



**FCC 47 CFR § 2.1093
IEEE Std 1528-2013**

SAR EVALUATION REPORT

FOR

GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac, and NFC

MODEL NUMBER: SM-A236U, SM-A236U1/DS, SM-S236DL

FCC ID: A3LSMA236U

REPORT NUMBER: 4790379967-S1V4

ISSUE DATE: 7/20/2022

Prepared for
**SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA**

Prepared by

UL Korea, Ltd.

26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

**Suwon Test Site: UL Korea, Ltd. Suwon Laboratory
218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902
FAX: (031) 213-5433**



Testing Laboratory

TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	6/24/2022	Initial Issue	--
V2	6/30/2022	Revised typo in LTE Band 41-Power Class 3 of Sec.9.3. Revised Plimit's output power of LTE Band 40 in Sec.6.3.	Sunghoon kim
V3	7/5/2022	Revised Plimit in NR Band n48-SRS2. - Revised CBE's Highest SAR level in Sec.1. - Highest SAR level of NR Band n48-SRS2 in Sec.1.1 - Plimit in SAR Characterizations of Sec.6.3. - Maximum allowed Plimit in Sec.6.4 - Added Dielectric Property Measurements & System check in SAR 1 Room of Sec.8. - DSI's output power in NR Band n48-SRS2 of Sec.9.4. - NR Band n48-SRS2's SAR level in Sec.10.26. -Revised Sub.2 Ant's SAR results in Sec.12. -Revised Page.83 & 84 in Appendix B.	Sunghoon kim
V4	7/20/2022	Revised Hotspot test distance of LTE Band 41-Power Class 2 of Sec.10.14.	Sunghoon kim



Table of Contents

1.	Attestation of Test Results	6
1.1.	<i>The Highest Reported SAR for RF exposure conditions for each bands</i>	<i>7</i>
2.	Test Specification, Methods and Procedures.....	8
3.	Facilities and Accreditation	8
4.	SAR Measurement System & Test Equipment	9
4.1.	<i>SAR Measurement System.....</i>	<i>9</i>
4.2.	<i>SAR Scan Procedures</i>	<i>11</i>
4.3.	<i>Test Equipment.....</i>	<i>13</i>
5.	Measurement Uncertainty.....	15
5.1.	<i>DECISION RULE.....</i>	<i>15</i>
6.	Device Under Test (DUT) Information	15
6.1.	<i>DUT Description</i>	<i>15</i>
6.2.	<i>Wireless Technologies.....</i>	<i>16</i>
6.3.	<i>Time-Averaging feature</i>	<i>17</i>
6.4.	<i>Maximum Allowed Output power</i>	<i>19</i>
6.5.	<i>DSI (Device State Index) Scenarios.....</i>	<i>23</i>
6.6.	<i>General LTE SAR Test and Reporting Considerations.....</i>	<i>24</i>
6.7.	<i>LTE (TDD) Considerations.....</i>	<i>27</i>
6.8.	<i>NR (Sub 6GHz) SAR Test and Reporting Considerations.....</i>	<i>28</i>
7.	RF Exposure Conditions (Test Configurations).....	30
8.	Dielectric Property Measurements & System Check	31
8.1.	<i>Dielectric Property Measurements</i>	<i>31</i>
8.2.	<i>System Check.....</i>	<i>40</i>
9.	Conducted Output Power Measurements.....	45
9.1.	<i>GSM</i>	<i>45</i>
9.2.	<i>W-CDMA</i>	<i>47</i>
9.3.	<i>LTE.....</i>	<i>53</i>
9.4.	<i>NR (Sub 6GHz).....</i>	<i>85</i>
9.5.	<i>Wi-Fi 2.4 GHz (DTS Band).....</i>	<i>127</i>
9.6.	<i>Wi-Fi 5GHz (U-NII Bands).....</i>	<i>128</i>
9.7.	<i>Bluetooth</i>	<i>129</i>
10.	Measured and Reported (Scaled) SAR Results.....	130
10.1.	<i>GSM 850.....</i>	<i>132</i>

10.2.	GSM 1900.....	132
10.3.	WCDMA Band II.....	133
10.4.	WCDMA Band IV.....	133
10.5.	WCDMA Band V.....	133
10.6.	LTE Band 7 (20MHz Bandwidth).....	134
10.7.	LTE Band 12 (10MHz Bandwidth).....	134
10.8.	LTE Band 13 (10MHz Bandwidth).....	135
10.9.	LTE Band 14 (10MHz Bandwidth).....	135
10.10.	LTE Band 25 (20MHz Bandwidth).....	136
10.11.	LTE Band 26 (15MHz Bandwidth).....	137
10.12.	LTE Band 30 (10MHz Bandwidth).....	137
10.13.	LTE Band 40 (10MHz Bandwidth).....	138
10.14.	LTE Band 41 (20MHz Bandwidth).....	139
10.15.	LTE Band 48 (20MHz Bandwidth).....	141
10.16.	LTE Band 66 (20MHz Bandwidth).....	142
10.17.	LTE Band 71 (20MHz Bandwidth).....	143
10.18.	NR Band n5 (20MHz Bandwidth).....	143
10.19.	NR Band n25 (40MHz Bandwidth).....	144
10.20.	NR Band n30 (10MHz Bandwidth).....	144
10.21.	NR Band n41 (100MHz Bandwidth).....	145
10.22.	NR Band n66 (40MHz Bandwidth).....	145
10.23.	NR Band n70 (15MHz Bandwidth).....	146
10.24.	NR Band n71 (20MHz Bandwidth).....	146
10.25.	NR Band n48 (Voice/Data/SRS0) (40MHz Bandwidth).....	147
10.26.	NR Band n48 (SRS1/SRS2/SRS3) (40MHz Bandwidth).....	147
10.27.	NR Band n77 (Voice/Data/SRS0) (100MHz Bandwidth).....	148
10.28.	NR Band n77 (SRS1/SRS2/SRS3) (100MHz Bandwidth).....	149
10.29.	LTE-uplink 2CA Band 41 (20MHz + 20MHz).....	150
10.30.	LTE-uplink 2CA Band 48 (20MHz + 20MHz).....	150
10.31.	Wi-Fi (DTS Band).....	150
10.32.	Wi-Fi (U-NII Bands).....	151
10.33.	Bluetooth.....	152
11.	SAR Measurement Variability.....	153
12.	Simultaneous Transmission SAR Analysis.....	154
12.1.	Sub6 Antenna Groups.....	155
12.1.1	Head exposure (DSI = 2) Antenna group analysis.....	156
12.1.2	Body-worn exposure (DSI = 0) Antenna group analysis.....	157

12.1.3	Hotspot exposure (DSI = 3) Antenna group analysis	158
12.1.4	Product Specific 10-g exposure (DSI = 0, 1, 4) Antenna group analysis	160
12.2.	<i>Simultaneous transmission analysis</i>	162
12.2.1.	Head exposure condition	162
12.2.2.	Body-worn exposure condition	162
12.2.3.	Hotspot exposure condition	163
12.2.4.	Product Specific 10-g exposure condition	164
Appendixes	166
	<i>4790379967-S1 FCC Report SAR_App A_Photos & Ant. Locations</i>	166
	<i>4790379967-S1 FCC Report SAR_App B_Highest SAR Test Plots</i>	166
	<i>4790379967-S1 FCC Report SAR_App C_System Check Plots</i>	166
	<i>4790379967-S1 FCC Report SAR_App D_SAR Tissue Ingredients</i>	166
	<i>4790379967-S1 FCC Report SAR_App E_Probe Cal. Certificates</i>	166
	<i>4790379967-S1 FCC Report SAR_App F_Dipole Cal. Certificates</i>	166
	<i>4790379967-S1 FCC Report SAR_App G_Proximity Sensor feature</i>	166
	<i>4790379967-S1 FCC Report SAR_App H_LTE Carrier Aggregation</i>	166

1. Attestation of Test Results

Applicant Name		SAMSUNG ELECTRONICS CO.,LTD.				
FCC ID		A3LSMA236U				
Model Number		SM- A236U, SM-A236U1/DS, SM-S236DL				
Applicable Standards		FCC 47 CFR § 2.1093 IEEE Std 1528-2013 Published RF exposure KDB procedures				
Exposure Category		SAR Limits (W/Kg)				
		Peak spatial-average (1g of tissue)		Product Specific 10g (10g of tissue)		
General population / Uncontrolled exposure		1.6		4.0		
RF Exposure Conditions		Equipment Class - The Highest Reported SAR (W/kg)				
		PCE	CBE	DTS	NII	DSS
Head		0.60	0.42	< 0.10	0.68	0.22
Body-worn		0.57	0.33	0.21	0.44	< 0.10
Hotspot		1.17	0.80	0.40	0.89	0.16
Product Specific 10g		3.17	N/A	N/A	2.19	N/A
Simultaneous TX	Head	1.59		0.97	1.59	1.59
	Body-worn	1.42		1.11	1.42	1.42
	Hotspot	1.57		1.57	1.55	1.55
	Product Specific 10g	N/A		N/A	N/A	N/A
Date Tested		5/16/2022 to 7/5/2022				
Test Results		Pass				
<p>UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.</p> <p>Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. 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 IAS, any agency of the Federal Government, or any agency of any government.</p>						
Approved & Released By:			Prepared By:			
						
Justin Park Operations Leader UL Korea, Ltd. Suwon Laboratory			Sunghoon Kim Senior Laboratory Engineer UL Korea, Ltd. Suwon Laboratory			

1.1. The Highest Reported SAR for RF exposure conditions for each bands

Equipment Class	Band	Antenna	The Highest Reported SAR (W/kg)			
			1g of tissue			10g of tissue
			Head Exposure condition	Body-worn Exposure condition	Hotspot Exposure condition	Product Specific Exposure condition
PCE	GSM 850	Main.1	0.392	0.524	1.166	N/A
	GSM 1900	Main.2	0.142	0.252	0.186	N/A
	WCDMA Band II	Main.2	0.188	0.368	0.344	N/A
	WCDMA Band IV	Main.2	0.148	0.301	0.426	N/A
	WCDMA Band V	Main.1	0.309	0.339	0.772	N/A
	LTE Band 7	Main.2	0.358	0.536	0.685	N/A
	LTE Band 12	Main.1	0.220	0.319	0.648	N/A
	LTE Band 13	Main.1	0.288	0.463	0.680	N/A
	LTE Band 14	Main.1	0.264	0.429	0.727	N/A
	LTE Band 25	Main.2	0.188	0.376	0.372	N/A
	LTE Band 25	Sub.1	0.602	0.253	0.479	N/A
	LTE Band 26	Main.1	0.336	0.371	0.857	N/A
	LTE Band 30	Main.2	0.179	0.242	0.225	N/A
	LTE Band 40	Main.2	0.195	0.243	0.053	N/A
	LTE Band 41	Main.2	0.310	0.498	0.811	3.170
	LTE Band 66	Main.2	0.169	0.573	0.396	N/A
	LTE Band 66	Sub.1	0.324	0.107	0.288	N/A
	LTE Band 71	Main.1	0.203	0.318	0.550	N/A
	NR Band n5	Main.1	0.293	0.427	0.869	N/A
	NR Band n25	Main.2	0.214	0.464	0.503	N/A
	NR Band n30	Main.2	0.161	0.233	0.224	N/A
	NR Band n41	Main.2	0.234	0.286	0.353	N/A
	NR Band n66	Main.2	0.234	0.393	0.385	N/A
	NR Band n70	Main.2	0.140	0.314	0.298	N/A
NR Band n71	Main.1	0.212	0.313	0.544	N/A	
NR Band n77	Sub.3	0.323	0.248	0.617	N/A	
	Sub.5	0.077	0.017	0.047	N/A	
	Sub.2	0.438	0.062	0.116	N/A	
	Main.2	0.001	0.115	0.201	N/A	
CBE	LTE Band 48	Sub.3	0.309	0.242	0.599	N/A
	NR Band n48	Sub.3	0.331	0.327	0.802	N/A
		Sub.5	0.028	0.013	0.026	N/A
		Sub.2	0.416	0.048	0.210	N/A
		Main.2	0.020	0.075	0.242	N/A
DTS	2.4GHz WLAN	WiFi/BT Ant.	0.055	0.214	0.400	N/A
UNII	5GHz WLAN	WiFi/BT Ant.	0.683	0.437	0.892	2.187
DSS	Bluetooth	WiFi/BT Ant.	0.224	0.082	0.158	N/A

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, ANSI C63.26-2015 the following FCC Published RF exposure [KDB](#) procedures:

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 648474 D04 Handset SAR v01r03
- 690783 D01 SAR Listings on Grants 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
- 941225 D07 UMPC Mini Tablet v01r02
- 971168 D01 Power Meas License Digital System v03r01

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

- [TCB workshop](#) October, 2014; RF Exposure Procedures Update (Overlapping LTE Bands)
- [TCB workshop](#) October, 2014; RF Exposure Procedures Update (Other LTE Considerations)
- [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 (LTE Test Conditions)
- [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 Update)
- [TCB workshop](#) April, 2019; RF Exposure Procedures (Tissue Simulating Liquids (TSL))
- [TCB workshop](#) October, 2020; 5G RFX Policies (Intra-band and Inter-band NSA-EN-DC evaluation)
- [TCB workshop](#) April, 2022; RF Exposure Procedures (5G NR FR1 Measurement)
- [TCB workshop](#) April, 2022; RF Exposure Procedures (Sum-Peak Location Separation Ratio)

3. Facilities and Accreditation

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

Suwon	
SAR 1 Room	SAR 6 Room
SAR 2 Room	SAR 7 Room
SAR 3 Room	SAR 8 Room
SAR 4 Room	SAR 9 Room
SAR 5 Room	

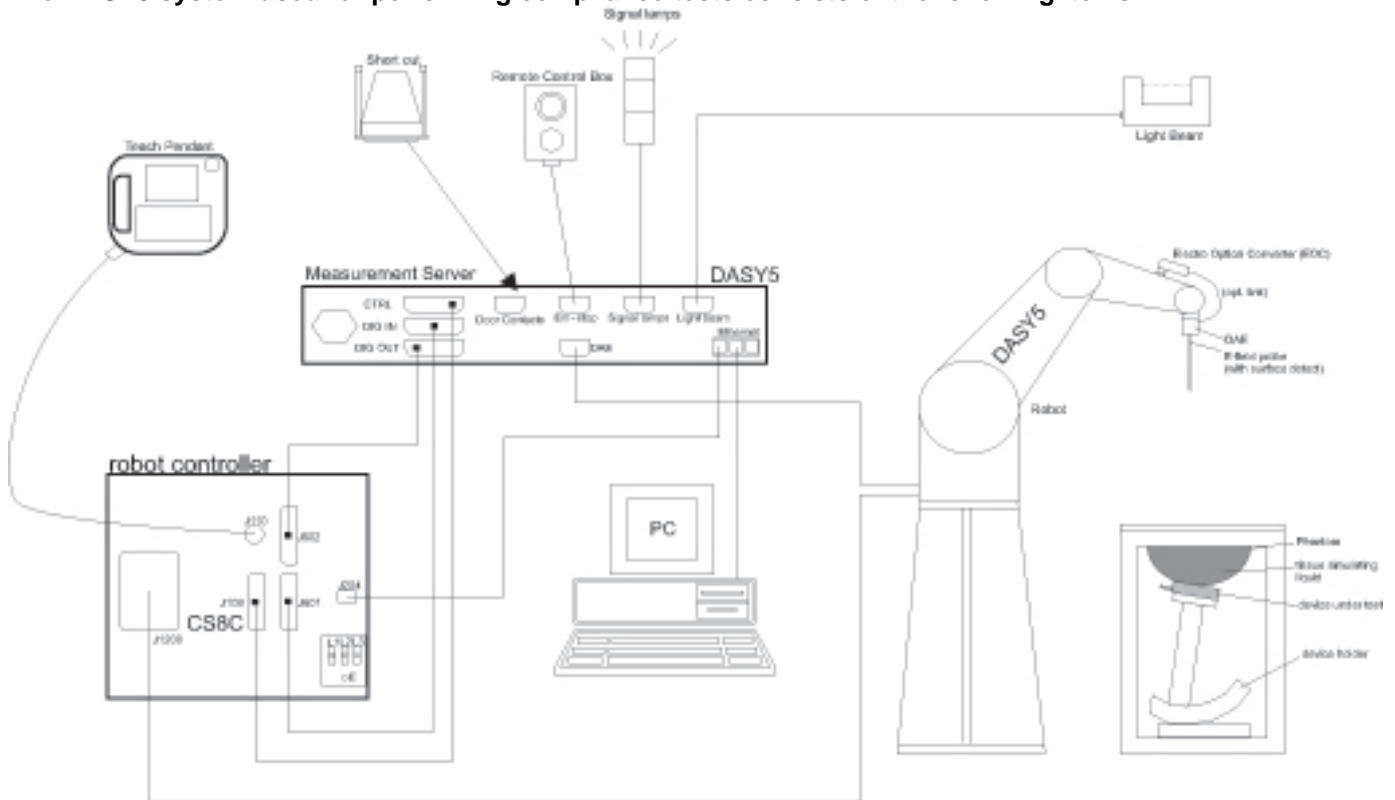
UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.

The full scope of accreditation can be viewed at <https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

4. SAR Measurement System & Test Equipment

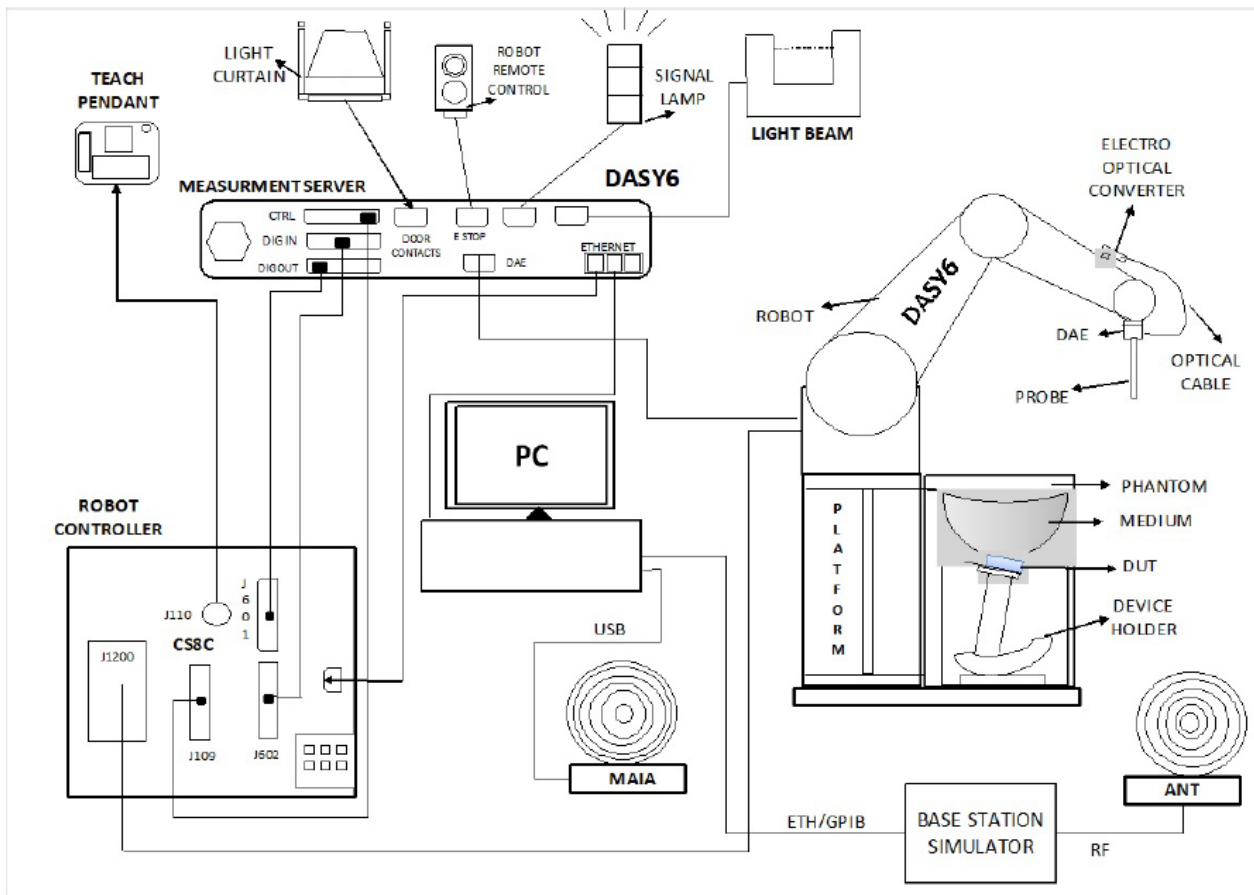
4.1. SAR Measurement System

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.

The DASY6 & 8 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 Win10 and the DASY6 or 8 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.

