.14	22.19	22.33	2.00	22.50
		3	3	22.14	22.18	22.18	2.00	22.50	22.14	22.18	22.18	2.00	22.50
		6	0	21.24	21.49	21.41	3.00	21.50	21.24	21.49	21.41	3.00	21.50
	256QAM	1	0	18.82	18.66	18.74	5.00	19.50	18.82	18.66	18.74	5.00	19.50
		1	3	18.70	18.80	18.88	5.00	19.50	18.70	18.80	18.88	5.00	19.50
		1	5	18.82	18.69	18.82	5.00	19.50	18.82	18.69	18.82	5.00	19.50
		3	0	18.84	18.84	18.77	5.00	19.50	18.84	18.84	18.77	5.00	19.50
		3	1	18.82	18.70	18.83	5.00	19.50	18.82	18.70	18.83	5.00	19.50
		3	3	18.74	18.81	18.81	5.00	19.50	18.74	18.81	18.81	5.00	19.50
		6	0	18.70	18.62	18.71	5.00	19.50	18.70	18.62	18.71	5.00	19.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 30 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm}			Power Mode B (dBm}		
				27710.00 2310 MHz	MPR	Tune-up Limit	27710.00 2310 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	24.97	0.00	25.70	19.71	0.00	20.25
		1	25	25.70	0.00	25.70	20.25	0.00	20.25
		1	49	24.99	0.00	25.70	19.71	0.00	20.25
		25	0	24.50	1.00	24.70	19.73	0.00	20.25
		25	12	24.70	1.00	24.70	20.25	0.00	20.25
		25	25	24.44	1.00	24.70	19.69	0.00	20.25
		50	0	24.70	1.00	24.70	20.25	0.00	20.25
	16QAM	1	0	24.66	1.00	24.70	20.16	0.00	20.25
		1	25	24.61	1.00	24.70	20.19	0.00	20.25
		1	49	24.58	1.00	24.70	20.11	0.00	20.25
		25	0	23.54	2.00	23.70	19.82	0.00	20.25
		25	12	23.59	2.00	23.70	19.86	0.00	20.25
		25	25	23.49	2.00	23.70	19.76	0.00	20.25
		50	0	23.50	2.00	23.70	19.77	0.00	20.25
	64QAM	1	0	23.66	2.00	23.70	19.71	0.00	20.25
		1	25	23.61	2.00	23.70	19.70	0.00	20.25
		1	49	23.58	2.00	23.70	19.71	0.00	20.25
		25	0	22.54	3.00	22.70	19.73	0.00	20.25
		25	12	22.59	3.00	22.70	19.78	0.00	20.25
		25	25	22.49	3.00	22.70	19.69	0.00	20.25
		50	0	22.50	3.00	22.70	19.70	0.00	20.25
	256QAM	1	0	19.70	5.00	20.70	19.93	0.00	20.25
		1	25	19.95	5.00	20.70	19.81	0.00	20.25
		1	49	20.00	5.00	20.70	19.91	0.00	20.25
		25	0	19.73	5.00	20.70	19.90	0.00	20.25
		25	12	19.85	5.00	20.70	19.85	0.00	20.25
		25	25	19.77	5.00	20.70	19.95	0.00	20.25
		50	0	20.00	5.00	20.70	19.71	0.00	20.25

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm}			Power Mode B (dBm}		
				27710.00 2310 MHz	MPR	Tune-up Limit	27710.00 2310 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	24.86	0.00	25.70	19.69	0.00	20.25
		1	12	24.91	0.00	25.70	19.76	0.00	20.25
		1	24	24.87	0.00	25.70	19.71	0.00	20.25
		12	0	24.46	1.00	24.70	19.80	0.00	20.25
		12	7	24.46	1.00	24.70	19.83	0.00	20.25
		12	13	24.45	1.00	24.70	19.81	0.00	20.25
		25	0	24.42	1.00	24.70	19.77	0.00	20.25
	16QAM	1	0	24.55	1.00	24.70	19.93	0.00	20.25
		1	12	24.60	1.00	24.70	19.96	0.00	20.25
		1	24	24.57	1.00	24.70	19.91	0.00	20.25
		12	0	23.46	2.00	23.70	19.83	0.00	20.25
		12	7	23.53	2.00	23.70	19.88	0.00	20.25
		12	13	23.50	2.00	23.70	19.86	0.00	20.25
		25	0	23.39	2.00	23.70	19.72	0.00	20.25
	64QAM	1	0	23.55	2.00	23.70	19.69	0.00	20.25
		1	12	23.60	2.00	23.70	19.76	0.00	20.25
		1	24	23.57	2.00	23.70	19.71	0.00	20.25
		12	0	22.46	3.00	22.70	19.80	0.00	20.25
		12	7	22.53	3.00	22.70	19.83	0.00	20.25
		12	13	22.50	3.00	22.70	19.81	0.00	20.25
		25	0	22.39	3.00	22.70	19.77	0.00	20.25
	256QAM	1	0	19.9	5	20.7	19.9	0	20.25
		1	12	19.9	5	20.7	19.9	0	20.25
		1	24	19.9	5	20.7	19.7	0	20.25
		12	0	19.8	5	20.7	20.0	0	20.25
		12	7	19.9	5	20.7	20.0	0	20.25
		12	13	19.9	5	20.7	19.8	0	20.25
		25	0	20.0	5	20.7	19.8	0	20.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 30 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}			Power Mode B {dBm}		
				27710.00 2310 MHz	MPR	Tune-up Limit	27710.00 2310 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	18.05	0.00	18.50	19.91	0.00	20.00
		1	25	18.25	0.00	18.50	20.00	0.00	20.00
		1	49	18.03	0.00	18.50	19.96	0.00	20.00
		25	0	17.97	0.00	18.50	19.21	0.00	20.00
		25	12	18.25	0.00	18.50	20.00	0.00	20.00
		25	25	18.04	0.00	18.50	19.26	0.00	20.00
		50	0	18.25	0.00	18.50	20.00	0.00	20.00
	16QAM	1	0	17.94	0.00	18.50	19.38	0.00	20.00
		1	25	17.94	0.00	18.50	19.39	0.00	20.00
		1	49	17.93	0.00	18.50	19.35	0.00	20.00
		25	0	17.92	0.00	18.50	19.06	0.00	20.00
		25	12	17.98	0.00	18.50	19.16	0.00	20.00
		25	25	17.99	0.00	18.50	19.13	0.00	20.00
		50	0	17.92	0.00	18.50	19.06	0.00	20.00
	64QAM	1	0	17.94	0.00	18.50	19.16	0.00	20.00
		1	25	17.94	0.00	18.50	19.13	0.00	20.00
		1	49	17.93	0.00	18.50	19.06	0.00	20.00
		25	0	17.92	0.00	18.50	19.37	0.20	19.80
		25	12	17.98	0.00	18.50	19.43	0.20	19.80
		25	25	17.99	0.00	18.50	19.44	0.20	19.80
		50	0	17.92	0.00	18.50	19.37	0.20	19.80
	256QAM	1	0	18.02	0.00	18.50	17.53	2.20	17.80
		1	25	17.92	0.00	18.50	17.44	2.20	17.80
		1	49	18.18	0.00	18.50	17.31	2.20	17.80
		25	0	18.04	0.00	18.50	17.40	2.20	17.80
		25	12	17.93	0.00	18.50	17.47	2.20	17.80
		25	25	17.91	0.00	18.50	17.45	2.20	17.80
		50	0	17.93	0.00	18.50	17.56	2.20	17.80

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}			Power Mode B {dBm}		
				27710.00 2310 MHz	MPR	Tune-up Limit	27710.00 2310 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	17.90	0.00	18.50	19.93	0.00	20.00
		1	12	18.00	0.00	18.50	19.94	0.00	20.00
		1	24	17.92	0.00	18.50	19.94	0.00	20.00
		12	0	17.94	0.00	18.50	19.00	0.00	20.00
		12	7	18.07	0.00	18.50	19.09	0.00	20.00
		12	13	18.03	0.00	18.50	19.06	0.00	20.00
		25	0	18.00	0.00	18.50	19.05	0.00	20.00
	16QAM	1	0	18.05	0.00	18.50	19.06	0.00	20.00
		1	12	18.20	0.00	18.50	19.20	0.00	20.00
		1	24	18.11	0.00	18.50	19.14	0.00	20.00
		12	0	18.01	0.00	18.50	19.15	0.00	20.00
		12	7	18.12	0.00	18.50	19.23	0.00	20.00
		12	13	18.05	0.00	18.50	19.23	0.00	20.00
		25	0	17.98	0.00	18.50	19.10	0.00	20.00
	64QAM	1	0	17.90	0.00	18.50	19.16	0.00	20.00
		1	12	18.00	0.00	18.50	19.13	0.00	20.00
		1	24	17.92	0.00	18.50	19.06	0.00	20.00
		12	0	17.94	0.00	18.50	19.37	0.20	19.80
		12	7	18.07	0.00	18.50	19.43	0.20	19.80
		12	13	18.03	0.00	18.50	19.44	0.20	19.80
		25	0	18.00	0.00	18.50	19.37	0.20	19.80
	256QAM	1	0	18.15	0.00	18.50	17.37	2.20	17.80
		1	12	17.93	0.00	18.50	17.49	2.20	17.80
		1	24	17.98	0.00	18.50	17.49	2.20	17.80
		12	0	18.13	0.00	18.50	17.47	2.20	17.80
		12	7	18.02	0.00	18.50	17.30	2.20	17.80
		12	13	18.11	0.00	18.50	17.59	2.20	17.80
		25	0	18.12	0.00	18.50	17.58	2.20	17.80

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 30 Measured Results (ANT3)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				27710	MPR	Tune-up Limit	27710	MPR	Tune-up Limit
				2310 MHz			2310 MHz		
10 MHz	QPSK	1	0	24.06	0.00	24.70	20.05	0.00	20.50
		1	25	24.20	0.00	24.70	20.06	0.00	20.50
		1	49	24.09	0.00	24.70	20.08	0.00	20.50
		25	0	23.20	1.00	23.70	19.99	0.00	20.50
		25	12	23.40	1.00	23.70	20.12	0.00	20.50
		25	25	23.27	1.00	23.70	20.06	0.00	20.50
		50	0	23.17	1.00	23.70	19.97	0.00	20.50
	16QAM	1	0	23.00	1.00	23.70	20.49	0.00	20.50
		1	25	23.00	1.00	23.70	20.47	0.00	20.50
		1	49	23.00	1.00	23.70	20.49	0.00	20.50
		25	0	22.23	2.00	22.70	20.06	0.00	20.50
		25	12	22.37	2.00	22.70	20.20	0.00	20.50
		25	25	22.29	2.00	22.70	20.10	0.00	20.50
		50	0	22.22	2.00	22.70	20.04	0.00	20.50
	64QAM	1	0	22.23	2.00	22.70	20.05	0.00	20.50
		1	25	22.29	2.00	22.70	20.06	0.00	20.50
		1	49	22.40	2.00	22.70	20.08	0.00	20.50
		25	0	21.33	3.00	21.70	19.99	0.00	20.50
		25	12	21.27	3.00	21.70	20.12	0.00	20.50
		25	25	21.17	3.00	21.70	20.06	0.00	20.50
		50	0	21.69	3.00	21.70	19.97	0.00	20.50
	256QAM	1	0	19.09	5.00	19.70	19.10	0.80	19.70
		1	25	18.94	5.00	19.70	18.94	0.80	19.70
		1	49	19.02	5.00	19.70	19.02	0.80	19.70
		25	0	18.91	5.00	19.70	18.97	0.80	19.70
		25	12	18.92	5.00	19.70	19.09	0.80	19.70
		25	25	18.98	5.00	19.70	18.82	0.80	19.70
		50	0	19.01	5.00	19.70	19.04	0.80	19.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				27710.00	MPR	Tune-up Limit	27710.00	MPR	Tune-up Limit
				2310 MHz			2310 MHz		
5 MHz	QPSK	1	0	24.13	0.00	24.70	19.96	0.00	20.50
		1	12	24.22	0.00	24.70	20.14	0.00	20.50
		1	24	24.16	0.00	24.70	20.08	0.00	20.50
		12	0	23.27	1.00	23.70	20.06	0.00	20.50
		12	7	23.37	1.00	23.70	20.19	0.00	20.50
		12	13	23.37	1.00	23.70	20.13	0.00	20.50
		25	0	23.34	1.00	23.70	20.15	0.00	20.50
	16QAM	1	0	23.00	1.00	23.70	20.17	0.00	20.50
		1	12	23.00	1.00	23.70	20.30	0.00	20.50
		1	24	23.00	1.00	23.70	20.24	0.00	20.50
		12	0	22.36	2.00	22.70	20.15	0.00	20.50
		12	7	22.48	2.00	22.70	20.24	0.00	20.50
		12	13	22.45	2.00	22.70	20.22	0.00	20.50
		25	0	22.40	2.00	22.70	20.11	0.00	20.50
	64QAM	1	0	22.42	2.00	22.70	20.06	0.00	20.50
		1	12	22.36	2.00	22.70	20.19	0.00	20.50
		1	24	22.47	2.00	22.70	20.13	0.00	20.50
		12	0	21.37	3.00	21.70	20.15	0.00	20.50
		12	7	21.37	3.00	21.70	20.17	0.00	20.50
		12	13	21.34	3.00	21.70	20.30	0.00	20.50
		25	0	21.45	3.00	21.70	20.24	0.00	20.50
	256QAM	1	0	18.88	5.00	19.70	18.80	0.80	19.70
		1	12	19.06	5.00	19.70	18.87	0.80	19.70
		1	24	18.83	5.00	19.70	18.91	0.80	19.70
		12	0	18.84	5.00	19.70	18.81	0.80	19.70
		12	7	18.91	5.00	19.70	19.01	0.80	19.70
		12	13	18.95	5.00	19.70	18.87	0.80	19.70
		25	0	18.88	5.00	19.70	19.09	0.80	19.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 30 Measured Results (ANT4)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}			Power Mode B {dBm}		
				27710	MPR	Tune-up Limit	27710	MPR	Tune-up Limit
				2310 MHz			2310 MHz		
10 MHz	QPSK	1	0	16.91	0.00	17.50	20.21	0.00	20.50
		1	25	17.50	0.00	17.50	20.50	0.00	20.50
		1	49	16.86	0.00	17.50	20.12	0.00	20.50
		25	0	16.86	0.00	17.50	20.15	0.00	20.50
		25	12	17.50	0.00	17.50	20.50	0.00	20.50
		25	25	16.82	0.00	17.50	20.13	0.00	20.50
		50	0	17.50	0.00	17.50	20.50	0.00	20.50
	16QAM	1	0	17.31	0.00	17.50	19.77	0.00	20.50
		1	25	17.26	0.00	17.50	19.73	0.00	20.50
		1	49	17.25	0.00	17.50	19.73	0.00	20.50
		25	0	16.94	0.00	17.50	19.90	0.30	20.20
		25	12	16.98	0.00	17.50	19.96	0.30	20.20
		25	25	16.90	0.00	17.50	19.87	0.30	20.20
		50	0	16.90	0.00	17.50	19.88	0.30	20.20
	64QAM	1	0	17.31	0.00	17.50	20.11	0.30	20.20
		1	25	17.26	0.00	17.50	20.06	0.30	20.20
		1	49	17.25	0.00	17.50	20.05	0.30	20.20
		25	0	16.94	0.00	17.50	18.94	1.30	19.20
		25	12	16.98	0.00	17.50	18.98	1.30	19.20
		25	25	16.90	0.00	17.50	18.90	1.30	19.20
		50	0	16.90	0.00	17.50	18.90	1.30	19.20
	256QAM	1	0	17.17	0.30	17.20	17.18	3.30	17.20
		1	25	17.12	0.30	17.20	17.20	3.30	17.20
		1	49	17.20	0.30	17.20	17.15	3.30	17.20
		25	0	17.02	0.30	17.20	16.98	3.30	17.20
		25	12	17.19	0.30	17.20	16.92	3.30	17.20
		25	25	17.07	0.30	17.20	17.08	3.30	17.20
		50	0	17.00	0.30	17.20	17.15	3.30	17.20

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}			Power Mode B {dBm}		
				27710.00	MPR	Tune-up Limit	27710.00	MPR	Tune-up Limit
				2310 MHz			2310 MHz		
5 MHz	QPSK	1	0	16.92	0.00	17.50	20.15	0.00	20.50
		1	12	16.96	0.00	17.50	20.16	0.00	20.50
		1	24	16.91	0.00	17.50	20.11	0.00	20.50
		12	0	16.99	0.00	17.50	20.20	0.00	20.50
		12	7	17.02	0.00	17.50	20.22	0.00	20.50
		12	13	16.98	0.00	17.50	20.19	0.00	20.50
		25	0	16.98	0.00	17.50	20.18	0.00	20.50
	16QAM	1	0	17.11	0.00	17.50	20.32	0.00	20.50
		1	12	17.08	0.00	17.50	20.31	0.00	20.50
		1	24	17.10	0.00	17.50	20.33	0.00	20.50
		12	0	17.06	0.00	17.50	19.97	0.30	20.20
		12	7	17.08	0.00	17.50	20.00	0.30	20.20
		12	13	17.04	0.00	17.50	19.97	0.30	20.20
		25	0	16.96	0.00	17.50	19.88	0.30	20.20
	64QAM	1	0	17.11	0.00	17.50	20.11	0.30	20.20
		1	12	17.08	0.00	17.50	20.08	0.30	20.20
		1	24	17.10	0.00	17.50	20.10	0.30	20.20
		12	0	17.06	0.00	17.50	19.06	1.30	19.20
		12	7	17.08	0.00	17.50	19.08	1.30	19.20
		12	13	17.04	0.00	17.50	19.04	1.30	19.20
		25	0	16.96	0.00	17.50	18.96	1.30	19.20
	256QAM	1	0	17.11	0.30	17.20	17.09	3.30	17.20
		1	12	16.99	0.30	17.20	17.16	3.30	17.20
		1	24	16.95	0.30	17.20	17.11	3.30	17.20
		12	0	16.92	0.30	17.20	17.07	3.30	17.20
		12	7	17.02	0.30	17.20	16.95	3.30	17.20
		12	13	17.14	0.30	17.20	17.06	3.30	17.20
		25	0	17.04	0.30	17.20	16.90	3.30	17.20

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 41 Power Class 3 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	QPSK	1	0	25.22	24.97	24.77	24.79	24.80	0.00	25.70	21.39	21.23	21.51	21.44	21.22	0.00	21.75
		1	49	25.50	25.50	25.50	25.50	25.50	0.00	25.70	21.70	21.70	21.70	21.70	21.70	0.00	21.75
		1	99	25.10	24.89	24.87	24.77	24.87	0.00	25.70	21.34	21.21	21.42	21.15	21.49	0.00	21.75
		50	0	24.68	24.45	24.32	24.28	24.09	1.00	24.70	21.47	21.26	21.73	21.68	21.49	0.00	21.75
		50	24	24.50	24.50	24.50	24.50	24.50	1.00	24.70	21.70	21.70	21.70	21.70	21.70	0.00	21.75
		50	50	24.64	24.41	24.35	24.16	24.21	1.00	24.70	21.42	21.21	21.14	20.95	21.01	0.00	21.75
		100	0	24.50	24.34	24.50	24.22	24.15	1.00	24.70	21.39	21.16	21.70	21.01	20.93	0.00	21.75
	16QAM	1	0	24.34	24.43	23.98	24.22	23.75	1.00	24.70	21.41	21.13	21.00	21.41	21.05	0.00	21.75
		1	49	24.26	24.42	24.28	24.47	24.15	1.00	24.70	21.35	21.08	21.33	21.61	21.43	0.00	21.75
		1	99	24.24	24.37	23.95	23.96	24.07	1.00	24.70	21.32	21.04	20.97	21.15	21.34	0.00	21.75
		50	0	23.21	23.44	23.32	23.34	23.08	2.00	23.70	21.44	21.27	21.17	21.04	21.47	0.00	21.75
		50	24	23.20	23.42	23.44	23.38	23.21	2.00	23.70	21.43	21.27	21.26	21.10	21.02	0.00	21.75
		50	50	23.66	23.37	23.38	23.20	23.23	2.00	23.70	21.37	21.23	21.17	20.92	21.00	0.00	21.75
		100	0	23.59	23.34	23.36	23.24	23.14	2.00	23.70	21.35	21.16	21.10	20.98	20.94	0.00	21.75
	64QAM	1	0	23.34	23.43	22.98	23.22	22.75	2.00	23.70	21.32	21.04	20.97	21.15	21.34	0.00	21.75
		1	49	23.26	23.42	23.28	23.47	23.15	2.00	23.70	21.44	21.27	21.17	21.04	21.47	0.00	21.75
		1	99	23.24	23.37	22.95	22.96	23.07	2.00	23.70	21.43	21.27	21.26	21.10	21.02	0.00	21.75
		50	0	22.21	22.44	22.32	22.34	22.08	3.00	22.70	21.36	21.59	21.47	21.49	21.23	0.00	21.75
		50	24	22.20	22.42	22.44	22.38	22.21	3.00	22.70	21.35	21.57	21.59	21.53	21.36	0.00	21.75
		50	50	22.66	22.37	22.38	22.20	22.23	3.00	22.70	21.70	21.52	21.53	21.35	21.38	0.00	21.75
		100	0	22.59	22.34	22.36	22.24	22.14	3.00	22.70	21.64	21.49	21.51	21.39	21.29	0.00	21.75
	256QAM	1	0	20.07	20.14	20.16	19.92	20.11	5.00	20.70	20.08	19.92	20.13	20.06	19.94	1.05	20.70
		1	49	20.07	19.98	20.02	20.19	19.92	5.00	20.70	20.15	20.12	20.14	20.06	20.05	1.05	20.70
		1	99	20.11	20.14	20.01	20.15	20.15	5.00	20.70	19.93	19.97	20.06	20.10	20.17	1.05	20.70
		50	0	19.99	20.05	20.04	20.00	19.92	5.00	20.70	20.06	20.04	20.11	20.14	20.10	1.05	20.70
		50	24	20.10	19.99	20.11	19.92	20.13	5.00	20.70	20.01	20.10	20.13	20.17	20.18	1.05	20.70
		50	50	19.94	20.11	19.97	20.08	20.13	5.00	20.70	20.15	20.03	19.99	20.07	20.09	1.05	20.70
		100	0	20.15	20.02	20.17	20.16	19.94	5.00	20.70	20.03	20.01	20.09	19.98	20.12	1.05	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
15 MHz	QPSK	1	0	25.38	24.90	24.86	24.88	24.98	0.00	25.70	21.32	20.90	20.84	21.45	21.13	0.00	21.75
		1	37	25.34	25.06	24.84	24.99	24.81	0.00	25.70	21.29	21.04	20.81	21.53	21.38	0.00	21.75
		1	74	25.31	24.82	24.82	24.78	24.82	0.00	25.70	21.28	20.80	20.83	21.27	21.38	0.00	21.75
		36	0	24.21	24.42	24.33	24.30	24.14	1.00	24.70	21.38	21.14	21.02	21.60	21.43	0.00	21.75
		36	20	24.21	24.47	24.38	24.35	24.24	1.00	24.70	21.37	21.17	21.07	21.60	21.52	0.00	21.75
		36	39	24.18	24.40	24.30	24.27	24.26	1.00	24.70	21.33	21.12	21.06	21.52	21.52	0.00	21.75
		75	0	24.13	24.37	24.27	24.24	24.17	1.00	24.70	21.28	21.09	21.00	21.54	21.47	0.00	21.75
	16QAM	1	0	24.26	24.30	24.27	24.28	23.94	1.00	24.70	21.43	20.95	20.88	21.57	21.20	0.00	21.75
		1	37	24.22	24.45	24.46	24.38	24.25	1.00	24.70	21.43	21.13	20.93	21.65	21.45	0.00	21.75
		1	74	24.22	24.24	24.26	24.10	24.23	1.00	24.70	21.41	20.88	20.89	21.35	21.41	0.00	21.75
		36	0	23.21	23.41	23.24	23.33	23.11	2.00	23.70	21.37	21.10	20.99	21.62	21.39	0.00	21.75
		36	20	23.22	23.42	23.40	23.35	23.24	2.00	23.70	21.39	21.16	21.06	21.01	20.88	0.00	21.75
		36	39	23.67	23.38	23.31	23.27	23.21	2.00	23.70	21.35	21.06	20.95	20.95	20.90	0.00	21.75
		75	0	23.62	23.40	23.30	23.25	23.18	2.00	23.70	21.30	21.08	21.00	20.95	20.86	0.00	21.75
	64QAM	1	0	23.26	23.30	23.27	23.28	22.94	2.00	23.70	21.38	21.21	21.04	20.99	20.89	0.00	21.75
		1	37	23.22	23.45	23.46	23.38	23.25	2.00	23.70	21.36	21.17	21.02	20.98	20.91	0.00	21.75
		1	74	23.22	23.24	23.26	23.10	23.23	2.00	23.70	21.33	21.15	21.10	20.92	20.86	0.00	21.75
		36	0	22.21	22.41	22.24	22.33	22.11	3.00	22.70	21.26	21.46	21.29	21.38	21.16	0.00	21.75
		36	20	22.22	22.42	22.40	22.35	22.24	3.00	22.70	21.27	21.47	21.45	21.40	21.29	0.00	21.75
		36	39	22.67	22.38	22.31	22.27	22.21	3.00	22.70	21.70	21.43	21.36	21.32	21.26	0.00	21.75
		75	0	22.62	22.40	22.30	22.25	22.18	3.00	22.70	21.67	21.45	21.35	21.30	21.23	0.00	21.75
	256QAM	1	0	20.13	19.98	19.99	20.03	20.10	5.00	20.70	20.20	19.92	20.06	20.12	20.20	1.05	20.70
		1	37	20.12	20.09	20.11	19.99	19.97	5.00	20.70	20.18	19.92	19.97	20.17	20.18	1.05	20.70
		1	74	20.16	20.04	20.04	19.97	20.13	5.00	20.70	20.18	19.99	20.12	20.09	20.02	1.05	20.70
		36	0	20.10	20.04	19.92	19.92	20.11	5.00	20.70	20.12	20.00	19.93	20.07	20.10	1.05	20.70
		36	20	20.16	20.05	19.96	20.15	19.93	5.00	20.70	20.04	19.94	19.93	20.05	20.11	1.05	20.70
		36	39	20.14	20.04	20.16	19.91	19.98	5.00	20.70	19.97	19.99	20.20	20.12	20.01	1.05	20.70
		75	0	20.09	20.09	20.06	19.91	20.04	5.00	20.70	20.10	20.12	19.95	20.04	20.10	1.05	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 41 Power Class 3 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
10 MHz	QPSK	1	0	25.21	24.89	24.84	24.71	24.71	0.00	25.70	21.12	20.89	20.99	20.88	20.80	0.00	21.75
		1	25	25.28	25.13	25.06	24.92	24.86	0.00	25.70	21.15	21.12	21.00	20.91	20.82	0.00	21.75
		1	49	25.27	24.88	24.80	24.88	24.79	0.00	25.70	21.15	20.85	20.95	20.84	20.83	0.00	21.75
		25	0	24.21	24.52	24.45	24.33	24.26	1.00	24.70	21.27	21.18	21.08	20.95	20.88	0.00	21.75
		25	12	24.17	24.60	24.53	24.36	24.34	1.00	24.70	21.28	21.26	21.15	21.00	20.96	0.00	21.75
		25	25	24.22	24.50	24.43	24.32	24.23	1.00	24.70	21.30	21.18	21.08	20.94	20.90	0.00	21.75
		50	0	24.15	24.50	24.45	24.32	24.22	1.00	24.70	21.23	21.18	21.07	20.93	20.88	0.00	21.75
	16QAM	1	0	24.22	24.19	24.21	24.21	24.04	1.00	24.70	21.28	20.89	20.89	20.87	20.93	0.00	21.75
		1	25	24.09	24.40	24.40	24.27	24.14	1.00	24.70	21.25	21.07	21.08	20.97	20.81	0.00	21.75
		1	49	24.20	24.28	24.14	24.13	24.03	1.00	24.70	21.34	20.88	20.82	20.83	20.92	0.00	21.75
		25	0	23.23	23.52	23.46	23.34	23.25	2.00	23.70	21.30	21.18	21.09	21.00	20.92	0.00	21.75
		25	12	23.24	23.56	23.54	23.41	23.29	2.00	23.70	21.22	21.23	21.15	21.02	20.95	0.00	21.75
		25	25	23.26	23.47	23.42	23.32	23.22	2.00	23.70	21.20	21.13	21.05	20.95	20.85	0.00	21.75
		50	0	23.21	23.51	23.45	23.33	23.22	2.00	23.70	21.16	21.16	21.09	20.96	20.87	0.00	21.75
	64QAM	1	0	23.22	23.19	23.21	23.21	23.04	2.00	23.70	21.22	21.23	21.15	21.02	20.95	0.00	21.75
		1	25	23.09	23.40	23.40	23.27	23.14	2.00	23.70	21.20	21.13	21.05	20.95	20.85	0.00	21.75
		1	49	23.20	23.28	23.14	23.13	23.03	2.00	23.70	21.16	21.16	21.09	20.96	20.87	0.00	21.75
		25	0	22.23	22.52	22.46	22.34	22.25	3.00	22.70	21.28	21.57	21.51	21.39	21.30	0.00	21.75
		25	12	22.24	22.56	22.54	22.41	22.29	3.00	22.70	21.29	21.61	21.59	21.46	21.34	0.00	21.75
		25	25	22.26	22.47	22.42	22.32	22.22	3.00	22.70	21.31	21.52	21.47	21.37	21.27	0.00	21.75
		50	0	22.21	22.51	22.45	22.33	22.22	3.00	22.70	21.26	21.56	21.50	21.38	21.27	0.00	21.75
	256QAM	1	0	20.04	19.91	20.15	20.11	20.00	5.00	20.70	19.93	20.15	20.13	19.91	19.93	1.05	20.70
		1	25	20.08	20.00	20.08	20.14	20.12	5.00	20.70	20.01	20.14	19.99	19.92	19.94	1.05	20.70
		1	49	20.01	20.05	20.01	19.91	20.14	5.00	20.70	20.05	20.04	19.96	20.03	19.94	1.05	20.70
		25	0	19.99	20.08	19.93	20.06	20.06	5.00	20.70	20.07	20.03	20.02	20.12	19.90	1.05	20.70
		25	12	19.98	20.18	20.14	20.01	20.16	5.00	20.70	20.12	20.15	20.07	19.92	19.94	1.05	20.70
		25	25	19.94	20.09	20.17	20.10	20.17	5.00	20.70	19.95	20.12	20.20	20.08	19.92	1.05	20.70
		50	0	20.02	19.92	20.17	20.07	19.91	5.00	20.70	20.03	20.18	19.93	20.12	20.17	1.05	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
5 MHz	QPSK	1	0	25.15	24.94	24.90	24.79	24.77	0.00	25.70	21.26	21.05	20.98	20.88	20.94	0.00	21.75
		1	12	25.20	24.93	24.89	24.78	24.87	0.00	25.70	21.24	21.01	20.99	20.88	20.99	0.00	21.75
		1	24	25.17	24.87	24.87	24.74	24.94	0.00	25.70	21.28	20.98	20.96	20.83	20.88	0.00	21.75
		12	0	24.24	24.58	24.51	24.41	24.27	1.00	24.70	21.33	21.19	21.12	20.93	21.06	0.00	21.75
		12	7	24.25	24.61	24.51	24.42	24.29	1.00	24.70	21.36	21.23	21.10	21.00	21.07	0.00	21.75
		12	13	24.24	24.57	24.49	24.38	24.31	1.00	24.70	21.30	21.22	21.08	20.99	21.05	0.00	21.75
		25	0	24.22	24.59	24.48	24.37	24.31	1.00	24.70	21.29	21.19	21.09	20.96	21.08	0.00	21.75
	16QAM	1	0	24.31	24.46	24.43	24.48	24.16	1.00	24.70	21.41	21.09	21.00	21.03	20.99	0.00	21.75
		1	12	24.40	24.37	24.43	24.48	24.08	1.00	24.70	21.53	21.01	21.00	21.08	20.89	0.00	21.75
		1	24	24.34	24.39	24.36	24.42	24.11	1.00	24.70	21.43	21.03	20.97	21.01	20.94	0.00	21.75
		12	0	23.27	23.60	23.47	23.43	23.29	2.00	23.70	21.38	21.18	21.03	20.99	20.88	0.00	21.75
		12	7	23.33	23.59	23.49	23.42	23.34	2.00	23.70	21.38	21.21	21.04	20.99	20.89	0.00	21.75
		12	13	23.23	23.55	23.44	23.39	23.29	2.00	23.70	21.36	21.17	21.02	20.98	20.91	0.00	21.75
		25	0	23.22	23.55	23.50	23.37	23.29	2.00	23.70	21.33	21.15	21.10	20.92	20.86	0.00	21.75
	64QAM	1	0	23.31	23.46	23.43	23.48	23.16	2.00	23.70	21.30	21.18	21.09	21.00	20.92	0.00	21.75
		1	12	23.40	23.37	23.43	23.48	23.08	2.00	23.70	21.22	21.23	21.15	21.02	20.95	0.00	21.75
		1	24	23.34	23.39	23.36	23.42	23.11	2.00	23.70	21.20	21.13	21.05	20.95	20.85	0.00	21.75
		12	0	22.27	22.60	22.47	22.43	22.29	3.00	22.70	21.32	21.65	21.52	21.48	21.34	0.00	21.75
		12	7	22.33	22.59	22.49	22.42	22.34	3.00	22.70	21.38	21.64	21.54	21.47	21.39	0.00	21.75
		12	13	22.23	22.55	22.44	22.39	22.29	3.00	22.70	21.28	21.60	21.49	21.44	21.34	0.00	21.75
		25	0	22.22	22.55	22.50	22.37	22.29	3.00	22.70	21.27	21.60	21.55	21.42	21.34	0.00	21.75
	256QAM	1	0	20.09	20.10	20.16	19.97	20.10	5.00	20.70	19.98	20.14	19.98	20.09	20.04	1.05	20.70
		1	12	20.18	20.19	20.19	20.12	19.92	5.00	20.70	20.01	20.05	20.03	20.00	20.07	1.05	20.70
		1	24	20.19	19.90	19.91	20.19	20.13	5.00	20.70	19.99	20.19	20.20	19.98	20.16	1.05	20.70
		12	0	20.17	20.16	20.09	20.00	20.01	5.00	20.70	20.05	20.11	20.05	20.01	20.02	1.05	20.70
		12	7	20.11	19.93	20.04	20.02	20.08	5.00	20.70	20.00	20.11	20.04	19.93	20.07	1.05	20.70
		12	13	19.95	20.00	20.20	20.14	19.91	5.00	20.70	20.17	19.96	20.04	19.91	20.08	1.05	20.70
		25	0	20.18	19.96	20.08	19.99	19.96	5.00	20.70	20.13	19.96	20.18	19.93	20.06	1.05	20.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 41 Power Class 3 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	QPSK	1	0	18.83	18.71	18.56	18.62	18.31	0.00	19.00	20.62	20.52	20.39	20.37	20.11	0.00	21.00
		1	49	19.00	19.00	19.00	19.00	19.00	0.00	19.00	21.00	21.00	21.00	21.00	21.00	0.00	21.00
		1	99	18.79	18.75	18.57	18.31	18.60	0.00	19.00	20.57	20.54	20.39	20.09	20.39	0.00	21.00
		50	0	18.86	18.71	18.83	18.75	18.56	0.00	19.00	20.65	20.53	20.62	20.54	20.57	0.00	21.00
		50	24	19.00	19.00	19.00	19.00	19.00	0.00	19.00	21.00	21.00	21.00	21.00	21.00	0.00	21.00
		50	50	18.82	18.78	18.85	18.70	18.77	0.00	19.00	20.61	20.59	20.65	20.48	20.58	0.00	21.00
		100	0	18.81	18.70	19.00	18.68	18.72	0.00	19.00	20.60	20.51	21.00	20.47	20.51	0.00	21.00
	16QAM	1	0	18.98	18.79	18.42	18.76	18.31	0.00	19.00	20.80	20.88	20.57	20.84	20.47	0.00	21.00
		1	49	18.92	18.77	18.75	18.96	18.72	0.00	19.00	20.80	20.87	20.90	20.70	20.83	0.00	21.00
		1	99	18.95	18.77	18.47	18.45	18.61	0.00	19.00	20.80	20.86	20.59	20.57	20.74	0.00	21.00
		50	0	18.91	18.70	18.84	18.80	18.59	0.00	19.00	20.30	20.08	20.23	20.18	19.91	0.20	20.80
		50	24	18.93	18.81	18.96	18.83	18.77	0.00	19.00	20.30	20.17	20.31	20.23	20.17	0.20	20.80
		50	50	18.88	18.77	18.87	18.77	18.77	0.00	19.00	20.26	20.16	20.24	20.11	20.15	0.20	20.80
		100	0	18.78	18.70	18.86	18.71	18.72	0.00	19.00	20.18	20.07	20.24	20.04	20.08	0.20	20.80
	64QAM	1	0	18.79	18.79	18.42	18.76	18.31	0.00	19.00	20.09	19.88	20.07	20.34	19.97	0.20	20.80
		1	49	18.77	18.77	18.75	18.96	18.72	0.00	19.00	20.08	19.87	19.90	20.04	19.83	0.20	20.80
		1	99	18.77	18.77	18.47	18.45	18.61	0.00	19.00	20.09	19.86	20.09	20.07	20.24	0.20	20.80
		50	0	18.70	18.71	18.50	18.64	18.60	0.00	19.00	19.30	19.08	19.23	19.18	18.91	1.20	19.80
		50	24	18.77	18.73	18.61	18.76	18.63	0.00	19.00	19.30	19.17	19.31	19.23	19.17	1.20	19.80
		50	50	18.77	18.68	18.57	18.67	18.57	0.00	19.00	19.26	19.16	19.24	19.11	19.15	1.20	19.80
		100	0	18.70	18.58	18.50	18.66	18.51	0.00	19.00	19.18	19.07	19.24	19.04	19.08	1.20	19.80
	256QAM	1	0	17.32	17.43	17.51	17.55	17.36	1.20	17.80	17.53	17.52	17.42	17.53	17.50	3.20	17.80
		1	49	17.41	17.32	17.46	17.31	17.52	1.20	17.80	17.34	17.47	17.48	17.48	17.56	3.20	17.80
		1	99	17.32	17.43	17.35	17.55	17.42	1.20	17.80	17.36	17.42	17.55	17.43	17.54	3.20	17.80
		50	0	17.56	17.54	17.44	17.44	17.53	1.20	17.80	17.32	17.50	17.35	17.40	17.37	3.20	17.80
		50	24	17.44	17.57	17.52	17.39	17.56	1.20	17.80	17.38	17.45	17.56	17.43	17.55	3.20	17.80
		50	50	17.52	17.46	17.54	17.54	17.53	1.20	17.80	17.35	17.42	17.50	17.54	17.57	3.20	17.80
		100	0	17.52	17.35	17.54	17.58	17.57	1.20	17.80	17.31	17.36	17.35	17.43	17.39	3.20	17.80

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
15 MHz	QPSK	1	0	18.81	18.52	18.57	18.67	18.40	0.00	19.00	20.60	20.28	20.39	20.45	20.19	0.00	21.00
		1	37	18.75	18.71	18.53	18.76	18.62	0.00	19.00	20.60	20.46	20.30	20.59	20.43	0.00	21.00
		1	74	18.77	18.48	18.48	18.49	18.65	0.00	19.00	20.55	20.27	20.23	20.31	20.44	0.00	21.00
		36	0	18.88	18.69	18.73	18.78	18.62	0.00	19.00	20.65	20.48	20.62	20.57	20.48	0.00	21.00
		36	20	18.87	18.80	18.78	18.79	18.77	0.00	19.00	20.68	20.62	20.59	20.59	20.59	0.00	21.00
		36	39	18.84	18.74	18.75	18.77	18.79	0.00	19.00	20.62	20.58	20.59	20.60	20.60	0.00	21.00
		75	0	18.81	18.76	18.75	18.70	18.73	0.00	19.00	20.59	20.51	20.51	20.52	20.55	0.00	21.00
	16QAM	1	0	18.98	18.52	18.67	18.75	18.48	0.00	19.00	20.70	20.68	20.76	20.91	20.60	0.00	21.00
		1	37	18.97	18.80	18.91	18.90	18.74	0.00	19.00	20.70	20.92	20.66	20.70	20.84	0.00	21.00
		1	74	18.91	18.60	18.57	18.61	18.65	0.00	19.00	20.99	20.80	20.50	20.76	20.80	0.00	21.00
		36	0	18.89	18.69	18.75	18.79	18.59	0.00	19.00	20.29	20.07	20.15	20.22	20.01	0.20	20.80
		36	20	18.89	18.84	18.77	18.81	18.79	0.00	19.00	20.27	20.22	20.18	20.20	20.20	0.20	20.80
		36	39	18.88	18.75	18.72	18.81	18.76	0.00	19.00	20.26	20.13	20.12	20.18	20.14	0.20	20.80
		75	0	18.82	18.76	18.69	18.72	18.74	0.00	19.00	20.21	20.15	20.22	20.12	20.13	0.20	20.80
	64QAM	1	0	18.32	18.52	18.67	18.75	18.48	0.00	19.00	20.17	19.90	19.90	19.91	19.90	0.20	20.80
		1	37	18.60	18.80	18.91	18.90	18.74	0.00	19.00	20.08	19.92	19.90	20.03	19.84	0.20	20.80
		1	74	18.40	18.60	18.57	18.61	18.65	0.00	19.00	19.99	19.90	19.90	19.90	19.80	0.20	20.80
		36	0	18.49	18.69	18.49	18.55	18.59	0.00	19.00	19.29	19.07	19.15	19.22	19.01	1.20	19.80
		36	20	18.49	18.69	18.64	18.57	18.61	0.00	19.00	19.27	19.22	19.18	19.20	19.20	1.20	19.80
		36	39	18.48	18.68	18.55	18.52	18.61	0.00	19.00	19.26	19.13	19.12	19.18	19.14	1.20	19.80
		75	0	18.42	18.62	18.56	18.49	18.52	0.00	19.00	19.21	19.15	19.22	19.12	19.13	1.20	19.80
	256QAM	1	0	17.51	17.47	17.54	17.44	17.37	1.20	17.80	17.38	17.37	17.57	17.31	17.59	3.20	17.80
		1	37	17.51	17.32	17.40	17.31	17.35	1.20	17.80	17.32	17.34	17.41	17.36	17.58	3.20	17.80
		1	74	17.45	17.35	17.31	17.45	17.43	1.20	17.80	17.45	17.57	17.42	17.34	17.57	3.20	17.80
		36	0	17.50	17.45	17.34	17.55	17.42	1.20	17.80	17.44	17.51	17.43	17.45	17.43	3.20	17.80
		36	20	17.50	17.54	17.34	17.33	17.39	1.20	17.80	17.33	17.40	17.31	17.45	17.30	3.20	17.80
		36	39	17.60	17.34	17.52	17.58	17.31	1.20	17.80	17.44	17.49	17.54	17.49	17.47	3.20	17.80
		75	0	17.41	17.39	17.50	17.46	17.41	1.20	17.80	17.39	17.39	17.56	17.54	17.59	3.20	17.80

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 41 Power Class 3 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}							Power Mode B {dBm}						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
10 MHz	QPSK	1	0	18.82	18.55	18.59	18.50	18.44	0.00	19.00	20.60	20.32	20.37	20.28	20.28	0.00	21.00
		1	25	18.83	18.78	18.81	18.74	18.71	0.00	19.00	20.64	20.56	20.61	20.53	20.48	0.00	21.00
		1	49	18.73	18.53	18.58	18.47	18.45	0.00	19.00	20.54	20.32	20.39	20.24	20.23	0.00	21.00
		25	0	18.90	18.87	18.93	18.74	18.70	0.00	19.00	20.72	20.65	20.70	20.52	20.48	0.00	21.00
		25	12	18.95	18.91	18.98	18.76	18.82	0.00	19.00	20.76	20.68	20.77	20.54	20.63	0.00	21.00
		25	25	18.90	18.85	18.91	18.81	18.74	0.00	19.00	20.69	20.61	20.67	20.60	20.55	0.00	21.00
		50	0	18.89	18.86	18.90	18.72	18.76	0.00	19.00	20.66	20.62	20.72	20.49	20.53	0.00	21.00
	16QAM	1	0	18.99	18.58	18.65	18.70	18.49	0.00	19.00	20.70	20.71	20.82	20.84	20.64	0.00	21.00
		1	25	18.88	18.79	18.86	18.79	18.70	0.00	19.00	20.70	20.92	20.70	20.98	20.85	0.00	21.00
		1	49	18.90	18.55	18.63	18.68	18.46	0.00	19.00	20.70	20.72	20.80	20.81	20.63	0.00	21.00
		25	0	18.98	18.86	18.92	18.76	18.71	0.00	19.00	20.36	20.23	20.29	20.16	20.13	0.20	20.80
		25	12	18.98	18.92	18.98	18.80	18.83	0.00	19.00	20.39	20.28	20.35	20.20	20.24	0.20	20.80
		25	25	18.91	18.84	18.88	18.87	18.77	0.00	19.00	20.30	20.20	20.25	20.22	20.18	0.20	20.80
		50	0	18.89	18.83	18.94	18.75	18.76	0.00	19.00	20.27	20.20	20.31	20.15	20.18	0.20	20.80
	64QAM	1	0	18.38	18.58	18.65	18.70	18.49	0.00	19.00	20.19	19.80	19.82	19.84	19.80	0.20	20.80
		1	25	18.59	18.79	18.86	18.79	18.70	0.00	19.00	20.11	19.92	20.03	19.98	19.85	0.20	20.80
		1	49	18.35	18.55	18.63	18.68	18.46	0.00	19.00	20.10	19.80	19.80	19.81	19.80	0.20	20.80
		25	0	18.58	18.78	18.66	18.72	18.56	0.00	19.00	19.36	19.23	19.29	19.16	19.13	1.20	19.80
		25	12	18.58	18.78	18.72	18.78	18.60	0.00	19.00	19.39	19.28	19.35	19.20	19.24	1.20	19.80
		25	25	18.51	18.71	18.64	18.68	18.67	0.00	19.00	19.30	19.20	19.25	19.22	19.18	1.20	19.80
		50	0	18.49	18.69	18.63	18.74	18.55	0.00	19.00	19.27	19.20	19.31	19.15	19.18	1.20	19.80
	256QAM	1	0	17.42	17.48	17.53	17.38	17.33	1.20	17.80	17.31	17.46	17.60	17.35	17.52	3.20	17.80
		1	25	17.45	17.53	17.31	17.54	17.34	1.20	17.80	17.36	17.32	17.51	17.44	17.33	3.20	17.80
		1	49	17.38	17.52	17.30	17.56	17.53	1.20	17.80	17.38	17.32	17.34	17.57	17.32	3.20	17.80
		25	0	17.39	17.48	17.43	17.42	17.32	1.20	17.80	17.53	17.43	17.43	17.60	17.56	3.20	17.80
		25	12	17.34	17.55	17.38	17.45	17.56	1.20	17.80	17.54	17.39	17.54	17.57	17.49	3.20	17.80
		25	25	17.51	17.39	17.45	17.36	17.43	1.20	17.80	17.51	17.49	17.55	17.40	17.54	3.20	17.80
		50	0	17.54	17.50	17.40	17.47	17.37	1.20	17.80	17.31	17.57	17.37	17.37	17.55	3.20	17.80

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}							Power Mode B {dBm}						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
5 MHz	QPSK	1	0	18.89	18.71	18.87	18.75	18.69	0.00	19.00	20.67	20.51	20.70	20.54	20.47	0.00	21.00
		1	12	18.87	18.73	18.86	18.81	18.65	0.00	19.00	20.67	20.54	20.67	20.60	20.49	0.00	21.00
		1	24	18.86	18.73	18.82	18.73	18.61	0.00	19.00	20.68	20.51	20.62	20.57	20.46	0.00	21.00
		12	0	18.98	18.86	18.95	18.85	18.81	0.00	19.00	20.73	20.69	20.77	20.62	20.60	0.00	21.00
		12	7	18.98	18.93	19.00	18.85	18.80	0.00	19.00	20.80	20.76	20.77	20.65	20.68	0.00	21.00
		12	13	18.97	18.88	18.93	18.89	18.79	0.00	19.00	20.71	20.68	20.73	20.69	20.64	0.00	21.00
		25	0	18.92	18.92	18.94	18.82	18.77	0.00	19.00	20.70	20.69	20.76	20.65	20.65	0.00	21.00
	16QAM	1	0	18.94	18.72	18.92	18.91	18.74	0.00	19.00	20.88	20.57	20.71	20.72	20.52	0.00	21.00
		1	12	18.97	18.75	18.92	18.97	18.65	0.00	19.00	20.95	20.54	20.68	20.84	20.51	0.00	21.00
		1	24	18.96	18.74	18.86	18.97	18.64	0.00	19.00	20.87	20.60	20.66	20.76	20.47	0.00	21.00
		12	0	18.88	18.93	18.91	18.90	18.83	0.00	19.00	20.38	20.30	20.30	20.31	20.28	0.20	20.80
		12	7	18.93	18.96	18.94	18.91	18.87	0.00	19.00	20.39	20.33	20.34	20.36	20.27	0.20	20.80
		12	13	18.83	18.89	18.93	18.93	18.83	0.00	19.00	20.40	20.31	20.28	20.36	20.24	0.20	20.80
		25	0	18.81	18.88	18.99	18.86	18.81	0.00	19.00	20.30	20.30	20.34	20.22	20.23	0.20	20.80
	64QAM	1	0	18.52	18.72	18.92	18.91	18.74	0.00	19.00	20.38	20.07	20.21	20.22	20.02	0.20	20.80
		1	12	18.55	18.75	18.92	18.97	18.65	0.00	19.00	20.45	20.04	20.18	20.34	20.01	0.20	20.80
		1	24	18.54	18.74	18.86	18.97	18.64	0.00	19.00	20.37	20.10	20.16	20.26	19.97	0.20	20.80
		12	0	18.48	18.68	18.73	18.71	18.70	0.00	19.00	19.38	19.30	19.30	19.31	19.28	1.20	19.80
		12	7	18.53	18.73	18.76	18.74	18.71	0.00	19.00	19.39	19.33	19.34	19.36	19.27	1.20	19.80
		12	13	18.43	18.63	18.69	18.73	18.73	0.00	19.00	19.40	19.31	19.28	19.36	19.24	1.20	19.80
		25	0	18.41	18.61	18.68	18.79	18.66	0.00	19.00	19.30	19.30	19.34	19.22	19.23	1.20	19.80
	256QAM	1	0	17.42	17.32	17.43	17.51	17.60	1.20	17.80	17.51	17.32	17.58	17.59	17.36	3.20	17.80
		1	12	17.35	17.30	17.32	17.46	17.34	1.20	17.80	17.35	17.59	17.52	17.44	17.31	3.20	17.80
		1	24	17.49	17.43	17.42	17.55	17.40	1.20	17.80	17.40	17.37	17.32	17.46	17.46	3.20	17.80
		12	0	17.47	17.39	17.34	17.56	17.58	1.20	17.80	17.52	17.55	17.47	17.39	17.49	3.20	17.80
		12	7	17.46	17.52	17.53	17.51	17.44	1.20	17.80	17.51	17.33	17.50	17.49	17.43	3.20	17.80
		12	13	17.51	17.55	17.50	17.55	17.57	1.20	17.80	17.53	17.42	17.48	17.32	17.53	3.20	17.80
		25	0	17.39	17.38	17.32	17.35	17.55	1.20	17.80	17.37	17.43	17.43	17.58	17.56	3.20	17.80

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 41 Power Class 3 Measured Results (ANT3)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	QPSK	1	0	24.02	24.62	23.99	24.19	23.99	0.00	24.70	19.00	19.74	19.43	19.34	19.09	0.00	20.00
		1	49	24.20	24.70	24.70	24.40	24.47	0.00	24.70	19.85	19.85	19.85	19.85	19.85	0.00	20.00
		1	99	24.12	24.22	23.87	23.90	24.41	0.00	24.70	19.72	19.36	19.28	19.00	19.46	0.00	20.00
		50	0	23.06	23.56	22.98	23.60	23.00	1.00	23.70	19.31	19.65	19.58	19.50	19.41	0.00	20.00
		50	24	23.70	23.56	23.70	23.61	23.19	1.00	23.70	19.85	19.85	19.85	19.85	19.85	0.00	20.00
		50	50	23.60	23.38	22.93	23.51	23.17	1.00	23.70	19.76	19.44	19.52	19.42	19.57	0.00	20.00
		100	0	23.25	23.46	23.70	23.56	23.12	1.00	23.70	19.48	19.50	19.85	19.44	19.51	0.00	20.00
	16QAM	1	0	22.76	23.34	23.46	23.21	22.87	1.00	23.70	19.00	19.67	19.30	19.47	19.09	0.00	20.00
		1	49	23.36	23.16	23.63	23.41	23.28	1.00	23.70	19.77	19.49	19.46	19.69	19.54	0.00	20.00
		1	99	23.67	22.93	23.34	22.88	23.26	1.00	23.70	19.80	19.31	19.18	19.16	19.42	0.00	20.00
		50	0	22.19	22.67	22.54	22.40	22.28	2.00	22.70	19.00	19.09	19.07	19.09	19.00	0.00	20.00
		50	24	22.52	22.64	22.58	22.35	22.49	2.00	22.70	19.16	19.06	19.11	19.10	19.08	0.00	20.00
		50	50	22.65	22.49	22.49	21.94	22.45	2.00	22.70	19.36	19.00	19.03	19.00	19.00	0.00	20.00
		100	0	22.37	22.53	22.45	22.27	22.40	2.00	22.70	19.00	19.00	19.07	19.00	19.03	0.00	20.00
	64QAM	1	0	22.42	22.62	21.99	22.19	21.99	2.00	22.70	19.00	19.74	19.43	19.34	19.09	0.00	20.00
		1	49	22.18	22.46	22.10	22.40	22.47	2.00	22.70	19.61	19.54	19.56	19.50	19.47	0.00	20.00
		1	99	22.52	22.22	21.87	21.90	22.41	2.00	22.70	19.76	19.36	19.28	19.00	19.46	0.00	20.00
		50	0	21.11	21.56	20.98	21.60	21.00	3.00	21.70	19.31	19.65	19.58	19.50	19.41	0.00	20.00
		50	24	21.42	21.56	21.03	21.61	21.19	3.00	21.70	19.61	19.60	19.61	19.52	19.59	0.00	20.00
		50	50	21.65	21.38	20.93	21.51	21.17	3.00	21.70	19.74	19.44	19.52	19.42	19.57	0.00	20.00
		100	0	21.30	21.46	20.96	21.56	21.12	3.00	21.70	19.48	19.50	19.51	19.44	19.51	0.00	20.00
	256QAM	1	0	18.95	18.84	18.92	19.02	19.00	5.00	19.70	19.08	18.88	18.85	18.80	18.84	0.30	19.70
		1	49	19.03	18.97	18.90	18.97	18.97	5.00	19.70	18.95	18.88	19.02	18.82	18.87	0.30	19.70
		1	99	18.93	18.83	18.95	18.89	18.81	5.00	19.70	19.07	18.82	19.04	18.95	18.88	0.30	19.70
		50	0	19.09	18.90	19.05	18.96	19.05	5.00	19.70	19.01	18.91	18.98	18.91	19.07	0.30	19.70
		50	24	18.84	19.01	19.08	18.99	18.91	5.00	19.70	18.84	18.81	19.06	19.01	18.97	0.30	19.70
		50	50	18.96	19.05	18.96	19.05	19.02	5.00	19.70	19.00	19.07	19.04	18.87	19.04	0.30	19.70
		100	0	19.05	18.97	18.81	18.94	18.80	5.00	19.70	18.90	18.97	18.97	18.81	19.02	0.30	19.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
15 MHz	QPSK	1	0	24.11	24.28	24.06	24.34	24.10	0.00	24.70	19.08	19.44	19.45	19.45	19.19	0.00	20.00
		1	37	23.77	24.28	24.01	24.40	24.32	0.00	24.70	19.65	19.43	19.40	19.51	19.46	0.00	20.00
		1	74	23.84	23.96	23.90	24.12	24.30	0.00	24.70	19.59	19.11	19.28	19.21	19.42	0.00	20.00
		36	0	22.94	23.53	22.91	23.63	22.99	1.00	23.70	19.42	19.60	19.48	19.51	19.42	0.00	20.00
		36	20	23.23	23.53	22.98	23.63	23.06	1.00	23.70	19.73	19.61	19.53	19.54	19.50	0.00	20.00
		36	39	23.34	23.37	22.94	23.60	23.15	1.00	23.70	19.77	19.42	19.51	19.50	19.57	0.00	20.00
		75	0	23.09	23.48	22.89	23.56	23.10	1.00	23.70	19.54	19.54	19.52	19.45	19.53	0.00	20.00
	16QAM	1	0	22.96	23.23	23.33	23.50	23.02	1.00	23.70	19.26	19.49	19.45	19.55	19.17	0.00	20.00
		1	37	23.25	23.27	23.29	23.50	23.34	1.00	23.70	19.73	19.51	19.44	19.60	19.48	0.00	20.00
		1	74	23.45	22.88	23.20	23.20	23.36	1.00	23.70	19.78	19.15	19.29	19.25	19.50	0.00	20.00
		36	0	22.12	22.29	22.34	22.47	22.25	2.00	22.70	19.00	19.05	19.00	19.08	19.00	0.00	20.00
		36	20	22.41	22.31	22.48	22.38	22.35	2.00	22.70	19.21	19.08	19.01	19.07	19.00	0.00	20.00
		36	39	22.51	22.11	22.42	22.13	22.41	2.00	22.70	19.29	19.00	19.00	19.03	19.04	0.00	20.00
		75	0	22.23	22.22	22.41	22.32	22.37	2.00	22.70	19.05	19.00	19.00	19.00	19.00	0.00	20.00
	64QAM	1	0	22.51	22.28	22.06	22.34	22.10	2.00	22.70	19.08	19.44	19.45	19.45	19.19	0.00	20.00
		1	37	22.17	22.28	22.01	22.40	22.32	2.00	22.70	19.65	19.43	19.40	19.51	19.46	0.00	20.00
		1	74	22.24	21.96	21.90	22.12	22.30	2.00	22.70	19.80	19.11	19.28	19.21	19.42	0.00	20.00
		36	0	20.99	21.53	20.91	21.63	20.99	3.00	21.70	19.42	19.60	19.48	19.51	19.42	0.00	20.00
		36	20	21.28	21.53	20.98	21.63	21.06	3.00	21.70	19.73	19.61	19.53	19.54	19.50	0.00	20.00
		36	39	21.39	21.37	20.94	21.60	21.15	3.00	21.70	19.75	19.42	19.51	19.50	19.57	0.00	20.00
		75	0	21.14	21.48	20.89	21.56	21.10	3.00	21.70	19.54	19.54	19.52	19.45	19.53	0.00	20.00
	256QAM	1	0	18.86	18.97	19.00	18.84	18.97	5.00	19.70	19.06	18.88	18.99	18.85	18.83	0.30	19.70
		1	37	18.86	18.82	19.01	18.80	19.05	5.00	19.70	19.02	19.08	19.09	18.96	18.94	0.30	19.70
		1	74	19.07	18.91	18.87	19.03	18.97	5.00	19.70	18.99	18.96	18.98	19.09	18.86	0.30	19.70
		36	0	19.09	18.96	19.09	19.01	19.00	5.00	19.70	19.00	19.03	18.99	19.09	18.81	0.30	19.70
		36	20	18.98	18.95	18.92	19.09	19.08	5.00	19.70	19.05	18.99	18.97	18.99	18.93	0.30	19.70
		36	39	18.97	19.01	18.97	18.94	18.85	5.00	19.70	19.04	18.81	19.08	18.86	18.85	0.30	19.70
		75	0	18.95	18.89	19.03	18.98	19.09	5.00	19.70	19.08	18.88	19.04	18.97	18.89	0.30	19.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 41 Power Class 3 Measured Results (ANT3) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
10 MHz	QPSK	1	0	24.54	24.11	23.95	24.23	23.96	0.00	24.70	19.24	19.28	19.27	19.33	19.16	0.00	20.00
		1	25	23.77	24.37	24.07	24.40	24.30	0.00	24.70	19.61	19.45	19.43	19.48	19.40	0.00	20.00
		1	49	23.83	24.04	23.88	24.13	24.06	0.00	24.70	19.66	19.11	19.19	19.12	19.14	0.00	20.00
		25	0	23.13	23.49	23.03	23.65	23.00	1.00	23.70	19.54	19.57	19.56	19.51	19.42	0.00	20.00
		25	12	23.32	23.55	23.06	22.82	23.11	1.00	23.70	19.67	19.60	19.57	19.54	19.57	0.00	20.00
		25	25	23.36	23.43	22.97	23.65	23.12	1.00	23.70	19.69	19.41	19.49	19.47	19.47	0.00	20.00
		50	0	23.15	23.48	22.99	23.64	23.03	1.00	23.70	19.57	19.52	19.50	19.44	19.46	0.00	20.00
	16QAM	1	0	23.17	23.12	23.30	23.26	23.17	1.00	23.70	19.45	19.30	19.40	19.54	19.22	0.00	20.00
		1	25	23.21	23.31	23.45	23.46	23.26	1.00	23.70	19.69	19.45	19.53	19.53	19.43	0.00	20.00
		1	49	23.49	23.11	23.21	23.20	23.27	1.00	23.70	19.69	19.14	19.24	19.29	19.24	0.00	20.00
		25	0	22.30	22.34	22.54	22.44	22.34	2.00	22.70	19.13	19.04	19.05	19.00	19.00	0.00	20.00
		25	12	22.48	22.40	22.54	22.37	22.50	2.00	22.70	19.22	19.08	19.11	19.02	19.01	0.00	20.00
		25	25	22.52	22.28	22.47	22.16	22.42	2.00	22.70	19.20	19.00	19.00	19.00	19.00	0.00	20.00
		50	0	22.34	22.35	22.48	22.33	22.38	2.00	22.70	19.04	19.01	19.04	19.00	19.00	0.00	20.00
	64QAM	1	0	22.66	22.11	21.95	22.23	21.96	2.00	22.70	19.24	19.28	19.27	19.33	19.16	0.00	20.00
		1	25	22.17	22.37	22.07	22.40	22.30	2.00	22.70	19.61	19.45	19.43	19.48	19.40	0.00	20.00
		1	49	22.23	22.04	21.88	22.13	22.06	2.00	22.70	19.66	19.11	19.19	19.12	19.14	0.00	20.00
		25	0	21.18	21.49	21.03	21.65	21.00	3.00	21.70	19.54	19.57	19.56	19.51	19.42	0.00	20.00
		25	12	21.37	21.55	21.06	20.82	21.11	3.00	21.70	19.63	19.60	19.57	19.54	19.57	0.00	20.00
		25	25	21.41	21.43	20.97	21.65	21.12	3.00	21.70	19.65	19.41	19.49	19.47	19.47	0.00	20.00
		50	0	21.20	21.48	20.99	21.64	21.03	3.00	21.70	19.57	19.52	19.50	19.44	19.46	0.00	20.00
	256QAM	1	0	18.96	18.96	18.95	19.05	19.00	5.00	19.70	18.86	18.87	19.07	19.08	18.98	0.30	19.70
		1	25	19.06	18.84	18.96	19.01	18.87	5.00	19.70	18.86	18.96	18.89	18.87	18.92	0.30	19.70
		1	49	19.03	18.84	18.87	18.83	19.03	5.00	19.70	18.89	18.84	19.07	18.84	18.84	0.30	19.70
		25	0	18.89	19.02	19.06	19.01	19.00	5.00	19.70	19.08	18.96	18.82	18.87	19.05	0.30	19.70
		25	12	19.01	19.00	18.95	18.97	18.90	5.00	19.70	18.96	19.08	19.10	19.08	18.92	0.30	19.70
		25	25	19.02	18.84	18.92	18.94	18.89	5.00	19.70	18.98	18.92	18.98	18.98	19.03	0.30	19.70
		50	0	19.03	18.85	19.06	18.97	19.01	5.00	19.70	18.94	18.93	18.82	19.10	19.06	0.30	19.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
5 MHz	QPSK	1	0	23.77	24.41	24.21	24.42	24.31	0.00	24.70	19.39	19.55	19.51	19.36	19.42	0.00	20.00
		1	12	23.78	24.39	24.16	24.48	24.40	0.00	24.70	19.48	19.48	19.46	19.42	19.48	0.00	20.00
		1	24	23.73	24.23	24.14	24.42	24.35	0.00	24.70	19.58	19.37	19.44	19.39	19.43	0.00	20.00
		12	0	23.25	23.63	23.09	23.69	23.12	1.00	23.70	19.56	19.60	19.58	19.49	19.46	0.00	20.00
		12	7	23.36	23.64	23.10	23.69	23.24	1.00	23.70	19.65	19.64	19.59	19.53	19.56	0.00	20.00
		12	13	23.33	23.52	23.08	23.66	23.25	1.00	23.70	19.63	19.51	19.56	19.56	19.52	0.00	20.00
		25	0	23.25	23.64	23.08	23.64	23.22	1.00	23.70	19.54	19.60	19.55	19.49	19.53	0.00	20.00
	16QAM	1	0	23.34	23.36	23.66	23.44	23.37	1.00	23.70	19.43	19.59	19.70	19.39	19.39	0.00	20.00
		1	12	23.22	23.20	23.68	23.52	23.33	1.00	23.70	19.53	19.61	19.67	19.37	19.53	0.00	20.00
		1	24	23.32	23.16	23.60	23.42	23.39	1.00	23.70	19.61	19.43	19.64	19.39	19.42	0.00	20.00
		12	0	22.37	22.44	22.61	22.42	22.46	2.00	22.70	19.07	19.06	19.16	19.02	19.03	0.00	20.00
		12	7	22.45	22.46	22.60	22.36	22.52	2.00	22.70	19.15	19.08	19.15	19.02	19.04	0.00	20.00
		12	13	22.45	22.33	22.56	22.28	22.54	2.00	22.70	19.10	19.02	19.08	19.07	19.06	0.00	20.00
		25	0	22.42	22.41	22.56	22.32	22.48	2.00	22.70	19.07	19.11	19.08	19.02	19.04	0.00	20.00
	64QAM	1	0	22.17	22.41	22.21	22.42	22.31	2.00	22.70	19.39	19.55	19.51	19.36	19.42	0.00	20.00
		1	12	22.18	22.39	22.16	22.48	22.40	2.00	22.70	19.48	19.48	19.46	19.42	19.48	0.00	20.00
		1	24	22.13	22.23	22.14	22.42	22.35	2.00	22.70	19.58	19.37	19.44	19.39	19.43	0.00	20.00
		12	0	21.30	21.63	21.09	21.69	21.12	3.00	21.70	19.56	19.60	19.58	19.49	19.46	0.00	20.00
		12	7	21.41	21.64	21.10	21.69	21.24	3.00	21.70	19.65	19.64	19.59	19.53	19.56	0.00	20.00
		12	13	21.38	21.52	21.08	21.66	21.25	3.00	21.70	19.63	19.51	19.56	19.56	19.52	0.00	20.00
		25	0	21.30	21.64	21.08	21.64	21.22	3.00	21.70	19.54	19.60	19.55	19.49	19.53	0.00	20.00
	256QAM	1	0	18.81	18.86	18.94	19.05	18.96	5.00	19.70	18.94	18.93	18.90	18.80	18.94	0.30	19.70
		1	12	18.99	18.86	18.89	18.88	18.86	5.00	19.70	18.94	19.10	19.01	18.96	18.81	0.30	19.70
		1	24	19.08	18.96	18.92	18.91	19.05	5.00	19.70	18.81	19.01	19.00	18.85	18.98	0.30	19.70
		12	0	18.96	18.91	19.09	18.81	18.90	5.00	19.70	18.92	19.09	19.10	18.90	18.90	0.30	19.70
		12	7	18.93	18.95	18.97	19.04	19.08	5.00	19.70	18.92	18.90	18.90	19.06	18.91	0.30	19.70
		12	13	18.91	18.91	18.82	18.88	18.82	5.00	19.70	19.02	18.88	19.03	19.06	18.84	0.30	19.70
		25	0	19.07	19.03	18.94	18.98	18.93	5.00	19.70	18.80	18.84	18.97	18.83	19.07	0.30	19.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 41 Power Class 3 Measured Results (ANT4)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}							Power Mode B {dBm}						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	QPSK	1	0	19.01	19.31	19.35	19.91	19.51	0.00	20.00	21.57	21.80	21.35	21.37	21.20	0.00	22.20
		1	49	20.00	20.00	20.00	20.00	20.00	0.00	20.00	21.90	21.90	21.90	21.90	21.90	0.00	22.20
		1	99	19.26	19.04	19.32	19.78	19.99	0.00	20.00	21.80	21.78	21.31	21.20	21.29	0.00	22.20
		50	0	19.04	19.26	19.33	19.68	19.60	0.00	20.00	20.93	20.95	20.60	20.56	20.29	1.00	21.20
		50	24	20.00	20.00	20.00	20.00	20.00	0.00	20.00	21.00	21.00	21.00	21.00	21.00	1.00	21.20
		50	50	19.21	19.22	19.35	19.56	19.76	0.00	20.00	21.00	20.82	20.61	20.49	20.48	1.00	21.20
		100	0	19.17	19.28	20.00	19.58	19.65	0.00	20.00	20.99	20.84	21.00	20.56	20.45	1.00	21.20
	16QAM	1	0	19.78	19.96	19.78	19.87	19.27	0.00	20.00	20.62	20.82	20.20	20.41	20.20	1.00	21.20
		1	49	19.31	19.29	19.24	19.78	19.73	0.00	20.00	21.00	20.75	20.43	20.62	20.27	1.00	21.20
		1	99	19.21	19.68	19.76	19.70	19.83	0.00	20.00	21.00	20.69	20.20	20.20	20.20	1.00	21.20
		50	0	19.29	19.47	19.57	19.92	19.77	0.00	20.00	19.91	19.90	19.60	19.58	19.28	2.00	20.20
		50	24	19.51	19.59	19.67	19.93	19.98	0.00	20.00	20.11	19.87	19.66	19.67	19.45	2.00	20.20
		50	50	19.48	19.41	19.58	19.82	19.94	0.00	20.00	20.09	19.76	19.61	19.49	19.42	2.00	20.20
		100	0	19.40	19.50	19.58	19.80	19.87	0.00	20.00	19.95	19.80	19.59	19.50	19.39	2.00	20.20
	64QAM	1	0	19.78	19.96	19.78	19.87	19.27	0.00	20.00	19.72	19.92	19.25	19.51	19.21	2.00	20.20
		1	49	19.31	19.29	19.24	19.78	19.73	0.00	20.00	20.13	19.85	19.53	19.72	19.37	2.00	20.20
		1	99	19.21	19.68	19.76	19.70	19.83	0.00	20.00	20.19	19.79	19.25	19.20	19.28	2.00	20.20
		50	0	18.29	18.47	18.57	18.92	18.77	0.80	19.20	18.91	18.90	18.60	18.58	18.28	3.00	19.20
		50	24	18.51	18.59	18.67	18.93	18.98	0.80	19.20	19.11	18.87	18.66	18.67	18.45	3.00	19.20
		50	50	18.48	18.41	18.58	18.82	18.94	0.80	19.20	19.09	18.76	18.61	18.49	18.42	3.00	19.20
		100	0	18.40	18.50	18.58	18.80	18.87	0.80	19.20	18.95	18.80	18.59	18.50	18.39	3.00	19.20
	256QAM	1	0	16.91	16.76	16.80	16.84	16.88	2.80	17.20	16.80	16.94	17.00	16.89	16.74	5.00	17.20
		1	49	16.82	16.73	16.90	16.93	16.84	2.80	17.20	16.76	16.77	16.74	16.84	16.90	5.00	17.20
		1	99	16.92	16.85	16.71	16.71	16.87	2.80	17.20	16.81	16.82	16.97	16.77	16.94	5.00	17.20
		50	0	16.73	16.78	16.88	16.95	16.76	2.80	17.20	16.73	16.80	16.74	16.81	16.76	5.00	17.20
		50	24	16.90	16.79	16.98	16.73	16.98	2.80	17.20	16.99	16.96	16.82	16.77	16.74	5.00	17.20
		50	50	16.92	16.87	16.95	16.90	16.84	2.80	17.20	16.96	16.97	16.71	16.77	16.99	5.00	17.20
		100	0	16.73	16.72	16.72	16.81	16.87	2.80	17.20	16.88	16.93	16.77	16.76	16.73	5.00	17.20

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}							Power Mode B {dBm}						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
15 MHz	QPSK	1	0	19.14	19.37	19.33	19.67	19.63	0.00	20.00	21.66	21.55	21.27	21.38	21.20	0.00	22.20
		1	37	19.39	19.43	19.30	19.80	19.92	0.00	20.00	21.90	21.68	21.22	21.47	21.27	0.00	22.20
		1	74	19.33	19.17	19.19	19.57	19.90	0.00	20.00	21.80	21.45	21.20	21.20	21.20	0.00	22.20
		36	0	19.08	19.28	19.31	19.63	19.66	0.00	20.00	20.90	20.82	20.45	20.46	20.23	1.00	21.20
		36	20	19.24	19.38	19.34	19.67	19.77	0.00	20.00	21.00	20.84	20.53	20.56	20.39	1.00	21.20
		36	39	19.24	19.29	19.29	19.53	19.75	0.00	20.00	20.99	20.69	20.45	20.46	20.38	1.00	21.20
		75	0	19.16	19.30	19.25	19.59	19.72	0.00	20.00	20.93	20.78	20.46	20.47	20.34	1.00	21.20
	16QAM	1	0	19.82	19.99	19.91	19.50	19.42	0.00	20.00	20.61	20.59	20.26	20.38	20.20	1.00	21.20
		1	37	19.24	19.27	19.30	19.70	19.70	0.00	20.00	20.90	20.76	20.20	20.46	20.30	1.00	21.20
		1	74	19.17	19.87	19.98	19.47	19.75	0.00	20.00	20.97	20.54	20.20	20.20	20.23	1.00	21.20
		36	0	19.32	19.50	19.50	19.90	19.85	0.00	20.00	19.99	19.84	19.48	19.57	19.28	2.00	20.20
		36	20	19.48	19.59	19.58	19.92	19.99	0.00	20.00	20.10	19.92	19.52	19.66	19.47	2.00	20.20
		36	39	19.48	19.48	19.48	19.77	19.94	0.00	20.00	20.08	19.75	19.55	19.56	19.45	2.00	20.20
		75	0	19.40	19.52	19.50	19.84	19.93	0.00	20.00	20.02	19.85	19.48	19.55	19.43	2.00	20.20
	64QAM	1	0	19.82	19.99	19.91	19.50	19.42	0.00	20.00	19.81	19.79	19.46	19.58	19.22	2.00	20.20
		1	37	19.24	19.27	19.30	19.70	19.70	0.00	20.00	20.10	19.96	19.40	19.66	19.50	2.00	20.20
		1	74	19.23	19.87	19.98	19.47	19.75	0.00	20.00	20.17	19.74	19.21	19.40	19.43	2.00	20.20
		36	0	18.32	18.50	18.50	18.90	18.85	0.80	19.20	18.99	18.84	18.48	18.57	18.28	3.00	19.20
		36	20	18.48	18.59	18.58	18.92	18.99	0.80	19.20	19.10	18.92	18.52	18.66	18.47	3.00	19.20
		36	39	18.48	18.48	18.48	18.77	18.94	0.80	19.20	19.08	18.75	18.55	18.56	18.45	3.00	19.20
		75	0	18.40	18.52	18.50	18.84	18.93	0.80	19.20	19.02	18.85	18.48	18.55	18.43	3.00	19.20
	256QAM	1	0	16.67	16.67	16.63	16.61	16.61	2.80	17.20	16.62	16.57	16.49	16.61	16.60	5.00	17.20
		1	37	16.57	16.62	16.41	16.40	16.64	2.80	17.20	16.65	16.52	16.61	16.58	16.46	5.00	17.20
		1	74	16.66	16.52	16.49	16.41	16.47	2.80	17.20	16.61	16.50	16.55	16.51	16.45	5.00	17.20
		36	0	16.58	16.48	16.55	16.52	16.45	2.80	17.20	16.44	16.52	16.60	16.61	16.67	5.00	17.20
		36	20	16.52	16.45	16.49	16.63	16.53	2.80	17.20	16.59	16.49	16.63	16.41	16.52	5.00	17.20
		36	39	16.62	16.48	16.58	16.52	16.58	2.80	17.20	16.58	16.65	16.48	16.69	16.64	5.00	17.20
		75	0	16.65	16.48	16.49	16.69	16.46	2.80	17.20	16.62	16.59	16.65	16.63	16.65	5.00	17.20

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 41 Power Class 3 Measured Results (ANT4) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}							Power Mode B {dBm}						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
10 MHz	QPSK	1	0	19.11	19.28	19.33	19.43	19.78	0.00	20.00	21.86	21.74	21.45	21.36	21.25	0.00	22.20
		1	25	19.37	19.53	19.51	19.80	19.92	0.00	20.00	21.89	21.76	21.65	21.58	21.48	0.00	22.20
		1	49	19.04	19.24	19.26	19.56	19.88	0.00	20.00	21.90	21.47	21.40	21.31	21.21	0.00	22.20
		25	0	19.12	19.26	19.41	19.59	19.80	0.00	20.00	20.94	20.90	20.81	20.65	20.53	1.00	21.20
		25	12	19.23	19.45	19.46	19.65	19.85	0.00	20.00	20.99	20.99	20.86	20.73	20.67	1.00	21.20
		25	25	19.15	19.34	19.36	19.58	19.82	0.00	20.00	20.98	20.78	20.76	20.72	20.56	1.00	21.20
		50	0	19.18	19.32	19.38	19.65	19.77	0.00	20.00	20.95	20.88	20.81	20.71	20.60	1.00	21.20
	16QAM	1	0	19.87	19.88	20.00	19.37	19.60	0.00	20.00	20.56	20.49	20.49	20.46	20.24	1.00	21.20
		1	25	19.21	19.23	19.38	19.60	19.68	0.00	20.00	20.67	20.68	20.63	20.54	20.48	1.00	21.20
		1	49	19.04	19.86	19.93	19.50	19.78	0.00	20.00	20.76	20.45	20.41	20.41	20.23	1.00	21.20
		25	0	19.11	19.24	19.37	19.61	19.76	0.00	20.00	19.86	19.98	19.67	19.55	19.42	2.00	20.20
		25	12	19.22	19.36	19.42	19.65	19.82	0.00	20.00	19.92	19.60	19.75	19.65	19.53	2.00	20.20
		25	25	19.14	19.28	19.36	19.60	19.77	0.00	20.00	19.89	19.85	19.66	19.62	19.46	2.00	20.20
		50	0	19.17	19.29	19.38	19.69	19.73	0.00	20.00	19.86	19.95	19.69	19.59	19.45	2.00	20.20
	64QAM	1	0	19.87	19.88	19.75	19.12	19.35	0.00	20.00	19.76	19.69	19.49	19.46	19.24	2.00	20.20
		1	25	19.21	19.23	19.13	19.35	19.43	0.00	20.00	19.87	19.88	19.63	19.54	19.48	2.00	20.20
		1	49	19.22	19.86	19.68	19.25	19.53	0.00	20.00	20.16	19.65	19.41	19.41	19.23	2.00	20.20
		25	0	18.36	18.49	18.37	18.61	18.76	0.80	19.20	19.06	18.98	18.67	18.55	18.42	3.00	19.20
		25	12	18.47	18.61	18.42	18.65	18.82	0.80	19.20	19.12	19.02	18.75	18.65	18.53	3.00	19.20
		25	25	18.39	18.53	18.36	18.60	18.77	0.80	19.20	19.09	18.85	18.66	18.62	18.46	3.00	19.20
		50	0	18.42	18.54	18.38	18.69	18.73	0.80	19.20	19.06	18.95	18.69	18.59	18.45	3.00	19.20
	256QAM	1	0	16.45	16.69	16.43	16.66	16.62	2.80	17.20	16.67	16.57	16.67	16.48	16.68	5.00	17.20
		1	25	16.63	16.45	16.52	16.41	16.41	2.80	17.20	16.50	16.60	16.53	16.60	16.53	5.00	17.20
		1	49	16.69	16.60	16.68	16.43	16.43	2.80	17.20	16.63	16.67	16.58	16.65	16.56	5.00	17.20
		25	0	16.46	16.59	16.65	16.44	16.57	2.80	17.20	16.49	16.63	16.59	16.50	16.47	5.00	17.20
		25	12	16.60	16.53	16.68	16.43	16.53	2.80	17.20	16.48	16.42	16.66	16.41	16.70	5.00	17.20
		25	25	16.54	16.52	16.58	16.67	16.61	2.80	17.20	16.65	16.43	16.53	16.46	16.59	5.00	17.20
		50	0	16.62	16.50	16.60	16.47	16.58	2.80	17.20	16.60	16.43	16.41	16.46	16.40	5.00	17.20