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	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
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 \leq the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

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: $\Delta x_{Zoom}, \Delta y_{Zoom}$			≤ 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 1 st 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	≤ 1.5 · $\Delta z_{Zoom}(n-1)$	
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 <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> 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.

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.

Dielectric Property Measurements

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	Agilent	E5071C	MY46522054	8-6-2022
Network Analyzer	ROHDE & SCHWARZ	ZNB 20	102256	8-6-2022
Dielectric Assessment Kit	SPEAG	DAK-3.5	1196	7-21-2022
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	LKM	DTM3000	3851	8-4-2022
Thermometer	LKM	DTM3000	3862	8-4-2022

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
MXG Analog Signal Generator	Agilent	N5181A	MY50145882	8-4-2022
MXG Analog Signal Generator	Keysight	N5181B	MY59100587	8-4-2022
MXG Analog Signal Generator	Keysight	N5173B	MY59101083	8-4-2022
Power Sensor	Keysight	U2000A	MY60180020	8-4-2022
Power Sensor	Agilent	U2000A	MY54260007	8-4-2022
Power Sensor	Agilent	U2000A	MY54260010	8-4-2022
Power Sensor	Keysight	U2000A	MY60490008	8-4-2022
Power Sensor	Keysight	U2000A	MY61060004	8-4-2022
Power Sensor	Keysight	U2000A	MY61010006	8-4-2022
Power Sensor	Keysight	U2000A	MY61010010	8-4-2022
Power Amplifier	EXODUS	AMP2027	1410025-AMP2027-10003	8-4-2022
Power Amplifier	EXODUS	AMP2027ADB	10002	8-4-2022
Directional Coupler	Agilent	772D	MY52180193	8-3-2022
Directional Coupler	H.P	778D	16133	8-3-2022
Directional Coupler	MINI-CIRCUITS	ZUDC20-183+	N/A	8-3-2022
Directional Coupler	MINI-CIRCUITS	ZUDC20-183+	N/A	8-3-2022
Low Pass Filter	MICROLAB	LA-15N	3943	8-3-2022
Low Pass Filter	FILTRON	L14012FL	1410003S	8-3-2022
Low Pass Filter	MICROLAB	LA-60N	3942	8-3-2022
Low Pass Filter	MINI-CIRCUITS	NLP-1200	VUU19301915	8-4-2022
Attenuator	KEYSIGHT	8491B/003	VE2017A0283	8-4-2022
Attenuator	KEYSIGHT	8491B/010	MY39271981	8-4-2022
Attenuator	KEYSIGHT	8491B/010	MY39272011	8-4-2022
Attenuator	KEYSIGHT	8491B/020	MY39271973	8-4-2022
E-Field Probe	SPEAG	EX3DV4	7330	1-28-2023
E-Field Probe	SPEAG	EX3DV4	7313	3-2-2023
E-Field Probe	SPEAG	EX3DV4	7545	8-26-2022
E-Field Probe	SPEAG	EX3DV4	7645	4-29-2023
E-Field Probe	SPEAG	EX3DV4	7652	4-28-2023
E-Field Probe	SPEAG	EX3DV4	7646	3-29-2023
E-Field Probe	SPEAG	EX3DV4	7376	7-30-2022

Test Equipment (Continued)

Data Acquisition Electronics	SPEAG	DAE4	1447	3-25-2023
Data Acquisition Electronics	SPEAG	DAE4	1468	9-27-2022
Data Acquisition Electronics	SPEAG	DAE4	1591	3-24-2023
Data Acquisition Electronics	SPEAG	DAE4	1343	8-23-2022
Data Acquisition Electronics	SPEAG	DAE4	1667	4-27-2023
Data Acquisition Electronics	SPEAG	DAE4	1668	4-27-2023
Data Acquisition Electronics	SPEAG	DAE4	912	11-22-2022
System Validation Dipole	SPEAG	D750V3	1205	4-27-2023
System Validation Dipole	SPEAG	D835V2	4d174	3-17-2023
System Validation Dipole	SPEAG	D1750V2	1125	2-24-2023
System Validation Dipole	SPEAG	D1750V2	1180	4-27-2023
System Validation Dipole	SPEAG	D1900V2	5d190	11-24-2022
System Validation Dipole	SPEAG	D2300V2	1090	11-18-2022
System Validation Dipole	SPEAG	D2300V2	1115	4-23-2023
System Validation Dipole	SPEAG	D2450V2	960	3-24-2023
System Validation Dipole	SPEAG	D2600V2	1178	4-23-2023
System Validation Dipole	SPEAG	D3500V2	1121	4-21-2023
System Validation Dipole	SPEAG	D3700V2	1036	5-21-2023
System Validation Dipole	SPEAG	D3900V2	1069	4-21-2023
System Validation Dipole	SPEAG	D5GHzV2	1184	12-3-2022
System Validation Dipole	SPEAG	D5GHzV2	1209	11-24-2022
Thermometer (SAR1)	Lutron	MHB-382SD	AH.91463	8-4-2022
Thermometer (SAR2)	Lutron	MHB-382SD	AH.50215	8-3-2022
Thermometer (SAR3)	Lutron	MHB-382SD	AH.50213	8-4-2022
Thermometer (SAR4, 5)	Lutron	MHB-382SD	AH.45903	8-3-2022
Thermometer (SAR6, 7)	Lutron	MHB-382SD	AK.18789	8-4-2022
Thermometer (SAR8, 9)	Lutron	MHB-382SD	AK.12102	8-3-2022

Others

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	150313	8-3-2022
Base Station Simulator	R & S	CMW500	150314	8-4-2022
Base Station Simulator	R & S	CMW500	162790	8-3-2022
Base Station Simulator	R & S	CMW500	169803	5-27-2023
Base Station Simulator	R & S	CMW500	169801	8-3-2022
Base Station Simulator	R & S	CMW500	169799	8-3-2022
Base Station Simulator	R & S	CMW500	169800	6-20-2023
Base Station Simulator	R & S	CMW500	169797	8-3-2022
Base Station Simulator	R & S	CMW500	169798	8-3-2022
UXM 5G Wireless Test Platform	Keysight	E7515B	MY59150850	12-13-2022
UXM 5G Wireless Test Platform	Keysight	E7515B	MY58460570	12-13-2022
UXM 5G Wireless Test Platform	Keysight	E7515B	MY57510596	8-6-2022
Radio Communication Test Station	Anritsu	MT8000A	6272398203	6-17-2023

Note(s):

1. For System Validation Dipole, Calibration interval applied every 2 years according to referencing KDB 865664 guidance.
2. Refer to Appendix F that mentioned about justification for Extended SAR Dipole Calibrations. (for blue box items)
3. All equipments were used until Cal.Due data.

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.

5.1. DECISION RULE

Decision rule for statement(s) of conformity is based on Procedures 1, Clause 4.4.2 in IEC Guide 115:2007.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Refer to Appendix A.					
Back Cover	<input checked="" type="checkbox"/> The Back Cover is not removable.					
Battery Options	<input checked="" type="checkbox"/> The rechargeable battery is not user accessible					
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its cellular data connection with other Wi-Fi-enabled devices. <input checked="" type="checkbox"/> Mobile Hotspot (Wi-Fi 2.4 GHz) <input checked="" type="checkbox"/> Mobile Hotspot (Wi-Fi 5.8 GHz)					
Wi-Fi Direct	Wi-Fi Direct enabled devices transfer data directly between each other <input checked="" type="checkbox"/> Wi-Fi Direct (Wi-Fi 2.4 GHz) <input checked="" type="checkbox"/> Wi-Fi Direct (Wi-Fi 5.2 GHz_UNII-1, Wi-Fi 5.8 GHz_UNII-3)					
Test Sample Information	No.	S/N	Notes	No.	S/N	Notes
	1	R3CT40ETK2B	Main Conducted	13	R3CT40ETQGM	SAR
	2	R3CT40ETF0H	Main Conducted	14	R3CT50DAQPB	SAR
	3	R3CT50DAP8K	Main Conducted	15	R3CT50DAPTK	SAR
	4	R3CT50DAQSM	Main Conducted	16	R3CT40DATNA	SAR
	5	R3CT50DC5VN	Main Conducted	17	R3CT50DC1EP	SAR
	6	VF31561M	Main Conducted	18	R3CT50DC11M	SAR
	7	R3CT50S8CJV	Main Conducted	19	R3CT50DCD5A	SAR
	8	R3CT50S8BSA	Main Conducted	20	R3CT50DCCVP	SAR
	9	R3CT40ETG0V	Wi-Fi & BT Conducted	21	R3CT50DCF4Y	SAR
	10	R3CT50DAW6E	Wi-Fi & BT Conducted	22	R3CT50DCD1L	SAR
	11	R3CT40ETNNL	SAR			
	12	R3CT40ETPWT	SAR			

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK)	GPRS Multi-Slot Class:	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
		GPRS (GMSK)	<input type="checkbox"/> Class 8 - 1 Up, 4 Down <input type="checkbox"/> Class 10 - 2 Up, 4 Down <input type="checkbox"/> Class 12 - 4 Up, 4 Down <input checked="" type="checkbox"/> Class 33 - 4 Up, 5 Down	
Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 24) HSUPA (Category 6) DC-HSDPA (Category 24) HSPA+ (DL only)		100%
LTE	FDD Band 2 / FDD Band 4 FDD Band 5 / FDD Band 7 FDD Band 12 / FDD Band 13 FDD Band 14 / FDD Band 25 FDD Band 26 / FDD Band 30 TDD Band 38 / TDD Band 40 TDD Band 41 ^{Power Class 3} TDD Band 41 ^{Power Class 2} TDD Band 48 / FDD Band 71 FDD Band 66	QPSK 16QAM 64QAM 256QAM Rel. 15 Carrier Aggregation (2 Uplink and 4 Downlinks) <u>Uplink inter-band</u> <u>Carrier Aggregation(2CC)</u> CA_41C & CA_48C		100% (FDD) 63.3% (TDD) ^{Power Class 3} 43.3% (TDD) ^{Power Class 2}
		Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5G NR (Sub 6)	FDD Band n2 / FDD Band n5 FDD Band n25 / FDD Band n30 TDD Band n41 ^{Power Class 3} TDD Band n41 ^{Power Class 2} TDD Band n48 / FDD Band n66 FDD Band n70 / FDD Band n71 TDD Band n77 ^{Power Class 3} TDD Band n77 ^{Power Class 2}	DFT-s-OFDM: ■ $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: ■ QPSK, 16QAM, 64QAM, 256QAM		100%
		Does this device support bands 5.60 ~ 5.65 GHz? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wi-Fi	2.4 GHz	802.11b / 802.11g / 802.11n (HT20)		99.0% (802.11b)
	5 GHz	802.11a / 802.11n (HT20) & (HT40) 802.11ac (VHT20) & (VHT40) & (VHT80)		98.7% (802.11a) 98.4% (802.11ac (VHT80))
	Does this device support Band gap channel(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Does this device support Band gap channel(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Bluetooth	2.4 GHz	Version 5.1 LE		77.4% (DH5)
NFC	13.56 MHz	Type A/B/F		N/A ⁶

Notes:

- The Bluetooth protocol is considered source-based averaging. Bluetooth GFSK (DH5) was verified to have the highest duty cycle of 77.4% and was considered and used for SAR Testing.
- Duty cycle for Wi-Fi is referenced from the DTS and UNII report.
- This device supports Power Class 2(HPUE) and Power Class 3 for LTE Band 41 & NR Band n41 & NR Band n77
- This device supports UL CA intra-band non-continues.
- NR TDD Band n48 & n77 has support SRS(0,1,2,3) modes.
- Measured Duty Cycle is not required due to SAR test exemption.

6.3. Time-Averaging feature

The equipment under test (EUT) contains the Qualcomm modems supporting 2G/3G/4G technologies and 5G NR bands. these modem is enabled with Qualcomm Smart Transmit feature to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with the FCC requirement. Refer to Compliance Summary document for detailed description of Qualcomm Smart Transmit feature.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of *SAR_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} ” + 1 dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB 447498 D01.

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

SAR Characterizations

Exposure condition			Body-Worn	Product Specific 10-g Without triggering sensor	Product Specific 10-g With triggering sensor	Head (RCV)	Hotspot	Ear-jack	P _{max} (Maximum tune-up Power) (dBm)
Spatial-average			1g	10g	10g	1g	1g	10g	
Test distance (mm)			15	13/ 0/ 6/ 7	0	0	10	0	
DSI:			0	0	1	2	3	4	
RF Air Interface	Antenna	Antenn Group	P _{limit} corresponding to 1.0 W/kg (SAR _{design_target}) (1g) / 2.5 W/kg (SAR _{design_target}) (10g)						
GSM 850	Main.1	AG0	29.29	32.53	29.62	30.54	26.08	29.62	25.48
GSM 1900	Main.2	AG0	29.12	26.22	17.48	31.63	17.48	17.48	21.98
WCDMA Band II	Main.2	AG0	28.85	25.53	20.50	31.77	20.50	20.50	23.50
WCDMA Band IV	Main.2	AG0	22.50	22.50	20.50	22.50	20.50	20.50	23.50
WCDMA Band V	Main.1	AG0	29.90	32.29	28.25	30.30	26.33	28.25	24.20
LTE Band 7	Main.2	AG0	22.00	22.00	20.50	22.00	20.50	20.50	23.50
LTE Band 12	Main.1	AG0	30.47	34.15	29.61	32.08	27.38	29.61	24.50
LTE Band 13	Main.1	AG0	28.84	32.93	28.77	30.91	27.17	28.77	24.50
LTE Band 14	Main.1	AG0	29.18	33.27	29.57	31.28	27.04	29.57	24.50
LTE Band 25/2	Main.2	AG0	29.25	25.24	21.00	32.26	21.00	21.00	24.00
LTE Band 25/2	Sub.1	AG1	29.47	25.21	25.21	18.50	26.70	25.21	22.50
LTE Band 26/5	Main.1	AG0	29.81	32.31	28.59	30.24	26.17	28.59	24.50
LTE Band 30	Main.2	AG0	30.17	27.55	20.00	31.46	20.00	20.00	23.00
LTE Band 40	Main.2	AG0	17.15	19.81	18.93	18.10	24.47	18.93	10.00
LTE Band 66/4	Main.2	AG0	23.00	23.00	21.00	23.00	21.00	21.00	23.50
LTE Band 66/4	Sub.1	AG1	33.17	26.98	26.98	20.50	28.91	26.98	22.50
LTE Band 71	Main.1	AG0	30.47	35.12	28.99	32.43	28.09	28.99	24.50
LTE Band 41/38 PC3	Main.2	AG0	26.03	22.84	20.00	28.12	20.00	20.00	22.00
LTE Band 41 PC2	Main.2	AG0	26.34	24.11	20.00	27.99	20.00	20.00	21.90
LTE Band 48	Sub.3	AG1	17.00	17.00	17.00	17.00	17.00	17.00	20.50
NR Band n5	Main.1	AG0	29.27	32.44	28.70	30.83	26.11	28.70	24.50
NR Band n25/n2	Main.2	AG0	28.33	24.91	21.00	31.70	21.00	21.00	24.00
NR Band n30	Main.2	AG0	30.48	27.15	20.00	31.94	20.00	20.00	23.00
NR Band n66	Main.2	AG0	29.22	24.47	21.00	31.32	21.00	21.00	24.00
NR Band n70	Main.2	AG0	28.03	24.61	20.00	31.55	20.00	20.00	22.00
NR Band n71	Main.1	AG0	29.57	33.56	29.48	31.23	27.15	29.48	23.50
NR Band n41 PC3/PC2	Main.2	AG0	19.50	19.50	17.00	19.50	19.50	17.00	25.50
NR Band n48-SRS 0	Sub.3	AG0	16.00	16.00	16.00	16.00	16.00	16.00	20.50
NR Band n48-SRS 1	Sub.5	AG1	9.50	9.50	9.50	9.50	9.50	9.50	10.50
NR Band n48-SRS 2	Sub.2	AG1	12.00	12.00	12.00	12.00	12.00	12.00	19.50
NR Band n48-SRS 3	Main.2	AG1	16.50	16.50	16.50	16.50	16.50	16.50	20.50
NR Band n77-SRS 0-PC3/PC2	Sub.3	AG0	17.00	17.00	17.00	17.00	17.00	17.00	25.50
NR Band n77-SRS 1-PC/3PC2	Sub.5	AG1	9.50	9.50	9.50	9.50	9.50	9.50	15.50
NR Band n77-SRS 2-PC/3PC2	Sub.2	AG1	11.00	11.00	11.00	11.00	11.00	11.00	22.00
NR Band n77-SRS 3-PC/3PC2	Main.2	AG1	16.00	16.00	16.00	16.00	16.00	16.00	22.00

Notes:

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 LTE TDD modulation schemes.
2. Maximum tune up output power P_{max} is used to configure EUT during RF tune up procedures. The maximum allowed output power is equal to maximum tune up output power + 1dB device design uncertainty.
3. 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.
4. If P_{Limit} is higher than P_{max} for some modes / bands, The modes/bands will operate at a power level up to P_{max} .

6.4. Maximum Allowed Output power

Maximum allowed output power means that Pmax or PLimit + 1dB device uncertainty for each DSI.

RF Air interface	Antenna	Mode	Time Slots	Maximum allowed output power (dBm)											
				Pmax		Plimit									
						DSI = 0 (Body-worn & Sensor Off)		DSI = 1 (Proximity sensor On)		DSI = 2 (Head-RCV On)		DSI = 3 (Hotspot)		DSI = 4 (Earjack)	
						Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM850	Main.1 Ant.	Voice	1	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47
		GPRS	1	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47
		GPRS	2	32.50	26.48	32.50	26.48	32.50	26.48	32.50	26.48	32.50	26.48	32.50	26.48
		GPRS	3	30.50	26.24	30.50	26.24	30.50	26.24	30.50	26.24	30.50	26.24	30.50	26.24
		GPRS	4	28.50	25.49	28.50	25.49	28.50	25.49	28.50	25.49	28.50	25.49	28.50	25.49
		EGPRS	1	27.50	18.47	27.50	18.47	27.50	18.47	27.50	18.47	27.50	18.47	27.50	18.47
		EGPRS	2	26.00	19.98	26.00	19.98	26.00	19.98	26.00	19.98	26.00	19.98	26.00	19.98
		EGPRS	3	24.00	19.74	24.00	19.74	24.00	19.74	24.00	19.74	24.00	19.74	24.00	19.74
GSM1900	Main.2 Ant.	Voice	1	30.70	21.67	30.70	21.67	27.50	18.47	30.70	21.67	27.50	18.47	27.50	18.47
		GPRS	1	30.70	21.67	30.70	21.67	27.50	18.47	30.70	21.67	27.50	18.47	27.50	18.47
		GPRS	2	29.00	22.98	29.00	22.98	24.50	18.48	29.00	22.98	24.50	18.48	24.50	18.48
		GPRS	3	27.00	22.74	27.00	22.74	22.70	18.44	27.00	22.74	22.70	18.44	22.70	18.44
		GPRS	4	25.00	21.99	25.00	21.99	21.50	18.49	25.00	21.99	21.50	18.49	21.50	18.49
		EGPRS	1	26.30	17.27	26.30	17.27	26.30	17.27	26.30	17.27	26.30	17.27	26.30	17.27
		EGPRS	2	25.00	18.98	25.00	18.98	24.50	18.48	25.00	18.98	24.50	18.48	24.50	18.48
		EGPRS	3	23.20	18.94	23.20	18.94	22.50	18.24	23.20	18.94	22.50	18.24	22.50	18.24
		EGPRS	4	22.20	19.19	22.20	19.19	21.40	18.39	22.20	19.19	21.40	18.39	21.40	18.39

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)							
			Pmax	Plimit						
				DSI = 0 (Body-worn & Sensor Off)	DSI = 1 (Proximity sensor On)	DSI = 2 (Head-RCV On)	DSI = 3 (Hotspot)	DSI = 4 (Earjack)		
W-CDMA Band II	Main.2 Ant.	R99	24.50	24.50	21.50	24.50	21.50	21.50		
		HSDPA	24.00	24.00	21.50	24.00	21.50	21.50		
		HSUPA	24.00	24.00	21.50	24.00	21.50	21.50		
		DC-HSDPA	24.00	24.00	21.50	24.00	21.50	21.50		
W-CDMA Band IV	Main.2 Ant.	R99	24.50	23.50	21.50	23.50	21.50	21.50		
		HSDPA	24.00	23.50	21.50	23.50	21.50	21.50		
		HSUPA	24.00	23.50	21.50	23.50	21.50	21.50		
		DC-HSDPA	24.00	23.50	21.50	23.50	21.50	21.50		
W-CDMA Band V	Main.1 Ant.	R99	25.20	25.20	25.20	25.20	25.20	25.20		
		HSDPA	24.50	24.50	24.50	24.50	24.50	24.50		
		HSUPA	24.50	24.50	24.50	24.50	24.50	24.50		
		DC-HSDPA	24.50	24.50	24.50	24.50	24.50	24.50		

Note(s):

1. Detail of DSI(Device State Index) conditions, please refer to Sec.6.5.

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)					
			Pmax	Plimit				
				DSI = 0 (Body-worn & Sensor Off)	DSI = 1 (Proximity sensor On)	DSI = 2 (Head-RCV On)	DSI = 3 (Hotspot)	DSI = 4 (Earjack)
LTE Band 2	Main.2 Ant.	QPSK	25.00	25.00	22.00	25.00	22.00	22.00
LTE Band 2	Sub.1 Ant.	QPSK	23.50	23.50	23.50	19.50	23.50	23.50
LTE Band 4	Main.2 Ant.	QPSK	24.50	24.00	22.00	24.00	22.00	22.00
LTE Band 5	Main.1 Ant.	QPSK	25.50	25.50	25.50	25.50	25.50	25.50
LTE Band 7	Main.2 Ant.	QPSK	24.50	23.00	21.50	23.00	21.50	21.50
LTE Band 12	Main.1 Ant.	QPSK	25.50	25.50	25.50	25.50	25.50	25.50
LTE Band 13	Main.1 Ant.	QPSK	25.50	25.50	25.50	25.50	25.50	25.50
LTE Band 14	Main.1 Ant.	QPSK	25.50	25.50	25.50	25.50	25.50	25.50
LTE Band 25	Main.2 Ant.	QPSK	25.00	25.00	22.00	25.00	22.00	22.00
LTE Band 25	Sub.1 Ant.	QPSK	23.50	23.50	23.50	19.50	23.50	23.50
LTE Band 26	Main.1 Ant.	QPSK	25.50	25.50	25.50	25.50	25.50	25.50
LTE Band 30	Main.2 Ant.	QPSK	24.00	24.00	21.00	24.00	21.00	21.00
LTE Band 38	Main.2 Ant.	QPSK	24.00	24.00	23.00	24.00	23.00	23.00
LTE Band 40	Main.2 Ant.	QPSK	13.00	13.00	13.00	13.00	13.00	13.00
LTE Band 41-PC2	Main.2 Ant.	QPSK	26.50	26.50	24.60	26.50	24.60	24.60
LTE Band 41-PC3	Main.2 Ant.	QPSK	25.00	25.00	23.00	25.00	23.00	23.00
LTE Band 48	Sub.3 Ant.	QPSK	23.50	20.00	20.00	20.00	20.00	20.00
LTE Band 66	Main.2 Ant.	QPSK	24.50	24.00	22.00	24.00	22.00	22.00
LTE Band 66	Sub.1 Ant.	QPSK	23.50	23.50	23.50	21.50	23.50	23.50
LTE Band 71	Main.1 Ant.	QPSK	25.50	25.50	25.50	25.50	25.50	25.50

Note(s):

1. Detail of DSI(Device State Index) conditions, please refer to Sec.6.5.
2. LTE Band 41-PC3 & LTE Band 48 has support UL CA intra-band-continues mode with same target power in each standalone LTE bands. Details of configuration are refer to Appendix.H.

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)					
			Pmax	Plimit				
				DSI = 0 (Body-worn & Sensor Off)	DSI = 1 (Proximity sensor On)	DSI = 2 (Head-RCV On)	DSI = 3 (Hotspot)	DSI = 4 (Earjack)
NR Band n2	Main.2 Ant.	DFT-s-OFDM	25.00	25.00	22.00	25.00	22.00	22.00
NR Band n5	Main.1 Ant.	DFT-s-OFDM	25.50	25.50	25.50	25.50	25.50	25.50
NR Band n25	Main.2 Ant.	DFT-s-OFDM	25.00	25.00	22.00	25.00	22.00	22.00
NR Band n30	Main.2 Ant.	DFT-s-OFDM	24.00	24.00	21.00	24.00	21.00	21.00
NR Band n41-PC2	Main.2 Ant.	DFT-s-OFDM	26.50	20.50	18.00	20.50	18.00	18.00
NR Band n41-PC3	Main.2 Ant.	DFT-s-OFDM	24.50	20.50	18.00	20.50	18.00	18.00
NR Band n48 (Voice/data/SRS0)	Sub.3 Ant.	DFT-s-OFDM	21.50	17.00	17.00	17.00	17.00	17.00
NR Band n48 (SRS1)	Sub.5 Ant.	SRS CW	11.50	10.50	10.50	10.50	10.50	10.50
NR Band n48 (SRS2)	Sub.2 Ant.	SRS CW	20.50	13.00	13.00	13.00	13.00	13.00
NR Band n48 (SRS3)	Main.2 Ant.	SRS CW	21.50	17.50	17.50	17.50	17.50	17.50
NR Band n66	Main.2 Ant.	DFT-s-OFDM	25.00	25.00	22.00	25.00	22.00	22.00
NR Band n70	Main.2 Ant.	DFT-s-OFDM	23.00	23.00	21.00	23.00	21.00	21.00
NR Band n71	Main.1 Ant.	DFT-s-OFDM	24.50	24.50	24.50	24.50	24.50	24.50
NR Band n77-PC2 (Voice/data/SRS0)	Sub.3 Ant.	DFT-s-OFDM	26.50	18.00	18.00	18.00	18.00	18.00
NR Band n77-PC2 (SRS1)	Sub.5 Ant.	SRS CW	16.50	10.50	10.50	10.50	10.50	10.50
NR Band n77-PC2 (SRS2)	Sub.2 Ant.	SRS CW	23.00	12.00	12.00	12.00	12.00	12.00
NR Band n77-PC2 (SRS3)	Main.2 Ant.	SRS CW	23.00	17.00	17.00	17.00	17.00	17.00
NR Band n77-PC3 (Voice/data/SRS0)	Sub.3 Ant.	DFT-s-OFDM	25.00	18.00	18.00	18.00	18.00	18.00
NR Band n77-PC3 (SRS1)	Sub.5 Ant.	SRS CW	16.50	10.50	10.50	10.50	10.50	10.50
NR Band n77-PC3 (SRS2)	Sub.2 Ant.	SRS CW	23.00	12.00	12.00	12.00	12.00	12.00
NR Band n77-PC3 (SRS3)	Main.2 Ant.	SRS CW	23.00	17.00	17.00	17.00	17.00	17.00

Note(s):

1. Detail of DSI(Device State Index) conditions, please refer to Sec.6.5.
2. NR Bands support SA and NSA mode as same target power.

WLAN maximum output power

RF Air interface	Band	Max. RF Output Power (dBm)					Reduced. RF Output Power (dBm)				
		802.11 mode					802.11 mode				
		a	b	g	n	ac	a	b	g	n	ac
WiFi 2.4 GHz	DTS		21 12ch : 8.0 13ch : 8.0	19 12ch : 6.0 13ch : 6.0	19 12ch : 6.0 13ch : 6.0			12.0 12ch : 8.0 13ch : 8.0	12.0 12ch : 6.0 13ch : 6.0	12.0 12ch : 6.0 13ch : 6.0	
WiFi 5 GHz (BW : 20MHz)	UNII-1 & 2A	16.0			16.0	16.0	11.0			11.0	11.0
	UNII-2C	16.0			16.0	16.0	11.0			11.0	11.0
	UNII-3	16.0			16.0	16.0	11.0			11.0	11.0
WiFi 5 GHz (BW : 40MHz)	UNII-1 UNII-2A				15.0	15.0				11.0	11.0
	UNII-2C				15.0	15.0				11.0	11.0
	UNII-3				15.0	15.0				11.0	11.0
WiFi 5 GHz (BW : 80MHz)	UNII-1 & 2A					13.0					11.0
	UNII-2C					13.0					11.0
	UNII-3					13.0					11.0
RF Air interface	Band	Max. RF Output Power (dBm)									
		BDR	EDR	LE-1Mbps	LE-2Mbps						
Bluetooth	DSS	17.0 78ch : 14.5	12.5 78ch : 10.0	8.0	8.0						

Notes:

1. This device uses an independent fixed level power reduction mechanism for WLAN mode operations during RCV operation. Detailed descriptions of the power reduction mechanism are included in the operational description.

6.5. DSI (Device State Index) Scenarios

This device supports multiple DSI Scenarios and Each DSIs operate to each RF exposure Conditions.

Please below table;

RF exposure Conditions	Technologies Supported	DSI conditions	Description
Head	All WWAN bands	DSI = 2	Next to the ear exposure condition. Handset's Receiver(ear piece) is active during Voice or VoIP call.
Body-worn	All WWAN bands	DSI = 0	Handset are used with body-worn accessories
Hotspot	All WWAN bands	DSI = 3	SAR test requirements for Handset wit wireless router or hotspor mode capabilities.
Product Specific 10-g	All WWAN bands	DSI = 0	Hand use conditions for Handset and proximity sensor is not active.
	All WWAN bands	DSI = 1	Hand use conditions for Handset and proximity sensor is active.
	All WWAN bands	DSI = 4	Connected ear-jack

Note(s):

1. DSI Scenarios priority: DSI=2 → DSI=3 → DS=4 → DSI=1 → DSI=0

Product Specific 10g Adjusted SAR Calculation

Wireless technologies	Worst DSI's Maximum tune-up limit (dBm)	DSI = 3 Maximum tune-up limit (dBm)	Power Factor	Reported SAR Limit (W/kg)
GSM 1900	22.98	18.49	2.81	0.427
WCDMA Band II	24.50	21.50	2.00	0.601
WCDMA Band IV	23.50	21.50	1.58	0.757
LTE Band 25/2 - Main.2	25.00	22.00	2.00	0.601
LTE Band 66/4 - Main.2	24.00	22.00	1.58	0.757
LTE Band 7	23.00	21.50	1.41	0.850
LTE Band 30	24.00	21.00	2.00	0.601
LTE Band 40	16.00	15.00	1.26	0.953
LTE Band 41/38 (PC3)	25.00	23.00	1.58	0.757
NR Band n25/n2	25.00	22.00	2.00	0.601
NR Band n30	24.00	21.00	2.00	0.601
NR Band n41	20.50	18.00	1.78	0.675
NR Band n66	25.00	22.00	2.00	0.601
NR Band n70	23.00	21.00	1.58	0.757

Note(s):

1. Tune-up limit powers for GSM 1900 are frame power(dBm).
2. Hotspot mode supports power reduction. When the measured SAR is scaled to the maximum tune-up limit, the adjusted SAR is < 1.2 W/kg. Therefore, Extremity SAR testing is not required for this band in accordance with KDB 648474 §2.5 b. Refer to §10 for Reported SAR results. If the Reported SAR 1g value in §10 is less than the Reported SAR Limit listed above, then Extremity SAR is not required.
3. LTE 50% RB is scaled up to the Max Tune-Up Limit with MPR included.
4. For Reported SAR limit in above table, it was calculated using Max tune-up Limit & Reduced Tune-up limit & Reported SAR 1.2 W/kg. (Reported SAR Limit = 1.2 W/kg / Power factor, Power factor = $10^{((\text{Max tune-up limit} - \text{Reduced tune-up limit})/10)}$)

6.6. General LTE SAR Test and Reporting Considerations

Item	Description						
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 2	Frequency range: 1850 - 1910 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					
		Channel Bandwidth					
		20 MHz	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					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	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					
		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					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	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						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low				23205/ 779.5			
Mid			23230/ 782	23230/ 782			
High				23255/ 784.5			
Band 14	Frequency range: 788 - 798 MHz						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low				23305/ 790.5			
Mid			23330/ 793	23330/ 793			
High				23355/ 795.5			

General LTE SAR Test and Reporting Considerations (Continued)

Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 25	Frequency range: 1850 - 1915 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						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low		26765/ 821.5	26740/ 819	26715/ 816.5	26705/ 815.5	26697/ 814.7	
Mid		26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5
High		26965/ 841.5	26990/ 844	27015/ 846.5	27025/ 847.5	27033/ 848.3	
Band 30	Frequency range: 2305 - 2315 MHz						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low				27685/ 2307.5			
Mid			27710/ 2310	27710/ 2310			
High				27735/ 2312.5			
Band 38	Frequency range: 2570 - 2620 MHz						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low	37850/ 2580	37825/ 2577.5	37800/ 2575	37775/ 2572.5			
Mid	38000/ 2595	38000/ 2595	38000/ 2595	38000/ 2595			
High	38150/ 2610	38175/ 2612.5	38200/ 2615	38225/ 2617.5			
Band 40 -Lower Band-	Frequency range: 2305 - 2315 MHz						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low				38725/ 2307.5			
Mid			38750/ 2310	38750/ 2310			
High				38775/ 2312.5			
Band 40 -Upper Band-	Frequency range: 2350 - 2360 MHz						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low				39175/ 2352.5			
Mid			39200/ 2355	39200/ 2355			
High				39225/ 2357.5			
Band 41	Frequency range: 2496 - 2690 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					

General LTE SAR Test and Reporting Considerations (Continued)

Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 48	Frequency range: 3550 - 3700 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	55990/ 3625	55990/ 3625	55990/ 3625	55990/ 3625		
	High	56640/ 3690	56665/ 3692.5	56690/ 3695	56715/ 3697.5		
	Band 66	Frequency range: 1710 - 1780 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
	Band 71	Frequency range: 663 - 698 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	133222/ 673	133197/ 670.5	133172/ 668	133147/ 665.5			
Mid	133297/ 680.5	133297/ 680.5	133297/ 680.5	133297/ 680.5			
High	133372/ 688	133397/ 690.5	133422/ 693	133447/ 695.5			
LTE transmitter and antenna implementation	Refer to Appendix A.						
Maximum power reduction (MPR)	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
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
256 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
	≥ 1						≤ 5
	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						
Power reduction	Yes						
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.						

Notes:

- 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 Band 41 test channels in accordance with October 2014 TCB workshop for all channels bandwidths.
- SAR Testing for LTE was performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

6.7. 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	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
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	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$20480 \cdot T_s$				
6	$19760 \cdot T_s$	$23040 \cdot T_s$				
7	$21952 \cdot T_s$	$12800 \cdot T_s$				
8	$24144 \cdot T_s$	-	-	-		
9	$13168 \cdot T_s$	-	-	-	-	

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	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

Calculated Duty Cycle = Extended cyclic prefix in uplink $\times (T_s) \times \#$ of S + $\#$ of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:

Calculated Duty Cycle = $5120 \times [1/(15000 \times 2048)] \times 2 + 6 \text{ ms} = 63.33\%$

where

$T_s = 1/(15000 \times 2048)$ seconds

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% duty cycle. Only LTE Band 41 Power Class 2 was used configuration 1 at 43.3% duty cycle for SAR testing.

6.8. NR (Sub 6GHz) SAR Test and Reporting Considerations

Item	Description														
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band n2	Frequency range: 1850 - 1910 MHz													
		Channel Bandwidth (MHz)													
		100	90	80	70	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	
	Band n5	Frequency range: 824 - 849 MHz													
		Channel Bandwidth (MHz)													
		100	90	80	70	60	50	40	30	25	20	15	10	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		
Band n25	Frequency range: 1850 - 1915 MHz														
	Channel Bandwidth (MHz)														
	100	90	80	70	60	50	40	30	25	20	15	10	5		
Low							374000 /1870	373000 /1865	372500 /1862.5	372000 /1860	371500 /1857.5	371000 /1855	370500 /1852.5		
Mid							376500 /1882.5	376500 /1882.5	376500 /1882.5	376500 /1882.5	376500 /1882.5	376500 /1882.5	376500 /1882.5		
High							379000 /1895	380000 /1900	380500 /1902.5	381000 /1905	381500 /1907.5	382000 /1910	382500 /1912.5		
Band n30	Frequency range: 2305 - 2315 MHz														
	Channel Bandwidth (MHz)														
	100	90	80	70	60	50	40	30	25	20	15	10	5		
Low													461500 /2307.5		
Mid												462000 /2310	462000 /2310		
High													462500 /2312.5		
Band n41	Frequency range: 2496 - 2690 MHz														
	Channel Bandwidth (MHz)														
	100	90	80	70	60	50	40	30	25	20	15	10	5		
Low	509202 /2546.01	508200 /2541	507204 /2536.02		505200 /2526	504204 /2512.02	503202 /2516.01	502200 /2511		501204 /2506.02					
Low-Mid							513468 /2567.34	510402 /2552.01		509898 /2549.49					
Mid	518598 /2592.99				518598 /2592.99	518598 /2592.99		518598 /2592.99		518598 /2592.99					
Mid-High							523734 /2618.67	526800 /2634		527298 /2636.49					
High	528000 /2640	528996 /2644.98	529998 /2649.99		532998 /2664.99	523734 /2618.67	534000 /2670	534996 /2674.98		535998 /2679.99					
Band n48	Frequency range: 3550 - 3700 MHz														
	Channel Bandwidth (MHz)														
	100	90	80	70	60	50	40	30	25	20	15	10	5		
Low							636000 /3570			637334 /3560.01		637000 /3555			
Low-Mid							640444 /3606.66			640222 /3603.33		640110 /3601.65			
Mid															
Mid-High							642888 /3643.32			643112 /3646.68		643222 /3648.33			
High							645332 /3679.98			646000 /3690		646332 /3694.98			
Band n66	Frequency range: 1710 - 1780 MHz														
	Channel Bandwidth (MHz)														
	100	90	80	70	60	50	40	30	25	20	15	10	5		
Low							346000 /1730	345000 /1725		344000 /1720	343500 /1717.5	343000 /1715	342500 /1712.5		
Mid							349000 /1745	349000 /1745		349000 /1745	349000 /1745	349000 /1745	349000 /1745		
High							352000 /1760	353000 /1765		354000 /1770	354500 /1772.5	355000 /1775	355500 /1777.5		
Band n70	Frequency range: 1695 - 1710 MHz														
	Channel Bandwidth (MHz)														
	100	90	80	70	60	50	40	30	25	20	15	10	5		
Low												340000 /1700	339500 /1697.5		
Mid											340500 /1702.5	340500 /1702.5	340500 /1702.5		
High												341000 /1705	341500 /1707.5		

Item	Description														
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band n71	Frequency range: 663 - 698 MHz													
		Channel Bandwidth (MHz)													
		100	90	80	70	60	50	40	30	25	20	15	10	5	
	Low										134600 /673	134100 /670.5	133600 /668	133147 /665.5	
	Mid										136100 /680.5	136100 /680.5	136100 /680.5	136100 /680.5	
	High										137600 /688	138100 /690.5	138600 /693	133447 /695.5	
	Band n77 -Lower Band-	Frequency range: 3450 - 3550 MHz													
		Channel Bandwidth (MHz)													
		100	90	80	70	60	50	40	30	25	20	15	10	5	
	Low						631668 /3475.02	631334 /3470.01	631000 /3465		630668 /3460.02				
	Mid	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01			633334 /3500.01		633334 /3500.01				
	High						635000 /3525	635332 /3529.98	635666 /3534.99		636000 /3540				
	Band n77 -Upper Band-	Frequency range: 3700 - 3980 MHz													
		Channel Bandwidth (MHz)													
		100	90	80	70	60	50	40	30	25	20	15	10	5	
Low		650000 /3750	649668 /3745.02	649334 /3740.01	649000 /3735	648668 /3730.02	648334 /3725.01	648000 /3720	647668 /3715.02		647334 /3710.01				
Low-Mid					653666 /3804.99	653556 /3803.34	652166 /3782.49	651200 /3768	651000 /3765		650800 /3762				
Mid-A			656000 /3840	656000 /3840			656000 /3840	654400 /3816	654334 /3815.01		654266 /3813.99				
Mid-B								657600 /3864	657666 /3864.99		657734 /3866.01				
Mid-High		662000 /3930	662332 /3934.98	662666 /3939.99	658334 /3875.01	658444 /3876.66	659834 /3897.51	660800 /3912	661000 /3915		661200 /3918				
High				663000 /3945	663332 /3949.98	663666 /3954.99	664000 /3960	664332 /3964.98		664666 /3969.99					
SCS	NR FDD Bands : 15 kHz, NR TDD Bands : 30 kHz														
Modulations Supported in UL	DFT-s-OFDM: $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM														
A-MPR (Additional MPR) disabled for SAR Testing?	Yes														
EN-DC Carrier Aggregation Possible Combinations															
LTE Anchor Bands for NR Band n2	LTE Band 5 / 12 / 13 / 14														
LTE Anchor Bands for NR Band n5	LTE Band 2 / 30 / 48 / 66														
LTE Anchor Bands for NR Band n25	LTE Band 12 / 48														
LTE Anchor Bands for NR Band n30	LTE Band 5 / 12 / 14														
LTE Anchor Bands for NR Band n41	LTE Band 2 / 12 / 25 / 66														
LTE Anchor Bands for NR Band n48	LTE Band 2 / 66														
LTE Anchor Bands for NR Band n66	LTE Band 5 / 12 / 13 / 14 / 48														
LTE Anchor Bands for NR Band n70	N/A (SA only supported)														
LTE Anchor Bands for NR Band n71	LTE Band 2 / 66														
LTE Anchor Bands for NR Band n77	LTE Band 2 / 5 / 7 / 12 / 13 / 14 / 30 / 66														

Notes:

- 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.
- NR configurations of SAR test were determined according to Section 5.2 of KDB 941225 D05.