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}							Power Mode B {dBm}						
				39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit	39750.00	40185.00	40620.00	41055.00	41490.00	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
5 MHz	QPSK	1	0	19.42	19.50	19.59	19.89	19.87	0.00	20.00	21.69	21.71	21.67	21.59	21.52	0.00	22.20
		1	12	19.43	19.48	19.56	19.91	19.87	0.00	20.00	21.68	21.69	21.68	21.58	21.47	0.00	22.20
		1	24	19.41	19.47	19.57	19.83	19.79	0.00	20.00	21.69	21.56	21.67	21.55	21.48	0.00	22.20
		12	0	19.28	19.39	19.43	19.74	19.85	0.00	20.00	20.88	20.85	20.86	20.80	20.67	1.00	21.20
		12	7	19.29	19.42	19.47	19.76	19.87	0.00	20.00	20.89	20.88	20.86	20.81	20.70	1.00	21.20
		12	13	19.27	19.40	19.41	19.69	19.83	0.00	20.00	20.89	20.77	20.81	20.75	20.68	1.00	21.20
		25	0	19.23	19.41	19.45	19.73	19.85	0.00	20.00	20.89	20.84	20.81	20.78	20.64	1.00	21.20
	16QAM	1	0	19.96	19.87	19.98	19.62	19.49	0.00	20.00	20.92	20.98	20.75	20.55	20.44	1.00	21.20
		1	12	19.23	19.01	19.24	19.54	19.43	0.00	20.00	20.91	20.97	20.82	20.44	20.47	1.00	21.20
		1	24	19.15	19.83	19.93	19.60	19.47	0.00	20.00	20.94	20.82	20.76	20.44	20.40	1.00	21.20
		12	0	19.31	19.40	19.35	19.78	19.78	0.00	20.00	20.07	19.95	19.80	19.69	19.47	2.00	20.20
		12	7	19.35	19.40	19.41	19.81	19.86	0.00	20.00	20.09	19.96	19.77	19.69	19.50	2.00	20.20
		12	13	19.29	19.39	19.36	19.73	19.78	0.00	20.00	20.01	19.89	19.79	19.65	19.48	2.00	20.20
		25	0	19.24	19.36	19.44	19.71	19.78	0.00	20.00	20.06	20.02	19.73	19.65	19.55	2.00	20.20
	64QAM	1	0	19.71	19.62	19.73	19.37	19.24	0.00	20.00	19.92	19.98	19.75	19.55	19.44	2.00	20.20
		1	12	19.23	19.21	19.24	19.29	19.18	0.00	20.00	19.91	19.97	19.82	19.44	19.47	2.00	20.20
		1	24	19.08	19.58	19.68	19.35	19.22	0.00	20.00	19.94	19.82	19.76	19.44	19.40	2.00	20.20
		12	0	18.31	18.40	18.35	18.78	18.78	0.80	19.20	19.07	18.95	18.80	18.69	18.47	3.00	19.20
		12	7	18.35	18.40	18.41	18.81	18.86	0.80	19.20	19.09	18.96	18.77	18.69	18.50	3.00	19.20
		12	13	18.29	18.39	18.36	18.73	18.78	0.80	19.20	19.01	18.89	18.79	18.65	18.48	3.00	19.20
		25	0	18.24	18.36	18.44	18.71	18.78	0.80	19.20	19.06	19.02	18.73	18.65	18.55	3.00	19.20
	256QAM	1	0	16.51	16.41	16.59	16.55	16.64	2.80	17.20	16.51	16.43	16.45	16.57	16.46	5.00	17.20
		1	12	16.49	16.41	16.52	16.46	16.51	2.80	17.20	16.50	16.59	16.68	16.62	16.58	5.00	17.20
		1	24	16.48	16.46	16.60	16.70	16.44	2.80	17.20	16.66	16.44	16.50	16.68	16.69	5.00	17.20
		12	0	16.56	16.69	16.49	16.59	16.44	2.80	17.20	16.51	16.54	16.60	16.51	16.66	5.00	17.20
		12	7	16.55	16.60	16.47	16.58	16.67	2.80	17.20	16.61	16.55	16.48	16.48	16.64	5.00	17.20
		12	13	16.46	16.68	16.66	16.68	16.52	2.80	17.20	16.64	16.61	16.41	16.48	16.45	5.00	17.20
		25	0	16.63	16.50	16.62	16.51	16.49	2.80	17.20	16.62	16.49	16.54	16.41	16.54	5.00	17.20

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 48 Measured Results (ANT7)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55340.00	55773.00	56207.00	56640.00	MPR	Tune-up Limit	55340.00	55773.00	56207.00	56640.00	MPR	Tune-up Limit
				3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz			3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz		
20 MHz	QPSK	1	0	24.95	25.08	25.07	25.10	0.00	25.70	21.36	21.53	21.45	21.54	0.00	22.00
		1	49	25.30	25.30	25.30	25.30	0.00	25.70	21.71	21.66	21.81	21.79	0.00	22.00
		1	99	25.01	24.96	25.08	25.05	0.00	25.70	21.42	21.35	21.53	21.44	0.00	22.00
		50	0	24.00	24.16	24.21	24.14	1.00	24.70	21.54	21.70	21.74	21.68	0.00	22.00
		50	24	24.40	24.40	24.40	24.40	1.00	24.70	21.70	21.84	21.86	21.83	0.00	22.00
		50	50	24.09	24.18	24.32	24.19	1.00	24.70	21.64	21.72	21.84	21.74	0.00	22.00
		100	0	24.11	24.20	24.40	24.23	1.00	24.70	21.63	21.76	21.75	21.75	0.00	22.00
	16QAM	1	0	23.73	24.00	24.11	23.90	1.00	24.70	21.23	21.68	21.41	21.42	0.00	22.00
		1	49	24.10	24.17	24.51	24.23	1.00	24.70	21.61	21.87	21.80	21.68	0.00	22.00
		1	99	23.80	23.82	24.17	23.87	1.00	24.70	21.32	21.50	21.47	21.35	0.00	22.00
		50	0	23.04	23.10	23.23	23.17	2.00	23.70	21.59	21.75	21.71	21.71	0.00	22.00
		50	24	23.22	23.26	23.36	23.31	2.00	23.70	21.75	21.89	21.84	21.87	0.00	22.00
		50	50	23.13	23.14	23.34	23.21	2.00	23.70	21.68	21.77	21.83	21.79	0.00	22.00
		100	0	23.09	23.18	23.22	23.20	2.00	23.70	21.67	21.76	21.74	21.78	0.00	22.00
	64QAM	1	0	22.73	23.00	23.11	22.90	2.00	23.70	21.23	21.68	21.41	21.42	0.00	22.00
		1	49	23.10	23.17	23.51	23.23	2.00	23.70	21.61	21.87	21.80	21.68	0.00	22.00
		1	99	22.80	22.82	23.17	22.87	2.00	23.70	21.32	21.50	21.47	21.35	0.00	22.00
		50	0	22.04	22.10	22.23	22.17	3.00	22.70	21.59	21.75	21.71	21.71	0.00	22.00
		50	24	22.22	22.26	22.36	22.31	3.00	22.70	21.75	21.89	21.84	21.87	0.00	22.00
		50	50	22.13	22.14	22.34	22.21	3.00	22.70	21.68	21.77	21.83	21.79	0.00	22.00
		100	0	22.09	22.18	22.22	22.20	3.00	22.70	21.67	21.76	21.74	21.78	0.00	22.00
	256QAM	1	0	20.20	19.97	19.98	19.99	5.00	20.70	19.96	19.96	19.94	20.12	1.30	20.70
		1	49	20.15	20.03	19.99	20.00	5.00	20.70	20.03	19.99	19.96	20.07	1.30	20.70
		1	99	19.99	20.16	20.03	20.03	5.00	20.70	20.03	20.17	20.02	20.04	1.30	20.70
		50	0	20.02	20.15	19.97	20.00	5.00	20.70	19.98	20.16	20.06	20.06	1.30	20.70
		50	24	20.01	20.16	20.16	20.15	5.00	20.70	20.08	19.92	19.98	20.00	1.30	20.70
		50	50	20.16	20.07	19.98	20.02	5.00	20.70	19.97	19.93	20.17	19.97	1.30	20.70
		100	0	20.07	20.04	20.03	19.91	5.00	20.70	20.01	19.90	20.13	20.00	1.30	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55315.00	55765.00	56215.00	56665.00	MPR	Tune-up Limit	55315.00	55765.00	56215.00	56665.00	MPR	Tune-up Limit
				3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz			3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz		
15 MHz	QPSK	1	0	24.96	25.10	25.16	25.16	0.00	25.70	21.40	21.52	21.50	21.59	0.00	22.00
		1	37	25.25	24.84	25.35	25.29	0.00	25.70	21.65	21.61	21.50	21.76	0.00	22.00
		1	74	25.12	25.24	25.22	25.15	0.00	25.70	21.51	21.47	21.72	21.57	0.00	22.00
		36	0	24.11	23.92	24.21	24.13	1.00	24.70	21.56	21.79	21.56	21.70	0.00	22.00
		36	20	24.23	23.90	24.32	24.27	1.00	24.70	21.75	21.83	21.65	21.84	0.00	22.00
		36	39	24.16	23.91	24.36	24.20	1.00	24.70	21.70	21.77	21.73	21.80	0.00	22.00
		75	0	24.09	23.86	24.25	24.20	1.00	24.70	21.65	21.75	21.60	21.77	0.00	22.00
	16QAM	1	0	24.03	24.05	24.20	24.20	1.00	24.70	21.58	21.69	21.66	21.75	0.00	22.00
		1	37	24.28	23.80	24.40	24.36	1.00	24.70	21.82	21.75	21.58	21.91	0.00	22.00
		1	74	24.14	24.15	24.26	24.14	1.00	24.70	21.66	21.61	21.79	21.75	0.00	22.00
		36	0	23.05	22.81	23.17	23.17	2.00	23.70	21.63	21.78	21.50	21.75	0.00	22.00
		36	20	23.22	22.90	23.31	23.28	2.00	23.70	21.79	21.83	21.56	21.90	0.00	22.00
		36	39	23.16	22.90	23.38	23.26	2.00	23.70	21.73	21.78	21.67	21.83	0.00	22.00
		75	0	23.14	22.91	23.25	23.24	2.00	23.70	21.72	21.79	21.59	21.82	0.00	22.00
	64QAM	1	0	23.03	23.05	23.20	23.20	2.00	23.70	21.58	21.69	21.66	21.75	0.00	22.00
		1	37	23.28	22.80	23.40	23.36	2.00	23.70	21.82	21.75	21.58	21.91	0.00	22.00
		1	74	23.14	23.15	23.26	23.14	2.00	23.70	21.66	21.61	21.79	21.75	0.00	22.00
		36	0	22.05	21.81	22.17	22.17	3.00	22.70	21.63	21.78	21.50	21.75	0.00	22.00
		36	20	22.22	21.90	22.31	22.28	3.00	22.70	21.79	21.83	21.56	21.90	0.00	22.00
		36	39	22.16	21.90	22.38	22.26	3.00	22.70	21.73	21.78	21.67	21.83	0.00	22.00
		75	0	22.14	21.91	22.25	22.24	3.00	22.70	21.72	21.79	21.59	21.82	0.00	22.00
	256QAM	1	0	19.91	20.05	20.04	20.15	5.00	20.70	19.96	19.94	19.93	20.18	1.30	20.70
		1	37	20.17	19.95	20.19	20.12	5.00	20.70	20.16	19.94	20.09	20.03	1.30	20.70
		1	74	20.05	20.00	20.08	20.02	5.00	20.70	19.91	20.12	19.91	20.00	1.30	20.70
		36	0	19.95	20.06	20.19	19.95	5.00	20.70	20.14	20.11	20.18	20.13	1.30	20.70
		36	20	20.11	19.93	19.92	20.01	5.00	20.70	19.91	19.91	20.18	19.96	1.30	20.70
		36	39	20.11	19.95	20.09	20.16	5.00	20.70	19.99	20.15	19.95	20.07	1.30	20.70
		75	0	20.11	20.08	20.06	20.05	5.00	20.70	19.92	20.00	19.93	20.18	1.30	20.70

Notes:

LTE Band 48 Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 48 Measured Results (ANT7) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55290.00	55757.00	56223.00	56690.00	MPR	Tune-up Limit	55290.00	55757.00	56223.00	56690.00	MPR	Tune-up Limit
				3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz			3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz		
10 MHz	QPSK	1	0	24.84	24.94	25.08	24.96	0.00	25.70	21.26	21.43	21.44	21.43	0.00	22.00
		1	25	25.21	25.32	25.40	25.31	0.00	25.70	21.61	21.78	21.80	21.78	0.00	22.00
		1	49	25.04	25.18	25.23	25.12	0.00	25.70	21.43	21.64	21.67	21.60	0.00	22.00
		25	0	24.06	24.20	24.20	24.10	1.00	24.70	21.58	21.77	21.75	21.66	0.00	22.00
		25	12	24.08	24.33	24.32	24.14	1.00	24.70	21.51	21.88	21.88	21.74	0.00	22.00
		25	25	24.15	24.31	24.37	24.28	1.00	24.70	21.67	21.87	21.95	21.86	0.00	22.00
		50	0	24.09	24.25	24.23	24.15	1.00	24.70	21.56	21.80	21.81	21.72	0.00	22.00
	16QAM	1	0	23.94	23.93	24.03	24.03	1.00	24.70	21.36	21.43	21.49	21.61	0.00	22.00
		1	25	24.20	24.27	24.41	24.29	1.00	24.70	21.66	21.74	21.85	21.85	0.00	22.00
		1	49	24.11	24.15	24.25	24.22	1.00	24.70	21.60	21.64	21.70	21.73	0.00	22.00
		25	0	23.06	23.22	23.21	23.14	2.00	23.70	21.54	21.73	21.74	21.64	0.00	22.00
		25	12	23.17	23.33	23.30	23.25	2.00	23.70	21.63	21.83	21.88	21.74	0.00	22.00
		25	25	23.15	23.35	23.37	23.31	2.00	23.70	21.72	21.84	21.94	21.86	0.00	22.00
		50	0	23.14	23.26	23.26	23.16	2.00	23.70	21.65	21.78	21.81	21.73	0.00	22.00
	64QAM	1	0	22.94	22.93	23.03	23.03	2.00	23.70	21.26	21.43	21.44	21.43	0.00	22.00
		1	25	23.20	23.27	23.41	23.29	2.00	23.70	21.61	21.78	21.80	21.78	0.00	22.00
		1	49	23.11	23.15	23.25	23.22	2.00	23.70	21.43	21.64	21.67	21.60	0.00	22.00
		25	0	22.06	22.22	22.21	22.14	3.00	22.70	21.58	21.77	21.75	21.66	0.00	22.00
		25	12	22.17	22.33	22.30	22.25	3.00	22.70	21.51	21.88	21.88	21.74	0.00	22.00
		25	25	22.15	22.35	22.37	22.31	3.00	22.70	21.67	21.87	21.89	21.86	0.00	22.00
		50	0	22.14	22.26	22.26	22.16	3.00	22.70	21.56	21.80	21.81	21.72	0.00	22.00
	256QAM	1	0	19.95	20.02	20.07	20.03	5.00	20.70	20.06	20.14	20.03	20.18	1.30	20.70
		1	25	20.10	20.16	19.99	19.96	5.00	20.70	20.11	20.10	20.03	20.07	1.30	20.70
		1	49	19.98	20.14	19.98	20.14	5.00	20.70	19.95	19.95	20.18	20.20	1.30	20.70
		25	0	20.06	20.19	19.99	19.98	5.00	20.70	20.19	20.09	19.91	19.91	1.30	20.70
		25	12	19.99	20.10	20.09	20.17	5.00	20.70	20.16	20.16	20.16	20.11	1.30	20.70
		25	25	20.13	20.12	20.17	19.94	5.00	20.70	20.03	19.93	19.94	20.16	1.30	20.70
		50	0	20.07	20.00	20.18	19.93	5.00	20.70	20.07	20.10	20.18	20.20	1.30	20.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55265.00	55748.00	56232.00	56715.00	MPR	Tune-up Limit	55265.00	55748.00	56232.00	56715.00	MPR	Tune-up Limit
				3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz			3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz		
5 MHz	QPSK	1	0	24.99	25.16	25.21	25.18	0.00	25.70	21.49	21.61	21.67	21.72	0.00	22.00
		1	12	25.20	25.35	25.33	25.33	0.00	25.70	21.67	21.75	21.78	21.82	0.00	22.00
		1	24	25.22	25.35	25.31	25.29	0.00	25.70	21.68	21.69	21.85	21.82	0.00	22.00
		12	0	24.13	24.28	24.22	24.27	1.00	24.70	21.69	21.74	21.94	21.78	0.00	22.00
		12	7	24.26	24.34	24.38	24.36	1.00	24.70	21.83	21.95	21.93	21.90	0.00	22.00
		12	13	24.25	24.32	24.39	24.35	1.00	24.70	21.75	21.95	21.95	21.93	0.00	22.00
		25	0	24.16	24.27	24.37	24.27	1.00	24.70	21.68	21.87	21.91	21.86	0.00	22.00
	16QAM	1	0	24.15	24.11	24.22	24.37	1.00	24.70	21.67	21.57	21.78	21.87	0.00	22.00
		1	12	24.41	24.27	24.35	24.49	1.00	24.70	21.89	21.72	21.93	21.94	0.00	22.00
		1	24	24.34	24.26	24.30	24.42	1.00	24.70	21.82	21.73	21.90	21.96	0.00	22.00
		12	0	23.20	23.24	23.22	23.26	2.00	23.70	21.60	21.67	21.86	21.93	0.00	22.00
		12	7	23.26	23.28	23.43	23.41	2.00	23.70	21.84	21.95	21.91	21.89	0.00	22.00
		12	13	23.26	23.26	23.40	23.42	2.00	23.70	21.90	21.88	21.88	21.81	0.00	22.00
		25	0	23.20	23.33	23.32	23.29	2.00	23.70	21.76	21.85	21.91	21.87	0.00	22.00
	64QAM	1	0	23.15	23.11	23.22	23.37	2.00	23.70	21.67	21.57	21.78	21.87	0.00	22.00
		1	12	23.41	23.27	23.35	23.49	2.00	23.70	21.89	21.72	21.93	21.94	0.00	22.00
		1	24	23.34	23.26	23.30	23.42	2.00	23.70	21.82	21.73	21.90	21.96	0.00	22.00
		12	0	22.20	22.24	22.22	22.26	3.00	22.70	21.60	21.67	21.86	21.93	0.00	22.00
		12	7	22.26	22.28	22.43	22.41	3.00	22.70	21.84	21.89	21.91	21.89	0.00	22.00
		12	13	22.26	22.26	22.40	22.42	3.00	22.70	21.90	21.88	21.88	21.81	0.00	22.00
		25	0	22.20	22.33	22.32	22.29	3.00	22.70	21.76	21.85	21.91	21.87	0.00	22.00
	256QAM	1	0	20.11	20.03	19.93	19.94	5.00	20.70	19.92	20.02	19.97	19.97	1.30	20.70
		1	12	20.17	19.96	20.01	20.13	5.00	20.70	20.05	20.16	19.92	20.17	1.30	20.70
		1	24	20.17	19.97	20.14	20.04	5.00	20.70	20.18	20.01	19.97	19.94	1.30	20.70
		12	0	20.12	20.13	20.05	20.04	5.00	20.70	20.01	19.92	20.18	20.01	1.30	20.70
		12	7	20.04	20.00	20.12	20.03	5.00	20.70	20.16	20.11	19.97	20.17	1.30	20.70
		12	13	20.13	20.15	20.18	20.18	5.00	20.70	19.97	20.15	20.16	20.20	1.30	20.70
		25	0	20.04	20.17	20.01	19.95	5.00	20.70	19.95	19.98	20.06	19.94	1.30	20.70

Notes:

LTE Band 48 Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 48 Measured Results (ANT8)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}						Power Mode B {dBm}					
				55340.00	55773.00	56207.00	56640.00	MPR	Tune-up Limit	55340.00	55773.00	56207.00	56640.00	MPR	Tune-up Limit
				3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz			3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz		
20 MHz	QPSK	1	0	21.61	21.72	21.62	21.48	0.00	22.25	19.06	19.17	19.07	18.93	0.00	19.50
		1	49	22.00	22.00	22.00	22.00	0.00	22.25	19.50	19.50	19.50	19.50	0.00	19.50
		1	99	21.61	21.50	21.60	21.31	0.00	22.25	19.06	18.95	19.05	18.76	0.00	19.50
		50	0	21.67	21.79	21.69	21.52	0.05	22.20	18.87	18.99	18.89	18.72	0.00	19.50
		50	24	22.00	22.00	22.00	22.00	0.05	22.20	19.50	19.50	19.50	19.50	0.00	19.50
		50	50	21.73	21.71	21.69	21.44	0.05	22.20	18.93	18.91	18.89	18.64	0.00	19.50
		100	0	21.71	21.72	22.00	21.48	0.05	22.20	18.91	18.92	19.50	18.68	0.00	19.50
	16QAM	1	0	21.60	21.52	21.33	21.41	0.05	22.20	18.80	18.72	18.53	18.61	0.00	19.50
		1	49	21.94	21.69	21.66	21.68	0.05	22.20	19.14	18.89	18.86	18.88	0.00	19.50
		1	99	21.63	21.32	21.30	21.27	0.05	22.20	18.83	18.52	18.50	18.50	0.00	19.50
		50	0	20.69	20.72	20.70	20.55	1.05	21.20	18.89	18.92	18.90	18.75	0.00	19.50
		50	24	20.84	20.77	20.80	20.60	1.05	21.20	19.04	18.97	19.00	18.80	0.00	19.50
		50	50	20.75	20.67	20.72	20.48	1.05	21.20	18.95	18.87	18.92	18.68	0.00	19.50
		100	0	20.74	20.68	20.68	20.47	1.05	21.20	18.94	18.88	18.88	18.67	0.00	19.50
	64QAM	1	0	20.81	20.73	20.54	20.62	1.05	21.20	19.01	18.93	18.74	18.82	0.00	19.50
		1	49	21.15	20.90	20.87	20.89	1.05	21.20	19.35	19.10	19.07	19.09	0.00	19.50
		1	99	20.84	20.53	20.51	20.48	1.05	21.20	19.04	18.73	18.71	18.68	0.00	19.50
		50	0	19.90	19.93	19.91	19.76	2.05	20.20	19.10	19.13	19.11	18.96	0.00	19.50
		50	24	20.05	19.98	20.01	19.81	2.05	20.20	19.25	19.18	19.21	19.01	0.00	19.50
		50	50	19.96	19.88	19.93	19.69	2.05	20.20	19.16	19.08	19.13	18.89	0.00	19.50
		100	0	19.95	19.89	19.89	19.68	2.05	20.20	19.15	19.09	19.09	18.88	0.00	19.50
	256QAM	1	0	17.79	17.75	17.55	17.72	4.05	18.20	17.65	17.78	17.80	17.75	1.30	18.20
		1	49	17.80	17.52	17.60	17.54	4.05	18.20	17.78	17.74	17.78	17.78	1.30	18.20
		1	99	17.70	17.63	17.59	17.72	4.05	18.20	17.57	17.62	17.58	17.50	1.30	18.20
		50	0	17.62	17.71	17.78	17.76	4.05	18.20	17.79	17.78	17.52	17.66	1.30	18.20
		50	24	17.52	17.77	17.73	17.62	4.05	18.20	17.67	17.68	17.61	17.65	1.30	18.20
		50	50	17.60	17.75	17.73	17.70	4.05	18.20	17.65	17.74	17.74	17.70	1.30	18.20
		100	0	17.52	17.69	17.59	17.71	4.05	18.20	17.50	17.56	17.71	17.53	1.30	18.20

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}						Power Mode B {dBm}					
				55315.00	55765.00	56215.00	56665.00	MPR	Tune-up Limit	55315.00	55765.00	56215.00	56665.00	MPR	Tune-up Limit
				3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz			3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz		
15 MHz	QPSK	1	0	21.71	21.75	21.66	21.57	0.00	22.25	18.96	19.00	18.91	18.82	0.00	19.50
		1	37	21.93	21.82	21.65	21.66	0.00	22.25	19.18	19.07	18.90	18.91	0.00	19.50
		1	74	21.79	21.62	21.80	21.47	0.00	22.25	19.04	18.87	19.05	18.72	0.00	19.50
		36	0	21.77	21.76	21.54	21.51	0.05	22.20	18.77	18.76	18.54	18.51	0.00	19.50
		36	20	21.85	21.78	21.56	21.57	0.05	22.20	18.85	18.78	18.56	18.57	0.00	19.50
		36	39	21.80	21.76	21.65	21.51	0.05	22.20	18.80	18.76	18.65	18.51	0.00	19.50
		75	0	21.75	21.73	21.59	21.48	0.05	22.20	18.75	18.73	18.59	18.50	0.00	19.50
	16QAM	1	0	21.62	21.68	21.52	21.51	0.05	22.20	18.62	18.68	18.52	18.51	0.00	19.50
		1	37	21.86	21.69	21.56	21.59	0.05	22.20	18.86	18.69	18.56	18.59	0.00	19.50
		1	74	21.72	21.51	21.76	21.40	0.05	22.20	18.72	18.51	18.76	18.50	0.00	19.50
		36	0	20.82	20.78	20.47	20.54	1.05	21.20	18.82	18.78	18.50	18.54	0.00	19.50
		36	20	20.87	20.81	20.58	20.59	1.05	21.20	18.87	18.81	18.58	18.59	0.00	19.50
		36	39	20.80	20.76	20.61	20.53	1.05	21.20	18.80	18.76	18.61	18.53	0.00	19.50
		75	0	20.79	20.75	20.59	20.54	1.05	21.20	18.79	18.75	18.59	18.54	0.00	19.50
	64QAM	1	0	20.83	20.89	20.73	20.72	1.05	21.20	18.83	18.89	18.73	18.72	0.00	19.50
		1	37	21.07	20.90	20.77	20.80	1.05	21.20	19.07	18.90	18.77	18.80	0.00	19.50
		1	74	20.93	20.72	20.97	20.61	1.05	21.20	18.93	18.72	18.97	18.61	0.00	19.50
		36	0	20.03	19.99	19.68	19.75	2.05	20.20	19.03	18.99	18.68	18.75	0.00	19.50
		36	20	20.08	20.02	19.79	19.80	2.05	20.20	19.08	19.02	18.79	18.80	0.00	19.50
		36	39	20.01	19.97	19.82	19.74	2.05	20.20	19.01	18.97	18.82	18.74	0.00	19.50
		75	0	20.00	19.96	19.80	19.75	2.05	20.20	19.00	18.96	18.80	18.75	0.00	19.50
	256QAM	1	0	17.58	17.55	17.71	17.76	4.05	18.20	17.57	17.64	17.75	17.55	1.30	18.20
		1	37	17.55	17.57	17.55	17.76	4.05	18.20	17.55	17.73	17.58	17.73	1.30	18.20
		1	74	17.70	17.79	17.60	17.73	4.05	18.20	17.78	17.52	17.73	17.77	1.30	18.20
		36	0	17.59	17.72	17.67	17.58	4.05	18.20	17.63	17.61	17.80	17.68	1.30	18.20
		36	20	17.52	17.74	17.65	17.59	4.05	18.20	17.67	17.59	17.67	17.67	1.30	18.20
		36	39	17.79	17.78	17.57	17.51	4.05	18.20	17.73	17.75	17.59	17.63	1.30	18.20
		75	0	17.53	17.75	17.69	17.77	4.05	18.20	17.65	17.74	17.73	17.79	1.30	18.20

Notes:

LTE Band 48 Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 48 Measured Results (ANT8) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}						Power Mode B {dBm}					
				55290.00	55757.00	56223.00	56690.00	MPR	Tune-up Limit	55290.00	55757.00	56223.00	56690.00	MPR	Tune-up Limit
				3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz			3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz		
10 MHz	QPSK	1	0	21.55	21.59	21.53	21.34	0.00	22.25	18.80	18.84	18.78	18.59	0.00	19.50
		1	25	21.88	21.92	21.86	21.68	0.00	22.25	19.13	19.17	19.11	18.93	0.00	19.50
		1	49	21.72	21.74	21.68	21.52	0.00	22.25	18.97	18.99	18.93	18.77	0.00	19.50
		25	0	21.70	21.75	21.72	21.49	0.05	22.20	18.70	18.75	18.72	18.50	0.00	19.50
		25	12	21.67	21.90	21.83	21.50	0.05	22.20	18.67	18.90	18.83	18.50	0.00	19.50
		25	25	21.84	21.88	21.82	21.58	0.05	22.20	18.84	18.88	18.82	18.58	0.00	19.50
		50	0	21.80	21.80	21.75	21.52	0.05	22.20	18.80	18.80	18.75	18.52	0.00	19.50
	16QAM	1	0	21.58	21.45	21.44	21.38	0.05	22.20	18.58	18.50	18.50	18.50	0.00	19.50
		1	25	21.85	21.79	21.74	21.56	0.05	22.20	18.85	18.79	18.74	18.56	0.00	19.50
		1	49	21.76	21.65	21.56	21.48	0.05	22.20	18.76	18.65	18.56	18.50	0.00	19.50
		25	0	20.76	20.77	20.74	20.51	1.05	21.20	18.76	18.77	18.74	18.51	0.00	19.50
		25	12	20.88	20.89	20.87	20.64	1.05	21.20	18.88	18.89	18.87	18.64	0.00	19.50
		25	25	20.89	20.86	20.85	20.62	1.05	21.20	18.89	18.86	18.85	18.62	0.00	19.50
		50	0	20.85	20.82	20.78	20.59	1.05	21.20	18.85	18.82	18.78	18.59	0.00	19.50
	64QAM	1	0	20.79	20.66	20.65	20.59	1.05	21.20	18.79	18.66	18.65	18.59	0.00	19.50
		1	25	21.06	21.00	20.95	20.77	1.05	21.20	19.06	19.00	18.95	18.77	0.00	19.50
		1	49	20.97	20.86	20.77	20.69	1.05	21.20	18.97	18.86	18.77	18.69	0.00	19.50
		25	0	19.97	19.98	19.95	19.72	2.05	20.20	18.97	18.98	18.95	18.72	0.00	19.50
		25	12	20.09	20.10	20.08	19.85	2.05	20.20	19.09	19.10	19.08	18.85	0.00	19.50
		25	25	20.10	20.07	20.06	19.83	2.05	20.20	19.10	19.07	19.06	18.83	0.00	19.50
		50	0	20.06	20.03	19.99	19.80	2.05	20.20	19.06	19.03	18.99	18.80	0.00	19.50
	256QAM	1	0	17.80	17.75	17.72	17.57	4.05	18.20	17.62	17.53	17.57	17.62	1.30	18.20
		1	25	17.56	17.68	17.61	17.56	4.05	18.20	17.77	17.67	17.64	17.78	1.30	18.20
		1	49	17.76	17.53	17.76	17.64	4.05	18.20	17.75	17.52	17.62	17.76	1.30	18.20
		25	0	17.54	17.55	17.60	17.63	4.05	18.20	17.51	17.75	17.78	17.72	1.30	18.20
		25	12	17.69	17.71	17.68	17.65	4.05	18.20	17.54	17.58	17.58	17.60	1.30	18.20
		25	25	17.57	17.63	17.72	17.66	4.05	18.20	17.75	17.62	17.60	17.63	1.30	18.20
		50	0	17.55	17.70	17.55	17.59	4.05	18.20	17.65	17.63	17.57	17.55	1.30	18.20
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}						Power Mode B {dBm}					
				55265.00	55748.00	56232.00	56715.00	MPR	Tune-up Limit	55265.00	55748.00	56232.00	56715.00	MPR	Tune-up Limit
				3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz			3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz		
5 MHz	QPSK	1	0	21.86	21.82	21.72	21.60	0.00	22.25	19.11	19.07	18.97	18.85	0.00	19.50
		1	12	21.95	21.95	21.86	21.69	0.00	22.25	19.20	19.20	19.11	18.94	0.00	19.50
		1	24	21.90	21.94	21.78	21.65	0.00	22.25	19.15	19.19	19.03	18.90	0.00	19.50
		12	0	21.79	21.82	21.76	21.52	0.05	22.20	18.79	18.82	18.76	18.52	0.00	19.50
		12	7	21.89	21.91	21.90	21.61	0.05	22.20	18.89	18.91	18.90	18.61	0.00	19.50
		12	13	21.93	21.95	21.91	21.66	0.05	22.20	18.93	18.95	18.91	18.66	0.00	19.50
		25	0	21.85	21.86	21.84	21.58	0.05	22.20	18.85	18.86	18.84	18.58	0.00	19.50
	16QAM	1	0	21.72	21.84	21.63	21.47	0.05	22.20	18.72	18.84	18.63	18.50	0.00	19.50
		1	12	21.84	22.00	21.71	21.59	0.05	22.20	18.84	19.02	18.71	18.59	0.00	19.50
		1	24	21.79	21.97	21.65	21.50	0.05	22.20	18.79	18.97	18.65	18.65	0.00	19.50
		12	0	20.80	20.85	20.79	20.51	1.05	21.20	18.80	18.85	18.79	18.51	0.00	19.50
		12	7	20.87	21.01	20.92	20.58	1.05	21.20	18.87	19.01	18.92	18.58	0.00	19.50
		12	13	20.88	21.01	20.94	20.63	1.05	21.20	18.88	19.01	18.94	18.63	0.00	19.50
		25	0	20.89	20.88	20.83	20.66	1.05	21.20	18.89	18.88	18.83	18.66	0.00	19.50
	64QAM	1	0	20.93	21.05	20.84	20.68	1.05	21.20	18.93	19.05	18.84	18.68	0.00	19.50
		1	12	21.05	21.00	20.92	20.80	1.05	21.20	19.05	19.23	18.92	18.80	0.00	19.50
		1	24	21.00	21.18	20.86	20.71	1.05	21.20	19.00	19.18	18.86	18.71	0.00	19.50
		12	0	20.01	20.06	20.00	19.72	2.05	20.20	19.01	19.06	19.00	18.72	0.00	19.50
		12	7	20.08	20.00	20.13	19.79	2.05	20.20	19.08	19.22	19.13	18.79	0.00	19.50
		12	13	20.09	20.00	20.15	19.84	2.05	20.20	19.09	19.22	19.15	18.84	0.00	19.50
		25	0	20.10	20.09	20.04	19.87	2.05	20.20	19.10	19.09	19.04	18.87	0.00	19.50
	256QAM	1	0	17.77	17.71	17.73	17.71	4.05	18.20	17.62	17.53	17.57	17.74	1.30	18.20
		1	12	17.61	17.66	17.65	17.68	4.05	18.20	17.78	17.52	17.56	17.74	1.30	18.20
		1	24	17.55	17.63	17.62	17.75	4.05	18.20	17.61	17.79	17.51	17.70	1.30	18.20
		12	0	17.66	17.67	17.79	17.73	4.05	18.20	17.73	17.62	17.77	17.58	1.30	18.20
		12	7	17.56	17.64	17.54	17.77	4.05	18.20	17.76	17.60	17.58	17.73	1.30	18.20
		12	13	17.58	17.62	17.57	17.70	4.05	18.20	17.67	17.61	17.70	17.57	1.30	18.20
		25	0	17.71	17.66	17.71	17.79	4.05	18.20	17.70	17.80	17.58	17.65	1.30	18.20

Notes:

LTE Band 48 Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 48 Measured Results (ANT9)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55340	55773	56207	56640	MPR	Tune-up Limit	55340	55773	56207	56640	MPR	Tune-up Limit
				3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz			3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz		
20 MHz	QPSK	1	0	24.65	24.84	24.56	24.37	0.00	25.20	21.57	21.73	21.47	21.31	0.00	22.00
		1	49	24.98	25.02	25.10	24.67	0.00	25.20	22.00	22.00	22.00	22.00	0.00	22.00
		1	99	24.70	24.60	24.53	24.33	0.00	25.20	21.59	21.52	21.42	21.22	0.00	22.00
		50	0	23.93	23.98	23.87	23.69	1.00	24.20	21.85	21.90	21.77	21.59	0.00	22.00
		50	24	24.02	24.04	24.10	23.76	1.00	24.20	22.00	22.00	22.00	22.00	0.00	22.00
		50	50	23.96	23.93	23.88	23.68	1.00	24.20	21.87	21.83	21.82	21.58	0.00	22.00
		100	0	23.95	23.94	23.87	23.69	1.00	24.20	21.86	21.87	22.00	21.58	0.00	22.00
	16QAM	1	0	23.70	23.71	23.74	23.43	1.00	24.20	21.53	21.58	21.58	21.24	0.00	22.00
		1	49	23.99	23.84	24.07	23.67	1.00	24.20	21.84	21.71	21.93	21.44	0.00	22.00
		1	99	23.71	23.48	23.68	23.30	1.00	24.20	21.58	21.38	21.54	21.15	0.00	22.00
		50	0	22.90	23.00	22.89	22.66	2.00	23.20	21.82	21.92	21.81	21.57	0.00	22.00
		50	24	23.02	23.00	23.02	22.71	2.00	23.20	21.92	21.98	21.94	21.65	0.00	22.00
		50	50	22.92	22.94	22.91	22.63	2.00	23.20	21.84	21.87	21.84	21.54	0.00	22.00
		100	0	22.92	22.95	22.88	22.67	2.00	23.20	21.86	21.88	21.80	21.56	0.00	22.00
	64QAM	1	0	22.55	22.74	22.46	22.27	2.00	23.20	21.89	21.90	21.79	21.56	0.00	22.00
		1	49	22.88	22.92	22.82	22.57	2.00	23.20	21.59	21.52	21.42	21.22	0.00	22.00
		1	99	22.60	22.50	22.43	22.23	2.00	23.20	21.85	21.90	21.77	21.59	0.00	22.00
		50	0	22.03	22.08	21.97	21.79	3.00	22.20	21.95	21.94	21.89	21.68	0.00	22.00
		50	24	22.12	22.14	22.08	21.86	3.00	22.20	21.87	21.83	21.82	21.58	0.00	22.00
		50	50	22.06	22.03	21.98	21.78	3.00	22.20	21.86	21.87	21.78	21.58	0.00	22.00
		100	0	22.05	22.04	21.97	21.79	3.00	22.20	21.53	21.58	21.58	21.24	0.00	22.00
	256QAM	1	0	19.74	19.96	19.79	19.78	5.00	20.20	19.93	19.89	19.99	19.83	1.80	20.20
		1	49	19.75	19.76	19.88	19.99	5.00	20.20	19.83	19.78	19.89	19.80	1.80	20.20
		1	99	19.73	19.84	19.94	19.80	5.00	20.20	19.86	19.93	19.70	19.94	1.80	20.20
		50	0	19.81	19.96	19.82	19.71	5.00	20.20	19.98	19.87	19.84	19.94	1.80	20.20
		50	24	19.86	19.73	19.77	19.70	5.00	20.20	19.75	19.73	19.93	19.95	1.80	20.20
		50	50	19.87	19.73	19.76	19.87	5.00	20.20	19.97	19.94	19.78	19.90	1.80	20.20
		100	0	19.94	19.73	19.73	19.93	5.00	20.20	19.90	19.97	19.84	19.75	1.80	20.20

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55315	55765	56215	56665	MPR	Tune-up Limit	55315	55765	56215	56665	MPR	Tune-up Limit
				3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz			3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz		
15 MHz	QPSK	1	0	24.65	24.79	24.71	24.50	0.00	25.20	21.60	21.69	21.58	21.34	0.00	22.00
		1	37	24.90	24.68	24.93	24.64	0.00	25.20	21.77	21.61	21.79	21.49	0.00	22.00
		1	74	24.78	24.93	24.69	24.43	0.00	25.20	21.66	21.83	21.59	21.31	0.00	22.00
		36	0	23.98	23.72	23.92	23.77	1.00	24.20	21.91	21.65	21.76	21.63	0.00	22.00
		36	20	23.94	23.71	23.97	23.74	1.00	24.20	21.88	21.70	21.89	21.67	0.00	22.00
		36	39	23.88	23.79	23.93	23.75	1.00	24.20	21.82	21.72	21.86	21.61	0.00	22.00
		75	0	23.89	23.72	23.88	23.70	1.00	24.20	21.79	21.65	21.78	21.59	0.00	22.00
	16QAM	1	0	23.80	23.79	23.80	23.63	1.00	24.20	21.76	21.67	21.74	21.51	0.00	22.00
		1	37	24.01	23.59	24.00	23.76	1.00	24.20	21.97	21.66	21.92	21.56	0.00	22.00
		1	74	23.85	23.97	23.79	23.57	1.00	24.20	21.82	21.92	21.72	21.42	0.00	22.00
		36	0	22.94	22.62	22.91	22.75	2.00	23.20	21.93	21.63	21.81	21.65	0.00	22.00
		36	20	22.96	22.54	22.98	22.78	2.00	23.20	21.89	21.64	21.91	21.65	0.00	22.00
		36	39	22.89	22.74	22.95	22.75	2.00	23.20	21.83	21.69	21.89	21.61	0.00	22.00
		75	0	22.89	22.72	22.91	22.71	2.00	23.20	21.80	21.70	21.85	21.60	0.00	22.00
	64QAM	1	0	22.55	22.69	22.61	22.40	2.00	23.20	21.88	21.70	21.89	21.67	0.00	22.00
		1	37	22.80	22.58	22.83	22.54	2.00	23.20	21.82	21.72	21.86	21.61	0.00	22.00
		1	74	22.68	22.83	22.59	22.33	2.00	23.20	21.79	21.65	21.78	21.59	0.00	22.00
		36	0	22.08	21.82	22.02	21.87	3.00	22.20	21.76	21.67	21.74	21.51	0.00	22.00
		36	20	22.04	21.81	22.07	21.84	3.00	22.20	21.97	21.66	21.92	21.56	0.00	22.00
		36	39	21.98	21.89	22.03	21.85	3.00	22.20	21.82	21.92	21.72	21.42	0.00	22.00
		75	0	21.99	21.82	21.98	21.80	3.00	22.20	21.93	21.63	21.81	21.65	0.00	22.00
	256QAM	1	0	19.98	19.96	19.77	19.96	5.00	20.20	19.83	19.71	19.74	19.83	1.80	20.20
		1	37	19.91	19.92	19.93	19.80	5.00	20.20	19.78	19.97	19.83	19.75	1.80	20.20
		1	74	19.91	19.75	19.99	19.85	5.00	20.20	19.97	19.82	19.79	19.96	1.80	20.20
		36	0	19.91	19.72	19.79	20.00	5.00	20.20	19.99	19.88	19.79	19.74	1.80	20.20
		36	20	19.71	19.81	19.90	19.83	5.00	20.20	19.77	19.90	19.82	19.92	1.80	20.20
		36	39	19.93	19.84	19.76	19.83	5.00	20.20	19.95	19.89	19.76	19.80	1.80	20.20
		75	0	19.70	19.75	19.72	19.70	5.00	20.20	19.98	19.98	19.84	19.73	1.80	20.20

Notes:

LTE Band 48 Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 48 Measured Results (ANT9) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55290	55757	56223	56690	MPR	Tune-up Limit	55290	55757	56223	56690	MPR	Tune-up Limit
				3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz			3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz		
10 MHz	QPSK	1	0	24.65	24.62	24.53	24.38	0.00	25.20	21.53	21.54	21.38	21.23	0.00	22.00
		1	25	24.96	24.97	24.88	24.70	0.00	25.20	21.86	21.89	21.73	21.55	0.00	22.00
		1	49	24.78	24.80	24.71	24.55	0.00	25.20	21.67	21.71	21.55	21.39	0.00	22.00
		25	0	23.95	23.98	23.82	23.68	1.00	24.20	21.83	21.88	21.70	21.57	0.00	22.00
		25	12	24.10	24.02	23.80	23.81	1.00	24.20	21.98	21.94	21.73	21.68	0.00	22.00
		25	25	23.97	24.01	23.95	23.79	1.00	24.20	21.88	21.94	21.83	21.67	0.00	22.00
		50	0	23.91	23.94	23.88	23.74	1.00	24.20	21.83	21.85	21.76	21.61	0.00	22.00
	16QAM	1	0	23.75	23.73	23.69	23.42	1.00	24.20	21.59	21.62	21.60	21.26	0.00	22.00
		1	25	24.06	24.05	23.94	23.74	1.00	24.20	21.92	21.95	21.83	21.59	0.00	22.00
		1	49	23.87	23.87	23.85	23.59	1.00	24.20	21.74	21.76	21.74	21.46	0.00	22.00
		25	0	22.94	22.99	22.85	22.67	2.00	23.20	21.89	21.90	21.78	21.59	0.00	22.00
		25	12	23.04	23.05	22.98	22.76	2.00	23.20	21.98	21.98	21.90	21.71	0.00	22.00
		25	25	22.97	23.03	22.94	22.76	2.00	23.20	21.90	21.95	21.87	21.68	0.00	22.00
		50	0	22.91	22.99	22.89	22.71	2.00	23.20	21.83	21.91	21.83	21.62	0.00	22.00
	64QAM	1	0	22.55	22.52	22.43	22.28	2.00	23.20	21.83	21.88	21.70	21.57	0.00	22.00
		1	25	22.86	22.87	22.78	22.60	2.00	23.20	21.98	21.94	21.73	21.68	0.00	22.00
		1	49	22.68	22.70	22.61	22.45	2.00	23.20	21.88	21.94	21.83	21.67	0.00	22.00
		25	0	22.05	22.08	21.92	21.78	3.00	22.20	21.83	21.85	21.76	21.61	0.00	22.00
		25	12	22.20	22.12	21.90	21.91	3.00	22.20	21.59	21.62	21.60	21.26	0.00	22.00
		25	25	22.07	22.11	22.05	21.89	3.00	22.20	21.92	21.95	21.83	21.59	0.00	22.00
		50	0	22.01	22.04	21.98	21.84	3.00	22.20	21.74	21.76	21.74	21.46	0.00	22.00
	256QAM	1	0	19.79	19.80	19.91	19.81	5.00	20.20	19.92	19.76	19.96	19.87	1.80	20.20
		1	25	19.80	19.81	19.95	19.83	5.00	20.20	19.90	19.83	19.76	19.85	1.80	20.20
		1	49	19.81	19.79	19.81	19.73	5.00	20.20	19.80	19.83	19.89	19.97	1.80	20.20
		25	0	19.94	19.74	19.97	19.89	5.00	20.20	19.73	19.80	19.82	19.89	1.80	20.20
		25	12	19.73	19.77	19.72	19.86	5.00	20.20	20.00	19.79	19.89	19.95	1.80	20.20
		25	25	19.72	19.97	19.77	19.81	5.00	20.20	19.96	19.93	19.90	19.86	1.80	20.20
		50	0	19.81	19.83	19.76	19.93	5.00	20.20	19.76	19.81	19.77	19.73	1.80	20.20

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55265	55748	56232	56715	MPR	Tune-up Limit	55265	55748	56232	56715	MPR	Tune-up Limit
				3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz			3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz		
5 MHz	QPSK	1	0	24.80	24.95	24.77	24.51	0.00	25.20	21.69	21.79	21.68	21.40	0.00	22.00
		1	12	24.94	25.04	24.93	24.64	0.00	25.20	21.81	21.94	21.79	21.55	0.00	22.00
		1	24	24.90	24.97	24.91	24.62	0.00	25.20	21.80	21.83	21.79	21.50	0.00	22.00
		12	0	23.97	24.07	23.94	23.57	1.00	24.20	21.87	21.98	21.77	21.57	0.00	22.00
		12	7	24.15	24.19	24.04	23.82	1.00	24.20	21.93	21.94	21.79	21.61	0.00	22.00
		12	13	24.13	24.18	23.98	23.76	1.00	24.20	21.88	21.93	21.78	21.62	0.00	22.00
		25	0	24.05	24.04	23.94	23.77	1.00	24.20	21.84	21.83	21.72	21.56	0.00	22.00
	16QAM	1	0	23.93	23.99	24.02	23.58	1.00	24.20	21.66	21.78	21.78	21.37	0.00	22.00
		1	12	24.04	24.13	24.18	23.72	1.00	24.20	21.82	21.89	21.97	21.49	0.00	22.00
		1	24	23.99	24.02	24.07	23.69	1.00	24.20	21.76	21.81	21.88	21.45	0.00	22.00
		12	0	23.07	22.96	23.04	22.63	2.00	23.20	21.87	21.78	21.84	21.46	0.00	22.00
		12	7	23.14	23.13	23.09	22.82	2.00	23.20	21.97	21.88	21.88	21.69	0.00	22.00
		12	13	23.12	23.12	23.11	22.80	2.00	23.20	21.96	21.91	21.87	21.68	0.00	22.00
		25	0	23.06	23.08	22.98	22.76	2.00	23.20	21.81	21.88	21.79	21.58	0.00	22.00
	64QAM	1	0	22.70	22.85	22.67	22.41	2.00	23.20	21.80	21.83	21.79	21.50	0.00	22.00
		1	12	22.84	22.94	22.83	22.54	2.00	23.20	21.87	21.98	21.77	21.57	0.00	22.00
		1	24	22.80	22.87	22.81	22.52	2.00	23.20	21.93	21.94	21.79	21.61	0.00	22.00
		12	0	22.07	22.17	22.04	21.67	3.00	22.20	21.88	21.93	21.78	21.62	0.00	22.00
		12	7	22.17	22.18	22.14	21.92	3.00	22.20	21.84	21.83	21.72	21.56	0.00	22.00
		12	13	22.18	22.13	22.08	21.86	3.00	22.20	21.66	21.78	21.78	21.37	0.00	22.00
		25	0	22.15	22.14	22.04	21.87	3.00	22.20	21.82	21.89	21.97	21.49	0.00	22.00
	256QAM	1	0	19.98	19.95	19.90	19.83	5.00	20.20	19.87	19.75	19.73	19.80	1.80	20.20
		1	12	19.76	19.98	19.81	19.76	5.00	20.20	19.72	19.87	19.93	19.76	1.80	20.20
		1	24	19.91	19.74	19.84	19.73	5.00	20.20	19.75	19.99	19.95	19.84	1.80	20.20
		12	0	19.97	19.70	19.71	19.72	5.00	20.20	19.77	19.76	19.90	19.93	1.80	20.20
		12	7	19.94	19.70	19.90	19.80	5.00	20.20	19.83	19.91	19.84	19.82	1.80	20.20
		12	13	19.71	19.75	19.98	19.98	5.00	20.20	19.86	19.83	19.80	19.71	1.80	20.20
		25	0	19.74	19.79	19.73	19.90	5.00	20.20	19.82	19.94	19.71	19.95	1.80	20.20

Notes:

LTE Band 48 Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 48 Measured Results (ANT4)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}						Power Mode B {dBm}					
				55340	55773	56207	56640	MPR	Tune-up Limit	55340	55773	56207	56640	MPR	Tune-up Limit
				3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz			3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz		
20 MHz	QPSK	1	0	21.61	21.62	21.45	21.41	0.00	21.75	22.01	22.02	21.85	21.81	0.00	22.70
		1	49	21.75	21.75	21.75	21.75	0.00	21.75	22.50	22.50	22.50	22.50	0.00	22.70
		1	99	21.61	21.44	21.52	21.27	0.00	21.75	22.01	21.84	21.92	21.70	0.00	22.70
		50	0	21.50	21.45	21.34	21.56	0.05	21.70	21.50	21.45	21.34	21.56	1.00	21.70
		50	24	21.70	21.70	21.70	21.70	0.05	21.70	21.50	21.50	21.50	21.50	1.00	21.70
		50	50	21.46	21.37	21.41	21.54	0.05	21.70	21.46	21.37	21.41	21.54	1.00	21.70
		100	0	21.47	21.40	21.70	21.56	0.05	21.70	21.47	21.40	21.50	21.56	1.00	21.70
	16QAM	1	0	21.33	21.18	20.94	21.43	0.05	21.70	21.33	21.18	20.94	21.43	1.00	21.70
		1	49	21.63	21.32	21.32	21.68	0.05	21.70	21.63	21.32	21.32	21.68	1.00	21.70
		1	99	21.30	20.95	20.99	21.28	0.05	21.70	21.30	20.95	20.99	21.28	1.00	21.70
		50	0	20.52	20.40	20.39	20.58	1.05	20.70	20.52	20.40	20.39	20.58	2.00	20.70
		50	24	20.59	20.47	20.50	20.66	1.05	20.70	20.59	20.47	20.50	20.66	2.00	20.70
		50	50	20.50	20.31	20.44	20.56	1.05	20.70	20.50	20.31	20.44	20.56	2.00	20.70
		100	0	20.48	20.40	20.38	20.53	1.05	20.70	20.48	20.40	20.38	20.53	2.00	20.70
	64QAM	1	0	20.33	20.18	19.94	20.43	1.05	20.70	20.33	20.18	19.94	20.43	2.00	20.70
		1	49	20.63	20.32	20.32	20.68	1.05	20.70	20.63	20.32	20.32	20.68	2.00	20.70
		1	99	20.30	19.95	19.99	20.28	1.05	20.70	20.30	19.95	19.99	20.28	2.00	20.70
		50	0	19.52	19.40	19.39	19.58	2.05	19.70	19.52	19.40	19.39	19.58	3.00	19.70
		50	24	19.59	19.47	19.50	19.66	2.05	19.70	19.59	19.47	19.50	19.66	3.00	19.70
		50	50	19.50	19.31	19.44	19.56	2.05	19.70	19.50	19.31	19.44	19.56	3.00	19.70
		100	0	19.48	19.40	19.38	19.53	2.05	19.70	19.48	19.40	19.38	19.53	3.00	19.70
	256QAM	1	0	17.57	17.37	17.37	17.46	4.05	17.70	17.31	17.50	17.45	17.52	5.00	17.70
		1	49	17.53	17.57	17.48	17.41	4.05	17.70	17.33	17.46	17.52	17.39	5.00	17.70
		1	99	17.59	17.58	17.32	17.32	4.05	17.70	17.53	17.55	17.54	17.53	5.00	17.70
		50	0	17.30	17.43	17.54	17.40	4.05	17.70	17.44	17.37	17.33	17.40	5.00	17.70
		50	24	17.31	17.42	17.46	17.31	4.05	17.70	17.32	17.55	17.40	17.37	5.00	17.70
		50	50	17.43	17.34	17.57	17.33	4.05	17.70	17.50	17.37	17.37	17.31	5.00	17.70
		100	0	17.51	17.49	17.41	17.47	4.05	17.70	17.35	17.40	17.36	17.51	5.00	17.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}						Power Mode B {dBm}					
				55315	55765	56215	56665	MPR	Tune-up Limit	55315	55765	56215	56665	MPR	Tune-up Limit
				3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz			3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz		
15 MHz	QPSK	1	0	21.32	21.53	21.34	21.29	0.00	21.75	21.92	22.13	21.94	21.89	0.00	22.70
		1	37	21.33	21.60	21.53	21.42	0.00	21.75	21.93	22.20	22.13	22.02	0.00	22.70
		1	74	21.55	21.39	21.33	21.24	0.00	21.75	22.15	21.99	21.93	21.84	0.00	22.70
		36	0	21.44	21.15	21.68	21.36	0.05	21.70	21.44	21.15	21.68	21.36	1.00	21.70
		36	20	21.65	21.19	21.04	21.38	0.05	21.70	21.65	21.19	21.04	21.38	1.00	21.70
		36	39	21.67	21.07	21.18	21.43	0.05	21.70	21.67	21.07	21.18	21.43	1.00	21.70
		75	0	21.59	21.10	21.11	21.38	0.05	21.70	21.59	21.10	21.11	21.38	1.00	21.70
	16QAM	1	0	21.55	20.88	21.08	21.37	0.05	21.70	21.55	20.88	21.08	21.37	1.00	21.70
		1	37	21.58	21.02	21.02	21.22	0.05	21.70	21.58	21.02	21.02	21.22	1.00	21.70
		1	74	21.66	21.55	21.56	21.45	0.05	21.70	21.66	21.55	21.56	21.45	1.00	21.70
		36	0	20.46	20.10	20.09	20.55	1.05	20.70	20.46	20.10	20.09	20.55	2.00	20.70
		36	20	20.57	20.17	20.20	20.66	1.05	20.70	20.57	20.17	20.20	20.66	2.00	20.70
		36	39	20.59	20.01	20.14	20.37	1.05	20.70	20.59	20.01	20.14	20.37	2.00	20.70
		75	0	20.61	20.10	20.08	20.33	1.05	20.70	20.61	20.10	20.08	20.33	2.00	20.70
	64QAM	1	0	20.55	19.88	20.08	20.37	1.05	20.70	20.55	19.88	20.08	20.37	2.00	20.70
		1	37	20.58	20.02	20.02	20.22	1.05	20.70	20.58	20.02	20.02	20.22	2.00	20.70
		1	74	20.66	20.55	20.56	20.45	1.05	20.70	20.66	20.55	20.56	20.45	2.00	20.70
		36	0	19.46	19.10	19.09	19.55	2.05	19.70	19.46	19.10	19.09	19.55	3.00	19.70
		36	20	19.57	19.17	19.20	19.66	2.05	19.70	19.57	19.17	19.20	19.66	3.00	19.70
		36	39	19.59	19.01	19.14	19.37	2.05	19.70	19.59	19.01	19.14	19.37	3.00	19.70
		75	0	19.61	19.10	19.08	19.33	2.05	19.70	19.61	19.10	19.08	19.33	3.00	19.70
	256QAM	1	0	17.37	17.51	17.31	17.42	4.05	17.70	17.45	17.35	17.37	17.54	5.00	17.70
		1	37	17.40	17.46	17.34	17.46	4.05	17.70	17.52	17.40	17.41	17.49	5.00	17.70
		1	74	17.46	17.41	17.32	17.32	4.05	17.70	17.35	17.54	17.51	17.39	5.00	17.70
		36	0	17.50	17.42	17.33	17.35	4.05	17.70	17.56	17.33	17.33	17.36	5.00	17.70
		36	20	17.56	17.34	17.32	17.55	4.05	17.70	17.45	17.36	17.31	17.40	5.00	17.70
		36	39	17.46	17.36	17.31	17.55	4.05	17.70	17.51	17.49	17.55	17.59	5.00	17.70
		75	0	17.48	17.60	17.47	17.32	4.05	17.70	17.40	17.50	17.40	17.36	5.00	17.70

Notes:

LTE Band 48 Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 48 Measured Results (ANT4) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}						Power Mode B {dBm}					
				55290	55757	56223	56690	MPR	Tune-up Limit	55290	55757	56223	56690	MPR	Tune-up Limit
				3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz			3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz		
10 MHz	QPSK	1	0	21.29	21.26	21.20	21.08	0.00	21.75	21.89	21.86	21.80	21.70	0.00	22.70
		1	25	21.64	21.63	21.56	21.43	0.00	21.75	22.24	22.23	22.16	22.03	0.00	22.70
		1	49	21.46	21.48	21.39	21.27	0.00	21.75	22.06	22.08	21.99	21.87	0.00	22.70
		25	0	21.20	21.15	21.68	21.46	0.05	21.70	21.20	21.15	21.68	21.46	1.00	21.70
		25	12	21.25	21.19	21.18	21.47	0.05	21.70	21.25	21.19	21.18	21.47	1.00	21.70
		25	25	21.16	21.07	21.11	21.59	0.05	21.70	21.16	21.07	21.11	21.59	1.00	21.70
		50	0	21.17	21.10	21.08	21.53	0.05	21.70	21.17	21.10	21.08	21.53	1.00	21.70
	16QAM	1	0	21.03	21.43	21.38	21.37	0.05	21.70	21.03	21.43	21.38	21.37	1.00	21.70
		1	25	21.33	21.02	21.69	21.57	0.05	21.70	21.33	21.02	21.69	21.57	1.00	21.70
		1	49	21.00	21.62	21.50	21.51	0.05	21.70	21.00	21.62	21.50	21.51	1.00	21.70
		25	0	20.22	20.10	20.69	20.39	1.05	20.70	20.22	20.10	20.69	20.39	2.00	20.70
		25	12	20.29	20.17	20.20	20.58	1.05	20.70	20.29	20.17	20.20	20.58	2.00	20.70
		25	25	20.20	20.01	20.14	20.63	1.05	20.70	20.20	20.01	20.14	20.63	2.00	20.70
		50	0	20.18	20.10	20.08	20.49	1.05	20.70	20.18	20.10	20.08	20.49	2.00	20.70
	64QAM	1	0	20.03	20.43	20.38	20.37	1.05	20.70	20.03	20.43	20.38	20.37	2.00	20.70
		1	25	20.33	20.02	20.69	20.57	1.05	20.70	20.33	20.02	20.69	20.57	2.00	20.70
		1	49	20.00	20.62	20.50	20.51	1.05	20.70	20.00	20.62	20.50	20.51	2.00	20.70
		25	0	19.22	19.10	19.69	19.39	2.05	19.70	19.22	19.10	19.69	19.39	3.00	19.70
		25	12	19.29	19.17	19.20	19.58	2.05	19.70	19.29	19.17	19.20	19.58	3.00	19.70
		25	25	19.20	19.01	19.14	19.63	2.05	19.70	19.20	19.01	19.14	19.63	3.00	19.70
		50	0	19.18	19.10	19.08	19.49	2.05	19.70	19.18	19.10	19.08	19.49	3.00	19.70
	256QAM	1	0	17.33	17.52	17.34	17.58	4.05	17.70	17.39	17.43	17.34	17.35	5.00	17.70
		1	25	17.43	17.39	17.35	17.43	4.05	17.70	17.46	17.60	17.34	17.59	5.00	17.70
		1	49	17.45	17.56	17.40	17.44	4.05	17.70	17.59	17.34	17.59	17.37	5.00	17.70
		25	0	17.35	17.33	17.46	17.41	4.05	17.70	17.33	17.44	17.42	17.42	5.00	17.70
		25	12	17.35	17.51	17.40	17.51	4.05	17.70	17.39	17.39	17.34	17.31	5.00	17.70
		25	25	17.42	17.30	17.54	17.54	4.05	17.70	17.54	17.46	17.31	17.31	5.00	17.70
		50	0	17.34	17.33	17.59	17.47	4.05	17.70	17.32	17.49	17.31	17.43	5.00	17.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}						Power Mode B {dBm}					
				55265	55748	56232	56715	MPR	Tune-up Limit	55265	55748	56232	56715	MPR	Tune-up Limit
				3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz			3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz		
5 MHz	QPSK	1	0	21.53	21.40	21.44	21.26	0.00	21.75	22.13	22.00	22.04	21.86	0.00	22.70
		1	12	21.71	21.60	21.59	21.37	0.00	21.75	22.31	22.20	22.19	21.97	0.00	22.70
		1	24	21.70	21.55	21.49	21.38	0.00	21.75	22.30	22.15	22.09	21.98	0.00	22.70
		12	0	21.20	21.15	21.04	21.52	0.05	21.70	21.20	21.15	21.04	21.52	1.00	21.70
		12	7	21.25	21.19	21.18	21.62	0.05	21.70	21.25	21.19	21.18	21.62	1.00	21.70
		12	13	21.16	21.07	21.11	21.66	0.05	21.70	21.16	21.07	21.11	21.66	1.00	21.70
		25	0	21.17	21.10	21.08	21.56	0.05	21.70	21.17	21.10	21.08	21.56	1.00	21.70
	16QAM	1	0	21.03	21.57	21.64	21.60	0.05	21.70	21.03	21.57	21.64	21.60	1.00	21.70
		1	12	21.33	20.88	21.66	21.02	0.05	21.70	21.33	20.88	21.66	21.02	1.00	21.70
		1	24	21.00	21.69	21.69	21.67	0.05	21.70	21.00	21.69	21.69	21.67	1.00	21.70
		12	0	20.22	20.10	20.68	20.60	1.05	20.70	20.22	20.10	20.68	20.60	2.00	20.70
		12	7	20.29	20.17	20.20	20.09	1.05	20.70	20.29	20.17	20.20	20.09	2.00	20.70
		12	13	20.20	20.01	20.14	20.20	1.05	20.70	20.20	20.01	20.14	20.20	2.00	20.70
		25	0	20.18	20.10	20.08	20.59	1.05	20.70	20.18	20.10	20.08	20.59	2.00	20.70
	64QAM	1	0	20.03	20.57	20.64	20.60	1.05	20.70	20.03	20.57	20.64	20.60	2.00	20.70
		1	12	20.33	19.88	20.66	20.02	1.05	20.70	20.33	19.88	20.66	20.02	2.00	20.70
		1	24	20.00	20.69	20.69	20.67	1.05	20.70	20.00	20.69	20.69	20.67	2.00	20.70
		12	0	19.22	19.10	19.68	19.60	2.05	19.70	19.22	19.10	19.68	19.60	3.00	19.70
		12	7	19.29	19.17	19.20	19.09	2.05	19.70	19.29	19.17	19.20	19.09	3.00	19.70
		12	13	19.20	19.01	19.14	19.20	2.05	19.70	19.20	19.01	19.14	19.20	3.00	19.70
		25	0	19.18	19.10	19.08	19.59	2.05	19.70	19.18	19.10	19.08	19.59	3.00	19.70
	256QAM	1	0	17.51	17.30	17.51	17.47	4.05	17.70	17.42	17.39	17.32	17.43	5.00	17.70
		1	12	17.48	17.44	17.54	17.34	4.05	17.70	17.42	17.56	17.56	17.58	5.00	17.70
		1	24	17.42	17.42	17.50	17.49	4.05	17.70	17.53	17.57	17.43	17.36	5.00	17.70
		12	0	17.49	17.34	17.47	17.56	4.05	17.70	17.42	17.49	17.46	17.39	5.00	17.70
		12	7	17.50	17.45	17.46	17.33	4.05	17.70	17.41	17.43	17.56	17.43	5.00	17.70
		12	13	17.36	17.55	17.45	17.41	4.05	17.70	17.59	17.58	17.52	17.42	5.00	17.70
		25	0	17.32	17.42	17.36	17.34	4.05	17.70	17.50	17.57	17.40	17.44	5.00	17.70

Notes:

LTE Band 48 Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132072.00	132322.00	132572.00	MPR	Tune-up Limit	132072.00	132322.00	132572.00	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	QPSK	1	0	24.74	24.89	24.88	0.00	25.70	16.48	16.38	16.62	0.00	17.25
		1	49	25.20	25.20	25.20	0.00	25.70	16.69	16.60	16.58	0.00	17.25
		1	99	24.70	24.84	24.71	0.00	25.70	16.37	16.33	16.51	0.00	17.25
		50	0	24.46	24.38	24.32	1.00	24.70	16.70	16.63	16.57	0.00	17.25
		50	24	24.50	24.50	24.50	1.00	24.70	16.79	16.74	16.62	0.00	17.25
		50	50	24.41	24.34	24.33	1.00	24.70	16.68	16.61	16.60	0.00	17.25
		100	0	24.48	24.50	24.29	1.00	24.70	16.71	16.68	16.53	0.00	17.25
	16QAM	1	0	24.38	24.26	24.50	1.00	24.70	17.12	16.82	17.21	0.00	17.25
		1	49	24.58	24.48	24.50	1.00	24.70	17.18	17.09	17.15	0.00	17.25
		1	99	24.26	24.20	24.50	1.00	24.70	16.80	16.79	17.07	0.00	17.25
		50	0	23.13	22.99	23.02	2.00	23.70	16.71	16.60	16.62	0.00	17.25
		50	24	23.22	23.08	23.03	2.00	23.70	16.83	16.72	16.66	0.00	17.25
		50	50	23.09	22.98	23.00	2.00	23.70	16.68	16.61	16.62	0.00	17.25
		100	0	23.14	23.06	22.98	2.00	23.70	16.73	16.68	16.58	0.00	17.25
	64QAM	1	0	23.38	23.26	23.60	2.00	23.70	16.37	16.33	16.51	0.00	17.25
		1	49	23.58	23.48	23.67	2.00	23.70	16.70	16.63	16.57	0.00	17.25
		1	99	23.26	23.20	23.50	2.00	23.70	16.79	16.74	16.62	0.00	17.25
		50	0	22.13	21.99	22.02	3.00	22.70	16.68	16.61	16.60	0.00	17.25
		50	24	22.22	22.08	22.03	3.00	22.70	16.71	16.68	16.53	0.00	17.25
		50	50	22.09	21.98	22.00	3.00	22.70	17.12	16.82	17.21	0.00	17.25
		100	0	22.14	22.06	21.98	3.00	22.70	17.18	17.09	17.15	0.00	17.25
	256QAM	1	0	19.73	19.75	19.93	5.00	20.70	16.74	16.81	16.75	0.00	17.25
		1	49	19.80	19.72	19.94	5.00	20.70	16.83	16.70	16.66	0.00	17.25
		1	99	19.95	19.98	19.93	5.00	20.70	16.79	16.87	16.70	0.00	17.25
		50	0	19.86	19.96	19.78	5.00	20.70	16.62	16.70	16.80	0.00	17.25
		50	24	20.00	19.74	19.96	5.00	20.70	16.89	16.60	16.82	0.00	17.25
		50	50	19.82	19.86	19.79	5.00	20.70	16.72	16.77	16.66	0.00	17.25
		100	0	19.77	19.85	19.71	5.00	20.70	16.62	16.87	16.68	0.00	17.25

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132047.00	132322.00	132597.00	MPR	Tune-up Limit	132047.00	132322.00	132597.00	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	24.91	24.80	24.92	0.00	25.70	16.65	16.56	16.61	0.00	17.25
		1	37	24.93	24.90	24.88	0.00	25.70	16.67	16.66	16.55	0.00	17.25
		1	74	24.79	24.71	24.80	0.00	25.70	16.52	16.50	16.51	0.00	17.25
		36	0	24.52	24.43	24.39	1.00	24.70	16.80	16.66	16.63	0.00	17.25
		36	20	24.56	24.47	24.49	1.00	24.70	16.80	16.75	16.70	0.00	17.25
		36	39	24.49	24.41	24.44	1.00	24.70	16.73	16.67	16.72	0.00	17.25
		75	0	24.49	24.43	24.33	1.00	24.70	16.73	16.68	16.57	0.00	17.25
	16QAM	1	0	24.47	24.49	24.05	1.00	24.70	17.03	16.99	16.58	0.00	17.25
		1	37	24.54	24.51	24.02	1.00	24.70	17.10	17.11	16.55	0.00	17.25
		1	74	24.38	24.31	23.96	1.00	24.70	16.94	16.94	16.51	0.00	17.25
		36	0	23.22	23.03	23.03	2.00	23.70	16.79	16.66	16.62	0.00	17.25
		36	20	23.28	23.11	23.10	2.00	23.70	16.86	16.71	16.71	0.00	17.25
		36	39	23.19	23.04	23.03	2.00	23.70	16.79	16.64	16.66	0.00	17.25
		75	0	23.21	23.06	22.98	2.00	23.70	16.79	16.69	16.68	0.00	17.25
	64QAM	1	0	23.47	23.49	23.40	2.00	23.70	16.80	16.75	16.70	0.00	17.25
		1	37	23.54	23.51	23.37	2.00	23.70	16.73	16.67	16.72	0.00	17.25
		1	74	23.38	23.31	23.31	2.00	23.70	16.73	16.68	16.57	0.00	17.25
		36	0	22.22	22.03	22.38	3.00	22.70	17.03	16.99	16.58	0.00	17.25
		36	20	22.63	22.46	22.45	3.00	22.70	16.67	16.66	16.55	0.00	17.25
		36	39	22.54	22.39	22.38	3.00	22.70	16.52	16.50	16.51	0.00	17.25
		75	0	22.56	22.41	22.33	3.00	22.70	16.80	16.66	16.63	0.00	17.25
	256QAM	1	0	19.72	19.77	19.89	5.00	20.70	16.80	16.85	16.72	0.00	17.25
		1	37	19.75	19.91	19.83	5.00	20.70	16.68	16.79	16.76	0.00	17.25
		1	74	19.77	19.99	19.94	5.00	20.70	16.72	16.71	16.79	0.00	17.25
		36	0	19.92	19.82	19.73	5.00	20.70	16.69	16.74	16.84	0.00	17.25
		36	20	19.92	19.99	19.88	5.00	20.70	16.63	16.61	16.62	0.00	17.25
		36	39	19.74	19.80	19.75	5.00	20.70	16.74	16.85	16.83	0.00	17.25
		75	0	19.95	19.96	19.91	5.00	20.70	16.67	16.72	16.85	0.00	17.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				132022.00	132322.00	132622.00			132022.00	132322.00	132622.00		
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	24.76	24.85	24.95	0.00	25.70	16.49	16.33	16.36	0.00	17.25
		1	25	24.95	25.12	25.14	0.00	25.70	16.76	16.61	16.60	0.00	17.25
		1	49	24.74	24.82	24.95	0.00	25.70	16.50	16.33	16.40	0.00	17.25
		25	0	24.46	24.62	24.61	1.00	24.70	16.71	16.63	16.61	0.00	17.25
		25	12	24.58	24.48	24.43	1.00	24.70	16.84	16.74	16.68	0.00	17.25
		25	25	24.44	24.39	24.36	1.00	24.70	16.72	16.65	16.61	0.00	17.25
		50	0	24.50	24.43	24.33	1.00	24.70	16.75	16.68	16.57	0.00	17.25
	16QAM	1	0	24.30	23.89	23.84	1.00	24.70	16.93	16.49	16.37	0.00	17.25
		1	25	24.56	24.09	23.99	1.00	24.70	17.16	16.69	16.59	0.00	17.25
		1	49	24.31	23.87	23.76	1.00	24.70	16.93	16.49	16.37	0.00	17.25
		25	0	23.12	23.13	23.04	2.00	23.70	16.78	16.72	16.66	0.00	17.25
		25	12	23.27	23.24	23.05	2.00	23.70	16.89	16.87	16.66	0.00	17.25
		25	25	23.15	23.12	23.03	2.00	23.70	16.79	16.78	16.70	0.00	17.25
		50	0	23.19	23.09	22.95	2.00	23.70	16.78	16.72	16.56	0.00	17.25
	64QAM	1	0	23.65	23.24	23.19	2.00	23.70	16.93	16.49	16.37	0.00	17.25
		1	25	23.66	23.44	23.34	2.00	23.70	17.16	16.69	16.59	0.00	17.25
		1	49	23.66	23.22	23.11	2.00	23.70	16.93	16.49	16.37	0.00	17.25
		25	0	22.47	22.48	22.39	3.00	22.70	16.78	16.72	16.66	0.00	17.25
		25	12	22.62	22.59	22.40	3.00	22.70	16.89	16.87	16.66	0.00	17.25
		25	25	22.50	22.47	22.38	3.00	22.70	16.84	16.74	16.68	0.00	17.25
		50	0	22.54	22.44	22.30	3.00	22.70	16.72	16.65	16.61	0.00	17.25
	256QAM	1	0	19.71	19.88	19.85	5.00	20.70	16.69	16.87	16.80	0.00	17.25
		1	25	19.92	19.86	19.75	5.00	20.70	16.89	16.82	16.80	0.00	17.25
		1	49	19.73	19.93	19.95	5.00	20.70	16.78	16.71	16.76	0.00	17.25
		25	0	19.97	19.98	19.99	5.00	20.70	16.73	16.69	16.64	0.00	17.25
		25	12	19.83	19.90	19.78	5.00	20.70	16.85	16.85	16.72	0.00	17.25
		25	25	19.73	19.80	19.99	5.00	20.70	16.66	16.68	16.63	0.00	17.25
		50	0	19.78	19.72	19.78	5.00	20.70	16.60	16.73	16.70	0.00	17.25

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				131997.00	132322.00	132647.00			131997.00	132322.00	132647.00		
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	25.01	25.01	24.87	0.00	25.70	16.77	16.73	16.65	0.00	17.25
		1	12	25.04	25.04	24.86	0.00	25.70	16.79	16.71	16.64	0.00	17.25
		1	24	24.96	24.96	24.77	0.00	25.70	16.71	16.66	16.56	0.00	17.25
		12	0	24.56	24.56	24.50	1.00	24.70	16.81	16.73	16.74	0.00	17.25
		12	7	24.59	24.59	24.48	1.00	24.70	16.90	16.79	16.75	0.00	17.25
		12	13	24.51	24.51	24.42	1.00	24.70	16.83	16.75	16.67	0.00	17.25
		25	0	24.56	24.56	24.46	1.00	24.70	16.85	16.73	16.73	0.00	17.25
	16QAM	1	0	24.33	24.33	24.59	1.00	24.70	16.99	16.84	17.12	0.00	17.25
		1	12	24.37	24.37	24.67	1.00	24.70	17.05	16.89	17.21	0.00	17.25
		1	24	24.28	24.28	24.57	1.00	24.70	16.96	16.83	17.18	0.00	17.25
		12	0	23.23	23.23	23.27	2.00	23.70	16.87	16.88	16.91	0.00	17.25
		12	7	23.30	23.30	23.27	2.00	23.70	16.95	16.87	16.90	0.00	17.25
		12	13	23.22	23.22	23.20	2.00	23.70	16.87	16.77	16.83	0.00	17.25
		25	0	23.16	23.16	23.13	2.00	23.70	16.79	16.75	16.77	0.00	17.25
	64QAM	1	0	23.33	23.33	23.59	2.00	23.70	16.99	16.84	17.12	0.00	17.25
		1	12	23.37	23.37	23.67	2.00	23.70	17.05	16.89	17.21	0.00	17.25
		1	24	23.28	23.28	23.57	2.00	23.70	16.96	16.83	17.18	0.00	17.25
		12	0	22.23	22.23	22.27	3.00	22.70	16.87	16.88	16.91	0.00	17.25
		12	7	22.30	22.30	22.27	3.00	22.70	16.95	16.87	16.90	0.00	17.25
		12	13	22.22	22.22	22.20	3.00	22.70	16.87	16.77	16.83	0.00	17.25
		25	0	22.16	22.16	22.13	3.00	22.70	16.79	16.75	16.77	0.00	17.25
	256QAM	1	0	19.92	19.76	19.74	5.00	20.70	16.76	16.74	16.82	0.00	17.25
		1	12	19.94	19.87	19.80	5.00	20.70	16.65	16.71	16.78	0.00	17.25
		1	24	19.97	19.87	19.84	5.00	20.70	16.64	16.85	16.73	0.00	17.25
		12	0	20.00	19.80	19.94	5.00	20.70	16.86	16.78	16.84	0.00	17.25
		12	7	19.83	19.86	19.96	5.00	20.70	16.65	16.85	16.64	0.00	17.25
		12	13	19.98	19.86	19.78	5.00	20.70	16.79	16.74	16.84	0.00	17.25
		25	0	19.97	19.82	19.85	5.00	20.70	16.87	16.87	16.88	0.00	17.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				131987.00	132322.00	132657.00			131987.00	132322.00	132657.00		
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	24.98	24.90	25.00	0.00	25.70	16.66	16.58	16.63	0.00	17.25
		1	8	24.96	24.90	24.91	0.00	25.70	16.56	16.49	16.55	0.00	17.25
		1	14	24.91	24.91	24.81	0.00	25.70	16.57	16.48	16.51	0.00	17.25
		8	0	24.61	24.52	24.48	1.00	24.70	16.76	16.67	16.67	0.00	17.25
		8	4	24.57	24.51	24.48	1.00	24.70	16.77	16.69	16.60	0.00	17.25
		8	7	24.59	24.50	24.49	1.00	24.70	16.79	16.64	16.60	0.00	17.25
		15	0	24.54	24.51	24.47	1.00	24.70	16.76	16.64	16.62	0.00	17.25
	16QAM	1	0	24.64	24.47	24.54	1.00	24.70	16.64	16.70	17.04	0.00	17.25
		1	8	24.58	24.46	24.49	1.00	24.70	16.57	16.65	16.97	0.00	17.25
		1	14	24.53	24.33	24.43	1.00	24.70	16.56	16.62	16.93	0.00	17.25
		8	0	23.61	23.63	23.24	2.00	23.70	16.87	16.72	16.72	0.00	17.25
		8	4	23.62	23.63	23.59	2.00	23.70	16.91	16.72	16.78	0.00	17.25
		8	7	23.61	23.61	23.60	2.00	23.70	16.85	16.71	16.74	0.00	17.25
		15	0	23.50	23.54	23.54	2.00	23.70	16.81	16.64	16.69	0.00	17.25
	64QAM	1	0	23.64	23.47	23.54	2.00	23.70	16.66	16.58	16.63	0.00	17.25
		1	8	23.58	23.46	23.49	2.00	23.70	16.56	16.49	16.55	0.00	17.25
		1	14	23.53	23.33	23.43	2.00	23.70	16.57	16.48	16.51	0.00	17.25
		8	0	22.61	22.63	22.24	3.00	22.70	16.76	16.67	16.67	0.00	17.25
		8	4	22.62	22.63	22.59	3.00	22.70	16.77	16.69	16.60	0.00	17.25
		8	7	22.61	22.61	22.60	3.00	22.70	16.79	16.64	16.60	0.00	17.25
		15	0	22.50	22.54	22.54	3.00	22.70	16.76	16.64	16.62	0.00	17.25
	256QAM	1	0	19.98	19.99	19.72	5.00	20.70	16.86	16.80	16.61	0.00	17.25
		1	8	19.92	19.70	19.98	5.00	20.70	16.85	16.90	16.82	0.00	17.25
		1	14	19.96	19.91	19.87	5.00	20.70	16.78	16.77	16.76	0.00	17.25
		8	0	19.94	19.79	19.88	5.00	20.70	16.87	16.80	16.75	0.00	17.25
		8	4	19.80	19.75	19.79	5.00	20.70	16.63	16.78	16.85	0.00	17.25
		8	7	19.82	19.85	19.71	5.00	20.70	16.82	16.74	16.88	0.00	17.25
		15	0	19.95	19.94	19.90	5.00	20.70	16.85	16.67	16.66	0.00	17.25