7. RF Exposure Conditions (Test Configurations)

Refer to Appendix A for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

Wireless technologies	RF Exposure Conditions	Antenna	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WWAN	Head	All Main Antennas	0 mm	Left Touch	N/A	Yes	
				Left Tilt (15°)	N/A	Yes	
				Right Touch	N/A	Yes	
				Right Tilt (15°)	N/A	Yes	
	Body	All Main Antennas	15 mm	Rear	N/A	Yes	
				Front	N/A	Yes	
	Hotspot	Main 1 Ant.	10 mm	Rear	< 25 mm	Yes	✓
				Front	< 25 mm	Yes	✓
				Edge 1 (Top)	> 25 mm	No	1
				Edge 2 (Right)	< 25 mm	Yes	
				Edge 3 (Bottom)	< 25 mm	Yes	
	Hotspot	Main 2 Ant.	10 mm	Rear	< 25 mm	Yes	✓
				Front	< 25 mm	Yes	✓
				Edge 1 (Top)	> 25 mm	No	1
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	< 25 mm	Yes	
	Hotspot	Sub.1 Ant.	10 mm	Rear	< 25 mm	Yes	✓
				Front	< 25 mm	Yes	✓
				Edge 1 (Top)	< 25 mm	Yes	✓
				Edge 2 (Right)	< 25 mm	Yes	
				Edge 3 (Bottom)	> 25 mm	No	1
	Hotspot	Sub.2 Ant. Sub.3 Ant. Sub.5 Ant.	10 mm	Rear	< 25 mm	Yes	✓
				Front	< 25 mm	Yes	✓
				Edge 1 (Top)	< 25 mm	Yes	✓
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	> 25 mm	No	1
	Product Specific 10-g	All Main Antennas	0 mm	Rear		Refer to notes 2 & 3	
				Front			
Edge 1 (Top)							
Edge 2 (Right)							
Edge 3 (Bottom)							
2.4GHz WLAN/BT & 5GHz WLAN	Head	All Main Antennas	0 mm	Left Touch	N/A	Yes	
				Left Tilt (15°)	N/A	Yes	
				Right Touch	N/A	Yes	
				Right Tilt (15°)	N/A	Yes	
	Body	All Main Antennas	15 mm	Rear	N/A	Yes	
				Front	N/A	Yes	
	Hotspot	WiFi2.4G & 5G BT	10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Edge 1 (Top)	< 25 mm	Yes	
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	> 25 mm	No	1
	Product Specific 10-g	All Main Antennas	0 mm	Rear		Refer to notes 2 & 4	
				Front			
				Edge 1 (Top)			
				Edge 2 (Right)			
				Edge 3 (Bottom)			
					Edge 4 (Left)		

Notes:

- SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.
- For Phablet devices: When hotspot mode applies, Product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.
- For Phablet devices: When hotspot mode applies and power reduction applies to hotspot mode, Product specific 10-g SAR is required for each test position that has and adjusted SAR to maximum power that is > 1.2 W/kg.
- For Phablet devices: When hotspot mode is not supported, Product specific 10-g SAR is required for all surfaces and edges with an antenna located at ≤ 25mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.

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 $\pm 2^\circ\text{C}$ 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.

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

SAR test were performed in All RF exposure conditions using Head tissue according to TCB workshop note of April. 2019.

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

Dielectric Property Measurements Results:
SAR 1 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2022-06-16	Head 1750	e'	39.9600	Relative Permittivity (ε _r):	39.96	40.08	-0.31	5
		e"	13.6700	Conductivity (σ):	1.33	1.37	-2.83	5
	Head 1710	e'	40.0000	Relative Permittivity (ε _r):	40.00	40.15	-0.36	5
		e"	13.8900	Conductivity (σ):	1.32	1.35	-1.91	5
	Head 1755	e'	39.9600	Relative Permittivity (ε _r):	39.96	40.08	-0.29	5
		e"	13.6400	Conductivity (σ):	1.33	1.37	-2.97	5
2022-06-16	Head 1900	e'	38.5600	Relative Permittivity (ε _r):	38.56	40.00	-3.60	5
		e"	13.0700	Conductivity (σ):	1.38	1.40	-1.37	5
	Head 1850	e'	39.3900	Relative Permittivity (ε _r):	39.39	40.00	-1.53	5
		e"	13.3900	Conductivity (σ):	1.38	1.40	-1.62	5
	Head 1910	e'	38.3700	Relative Permittivity (ε _r):	38.37	40.00	-4.08	5
		e"	12.9700	Conductivity (σ):	1.38	1.40	-1.61	5
2022-06-17	Head 750	e'	41.0500	Relative Permittivity (ε _r):	41.05	41.96	-2.17	5
		e"	20.7200	Conductivity (σ):	0.86	0.89	-3.25	5
	Head 680	e'	41.2800	Relative Permittivity (ε _r):	41.28	42.32	-2.46	5
		e"	22.5900	Conductivity (σ):	0.85	0.89	-3.78	5
	Head 790	e'	40.8300	Relative Permittivity (ε _r):	40.83	41.76	-2.22	5
		e"	19.8100	Conductivity (σ):	0.87	0.90	-2.90	5
2022-06-17	Head 2250	e'	38.6700	Relative Permittivity (ε _r):	38.67	39.56	-2.25	5
		e"	12.4900	Conductivity (σ):	1.56	1.62	-3.53	5
	Head 2300	e'	38.5300	Relative Permittivity (ε _r):	38.53	39.47	-2.39	5
		e"	12.5100	Conductivity (σ):	1.60	1.66	-3.84	5
	Head 2350	e'	38.4000	Relative Permittivity (ε _r):	38.40	39.38	-2.50	5
		e"	12.5300	Conductivity (σ):	1.64	1.71	-4.12	5
2022-06-22	Head 5250	e'	36.5700	Relative Permittivity (ε _r):	36.57	35.93	1.77	5
		e"	16.5100	Conductivity (σ):	4.82	4.70	2.50	5
	Head 5260	e'	36.6200	Relative Permittivity (ε _r):	36.62	35.92	1.94	5
		e"	16.5400	Conductivity (σ):	4.84	4.71	2.66	5
	Head 5600	e'	36.7200	Relative Permittivity (ε _r):	36.72	35.53	3.34	5
		e"	16.0200	Conductivity (σ):	4.99	5.06	-1.42	5
	Head 5750	e'	36.3800	Relative Permittivity (ε _r):	36.38	35.36	2.88	5
		e"	15.9900	Conductivity (σ):	5.11	5.21	-1.95	5
	Head 5825	e'	36.0700	Relative Permittivity (ε _r):	36.07	35.30	2.18	5
		e"	16.1200	Conductivity (σ):	5.22	5.27	-0.93	5
2022-07-05	Head 3550	e'	38.4400	Relative Permittivity (ε _r):	38.44	37.87	1.50	5
		e"	14.7800	Conductivity (σ):	2.92	2.96	-1.53	5
	Head 3600	e'	38.3600	Relative Permittivity (ε _r):	38.36	37.82	1.44	5
		e"	14.8300	Conductivity (σ):	2.97	3.01	-1.51	5
	Head 3650	e'	38.2700	Relative Permittivity (ε _r):	38.27	37.76	1.35	5
		e"	14.8500	Conductivity (σ):	3.01	3.07	-1.67	5
	Head 3700	e'	38.1700	Relative Permittivity (ε _r):	38.17	37.70	1.24	5
		e"	14.8900	Conductivity (σ):	3.06	3.12	-1.70	5

SAR 3 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2022-05-16	Head 1750	e'	39.1700	Relative Permittivity (ε _r):	39.17	40.08	-2.28	5
		e"	13.7700	Conductivity (σ):	1.34	1.37	-2.12	5
	Head 1710	e'	39.2000	Relative Permittivity (ε _r):	39.20	40.15	-2.36	5
		e"	13.8300	Conductivity (σ):	1.31	1.35	-2.33	5
	Head 1755	e'	39.1700	Relative Permittivity (ε _r):	39.17	40.08	-2.26	5
		e"	13.7700	Conductivity (σ):	1.34	1.37	-2.05	5
2022-05-16	Head 1900	e'	39.0200	Relative Permittivity (ε _r):	39.02	40.00	-2.45	5
		e"	13.3800	Conductivity (σ):	1.41	1.40	0.97	5
	Head 1850	e'	39.0200	Relative Permittivity (ε _r):	39.02	40.00	-2.45	5
		e"	13.4200	Conductivity (σ):	1.38	1.40	-1.40	5
	Head 1910	e'	39.0200	Relative Permittivity (ε _r):	39.02	40.00	-2.45	5
		e"	13.3700	Conductivity (σ):	1.42	1.40	1.42	5
2022-05-18	Head 1900	e'	39.8000	Relative Permittivity (ε _r):	39.80	40.00	-0.50	5
		e"	13.4000	Conductivity (σ):	1.42	1.40	1.12	5
	Head 1850	e'	39.7300	Relative Permittivity (ε _r):	39.73	40.00	-0.68	5
		e"	13.3800	Conductivity (σ):	1.38	1.40	-1.69	5
	Head 1910	e'	39.8200	Relative Permittivity (ε _r):	39.82	40.00	-0.45	5
		e"	13.3900	Conductivity (σ):	1.42	1.40	1.57	5
2022-05-30	Head 1900	e'	39.7700	Relative Permittivity (ε _r):	39.77	40.00	-0.57	5
		e"	13.6300	Conductivity (σ):	1.44	1.40	2.85	5
	Head 1850	e'	39.8200	Relative Permittivity (ε _r):	39.82	40.00	-0.45	5
		e"	13.6900	Conductivity (σ):	1.41	1.40	0.59	5
	Head 1910	e'	39.7300	Relative Permittivity (ε _r):	39.73	40.00	-0.68	5
		e"	13.6100	Conductivity (σ):	1.45	1.40	3.24	5

SAR 4 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2022-05-16	Head 2600	e'	37.6500	Relative Permittivity (ϵ_r):	37.65	39.01	-3.49	5
		e"	13.3400	Conductivity (σ):	1.93	1.96	-1.71	5
	Head 2500	e'	37.8000	Relative Permittivity (ϵ_r):	37.80	39.14	-3.42	5
		e"	13.3400	Conductivity (σ):	1.85	1.85	0.02	5
	Head 2700	e'	37.4500	Relative Permittivity (ϵ_r):	37.45	38.88	-3.69	5
		e"	13.2700	Conductivity (σ):	1.99	2.07	-3.77	5
2022-05-18	Head 2250	e'	38.4500	Relative Permittivity (ϵ_r):	38.45	39.56	-2.81	5
		e"	12.9100	Conductivity (σ):	1.62	1.62	-0.29	5
	Head 2300	e'	38.2900	Relative Permittivity (ϵ_r):	38.29	39.47	-3.00	5
		e"	12.9000	Conductivity (σ):	1.65	1.66	-0.84	5
	Head 2350	e'	38.3200	Relative Permittivity (ϵ_r):	38.32	39.38	-2.70	5
		e"	13.0200	Conductivity (σ):	1.70	1.71	-0.37	5
2022-05-19	Head 2600	e'	38.9700	Relative Permittivity (ϵ_r):	38.97	39.01	-0.10	5
		e"	13.5600	Conductivity (σ):	1.96	1.96	-0.09	5
	Head 2500	e'	39.2700	Relative Permittivity (ϵ_r):	39.27	39.14	0.34	5
		e"	13.5500	Conductivity (σ):	1.88	1.85	1.59	5
	Head 2700	e'	38.6600	Relative Permittivity (ϵ_r):	38.66	38.88	-0.58	5
		e"	13.6100	Conductivity (σ):	2.04	2.07	-1.31	5
2022-05-22	Head 2600	e'	37.4300	Relative Permittivity (ϵ_r):	37.43	39.01	-4.05	5
		e"	13.8200	Conductivity (σ):	2.00	1.96	1.82	5
	Head 2500	e'	37.5700	Relative Permittivity (ϵ_r):	37.57	39.14	-4.00	5
		e"	13.6900	Conductivity (σ):	1.90	1.85	2.64	5
	Head 2700	e'	37.2000	Relative Permittivity (ϵ_r):	37.20	38.88	-4.33	5
		e"	13.8700	Conductivity (σ):	2.08	2.07	0.58	5
2022-05-25	Head 2250	e'	39.6100	Relative Permittivity (ϵ_r):	39.61	39.56	0.13	5
		e"	12.8300	Conductivity (σ):	1.61	1.62	-0.90	5
	Head 2300	e'	39.5100	Relative Permittivity (ϵ_r):	39.51	39.47	0.09	5
		e"	12.8100	Conductivity (σ):	1.64	1.66	-1.53	5
	Head 2350	e'	39.4500	Relative Permittivity (ϵ_r):	39.45	39.38	0.17	5
		e"	12.9200	Conductivity (σ):	1.69	1.71	-1.14	5
2022-05-25	Head 2600	e'	39.0700	Relative Permittivity (ϵ_r):	39.07	39.01	0.15	5
		e"	13.2600	Conductivity (σ):	1.92	1.96	-2.30	5
	Head 2500	e'	39.2000	Relative Permittivity (ϵ_r):	39.20	39.14	0.16	5
		e"	13.1500	Conductivity (σ):	1.83	1.85	-1.41	5
	Head 2700	e'	38.8200	Relative Permittivity (ϵ_r):	38.82	38.88	-0.17	5
		e"	13.3700	Conductivity (σ):	2.01	2.07	-3.05	5
2022-05-26	Head 1750	e'	39.0300	Relative Permittivity (ϵ_r):	39.03	40.08	-2.63	5
		e"	14.4700	Conductivity (σ):	1.41	1.37	2.85	5
	Head 1710	e'	39.1000	Relative Permittivity (ϵ_r):	39.10	40.15	-2.61	5
		e"	14.6100	Conductivity (σ):	1.39	1.35	3.17	5
	Head 1755	e'	39.0300	Relative Permittivity (ϵ_r):	39.03	40.08	-2.61	5
		e"	14.4500	Conductivity (σ):	1.41	1.37	2.79	5
2022-05-30	Head 2250	e'	40.1800	Relative Permittivity (ϵ_r):	40.18	39.56	1.57	5
		e"	12.6400	Conductivity (σ):	1.58	1.62	-2.37	5
	Head 2300	e'	40.1400	Relative Permittivity (ϵ_r):	40.14	39.47	1.69	5
		e"	12.6600	Conductivity (σ):	1.62	1.66	-2.69	5
	Head 2350	e'	40.0400	Relative Permittivity (ϵ_r):	40.04	39.38	1.66	5
		e"	12.7400	Conductivity (σ):	1.66	1.71	-2.52	5
2022-05-31	Head 1750	e'	40.5700	Relative Permittivity (ϵ_r):	40.57	40.08	1.21	5
		e"	13.8200	Conductivity (σ):	1.34	1.37	-1.77	5
	Head 1710	e'	40.5300	Relative Permittivity (ϵ_r):	40.53	40.15	0.96	5
		e"	13.8400	Conductivity (σ):	1.32	1.35	-2.26	5
	Head 1755	e'	40.5200	Relative Permittivity (ϵ_r):	40.52	40.08	1.11	5
		e"	13.8100	Conductivity (σ):	1.35	1.37	-1.76	5
2022-05-31	Head 1900	e'	40.7500	Relative Permittivity (ϵ_r):	40.75	40.00	1.88	5
		e"	13.6000	Conductivity (σ):	1.44	1.40	2.63	5
	Head 1850	e'	40.5700	Relative Permittivity (ϵ_r):	40.57	40.00	1.43	5
		e"	13.7300	Conductivity (σ):	1.41	1.40	0.88	5
	Head 1910	e'	40.6700	Relative Permittivity (ϵ_r):	40.67	40.00	1.68	5
		e"	13.5600	Conductivity (σ):	1.44	1.40	2.86	5

SAR 4 Room (Continued)

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2022-06-03	Head 1750	e'	40.7000	Relative Permittivity (ϵ_r):	40.70	40.08	1.54	5
		e"	13.8800	Conductivity (σ):	1.35	1.37	-1.34	5
	Head 1710	e'	40.7600	Relative Permittivity (ϵ_r):	40.76	40.15	1.53	5
		e"	13.9800	Conductivity (σ):	1.33	1.35	-1.28	5
	Head 1755	e'	40.6900	Relative Permittivity (ϵ_r):	40.69	40.08	1.53	5
		e"	13.8700	Conductivity (σ):	1.35	1.37	-1.33	5
2022-06-03	Head 1900	e'	40.5000	Relative Permittivity (ϵ_r):	40.50	40.00	1.25	5
		e"	13.5800	Conductivity (σ):	1.43	1.40	2.48	5
	Head 1850	e'	40.5600	Relative Permittivity (ϵ_r):	40.56	40.00	1.40	5
		e"	13.6700	Conductivity (σ):	1.41	1.40	0.44	5
	Head 1910	e'	40.4800	Relative Permittivity (ϵ_r):	40.48	40.00	1.20	5
		e"	13.5700	Conductivity (σ):	1.44	1.40	2.94	5

SAR 5 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2022-05-16	Head 750	e'	40.3600	Relative Permittivity (ϵ_r):	40.36	41.96	-3.82	5
		e"	21.8500	Conductivity (σ):	0.91	0.89	2.03	5
	Head 680	e'	40.4400	Relative Permittivity (ϵ_r):	40.44	42.32	-4.44	5
		e"	23.0900	Conductivity (σ):	0.87	0.89	-1.65	5
	Head 790	e'	40.1800	Relative Permittivity (ϵ_r):	40.18	41.76	-3.78	5
		e"	21.1100	Conductivity (σ):	0.93	0.90	3.47	5
2022-05-16	Head 835	e'	40.0900	Relative Permittivity (ϵ_r):	40.09	41.50	-3.40	5
		e"	20.2900	Conductivity (σ):	0.94	0.90	4.67	5
	Head 820	e'	40.1000	Relative Permittivity (ϵ_r):	40.10	41.60	-3.61	5
		e"	20.5700	Conductivity (σ):	0.94	0.90	4.39	5
	Head 850	e'	40.0700	Relative Permittivity (ϵ_r):	40.07	41.50	-3.45	5
		e"	20.0100	Conductivity (σ):	0.95	0.92	3.36	5
2022-05-18	Head 750	e'	41.5700	Relative Permittivity (ϵ_r):	41.57	41.96	-0.93	5
		e"	21.9500	Conductivity (σ):	0.92	0.89	2.50	5
	Head 680	e'	41.8200	Relative Permittivity (ϵ_r):	41.82	42.32	-1.18	5
		e"	24.0700	Conductivity (σ):	0.91	0.89	2.52	5
	Head 790	e'	41.4100	Relative Permittivity (ϵ_r):	41.41	41.76	-0.83	5
		e"	21.1900	Conductivity (σ):	0.93	0.90	3.87	5
2022-05-18	Head 835	e'	41.3100	Relative Permittivity (ϵ_r):	41.31	41.50	-0.46	5
		e"	20.2500	Conductivity (σ):	0.94	0.90	4.46	5
	Head 820	e'	41.3500	Relative Permittivity (ϵ_r):	41.35	41.60	-0.61	5
		e"	20.5900	Conductivity (σ):	0.94	0.90	4.49	5
	Head 850	e'	41.2900	Relative Permittivity (ϵ_r):	41.29	41.50	-0.51	5
		e"	19.9100	Conductivity (σ):	0.94	0.92	2.84	5
2022-05-23	Head 750	e'	43.0000	Relative Permittivity (ϵ_r):	43.00	41.96	2.47	5
		e"	21.0000	Conductivity (σ):	0.88	0.89	-1.94	5
	Head 680	e'	43.1300	Relative Permittivity (ϵ_r):	43.13	42.32	1.91	5
		e"	22.5600	Conductivity (σ):	0.85	0.89	-3.91	5
	Head 790	e'	42.8800	Relative Permittivity (ϵ_r):	42.88	41.76	2.69	5
		e"	20.2300	Conductivity (σ):	0.89	0.90	-0.84	5
2022-05-23	Head 835	e'	42.7800	Relative Permittivity (ϵ_r):	42.78	41.50	3.08	5
		e"	19.4400	Conductivity (σ):	0.90	0.90	0.29	5
	Head 820	e'	42.8000	Relative Permittivity (ϵ_r):	42.80	41.60	2.88	5
		e"	19.6900	Conductivity (σ):	0.90	0.90	-0.08	5
	Head 850	e'	42.7800	Relative Permittivity (ϵ_r):	42.78	41.50	3.08	5
		e"	19.2000	Conductivity (σ):	0.91	0.92	-0.83	5
2022-05-26	Head 750	e'	43.2700	Relative Permittivity (ϵ_r):	43.27	41.96	3.12	5
		e"	20.8500	Conductivity (σ):	0.87	0.89	-2.64	5
	Head 680	e'	43.3700	Relative Permittivity (ϵ_r):	43.37	42.32	2.48	5
		e"	22.4800	Conductivity (σ):	0.85	0.89	-4.25	5
	Head 790	e'	43.0000	Relative Permittivity (ϵ_r):	43.00	41.76	2.98	5
		e"	19.7700	Conductivity (σ):	0.87	0.90	-3.09	5
2022-05-26	Head 835	e'	42.8300	Relative Permittivity (ϵ_r):	42.83	41.50	3.20	5
		e"	19.0100	Conductivity (σ):	0.88	0.90	-1.93	5
	Head 820	e'	42.8600	Relative Permittivity (ϵ_r):	42.86	41.60	3.02	5
		e"	19.2100	Conductivity (σ):	0.88	0.90	-2.51	5
	Head 850	e'	42.8400	Relative Permittivity (ϵ_r):	42.84	41.50	3.23	5
		e"	18.8300	Conductivity (σ):	0.89	0.92	-2.74	5
2022-05-30	Head 835	e'	42.1000	Relative Permittivity (ϵ_r):	42.10	41.50	1.45	5
		e"	19.4800	Conductivity (σ):	0.90	0.90	0.49	5
	Head 820	e'	42.0900	Relative Permittivity (ϵ_r):	42.09	41.60	1.17	5
		e"	19.6900	Conductivity (σ):	0.90	0.90	-0.08	5
	Head 850	e'	42.1000	Relative Permittivity (ϵ_r):	42.10	41.50	1.45	5
		e"	19.2400	Conductivity (σ):	0.91	0.92	-0.62	5