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				131979.00	132322.00	132665.00			131979.00	132322.00	132665.00		
				1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	25.00	24.90	24.80	0.00	25.70	16.61	16.60	16.48	0.00	17.25
		1	3	25.00	24.93	24.88	0.00	25.70	16.67	16.57	16.51	0.00	17.25
		1	5	24.95	24.84	24.76	0.00	25.70	16.57	16.50	16.41	0.00	17.25
		3	0	24.91	24.90	24.79	0.00	25.70	16.64	16.50	16.42	0.00	17.25
		3	1	24.96	24.93	24.83	0.00	25.70	16.63	16.53	16.47	0.00	17.25
		3	3	24.95	24.90	24.80	0.00	25.70	16.63	16.49	16.46	0.00	17.25
		6	0	24.51	24.42	24.39	1.00	24.70	16.65	16.56	16.54	0.00	17.25
	16QAM	1	0	24.64	24.49	24.45	1.00	24.70	17.07	16.70	16.60	0.00	17.25
		1	3	24.70	24.49	24.47	1.00	24.70	17.08	16.78	16.61	0.00	17.25
		1	5	24.61	24.43	24.42	1.00	24.70	17.02	16.66	16.59	0.00	17.25
		3	0	24.55	24.65	24.56	1.00	24.70	16.85	16.66	16.73	0.00	17.25
		3	1	24.63	24.65	24.62	1.00	24.70	16.91	16.66	16.78	0.00	17.25
		3	3	24.61	24.62	24.59	1.00	24.70	16.91	16.66	16.75	0.00	17.25
		6	0	23.66	23.31	23.57	2.00	23.70	16.62	16.74	16.74	0.00	17.25
	64QAM	1	0	23.64	23.49	23.45	2.00	23.70	16.57	16.50	16.41	0.00	17.25
		1	3	23.70	23.49	23.47	2.00	23.70	16.64	16.50	16.42	0.00	17.25
		1	5	23.61	23.43	23.42	2.00	23.70	16.63	16.53	16.47	0.00	17.25
		3	0	23.55	23.65	23.56	2.00	23.70	16.63	16.49	16.46	0.00	17.25
		3	1	23.63	23.65	23.62	2.00	23.70	16.65	16.56	16.54	0.00	17.25
		3	3	23.61	23.62	23.59	2.00	23.70	17.07	16.70	16.60	0.00	17.25
		6	0	22.66	22.31	22.57	3.00	22.70	17.08	16.78	16.61	0.00	17.25
	256QAM	1	0	19.78	19.95	19.88	5.00	20.70	16.83	16.78	16.72	0.00	17.25
		1	3	19.75	19.92	19.81	5.00	20.70	16.90	16.81	16.64	0.00	17.25
		1	5	19.89	19.85	19.90	5.00	20.70	16.79	16.71	16.73	0.00	17.25
		3	0	19.76	19.72	19.92	5.00	20.70	16.80	16.77	16.76	0.00	17.25
		3	1	19.94	19.85	19.97	5.00	20.70	16.83	16.64	16.67	0.00	17.25
		3	3	19.97	19.71	19.78	5.00	20.70	16.68	16.85	16.60	0.00	17.25
		6	0	19.93	19.88	19.84	5.00	20.70	16.83	16.70	16.71	0.00	17.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132072.00	132322.00	132572.00	MPR	Tune-up Limit	132072.00	132322.00	132572.00	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	QPSK	1	0	20.52	20.33	20.57	0.00	21.00	19.90	19.69	19.90	0.00	20.25
		1	49	20.90	20.90	20.90	0.00	21.00	20.15	19.95	19.95	0.00	20.25
		1	99	20.41	20.26	20.46	0.00	21.00	19.79	19.64	19.79	0.00	20.25
		50	0	20.76	20.55	20.48	0.00	21.00	19.32	19.33	19.34	0.00	20.25
		50	24	20.90	20.90	20.90	0.00	21.00	20.15	19.95	19.95	0.00	20.25
		50	50	20.69	20.54	20.50	0.00	21.00	19.45	19.30	19.33	0.00	20.25
		100	0	20.76	20.90	20.44	0.00	21.00	19.49	19.95	19.28	0.00	20.25
	16QAM	1	0	20.73	20.76	20.75	0.00	21.00	19.53	19.59	19.53	0.00	20.25
		1	49	20.72	20.73	20.74	0.00	21.00	19.83	19.65	19.49	0.00	20.25
		1	99	20.65	20.77	20.71	0.00	21.00	19.38	19.50	19.42	0.00	20.25
		50	0	20.44	20.32	20.21	0.00	21.00	19.53	19.37	19.51	0.00	20.25
		50	24	20.52	20.43	20.24	0.00	21.00	19.60	19.48	19.57	0.00	20.25
		50	50	20.38	20.29	20.22	0.00	21.00	19.46	19.35	19.53	0.00	20.25
		100	0	20.48	20.36	20.16	0.00	21.00	19.51	19.40	19.53	0.00	20.25
	64QAM	1	0	20.44	20.32	20.21	0.00	21.00	19.60	19.48	19.57	0.00	20.25
		1	49	20.52	20.43	20.24	0.00	21.00	19.46	19.35	19.53	0.00	20.25
		1	99	20.38	20.29	20.22	0.00	21.00	19.51	19.40	19.53	0.00	20.25
		50	0	19.48	19.36	19.16	0.90	20.10	19.53	19.41	19.21	0.15	20.10
		50	24	19.44	19.32	19.21	0.90	20.10	19.49	19.37	19.26	0.15	20.10
		50	50	19.52	19.43	19.24	0.90	20.10	19.57	19.48	19.29	0.15	20.10
		100	0	19.38	19.29	19.22	0.90	20.10	19.43	19.34	19.27	0.15	20.10
	256QAM	1	0	17.60	17.40	17.39	2.90	18.10	17.53	17.38	17.53	2.15	18.10
		1	49	17.39	17.42	17.41	2.90	18.10	17.38	17.33	17.49	2.15	18.10
		1	99	17.53	17.34	17.35	2.90	18.10	17.43	17.45	17.43	2.15	18.10
		50	0	17.43	17.39	17.57	2.90	18.10	17.52	17.59	17.58	2.15	18.10
		50	24	17.36	17.54	17.31	2.90	18.10	17.44	17.58	17.39	2.15	18.10
		50	50	17.48	17.30	17.43	2.90	18.10	17.37	17.30	17.56	2.15	18.10
		100	0	17.43	17.46	17.51	2.90	18.10	17.36	17.53	17.59	2.15	18.10

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132047.00	132322.00	132597.00	MPR	Tune-up Limit	132047.00	132322.00	132597.00	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	20.69	20.46	20.59	0.00	21.00	19.74	19.62	19.74	0.00	20.25
		1	37	20.73	20.49	20.49	0.00	21.00	19.84	19.65	19.67	0.00	20.25
		1	74	20.54	20.31	20.47	0.00	21.00	19.70	19.47	19.64	0.00	20.25
		36	0	20.79	20.62	20.55	0.00	21.00	19.35	19.38	19.30	0.00	20.25
		36	20	20.85	20.67	20.56	0.00	21.00	19.42	19.42	19.29	0.00	20.25
		36	39	20.77	20.59	20.57	0.00	21.00	19.52	19.34	19.30	0.00	20.25
		75	0	20.77	20.62	20.47	0.00	21.00	19.53	19.35	19.28	0.00	20.25
	16QAM	1	0	20.71	20.27	20.50	0.00	21.00	19.68	19.30	19.65	0.00	20.25
		1	37	20.66	20.32	20.74	0.00	21.00	19.71	19.34	19.55	0.00	20.25
		1	74	20.62	20.15	20.70	0.00	21.00	19.52	19.44	19.46	0.00	20.25
		36	0	20.39	20.22	20.18	0.00	21.00	19.60	19.37	19.57	0.00	20.25
		36	20	20.43	20.28	20.19	0.00	21.00	19.67	19.44	19.58	0.00	20.25
		36	39	20.36	20.21	20.19	0.00	21.00	19.57	19.34	19.58	0.00	20.25
		75	0	20.41	20.23	20.12	0.00	21.00	19.61	19.39	19.53	0.00	20.25
	64QAM	1	0	20.43	20.28	20.19	0.00	21.00	19.52	19.44	19.46	0.00	20.25
		1	37	20.36	20.21	20.19	0.00	21.00	19.60	19.37	19.57	0.00	20.25
		1	74	20.41	20.23	20.12	0.00	21.00	19.67	19.44	19.58	0.00	20.25
		36	0	19.41	19.23	19.12	0.90	20.10	19.56	19.38	19.27	0.15	20.10
		36	20	19.43	19.28	19.19	0.90	20.10	19.58	19.43	19.34	0.15	20.10
		36	39	19.36	19.21	19.19	0.90	20.10	19.51	19.36	19.34	0.15	20.10
		75	0	19.41	19.23	19.12	0.90	20.10	19.56	19.38	19.27	0.15	20.10
	256QAM	1	0	17.37	17.39	17.57	2.90	18.10	17.38	17.42	17.59	2.15	18.10
		1	37	17.56	17.34	17.39	2.90	18.10	17.60	17.51	17.44	2.15	18.10
		1	74	17.40	17.53	17.51	2.90	18.10	17.39	17.57	17.31	2.15	18.10
		36	0	17.38	17.51	17.54	2.90	18.10	17.52	17.49	17.45	2.15	18.10
		36	20	17.44	17.57	17.30	2.90	18.10	17.38	17.49	17.51	2.15	18.10
		36	39	17.49	17.56	17.51	2.90	18.10	17.60	17.45	17.32	2.15	18.10
		75	0	17.57	17.60	17.49	2.90	18.10	17.46	17.40	17.51	2.15	18.10

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132022.00	132322.00	132622.00	MPR	Tune-up Limit	132022.00	132322.00	132622.00	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	20.49	20.36	20.32	0.00	21.00	19.70	19.53	19.43	0.00	20.25
		1	25	20.70	20.56	20.51	0.00	21.00	19.87	19.73	19.62	0.00	20.25
		1	49	20.40	20.35	20.32	0.00	21.00	19.67	19.52	19.38	0.00	20.25
		25	0	20.79	20.56	20.48	0.00	21.00	19.78	19.53	19.45	0.00	20.25
		25	12	20.85	20.70	20.52	0.00	21.00	19.82	19.67	19.50	0.00	20.25
		25	25	20.72	20.60	20.51	0.00	21.00	19.69	19.56	19.47	0.00	20.25
		50	0	20.77	20.63	20.48	0.00	21.00	19.72	19.59	19.44	0.00	20.25
	16QAM	1	0	20.60	20.37	20.68	0.00	21.00	19.69	19.31	19.29	0.00	20.25
		1	25	20.77	20.54	20.96	0.00	21.00	19.92	19.50	19.54	0.00	20.25
		1	49	20.51	20.34	20.73	0.00	21.00	19.69	19.29	19.27	0.00	20.25
		25	0	20.69	20.39	20.33	0.00	21.00	19.42	19.35	19.34	0.00	20.25
		25	12	20.75	20.49	20.39	0.00	21.00	19.46	19.45	19.40	0.00	20.25
		25	25	20.64	20.39	20.37	0.00	21.00	19.33	19.36	19.38	0.00	20.25
		50	0	20.60	20.38	20.29	0.00	21.00	19.38	19.35	19.25	0.00	20.25
	64QAM	1	0	20.75	20.49	20.39	0.00	21.00	19.52	19.59	19.44	0.00	20.25
		1	25	20.64	20.39	20.37	0.00	21.00	19.69	19.31	19.29	0.00	20.25
		1	49	20.60	20.38	20.29	0.00	21.00	19.92	19.50	19.54	0.00	20.25
		25	0	19.60	19.38	19.29	0.90	20.10	19.35	19.33	19.24	0.15	20.10
		25	12	19.75	19.49	19.39	0.90	20.10	19.70	19.44	19.34	0.15	20.10
		25	25	19.64	19.39	19.37	0.90	20.10	19.59	19.34	19.32	0.15	20.10
		50	0	19.60	19.38	19.29	0.90	20.10	19.55	19.33	19.24	0.15	20.10
	256QAM	1	0	17.60	17.30	17.33	2.90	18.10	17.51	17.46	17.44	2.15	18.10
		1	25	17.50	17.50	17.57	2.90	18.10	17.43	17.52	17.52	2.15	18.10
		1	49	17.38	17.56	17.53	2.90	18.10	17.35	17.51	17.59	2.15	18.10
		25	0	17.59	17.55	17.45	2.90	18.10	17.33	17.58	17.47	2.15	18.10
		25	12	17.50	17.57	17.45	2.90	18.10	17.52	17.47	17.47	2.15	18.10
		25	25	17.44	17.42	17.37	2.90	18.10	17.45	17.38	17.46	2.15	18.10
		50	0	17.57	17.39	17.36	2.90	18.10	17.39	17.55	17.52	2.15	18.10
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				131997.00	132322.00	132647.00	MPR	Tune-up Limit	131997.00	132322.00	132647.00	MPR	Tune-up Limit
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	20.61	20.49	20.33	0.00	21.00	19.71	19.77	19.79	0.00	20.25
		1	12	20.62	20.49	20.28	0.00	21.00	19.80	19.85	19.73	0.00	20.25
		1	24	20.55	20.43	20.23	0.00	21.00	19.82	19.80	19.66	0.00	20.25
		12	0	20.69	20.51	20.42	0.00	21.00	19.42	19.43	19.41	0.00	20.25
		12	7	20.69	20.49	20.44	0.00	21.00	19.40	19.42	19.42	0.00	20.25
		12	13	20.64	20.39	20.35	0.00	21.00	19.56	19.40	19.33	0.00	20.25
		25	0	20.67	20.46	20.37	0.00	21.00	19.59	19.41	19.36	0.00	20.25
	16QAM	1	0	20.74	20.60	20.71	0.00	21.00	19.70	19.36	19.31	0.00	20.25
		1	12	20.75	20.57	20.76	0.00	21.00	19.73	19.33	19.28	0.00	20.25
		1	24	20.73	20.56	20.75	0.00	21.00	19.67	19.33	19.34	0.00	20.25
		12	0	20.34	20.21	20.15	0.00	21.00	19.59	19.58	19.74	0.00	20.25
		12	7	20.35	20.17	20.17	0.00	21.00	19.55	19.56	19.75	0.00	20.25
		12	13	20.29	20.08	20.10	0.00	21.00	19.52	19.46	19.69	0.00	20.25
		25	0	20.21	20.08	20.05	0.00	21.00	19.45	19.46	19.62	0.00	20.25
	64QAM	1	0	20.35	20.17	20.17	0.00	21.00	19.59	19.58	19.74	0.00	20.25
		1	12	20.29	20.08	20.10	0.00	21.00	19.55	19.56	19.75	0.00	20.25
		1	24	20.21	20.08	20.05	0.00	21.00	19.52	19.46	19.69	0.00	20.25
		12	0	19.41	19.28	19.25	0.90	20.10	19.56	19.43	19.40	0.15	20.10
		12	7	19.55	19.37	19.37	0.90	20.10	19.70	19.52	19.52	0.15	20.10
		12	13	19.49	19.28	19.30	0.90	20.10	19.64	19.43	19.45	0.15	20.10
		25	0	19.41	19.28	19.25	0.90	20.10	19.56	19.43	19.40	0.15	20.10
	256QAM	1	0	17.31	17.54	17.30	2.90	18.10	17.40	17.57	17.33	2.15	18.10
		1	12	17.60	17.32	17.59	2.90	18.10	17.30	17.39	17.36	2.15	18.10
		1	24	17.33	17.44	17.36	2.90	18.10	17.57	17.45	17.41	2.15	18.10
		12	0	17.58	17.54	17.49	2.90	18.10	17.39	17.35	17.55	2.15	18.10
		12	7	17.40	17.58	17.39	2.90	18.10	17.43	17.51	17.53	2.15	18.10
		12	13	17.35	17.44	17.40	2.90	18.10	17.51	17.51	17.43	2.15	18.10
		25	0	17.45	17.47	17.45	2.90	18.10	17.34	17.58	17.50	2.15	18.10

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				131987.00	132322.00	132657.00	MPR	Tune-up Limit	131987.00	132322.00	132657.00	MPR	Tune-up Limit
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	20.73	20.54	20.59	0.00	21.00	19.85	19.85	19.82	0.00	20.25
		1	8	20.68	20.51	20.52	0.00	21.00	19.85	19.82	19.73	0.00	20.25
		1	14	20.66	20.50	20.47	0.00	21.00	19.78	19.82	19.65	0.00	20.25
		8	0	20.83	20.68	20.61	0.00	21.00	19.41	19.43	19.37	0.00	20.25
		8	4	20.85	20.68	20.60	0.00	21.00	19.42	19.47	19.37	0.00	20.25
		8	7	20.84	20.67	20.56	0.00	21.00	19.62	19.46	19.38	0.00	20.25
		15	0	20.83	20.64	20.61	0.00	21.00	19.62	19.42	19.34	0.00	20.25
	16QAM	1	0	20.89	20.56	20.82	0.00	21.00	19.78	19.49	19.54	0.00	20.25
		1	8	20.81	20.54	20.93	0.00	21.00	19.72	19.41	19.41	0.00	20.25
		1	14	20.80	20.50	20.93	0.00	21.00	19.71	19.37	19.39	0.00	20.25
		8	0	20.53	20.39	20.27	0.00	21.00	19.76	19.57	19.72	0.00	20.25
		8	4	20.49	20.39	20.31	0.00	21.00	19.72	19.56	19.75	0.00	20.25
		8	7	20.50	20.37	20.30	0.00	21.00	19.73	19.56	19.69	0.00	20.25
		15	0	20.39	20.28	20.23	0.00	21.00	19.64	19.45	19.59	0.00	20.25
	64QAM	1	0	20.49	20.39	20.31	0.00	21.00	19.72	19.41	19.41	0.00	20.25
		1	8	20.50	20.37	20.30	0.00	21.00	19.71	19.37	19.39	0.00	20.25
		1	14	20.39	20.28	20.23	0.00	21.00	19.76	19.57	19.72	0.00	20.25
		8	0	19.39	19.28	19.23	0.90	20.10	19.54	19.43	19.38	0.15	20.10
		8	4	19.49	19.39	19.31	0.90	20.10	19.64	19.54	19.46	0.15	20.10
		8	7	19.50	19.37	19.30	0.90	20.10	19.65	19.52	19.45	0.15	20.10
		15	0	19.39	19.28	19.23	0.90	20.10	19.54	19.43	19.38	0.15	20.10
	256QAM	1	0	17.56	17.47	17.57	2.90	18.10	17.58	17.57	17.55	2.15	18.10
		1	8	17.59	17.47	17.36	2.90	18.10	17.48	17.48	17.47	2.15	18.10
		1	14	17.48	17.39	17.44	2.90	18.10	17.34	17.44	17.38	2.15	18.10
		8	0	17.32	17.34	17.53	2.90	18.10	17.59	17.38	17.34	2.15	18.10
		8	4	17.39	17.44	17.40	2.90	18.10	17.43	17.56	17.31	2.15	18.10
		8	7	17.47	17.37	17.42	2.90	18.10	17.35	17.39	17.31	2.15	18.10
		15	0	17.47	17.53	17.40	2.90	18.10	17.46	17.33	17.57	2.15	18.10

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				131979.00	132322.00	132665.00	MPR	Tune-up Limit	131979.00	132322.00	132665.00	MPR	Tune-up Limit
				1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	20.59	20.36	20.22	0.00	21.00	19.81	19.88	19.71	0.00	20.25
		1	3	20.61	20.38	20.26	0.00	21.00	19.83	19.84	19.74	0.00	20.25
		1	5	20.52	20.27	20.18	0.00	21.00	19.73	19.79	19.65	0.00	20.25
		3	0	20.69	20.54	20.41	0.00	21.00	19.70	19.64	19.57	0.00	20.25
		3	1	20.73	20.56	20.42	0.00	21.00	19.72	19.69	19.59	0.00	20.25
		3	3	20.72	20.57	20.43	0.00	21.00	19.80	19.66	19.60	0.00	20.25
		6	0	20.58	20.36	20.29	0.00	21.00	19.51	19.32	19.46	0.00	20.25
	16QAM	1	0	20.71	20.79	20.33	0.00	21.00	19.73	19.56	19.39	0.00	20.25
		1	3	20.77	20.77	20.36	0.00	21.00	19.75	19.66	19.41	0.00	20.25
		1	5	20.65	20.71	20.29	0.00	21.00	19.67	19.52	19.36	0.00	20.25
		3	0	20.25	20.17	20.09	0.00	21.00	19.72	19.39	19.74	0.00	20.25
		3	1	20.30	20.22	20.12	0.00	21.00	19.75	19.44	19.77	0.00	20.25
		3	3	20.25	20.20	20.12	0.00	21.00	19.74	19.42	19.77	0.00	20.25
		6	0	20.71	20.29	20.46	0.00	21.00	19.37	19.39	19.64	0.00	20.25
	64QAM	1	0	20.90	20.82	20.72	0.00	21.00	19.93	19.99	19.85	0.00	20.25
		1	3	20.85	20.80	20.72	0.00	21.00	19.60	19.54	19.47	0.00	20.25
		1	5	20.71	20.29	20.46	0.00	21.00	19.62	19.59	19.49	0.00	20.25
		3	0	20.31	20.10	20.06	0.00	21.00	19.56	19.30	19.31	0.00	20.25
		3	1	20.50	20.42	20.32	0.00	21.00	19.75	19.67	19.57	0.00	20.25
		3	3	20.45	20.40	20.32	0.00	21.00	19.70	19.65	19.57	0.00	20.25
		6	0	19.71	19.29	19.46	0.90	20.10	19.56	19.14	19.31	0.15	20.10
	256QAM	1	0	17.46	17.36	17.36	2.90	18.10	17.36	17.31	17.57	2.15	18.10
		1	3	17.57	17.59	17.40	2.90	18.10	17.48	17.42	17.47	2.15	18.10
		1	5	17.40	17.44	17.43	2.90	18.10	17.45	17.42	17.48	2.15	18.10
		3	0	17.38	17.32	17.34	2.90	18.10	17.42	17.53	17.31	2.15	18.10
		3	1	17.60	17.51	17.47	2.90	18.10	17.52	17.53	17.46	2.15	18.10
		3	3	17.37	17.57	17.54	2.90	18.10	17.49	17.47	17.41	2.15	18.10
		6	0	17.34	17.46	17.46	2.90	18.10	17.53	17.46	17.33	2.15	18.10

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT3)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132072	132322	132572	MPR	Tune-up Limit	132072	132322	132572	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	QPSK	1	0	23.74	23.75	24.03	0.00	24.70	19.33	19.31	19.50	0.00	20.25
		1	49	24.20	24.20	24.20	0.00	24.70	19.75	19.75	19.75	0.00	20.25
		1	99	23.77	23.72	23.88	0.00	24.70	19.30	19.25	19.38	0.00	20.25
		50	0	23.05	23.00	22.96	1.00	23.70	19.58	19.54	19.47	0.00	20.25
		50	24	23.50	23.50	23.50	1.00	23.70	19.75	19.75	19.75	0.00	20.25
		50	50	23.04	23.01	22.92	1.00	23.70	19.58	19.55	19.45	0.00	20.25
		100	0	23.08	23.50	22.88	1.00	23.70	19.62	19.75	19.40	0.00	20.25
	16QAM	1	0	23.21	23.32	23.50	1.00	23.70	19.53	19.35	19.63	0.00	20.25
		1	49	23.50	23.50	23.38	1.00	23.70	19.57	19.60	19.45	0.00	20.25
		1	99	23.22	23.31	23.32	1.00	23.70	19.47	19.33	19.41	0.00	20.25
		50	0	22.01	22.04	21.97	2.00	22.70	19.63	19.53	19.50	0.00	20.25
		50	24	22.14	22.16	21.99	2.00	22.70	19.73	19.67	19.51	0.00	20.25
		50	50	22.03	22.04	21.96	2.00	22.70	19.61	19.53	19.47	0.00	20.25
		100	0	22.07	22.08	21.90	2.00	22.70	19.67	19.57	19.43	0.00	20.25
	64QAM	1	0	21.74	21.75	22.03	2.00	22.70	19.33	19.31	19.50	0.00	20.25
		1	49	21.98	22.00	21.94	2.00	22.70	19.61	19.52	19.48	0.00	20.25
		1	99	21.77	21.72	21.88	2.00	22.70	19.30	19.25	19.38	0.00	20.25
		50	0	21.05	21.00	20.96	3.00	21.70	19.67	19.53	19.61	0.00	20.25
		50	24	21.17	21.14	20.98	3.00	21.70	19.43	19.33	19.30	0.00	20.25
		50	50	21.04	21.01	20.92	3.00	21.70	19.53	19.47	19.31	0.00	20.25
		100	0	21.08	21.08	20.88	3.00	21.70	19.41	19.33	19.27	0.00	20.25
	256QAM	1	0	18.97	18.98	19.16	5.00	19.70	19.04	19.11	19.05	0.55	19.70
		1	49	19.08	19.15	19.19	5.00	19.70	19.02	19.15	18.94	0.55	19.70
		1	99	18.99	19.11	19.08	5.00	19.70	19.15	18.91	18.90	0.55	19.70
		50	0	18.99	18.95	19.19	5.00	19.70	19.10	19.07	19.07	0.55	19.70
		50	24	19.05	19.18	18.98	5.00	19.70	18.99	19.06	19.19	0.55	19.70
		50	50	19.12	19.08	18.93	5.00	19.70	18.92	19.02	19.20	0.55	19.70
		100	0	18.95	19.02	18.95	5.00	19.70	19.05	19.05	19.18	0.55	19.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132047.00	132322.00	132597.00	MPR	Tune-up Limit	132047.00	132322.00	132597.00	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	23.99	23.96	24.03	0.00	24.70	19.51	19.46	19.59	0.00	20.25
		1	37	24.05	24.01	23.94	0.00	24.70	19.55	19.51	19.53	0.00	20.25
		1	74	23.91	23.81	23.90	0.00	24.70	19.43	19.35	19.44	0.00	20.25
		36	0	23.11	23.06	23.00	1.00	23.70	19.63	19.58	19.55	0.00	20.25
		36	20	23.17	23.13	23.09	1.00	23.70	19.70	19.67	19.62	0.00	20.25
		36	39	23.11	23.07	23.00	1.00	23.70	19.64	19.59	19.53	0.00	20.25
		75	0	23.10	23.09	22.96	1.00	23.70	19.63	19.60	19.47	0.00	20.25
	16QAM	1	0	23.39	22.94	23.44	1.00	23.70	19.52	19.25	19.65	0.00	20.25
		1	37	23.48	23.02	23.42	1.00	23.70	19.60	19.25	19.59	0.00	20.25
		1	74	23.43	22.82	23.32	1.00	23.70	19.69	19.25	19.74	0.00	20.25
		36	0	22.09	22.04	22.02	2.00	22.70	19.48	19.37	19.33	0.00	20.25
		36	20	22.15	22.12	22.12	2.00	22.70	19.56	19.47	19.39	0.00	20.25
		36	39	22.08	22.04	22.01	2.00	22.70	19.49	19.39	19.31	0.00	20.25
		75	0	22.11	22.07	21.97	2.00	22.70	19.50	19.41	19.28	0.00	20.25
	64QAM	1	0	21.99	21.96	22.03	2.00	22.70	19.51	19.46	19.59	0.00	20.25
		1	37	22.05	22.01	21.94	2.00	22.70	19.55	19.51	19.53	0.00	20.25
		1	74	21.91	21.81	21.90	2.00	22.70	19.43	19.35	19.44	0.00	20.25
		36	0	21.51	21.46	21.40	3.00	21.70	19.63	19.58	19.55	0.00	20.25
		36	20	21.57	21.53	21.49	3.00	21.70	19.70	19.67	19.62	0.00	20.25
		36	39	21.51	21.47	21.40	3.00	21.70	19.64	19.59	19.53	0.00	20.25
		75	0	21.50	21.49	21.36	3.00	21.70	19.63	19.60	19.47	0.00	20.25
	256QAM	1	0	18.97	18.95	18.95	5.00	19.70	18.99	19.15	19.05	0.55	19.70
		1	37	19.07	19.04	19.00	5.00	19.70	19.12	19.00	19.17	0.55	19.70
		1	74	19.19	18.97	19.04	5.00	19.70	19.13	19.01	19.19	0.55	19.70
		36	0	18.95	19.01	18.91	5.00	19.70	19.15	19.08	18.99	0.55	19.70
		36	20	19.04	19.03	19.02	5.00	19.70	19.07	19.13	19.14	0.55	19.70
		36	39	18.95	19.02	19.13	5.00	19.70	19.07	19.05	19.18	0.55	19.70
		75	0	18.91	19.11	18.94	5.00	19.70	19.06	19.07	18.95	0.55	19.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT3) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132022.00	132322.00	132622.00	MPR	Tune-up Limit	132022.00	132322.00	132622.00	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	23.75	23.91	23.79	0.00	24.70	19.41	19.36	19.49	0.00	20.25
		1	25	24.02	24.10	24.00	0.00	24.70	19.45	19.41	19.43	0.00	20.25
		1	49	23.83	23.90	23.76	0.00	24.70	19.33	19.25	19.34	0.00	20.25
		25	0	23.12	23.02	22.95	1.00	23.70	19.53	19.48	19.45	0.00	20.25
		25	12	23.18	23.18	23.02	1.00	23.70	19.60	19.57	19.52	0.00	20.25
		25	25	23.06	23.08	23.01	1.00	23.70	19.54	19.49	19.43	0.00	20.25
		50	0	23.09	23.07	22.96	1.00	23.70	19.53	19.50	19.37	0.00	20.25
	16QAM	1	0	22.91	22.87	23.21	1.00	23.70	19.52	19.27	19.65	0.00	20.25
		1	25	23.11	23.06	23.44	1.00	23.70	19.60	19.31	19.59	0.00	20.25
		1	49	22.89	22.83	23.18	1.00	23.70	19.49	19.25	19.54	0.00	20.25
		25	0	22.20	22.06	21.99	2.00	22.70	19.48	19.37	19.33	0.00	20.25
		25	12	22.25	22.19	22.08	2.00	22.70	19.56	19.47	19.39	0.00	20.25
		25	25	22.15	22.07	22.02	2.00	22.70	19.49	19.39	19.31	0.00	20.25
		50	0	22.12	22.07	21.97	2.00	22.70	19.50	19.41	19.28	0.00	20.25
	64QAM	1	0	21.75	21.91	21.79	2.00	22.70	19.41	19.36	19.49	0.00	20.25
		1	25	22.02	22.10	22.00	2.00	22.70	19.45	19.41	19.43	0.00	20.25
		1	49	21.83	21.90	21.76	2.00	22.70	19.33	19.25	19.34	0.00	20.25
		25	0	21.32	21.22	21.15	3.00	21.70	19.53	19.48	19.45	0.00	20.25
		25	12	21.38	21.38	21.22	3.00	21.70	19.60	19.57	19.52	0.00	20.25
		25	25	21.26	21.28	21.21	3.00	21.70	19.54	19.49	19.43	0.00	20.25
		50	0	21.29	21.27	21.16	3.00	21.70	19.53	19.50	19.37	0.00	20.25
	256QAM	1	0	18.94	19.01	19.04	5.00	19.70	18.94	18.90	18.90	0.55	19.70
		1	25	19.13	19.00	18.91	5.00	19.70	18.99	19.02	19.14	0.55	19.70
		1	49	19.20	18.93	18.92	5.00	19.70	19.03	18.92	18.91	0.55	19.70
		25	0	19.16	19.16	19.17	5.00	19.70	18.94	19.15	19.03	0.55	19.70
		25	12	19.15	19.02	19.09	5.00	19.70	19.12	18.96	19.02	0.55	19.70
		25	25	19.07	19.19	19.18	5.00	19.70	19.04	18.92	18.92	0.55	19.70
		50	0	19.16	19.10	19.11	5.00	19.70	19.00	19.11	18.95	0.55	19.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				131997.00	132322.00	132647.00	MPR	Tune-up Limit	131997.00	132322.00	132647.00	MPR	Tune-up Limit
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	24.10	24.16	24.01	0.00	24.70	19.29	19.37	19.31	0.00	20.25
		1	12	24.18	24.19	23.96	0.00	24.70	19.33	19.36	19.30	0.00	20.25
		1	24	24.07	24.12	23.87	0.00	24.70	19.28	19.30	19.25	0.00	20.25
		12	0	23.24	23.18	23.08	1.00	23.70	19.44	19.43	19.37	0.00	20.25
		12	7	23.23	23.19	23.07	1.00	23.70	19.45	19.38	19.33	0.00	20.25
		12	13	23.15	23.12	22.99	1.00	23.70	19.40	19.36	19.28	0.00	20.25
		25	0	23.16	23.13	23.09	1.00	23.70	19.44	19.38	19.31	0.00	20.25
	16QAM	1	0	23.28	23.30	23.62	1.00	23.70	19.88	19.49	19.45	0.00	20.25
		1	12	23.30	23.29	23.58	1.00	23.70	19.89	19.51	19.45	0.00	20.25
		1	24	23.24	23.26	23.51	1.00	23.70	19.86	19.46	19.37	0.00	20.25
		12	0	22.24	22.25	22.23	2.00	22.70	19.59	19.51	19.38	0.00	20.25
		12	7	22.28	22.28	22.26	2.00	22.70	19.60	19.47	19.35	0.00	20.25
		12	13	22.21	22.21	22.16	2.00	22.70	19.54	19.44	19.28	0.00	20.25
		25	0	22.12	22.14	22.13	2.00	22.70	19.48	19.38	19.25	0.00	20.25
	64QAM	1	0	22.10	22.16	22.01	2.00	22.70	19.29	19.37	19.31	0.00	20.25
		1	12	22.18	22.19	21.96	2.00	22.70	19.33	19.36	19.30	0.00	20.25
		1	24	22.07	22.12	21.87	2.00	22.70	19.28	19.30	19.25	0.00	20.25
		12	0	20.99	20.87	20.77	3.00	21.70	19.44	19.43	19.37	0.00	20.25
		12	7	20.88	20.88	20.72	3.00	21.70	19.45	19.38	19.33	0.00	20.25
		12	13	20.76	20.78	20.71	3.00	21.70	19.40	19.36	19.28	0.00	20.25
		25	0	20.79	20.77	20.71	3.00	21.70	19.44	19.38	19.31	0.00	20.25
	256QAM	1	0	18.94	19.12	18.95	5.00	19.70	19.02	19.00	18.95	0.55	19.70
		1	12	19.01	19.03	19.16	5.00	19.70	19.03	19.16	19.03	0.55	19.70
		1	24	19.01	18.94	18.94	5.00	19.70	19.17	19.07	19.03	0.55	19.70
		12	0	19.14	18.98	18.92	5.00	19.70	18.97	19.00	19.19	0.55	19.70
		12	7	19.16	19.20	19.13	5.00	19.70	19.11	19.04	19.01	0.55	19.70
		12	13	19.01	19.19	19.11	5.00	19.70	18.93	18.93	19.18	0.55	19.70
		25	0	19.05	19.06	18.93	5.00	19.70	18.95	19.01	19.07	0.55	19.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT3) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				131987.00	132322.00	132657.00			131987.00	132322.00	132657.00		
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	24.09	24.08	24.08	0.00	24.70	19.45	19.38	19.37	0.00	20.25
		1	8	24.07	24.06	23.99	0.00	24.70	19.44	19.30	19.25	0.00	20.25
		1	14	24.01	24.04	23.96	0.00	24.70	19.38	19.34	19.25	0.00	20.25
		8	0	23.22	23.16	23.09	1.00	23.70	19.54	19.48	19.43	0.00	20.25
		8	4	23.23	23.16	23.03	1.00	23.70	19.51	19.49	19.41	0.00	20.25
		8	7	23.17	23.18	23.02	1.00	23.70	19.55	19.47	19.41	0.00	20.25
		15	0	23.20	23.12	23.03	1.00	23.70	19.54	19.47	19.39	0.00	20.25
	16QAM	1	0	23.24	23.13	23.50	1.00	23.70	19.90	19.38	19.48	0.00	20.25
		1	8	23.16	23.09	23.40	1.00	23.70	19.83	19.33	19.37	0.00	20.25
		1	14	23.13	23.04	23.33	1.00	23.70	19.81	19.31	19.32	0.00	20.25
		8	0	22.23	22.28	22.17	2.00	22.70	19.63	19.60	19.44	0.00	20.25
		8	4	22.24	22.30	22.14	2.00	22.70	19.62	19.61	19.43	0.00	20.25
		8	7	22.27	22.27	22.15	2.00	22.70	19.63	19.60	19.44	0.00	20.25
		15	0	22.13	22.18	22.07	2.00	22.70	19.56	19.51	19.30	0.00	20.25
	64QAM	1	0	22.09	22.08	22.08	2.00	22.70	19.45	19.38	19.37	0.00	20.25
		1	8	22.07	22.06	21.99	2.00	22.70	19.44	19.30	19.25	0.00	20.25
		1	14	22.01	22.04	21.96	2.00	22.70	19.38	19.34	19.25	0.00	20.25
		8	0	21.42	21.36	21.29	3.00	21.70	19.54	19.48	19.43	0.00	20.25
		8	4	21.43	21.36	21.23	3.00	21.70	19.51	19.49	19.41	0.00	20.25
		8	7	21.37	21.38	21.22	3.00	21.70	19.55	19.47	19.41	0.00	20.25
		15	0	21.40	21.32	21.23	3.00	21.70	19.54	19.47	19.39	0.00	20.25
	256QAM	1	0	19.08	19.06	19.04	5.00	19.70	18.97	19.07	19.15	0.55	19.70
		1	8	18.92	19.02	18.99	5.00	19.70	19.03	19.01	19.11	0.55	19.70
		1	14	18.93	18.96	18.94	5.00	19.70	18.94	19.11	18.98	0.55	19.70
		8	0	19.08	18.94	19.00	5.00	19.70	18.97	19.06	19.07	0.55	19.70
		8	4	19.00	19.00	19.02	5.00	19.70	18.96	18.97	18.92	0.55	19.70
		8	7	19.06	19.07	19.19	5.00	19.70	18.98	19.09	18.98	0.55	19.70
		15	0	19.02	18.97	19.15	5.00	19.70	18.97	19.17	19.05	0.55	19.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			MPR	Tune-up Limit	Power Mode B (dBm)			MPR	Tune-up Limit
				131979.00	132322.00	132665.00			131979.00	132322.00	132665.00		
				1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	24.11	24.07	23.89	0.00	24.70	19.60	19.58	19.42	0.00	20.25
		1	3	24.17	24.12	23.93	0.00	24.70	19.66	19.62	19.47	0.00	20.25
		1	5	24.07	23.98	23.84	0.00	24.70	19.56	19.56	19.34	0.00	20.25
		3	0	24.32	24.37	24.17	0.00	24.70	19.60	19.49	19.36	0.00	20.25
		3	1	24.38	24.38	24.23	0.00	24.70	19.60	19.53	19.42	0.00	20.25
		3	3	24.37	24.34	24.19	0.00	24.70	19.60	19.55	19.40	0.00	20.25
		6	0	23.13	23.07	22.98	1.00	23.70	19.63	19.59	19.46	0.00	20.25
	16QAM	1	0	23.27	23.53	23.04	1.00	23.70	19.71	19.45	19.25	0.00	20.25
		1	3	23.31	23.53	23.03	1.00	23.70	19.70	19.51	19.25	0.00	20.25
		1	5	23.23	23.45	23.00	1.00	23.70	19.66	19.34	19.25	0.00	20.25
		3	0	23.17	23.28	23.16	1.00	23.70	19.51	19.36	19.33	0.00	20.25
		3	1	23.24	23.31	23.22	1.00	23.70	19.54	19.39	19.39	0.00	20.25
		3	3	23.19	23.27	23.18	1.00	23.70	19.55	19.39	19.35	0.00	20.25
		6	0	22.27	21.99	22.15	2.00	22.70	19.26	19.45	19.35	0.00	20.25
	64QAM	1	0	22.11	22.07	21.89	2.00	22.70	19.60	19.58	19.42	0.00	20.25
		1	3	22.17	22.12	21.93	2.00	22.70	19.66	19.62	19.47	0.00	20.25
		1	5	22.07	21.98	21.84	2.00	22.70	19.56	19.56	19.34	0.00	20.25
		3	0	22.02	22.07	21.87	2.00	22.70	19.60	19.49	19.36	0.00	20.25
		3	1	22.08	22.08	21.93	2.00	22.70	19.60	19.53	19.42	0.00	20.25
		3	3	22.07	22.04	21.89	2.00	22.70	19.60	19.55	19.40	0.00	20.25
		6	0	21.68	21.61	21.55	3.00	21.70	19.63	19.59	19.46	0.00	20.25
	256QAM	1	0	18.99	19.08	19.19	5.00	19.70	19.05	19.07	18.98	0.55	19.70
		1	3	18.98	18.96	19.03	5.00	19.70	19.10	19.09	19.14	0.55	19.70
		1	5	19.02	19.07	18.94	5.00	19.70	19.03	19.18	19.18	0.55	19.70
		3	0	19.07	18.98	18.93	5.00	19.70	19.20	18.94	19.17	0.55	19.70
		3	1	18.95	18.99	19.16	5.00	19.70	19.11	19.07	19.13	0.55	19.70
		3	3	18.93	18.96	19.04	5.00	19.70	18.99	19.15	18.92	0.55	19.70
		6	0	18.98	19.09	18.94	5.00	19.70	19.06	19.13	19.04	0.55	19.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT4)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				132072.00	132322.00	132572.00	MPR	Tune-up Limit	132072.00	132322.00	132572.00	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	QPSK	1	0	19.69	19.47	19.74	0.00	20.00	21.49	21.27	21.54	0.00	21.75
		1	49	20.00	20.00	20.00	0.00	20.00	21.75	21.75	21.75	0.00	21.75
		1	99	19.54	19.44	19.68	0.00	20.00	21.34	21.24	21.48	0.00	21.75
		50	0	19.83	19.65	19.65	0.00	20.00	21.08	20.90	20.90	0.05	21.70
		50	24	20.00	20.00	20.00	0.00	20.00	21.65	21.65	21.65	0.05	21.70
		50	50	19.79	19.66	19.68	0.00	20.00	21.04	20.91	20.93	0.05	21.70
		100	0	19.84	20.00	19.63	0.00	20.00	21.09	21.65	20.88	0.05	21.70
	16QAM	1	0	19.59	19.27	19.70	0.00	20.00	21.24	20.92	21.35	0.05	21.70
		1	49	19.69	19.51	19.65	0.00	20.00	21.34	21.16	21.30	0.05	21.70
		1	99	19.39	19.27	19.72	0.00	20.00	21.04	20.92	21.37	0.05	21.70
		50	0	19.40	19.17	19.24	0.00	20.00	20.05	19.82	19.89	1.05	20.70
		50	24	19.49	19.30	19.29	0.00	20.00	20.14	19.95	19.94	1.05	20.70
		50	50	19.35	19.19	19.25	0.00	20.00	20.00	19.84	19.90	1.05	20.70
		100	0	19.40	19.23	19.21	0.00	20.00	20.05	19.88	19.86	1.05	20.70
	64QAM	1	0	19.69	19.47	19.74	0.00	20.00	20.34	20.12	20.39	1.05	20.70
		1	49	19.91	19.70	19.72	0.00	20.00	20.56	20.35	20.37	1.05	20.70
		1	99	19.54	19.44	19.68	0.00	20.00	20.19	20.09	20.33	1.05	20.70
		50	0	19.19	18.97	19.24	0.30	19.70	19.34	19.12	19.39	2.05	19.70
		50	24	19.41	19.20	19.22	0.30	19.70	19.56	19.35	19.37	2.05	19.70
		50	50	19.04	18.94	19.18	0.30	19.70	19.19	19.09	19.33	2.05	19.70
		100	0	19.33	19.15	19.15	0.30	19.70	19.48	19.30	19.30	2.05	19.70
	256QAM	1	0	17.34	17.39	17.37	2.30	17.70	17.30	17.19	17.11	4.05	17.70
		1	49	17.12	17.32	17.34	2.30	17.70	17.16	17.30	17.31	4.05	17.70
		1	99	17.24	17.37	17.34	2.30	17.70	17.13	17.16	17.34	4.05	17.70
		50	0	17.14	17.25	17.11	2.30	17.70	17.29	17.12	17.32	4.05	17.70
		50	24	17.36	17.37	17.26	2.30	17.70	17.16	17.35	17.33	4.05	17.70
		50	50	17.30	17.25	17.29	2.30	17.70	17.16	17.31	17.10	4.05	17.70
		100	0	17.30	17.19	17.24	2.30	17.70	17.34	17.31	17.36	4.05	17.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				132047.00	132322.00	132597.00	MPR	Tune-up Limit	132047.00	132322.00	132597.00	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	19.86	19.64	19.79	0.00	20.00	21.66	21.44	21.59	0.00	21.75
		1	37	19.86	19.73	19.74	0.00	20.00	21.66	21.53	21.54	0.00	21.75
		1	74	19.71	19.60	19.74	0.00	20.00	21.51	21.40	21.54	0.00	21.75
		36	0	19.93	19.69	19.73	0.00	20.00	21.18	20.94	20.98	0.05	21.70
		36	20	19.94	19.77	19.80	0.00	20.00	21.19	21.02	21.05	0.05	21.70
		36	39	19.85	19.70	19.76	0.00	20.00	21.10	20.95	21.01	0.05	21.70
		75	0	19.86	19.69	19.68	0.00	20.00	21.11	20.94	20.93	0.05	21.70
	16QAM	1	0	19.64	19.45	19.15	0.00	20.00	21.29	21.10	20.80	0.05	21.70
		1	37	19.69	19.50	19.15	0.00	20.00	21.34	21.15	20.80	0.05	21.70
		1	74	19.51	19.36	19.22	0.00	20.00	21.16	21.01	20.87	0.05	21.70
		36	0	19.55	19.22	19.27	0.00	20.00	20.20	19.87	19.92	1.05	20.70
		36	20	19.53	19.29	19.35	0.00	20.00	20.18	19.94	20.00	1.05	20.70
		36	39	19.45	19.24	19.28	0.00	20.00	20.10	19.89	19.93	1.05	20.70
		75	0	19.46	19.26	19.22	0.00	20.00	20.11	19.91	19.87	1.05	20.70
	64QAM	1	0	19.86	19.64	19.79	0.00	20.00	20.51	20.29	20.44	1.05	20.70
		1	37	19.86	19.73	19.74	0.00	20.00	20.51	20.38	20.39	1.05	20.70
		1	74	19.71	19.60	19.74	0.00	20.00	20.36	20.25	20.39	1.05	20.70
		36	0	19.36	19.14	19.29	0.30	19.70	19.31	19.09	19.24	2.05	19.70
		36	20	19.36	19.23	19.24	0.30	19.70	19.31	19.18	19.19	2.05	19.70
		36	39	19.21	19.10	19.24	0.30	19.70	19.16	19.05	19.19	2.05	19.70
		75	0	19.43	19.19	19.23	0.30	19.70	19.38	19.14	19.18	2.05	19.70
	256QAM	1	0	17.38	17.32	17.30	2.30	17.70	17.25	17.13	17.11	4.05	17.70
		1	37	17.11	17.25	17.20	2.30	17.70	17.15	17.14	17.11	4.05	17.70
		1	74	17.17	17.39	17.20	2.30	17.70	17.38	17.26	17.33	4.05	17.70
		36	0	17.31	17.26	17.23	2.30	17.70	17.30	17.25	17.32	4.05	17.70
		36	20	17.37	17.39	17.12	2.30	17.70	17.31	17.39	17.19	4.05	17.70
		36	39	17.24	17.22	17.36	2.30	17.70	17.21	17.40	17.20	4.05	17.70
		75	0	17.14	17.39	17.31	2.30	17.70	17.32	17.15	17.14	4.05	17.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT4) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				132022.00	132322.00	132622.00	MPR	Tune-up Limit	132022.00	132322.00	132622.00	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	19.70	19.40	19.50	0.00	20.00	21.50	21.20	21.30	0.00	21.75
		1	25	19.91	19.70	19.75	0.00	20.00	21.71	21.50	21.55	0.00	21.75
		1	49	19.69	19.40	19.61	0.00	20.00	21.49	21.20	21.41	0.00	21.75
		25	0	19.84	19.72	19.68	0.00	20.00	21.09	20.97	20.93	0.05	21.70
		25	12	19.94	19.77	19.73	0.00	20.00	21.19	21.02	20.98	0.05	21.70
		25	25	19.84	19.65	19.72	0.00	20.00	21.09	20.90	20.97	0.05	21.70
		50	0	19.85	19.68	19.66	0.00	20.00	21.10	20.93	20.91	0.05	21.70
	16QAM	1	0	19.68	19.14	19.12	0.00	20.00	21.13	20.79	20.77	0.05	21.70
		1	25	19.91	19.34	19.36	0.00	20.00	21.36	20.99	21.01	0.05	21.70
		1	49	19.65	19.13	19.19	0.00	20.00	21.10	20.78	20.84	0.05	21.70
		25	0	19.42	19.36	19.26	0.00	20.00	19.87	20.01	19.91	1.05	20.70
		25	12	19.53	19.42	19.30	0.00	20.00	19.98	20.07	19.95	1.05	20.70
		25	25	19.44	19.33	19.31	0.00	20.00	19.89	19.98	19.96	1.05	20.70
		50	0	19.45	19.27	19.19	0.00	20.00	19.90	19.92	19.84	1.05	20.70
	64QAM	1	0	19.70	19.40	19.50	0.00	20.00	20.15	19.85	19.95	1.05	20.70
		1	25	19.91	19.70	19.75	0.00	20.00	20.36	20.15	20.20	1.05	20.70
		1	49	19.69	19.40	19.61	0.00	20.00	20.14	19.85	20.06	1.05	20.70
		25	0	19.20	18.90	19.00	0.30	19.70	19.15	18.85	18.95	2.05	19.70
		25	12	19.41	19.20	19.25	0.30	19.70	19.36	19.15	19.20	2.05	19.70
		25	25	19.19	18.90	19.11	0.30	19.70	19.14	18.85	19.06	2.05	19.70
		50	0	19.34	19.22	19.18	0.30	19.70	19.29	19.17	19.13	2.05	19.70
	256QAM	1	0	17.34	17.32	17.35	2.30	17.70	17.12	17.24	17.31	4.05	17.70
		1	25	17.23	17.13	17.32	2.30	17.70	17.25	17.36	17.25	4.05	17.70
		1	49	17.13	17.32	17.29	2.30	17.70	17.31	17.29	17.18	4.05	17.70
		25	0	17.32	17.27	17.17	2.30	17.70	17.27	17.11	17.20	4.05	17.70
		25	12	17.16	17.13	17.10	2.30	17.70	17.32	17.23	17.36	4.05	17.70
		25	25	17.17	17.28	17.37	2.30	17.70	17.16	17.18	17.17	4.05	17.70
		50	0	17.30	17.20	17.23	2.30	17.70	17.14	17.34	17.18	4.05	17.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}					Power Mode B {dBm}				
				131997.00	132322.00	132647.00	MPR	Tune-up Limit	131997.00	132322.00	132647.00	MPR	Tune-up Limit
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	19.90	19.80	19.77	0.00	20.00	21.70	21.60	21.57	0.00	21.75
		1	12	19.93	19.81	19.75	0.00	20.00	21.73	21.61	21.55	0.00	21.75
		1	24	19.84	19.74	19.68	0.00	20.00	21.64	21.54	21.48	0.00	21.75
		12	0	19.93	19.77	19.82	0.00	20.00	21.18	21.02	21.07	0.05	21.70
		12	7	19.92	19.78	19.85	0.00	20.00	21.17	21.03	21.10	0.05	21.70
		12	13	19.85	19.71	19.76	0.00	20.00	21.10	20.96	21.01	0.05	21.70
		25	0	19.94	19.75	19.81	0.00	20.00	21.19	21.00	21.06	0.05	21.70
	16QAM	1	0	19.48	19.31	19.79	0.00	20.00	20.93	20.76	21.24	0.05	21.70
		1	12	19.50	19.32	19.82	0.00	20.00	20.95	20.77	21.27	0.05	21.70
		1	24	19.43	19.26	19.72	0.00	20.00	20.88	20.71	21.17	0.05	21.70
		12	0	19.60	19.40	19.51	0.00	20.00	20.05	19.85	19.96	1.05	20.70
		12	7	19.57	19.44	19.52	0.00	20.00	20.02	19.89	19.97	1.05	20.70
		12	13	19.50	19.35	19.48	0.00	20.00	19.95	19.80	19.93	1.05	20.70
		25	0	19.44	19.32	19.43	0.00	20.00	19.89	19.77	19.88	1.05	20.70
	64QAM	1	0	19.90	19.80	19.77	0.00	20.00	20.35	20.25	20.22	1.05	20.70
		1	12	19.93	19.81	19.75	0.00	20.00	20.38	20.26	20.20	1.05	20.70
		1	24	19.84	19.74	19.68	0.00	20.00	20.29	20.19	20.13	1.05	20.70
		12	0	19.40	19.30	19.27	0.30	19.70	19.35	19.25	19.22	2.05	19.70
		12	7	19.43	19.31	19.25	0.30	19.70	19.38	19.26	19.20	2.05	19.70
		12	13	19.34	19.24	19.18	0.30	19.70	19.29	19.19	19.13	2.05	19.70
		25	0	19.43	19.27	19.32	0.30	19.70	19.38	19.22	19.27	2.05	19.70
	256QAM	1	0	17.13	17.14	17.29	2.30	17.70	17.23	17.12	17.35	4.05	17.70
		1	12	17.12	17.27	17.34	2.30	17.70	17.17	17.17	17.33	4.05	17.70
		1	24	17.15	17.11	17.29	2.30	17.70	17.27	17.38	17.25	4.05	17.70
		12	0	17.22	17.20	17.38	2.30	17.70	17.30	17.22	17.11	4.05	17.70
		12	7	17.25	17.22	17.36	2.30	17.70	17.18	17.14	17.35	4.05	17.70
		12	13	17.35	17.30	17.37	2.30	17.70	17.30	17.33	17.35	4.05	17.70
		25	0	17.28	17.26	17.24	2.30	17.70	17.36	17.38	17.30	4.05	17.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Band 66 Measured Results (ANT4) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}			MPR	Tune-up Limit	Power Mode B {dBm}			MPR	Tune-up Limit
				131987.00	132322.00	132657.00			131987.00	132322.00	132657.00		
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	19.72	19.42	19.52	0.00	20.00	21.52	21.22	21.32	0.00	21.75
		1	8	19.93	19.72	19.77	0.00	20.00	21.73	21.52	21.57	0.00	21.75
		1	14	19.71	19.42	19.63	0.00	20.00	21.51	21.22	21.43	0.00	21.75
		8	0	19.86	19.74	19.70	0.00	20.00	21.11	20.99	20.95	0.05	21.70
		8	4	19.94	19.79	19.75	0.00	20.00	21.19	21.04	21.00	0.05	21.70
		8	7	19.86	19.67	19.74	0.00	20.00	21.11	20.92	20.99	0.05	21.70
		15	0	19.87	19.70	19.68	0.00	20.00	21.12	20.95	20.93	0.05	21.70
	16QAM	1	0	19.70	19.16	19.14	0.00	20.00	21.15	20.81	20.79	0.05	21.70
		1	8	19.93	19.36	19.38	0.00	20.00	21.38	21.01	21.03	0.05	21.70
		1	14	19.67	19.15	19.21	0.00	20.00	21.12	20.80	20.86	0.05	21.70
		8	0	19.44	19.38	19.28	0.00	20.00	19.89	20.03	19.93	1.05	20.70
		8	4	19.55	19.44	19.32	0.00	20.00	20.00	20.09	19.97	1.05	20.70
		8	7	19.46	19.35	19.33	0.00	20.00	19.91	20.00	19.98	1.05	20.70
		15	0	19.47	19.29	19.21	0.00	20.00	19.92	19.94	19.86	1.05	20.70
	64QAM	1	0	19.72	19.42	19.52	0.00	20.00	20.17	19.87	19.97	1.05	20.70
		1	8	19.93	19.72	19.77	0.00	20.00	20.38	20.17	20.22	1.05	20.70
		1	14	19.71	19.42	19.63	0.00	20.00	20.16	19.87	20.08	1.05	20.70
		8	0	19.22	18.92	19.02	0.30	19.70	19.17	18.87	18.97	2.05	19.70
		8	4	19.43	19.22	19.27	0.30	19.70	19.38	19.17	19.22	2.05	19.70
		8	7	19.21	18.92	19.13	0.30	19.70	19.16	18.87	19.08	2.05	19.70
		15	0	19.36	19.24	19.20	0.30	19.70	19.31	19.19	19.15	2.05	19.70
	256QAM	1	0	17.37	17.23	17.21	2.30	17.70	17.13	17.10	17.12	4.05	17.70
		1	8	17.25	17.15	17.21	2.30	17.70	17.21	17.30	17.20	4.05	17.70
		1	14	17.29	17.36	17.30	2.30	17.70	17.34	17.20	17.16	4.05	17.70
		8	0	17.30	17.34	17.36	2.30	17.70	17.30	17.16	17.27	4.05	17.70
		8	4	17.24	17.23	17.14	2.30	17.70	17.30	17.37	17.11	4.05	17.70
		8	7	17.14	17.19	17.20	2.30	17.70	17.40	17.15	17.39	4.05	17.70
		15	0	17.30	17.11	17.28	2.30	17.70	17.33	17.24	17.24	4.05	17.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A {dBm}			MPR	Tune-up Limit	Power Mode B {dBm}			MPR	Tune-up Limit
				131979.00	132322.00	132665.00			131979.00	132322.00	132665.00		
				1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	19.88	19.78	19.75	0.00	20.00	21.68	21.58	21.55	0.00	21.75
		1	3	19.91	19.79	19.73	0.00	20.00	21.71	21.59	21.53	0.00	21.75
		1	5	19.82	19.72	19.66	0.00	20.00	21.62	21.52	21.46	0.00	21.75
		3	0	19.91	19.75	19.80	0.00	20.00	21.16	21.00	21.05	0.05	21.70
		3	1	19.90	19.76	19.83	0.00	20.00	21.15	21.01	21.08	0.05	21.70
		3	3	19.83	19.69	19.74	0.00	20.00	21.08	20.94	20.99	0.05	21.70
		6	0	19.92	19.73	19.79	0.00	20.00	21.17	20.98	21.04	0.05	21.70
	16QAM	1	0	19.46	19.29	19.77	0.00	20.00	20.91	20.74	21.22	0.05	21.70
		1	3	19.48	19.30	19.80	0.00	20.00	20.93	20.75	21.25	0.05	21.70
		1	5	19.41	19.24	19.70	0.00	20.00	21.06	20.89	21.35	0.05	21.70
		3	0	19.58	19.38	19.49	0.00	20.00	21.03	20.83	20.94	0.05	21.70
		3	1	19.55	19.42	19.50	0.00	20.00	21.00	20.87	20.95	0.05	21.70
		3	3	19.48	19.33	19.46	0.00	20.00	20.93	20.78	20.91	0.05	21.70
		6	0	19.42	19.30	19.41	0.00	20.00	20.07	19.95	20.06	1.05	20.70
	64QAM	1	0	19.88	19.78	19.75	0.00	20.00	20.13	20.03	20.00	1.05	20.70
		1	3	19.91	19.79	19.73	0.00	20.00	20.16	20.04	19.98	1.05	20.70
		1	5	19.82	19.72	19.66	0.00	20.00	20.07	19.97	19.91	1.05	20.70
		3	0	19.38	19.28	19.25	0.00	20.00	19.93	19.83	19.80	1.05	20.70
		3	1	19.41	19.29	19.23	0.00	20.00	19.96	19.84	19.78	1.05	20.70
		3	3	19.32	19.22	19.16	0.00	20.00	19.87	19.77	19.71	1.05	20.70
		6	0	19.41	19.25	19.30	0.30	19.70	19.16	19.00	19.05	2.05	19.70
	256QAM	1	0	17.32	17.35	17.37	2.30	17.70	19.30	19.20	19.14	2.05	19.70
		1	3	17.32	17.36	17.15	2.30	17.70	19.21	19.28	19.11	2.05	19.70
		1	5	17.39	17.16	17.23	2.30	17.70	19.30	19.24	19.18	2.05	19.70
		3	0	17.32	17.15	17.18	2.30	17.70	19.19	19.19	19.32	2.05	19.70
		3	1	17.12	17.27	17.10	2.30	17.70	19.32	19.30	19.34	2.05	19.70
		3	3	17.32	17.19	17.18	2.30	17.70	19.28	19.31	19.26	2.05	19.70
		6	0	17.32	17.30	17.21	2.30	17.70	19.14	19.24	19.25	2.05	19.70

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.5. LTE Up-Link Carrier Aggregation

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

For inter-band carrier aggregation with uplink assigned to one E-UTRA band (Table 5.6A-1), the requirements in subclause 6.2.3 apply.

For inter-band carrier aggregation with one component carrier per operating band and the uplink active in two E-UTRA bands, the requirements in subclause 6.2.3 apply for each uplink component carrier.

For intra-band contiguous carrier aggregation the allowed Maximum Power Reduction (MPR) for the maximum output power applicable to the DUT in table below. In case the modulation format is different on different component carriers then the MPR is determined by the rules applied to higher order of those modulations.

Modulation	CA bandwidth Class B and C / Smallest Component Carrier Transmission Bandwidth Configuration				MPR (dB)
	25 RB	50 RB	75 RB	100 RB	
QPSK	> 8 and ≤ 25	> 12 and ≤ 50	> 16 and ≤ 75	> 18 and ≤ 100	≤ 1
QPSK	> 25	> 50	> 75	> 100	≤ 2
16 QAM	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 8 and ≤ 25	> 12 and ≤ 50	> 16 and ≤ 75	> 18 and ≤ 100	≤ 2
16 QAM	> 25	> 50	> 75	> 100	≤ 3
64 QAM	≤ 8 and allocation wholly contained within a single CC	≤ 12 and allocation wholly contained within a single CC	≤ 16 and allocation wholly contained within a single CC	≤ 18 and allocation wholly contained within a single CC	≤ 2
64 QAM	> 8 or allocation extends across two CC's	> 12 or allocation extends across two CC's	> 16 or allocation extends across two CC's	> 18 or allocation extends across two CC's	≤ 3
256 QAM	≥ 1				≤ 5

For PUCCH and SRS transmissions, the allowed MPR is according to that specified for PUSCH WPDK modulation for the corresponding transmission bandwidth.

For intra-band contiguous carrier aggregation bandwidth class C with non-contiguous resource allocation, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2A-1 is specified as follows

$$MPR = CEIL \{\min(M_A, M_{IM5}), 0.5\}$$

Where M_A is defined as follows

$$M_A = \begin{cases} 8.2 & ;0 \le A < 0.025 \\ 9.2 - 40A & ;0.025 \le A < 0.05 \\ 8 - 16A & ;0.05 \le A < 0.25 \\ 4.83 - 3.33A & ;0.25 \le A \le 0.4 \end{cases}$$

This report shall not be reproduced without the written approval of UL Verification Services Inc.

$3.83 – 0.83A$;$0.4 \le A \le 1$

and M_{IM5} is defined as follows

$M_{IM5} =$ 4.5 ; $\Delta_{IM5} < 1.5 * BW_{Channel_CA}$

6.0 ; $1.5 * BW_{Channel_CA} \le \Delta_{IM5} < BW_{Channel_CA}/2 + \Delta f_{ooB}$

M_A ; $\Delta_{IM5} \ge BW_{Channel_CA}/2 + \Delta f_{ooB}$

Where

$A = N_{RB_alloc} / N_{RB_agg}$

$\Delta_{IM5} = \max(\left| F_{C_agg} – (3*F_{agg_alloc_low} – 2*F_{agg_alloc_high}) \right|, \left| F_{C_agg} – (3*F_{agg_alloc_high} – 2*F_{agg_alloc_low}) \right|)$

CEIL{M_A, 0.5} means rounding upwards to closest 0.5dB, i.e. MPR ∈ [3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5]

For intra-band carrier aggregation, the MPR is evaluated per slot and given by the maximum value taken over the transmission(s) on all component carriers within the slot; the maximum MPR over the two slots is then applied for the entire subframe.

For intra-band non-contiguous carrier aggregation with one uplink carrier on the PCC, the requirements in the subclause 6.2.3 apply. For intra-band non-contiguous aggregation with two uplink carriers the MPR is defined for those E-UTRA bands where maximum possible $W_{GAP} \le 42.2$ MHz as follows

MPR = CEIL{M_A, 0.5}

Where M_N is defined as follows

$M_N =$ $-0.125N + 18.25$; $2 \le N \le 50$

$-0.0333 N + 13.67$; $50 < N \le 200$

Where $N = N_{RB_alloc}$ is the number of allocated resource blocks.

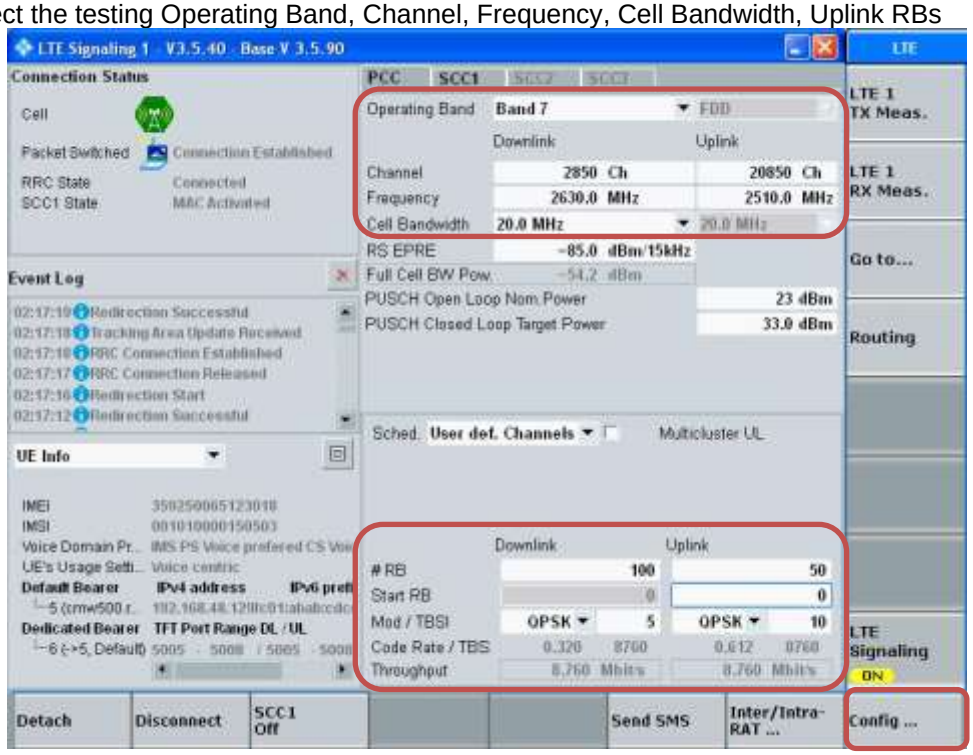
For the UE maximum output power modified by MPR, the power limits specified in subclause 6.2.5A apply.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Carrier Aggregation Test Signal Set-up Procedure

(Use normal LTE set-up procedure in addition with the following steps)

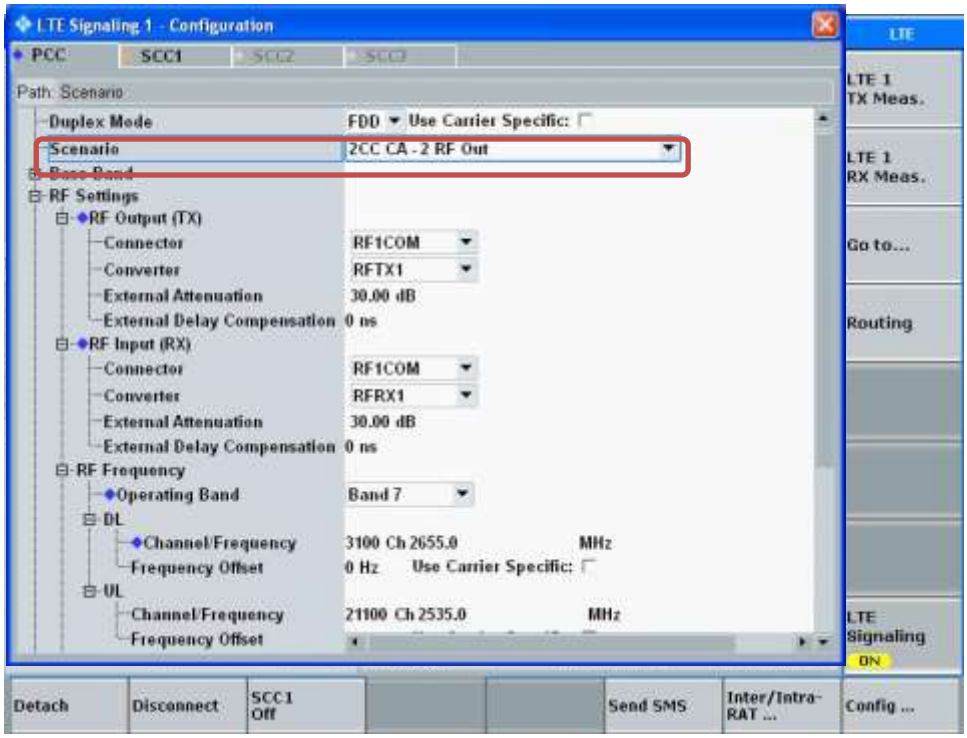
Set to CMW-500 with following parameters:

- PCC tab:
  - Select the testing Operating Band, Channel, Frequency, Cell Bandwidth, Uplink RBs
  - 

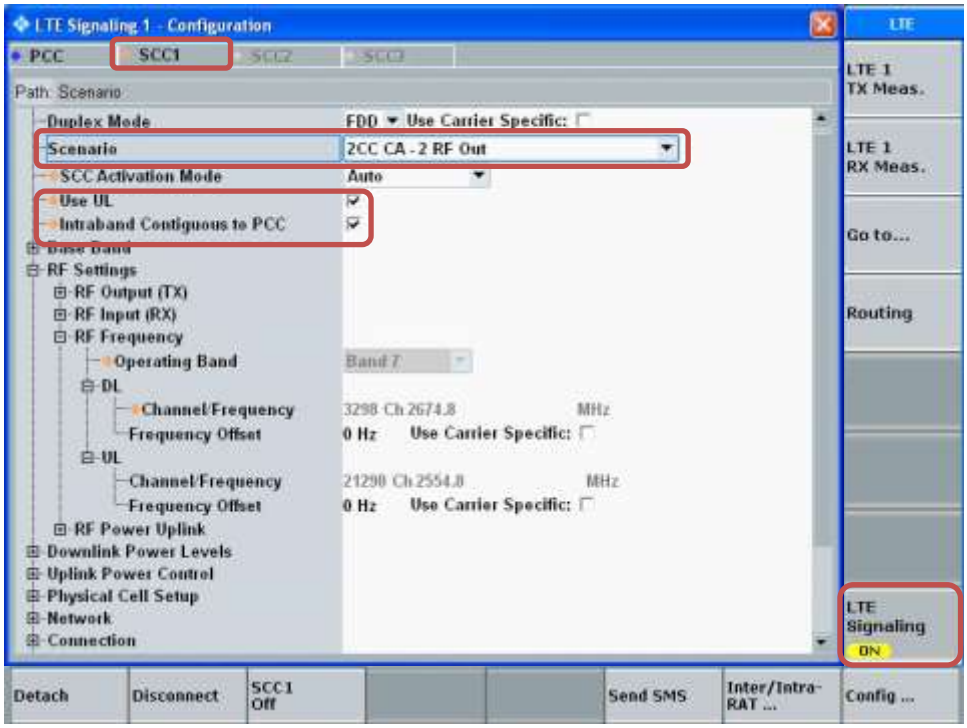
- Go to “Config….”

This report shall not be reproduced without the written approval of UL Verification Services Inc.

- Go to “Scenario”
- Set to “2CC CA – 2 RF Out”

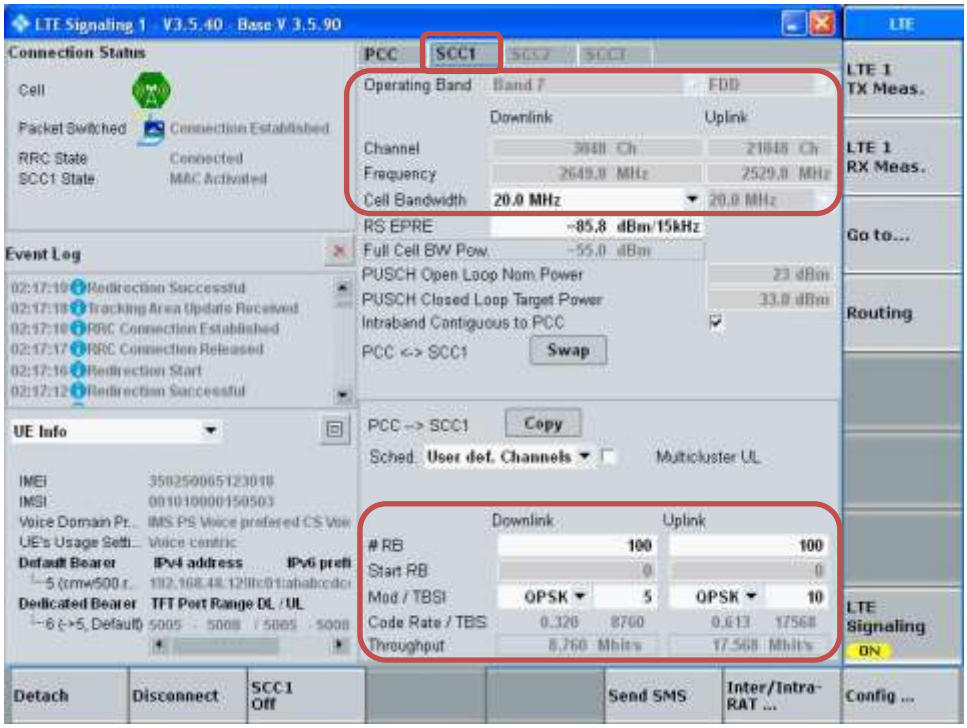


- Select “SCC1” tab
- Go to “Scenario”
- Set to “2CC CA – 2 RF Out”
- Enable “Use UL”
- Enable “Intraband Contiguous to PCC”
- Select “LTE Signaling” button



This report shall not be reproduced without the written approval of UL Verification Services Inc.

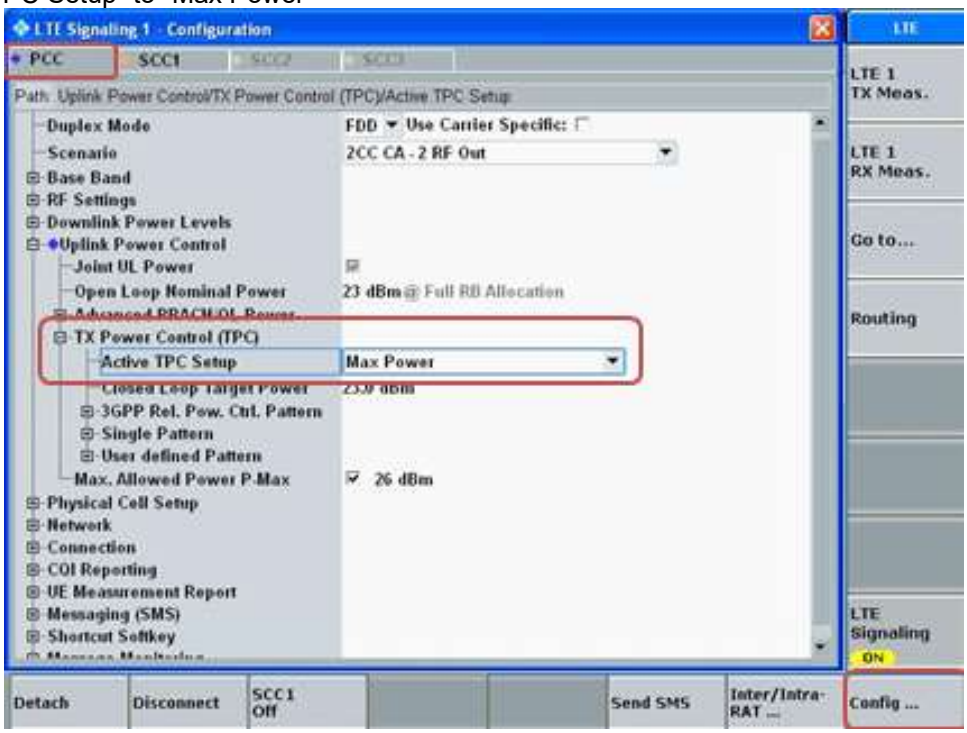
- Select “SCC1” tab
  - Select the testing Cell Bandwidth, Uplink RBs



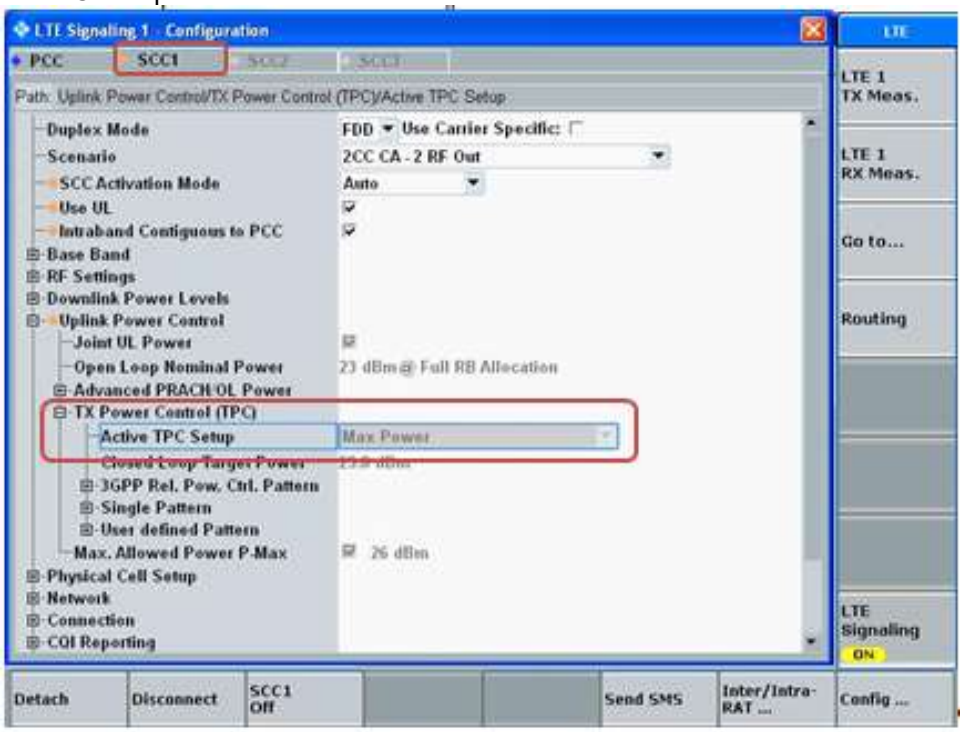
This report shall not be reproduced without the written approval of UL Verification Services Inc.

Max Power Setting

- Select “Config …” button
- Select PCC tab
- Set “Active TPC Setup” to “Max Power”



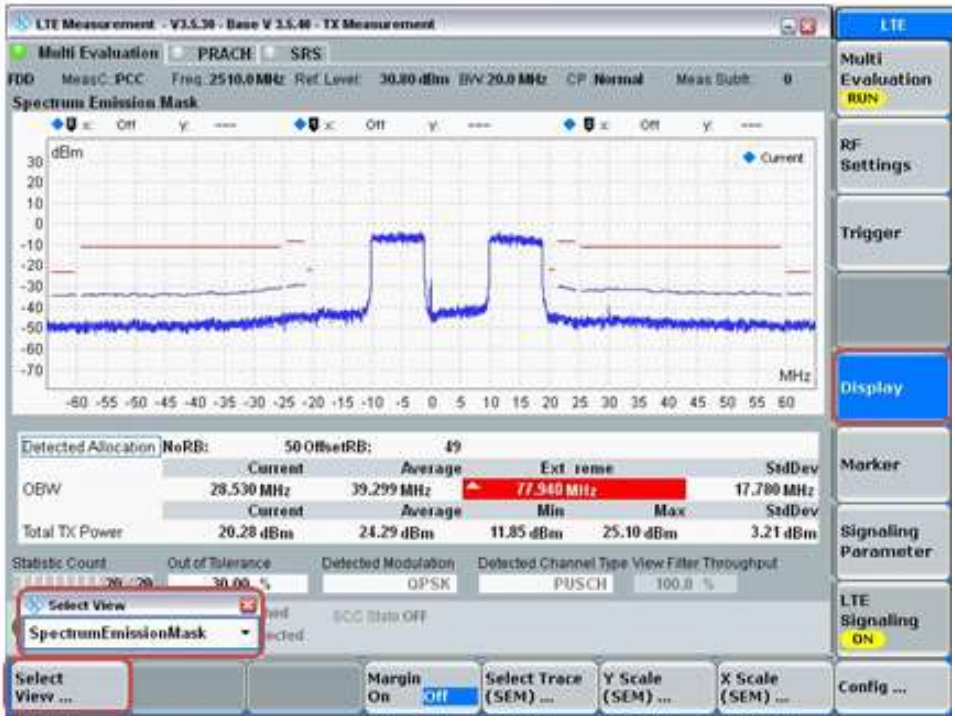
- Select SCC1 tab
- Verify that “Active TPC Setup” is set to “Max Power”



This report shall not be reproduced without the written approval of UL Verification Services Inc.

View TX Power

- Go to “Display”
- Select “Select View…”
- Select “Spectrum Emission Mask”



This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Intra-Band Contiguous Carrier Aggregation

UL CA shall be tested based on the worst-case SAR configuration determined from non-CA SAR testing result. The channel BW, channel number, RB allocation, etc. would be selected to allow contiguous CA of PCC and SCC. Uplink output power for UL CA is the total power measured across the PCC and SCC.

UL CA power measurements were performed for each antennas at with QPSK modulation based on the worst-case standalone SAR.

The UL CA mode power measurements represent the total power across both carriers. Measurements were made for all supported PCC bandwidths using the channel/RB combination resulting in the highest standalone output power at the least MPR (0 dB). SCCs were set to use configurations similar to the PCC to establish conservative or worst case equivalent SAR test conditions (highest maximum power with MPR of 0 dB).

The standalone power measurement is the power for the PCC in the non-CA mode (i.e. single carrier power). In all cases the UL CA power is less than or equal to the standalone power, which is in accordance with the tune-up limits in table below.

According to November 2017 TCB workshop, Uplink CA SAR Test Guidance as follows:

a) When the maximum output for UL CA is ≤ standalone LTE mode (without CA)
   - PCC is configured according to the highest standalone SAR configuration tested
   - SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC

b) When the Reported SAR for UL CA configuration, described above, is > 1.2 W/kg, UL CA SAR is also required for all required test channels(PCC based)

c) UL CA SAR is also required for standalone SAR configurations > 1.2 W/kg when they are scaled to the UL CA power level

Maximum Output Power (Tune-up Limit) for LTE UL Carrier Aggregation

Intra-Band Contiguous	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT1		ANT2		ANT3		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
CA_5B	QPSK	25.70	25.70	24.50	24.50				
CA_7C	QPSK	25.70	19.75	17.00	18.25	24.70	18.50	17.50	21.25
CA_41C (PC3)	QPSK	25.70	21.75	19.00	21.00	24.70	20.00	20.00	22.20
CA_41C (PC2)	QPSK	27.70	N/A	N/A	N/A	26.70	N/A	N/A	23.75
Intra-Band Contiguous	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT7		ANT8		ANT9		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
CA_48C	QPSK	25.70	22.00	22.25	19.50	25.20	22.00	21.75	22.70

LTE CA_5B Measured Results

UL CA Combination	Antenna	Power Mode	Modulation	PCC				SCC				Standalone Power		(PCC + SCC) UL CA Power		
				BW (MHz)	Freq	RB	Offset	BW (MHz)	Freq	RB	Offset	Tune-Up Limit (dBm)	UL CA Inactive (dBm)	Tune-Up Limit (dBm)	UL CA active (dBm)	Delta
CA_5B	ANT 1	Mode A	QPSK	10	831.6	1	49	5	841.5	1	0	25.70	25.27	25.70	25.25	0.0
CA_5B	ANT 1	Mode B	QPSK	10	831.6	1	49	5	841.5	1	0	25.70	25.57	25.70	25.25	-0.3
CA_5B	ANT 2	Mode A	QPSK	10	831.6	1	49	5	841.5	1	0	24.50	24.33	24.50	24.07	-0.3
CA_5B	ANT 2	Mode B	QPSK	10	831.6	1	49	5	841.5	1	0	24.50	24.46	24.50	24.07	-0.4

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE CA_7C Measured Results

UL CA Combination	Antenna	Power Mode	Modulation	PCC				SCC				Standalone Power		(PCC + SCC) UL CA Power		
				BW (MHz)	Freq	RB	Offset	BW (MHz)	Freq	RB	Offset	Tune-Up Limit (dBm)	UL CA Inactive (dBm)	Tune-Up Limit (dBm)	UL CA active (dBm)	Delta
CA_7C	ANT 1	Mode A	QPSK	20	2525.1	1	99	20	2544.9	1	0	25.70	25.52	25.70	25.59	0.1
CA_7C	ANT 1	Mode B	QPSK	20	2510.0	1	99	20	2529.8	1	0	19.75	19.47	19.75	19.50	0.0
CA_7C	ANT 2	Mode A	QPSK	20	2510.0	1	99	20	2529.8	1	0	17.00	16.92	17.00	16.62	-0.3
CA_7C	ANT 2	Mode B	QPSK	20	2540.2	1	99	20	2560	1	0	18.25	18.04	18.25	18.22	0.2
CA_7C	ANT 2	Mode B	QPSK	20	2510.0	1	99	20	2529.8	1	0	18.25	18.04	18.25	18.22	0.2
CA_7C	ANT 3	Mode A	QPSK	20	2525.1	1	99	20	2544.9	1	0	24.70	24.45	24.70	24.34	-0.1
CA_7C	ANT 3	Mode B	QPSK	20	2525.1	1	99	20	2544.9	1	0	18.50	18.01	18.50	18.40	0.4
CA_7C	ANT 3	Mode B	QPSK	20	2510.0	1	99	20	2529.8	1	0	18.50	18.03	18.50	18.35	0.3
CA_7C	ANT 4	Mode A	QPSK	20	2525.1	1	99	20	2544.9	1	0	17.50	17.04	17.50	17.20	0.2
CA_7C	ANT 4	Mode B	QPSK	20	2525.1	1	99	20	2544.9	1	0	21.25	21.15	21.25	21.15	0.0

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

LTE CA_41C (PC3) Measured Results

UL CA Combination	Antenna	Power Mode	Modulation	PCC				SCC				Standalone Power		(PCC + SCC) UL CA Power		
				BW (MHz)	Freq	RB	Offset	BW (MHz)	Freq	RB	Offset	Tune-Up Limit (dBm)	UL CA Inactive (dBm)	Tune-Up Limit (dBm)	UL CA active (dBm)	Delta
CA_41C	ANT 1	Mode A	QPSK	20	2583.1	1	99	20	2602.9	1	0	25.70	25.53	25.70	25.36	-0.2
CA_41C	ANT 1	Mode B	QPSK	20	2583.1	1	99	20	2602.9	1	0	21.75	21.51	21.75	21.35	-0.2
CA_41C	ANT 1	Mode B	QPSK	20	2506	1	99	20	2525.8	1	0	21.75	21.63	21.75	21.64	0.0
CA_41C	ANT 2	Mode A	QPSK	20	2660.2	1	99	20	2680	1	0	19.00	18.60	19.00	18.85	0.3
CA_41C	ANT 2	Mode B	QPSK	20	2506.0	1	99	20	2525.8	1	0	21.00	20.94	21.00	20.56	-0.4
CA_41C	ANT 3	Mode A	QPSK	20	2583.1	1	99	20	2602.9	1	0	24.70	24.41	24.70	24.40	0.0
CA_41C	ANT 3	Mode B	QPSK	20	2583.1	1	99	20	2602.9	1	0	20.00	19.69	20.00	19.68	0.0
CA_41C	ANT 3	Mode B	QPSK	20	2506.0	1	99	20	2525.8	1	0	20.00	19.93	20.00	19.49	-0.4
CA_41C	ANT 4	Mode A	QPSK	20	2660.2	1	99	20	2680.0	1	0	20.00	19.98	20.00	19.77	-0.2
CA_41C	ANT 4	Mode B	QPSK	20	2583.1	1	99	20	2602.9	1	0	22.20	21.86	22.20	21.97	0.1

Note(s):

1. PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.
2. Additional SAR for UL CA PC2 is not required. Test reduction has been applied base on standalone SAR.
3. SAR evaluation for PC2 is only required when its Maximum output power (Tune-up Limit) is higher from PC3.

LTE CA_48C Measured Results

UL CA Combination	Antenna	Power Mode	Modulation	PCC				SCC				Standalone Power		(PCC + SCC) UL CA Power		
				BW (MHz)	Freq	RB	Offset	BW (MHz)	Freq	RB	Offset	Tune-Up Limit (dBm)	UL CA Inactive (dBm)	Tune-Up Limit (dBm)	UL CA active (dBm)	Delta
CA_48C	ANT 7	Mode A	QPSK	20	3615.1	1	99	20	3634.9	1	0	25.70	25.34	25.70	25.45	0.1
CA_48C	ANT 7	Mode B	QPSK	20	3560.0	1	99	20	3579.8	1	0	22.00	21.75	22.00	21.79	0.0
CA_48C	ANT 4	Mode A	QPSK	20	3560.0	1	99	20	3579.8	1	0	22.25	22.19	22.25	22.08	-0.1
CA_48C	ANT 4	Mode B	QPSK	20	3615.1	1	99	20	3634.9	1	0	19.50	19.32	19.50	19.14	-0.2
CA_48C	ANT 4	Mode B	QPSK	20	3560.0	1	99	20	3579.8	1	0	19.50	19.27	19.50	19.11	-0.2
CA_48C	ANT 9	Mode A	QPSK	20	3615.1	1	99	20	3634.9	1	0	25.20	25.12	25.20	24.92	-0.2
CA_48C	ANT 9	Mode B	QPSK	20	3560.0	1	99	20	3579.8	1	0	22.00	21.71	22.00	21.71	0.0
CA_48C	ANT 8	Mode A	QPSK	20	3560.0	1	99	20	3579.8	1	0	21.75	21.27	21.75	21.50	0.2
CA_48C	ANT 8	Mode B	QPSK	20	3560.0	1	99	20	3579.8	1	0	22.70	22.38	22.70	22.59	0.2

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

LTE Inter-Band Carrier Aggregation

According to October 2018 TCB workshop, Uplink CA SAR Test Guidance as follows:

- Provide the single uplink SAR values you have obtained for the relevant SAR configurations and frequency bands that employ inter-band uplink carrier aggregation.
- If the single uplink 1-g SAR values for each band are both less than 0.8 W/kg and the algebraic summation of the 1-g SAR values are less than 1.45 W/kg no additional measurements need to be performed.
- If one of the single uplink 1-g SAR values is greater than 0.8 W/kg, instead of algebraically summing the 1-g SAR values, sum up the SAR distributions, similar to the enlarged zoom scan (volume scan) procedures found in FCC KDB Publication 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04.
- If the algebraic sum of the 1-g SAR values is > 1.45 W/kg additional measurements may have to be made. Submit a KDB inquiry for additional guidance.

Maximum Output Power (Tune-up Limit) and SAR test exemption for LTE UL Carrier Aggregation

Test positions and test channels used for the testing below are based on the standalone worst-case SAR results. UL CA is reduced by 3dB therefore power and SAR was estimated based on standalone results.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

UL CA inter-bands	RF Exposure Conditions	Antennna Ports				Standalone worst-case position				UL CA				
						Tune-up Limit (dBm)		Reported 1-g SAR (W/kg)		Tune-up Limit (-3dB) (dBm)		Reported 1-g SAR (W/kg)		
		CC1		CC2		CC1	CC2	CC1	CC2	CC1	CC2	CC1	CC2	CC1+CC2
CA_2A-5A	Head	ANT1	2A	ANT2	5A	25.70	24.50	0.312	0.711	22.70	21.50	0.156	0.356	**0.513**
		ANT2	2A	ANT1	5A	20.25	25.70	0.897	0.204	17.25	22.70	0.450	0.102	**0.552**
		ANT3	2A	ANT1	5A	24.70	25.70	0.603	0.204	21.70	22.70	0.302	0.102	**0.404**
		ANT3	2A	ANT2	5A	24.70	24.50	0.603	0.711	21.70	21.50	0.302	0.356	**0.659**
		ANT4	2A	ANT1	5A	18.50	25.70	0.926	0.204	15.50	22.70	0.464	0.102	**0.566**
		ANT4	2A	ANT2	5A	18.50	24.50	0.926	0.711	15.50	21.50	0.464	0.356	**0.820**
	Body	ANT1	2A	ANT2	5A	17.00	24.50	0.941	0.672	14.00	21.50	0.472	0.337	**0.808**
		ANT2	2A	ANT1	5A	20.00	25.70	0.911	0.837	17.00	22.70	0.457	0.419	**0.876**
		ANT3	2A	ANT1	5A	19.50	25.70	0.843	0.837	16.50	22.70	0.423	0.419	**0.842**
		ANT3	2A	ANT2	5A	19.50	24.50	0.843	0.672	16.50	21.50	0.423	0.337	**0.759**
		ANT4	2A	ANT1	5A	19.25	25.70	0.968	0.837	16.25	22.70	0.485	0.419	**0.905**
		ANT4	2A	ANT2	5A	19.25	24.50	0.968	0.672	16.25	21.50	0.485	0.337	**0.822**
CA_2A-12A	Head	ANT1	2A	ANT2	12A	25.70	23.90	0.312	0.653	22.70	20.90	0.156	0.327	**0.484**
		ANT2	2A	ANT1	12A	20.25	25.70	0.897	0.206	17.25	22.70	0.450	0.103	**0.553**
		ANT3	2A	ANT1	12A	24.70	25.70	0.603	0.206	21.70	22.70	0.302	0.103	**0.405**
		ANT3	2A	ANT2	12A	24.70	23.90	0.603	0.653	21.70	20.90	0.302	0.327	**0.629**
		ANT4	2A	ANT1	12A	18.50	25.70	0.926	0.206	15.50	22.70	0.464	0.103	**0.567**
		ANT4	2A	ANT2	12A	18.50	23.90	0.926	0.653	15.50	20.90	0.464	0.327	**0.791**
	Body	ANT1	2A	ANT2	12A	17.00	23.90	0.941	0.317	14.00	20.90	0.472	0.159	**0.630**
		ANT2	2A	ANT1	12A	20.00	25.70	0.911	0.687	17.00	22.70	0.457	0.344	**0.801**
		ANT3	2A	ANT1	12A	19.50	25.70	0.843	0.687	16.50	22.70	0.423	0.344	**0.767**
		ANT3	2A	ANT2	12A	19.50	23.90	0.843	0.317	16.50	20.90	0.423	0.159	**0.581**
		ANT4	2A	ANT1	12A	19.25	25.70	0.968	0.687	16.25	22.70	0.485	0.344	**0.829**
		ANT4	2A	ANT2	12A	19.25	23.90	0.968	0.317	16.25	20.90	0.485	0.159	**0.644**
CA_2A-13A	Head	ANT1	2A	ANT2	13A	25.70	23.90	0.312	0.741	22.70	20.90	0.156	0.371	**0.528**
		ANT2	2A	ANT1	13A	20.25	25.70	0.897	0.201	17.25	22.70	0.450	0.101	**0.550**
		ANT3	2A	ANT1	13A	24.70	25.70	0.603	0.201	21.70	22.70	0.302	0.101	**0.403**
		ANT3	2A	ANT2	13A	24.70	23.90	0.603	0.741	21.70	20.90	0.302	0.371	**0.674**
		ANT4	2A	ANT1	13A	18.50	25.70	0.926	0.201	15.50	22.70	0.464	0.101	**0.565**
		ANT4	2A	ANT2	13A	18.50	23.90	0.926	0.741	15.50	20.90	0.464	0.371	**0.835**
	Body	ANT1	2A	ANT2	13A	17.00	23.90	0.941	0.460	14.00	20.90	0.472	0.231	**0.702**
		ANT2	2A	ANT1	13A	20.00	25.70	0.911	0.754	17.00	22.70	0.457	0.378	**0.834**
		ANT3	2A	ANT1	13A	19.50	25.70	0.843	0.754	16.50	22.70	0.423	0.378	**0.800**
		ANT3	2A	ANT2	13A	19.50	23.90	0.843	0.460	16.50	20.90	0.423	0.231	**0.653**
		ANT4	2A	ANT1	13A	19.25	25.70	0.968	0.754	16.25	22.70	0.485	0.378	**0.863**
		ANT4	2A	ANT2	13A	19.25	23.90	0.968	0.460	16.25	20.90	0.485	0.231	**0.716**
CA_4A-5A	Head	ANT1	4A	ANT2	5A	25.70	24.50	0.258	0.711	22.70	21.50	0.129	0.356	**0.486**
		ANT2	4A	ANT1	5A	21.00	25.70	0.997	0.204	18.00	22.70	0.500	0.102	**0.602**
		ANT3	4A	ANT1	5A	24.70	25.70	0.257	0.204	21.70	22.70	0.129	0.102	**0.231**
		ANT3	4A	ANT2	5A	24.70	24.50	0.257	0.711	21.70	21.50	0.129	0.356	**0.485**
		ANT4	4A	ANT1	5A	20.00	25.70	0.957	0.204	17.00	22.70	0.480	0.102	**0.582**
		ANT4	4A	ANT2	5A	20.00	24.50	0.957	0.711	17.00	21.50	0.480	0.356	**0.836**
	Body	ANT1	4A	ANT2	5A	17.25	24.50	0.919	0.672	14.25	21.50	0.461	0.337	**0.797**
		ANT2	4A	ANT1	5A	20.25	25.70	0.996	0.837	17.25	22.70	0.499	0.419	**0.919**
		ANT3	4A	ANT1	5A	20.25	25.70	0.827	0.837	17.25	22.70	0.414	0.419	**0.834**
		ANT3	4A	ANT2	5A	20.25	24.50	0.827	0.672	17.25	21.50	0.414	0.337	**0.751**
		ANT4	4A	ANT1	5A	21.75	25.70	0.999	0.837	18.75	22.70	0.501	0.419	**0.920**
		ANT4	4A	ANT2	5A	21.75	24.50	0.999	0.672	18.75	21.50	0.501	0.337	**0.837**
CA_4A-12A	Head	ANT1	4A	ANT2	12A	25.70	23.90	0.258	0.653	22.70	20.90	0.129	0.327	**0.457**
		ANT2	4A	ANT1	12A	21.00	25.70	0.997	0.206	18.00	22.70	0.500	0.103	**0.603**
		ANT3	4A	ANT1	12A	24.70	25.70	0.257	0.206	21.70	22.70	0.129	0.103	**0.232**
		ANT3	4A	ANT2	12A	24.70	23.90	0.257	0.653	21.70	20.90	0.129	0.327	**0.456**
		ANT4	4A	ANT1	12A	20.00	25.70	0.957	0.206	17.00	22.70	0.480	0.103	**0.583**
		ANT4	4A	ANT2	12A	20.00	23.90	0.957	0.653	17.00	20.90	0.480	0.327	**0.807**
	Body	ANT1	4A	ANT2	12A	17.25	23.90	0.919	0.317	14.25	20.90	0.461	0.159	**0.619**
		ANT2	4A	ANT1	12A	20.25	25.70	0.996	0.687	17.25	22.70	0.499	0.344	**0.843**
		ANT3	4A	ANT1	12A	20.25	25.70	0.827	0.687	17.25	22.70	0.414	0.344	**0.759**
		ANT3	4A	ANT2	12A	20.25	23.90	0.827	0.317	17.25	20.90	0.414	0.159	**0.573**
		ANT4	4A	ANT1	12A	21.75	25.70	0.999	0.687	18.75	22.70	0.501	0.344	**0.845**
		ANT4	4A	ANT2	12A	21.75	23.90	0.999	0.317	18.75	20.90	0.501	0.159	**0.660**

This report shall not be reproduced without the written approval of UL Verification Services Inc.

UL CA inter-bands	RF Exposure Conditions	Antennna Ports				Standalone worst-case position				UL CA				
						Tune-up Limit (dBm)		Reported 1-g SAR (W/kg)		Tune-up Limit (-3dB) (dBm)		Reported 1-g SAR (W/kg)		
		CC1		CC2		CC1	CC2	CC1	CC2	CC1	CC2	CC1	CC2	CC1+CC2
CA_4A-13A	Head	ANT1	4A	ANT2	13A	25.70	23.90	0.258	0.741	22.70	20.90	0.129	0.371	**0.501**
		ANT2	4A	ANT1	13A	21.00	25.70	0.997	0.201	18.00	22.70	0.500	0.101	**0.600**
		ANT3	4A	ANT1	13A	24.70	25.70	0.257	0.201	21.70	22.70	0.129	0.101	**0.230**
		ANT3	4A	ANT2	13A	24.70	23.90	0.257	0.741	21.70	20.90	0.129	0.371	**0.500**
		ANT4	4A	ANT1	13A	20.00	25.70	0.957	0.201	17.00	22.70	0.480	0.101	**0.580**
		ANT4	4A	ANT2	13A	20.00	23.90	0.957	0.741	17.00	20.90	0.480	0.371	**0.851**
	Body	ANT1	4A	ANT2	13A	17.25	23.90	0.919	0.460	14.25	20.90	0.461	0.231	**0.691**
		ANT2	4A	ANT1	13A	20.25	25.70	0.996	0.754	17.25	22.70	0.499	0.378	**0.877**
		ANT3	4A	ANT1	13A	20.25	25.70	0.827	0.754	17.25	22.70	0.414	0.378	**0.792**
		ANT3	4A	ANT2	13A	20.25	23.90	0.827	0.460	17.25	20.90	0.414	0.231	**0.645**
		ANT4	4A	ANT1	13A	21.75	25.70	0.999	0.754	18.75	22.70	0.501	0.378	**0.879**
		ANT4	4A	ANT2	13A	21.75	23.90	0.999	0.460	18.75	20.90	0.501	0.231	**0.731**
CA_5A-7A	Head	ANT1	5A	ANT2	7A	25.70	17.00	0.226	0.993	22.70	14.00	0.113	0.498	**0.611**
		ANT1	5A	ANT3	7A	25.70	24.70	0.226	0.931	22.70	21.70	0.113	0.467	**0.580**
		ANT1	5A	ANT4	7A	25.70	17.50	0.226	0.984	22.70	14.50	0.113	0.493	**0.606**
		ANT2	5A	ANT1	7A	24.50	25.70	0.758	0.645	21.50	22.70	0.380	0.323	**0.703**
		ANT2	5A	ANT3	7A	24.50	24.70	0.758	0.931	21.50	21.70	0.380	0.467	**0.847**
		ANT2	5A	ANT4	7A	24.50	17.50	0.758	0.984	21.50	14.50	0.380	0.493	**0.873**
	Body	ANT1	5A	ANT2	7A	25.70	18.25	0.837	0.998	22.70	15.25	0.419	0.500	**0.920**
		ANT1	5A	ANT3	7A	25.70	18.50	0.837	0.961	22.70	15.50	0.419	0.482	**0.901**
		ANT1	5A	ANT4	7A	25.70	21.25	0.837	0.957	22.70	18.25	0.419	0.480	**0.899**
		ANT2	5A	ANT1	7A	24.50	19.75	0.672	0.981	21.50	16.75	0.337	0.492	**0.828**
		ANT2	5A	ANT3	7A	24.50	18.50	0.672	0.961	21.50	15.50	0.337	0.482	**0.818**
		ANT2	5A	ANT4	7A	24.50	21.25	0.672	0.957	21.50	18.25	0.337	0.480	**0.816**
CA_5A-66A	Head	ANT1	5A	ANT2	66A	25.70	21.00	0.226	0.997	22.70	18.00	0.113	0.500	**0.613**
		ANT1	5A	ANT3	66A	25.70	24.70	0.226	0.257	22.70	21.70	0.113	0.129	**0.242**
		ANT1	5A	ANT4	66A	25.70	20.00	0.226	0.957	22.70	17.00	0.113	0.480	**0.593**
		ANT2	5A	ANT1	66A	24.50	25.70	0.758	0.258	21.50	22.70	0.380	0.129	**0.509**
		ANT2	5A	ANT3	66A	24.50	24.70	0.758	0.257	21.50	21.70	0.380	0.129	**0.509**
		ANT2	5A	ANT4	66A	24.50	20.00	0.758	0.957	21.50	17.00	0.380	0.480	**0.860**
	Body	ANT1	5A	ANT2	66A	25.70	20.25	0.837	0.996	22.70	17.25	0.419	0.499	**0.919**
		ANT1	5A	ANT3	66A	25.70	20.25	0.837	0.827	22.70	17.25	0.419	0.414	**0.834**
		ANT1	5A	ANT4	66A	25.70	21.75	0.837	0.999	22.70	18.75	0.419	0.501	**0.920**
		ANT2	5A	ANT1	66A	24.50	17.25	0.672	0.919	21.50	14.25	0.337	0.461	**0.797**
		ANT2	5A	ANT3	66A	24.50	20.25	0.672	0.827	21.50	17.25	0.337	0.414	**0.751**
		ANT2	5A	ANT4	66A	24.50	21.75	0.672	0.999	21.50	18.75	0.337	0.501	**0.837**
CA_12A-66A	Head	ANT1	12A	ANT2	66A	25.70	21.00	0.206	0.997	22.70	18.00	0.103	0.500	**0.603**
		ANT1	12A	ANT3	66A	25.70	24.70	0.206	0.257	22.70	21.70	0.103	0.129	**0.232**
		ANT1	12A	ANT4	66A	25.70	20.00	0.206	0.957	22.70	17.00	0.103	0.480	**0.583**
		ANT2	12A	ANT1	66A	23.90	25.70	0.652	0.258	20.90	22.70	0.327	0.129	**0.456**
		ANT2	12A	ANT3	66A	23.90	24.70	0.652	0.257	20.90	21.70	0.327	0.129	**0.456**
		ANT2	12A	ANT4	66A	23.90	20.00	0.652	0.957	20.90	17.00	0.327	0.480	**0.806**
	Body	ANT1	12A	ANT2	66A	25.70	20.25	0.687	0.996	22.70	17.25	0.344	0.499	**0.843**
		ANT1	12A	ANT3	66A	25.70	20.25	0.687	0.827	22.70	17.25	0.344	0.414	**0.759**
		ANT1	12A	ANT4	66A	25.70	21.75	0.687	0.999	22.70	18.75	0.344	0.501	**0.845**
		ANT2	12A	ANT1	66A	23.90	17.25	0.317	0.919	20.90	14.25	0.159	0.461	**0.619**
		ANT2	12A	ANT3	66A	23.90	20.25	0.317	0.827	20.90	17.25	0.159	0.414	**0.573**
		ANT2	12A	ANT4	66A	23.90	21.75	0.317	0.999	20.90	18.75	0.159	0.501	**0.660**
CA_13A-66A	Head	ANT1	13A	ANT2	66A	25.70	21.00	0.201	0.997	22.70	18.00	0.101	0.500	**0.600**
		ANT1	13A	ANT3	66A	25.70	24.70	0.201	0.257	22.70	21.70	0.101	0.129	**0.230**
		ANT1	13A	ANT4	66A	25.70	20.00	0.201	0.957	22.70	17.00	0.101	0.480	**0.580**
		ANT2	13A	ANT1	66A	23.90	25.70	0.741	0.258	20.90	22.70	0.371	0.129	**0.501**
		ANT2	13A	ANT3	66A	23.90	24.70	0.741	0.257	20.90	21.70	0.371	0.129	**0.500**
		ANT2	13A	ANT4	66A	23.90	20.00	0.741	0.957	20.90	17.00	0.371	0.480	**0.851**
	Body	ANT1	13A	ANT2	66A	25.70	20.25	0.754	0.996	22.70	17.25	0.378	0.499	**0.877**
		ANT1	13A	ANT3	66A	25.70	20.25	0.754	0.827	22.70	17.25	0.378	0.414	**0.792**
		ANT1	13A	ANT4	66A	25.70	21.75	0.754	0.999	22.70	18.75	0.378	0.501	**0.879**
		ANT2	13A	ANT1	66A	23.90	17.25	0.460	0.919	20.90	14.25	0.231	0.461	**0.691**
		ANT2	13A	ANT3	66A	23.90	20.25	0.460	0.827	20.90	17.25	0.231	0.414	**0.645**
		ANT2	13A	ANT4	66A	23.90	21.75	0.460	0.999	20.90	18.75	0.231	0.501	**0.731**

Conclusion:

The single uplink 1-g SAR values for each band are both less than 0.8 W/kg and the algebraic summation of the 1-g SAR values are less than 1.45 W/kg. Therefore, no additional measurements are required.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.6. LTE Down-Link Carrier Aggregation

This device supports LTE downlink carrier aggregation (CA). The tables appendix G is show the supported frequency bands of the device for DL Inter-band and DL Intra-band combinations.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.7. 5G NR(FR1)

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS 138.521-1 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS138.521-1.

Table 6.2.2.3-1: Maximum Power Reduction (MPR) for Power 3

Modulation	MPR (dB)		
	Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM PI/2 BPSK	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
	≤ 0.5[2]		0[2]
DFT-s-OFDM QPSK	≤ 1		0
DFT-s-OFDM 16 QAM	≤ 2		≤ 1
DFT-s-OFDM 64 QAM	≤ 2.5		
DFT-s-OFDM 256 QAM	≤ 4.5		
CP-OFDM QPSK	≤ 3		≤ 1.5
CP-OFDM 16 QAM	≤ 3		≤ 2
CP-OFDM 64 QAM	≤ 3.5		
CP-OFDM 256 QAM	≤ 6.5		

NOTE 1: Applicable for UE operating in TDD mode with PI/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0dB MPR is 26dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40% of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

The allowed A-MPR values specified below in Table 6.2.3.3.1-1 of 3GPP TS138.521-1 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of “NS_01”

Table 6.2.3.3.1-1: Additional maximum power reduction (A-MPR)

Network Signalling label	Requirements (subclause)	NR Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01		Table 5.2-1	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100	Table 5.3.2-1	N/A

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Uplink RB allocations were used to Table 6.1-1 of the 3GPP TS 138.521-1.

Channel Bandwidth	SCS(kHz)	OFDM	RB allocation							
			Edge_Full_Left	Edge_Full_Right	Edge_1RB_Left	Edge_1RB_Right	Outer_Full	Inner_Full	Inner_1RB_Left	Inner_1RB_Right
5MHz	15	DFT-s	2@0	2@23	1@0	1@24	25@0	12@6	1@1	1@23
		CP	2@0	2@23	1@0	1@24	25@0	13@6	1@1	1@23
	30	DFT-s	2@0	2@9	1@0	1@10	10@0	5@2[1]	1@1	1@9
		CP	2@0	2@9	1@0	1@10	11@0	5@2[1]	1@1	1@9
	60	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10MHz	15	DFT-s	2@0	2@50	1@0	1@51	50@0	25@12	1@1	1@50
		CP	2@0	2@50	1@0	1@51	52@0	26@13	1@1	1@50
	30	DFT-s	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
		CP	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
	60	DFT-s	2@0	2@9	1@0	1@10	10@0	5@2[1]	1@1	1@9
		CP	2@0	2@9	1@0	1@10	11@0	5@2[1]	1@1	1@9
15MHz	15	DFT-s	2@0	2@77	1@0	1@78	75@0	36@18	1@1	1@77
		CP	2@0	2@77	1@0	1@78	79@0	39@19[1]	1@1	1@77
	30	DFT-s	2@0	2@36	1@0	1@37	36@0	18@9	1@1	1@36
		CP	2@0	2@36	1@0	1@37	38@0	19@9	1@1	1@36
	60	DFT-s	2@0	2@16	1@0	1@17	18@0	9@4	1@1	1@16
		CP	2@0	2@16	1@0	1@17	18@0	9@4	1@1	1@16
20MHz	15	DFT-s	2@0	2@104	1@0	1@105	100@0	50@25	1@1	1@104
		CP	2@0	2@104	1@0	1@105	106@0	53@26	1@1	1@104
	30	DFT-s	2@0	2@49	1@0	1@50	50@0	25@12	1@1	1@49
		CP	2@0	2@49	1@0	1@50	51@0	25@12[1]	1@1	1@49
	60	DFT-s	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
		CP	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
25MHz	15	DFT-s	2@0	2@131	1@0	1@132	128@0	64@32	1@1	1@131
		CP	2@0	2@131	1@0	1@132	133@0	67@33	1@1	1@131
	30	DFT-s	2@0	2@63	1@0	1@64	64@0	32@16	1@1	1@63
		CP	2@0	2@63	1@0	1@64	65@0	33@16	1@1	1@63
	60	DFT-s	2@0	2@29	1@0	1@30	30@0	15@7[1]	1@1	1@29
		CP	2@0	2@29	1@0	1@30	31@0	15@7[1]	1@1	1@29
30MHz	15	DFT-s	2@0	2@158	1@0	1@159	160@0	80@40	1@1	1@158
		CP	2@0	2@158	1@0	1@159	160@0	80@40	1@1	1@158
	30	DFT-s	2@0	2@76	1@0	1@77	75@0	36@18	1@1	1@76
		CP	2@0	2@76	1@0	1@77	78@0	39@19	1@1	1@76
	60	DFT-s	2@0	2@36	1@0	1@37	36@0	18@9	1@1	1@36
		CP	2@0	2@36	1@0	1@37	38@0	19@9	1@1	1@36
40MHz	15	DFT-s	2@0	2@214	1@0	1@215	216@0	108@54	1@1	1@214
		CP	2@0	2@214	1@0	1@215	216@0	108@54	1@1	1@214
	30	DFT-s	2@0	2@104	1@0	1@105	100@0	50@25	1@1	1@104
		CP	2@0	2@104	1@0	1@105	106@0	53@26	1@1	1@104
	60	DFT-s	2@0	2@49	1@0	1@50	50@0	25@12	1@1	1@49
		CP	2@0	2@49	1@0	1@50	51@0	25@12[1]	1@1	1@49
50MHz	15	DFT-s	2@0	2@268	1@0	1@269	270@0	135@67	1@1	1@268
		CP	2@0	2@268	1@0	1@269	270@0	135@67	1@1	1@268
	30	DFT-s	2@0	2@131	1@0	1@132	128@0	64@32	1@1	1@131
		CP	2@0	2@131	1@0	1@132	133@0	67@33	1@1	1@131
	60	DFT-s	2@0	2@63	1@0	1@64	64@0	32@16	1@1	1@63
		CP	2@0	2@63	1@0	1@64	65@0	33@16	1@1	1@63
60MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2@0	2@160	1@0	1@161	162@0	81@40	1@1	1@160
		CP	2@0	2@160	1@0	1@161	162@0	81@40	1@1	1@160
	60	DFT-s	2@0	2@77	1@0	1@78	75@0	36@18	1@1	1@77
		CP	2@0	2@77	1@0	1@78	79@0	39@19[1]	1@1	1@77
80MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2@0	2@215	1@0	1@216	216@0	108@54	1@1	1@215
		CP	2@0	2@215	1@0	1@216	217@0	109@54	1@1	1@215
	60	DFT-s	2@0	2@105	1@0	1@106	100@0	50@25	1@1	1@105
		CP	2@0	2@105	1@0	1@106	107@0	53@26[1]	1@1	1@105
90MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2@0	2@243	1@0	1@244	240@0	120@60	1@1	1@243
		CP	2@0	2@243	1@0	1@244	245@0	123@61	1@1	1@243
	60	DFT-s	2@0	2@119	1@0	1@120	120@0	60@30	1@1	1@119
		CP	2@0	2@119	1@0	1@120	121@0	61@30	1@1	1@119
100MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2@0	2@271	1@0	1@272	270@0	135@67	1@1	1@271
		CP	2@0	2@271	1@0	1@272	273@0	137@68	1@1	1@271
	60	DFT-s	2@0	2@133	1@0	1@134	135@0	64@32	1@1	1@133
		CP	2@0	2@133	1@0	1@134	135@0	67@33[1]	1@1	1@133

Note 1: The allocated RB number L_{CRB} is ceil(N_{RB}/2) -1 in order to meet Inner RB allocation definition ($RB_{Start,Low} \leq RB_{Start} \leq RB_{Start,High}$) described in subclause 6.2.2 of TS 38.101-1 [2].

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Maximum Output Power (Tune-up Limit) for 5G NR (FR1)

According to April 2015 TCB workshop, SAR test exclusion can be applied for testing overlapping 5G NR(FR1) bands as follows:

c) The maximum output power, including tolerance, for the smaller band must be ≤ the larger band to qualify for the SAR test exclusion.
d) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.

- NR Band n2 (1850-1910 MHz) is covered by NR Band n25 (1850-1915 MHz)

Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices.

SAR measurement is not required for the Pi/2 BPSK, 16QAM, 64QAM and 256QAM. When the highest maximum output power for Pi/2 BPSK, 16QAM, 64QAM and 256QAM is ≤ ½ dB higher than the QPSK or when the reported SAR for the QPSK configuration is ≤ 1.45 W/kg.

Please refer to section 6.5. for 5G NR(FR1) detail test channels.

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT1		ANT2		ANT3		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
NR n2	QPSK	25.70	17.00	20.25	20.00	24.70	19.50	18.50	19.25
NR n5	QPSK	25.70	25.70	24.50	24.50				
NR n12	QPSK	25.70	25.70	23.90	23.90				
NR n25	QPSK	25.70	17.00	20.25	20.00	24.70	19.50	18.50	19.25
NR n41 (PC3)	QPSK	25.70	19.75	17.00	19.00	25.00	18.00	18.00	20.25
NR n41 (PC2)	QPSK	26.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NR n66	QPSK	25.70	17.25	21.00	20.25	24.70	20.25	20.00	21.75
RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)							
		ANT7		ANT8		ANT9		ANT4	
		Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
NR n77	QPSK	25.70	19.00	20.50	17.00	25.20	19.00	19.00	19.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 5 Measured Results (ANT1)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					166800	167300	167800	MPR	Tune-up Limit	166800	167300	167800	MPR	Tune-up Limit
					834 MHz	836.6 MHz	839 MHz			834 MHz	836.6 MHz	839 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1		24.86		0.0	25.70		24.86		0.0	25.70
		QPSK	1	1		24.88		0.0	25.70		24.88		0.0	25.70
			1	53		25.70		0.0	25.70		25.70		0.0	25.70
			1	104		24.73		0.0	25.70		24.73		0.0	25.70
			50	0		23.73		1.0	24.70		23.73		1.0	24.70
			50	28		25.70		0.0	25.70		25.70		0.0	25.70
			50	56		23.79		1.0	24.70		23.79		1.0	24.70
			100	0		23.94		1.0	24.70		23.94		1.0	24.70
		16QAM	1	1		23.84		1.0	24.70		23.84		1.0	24.70
		64QAM	1	1		22.49		2.5	23.20		22.49		2.5	23.20
		256QAM	1	1		20.24		4.5	21.20		20.24		4.5	21.20
	CP-OFDM	QPSK	1	1		23.20		1.5	24.20		23.20		1.5	24.20
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					166300	167300	168300	MPR	Tune-up Limit	166300	167300	168300	MPR	Tune-up Limit
					831.5 MHz	836.6 MHz	841.5 MHz			831.5 MHz	836.6 MHz	841.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1		24.89		0.0	25.70		24.89		0.0	25.70
		QPSK	1	1		24.98		0.0	25.70		24.98		0.0	25.70
			1	40		24.76		0.0	25.70		24.76		0.0	25.70
			1	77		24.81		0.0	25.70		24.81		0.0	25.70
			36	0		23.90		1.0	24.70		23.90		1.0	24.70
			36	22		24.81		0.0	25.70		24.81		0.0	25.70
			36	43		23.80		1.0	24.70		23.80		1.0	24.70
			75	0		23.71		1.0	24.70		23.71		1.0	24.70
		16QAM	1	1		23.99		1.0	24.70		23.99		1.0	24.70
		64QAM	1	1		22.27		2.5	23.20		22.27		2.5	23.20
		256QAM	1	1		20.48		4.5	21.20		20.48		4.5	21.20
	CP-OFDM	QPSK	1	1		23.33		1.5	24.20		23.33		1.5	24.20
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					165800	167300	168800	MPR	Tune-up Limit	165800	167300	168800	MPR	Tune-up Limit
					829 MHz	836.6 MHz	844 MHz			829 MHz	836.6 MHz	844 MHz		
10 MHz	DFS-s OFDM	PI/2 BPSK	1	1		24.86		0.0	25.70		24.86		0.0	25.70
		QPSK	1	1		24.85		0.0	25.70		24.85		0.0	25.70
			1	26		24.73		0.0	25.70		24.73		0.0	25.70
			1	50		24.85		0.0	25.70		24.85		0.0	25.70
			25	0		23.75		1.0	24.70		23.75		1.0	24.70
			25	14		24.94		0.0	25.70		24.94		0.0	25.70
			25	27		23.73		1.0	24.70		23.73		1.0	24.70
			50	0		23.88		1.0	24.70		23.88		1.0	24.70
		16QAM	1	1		23.78		1.0	24.70		23.78		1.0	24.70
		64QAM	1	1		22.31		2.5	23.20		22.31		2.5	23.20
		256QAM	1	1		20.24		4.5	21.20		20.24		4.5	21.20
	CP-OFDM	QPSK	1	1		23.48		1.5	24.20		23.48		1.5	24.20
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					165300	167300	169300	MPR	Tune-up Limit	165300	167300	169300	MPR	Tune-up Limit
					826.5 MHz	836.6 MHz	846.5 MHz			826.5 MHz	836.6 MHz	846.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.99	24.70	24.76	0.0	25.70	24.99	24.70	24.76	0.0	25.70
		QPSK	1	1	24.79	24.88	24.75	0.0	25.70	24.79	24.88	24.75	0.0	25.70
			1	13	24.81	24.96	24.96	0.0	25.70	24.81	24.96	24.96	0.0	25.70
			1	23	24.82	24.89	24.71	0.0	25.70	24.82	24.89	24.71	0.0	25.70
			12	0	23.84	23.94	23.92	1.0	24.70	23.84	23.94	23.92	1.0	24.70
			12	7	24.77	24.72	24.94	0.0	25.70	24.77	24.72	24.94	0.0	25.70
			12	13	23.93	23.73	23.86	1.0	24.70	23.93	23.73	23.86	1.0	24.70
			25	0	23.84	23.90	23.89	1.0	24.70	23.84	23.90	23.89	1.0	24.70
		16QAM	1	1	23.74	23.82	23.86	1.0	24.70	23.74	23.82	23.86	1.0	24.70
		64QAM	1	1	22.48	22.28	22.25	2.5	23.20	22.48	22.28	22.25	2.5	23.20
		256QAM	1	1	20.50	20.36	20.28	4.5	21.20	20.50	20.36	20.28	4.5	21.20
	CP-OFDM	QPSK	1	1	23.39	23.36	23.32	1.5	24.20	23.39	23.36	23.32	1.5	24.20

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 5 Measured Results (ANT2)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					166800	167300	167800	MPR	Tune-up Limit	166800	167300	167800	MPR	Tune-up Limit
					834 MHz	836.6 MHz	839 MHz			834 MHz	836.6 MHz	839 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1		24.26		0.0	24.50		24.26		0.0	24.50
		QPSK	1	1		24.37		0.0	24.50		24.37		0.0	24.50
			1	53		24.50		0.0	24.50		24.50		0.0	24.50
			1	104		24.42		0.0	24.50		24.42		0.0	24.50
			50	0		23.30		1.0	23.50		23.30		1.0	23.50
			50	28		24.50		0.0	24.50		24.50		0.0	24.50
			50	56		23.30		1.0	23.50		23.30		1.0	23.50
			100	0		23.37		1.0	23.50		23.37		1.0	23.50
		16QAM	1	1		23.38		1.0	23.50		23.38		1.0	23.50
		64QAM	1	1		21.71		2.5	22.00		21.71		2.5	22.00
		256QAM	1	1		19.87		4.5	20.00		19.87		4.5	20.00
	CP-OFDM	QPSK	1	1		22.96		1.5	23.00		22.96		1.5	23.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					166300	167300	168300	MPR	Tune-up Limit	166300	167300	168300	MPR	Tune-up Limit
					831.5 MHz	836.6 MHz	841.5 MHz			831.5 MHz	836.6 MHz	841.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1		24.40		0.0	24.50		24.40		0.0	24.50
		QPSK	1	1		24.36		0.0	24.50		24.36		0.0	24.50
			1	40		24.26		0.0	24.50		24.26		0.0	24.50
			1	77		24.48		0.0	24.50		24.48		0.0	24.50
			36	0		23.32		1.0	23.50		23.32		1.0	23.50
			36	22		24.50		0.0	24.50		24.50		0.0	24.50
			36	43		23.49		1.0	23.50		23.49		1.0	23.50
			75	0		23.38		1.0	23.50		23.38		1.0	23.50
		16QAM	1	1		23.43		1.0	23.50		23.43		1.0	23.50
		64QAM	1	1		21.72		2.5	22.00		21.72		2.5	22.00
		256QAM	1	1		19.93		4.5	20.00		19.93		4.5	20.00
	CP-OFDM	QPSK	1	1		22.95		1.5	23.00		22.95		1.5	23.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					165800	167300	168800	MPR	Tune-up Limit	165800	167300	168800	MPR	Tune-up Limit
					829 MHz	836.6 MHz	844 MHz			829 MHz	836.6 MHz	844 MHz		
10 MHz	DFS-s OFDM	PI/2 BPSK	1	1		24.42		0.0	24.50		24.42		0.0	24.50
		QPSK	1	1		24.29		0.0	24.50		24.29		0.0	24.50
			1	26		24.50		0.0	24.50		24.50		0.0	24.50
			1	50		24.47		0.0	24.50		24.47		0.0	24.50
			25	0		23.30		1.0	23.50		23.30		1.0	23.50
			25	14		24.32		0.0	24.50		24.32		0.0	24.50
			25	27		23.38		1.0	23.50		23.38		1.0	23.50
			50	0		23.30		1.0	23.50		23.30		1.0	23.50
		16QAM	1	1		23.49		1.0	23.50		23.49		1.0	23.50
		64QAM	1	1		21.87		2.5	22.00		21.87		2.5	22.00
		256QAM	1	1		19.74		4.5	20.00		19.74		4.5	20.00
	CP-OFDM	QPSK	1	1		22.95		1.5	23.00		22.95		1.5	23.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					165300	167300	169300	MPR	Tune-up Limit	165300	167300	169300	MPR	Tune-up Limit
					826.5 MHz	836.6 MHz	846.5 MHz			826.5 MHz	836.6 MHz	846.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.48	24.40	24.40	0.0	24.50	24.48	24.40	24.40	0.0	24.50
		QPSK	1	1	24.26	24.29	24.33	0.0	24.50	24.26	24.29	24.33	0.0	24.50
			1	13	24.37	24.25	24.28	0.0	24.50	24.37	24.25	24.28	0.0	24.50
			1	23	24.20	24.41	24.44	0.0	24.50	24.20	24.41	24.44	0.0	24.50
			12	0	23.32	23.27	23.36	1.0	23.50	23.32	23.27	23.36	1.0	23.50
			12	7	24.33	24.39	24.31	0.0	24.50	24.33	24.39	24.31	0.0	24.50
			12	13	23.25	23.34	23.47	1.0	23.50	23.25	23.34	23.47	1.0	23.50
			25	0	23.44	23.48	23.40	1.0	23.50	23.44	23.48	23.40	1.0	23.50
		16QAM	1	1	23.20	23.41	23.45	1.0	23.50	23.20	23.41	23.45	1.0	23.50
		64QAM	1	1	21.84	21.91	21.88	2.5	22.00	21.84	21.91	21.88	2.5	22.00
		256QAM	1	1	19.75	19.72	19.81	4.5	20.00	19.75	19.72	19.81	4.5	20.00
	CP-OFDM	QPSK	1	1	22.79	22.98	22.81	1.5	23.00	22.79	22.98	22.81	1.5	23.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 12 Measured Results (ANT1)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					141300	141500	141700	MPR	Tune-up Limit	141300	141500	141700	MPR	Tune-up Limit
					706.5 MHz	707.5 MHz	708.5 MHz			706.5 MHz	707.5 MHz	708.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1		24.86		0.0	25.70		24.86		0.0	25.70
		QPSK	1	1		24.80		0.0	25.70		24.80		0.0	25.70
			1	40		25.70		0.0	25.70		25.70		0.0	25.70
			1	77		24.76		0.0	25.70		24.76		0.0	25.70
			36	0		23.90		1.0	24.70		23.90		1.0	24.70
			36	22		25.70		0.0	25.70		25.70		0.0	25.70
			36	43		23.94		1.0	24.70		23.94		1.0	24.70
			75	0		23.87		1.0	24.70		23.87		1.0	24.70
		16QAM	1	1		23.94		1.0	24.70		23.94		1.0	24.70
		64QAM	1	1		22.25		2.5	23.20		22.25		2.5	23.20
		256QAM	1	1		20.35		4.5	21.20		20.35		4.5	21.20
	CP-OFDM	QPSK	1	1		23.38		1.5	24.20		23.38		1.5	24.20
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					140800	141500	142200	MPR	Tune-up Limit	140800	141500	142200	MPR	Tune-up Limit
					704 MHz	707.5 MHz	711 MHz			704 MHz	707.5 MHz	711 MHz		
10 MHz	DFS-s OFDM	PI/2 BPSK	1	1		24.92		0.0	25.70		24.92		0.0	25.70
		QPSK	1	1		24.99		0.0	25.70		24.99		0.0	25.70
			1	26		24.76		0.0	25.70		24.76		0.0	25.70
			1	50		24.74		0.0	25.70		24.74		0.0	25.70
			25	0		23.90		1.0	24.70		23.90		1.0	24.70
			25	14		24.72		0.0	25.70		24.72		0.0	25.70
			25	27		23.99		1.0	24.70		23.99		1.0	24.70
			50	0		23.89		1.0	24.70		23.89		1.0	24.70
		16QAM	1	1		23.80		1.0	24.70		23.80		1.0	24.70
		64QAM	1	1		22.30		2.5	23.20		22.30		2.5	23.20
		256QAM	1	1		20.48		4.5	21.20		20.48		4.5	21.20
	CP-OFDM	QPSK	1	1		23.20		1.5	24.20		23.20		1.5	24.20
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					140300	141500	142700	MPR	Tune-up Limit	140300	141500	142700	MPR	Tune-up Limit
					701.5 MHz	707.5 MHz	713.5 MHz			701.5 MHz	707.5 MHz	713.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.74	24.94	24.92	0.0	25.70	24.74	24.94	24.92	0.0	25.70
		QPSK	1	1	24.90	24.83	24.85	0.0	25.70	24.90	24.83	24.85	0.0	25.70
			1	13	24.80	24.90	24.73	0.0	25.70	24.80	24.90	24.73	0.0	25.70
			1	23	24.84	24.99	24.75	0.0	25.70	24.84	24.99	24.75	0.0	25.70
			12	0	23.96	23.84	23.94	1.0	24.70	23.96	23.84	23.94	1.0	24.70
			12	7	24.76	24.79	24.84	0.0	25.70	24.76	24.79	24.84	0.0	25.70
			12	13	23.96	23.84	23.81	1.0	24.70	23.96	23.84	23.81	1.0	24.70
			25	0	23.96	23.81	23.82	1.0	24.70	23.96	23.81	23.82	1.0	24.70
		16QAM	1	1	23.70	23.78	23.99	1.0	24.70	23.70	23.78	23.99	1.0	24.70
		64QAM	1	1	22.47	22.25	22.21	2.5	23.20	22.47	22.25	22.21	2.5	23.20
		256QAM	1	1	20.41	20.32	20.40	4.5	21.20	20.41	20.32	20.40	4.5	21.20
	CP-OFDM	QPSK	1	1	23.24	23.44	23.22	1.5	24.20	23.24	23.44	23.22	1.5	24.20

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 12 Measured Results (ANT2)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					141300	141500	141700	MPR	Tune-up Limit	141300	141500	141700	MPR	Tune-up Limit
					706.5 MHz	707.5 MHz	708.5 MHz			706.5 MHz	707.5 MHz	708.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1		23.71		0.0	23.90		23.71		0.0	23.90
		QPSK	1	1		23.87		0.0	23.90		23.87		0.0	23.90
			1	40		23.90		0.0	23.90		23.90		0.0	23.90
			1	77		23.72		0.0	23.90		23.72		0.0	23.90
			36	0		22.68		1.0	22.90		22.68		1.0	22.90
			36	22		23.90		0.0	23.90		23.90		0.0	23.90
			36	43		22.62		1.0	22.90		22.62		1.0	22.90
			75	0		22.74		1.0	22.90		22.74		1.0	22.90
		16QAM	1	1		22.88		1.0	22.90		22.88		1.0	22.90
		64QAM	1	1		21.21		2.5	21.40		21.21		2.5	21.40
		256QAM	1	1		19.38		4.5	19.40		19.38		4.5	19.40
	CP-OFDM	QPSK	1	1		22.30		1.5	22.40		22.30		1.5	22.40
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					140800	141500	142200	MPR	Tune-up Limit	140800	141500	142200	MPR	Tune-up Limit
					704 MHz	707.5 MHz	711 MHz			704 MHz	707.5 MHz	711 MHz		
10 MHz	DFS-s OFDM	PI/2 BPSK	1	1		23.60		0.0	23.90		23.60		0.0	23.90
		QPSK	1	1		23.62		0.0	23.90		23.62		0.0	23.90
			1	26		23.81		0.0	23.90		23.81		0.0	23.90
			1	50		23.88		0.0	23.90		23.88		0.0	23.90
			25	0		22.65		1.0	22.90		22.65		1.0	22.90
			25	14		23.66		0.0	23.90		23.66		0.0	23.90
			25	27		22.68		1.0	22.90		22.68		1.0	22.90
			50	0		22.87		1.0	22.90		22.87		1.0	22.90
		16QAM	1	1		22.79		1.0	22.90		22.79		1.0	22.90
		64QAM	1	1		21.28		2.5	21.40		21.28		2.5	21.40
		256QAM	1	1		19.16		4.5	19.40		19.16		4.5	19.40
	CP-OFDM	QPSK	1	1		22.30		1.5	22.40		22.30		1.5	22.40
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					140300	141500	142700	MPR	Tune-up Limit	140300	141500	142700	MPR	Tune-up Limit
					701.5 MHz	707.5 MHz	713.5 MHz			701.5 MHz	707.5 MHz	713.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	23.87	23.68	23.80	0.0	23.90	23.87	23.68	23.80	0.0	23.90
		QPSK	1	1	23.74	23.86	23.63	0.0	23.90	23.74	23.86	23.63	0.0	23.90
			1	13	23.83	23.88	23.74	0.0	23.90	23.83	23.88	23.74	0.0	23.90
			1	23	23.63	23.69	23.87	0.0	23.90	23.63	23.69	23.87	0.0	23.90
			12	0	22.80	22.82	22.85	1.0	22.90	22.80	22.82	22.85	1.0	22.90
			12	7	23.63	23.61	23.74	0.0	23.90	23.63	23.61	23.74	0.0	23.90
			12	13	22.90	22.88	22.85	1.0	22.90	22.90	22.88	22.85	1.0	22.90
			25	0	22.87	22.84	22.87	1.0	22.90	22.87	22.84	22.87	1.0	22.90
		16QAM	1	1	22.87	22.66	22.69	1.0	22.90	22.87	22.66	22.69	1.0	22.90
		64QAM	1	1	21.25	21.12	21.16	2.5	21.40	21.25	21.12	21.16	2.5	21.40
		256QAM	1	1	19.14	19.26	19.34	4.5	19.40	19.14	19.26	19.34	4.5	19.40
	CP-OFDM	QPSK	1	1	22.23	22.37	22.33	1.5	22.40	22.23	22.37	22.33	1.5	22.40

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 25 Measured Results (ANT1)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					372000	376500	381000	MPR	Tune-up Limit	372000	376500	381000	MPR	Tune-up Limit
					1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.75	24.95	24.76	0.0	25.70	16.80	16.77	16.70	0.0	17.00
		QPSK	1	1	24.75	24.86	24.84	0.0	25.70	16.80	16.85	16.98	0.0	17.00
			1	53	25.70	25.70	25.70	0.0	25.70	17.00	17.00	17.00	0.0	17.00
			1	104	24.77	24.95	24.83	0.0	25.70	16.92	16.85	16.85	0.0	17.00
			50	0	23.97	23.70	23.92	1.0	24.70	16.73	16.85	16.72	0.0	17.00
			50	28	25.70	25.70	25.70	0.0	25.70	17.00	17.00	17.00	0.0	17.00
			50	56	23.79	23.88	23.72	1.0	24.70	16.90	16.77	16.91	0.0	17.00
			100	0	23.98	23.85	23.79	1.0	24.70	16.86	17.00	16.73	0.0	17.00
		16QAM	1	1	23.86	23.90	23.70	1.0	24.70	16.82	16.77	16.87	0.0	17.00
		64QAM	1	1	22.34	22.41	22.48	2.5	23.20	16.98	16.89	16.91	0.0	17.00
		256QAM	1	1	20.29	20.28	20.22	4.5	21.20	16.79	16.82	16.83	0.0	17.00
	CP-OFDM	QPSK	1	1	23.36	23.48	23.30	1.5	24.20	16.74	16.99	16.94	0.0	17.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					371500	376500	381500	MPR	Tune-up Limit	371500	376500	381500	MPR	Tune-up Limit
					1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.95	24.87	24.75	0.0	25.70	16.78	16.92	16.95	0.0	17.00
		QPSK	1	1	24.79	24.81	24.83	0.0	25.70	16.96	16.76	16.78	0.0	17.00
			1	40	24.73	24.84	24.73	0.0	25.70	16.73	16.72	16.78	0.0	17.00
			1	77	24.90	24.96	24.74	0.0	25.70	16.74	16.80	16.89	0.0	17.00
			36	0	23.82	23.88	23.86	1.0	24.70	16.76	16.79	16.77	0.0	17.00
			36	22	24.72	24.88	24.87	0.0	25.70	16.98	16.77	16.89	0.0	17.00
			36	43	23.88	23.80	23.83	1.0	24.70	16.71	16.90	16.88	0.0	17.00
			75	0	23.87	23.94	23.86	1.0	24.70	16.79	16.71	16.76	0.0	17.00
		16QAM	1	1	23.96	23.88	23.70	1.0	24.70	16.74	16.82	16.70	0.0	17.00
		64QAM	1	1	22.30	22.28	22.34	2.5	23.20	16.76	16.79	16.85	0.0	17.00
		256QAM	1	1	20.26	20.47	20.31	4.5	21.20	16.90	16.86	16.79	0.0	17.00
	CP-OFDM	QPSK	1	1	23.25	23.30	23.42	1.5	24.20	16.75	16.83	16.83	0.0	17.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					371000	376500	382000	MPR	Tune-up Limit	371000	376500	382000	MPR	Tune-up Limit
					1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.72	24.89	24.89	0.0	25.70	16.82	16.80	16.83	0.0	17.00
		QPSK	1	1	24.83	24.87	24.90	0.0	25.70	16.98	16.95	16.98	0.0	17.00
			1	26	24.86	24.75	24.87	0.0	25.70	16.88	16.89	16.91	0.0	17.00
			1	50	24.86	24.82	24.70	0.0	25.70	16.73	16.96	16.72	0.0	17.00
			25	0	23.73	23.80	23.78	1.0	24.70	16.83	16.75	16.80	0.0	17.00
			25	14	24.97	24.84	24.81	0.0	25.70	16.82	16.90	16.89	0.0	17.00
			25	27	23.79	23.94	23.77	1.0	24.70	16.73	16.81	16.74	0.0	17.00
			50	0	23.73	23.86	23.95	1.0	24.70	16.81	16.71	16.85	0.0	17.00
		16QAM	1	1	23.78	23.87	23.95	1.0	24.70	16.89	16.70	16.96	0.0	17.00
		64QAM	1	1	22.36	22.39	22.45	2.5	23.20	16.73	16.96	16.93	0.0	17.00
		256QAM	1	1	20.43	20.29	20.29	4.5	21.20	16.75	16.92	16.87	0.0	17.00
	CP-OFDM	QPSK	1	1	23.46	23.21	23.27	1.5	24.20	16.92	16.93	16.85	0.0	17.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					370500	376500	382500	MPR	Tune-up Limit	370500	376500	382500	MPR	Tune-up Limit
					1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.80	24.98	24.73	0.0	25.70	16.84	16.72	16.91	0.0	17.00
		QPSK	1	1	24.87	24.70	24.78	0.0	25.70	16.82	16.98	16.95	0.0	17.00
			1	13	24.80	24.72	24.75	0.0	25.70	16.97	16.89	16.98	0.0	17.00
			1	23	24.73	24.84	24.99	0.0	25.70	16.71	16.79	16.93	0.0	17.00
			12	0	23.90	23.98	23.71	1.0	24.70	16.76	16.93	16.91	0.0	17.00
			12	7	24.80	24.85	24.72	0.0	25.70	16.77	16.90	16.87	0.0	17.00
			12	13	23.83	23.77	23.99	1.0	24.70	16.81	16.81	16.94	0.0	17.00
			25	0	23.91	23.97	23.95	1.0	24.70	16.75	16.94	16.97	0.0	17.00
		16QAM	1	1	23.71	23.77	23.82	1.0	24.70	16.70	16.71	16.73	0.0	17.00
		64QAM	1	1	22.44	22.24	22.42	2.5	23.20	16.86	16.99	16.83	0.0	17.00
		256QAM	1	1	20.47	20.43	20.41	4.5	21.20	16.91	16.92	16.93	0.0	17.00
	CP-OFDM	QPSK	1	1	23.33	23.44	23.38	1.5	24.20	16.91	16.83	16.86	0.0	17.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 25 Measured Results (ANT2)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					372000	376500	381000	MPR	Tune-up Limit	372000	376500	381000	MPR	Tune-up Limit
					1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.14	20.11	20.00	0.0	20.25	19.88	19.98	19.97	0.0	20.00
		QPSK	1	1	20.11	20.01	20.11	0.0	20.25	19.77	20.00	19.71	0.0	20.00
			1	53	20.25	20.25	20.25	0.0	20.25	20.00	20.00	20.00	0.0	20.00
			1	104	20.12	20.02	19.99	0.0	20.25	19.94	19.99	19.81	0.0	20.00
			50	0	19.97	20.06	20.17	0.0	20.25	19.76	19.73	19.73	0.0	20.00
			50	28	20.25	20.25	20.25	0.0	20.25	20.00	20.00	20.00	0.0	20.00
			50	56	20.08	20.03	20.10	0.0	20.25	19.80	19.78	19.93	0.0	20.00
			100	0	20.07	20.25	20.21	0.0	20.25	19.87	20.00	19.92	0.0	20.00
		16QAM	1	1	19.98	20.18	20.25	0.0	20.25	19.97	19.78	19.95	0.0	20.00
		64QAM	1	1	20.21	20.12	20.11	0.0	20.25	19.73	19.85	19.84	0.0	20.00
		256QAM	1	1	20.03	20.16	19.95	0.0	20.25	19.88	19.90	19.84	0.0	20.00
	CP-OFDM	QPSK	1	1	20.00	20.13	20.13	0.0	20.25	19.95	19.90	19.71	0.0	20.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					371500	376500	381500	MPR	Tune-up Limit	371500	376500	381500	MPR	Tune-up Limit
					1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.06	20.11	19.97	0.0	20.25	19.93	19.80	19.85	0.0	20.00
		QPSK	1	1	20.08	20.15	20.00	0.0	20.25	19.71	19.91	19.94	0.0	20.00
			1	40	20.19	20.20	20.07	0.0	20.25	19.73	19.94	19.73	0.0	20.00
			1	77	19.99	20.20	20.17	0.0	20.25	19.80	19.90	19.98	0.0	20.00
			36	0	20.13	20.15	20.01	0.0	20.25	19.90	19.87	19.92	0.0	20.00
			36	22	20.05	20.04	20.09	0.0	20.25	19.82	19.78	19.97	0.0	20.00
			36	43	19.98	19.95	20.14	0.0	20.25	19.71	19.82	19.89	0.0	20.00
			75	0	20.17	20.16	20.01	0.0	20.25	19.79	19.73	19.85	0.0	20.00
		16QAM	1	1	20.14	20.08	20.05	0.0	20.25	19.91	19.74	19.73	0.0	20.00
		64QAM	1	1	20.12	20.24	20.17	0.0	20.25	19.93	19.97	19.77	0.0	20.00
		256QAM	1	1	20.25	20.11	20.17	0.0	20.25	19.84	19.87	19.85	0.0	20.00
	CP-OFDM	QPSK	1	1	20.16	20.02	20.11	0.0	20.25	19.89	19.75	19.96	0.0	20.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					371000	376500	382000	MPR	Tune-up Limit	371000	376500	382000	MPR	Tune-up Limit
					1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	19.97	20.05	19.99	0.0	20.25	19.87	19.78	19.89	0.0	20.00
		QPSK	1	1	20.04	20.00	19.95	0.0	20.25	19.74	19.97	19.80	0.0	20.00
			1	26	20.23	20.14	20.25	0.0	20.25	19.74	19.71	19.76	0.0	20.00
			1	50	19.96	20.25	20.12	0.0	20.25	19.91	19.99	19.86	0.0	20.00
			25	0	20.14	20.19	20.06	0.0	20.25	19.91	19.88	19.73	0.0	20.00
			25	14	20.02	20.23	20.13	0.0	20.25	19.73	19.71	19.98	0.0	20.00
			25	27	20.04	20.25	20.12	0.0	20.25	19.77	19.91	19.94	0.0	20.00
			50	0	19.99	20.24	20.19	0.0	20.25	19.83	19.96	19.93	0.0	20.00
		16QAM	1	1	20.25	20.05	19.98	0.0	20.25	19.90	19.79	19.85	0.0	20.00
		64QAM	1	1	20.17	20.16	20.11	0.0	20.25	19.96	19.71	19.90	0.0	20.00
		256QAM	1	1	19.99	19.99	19.99	0.0	20.25	19.76	19.95	19.78	0.0	20.00
	CP-OFDM	QPSK	1	1	20.04	20.11	20.19	0.0	20.25	19.89	19.78	19.93	0.0	20.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					370500	376500	382500	MPR	Tune-up Limit	370500	376500	382500	MPR	Tune-up Limit
					1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.19	19.98	19.99	0.0	20.25	19.89	19.90	19.78	0.0	20.00
		QPSK	1	1	20.13	20.05	20.15	0.0	20.25	19.89	19.85	19.92	0.0	20.00
			1	13	20.12	19.96	20.19	0.0	20.25	19.74	19.77	19.90	0.0	20.00
			1	23	19.95	20.20	20.01	0.0	20.25	19.77	19.74	19.81	0.0	20.00
			12	0	20.00	20.09	20.18	0.0	20.25	19.82	19.98	19.90	0.0	20.00
			12	7	20.14	20.06	20.14	0.0	20.25	19.84	19.78	19.94	0.0	20.00
			12	13	20.24	20.09	20.17	0.0	20.25	19.75	19.73	19.94	0.0	20.00
			25	0	20.17	20.04	20.20	0.0	20.25	19.82	19.94	19.79	0.0	20.00
		16QAM	1	1	20.13	20.10	19.95	0.0	20.25	19.83	19.85	19.93	0.0	20.00
		64QAM	1	1	20.06	20.23	20.22	0.0	20.25	19.82	19.83	19.81	0.0	20.00
		256QAM	1	1	19.95	20.20	20.10	0.0	20.25	19.76	19.94	19.90	0.0	20.00
	CP-OFDM	QPSK	1	1	20.25	20.22	20.20	0.0	20.25	19.98	20.00	19.84	0.0	20.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 25 Measured Results (ANT3)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					372000	376500	381000	MPR	Tune-up Limit	372000	376500	381000	MPR	Tune-up Limit
					1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.46	24.36	24.20	0.0	24.70	19.00	19.10	19.15	0.0	19.50
		QPSK	1	1	24.47	24.29	24.28	0.0	24.70	19.09	19.03	18.96	0.0	19.50
			1	53	24.70	24.70	24.70	0.0	24.70	19.50	19.50	19.50	0.0	19.50
			1	104	24.38	24.47	24.31	0.0	24.70	19.00	18.90	19.06	0.0	19.50
			50	0	23.22	23.25	23.28	1.0	23.70	18.90	18.92	19.10	0.0	19.50
			50	28	24.70	24.70	24.70	0.0	24.70	19.50	19.50	19.50	0.0	19.50
			50	56	23.29	23.48	23.34	1.0	23.70	19.16	19.07	18.92	0.0	19.50
			100	0	23.25	23.41	23.35	1.0	23.70	19.17	19.50	18.99	0.0	19.50
		16QAM	1	1	23.45	23.44	23.31	1.0	23.70	19.06	19.14	18.91	0.0	19.50
		64QAM	1	1	21.81	21.96	21.93	2.5	22.20	19.10	19.20	19.02	0.0	19.50
		256QAM	1	1	19.89	19.98	19.74	4.5	20.20	18.92	19.06	19.01	0.0	19.50
	CP-OFDM	QPSK	1	1	22.90	22.92	22.99	1.5	23.20	18.98	19.04	19.09	0.0	19.50
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					371500	376500	381500	MPR	Tune-up Limit	371500	376500	381500	MPR	Tune-up Limit
					1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.42	24.25	24.41	0.0	24.70	19.04	19.11	19.06	0.0	19.50
		QPSK	1	1	24.36	24.44	24.30	0.0	24.70	19.13	19.03	19.17	0.0	19.50
			1	40	24.32	24.26	24.28	0.0	24.70	19.12	19.17	18.95	0.0	19.50
			1	77	24.40	24.31	24.32	0.0	24.70	18.99	19.00	18.99	0.0	19.50
			36	0	23.33	23.42	23.32	1.0	23.70	19.08	19.17	18.96	0.0	19.50
			36	22	24.45	24.26	24.45	0.0	24.70	19.18	19.14	19.12	0.0	19.50
			36	43	23.48	23.39	23.41	1.0	23.70	19.04	19.10	18.95	0.0	19.50
			75	0	23.28	23.33	23.37	1.0	23.70	19.02	18.98	19.03	0.0	19.50
		16QAM	1	1	23.47	23.36	23.25	1.0	23.70	19.05	18.91	19.10	0.0	19.50
		64QAM	1	1	21.73	21.87	21.76	2.5	22.20	18.97	19.11	18.96	0.0	19.50
		256QAM	1	1	19.90	19.70	19.88	4.5	20.20	18.98	19.09	18.97	0.0	19.50
	CP-OFDM	QPSK	1	1	22.82	22.89	22.87	1.5	23.20	19.06	19.13	19.08	0.0	19.50
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					371000	376500	382000	MPR	Tune-up Limit	371000	376500	382000	MPR	Tune-up Limit
					1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.46	24.25	24.21	0.0	24.70	19.19	18.99	19.18	0.0	19.50
		QPSK	1	1	24.45	24.28	24.34	0.0	24.70	19.07	19.00	19.18	0.0	19.50
			1	26	24.33	24.42	24.22	0.0	24.70	19.08	19.09	18.93	0.0	19.50
			1	50	24.37	24.39	24.43	0.0	24.70	19.20	19.18	19.08	0.0	19.50
			25	0	23.28	23.42	23.46	1.0	23.70	19.14	18.99	19.04	0.0	19.50
			25	14	24.48	24.21	24.33	0.0	24.70	18.96	19.04	18.94	0.0	19.50
			25	27	23.49	23.22	23.34	1.0	23.70	18.98	19.09	19.04	0.0	19.50
			50	0	23.49	23.30	23.31	1.0	23.70	18.97	18.91	19.01	0.0	19.50
		16QAM	1	1	23.35	23.43	23.33	1.0	23.70	19.08	19.09	19.00	0.0	19.50
		64QAM	1	1	21.88	21.90	21.91	2.5	22.20	19.06	18.98	19.06	0.0	19.50
		256QAM	1	1	19.74	19.72	19.83	4.5	20.20	19.03	18.98	18.91	0.0	19.50
	CP-OFDM	QPSK	1	1	22.78	22.87	22.99	1.5	23.20	18.95	19.15	18.91	0.0	19.50
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					370500	376500	382500	MPR	Tune-up Limit	370500	376500	382500	MPR	Tune-up Limit
					1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.36	24.27	24.24	0.0	24.70	18.93	19.06	19.01	0.0	19.50
		QPSK	1	1	24.44	24.40	24.47	0.0	24.70	19.06	19.16	18.97	0.0	19.50
			1	13	24.29	24.40	24.22	0.0	24.70	19.17	19.19	19.18	0.0	19.50
			1	23	24.40	24.42	24.29	0.0	24.70	18.93	18.93	18.92	0.0	19.50
			12	0	23.44	23.26	23.47	1.0	23.70	19.04	19.08	18.97	0.0	19.50
			12	7	24.42	24.38	24.31	0.0	24.70	19.05	19.08	19.06	0.0	19.50
			12	13	23.24	23.27	23.45	1.0	23.70	18.95	18.95	19.01	0.0	19.50
			25	0	23.38	23.47	23.42	1.0	23.70	19.10	18.92	19.18	0.0	19.50
		16QAM	1	1	23.43	23.40	23.21	1.0	23.70	19.16	18.96	19.11	0.0	19.50
		64QAM	1	1	21.98	21.72	21.77	2.5	22.20	19.10	19.16	18.94	0.0	19.50
		256QAM	1	1	19.83	19.80	19.72	4.5	20.20	18.91	19.20	18.91	0.0	19.50
	CP-OFDM	QPSK	1	1	22.76	22.72	22.90	1.5	23.20	19.08	18.94	19.06	0.0	19.50

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 25 Measured Results (ANT4)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					372000	376500	381000	MPR	Tune-up Limit	372000	376500	381000	MPR	Tune-up Limit
					1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	18.21	18.34	18.24	0.0	18.50	18.94	18.91	18.73	0.0	19.25
		QPSK	1	1	18.33	18.33	18.26	0.0	18.50	18.96	18.86	18.70	0.0	19.25
			1	53	18.50	18.50	18.50	0.0	18.50	19.25	19.25	19.25	0.0	19.25
			1	104	18.50	18.46	18.35	0.0	18.50	18.96	18.90	18.92	0.0	19.25
			50	0	18.40	18.28	18.26	0.0	18.50	18.91	18.75	18.78	0.0	19.25
			50	28	18.50	18.50	18.50	0.0	18.50	19.25	19.25	19.25	0.0	19.25
			50	56	18.26	18.33	18.25	0.0	18.50	18.98	18.76	18.73	0.0	19.25
			100	0	18.24	18.50	18.30	0.0	18.50	18.93	19.25	18.97	0.0	19.25
		16QAM	1	1	18.36	18.38	18.32	0.0	18.50	18.92	18.76	18.98	0.0	19.25
		64QAM	1	1	18.48	18.25	18.39	0.0	18.50	18.98	18.88	18.78	0.0	19.25
		256QAM	1	1	18.34	18.44	18.47	0.0	18.50	18.87	18.73	18.83	0.0	19.25
	CP-OFDM	QPSK	1	1	18.21	18.45	18.27	0.0	18.50	18.78	18.97	18.75	0.0	19.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					371500	376500	381500	MPR	Tune-up Limit	371500	376500	381500	MPR	Tune-up Limit
					1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	18.40	18.32	18.49	0.0	18.50	18.75	18.94	18.90	0.0	19.25
		QPSK	1	1	18.48	18.25	18.42	0.0	18.50	18.94	18.75	18.94	0.0	19.25
			1	40	18.38	18.43	18.26	0.0	18.50	18.72	18.79	18.95	0.0	19.25
			1	77	18.29	18.27	18.50	0.0	18.50	18.83	18.80	18.77	0.0	19.25
			36	0	18.24	18.22	18.32	0.0	18.50	18.96	18.71	18.78	0.0	19.25
			36	22	18.32	18.48	18.28	0.0	18.50	18.71	18.93	18.91	0.0	19.25
			36	43	18.48	18.49	18.27	0.0	18.50	18.86	18.78	18.83	0.0	19.25
			75	0	18.31	18.29	18.28	0.0	18.50	18.86	18.87	18.70	0.0	19.25
		16QAM	1	1	18.42	18.39	18.42	0.0	18.50	18.75	18.99	18.96	0.0	19.25
		64QAM	1	1	18.21	18.38	18.39	0.0	18.50	18.94	18.92	18.92	0.0	19.25
		256QAM	1	1	18.21	18.45	18.25	0.0	18.50	18.92	18.91	19.00	0.0	19.25
	CP-OFDM	QPSK	1	1	18.21	18.28	18.33	0.0	18.50	18.73	18.84	18.75	0.0	19.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					371000	376500	382000	MPR	Tune-up Limit	371000	376500	382000	MPR	Tune-up Limit
					1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	18.47	18.37	18.48	0.0	18.50	18.90	18.83	18.86	0.0	19.25
		QPSK	1	1	18.37	18.21	18.38	0.0	18.50	18.87	18.82	18.70	0.0	19.25
			1	26	18.45	18.28	18.26	0.0	18.50	18.75	18.74	18.87	0.0	19.25
			1	50	18.39	18.31	18.20	0.0	18.50	18.81	18.88	18.81	0.0	19.25
			25	0	18.23	18.21	18.34	0.0	18.50	18.96	18.91	18.96	0.0	19.25
			25	14	18.37	18.39	18.48	0.0	18.50	18.75	18.83	18.87	0.0	19.25
			25	27	18.39	18.41	18.28	0.0	18.50	18.85	18.73	18.88	0.0	19.25
			50	0	18.35	18.35	18.41	0.0	18.50	18.88	18.75	18.75	0.0	19.25
		16QAM	1	1	18.24	18.50	18.30	0.0	18.50	18.99	18.76	18.73	0.0	19.25
		64QAM	1	1	18.34	18.33	18.46	0.0	18.50	18.85	18.77	18.80	0.0	19.25
		256QAM	1	1	18.27	18.46	18.24	0.0	18.50	18.71	18.99	18.71	0.0	19.25
	CP-OFDM	QPSK	1	1	18.47	18.39	18.32	0.0	18.50	18.80	18.76	18.77	0.0	19.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					370500	376500	382500	MPR	Tune-up Limit	370500	376500	382500	MPR	Tune-up Limit
					1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	18.47	18.39	18.49	0.0	18.50	18.81	18.87	18.71	0.0	19.25
		QPSK	1	1	18.22	18.31	18.41	0.0	18.50	18.77	18.84	18.74	0.0	19.25
			1	13	18.40	18.42	18.45	0.0	18.50	18.71	18.74	18.82	0.0	19.25
			1	23	18.20	18.33	18.37	0.0	18.50	18.77	18.71	18.79	0.0	19.25
			12	0	18.20	18.22	18.45	0.0	18.50	18.72	18.94	18.91	0.0	19.25
			12	7	18.42	18.33	18.26	0.0	18.50	18.90	18.92	18.82	0.0	19.25
			12	13	18.44	18.40	18.38	0.0	18.50	18.73	18.77	18.99	0.0	19.25
			25	0	18.35	18.25	18.46	0.0	18.50	18.75	18.99	18.93	0.0	19.25
		16QAM	1	1	18.23	18.37	18.24	0.0	18.50	18.74	19.00	18.72	0.0	19.25
		64QAM	1	1	18.33	18.31	18.43	0.0	18.50	18.72	18.75	18.89	0.0	19.25
		256QAM	1	1	18.25	18.28	18.49	0.0	18.50	18.74	18.93	18.83	0.0	19.25
	CP-OFDM	QPSK	1	1	18.37	18.34	18.43	0.0	18.50	18.99	18.79	18.80	0.0	19.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 41 Measured Results (ANT1)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					509200	513900	518600	523300	528000	MPR	Tune-up Limit	509200	513900	518600	523300	528000	MPR	Tune-up Limit
					2546 MHz	2569.5 MHz	2593 MHz	2616.5 MHz	2640 MHz			2546 MHz	2569.5 MHz	2593 MHz	2616.5 MHz	2640 MHz		
100 MHz	DFS-s OFDM	PI/2 BPSK	1	1			24.70			0.0	25.70			19.46			0.0	19.75
		QPSK	1	1			24.98			0.0	25.70			19.49			0.0	19.75
			1	137			25.70			0.0	25.70			19.75			0.0	19.75
			1	271			24.87			0.0	25.70			19.59			0.0	19.75
			135	0			23.93			1.0	24.70			19.66			0.0	19.75
			135	69			25.70			0.0	25.70			19.75			0.0	19.75
			135	138			23.79			1.0	24.70			19.69			0.0	19.75
			270	0			23.85			1.0	24.70			19.75			0.0	19.75
		16QAM	1	1			23.82			1.0	24.70			19.53			0.0	19.75
		64QAM	1	1			22.48			2.5	23.20			19.49			0.0	19.75
		256QAM	1	1			20.47			4.5	21.20			19.60			0.0	19.75
	CP-OFDM	QPSK	1	1			23.27			1.5	24.20			19.71			0.0	19.75
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					508200	513400	518600	523800	529000	MPR	Tune-up Limit	508200	513400	518600	523800	529000	MPR	Tune-up Limit
					2541 MHz	2567 MHz	2593 MHz	2619 MHz	2645 MHz			2541 MHz	2567 MHz	2593 MHz	2619 MHz	2645 MHz		
90 MHz	DFS-s OFDM	PI/2 BPSK	1	1			24.83			0.0	25.70			19.74			0.0	19.75
		QPSK	1	1			24.98			0.0	25.70			19.57			0.0	19.75
			1	123			24.98			0.0	25.70			19.53			0.0	19.75
			1	243			24.94			0.0	25.70			19.63			0.0	19.75
			120	0			23.78			1.0	24.70			19.46			0.0	19.75
			120	63			24.72			0.0	25.70			19.54			0.0	19.75
			120	125			23.88			1.0	24.70			19.54			0.0	19.75
			243	0			23.91			1.0	24.70			19.59			0.0	19.75
		16QAM	1	1			23.74			1.0	24.70			19.50			0.0	19.75
		64QAM	1	1			22.28			2.5	23.20			19.67			0.0	19.75
		256QAM	1	1			20.36			4.5	21.20			19.48			0.0	19.75
	CP-OFDM	QPSK	1	1			23.25			1.5	24.20			19.68			0.0	19.75
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					507200	512900	518600	524300	530000	MPR	Tune-up Limit	507200	512900	518600	524300	530000	MPR	Tune-up Limit
					2536 MHz	2564.5 MHz	2593 MHz	2621.5 MHz	2650 MHz			2536 MHz	2564.5 MHz	2593 MHz	2621.5 MHz	2650 MHz		
80 MHz	DFS-s OFDM	PI/2 BPSK	1	1			24.91			0.0	25.70			19.47			0.0	19.75
		QPSK	1	1			24.88			0.0	25.70			19.71			0.0	19.75
			1	109			24.97			0.0	25.70			19.55			0.0	19.75
			1	215			24.97			0.0	25.70			19.69			0.0	19.75
			108	0			23.72			1.0	24.70			19.49			0.0	19.75
			108	55			24.93			0.0	25.70			19.64			0.0	19.75
			108	109			23.89			1.0	24.70			19.45			0.0	19.75
			216	0			23.79			1.0	24.70			19.60			0.0	19.75
		16QAM	1	1			23.99			1.0	24.70			19.56			0.0	19.75
		64QAM	1	1			22.36			2.5	23.20			19.46			0.0	19.75
		256QAM	1	1			20.49			4.5	21.20			19.57			0.0	19.75
	CP-OFDM	QPSK	1	1			23.35			1.5	24.20			19.51			0.0	19.75
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					505200	511900	518600	525300	532000	MPR	Tune-up Limit	505200	511900	518600	525300	532000	MPR	Tune-up Limit
					2526 MHz	2559.5 MHz	2593 MHz	2626.5 MHz	2660 MHz			2526 MHz	2559.5 MHz	2593 MHz	2626.5 MHz	2660 MHz		
60 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.71	24.70	24.75	24.82	24.96	0.0	25.70	19.48	19.47	19.52	19.56	19.68	0.0	19.75
		QPSK	1	1	24.91	24.86	24.79	24.83	24.81	0.0	25.70	19.70	19.72	19.49	19.70	19.48	0.0	19.75
			1	81	24.83	24.85	24.83	24.78	24.83	0.0	25.70	19.69	19.52	19.50	19.65	19.59	0.0	19.75
			1	160	24.80	25.00	24.87	24.98	24.75	0.0	25.70	19.53	19.69	19.67	19.61	19.70	0.0	19.75
			81	0	23.72	23.87	23.74	23.75	24.00	1.0	24.70	19.57	19.65	19.49	19.52	19.62	0.0	19.75
			81	40	25.00	24.73	24.70	24.71	24.89	0.0	25.70	19.62	19.48	19.48	19.71	19.67	0.0	19.75
			81	81	23.83	23.81	23.76	23.72	23.73	1.0	24.70	19.68	19.66	19.46	19.51	19.47	0.0	19.75
			162	0	23.85	23.85	23.82	23.89	23.96	1.0	24.70	19.59	19.47	19.50	19.70	19.70	0.0	19.75
		16QAM	1	1	23.93	23.72	23.91	23.97	23.74	1.0	24.70	19.66	19.45	19.70	19.49	19.45	0.0	19.75
		64QAM	1	1	22.23	22.40	22.37	22.43	22.44	2.5	23.20	19.45	19.50	19.71	19.51	19.64	0.0	19.75
		256QAM	1	1	20.24	20.42	20.34	20.29	20.20	4.5	21.20	19.64	19.62	19.68	19.44	19.72	0.0	19.75
	CP-OFDM	QPSK	1	1	23.32	23.48	23.39	23.45	23.24	1.5	24.20	19.61	19.60	19.65	19.72	19.55	0.0	19.75
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					504200	511400	518600	525800	533000	MPR	Tune-up Limit	504200	511400	518600	525800	533000	MPR	Tune-up Limit
					2521 MHz	2557 MHz	2593 MHz	2629 MHz	2665 MHz			2521 MHz	2557 MHz	2593 MHz	2629 MHz	2665 MHz		
50 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.88	24.75	24.98	24.92	24.79	0.0	25.70	19.65	19.63	19.53	19.64	19.55	0.0	19.75
		QPSK	1	1	24.91	24.86	24.93	24.75	24.99	0.0	25.70	19.70	19.51	19.64	19.72	19.48	0.0	19.75
			1	67	24.70	24.97	24.96	25.00	24.95	0.0	25.70	19.56	19.65	19.64	19.73	19.50	0.0	19.75
			1	131	24.93	24.77	24.73	24.95	24.87	0.0	25.70	19.69	19.53	19.71	19.64	19.48	0.0	19.75
			64	0	23.96	23.89	23.75	23.85	23.91	1.0	24.70	19.49	19.62	19.48	19.52	19.74	0.0	19.75
			64	35	24.74	24.97	24.72	24.89	24.99	0.0	25.70	19.58	19.49	19.66	19.65	19.73	0.0	19.75
			64	69	23.84	23.73	23.87	23.88	23.94	1.0	24.70	19.62	19.58	19.64	19.47	19.49	0.0	19.75
			128	0	23.81	23.82	23.78	23.96	23.98	1.0	24.70	19.58	19.60	19.72	19.50	19.57	0.0	19.75
		16QAM	1	1	23.92	23.73	23.82	23.71	23.93	1.0	24.70	19.60	19.55	19.66	19.49	19.46	0.0	19.75
		64QAM	1	1	22.22	22.42	22.48	22.20	22.34	2.5	23.20	19.47	19.49	19.45	19.64	19.46	0.0	19.75
		256QAM	1	1	20.46	20.43	20.38	20.25	20.33	4.5	21.20	19.61	19.62	19.46	19.60	19.69	0.0	19.75
	CP-OFDM	QPSK	1	1	23.27	23.38	23.30	23.22	23.30	1.5	24.20	19.63	19.64	19.62	19.45	19.50	0.0	19.75