SAR 7 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2022-06-06	Head 1750	e'	39.4900	Relative Permittivity (ϵ_r):	39.49	40.08	-1.48	5
		e"	13.7300	Conductivity (σ):	1.34	1.37	-2.41	5
	Head 1710	e'	39.5400	Relative Permittivity (ϵ_r):	39.54	40.15	-1.51	5
		e"	13.8000	Conductivity (σ):	1.31	1.35	-2.55	5
	Head 1755	e'	39.4700	Relative Permittivity (ϵ_r):	39.47	40.08	-1.51	5
		e"	13.7000	Conductivity (σ):	1.34	1.37	-2.54	5
2022-06-06	Head 1900	e'	39.2400	Relative Permittivity (ϵ_r):	39.24	40.00	-1.90	5
		e"	13.4700	Conductivity (σ):	1.42	1.40	1.65	5
	Head 1850	e'	39.3100	Relative Permittivity (ϵ_r):	39.31	40.00	-1.72	5
		e"	13.5700	Conductivity (σ):	1.40	1.40	-0.29	5
	Head 1910	e'	39.2300	Relative Permittivity (ϵ_r):	39.23	40.00	-1.93	5
		e"	13.4500	Conductivity (σ):	1.43	1.40	2.03	5
2022-06-17	Head 2450	e'	39.6200	Relative Permittivity (ϵ_r):	39.62	39.20	1.07	5
		e"	13.2100	Conductivity (σ):	1.80	1.80	-0.02	5
	Head 2410	e'	39.7000	Relative Permittivity (ϵ_r):	39.70	39.28	1.07	5
		e"	13.2500	Conductivity (σ):	1.78	1.76	0.86	5
	Head 2475	e'	39.5800	Relative Permittivity (ϵ_r):	39.58	39.17	1.05	5
		e"	13.2000	Conductivity (σ):	1.82	1.83	-0.57	5
2022-06-17	Head 2600	e'	39.4200	Relative Permittivity (ϵ_r):	39.42	39.01	1.05	5
		e"	13.2600	Conductivity (σ):	1.92	1.96	-2.30	5
	Head 2500	e'	39.5400	Relative Permittivity (ϵ_r):	39.54	39.14	1.03	5
		e"	13.2200	Conductivity (σ):	1.84	1.85	-0.88	5
	Head 2700	e'	39.2100	Relative Permittivity (ϵ_r):	39.21	38.88	0.84	5
		e"	13.3200	Conductivity (σ):	2.00	2.07	-3.41	5
2022-06-20	Head 2450	e'	39.8500	Relative Permittivity (ϵ_r):	39.85	39.20	1.66	5
		e"	13.6900	Conductivity (σ):	1.86	1.80	3.61	5
	Head 2400	e'	39.9400	Relative Permittivity (ϵ_r):	39.94	39.30	1.64	5
		e"	13.7200	Conductivity (σ):	1.83	1.75	4.52	5
	Head 2480	e'	39.8200	Relative Permittivity (ϵ_r):	39.82	39.16	1.68	5
		e"	13.6800	Conductivity (σ):	1.89	1.83	2.95	5
2022-06-20	Head 2600	e'	39.6300	Relative Permittivity (ϵ_r):	39.63	39.01	1.59	5
		e"	13.7400	Conductivity (σ):	1.99	1.96	1.23	5
	Head 2500	e'	39.8100	Relative Permittivity (ϵ_r):	39.81	39.14	1.72	5
		e"	13.6700	Conductivity (σ):	1.90	1.85	2.49	5
	Head 2700	e'	39.4800	Relative Permittivity (ϵ_r):	39.48	38.88	1.53	5
		e"	13.8200	Conductivity (σ):	2.07	2.07	0.22	5
2022-06-23	Head 1750	e'	40.8100	Relative Permittivity (ϵ_r):	40.81	40.08	1.81	5
		e"	13.6100	Conductivity (σ):	1.32	1.37	-3.26	5
	Head 1710	e'	40.8000	Relative Permittivity (ϵ_r):	40.80	40.15	1.63	5
		e"	13.7300	Conductivity (σ):	1.31	1.35	-3.04	5
	Head 1755	e'	40.8100	Relative Permittivity (ϵ_r):	40.81	40.08	1.83	5
		e"	13.5900	Conductivity (σ):	1.33	1.37	-3.33	5
2022-06-23	Head 1900	e'	40.7100	Relative Permittivity (ϵ_r):	40.71	40.00	1.78	5
		e"	13.4000	Conductivity (σ):	1.42	1.40	1.12	5
	Head 1850	e'	40.7000	Relative Permittivity (ϵ_r):	40.70	40.00	1.75	5
		e"	13.3900	Conductivity (σ):	1.38	1.40	-1.62	5
	Head 1910	e'	40.7200	Relative Permittivity (ϵ_r):	40.72	40.00	1.80	5
		e"	13.3700	Conductivity (σ):	1.42	1.40	1.42	5
2022-06-24	Head 2600	e'	39.6000	Relative Permittivity (ϵ_r):	39.60	39.01	1.51	5
		e"	13.6500	Conductivity (σ):	1.97	1.96	0.57	5
	Head 2500	e'	39.7800	Relative Permittivity (ϵ_r):	39.78	39.14	1.64	5
		e"	13.5800	Conductivity (σ):	1.89	1.85	1.82	5
	Head 2700	e'	39.4500	Relative Permittivity (ϵ_r):	39.45	38.88	1.45	5
		e"	13.7300	Conductivity (σ):	2.06	2.07	-0.44	5

SAR 8 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
2022-06-08	Head 3500	e'	39.0200	Relative Permittivity (ε _r):	39.02	37.93	2.87	5	
		e"	15.5000	Conductivity (σ):	3.02	2.91	3.60	5	
	Head 3560	e'	38.9100	Relative Permittivity (ε _r):	38.91	37.86	2.77	5	
		e"	15.5600	Conductivity (σ):	3.08	2.97	3.60	5	
	Head 3600	e'	38.8100	Relative Permittivity (ε _r):	38.81	37.82	2.63	5	
		e"	15.4900	Conductivity (σ):	3.10	3.01	2.88	5	
	Head 3690	e'	38.5600	Relative Permittivity (ε _r):	38.56	37.71	2.25	5	
		e"	15.6700	Conductivity (σ):	3.22	3.11	3.51	5	
	Head 3700	e'	38.5600	Relative Permittivity (ε _r):	38.56	37.70	2.28	5	
		e"	15.6600	Conductivity (σ):	3.22	3.12	3.39	5	
	2022-06-08	Head 3600	e'	38.8100	Relative Permittivity (ε _r):	38.81	37.82	2.63	5
			e"	15.4900	Conductivity (σ):	3.10	3.01	2.88	5
Head 3650		e'	38.5700	Relative Permittivity (ε _r):	38.57	37.76	2.15	5	
		e"	15.5700	Conductivity (σ):	3.16	3.07	3.10	5	
Head 3700		e'	38.5600	Relative Permittivity (ε _r):	38.56	37.70	2.28	5	
		e"	15.6600	Conductivity (σ):	3.22	3.12	3.39	5	
Head 3750		e'	38.3800	Relative Permittivity (ε _r):	38.38	37.64	1.95	5	
		e"	15.5900	Conductivity (σ):	3.25	3.17	2.63	5	
Head 3800		e'	38.0500	Relative Permittivity (ε _r):	38.05	37.59	1.23	5	
		e"	15.7800	Conductivity (σ):	3.33	3.22	3.59	5	
2022-06-08		Head 3750	e'	38.3800	Relative Permittivity (ε _r):	38.38	37.64	1.95	5
			e"	15.5900	Conductivity (σ):	3.25	3.17	2.63	5
	Head 3800	e'	38.0500	Relative Permittivity (ε _r):	38.05	37.59	1.23	5	
		e"	15.7800	Conductivity (σ):	3.33	3.22	3.59	5	
	Head 3900	e'	37.9400	Relative Permittivity (ε _r):	37.94	37.47	1.25	5	
		e"	15.8800	Conductivity (σ):	3.44	3.32	3.70	5	
	Head 3930	e'	37.7500	Relative Permittivity (ε _r):	37.75	37.44	0.83	5	
		e"	15.9900	Conductivity (σ):	3.49	3.35	4.25	5	
	Head 3950	e'	37.6300	Relative Permittivity (ε _r):	37.63	37.42	0.57	5	
		e"	16.0800	Conductivity (σ):	3.53	3.37	4.74	5	
	2022-06-13	Head 5250	e'	35.9300	Relative Permittivity (ε _r):	35.93	35.93	-0.01	5
			e"	16.1900	Conductivity (σ):	4.73	4.70	0.51	5
Head 5260		e'	35.9100	Relative Permittivity (ε _r):	35.91	35.92	-0.03	5	
		e"	16.1900	Conductivity (σ):	4.74	4.71	0.48	5	
Head 5600		e'	35.1900	Relative Permittivity (ε _r):	35.19	35.53	-0.97	5	
		e"	16.3900	Conductivity (σ):	5.10	5.06	0.85	5	
Head 5800		e'	34.8800	Relative Permittivity (ε _r):	34.88	35.30	-1.19	5	
		e"	16.4500	Conductivity (σ):	5.31	5.27	0.67	5	
Head 5825		e'	34.8200	Relative Permittivity (ε _r):	34.82	35.30	-1.36	5	
		e"	16.4500	Conductivity (σ):	5.33	5.27	1.10	5	
2022-06-16		Head 3500	e'	36.9800	Relative Permittivity (ε _r):	36.98	37.93	-2.50	5
			e"	14.9400	Conductivity (σ):	2.91	2.91	-0.14	5
	Head 3560	e'	36.8700	Relative Permittivity (ε _r):	36.87	37.86	-2.62	5	
		e"	15.0300	Conductivity (σ):	2.98	2.97	0.07	5	
	Head 3600	e'	37.0700	Relative Permittivity (ε _r):	37.07	37.82	-1.97	5	
		e"	14.8500	Conductivity (σ):	2.97	3.01	-1.37	5	
	Head 3690	e'	36.3600	Relative Permittivity (ε _r):	36.36	37.71	-3.59	5	
		e"	14.8700	Conductivity (σ):	3.05	3.11	-1.77	5	
	Head 3700	e'	36.3500	Relative Permittivity (ε _r):	36.35	37.70	-3.58	5	
		e"	14.9100	Conductivity (σ):	3.07	3.12	-1.56	5	
	2022-06-16	Head 3600	e'	37.0700	Relative Permittivity (ε _r):	37.07	37.82	-1.97	5
			e"	14.8500	Conductivity (σ):	2.97	3.01	-1.37	5
Head 3650		e'	36.7200	Relative Permittivity (ε _r):	36.72	37.76	-2.75	5	
		e"	14.7200	Conductivity (σ):	2.99	3.07	-2.53	5	
Head 3700		e'	36.3500	Relative Permittivity (ε _r):	36.35	37.70	-3.58	5	
		e"	14.9100	Conductivity (σ):	3.07	3.12	-1.56	5	
Head 3750		e'	36.4700	Relative Permittivity (ε _r):	36.47	37.64	-3.12	5	
		e"	14.8700	Conductivity (σ):	3.10	3.17	-2.11	5	
Head 3800		e'	36.2200	Relative Permittivity (ε _r):	36.22	37.59	-3.64	5	
		e"	14.8300	Conductivity (σ):	3.13	3.22	-2.64	5	

SAR 8 Room (Continued)

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2022-06-16	Head 3750	e'	36.4700	Relative Permittivity (ε _r):	36.47	37.64	-3.12	5
		e"	14.8700	Conductivity (σ):	3.10	3.17	-2.11	5
	Head 3800	e'	36.2200	Relative Permittivity (ε _r):	36.22	37.59	-3.64	5
		e"	14.8300	Conductivity (σ):	3.13	3.22	-2.64	5
	Head 3900	e'	35.8800	Relative Permittivity (ε _r):	35.88	37.47	-4.25	5
		e"	14.9200	Conductivity (σ):	3.24	3.32	-2.57	5
	Head 3930	e'	35.7200	Relative Permittivity (ε _r):	35.72	37.44	-4.59	5
		e"	14.9500	Conductivity (σ):	3.27	3.35	-2.53	5
	Head 3950	e'	35.6200	Relative Permittivity (ε _r):	35.62	37.42	-4.80	5
		e"	15.0200	Conductivity (σ):	3.30	3.37	-2.17	5
2022-06-20	Head 3500	e'	37.6800	Relative Permittivity (ε _r):	37.68	37.93	-0.66	5
		e"	15.5000	Conductivity (σ):	3.02	2.91	3.60	5
	Head 3560	e'	37.5900	Relative Permittivity (ε _r):	37.59	37.86	-0.72	5
		e"	15.5600	Conductivity (σ):	3.08	2.97	3.60	5
	Head 3600	e'	37.5200	Relative Permittivity (ε _r):	37.52	37.82	-0.78	5
		e"	15.5900	Conductivity (σ):	3.12	3.01	3.54	5
	Head 3690	e'	37.3800	Relative Permittivity (ε _r):	37.38	37.71	-0.88	5
		e"	15.6600	Conductivity (σ):	3.21	3.11	3.45	5
	Head 3700	e'	37.3600	Relative Permittivity (ε _r):	37.36	37.70	-0.91	5
		e"	15.6700	Conductivity (σ):	3.22	3.12	3.45	5
2022-06-20	Head 3600	e'	37.5200	Relative Permittivity (ε _r):	37.52	37.82	-0.78	5
		e"	15.5900	Conductivity (σ):	3.12	3.01	3.54	5
	Head 3650	e'	37.4200	Relative Permittivity (ε _r):	37.42	37.76	-0.90	5
		e"	15.6300	Conductivity (σ):	3.17	3.07	3.49	5
	Head 3700	e'	37.3600	Relative Permittivity (ε _r):	37.36	37.70	-0.91	5
		e"	15.6700	Conductivity (σ):	3.22	3.12	3.45	5
	Head 3750	e'	37.2800	Relative Permittivity (ε _r):	37.28	37.64	-0.97	5
		e"	15.6800	Conductivity (σ):	3.27	3.17	3.22	5
	Head 3800	e'	37.2200	Relative Permittivity (ε _r):	37.22	37.59	-0.98	5
		e"	15.7200	Conductivity (σ):	3.32	3.22	3.20	5
2022-06-20	Head 3750	e'	37.2800	Relative Permittivity (ε _r):	37.28	37.64	-0.97	5
		e"	15.6800	Conductivity (σ):	3.27	3.17	3.22	5
	Head 3800	e'	37.2200	Relative Permittivity (ε _r):	37.22	37.59	-0.98	5
		e"	15.7200	Conductivity (σ):	3.32	3.22	3.20	5
	Head 3900	e'	37.0700	Relative Permittivity (ε _r):	37.07	37.47	-1.08	5
		e"	15.7600	Conductivity (σ):	3.42	3.32	2.91	5
	Head 3930	e'	37.0300	Relative Permittivity (ε _r):	37.03	37.44	-1.09	5
		e"	15.7800	Conductivity (σ):	3.45	3.35	2.89	5
	Head 3950	e'	37.0100	Relative Permittivity (ε _r):	37.01	37.42	-1.09	5
		e"	15.7900	Conductivity (σ):	3.47	3.37	2.85	5
2022-06-24	Head 3500	e'	37.6900	Relative Permittivity (ε _r):	37.69	37.93	-0.63	5
		e"	15.4400	Conductivity (σ):	3.00	2.91	3.20	5
	Head 3560	e'	37.6000	Relative Permittivity (ε _r):	37.60	37.86	-0.69	5
		e"	15.5000	Conductivity (σ):	3.07	2.97	3.20	5
	Head 3600	e'	37.5300	Relative Permittivity (ε _r):	37.53	37.82	-0.76	5
		e"	15.5300	Conductivity (σ):	3.11	3.01	3.14	5
	Head 3690	e'	37.3900	Relative Permittivity (ε _r):	37.39	37.71	-0.86	5
		e"	15.6000	Conductivity (σ):	3.20	3.11	3.05	5
	Head 3700	e'	37.3800	Relative Permittivity (ε _r):	37.38	37.70	-0.85	5
		e"	15.6100	Conductivity (σ):	3.21	3.12	3.06	5
2022-06-24	Head 3600	e'	37.5300	Relative Permittivity (ε _r):	37.53	37.82	-0.76	5
		e"	15.5300	Conductivity (σ):	3.11	3.01	3.14	5
	Head 3650	e'	37.4400	Relative Permittivity (ε _r):	37.44	37.76	-0.84	5
		e"	15.5700	Conductivity (σ):	3.16	3.07	3.10	5
	Head 3700	e'	37.3800	Relative Permittivity (ε _r):	37.38	37.70	-0.85	5
		e"	15.6100	Conductivity (σ):	3.21	3.12	3.06	5
	Head 3750	e'	37.2900	Relative Permittivity (ε _r):	37.29	37.64	-0.94	5
		e"	15.6300	Conductivity (σ):	3.26	3.17	2.89	5
	Head 3800	e'	37.2300	Relative Permittivity (ε _r):	37.23	37.59	-0.95	5
		e"	15.6600	Conductivity (σ):	3.31	3.22	2.81	5
2022-06-24	Head 3750	e'	37.2900	Relative Permittivity (ε _r):	37.29	37.64	-0.94	5
		e"	15.6300	Conductivity (σ):	3.26	3.17	2.89	5
	Head 3800	e'	37.2300	Relative Permittivity (ε _r):	37.23	37.59	-0.95	5
		e"	15.6600	Conductivity (σ):	3.31	3.22	2.81	5
	Head 3900	e'	37.0900	Relative Permittivity (ε _r):	37.09	37.47	-1.02	5
		e"	15.7000	Conductivity (σ):	3.40	3.32	2.52	5
	Head 3930	e'	37.0500	Relative Permittivity (ε _r):	37.05	37.44	-1.04	5
		e"	15.7200	Conductivity (σ):	3.44	3.35	2.49	5
	Head 3950	e'	37.0200	Relative Permittivity (ε _r):	37.02	37.42	-1.06	5
		e"	15.7300	Conductivity (σ):	3.45	3.37	2.46	5