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 41 Measured Results (ANT1) (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					503200	510900	518600	526300	534000	MPR	Tune-up Limit	503200	510900	518600	526300	534000	MPR	Tune-up Limit
					2516 MHz	2554.5 MHz	2593 MHz	2631.5 MHz	2670 MHz			2516 MHz	2554.5 MHz	2593 MHz	2631.5 MHz	2670 MHz		
40 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.73	24.85	24.80	24.74	24.78	0.0	25.70	19.63	19.63	19.67	19.54	19.57	0.0	19.75
		QPSK	1	1	24.99	24.79	24.77	24.88	24.81	0.0	25.70	19.46	19.69	19.66	19.57	19.73	0.0	19.75
			1	53	24.89	24.86	24.77	24.83	24.73	0.0	25.70	19.44	19.73	19.54	19.62	19.53	0.0	19.75
			1	104	24.88	24.88	24.75	24.76	24.83	0.0	25.70	19.66	19.68	19.63	19.68	19.70	0.0	19.75
			50	0	23.74	23.84	23.85	23.82	23.93	1.0	24.70	19.44	19.62	19.50	19.58	19.61	0.0	19.75
			50	28	24.73	24.95	24.73	24.99	24.81	0.0	25.70	19.54	19.52	19.53	19.59	19.53	0.0	19.75
			50	56	23.96	23.89	23.95	23.93	23.71	1.0	24.70	19.67	19.47	19.50	19.50	19.62	0.0	19.75
			100	0	23.97	23.99	23.94	23.95	23.98	1.0	24.70	19.51	19.65	19.50	19.56	19.64	0.0	19.75
		16QAM	1	1	23.86	23.86	23.79	23.94	23.80	1.0	24.70	19.49	19.60	19.58	19.63	19.59	0.0	19.75
		64QAM	1	1	22.30	22.35	22.26	22.50	22.22	2.5	23.20	19.61	19.60	19.48	19.48	19.68	0.0	19.75
		256QAM	1	1	20.38	20.38	20.24	20.26	20.39	4.5	21.20	19.65	19.47	19.69	19.71	19.66	0.0	19.75
	CP-OFDM	QPSK	1	1	23.27	23.33	23.20	23.44	23.49	1.5	24.20	19.45	19.67	19.70	19.61	19.66	0.0	19.75

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					501200	509900	518600	527300	536000	MPR	Tune-up Limit	501200	509900	518600	527300	536000	MPR	Tune-up Limit
					2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.89	24.93	24.95	24.92	24.85	0.0	25.70	19.69	19.63	19.65	19.67	19.57	0.0	19.75
		QPSK	1	1	24.84	24.79	24.77	24.79	24.93	0.0	25.70	19.49	19.61	19.47	19.66	19.45	0.0	19.75
			1	26	24.92	24.91	24.91	24.98	24.87	0.0	25.70	19.71	19.47	19.61	19.55	19.59	0.0	19.75
			1	49	24.96	24.93	24.92	24.95	24.75	0.0	25.70	19.49	19.49	19.68	19.46	19.65	0.0	19.75
			25	0	23.91	23.83	23.73	23.72	23.96	1.0	24.70	19.74	19.61	19.68	19.69	19.61	0.0	19.75
			25	13	24.72	24.99	24.81	24.95	24.87	0.0	25.70	19.55	19.61	19.65	19.57	19.51	0.0	19.75
			25	26	23.74	23.76	23.92	23.70	23.96	1.0	24.70	19.67	19.45	19.46	19.51	19.50	0.0	19.75
			50	0	23.89	23.81	23.75	23.94	23.97	1.0	24.70	19.44	19.69	19.70	19.49	19.53	0.0	19.75
		16QAM	1	1	23.90	23.84	23.90	23.81	23.78	1.0	24.70	19.45	19.46	19.57	19.66	19.48	0.0	19.75
		64QAM	1	1	22.28	22.28	22.30	22.37	22.27	2.5	23.20	19.52	19.68	19.58	19.70	19.51	0.0	19.75
		256QAM	1	1	20.42	20.20	20.41	20.26	20.44	4.5	21.20	19.69	19.47	19.58	19.45	19.57	0.0	19.75
	CP-OFDM	QPSK	1	1	23.36	23.46	23.40	23.48	23.50	1.5	24.20	19.67	19.58	19.56	19.49	19.51	0.0	19.75

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 41 Measured Results (ANT2)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					509200	513900	518600	523300	528000			509200	513900	518600	523300	528000		
					2546 MHz	2569.5 MHz	2593 MHz	2616.5 MHz	2640 MHz			2546 MHz	2569.5 MHz	2593 MHz	2616.5 MHz	2640 MHz		
100 MHz	DFS-s OFDM	Pi/2 BPSK	1	1			16.91			0.0	17.00			18.99			0.0	19.00
		QPSK	1	1			16.86			0.0	17.00			18.94			0.0	19.00
			1	137			17.00			0.0	17.00			19.00			0.0	19.00
			1	271			16.88			0.0	17.00			18.83			0.0	19.00
			135	0			16.79			0.0	17.00			18.97			0.0	19.00
			135	69			17.00			0.0	17.00			19.00			0.0	19.00
			135	138			16.85			0.0	17.00			18.70			0.0	19.00
			270	0			17.00			0.0	17.00			19.00			0.0	19.00
		16QAM	1	1			16.83			0.0	17.00			18.82			0.0	19.00
		64QAM	1	1			16.90			0.0	17.00			18.85			0.0	19.00
		256QAM	1	1			16.80			0.0	17.00			18.87			0.0	19.00
	CP-OFDM	QPSK	1	1			16.85			0.0	17.00			18.73			0.0	19.00

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					508200	513400	518600	523800	529000			508200	513400	518600	523800	529000		
					2541 MHz	2567 MHz	2593 MHz	2619 MHz	2645 MHz			2541 MHz	2567 MHz	2593 MHz	2619 MHz	2645 MHz		
90 MHz	DFS-s OFDM	Pi/2 BPSK	1	1			16.89			0.0	17.00			18.88			0.0	19.00
		QPSK	1	1			16.85			0.0	17.00			18.78			0.0	19.00
			1	123			16.95			0.0	17.00			18.88			0.0	19.00
			1	243			16.74			0.0	17.00			18.85			0.0	19.00
			120	0			16.83			0.0	17.00			18.90			0.0	19.00
			120	63			16.94			0.0	17.00			18.98			0.0	19.00
			120	125			16.89			0.0	17.00			18.90			0.0	19.00
			243	0			16.76			0.0	17.00			18.82			0.0	19.00
		16QAM	1	1			16.74			0.0	17.00			18.72			0.0	19.00
		64QAM	1	1			16.87			0.0	17.00			18.76			0.0	19.00
		256QAM	1	1			16.96			0.0	17.00			18.84			0.0	19.00
	CP-OFDM	QPSK	1	1			16.78			0.0	17.00			18.92			0.0	19.00

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					507200	512900	518600	524300	530000			507200	512900	518600	524300	530000		
					2536 MHz	2564.5 MHz	2593 MHz	2621.5 MHz	2650 MHz			2536 MHz	2564.5 MHz	2593 MHz	2621.5 MHz	2650 MHz		
80 MHz	DFS-s OFDM	Pi/2 BPSK	1	1			16.82			0.0	17.00			18.71			0.0	19.00
		QPSK	1	1			16.71			0.0	17.00			18.83			0.0	19.00
			1	109			16.82			0.0	17.00			18.80			0.0	19.00
			1	215			16.74			0.0	17.00			18.77			0.0	19.00
			108	0			16.95			0.0	17.00			18.94			0.0	19.00
			108	55			16.88			0.0	17.00			18.75			0.0	19.00
			108	109			16.84			0.0	17.00			18.89			0.0	19.00
			216	0			16.84			0.0	17.00			18.76			0.0	19.00
		16QAM	1	1			16.89			0.0	17.00			18.86			0.0	19.00
		64QAM	1	1			16.83			0.0	17.00			18.96			0.0	19.00
		256QAM	1	1			16.98			0.0	17.00			18.88			0.0	19.00
	CP-OFDM	QPSK	1	1			16.94			0.0	17.00			18.73			0.0	19.00

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					505200	511900	518600	525300	532000			505200	511900	518600	525300	532000		
					2526 MHz	2559.5 MHz	2593 MHz	2626.5 MHz	2660 MHz			2526 MHz	2559.5 MHz	2593 MHz	2626.5 MHz	2660 MHz		
60 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	16.98	16.74	16.86	16.70	16.74	0.0	17.00	18.78	18.87	18.70	18.73	18.74	0.0	19.00
		QPSK	1	1	16.88	16.89	16.96	16.91	16.72	0.0	17.00	18.85	18.79	18.94	18.90	18.80	0.0	19.00
			1	81	16.95	16.73	16.73	16.96	16.89	0.0	17.00	18.74	18.88	18.95	18.78	18.82	0.0	19.00
			1	160	16.71	16.82	16.98	16.84	16.96	0.0	17.00	18.90	18.77	18.83	18.82	18.86	0.0	19.00
			81	0	16.92	16.90	16.74	16.79	16.76	0.0	17.00	18.93	19.00	18.71	18.83	18.91	0.0	19.00
			81	40	16.87	16.77	16.88	16.97	16.91	0.0	17.00	18.91	18.76	18.99	18.80	18.93	0.0	19.00
			81	81	16.78	16.80	16.92	16.90	16.84	0.0	17.00	18.92	18.91	18.83	18.89	18.83	0.0	19.00
			162	0	16.78	16.87	16.94	16.99	16.86	0.0	17.00	18.75	18.97	18.83	18.94	18.90	0.0	19.00
		16QAM	1	1	16.81	16.73	16.79	16.78	16.97	0.0	17.00	18.76	18.73	18.98	18.77	18.74	0.0	19.00
		64QAM	1	1	16.76	16.87	16.73	16.82	16.76	0.0	17.00	18.96	18.81	18.91	18.86	18.79	0.0	19.00
		256QAM	1	1	16.85	16.83	16.73	16.76	16.75	0.0	17.00	18.81	18.75	18.98	18.72	18.80	0.0	19.00
	CP-OFDM	QPSK	1	1	16.78	16.70	16.97	16.99	16.70	0.0	17.00	18.84	19.00	18.72	18.80	18.99	0.0	19.00

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					504200	511400	518600	525800	533000			504200	511400	518600	525800	533000		
					2521 MHz	2557 MHz	2593 MHz	2629 MHz	2665 MHz			2521 MHz	2557 MHz	2593 MHz	2629 MHz	2665 MHz		
50 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	16.84	16.84	17.00	16.94	16.70	0.0	17.00	18.71	18.79	18.74	18.93	18.79	0.0	19.00
		QPSK	1	1	16.98	16.76	16.76	16.87	16.95	0.0	17.00	18.81	18.86	18.79	18.87	18.78	0.0	19.00
			1	67	16.73	16.96	16.86	17.00	16.95	0.0	17.00	18.81	18.79	18.75	18.99	18.79	0.0	19.00
			1	131	16.80	16.73	16.99	16.92	16.86	0.0	17.00	18.81	18.89	18.91	18.86	18.93	0.0	19.00
			64	0	16.78	16.83	16.73	16.87	16.93	0.0	17.00	18.89	18.75	18.94	18.91	18.93	0.0	19.00
			64	35	16.84	16.86	16.87	16.97	16.88	0.0	17.00	18.76	18.70	18.77	18.78	18.78	0.0	19.00
			64	69	16.87	17.00	16.84	16.86	16.84	0.0	17.00	18.76	18.89	18.74	18.79	18.85	0.0	19.00
			128	0	16.85	16.79	16.94	16.74	16.95	0.0	17.00	18.96	18.83	18.99	18.83	18.91	0.0	19.00
		16QAM	1	1	16.99	16.75	16.84	16.71	16.77	0.0	17.00	18.95	18.81	18.95	18.75	18.87	0.0	19.00
		64QAM	1	1	16.93	16.80	16.79	16.72	16.86	0.0	17.00	18.94	18.98	18.90	18.91	18.92	0.0	19.00
		256QAM	1	1	16.87	16.81	16.97	16.96	16.70	0.0	17.00	18.71	18.82	18.83	18.81	18.99	0.0	19.00
	CP-OFDM	QPSK	1	1	16.85	16.84	16.80	16.94	16.85	0.0	17.00	18.84	18.74	18.83	18.84	18.95	0.0	19.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 41 Measured Results (ANT2) (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					503200	510900	518600	526300	534000	MPR	Tune-up Limit	503200	510900	518600	526300	534000	MPR	Tune-up Limit
					2516 MHz	2554.5 MHz	2593 MHz	2631.5 MHz	2670 MHz			2516 MHz	2554.5 MHz	2593 MHz	2631.5 MHz	2670 MHz		
40 MHz	DFS-s OFDM	PI/2 BPSK	1	1	16.92	16.93	16.93	16.81	17.00	0.0	17.00	18.92	18.76	18.85	18.75	18.84	0.0	19.00
		QPSK	1	1	16.94	16.99	16.98	16.93	16.88	0.0	17.00	18.95	18.89	18.86	18.80	18.84	0.0	19.00
			1	53	16.93	16.88	16.83	16.88	16.77	0.0	17.00	18.83	18.91	18.87	18.89	18.75	0.0	19.00
			1	104	16.83	16.94	16.85	16.75	16.99	0.0	17.00	18.79	18.73	18.75	18.99	18.76	0.0	19.00
			50	0	16.98	16.87	16.92	16.71	16.81	0.0	17.00	18.98	18.74	18.79	18.87	18.86	0.0	19.00
			50	28	16.86	16.73	16.99	16.75	17.00	0.0	17.00	18.81	18.81	18.95	18.81	18.77	0.0	19.00
			50	56	16.73	16.76	16.92	16.85	16.98	0.0	17.00	18.97	18.72	18.94	18.84	18.83	0.0	19.00
			100	0	16.80	16.74	16.88	16.76	16.99	0.0	17.00	18.82	18.79	18.78	18.89	18.87	0.0	19.00
		16QAM	1	1	16.95	16.88	16.99	17.00	16.85	0.0	17.00	18.91	18.99	18.75	18.93	18.79	0.0	19.00
		64QAM	1	1	16.98	17.00	16.98	16.83	16.96	0.0	17.00	18.78	18.98	18.85	18.88	18.95	0.0	19.00
		256QAM	1	1	16.85	16.98	16.92	16.74	16.97	0.0	17.00	18.85	18.80	18.99	18.73	18.72	0.0	19.00
	CP-OFDM	QPSK	1	1	16.85	16.97	16.86	16.83	16.73	0.0	17.00	18.77	18.78	18.95	18.92	18.80	0.0	19.00

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					501200	509900	518600	527300	536000	MPR	Tune-up Limit	501200	509900	518600	527300	536000	MPR	Tune-up Limit
					2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	16.83	16.92	16.91	16.85	16.75	0.0	17.00	18.96	18.75	18.98	18.91	18.82	0.0	19.00
		QPSK	1	1	16.72	16.82	16.72	16.98	16.88	0.0	17.00	18.79	18.71	18.94	18.77	18.98	0.0	19.00
			1	26	16.90	16.80	16.94	16.93	16.88	0.0	17.00	18.74	18.81	18.85	18.76	18.73	0.0	19.00
			1	49	16.73	16.94	16.76	16.96	16.85	0.0	17.00	18.89	18.91	18.70	18.95	18.90	0.0	19.00
			25	0	16.91	16.79	16.91	16.98	16.96	0.0	17.00	18.94	18.85	18.81	18.99	18.90	0.0	19.00
			25	13	16.83	16.79	16.73	16.90	16.87	0.0	17.00	18.73	18.91	18.86	18.93	18.71	0.0	19.00
			25	26	16.75	16.94	16.85	16.74	16.73	0.0	17.00	18.72	18.74	18.72	18.74	18.77	0.0	19.00
			50	0	16.93	16.81	16.73	16.83	16.99	0.0	17.00	18.84	18.71	18.81	18.93	18.91	0.0	19.00
		16QAM	1	1	16.82	16.76	16.95	16.75	16.82	0.0	17.00	18.91	18.87	18.80	18.90	18.95	0.0	19.00
		64QAM	1	1	16.87	16.75	16.94	16.99	16.85	0.0	17.00	18.94	18.91	18.71	18.80	18.87	0.0	19.00
		256QAM	1	1	16.79	16.71	16.91	16.76	16.83	0.0	17.00	18.94	18.83	18.75	18.78	18.77	0.0	19.00
	CP-OFDM	QPSK	1	1	16.86	16.88	16.97	16.90	17.00	0.0	17.00	18.97	18.84	18.94	18.98	18.97	0.0	19.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 41 Measured Results (ANT3)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					509200	513900	518600	523300	528000			509200	513900	518600	523300	528000		
					2546 MHz	2569.5 MHz	2593 MHz	2616.5 MHz	2640 MHz			2546 MHz	2569.5 MHz	2593 MHz	2616.5 MHz	2640 MHz		
100 MHz	DFS-s OFDM	PI/2 BPSK	1	1			24.40			0.0	25.00			17.67			0.0	18.00
		QPSK	1	1			24.36			0.0	25.00			17.66			0.0	18.00
			1	137			25.00			0.0	25.00			18.00			0.0	18.00
			1	271			24.24			0.0	25.00			17.58			0.0	18.00
			135	0			23.38			1.0	24.00			17.66			0.0	18.00
			135	69			25.00			0.0	25.00			18.00			0.0	18.00
			135	138			23.46			1.0	24.00			17.47			0.0	18.00
			270	0			23.26			1.0	24.00			18.00			0.0	18.00
		16QAM	1	1			23.29			1.0	24.00			17.46			0.0	18.00
		64QAM	1	1			21.98			2.5	22.50			17.42			0.0	18.00
		256QAM	1	1			19.86			4.5	20.50			17.46			0.0	18.00
	CP-OFDM	QPSK	1	1			22.91			1.5	23.50			17.45			0.0	18.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					508200	513400	518600	523800	529000			508200	513400	518600	523800	529000		
					2541 MHz	2567 MHz	2593 MHz	2619 MHz	2645 MHz			2541 MHz	2567 MHz	2593 MHz	2619 MHz	2645 MHz		
90 MHz	DFS-s OFDM	PI/2 BPSK	1	1			24.21			0.0	25.00			17.40			0.0	18.00
		QPSK	1	1			24.47			0.0	25.00			17.67			0.0	18.00
			1	123			24.36			0.0	25.00			17.64			0.0	18.00
			1	243			24.26			0.0	25.00			17.42			0.0	18.00
			120	0			23.33			1.0	24.00			17.47			0.0	18.00
			120	63			24.25			0.0	25.00			17.56			0.0	18.00
			120	125			23.22			1.0	24.00			17.55			0.0	18.00
			243	0			23.25			1.0	24.00			17.57			0.0	18.00
		16QAM	1	1			23.44			1.0	24.00			17.40			0.0	18.00
		64QAM	1	1			21.71			2.5	22.50			17.41			0.0	18.00
		256QAM	1	1			19.84			4.5	20.50			17.44			0.0	18.00
	CP-OFDM	QPSK	1	1			22.95			1.5	23.50			17.41			0.0	18.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					507200	512900	518600	524300	530000			507200	512900	518600	524300	530000		
					2536 MHz	2564.5 MHz	2593 MHz	2621.5 MHz	2650 MHz			2536 MHz	2564.5 MHz	2593 MHz	2621.5 MHz	2650 MHz		
80 MHz	DFS-s OFDM	PI/2 BPSK	1	1			24.30			0.0	25.00			17.43			0.0	18.00
		QPSK	1	1			24.26			0.0	25.00			17.56			0.0	18.00
			1	109			24.22			0.0	25.00			17.53			0.0	18.00
			1	215			24.36			0.0	25.00			17.44			0.0	18.00
			108	0			23.40			1.0	24.00			17.42			0.0	18.00
			108	55			24.40			0.0	25.00			17.56			0.0	18.00
			108	109			23.38			1.0	24.00			17.59			0.0	18.00
			216	0			23.37			1.0	24.00			17.49			0.0	18.00
		16QAM	1	1			23.41			1.0	24.00			17.58			0.0	18.00
		64QAM	1	1			21.94			2.5	22.50			17.53			0.0	18.00
		256QAM	1	1			19.97			4.5	20.50			17.68			0.0	18.00
	CP-OFDM	QPSK	1	1			22.99			1.5	23.50			17.63			0.0	18.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					505200	511900	518600	525300	532000			505200	511900	518600	525300	532000		
					2526 MHz	2559.5 MHz	2593 MHz	2626.5 MHz	2660 MHz			2526 MHz	2559.5 MHz	2593 MHz	2626.5 MHz	2660 MHz		
60 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.49	24.44	24.43	24.45	24.41	0.0	25.00	17.54	17.66	17.65	17.69	17.48	0.0	18.00
		QPSK	1	1	24.24	24.47	24.48	24.44	24.24	0.0	25.00	17.56	17.67	17.67	17.41	17.41	0.0	18.00
			1	81	24.37	24.31	24.43	24.28	24.43	0.0	25.00	17.64	17.54	17.50	17.57	17.43	0.0	18.00
			1	160	24.38	24.45	24.33	24.42	24.36	0.0	25.00	17.60	17.52	17.66	17.69	17.58	0.0	18.00
			81	0	23.23	23.44	23.21	23.46	23.28	1.0	24.00	17.42	17.60	17.49	17.48	17.61	0.0	18.00
			81	40	24.42	24.37	24.43	24.24	24.28	0.0	25.00	17.40	17.56	17.50	17.55	17.57	0.0	18.00
			81	81	23.39	23.28	23.47	23.28	23.39	1.0	24.00	17.50	17.62	17.62	17.65	17.50	0.0	18.00
			162	0	23.40	23.20	23.37	23.49	23.50	1.0	24.00	17.48	17.43	17.47	17.64	17.51	0.0	18.00
		16QAM	1	1	23.41	23.32	23.30	23.46	23.42	1.0	24.00	17.64	17.50	17.66	17.49	17.70	0.0	18.00
		64QAM	1	1	21.77	21.78	21.99	21.81	21.89	2.5	22.50	17.49	17.53	17.60	17.56	17.51	0.0	18.00
		256QAM	1	1	19.84	19.87	19.83	19.78	19.94	4.5	20.50	17.43	17.69	17.41	17.58	17.66	0.0	18.00
	CP-OFDM	QPSK	1	1	22.91	22.89	22.79	22.75	22.95	1.5	23.50	17.47	17.61	17.56	17.68	17.55	0.0	18.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					504200	511400	518600	525800	533000			504200	511400	518600	525800	533000		
					2521 MHz	2557 MHz	2593 MHz	2629 MHz	2665 MHz			2521 MHz	2557 MHz	2593 MHz	2629 MHz	2665 MHz		
50 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.32	24.42	24.30	24.48	24.48	0.0	25.00	17.63	17.67	17.62	17.54	17.55	0.0	18.00
		QPSK	1	1	24.38	24.31	24.26	24.31	24.39	0.0	25.00	17.69	17.64	17.44	17.50	17.61	0.0	18.00
			1	67	24.24	24.28	24.41	24.22	24.45	0.0	25.00	17.50	17.51	17.48	17.48	17.65	0.0	18.00
			1	131	24.46	24.23	24.34	24.37	24.27	0.0	25.00	17.48	17.66	17.67	17.54	17.45	0.0	18.00
			64	0	23.31	23.31	23.45	23.29	23.27	1.0	24.00	17.52	17.53	17.64	17.58	17.62	0.0	18.00
			64	35	24.20	24.24	24.30	24.34	24.28	0.0	25.00	17.52	17.55	17.69	17.53	17.52	0.0	18.00
			64	69	23.33	23.42	23.29	23.32	23.41	1.0	24.00	17.49	17.58	17.56	17.44	17.47	0.0	18.00
			128	0	23.37	23.37	23.26	23.46	23.40	1.0	24.00	17.51	17.68	17.41	17.51	17.65	0.0	18.00
		16QAM	1	1	23.27	23.26	23.31	23.24	23.39	1.0	24.00	17.61	17.55	17.58	17.43	17.61	0.0	18.00
		64QAM	1	1	21.95	21.86	21.96	21.75	21.86	2.5	22.50	17.45	17.41	17.63	17.49	17.69	0.0	18.00
		256QAM	1	1	19.76	19.74	19.72	19.71	19.86	4.5	20.50	17.63	17.48	17.65	17.70	17.55	0.0	18.00
	CP-OFDM	QPSK	1	1	22.72	22.95	22.72	22.79	23.00	1.5	23.50	17.47	17.65	17.60	17.69	17.56	0.0	18.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 41 Measured Results (ANT3) (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					503200	510900	518600	526300	534000	MPR	Tune-up Limit	503200	510900	518600	526300	534000	MPR	Tune-up Limit
					2516 MHz	2554.5 MHz	2593 MHz	2631.5 MHz	2670 MHz			2516 MHz	2554.5 MHz	2593 MHz	2631.5 MHz	2670 MHz		
40 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.21	24.46	24.22	24.44	24.30	0.0	25.00	17.47	17.44	17.53	17.67	17.61	0.0	18.00
		QPSK	1	1	24.35	24.22	24.44	24.44	24.47	0.0	25.00	17.46	17.63	17.45	17.42	17.63	0.0	18.00
			1	53	24.22	24.47	24.43	24.50	24.28	0.0	25.00	17.41	17.59	17.64	17.52	17.47	0.0	18.00
			1	104	24.41	24.20	24.28	24.30	24.31	0.0	25.00	17.61	17.47	17.63	17.46	17.51	0.0	18.00
			50	0	23.29	23.26	23.46	23.37	23.45	1.0	24.00	17.44	17.46	17.42	17.54	17.64	0.0	18.00
			50	28	24.46	24.45	24.27	24.32	24.34	0.0	25.00	17.69	17.48	17.58	17.49	17.58	0.0	18.00
			50	56	23.36	23.43	23.44	23.40	23.25	1.0	24.00	17.52	17.44	17.69	17.44	17.56	0.0	18.00
			100	0	23.33	23.38	23.41	23.46	23.44	1.0	24.00	17.55	17.51	17.55	17.65	17.42	0.0	18.00
		16QAM	1	1	23.39	23.24	23.21	23.43	23.42	1.0	24.00	17.45	17.41	17.48	17.49	17.64	0.0	18.00
		64QAM	1	1	21.84	21.79	21.95	21.78	21.75	2.5	22.50	17.45	17.57	17.69	17.56	17.59	0.0	18.00
		256QAM	1	1	19.88	19.79	19.81	19.89	19.75	4.5	20.50	17.70	17.53	17.62	17.68	17.44	0.0	18.00
	CP-OFDM	QPSK	1	1	22.72	22.72	23.00	22.97	22.97	1.5	23.50	17.60	17.45	17.47	17.47	17.56	0.0	18.00

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					501200	509900	518600	527300	536000	MPR	Tune-up Limit	501200	509900	518600	527300	536000	MPR	Tune-up Limit
					2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.46	24.43	24.28	24.49	24.44	0.0	25.00	17.58	17.47	17.40	17.52	17.46	0.0	18.00
		QPSK	1	1	24.47	24.48	24.42	24.28	24.48	0.0	25.00	17.62	17.42	17.52	17.67	17.44	0.0	18.00
			1	26	24.29	24.20	24.34	24.48	24.28	0.0	25.00	17.66	17.45	17.49	17.64	17.48	0.0	18.00
			1	49	24.48	24.34	24.46	24.40	24.31	0.0	25.00	17.42	17.58	17.57	17.43	17.48	0.0	18.00
			25	0	23.24	23.36	23.38	23.31	23.36	1.0	24.00	17.45	17.41	17.45	17.48	17.56	0.0	18.00
			25	13	24.45	24.45	24.49	24.35	24.34	0.0	25.00	17.49	17.51	17.63	17.61	17.51	0.0	18.00
			25	26	23.31	23.41	23.23	23.34	23.24	1.0	24.00	17.49	17.55	17.66	17.64	17.60	0.0	18.00
			50	0	23.44	23.33	23.31	23.39	23.38	1.0	24.00	17.68	17.68	17.40	17.47	17.65	0.0	18.00
		16QAM	1	1	23.21	23.48	23.23	23.27	23.35	1.0	24.00	17.64	17.69	17.61	17.44	17.52	0.0	18.00
		64QAM	1	1	21.86	21.83	21.94	21.75	21.76	2.5	22.50	17.45	17.56	17.40	17.55	17.49	0.0	18.00
		256QAM	1	1	19.97	19.82	19.72	19.75	19.85	4.5	20.50	17.40	17.62	17.51	17.70	17.53	0.0	18.00
	CP-OFDM	QPSK	1	1	22.75	22.95	22.80	22.75	22.77	1.5	23.50	17.43	17.48	17.49	17.57	17.54	0.0	18.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 41 Measured Results (ANT4)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					509200	513900	518600	523300	528000			509200	513900	518600	523300	528000		
					2546 MHz	2569.5 MHz	2593 MHz	2616.5 MHz	2640 MHz			2546 MHz	2569.5 MHz	2593 MHz	2616.5 MHz	2640 MHz		
100 MHz	DFS-s OFDM	Pi/2 BPSK	1	1			17.80			0.0	18.00			19.96			0.0	20.25
		QPSK	1	1			17.79			0.0	18.00			19.99			0.0	20.25
			1	137			18.00			0.0	18.00			20.25			0.0	20.25
			1	271			17.73			0.0	18.00			19.89			0.0	20.25
			135	0			17.88			0.0	18.00			19.84			0.0	20.25
			135	69			18.00			0.0	18.00			20.25			0.0	20.25
			135	138			17.94			0.0	18.00			19.94			0.0	20.25
			270	0			18.00			0.0	18.00			20.25			0.0	20.25
		16QAM	1	1			17.83			0.0	18.00			19.83			0.0	20.25
		64QAM	1	1			17.94			0.0	18.00			19.85			0.0	20.25
		256QAM	1	1			17.95			0.0	18.00			19.89			0.0	20.25
	CP-OFDM	QPSK	1	1			17.80			0.0	18.00			19.71			0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					508200	513400	518600	523800	529000			508200	513400	518600	523800	529000		
					2541 MHz	2567 MHz	2593 MHz	2619 MHz	2645 MHz			2541 MHz	2567 MHz	2593 MHz	2619 MHz	2645 MHz		
90 MHz	DFS-s OFDM	Pi/2 BPSK	1	1			17.97			0.0	18.00			19.83			0.0	20.25
		QPSK	1	1			17.79			0.0	18.00			19.82			0.0	20.25
			1	123			17.74			0.0	18.00			19.96			0.0	20.25
			1	243			17.92			0.0	18.00			19.77			0.0	20.25
			120	0			17.83			0.0	18.00			19.87			0.0	20.25
			120	63			17.93			0.0	18.00			19.70			0.0	20.25
			120	125			17.85			0.0	18.00			19.79			0.0	20.25
			243	0			17.86			0.0	18.00			19.70			0.0	20.25
		16QAM	1	1			17.82			0.0	18.00			19.96			0.0	20.25
		64QAM	1	1			17.71			0.0	18.00			19.74			0.0	20.25
		256QAM	1	1			17.98			0.0	18.00			19.74			0.0	20.25
	CP-OFDM	QPSK	1	1			17.98			0.0	18.00			19.76			0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					507200	512900	518600	524300	530000			507200	512900	518600	524300	530000		
					2536 MHz	2564.5 MHz	2593 MHz	2621.5 MHz	2650 MHz			2536 MHz	2564.5 MHz	2593 MHz	2621.5 MHz	2650 MHz		
80 MHz	DFS-s OFDM	Pi/2 BPSK	1	1			17.72			0.0	18.00			19.87			0.0	20.25
		QPSK	1	1			17.76			0.0	18.00			19.77			0.0	20.25
			1	109			17.89			0.0	18.00			19.97			0.0	20.25
			1	215			18.00			0.0	18.00			19.96			0.0	20.25
			108	0			17.85			0.0	18.00			19.81			0.0	20.25
			108	55			17.80			0.0	18.00			19.97			0.0	20.25
			108	109			17.78			0.0	18.00			19.99			0.0	20.25
			216	0			17.80			0.0	18.00			19.75			0.0	20.25
		16QAM	1	1			17.90			0.0	18.00			20.00			0.0	20.25
		64QAM	1	1			17.73			0.0	18.00			19.90			0.0	20.25
		256QAM	1	1			17.85			0.0	18.00			19.85			0.0	20.25
	CP-OFDM	QPSK	1	1			17.83			0.0	18.00			19.75			0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					505200	511900	518600	525300	532000			505200	511900	518600	525300	532000		
					2526 MHz	2559.5 MHz	2593 MHz	2626.5 MHz	2660 MHz			2526 MHz	2559.5 MHz	2593 MHz	2626.5 MHz	2660 MHz		
60 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	17.80	17.72	17.71	17.80	17.99	0.0	18.00	19.82	19.85	19.86	19.91	19.97	0.0	20.25
		QPSK	1	1	17.72	17.86	17.78	17.84	17.82	0.0	18.00	19.83	19.90	19.86	19.84	19.90	0.0	20.25
			1	81	17.98	17.85	17.72	17.93	17.93	0.0	18.00	19.78	19.97	19.75	19.95	19.88	0.0	20.25
			1	160	17.76	17.74	17.90	17.98	17.96	0.0	18.00	19.92	19.97	19.77	19.78	19.76	0.0	20.25
			81	0	17.90	17.74	17.78	17.71	17.72	0.0	18.00	19.76	19.91	19.73	19.71	19.93	0.0	20.25
			81	40	17.79	17.86	17.78	17.74	17.83	0.0	18.00	19.75	19.73	19.90	19.94	19.96	0.0	20.25
			81	81	17.86	17.90	17.88	17.93	17.79	0.0	18.00	19.87	19.74	19.81	19.96	19.71	0.0	20.25
			162	0	17.84	17.85	17.86	17.92	17.92	0.0	18.00	19.92	19.77	19.89	19.92	19.75	0.0	20.25
		16QAM	1	1	17.92	17.72	17.89	17.89	17.73	0.0	18.00	19.98	19.84	19.93	19.77	19.97	0.0	20.25
		64QAM	1	1	17.96	17.85	17.81	17.80	17.88	0.0	18.00	19.93	19.92	19.96	20.00	19.99	0.0	20.25
		256QAM	1	1	17.70	17.87	17.79	17.79	17.78	0.0	18.00	19.77	19.96	19.91	19.89	19.81	0.0	20.25
	CP-OFDM	QPSK	1	1	17.78	17.87	17.78	17.90	17.73	0.0	18.00	19.93	19.99	19.84	19.98	19.78	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					MPR	Tune-up Limit	Power Mode B (dBm)					MPR	Tune-up Limit
					504200	511400	518600	525800	533000			504200	511400	518600	525800	533000		
					2521 MHz	2557 MHz	2593 MHz	2629 MHz	2665 MHz			2521 MHz	2557 MHz	2593 MHz	2629 MHz	2665 MHz		
50 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	17.76	17.74	17.92	17.96	17.76	0.0	18.00	19.82	19.87	19.78	19.75	19.91	0.0	20.25
		QPSK	1	1	17.93	17.99	17.84	17.79	17.84	0.0	18.00	19.80	19.88	19.88	20.00	19.86	0.0	20.25
			1	67	17.82	17.74	17.87	17.85	17.78	0.0	18.00	19.86	19.74	20.00	19.94	19.78	0.0	20.25
			1	131	17.77	17.75	17.83	17.78	17.96	0.0	18.00	19.81	19.98	19.73	19.72	19.91	0.0	20.25
			64	0	18.00	17.99	17.76	17.88	17.95	0.0	18.00	19.74	19.96	19.73	20.00	19.90	0.0	20.25
			64	35	17.80	17.97	17.74	17.98	17.85	0.0	18.00	19.84	19.97	19.89	19.92	19.98	0.0	20.25
			64	69	17.78	17.81	17.92	17.90	17.75	0.0	18.00	19.83	19.72	19.96	19.72	19.78	0.0	20.25
			128	0	17.79	17.92	17.94	17.86	17.82	0.0	18.00	19.74	19.73	19.86	19.85	19.89	0.0	20.25
		16QAM	1	1	17.92	17.90	17.91	17.80	17.72	0.0	18.00	19.98	19.74	19.85	19.85	19.79	0.0	20.25
		64QAM	1	1	17.77	17.92	17.93	17.83	17.87	0.0	18.00	19.97	19.95	19.91	19.88	19.99	0.0	20.25
		256QAM	1	1	17.71	17.76	17.88	17.80	17.80	0.0	18.00	19.89	19.79	19.80	19.98	19.80	0.0	20.25
	CP-OFDM	QPSK	1	1	17.96	17.76	17.82	17.81	17.86	0.0	18.00	19.91	19.85	19.81	19.94	19.72	0.0	20.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 41 Measured Results (ANT4) (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					503200	510900	518600	526300	534000	MPR	Tune-up Limit	503200	510900	518600	526300	534000	MPR	Tune-up Limit
					2516 MHz	2554.5 MHz	2593 MHz	2631.5 MHz	2670 MHz			2516 MHz	2554.5 MHz	2593 MHz	2631.5 MHz	2670 MHz		
40 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	17.87	17.82	17.81	17.72	17.99	0.0	18.00	19.94	19.73	19.92	19.92	19.99	0.0	20.25
		QPSK	1	1	17.98	17.96	17.96	17.89	17.89	0.0	18.00	19.79	19.74	19.98	19.74	19.97	0.0	20.25
			1	53	17.81	17.76	17.82	17.87	17.78	0.0	18.00	19.71	19.98	19.95	19.81	19.83	0.0	20.25
			1	104	17.98	17.76	17.72	17.76	17.85	0.0	18.00	19.76	19.89	19.85	19.80	19.71	0.0	20.25
			50	0	17.95	18.00	17.86	17.87	17.78	0.0	18.00	19.75	19.97	19.81	19.82	19.95	0.0	20.25
			50	28	17.78	17.95	17.93	17.81	17.88	0.0	18.00	19.98	19.71	19.79	19.71	19.88	0.0	20.25
			50	56	17.89	17.83	17.80	17.82	17.75	0.0	18.00	19.88	19.85	19.71	19.97	19.86	0.0	20.25
			100	0	17.89	17.93	17.73	17.89	17.89	0.0	18.00	19.90	19.98	19.80	19.78	19.77	0.0	20.25
		16QAM	1	1	17.73	17.95	17.94	17.88	17.87	0.0	18.00	19.72	19.72	19.74	19.89	19.86	0.0	20.25
		64QAM	1	1	17.81	17.77	17.75	17.89	17.83	0.0	18.00	19.91	19.90	19.88	19.82	19.81	0.0	20.25
		256QAM	1	1	17.89	17.91	17.90	17.97	17.86	0.0	18.00	19.88	19.96	19.80	19.72	19.81	0.0	20.25
	CP-OFDM	QPSK	1	1	17.86	17.85	17.70	17.87	17.75	0.0	18.00	19.84	19.88	19.97	19.86	19.82	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					501200	509900	518600	527300	536000	MPR	Tune-up Limit	501200	509900	518600	527300	536000	MPR	Tune-up Limit
					2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	17.87	17.93	17.80	17.91	17.97	0.0	18.00	19.73	19.70	19.90	19.73	19.98	0.0	20.25
		QPSK	1	1	17.74	17.93	17.90	17.84	17.85	0.0	18.00	19.91	19.89	20.00	19.95	19.90	0.0	20.25
			1	26	17.81	17.82	17.97	17.99	17.97	0.0	18.00	19.93	19.78	19.99	19.90	19.72	0.0	20.25
			1	49	17.86	17.99	17.83	17.84	17.86	0.0	18.00	19.98	19.95	19.89	19.75	19.89	0.0	20.25
			25	0	17.96	17.82	17.99	17.80	17.90	0.0	18.00	19.77	19.96	19.86	19.99	20.00	0.0	20.25
			25	13	17.77	17.77	17.78	17.84	17.87	0.0	18.00	19.72	19.85	19.88	19.70	19.96	0.0	20.25
			25	26	17.89	17.93	17.97	17.86	17.74	0.0	18.00	19.94	19.98	19.79	19.89	19.95	0.0	20.25
			50	0	17.84	17.71	17.72	17.91	17.94	0.0	18.00	19.77	19.91	19.83	19.99	19.95	0.0	20.25
		16QAM	1	1	17.82	17.73	17.88	17.99	17.76	0.0	18.00	19.76	19.79	19.79	19.93	19.87	0.0	20.25
		64QAM	1	1	17.91	17.96	17.72	17.89	17.75	0.0	18.00	19.79	19.86	19.75	19.88	19.71	0.0	20.25
		256QAM	1	1	17.95	17.98	17.91	17.95	17.73	0.0	18.00	19.98	19.83	19.75	19.96	19.78	0.0	20.25
	CP-OFDM	QPSK	1	1	17.94	17.77	17.78	17.81	17.96	0.0	18.00	19.92	19.78	19.83	19.98	19.82	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					500700	509600	518600	527560	536500	MPR	Tune-up Limit	500700	509600	518600	527560	536500	MPR	Tune-up Limit
					2503.5 MHz	2548.3 MHz	2593 MHz	2637.8 MHz	2682.5 MHz			2503.5 MHz	2548.3 MHz	2593 MHz	2637.8 MHz	2682.5 MHz		
15 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	17.91	17.97	17.75	17.71	17.82	0.0	18.00	19.78	19.90	19.90	19.71	19.75	0.0	20.25
		QPSK	1	1	17.96	17.97	17.80	17.83	17.89	0.0	18.00	19.90	19.75	19.81	19.81	19.92	0.0	20.25
			1	18	17.72	17.97	17.78	17.88	17.79	0.0	18.00	19.88	19.80	19.92	19.98	19.91	0.0	20.25
			1	36	17.96	17.99	17.96	17.70	17.92	0.0	18.00	19.89	19.99	19.76	19.72	19.99	0.0	20.25
			18	0	17.85	17.99	17.79	17.97	17.88	0.0	18.00	19.72	19.93	19.80	19.81	19.91	0.0	20.25
			18	9	18.00	17.98	17.84	17.82	17.93	0.0	18.00	19.89	19.93	19.99	19.75	19.98	0.0	20.25
			18	19	17.72	17.84	17.75	17.79	17.98	0.0	18.00	19.79	19.96	19.77	19.85	19.77	0.0	20.25
			36	0	17.77	17.70	17.94	17.86	17.87	0.0	18.00	19.83	19.82	19.99	19.80	19.80	0.0	20.25
		16QAM	1	1	17.78	17.92	17.98	17.83	17.78	0.0	18.00	19.81	19.74	19.91	19.91	19.98	0.0	20.25
		64QAM	1	1	17.81	17.76	17.84	17.86	17.73	0.0	18.00	19.76	19.84	19.96	19.91	19.90	0.0	20.25
		256QAM	1	1	17.79	17.89	17.71	18.00	17.72	0.0	18.00	19.86	19.91	19.88	19.95	19.90	0.0	20.25
	CP-OFDM	QPSK	1	1	17.78	17.82	17.72	17.87	17.84	0.0	18.00	19.72	19.92	19.71	19.90	19.84	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					500200	509400	518600	527800	537000	MPR	Tune-up Limit	500200	509400	518600	527800	537000	MPR	Tune-up Limit
					2501 MHz	2547 MHz	2593 MHz	2639 MHz	2685 MHz			2501 MHz	2547 MHz	2593 MHz	2639 MHz	2685 MHz		
10 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	17.73	17.93	17.85	17.83	17.70	0.0	18.00	19.85	19.75	19.74	19.72	19.98	0.0	20.25
		QPSK	1	1	17.79	17.89	17.86	17.94	17.82	0.0	18.00	19.75	19.87	19.73	19.88	19.95	0.0	20.25
			1	11	17.92	17.76	17.74	17.76	17.96	0.0	18.00	19.80	19.91	19.80	19.73	19.84	0.0	20.25
			1	22	17.73	17.77	17.81	17.73	17.78	0.0	18.00	19.88	19.70	19.87	19.86	19.71	0.0	20.25
			12	0	17.83	17.84	17.82	17.96	17.94	0.0	18.00	19.80	19.89	19.83	19.87	19.84	0.0	20.25
			12	6	17.74	17.97	17.87	17.80	17.71	0.0	18.00	19.87	19.91	19.85	19.94	19.87	0.0	20.25
			12	13	17.96	17.77	17.96	17.73	17.96	0.0	18.00	19.73	19.93	19.92	19.78	19.95	0.0	20.25
			24	0	17.99	17.78	17.75	17.92	17.82	0.0	18.00	19.82	19.78	19.89	19.79	19.87	0.0	20.25
		16QAM	1	1	17.99	17.93	17.80	17.84	17.78	0.0	18.00	19.80	19.73	19.97	19.81	19.76	0.0	20.25
		64QAM	1	1	17.71	17.91	17.87	17.85	17.98	0.0	18.00	19.85	19.93	19.95	19.81	19.82	0.0	20.25
		256QAM	1	1	17.71	17.99	17.78	17.96	17.84	0.0	18.00	19.81	19.77	19.96	19.85	19.95	0.0	20.25
	CP-OFDM	QPSK	1	1	17.73	17.97	17.84	17.99	17.94	0.0	18.00	19.86	19.80	19.87	19.86	19.92	0.0	20.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 66 Measured Results (ANT1)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					344000	349000	354000	MPR	Tune-up Limit	344000	349000	354000	MPR	Tune-up Limit
					1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.73	24.72	24.97	0.0	25.70	16.99	17.03	17.13	0.0	17.25
		QPSK	1	1	24.74	24.89	24.96	0.0	25.70	16.99	17.17	17.13	0.0	17.25
			1	53	25.70	25.70	25.70	0.0	25.70	17.25	17.25	17.25	0.0	17.25
			1	104	24.81	24.84	24.70	0.0	25.70	17.22	17.20	17.04	0.0	17.25
			50	0	23.73	23.99	23.98	1.0	24.70	17.11	17.20	17.14	0.0	17.25
			50	28	25.70	25.70	25.70	0.0	25.70	17.25	17.25	17.25	0.0	17.25
			50	56	24.00	23.99	23.79	1.0	24.70	17.19	17.23	17.19	0.0	17.25
			100	0	23.96	23.88	23.71	1.0	24.70	17.19	17.25	16.99	0.0	17.25
		16QAM	1	1	23.97	23.76	23.85	1.0	24.70	16.96	17.05	17.12	0.0	17.25
		64QAM	1	1	22.46	22.41	22.40	2.5	23.20	17.10	17.05	17.15	0.0	17.25
		256QAM	1	1	20.26	20.47	20.35	4.5	21.20	17.13	16.97	17.06	0.0	17.25
	CP-OFDM	QPSK	1	1	23.50	23.46	23.24	1.5	24.20	17.21	17.09	17.07	0.0	17.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					343500	349000	354500	MPR	Tune-up Limit	343500	349000	354500	MPR	Tune-up Limit
					1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.74	24.71	24.86	0.0	25.70	17.11	17.19	17.19	0.0	17.25
		QPSK	1	1	24.78	24.89	24.79	0.0	25.70	17.16	17.03	16.95	0.0	17.25
			1	40	24.97	24.72	24.71	0.0	25.70	17.10	16.97	16.97	0.0	17.25
			1	77	24.77	24.86	24.86	0.0	25.70	17.05	16.96	16.98	0.0	17.25
			36	0	23.72	23.88	23.86	1.0	24.70	17.02	17.23	17.17	0.0	17.25
			36	22	24.95	24.80	24.85	0.0	25.70	17.18	17.24	17.13	0.0	17.25
			36	43	23.90	23.73	23.93	1.0	24.70	17.18	17.15	17.22	0.0	17.25
			75	0	23.78	23.75	23.97	1.0	24.70	17.23	16.98	17.15	0.0	17.25
		16QAM	1	1	23.71	23.90	23.79	1.0	24.70	17.24	17.17	17.20	0.0	17.25
		64QAM	1	1	22.48	22.26	22.46	2.5	23.20	17.09	16.96	17.21	0.0	17.25
		256QAM	1	1	20.42	20.40	20.31	4.5	21.20	17.10	17.08	17.19	0.0	17.25
	CP-OFDM	QPSK	1	1	23.46	23.29	23.36	1.5	24.20	17.20	16.98	17.10	0.0	17.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					343000	349000	355000	MPR	Tune-up Limit	343000	349000	355000	MPR	Tune-up Limit
					1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.97	25.00	24.83	0.0	25.70	17.19	17.22	17.20	0.0	17.25
		QPSK	1	1	24.74	24.93	24.71	0.0	25.70	17.13	16.97	16.97	0.0	17.25
			1	26	24.81	24.99	24.91	0.0	25.70	17.10	17.11	16.97	0.0	17.25
			1	50	24.96	24.73	24.74	0.0	25.70	17.02	17.17	17.17	0.0	17.25
			25	0	23.98	23.88	23.71	1.0	24.70	17.24	16.97	17.23	0.0	17.25
			25	14	24.70	24.98	24.81	0.0	25.70	17.19	17.21	16.96	0.0	17.25
			25	27	23.76	23.83	23.72	1.0	24.70	16.99	16.98	17.08	0.0	17.25
			50	0	23.91	23.76	23.83	1.0	24.70	16.99	17.21	16.96	0.0	17.25
		16QAM	1	1	23.72	23.73	23.90	1.0	24.70	17.23	17.14	17.08	0.0	17.25
		64QAM	1	1	22.49	22.26	22.29	2.5	23.20	17.16	17.09	17.01	0.0	17.25
		256QAM	1	1	20.37	20.50	20.32	4.5	21.20	17.11	17.19	17.03	0.0	17.25
	CP-OFDM	QPSK	1	1	23.22	23.48	23.28	1.5	24.20	17.09	17.15	17.05	0.0	17.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					342500	349000	355500	MPR	Tune-up Limit	342500	349000	355500	MPR	Tune-up Limit
					1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.76	24.72	24.95	0.0	25.70	16.95	17.08	16.95	0.0	17.25
		QPSK	1	1	24.95	24.79	24.96	0.0	25.70	17.04	17.23	17.19	0.0	17.25
			1	13	24.87	24.70	24.85	0.0	25.70	16.97	17.19	17.16	0.0	17.25
			1	23	24.82	24.74	24.94	0.0	25.70	17.19	17.13	17.05	0.0	17.25
			12	0	23.73	23.95	23.82	1.0	24.70	17.08	17.18	17.23	0.0	17.25
			12	7	24.79	24.90	24.75	0.0	25.70	17.22	17.16	16.98	0.0	17.25
			12	13	23.88	23.99	23.96	1.0	24.70	17.04	17.15	17.09	0.0	17.25
			25	0	23.82	23.83	23.98	1.0	24.70	16.99	17.02	17.22	0.0	17.25
		16QAM	1	1	23.89	23.75	23.77	1.0	24.70	16.97	17.01	17.02	0.0	17.25
		64QAM	1	1	22.29	22.30	22.37	2.5	23.20	17.10	17.13	17.14	0.0	17.25
		256QAM	1	1	20.38	20.22	20.23	4.5	21.20	16.98	16.97	17.16	0.0	17.25
	CP-OFDM	QPSK	1	1	23.31	23.32	23.34	1.5	24.20	17.18	16.97	17.03	0.0	17.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 66 Measured Results (ANT2)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					344000	349000	354000	MPR	Tune-up Limit	344000	349000	354000	MPR	Tune-up Limit
					1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.95	20.80	20.83	0.0	21.00	20.24	20.22	20.08	0.0	20.25
		QPSK	1	1	20.98	20.93	20.94	0.0	21.00	19.96	20.24	20.13	0.0	20.25
			1	53	21.00	21.00	21.00	0.0	21.00	20.09	20.09	20.12	0.0	20.25
			1	104	20.80	20.78	20.72	0.0	21.00	20.17	20.00	20.02	0.0	20.25
			50	0	20.88	20.93	20.87	0.0	21.00	20.25	20.12	20.17	0.0	20.25
			50	28	21.00	21.00	21.00	0.0	21.00	20.24	20.24	19.98	0.0	20.25
			50	56	20.76	20.89	20.81	0.0	21.00	20.10	20.13	20.17	0.0	20.25
			100	0	20.85	21.00	20.88	0.0	21.00	20.18	20.22	20.02	0.0	20.25
		16QAM	1	1	20.97	20.96	20.84	0.0	21.00	20.07	20.10	20.15	0.0	20.25
		64QAM	1	1	20.99	20.87	20.97	0.0	21.00	20.15	20.07	20.20	0.0	20.25
		256QAM	1	1	20.94	20.88	20.94	0.0	21.00	20.21	20.07	20.22	0.0	20.25
	CP-OFDM	QPSK	1	1	20.77	20.87	20.83	0.0	21.00	19.96	20.22	20.15	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					343500	349000	354500	MPR	Tune-up Limit	343500	349000	354500	MPR	Tune-up Limit
					1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.71	20.97	20.96	0.0	21.00	20.17	20.01	19.98	0.0	20.25
		QPSK	1	1	20.94	20.92	20.83	0.0	21.00	20.12	20.08	20.23	0.0	20.25
			1	40	20.90	20.86	20.90	0.0	21.00	20.03	20.13	20.16	0.0	20.25
			1	77	20.95	20.98	20.72	0.0	21.00	19.99	19.97	20.18	0.0	20.25
			36	0	20.97	20.83	20.99	0.0	21.00	20.05	20.18	19.95	0.0	20.25
			36	22	21.00	20.93	20.84	0.0	21.00	20.07	20.08	20.11	0.0	20.25
			36	43	20.73	20.81	20.81	0.0	21.00	20.00	20.12	20.16	0.0	20.25
			75	0	20.82	20.83	20.79	0.0	21.00	20.08	20.01	20.16	0.0	20.25
		16QAM	1	1	20.76	20.74	20.92	0.0	21.00	19.98	20.13	20.12	0.0	20.25
		64QAM	1	1	20.82	20.94	20.82	0.0	21.00	20.17	19.98	20.03	0.0	20.25
		256QAM	1	1	21.00	20.82	20.94	0.0	21.00	20.07	20.07	20.16	0.0	20.25
	CP-OFDM	QPSK	1	1	20.91	20.83	20.75	0.0	21.00	20.21	20.06	20.10	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					343000	349000	355000	MPR	Tune-up Limit	343000	349000	355000	MPR	Tune-up Limit
					1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.96	20.76	20.93	0.0	21.00	20.18	20.03	20.06	0.0	20.25
		QPSK	1	1	21.00	20.76	20.93	0.0	21.00	20.02	20.00	20.22	0.0	20.25
			1	26	20.72	20.97	20.77	0.0	21.00	20.23	20.17	20.23	0.0	20.25
			1	50	20.85	20.73	20.96	0.0	21.00	20.10	20.17	20.14	0.0	20.25
			25	0	20.99	20.77	20.87	0.0	21.00	20.03	20.06	20.15	0.0	20.25
			25	14	20.96	20.99	20.91	0.0	21.00	20.24	20.08	20.07	0.0	20.25
			25	27	20.78	20.94	20.97	0.0	21.00	20.13	19.95	19.97	0.0	20.25
			50	0	20.87	20.75	20.73	0.0	21.00	20.07	19.98	19.99	0.0	20.25
		16QAM	1	1	20.96	20.93	20.96	0.0	21.00	20.19	20.21	20.10	0.0	20.25
		64QAM	1	1	20.70	20.85	20.99	0.0	21.00	20.15	20.17	20.23	0.0	20.25
		256QAM	1	1	20.82	20.77	20.74	0.0	21.00	20.21	20.06	20.06	0.0	20.25
	CP-OFDM	QPSK	1	1	20.82	20.84	20.92	0.0	21.00	20.25	20.19	20.17	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					342500	349000	355500	MPR	Tune-up Limit	342500	349000	355500	MPR	Tune-up Limit
					1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.98	20.76	20.82	0.0	21.00	20.20	19.99	20.18	0.0	20.25
		QPSK	1	1	20.89	20.89	20.80	0.0	21.00	20.24	20.12	20.15	0.0	20.25
			1	13	21.00	20.86	20.75	0.0	21.00	20.15	20.10	20.06	0.0	20.25
			1	23	20.74	20.93	20.84	0.0	21.00	20.00	20.23	20.16	0.0	20.25
			12	0	20.80	20.89	20.89	0.0	21.00	20.07	20.19	20.11	0.0	20.25
			12	7	20.94	20.98	20.70	0.0	21.00	20.11	20.18	20.11	0.0	20.25
			12	13	20.93	20.78	20.88	0.0	21.00	19.98	20.20	20.11	0.0	20.25
			25	0	20.99	20.70	20.79	0.0	21.00	20.09	20.11	20.14	0.0	20.25
		16QAM	1	1	20.96	20.88	20.88	0.0	21.00	20.21	20.21	20.09	0.0	20.25
		64QAM	1	1	20.71	20.83	20.83	0.0	21.00	20.00	20.01	20.24	0.0	20.25
		256QAM	1	1	20.81	20.83	20.99	0.0	21.00	20.20	20.15	20.08	0.0	20.25
	CP-OFDM	QPSK	1	1	20.70	20.98	20.98	0.0	21.00	20.17	20.08	20.10	0.0	20.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 66 Measured Results (ANT3)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					344000	349000	354000	MPR	Tune-up Limit	344000	349000	354000	MPR	Tune-up Limit
					1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.42	24.33	24.22	0.0	24.70	19.87	19.97	19.75	0.0	20.25
		QPSK	1	1	24.46	24.47	24.40	0.0	24.70	19.91	19.74	19.92	0.0	20.25
			1	53	24.70	24.70	24.70	0.0	24.70	20.25	20.25	20.25	0.0	20.25
			1	104	24.22	24.42	24.20	0.0	24.70	19.92	19.78	19.91	0.0	20.25
			50	0	23.29	23.32	23.42	1.0	23.70	19.73	20.00	19.96	0.0	20.25
			50	28	24.70	24.70	24.70	0.0	24.70	20.25	20.25	20.25	0.0	20.25
			50	56	23.48	23.31	23.50	1.0	23.70	19.88	19.73	19.98	0.0	20.25
			100	0	23.41	23.31	23.33	1.0	23.70	19.91	20.25	19.75	0.0	20.25
		16QAM	1	1	23.30	23.30	23.31	1.0	23.70	19.94	19.83	19.99	0.0	20.25
		64QAM	1	1	21.70	21.75	21.95	2.5	22.20	19.88	19.98	19.96	0.0	20.25
		256QAM	1	1	19.84	19.72	19.83	4.5	20.20	19.80	19.98	19.87	0.0	20.25
	CP-OFDM	QPSK	1	1	22.94	22.91	22.96	1.5	23.20	19.94	19.79	19.90	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					343500	349000	354500	MPR	Tune-up Limit	343500	349000	354500	MPR	Tune-up Limit
					1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.48	24.49	24.45	0.0	24.70	19.80	19.86	19.91	0.0	20.25
		QPSK	1	1	24.33	24.37	24.44	0.0	24.70	19.94	19.96	20.00	0.0	20.25
			1	40	24.33	24.34	24.35	0.0	24.70	19.73	19.81	19.86	0.0	20.25
			1	77	24.24	24.32	24.31	0.0	24.70	19.97	19.93	19.82	0.0	20.25
			36	0	23.28	23.28	23.20	1.0	23.70	19.97	19.79	19.80	0.0	20.25
			36	22	24.39	24.46	24.34	0.0	24.70	19.98	19.76	19.73	0.0	20.25
			36	43	23.49	23.40	23.33	1.0	23.70	19.98	19.70	19.94	0.0	20.25
			75	0	23.26	23.34	23.38	1.0	23.70	19.78	19.74	19.76	0.0	20.25
		16QAM	1	1	23.36	23.36	23.46	1.0	23.70	19.71	19.92	19.89	0.0	20.25
		64QAM	1	1	21.96	21.75	21.79	2.5	22.20	19.91	19.89	19.77	0.0	20.25
		256QAM	1	1	19.71	19.80	19.99	4.5	20.20	19.77	19.93	19.86	0.0	20.25
	CP-OFDM	QPSK	1	1	22.74	22.80	22.98	1.5	23.20	19.73	19.88	19.91	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					343000	349000	355000	MPR	Tune-up Limit	343000	349000	355000	MPR	Tune-up Limit
					1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.49	24.20	24.31	0.0	24.70	19.72	19.82	19.98	0.0	20.25
		QPSK	1	1	24.44	24.28	24.49	0.0	24.70	19.80	19.89	19.72	0.0	20.25
			1	26	24.46	24.46	24.48	0.0	24.70	19.95	19.79	19.81	0.0	20.25
			1	50	24.40	24.21	24.29	0.0	24.70	19.87	19.94	19.82	0.0	20.25
			25	0	23.39	23.47	23.37	1.0	23.70	19.99	19.74	19.73	0.0	20.25
			25	14	24.39	24.33	24.32	0.0	24.70	19.87	19.79	19.75	0.0	20.25
			25	27	23.42	23.24	23.30	1.0	23.70	19.71	19.78	19.93	0.0	20.25
			50	0	23.21	23.29	23.49	1.0	23.70	19.89	19.85	19.78	0.0	20.25
		16QAM	1	1	23.49	23.36	23.29	1.0	23.70	19.84	19.72	19.74	0.0	20.25
		64QAM	1	1	21.87	21.86	21.90	2.5	22.20	19.83	19.96	19.85	0.0	20.25
		256QAM	1	1	19.96	19.71	19.72	4.5	20.20	19.85	19.92	19.89	0.0	20.25
	CP-OFDM	QPSK	1	1	22.70	22.84	22.79	1.5	23.20	19.73	19.78	19.76	0.0	20.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					342500	349000	355500	MPR	Tune-up Limit	342500	349000	355500	MPR	Tune-up Limit
					1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.44	24.37	24.27	0.0	24.70	19.72	19.94	19.74	0.0	20.25
		QPSK	1	1	24.46	24.24	24.29	0.0	24.70	19.93	19.94	19.99	0.0	20.25
			1	13	24.30	24.45	24.33	0.0	24.70	19.97	19.91	19.93	0.0	20.25
			1	23	24.45	24.47	24.27	0.0	24.70	19.80	19.89	19.80	0.0	20.25
			12	0	23.28	23.42	23.25	1.0	23.70	19.93	19.96	19.78	0.0	20.25
			12	7	24.33	24.28	24.27	0.0	24.70	19.87	19.90	19.95	0.0	20.25
			12	13	23.34	23.28	23.44	1.0	23.70	19.87	19.94	19.85	0.0	20.25
			25	0	23.29	23.43	23.28	1.0	23.70	19.91	19.90	19.90	0.0	20.25
		16QAM	1	1	23.21	23.42	23.25	1.0	23.70	19.88	19.92	19.86	0.0	20.25
		64QAM	1	1	21.83	21.76	21.96	2.5	22.20	19.84	19.98	19.75	0.0	20.25
		256QAM	1	1	19.98	19.95	19.89	4.5	20.20	19.82	19.85	19.70	0.0	20.25
	CP-OFDM	QPSK	1	1	22.75	22.71	22.87	1.5	23.20	19.78	19.96	19.92	0.0	20.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 66 Measured Results (ANT4)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					344000	349000	354000	MPR	Tune-up Limit	344000	349000	354000	MPR	Tune-up Limit
					1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	19.95	19.71	19.89	0.0	20.00	20.72	20.96	20.81	0.0	21.75
		QPSK	1	1	19.93	19.86	19.72	0.0	20.00	20.86	20.73	20.79	0.0	21.75
			1	53	20.00	20.00	20.00	0.0	20.00	21.75	21.75	21.75	0.0	21.75
			1	104	19.96	19.79	19.84	0.0	20.00	20.89	20.99	20.92	0.0	21.75
			50	0	19.73	19.79	19.73	0.0	20.00	20.94	20.98	20.96	0.0	21.75
			50	28	20.00	20.00	20.00	0.0	20.00	21.75	21.75	21.75	0.0	21.75
			50	56	19.82	19.73	19.79	0.0	20.00	20.85	20.84	20.70	0.0	21.75
			100	0	19.80	20.00	19.79	0.0	20.00	20.96	21.75	20.85	0.0	21.75
		16QAM	1	1	19.85	19.83	19.70	0.0	20.00	20.74	20.95	20.84	0.0	21.75
		64QAM	1	1	19.94	19.88	19.78	0.0	20.00	20.97	20.74	20.74	0.0	21.75
		256QAM	1	1	19.99	19.81	19.70	0.0	20.00	20.84	20.83	20.81	0.0	21.75
	CP-OFDM	QPSK	1	1	19.75	19.96	19.82	0.0	20.00	20.80	20.83	20.88	0.0	21.75
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					343500	349000	354500	MPR	Tune-up Limit	343500	349000	354500	MPR	Tune-up Limit
					1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	DFS-s OFDM	PI/2 BPSK	1	1	19.82	19.74	19.78	0.0	20.00	20.81	20.82	20.72	0.0	21.75
		QPSK	1	1	19.81	19.76	19.85	0.0	20.00	20.86	20.95	20.93	0.0	21.75
			1	40	19.93	19.87	19.81	0.0	20.00	20.89	20.80	20.84	0.0	21.75
			1	77	19.80	19.86	19.78	0.0	20.00	20.76	20.96	20.90	0.0	21.75
			36	0	19.80	19.79	19.87	0.0	20.00	20.72	20.98	20.99	0.0	21.75
			36	22	19.89	19.73	19.76	0.0	20.00	20.79	20.77	20.77	0.0	21.75
			36	43	19.80	19.93	19.74	0.0	20.00	20.84	20.85	20.72	0.0	21.75
			75	0	19.96	19.77	19.91	0.0	20.00	20.72	20.77	20.79	0.0	21.75
		16QAM	1	1	19.77	19.70	19.86	0.0	20.00	20.98	20.71	20.90	0.0	21.75
		64QAM	1	1	19.92	19.97	19.82	0.0	20.00	20.76	20.90	20.82	0.0	21.75
		256QAM	1	1	19.86	19.93	19.87	0.0	20.00	20.92	20.75	20.71	0.0	21.75
	CP-OFDM	QPSK	1	1	19.93	19.91	19.82	0.0	20.00	20.82	20.89	20.76	0.0	21.75
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					343000	349000	355000	MPR	Tune-up Limit	343000	349000	355000	MPR	Tune-up Limit
					1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	DFS-s OFDM	PI/2 BPSK	1	1	19.82	19.89	19.80	0.0	20.00	20.77	20.75	20.81	0.0	21.75
		QPSK	1	1	19.75	19.72	19.75	0.0	20.00	20.99	20.97	20.72	0.0	21.75
			1	26	19.87	19.94	19.91	0.0	20.00	20.86	20.97	20.79	0.0	21.75
			1	50	19.75	19.84	19.76	0.0	20.00	20.99	20.73	20.75	0.0	21.75
			25	0	19.93	19.78	19.80	0.0	20.00	20.83	20.70	20.93	0.0	21.75
			25	14	19.76	19.92	19.71	0.0	20.00	20.85	20.71	20.79	0.0	21.75
			25	27	19.87	19.96	19.82	0.0	20.00	20.97	20.78	20.73	0.0	21.75
			50	0	19.90	19.91	19.84	0.0	20.00	20.93	20.90	20.99	0.0	21.75
		16QAM	1	1	19.90	19.84	19.95	0.0	20.00	20.81	20.83	20.73	0.0	21.75
		64QAM	1	1	19.97	19.89	19.86	0.0	20.00	20.81	20.73	20.97	0.0	21.75
		256QAM	1	1	19.84	20.00	19.96	0.0	20.00	20.90	20.87	20.94	0.0	21.75
	CP-OFDM	QPSK	1	1	19.74	19.96	19.88	0.0	20.00	20.80	20.75	20.90	0.0	21.75
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					342500	349000	355500	MPR	Tune-up Limit	342500	349000	355500	MPR	Tune-up Limit
					1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	DFS-s OFDM	PI/2 BPSK	1	1	19.90	19.71	19.91	0.0	20.00	20.91	20.82	20.71	0.0	21.75
		QPSK	1	1	19.95	19.74	19.72	0.0	20.00	20.84	20.82	20.87	0.0	21.75
			1	13	19.87	19.99	19.79	0.0	20.00	20.81	20.90	20.83	0.0	21.75
			1	23	19.72	19.93	19.80	0.0	20.00	20.94	20.94	20.94	0.0	21.75
			12	0	19.75	19.75	19.92	0.0	20.00	20.88	20.79	20.90	0.0	21.75
			12	7	19.97	19.73	19.92	0.0	20.00	21.00	20.73	20.73	0.0	21.75
			12	13	19.78	19.95	19.96	0.0	20.00	20.94	20.99	20.71	0.0	21.75
			25	0	19.77	19.96	19.93	0.0	20.00	20.76	20.88	20.71	0.0	21.75
		16QAM	1	1	19.82	19.92	19.94	0.0	20.00	20.77	20.76	20.75	0.0	21.75
		64QAM	1	1	19.87	19.96	19.76	0.0	20.00	20.89	20.82	20.94	0.0	21.75
		256QAM	1	1	19.79	19.74	19.98	0.0	20.00	20.95	20.86	20.95	0.0	21.75
	CP-OFDM	QPSK	1	1	19.79	19.99	19.77	0.0	20.00	20.99	20.88	20.90	0.0	21.75