SAR 9 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2022-06-06	Head 2250	e'	39.4100	Relative Permittivity (ε _r):	39.41	39.56	-0.38	5
		e''	13.0900	Conductivity (σ):	1.64	1.62	1.10	5
	Head 2300	e'	39.3000	Relative Permittivity (ε _r):	39.30	39.47	-0.44	5
		e''	13.0500	Conductivity (σ):	1.67	1.66	0.31	5
	Head 2350	e'	39.1700	Relative Permittivity (ε _r):	39.17	39.38	-0.54	5
		e''	13.0700	Conductivity (σ):	1.71	1.71	0.01	5
2022-06-07	Head 750	e'	40.4300	Relative Permittivity (ε _r):	40.43	41.96	-3.65	5
		e''	21.6600	Conductivity (σ):	0.90	0.89	1.14	5
	Head 680	e'	40.8900	Relative Permittivity (ε _r):	40.89	42.32	-3.38	5
		e''	23.7000	Conductivity (σ):	0.90	0.89	0.95	5
	Head 790	e'	40.2900	Relative Permittivity (ε _r):	40.29	41.76	-3.51	5
		e''	20.9500	Conductivity (σ):	0.92	0.90	2.69	5
2022-06-08	Head 2600	e'	39.7600	Relative Permittivity (ε _r):	39.76	39.01	1.92	5
		e''	14.1100	Conductivity (σ):	2.04	1.96	3.96	5
	Head 2500	e'	40.0000	Relative Permittivity (ε _r):	40.00	39.14	2.21	5
		e''	13.9300	Conductivity (σ):	1.94	1.85	4.44	5
	Head 2700	e'	39.5700	Relative Permittivity (ε _r):	39.57	38.88	1.76	5
		e''	14.1000	Conductivity (σ):	2.12	2.07	2.25	5
2022-06-10	Head 1750	e'	40.5900	Relative Permittivity (ε _r):	40.59	40.08	1.26	5
		e''	13.8900	Conductivity (σ):	1.35	1.37	-1.27	5
	Head 1710	e'	40.6400	Relative Permittivity (ε _r):	40.64	40.15	1.23	5
		e''	14.0500	Conductivity (σ):	1.34	1.35	-0.78	5
	Head 1755	e'	40.5800	Relative Permittivity (ε _r):	40.58	40.08	1.26	5
		e''	13.8800	Conductivity (σ):	1.35	1.37	-1.26	5
2022-06-13	Head 2250	e'	38.1300	Relative Permittivity (ε _r):	38.13	39.56	-3.62	5
		e''	13.3600	Conductivity (σ):	1.67	1.62	3.19	5
	Head 2300	e'	38.0600	Relative Permittivity (ε _r):	38.06	39.47	-3.58	5
		e''	13.4000	Conductivity (σ):	1.71	1.66	3.00	5
	Head 2350	e'	38.0400	Relative Permittivity (ε _r):	38.04	39.38	-3.41	5
		e''	13.4500	Conductivity (σ):	1.76	1.71	2.92	5
2022-06-13	Head 2450	e'	37.9800	Relative Permittivity (ε _r):	37.98	39.20	-3.11	5
		e''	13.4500	Conductivity (σ):	1.83	1.80	1.79	5
	Head 2400	e'	38.0400	Relative Permittivity (ε _r):	38.04	39.30	-3.20	5
		e''	13.4100	Conductivity (σ):	1.79	1.75	2.16	5
	Head 2480	e'	37.9600	Relative Permittivity (ε _r):	37.96	39.16	-3.07	5
		e''	13.5200	Conductivity (σ):	1.86	1.83	1.74	5
2022-06-14	Head 2600	e'	39.2800	Relative Permittivity (ε _r):	39.28	39.01	0.69	5
		e''	13.2800	Conductivity (σ):	1.92	1.96	-2.16	5
	Head 2500	e'	39.4200	Relative Permittivity (ε _r):	39.42	39.14	0.72	5
		e''	13.2000	Conductivity (σ):	1.83	1.85	-1.03	5
	Head 2700	e'	39.0900	Relative Permittivity (ε _r):	39.09	38.88	0.53	5
		e''	13.3900	Conductivity (σ):	2.01	2.07	-2.90	5
2022-06-16	Head 3500	e'	37.8900	Relative Permittivity (ε _r):	37.89	37.93	-0.10	5
		e''	15.0900	Conductivity (σ):	2.94	2.91	0.86	5
	Head 3560	e'	37.7800	Relative Permittivity (ε _r):	37.78	37.86	-0.21	5
		e''	15.1100	Conductivity (σ):	2.99	2.97	0.61	5
	Head 3600	e'	37.7600	Relative Permittivity (ε _r):	37.76	37.82	-0.15	5
		e''	15.1300	Conductivity (σ):	3.03	3.01	0.49	5
	Head 3690	e'	37.6200	Relative Permittivity (ε _r):	37.62	37.71	-0.25	5
		e''	15.2100	Conductivity (σ):	3.12	3.11	0.47	5
	Head 3700	e'	37.6100	Relative Permittivity (ε _r):	37.61	37.70	-0.24	5
		e''	15.2200	Conductivity (σ):	3.13	3.12	0.48	5
2022-06-16	Head 3600	e'	37.7600	Relative Permittivity (ε _r):	37.76	37.82	-0.15	5
		e''	15.1300	Conductivity (σ):	3.03	3.01	0.49	5
	Head 3650	e'	37.6600	Relative Permittivity (ε _r):	37.66	37.76	-0.26	5
		e''	15.1700	Conductivity (σ):	3.08	3.07	0.45	5
	Head 3700	e'	37.6100	Relative Permittivity (ε _r):	37.61	37.70	-0.24	5
		e''	15.2200	Conductivity (σ):	3.13	3.12	0.48	5
	Head 3750	e'	37.5700	Relative Permittivity (ε _r):	37.57	37.64	-0.20	5
		e''	15.2100	Conductivity (σ):	3.17	3.17	0.13	5
	Head 3800	e'	37.5100	Relative Permittivity (ε _r):	37.51	37.59	-0.21	5
		e''	15.2600	Conductivity (σ):	3.22	3.22	0.18	5

SAR 9 Room (Continued)

Date	Freq. (MHz)		Liquid Parameters	Measured	Target	Delta (%)	Limit ±(%)		
2022-06-16	Head 3750	e'	37.5700	Relative Permittivity (ϵ_r):	37.57	37.64	-0.20	5	
		e''	15.2100	Conductivity (σ):	3.17	3.17	0.13	5	
	Head 3800	e'	37.5100	Relative Permittivity (ϵ_r):	37.51	37.59	-0.21	5	
		e''	15.2600	Conductivity (σ):	3.22	3.22	0.18	5	
	Head 3900	e'	37.4100	Relative Permittivity (ϵ_r):	37.41	37.47	-0.17	5	
		e''	15.3000	Conductivity (σ):	3.32	3.32	-0.09	5	
	Head 3930	e'	37.3500	Relative Permittivity (ϵ_r):	37.35	37.44	-0.24	5	
		e''	15.3500	Conductivity (σ):	3.35	3.35	0.08	5	
	Head 3950	e'	37.3500	Relative Permittivity (ϵ_r):	37.35	37.42	-0.18	5	
		e''	15.3800	Conductivity (σ):	3.38	3.37	0.18	5	
	2022-06-20	Head 3500	e'	37.7300	Relative Permittivity (ϵ_r):	37.73	37.93	-0.53	5
			e''	14.8400	Conductivity (σ):	2.89	2.91	-0.81	5
Head 3560		e'	37.6300	Relative Permittivity (ϵ_r):	37.63	37.86	-0.61	5	
		e''	14.8800	Conductivity (σ):	2.95	2.97	-0.93	5	
Head 3600		e'	37.5700	Relative Permittivity (ϵ_r):	37.57	37.82	-0.65	5	
		e''	14.9000	Conductivity (σ):	2.98	3.01	-1.04	5	
Head 3690		e'	37.3600	Relative Permittivity (ϵ_r):	37.36	37.71	-0.94	5	
		e''	14.9600	Conductivity (σ):	3.07	3.11	-1.18	5	
Head 3700		e'	37.3400	Relative Permittivity (ϵ_r):	37.34	37.70	-0.96	5	
		e''	14.9800	Conductivity (σ):	3.08	3.12	-1.10	5	
2022-06-20	Head 3600	e'	37.5700	Relative Permittivity (ϵ_r):	37.57	37.82	-0.65	5	
		e''	14.9000	Conductivity (σ):	2.98	3.01	-1.04	5	
	Head 3650	e'	37.4600	Relative Permittivity (ϵ_r):	37.46	37.76	-0.79	5	
		e''	14.9300	Conductivity (σ):	3.03	3.07	-1.14	5	
	Head 3700	e'	37.3400	Relative Permittivity (ϵ_r):	37.34	37.70	-0.96	5	
		e''	14.9800	Conductivity (σ):	3.08	3.12	-1.10	5	
	Head 3750	e'	37.3100	Relative Permittivity (ϵ_r):	37.31	37.64	-0.89	5	
		e''	15.0400	Conductivity (σ):	3.14	3.17	-0.99	5	
	Head 3800	e'	37.2400	Relative Permittivity (ϵ_r):	37.24	37.59	-0.92	5	
		e''	14.9800	Conductivity (σ):	3.17	3.22	-1.66	5	
2022-06-20	Head 3750	e'	37.3100	Relative Permittivity (ϵ_r):	37.31	37.64	-0.89	5	
		e''	15.0400	Conductivity (σ):	3.14	3.17	-0.99	5	
	Head 3800	e'	37.2400	Relative Permittivity (ϵ_r):	37.24	37.59	-0.92	5	
		e''	14.9800	Conductivity (σ):	3.17	3.22	-1.66	5	
	Head 3900	e'	37.0100	Relative Permittivity (ϵ_r):	37.01	37.47	-1.24	5	
		e''	15.1300	Conductivity (σ):	3.28	3.32	-1.20	5	
	Head 3930	e'	36.9700	Relative Permittivity (ϵ_r):	36.97	37.44	-1.25	5	
		e''	15.0800	Conductivity (σ):	3.30	3.35	-1.68	5	
	Head 3950	e'	36.9100	Relative Permittivity (ϵ_r):	36.91	37.42	-1.35	5	
		e''	15.0700	Conductivity (σ):	3.31	3.37	-1.84	5	

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 2.5 mm.
For 5 GHz band - Distance between probe sensors and phantom surface was set to 1.4 mm
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

Reference Target SAR Values

The reference SAR values can be obtained from the calibration certificate of system validation dipoles.

System Dipole	Serial No.	Cal. Date	Cal. Due Date	Target SAR Values (W/kg)	
				1g/10g	Head
D750V3	1205	4-27-2021	2-23-2022	1g	8.66
				10g	5.65
D835V2	4d174	3-17-2021	3-17-2023	1g	9.70
				10g	6.29
D1750V2	1125	2-24-2022	2-24-2023	1g	36.80
				10g	19.40
D1750V2	1180	4-27-2021	4-27-2023	1g	36.40
				10g	19.10
D1900V2	5d190	11-24-2020	11-24-2022	1g	40.10
				10g	20.70
D2300V2	1115	4-23-2021	4-23-2023	1g	49.30
				10g	23.60
D2300V2	1090	11-18-2020	11-18-2022	1g	49.70
				10g	23.70
D2450V2	960	3-24-2022	3-24-2023	1g	51.90
				10g	24.00
D2600V2	1178	4-21-2021	4-21-2023	1g	56.60
				10g	25.40
D3500V2	1121	4-21-2021	4-21-2023	1g	66.30
				10g	25.00
D3700V2	1036	5-21-2021	5-21-2023	1g	67.90
				10g	24.30
D3900V2	1069	4-21-2021	4-24-2023	1g	70.10
				10g	24.30
D5GHzV2 (5250)	1209	11-24-2021	11-24-2022	1g	78.00
D5GHzV2 (5600)				10g	22.40
D5GHzV2 (5600)	1184	12-3-2020	12-3-2022	1g	80.90
D5GHzV2 (5250)				10g	23.10
D5GHzV2 (5250)	1184	12-3-2020	12-3-2022	1g	79.10
D5GHzV2 (5600)				10g	22.70
D5GHzV2 (5600)	1184	12-3-2020	12-3-2022	1g	82.40
D5GHzV2 (5750)				10g	23.30
D5GHzV2 (5750)	1184	12-3-2020	12-3-2022	1g	79.90
D5GHzV2 (5750)				10g	22.60

Note(s):

1. For System Validation Dipole, Calibration interval applied every 2 years according to referencing KDB 865664 guidance.
2. Refer to Appendix F that mentioned about justification for Extended SAR Dipole Calibrations.
3. All equipments were used until Cal.Due data.

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.

SAR 1 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
2022-06-16	D1750V2	1125	Head	1g	3.90	39.0	36.80	5.98	1
				10g	2.07	20.7	19.40	6.70	
2022-06-16	D1900V2	5d190	Head	1g	4.19	41.9	40.10	4.49	
				10g	2.15	21.5	20.70	3.86	
2022-06-17	D750V3	1205	Head	1g	0.85	8.5	8.66	-1.39	
				10g	0.54	5.4	5.65	-4.25	
2022-06-17	D2300V2	1115	Head	1g	4.67	46.7	49.30	-5.27	
				10g	2.22	22.2	23.60	-5.93	
2022-06-22	D5GHzV2	1209	Head	1g	7.57	75.7	78.00	-2.95	
				10g	2.25	22.5	22.40	0.45	
	D5GHzV2	1209	Head	1g	8.06	80.6	80.90	-0.37	
				10g	2.36	23.6	23.10	2.16	
2022-07-05	D3700V2	1036	Head	1g	6.56	65.6	67.90	-3.39	2
				10g	2.51	25.1	24.30	3.29	

SAR 3 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
2022-05-16	D1750V2	1180	Head	1g	3.47	34.7	36.40	-4.67	
				10g	1.83	18.3	19.10	-4.19	
2022-05-16	D1900V2	5d190	Head	1g	3.77	37.7	40.10	-5.99	
				10g	1.94	19.4	20.70	-6.28	
2022-05-18	D1900V2	5d190	Head	1g	3.79	37.9	40.10	-5.49	
				10g	1.95	19.5	20.70	-5.80	
2022-05-30	D1900V2	5d190	Head	1g	3.70	37.0	40.10	-7.73	3
				10g	1.91	19.1	20.70	-7.73	

SAR 4 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
2022-05-16	D2600V2	1178	Head	1g	5.92	59.2	56.60	4.59	
				10g	2.67	26.7	25.40	5.12	
2022-05-18	D2300V2	1115	Head	1g	4.63	46.3	49.30	-6.09	4
				10g	2.22	22.2	23.60	-5.93	
2022-05-19	D2600V2	1178	Head	1g	5.82	58.2	56.60	2.83	
				10g	2.61	26.1	25.40	2.76	
2022-05-22	D2600V2	1178	Head	1g	5.74	57.4	56.60	1.41	
				10g	2.55	25.5	25.40	0.39	
2022-05-25	D2300V2	1115	Head	1g	5.13	51.3	49.30	4.06	
				10g	2.46	24.6	23.60	4.24	
2022-05-25	D2600V2	1178	Head	1g	5.90	59.0	56.60	4.24	
				10g	2.67	26.7	25.40	5.12	
2022-05-26	D1750V2	1180	Head	1g	3.57	35.7	36.40	-1.92	
				10g	1.93	19.3	19.10	1.05	
2022-05-30	D2300V2	1115	Head	1g	4.97	49.7	49.30	0.81	
				10g	2.37	23.7	23.60	0.42	
2022-05-31	D1750V2	1180	Head	1g	3.41	34.1	36.40	-6.32	5
				10g	1.85	18.5	19.10	-3.14	
2022-05-31	D1900V2	5d190	Head	1g	4.16	41.6	40.10	3.74	
				10g	2.15	21.5	20.70	3.86	
2022-06-03	D1750V2	1180	Head	1g	3.55	35.5	36.40	-2.47	
				10g	1.89	18.9	19.10	-1.05	
2022-06-03	D1900V2	5d190	Head	1g	4.15	41.5	40.10	3.49	
				10g	2.14	21.4	20.70	3.38	

SAR 5 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
2022-05-16	D750V3	1205	Head	1g	0.90	9.0	8.66	3.93	6
				10g	0.60	6.0	5.65	5.84	
2022-05-16	D835V2	4d174	Head	1g	1.04	10.4	9.70	7.22	7
				10g	0.69	6.9	6.29	9.54	
2022-05-18	D750V3	1205	Head	1g	0.84	8.4	8.66	-3.23	
				10g	0.55	5.5	5.65	-2.48	
2022-05-18	D835V2	4d174	Head	1g	0.93	9.3	9.70	-3.71	
				10g	0.61	6.1	6.29	-3.02	
2022-05-23	D750V3	1205	Head	1g	0.87	8.7	8.66	0.35	
				10g	0.57	5.7	5.65	0.88	
2022-05-23	D835V2	4d174	Head	1g	0.94	9.4	9.70	-2.68	
				10g	0.62	6.2	6.29	-2.07	
2022-05-26	D750V3	1205	Head	1g	0.86	8.6	8.66	-0.46	
				10g	0.58	5.8	5.65	1.95	
2022-05-26	D835V2	4d174	Head	1g	0.98	9.8	9.70	1.34	
				10g	0.65	6.5	6.29	3.97	
2022-05-30	D835V2	4d174	Head	1g	1.02	10.2	9.70	5.15	
				10g	0.67	6.7	6.29	7.00	

SAR 7 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
2022-06-06	D1750V2	1180	Head	1g	3.55	35.5	36.40	-2.47	
				10g	1.90	19.0	19.10	-0.52	
2022-06-06	D1900V2	5d190	Head	1g	4.20	42.0	40.10	4.74	
				10g	2.16	21.6	20.70	4.35	
2022-06-17	D2450V2	960	Head	1g	5.30	53.0	51.90	2.12	
				10g	2.46	24.6	24.00	2.50	
2022-06-17	D2600V2	1178	Head	1g	6.07	60.7	56.60	7.24	
				10g	2.75	27.5	25.40	8.27	
2022-06-20	D2450V2	960	Head	1g	5.52	55.2	51.90	6.36	8
				10g	2.57	25.7	24.00	7.08	
2022-06-20	D2600V2	1178	Head	1g	6.03	60.3	56.60	6.54	
				10g	2.73	27.3	25.40	7.48	
2022-06-23	D1750V2	1125	Head	1g	3.68	36.8	36.80	0.00	
				10g	1.95	19.5	19.40	0.52	
2022-06-23	D1900V2	5d190	Head	1g	4.20	42.0	40.10	4.74	
				10g	2.16	21.6	20.70	4.35	
2022-06-24	D2600V2	1178	Head	1g	6.03	60.3	56.60	6.54	
				10g	2.71	27.1	25.40	6.69	

SAR 8 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
2022-06-08	D3500V2	1121	Head	1g	6.80	68.0	66.30	2.56	9
				10g	2.63	26.3	25.00	5.20	
2022-06-08	D3700V2	1036	Head	1g	6.76	67.6	67.90	-0.44	
				10g	2.54	25.4	24.30	4.53	
2022-06-08	D3900V2	1069	Head	1g	7.26	72.6	70.10	3.57	10
				10g	2.62	26.2	24.30	7.82	
2022-06-13	D5GHzV2	1209	Head	1g	7.94	79.4	78.00	1.79	
				10g	2.29	22.9	22.40	2.23	
2022-06-13	D5GHzV2	1209	Head	1g	8.44	84.4	80.90	4.33	11
				10g	2.44	24.4	23.10	5.63	
2022-06-16	D3500V2	1121	Head	1g	6.50	65.0	66.30	-1.96	
				10g	2.54	25.4	25.00	1.60	
2022-06-16	D3700V2	1036	Head	1g	6.70	67.0	67.90	-1.33	
				10g	2.54	25.4	24.30	4.53	
2022-06-16	D3900V2	1069	Head	1g	6.91	69.1	70.10	-1.43	
				10g	2.52	25.2	24.30	3.70	
2022-06-20	D3500V2	1121	Head	1g	6.77	67.7	66.30	2.11	
				10g	2.62	26.2	25.00	4.80	
2022-06-20	D3700V2	1036	Head	1g	6.59	65.9	67.90	-2.95	12
				10g	2.49	24.9	24.30	2.47	
2022-06-20	D3900V2	1069	Head	1g	7.14	71.4	70.10	1.85	
				10g	2.57	25.7	24.30	5.76	
2022-06-24	D3500V2	1121	Head	1g	6.70	67.0	66.30	1.06	
				10g	2.65	26.5	25.00	6.00	
2022-06-24	D3700V2	1036	Head	1g	6.66	66.6	67.90	-1.91	
				10g	2.55	25.5	24.30	4.94	
2022-06-24	D3900V2	1069	Head	1g	7.09	70.9	70.10	1.14	
				10g	2.60	26.0	24.30	7.00	

SAR 9 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
2022-06-06	D2300V2	1115	Head	1g	4.82	48.2	49.30	-2.23	
				10g	2.32	23.2	23.60	-1.69	
2022-06-07	D750V3	1205	Head	1g	0.88	8.8	8.66	1.04	
				10g	0.58	5.8	5.65	1.77	
2022-06-08	D2600V2	1178	Head	1g	5.62	56.2	56.60	-0.71	
				10g	2.53	25.3	25.40	-0.39	
2022-06-10	D1750V2	1125	Head	1g	3.90	39.0	36.80	5.98	
				10g	2.07	20.7	19.40	6.70	
2022-06-13	D2300V2	1090	Head	1g	4.64	46.4	49.70	-6.64	13
				10g	2.22	22.2	23.70	-6.33	
2022-06-13	D2450V2	960	Head	1g	5.50	55.0	51.90	5.97	
				10g	2.55	25.5	24.00	6.25	
2022-06-14	D2600V2	1178	Head	1g	5.23	52.3	56.60	-7.60	14
				10g	2.35	23.5	25.40	-7.48	
2022-06-16	D3500V2	1121	Head	1g	6.68	66.8	66.30	0.75	
				10g	2.58	25.8	25.00	3.20	
2022-06-16	D3700V2	1036	Head	1g	6.61	66.1	67.90	-2.65	
				10g	2.48	24.8	24.30	2.06	
2022-06-16	D3900V2	1069	Head	1g	7.00	70.0	70.10	-0.14	
				10g	2.52	25.2	24.30	3.70	
2022-06-20	D3500V2	1121	Head	1g	6.57	65.7	66.30	-0.90	
				10g	2.54	25.4	25.00	1.60	
2022-06-20	D3700V2	1036	Head	1g	6.89	68.9	67.90	1.47	
				10g	2.59	25.9	24.30	6.58	
2022-06-20	D3900V2	1069	Head	1g	6.82	68.2	70.10	-2.71	
				10g	2.45	24.5	24.30	0.82	

9. Conducted Output Power Measurements

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.