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 77 Measured Results (ANT7)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					650000	653000	656000	659000	662000	MPR	Tune-up Limit	650000	653000	656000	659000	662000	MPR	Tune-up Limit
					3750 MHz	3795 MHz	3840 MHz	3885 MHz	3930 MHz			3750 MHz	3795 MHz	3840 MHz	3885 MHz	3930 MHz		
100 MHz	DFS-s OFDM	PI/2 BPSK	1	1			25.55			0.0	25.7			18.94			0.0	19.00
		QPSK	1	1			25.54			0.0	25.7			18.86			0.0	19.00
			1	137			25.70			0.0	25.7			19.00			0.0	19.00
			1	271			25.57			0.0	25.7			18.91			0.0	19.00
			135	0			24.55			1.0	24.7			18.84			0.0	19.00
			135	69			25.70			0.0	25.7			19.00			0.0	19.00
			135	138			24.49			1.0	24.7			18.93			0.0	19.00
			270	0			24.46			1.0	24.7			19.00			0.0	19.00
		16QAM	1	1			24.59			1.0	24.7			18.99			0.0	19.00
		64QAM	1	1			22.94			2.5	23.2			18.84			0.0	19.00
		256QAM	1	1			20.92			4.5	21.2			18.85			0.0	19.00
	CP-OFDM	QPSK	1	1			23.97			1.5	24.2			18.93			0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					649666	652834	656000	659166	662334	MPR	Tune-up Limit	649666	652834	656000	659166	662334	MPR	Tune-up Limit
					3744.99 MHz	3792.51 MHz	3840 MHz	3887.49 MHz	3935.01 MHz			3744.99 MHz	3792.51 MHz	3840 MHz	3887.49 MHz	3935.01 MHz		
90 MHz	DFS-s OFDM	PI/2 BPSK	1	1			25.24			0.0	25.7			18.69			0.0	19.00
		QPSK	1	1			25.38			0.0	25.70			18.53			0.0	19.00
			1	123			25.35			0.0	25.70			18.57			0.0	19.00
			1	243			25.40			0.0	25.70			18.52			0.0	19.00
			120	0			24.28			1.0	24.70			18.53			0.0	19.00
			120	63			25.34			0.0	25.70			18.63			0.0	19.00
			120	125			24.20			1.0	24.70			18.76			0.0	19.00
			243	0			24.39			1.0	24.70			18.71			0.0	19.00
		16QAM	1	1			24.38			1.0	24.70			18.61			0.0	19.00
		64QAM	1	1			22.89			2.5	23.20			18.77			0.0	19.00
		256QAM	1	1			20.70			4.5	21.20			18.65			0.0	19.00
	CP-OFDM	QPSK	1	1			23.91			1.5	24.20			18.75			0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					649334	652666	656000	659334	662666	MPR	Tune-up Limit	649334	652666	656000	659334	662666	MPR	Tune-up Limit
					3740.01 MHz	3789.99 MHz	3840 MHz	3890.01 MHz	3939.99 MHz			3740.01 MHz	3789.99 MHz	3840 MHz	3890.01 MHz	3939.99 MHz		
80 MHz	DFS-s OFDM	PI/2 BPSK	1	1	25.39	25.26	25.43	25.21	25.38	0.0	25.70	18.70	18.61	18.65	18.52	18.56	0.0	19.00
		QPSK	1	1	25.28	25.31	25.47	25.20	25.22	0.0	25.70	18.53	18.77	18.55	18.59	18.71	0.0	19.00
			1	109	25.23	25.37	25.21	25.28	25.35	0.0	25.70	18.64	18.56	18.68	18.78	18.53	0.0	19.00
			1	215	25.31	25.37	25.24	25.35	25.39	0.0	25.70	18.51	18.73	18.55	18.61	18.62	0.0	19.00
			108	0	24.39	24.47	24.40	24.32	24.50	1.0	24.70	18.64	18.50	18.75	18.61	18.71	0.0	19.00
			108	55	25.50	25.50	25.40	25.47	25.48	0.0	25.70	18.70	18.52	18.79	18.74	18.74	0.0	19.00
			108	109	24.40	24.46	24.32	24.44	24.21	1.0	24.70	18.80	18.56	18.80	18.66	18.78	0.0	19.00
			216	0	24.40	24.33	24.40	24.39	24.47	1.0	24.70	18.58	18.50	18.60	18.61	18.66	0.0	19.00
		16QAM	1	1	24.39	24.27	24.36	24.34	24.43	1.0	24.70	18.70	18.64	18.72	18.63	18.64	0.0	19.00
		64QAM	1	1	22.96	22.75	22.74	22.94	22.93	2.5	23.20	18.67	18.61	18.50	18.67	18.75	0.0	19.00
		256QAM	1	1	20.88	20.95	20.77	20.82	20.76	4.5	21.20	18.52	18.59	18.59	18.73	18.73	0.0	19.00
	CP-OFDM	QPSK	1	1	23.73	23.94	23.79	23.91	23.92	1.5	24.20	18.64	18.65	18.72	18.75	18.66	0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648666	652334	656000	659666	663334	MPR	Tune-up Limit	648666	652334	656000	659666	663334	MPR	Tune-up Limit
					3729.99 MHz	6785.01 MHz	3840 MHz	3894.99 MHz	3950.1 MHz			3729.99 MHz	6785.01 MHz	3840 MHz	3894.99 MHz	3950.1 MHz		
60 MHz	DFS-s OFDM	PI/2 BPSK	1	1	25.45	25.26	25.20	25.35	25.43	0.0	25.70	18.70	18.77	18.61	18.71	18.79	0.0	19.00
		QPSK	1	1	25.27	25.37	25.22	25.37	25.37	0.0	25.70	18.79	18.68	18.66	18.74	18.62	0.0	19.00
			1	81	25.48	25.39	25.47	25.42	25.25	0.0	25.70	18.75	18.74	18.66	18.61	18.62	0.0	19.00
			1	160	25.32	25.32	25.44	25.28	25.27	0.0	25.70	18.70	18.78	18.62	18.78	18.79	0.0	19.00
			81	0	24.22	24.42	24.30	24.39	24.36	1.0	24.70	18.57	18.60	18.69	18.65	18.63	0.0	19.00
			81	40	25.28	25.42	25.34	25.44	25.38	0.0	25.70	18.51	18.64	18.58	18.58	18.65	0.0	19.00
			81	81	24.40	24.43	24.48	24.46	24.36	1.0	24.70	18.61	18.55	18.54	18.75	18.50	0.0	19.00
			162	0	24.32	24.43	24.24	24.40	24.22	1.0	24.70	18.68	18.50	18.54	18.56	18.71	0.0	19.00
		16QAM	1	1	24.32	24.39	24.40	24.23	24.37	1.0	24.70	18.59	18.66	18.74	18.55	18.54	0.0	19.00
		64QAM	1	1	22.95	22.97	22.87	22.75	22.89	2.5	23.20	18.52	18.74	18.54	18.51	18.71	0.0	19.00
		256QAM	1	1	20.99	20.98	20.86	20.80	20.97	4.5	21.20	18.64	18.56	18.59	18.65	18.51	0.0	19.00
	CP-OFDM	QPSK	1	1	23.94	23.75	23.78	23.74	23.72	1.5	24.20	18.65	18.79	18.64	18.58	18.66	0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648334	652166	656000	659834	663666	MPR	Tune-up Limit	648334	652166	656000	659834	663666	MPR	Tune-up Limit
					3725.01 MHz	652166 MHz	3840 MHz	3897.51 MHz	3954.99 MHz			3725.01 MHz	652166 MHz	3840 MHz	3897.51 MHz	3954.99 MHz		
50 MHz	DFS-s OFDM	PI/2 BPSK	1	1	25.32	25.33	25.48	25.30	25.34	0.0	25.70	18.76	18.52	18.52	18.52	18.62	0.0	19.00
		QPSK	1	1	25.21	25.21	25.34	25.44	25.20	0.0	25.70	18.72	18.75	18.54	18.76	18.78	0.0	19.00
			1	67	25.32	25.25	25.49	25.37	25.32	0.0	25.70	18.74	18.72	18.52	18.59	18.69	0.0	19.00
			1	131	25.47	25.27	25.31	25.27	25.27	0.0	25.70	18.51	18.55	18.73	18.76	18.55	0.0	19.00
			64	0	24.39	24.31	24.22	24.41	24.25	1.0	24.70	18.58	18.57	18.56	18.59	18.60	0.0	19.00
			64	35	25.21	25.33	25.29	25.36	25.45	0.0	25.70	18.73	18.54	18.55	18.60	18.72	0.0	19.00
			64	69	24.35	24.31	24.49	24.31	24.41	1.0	24.70	18.63	18.74	18.74	18.78	18.60	0.0	19.00
			128	0	24.29	24.23	24.33	24.36	24.36	1.0	24.70	18.55	18.55	18.65	18.75	18.68	0.0	19.00
		16QAM	1	1	24.39	24.41	24.48	24.30	24.42	1.0	24.70	18.77	18.54	18.69	18.76	18.69	0.0	19.00
		64QAM	1	1	22.82	22.94	22.75	22.87	22.97	2.5	23.20	18.65	18.62	18.62	18.66	18.60	0.0	19.00
		256QAM	1	1	21.00	20.98	20.87	20.99	20.99	4.5	21.20	18.70	18.52	18.55	18.63	18.51	0.0	19.00
	CP-OFDM	QPSK	1	1	23.71	23.83	23.73	23.77	23.86	1.5	24.20	18.68	18.74	18.57	18.58	18.72	0.0	19.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 77 Measured Results (ANT7) (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648000	652000	656000	660000	664000	MPR	Tune-up Limit	648000	652000	656000	660000	664000	MPR	Tune-up Limit
					3720 MHz	3780 MHz	3840 MHz	3900 MHz	3960 MHz			3720 MHz	3780 MHz	3840 MHz	3900 MHz	3960 MHz		
40 MHz	DFS-s OFDM	PI/2 BPSK	1	1	25.44	25.26	25.38	25.24	25.22	0.0	25.70	18.57	18.76	18.62	18.75	18.72	0.0	19.00
		QPSK	1	1	25.24	25.40	25.48	25.39	25.38	0.0	25.70	18.76	18.52	18.60	18.52	18.68	0.0	19.00
			1	53	25.39	25.49	25.22	25.29	25.34	0.0	25.70	18.59	18.80	18.60	18.78	18.56	0.0	19.00
			1	104	25.47	25.34	25.32	25.47	25.21	0.0	25.70	18.78	18.64	18.77	18.62	18.63	0.0	19.00
			50	0	24.33	24.40	24.20	24.22	24.44	1.0	24.70	18.78	18.63	18.65	18.71	18.61	0.0	19.00
			50	28	25.35	25.42	25.29	25.35	25.40	0.0	25.70	18.52	18.64	18.59	18.74	18.66	0.0	19.00
			50	56	24.22	24.28	24.29	24.50	24.31	1.0	24.70	18.70	18.58	18.70	18.70	18.79	0.0	19.00
			100	0	24.45	24.27	24.29	24.47	24.33	1.0	24.70	18.51	18.67	18.52	18.67	18.58	0.0	19.00
		16QAM	1	1	24.41	24.49	24.28	24.39	24.34	1.0	24.70	18.63	18.75	18.75	18.53	18.53	0.0	19.00
		64QAM	1	1	22.89	22.78	22.99	22.94	22.78	2.5	23.20	18.72	18.75	18.80	18.65	18.57	0.0	19.00
		256QAM	1	1	20.86	20.95	20.87	20.87	20.76	4.5	21.20	18.70	18.51	18.77	18.56	18.55	0.0	19.00
	CP-OFDM	QPSK	1	1	23.96	23.99	23.99	23.88	23.81	1.5	24.20	18.60	18.50	18.77	18.79	18.54	0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					647334	651666	656000	660266	664666	MPR	Tune-up Limit	647334	651666	656000	660266	664666	MPR	Tune-up Limit
					3710.01 MHz	3774.99 MHz	3840 MHz	3903.99 MHz	3969.99 MHz			3710.01 MHz	3774.99 MHz	3840 MHz	3903.99 MHz	3969.99 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	25.34	25.23	25.44	25.25	25.33	0.0	25.70	18.71	18.50	18.75	18.76	18.51	0.0	19.00
		QPSK	1	1	25.29	25.42	25.50	25.44	25.46	0.0	25.70	18.66	18.69	18.69	18.77	18.69	0.0	19.00
			1	26	25.32	25.32	25.48	25.43	25.46	0.0	25.70	18.55	18.61	18.59	18.66	18.57	0.0	19.00
			1	49	25.20	25.24	25.22	25.41	25.32	0.0	25.70	18.71	18.75	18.67	18.76	18.76	0.0	19.00
			25	0	24.31	24.27	24.20	24.48	24.41	1.0	24.70	18.55	18.53	18.54	18.72	18.62	0.0	19.00
			25	13	25.48	25.50	25.32	25.49	25.24	0.0	25.70	18.50	18.79	18.68	18.76	18.61	0.0	19.00
			25	26	24.39	24.23	24.37	24.22	24.22	1.0	24.70	18.72	18.72	18.53	18.65	18.64	0.0	19.00
			50	0	24.33	24.29	24.25	24.46	24.29	1.0	24.70	18.70	18.72	18.60	18.56	18.52	0.0	19.00
		16QAM	1	1	24.20	24.46	24.32	24.22	24.37	1.0	24.70	18.55	18.72	18.51	18.57	18.59	0.0	19.00
		64QAM	1	1	22.96	22.75	22.99	22.78	22.88	2.5	23.20	18.69	18.73	18.66	18.65	18.52	0.0	19.00
		256QAM	1	1	21.00	20.71	20.71	20.75	20.99	4.5	21.20	18.71	18.55	18.66	18.80	18.70	0.0	19.00
	CP-OFDM	QPSK	1	1	23.74	23.78	23.80	23.73	23.92	1.5	24.20	18.74	18.64	18.51	18.64	18.75	0.0	19.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 77 Measured Results (ANT8)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					650000	653000	656000	659000	662000	MPR	Tune-up Limit	650000	653000	656000	659000	662000	MPR	Tune-up Limit
					3750 MHz	3795 MHz	3840 MHz	3885 MHz	3930 MHz			3750 MHz	3795 MHz	3840 MHz	3885 MHz	3930 MHz		
100 MHz	DFS-s OFDM	PI/2 BPSK	1	1			20.33			0.0	20.50			16.71			0.0	17.00
		QPSK	1	1			20.31			0.0	20.50			16.69			0.0	17.00
			1	137			20.50			0.0	20.50			16.75			0.0	17.00
			1	271			20.33			0.0	20.50			16.63			0.0	17.00
			135	0			20.44			0.0	20.50			16.65			0.0	17.00
			135	69			20.50			0.0	20.50			16.75			0.0	17.00
			135	138			20.43			0.0	20.50			16.63			0.0	17.00
			270	0			20.50			0.0	20.50			16.75			0.0	17.00
		16QAM	1	1			20.42			0.0	20.50			16.69			0.0	17.00
		64QAM	1	1			20.31			0.0	20.50			16.56			0.0	17.00
		256QAM	1	1			20.35			0.0	20.50			16.71			0.0	17.00
	CP-OFDM	QPSK	1	1			20.49			0.0	20.50			16.57			0.0	17.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					649666	652834	656000	659166	662334	MPR	Tune-up Limit	649666	652834	656000	659166	662334	MPR	Tune-up Limit
					3744.99 MHz	3792.51 MHz	3840 MHz	3887.49 MHz	3935.01 MHz			3744.99 MHz	3792.51 MHz	3840 MHz	3887.49 MHz	3935.01 MHz		
90 MHz	DFS-s OFDM	PI/2 BPSK	1	1			20.27			0.0	20.50			16.51			0.0	17.00
		QPSK	1	1			20.14			0.0	20.50			16.46			0.0	17.00
			1	123			20.14			0.0	20.50			16.55			0.0	17.00
			1	243			20.17			0.0	20.50			16.40			0.0	17.00
			120	0			20.30			0.0	20.50			16.39			0.0	17.00
			120	63			20.24			0.0	20.50			16.55			0.0	17.00
			120	125			20.32			0.0	20.50			16.47			0.0	17.00
			243	0			20.26			0.0	20.50			16.39			0.0	17.00
		16QAM	1	1			20.27			0.0	20.50			16.44			0.0	17.00
		64QAM	1	1			20.22			0.0	20.50			16.46			0.0	17.00
		256QAM	1	1			20.21			0.0	20.50			16.42			0.0	17.00
	CP-OFDM	QPSK	1	1			20.15			0.0	20.50			16.61			0.0	17.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					649334	652666	656000	659334	662666	MPR	Tune-up Limit	649334	652666	656000	659334	662666	MPR	Tune-up Limit
					3740.01 MHz	3789.99 MHz	3840 MHz	3890.01 MHz	3939.99 MHz			3740.01 MHz	3789.99 MHz	3840 MHz	3890.01 MHz	3939.99 MHz		
80 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.21	20.33	20.20	20.40	20.13	0.0	20.50	16.60	16.61	16.64	16.41	16.42	0.0	17.00
		QPSK	1	1	20.25	20.38	20.22	20.33	20.23	0.0	20.50	16.36	16.54	16.54	16.58	16.40	0.0	17.00
			1	109	20.10	20.40	20.26	20.14	20.36	0.0	20.50	16.46	16.64	16.43	16.36	16.54	0.0	17.00
			1	215	20.23	20.28	20.24	20.29	20.28	0.0	20.50	16.61	16.40	16.35	16.51	16.56	0.0	17.00
			108	0	20.21	20.29	20.29	20.13	20.32	0.0	20.50	16.60	16.63	16.60	16.48	16.54	0.0	17.00
			108	55	20.16	20.14	20.21	20.29	20.22	0.0	20.50	16.65	16.47	16.50	16.62	16.48	0.0	17.00
			108	109	20.14	20.18	20.17	20.29	20.16	0.0	20.50	16.57	16.42	16.44	16.64	16.41	0.0	17.00
			216	0	20.20	20.14	20.22	20.35	20.12	0.0	20.50	16.36	16.45	16.41	16.48	16.49	0.0	17.00
		16QAM	1	1	20.30	20.37	20.11	20.19	20.12	0.0	20.50	16.52	16.36	16.47	16.47	16.63	0.0	17.00
		64QAM	1	1	20.15	20.37	20.28	20.34	20.21	0.0	20.50	16.62	16.53	16.59	16.40	16.42	0.0	17.00
		256QAM	1	1	20.18	20.17	20.24	20.39	20.15	0.0	20.50	16.44	16.40	16.55	16.63	16.37	0.0	17.00
	CP-OFDM	QPSK	1	1	20.27	20.24	20.14	20.21	20.11	0.0	20.50	16.37	16.46	16.57	16.44	16.64	0.0	17.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648666	652334	656000	659666	663334	MPR	Tune-up Limit	648666	652334	656000	659666	663334	MPR	Tune-up Limit
					3729.99 MHz	6785.01 MHz	3840 MHz	3894.99 MHz	3950.1 MHz			3729.99 MHz	6785.01 MHz	3840 MHz	3894.99 MHz	3950.1 MHz		
60 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.24	20.32	20.17	20.17	20.33	0.0	20.50	16.57	16.44	16.64	16.43	16.58	0.0	17.00
		QPSK	1	1	20.20	20.19	20.36	20.13	20.27	0.0	20.50	16.42	16.59	16.46	16.50	16.42	0.0	17.00
			1	81	20.39	20.37	20.15	20.37	20.37	0.0	20.50	16.58	16.51	16.56	16.51	16.64	0.0	17.00
			1	160	20.13	20.19	20.22	20.20	20.39	0.0	20.50	16.62	16.51	16.37	16.59	16.63	0.0	17.00
			81	0	20.34	20.30	20.26	20.18	20.24	0.0	20.50	16.57	16.64	16.48	16.59	16.53	0.0	17.00
			81	40	20.11	20.16	20.28	20.19	20.29	0.0	20.50	16.43	16.57	16.63	16.38	16.46	0.0	17.00
			81	81	20.15	20.38	20.27	20.34	20.29	0.0	20.50	16.40	16.55	16.36	16.42	16.43	0.0	17.00
			162	0	20.26	20.25	20.28	20.32	20.19	0.0	20.50	16.62	16.46	16.43	16.40	16.41	0.0	17.00
		16QAM	1	1	20.29	20.22	20.23	20.36	20.13	0.0	20.50	16.59	16.52	16.37	16.39	16.63	0.0	17.00
		64QAM	1	1	20.24	20.21	20.21	20.16	20.15	0.0	20.50	16.43	16.42	16.63	16.42	16.57	0.0	17.00
		256QAM	1	1	20.26	20.38	20.30	20.31	20.35	0.0	20.50	16.44	16.45	16.47	16.55	16.59	0.0	17.00
	CP-OFDM	QPSK	1	1	20.36	20.23	20.32	20.33	20.22	0.0	20.50	16.59	16.55	16.44	16.53	16.37	0.0	17.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648334	652166	656000	659834	663666	MPR	Tune-up Limit	648334	652166	656000	659834	663666	MPR	Tune-up Limit
					3725.01 MHz	652166 MHz	3840 MHz	3897.51 MHz	3954.99 MHz			3725.01 MHz	652166 MHz	3840 MHz	3897.51 MHz	3954.99 MHz		
50 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.28	20.39	20.21	20.27	20.23	0.0	20.50	16.53	16.61	16.58	16.50	16.40	0.0	17.00
		QPSK	1	1	20.38	20.23	20.25	20.17	20.36	0.0	20.50	16.62	16.60	16.43	16.62	16.47	0.0	17.00
			1	67	20.21	20.40	20.31	20.16	20.29	0.0	20.50	16.35	16.64	16.56	16.61	16.38	0.0	17.00
			1	131	20.29	20.20	20.18	20.20	20.13	0.0	20.50	16.49	16.39	16.43	16.44	16.36	0.0	17.00
			64	0	20.37	20.18	20.27	20.36	20.29	0.0	20.50	16.60	16.45	16.44	16.57	16.60	0.0	17.00
			64	35	20.38	20.23	20.24	20.33	20.20	0.0	20.50	16.64	16.37	16.61	16.56	16.48	0.0	17.00
			64	69	20.25	20.20	20.13	20.31	20.21	0.0	20.50	16.51	16.62	16.52	16.60	16.52	0.0	17.00
			128	0	20.16	20.12	20.22	20.12	20.33	0.0	20.50	16.53	16.57	16.50	16.58	16.46	0.0	17.00
		16QAM	1	1	20.21	20.34	20.13	20.32	20.24	0.0	20.50	16.47	16.63	16.43	16.57	16.59	0.0	17.00
		64QAM	1	1	20.39	20.36	20.37	20.34	20.14	0.0	20.50	16.40	16.50	16.55	16.64	16.46	0.0	17.00
		256QAM	1	1	20.18	20.20	20.28	20.32	20.24	0.0	20.50	16.50	16.64	16.46	16.47	16.44	0.0	17.00
	CP-OFDM	QPSK	1	1	20.39	20.13	20.28	20.15	20.39	0.0	20.50	16.58	16.37	16.40	16.64	16.57	0.0	17.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 77 Measured Results (ANT8) (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648000	652000	656000	660000	664000	MPR	Tune-up Limit	648000	652000	656000	660000	664000	MPR	Tune-up Limit
					3720 MHz	3780 MHz	3840 MHz	3900 MHz	3960 MHz			3720 MHz	3780 MHz	3840 MHz	3900 MHz	3960 MHz		
40 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.34	20.17	20.20	20.15	20.13	0.0	20.50	16.40	16.52	16.38	16.52	16.42	0.0	17.00
		QPSK	1	1	20.27	20.21	20.19	20.36	20.30	0.0	20.50	16.56	16.37	16.43	16.57	16.45	0.0	17.00
			1	53	20.15	20.24	20.23	20.18	20.17	0.0	20.50	16.36	16.62	16.64	16.50	16.65	0.0	17.00
			1	104	20.40	20.28	20.13	20.38	20.25	0.0	20.50	16.38	16.62	16.61	16.48	16.47	0.0	17.00
			50	0	20.17	20.32	20.30	20.39	20.38	0.0	20.50	16.36	16.39	16.37	16.56	16.48	0.0	17.00
			50	28	20.27	20.16	20.32	20.36	20.16	0.0	20.50	16.47	16.49	16.42	16.53	16.52	0.0	17.00
			50	56	20.39	20.20	20.20	20.13	20.30	0.0	20.50	16.36	16.47	16.56	16.37	16.36	0.0	17.00
			100	0	20.14	20.30	20.17	20.12	20.19	0.0	20.50	16.60	16.59	16.48	16.41	16.61	0.0	17.00
		16QAM	1	1	20.20	20.11	20.35	20.31	20.18	0.0	20.50	16.53	16.55	16.45	16.46	16.41	0.0	17.00
		64QAM	1	1	20.18	20.31	20.36	20.10	20.15	0.0	20.50	16.42	16.55	16.49	16.58	16.51	0.0	17.00
		256QAM	1	1	20.32	20.16	20.37	20.38	20.10	0.0	20.50	16.37	16.61	16.45	16.38	16.55	0.0	17.00
	CP-OFDM	QPSK	1	1	20.16	20.29	20.17	20.19	20.24	0.0	20.50	16.36	16.48	16.62	16.55	16.42	0.0	17.00

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					647334	651666	656000	660266	664666	MPR	Tune-up Limit	647334	651666	656000	660266	664666	MPR	Tune-up Limit
					3710.01 MHz	3774.99 MHz	3840 MHz	3903.99 MHz	3969.99 MHz			3710.01 MHz	3774.99 MHz	3840 MHz	3903.99 MHz	3969.99 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	20.13	20.20	20.23	20.28	20.30	0.0	20.50	16.56	16.42	16.54	16.49	16.52	0.0	17.00
		QPSK	1	1	20.14	20.38	20.26	20.22	20.32	0.0	20.50	16.51	16.41	16.40	16.42	16.61	0.0	17.00
			1	26	20.30	20.29	20.27	20.14	20.26	0.0	20.50	16.62	16.36	16.44	16.43	16.54	0.0	17.00
			1	49	20.28	20.39	20.36	20.31	20.25	0.0	20.50	16.47	16.59	16.53	16.47	16.43	0.0	17.00
			25	0	20.13	20.14	20.17	20.14	20.12	0.0	20.50	16.51	16.52	16.40	16.40	16.48	0.0	17.00
			25	13	20.30	20.40	20.15	20.15	20.20	0.0	20.50	16.42	16.41	16.60	16.64	16.61	0.0	17.00
			25	26	20.18	20.30	20.26	20.32	20.20	0.0	20.50	16.39	16.52	16.59	16.60	16.52	0.0	17.00
			50	0	20.23	20.11	20.37	20.36	20.29	0.0	20.50	16.64	16.56	16.50	16.41	16.43	0.0	17.00
		16QAM	1	1	20.30	20.20	20.10	20.24	20.16	0.0	20.50	16.52	16.61	16.64	16.35	16.51	0.0	17.00
		64QAM	1	1	20.29	20.11	20.27	20.28	20.13	0.0	20.50	16.56	16.44	16.48	16.36	16.63	0.0	17.00
		256QAM	1	1	20.33	20.32	20.38	20.23	20.24	0.0	20.50	16.39	16.49	16.60	16.37	16.61	0.0	17.00
	CP-OFDM	QPSK	1	1	20.15	20.18	20.17	20.23	20.25	0.0	20.50	16.49	16.36	16.53	16.44	16.62	0.0	17.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 77 Measured Results (ANT9)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					650000	653000	656000	659000	662000	MPR	Tune-up Limit	650000	653000	656000	659000	662000	MPR	Tune-up Limit
					3750 MHz	3795 MHz	3840 MHz	3885 MHz	3930 MHz			3750 MHz	3795 MHz	3840 MHz	3885 MHz	3930 MHz		
100 MHz	DFS-s OFDM	PI/2 BPSK	1	1			25.03			0.0	25.2			18.60			0.0	19.00
		QPSK	1	1			25.10			0.0	25.2			18.66			0.0	19.00
			1	137			25.15			0.0	25.2			18.75			0.0	19.00
			1	271			25.12			0.0	25.2			18.67			0.0	19.00
			135	0			24.07			1.0	24.2			18.65			0.0	19.00
			135	69			25.12			0.0	25.2			18.75			0.0	19.00
			135	138			24.03			1.0	24.2			18.63			0.0	19.00
			270	0			24.08			1.0	24.2			18.75			0.0	19.00
		16QAM	1	1			24.00			1.0	24.2			18.68			0.0	19.00
		64QAM	1	1			22.70			2.5	22.7			18.61			0.0	19.00
		256QAM	1	1			20.62			4.5	20.7			18.75			0.0	19.00
	CP-OFDM	QPSK	1	1			23.59			1.5	23.7			18.57			0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					649666	652834	656000	659166	662334	MPR	Tune-up Limit	649666	652834	656000	659166	662334	MPR	Tune-up Limit
					3744.99 MHz	3792.51 MHz	3840 MHz	3887.49 MHz	3935.01 MHz			3744.99 MHz	3792.51 MHz	3840 MHz	3887.49 MHz	3935.01 MHz		
90 MHz	DFS-s OFDM	PI/2 BPSK	1	1			24.95			0.0	25.2			18.51			0.0	19.00
		QPSK	1	1			24.92			0.0	25.20			18.33			0.0	19.00
			1	123			24.75			0.0	25.20			18.33			0.0	19.00
			1	243			24.96			0.0	25.20			18.37			0.0	19.00
			120	0			23.93			1.0	24.20			18.46			0.0	19.00
			120	63			24.77			0.0	25.20			18.29			0.0	19.00
			120	125			23.84			1.0	24.20			18.36			0.0	19.00
			243	0			23.72			1.0	24.20			18.31			0.0	19.00
		16QAM	1	1			23.78			1.0	24.20			18.42			0.0	19.00
		64QAM	1	1			22.25			2.5	22.70			18.34			0.0	19.00
		256QAM	1	1			20.20			4.5	20.70			18.48			0.0	19.00
	CP-OFDM	QPSK	1	1			23.42			1.5	23.70			18.38			0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					649334	652666	656000	659334	662666	MPR	Tune-up Limit	649334	652666	656000	659334	662666	MPR	Tune-up Limit
					3740.01 MHz	3789.99 MHz	3840 MHz	3890.01 MHz	3939.99 MHz			3740.01 MHz	3789.99 MHz	3840 MHz	3890.01 MHz	3939.99 MHz		
80 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.73	24.74	24.78	24.99	24.80	0.0	25.20	18.49	18.54	18.50	18.52	18.38	0.0	19.00
		QPSK	1	1	24.80	24.91	24.96	24.89	24.77	0.0	25.20	18.37	18.33	18.39	18.31	18.37	0.0	19.00
			1	109	24.77	24.93	24.87	24.85	24.81	0.0	25.20	18.50	18.38	18.37	18.53	18.27	0.0	19.00
			1	215	24.71	24.87	24.81	24.85	24.91	0.0	25.20	18.26	18.52	18.46	18.27	18.43	0.0	19.00
			108	0	23.95	23.75	23.96	23.94	23.95	1.0	24.20	18.36	18.50	18.25	18.55	18.33	0.0	19.00
			108	55	24.97	24.90	24.91	24.88	24.73	0.0	25.20	18.55	18.40	18.42	18.36	18.45	0.0	19.00
			108	109	23.91	23.74	23.73	23.79	23.73	1.0	24.20	18.29	18.43	18.47	18.47	18.27	0.0	19.00
			216	0	23.86	24.00	23.97	23.79	23.92	1.0	24.20	18.52	18.25	18.32	18.51	18.28	0.0	19.00
		16QAM	1	1	23.87	23.97	23.90	23.93	23.70	1.0	24.20	18.49	18.44	18.51	18.53	18.48	0.0	19.00
		64QAM	1	1	22.27	22.25	22.29	22.37	22.35	2.5	22.70	18.30	18.32	18.50	18.49	18.49	0.0	19.00
		256QAM	1	1	20.46	20.41	20.48	20.40	20.44	4.5	20.70	18.36	18.26	18.30	18.53	18.31	0.0	19.00
	CP-OFDM	QPSK	1	1	23.49	23.40	23.28	23.28	23.27	1.5	23.70	18.40	18.25	18.29	18.27	18.46	0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648666	652334	656000	659666	663334	MPR	Tune-up Limit	648666	652334	656000	659666	663334	MPR	Tune-up Limit
					3729.99 MHz	6785.01 MHz	3840 MHz	3894.99 MHz	3950.1 MHz			3729.99 MHz	6785.01 MHz	3840 MHz	3894.99 MHz	3950.1 MHz		
60 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.78	24.80	24.81	24.72	24.99	0.0	25.20	18.41	18.32	18.40	18.49	18.47	0.0	19.00
		QPSK	1	1	24.75	24.90	24.87	24.85	24.77	0.0	25.20	18.25	18.49	18.42	18.34	18.45	0.0	19.00
			1	81	24.73	24.87	24.79	24.97	24.89	0.0	25.20	18.47	18.27	18.48	18.47	18.48	0.0	19.00
			1	160	24.98	24.84	24.76	24.82	24.91	0.0	25.20	18.28	18.37	18.30	18.43	18.34	0.0	19.00
			81	0	23.90	23.75	23.93	23.71	23.86	1.0	24.20	18.52	18.41	18.45	18.52	18.45	0.0	19.00
			81	40	24.87	24.91	24.76	24.79	24.82	0.0	25.20	18.37	18.26	18.52	18.39	18.34	0.0	19.00
			81	81	23.89	23.94	23.97	23.79	23.71	1.0	24.20	18.27	18.25	18.42	18.29	18.52	0.0	19.00
			162	0	23.95	23.86	23.93	23.93	23.88	1.0	24.20	18.45	18.47	18.26	18.53	18.54	0.0	19.00
		16QAM	1	1	23.75	23.89	23.97	23.90	23.70	1.0	24.20	18.48	18.49	18.42	18.34	18.29	0.0	19.00
		64QAM	1	1	22.46	22.41	22.23	22.25	22.46	2.5	22.70	18.49	18.36	18.50	18.45	18.50	0.0	19.00
		256QAM	1	1	20.21	20.35	20.44	20.39	20.43	4.5	20.70	18.46	18.44	18.40	18.29	18.41	0.0	19.00
	CP-OFDM	QPSK	1	1	23.46	23.33	23.42	23.29	23.44	1.5	23.70	18.46	18.29	18.28	18.43	18.43	0.0	19.00
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648334	652166	656000	659834	663666	MPR	Tune-up Limit	648334	652166	656000	659834	663666	MPR	Tune-up Limit
					3725.01 MHz	652166 MHz	3840 MHz	3897.51 MHz	3954.99 MHz			3725.01 MHz	652166 MHz	3840 MHz	3897.51 MHz	3954.99 MHz		
50 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.77	24.76	24.81	24.98	24.81	0.0	25.20	18.44	18.33	18.54	18.30	18.40	0.0	19.00
		QPSK	1	1	24.88	24.88	24.73	24.94	24.83	0.0	25.20	18.31	18.35	18.45	18.34	18.37	0.0	19.00
			1	67	24.97	24.88	24.78	24.87	24.71	0.0	25.20	18.41	18.54	18.48	18.42	18.41	0.0	19.00
			1	131	24.88	24.87	24.72	24.90	24.78	0.0	25.20	18.54	18.31	18.37	18.49	18.33	0.0	19.00
			64	0	23.94	23.88	23.87	23.75	23.82	1.0	24.20	18.49	18.53	18.53	18.37	18.42	0.0	19.00
			64	35	24.91	24.75	24.97	24.94	24.87	0.0	25.20	18.48	18.47	18.30	18.33	18.27	0.0	19.00
			64	69	23.81	23.74	23.74	23.95	23.89	1.0	24.20	18.55	18.38	18.36	18.40	18.30	0.0	19.00
			128	0	23.99	23.75	23.83	23.79	23.95	1.0	24.20	18.34	18.42	18.42	18.38	18.48	0.0	19.00
		16QAM	1	1	23.74	23.87	23.97	23.79	23.79	1.0	24.20	18.55	18.51	18.45	18.34	18.54	0.0	19.00
		64QAM	1	1	22.33	22.45	22.40	22.27	22.39	2.5	22.70	18.42	18.50	18.43	18.29	18.37	0.0	19.00
		256QAM	1	1	20.38	20.46	20.46	20.22	20.25	4.5	20.70	18.41	18.34	18.26	18.44	18.31	0.0	19.00
	CP-OFDM	QPSK	1	1	23.44	23.29	23.46	23.50	23.48	1.5	23.70	18.26	18.27	18.38	18.26	18.53	0.0	19.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 77 Measured Results (ANT9) (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648000	652000	656000	660000	664000	MPR	Tune-up Limit	648000	652000	656000	660000	664000	MPR	Tune-up Limit
					3720 MHz	3780 MHz	3840 MHz	3900 MHz	3960 MHz			3720 MHz	3780 MHz	3840 MHz	3900 MHz	3960 MHz		
40 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.91	24.85	24.98	24.81	24.78	0.0	25.20	18.33	18.44	18.43	18.50	18.31	0.0	19.00
		QPSK	1	1	24.91	24.99	24.79	24.78	24.83	0.0	25.20	18.26	18.45	18.48	18.37	18.44	0.0	19.00
			1	53	24.79	24.92	24.88	24.86	24.94	0.0	25.20	18.44	18.34	18.43	18.30	18.40	0.0	19.00
			1	104	24.95	24.79	24.83	24.81	24.89	0.0	25.20	18.46	18.53	18.50	18.33	18.36	0.0	19.00
			50	0	23.99	23.79	23.92	23.92	23.96	1.0	24.20	18.38	18.39	18.49	18.45	18.34	0.0	19.00
			50	28	24.77	24.98	24.88	24.76	24.92	0.0	25.20	18.42	18.43	18.34	18.36	18.41	0.0	19.00
			50	56	23.78	23.72	23.82	23.97	23.98	1.0	24.20	18.37	18.26	18.30	18.46	18.37	0.0	19.00
			100	0	23.79	23.96	23.91	23.72	23.71	1.0	24.20	18.29	18.34	18.30	18.48	18.42	0.0	19.00
		16QAM	1	1	23.98	23.93	23.94	23.74	23.94	1.0	24.20	18.33	18.30	18.51	18.53	18.36	0.0	19.00
		64QAM	1	1	22.45	22.22	22.25	22.36	22.45	2.5	22.70	18.44	18.31	18.49	18.38	18.36	0.0	19.00
		256QAM	1	1	20.34	20.31	20.43	20.34	20.38	4.5	20.70	18.45	18.53	18.51	18.44	18.44	0.0	19.00
	CP-OFDM	QPSK	1	1	23.38	23.33	23.48	23.31	23.44	1.5	23.70	18.55	18.41	18.41	18.41	18.52	0.0	19.00

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					647334	651666	656000	660266	664666	MPR	Tune-up Limit	647334	651666	656000	660266	664666	MPR	Tune-up Limit
					3710.01 MHz	3774.99 MHz	3840 MHz	3903.99 MHz	3969.99 MHz			3710.01 MHz	3774.99 MHz	3840 MHz	3903.99 MHz	3969.99 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	24.75	24.71	24.76	24.86	24.73	0.0	25.20	18.35	18.31	18.49	18.36	18.34	0.0	19.00
		QPSK	1	1	24.85	24.98	24.98	24.83	24.81	0.0	25.20	18.26	18.36	18.53	18.41	18.29	0.0	19.00
			1	26	24.83	24.78	24.75	24.87	24.84	0.0	25.20	18.52	18.43	18.31	18.44	18.29	0.0	19.00
			1	49	24.73	24.95	24.75	24.96	24.83	0.0	25.20	18.37	18.52	18.39	18.54	18.52	0.0	19.00
			25	0	23.74	23.86	23.81	23.74	23.97	1.0	24.20	18.39	18.35	18.30	18.37	18.41	0.0	19.00
			25	13	24.98	24.97	24.84	24.71	24.92	0.0	25.20	18.38	18.51	18.32	18.54	18.34	0.0	19.00
			25	26	23.94	23.85	23.99	23.72	23.80	1.0	24.20	18.45	18.41	18.25	18.46	18.52	0.0	19.00
			50	0	23.73	23.70	23.80	23.76	23.72	1.0	24.20	18.42	18.49	18.39	18.34	18.41	0.0	19.00
		16QAM	1	1	23.97	23.80	23.97	23.78	23.96	1.0	24.20	18.29	18.43	18.38	18.53	18.41	0.0	19.00
		64QAM	1	1	22.24	22.44	22.42	22.44	22.31	2.5	22.70	18.36	18.49	18.27	18.51	18.26	0.0	19.00
		256QAM	1	1	20.39	20.47	20.49	20.29	20.45	4.5	20.70	18.45	18.33	18.50	18.40	18.34	0.0	19.00
	CP-OFDM	QPSK	1	1	23.27	23.38	23.43	23.28	23.22	1.5	23.70	18.47	18.46	18.41	18.37	18.43	0.0	19.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 77 Measured Results (ANT4)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					650000	653000	656000	659000	662000	MPR	Tune-up Limit	650000	653000	656000	659000	662000	MPR	Tune-up Limit
					3750 MHz	3795 MHz	3840 MHz	3885 MHz	3930 MHz			3750 MHz	3795 MHz	3840 MHz	3885 MHz	3930 MHz		
100 MHz	DFS-s OFDM	Pi/2 BPSK	1	1			18.82			0.00	19.00			19.07			0.00	19.25
		QPSK	1	1			18.92			0.00	19.00			19.15			0.00	19.25
			1	137			19.00			0.00	19.00			19.25			0.00	19.25
			1	271			18.87			0.00	19.00			19.08			0.00	19.25
			135	0			18.89			0.00	19.00			19.11			0.00	19.25
			135	69			19.00			0.00	19.00			19.25			0.00	19.25
			135	138			18.93			0.00	19.00			19.05			0.00	19.25
			270	0			19.00			0.00	19.00			19.25			0.00	19.25
		16QAM	1	1			18.90			0.00	19.00			19.08			0.00	19.25
		64QAM	1	1			18.94			0.00	19.00			19.23			0.00	19.25
		256QAM	1	1			18.97			0.00	19.00			19.13			0.00	19.25
	CP-OFDM	QPSK	1	1			18.94			0.00	19.00			19.13			0.00	19.25

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					649666	652834	656000	659166	662334	MPR	Tune-up Limit	649666	652834	656000	659166	662334	MPR	Tune-up Limit
					3744.99 MHz	3792.51 MHz	3840 MHz	3887.49 MHz	3935.01 MHz			3744.99 MHz	3792.51 MHz	3840 MHz	3887.49 MHz	3935.01 MHz		
90 MHz	DFS-s OFDM	Pi/2 BPSK	1	1			18.73			0.0	19			18.85			0.0	19.25
		QPSK	1	1			18.59			0.0	19.00			19.08			0.0	19.25
			1	123			18.71			0.0	19.00			18.82			0.0	19.25
			1	243			18.54			0.0	19.00			19.06			0.0	19.25
			120	0			18.76			0.0	19.00			18.82			0.0	19.25
			120	63			18.63			0.0	19.00			19.02			0.0	19.25
			120	125			18.77			0.0	19.00			18.87			0.0	19.25
			243	0			18.78			0.0	19.00			18.93			0.0	19.25
		16QAM	1	1			18.59			0.0	19.00			19.02			0.0	19.25
		64QAM	1	1			18.76			0.0	19.00			18.95			0.0	19.25
		256QAM	1	1			18.69			0.0	19.00			18.80			0.0	19.25
	CP-OFDM	QPSK	1	1			18.60			0.0	19.00			19.04			0.0	19.25

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					649334	652666	656000	659334	662666	MPR	Tune-up Limit	649334	652666	656000	659334	662666	MPR	Tune-up Limit
					3740.01 MHz	3789.99 MHz	3840 MHz	3890.01 MHz	3939.99 MHz			3740.01 MHz	3789.99 MHz	3840 MHz	3890.01 MHz	3939.99 MHz		
80 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	18.65	18.60	18.74	18.50	18.78	0.0	19.00	18.96	19.07	18.91	19.09	19.03	0.0	19.25
		QPSK	1	1	18.63	18.70	18.68	18.72	18.52	0.0	19.00	19.06	18.94	18.91	18.87	18.93	0.0	19.25
			1	109	18.51	18.67	18.55	18.76	18.60	0.0	19.00	19.10	18.86	18.91	19.05	19.06	0.0	19.25
			1	215	18.59	18.69	18.72	18.80	18.66	0.0	19.00	18.95	18.95	19.02	19.06	19.09	0.0	19.25
			108	0	18.66	18.63	18.71	18.75	18.54	0.0	19.00	18.91	18.96	18.95	19.08	19.05	0.0	19.25
			108	55	18.80	18.76	18.73	18.54	18.54	0.0	19.00	18.80	19.08	19.03	18.83	19.04	0.0	19.25
			108	109	18.78	18.72	18.79	18.68	18.64	0.0	19.00	18.91	18.85	18.98	18.89	18.97	0.0	19.25
			216	0	18.57	18.69	18.57	18.52	18.55	0.0	19.00	18.83	19.04	19.05	19.05	18.99	0.0	19.25
		16QAM	1	1	18.70	18.78	18.58	18.57	18.52	0.0	19.00	18.83	19.04	18.90	19.08	18.81	0.0	19.25
		64QAM	1	1	18.61	18.70	18.67	18.79	18.52	0.0	19.00	19.02	18.81	18.99	18.93	19.08	0.0	19.25
		256QAM	1	1	18.79	18.79	18.62	18.64	18.62	0.0	19.00	19.08	18.83	19.04	18.94	19.02	0.0	19.25
	CP-OFDM	QPSK	1	1	18.71	18.57	18.76	18.79	18.78	0.0	19.00	19.08	19.05	19.04	18.95	18.80	0.0	19.25

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648666	652334	656000	659666	663334	MPR	Tune-up Limit	648666	652334	656000	659666	663334	MPR	Tune-up Limit
					3729.99 MHz	6785.01 MHz	3840 MHz	3894.99 MHz	3950.1 MHz			3729.99 MHz	6785.01 MHz	3840 MHz	3894.99 MHz	3950.1 MHz		
60 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	18.62	18.64	18.56	18.61	18.67	0.0	19.00	18.89	18.81	18.84	18.87	18.83	0.0	19.25
		QPSK	1	1	18.73	18.65	18.51	18.51	18.74	0.0	19.00	18.99	18.87	18.94	19.09	18.95	0.0	19.25
			1	81	18.78	18.63	18.63	18.69	18.70	0.0	19.00	19.03	18.93	18.93	18.83	19.07	0.0	19.25
			1	160	18.62	18.80	18.60	18.76	18.60	0.0	19.00	18.81	18.98	19.02	19.01	19.10	0.0	19.25
			81	0	18.78	18.76	18.61	18.72	18.76	0.0	19.00	18.88	18.95	19.00	18.84	18.82	0.0	19.25
			81	40	18.69	18.69	18.51	18.76	18.71	0.0	19.00	18.96	19.00	19.05	18.91	18.89	0.0	19.25
			81	81	18.70	18.57	18.70	18.71	18.73	0.0	19.00	18.90	19.00	18.87	18.91	18.98	0.0	19.25
			162	0	18.65	18.67	18.76	18.63	18.52	0.0	19.00	18.84	18.88	18.91	19.10	19.10	0.0	19.25
		16QAM	1	1	18.61	18.77	18.57	18.55	18.62	0.0	19.00	18.90	18.86	18.89	19.06	18.96	0.0	19.25
		64QAM	1	1	18.77	18.67	18.77	18.78	18.72	0.0	19.00	18.88	18.84	19.07	18.95	18.94	0.0	19.25
		256QAM	1	1	18.61	18.61	18.73	18.56	18.51	0.0	19.00	18.86	19.02	19.09	19.09	18.88	0.0	19.25
	CP-OFDM	QPSK	1	1	18.63	18.61	18.55	18.61	18.77	0.0	19.00	19.09	19.04	19.07	18.98	19.10	0.0	19.25

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648334	652166	656000	659834	663666	MPR	Tune-up Limit	648334	652166	656000	659834	663666	MPR	Tune-up Limit
					3725.01 MHz	652166 MHz	3840 MHz	3897.51 MHz	3954.99 MHz			3725.01 MHz	652166 MHz	3840 MHz	3897.51 MHz	3954.99 MHz		
50 MHz	DFS-s OFDM	Pi/2 BPSK	1	1	18.62	18.73	18.64	18.67	18.72	0.0	19.00	19.04	18.98	18.93	19.06	18.90	0.0	19.25
		QPSK	1	1	18.73	18.66	18.58	18.79	18.78	0.0	19.00	18.87	18.98	18.91	18.89	18.91	0.0	19.25
			1	67	18.59	18.67	18.76	18.71	18.69	0.0	19.00	19.04	18.82	18.96	18.92	18.85	0.0	19.25
			1	131	18.63	18.60	18.69	18.76	18.78	0.0	19.00	18.88	18.81	18.87	18.87	19.06	0.0	19.25
			64	0	18.70	18.68	18.53	18.63	18.73	0.0	19.00	18.95	18.98	18.97	18.81	18.87	0.0	19.25
			64	35	18.77	18.68	18.56	18.52	18.53	0.0	19.00	19.09	18.97	19.03	18.81	18.96	0.0	19.25
			64	69	18.71	18.64	18.52	18.70	18.74	0.0	19.00	19.06	18.96	18.84	18.94	19.09	0.0	19.25
			128	0	18.66	18.72	18.59	18.73	18.61	0.0	19.00	19.06	18.81	19.06	18.86	18.98	0.0	19.25
		16QAM	1	1	18.56	18.63	18.57	18.68	18.62	0.0	19.00	18.81	18.90	19.08	18.86	18.86	0.0	19.25
		64QAM	1	1	18.67	18.77	18.52	18.76	18.78	0.0	19.00	19.01	18.93	19.03	18.98	18.84	0.0	19.25
		256QAM	1	1	18.66	18.54	18.51	18.56	18.69	0.0	19.00	18.96	19.05	18.99	18.88	19.06	0.0	19.25
	CP-OFDM	QPSK	1	1	18.69	18.68	18.76	18.74	18.67	0.0	19.00	19.05	19.06	19.04	18.94	18.98	0.0	19.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

NR Band 77 Measured Results (ANT4) (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					648000	652000	656000	660000	664000	MPR	Tune-up Limit	648000	652000	656000	660000	664000	MPR	Tune-up Limit
					3720 MHz	3780 MHz	3840 MHz	3900 MHz	3960 MHz			3720 MHz	3780 MHz	3840 MHz	3900 MHz	3960 MHz		
40 MHz	DFS-s OFDM	PI/2 BPSK	1	1	18.80	18.64	18.51	18.70	18.71	0.0	19.00	18.99	18.98	18.94	19.00	18.94	0.0	19.25
		QPSK	1	1	18.79	18.75	18.77	18.77	18.64	0.0	19.00	19.09	18.83	18.86	19.08	18.83	0.0	19.25
			1	53	18.58	18.71	18.56	18.73	18.62	0.0	19.00	18.84	19.06	18.81	18.97	18.98	0.0	19.25
			1	104	18.61	18.57	18.76	18.62	18.77	0.0	19.00	18.91	18.90	18.81	19.04	18.88	0.0	19.25
			50	0	18.69	18.56	18.66	18.53	18.71	0.0	19.00	18.89	19.07	18.82	19.03	18.94	0.0	19.25
			50	28	18.52	18.71	18.54	18.59	18.55	0.0	19.00	19.01	18.99	18.98	18.95	18.83	0.0	19.25
			50	56	18.72	18.75	18.55	18.64	18.58	0.0	19.00	18.90	18.87	19.06	19.10	19.01	0.0	19.25
			100	0	18.63	18.63	18.52	18.70	18.78	0.0	19.00	18.98	19.03	18.92	18.96	19.04	0.0	19.25
		16QAM	1	1	18.67	18.53	18.63	18.57	18.61	0.0	19.00	18.89	18.98	19.07	18.97	19.10	0.0	19.25
		64QAM	1	1	18.67	18.51	18.75	18.74	18.74	0.0	19.00	19.00	18.85	19.03	18.81	18.91	0.0	19.25
		256QAM	1	1	18.68	18.77	18.52	18.65	18.54	0.0	19.00	19.05	18.88	18.91	18.87	19.00	0.0	19.25
	CP-OFDM	QPSK	1	1	18.76	18.54	18.67	18.52	18.64	0.0	19.00	19.06	18.92	18.89	18.94	18.86	0.0	19.25
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
					647334	651666	656000	660266	664666	MPR	Tune-up Limit	647334	651666	656000	660266	664666	MPR	Tune-up Limit
					3710.01 MHz	3774.99 MHz	3840 MHz	3903.99 MHz	3969.99 MHz			3710.01 MHz	3774.99 MHz	3840 MHz	3903.99 MHz	3969.99 MHz		
20 MHz	DFS-s OFDM	PI/2 BPSK	1	1	18.80	18.75	18.59	18.79	18.78	0.0	19.00	18.94	19.07	19.06	18.99	18.96	0.0	19.25
		QPSK	1	1	18.76	18.50	18.64	18.66	18.73	0.0	19.00	18.88	18.98	18.94	18.87	18.83	0.0	19.25
			1	26	18.70	18.61	18.65	18.71	18.59	0.0	19.00	18.88	19.06	19.04	18.88	18.93	0.0	19.25
			1	49	18.63	18.68	18.51	18.62	18.62	0.0	19.00	19.02	19.02	19.05	18.90	18.85	0.0	19.25
			25	0	18.75	18.76	18.74	18.79	18.78	0.0	19.00	18.93	19.00	18.90	18.84	19.09	0.0	19.25
			25	13	18.58	18.75	18.71	18.66	18.64	0.0	19.00	19.09	18.94	18.82	18.99	18.80	0.0	19.25
			25	26	18.58	18.66	18.68	18.66	18.60	0.0	19.00	18.92	18.81	18.89	19.09	18.80	0.0	19.25
			50	0	18.71	18.56	18.61	18.55	18.57	0.0	19.00	18.82	18.98	19.00	19.02	18.86	0.0	19.25
		16QAM	1	1	18.54	18.59	18.56	18.52	18.59	0.0	19.00	18.84	18.84	18.96	18.91	18.85	0.0	19.25
		64QAM	1	1	18.56	18.71	18.74	18.63	18.63	0.0	19.00	18.89	18.81	18.84	19.04	18.85	0.0	19.25
		256QAM	1	1	18.57	18.70	18.75	18.72	18.57	0.0	19.00	18.93	18.92	18.91	18.86	18.85	0.0	19.25
	CP-OFDM	QPSK	1	1	18.56	18.74	18.67	18.67	18.50	0.0	19.00	18.89	19.01	18.90	18.82	18.95	0.0	19.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.8. Wi-Fi 2.4GHz (DTS Band)

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 b/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. g, n, ac, then ax) is selected. Therefore the SAR measurements performed for the 802.11b modes, as the lowest order modulation, cover 802.11g/n/ac/ax modes.

According to KDB 248227 D01, simultaneous SAR provisions in KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is <1.6W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

Maximum Power

The table below is the Maximum power for this device. The highlighted values indicates what the overall worst case transmission mode will be required for SAR testing per channel. In the Wi-Fi 2.4 GHz (Pcell_OFF and Pcell_ON) table, the highlighted worst case Low/Mid/High channels are selected for Mode A and Mode B.

Channel	Frequency (MHz)	ANT3												
		b (SISO)	g (SISO)	11n/11ac HT20 (SISO)	11ax HE20 SU (SISO)	11ax HE20 RU106 (SISO)	11ax HE20 RU52 (SISO)	11ax HE20 RU26 (SISO)	11n/11ac HT20 (MIMO)	11ax HE20 SU (MIMO)	11ax HE20 RU106 (MIMO)	11ax HE20 RU52 (MIMO)	11ax HE20 RU26 (MIMO)
1	2412	**21.50**	17.50	17.50	16.00	16.00	16.00	16.00	16.50	15.00	15.00	15.00	15.00
2	2417	**22.00**	19.50	19.50	18.00	18.00	18.00	18.00	18.50	17.00	17.00	17.00	17.00
3	2422	**22.00**	21.50	21.50	21.50	21.50	21.50	21.50	20.00	19.00	19.00	19.00	19.00
4	2427	**22.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	20.00
5	2432	**22.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	20.00
6	2437	**22.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	20.00
7	2442	**22.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	20.00
8	2447	**22.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	20.00
9	2452	**22.00**	21.00	21.00	21.50	21.50	21.50	21.50	19.50	18.50	18.50	18.50	18.50
10	2457	**22.00**	19.50	19.50	18.00	18.00	18.00	18.00	18.50	17.00	17.00	17.00	17.00
11	2462	**22.00**	17.50	17.50	16.00	16.00	16.00	16.00	16.50	15.00	15.00	15.00	15.00
12	2467	**22.00**	15.50	15.50	14.00	14.00	14.00	14.00	14.00	13.00	13.00	13.00	13.00
13	2472	**21.50**	15.50	15.50	11.00	5.50	1.50	0.00	14.50	8.50	4.50	2.50	0.00
Channel	Frequency (MHz)	ANT4												
		b (SISO)	g (SISO)	11n/11ac HT20 (SISO)	11ax HE20 SU (SISO)	11ax HE20 RU106 (SISO)	11ax HE20 RU52 (SISO)	11ax HE20 RU26 (SISO)	11n/11ac HT20 (MIMO)	11ax HE20 SU (MIMO)	11ax HE20 RU106 (MIMO)	11ax HE20 RU52 (MIMO)	11ax HE20 RU26 (MIMO)
1	2412	**21.25**	17.50	17.50	16.00	16.00	16.00	16.00	16.50	15.00	15.00	15.00	15.00
2	2417	**21.25**	19.50	19.50	18.00	18.00	18.00	18.00	18.50	17.00	17.00	17.00	17.00
3	2422	**21.25**	21.25	21.25	21.25	21.25	21.25	21.25	20.00	19.00	19.00	19.00	19.00
4	2427	**21.25**	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	20.00
5	2432	**21.25**	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	20.00
6	2437	**21.25**	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	20.00
7	2442	**21.25**	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	20.00
8	2447	**21.25**	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	21.25	20.00
9	2452	**21.25**	21.00	21.00	21.25	21.25	21.25	21.25	19.50	18.50	18.50	18.50	18.50
10	2457	**21.25**	19.50	19.50	18.00	18.00	18.00	18.00	18.50	17.00	17.00	17.00	17.00
11	2462	**21.25**	17.50	17.50	16.00	16.00	16.00	16.00	16.50	15.00	15.00	15.00	15.00
12	2467	**21.25**	15.50	15.50	14.00	14.00	14.00	14.00	14.00	13.00	13.00	13.00	13.00
13	2472	**21.25**	15.50	15.50	11.00	5.50	1.50	0.00	14.50	8.50	4.50	2.50	0.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Wi-Fi 2.4 GHz (P_{cell_OFF} and P_{cell_ON})

For 2.4 GHz band, there are two use cases:

- P_{Cell_ON}: This will be used when both WWAN and Wi-Fi radios are ON.
- P_{Cell_OFF}: This will be used when only Wi-Fi radio is ON

Mode	Channel	Frequency (MHz)	Pcell OFF				Pcell ON			
			ANT3		ANT4		ANT3		ANT4	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11b DSSS (SISO)	1	2412	21.50	19.00	18.75	21.25	21.50	16.00	14.00	18.25
	2	2417	22.00	19.00	18.75	21.25	22.00	16.00	14.00	18.25
	3	2422	22.00	19.00	18.75	21.25	22.00	16.00	14.00	18.25
	4	2427	22.50	19.00	18.75	21.25	22.50	16.00	14.00	18.25
	5	2432	22.50	19.00	18.75	21.25	22.50	16.00	14.00	18.25
	6	2437	22.50	19.00	18.75	21.25	22.50	16.00	14.00	18.25
	7	2442	22.50	19.00	18.75	21.25	22.50	16.00	14.00	18.25
	8	2447	22.50	19.00	18.75	21.25	22.50	16.00	14.00	18.25
	9	2452	22.00	19.00	18.75	21.25	22.00	16.00	14.00	18.25
	10	2457	22.00	19.00	18.75	21.25	22.00	16.00	14.00	18.25
	11	2462	22.00	19.00	18.75	21.25	22.00	16.00	14.00	18.25
	12	2467	22.00	19.00	18.75	21.25	22.00	16.00	14.00	18.25
	13	2472	21.50	19.00	18.75	21.25	21.50	16.00	14.00	18.25

Wi-Fi 2.4GHz Measured Results

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11g/n/ac/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

SAR testing is not required for OFDM mode(s) when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

Power Mode	Antenna	Mode	Power Mode A					Power Mode B				
			Ch #	Freq. (MHz)	Meas Pwr (dBm)	Tune-up (dBm)	SAR Test (Yes/No)	Ch #	Freq. (MHz)	Meas Pwr (dBm)	Tune-up (dBm)	SAR Test (Yes/No)
Pcell OFF	ANT3	DSSS 802.11b	4	2427	22.50	22.50	Yes	1	2412	19.00	19.00	Yes
			6	2437	22.50	22.50		6	2437	19.00	19.00	
			8	2447	22.50	22.50		11	2462	19.00	19.00	
	ANT4	DSSS 802.11b	1	2412	18.75	18.75	Yes	1	2412	21.25	21.25	Yes
			6	2437	18.75	18.75		6	2437	21.25	21.25	
			11	2462	18.75	18.75		11	2462	21.25	21.25	
Power Mode	Antenna	Mode	Power Mode A					Power Mode B				
			Ch #	Freq. (MHz)	Meas Pwr (dBm)	Tune-up (dBm)	SAR Test (Yes/No)	Ch #	Freq. (MHz)	Meas Pwr (dBm)	Tune-up (dBm)	SAR Test (Yes/No)
Pcell ON	ANT3	DSSS 802.11b	4	2427	22.50	22.50	Yes	1	2412	16.00	16.00	Yes
			6	2437	22.50	22.50		6	2437	16.00	16.00	
			8	2447	22.50	22.50		11	2462	16.00	16.00	
	ANT4	DSSS 802.11b	1	2412	14.00	14.00	Yes	1	2412	18.25	18.25	Yes
			6	2437	14.00	14.00		6	2437	18.25	18.25	
			11	2462	14.00	14.00		11	2462	18.25	18.25	

Note(s):

SAR is not required for channel 12 and 13 because the tune-up limit and the measured output power for these two channels are not greater than those for the default test channels. Refer to KDB 248227 D01 section 3.1

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.9. Wi-Fi 5GHz (U-NII Bands)

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, n, ac then ax) is selected. Therefore the SAR measurements performed for the 802.11n/ac modes, as the lowest order modulation, cover 802.11ax modes.

When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

According to KDB 248227 D01, simultaneous SAR provisions in KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is <1.6W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Maximum Power

The table below is the Maximum power for this device. The highlighted values indicates what the overall worst case transmission mode will be required for SAR testing per channel. In the Wi-Fi 5 GHz (Pcell_OFF and Pcell_ON) table, the highlighted worst case Low/Mid/High channels are selected for Mode A and Mode B.

ANT5														
Band	Bandwidth	Channel	Frequency (MHz)	a (SISO)	11n/11ac HT (SISO)	11ax HE SU (SISO)	11ax HE RU106 (SISO)	11ax HE RU52 (SISO)	11ax HE RU26 (SISO)	11n/11ac HT (MIMO)	11ax HE SU (MIMO)	11ax HE RU106 (MIMO)	11ax HE RU52 (MIMO)	11ax HE RU26 (MIMO)
U-NII-1	20 MHz	36	5180	18.50	18.50	18.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		40	5200	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		44	5220	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		48	5240	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
	40 MHz	38	5190		**17.00**	16.00	16.00	15.00	12.00	15.50	15.50	15.00	12.00	9.00
		46	5230		**21.00**	21.00	18.00	15.00	12.00	20.00	20.00	15.00	12.00	9.00
	80 MHz	42	5210		16.50	16.00	16.00	15.00	12.00	15.50	15.00	15.00	12.00	9.00
Band	Bandwidth	Channel	Frequency (MHz)	a (SISO)	11n/11ac HT (SISO)	11ax HE SU (SISO)	11ax HE RU106 (SISO)	11ax HE RU52 (SISO)	11ax HE RU26 (SISO)	11n/11ac HT (MIMO)	11ax HE SU (MIMO)	11ax HE RU106 (MIMO)	11ax HE RU52 (MIMO)	11ax HE RU26 (MIMO)
U-NII-2A	20 MHz	52	5260	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		56	5280	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		60	5300	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		64	5320	18.50	18.50	18.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
	40 MHz	54	5270		**21.00**	21.00	18.00	15.00	12.00	20.00	20.00	15.00	12.00	9.00
		62	5310		**17.00**	16.00	16.00	15.00	12.00	15.50	15.50	15.00	12.00	9.00
	80 MHz	58	5290		16.50	16.00	16.00	15.00	12.00	15.00	15.00	15.00	12.00	9.00
Band	Bandwidth	Channel	Frequency (MHz)	a (SISO)	11n/11ac HT (SISO)	11ax HE SU (SISO)	11ax HE RU106 (SISO)	11ax HE RU52 (SISO)	11ax HE RU26 (SISO)	11n/11ac HT (MIMO)	11ax HE SU (MIMO)	11ax HE RU106 (MIMO)	11ax HE RU52 (MIMO)	11ax HE RU26 (MIMO)
U-NII-2C	20 MHz	100	5500	18.30	18.30	18.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		104	5520	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		108	5540	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		112	5560	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		116	5580	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		120	5600	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		124	5620	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		128	5640	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		132	5660	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		136	5680	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		140	5700	18.00	18.00	16.50	18.00	15.00	12.00	17.00	16.00	15.00	12.00	9.00
		144	5720	20.00	20.00	20.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
	40 MHz	102	5510		16.50	16.00	16.00	15.00	12.00	15.50	15.50	15.00	12.00	9.00
		110	5550		21.00	21.00	18.00	15.00	12.00	20.00	20.00	15.00	12.00	9.00
		118	5590		21.00	21.00	18.00	15.00	12.00	20.00	20.00	15.00	12.00	9.00
		126	5630		21.00	21.00	18.00	15.00	12.00	20.00	20.00	15.00	12.00	9.00
		134	5670		20.50	19.00	18.00	15.00	12.00	20.00	18.50	15.00	12.00	9.00
		142	5710		21.00	21.00	18.00	15.00	12.00	20.00	20.00	15.00	12.00	9.00
	80 MHz	106	5530		**15.50**	15.00	15.00	15.00	12.00	14.80	14.00	14.00	12.00	9.00
		122	5610		**21.50**	21.50	18.00	15.00	12.00	20.00	20.00	15.00	12.00	9.00
		138	5690		**21.50**	21.50	18.00	15.00	12.00	20.00	20.00	15.00	12.00	9.00
Band	Bandwidth	Channel	Frequency (MHz)	a (SISO)	11n/11ac HT (SISO)	11ax HE SU (SISO)	11ax HE RU106 (SISO)	11ax HE RU52 (SISO)	11ax HE RU26 (SISO)	11n/11ac HT (MIMO)	11ax HE SU (MIMO)	11ax HE RU106 (MIMO)	11ax HE RU52 (MIMO)	11ax HE RU26 (MIMO)
U-NII-3	20 MHz	149	5745	**21.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50
		153	5765	**21.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50
		157	5785	**21.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50
		161	5805	**21.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50
		165	5825	**21.50**	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50
	40 MHz	151	5755		21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00
		159	5795		21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00
	80 MHz	155	5775		20.50	20.50	21.50	21.50	21.50	20.00	20.00	20.00	20.00	20.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

ANT6														
Band	Bandwidth	Channel	Frequency (MHz)	a (SISO)	11n/11ac HT (SISO)	11ax HE SU (SISO)	11ax HE RU106 (SISO)	11ax HE RU52 (SISO)	11ax HE RU26 (SISO)	11n/11ac HT (MIMO)	11ax HE SU (MIMO)	11ax HE RU106 (MIMO)	11ax HE RU52 (MIMO)	11ax HE RU26 (MIMO)
U-NII-1	20 MHz	36	5180	18.50	18.50	18.00	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		40	5200	18.50	18.50	18.50	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		44	5220	18.50	18.50	18.50	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		48	5240	18.50	18.50	18.50	18.00	15.00	12.00	17.00	17.00	15.00	12.00	9.00
	40 MHz	38	5190		**17.00**	16.00	16.00	15.00	12.00	15.50	15.50	15.00	12.00	9.00
		46	5230		**18.50**	18.50	18.00	15.00	12.00	18.50	18.50	15.00	12.00	9.00
	80 MHz	42	5210		16.50	16.00	16.00	15.00	12.00	15.50	15.00	15.00	12.00	9.00
Band	Bandwidth	Channel	Frequency (MHz)	a (SISO)	11n/11ac HT (SISO)	11ax HE SU (SISO)	11ax HE RU106 (SISO)	11ax HE RU52 (SISO)	11ax HE RU26 (SISO)	11n/11ac HT (MIMO)	11ax HE SU (MIMO)	11ax HE RU106 (MIMO)	11ax HE RU52 (MIMO)	11ax HE RU26 (MIMO)
U-NII-2A	20 MHz	52	5260	17.75	17.75	17.75	17.75	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		56	5280	17.75	17.75	17.75	17.75	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		60	5300	17.75	17.75	17.75	17.75	15.00	12.00	17.00	17.00	15.00	12.00	9.00
		64	5320	17.75	17.75	17.75	17.75	15.00	12.00	17.00	17.00	15.00	12.00	9.00
	40 MHz	54	5270		**17.75**	17.75	17.75	15.00	12.00	17.75	17.75	15.00	12.00	9.00
		62	5310		**17.00**	16.00	16.00	15.00	12.00	15.50	15.50	15.00	12.00	9.00
	80 MHz	58	5290		16.50	16.00	16.00	15.00	12.00	15.00	15.00	15.00	12.00	9.00
Band	Bandwidth	Channel	Frequency (MHz)	a (SISO)	11n/11ac HT (SISO)	11ax HE SU (SISO)	11ax HE RU106 (SISO)	11ax HE RU52 (SISO)	11ax HE RU26 (SISO)	11n/11ac HT (MIMO)	11ax HE SU (MIMO)	11ax HE RU106 (MIMO)	11ax HE RU52 (MIMO)	11ax HE RU26 (MIMO)
U-NII-2C	20 MHz	100	5500	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		104	5520	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		108	5540	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		112	5560	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		116	5580	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		120	5600	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		124	5620	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		128	5640	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		132	5660	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		136	5680	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		140	5700	16.75	16.75	16.50	16.75	15.00	12.00	16.75	16.00	15.00	12.00	9.00
		144	5720	16.75	16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
	40 MHz	102	5510		16.50	16.00	16.00	15.00	12.00	15.50	15.50	15.00	12.00	9.00
		110	5550		16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		118	5590		16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		126	5630		16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		134	5670		16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		142	5710		16.75	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
	80 MHz	106	5530		**15.50**	15.00	15.00	15.00	12.00	14.80	14.00	14.00	12.00	9.00
		122	5610		**16.75**	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
		138	5690		**16.75**	16.75	16.75	15.00	12.00	16.75	16.75	15.00	12.00	9.00
Band	Bandwidth	Channel	Frequency (MHz)	a (SISO)	11n/11ac HT (SISO)	11ax HE SU (SISO)	11ax HE RU106 (SISO)	11ax HE RU52 (SISO)	11ax HE RU26 (SISO)	11n/11ac HT (MIMO)	11ax HE SU (MIMO)	11ax HE RU106 (MIMO)	11ax HE RU52 (MIMO)	11ax HE RU26 (MIMO)
U-NII-3	20 MHz	149	5745	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
		153	5765	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
		157	5785	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
		161	5805	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
		165	5825	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
	40 MHz	151	5755		18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
		159	5795		18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
	80 MHz	155	5775		**18.00**	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Wi-Fi 5 GHz (P_{cell_OFF} and P_{cell_ON})

For 5GHz band, there are two use cases:

- P_{Cell_ON}: This will be used when both WWAN and Wi-Fi radios are ON.
- P_{Cell_OFF}: This will be used when only Wi-Fi radio is ON

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT6		ANT5		ANT6	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (SISO)	802.11a/n/ac 20 MHz	36	5180	18.50	18.50	18.50	18.25	18.50	15.25	12.50	14.50
		40	5200	20.00	19.00	18.50	18.25	20.00	15.25	12.50	14.50
		44	5220	20.00	19.00	18.50	18.25	20.00	15.25	12.50	14.50
		48	5240	20.00	19.00	18.50	18.25	20.00	15.25	12.50	14.50
	802.11n/ac 40 MHz	38	5190	17.00	17.00	17.00	17.00	17.00	15.25	12.50	14.50
		46	5230	21.00	19.00	18.50	18.25	21.00	15.25	12.50	14.50
	802.11ac 80 MHz	42	5210	16.50	16.50	16.50	16.50	16.50	15.25	12.50	14.50
U-NII-2A 5.3 GHz (SISO)	802.11a/n/ac 20 MHz	52	5260	20.00	17.75	17.50	17.75	20.00	14.00	11.50	14.00
		56	5280	20.00	17.75	17.50	17.75	20.00	14.00	11.50	14.00
		60	5300	20.00	17.75	17.50	17.75	20.00	14.00	11.50	14.00
		64	5320	18.50	17.75	17.50	17.75	18.50	14.00	11.50	14.00
	802.11n/ac 40 MHz	54	5270	21.00	17.75	17.50	17.75	21.00	14.00	11.50	14.00
		62	5310	17.00	17.00	17.00	17.00	17.00	14.00	11.50	14.00
	802.11ac 80 MHz	58	5290	16.50	16.50	16.50	16.50	16.50	14.00	11.50	14.00

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT6		ANT5		ANT6	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-2C 5.5 GHz (SISO)	802.11a/n/ac 20 MHz	100	5500	18.30	16.50	16.75	16.25	18.30	12.75	10.75	12.50
		104	5520	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		108	5540	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		112	5560	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		116	5580	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		120	5600	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		124	5620	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		128	5640	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		132	5660	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		136	5680	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
		140	5700	18.00	16.50	16.75	16.25	18.00	12.75	10.75	12.50
		144	5720	20.00	16.50	16.75	16.25	20.00	12.75	10.75	12.50
	802.11n/ac 40 MHz	102	5510	16.50	16.50	16.50	16.25	16.50	12.75	10.75	12.50
		110	5550	21.00	16.50	16.75	16.25	21.00	12.75	10.75	12.50
		118	5590	21.00	16.50	16.75	16.25	21.00	12.75	10.75	12.50
		126	5630	21.00	16.50	16.75	16.25	21.00	12.75	10.75	12.50
		134	5670	20.50	16.50	16.75	16.25	20.50	12.75	10.75	12.50
		142	5710	21.00	16.50	16.75	16.25	21.00	12.75	10.75	12.50
	802.11ac 80 MHz	106	5530	15.50	15.50	15.50	15.50	15.50	12.75	10.75	12.50
		122	5610	21.50	16.50	16.75	16.25	21.50	12.75	10.75	12.50
		138	5690	21.50	16.50	16.75	16.25	21.50	12.75	10.75	12.50

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT6		ANT5		ANT6	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-3 5.8 GHz (SISO)	802.11a/n/ac 20 MHz	149	5745	21.50	17.50	18.00	18.00	21.50	13.75	12.00	14.25
		153	5765	21.50	17.50	18.00	18.00	21.50	13.75	12.00	14.25
		157	5785	21.50	17.50	18.00	18.00	21.50	13.75	12.00	14.25
		161	5805	21.50	17.50	18.00	18.00	21.50	13.75	12.00	14.25
		165	5825	21.50	17.50	18.00	18.00	21.50	13.75	12.00	14.25
	802.11n/ac 40 MHz	151	5755	21.00	17.50	18.00	18.00	21.00	13.75	12.00	14.25
		159	5795	21.00	17.50	18.00	18.00	21.00	13.75	12.00	14.25
	802.11ac 80 MHz	155	5775	20.50	17.50	18.00	18.00	20.50	13.75	12.00	14.25

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Wi-Fi 5 GHz Measured Results

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n then ac) is selected.

SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

Power Mode	Antenna	Power Mode A							Power Mode B						
		Band	Mode	Ch #	Freq. (MHz)	Meas Pwr (dBm)	Tune-up (dBm)	SAR Test (Yes/No)	Band	Mode	Ch #	Freq. (MHz)	Meas Pwr (dBm)	Tune-up (dBm)	SAR Test (Yes/No)
Pcell OFF	ANT5	U-NII-2A	802.11n HT40	54	5270	21.00	21.00	Yes	U-NII-1	802.11n HT40	38	5190	17.00	17.00	Yes
				62	5310	17.00	17.00				46	5230	19.00	19.00	
		U-NII-2C	802.11ac VHT80	106	5530	15.50	15.50	Yes	U-NII-2C	802.11ac VHT80	106	5530	15.50	15.50	Yes
				122	5610	21.50	21.50				122	5610	16.50	16.50	
				138	5690	21.50	21.50				138	5690	16.50	16.50	
		U-NII-3	802.11a	149	5745	21.50	21.50	Yes	U-NII-3	802.11ac VHT80	155	5775	17.50	17.50	Yes
				157	5785	21.50	21.50								
				165	5825	21.50	21.50								
	ANT6	U-NII-1	802.11n HT40	38	5190	17.00	17.00	Yes	U-NII-1	802.11n HT40	38	5190	17.00	17.00	Yes
				46	5230	18.50	18.50				46	5230	18.25	18.25	
		U-NII-2C	802.11ac VHT80	106	5530	15.50	15.50	Yes	U-NII-2C	802.11ac VHT80	106	5530	15.50	15.50	Yes
				122	5610	16.75	16.75				122	5610	16.25	16.25	
				138	5690	16.75	16.75				138	5690	16.25	16.25	
		U-NII-3	802.11ac VHT80	155	5775	18.00	18.00	Yes	U-NII-3	802.11ac VHT80	155	5775	18.00	18.00	Yes
Power Mode	Antenna	Power Mode A							Power Mode B						
		Band	Mode	Ch #	Freq. (MHz)	Meas Pwr (dBm)	Tune-up (dBm)	SAR Test (Yes/No)	Band	Mode	Ch #	Freq. (MHz)	Meas Pwr (dBm)	Tune-up (dBm)	SAR Test (Yes/No)
Pcell ON	ANT5	U-NII-2A	802.11n HT40	54	5270	21.00	21.00	Yes	U-NII-1	802.11ac VHT80	42	5120	15.25	15.25	Yes
				62	5310	17.00	17.00								
		U-NII-2C	802.11ac VHT80	106	5530	15.50	15.50	Yes	U-NII-2C	802.11ac VHT80	106	5530	12.75	12.75	Yes
				122	5610	21.50	21.50				122	5610	12.75	12.75	
				138	5690	21.50	21.50				138	5690	12.75	12.75	
		U-NII-3	802.11a	149	5745	21.50	21.50	Yes	U-NII-3	802.11ac VHT80	155	5775	13.75	13.75	Yes
				157	5785	21.50	21.50								
				165	5825	21.50	21.50								
	ANT6	U-NII-1	802.11ac VHT80	42	5210	12.50	12.50	Yes	U-NII-1	802.11ac VHT80	42	5210	14.50	14.50	Yes
		U-NII-2C	802.11ac VHT80	106	5530	10.75	10.75	Yes	U-NII-2C	802.11ac VHT80	106	5530	12.50	12.50	Yes
				122	5610	10.75	10.75				122	5610	12.50	12.50	
				138	5690	10.75	10.75				138	5690	12.50	12.50	
		U-NII-3	802.11ac VHT80	155	5775	12.00	12.00	Yes	U-NII-3	802.11ac VHT80	155	5775	14.25	14.25	Yes

This report shall not be reproduced without the written approval of UL Verification Services Inc.

9.10. Bluetooth

From October 2016 TCB workshop, this device power and SAR measured is performed with test software, the duty cycle is 100%.

According to KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is <1.6W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

Bluetooth (P_{low}, P_{high}, and $P_{standalone}$)

For Bluetooth, there are three use cases:

- Bluetooth P_{low} is used with Wi-Fi and WWAN antennas are active.
- Bluetooth P_{high} is used when Wi-Fi antenna is active and WWAN antenna is inactive or with Wi-Fi inactive and WWAN antenna is active.
- Bluetooth $P_{standalone}$ is used with Wi-Fi and WWAN antennas are inactive.

Mode	Maximum Output Power (Tune-up Limit) (dBm)											
	Bluetooth P_{low}				Bluetooth P_{high}				Bluetooth $P_{standalone}$			
	ANT3		ANT4		ANT3		ANT4		ANT3		ANT4	
	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
GFSK	10.5	8.0	7.5	10.0	20.0	14.0	13.5	16.0	20.0	19.0	18.5	20.0
EDR	10.5	8.0	7.5	10.0	16.0	14.0	13.5	16.0	16.0	16.0	16.0	16.0
LE	10.5	8.0	7.5	10.0	20.0	14.0	13.5	16.0	20.0	19.0	18.5	20.0
HDR	10.5	8.0	7.5	10.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0

This device supports Bluetooth beamforming. SAR measurement is not required for Beamforming when the output power is equal or less than a single chain. Please refer to BT tune-up procedure.

Bluetooth Measured Results

SAR measurement is not required for the 8PSK, BLE, and HDR. When the secondary mode is ≤ ¼ dB higher than the primary mode.

Power Mode	Antenna	Mode	Ch #	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
					Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
Bluetooth P_{low}	ANT3	GFSK	0	2402	10.50	10.50	Yes	8.00	8.00	Yes
			39	2441	10.50	10.50		8.00	8.00	
			78	2480	10.50	10.50		8.00	8.00	
	ANT4	GFSK	0	2402	7.50	7.50	Yes	10.00	10.00	Yes
			39	2441	7.50	7.50		10.00	10.00	
			78	2480	7.50	7.50		10.00	10.00	
Bluetooth P_{high}	ANT3	GFSK	0	2402	20.00	20.00	Yes	14.00	14.00	Yes
			39	2441	20.00	20.00		14.00	14.00	
			78	2480	20.00	20.00		14.00	14.00	
	ANT4	GFSK	0	2402	13.50	13.50	Yes	16.00	16.00	Yes
			39	2441	13.50	13.50		16.00	16.00	
			78	2480	13.50	13.50		16.00	16.00	
Bluetooth $P_{standalone}$	ANT3	GFSK	0	2402	20.00	20.00	Yes	19.00	19.00	Yes
			39	2441	20.00	20.00		19.00	19.00	
			78	2480	20.00	20.00		19.00	19.00	
	ANT4	GFSK	0	2402	18.50	18.50	Yes	20.00	20.00	Yes
			39	2441	18.50	18.50		20.00	20.00	
			78	2480	18.50	18.50		20.00	20.00	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Duty Factor Measured Results

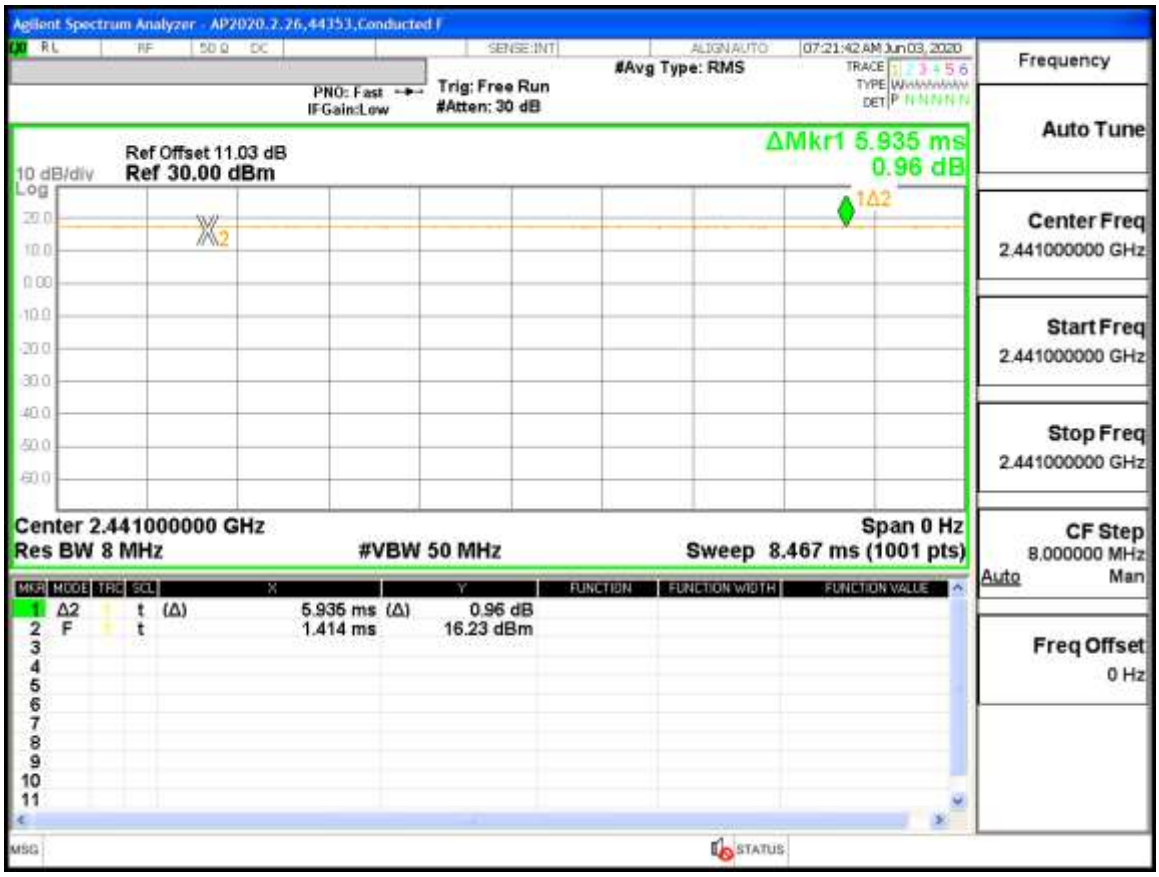
Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
GFSK	DH5	1	1	100.00%	1.00

Note(s):

Duty Cycle = (T on / period) * 100%

Duty Cycle plots

GFSK



This report shall not be reproduced without the written approval of UL Verification Services Inc.

10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

- Reported SAR(W/kg) for WWAN = Measured SAR *Tune-up Scaling Factor
- Reported SAR(W/kg) for Wi-Fi and Bluetooth = Measured SAR * Tune-up scaling factor * Duty Cycle scaling factor
- Duty Cycle scaling factor = 1 / Duty cycle (%)

KDB 447498 D01 General RF Exposure Guidance:

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

KDB 648474 D04 Handset SAR:

With headset attached, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

KDB 941225 D01 SAR test for 3G devices:

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.
- When the reported SAR is > 0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
- Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
- Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
- Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- For LTE bands that do not support at least three non-overlapping channels in certain channel bandwidths, test the available non-overlapping channels instead. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing; therefore, the requirement for H, M and L channels may not fully apply.

KDB 248227 D01 SAR meas for 802.11:

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; these are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the *initial test position(s)* by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The *initial test position(s)* is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the *reported* SAR for the *initial test position* is:

This report shall not be reproduced without the written approval of UL Verification Services Inc.