GSM850 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)			
					DSI = 0, 1, 2, 3, 4			
					Measured		Tune-up Limit	
					Burst Pw r	Frame Pw r	Burst Pw r	Frame Pw r
GSM (Voice)	CS1	1	128	824.2	32.93	23.90	33.50	24.47
			190	836.6	32.91	23.88		
			251	848.8	32.70	23.67		
GPRS (GMSK)	CS1	1	128	824.2	32.89	23.86	33.50	24.47
			190	836.6	31.76	22.73		
			251	848.8	31.84	22.81		
		2	128	824.2	31.76	25.74	32.50	26.48
			190	836.6	31.21	25.19		
			251	848.8	31.99	25.97		
		3	128	824.2	29.20	24.94	30.50	26.24
			190	836.6	29.47	25.21		
			251	848.8	29.25	24.99		
		4	128	824.2	27.56	24.55	28.50	25.49
			190	836.6	27.10	24.09		
			251	848.8	26.72	23.71		
EGPRS (8PSK)	MCS5	1	128	824.2	26.93	17.90	27.50	18.47
			190	836.6	25.59	16.56		
			251	848.8	25.44	16.41		
		2	128	824.2	25.65	19.63	26.00	19.98
			190	836.6	25.63	19.61		
			251	848.8	25.72	19.70		
		3	128	824.2	23.31	19.05	24.00	19.74
			190	836.6	23.52	19.26		
			251	848.8	23.27	19.01		
		4	128	824.2	22.21	19.20	23.00	19.99
			190	836.6	22.41	19.40		
			251	848.8	22.24	19.23		

Notes:

The worst-case configuration and mode for SAR testing is determined to be as follows:

- GMSK (GPRS) mode with 2 time slots for Max power, based on the Tune-up Procedure. Refer to §6.3.
- SAR is not required for EGPRS (8PSK) mode because the maximum output power and tune-up limit is $\leq 1/4$ dB higher than GMSK GPRS or the adjusted SAR of the highest reported SAR of GMSK GPRS is ≤ 1.2 W/kg.

GSM1900 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)											
					DSI = 0, 2				DSI = 3				DSI = 1, 4			
					Measured		Tune-up Limit		Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM (Voice)	CS1	1	512	1850.2	29.24	20.21	30.70	21.67	26.45	17.42	27.50	18.47	26.42	17.38	27.50	18.47
			661	1880.0	29.65	20.62			26.96	17.93			26.93	17.90		
			810	1909.8	29.71	20.68			26.84	17.81			26.82	17.79		
GPRS (GMSK)	CS1	1	512	1850.2	29.17	20.14	30.70	21.67	26.42	17.39	27.50	18.47	26.90	17.87	27.50	18.47
			661	1880.0	29.53	20.50			27.11	18.08			27.38	18.35		
			810	1909.8	29.59	20.56			27.03	18.00			27.21	18.18		
		2	512	1850.2	27.04	21.02	29.00	22.98	23.34	17.32	24.50	18.48	23.79	17.77	24.50	18.48
			661	1880.0	27.85	21.83			23.69	17.67			23.96	17.94		
			810	1909.8	27.89	21.87			23.65	17.63			23.84	17.82		
	3	512	1850.2	25.42	21.16	27.00	22.74	21.60	17.34	22.70	18.44	21.98	17.72	22.70	18.44	
		661	1880.0	25.43	21.17			22.09	17.83			22.33	18.07			
		810	1909.8	25.07	20.81			21.70	17.44			21.87	17.61			
	4	512	1850.2	23.64	20.63	25.00	21.99	20.38	17.37	21.50	18.49	20.70	17.69	21.50	18.49	
		661	1880.0	24.35	21.34			20.88	17.87			21.10	18.09			
		810	1909.8	23.21	20.20			20.73	17.72			20.89	17.88			
EGPRS (8PSK)	MCS5	1	512	1850.2	25.11	16.08	26.30	17.27	25.26	16.23	27.50	18.47	25.37	16.33	27.50	18.47
			661	1880.0	25.58	16.55			25.72	16.69			25.81	16.78		
			810	1909.8	25.48	16.45			25.72	16.69			25.78	16.75		
		2	512	1850.2	23.50	17.48	25.00	18.98	23.55	17.53	24.50	18.48	23.66	17.64	24.50	18.48
			661	1880.0	24.00	17.98			23.76	17.74			23.90	17.88		
			810	1909.8	23.91	17.89			23.81	17.79			23.86	17.84		
	3	512	1850.2	21.97	17.71	23.20	18.94	21.69	17.43	22.50	18.24	21.80	17.54	22.50	18.24	
		661	1880.0	22.24	17.98			21.94	17.68			22.07	17.81			
		810	1909.8	22.14	17.88			21.98	17.72			22.03	17.77			
	4	512	1850.2	20.91	17.90	22.20	19.19	20.41	17.40	21.40	18.39	20.50	17.49	21.40	18.39	
		661	1880.0	21.26	18.25			20.88	17.87			20.99	17.98			
		810	1909.8	21.31	18.30			20.74	17.73			20.79	17.78			

Notes:

The worst-case configuration and mode for SAR testing is determined to be as follows:

- GMSK (GPRS) mode with 2 time slots for Max power, based on the Tune-up Procedure. Refer to §6.3.
- GMSK (GPRS) mode with 4 time slots for Reduced power, based on the Tune-up Procedure. Refer to §6.3.
- SAR is not required for EGPRS (8PSK) mode because the maximum output power and tune-up limit is ≤ 1/4dB higher than GMSK GPRS or the adjusted SAR of the highest reported SAR of GMSK GPRS is ≤ 1.2W/kg.

9.2. W-CDMA

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 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

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

HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests were completed according to Release 5 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subtest	1	2	3	4
W-CDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set 1			
	Power Control Algorithm	Algorithm 2			
	β_c	2/15	11/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	β_c/β_d	2/15	11/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
MPR (dB)	0	0	0.5	0.5	
HSDPA Specific Settings	D_{ACK}	8			
	D_{NAK}	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback (Table 5.2B.4)	4ms			
	CQI Repetition Factor (Table 5.2B.4)	2			
	$A_{hs}=\beta_{hs}/\beta_c$	30/15			

HSPA (HSDPA & 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 v13. A summary of these settings are illustrated below:

	Mode	HSPA				
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2 kbps RMC				
	HSDPA FRC	H-Set 1				
	HSUPA Test	HSPA				
	Power Control Algorithm	Algorithm 2				Algorithm 1
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	0
	β_{ec}	209/225	12/15	30/15	2/15	5/15
	β_c/β_d	11/15	6/15	15/9	2/15	-
	β_{hs}	22/15	12/15	30/15	4/15	5/15
	β_{ed}	1309/225	94/75	47/15	56/75	47/15
CM (dB)	1	3	2	3	1	
MPR (dB)	0	2	1	2	0	
HSDPA Specific Settings	DACK	8				0
	DNAK	8				0
	DCQI	8				0
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				
	CQI Repetition Factor (Table 5.2B.4)	2				
	A _{hs} = β_{hs}/β_c	30/15				
HSUPA Specific Settings	E-DPDCH	6	8	8	5	0
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	12
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	67
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E-TFCIs	5	5	2	5	1
	Reference E-TFCI	11	11	11	11	67
	Reference E-TFCI PO	4	4	4	4	18
	Reference E-TFCI	67	67	92	67	67
	Reference E-TFCI PO	18	18	18	18	18
	Reference E-TFCI	71	71	71	71	71
	Reference E-TFCI PO	23	23	23	23	23
	Reference E-TFCI	75	75	75	75	75
	Reference E-TFCI PO	26	26	26	26	26
	Reference E-TFCI	81	81	81	81	81
Reference E-TFCI PO	27	27	27	27	27	
Maximum Channelization Codes	2xSF2				SF4	

DC-HSDPA Setup Procedures used to establish the test signals

The following tests were completed according to procedures in section 7.3.13 of 3GPP TS34.108 v9.5.0. A summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0

Table E.5.0: Levels for HSDPA connection setup

Parameter During Connection setup	Unit	Value
P-CPICH_Ec/Ior	dB	-10
P-CCPCH and SCH_Ec/Ior	dB	-12
PICH_Ec/Ior	dB	-15
HS-PDSCH	dB	off
HS-SCCH_1	dB	off
DPCH_Ec/Ior	dB	-5
OCNS_Ec/Ior	dB	-3.1

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.

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	Processes	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.		

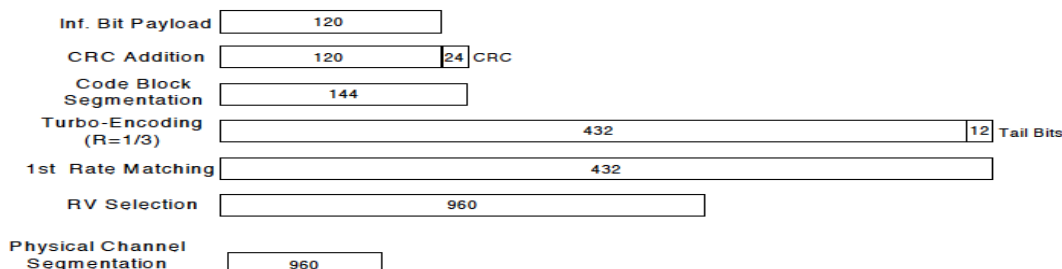


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

The following 4 Sub-tests for HSDPA were completed according to Release 8 procedures in section 5.2 of 3GPP TS34.121. A summary of subtest settings are illustrated below:

	Mode	HSDPA 1	HSDPA 2	HSDPA 3	HSDPA 4
Subtest		1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set 12			
	Power Control Algorithm	Algorithm2			
	β_c	2/15	11/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	β_d (SF)	64			
	β_c/β_d	2/15	11/15	15/8	15/4
HSDPA Specific Settings	β_{hs}	4/15	24/15	30/15	30/15
	MPR (dB)	0	0	0.5	0.5
	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack Repetition factor	3			
	CQI Feedback	4ms			
CQI Repetition Factor	2				
$A_{hs} = \beta_{hs} / \beta_c$	30/15				

HSPA+

HSPA+ is only supported to down link. Therefore, the RF conducted power is not measured.

W-CDMA Band II Measured Results

Mode		UL Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)								
				DSI = 0, 2			DSI = 3			DSI = 1, 4		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	24.08	N/A	24.50	20.88	N/A	21.50	20.89	N/A	21.50
		9400	1880.0	24.17			21.20			21.20		
		9538	1907.6	24.16			21.00			21.02		
HSDPA	Subtest 1	9262	1852.4	23.08	0	24.00	19.91	0	21.50	19.90	0	21.50
		9400	1880.0	23.17			20.20			20.21		
		9538	1907.6	23.17			20.01			20.01		
	Subtest 2	9262	1852.4	23.07	0	24.00	19.90	0	21.50	19.91	0	21.50
		9400	1880.0	23.16			20.18			20.19		
		9538	1907.6	23.14			20.00			20.01		
	Subtest 3	9262	1852.4	22.53	0.5	23.50	19.39	0.5	21.00	19.42	0.5	21.00
		9400	1880.0	22.65			19.67			19.70		
		9538	1907.6	22.62			19.50			19.52		
	Subtest 4	9262	1852.4	22.60	0.5	23.50	19.40	0.5	21.00	19.41	0.5	21.00
		9400	1880.0	22.66			19.68			19.69		
		9538	1907.6	22.63			19.51			19.49		
HSUPA	Subtest 1	9262	1852.4	23.03	0	24.00	19.88	0	21.50	19.90	0	21.50
		9400	1880.0	23.20			20.20			20.23		
		9538	1907.6	23.17			20.02			20.05		
	Subtest 2	9262	1852.4	21.12	2	22.00	17.89	2	19.50	17.87	2	19.50
		9400	1880.0	21.22			18.19			18.20		
		9538	1907.6	21.15			18.01			18.01		
	Subtest 3	9262	1852.4	22.12	1	23.00	18.91	1	20.50	18.78	1	20.50
		9400	1880.0	22.18			19.22			19.17		
		9538	1907.6	22.13			19.01			18.96		
	Subtest 4	9262	1852.4	21.08	2	22.00	17.89	2	19.50	18.05	2	19.50
		9400	1880.0	21.23			18.21			18.11		
		9538	1907.6	21.18			17.97			18.03		
	Subtest 5	9262	1852.4	23.13	0	24.00	19.78	0	21.50	19.76	0	21.50
		9400	1880.0	23.23			20.08			20.15		
		9538	1907.6	23.19			19.92			19.96		
DC-HSDPA	Subtest 1	9262	1852.4	23.14	0	24.00	19.87	0	21.50	19.89	0	21.50
		9400	1880.0	23.26			20.20			20.21		
		9538	1907.6	23.24			20.01			20.03		
	Subtest 2	9262	1852.4	23.11	0	24.00	19.86	0	21.50	19.87	0	21.50
		9400	1880.0	23.22			20.17			20.18		
		9538	1907.6	23.19			19.95			20.00		
	Subtest 3	9262	1852.4	22.62	0.5	23.50	19.37	0.5	21.00	19.41	0.5	21.00
		9400	1880.0	22.75			19.69			19.70		
		9538	1907.6	22.68			19.49			19.51		
	Subtest 4	9262	1852.4	22.64	0.5	23.50	19.37	0.5	21.00	19.36	0.5	21.00
		9400	1880.0	22.72			19.65			19.67		
		9538	1907.6	22.71			19.51			19.49		

W-CDMA Band IV Measured Results

Mode		UL Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)								
				DSI = 0, 2			DSI = 3			DSI = 1, 4		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	22.77	N/A	23.50	20.81	N/A	21.50	20.83	N/A	21.50
		1413	1732.6	22.80			20.71			20.70		
		1513	1752.6	22.60			20.64			20.67		
HSDPA	Subtest 1	1312	1712.4	21.78	0	23.50	19.87	0	21.50	19.85	0	21.50
		1413	1732.6	21.78			19.72			19.71		
		1513	1752.6	21.60			19.65			19.68		
	Subtest 2	1312	1712.4	21.78	0	23.50	19.86	0	21.50	19.84	0	21.50
		1413	1732.6	21.81			19.70			19.71		
		1513	1752.6	21.59			19.65			19.66		
	Subtest 3	1312	1712.4	21.28	0.5	23.00	19.32	0.5	21.00	19.30	0.5	21.00
		1413	1732.6	21.25			19.23			19.21		
		1513	1752.6	21.05			19.09			19.14		
	Subtest 4	1312	1712.4	21.29	0.5	23.00	19.35	0.5	21.00	19.31	0.5	21.00
		1413	1732.6	21.25			19.20			19.19		
		1513	1752.6	21.06			19.15			19.13		
HSUPA	Subtest 1	1312	1712.4	21.77	0	23.50	19.82	0	21.50	19.84	0	21.50
		1413	1732.6	21.78			19.68			19.71		
		1513	1752.6	21.61			19.65			19.69		
	Subtest 2	1312	1712.4	19.70	2	21.50	17.79	2	19.50	17.81	2	19.50
		1413	1732.6	19.74			17.71			17.70		
		1513	1752.6	19.67			17.70			17.69		
	Subtest 3	1312	1712.4	20.88	1	22.50	18.80	1	20.50	18.75	1	20.50
		1413	1732.6	20.83			18.66			18.67		
		1513	1752.6	20.62			18.67			18.71		
	Subtest 4	1312	1712.4	19.84	2	21.50	17.80	2	19.50	17.81	2	19.50
		1413	1732.6	19.82			17.66			17.71		
		1513	1752.6	19.65			17.71			17.71		
	Subtest 5	1312	1712.4	21.72	0	23.50	19.75	0	21.50	19.67	0	21.50
		1413	1732.6	21.79			19.70			19.81		
		1513	1752.6	21.61			19.63			19.68		
DC-HSDPA	Subtest 1	1312	1712.4	22.75	0	23.50	19.82	0	21.50	19.69	0	21.50
		1413	1732.6	22.81			19.72			19.62		
		1513	1752.6	22.64			19.68			19.55		
	Subtest 2	1312	1712.4	22.78	0	23.50	19.82	0	21.50	19.70	0	21.50
		1413	1732.6	22.86			19.73			19.59		
		1513	1752.6	22.65			19.68			19.55		
	Subtest 3	1312	1712.4	22.75	0.5	23.00	19.34	0.5	21.00	19.23	0.5	21.00
		1413	1732.6	22.79			19.20			19.09		
		1513	1752.6	22.63			19.17			19.06		
	Subtest 4	1312	1712.4	22.77	0.5	23.00	19.31	0.5	21.00	19.23	0.5	21.00
		1413	1732.6	22.81			19.20			19.08		
		1513	1752.6	22.58			19.15			19.02		

W-CDMA Band V Measured Results

Mode		UL Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)		
				DSI = 0, 1, 2, 3, 4		
				Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	24.45	N/A	25.20
		4183	836.6	24.53		
		4233	846.6	24.30		
HSDPA	Subtest 1	4132	826.4	23.45	0	24.50
		4183	836.6	23.53		
		4233	846.6	23.28		
	Subtest 2	4132	826.4	23.43	0	24.50
		4183	836.6	23.52		
		4233	846.6	23.29		
	Subtest 3	4132	826.4	22.92	0.5	24.00
		4183	836.6	23.00		
		4233	846.6	22.78		
	Subtest 4	4132	826.4	22.94	0.5	24.00
		4183	836.6	22.97		
		4233	846.6	22.75		
HSUPA	Subtest 1	4132	826.4	23.38	0	24.50
		4183	836.6	23.43		
		4233	846.6	23.24		
	Subtest 2	4132	826.4	21.39	2	22.50
		4183	836.6	21.45		
		4233	846.6	21.24		
	Subtest 3	4132	826.4	22.41	1	23.50
		4183	836.6	22.44		
		4233	846.6	22.21		
	Subtest 4	4132	826.4	21.42	2	22.50
		4183	836.6	21.46		
		4233	846.6	21.25		
	Subtest 5	4132	826.4	23.42	0	24.50
		4183	836.6	23.48		
		4233	846.6	23.25		
DC-HSDPA	Subtest 1	4132	826.4	23.43	0	24.50
		4183	836.6	23.48		
		4233	846.6	23.25		
	Subtest 2	4132	826.4	23.41	0	24.50
		4183	836.6	23.47		
		4233	846.6	23.23		
	Subtest 3	4132	826.4	22.93	0.5	24.00
		4183	836.6	22.97		
		4233	846.6	22.74		
	Subtest 4	4132	826.4	22.91	0.5	24.00
		4183	836.6	22.97		
		4233	846.6	22.77		

9.3. 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

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 5 (824 – 849 MHz) is covered by LTE Band 26 (814 – 849 MHz)
 - LTE Band 38 (2570 – 2620 MHz) is covered by LTE Band 41 (2496 – 2690 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 Higher order modulations. When the highest maximum output power for Higher order modulations are ≤ 0.5 dB higher than the QPSK or when the reported SAR for QPSK configuration is ≤ 1.45 W/kg.