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the ***initial test position*** to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the ***reported*** SAR is ≤ 0.8 W/kg or all required test positions are tested.
  - For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
  - When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the ***initial test position*** and subsequent test positions, when the ***reported*** SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the ***reported*** SAR is ≤ 1.2 W/kg or all required test channels are considered.
  - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.
- When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

To determine the ***initial test position***, Area Scans were performed to determine the position with the *Maximum Value of SAR (measured)*. The position that produced the highest *Maximum Value of SAR* is considered the worst case position; thus used as the ***initial test position***.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.1. GSM850

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	GPRS 2 Slots	Mode A	0	Left Touch	190	836.6	32.50	32.20	0.198	0.212	0.150	0.161	
					Left Tilt	190	836.6	32.50	32.20	0.099	0.106	0.077	0.083	
					Right Touch	190	836.6	32.50	32.20	0.235	0.252	0.177	0.190	1
					Right Tilt	190	836.6	32.50	32.20	0.089	0.095	0.070	0.075	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	128	824.2	31.50	31.20	0.635	0.680	0.352	0.377	
						190	836.6	31.50	31.30	0.780	0.817	0.432	0.452	2
						251	848.8	31.50	31.30	0.775	0.812	0.434	0.454	
					Front	190	836.6	31.50	31.30	0.358	0.375	0.212	0.222	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 2	190	836.6	31.50	31.30	0.681	0.713	0.432	0.452	
					Edge 3	190	836.6	31.50	31.30	0.441	0.462	0.201	0.210	
					Edge 4	190	836.6	31.50	31.30	0.212	0.222	0.135	0.141	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	GPRS 2 Slots	Mode A	0	Left Touch	190	836.6	31.00	30.86	0.531	0.548	0.352	0.364	
					Left Tilt	190	836.6	31.00	30.86	0.474	0.490	0.241	0.249	
					Right Touch	190	836.6	31.00	30.86	0.585	0.604	0.382	0.395	3
					Right Tilt	190	836.6	31.00	30.86	0.542	0.560	0.278	0.287	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	190	836.6	31.00	30.86	0.416	0.430	0.249	0.257	4
					Front	190	836.6	31.00	30.86	0.227	0.234	0.151	0.156	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 1	190	836.6	31.00	30.86	0.167	0.172	0.084	0.087	
					Edge 2	190	836.6	31.00	30.86	0.152	0.157	0.097	0.100	
					Edge 4	190	836.6	31.00	30.86	0.171	0.177	0.110	0.114	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.2. GSM1900

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	GPRS 2 Slots	Mode A	0	Left Touch	661	1880.0	31.00	30.50	0.089	0.100	0.057	0.064	
					Left Tilt	661	1880.0	31.00	30.50	0.077	0.086	0.044	0.049	
					Right Touch	661	1880.0	31.00	30.50	0.133	0.149	0.082	0.092	5
					Right Tilt	661	1880.0	31.00	30.50	0.083	0.094	0.051	0.058	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	661	1880.0	23.50	23.25	0.391	0.414	0.204	0.216	6
					Front	661	1880.0	23.50	23.25	0.347	0.368	0.171	0.181	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 2	661	1880.0	23.50	23.25	0.122	0.129	0.059	0.062	
					Edge 3	512	1850.2	23.50	23.25	0.862	0.913	0.396	0.419	
						661	1880.0	23.50	23.25	0.848	0.898	0.336	0.356	
						810	1909.8	23.50	23.25	0.863	0.914	0.394	0.417	7
					Edge 4	661	1880.0	23.50	23.25	0.038	0.040	0.022	0.023	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	GPRS 2 Slots	Mode A	0	Left Touch	661	1880.0	26.25	26.00	0.149	0.158	0.092	0.097	
					Left Tilt	661	1880.0	26.25	26.00	0.117	0.124	0.060	0.064	
					Right Touch	512	1850.2	26.25	26.00	0.715	0.757	0.364	0.386	
						661	1880.0	26.25	26.00	0.841	0.891	0.429	0.454	
						810	1909.8	26.25	26.00	0.841	0.891	0.429	0.454	8
					Right Tilt	661	1880.0	26.25	26.00	0.496	0.525	0.228	0.242	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	512	1850.2	26.00	25.75	0.775	0.821	0.352	0.373	
						661	1880.0	26.00	25.75	0.880	0.932	0.398	0.422	
						810	1909.8	26.00	25.75	0.913	0.967	0.418	0.443	9
					Front	661	1880.0	26.00	25.75	0.108	0.114	0.053	0.056	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 1	661	1880.0	26.00	25.75	0.085	0.090	0.037	0.039	
					Edge 2	661	1880.0	26.00	25.75	0.004	0.004	0.001	0.001	
					Edge 4	661	1880.0	26.00	25.75	0.105	0.111	0.051	0.054	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	GPRS 2 Slots	Mode A	0	Left Touch	661	1880.0	30.00	29.81	0.401	0.419	0.245	0.256	10
					Left Tilt	661	1880.0	30.00	29.81	0.239	0.250	0.144	0.150	
					Right Touch	661	1880.0	30.00	29.81	0.329	0.344	0.202	0.211	
					Right Tilt	661	1880.0	30.00	29.81	0.206	0.215	0.117	0.122	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	512	1850.2	25.50	25.30	0.936	0.980	0.499	0.523	11
						661	1880.0	25.50	25.30	0.932	0.976	0.509	0.533	
						810	1909.8	25.50	25.30	0.935	0.979	0.507	0.531	
					Front	661	1880.0	25.50	25.30	0.487	0.510	0.272	0.285	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 3	661	1880.0	25.50	25.30	0.231	0.242	0.120	0.126	
					Edge 4	661	1880.0	25.50	25.30	0.567	0.594	0.295	0.309	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	GPRS 2 Slots	Mode A	0	Left Touch	512	1850.2	24.50	24.50	0.765	0.765	0.371	0.371	
						661	1880.0	24.50	24.50	0.917	0.917	0.442	0.442	
						810	1909.8	24.50	24.50	0.975	0.975	0.469	0.469	12
					Left Tilt	661	1880.0	24.50	24.50	0.500	0.500	0.245	0.245	
					Right Touch	661	1880.0	24.50	24.50	0.286	0.286	0.165	0.165	
					Right Tilt	661	1880.0	24.50	24.50	0.192	0.192	0.105	0.105	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	661	1880.0	25.50	25.00	0.637	0.715	0.313	0.351	13
					Front	661	1880.0	25.50	25.00	0.358	0.402	0.180	0.202	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 1	661	1880.0	25.50	25.00	0.189	0.212	0.090	0.101	
					Edge 2	512	1850.2	25.50	25.00	0.621	0.697	0.293	0.329	
						661	1880.0	25.50	25.00	0.754	0.846	0.356	0.399	14
						810	1909.8	25.50	25.00	0.703	0.789	0.329	0.369	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.3. W-CDMA Band 2

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	9400	1880.0	25.70	25.70	0.125	0.125	0.083	0.083	
					Left Tilt	9400	1880.0	25.70	25.70	0.095	0.095	0.059	0.059	
					Right Touch	9400	1880.0	25.70	25.70	0.289	0.289	0.181	0.181	15
					Right Tilt	9400	1880.0	25.70	25.70	0.126	0.126	0.078	0.078	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	9400	1880.0	17.00	16.90	0.594	0.608	0.328	0.336	16
					Front	9400	1880.0	17.00	16.90	0.544	0.557	0.270	0.276	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	9400	1880.0	17.00	16.90	0.210	0.215	0.101	0.103	
					Edge 3	9262	1852.4	17.00	17.00	0.817	0.817	0.387	0.387	
						9400	1880.0	17.00	16.90	0.870	0.890	0.411	0.421	
						9538	1907.6	17.00	16.80	0.860	0.901	0.404	0.423	17
					Edge 4	9400	1880.0	17.00	16.90	0.048	0.049	0.029	0.030	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	9400	1880.0	20.25	20.20	0.204	0.206	0.131	0.133	
					Left Tilt	9400	1880.0	20.25	20.20	0.187	0.189	0.096	0.097	
					Right Touch	9262	1852.4	20.25	20.20	0.732	0.740	0.371	0.375	
						9400	1880.0	20.25	20.20	0.817	0.826	0.416	0.421	18
						9538	1907.6	20.25	20.20	0.805	0.814	0.410	0.415	
					Right Tilt	9400	1880.0	20.25	20.20	0.713	0.721	0.327	0.331	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	9262	1852.4	20.00	20.00	0.923	0.923	0.437	0.437	
						9400	1880.0	20.00	20.00	0.960	0.960	0.454	0.454	19
						9538	1907.6	20.00	20.00	0.959	0.959	0.449	0.449	
					Front	9400	1880.0	20.00	20.00	0.632	0.632	0.317	0.317	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	9400	1880.0	20.00	20.00	0.382	0.382	0.163	0.163	
					Edge 2	9400	1880.0	20.00	20.00	0.015	0.015	0.006	0.006	
					Edge 4	9400	1880.0	20.00	20.00	0.479	0.479	0.237	0.237	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	9400	1880.0	24.70	24.40	0.428	0.459	0.268	0.287	20
					Left Tilt	9400	1880.0	24.70	24.40	0.226	0.242	0.135	0.145	
					Right Touch	9400	1880.0	24.70	24.40	0.295	0.316	0.167	0.179	
					Right Tilt	9400	1880.0	24.70	24.40	0.224	0.240	0.128	0.137	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	9262	1852.4	19.50	19.25	0.767	0.812	0.409	0.433	
						9400	1880.0	19.50	19.25	0.813	0.861	0.443	0.469	
						9538	1907.6	19.50	19.25	0.854	0.905	0.460	0.487	21
					Front	9400	1880.0	19.50	19.25	0.656	0.695	0.368	0.390	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 3	9400	1880.0	19.50	19.25	0.232	0.246	0.125	0.132	
					Edge 4	9400	1880.0	19.50	19.25	0.679	0.719	0.355	0.376	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	9262	1852.4	18.25	18.25	0.810	0.810	0.386	0.386	
						9400	1880.0	18.25	18.25	0.912	0.912	0.439	0.439	22
						9538	1907.6	18.25	18.25	0.845	0.845	0.403	0.403	
					Left Tilt	9400	1880.0	18.25	18.25	0.490	0.490	0.242	0.242	
					Right Touch	9400	1880.0	18.25	18.25	0.250	0.250	0.145	0.145	
					Right Tilt	9400	1880.0	18.25	18.25	0.175	0.175	0.097	0.097	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	9400	1880.0	19.25	19.25	0.718	0.718	0.359	0.359	23
					Front	9400	1880.0	19.25	19.25	0.376	0.376	0.204	0.204	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	9400	1880.0	19.25	19.25	0.274	0.274	0.132	0.132	
					Edge 2	9262	1852.4	19.25	19.25	0.792	0.792	0.378	0.378	
						9400	1880.0	19.25	19.25	0.894	0.894	0.425	0.425	
						9538	1907.6	19.25	19.25	0.968	0.968	0.458	0.458	24

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.4. W-CDMA Band 4

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	1413	1732.6	25.70	25.40	0.065	0.070	0.043	0.046	
					Left Tilt	1413	1732.6	25.70	25.40	0.050	0.053	0.031	0.033	
					Right Touch	1413	1732.6	25.70	25.40	0.175	0.188	0.110	0.118	25
					Right Tilt	1413	1732.6	25.70	25.40	0.043	0.046	0.027	0.029	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	1413	1732.6	17.25	17.15	0.519	0.531	0.255	0.261	26
					Front	1413	1732.6	17.25	17.15	0.408	0.418	0.198	0.203	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	1413	1732.6	17.25	17.15	0.142	0.145	0.074	0.076	
					Edge 3	1312	1712.4	17.25	17.00	0.685	0.725	0.322	0.341	
						1413	1732.6	17.25	17.15	0.784	0.802	0.370	0.379	
						1513	1752.6	17.25	17.03	0.864	0.909	0.407	0.428	27
					Edge 4	1413	1732.6	17.25	17.15	0.005	0.005	0.002	0.002	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	1413	1732.6	21.00	20.90	0.347	0.355	0.191	0.195	
					Left Tilt	1413	1732.6	21.00	20.90	0.402	0.411	0.214	0.219	
					Right Touch	1312	1712.4	21.00	20.90	0.914	0.935	0.477	0.488	28
						1413	1732.6	21.00	20.90	0.803	0.822	0.418	0.428	
						1513	1752.6	21.00	20.90	0.708	0.724	0.371	0.380	
					Right Tilt	1413	1732.6	21.00	20.90	0.764	0.782	0.371	0.380	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	1413	1732.6	19.75	19.75	0.680	0.680	0.332	0.332	29
					Front	1413	1732.6	19.75	19.75	0.437	0.437	0.228	0.228	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	1312	1712.4	19.75	19.75	0.976	0.976	0.474	0.474	30
						1413	1732.6	19.75	19.75	0.802	0.802	0.392	0.392	
						1513	1752.6	19.75	19.75	0.626	0.626	0.306	0.306	
					Edge 2	1413	1732.6	19.75	19.75	0.070	0.070	0.046	0.046	
					Edge 4	1413	1732.6	19.75	19.75	0.333	0.333	0.172	0.172	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	1413	1732.6	24.70	24.31	0.164	0.179	0.108	0.118	31
					Left Tilt	1413	1732.6	24.70	24.31	0.081	0.089	0.053	0.058	
					Right Touch	1413	1732.6	24.70	24.31	0.103	0.113	0.066	0.072	
					Right Tilt	1413	1732.6	24.70	24.31	0.079	0.086	0.048	0.053	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	1312	1712.4	20.25	19.81	0.715	0.791	0.389	0.430	
						1413	1732.6	20.25	19.80	0.742	0.823	0.399	0.443	
						1513	1752.6	20.25	19.82	0.780	0.861	0.415	0.458	32
					Front	1413	1732.6	20.25	19.80	0.364	0.404	0.217	0.241	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 3	1413	1732.6	20.25	19.80	0.110	0.122	0.048	0.053	
					Edge 4	1312	1712.4	20.25	19.81	0.666	0.737	0.350	0.387	
						1413	1732.6	20.25	19.80	0.729	0.809	0.379	0.420	
						1513	1752.6	20.25	19.82	0.723	0.798	0.372	0.411	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	1312	1712.4	20.00	19.75	0.844	0.894	0.429	0.454	
						1413	1732.6	20.00	19.75	0.854	0.905	0.434	0.460	
						1513	1752.6	20.00	19.75	0.874	0.926	0.437	0.463	33
					Left Tilt	1413	1732.6	20.00	19.75	0.467	0.495	0.236	0.250	
					Right Touch	1413	1732.6	20.00	19.75	0.225	0.238	0.138	0.146	
					RighttTilt	1413	1732.6	20.00	19.75	0.182	0.193	0.113	0.120	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	1413	1732.6	21.75	21.25	0.583	0.654	0.312	0.350	34
					Front	1413	1732.6	21.75	21.25	0.420	0.471	0.229	0.257	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	1413	1732.6	21.75	21.25	0.324	0.364	0.161	0.181	
					Edge 2	1312	1712.4	21.75	21.25	0.748	0.839	0.364	0.408	
						1413	1732.6	21.75	21.25	0.789	0.885	0.367	0.412	35
						1513	1752.6	21.75	21.25	0.724	0.812	0.336	0.377	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.5. W-CDMA Band 5

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	4183	836.6	25.70	25.60	0.164	0.168	0.129	0.132	
					Left Tilt	4183	836.6	25.70	25.60	0.090	0.092	0.070	0.072	
					Right Touch	4183	836.6	25.70	25.60	0.199	0.204	0.149	0.152	36
					RighttTilt	4183	836.6	25.70	25.60	0.087	0.089	0.069	0.071	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	4132	826.4	25.70	25.60	0.878	0.898	0.476	0.487	
						4183	836.6	25.70	25.60	0.789	0.807	0.429	0.439	
						4233	846.6	25.70	25.70	0.886	0.886	0.488	0.488	37
					Front	4183	836.6	25.70	25.60	0.385	0.394	0.220	0.225	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	4183	836.6	25.70	25.60	0.702	0.718	0.442	0.452	
					Edge 3	4183	836.6	25.70	25.60	0.477	0.488	0.211	0.216	
					Edge 4	4183	836.6	25.70	25.60	0.238	0.244	0.150	0.153	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	4183	836.6	23.90	23.90	0.569	0.569	0.379	0.379	
					Left Tilt	4183	836.6	23.90	23.90	0.536	0.536	0.282	0.282	
					Right Touch	4183	836.6	23.90	23.90	0.711	0.711	0.482	0.482	38
					Right Tilt	4183	836.6	23.90	23.90	0.405	0.405	0.242	0.242	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	4183	836.6	23.90	23.90	0.540	0.540	0.326	0.326	39
					Front	4183	836.6	23.90	23.90	0.257	0.257	0.171	0.171	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	4183	836.6	23.90	23.90	0.201	0.201	0.101	0.101	
					Edge 2	4183	836.6	23.90	23.90	0.147	0.147	0.094	0.094	
					Edge 4	4183	836.6	23.90	23.90	0.192	0.192	0.123	0.123	

10.6. CDMA BC0

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	384	836.5	25.70	25.56	0.196	0.202	0.148	0.153	
					Left Tilt	384	836.5	25.70	25.56	0.122	0.126	0.094	0.097	
					Right Touch	384	836.5	25.70	25.56	0.224	0.231	0.170	0.176	
					Right Tilt	384	836.5	25.70	25.56	0.137	0.141	0.106	0.109	
		1xEVDO Rel. 0	Mode A	0	Left Touch	384	836.5	25.70	25.56	0.163	0.168	0.126	0.130	
					Left Tilt	384	836.5	25.70	25.56	0.081	0.084	0.064	0.066	
					Right Touch	384	836.5	25.70	25.56	0.254	0.262	0.187	0.193	40
					Right Tilt	384	836.5	25.70	25.56	0.111	0.115	0.088	0.091	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	384	836.5	25.70	25.56	0.653	0.674	0.362	0.374	41
					Front	384	836.5	25.70	25.56	0.382	0.395	0.221	0.228	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 2	384	836.5	25.70	25.56	0.730	0.754	0.460	0.475	42
					Edge 3	384	836.5	25.70	25.56	0.480	0.496	0.214	0.221	
					Edge 4	384	836.5	25.70	25.56	0.238	0.246	0.151	0.156	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	384	836.5	23.90	23.90	0.565	0.565	0.381	0.381	
					Left Tilt	384	836.5	23.90	23.90	0.635	0.635	0.317	0.317	
					Right Touch	384	836.5	23.90	23.90	0.766	0.766	0.491	0.491	43
					Right Tilt	384	836.5	23.90	23.90	0.554	0.554	0.286	0.286	
		1xEVDO Rel. 0	Mode A	0	Left Touch	384	836.5	23.90	23.90	0.455	0.455	0.338	0.338	
					Left Tilt	384	836.5	23.90	23.90	0.555	0.555	0.303	0.303	
					Right Touch	384	836.5	23.90	23.90	0.657	0.657	0.458	0.458	
					Right Tilt	384	836.5	23.90	23.90	0.545	0.545	0.296	0.296	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	384	836.5	23.90	23.90	0.475	0.475	0.287	0.287	44
					Front	384	836.5	23.90	23.90	0.306	0.306	0.199	0.199	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 1	384	836.5	23.90	23.90	0.211	0.211	0.106	0.106	
					Edge 2	384	836.5	23.90	23.90	0.157	0.157	0.099	0.099	
					Edge 4	384	836.5	23.90	23.90	0.207	0.207	0.132	0.132	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.7. CDMA BC1

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	600	1880.0	25.70	25.50	0.121	0.127	0.080	0.084	
					Left Tilt	600	1880.0	25.70	25.50	0.097	0.101	0.058	0.060	
					Right Touch	600	1880.0	25.70	25.50	0.206	0.216	0.129	0.135	
					Right Tilt	600	1880.0	25.70	25.50	0.105	0.110	0.068	0.071	
		1xEVDO Rel. 0	Mode A	0	Left Touch	600	1880.0	25.70	25.50	0.137	0.143	0.088	0.092	
					Left Tilt	600	1880.0	25.70	25.50	0.118	0.124	0.070	0.073	
					Right Touch	600	1880.0	25.70	25.50	0.210	0.220	0.136	0.142	45
					Right Tilt	600	1880.0	25.70	25.50	0.130	0.136	0.084	0.087	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	600	1880.0	17.00	17.00	0.677	0.677	0.348	0.348	46
					Front	600	1880.0	17.00	17.00	0.453	0.453	0.230	0.230	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 2	600	1880.0	17.00	17.00	0.217	0.217	0.105	0.105	
					Edge 3	25	1851.3	17.00	17.00	0.963	0.963	0.456	0.456	
						600	1880.0	17.00	17.00	0.903	0.903	0.435	0.435	
						1175	1908.8	17.00	17.00	0.977	0.977	0.463	0.463	47
					Edge 4	600	1880.0	17.00	17.00	0.042	0.042	0.024	0.024	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	600	1880.0	20.25	20.00	0.172	0.182	0.108	0.114	
					Left Tilt	600	1880.0	20.25	20.00	0.168	0.178	0.087	0.092	
					Right Touch	25	1851.3	20.25	20.00	0.808	0.856	0.415	0.440	
						600	1880.0	20.25	20.00	0.861	0.912	0.442	0.468	
						1175	1908.8	20.25	20.00	0.912	0.966	0.472	0.500	48
					Right Tilt	25	1851.3	20.25	20.00	0.554	0.587	0.261	0.276	
						600	1880.0	20.25	20.00	0.776	0.822	0.361	0.382	
						1175	1908.8	20.25	20.00	0.616	0.653	0.289	0.306	
		1xEVDO Rel. 0	Mode A	0	Left Touch	600	1880.0	20.25	20.00	0.173	0.183	0.102	0.108	
					Left Tilt	600	1880.0	20.25	20.00	0.176	0.186	0.091	0.096	
					Right Touch	25	1851.3	20.25	20.00	0.734	0.777	0.370	0.392	
						600	1880.0	20.25	20.00	0.783	0.829	0.394	0.417	
						1175	1908.8	20.25	20.00	0.822	0.871	0.418	0.443	
					Right Tilt	600	1880.0	20.25	20.00	0.555	0.588	0.252	0.267	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	25	1851.3	20.00	19.50	0.725	0.813	0.328	0.368	
						600	1880.0	20.00	19.50	0.760	0.853	0.344	0.386	
						1175	1908.8	20.00	19.50	0.779	0.874	0.354	0.397	49
					Front	600	1880.0	20.00	19.50	0.432	0.485	0.214	0.240	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 1	600	1880.0	20.00	19.50	0.383	0.430	0.169	0.190	
					Edge 2	600	1880.0	20.00	19.50	0.019	0.022	0.010	0.011	
					Edge 4	600	1880.0	20.00	19.50	0.513	0.576	0.249	0.279	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.8. CDMA BC10

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	560	820.0	25.70	25.14	0.170	0.193	0.130	0.148	
					Left Tilt	560	820.0	25.70	25.14	0.114	0.130	0.088	0.100	
					Right Touch	560	820.0	25.70	25.14	0.222	0.253	0.172	0.196	50
					Right Tilt	560	820.0	25.70	25.14	0.118	0.134	0.092	0.104	
		1xEVDO Rel. 0	Mode A	0	Left Touch	560	820.0	25.70	25.14	0.156	0.177	0.124	0.141	
					Left Tilt	560	820.0	25.70	25.14	0.085	0.097	0.067	0.076	
					Right Touch	560	820.0	25.70	25.14	0.220	0.250	0.163	0.185	
					Right Tilt	560	820.0	25.70	25.14	0.092	0.105	0.073	0.083	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	560	820.0	25.70	25.14	0.627	0.713	0.346	0.394	51
					Front	560	820.0	25.70	25.14	0.348	0.396	0.197	0.224	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 2	560	820.0	25.70	25.14	0.615	0.700	0.391	0.445	
					Edge 3	560	820.0	25.70	25.14	0.402	0.457	0.182	0.207	
					Edge 4	560	820.0	25.70	25.14	0.211	0.240	0.135	0.154	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	560	820.0	23.90	23.90	0.651	0.651	0.440	0.440	
					Left Tilt	560	820.0	23.90	23.90	0.620	0.620	0.322	0.322	
					Right Touch	560	820.0	23.90	23.90	0.773	0.773	0.509	0.509	52
					Right Tilt	560	820.0	23.90	23.90	0.538	0.538	0.283	0.283	
		1xEVDO Rel. 0	Mode A	0	Left Touch	560	820.0	23.90	23.90	0.466	0.466	0.351	0.351	
					Left Tilt	560	820.0	23.90	23.90	0.587	0.587	0.322	0.322	
					Right Touch	560	820.0	23.90	23.90	0.634	0.634	0.443	0.443	
					Right Tilt	560	820.0	23.90	23.90	0.442	0.442	0.255	0.255	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	560	820.0	23.90	23.90	0.404	0.404	0.247	0.247	53
					Front	560	820.0	23.90	23.90	0.251	0.251	0.168	0.168	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 1	560	820.0	23.90	23.90	0.180	0.180	0.089	0.089	
					Edge 2	560	820.0	23.90	23.90	0.190	0.190	0.122	0.122	
					Edge 4	560	820.0	23.90	23.90	0.199	0.199	0.128	0.128	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.9. LTE Band 5 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	20525	836.5	1	25	25.70	25.70	0.156	0.156	0.124	0.124	
								25	12	24.70	24.70	0.127	0.127	0.101	0.101	
					Left Tilt	20525	836.5	1	25	25.70	25.70	0.103	0.103	0.080	0.080	
								25	12	24.70	24.70	0.084	0.084	0.065	0.065	
					Right Touch	20525	836.5	1	25	25.70	25.70	0.226	0.226	0.172	0.172	54
								25	12	24.70	24.70	0.187	0.187	0.141	0.141	
					Right Tilt	20525	836.5	1	25	25.70	25.70	0.100	0.100	0.079	0.079	
								25	12	24.70	24.70	0.082	0.082	0.066	0.066	
	Body & Hotspot	QPSK	Mode B	5	Rear	20525	836.5	1	25	25.70	25.70	0.837	0.837	0.459	0.459	55
								25	12	24.70	24.70	0.693	0.693	0.376	0.376	
					Front	20525	836.5	1	25	25.70	25.70	0.412	0.412	0.235	0.235	
								25	12	24.70	24.70	0.337	0.337	0.192	0.192	
	Hotspot	QPSK	Mode B	5	Edge 2	20525	836.5	1	25	25.70	25.70	0.661	0.661	0.419	0.419	
								25	12	24.70	24.70	0.534	0.534	0.340	0.340	
					Edge 3	20525	836.5	1	25	25.70	25.70	0.468	0.468	0.211	0.211	
								25	12	24.70	24.70	0.357	0.357	0.163	0.163	
					Edge 4	20525	836.5	1	25	25.70	25.70	0.224	0.224	0.142	0.142	
								25	12	24.70	24.70	0.181	0.181	0.115	0.115	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	20525	836.5	1	25	24.50	24.50	0.578	0.578	0.413	0.413	
								25	12	23.50	23.50	0.473	0.473	0.337	0.337	
					Left Tilt	20525	836.5	1	25	24.50	24.50	0.550	0.550	0.278	0.278	
								25	12	23.50	23.50	0.455	0.455	0.228	0.228	
					Right Touch	20525	836.5	1	25	24.50	24.50	0.758	0.758	0.489	0.489	56
								25	12	23.50	23.50	0.634	0.634	0.415	0.415	
					Right Tilt	20525	836.5	1	25	24.50	24.50	0.536	0.536	0.314	0.314	
								25	12	23.50	23.50	0.439	0.439	0.256	0.256	
	Body & Hotspot	QPSK	Mode B	5	Rear	20525	836.5	1	25	24.50	24.50	0.672	0.672	0.400	0.400	57
								25	12	23.50	23.50	0.553	0.553	0.327	0.327	
					Front	20525	836.5	1	25	24.50	24.50	0.373	0.373	0.237	0.237	
								25	12	23.50	23.50	0.304	0.304	0.193	0.193	
	Hotspot	QPSK	Mode B	5	Edge 1	20525	836.5	1	25	24.50	24.50	0.226	0.226	0.114	0.114	
								25	12	23.50	23.50	0.184	0.184	0.092	0.092	
					Edge 2	20525	836.5	1	25	24.50	24.50	0.177	0.177	0.113	0.113	
								25	12	23.50	23.50	0.143	0.143	0.091	0.091	
					Edge 4	20525	836.5	1	25	24.50	24.50	0.232	0.232	0.148	0.148	
								25	12	23.50	23.50	0.189	0.189	0.121	0.121	

UL CA 5B

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 1	Head	QPSK	Mode A	0	Right Touch	20476	831.6	1	49	20575	841.5	1	0	25.70	25.25	0.185	0.205	0.133	0.148	
ANT 1	Body	QPSK	Mode B	5	Rear	20476	831.6	1	49	20575	841.5	1	0	25.70	25.25	0.704	0.781	0.390	0.433	
ANT 2	Head	QPSK	Mode A	0	Right Touch	20476	831.6	1	49	20575	841.5	1	0	24.50	24.07	0.580	0.640	0.406	0.448	
ANT 2	Body	QPSK	Mode B	5	Rear	20476	831.6	1	49	20575	841.5	1	0	24.50	24.07	0.541	0.597	0.325	0.359	

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.10. LTE Band 7 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	21100	2535.0	1	49	25.70	25.70	0.297	0.297	0.158	0.158	
								50	24	24.70	24.70	0.207	0.207	0.108	0.108	
					Left Tilt	21100	2535.0	1	49	25.70	25.70	0.127	0.127	0.065	0.065	
								50	24	24.70	24.70	0.096	0.096	0.049	0.049	
					Right Touch	21100	2535.0	1	49	25.70	25.70	0.645	0.645	0.331	0.331	58
								50	24	24.70	24.70	0.524	0.524	0.265	0.265	
					Right Tilt	21100	2535.0	1	49	25.70	25.70	0.114	0.114	0.060	0.060	
								50	24	24.70	24.70	0.066	0.066	0.032	0.032	
	Body & Hotspot	QPSK	Mode B	5	Rear	20850	2510.0	1	49	19.75	19.75	0.843	0.843	0.360	0.360	
								50	24	19.75	19.75	0.872	0.872	0.372	0.372	59
						21100	2535.0	1	49	19.75	19.75	0.839	0.839	0.369	0.369	
								50	24	19.75	19.50	0.769	0.815	0.329	0.348	
								100	0	19.75	19.50	0.750	0.794	0.321	0.340	
						21350	2560.0	1	49	19.75	19.75	0.774	0.774	0.340	0.340	
								50	24	19.75	19.50	0.790	0.837	0.350	0.371	
					Front	21100	2535.0	1	49	19.75	19.75	0.564	0.564	0.234	0.234	
								50	24	19.75	19.50	0.579	0.613	0.239	0.253	
	Hotspot	QPSK	Mode B	5	Edge 2	20850	2510.0	1	49	19.75	19.75	0.944	0.944	0.388	0.388	
								50	24	19.75	19.75	0.970	0.970	0.398	0.398	
						21100	2535.0	1	49	19.75	19.75	0.888	0.888	0.368	0.368	
								50	24	19.75	19.50	0.926	0.981	0.385	0.408	60
								100	0	19.75	19.50	0.907	0.961	0.377	0.399	
						21350	2560.0	1	49	19.75	19.75	0.836	0.836	0.340	0.340	
								50	24	19.75	19.50	0.864	0.915	0.352	0.373	
					Edge 3	21100	2535.0	1	49	19.75	19.75	0.352	0.352	0.135	0.135	
								50	24	19.75	19.50	0.363	0.385	0.139	0.147	
					Edge 4	21100	2535.0	1	49	19.75	19.75	0.043	0.043	0.018	0.018	
								50	24	19.75	19.50	0.045	0.048	0.019	0.020	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	20850	2510.0	1	49	17.00	16.80	0.871	0.912	0.334	0.350	
								50	24	17.00	16.80	0.908	0.951	0.347	0.363	
						21100	2535.0	1	49	17.00	16.80	0.863	0.904	0.329	0.345	
								50	24	17.00	16.80	0.880	0.921	0.335	0.351	
								100	0	17.00	16.80	0.870	0.911	0.332	0.348	
						21350	2560.0	1	49	17.00	16.80	0.875	0.916	0.331	0.347	
								50	24	17.00	16.80	0.845	0.885	0.323	0.338	
					Left Tilt	20850	2510.0	1	49	17.00	16.80	0.925	0.969	0.355	0.372	
								50	24	17.00	16.80	0.948	0.993	0.360	0.377	61
						21100	2535.0	1	49	17.00	16.80	0.872	0.913	0.328	0.343	
								50	24	17.00	16.80	0.927	0.971	0.349	0.365	
								100	0	17.00	16.80	0.895	0.937	0.335	0.351	
						21350	2560.0	1	49	17.00	16.80	0.857	0.897	0.319	0.334	
								50	24	17.00	16.80	0.945	0.990	0.347	0.363	
					Right Touch	20850	2510.0	1	49	17.00	16.80	0.872	0.913	0.333	0.349	
								50	24	17.00	16.80	0.808	0.846	0.315	0.330	
						21100	2535.0	1	49	17.00	16.80	0.767	0.803	0.297	0.311	
								50	24	17.00	16.80	0.819	0.858	0.321	0.336	
								100	0	17.00	16.80	0.811	0.849	0.309	0.324	
						21350	2560.0	1	49	17.00	16.80	0.749	0.784	0.293	0.307	
								50	24	17.00	16.80	0.774	0.810	0.300	0.314	
					Right Tilt	20850	2510.0	1	49	17.00	16.80	0.869	0.910	0.317	0.332	
								50	24	17.00	16.80	0.871	0.912	0.313	0.328	
						21100	2535.0	1	49	17.00	16.80	0.901	0.943	0.322	0.337	
								50	24	17.00	16.80	0.872	0.913	0.315	0.330	
								100	0	17.00	16.80	0.844	0.884	0.303	0.317	
						21350	2560.0	1	49	17.00	16.80	0.838	0.877	0.301	0.315	
								50	24	17.00	16.80	0.894	0.936	0.321	0.336	
	Body & Hotspot	QPSK	Mode B	5	Rear	20850	2510.0	1	49	18.25	18.20	0.789	0.798	0.320	0.324	
								50	24	18.25	18.20	0.803	0.812	0.327	0.331	
						21100	2535.0	1	49	18.25	18.20	0.796	0.805	0.321	0.325	
								50	24	18.25	18.20	0.812	0.821	0.324	0.328	
								100	0	18.25	18.20	0.792	0.801	0.320	0.324	
						21350	2560.0	1	49	18.25	18.20	0.915	0.926	0.364	0.368	
								50	24	18.25	18.20	0.955	0.966	0.374	0.378	62
					Front	21100	2535.0	1	49	18.25	18.20	0.717	0.725	0.272	0.275	
								50	24	18.25	18.20	0.735	0.744	0.279	0.282	
	Hotspot	QPSK	Mode B	5	Edge 1	20850	2510.0	1	49	18.25	18.20	0.987	0.998	0.358	0.362	63
								50	24	18.25	18.20	0.940	0.951	0.339	0.343	
						21100	2535.0	1	49	18.25	18.20	0.895	0.905	0.324	0.328	
								50	24	18.25	18.20	0.963	0.974	0.346	0.350	
								100	0	18.25	18.20	0.980	0.991	0.352	0.356	
						21350	2560.0	1	49	18.25	18.20	0.859	0.869	0.303	0.307	
								50	24	18.25	18.20	0.880	0.890	0.312	0.316	
					Edge 2	21100	2535.0	1	49	18.25	18.20	0.097	0.098	0.043	0.043	
								50	24	18.25	18.20	0.098	0.099	0.043	0.043	
					Edge 4	20850	2510.0	1	49	18.25	18.20	0.740	0.749	0.324	0.328	
								50	24	18.25	18.20	0.753	0.762	0.352	0.356	
						21100	2535.0	1	49	18.25	18.20	0.797	0.806	0.358	0.362	
								50	24	18.25	18.20	0.826	0.836	0.366	0.370	
								100	0	18.25	18.20	0.873	0.883	0.388	0.392	
						21350	2560.0	1	49	18.25	18.20	0.729	0.737	0.314	0.318	
								50	24	18.25	18.20	0.744	0.753	0.321	0.325	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	QPSK	Mode A	0	Left Touch	20850	2510.0	1	49	24.70	24.70	0.863	0.863	0.463	0.463	
								50	24	23.70	23.70	0.763	0.763	0.416	0.416	
						21100	2535.0	1	49	24.70	24.70	0.931	0.931	0.500	0.500	64
								50	24	23.70	23.70	0.908	0.908	0.486	0.486	
								100	0	23.70	23.70	0.892	0.892	0.478	0.478	
						21350	2560.0	1	49	24.70	24.70	0.898	0.898	0.497	0.497	
								50	24	23.70	23.70	0.732	0.732	0.404	0.404	
					Left Tilt	21100	2535.0	1	49	24.70	24.70	0.278	0.278	0.143	0.143	
								50	24	23.70	23.70	0.224	0.224	0.114	0.114	
					Right Touch	21100	2535.0	1	49	24.70	24.70	0.479	0.479	0.264	0.264	
								50	24	23.70	23.70	0.387	0.387	0.213	0.213	
					Right Tilt	21100	2535.0	1	49	24.70	24.70	0.444	0.444	0.230	0.230	
								50	24	23.70	23.70	0.411	0.411	0.206	0.206	
	Body & Hotspot	QPSK	Mode B	5	Rear	21100	2535.0	1	49	18.50	18.50	0.625	0.625	0.312	0.312	
								50	24	18.50	18.50	0.629	0.629	0.313	0.313	65
					Front	21100	2535.0	1	49	18.50	18.50	0.582	0.582	0.282	0.282	
								50	24	18.50	18.50	0.603	0.603	0.293	0.293	
	Hotspot	QPSK	Mode B	5	Edge 3	21100	2535.0	1	49	18.50	18.50	0.369	0.369	0.177	0.177	
								50	24	18.50	18.50	0.306	0.306	0.146	0.146	
					Edge 4	20850	2510.0	1	49	18.50	18.50	0.932	0.932	0.408	0.408	
								50	24	18.50	18.50	0.961	0.961	0.421	0.421	66
						21100	2535.0	1	49	18.50	18.50	0.870	0.870	0.380	0.380	
								50	24	18.50	18.50	0.902	0.902	0.394	0.394	
								100	0	18.50	18.50	0.893	0.893	0.390	0.390	
						21350	2560.0	1	49	18.50	18.50	0.758	0.758	0.335	0.335	
								50	24	18.50	18.50	0.790	0.790	0.347	0.347	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	QPSK	Mode A	0	Left Touch	20850	2510.0	1	49	17.50	17.50	0.923	0.923	0.354	0.354	
								50	24	17.50	17.50	0.951	0.951	0.364	0.364	
						21100	2535.0	1	49	17.50	17.50	0.984	0.984	0.365	0.365	67
								50	24	17.50	17.50	0.918	0.918	0.348	0.348	
								100	0	17.50	17.50	0.898	0.898	0.329	0.329	
						21350	2560.0	1	49	17.50	17.50	0.899	0.899	0.337	0.337	
								50	24	17.50	17.50	0.927	0.927	0.349	0.349	
					Left Tilt	21100	2535.0	1	49	17.50	17.50	0.509	0.509	0.216	0.216	
								50	24	17.50	17.50	0.534	0.534	0.229	0.229	
					Right Touch	21100	2535.0	1	49	17.50	17.50	0.208	0.208	0.097	0.097	
								50	24	17.50	17.50	0.214	0.214	0.102	0.102	
					Right Tilt	21100	2535.0	1	49	17.50	17.50	0.170	0.170	0.081	0.081	
								50	24	17.50	17.50	0.191	0.191	0.089	0.089	
	Body & Hotspot	QPSK	Mode B	5	Rear	20850	2510.0	1	49	21.25	21.20	0.735	0.744	0.326	0.330	
								50	24	21.20	21.20	0.688	0.688	0.306	0.306	
						21100	2535.0	1	49	21.25	21.20	0.946	0.957	0.417	0.422	68
								50	24	21.20	21.20	0.802	0.802	0.349	0.349	
								100	0	21.20	21.20	0.876	0.876	0.385	0.385	
						21350	2560.0	1	49	21.25	21.20	0.889	0.899	0.399	0.404	
								50	24	21.20	21.20	0.706	0.706	0.314	0.314	
					Front	21100	2535.0	1	49	21.25	21.20	0.750	0.759	0.341	0.345	
								50	24	21.20	21.20	0.682	0.682	0.310	0.310	
	Hotspot	QPSK	Mode B	5	Edge 1	21100	2535.0	1	49	21.25	21.20	0.243	0.246	0.094	0.095	
								50	24	21.20	21.20	0.206	0.206	0.083	0.083	
					Edge 2	20850	2510.0	1	49	21.25	21.20	0.734	0.742	0.333	0.337	
						21100	2535.0	1	49	21.25	21.20	0.830	0.840	0.369	0.373	
								50	24	21.20	21.20	0.732	0.732	0.326	0.326	
						21350	2560.0	1	49	21.25	21.20	0.915	0.926	0.401	0.406	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

UL CA 7C

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 1	Head	QPSK	Mode A	0	Right Touch	21001	2525.1	1	99	21199	2544.9	1	0	25.70	25.59	0.245	0.251	0.123	0.126	
ANT 1	Body	QPSK	Mode B	5	Rear	20850	2510.0	1	99	21048	2529.8	1	0	19.75	19.50	0.708	0.750	0.316	0.335	
ANT 1	Hotspot	QPSK	Mode B	5	Edge 2	20850	2510.0	1	99	21048	2529.8	1	0	19.75	19.50	0.911	0.965	0.387	0.410	
ANT 2	Head	QPSK	Mode A	0	Left Tilt	20850	2510.0	1	99	21048	2529.8	1	0	17.00	16.62	0.469	0.512	0.165	0.180	
ANT 2	Body	QPSK	Mode B	5	Rear	21152	2540.2	1	99	21350	2560.0	1	0	18.25	18.22	0.553	0.557	0.248	0.250	
ANT 2	Hotspot	QPSK	Mode B	5	Edge 1	20850	2510.0	1	99	21048	2529.8	1	0	18.25	18.22	0.835	0.841	0.302	0.304	
ANT 3	Head	QPSK	Mode A	0	Left Touch	21001	2525.1	1	99	21199	2544.9	1	0	24.70	24.34	0.792	0.860	0.425	0.461	
ANT 3	Body	QPSK	Mode B	5	Rear	21001	2525.1	1	99	21199	2544.9	1	0	18.50	18.40	0.607	0.621	0.307	0.314	
ANT 3	Hotspot	QPSK	Mode B	5	Edge 4	20850	2510.0	1	99	21048	2529.8	1	0	18.50	18.35	0.647	0.670	0.287	0.297	
ANT 4	Head	QPSK	Mode A	0	Left Touch	21001	2525.1	1	99	21199	2544.9	1	0	17.50	17.20	0.793	0.850	0.323	0.346	
ANT 4	Body	QPSK	Mode B	5	Rear	21001	2525.1	1	99	21199	2544.9	1	0	21.25	21.15	0.621	0.636	0.287	0.294	

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

10.11. LTE Band 12 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	23095	707.5	1	25	25.70	25.20	0.046	0.052	0.037	0.042	
								25	12	24.70	24.20	0.045	0.050	0.036	0.040	
					Left Tilt	23095	707.5	1	25	25.70	25.20	0.025	0.028	0.014	0.016	
								25	12	24.70	24.20	0.024	0.027	0.015	0.016	
					Right Touch	23095	707.5	1	25	25.70	25.20	0.184	0.206	0.144	0.162	69
								25	12	24.70	24.20	0.152	0.171	0.118	0.132	
					Right Tilt	23095	707.5	1	25	25.70	25.20	0.091	0.102	0.074	0.083	
								25	12	24.70	24.20	0.070	0.079	0.057	0.064	
	Body & Hotspot	QPSK	Mode B	5	Rear	23095	707.5	1	25	25.70	25.20	0.612	0.687	0.344	0.386	70
								25	12	24.70	24.20	0.507	0.569	0.283	0.318	
					Front	23095	707.5	1	25	25.70	25.20	0.245	0.275	0.165	0.185	
								25	12	24.70	24.20	0.212	0.238	0.142	0.159	
	Hotspot	QPSK	Mode B	5	Edge 2	23095	707.5	1	25	25.70	25.20	0.612	0.687	0.396	0.444	71
								25	12	24.70	24.20	0.494	0.554	0.321	0.360	
					Edge 3	23095	707.5	1	25	25.70	25.20	0.235	0.264	0.119	0.134	
								25	12	24.70	24.20	0.197	0.221	0.088	0.099	
					Edge 4	23095	707.5	1	25	25.70	25.20	0.238	0.267	0.155	0.174	
								25	12	24.70	24.20	0.196	0.220	0.127	0.142	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	23095	707.5	1	25	23.90	23.90	0.423	0.423	0.274	0.274	
								25	12	22.90	22.90	0.349	0.349	0.225	0.225	
					Left Tilt	23095	707.5	1	25	23.90	23.90	0.362	0.362	0.198	0.198	
								25	12	22.90	22.90	0.310	0.310	0.167	0.167	
					Right Touch	23095	707.5	1	25	23.90	23.90	0.653	0.653	0.414	0.414	72
								25	12	22.90	22.90	0.534	0.534	0.338	0.338	
					Right Tilt	23095	707.5	1	25	23.90	23.90	0.474	0.474	0.270	0.270	
								25	12	22.90	22.90	0.386	0.386	0.219	0.219	
	Body & Hotspot	QPSK	Mode B	5	Rear	23095	707.5	1	25	23.90	23.90	0.317	0.317	0.196	0.196	73
								25	12	22.90	22.90	0.260	0.260	0.161	0.161	
					Front	23095	707.5	1	25	23.90	23.90	0.230	0.230	0.158	0.158	
								25	12	22.90	22.90	0.181	0.181	0.124	0.124	
	Hotspot	QPSK	Mode B	5	Edge 1	23095	707.5	1	25	23.90	23.90	0.147	0.147	0.070	0.070	
								25	12	22.90	22.90	0.119	0.119	0.057	0.057	
					Edge 2	23095	707.5	1	25	23.90	23.90	0.146	0.146	0.095	0.095	
								25	12	22.90	22.90	0.118	0.118	0.077	0.077	
					Edge 4	23095	707.5	1	25	23.90	23.90	0.287	0.287	0.186	0.186	
								25	12	22.90	22.90	0.233	0.233	0.151	0.151	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.12. LTE Band 13 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	23230	782.0	1	25	25.70	25.20	0.153	0.172	0.120	0.135	
								25	12	24.70	24.20	0.128	0.144	0.101	0.113	
					Left Tilt	23230	782.0	1	25	25.70	25.20	0.098	0.110	0.076	0.085	
								25	12	24.70	24.20	0.081	0.091	0.064	0.072	
					Right Touch	23230	782.0	1	25	25.70	25.20	0.179	0.201	0.140	0.157	74
								25	12	24.70	24.20	0.146	0.164	0.115	0.129	
					Right Tilt	23230	782.0	1	25	25.70	25.20	0.098	0.110	0.079	0.089	
								25	12	24.70	24.20	0.080	0.090	0.064	0.072	
	Body & Hotspot	QPSK	Mode B	5	Rear	23230	782.0	1	25	25.70	25.20	0.563	0.632	0.338	0.379	75
								25	12	24.70	24.20	0.460	0.516	0.277	0.311	
					Front	23230	782.0	1	25	25.70	25.20	0.305	0.342	0.196	0.220	
								25	12	24.70	24.20	0.251	0.282	0.161	0.181	
	Hotspot	QPSK	Mode B	5	Edge 2	23230	782.0	1	25	25.70	25.20	0.672	0.754	0.426	0.478	76
								25	12	24.70	24.20	0.554	0.622	0.350	0.393	
					Edge 3	23230	782.0	1	25	25.70	25.20	0.264	0.296	0.116	0.130	
								25	12	24.70	24.20	0.215	0.241	0.095	0.107	
					Edge 4	23230	782.0	1	25	25.70	25.20	0.320	0.359	0.205	0.230	
								25	12	24.70	24.20	0.260	0.292	0.167	0.187	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	23230	782.0	1	25	23.90	23.90	0.524	0.524	0.365	0.365	
								25	12	22.90	22.90	0.421	0.421	0.294	0.294	
					Left Tilt	23230	782.0	1	25	23.90	23.90	0.544	0.544	0.290	0.290	
								25	12	22.90	22.90	0.450	0.450	0.240	0.240	
					Right Touch	23230	782.0	1	25	23.90	23.90	0.741	0.741	0.479	0.479	77
								25	12	22.90	22.90	0.605	0.605	0.391	0.391	
					Right Tilt	23230	782.0	1	25	23.90	23.90	0.510	0.510	0.300	0.300	
								25	12	22.90	22.90	0.421	0.421	0.243	0.243	
	Body & Hotspot	QPSK	Mode B	5	Rear	23230	782.0	1	25	23.90	23.90	0.460	0.460	0.283	0.283	78
								25	12	22.90	22.90	0.371	0.371	0.228	0.228	
					Front	23230	782.0	1	25	23.90	23.90	0.292	0.292	0.195	0.195	
								25	12	22.90	22.90	0.238	0.238	0.160	0.160	
	Hotspot	QPSK	Mode B	5	Edge 1	23230	782.0	1	25	23.90	23.90	0.153	0.153	0.079	0.079	
								25	12	22.90	22.90	0.127	0.127	0.066	0.066	
					Edge 2	23230	782.0	1	25	23.90	23.90	0.178	0.178	0.114	0.114	
								25	12	22.90	22.90	0.148	0.148	0.095	0.095	
					Edge 4	23230	782.0	1	25	23.90	23.90	0.235	0.235	0.150	0.150	
								25	12	22.90	22.90	0.195	0.195	0.125	0.125	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.13. LTE Band 25 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	26365	1882.5	1	49	25.70	25.70	0.160	0.160	0.102	0.102	
								50	24	24.70	24.70	0.129	0.129	0.082	0.082	
					Left Tilt	26365	1882.5	1	49	25.70	25.70	0.106	0.106	0.063	0.063	
								50	24	24.70	24.70	0.089	0.089	0.053	0.053	
					Right Touch	26365	1882.5	1	49	25.70	25.70	0.312	0.312	0.192	0.192	79
								50	24	24.70	24.70	0.245	0.245	0.151	0.151	
					Right Tilt	26365	1882.5	1	49	25.70	25.70	0.096	0.096	0.062	0.062	
								50	24	24.70	24.70	0.075	0.075	0.047	0.047	
	Body & Hotspot	QPSK	Mode B	5	Rear	26365	1882.5	1	49	17.00	17.00	0.614	0.614	0.314	0.314	
								50	24	17.00	17.00	0.624	0.624	0.319	0.319	80
					Front	26365	1882.5	1	49	17.00	17.00	0.517	0.517	0.254	0.254	
								50	24	17.00	17.00	0.528	0.528	0.257	0.257	
	Hotspot	QPSK	Mode B	5	Edge 2	26365	1882.5	1	49	17.00	17.00	0.249	0.249	0.124	0.124	
								50	24	17.00	17.00	0.253	0.253	0.127	0.127	
					Edge 3	26140	1860.0	1	49	17.00	17.00	0.914	0.914	0.418	0.418	
								50	24	17.00	17.00	0.941	0.941	0.428	0.428	81
						26365	1882.5	1	49	17.00	17.00	0.898	0.898	0.412	0.412	
								50	24	17.00	17.00	0.913	0.913	0.417	0.417	
								100	0	17.00	17.00	0.902	0.902	0.412	0.412	
						26590	1905.0	1	49	17.00	17.00	0.841	0.841	0.385	0.385	
								50	24	17.00	17.00	0.850	0.850	0.389	0.389	
					Edge 4	26365	1882.5	1	49	17.00	17.00	0.013	0.013	0.006	0.006	
								50	24	17.00	17.00	0.012	0.012	0.005	0.005	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	26365	1882.5	1	49	20.25	20.00	0.154	0.163	0.098	0.104	
								50	24	20.25	20.00	0.154	0.163	0.099	0.105	
					Left Tilt	26365	1882.5	1	49	20.25	20.00	0.204	0.216	0.106	0.112	
								50	24	20.25	20.00	0.201	0.213	0.105	0.111	
					Right Touch	26140	1860.0	1	49	20.25	20.00	0.767	0.812	0.385	0.408	
								50	24	20.25	20.00	0.783	0.829	0.394	0.417	
						26365	1882.5	1	49	20.25	20.00	0.803	0.851	0.404	0.428	
								50	24	20.25	20.00	0.807	0.855	0.407	0.431	
								100	0	20.25	20.00	0.786	0.833	0.397	0.421	
						26590	1905.0	1	49	20.25	20.00	0.813	0.861	0.412	0.436	
								50	24	20.25	20.00	0.847	0.897	0.428	0.453	82
					Right Tilt	26365	1882.5	1	49	20.25	20.00	0.595	0.630	0.277	0.293	
								50	24	20.25	20.00	0.600	0.636	0.279	0.296	
	Body & Hotspot	QPSK	Mode B	5	Rear	26140	1860.0	1	49	20.00	20.00	0.832	0.832	0.373	0.373	
								50	24	20.00	20.00	0.860	0.860	0.383	0.383	
						26365	1882.5	1	49	20.00	20.00	0.911	0.911	0.409	0.409	83
								50	24	20.00	20.00	0.856	0.856	0.383	0.383	
								100	0	20.00	20.00	0.854	0.854	0.382	0.382	
						26590	1905.0	1	49	20.00	20.00	0.841	0.841	0.378	0.378	
								50	24	20.00	20.00	0.864	0.864	0.385	0.385	
					Front	26365	1882.5	1	49	20.00	20.00	0.349	0.349	0.175	0.175	
								50	24	20.00	20.00	0.348	0.348	0.176	0.176	
	Hotspot	QPSK	Mode B	5	Edge 1	26365	1882.5	1	49	20.00	20.00	0.368	0.368	0.159	0.159	
								50	24	20.00	20.00	0.368	0.368	0.160	0.160	
					Edge 2	26365	1882.5	1	49	20.00	20.00	0.025	0.025	0.013	0.013	
								50	24	20.00	20.00	0.025	0.025	0.013	0.013	
					Edge 4	26365	1882.5	1	49	20.00	20.00	0.468	0.468	0.229	0.229	
								50	24	20.00	20.00	0.467	0.467	0.232	0.232	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	QPSK	Mode A	0	Left Touch	26365	1882.5	1	49	24.70	24.20	0.537	0.603	0.333	0.374	84
								50	24	23.70	23.70	0.432	0.432	0.269	0.269	
					Left Tilt	26365	1882.5	1	49	24.70	24.20	0.207	0.232	0.126	0.141	
								50	24	23.70	23.70	0.167	0.167	0.102	0.102	
					Right Touch	26365	1882.5	1	49	24.70	24.20	0.222	0.249	0.128	0.144	
								50	24	23.70	23.70	0.100	0.100	0.056	0.056	
					Right Tilt	26365	1882.5	1	49	24.70	24.20	0.075	0.084	0.044	0.049	
								50	24	23.70	23.70	0.076	0.076	0.044	0.044	
	Body & Hotspot	QPSK	Mode B	5	Rear	26365	1882.5	1	49	19.50	19.25	0.677	0.717	0.362	0.383	85
								50	24	19.50	19.25	0.676	0.716	0.360	0.381	
					Front	26365	1882.5	1	49	19.50	19.25	0.564	0.597	0.312	0.330	
								50	24	19.50	19.25	0.566	0.600	0.312	0.330	
	Hotspot	QPSK	Mode B	5	Edge 3	26365	1882.5	1	49	19.50	19.25	0.177	0.187	0.083	0.088	
								50	24	19.50	19.25	0.179	0.190	0.083	0.088	
					Edge 4	26140	1860.0	1	49	19.50	19.25	0.809	0.857	0.402	0.426	
								50	24	19.50	19.25	0.828	0.877	0.411	0.435	86
						26365	1882.5	1	49	19.50	19.25	0.779	0.825	0.386	0.409	
								50	24	19.50	19.25	0.796	0.843	0.393	0.416	
								100	0	19.50	19.25	0.794	0.841	0.391	0.414	
						26590	1905.0	1	49	19.50	19.25	0.772	0.818	0.378	0.400	
								50	24	19.50	19.25	0.777	0.823	0.380	0.403	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	QPSK	Mode A	0	Left Touch	26140	1860.0	1	49	18.50	18.25	0.728	0.771	0.351	0.372	
								50	24	18.50	18.25	0.757	0.802	0.362	0.383	
						26365	1882.5	1	49	18.50	18.25	0.829	0.878	0.396	0.419	
								50	24	18.50	18.25	0.846	0.896	0.404	0.428	
								100	0	18.50	18.25	0.813	0.861	0.388	0.411	
						26590	1905.0	1	49	18.50	18.25	0.839	0.889	0.399	0.423	
								50	24	18.50	18.25	0.874	0.926	0.416	0.441	87
					Left Tilt	26365	1882.5	1	49	18.50	18.25	0.390	0.413	0.192	0.203	
								50	24	18.50	18.25	0.395	0.418	0.194	0.205	
					Right Touch	26365	1882.5	1	49	18.50	18.25	0.244	0.258	0.138	0.146	
								50	24	18.50	18.25	0.249	0.264	0.141	0.149	
					Right Tilt	26365	1882.5	1	49	18.50	18.25	0.185	0.196	0.099	0.105	
								50	24	18.50	18.25	0.149	0.158	0.080	0.085	
	Body & Hotspot	QPSK	Mode B	5	Rear	26365	1882.5	1	49	19.25	19.00	0.559	0.592	0.284	0.301	
								50	24	19.25	19.00	0.569	0.603	0.289	0.306	88
					Front	26365	1882.5	1	49	19.25	19.00	0.426	0.451	0.222	0.235	
								50	24	19.25	19.00	0.429	0.454	0.223	0.236	
	Hotspot	QPSK	Mode B	5	Edge 1	26365	1882.5	1	49	19.25	19.00	0.335	0.355	0.167	0.177	
								50	24	19.25	19.00	0.341	0.361	0.171	0.181	
					Edge 2	26140	1860.0	1	49	19.25	19.00	0.731	0.774	0.336	0.356	
								50	24	19.25	19.00	0.752	0.797	0.346	0.367	
						26365	1882.5	1	49	19.25	19.00	0.813	0.861	0.375	0.397	
								50	24	19.25	19.00	0.830	0.879	0.383	0.406	
								100	0	19.25	19.00	0.794	0.841	0.366	0.388	
						26590	1905.0	1	49	19.25	19.00	0.894	0.947	0.413	0.437	
								50	24	19.25	19.00	0.914	0.968	0.422	0.447	89

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.14. LTE Band 26 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	26865	831.5	1	25	25.70	25.30	0.151	0.166	0.119	0.130	
								25	12	24.70	24.70	0.124	0.124	0.098	0.098	
					Left Tilt	26865	831.5	1	25	25.70	25.30	0.102	0.112	0.079	0.087	
								25	12	24.70	24.70	0.081	0.081	0.063	0.063	
					Right Touch	26865	831.5	1	25	25.70	25.30	0.213	0.234	0.164	0.180	90
								25	12	24.70	24.70	0.170	0.170	0.131	0.131	
					Right Tilt	26865	831.5	1	25	25.70	25.30	0.090	0.099	0.072	0.079	
								25	12	24.70	24.70	0.072	0.072	0.058	0.058	
	Body & Hotspot	QPSK	Mode B	5	Rear	26865	831.5	1	25	25.70	25.30	0.713	0.782	0.393	0.431	91
								25	12	24.70	24.70	0.579	0.579	0.316	0.316	
					Front	26865	831.5	1	25	25.70	25.30	0.351	0.385	0.199	0.218	
								25	12	24.70	24.70	0.287	0.287	0.162	0.162	
	Hotspot	QPSK	Mode B	5	Edge 2	26865	831.5	1	25	25.70	25.30	0.678	0.743	0.428	0.469	
								25	12	24.70	24.70	0.549	0.549	0.346	0.346	
					Edge 3	26865	831.5	1	25	25.70	25.30	0.429	0.470	0.196	0.215	
								25	12	24.70	24.70	0.347	0.347	0.159	0.159	
					Edge 4	26865	831.5	1	25	25.70	25.30	0.228	0.250	0.145	0.159	
								25	12	24.70	24.70	0.184	0.184	0.117	0.117	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	26865	831.5	1	25	24.50	24.25	0.583	0.618	0.411	0.435	
								25	12	23.50	23.25	0.469	0.497	0.331	0.351	
					Left Tilt	26865	831.5	1	25	24.50	24.25	0.576	0.610	0.301	0.319	
								25	12	23.50	23.25	0.496	0.525	0.260	0.275	
					Right Touch	26740	819.0	1	25	24.50	24.25	0.820	0.869	0.530	0.561	92
								25	12	23.50	23.25	0.667	0.707	0.438	0.464	
						26865	831.5	1	25	24.50	24.25	0.809	0.857	0.522	0.553	
								25	12	23.50	23.25	0.785	0.832	0.515	0.546	
								50	0	23.50	23.25	0.767	0.812	0.503	0.533	
						26990	844.0	1	25	24.50	24.25	0.740	0.784	0.475	0.503	
								25	12	23.50	23.25	0.649	0.687	0.424	0.449	
					Right Tilt	26865	831.5	1	25	24.50	24.25	0.466	0.494	0.265	0.281	
								25	12	23.50	23.25	0.378	0.400	0.216	0.229	
	Body & Hotspot	QPSK	Mode B	5	Rear	26865	831.5	1	25	24.50	24.25	0.550	0.583	0.336	0.356	93
								25	12	23.50	23.25	0.379	0.401	0.230	0.244	
					Front	26865	831.5	1	25	24.50	24.25	0.305	0.323	0.202	0.214	
								25	12	23.50	23.25	0.247	0.262	0.164	0.174	
	Hotspot	QPSK	Mode B	5	Edge 1	26865	831.5	1	25	24.50	24.25	0.200	0.212	0.101	0.107	
								25	12	23.50	23.25	0.162	0.172	0.082	0.087	
					Edge 2	26865	831.5	1	25	24.50	24.25	0.206	0.218	0.132	0.140	
								25	12	23.50	23.25	0.165	0.175	0.106	0.112	
					Edge 4	26865	831.5	1	25	24.50	24.25	0.246	0.261	0.158	0.167	
								25	12	23.50	23.25	0.198	0.210	0.127	0.135	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.15. LTE Band 30 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	27710	2310.0	1	25	25.70	25.70	0.372	0.372	0.210	0.210	
								25	12	24.70	24.70	0.295	0.295	0.166	0.166	
					Left Tilt	27710	2310.0	1	25	25.70	25.70	0.176	0.176	0.084	0.084	
								25	12	24.70	24.70	0.152	0.152	0.072	0.072	
					Right Touch	27710	2310.0	1	25	25.70	25.70	0.842	0.842	0.424	0.424	94
								25	12	24.70	24.70	0.670	0.670	0.336	0.336	
					Right Tilt	27710	2310.0	1	25	25.70	25.70	0.142	0.142	0.076	0.076	
								25	12	24.70	24.70	0.126	0.126	0.064	0.064	
	Body & Hotspot	QPSK	Mode B	5	Rear	27710	2310.0	1	25	20.25	20.25	0.583	0.583	0.271	0.271	
								25	12	20.25	20.25	0.612	0.612	0.283	0.283	95
					Front	27710	2310.0	1	25	20.25	20.25	0.609	0.609	0.275	0.275	
								25	12	20.25	20.25	0.623	0.623	0.281	0.281	
	Hotspot	QPSK	Mode B	5	Edge 2	27710	2310.0	1	25	20.25	20.25	0.942	0.942	0.381	0.381	
								25	12	20.25	20.25	0.960	0.960	0.389	0.389	96
								50	0	20.25	20.25	0.950	0.950	0.384	0.384	
					Edge 3	27710	2310.0	1	25	20.25	20.25	0.252	0.252	0.106	0.106	
								25	12	20.25	20.25	0.256	0.256	0.108	0.108	
					Edge 4	27710	2310.0	1	25	20.25	20.25	0.042	0.042	0.022	0.022	
								25	12	20.25	20.25	0.036	0.036	0.018	0.018	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	27710	2310.0	1	25	18.50	18.25	0.391	0.414	0.165	0.175	
								25	12	18.50	18.25	0.440	0.466	0.189	0.200	
					Left Tilt	27710	2310.0	1	25	18.50	18.25	0.468	0.496	0.191	0.202	
								25	12	18.50	18.25	0.479	0.507	0.196	0.208	
					Right Touch	27710	2310.0	1	25	18.50	18.25	0.804	0.852	0.337	0.357	
								25	12	18.50	18.25	0.841	0.891	0.353	0.374	97
								50	0	18.50	18.25	0.819	0.868	0.340	0.360	
					Right Tilt	27710	2310.0	1	25	18.50	18.25	0.677	0.717	0.269	0.285	
								25	12	18.50	18.25	0.692	0.733	0.275	0.291	
	Body & Hotspot	QPSK	Mode B	5	Rear	27710	2310.0	1	25	20.00	20.00	0.629	0.629	0.286	0.286	
								25	12	20.00	20.00	0.632	0.632	0.287	0.287	98
					Front	27710	2310.0	1	25	20.00	20.00	0.470	0.470	0.223	0.223	
								25	12	20.00	20.00	0.479	0.479	0.227	0.227	
	Hotspot	QPSK	Mode B	5	Edge 1	27710	2310.0	1	25	20.00	20.00	0.463	0.463	0.193	0.193	
								25	12	20.00	20.00	0.487	0.487	0.201	0.201	
					Edge 2	27710	2310.0	1	25	20.00	20.00	0.036	0.036	0.018	0.018	
								25	12	20.00	20.00	0.040	0.040	0.021	0.021	
					Edge 4	27710	2310.0	1	25	20.00	20.00	0.888	0.888	0.409	0.409	
								25	12	20.00	20.00	0.904	0.904	0.416	0.416	99
								50	0	20.00	20.00	0.885	0.885	0.407	0.407	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	QPSK	Mode A	0	Left Touch	27710	2310.0	1	25	24.70	24.20	0.698	0.783	0.393	0.441	100
								25	12	23.70	23.40	0.653	0.700	0.368	0.394	
					Left Tilt	27710	2310.0	1	25	24.70	24.20	0.237	0.266	0.127	0.142	
								25	12	23.70	23.40	0.226	0.242	0.120	0.129	
					Right Touch	27710	2310.0	1	25	24.70	24.20	0.283	0.318	0.168	0.188	
								25	12	23.70	23.40	0.292	0.313	0.172	0.184	
					Right Tilt	27710	2310.0	1	25	24.70	24.20	0.294	0.330	0.159	0.178	
								25	12	23.70	23.40	0.258	0.276	0.142	0.152	
	Body & Hotspot	QPSK	Mode B	5	Rear	27710	2310.0	1	25	20.50	20.50	0.771	0.771	0.416	0.416	
								25	12	20.50	20.50	0.793	0.793	0.427	0.427	
					Front	27710	2310.0	1	25	20.50	20.50	0.881	0.881	0.467	0.467	101
								25	12	20.50	20.50	0.860	0.860	0.458	0.458	
								50	0	20.50	20.50	0.805	0.805	0.427	0.427	
	Hotspot	QPSK	Mode B	5	Edge 3	27710	2310.0	1	25	20.50	20.50	0.177	0.177	0.092	0.092	
								25	12	20.50	20.50	0.179	0.179	0.094	0.094	
					Edge 4	27710	2310.0	1	25	20.50	20.50	0.861	0.861	0.417	0.417	
								25	12	20.50	20.50	0.884	0.884	0.428	0.428	
								50	0	20.50	20.50	0.984	0.984	0.468	0.468	102

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	QPSK	Mode A	0	Left Touch	27710	2310.0	1	25	17.50	17.50	0.913	0.913	0.422	0.422	
								25	12	17.50	17.50	0.951	0.951	0.438	0.438	103
								50	0	17.50	17.50	0.935	0.935	0.432	0.432	
					Left Tilt	27710	2310.0	1	25	17.50	17.50	0.572	0.572	0.263	0.263	
								25	12	17.50	17.50	0.588	0.588	0.270	0.270	
					Right Touch	27710	2310.0	1	25	17.50	17.50	0.338	0.338	0.172	0.172	
								25	12	17.50	17.50	0.345	0.345	0.176	0.176	
					Right Tilt	27710	2310.0	1	25	17.50	17.50	0.221	0.221	0.113	0.113	
								25	12	17.50	17.50	0.226	0.226	0.116	0.116	
	Body & Hotspot	QPSK	Mode B	5	Rear	27710	2310.0	1	25	20.50	20.50	0.903	0.903	0.432	0.432	
								25	12	20.50	20.50	0.928	0.928	0.442	0.442	104
								50	0	20.50	20.50	0.910	0.910	0.434	0.434	
					Front	27710	2310.0	1	25	20.50	20.50	0.688	0.688	0.347	0.347	
								25	12	20.50	20.50	0.702	0.702	0.354	0.354	
	Hotspot	QPSK	Mode B	5	Edge 1	27710	2310.0	1	25	20.50	20.50	0.307	0.307	0.152	0.152	
								25	12	20.50	20.50	0.308	0.308	0.153	0.153	
					Edge 2	27710	2310.0	1	25	20.50	20.50	0.549	0.549	0.269	0.269	
								25	12	20.50	20.50	0.566	0.566	0.279	0.279	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.16. LTE Band 41 Power Class 3 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	40620	2593.0	1	49	25.70	25.50	0.196	0.205	0.109	0.114	
								50	24	24.70	24.50	0.145	0.152	0.081	0.085	
					Left Tilt	40620	2593.0	1	49	25.70	25.50	0.086	0.090	0.044	0.046	
								50	24	24.70	24.50	0.072	0.075	0.034	0.035	
					Right Touch	40620	2593.0	1	49	25.70	25.50	0.381	0.399	0.194	0.203	105
								50	24	24.70	24.50	0.308	0.323	0.157	0.164	
					Right Tilt	40620	2593.0	1	49	25.70	25.50	0.074	0.077	0.037	0.039	
								50	24	24.70	24.50	0.056	0.059	0.025	0.026	
	Body & Hotspot	QPSK	Mode B	5	Rear	40620	2593.0	1	49	21.75	21.70	0.715	0.723	0.321	0.325	
								50	24	21.75	21.70	0.732	0.740	0.327	0.331	106
					Front	40620	2593.0	1	49	21.75	21.70	0.390	0.395	0.163	0.165	
								50	24	21.75	21.70	0.401	0.406	0.168	0.170	
	Hotspot	QPSK	Mode B	5	Edge 2	39750	2506.0	1	49	21.75	21.70	0.928	0.939	0.369	0.373	
								50	24	21.75	21.70	0.957	0.968	0.378	0.382	107
						40185	2549.5	1	49	21.75	21.70	0.839	0.849	0.331	0.335	
								50	24	21.75	21.70	0.858	0.868	0.337	0.341	
						40620	2593.0	1	49	21.75	21.70	0.867	0.877	0.337	0.341	
								50	24	21.75	21.70	0.897	0.907	0.349	0.353	
								100	0	21.75	21.70	0.875	0.885	0.340	0.344	
						41055	2636.5	1	49	21.75	21.70	0.879	0.889	0.343	0.347	
								50	24	21.75	21.70	0.895	0.905	0.349	0.353	
						41490	2680.0	1	49	21.75	21.70	0.894	0.904	0.344	0.348	
								50	24	21.75	21.70	0.906	0.916	0.347	0.351	
					Edge 3	40620	2593.0	1	49	21.75	21.70	0.304	0.308	0.110	0.111	
								50	24	21.75	21.70	0.287	0.290	0.106	0.107	
					Edge 4	40620	2593.0	1	49	21.75	21.70	0.054	0.054	0.023	0.023	
								50	24	21.75	21.70	0.055	0.056	0.024	0.025	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	39750	2506.0	1	49	19.00	19.00	0.852	0.852	0.325	0.325	
								50	24	19.00	19.00	0.844	0.844	0.323	0.323	
						40185	2549.5	1	49	19.00	19.00	0.857	0.857	0.323	0.323	
								50	24	19.00	19.00	0.846	0.846	0.319	0.319	
						40620	2593.0	1	49	19.00	19.00	0.950	0.950	0.358	0.358	
								50	24	19.00	19.00	0.901	0.901	0.337	0.337	
								100	0	19.00	19.00	0.893	0.893	0.334	0.334	
						41055	2636.5	1	49	19.00	19.00	0.812	0.812	0.304	0.304	
								50	24	19.00	19.00	0.826	0.826	0.307	0.307	
						41490	2680.0	1	49	19.00	19.00	0.906	0.906	0.336	0.336	
								50	24	19.00	19.00	0.915	0.915	0.338	0.338	
					Left Tilt	39750	2506.0	1	49	19.00	19.00	0.879	0.879	0.328	0.328	
								50	24	19.00	19.00	0.914	0.914	0.340	0.340	
						40185	2549.5	1	49	19.00	19.00	0.868	0.868	0.320	0.320	
								50	24	19.00	19.00	0.921	0.921	0.338	0.338	
						40620	2593.0	1	49	19.00	19.00	0.927	0.927	0.340	0.340	
								50	24	19.00	19.00	0.934	0.934	0.340	0.340	
								100	0	19.00	19.00	0.914	0.914	0.333	0.333	
						41055	2636.5	1	49	19.00	19.00	0.924	0.924	0.334	0.334	
								50	24	19.00	19.00	0.926	0.926	0.334	0.334	
						41490	2680.0	1	49	19.00	19.00	0.982	0.982	0.349	0.349	
								50	24	19.00	19.00	0.988	0.988	0.351	0.351	108
					Right Touch	39750	2506.0	1	49	19.00	19.00	0.786	0.786	0.303	0.303	
								50	24	19.00	19.00	0.809	0.809	0.312	0.312	
						40185	2549.5	1	49	19.00	19.00	0.802	0.802	0.309	0.309	
								50	24	19.00	19.00	0.824	0.824	0.317	0.317	
						40620	2593.0	1	49	19.00	19.00	0.848	0.848	0.328	0.328	
								50	24	19.00	19.00	0.831	0.831	0.322	0.322	
								100	0	19.00	19.00	0.889	0.889	0.338	0.338	
						41055	2636.5	1	49	19.00	19.00	0.771	0.771	0.297	0.297	
								50	24	19.00	19.00	0.803	0.803	0.309	0.309	
						41490	2680.0	1	49	19.00	19.00	0.714	0.714	0.278	0.278	
								50	24	19.00	19.00	0.741	0.741	0.289	0.289	
					Right Tilt	40620	2593.0	1	49	19.00	19.00	0.706	0.706	0.265	0.265	
								50	24	19.00	19.00	0.740	0.740	0.278	0.278	
	Body & Hotspot	QPSK	Mode B	5	Rear	39750	2506.0	1	49	21.00	21.00	0.969	0.969	0.387	0.387	
								50	24	21.00	21.00	0.957	0.957	0.381	0.381	
						40185	2549.5	1	49	21.00	21.00	0.975	0.975	0.393	0.393	109
								50	24	21.00	21.00	0.902	0.902	0.355	0.355	
						40620	2593.0	1	49	21.00	21.00	0.841	0.841	0.341	0.341	
								50	24	21.00	21.00	0.856	0.856	0.347	0.347	
								100	0	21.00	21.00	0.889	0.889	0.354	0.354	
						41055	2636.5	1	49	21.00	21.00	0.859	0.859	0.339	0.339	
								50	24	21.00	21.00	0.886	0.886	0.351	0.351	
						41490	2680.0	1	49	21.00	21.00	0.879	0.879	0.348	0.348	
								50	24	21.00	21.00	0.831	0.831	0.329	0.329	
					Front	40620	2593.0	1	49	21.00	21.00	0.692	0.692	0.270	0.270	
								50	24	21.00	21.00	0.648	0.648	0.254	0.254	
	Hotspot	QPSK	Mode B	5	Edge 1	39750	2506.0	1	49	21.00	21.00	0.879	0.879	0.319	0.319	
								50	24	21.00	21.00	0.867	0.867	0.314	0.314	
						40185	2549.5	1	49	21.00	21.00	0.846	0.846	0.306	0.306	
								50	24	21.00	21.00	0.869	0.869	0.313	0.313	
						40620	2593.0	1	49	21.00	21.00	0.867	0.867	0.310	0.310	
								50	24	21.00	21.00	0.906	0.906	0.324	0.324	
								100	0	21.00	21.00	0.889	0.889	0.318	0.318	
						41055	2636.5	1	49	21.00	21.00	0.839	0.839	0.299	0.299	
								50	24	21.00	21.00	0.843	0.843	0.299	0.299	
						41490	2680.0	1	49	21.00	21.00	0.778	0.778	0.274	0.274	
								50	24	21.00	21.00	0.800	0.800	0.281	0.281	
					Edge 2	40620	2593.0	1	49	21.00	21.00	0.073	0.073	0.034	0.034	
								50	24	21.00	21.00	0.058	0.058	0.026	0.026	
					Edge 4	40620	2593.0	1	49	21.00	21.00	0.751	0.751	0.314	0.314	
								50	24	21.00	21.00	0.773	0.773	0.326	0.326	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	QPSK	Mode A	0	Left Touch	40620	2593.0	1	49	24.70	24.70	0.485	0.485	0.266	0.266	110
								50	24	23.70	23.70	0.394	0.394	0.216	0.216	
					Left Tilt	40620	2593.0	1	49	24.70	24.70	0.167	0.167	0.084	0.084	
								50	24	23.70	23.70	0.136	0.136	0.066	0.066	
					Right Touch	40620	2593.0	1	49	24.70	24.70	0.251	0.251	0.136	0.136	
								50	24	23.70	23.70	0.202	0.202	0.108	0.108	
					Right Tilt	40620	2593.0	1	49	24.70	24.70	0.198	0.198	0.098	0.098	
								50	24	23.70	23.70	0.157	0.157	0.077	0.077	
	Body & Hotspot	QPSK	Mode B	5	Rear	40620	2593.0	1	49	20.00	19.85	0.646	0.669	0.302	0.313	
								50	24	20.00	19.85	0.669	0.693	0.312	0.323	111
					Front	40620	2593.0	1	49	20.00	19.85	0.371	0.384	0.175	0.181	
								50	24	20.00	19.85	0.382	0.395	0.182	0.188	
	Hotspot	QPSK	Mode B	5	Edge 3	40620	2593.0	1	49	20.00	19.85	0.066	0.069	0.030	0.031	
								50	24	20.00	19.85	0.061	0.063	0.028	0.029	
					Edge 4	39750	2506.0	1	49	20.00	19.85	0.865	0.895	0.370	0.383	
								50	24	20.00	19.85	0.873	0.904	0.373	0.386	
						40185	2549.5	1	49	20.00	19.85	0.921	0.953	0.388	0.402	
								50	24	20.00	19.85	0.958	0.992	0.402	0.416	112
						40620	2593.0	1	49	20.00	19.85	0.773	0.800	0.321	0.332	
								50	24	20.00	19.85	0.790	0.818	0.327	0.338	
								100	0	20.00	19.85	0.778	0.805	0.322	0.333	
						41055	2636.5	1	49	20.00	19.85	0.698	0.723	0.284	0.294	
								50	24	20.00	19.85	0.705	0.730	0.287	0.297	
						41490	2680.0	1	49	20.00	19.85	0.700	0.725	0.280	0.290	
								50	24	20.00	19.85	0.706	0.731	0.282	0.292	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	QPSK	Mode A	0	Left Touch	39750	2506.0	1	49	20.00	20.00	0.821	0.821	0.350	0.350	
								50	24	20.00	20.00	0.826	0.826	0.352	0.352	
						40185	2549.5	1	49	20.00	20.00	0.862	0.862	0.361	0.361	
								50	24	20.00	20.00	0.894	0.894	0.375	0.375	
						40620	2593.0	1	49	20.00	20.00	0.840	0.840	0.350	0.350	
								50	24	20.00	20.00	0.869	0.869	0.361	0.361	
								100	0	20.00	20.00	0.851	0.851	0.353	0.353	
						41055	2636.5	1	49	20.00	20.00	0.929	0.929	0.379	0.379	
								50	24	20.00	20.00	0.943	0.943	0.384	0.384	
						41490	2680.0	1	49	20.00	20.00	0.965	0.965	0.388	0.388	113
								50	24	20.00	20.00	0.962	0.962	0.387	0.387	
					Left Tilt	40620	2593.0	1	49	20.00	20.00	0.482	0.482	0.205	0.205	
								50	24	20.00	20.00	0.497	0.497	0.211	0.211	
					Right Touch	40620	2593.0	1	49	20.00	20.00	0.301	0.301	0.134	0.134	
								50	24	20.00	20.00	0.313	0.313	0.140	0.140	
					Right Tilt	40620	2593.0	1	49	20.00	20.00	0.194	0.194	0.089	0.089	
								50	24	20.00	20.00	0.201	0.201	0.093	0.093	
	Body & Hotspot	QPSK	Mode B	5	Rear	39750	2506.0	1	49	22.20	21.90	0.731	0.783	0.306	0.328	
						40185	2549.5	1	49	22.20	21.90	0.579	0.620	0.249	0.267	
						40620	2593.0	1	49	22.20	21.90	0.761	0.815	0.316	0.339	114
								50	24	21.20	21.00	0.615	0.644	0.252	0.264	
						41055	2636.5	1	49	22.20	21.90	0.587	0.629	0.253	0.271	
						41490	2680.0	1	49	22.20	21.90	0.540	0.579	0.233	0.250	
					Front	40620	2593.0	1	49	22.20	21.90	0.550	0.589	0.244	0.261	
								50	24	21.20	21.00	0.528	0.553	0.234	0.245	
	Hotspot	QPSK	Mode B	5	Edge 1	40620	2593.0	1	49	22.20	21.90	0.210	0.225	0.086	0.092	
								50	24	21.20	21.00	0.208	0.218	0.086	0.090	
					Edge 2	40620	2593.0	1	49	22.20	21.90	0.619	0.663	0.268	0.287	
								50	24	21.20	21.00	0.600	0.628	0.258	0.270	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

UL CA 41C

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 1	Head	QPSK	Mode A	0	Right Touch	40521	2583.1	1	99	40719	2602.9	1	0	25.70	25.36	0.270	0.292	0.142	0.154	
ANT 1	Body	QPSK	Mode B	5	Rear	40521	2583.1	1	99	40719	2602.9	1	0	21.75	21.35	0.394	0.432	0.179	0.196	
ANT 1	Hotspot	QPSK	Mode B	5	Edge 2	39750	2506.0	1	99	39948	2525.8	1	0	21.75	21.64	0.600	0.616	0.250	0.256	
ANT 2	Head	QPSK	Mode A	0	Left Tilt	41292	2660.2	1	99	41490	2680.0	1	0	19.00	18.85	0.844	0.873	0.299	0.309	
ANT 2	Body	QPSK	Mode B	5	Rear	39750	2506.0	1	99	39948	2525.8	1	0	21.00	20.56	0.634	0.702	0.267	0.296	
ANT 3	Head	QPSK	Mode B	0	Left Touch	40521	2583.1	1	99	40719	2602.9	1	0	24.70	24.40	0.310	0.332	0.166	0.178	
ANT 3	Body	QPSK	Mode B	5	Rear	40521	2583.1	1	99	40719	2602.9	1	0	20.00	19.68	0.606	0.652	0.283	0.305	
ANT 3	Hotspot	QPSK	Mode B	5	Edge 4	39750	2506.0	1	99	39948	2525.8	1	0	20.00	19.49	0.749	0.842	0.329	0.370	
ANT 4	Head	QPSK	Mode A	0	Left Touch	41292	2660.2	1	99	41490	2680.0	1	0	20.00	19.77	0.772	0.815	0.308	0.325	
ANT 4	Body	QPSK	Mode B	5	Rear	40521	2583.1	1	99	40719	2602.9	1	0	22.20	21.97	0.440	0.464	0.208	0.219	

Note(s):
PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.
Additional SAR for UL CA PC2 is not required. Test reduction has been applied base on standalone SAR.

10.17. LTE Band 41 Power Class 2 (20MHz Bandwidth)

According to Section 9.4, SAR evaluation for PC2 is only required when its Maximum output power (Tune-up Limit) is higher from PC3.

From May 2017 TCB Workshop, SAR tested were performed using Power Class 3. SAR test for Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination. According to the highest time averaged power for UL-DL configurations, configuration # 1 with duty cycle 43.3% is used for Power Class 2 SAR test.

Additional SAR testing for Power Class 2 is not required when:

- The reported SAR vs. output power can be linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg

Reported SAR vs. Output Power linearly scaled

Antenna	RF Exposure Conditions	Power Class 2			Power Class 3				PC2 linearly scaled Reported SAR (W/kg)	Linearly scaled (<10%)
		Duty Cycle	Tune-up Power (dBm)	Frame Avg. Power (mW)	Duty Cycle	Tune-up Power (dBm)	Frame Avg. Power (mW)	Reported 1-g SAR (W/kg)		
ANT1	Head	43.3%	27.70	254.97	63.3%	25.70	235.18	0.399	0.433	8.41%
ANT3	Head	43.3%	26.70	202.53	63.3%	24.70	186.81	0.485	0.526	8.41%
ANT4	Body	43.3%	24.20	113.89	63.3%	22.20	105.05	0.815	0.884	8.41%

Conclusion:
SAR test for Power Class 2 is not required base on the reported SAR <1.4 W/kg and reported SAR vs. output power linearly scaled <10%.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.18. LTE Band 48 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT7	Head	QPSK	Mode A	0	Left Touch	56207	3646.7	1	49	25.70	25.30	0.186	0.204	0.048	0.052	
								50	24	24.70	24.40	0.154	0.165	0.040	0.043	
					Left Tilt	56207	3646.7	1	49	25.70	25.30	0.099	0.108	0.033	0.037	
								50	24	24.70	24.40	0.087	0.093	0.030	0.032	
					Right Touch	56207	3646.7	1	49	25.70	25.30	0.328	0.360	0.108	0.118	115
								50	24	24.70	24.40	0.308	0.330	0.094	0.101	
					Right Tilt	56207	3646.7	1	49	25.70	25.30	0.060	0.066	0.021	0.023	
								50	24	24.70	24.40	0.044	0.047	0.015	0.016	
	Body & Hotspot	QPSK	Mode B	5	Rear	55340	3560.0	1	49	22.00	22.00	0.967	0.967	0.351	0.351	
								50	24	22.00	22.00	0.995	0.995	0.361	0.361	116
						55773	3603.3	1	49	22.00	22.00	0.855	0.855	0.309	0.309	
								50	24	22.00	22.00	0.893	0.893	0.324	0.324	
						56207	3646.7	1	49	22.00	22.00	0.923	0.923	0.325	0.325	
								50	24	22.00	22.00	0.938	0.938	0.330	0.330	
								100	0	22.00	22.00	0.911	0.911	0.319	0.319	
						56640	3690.0	1	49	22.00	22.00	0.869	0.869	0.303	0.303	
								50	24	22.00	22.00	0.901	0.901	0.312	0.312	
					Front	56207	3646.7	1	49	22.00	22.00	0.323	0.323	0.112	0.112	
								50	24	22.00	22.00	0.322	0.322	0.112	0.112	
	Hotspot	QPSK	Mode B	5	Edge 2	55340	3560.0	1	49	22.00	22.00	0.950	0.950	0.357	0.357	
								50	24	22.00	22.00	0.918	0.918	0.347	0.347	
						55773	3603.3	1	49	22.00	22.00	0.821	0.821	0.303	0.303	
								50	24	22.00	22.00	0.858	0.858	0.315	0.315	
						56207	3646.7	1	49	22.00	22.00	0.841	0.841	0.305	0.305	
								50	24	22.00	22.00	0.861	0.861	0.311	0.311	
								100	0	22.00	22.00	0.821	0.821	0.298	0.298	
						56640	3690.0	1	49	22.00	22.00	0.879	0.879	0.310	0.310	
								50	24	22.00	22.00	0.897	0.897	0.319	0.319	
					Edge 3	56207	3646.7	1	49	22.00	22.00	0.301	0.301	0.095	0.095	
								50	24	22.00	22.00	0.307	0.307	0.096	0.096	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT8	Head	QPSK	Mode A	0	Left Touch	56207	3646.7	1	49	22.25	22.00	0.206	0.218	0.082	0.087	
								50	24	22.20	22.00	0.188	0.197	0.074	0.077	
					Left Tilt	56207	3646.7	1	49	22.25	22.00	0.190	0.201	0.076	0.081	
								50	24	22.20	22.00	0.161	0.169	0.063	0.066	
					Right Touch	56207	3646.7	1	49	22.25	22.00	0.871	0.923	0.338	0.358	117
						56207	3646.7	1	49	22.25	22.00	0.634	0.672	0.244	0.258	
						56207	3646.7	1	49	22.25	22.00	0.772	0.818	0.285	0.302	
								50	24	22.20	22.00	0.693	0.726	0.253	0.265	
						56207	3646.7	1	49	22.25	22.00	0.715	0.757	0.260	0.275	
					Right Tilt	56207	3646.7	1	49	22.25	22.00	0.450	0.477	0.166	0.176	
								50	24	22.20	22.00	0.437	0.458	0.158	0.165	
	Body & Hotspot	QPSK	Mode B	5	Rear	55340	3560.0	1	49	19.50	19.50	0.985	0.985	0.289	0.289	
								50	24	19.50	19.50	0.945	0.945	0.279	0.279	
						55773	3603.3	1	49	19.50	19.50	0.998	0.998	0.295	0.295	118
								50	24	19.50	19.50	0.926	0.926	0.270	0.270	
						56207	3646.7	1	49	19.50	19.50	0.885	0.885	0.255	0.255	
								50	24	19.50	19.50	0.896	0.896	0.258	0.258	
								100	0	19.50	19.50	0.875	0.875	0.252	0.252	
						56640	3690.0	1	49	19.50	19.50	0.925	0.925	0.258	0.258	
								50	24	19.50	19.50	0.957	0.957	0.270	0.270	
					Front	56207	3646.7	1	49	19.50	19.50	0.297	0.297	0.124	0.124	
								50	24	19.50	19.50	0.339	0.339	0.134	0.134	
	Hotspot	QPSK	Mode B	5	Edge 1	56207	3646.7	1	49	19.50	19.50	0.127	0.127	0.039	0.039	
								50	24	19.50	19.50	0.127	0.127	0.039	0.039	
					Edge 4	56207	3646.7	1	49	19.50	19.50	0.226	0.226	0.088	0.088	
								50	24	19.50	19.50	0.233	0.233	0.091	0.091	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT9	Head	QPSK	Mode A	0	Left Touch	56207	3646.7	1	49	25.20	25.10	0.137	0.140	0.040	0.041	119
								50	24	24.20	24.10	0.105	0.107	0.029	0.030	
					Left Tilt	56207	3646.7	1	49	25.20	25.10	0.014	0.015	0.003	0.003	
								50	24	24.20	24.10	0.010	0.010	0.002	0.002	
					Right Touch	56207	3646.7	1	49	25.20	25.10	0.135	0.138	0.063	0.064	
								50	24	24.20	24.10	0.108	0.111	0.049	0.050	
					Right Tilt	56207	3646.7	1	49	25.20	25.10	0.036	0.036	0.011	0.011	
								50	24	24.20	24.10	0.022	0.022	0.006	0.006	
	Body & Hotspot	QPSK	Mode B	5	Rear	55340	3560.0	1	49	22.00	22.00	0.824	0.824	0.343	0.343	
								50	24	22.00	22.00	0.831	0.831	0.346	0.346	
						55773	3603.3	1	49	22.00	22.00	0.778	0.778	0.313	0.313	
								50	24	22.00	22.00	0.824	0.824	0.330	0.330	
						56207	3646.7	1	49	22.00	22.00	0.805	0.805	0.312	0.312	
								50	24	22.00	22.00	0.823	0.823	0.319	0.319	
								100	0	22.00	22.00	0.791	0.791	0.308	0.308	
						56640	3690.0	1	49	22.00	22.00	0.750	0.750	0.280	0.280	
								50	24	22.00	22.00	0.770	0.770	0.288	0.288	
					Front	55340	3560.0	1	49	22.00	22.00	0.987	0.987	0.435	0.435	
								50	24	22.00	22.00	0.994	0.994	0.437	0.437	120
						55773	3603.3	1	49	22.00	22.00	0.895	0.895	0.402	0.402	
								50	24	22.00	22.00	0.934	0.934	0.418	0.418	
						56207	3646.7	1	49	22.00	22.00	0.819	0.819	0.363	0.363	
								50	24	22.00	22.00	0.855	0.855	0.378	0.378	
								100	0	22.00	22.00	0.832	0.832	0.367	0.367	
						56640	3690.0	1	49	22.00	22.00	0.859	0.859	0.380	0.380	
								50	24	22.00	22.00	0.887	0.887	0.390	0.390	
	Hotspot	QPSK	Mode B	5	Edge 3	56207	3646.7	1	49	22.00	22.00	0.771	0.771	0.297	0.297	
								50	24	22.00	22.00	0.705	0.705	0.277	0.277	
					Edge 4	56207	3646.7	1	49	22.00	22.00	0.443	0.443	0.159	0.159	
								50	24	22.00	22.00	0.469	0.469	0.171	0.171	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	QPSK	Mode A	0	Left Touch	55340	3560.0	1	49	21.75	21.75	0.846	0.846	0.308	0.308	121
						55773	3603.3	1	49	21.75	21.75	0.826	0.826	0.302	0.302	
						56207	3646.7	1	49	21.75	21.75	0.810	0.810	0.297	0.297	
								50	24	21.70	21.70	0.743	0.743	0.270	0.270	
						56640	3690.0	1	49	21.75	21.75	0.737	0.737	0.258	0.258	
					Left Tilt	56207	3646.7	1	49	21.75	21.75	0.362	0.362	0.126	0.126	
								50	24	21.70	21.70	0.328	0.328	0.114	0.114	
					Right Touch	56207	3646.7	1	49	21.75	21.75	0.153	0.153	0.055	0.055	
								50	24	21.70	21.70	0.140	0.140	0.048	0.048	
					Right Tilt	56207	3646.7	1	49	21.75	21.75	0.127	0.127	0.045	0.045	
								50	24	21.70	21.70	0.114	0.114	0.040	0.040	
	Body & Hotspot	QPSK	Mode B	5	Rear	55340	3560.0	1	49	22.70	22.50	0.312	0.327	0.115	0.120	122
								50	24	21.70	21.50	0.254	0.266	0.092	0.096	
					Front	56207	3646.7	1	49	22.70	22.50	0.236	0.247	0.088	0.092	
								50	24	21.70	21.50	0.213	0.223	0.091	0.095	
	Hotspot	QPSK	Mode B	5	Edge 1	56207	3646.7	1	49	22.70	22.50	0.063	0.066	0.025	0.026	
								50	24	21.70	21.50	0.061	0.063	0.023	0.024	
					Edge 2	55340	3560.0	1	49	22.70	22.50	0.839	0.879	0.304	0.318	123
						55773	3603.3	1	49	22.70	22.50	0.797	0.835	0.289	0.303	
						56207	3646.7	1	49	22.70	22.50	0.773	0.809	0.278	0.291	
								50	24	21.70	21.50	0.706	0.739	0.252	0.264	
						56640	3690.0	1	49	22.70	22.50	0.756	0.792	0.272	0.285	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

UL CA 48C

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 7	Head	QPSK	Mode A	0	Right Touch	55891	3615.1	1	99	56089	3634.9	1	0	25.70	25.45	0.196	0.207	0.054	0.057	
ANT 7	Body	QPSK	Mode B	5	Rear	55340	3560.0	1	99	55538	3579.8	1	0	22.00	21.79	0.660	0.692	0.249	0.261	
ANT 8	Head	QPSK	Mode A	0	Left Touch	55340	3560.0	1	99	55538	3579.8	1	0	22.25	22.08	0.669	0.696	0.244	0.254	
ANT 8	Body	QPSK	Mode B	5	Rear	55891	3615.1	1	99	56089	3634.9	1	0	19.50	19.14	0.296	0.321	0.112	0.122	
ANT 8	Hotspot	QPSK	Mode B	5	Edge 2	55340	3560.0	1	99	55538	3579.8	1	0	19.50	19.11	0.524	0.574	0.200	0.219	
ANT 9	Head	QPSK	Mode A	0	Left Touch	55891	3615.1	1	99	56089	3634.9	1	0	25.20	24.92	0.095	0.101	0.031	0.033	
ANT 9	Body	QPSK	Mode B	5	Front	55340	3560.0	1	99	55538	3579.8	1	0	22.00	21.71	0.871	0.931	0.291	0.311	
ANT 4	Head	QPSK	Mode A	0	Right Touch	55340	3560.0	1	99	55538	3579.8	1	0	21.75	21.50	0.698	0.739	0.257	0.272	
ANT 4	Body	QPSK	Mode B	5	Rear	55340	3560.0	1	99	55538	3579.8	1	0	22.70	22.59	0.653	0.670	0.190	0.195	

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.19. LTE Band 66 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	132322	1745.0	1	49	25.70	25.20	0.134	0.150	0.090	0.101	
								50	24	24.70	24.50	0.083	0.087	0.056	0.059	
					Left Tilt	132322	1745.0	1	49	25.70	25.20	0.080	0.090	0.050	0.056	
								50	24	24.70	24.50	0.061	0.064	0.038	0.040	
					Right Touch	132322	1745.0	1	49	25.70	25.20	0.230	0.258	0.149	0.167	124
								50	24	24.70	24.50	0.179	0.187	0.116	0.121	
					Right Tilt	132322	1745.0	1	49	25.70	25.20	0.072	0.081	0.045	0.050	
								50	24	24.70	24.50	0.061	0.064	0.038	0.040	
	Body & Hotspot	QPSK	Mode B	5	Rear	132322	1745.0	1	49	17.25	17.00	0.524	0.555	0.262	0.278	
								50	24	17.25	17.00	0.543	0.575	0.271	0.287	125
					Front	132322	1745.0	1	49	17.25	17.00	0.404	0.428	0.197	0.209	
								50	24	17.25	17.00	0.415	0.440	0.203	0.215	
	Hotspot	QPSK	Mode B	5	Edge 2	132322	1745.0	1	49	17.25	17.00	0.184	0.195	0.095	0.101	
								50	24	17.25	17.00	0.190	0.201	0.099	0.105	
					Edge 3	132072	1720.0	1	49	17.25	17.00	0.722	0.765	0.339	0.359	
								50	24	17.25	17.00	0.740	0.784	0.348	0.369	
						132322	1745.0	1	49	17.25	17.00	0.820	0.869	0.386	0.409	
								50	24	17.25	17.00	0.853	0.904	0.401	0.425	
								100	0	17.25	17.00	0.838	0.888	0.394	0.417	
						132572	1770.0	1	49	17.25	17.00	0.857	0.908	0.404	0.428	
								50	24	17.25	17.00	0.868	0.919	0.408	0.432	126
					Edge 4	132322	1745.0	1	49	17.25	17.00	0.008	0.008	0.004	0.004	
								50	24	17.25	17.00	0.006	0.007	0.003	0.003	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	132322	1745.0	1	49	21.00	20.90	0.370	0.379	0.207	0.212	
								50	24	21.00	20.90	0.374	0.383	0.211	0.216	
					Left Tilt	132322	1745.0	1	49	21.00	20.90	0.331	0.339	0.179	0.183	
								50	24	21.00	20.90	0.342	0.350	0.185	0.189	
					Right Touch	132072	1720.0	1	49	21.00	20.90	0.937	0.959	0.488	0.499	
								50	24	21.00	20.90	0.974	0.997	0.506	0.518	127
						132322	1745.0	1	49	21.00	20.90	0.794	0.812	0.416	0.426	
								50	24	21.00	20.90	0.812	0.831	0.425	0.435	
								100	0	21.00	20.90	0.799	0.818	0.418	0.428	
						132572	1770.0	1	49	21.00	20.90	0.696	0.712	0.367	0.376	
								50	24	21.00	20.90	0.691	0.707	0.365	0.374	
					Right Tilt	132322	1745.0	1	49	21.00	20.90	0.666	0.682	0.321	0.328	
								50	24	21.00	20.90	0.685	0.701	0.330	0.338	
	Body & Hotspot	QPSK	Mode B	5	Rear	132322	1745.0	1	49	20.25	19.95	0.619	0.663	0.301	0.323	
								50	24	20.25	19.95	0.632	0.677	0.306	0.328	128
					Front	132322	1745.0	1	49	20.25	19.95	0.345	0.370	0.182	0.195	
								50	24	20.25	19.95	0.357	0.383	0.191	0.205	
	Hotspot	QPSK	Mode B	5	Edge 1	132072	1720.0	1	49	20.25	20.15	0.941	0.963	0.458	0.469	
								50	24	20.25	20.15	0.973	0.996	0.458	0.469	129
						132322	1745.0	1	49	20.25	19.95	0.753	0.807	0.255	0.273	
								50	24	20.25	19.95	0.808	0.866	0.380	0.407	
								100	0	20.25	19.95	0.797	0.854	0.373	0.400	
						132572	1770.0	1	49	20.25	19.95	0.596	0.639	0.279	0.299	
								50	24	20.25	19.95	0.587	0.629	0.280	0.300	
					Edge 2	132322	1745.0	1	49	20.25	19.95	0.021	0.022	0.014	0.015	
								50	24	20.25	19.95	0.020	0.022	0.013	0.014	
					Edge 4	132322	1745.0	1	49	20.25	19.95	0.513	0.550	0.250	0.268	
								50	24	20.25	19.95	0.449	0.481	0.228	0.244	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	QPSK	Mode A	0	Left Touch	132322	1745.0	1	49	24.70	24.20	0.229	0.257	0.150	0.168	130
								50	24	23.70	23.50	0.161	0.169	0.105	0.110	
					Left Tilt	132322	1745.0	1	49	24.70	24.20	0.197	0.221	0.127	0.142	
								50	24	23.70	23.50	0.103	0.108	0.066	0.069	
					Right Touch	132322	1745.0	1	49	24.70	24.20	0.140	0.157	0.091	0.102	
								50	24	23.70	23.50	0.112	0.117	0.073	0.076	
					Right Tilt	132322	1745.0	1	49	24.70	24.20	0.125	0.140	0.075	0.084	
								50	24	23.70	23.50	0.081	0.085	0.048	0.050	
	Body & Hotspot	QPSK	Mode B	5	Rear	132072	1720.0	1	49	20.25	19.75	0.701	0.787	0.367	0.412	
								50	24	20.25	19.75	0.727	0.816	0.389	0.436	
						132322	1745.0	1	49	20.25	19.75	0.725	0.813	0.374	0.420	
								50	24	20.25	19.75	0.737	0.827	0.380	0.426	131
								100	0	20.25	19.75	0.729	0.818	0.375	0.421	
						132572	1770.0	1	49	20.25	19.75	0.719	0.807	0.373	0.419	
								50	24	20.25	19.75	0.727	0.816	0.378	0.424	
					Front	132322	1745.0	1	49	20.25	19.75	0.451	0.506	0.262	0.294	
								50	24	20.25	19.75	0.465	0.522	0.269	0.302	
	Hotspot	QPSK	Mode B	5	Edge 3	132322	1745.0	1	49	20.25	19.75	0.076	0.085	0.032	0.036	
								50	24	20.25	19.75	0.078	0.088	0.033	0.037	
					Edge 4	132322	1745.0	1	49	20.25	19.75	0.541	0.607	0.285	0.320	
								50	24	20.25	19.75	0.554	0.622	0.290	0.325	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	QPSK	Mode A	0	Left Touch	132072	1720.0	1	49	20.00	20.00	0.903	0.903	0.461	0.461	
								50	24	20.00	20.00	0.933	0.933	0.473	0.473	
						132322	1745.0	1	49	20.00	20.00	0.911	0.911	0.465	0.465	
								50	24	20.00	20.00	0.944	0.944	0.477	0.477	
								100	0	20.00	20.00	0.926	0.926	0.469	0.469	
						132572	1770.0	1	49	20.00	20.00	0.926	0.926	0.468	0.468	
								50	24	20.00	20.00	0.957	0.957	0.483	0.483	132
					Left Tilt	132322	1745.0	1	49	20.00	20.00	0.427	0.427	0.222	0.222	
								50	24	20.00	20.00	0.443	0.443	0.229	0.229	
					Right Touch	132322	1745.0	1	49	20.00	20.00	0.211	0.211	0.130	0.130	
								50	24	20.00	20.00	0.195	0.195	0.120	0.120	
					Right Tilt	132322	1745.0	1	49	20.00	20.00	0.172	0.172	0.285	0.285	
								50	24	20.00	20.00	0.175	0.175	0.110	0.110	
	Body & Hotspot	QPSK	Mode B	5	Rear	132322	1745.0	1	49	21.75	21.75	0.478	0.478	0.249	0.249	
								50	24	21.70	21.65	0.415	0.420	0.217	0.220	
					Front	132322	1745.0	1	49	21.75	21.75	0.482	0.482	0.254	0.254	133
								50	24	21.70	21.65	0.423	0.428	0.223	0.226	
	Hotspot	QPSK	Mode B	5	Edge 1	132322	1745.0	1	49	21.75	21.75	0.380	0.380	0.182	0.182	
								50	24	21.70	21.65	0.329	0.333	0.158	0.160	
					Edge 2	132072	1720.0	1	49	21.75	21.75	0.977	0.977	0.474	0.474	
								50	24	21.70	21.65	0.810	0.819	0.391	0.396	
						132322	1745.0	1	49	21.75	21.75	0.969	0.969	0.466	0.466	
								50	24	21.70	21.65	0.794	0.803	0.380	0.384	
								100	0	21.70	21.65	0.978	0.989	0.459	0.464	
						132572	1770.0	1	49	21.75	21.75	0.999	0.999	0.475	0.475	134
								50	24	21.70	21.65	0.814	0.823	0.386	0.390	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

SAR Testing for 5G Bands was performed in one of two ways:

1.) If the 5G Band has a LTE equivalent Band, such as LTE Band 5 for 5G Band n5; then spot-checks were performed on the worst-case position per Exposure Condition per Antenna. If the Reported SAR Result for the 5G spot-check is ≤ the Reported SAR result of the LTE equivalent Band, then no further testing is required. If the value is more than 10% greater than the LTE equivalent Band, full testing is required.

2.) If there is no LTE equivalent Band supported on this device, then full testing is required for that band.

10.20. 5G NR Band n5 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	DFT-s-OFDM QPSK	Mode A	0	Right Touch	167300	836.5	1	53	25.70	25.70	0.190	0.190	0.141	0.141	185
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	167300	836.5	1	53	25.70	25.70	0.672	0.672	0.366	0.366	186
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	DFT-s-OFDM QPSK	Mode A	0	Right Touch	167300	836.5	1	53	24.50	24.50	0.494	0.494	0.299	0.299	187
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	167300	836.5	1	53	24.50	24.50	0.426	0.426	0.255	0.255	188

Note(s):

Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

10.21. 5G NR Band n12 (15MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	DFT-s-OFDM QPSK	Mode A	0	Right Touch	141500	707.5	1	40	25.70	25.70	0.123	0.123	0.092	0.092	189
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	141500	707.5	1	40	25.70	25.70	0.448	0.448	0.262	0.262	190
					Edge 2	141500	707.5	1	40	25.70	25.70	0.497	0.497	0.319	0.319	191
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	DFT-s-OFDM QPSK	Mode A	0	Right Touch	141500	707.5	1	40	23.90	23.90	0.433	0.433	0.269	0.269	192
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	141500	707.5	1	40	23.90	23.90	0.238	0.238	0.143	0.143	193

Note(s):

Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.22. 5G NR Band n25 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	DFT-s-OFDM QPSK	Mode A	0	Right Touch	376500	1882.5	1	53	25.70	25.70	0.169	0.169	0.105	0.105	194
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	376500	1882.5	50	28	17.00	17.00	0.589	0.589	0.321	0.321	195
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 3	372000	1860.0	50	28	17.00	17.00	0.930	0.930	0.448	0.448	196
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	DFT-s-OFDM QPSK	Mode A	0	Right Touch	381000	1905.0	50	28	20.25	20.25	0.576	0.576	0.312	0.312	197
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	376500	1882.5	1	53	20.00	20.00	0.553	0.553	0.257	0.257	198
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 4	376500	1882.5	1	53	20.00	20.00	0.446	0.446	0.225	0.225	199
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	DFT-s-OFDM QPSK	Mode A	0	Left Touch	376500	1882.5	1	53	24.70	24.70	0.481	0.481	0.301	0.301	200
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	376500	1882.5	1	53	19.50	19.50	0.539	0.539	0.304	0.304	201
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 4	372000	1860.0	50	28	19.50	19.50	0.705	0.705	0.376	0.376	202
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	DFT-s-OFDM QPSK	Mode A	0	Left Touch	381000	1905.0	50	28	18.50	18.50	0.715	0.715	0.369	0.369	203
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	376500	1882.5	50	28	19.25	19.25	0.461	0.461	0.250	0.250	204
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 2	381000	1905.0	50	28	19.25	19.25	0.819	0.819	0.402	0.402	205

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.23. 5G NR Band n41 (100MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	DFT-s-OFDM QPSK	Mode A	0	Right Touch	518600	2593.0	1	137	25.70	25.70	0.148	0.148	0.081	0.081	206
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	518600	2593.0	135	69	19.75	19.75	0.668	0.668	0.293	0.293	207
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 2	518600	2593.0	135	69	19.75	19.75	0.761	0.761	0.323	0.323	208
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	DFT-s-OFDM QPSK	Mode A	0	Left Tilt	518600	2593.0	1	137	17.00	17.00	0.980	0.980	0.396	0.396	209
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	518600	2593.0	1	137	19.00	19.00	0.715	0.715	0.303	0.303	210
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	DFT-s-OFDM QPSK	Mode A	0	Left Touch	518600	2593.0	1	137	25.00	25.00	0.402	0.402	0.222	0.222	211
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	518600	2593.0	135	69	18.00	18.00	0.489	0.489	0.239	0.239	212
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 4	518600	2593.0	135	69	18.00	18.00	0.912	0.912	0.377	0.377	213
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	DFT-s-OFDM QPSK	Mode A	0	Left Touch	518600	2593.0	1	137	18.00	18.00	0.929	0.929	0.391	0.391	214
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	518600	2593.0	1	137	20.25	20.25	0.566	0.566	0.239	0.239	215

Note(s):

Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

10.24. 5G NR Band n41 Power Class 2 (100MHz Bandwidth)

According to Section 9.4, SAR evaluation for PC2 is only required when its Maximum output power (Tune-up Limit) is higher from PC3.

From May 2017 TCB Workshop, SAR tested were performed using Power Class 3. SAR test for Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination.

Additional SAR testing for Power Class 2 is not required when:

- The reported SAR vs. output power can be linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg

Reported SAR vs. Output Power linearly scaled

Antenna	RF Exposure Conditions	Power Class 2			Power Class 3				PC2 linearly scaled Reported SAR (W/kg)	Linearly scaled (<10%)
		Duty Cycle	Tune-up Power (dBm)	Frame Avg. Power (mW)	Duty Cycle	Tune-up Power (dBm)	Frame Avg. Power (mW)	Reported 1-g SAR (W/kg)		
ANT1	Head	50.0%	26.70	233.87	100.0%	25.70	371.54	0.148	0.093	-37.05%

Conclusion:

SAR test for Power Class 2 is not required base on the reported SAR <1.4 W/kg and reported SAR vs. output power linearly scaled <10%.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.25. 5G NR Band n66 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	DFT-s-OFDM	Mode A	0	Right Touch	349000	1745.0	1	53	25.70	25.70	0.217	0.217	0.143	0.143	216
	Body & Hotspot	DFT-s-OFDM	Mode B	5	Rear	349000	1745.0	50	28	17.25	17.25	0.415	0.415	0.211	0.211	217
	Hotspot	DFT-s-OFDM	Mode B	5	Edge 3	352000	1760.0	50	28	17.25	17.25	0.689	0.689	0.322	0.322	218
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	DFT-s-OFDM	Mode A	0	Right Touch	346000	1730.0	50	28	21.00	21.00	0.761	0.761	0.373	0.373	219
	Body & Hotspot	DFT-s-OFDM	Mode B	5	Rear	349000	1745.0	50	28	20.25	20.25	0.545	0.545	0.262	0.262	220
	Hotspot	DFT-s-OFDM	Mode B	5	Edge 1	346000	1730.0	50	28	20.25	20.25	0.619	0.619	0.293	0.293	221
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	DFT-s-OFDM	Mode A	0	Left Touch	349000	1745.0	1	53	24.70	24.70	0.212	0.212	0.143	0.143	222
	Body & Hotspot	DFT-s-OFDM	Mode B	5	Rear	349000	1745.0	50	28	20.25	20.25	0.500	0.500	0.280	0.280	223
	Hotspot	DFT-s-OFDM	Mode B	5	Edge 4	349000	1745.0	50	28	20.25	20.25	0.480	0.480	0.256	0.256	224
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	DFT-s-OFDM	Mode A	0	Left Touch	352000	1760.0	50	28	20.00	20.00	0.834	0.834	0.427	0.427	225
	Body & Hotspot	DFT-s-OFDM	Mode B	5	Front	349000	1745.0	1	53	21.75	21.75	0.293	0.293	0.160	0.160	226
	Hotspot	DFT-s-OFDM	Mode B	5	Edge 2	352000	1760.0	1	53	21.75	21.75	0.762	0.762	0.352	0.352	227

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.26. 5G NR Band n77 (100MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT7	Head	DFT-s-OFDM QPSK	Mode A	0	Left Touch	650000	3750.0	1	137	25.70	25.70	0.204	0.204	0.081	0.081	
								135	69	25.70	25.70	0.205	0.205	0.083	0.083	
					Left Tilt	650000	3750.0	1	137	25.70	25.70	0.189	0.189	0.070	0.070	
								135	69	25.70	25.70	0.183	0.183	0.068	0.068	
					Right Touch	650000	3750.0	1	137	25.70	25.70	0.506	0.506	0.197	0.197	228
								135	69	25.70	25.70	0.480	0.480	0.193	0.193	
					Right Tilt	650000	3750.0	1	137	25.70	25.70	0.113	0.113	0.043	0.043	
								135	69	25.70	25.70	0.146	0.146	0.058	0.058	
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	650000	3750.0	1	137	19.00	19.00	0.848	0.848	0.303	0.303	
								135	69	19.00	19.00	0.902	0.902	0.320	0.320	
								270	0	19.00	19.00	0.914	0.914	0.318	0.318	229
					Front	650000	3750.0	1	137	19.00	19.00	0.361	0.361	0.124	0.124	
								135	69	19.00	19.00	0.395	0.395	0.143	0.143	
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 2	650000	3750.0	1	137	19.00	19.00	0.900	0.900	0.330	0.330	
								135	69	19.00	19.00	0.899	0.899	0.325	0.325	
								270	0	19.00	19.00	0.984	0.984	0.352	0.352	230
					Edge 3	650000	3750.0	1	137	19.00	19.00	0.563	0.563	0.178	0.178	
								135	69	19.00	19.00	0.563	0.563	0.176	0.176	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT8	Head	DFT-s-OFDM QPSK	Mode A	0	Left Touch	650000	3750.0	1	137	20.50	20.50	0.481	0.481	0.159	0.159	
								135	69	20.50	20.50	0.463	0.463	0.151	0.151	
					Left Tilt	650000	3750.0	1	137	20.50	20.50	0.256	0.256	0.099	0.099	
								135	69	20.50	20.50	0.256	0.256	0.103	0.103	
					Right Touch	650000	3750.0	1	137	20.50	20.50	0.940	0.940	0.301	0.301	
								135	69	20.50	20.50	0.902	0.902	0.291	0.291	
								270	0	20.50	20.50	0.984	0.984	0.304	0.304	231
					Right Tilt	650000	3750.0	1	137	20.50	20.50	0.646	0.646	0.209	0.209	
								135	69	20.50	20.50	0.677	0.677	0.222	0.222	
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	650000	3750.0	1	137	17.00	17.00	0.935	0.935	0.312	0.312	232
								135	69	17.00	17.00	0.909	0.909	0.301	0.301	
								270	0	17.00	17.00	0.827	0.827	0.287	0.287	
					Front	650000	3750.0	1	137	17.00	17.00	0.266	0.266	0.095	0.095	
								135	69	17.00	17.00	0.235	0.235	0.860	0.860	
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 1	650000	3750.0	1	137	17.00	17.00	0.410	0.410	0.125	0.125	
								135	69	17.00	17.00	0.353	0.353	0.105	0.105	
					Edge 2	650000	3750.0	1	137	17.00	17.00	0.129	0.129	0.046	0.046	
								135	69	17.00	17.00	0.129	0.129	0.045	0.045	

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT9	Head	DFT-s-OFDM QPSK	Mode A	0	Left Touch	650000	3750.0	1	137	25.20	25.15	0.107	0.108	0.039	0.039	233
								135	69	25.20	25.12	0.104	0.106	0.036	0.037	
					Left Tilt	650000	3750.0	1	137	25.20	25.15	0.097	0.098	0.030	0.030	
								135	69	25.20	25.12	0.102	0.104	0.030	0.031	
					Right Touch	650000	3750.0	1	137	25.20	25.15	0.096	0.097	0.035	0.035	
								135	69	25.20	25.12	0.097	0.099	0.036	0.037	
					Right Tilt	650000	3750.0	1	137	25.20	25.15	0.050	0.051	0.018	0.018	
								135	69	25.20	25.12	0.057	0.058	0.022	0.022	
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	650000	3750.0	1	137	19.00	18.75	0.834	0.883	0.321	0.340	234
								135	69	19.00	18.75	0.830	0.879	0.320	0.339	
								270	0	19.00	18.75	0.745	0.789	0.291	0.308	
					Front	650000	3750.0	1	137	19.00	18.75	0.463	0.490	0.237	0.251	
								135	69	19.00	18.75	0.397	0.421	0.136	0.144	
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 3	650000	3750.0	1	137	19.00	18.75	0.519	0.550	0.168	0.178	
								135	69	19.00	18.75	0.598	0.633	0.186	0.197	
					Edge 4	650000	3750.0	1	137	19.00	18.75	0.302	0.320	0.108	0.114	
								135	69	19.00	18.75	0.300	0.318	0.108	0.114	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Head	DFT-s-OFDM QPSK	Mode A	0	Left Touch	650000	3750.0	1	137	19.00	19.00	0.943	0.943	0.335	0.335	
								135	69	19.00	19.00	0.966	0.966	0.376	0.376	235
								270	0	19.00	19.00	0.904	0.904	0.344	0.344	
					Left Tilt	650000	3750.0	1	137	19.00	19.00	0.539	0.539	0.198	0.198	
								135	69	19.00	19.00	0.518	0.518	0.187	0.187	
					Right Touch	650000	3750.0	1	137	19.00	19.00	0.174	0.174	0.070	0.070	
								135	69	19.00	19.00	0.170	0.170	0.066	0.066	
					Right Tilt	650000	3750.0	1	137	19.00	19.00	0.148	0.148	0.062	0.062	
								135	69	19.00	19.00	0.146	0.146	0.060	0.060	
	Body & Hotspot	DFT-s-OFDM QPSK	Mode B	5	Rear	650000	3750.0	1	137	19.25	19.25	0.551	0.551	0.203	0.203	
								135	69	19.25	19.25	0.594	0.594	0.219	0.219	236
					Front	650000	3750.0	1	137	19.25	19.25	0.475	0.475	0.177	0.177	
								135	69	19.25	19.25	0.443	0.443	0.162	0.162	
	Hotspot	DFT-s-OFDM QPSK	Mode B	5	Edge 1	650000	3750.0	1	137	19.25	19.25	0.133	0.133	0.055	0.055	
								135	69	19.25	19.25	0.136	0.136	0.056	0.056	
					Edge 2	650000	3750.0	1	137	19.25	19.25	0.911	0.911	0.342	0.342	237
								135	69	19.25	19.25	0.871	0.871	0.327	0.327	
								270	0	19.25	19.25	0.901	0.901	0.339	0.339	

Note(s):

Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.27. Wi-Fi (DTS Band)

When the 802.11b reported SAR of the highest measured maximum output power channel is ≤ 0.8 W/kg, no further SAR testing is required. If SAR is > 0.8 W/kg and ≤ 1.2 W/kg, SAR is required for the next highest measured output power channel. Finally, if SAR is > 1.2 W/kg, SAR is required for the third channel.

SAR testing is not required for OFDM mode(s) when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

ANT3 Power Mode A the P_{Cell_ON} is same as P_{Cell_OFF}

Antenna	WWAN Power	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
											Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Cell OFF	Head	802.11b	Mode A	0	Left Touch	6	2437	0.0658	100.0%	22.50	22.50	0.041	0.041	0.024	0.024	135
						Left Tilt	6	2437	0.026	100.0%	22.50	22.50					
						Right Touch	6	2437	0.062	100.0%	22.50	22.50					
						Right Tilt	6	2437	0.020	100.0%	22.50	22.50					
		Body & Hotspot	802.11b	Mode B	5	Rear	1	2412	1.100	100.0%	19.00	19.00	0.842	0.842	0.321	0.321	
							6	2437	1.630	100.0%	19.00	19.00	1.060	1.060	0.410	0.410	136
							11	2462	1.43	100.0%	19.00	19.00	0.925	0.925	0.347	0.347	
						Front	1	2412	1.350	100.0%	19.00	19.00	0.921	0.921	0.412	0.412	
							6	2437	1.160	100.0%	19.00	19.00	0.802	0.802	0.375	0.375	
		Hotspot	802.11b	Mode B		Edge 3	6	2437	0.461	100.0%	19.00	19.00	0.322	0.322	0.140	0.140	
						Edge 4	6	2437	0.298	100.0%	19.00	19.00					
Antenna	WWAN Power	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
											Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Cell OFF	Head	802.11b	Mode A	0	Left Touch	1	2412	1.560	100.0%	18.75	18.75	1.090	1.090	0.457	0.457	
							6	2437	1.830	100.0%	18.75	18.75	1.100	1.100	0.470	0.470	137
							11	2462	1.660	100.0%	18.75	18.75	0.996	0.996	0.431	0.431	
						Left Tilt	6	2437	0.750	100.0%	18.75	18.75	0.557	0.557	0.237	0.237	
						Right Touch	6	2437	0.434	100.0%	18.75	18.75					
						Right Tilt	6	2437	0.312	100.0%	18.75	18.75					
		Body & Hotspot	802.11b	Mode B	5	Rear	1	2412	1.410	100.0%	21.25	21.25	0.785	0.785	0.349	0.349	
							6	2437	1.400	100.0%	21.25	21.25	0.858	0.858	0.399	0.399	
						Front	1	2412	1.300	100.0%	21.25	21.25	0.884	0.884	0.422	0.422	138
							6	2437	1.280	100.0%	21.25	21.25	0.840	0.840	0.395	0.395	
		Hotspot	802.11b	Mode B	5	Edge 1	6	2437	0.327	100.0%	21.25	21.25	0.260	0.260	0.109	0.109	
						Edge 2	6	2437	1.580	100.0%	21.25	21.25	1.040	1.040	0.453	0.453	139
							11	2462	1.270	100.0%	21.25	21.25	0.860	0.860	0.372	0.372	
Antenna	WWAN Power	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
											Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 3	Cell ON	Body & Hotspot	802.11b	Mode B	5	Rear	6	2437	0.801	100.0%	16.00	16.00	0.481	0.481	0.179	0.179	
						Front	6	2437	0.78	100.0%	16.00	16.00	0.569	0.569	0.254	0.254	140
		Hotspot	802.11b	Mode B	5	Edge 3	6	2437	0.246	100.0%	16.00	16.00					
						Edge 4	6	2437	0.123	100.0%	16.00	16.00					
Antenna	WWAN Power	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
											Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Cell ON	Head	802.11b	Mode A	0	Left Touch	6	2437	0.578	100.0%	14.00	14.00	0.349	0.349	0.145	0.145	141
						Left Tilt	6	2437	0.236	100.0%	14.00	14.00					
						Right Touch	6	2437	0.102	100.0%	14.00	14.00					
						Right Tilt	6	2437	0.09	100.0%	14.00	14.00					
		Body & Hotspot	802.11b	Mode B	5	Rear	6	2437	0.73	100.0%	18.25	18.25	0.420	0.420	0.190	0.190	142
						Front	6	2437	0.416	100.0%	18.25	18.25					
		Hotspot	802.11b	Mode B	5	Edge 1	6	2437	0.156	100.0%	18.25	18.25					
						Edge 2	6	2437	0.977	100.0%	18.25	18.25	0.567	0.567	0.234	0.234	143

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.28. Wi-Fi (U-NII Band)

Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell OFF	U-NII-2A	Head	802.11n (HT40)	Mode A	0	Left Touch	54	5270	0.071	96.8%	21.00	21.00	0.031	0.032	0.007	0.007	144
							Left Tilt	54	5270	0.056	96.8%	21.00	21.00					
							Right Touch	54	5270	0.057	96.8%	21.00	21.00					
							Right Tilt	54	5270	0.054	96.8%	21.00	21.00					
		U-NII-1	Body & Airplay	802.11n HT40	Mode B	5	Rear	38	5190	1.450	96.8%	17.00	17.00	0.624	0.645	0.181	0.187	
								46	5230	2.390	96.8%	19.00	19.00	1.070	1.105	0.316	0.326	145
							Front	46	5230	0.115	96.8%	19.00	19.00					
			Airplay	802.11n HT40)	Mode B	5	Edge 3	46	5230	0.584	96.8%	19.00	19.00	0.248	0.256	0.082	0.085	
							Edge 4	46	5230	0.131	96.8%	19.00	19.00					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell OFF	U-NII-2C	Head	802.11ac (VHT80)	Mode A	0	Left Touch	122	5610	0.154	95.1%	21.50	21.50	0.061	0.064	0.015	0.016	146
							Left Tilt	122	5610	0.058	95.1%	21.50	21.50					
							Right Touch	122	5610	0.129	95.1%	21.50	21.50					
							Right Tilt	122	5610	0.109	95.1%	21.50	21.50					
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	122	5610	2.690	95.1%	16.50	16.50	1.070	1.125	0.327	0.344	147
								138	5690	2.120	95.1%	16.50	16.50	0.932	0.980	0.273	0.287	
							Front	122	5610	0.088	95.1%	16.50	16.50					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	122	5610	0.681	95.1%	16.50	16.50	0.309	0.325	0.108	0.114	
							Edge 4	122	5610	0.171	95.1%	16.50	16.50					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell OFF	U-NII-3	Head	802.11a	Mode A	0	Left Touch	157	5785	0.098	98.7%	21.50	21.50	0.018	0.018	0.002	0.002	148
							Left Tilt	157	5785	0.017	98.7%	21.50	21.50					
							Right Touch	157	5785	0.027	98.7%	21.50	21.50					
							Right Tilt	157	5785	0.047	98.7%	21.50	21.50					
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	2.170	95.1%	17.50	17.50	1.070	1.125	0.327	0.344	149
							Front	155	5775	0.097	95.1%	17.50	17.50					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	155	5775	0.668	95.1%	17.50	17.50	0.236	0.248	0.08	0.084	
							Edge 4	155	5775	0.195	95.1%	17.50	17.50					
Antenna	WWAN Power	Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT6	Cell OFF	U-NII-1	Head	802.11n (HT40)	Mode A	0	Left Touch	46	5230	0.565	96.8%	18.50	18.50					
							Left Tilt	46	5230	0.546	96.8%	18.50	18.50					
							Right Touch	38	5230	1.350	96.8%	17.00	17.00	0.532	0.550	0.156	0.161	
								46	5230	2.940	96.8%	18.50	18.50	1.030	1.064	0.316	0.326	150
							Right Tilt	46	5230	1.940	96.8%	18.50	18.50	0.709	0.732	0.199	0.206	
			Body & Airplay	802.11 n HT40	Mode B	5	Rear	38	5230	1.080	96.8%	17.00	17.00	0.563	0.582	0.156	0.161	
								46	5230	1.800	96.8%	18.25	18.25	0.952	0.983	0.265	0.274	151
							Front	46	5230	0.936	96.8%	18.25	18.25	0.474	0.490	0.142	0.147	
			Airplay	802.11n (HT40)	Mode B	5	Edge 1	46	5230	0.619	96.8%	18.25	18.25					
							Edge 4	38	5230	1.950	96.8%	17.00	17.00	0.826	0.853	0.266	0.275	
								46	5230	2.710	96.8%	18.25	18.25	1.100	1.136	0.341	0.352	152
Antenna	WWAN Power	Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT6	Cell OFF	U-NII-2C	Head	802.11ac (VHT80)	Mode A	0	Left Touch	122	5610	0.588	95.1%	16.75	16.75					
							Left Tilt	122	5610	0.696	95.1%	16.75	16.75					
							Right Touch	106	5530	2.470	95.1%	16.75	16.75	1.030	1.083	0.319	0.335	
								122	5610	3.240	95.1%	16.75	16.75	1.120	1.178	0.337	0.354	153
								138	5690	2.610	95.1%	16.75	16.75	0.965	1.015	0.283	0.298	
							Right Tilt	122	5610	1.550	95.1%	16.75	16.75	0.743	0.781	0.198	0.208	
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	122	5610	1.340	95.1%	15.50	15.50	0.649	0.682	0.181	0.190	154
							Front	122	5610	0.958	95.1%	16.25	16.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	122	5610	0.518	95.1%	16.25	16.25					
							Edge 4	122	5610	2.950	95.1%	16.25	16.25	1.110	1.167	0.334	0.351	155
								138	5690	2.120	95.1%	16.25	16.25	0.912	0.959	0.276	0.290	
Antenna	WWAN Power	Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT6	Cell OFF	U-NII-3	Head	802.11ac (VHT80)	Mode A	0	Left Touch	155	5775	1.250	95.1%	18.00	18.00					
							Left Tilt	155	5775	1.490	95.1%	18.00	18.00	0.367	0.386	0.102	0.107	
							Right Touch	155	5775	2.410	95.1%	18.00	18.00	1.070	1.125	0.310	0.326	156
							Right Tilt	155	5775	2.660	95.1%	18.00	18.00	0.940	0.988	0.239	0.251	
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	2.160	95.1%	18.00	18.00	1.080	1.136	0.285	0.300	157
							Front	155	5775	1.510	95.1%	18.00	18.00	0.623	0.655	0.182	0.191	
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	155	5775	0.722	95.1%	18.00	18.00					
							Edge 4	155	5775	2.830	95.1%	18.00	18.00	1.120	1.178	0.342	0.360	158

This report shall not be reproduced without the written approval of UL Verification Services Inc.

ANT5 Power Mode A the P_{Cell_ON} is same as P_{Cell_OFF}

Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell ON	U-NII-2A	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	42	5210	0.701	95.1%	15.25	15.25	0.415	0.436	0.119	0.125	159
							Front	42	5210	0.036	95.1%	15.25	15.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	42	5210	0.221	95.1%	15.25	15.25	0.110	0.116	0.038	0.040	
							Edge 4	42	5210	0.054	95.1%	15.25	15.25					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell ON	U-NII-2C	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	122	5610	1.200	95.1%	12.75	12.75	0.426	0.448	0.138	0.145	160
							Front	122	5610	0.039	95.1%	12.75	12.75					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	122	5610	0.241	95.1%	12.75	12.75	0.119	0.125	0.038	0.040	
							Edge 4	122	5610	0.062	95.1%	12.75	12.75					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell ON	U-NII-3	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	0.959	95.1%	13.75	13.75	0.403	0.424	0.142	0.149	161
							Front	155	5775	0.043	95.1%	13.75	13.75					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	155	5775	0.298	95.1%	13.75	13.75	0.144	0.151	0.050	0.053	
							Edge 4	155	5775	0.087	95.1%	13.75	13.75					
Antenna	WWAN Power	Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT6	Cell ON	U-NII-1	Head	802.11ac (VHT80)	Mode A	0	Left Touch	42	5210	0.161	95.1%	12.50	12.50					
							Left Tilt	42	5210	0.197	95.1%	12.50	12.50					
							Right Touch	42	5210	0.480	95.1%	12.50	12.50	0.206	0.217	0.068	0.072	162
							Right Tilt	42	5210	0.379	95.1%	12.50	12.50					
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	42	5210	0.948	95.1%	14.50	14.50	0.400	0.421	0.114	0.120	163
							Front	42	5210	0.489	95.1%	14.50	14.50					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	42	5210	0.301	95.1%	14.50	14.50					
							Edge 4	42	5210	0.951	95.1%	14.50	14.50	0.425	0.447	0.113	0.119	164
Antenna	WWAN Power	Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT6	Cell ON	U-NII-2C	Head	802.11ac (VHT80)	Mode A	0	Left Touch	122	5610	0.214	95.1%	10.75	10.75					
							Left Tilt	122	5610	0.214	95.1%	10.75	10.75					
							Right Touch	122	5610	0.65	95.1%	10.75	10.75	0.268	0.282	0.077	0.081	165
							Right Tilt	122	5610	0.504	95.1%	10.75	10.75					
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	122	5610	0.959	95.1%	12.50	12.50	0.346	0.364	0.089	0.094	166
							Front	122	5610	0.256	95.1%	12.50	12.50					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	122	5610	0.023	95.1%	12.50	12.50					
							Edge 4	122	5610	1.1	95.1%	12.50	12.50	0.410	0.431	0.123	0.129	167
Antenna	WWAN Power	Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT6	Cell ON	U-NII-3	Head	802.11ac (VHT80)	Mode A	0	Left Touch	155	5775	0.156	95.1%	12.00	12.00					
							Left Tilt	155	5775	0.220	95.1%	12.00	12.00					
							Right Touch	155	5775	0.503	95.1%	12.00	12.00	0.268	0.282	0.072	0.076	168
							Right Tilt	155	5775	0.523	95.1%	12.00	12.00					
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	1.36	95.1%	14.25	14.25	0.393	0.413	0.128	0.135	169
							Front	155	5775	0.574	95.1%	14.25	14.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	155	5775	0.294	95.1%	14.25	14.25					
							Edge 4	155	5775	1.01	95.1%	14.25	14.25	0.411	0.432	0.125	0.131	170

This report shall not be reproduced without the written approval of UL Verification Services Inc.

10.29. Bluetooth

ANT3 Power Mode A the P_{high} is same as $P_{standalone}$

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3 P_{low}	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	10.50	10.50	>0.001	>0.001	>0.001	>0.001	171
					Left Tilt	39	2441	100.0%	10.50	10.50	>0.001	>0.001	>0.001	>0.001	
					Right Touch	39	2441	100.0%	10.50	10.50	>0.001	>0.001	>0.001	>0.001	
					Right Tilt	39	2441	100.0%	10.50	10.50	>0.001	>0.001	>0.001	>0.001	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	8.00	8.00	0.067	0.067	0.023	0.023	
					Front	39	2441	100.0%	8.00	8.00	0.068	0.068	0.032	0.032	172
	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	8.00	8.00	0.002	0.002	0.001	0.001	
					Edge 4	39	2441	100.0%	8.00	8.00	0.006	0.006	0.001	0.001	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3 P_{high}	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	14.00	14.00	0.078	0.078	0.028	0.028	
					Front	39	2441	100.0%	14.00	14.00	0.118	0.118	0.051	0.051	173
	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	14.00	14.00	0.021	0.021	0.009	0.009	
					Edge 4	39	2441	100.0%	14.00	14.00	0.008	0.008	0.000	0.000	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3 $P_{standlone}$	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	20.00	20.00	0.050	0.050	0.027	0.027	174
					Left Tilt	39	2441	100.0%	20.00	20.00	0.002	0.002	0.000	0.000	
					Right Touch	39	2441	100.0%	20.00	20.00	0.017	0.017	0.006	0.006	
					Right Tilt	39	2441	100.0%	20.00	20.00	0.003	0.003	0.001	0.001	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	19.00	19.00	0.668	0.668	0.258	0.258	175
					Front	39	2441	100.0%	19.00	19.00	0.324	0.324	0.146	0.146	
	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	19.00	19.00	0.087	0.087	0.043	0.043	
					Edge 4	39	2441	100.0%	19.00	19.00	0.047	0.047	0.200	0.200	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4 P_{low}	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	7.50	7.50	0.059	0.059	0.023	0.023	176
					Left Tilt	39	2441	100.0%	7.50	7.50	0.028	0.028	0.009	0.009	
					Right Touch	39	2441	100.0%	7.50	7.50	0.012	0.012	0.004	0.004	
					Right Tilt	39	2441	100.0%	7.50	7.50	0.005	0.005	0.001	0.001	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	10.00	10.00	0.067	0.067	0.027	0.027	177
					Front	39	2441	100.0%	10.00	10.00	0.047	0.047	0.020	0.020	
	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	10.00	10.00	0.013	0.013	0.004	0.004	
					Edge 2	39	2441	100.0%	10.00	10.00	0.089	0.089	0.036	0.036	178
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4 P_{high}	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	13.50	13.50	0.311	0.311	0.131	0.131	179
					Left Tilt	39	2441	100.0%	13.50	13.50	0.153	0.153	0.063	0.063	
					Right Touch	39	2441	100.0%	13.50	13.50	0.063	0.063	0.026	0.026	
					Right Tilt	39	2441	100.0%	13.50	13.50	0.046	0.046	0.019	0.019	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	16.00	16.00	0.228	0.228	0.099	0.099	180
					Front	39	2441	100.0%	16.00	16.00	0.148	0.148	0.067	0.067	
	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	16.00	16.00	0.031	0.031	0.013	0.013	
					Edge 2	39	2441	100.0%	16.00	16.00	0.250	0.250	0.105	0.105	181
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4 $P_{standlone}$	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	18.50	18.50	0.739	0.739	0.310	0.310	182
					Left Tilt	39	2441	100.0%	18.50	18.50	0.620	0.620	0.261	0.261	
					Right Touch	39	2441	100.0%	18.50	18.50	0.221	0.221	0.101	0.101	
					Right Tilt	39	2441	100.0%	18.50	18.50	0.168	0.168	0.079	0.079	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	20.00	20.00	0.708	0.708	0.322	0.322	183
					Front	39	2441	100.0%	20.00	20.00	0.689	0.689	0.314	0.314	
	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	20.00	20.00	0.176	0.176	0.076	0.076	
					Edge 2	39	2441	100.0%	20.00	20.00	0.785	0.785	0.309	0.309	184

This report shall not be reproduced without the written approval of UL Verification Services Inc.

11. SAR Measurement Variability

In accordance with published RF Exposure KDB 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is <0.8 or 2 W/kg (1-g or 10-g respectively); steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.8 or 2 W/kg (1-g or 10-g respectively), repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 or 3.6 W/kg (~ 10% from the 1-g or 10-g respective SAR limit).
4) Perform a third repeated measurement only if the original, first, or second repeated measurement is ≥ 1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	First Repeated	
						Measured SAR (W/kg)	Largest to Smallest SAR Ratio
850	WCDMA Band V	Body & Hotspot	Rear	Yes	0.886	0.802	1.10
1750	LTE Band 66	Hotspot	Edge 2	Yes	0.999	0.961	1.04
1900	CDMA BC1	Hotspot	Edge 3	Yes	0.977	0.899	1.09
2300	LTE Band 30	Hotspot	Edge 4	Yes	0.984	0.966	1.02
2400	Wi-Fi 802.11b/g/n	Head	Left Touch	Yes	1.100	1.090	1.01
2500	LTE Band 7	Hotspot	Edge 1	Yes	0.987	0.960	1.03
2600	LTE Band 41	Head	Left Tilt	Yes	0.988	0.972	1.02
3600	LTE Band 48	Body & Hotspot	Rear	Yes	0.998	0.893	1.12
5200	Wi-Fi 802.11a/n/ac	Hotspot	Edge 4	Yes	1.100	1.070	1.03
5500	Wi-Fi 802.11a/n/ac	Head	Right Touch	Yes	1.120	1.010	1.11
5800	Wi-Fi 802.11a/n/ac	Hotspot	Edge 4	Yes	1.120	0.979	1.14

Note(s):

Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is < 1.20.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

12. Simultaneous Transmission Conditions

KDB 447498 D01 General RF Exposure Guidance provides two procedures for determining simultaneous transmission SAR test exclusion: Sum of SAR and SAR to Peak Location Ratio (SPLSR)

Sum of SAR

To qualify for simultaneous transmission SAR test exclusion based upon Sum of SAR the sum of the reported standalone SARs for all simultaneously transmitting antennas shall be below the applicable standalone SAR limit. If the sum of the SARs is above the applicable limit then simultaneous transmission SAR test exclusion may still apply if the requirements of the SAR to Peak Location Ratio (SPLSR) evaluation are met.

SAR to Peak Location Ratio (SPLSR)

KDB 447498 D01 General RF Exposure Guidance explains how to calculate the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR = (SAR_1 + SAR_2)^{1.5} / Ri$$

Where:

SAR_1 is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR_2 is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

Ri is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / Ri \leq 0.04$$

When an individual antenna transmits at on two bands simultaneously, the sum of the highest *reported* SAR for the frequency bands should be used to determine SAR_1.or SAR_2. When SPLSR is necessary, the smallest distance between the peak SAR locations for the antenna pair with respect to the peaks from each antenna should be used.

The antennas in all antenna pairs that do not qualify for simultaneous transmission SAR test exclusion must be tested for SAR compliance, according to the enlarged zoom scan and volume scan post-processing procedures in KDB Publication 865664 D01

Simultaneous transmission SAR measurement

When simultaneous transmission SAR measurements are required in different frequency bands not covered by a single probe calibration point then separate tests for each frequency band are performed. The tests are performed using enlarged zoom scans which are processed, by means of superposition, using the DASY volume scan post-processing procedures to determine the 1-g SAR for the aggregate SAR distribution.

The spatial resolution used for all enlarged zoom scans is the same as used for the most stringent zoom scans. I.E. the scan parameters required for the highest frequency assessed are used for all enlarged zoom scans. The scans cover the complete area of the device to ensure all transmitting antennas and radiating structures are assessed.

DASY provides the ability to perform Multiband Evaluations according to the latest standards using the Volume Scan job as well as appropriate routines for the Post-processing.

In order to extract and process measurements within different frequency bands, the SEMCAD X Post-processor performs the combination and subsequent superposition of these measurement data via DASY = Combined MultiBand Averaged SAR.

Combined Multi Band Averaged SAR allows - in addition to the data extraction - an evaluation of the 1 g, 10 g and/or arbitrary averaged mass SAR.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Power Scaling Factor is used to allow the volume scans to be scaled by a value other than "1", this is important when the results need to be scaled to different maximum power levels. The Power Scaling Factor is applied to each individual point of the scan. When power scaling is used in multi-band combinations the scaling factor is applied to each individual point of the first scan, the second factor is then applied to each individual point of the second scan and so on. The scans are then combined.

Simultaneous transmission SAR Exclusion

According to KDB 248227 D01, simultaneous SAR provisions in KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is <1.6W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

In Airplay mode, the device uses same power and power control mechanism as Wi-Fi. Airplay is not supported in hotspot mode. Airplay utilize the same 802.11 modes, modulation, MIMO, Channel Bandwidth, etc. as Wi-Fi does. Therefore Airplay usage is categorized by the Wi-Fi SAR testing contained in Section 10.

The simultaneous transmission possibilities for this device are listed as below.

RF Exposure Condition	Item	Capable Transmit Configurations		
Head Body Worn Accessory Hotspot	1	WWAN & 5G OFF (CELLULAR ANTENNAS OFF)	+ (ANT5) Wi-Fi 5 GHz SISO	+ (ANT3) Bluetooth (P_{High})
	2		+ (ANT6) Wi-Fi 5 GHz SISO	+ (ANT3) Bluetooth (P_{High})
	3		+ Wi-Fi 5 GHz MIMO	+ (ANT3) Bluetooth (P_{High})
	4		+ (ANT5) Wi-Fi 5 GHz SISO	+ (ANT4) Bluetooth (P_{High})
	5		+ (ANT6) Wi-Fi 5 GHz SISO	+ (ANT4) Bluetooth (P_{High})
	6		+ Wi-Fi 5 GHz MIMO	+ (ANT4) Bluetooth (P_{High})
	7	WWAN & 5G ON (CELLULAR ANTENNAS ON)	+ (ANT3) Wi-Fi 2.4 GHz SISO	
	8		+ (ANT4) Wi-Fi 2.4 GHz SISO	
	9		+ Wi-Fi 2.4 GHz MIMO	
	10			+ (ANT3) Bluetooth (P_{High})
	11			+ (ANT4) Bluetooth (P_{High})
	12		+ (ANT5) Wi-Fi 5 GHz SISO	
	13		+ (ANT6) Wi-Fi 5 GHz SISO	
	14		+ Wi-Fi 5 GHz MIMO	
	15		+ (ANT5) Wi-Fi 5 GHz SISO	+ (ANT3) Bluetooth (P_{low})
	16		+ (ANT6) Wi-Fi 5 GHz SISO	+ (ANT3) Bluetooth (P_{low})
	17		+ Wi-Fi 5 GHz MIMO	+ (ANT3) Bluetooth (P_{low})
	18		+ (ANT5) Wi-Fi 5 GHz SISO	+ (ANT4) Bluetooth (P_{low})
	19		+ (ANT6) Wi-Fi 5 GHz SISO	+ (ANT4) Bluetooth (P_{low})
	20		+ Wi-Fi 5 GHz MIMO	+ (ANT4) Bluetooth (P_{low})

Note(s):

1. Wi-Fi 2.4GHz & Bluetooth cannot transmit simultaneously.
2. Wi-Fi 2.4GHz & Wi-Fi 5GHz cannot transmit simultaneously.
3. WWAN cannot transmit simultaneously.
4. Bluetooth P_{low} is used with Wi-Fi and WWAN antennas are active.
5. Bluetooth P_{high} is used when Wi-Fi antenna is active and WWAN antenna is inactive or with Wi-Fi inactive and WWAN antenna is active.
6. Bluetooth $P_{standalone}$ is used with Wi-Fi and WWAN antennas are inactive.
7. Wi-Fi SISO mode SAR result can also represent for MIMO mode SAR and is used for MIMO mode simultaneous transmission analysis because antennas are not overlapping and the MIMO mode maximum power is equal or less than SISO mode.
8. 5G NR only supported NSA mode.
9. For EN-DC mode, Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from 5G NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G NR to not exceed FCC limit. Therefore, simultaneous transmission compliance between 4G+5G NR operation is demonstrated in the Part 2 Report during algorithm validation. In Part 1 Report, simultaneous transmission compliance was evaluated individually with other Radios (WLAN or BT) using one of 4G or 5G NR.

This report shall not be reproduced without the written approval of UL Verification Services Inc.

12.1. Sum of the SAR for WWAN Cell-off & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)				∑ 1-g SAR (W/kg)			
		1	2	3	4	1+3	1+4	2+3	2+4
		Wi-Fi 5G ANT5	Wi-Fi 5G ANT6	BT(P_{high}) ANT3	BT(P_{high}) ANT4				
Head	Left Touch	0.064	0.386	0.008	0.372	0.072	0.436	0.394	0.758
	Left Tilt	0.064	0.386	0.001	0.210	0.065	0.274	0.387	0.596
	Right Touch	0.064	1.178	0.001	0.071	0.065	0.135	1.179	1.249
	Right Tilt	0.064	0.988	0.001	0.055	0.065	0.119	0.989	1.043
Body-worn & Hotspot	Rear	1.125	1.136	0.293	0.317	1.418	1.442	1.429	1.453
	Front	0.325	0.655	0.310	0.175	0.635	0.500	0.965	0.830
Hotspot	Edge 1		0.655		0.053		0.053	0.655	0.708
	Edge 2				0.377		0.377		0.377
	Edge 3	0.325		0.092		0.417	0.325	0.092	
	Edge 4	0.325	1.178	0.046		0.371	0.325	1.224	1.178

12.2. Sum of the SAR for WWAN Cell-on(ANT1) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT1	Wi-Fi 2.4G ANT3	Wi-Fi 2.4G ANT4	BT(P_{high}) ANT3	BT(P_{high}) ANT4				
Head	Left Touch	0.372	0.041	0.349	0.008	0.372	0.413	0.721	0.380	0.744
	Left Tilt	0.176	0.041	0.349	0.001	0.210	0.217	0.525	0.177	0.386
	Right Touch	0.842	0.041	0.349	0.001	0.071	0.883	1.191	0.843	0.913
	Right Tilt	0.142	0.041	0.349	0.001	0.055	0.183	0.491	0.143	0.197
Body-worn & Hptspot	Rear	0.898	0.481	0.420	0.293	0.317	1.379	1.318	1.191	1.215
	Front	0.623	0.569	0.420	0.310	0.175	1.192	1.043	0.933	0.798
Hotspot	Edge 1			0.567		0.053		0.567		0.053
	Edge 2	0.981		0.567		0.377	0.981	1.548	0.981	1.358
	Edge 3	0.977	0.481		0.092		1.458	0.977	1.069	0.977
	Edge 4	0.359	0.481		0.046		0.840	0.359	0.405	0.359

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT1	Wi-Fi 5G ANT5	Wi-Fi 5G ANT6	BT(P_{Low}) ANT3	BT(P_{Low}) ANT4				
Head	Left Touch	0.372	0.064	0.282	0.008	0.056	0.444	0.492	0.662	0.710
	Left Tilt	0.176	0.064	0.282	0.001	0.027	0.241	0.267	0.459	0.485
	Right Touch	0.842	0.064	0.282	0.001	0.013	0.907	0.919	1.125	1.137
	Right Tilt	0.142	0.064	0.282	0.001	0.006	0.207	0.212	0.425	0.430
Body-worn & Hptspot	Rear	0.898	0.448	0.421	0.082	0.085	1.428	1.431	1.401	1.404
	Front	0.623	0.151	0.421	0.062	0.061	0.836	0.835	1.106	1.105
Hotspot	Edge 1			0.421		0.014		0.014	0.421	0.435
	Edge 2	0.981				0.097	0.981	1.078	0.981	1.078
	Edge 3	0.977	0.151		0.021		1.149	1.128	0.998	0.977
	Edge 4	0.359	0.151	0.439	0.013		0.523	0.510	0.811	0.798

This report shall not be reproduced without the written approval of UL Verification Services Inc.

12.3. Sum of the SAR for WWAN Cell-on(ANT2) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT2	Wi-Fi 2.4G ANT3	Wi-Fi 2.4G ANT4	BT(P_{high}) ANT3	BT(P_{high}) ANT4				
Head	Left Touch	0.951	0.041	0.349	0.008	0.372	0.992	1.300	0.959	1.323
	Left Tilt	0.993	0.041	0.349	0.001	0.210	1.034	1.342	0.994	1.203
	Right Touch	0.997	0.041	0.349	0.001	0.071	1.038	1.346	0.998	1.068
	Right Tilt	0.943	0.041	0.349	0.001	0.055	0.984	1.292	0.944	0.998
Body-worn & Hptspot	Rear	0.975	0.481	0.420	0.293	0.317	1.456	1.395	1.268	1.292
	Front	0.744	0.569	0.420	0.310	0.175	1.313	1.164	1.054	0.919
Hotspot	Edge 1	0.998		0.567		0.053	0.998	1.565	0.998	1.051
	Edge 2	0.218		0.567		0.377	0.218	0.785	0.218	0.595
	Edge 3		0.481		0.092		0.481		0.092	
	Edge 4	0.904	0.481		0.046		1.385	0.904	0.950	0.904

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT2	Wi-Fi 5G ANT5	Wi-Fi 5G ANT6	BT(P_{Low}) ANT3	BT(P_{Low}) ANT4				
Head	Left Touch	0.951	0.064	0.282	0.008	0.056	1.023	1.071	1.241	1.289
	Left Tilt	0.993	0.064	0.282	0.001	0.027	1.058	1.084	1.275	1.301
	Right Touch	0.997	0.064	0.282	0.001	0.013	1.062	1.074	1.279	1.291
	Right Tilt	0.943	0.064	0.282	0.001	0.006	1.008	1.013	1.226	1.231
Body-worn & Hptspot	Rear	0.975	0.448	0.421	0.082	0.085	1.505	1.508	1.478	1.481
	Front	0.744	0.151	0.421	0.062	0.061	0.957	0.956	1.227	1.226
Hotspot	Edge 1	0.998		0.421		0.014	0.998	1.012	1.419	1.433
	Edge 2	0.218				0.097	0.218	0.315	0.218	0.315
	Edge 3		0.151		0.021		0.172	0.151	0.021	
	Edge 4	0.904	0.151	0.439	0.013		1.068	1.055	1.356	1.343

This report shall not be reproduced without the written approval of UL Verification Services Inc.

12.4. Sum of the SAR for WWAN Cell-on(ANT3) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT3	Wi-Fi 2.4G ANT3	Wi-Fi 2.4G ANT4	BT(P_{high}) ANT3	BT(P_{high}) ANT4				
Head	Left Touch	0.931	0.041	0.349	0.008	0.372	0.972	1.280	0.939	1.303
	Left Tilt	0.278	0.041	0.349	0.001	0.210	0.319	0.627	0.279	0.488
	Right Touch	0.479	0.041	0.349	0.001	0.071	0.520	0.828	0.480	0.550
	Right Tilt	0.444	0.041	0.349	0.001	0.055	0.485	0.793	0.445	0.499
Body-worn & Hptspot	Rear	0.980	0.481	0.420	0.293	0.317	1.461	1.400	1.273	1.297
	Front	0.881	0.569	0.420	0.310	0.175	1.450	1.301	1.191	1.056
Hotspot	Edge 1			0.567		0.053		0.567		0.053
	Edge 2			0.567		0.377		0.567		0.377
	Edge 3	0.369	0.481		0.092		0.850	0.369	0.461	0.369
	Edge 4	0.992	0.481		0.046		1.473	0.992	1.038	0.992

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT3	Wi-Fi 5G ANT5	Wi-Fi 5G ANT6	BT(P_{Low}) ANT3	BT(P_{Low}) ANT4				
Head	Left Touch	0.931	0.064	0.282	0.008	0.056	1.003	1.051	1.221	1.269
	Left Tilt	0.278	0.064	0.282	0.001	0.027	0.343	0.369	0.561	0.587
	Right Touch	0.479	0.064	0.282	0.001	0.013	0.544	0.556	0.762	0.774
	Right Tilt	0.444	0.064	0.282	0.001	0.006	0.509	0.514	0.727	0.732
Body-worn & Hptspot	Rear	0.980	0.448	0.421	0.082	0.085	1.510	1.513	1.483	1.486
	Front	0.881	0.151	0.421	0.062	0.061	1.094	1.093	1.364	1.363
Hotspot	Edge 1			0.421		0.014		0.014	0.421	0.435
	Edge 2					0.097		0.097		0.097
	Edge 3	0.369	0.151		0.021		0.541	0.520	0.390	0.369
	Edge 4	0.992	0.151	0.439	0.013		1.156	1.143	1.444	1.431

This report shall not be reproduced without the written approval of UL Verification Services Inc.

12.5. Sum of the SAR for WWAN Cell-on(ANT4) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT4	Wi-Fi 2.4G ANT3	Wi-Fi 2.4G ANT4	BT(P_{high}) ANT3	BT(P_{high}) ANT4				
Head	Left Touch	0.984	0.041	0.349	0.008	0.372	1.025	1.333	0.992	1.356
	Left Tilt	0.588	0.041	0.349	0.001	0.210	0.629	0.937	0.589	0.798
	Right Touch	0.345	0.041	0.349	0.001	0.071	0.386	0.694	0.346	0.416
	Right Tilt	0.226	0.041	0.349	0.001	0.055	0.267	0.575	0.227	0.281
Body-worn & Hptspot	Rear	0.957	0.481	0.420	0.293	0.317	1.438	1.377	1.250	1.274
	Front	0.759	0.569	0.420	0.310	0.175	1.328	1.179	1.069	0.934
Hotspot	Edge 1	0.380		0.567		0.053	0.380	0.947	0.380	0.433
	Edge 2	0.999		0.567		0.377	0.999	1.566	0.999	1.376
	Edge 3		0.481		0.092		0.481		0.092	
	Edge 4		0.481		0.046		0.481		0.046	

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT4	Wi-Fi 5G ANT5	Wi-Fi 5G ANT6	BT(P_{Low}) ANT3	BT(P_{Low}) ANT4				
Head	Left Touch	0.984	0.064	0.282	0.008	0.056	1.056	1.104	1.274	1.322
	Left Tilt	0.588	0.064	0.282	0.001	0.027	0.653	0.679	0.871	0.897
	Right Touch	0.345	0.064	0.282	0.001	0.013	0.410	0.422	0.628	0.640
	Right Tilt	0.226	0.064	0.282	0.001	0.006	0.291	0.296	0.509	0.514
Body-worn & Hptspot	Rear	0.957	0.448	0.421	0.082	0.085	1.487	1.490	1.460	1.463
	Front	0.759	0.151	0.421	0.062	0.061	0.972	0.971	1.242	1.241
Hotspot	Edge 1	0.380		0.421		0.014	0.380	0.394	0.801	0.815
	Edge 2	0.999				0.097	0.999	1.096	0.999	1.096
	Edge 3		0.151		0.021		0.172	0.151	0.021	
	Edge 4		0.151	0.439	0.013		0.164	0.151	0.452	0.439

This report shall not be reproduced without the written approval of UL Verification Services Inc.

12.6. Sum of the SAR for WWAN Cell-on(ANT7) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT2	Wi-Fi 2.4G ANT3	Wi-Fi 2.4G ANT4	BT(P_{high}) ANT3	BT(P_{high}) ANT4				
Head	Left Touch	0.205	0.041	0.349	0.008	0.372	0.246	0.554	0.213	0.577
	Left Tilt	0.189	0.041	0.349	0.001	0.210	0.230	0.538	0.190	0.399
	Right Touch	0.506	0.041	0.349	0.001	0.071	0.547	0.855	0.507	0.577
	Right Tilt	0.146	0.041	0.349	0.001	0.055	0.187	0.495	0.147	0.201
Body-worn & Hptspot	Rear	0.995	0.481	0.420	0.293	0.317	1.476	1.415	1.288	1.312
	Front	0.395	0.569	0.420	0.310	0.175	0.964	0.815	0.705	0.570
Hotspot	Edge 1			0.567		0.053		0.567		0.053
	Edge 2	0.984		0.567		0.377	0.984	1.551	0.984	1.361
	Edge 3	0.563	0.481		0.092		1.044	0.563	0.655	0.563
	Edge 4		0.481		0.046		0.481		0.046	

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT2	Wi-Fi 5G ANT5	Wi-Fi 5G ANT6	BT(P_{Low}) ANT3	BT(P_{Low}) ANT4				
Head	Left Touch	0.205	0.064	0.282	0.008	0.056	0.277	0.325	0.495	0.543
	Left Tilt	0.189	0.064	0.282	0.001	0.027	0.254	0.280	0.472	0.498
	Right Touch	0.506	0.064	0.282	0.001	0.013	0.571	0.583	0.789	0.801
	Right Tilt	0.146	0.064	0.282	0.001	0.006	0.211	0.216	0.429	0.434
Body-worn & Hptspot	Rear	0.995	0.448	0.421	0.082	0.085	1.525	1.528	1.498	1.501
	Front	0.395	0.151	0.421	0.062	0.061	0.608	0.607	0.878	0.877
Hotspot	Edge 1			0.421		0.014		0.014	0.421	0.435
	Edge 2	0.984				0.097	0.984	1.081	0.984	1.081
	Edge 3	0.563	0.151		0.021		0.735	0.714	0.584	0.563
	Edge 4		0.151	0.439	0.013		0.164	0.151	0.452	0.439

This report shall not be reproduced without the written approval of UL Verification Services Inc.

12.7. Sum of the SAR for WWAN Cell-on(ANT8) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT3	Wi-Fi 2.4G ANT3	Wi-Fi 2.4G ANT4	BT(P_{high}) ANT3	BT(P_{high}) ANT4				
Head	Left Touch	0.481	0.041	0.349	0.008	0.372	0.522	0.830	0.489	0.853
	Left Tilt	0.256	0.041	0.349	0.001	0.210	0.297	0.605	0.257	0.466
	Right Touch	0.984	0.041	0.349	0.001	0.071	1.025	1.333	0.985	1.055
	Right Tilt	0.677	0.041	0.349	0.001	0.055	0.718	1.026	0.678	0.732
Body-worn & Hptspot	Rear	0.998	0.481	0.420	0.293	0.317	1.479	1.418	1.291	1.315
	Front	0.339	0.569	0.420	0.310	0.175	0.908	0.759	0.649	0.514
Hotspot	Edge 1	0.410		0.567		0.053	0.410	0.977	0.410	0.463
	Edge 2			0.567		0.377		0.567		0.377
	Edge 3		0.481		0.092		0.481		0.092	
	Edge 4	0.233	0.481		0.046		0.714	0.233	0.279	0.233

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT3	Wi-Fi 5G ANT5	Wi-Fi 5G ANT6	BT(P_{Low}) ANT3	BT(P_{Low}) ANT4				
Head	Left Touch	0.481	0.064	0.282	0.008	0.056	0.553	0.601	0.771	0.819
	Left Tilt	0.256	0.064	0.282	0.001	0.027	0.321	0.347	0.539	0.565
	Right Touch	0.984	0.064	0.282	0.001	0.013	1.049	1.061	1.267	1.279
	Right Tilt	0.677	0.064	0.282	0.001	0.006	0.742	0.747	0.960	0.965
Body-worn & Hptspot	Rear	0.998	0.448	0.421	0.082	0.085	1.528	1.531	1.501	1.504
	Front	0.339	0.151	0.421	0.062	0.061	0.552	0.551	0.822	0.821
Hotspot	Edge 1	0.410		0.421		0.014	0.410	0.424	0.831	0.845
	Edge 2					0.097		0.097		0.097
	Edge 3		0.151		0.021		0.172	0.151	0.021	
	Edge 4	0.233	0.151	0.439	0.013		0.397	0.384	0.685	0.672

This report shall not be reproduced without the written approval of UL Verification Services Inc.

12.8. Sum of the SAR for WWAN Cell-on(ANT9) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT4	Wi-Fi 2.4G ANT3	Wi-Fi 2.4G ANT4	BT(P_{high}) ANT3	BT(P_{high}) ANT4				
Head	Left Touch	0.140	0.041	0.349	0.008	0.372	0.181	0.489	0.148	0.512
	Left Tilt	0.104	0.041	0.349	0.001	0.210	0.145	0.453	0.105	0.314
	Right Touch	0.138	0.041	0.349	0.001	0.071	0.179	0.487	0.139	0.209
	Right Tilt	0.058	0.041	0.349	0.001	0.055	0.099	0.407	0.059	0.113
Body-worn & Hptspot	Rear	0.883	0.481	0.420	0.293	0.317	1.364	1.303	1.176	1.200
	Front	0.994	0.569	0.420	0.310	0.175	1.563	1.414	1.304	1.169
Hotspot	Edge 1			0.567		0.053		0.567		0.053
	Edge 2			0.567		0.377		0.567		0.377
	Edge 3	0.771	0.481		0.092		1.252	0.771	0.863	0.771
	Edge 4	0.469	0.481		0.046		0.950	0.469	0.515	0.469

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT4	Wi-Fi 5G ANT5	Wi-Fi 5G ANT6	BT(P_{Low}) ANT3	BT(P_{Low}) ANT4				
Head	Left Touch	0.140	0.064	0.282	0.008	0.056	0.212	0.260	0.430	0.478
	Left Tilt	0.104	0.064	0.282	0.001	0.027	0.169	0.195	0.387	0.413
	Right Touch	0.138	0.064	0.282	0.001	0.013	0.203	0.215	0.421	0.433
	Right Tilt	0.058	0.064	0.282	0.001	0.006	0.123	0.128	0.341	0.346
Body-worn & Hptspot	Rear	0.883	0.448	0.421	0.082	0.085	1.413	1.416	1.386	1.389
	Front	0.994	0.151	0.421	0.062	0.061	1.207	1.206	1.477	1.476
Hotspot	Edge 1			0.421		0.014		0.014	0.421	0.435
	Edge 2					0.097		0.097		0.097
	Edge 3	0.771	0.151		0.021		0.943	0.922	0.792	0.771
	Edge 4	0.469	0.151	0.439	0.013		0.633	0.620	0.921	0.908

This report shall not be reproduced without the written approval of UL Verification Services Inc.

Appendixes

Refer to separated files for the following appendixes.

Appendix A: SAR Setup Photos

Appendix B: SAR System Check Plots

Appendix C: SAR Highest Test Plots

Appendix D: SAR Tissue Ingredients

Appendix E: SAR Probe Certificates

Appendix F: SAR Dipole Certificates

Appendix G: LTE Down-Link Carrier Aggregation

Appendix H: Body Detect Validation

Appendix I: Wi-Fi Time-Averaged SAR(TAS)

END OF REPORT

This report shall not be reproduced without the written approval of UL Verification Services Inc.