LTE Band 7 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)														
				DSI = 0, 2					DSI = 3					DSI = 1, 4				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				20850	21100	21350			20850	21100	21350			20850	21100	21350		
2510 MHz	2535 MHz	2560 MHz	2510 MHz	2535 MHz	2560 MHz	2510 MHz	2535 MHz	2560 MHz										
20 MHz	QPSK	1	0	21.92	22.15	21.93	0.0	23.0	20.45	20.77	20.75	0.0	21.5	20.54	20.74	20.73	0.0	21.5
		1	49	22.06	21.92	21.77	0.0	23.0	20.54	20.72	20.55	0.0	21.5	20.65	20.67	20.62	0.0	21.5
		1	99	22.14	21.86	21.67	0.0	23.0	20.72	20.67	20.56	0.0	21.5	20.71	20.68	20.41	0.0	21.5
		50	0	22.20	22.17	22.00	0.0	23.0	20.84	20.88	20.72	0.0	21.5	20.87	20.98	20.74	0.0	21.5
		50	24	22.20	22.21	22.03	0.0	23.0	20.94	21.01	20.79	0.0	21.5	20.87	21.02	20.81	0.0	21.5
		50	50	22.13	22.04	21.91	0.0	23.0	20.91	20.94	20.64	0.0	21.5	20.91	20.94	20.69	0.0	21.5
	100	0	22.21	22.12	21.93	0.0	23.0	20.85	20.93	20.74	0.0	21.5	20.92	21.03	20.74	0.0	21.5	
	16QAM	1	0	22.29	22.60	22.49	0.0	23.0	21.12	21.27	20.99	0.0	21.5	21.10	21.26	20.97	0.0	21.5
		1	49	22.42	22.53	22.30	0.0	23.0	21.31	21.19	20.81	0.0	21.5	21.29	21.16	20.80	0.0	21.5
		1	99	22.52	22.46	22.22	0.0	23.0	21.34	21.15	20.76	0.0	21.5	20.92	21.11	20.75	0.0	21.5
		50	0	21.68	21.71	21.52	1.0	22.0	20.84	20.91	20.59	0.0	21.5	20.83	20.90	20.57	0.0	21.5
		50	24	21.67	21.68	21.52	1.0	22.0	20.87	20.92	20.60	0.0	21.5	20.86	20.88	20.62	0.0	21.5
		50	50	21.69	21.60	21.41	1.0	22.0	20.91	20.86	20.55	0.0	21.5	20.89	20.84	20.53	0.0	21.5
	100	0	21.69	21.66	21.44	1.0	22.0	20.88	20.89	20.56	0.0	21.5	20.87	20.87	20.55	0.0	21.5	
	64QAM	1	0	21.18	21.83	21.78	1.0	22.0	20.79	21.39	20.92	0.0	21.5	20.72	21.08	20.91	0.0	21.5
		1	49	21.89	21.68	21.67	1.0	22.0	20.92	21.35	20.80	0.0	21.5	20.93	21.35	20.79	0.0	21.5
		1	99	21.92	21.62	21.23	1.0	22.0	21.03	21.33	20.73	0.0	21.5	21.03	21.33	20.78	0.0	21.5
		50	0	20.52	20.74	20.58	2.0	21.0	20.66	20.90	20.68	0.5	21.0	20.59	20.91	20.66	0.5	21.0
		50	24	20.80	20.74	20.61	2.0	21.0	20.86	20.91	20.69	0.5	21.0	20.87	20.91	20.70	0.5	21.0
		50	50	20.84	20.71	20.52	2.0	21.0	20.90	20.86	20.61	0.5	21.0	20.91	20.87	20.60	0.5	21.0
	100	0	20.75	20.74	20.54	2.0	21.0	20.86	20.86	20.61	0.5	21.0	20.86	20.87	20.60	0.5	21.0	
	256QAM	1	0	18.77	18.70	18.71	3.0	20.0	18.61	19.04	18.81	1.5	20.0	18.59	19.07	18.81	1.5	20.0
		1	49	18.83	18.50	18.57	3.0	20.0	18.72	18.90	18.66	1.5	20.0	18.73	18.88	18.64	1.5	20.0
		1	99	18.98	18.58	18.60	3.0	20.0	18.90	18.95	18.66	1.5	20.0	18.89	18.99	18.66	1.5	20.0
50		0	18.74	18.73	18.52	3.0	20.0	18.83	18.85	18.59	1.5	20.0	18.83	18.86	18.60	1.5	20.0	
50		24	18.76	18.72	18.56	3.0	20.0	18.87	18.87	18.63	1.5	20.0	18.86	18.87	18.63	1.5	20.0	
50		50	18.84	18.72	18.51	3.0	20.0	18.93	18.87	18.58	1.5	20.0	18.92	18.85	18.55	1.5	20.0	
100	0	18.75	18.72	18.46	3.0	20.0	18.87	18.85	18.52	1.5	20.0	18.86	18.82	18.52	1.5	20.0		
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit			
				20825.00	21100.00	21375.00	2507.5 MHz			2535 MHz	2562.5 MHz	20825.00	21100.00			21375.00	2507.5 MHz	2535 MHz
15 MHz	QPSK	1	0	22.00	22.09	21.93	0.0	23.0	20.59	20.77	20.59	0.0	21.5	20.59	20.80	20.54	0.0	21.5
		1	37	22.09	21.93	21.78	0.0	23.0	20.68	20.70	20.48	0.0	21.5	20.65	20.76	20.44	0.0	21.5
		1	74	22.16	21.91	21.74	0.0	23.0	20.82	20.74	20.51	0.0	21.5	20.81	20.79	20.46	0.0	21.5
		36	0	22.18	22.09	21.98	0.0	23.0	20.71	20.90	20.63	0.0	21.5	20.75	20.92	20.60	0.0	21.5
		36	20	22.22	22.08	21.93	0.0	23.0	20.80	20.93	20.58	0.0	21.5	20.81	20.91	20.57	0.0	21.5
		36	39	22.20	22.04	21.94	0.0	23.0	20.76	20.90	20.59	0.0	21.5	20.78	20.89	20.60	0.0	21.5
	75	0	22.16	22.08	21.89	0.0	23.0	20.74	20.92	20.59	0.0	21.5	20.73	20.89	20.57	0.0	21.5	
	16QAM	1	0	22.34	22.47	21.80	0.0	23.0	20.94	20.75	20.98	0.0	21.5	20.95	21.24	20.55	0.0	21.5
		1	37	22.47	22.27	21.74	0.0	23.0	21.08	20.73	20.96	0.0	21.5	21.13	21.18	20.48	0.0	21.5
		1	74	22.55	22.29	21.65	0.0	23.0	21.23	20.75	20.89	0.0	21.5	21.20	21.20	20.43	0.0	21.5
		36	0	21.67	21.66	21.48	1.0	22.0	20.72	20.92	20.70	0.0	21.5	20.81	20.92	20.60	0.0	21.5
		36	20	21.78	21.65	21.42	1.0	22.0	20.78	20.92	20.64	0.0	21.5	20.87	20.88	20.55	0.0	21.5
		36	39	21.72	21.58	21.45	1.0	22.0	20.76	20.90	20.65	0.0	21.5	20.85	20.85	20.60	0.0	21.5
	75	0	21.72	21.64	21.42	1.0	22.0	20.73	20.94	20.59	0.0	21.5	20.81	20.92	20.58	0.0	21.5	
	64QAM	1	0	20.61	21.88	21.71	1.0	22.0	20.70	21.42	20.89	0.0	21.5	21.17	21.16	20.73	0.0	21.5
		1	37	21.66	21.76	21.66	1.0	22.0	20.84	21.41	20.87	0.0	21.5	21.31	21.11	20.68	0.0	21.5
		1	74	21.80	21.75	21.16	1.0	22.0	20.95	21.42	20.83	0.0	21.5	21.40	21.14	20.64	0.0	21.5
		36	0	20.25	20.69	20.50	2.0	21.0	20.27	20.94	20.67	0.5	21.0	20.53	20.96	20.71	0.5	21.0
		36	20	20.78	20.70	20.47	2.0	21.0	20.79	20.93	20.63	0.5	21.0	20.84	20.99	20.66	0.5	21.0
		36	39	20.79	20.64	20.49	2.0	21.0	20.88	20.90	20.65	0.5	21.0	20.82	20.95	20.69	0.5	21.0
	75	0	20.71	20.75	20.45	2.0	21.0	20.80	20.97	20.62	0.5	21.0	20.82	20.96	20.62	0.5	21.0	
	256QAM	1	0	18.40	18.94	18.89	3.0	20.0	18.46	19.13	19.03	1.5	20.0	18.88	19.31	18.46	1.5	20.0
		1	37	18.42	18.83	18.81	3.0	20.0	18.57	19.04	19.02	1.5	20.0	18.94	19.22	18.32	1.5	20.0
		1	74	18.61	18.86	18.88	3.0	20.0	18.76	19.15	19.03	1.5	20.0	19.12	19.32	18.46	1.5	20.0
36		0	18.69	18.69	18.52	3.0	20.0	18.73	18.89	18.64	1.5	20.0	18.73	18.95	18.62	1.5	20.0	
36		20	18.75	18.68	18.47	3.0	20.0	18.81	18.89	18.63	1.5	20.0	18.82	18.96	18.59	1.5	20.0	
36		39	18.75	18.65	18.51	3.0	20.0	18.81	18.91	18.68	1.5	20.0	18.80	18.95	18.65	1.5	20.0	
75	0	18.68	18.65	18.49	3.0	20.0	18.75	18.91	18.64	1.5	20.0	18.75	18.95	18.59	1.5	20.0		

LTE Band 7 Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	
				20800.00	21100.00	21400.00			20800.00	21100.00	21400.00			20800.00	21100.00	21400.00			
				2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz			
10 MHz	QPSK	1	0	22.14	22.20	21.91	0.0	23.0	20.72	20.89	20.74	0.0	21.5	20.68	20.92	20.73	0.0	21.5	
		1	25	22.24	22.06	21.97	0.0	23.0	20.74	20.89	20.71	0.0	21.5	20.77	20.94	20.69	0.0	21.5	
		1	49	22.32	22.09	21.87	0.0	23.0	20.84	21.00	20.69	0.0	21.5	20.86	20.99	20.72	0.0	21.5	
		25	0	22.28	22.28	22.04	0.0	23.0	20.88	21.08	20.72	0.0	21.5	20.90	21.07	20.75	0.0	21.5	
		25	12	22.27	22.28	22.03	0.0	23.0	20.88	21.06	20.74	0.0	21.5	20.86	21.07	20.73	0.0	21.5	
		25	25	22.28	22.24	22.02	0.0	23.0	20.90	21.05	20.79	0.0	21.5	20.88	21.05	20.75	0.0	21.5	
	50	0	22.26	22.27	22.02	0.0	23.0	20.84	21.05	20.72	0.0	21.5	20.87	21.07	20.71	0.0	21.5		
	16QAM	1	0	22.40	22.18	21.98	0.0	23.0	20.80	20.93	21.14	0.0	21.5	20.79	20.93	21.18	0.0	21.5	
		1	25	22.56	22.13	21.91	0.0	23.0	20.87	20.90	21.13	0.0	21.5	20.85	20.88	21.13	0.0	21.5	
		1	49	22.56	22.10	21.91	0.0	23.0	20.94	20.89	21.15	0.0	21.5	20.93	20.91	21.19	0.0	21.5	
		25	0	21.82	21.87	21.57	1.0	22.0	21.02	21.10	20.81	0.0	21.5	21.01	21.09	20.82	0.0	21.5	
		25	12	21.84	21.85	21.58	1.0	22.0	21.01	21.11	20.82	0.0	21.5	20.98	21.11	20.76	0.0	21.5	
		25	25	21.80	21.82	21.59	1.0	22.0	21.00	21.07	20.82	0.0	21.5	21.01	21.09	20.86	0.0	21.5	
	50	0	21.79	21.80	21.53	1.0	22.0	20.90	21.04	20.76	0.0	21.5	20.90	21.04	20.75	0.0	21.5		
	64QAM	1	0	20.79	21.88	21.64	1.0	22.0	20.76	21.29	21.04	0.0	21.5	21.02	21.36	20.83	0.0	21.5	
		1	25	21.41	21.92	21.64	1.0	22.0	20.99	21.25	21.06	0.0	21.5	21.11	21.32	20.92	0.0	21.5	
		1	49	21.81	21.74	21.02	1.0	22.0	21.11	21.23	21.06	0.0	21.5	21.10	21.34	20.92	0.0	21.5	
		25	0	20.11	20.87	20.63	2.0	21.0	20.15	20.89	20.75	0.5	21.0	20.46	20.76	20.80	0.5	21.0	
		25	12	20.52	20.87	20.63	2.0	21.0	20.54	20.92	20.76	0.5	21.0	20.82	20.85	20.79	0.5	21.0	
		25	25	20.85	20.77	20.66	2.0	21.0	20.87	20.78	20.81	0.5	21.0	20.96	20.77	20.83	0.5	21.0	
	50	0	20.50	20.82	20.58	2.0	21.0	20.60	20.69	20.72	0.5	21.0	20.84	20.83	20.75	0.5	21.0		
	256QAM	1	0	18.69	19.33	18.38	3.0	20.0	18.61	19.04	19.20	1.5	20.0	18.83	19.55	18.59	1.5	20.0	
		1	25	18.80	19.21	18.40	3.0	20.0	18.70	18.98	19.23	1.5	20.0	18.91	19.47	18.56	1.5	20.0	
		1	49	18.86	19.29	18.42	3.0	20.0	18.80	19.03	19.34	1.5	20.0	18.94	19.53	18.60	1.5	20.0	
		25	0	18.90	18.86	18.65	3.0	20.0	18.91	19.07	18.80	1.5	20.0	18.98	19.08	18.78	1.5	20.0	
		25	12	18.89	18.85	18.66	3.0	20.0	18.94	19.12	18.81	1.5	20.0	19.00	19.12	18.80	1.5	20.0	
		25	25	18.95	18.84	18.71	3.0	20.0	18.99	19.12	18.88	1.5	20.0	19.03	19.11	18.85	1.5	20.0	
	50	0	18.83	18.82	18.58	3.0	20.0	18.90	19.07	18.80	1.5	20.0	18.92	19.07	18.72	1.5	20.0		
	5 MHz	QPSK	1	0	22.22	22.25	22.02	0.0	23.0	20.82	20.97	20.72	0.0	21.5	20.80	20.99	20.70	0.0	21.5
			1	12	22.16	22.23	22.01	0.0	23.0	20.77	20.90	20.70	0.0	21.5	20.77	20.94	20.73	0.0	21.5
1			24	22.28	22.26	22.01	0.0	23.0	20.91	20.99	20.70	0.0	21.5	20.93	21.00	20.77	0.0	21.5	
12			0	22.16	22.20	22.05	0.0	23.0	20.73	20.99	20.71	0.0	21.5	20.74	20.97	20.74	0.0	21.5	
12			7	22.25	22.31	22.09	0.0	23.0	20.84	21.09	20.78	0.0	21.5	20.86	21.09	20.79	0.0	21.5	
12			13	22.31	22.28	22.12	0.0	23.0	20.85	21.06	20.81	0.0	21.5	20.87	21.07	20.81	0.0	21.5	
25		0	22.29	22.29	22.08	0.0	23.0	20.84	21.06	20.74	0.0	21.5	20.85	21.04	20.75	0.0	21.5		
16QAM		1	0	21.93	22.55	22.07	0.0	23.0	20.92	21.14	20.84	0.0	21.5	20.95	21.16	20.85	0.0	21.5	
		1	12	22.30	22.55	22.04	0.0	23.0	20.90	21.09	20.74	0.0	21.5	20.93	21.11	20.73	0.0	21.5	
		1	24	22.44	22.54	22.11	0.0	23.0	21.04	21.17	20.90	0.0	21.5	21.04	21.19	20.91	0.0	21.5	
		12	0	21.31	21.87	21.60	1.0	22.0	20.83	20.90	20.79	0.0	21.5	20.85	21.14	20.79	0.0	21.5	
		12	7	21.53	21.94	21.60	1.0	22.0	20.95	21.01	20.82	0.0	21.5	20.97	21.20	20.84	0.0	21.5	
		12	13	21.71	21.95	21.62	1.0	22.0	20.95	21.00	20.89	0.0	21.5	20.98	21.22	20.85	0.0	21.5	
25		0	21.52	21.81	21.51	1.0	22.0	20.88	20.92	20.73	0.0	21.5	20.88	21.08	20.72	0.0	21.5		
64QAM		1	0	20.80	21.93	21.80	1.0	22.0	20.69	21.38	20.94	0.0	21.5	20.94	21.20	20.83	0.0	21.5	
		1	12	21.02	22.00	21.67	1.0	22.0	20.76	21.38	20.93	0.0	21.5	21.27	21.18	21.27	0.0	21.5	
		1	24	21.36	21.89	21.16	1.0	22.0	20.82	21.36	20.99	0.0	21.5	21.28	21.26	21.30	0.0	21.5	
		12	0	20.01	20.73	20.62	2.0	21.0	19.95	21.00	20.78	0.5	21.0	20.93	20.94	20.92	0.5	21.0	
		12	7	20.19	20.74	20.63	2.0	21.0	20.13	20.88	20.80	0.5	21.0	20.89	20.90	20.89	0.5	21.0	
		12	13	20.34	20.80	20.50	2.0	21.0	20.32	20.82	20.85	0.5	21.0	20.92	20.90	20.90	0.5	21.0	
25		0	20.10	20.74	20.57	2.0	21.0	20.10	20.43	20.76	0.5	21.0	20.91	20.90	20.91	0.5	21.0		
256QAM		1	0	18.45	18.87	18.62	3.0	20.0	18.51	19.14	18.81	1.5	20.0	19.13	19.12	19.14	1.5	20.0	
		1	12	18.55	18.83	18.74	3.0	20.0	18.60	19.14	18.91	1.5	20.0	19.09	19.09	19.11	1.5	20.0	
		1	24	18.57	18.91	18.67	3.0	20.0	18.63	19.19	18.84	1.5	20.0	19.21	19.24	19.21	1.5	20.0	
		12	0	18.73	18.71	18.61	3.0	20.0	18.81	18.96	18.77	1.5	20.0	19.00	19.01	19.01	1.5	20.0	
		12	7	18.82	18.82	18.68	3.0	20.0	18.90	19.07	18.84	1.5	20.0	18.95	18.94	18.93	1.5	20.0	
		12	13	18.86	18.81	18.69	3.0	20.0	18.93	19.06	18.84	1.5	20.0	18.98	19.00	18.99	1.5	20.0	
25		0	18.86	18.76	18.68	3.0	20.0	18.94	19.01	18.82	1.5	20.0	18.95	18.97	18.96	1.5	20.0		

LTE Band 12 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)						
				DSI = 0, 1, 2, 3, 4					MPR	Tune-up Limit
				Measured Pwr (dBm)			MPR	Tune-up Limit		
				23060	23095	23130				
			704 MHz	707.5 MHz	711 MHz					
10 MHz	QPSK	1	0		24.76		0.0	25.5		
		1	25		24.73		0.0	25.5		
		1	49		24.78		0.0	25.5		
		25	0		23.92		1.0	24.5		
		25	12		23.94		1.0	24.5		
		25	25		23.91		1.0	24.5		
	16QAM	50	0		23.87		1.0	24.5		
		1	0		24.32		1.0	24.5		
		1	25		24.29		1.0	24.5		
		1	49		24.28		1.0	24.5		
		25	0		23.03		2.0	23.5		
		25	12		22.99		2.0	23.5		
	64QAM	25	25		22.99		2.0	23.5		
		50	0		22.95		2.0	23.5		
		1	0		23.10		2.0	23.5		
		1	25		23.06		2.0	23.5		
		1	49		23.09		2.0	23.5		
		25	0		22.00		3.0	22.5		
	256QAM	25	12		22.00		3.0	22.5		
		25	25		22.06		3.0	22.5		
50		0		21.91		3.0	22.5			
1		0		19.82		5.0	20.5			
1		25		19.85		5.0	20.5			
1		49		19.95		5.0	20.5			
5 MHz	QPSK	25	0		20.00		5.0	20.5		
		25	12		20.01		5.0	20.5		
		25	25		20.02		5.0	20.5		
		50	0		19.91		5.0	20.5		
		1	0		24.86	24.85	24.95	0.0	25.5	
		1	12		24.85	24.92	24.88	0.0	25.5	
	16QAM	1	24		24.82	24.87	24.93	0.0	25.5	
		12	0		23.86	23.91	23.91	1.0	24.5	
		12	7		23.99	24.00	24.02	1.0	24.5	
		12	13		23.88	23.95	23.95	1.0	24.5	
		25	0		23.93	23.94	23.98	1.0	24.5	
		1	0		24.34	24.02	24.11	1.0	24.5	
	64QAM	1	12		24.33	23.90	24.04	1.0	24.5	
		1	24		24.36	23.99	24.07	1.0	24.5	
		12	0		23.05	22.97	22.98	2.0	23.5	
		12	7		23.11	23.03	23.10	2.0	23.5	
		12	13		23.04	22.95	23.03	2.0	23.5	
		25	0		23.01	22.90	23.01	2.0	23.5	
	256QAM	1	0		23.04	23.10	22.62	2.0	23.5	
		1	12		22.78	23.18	22.39	2.0	23.5	
1		24		23.09	23.14	22.85	2.0	23.5		
12		0		21.45	21.98	21.63	3.0	22.5		
12		7		21.45	22.07	21.60	3.0	22.5		
12		13		21.46	22.01	21.72	3.0	22.5		
256QAM	25	0		21.48	21.99	21.64	3.0	22.5		
	1	0		19.98	19.92	19.62	5.0	20.5		
	1	12		19.96	20.06	19.73	5.0	20.5		
	1	24		20.01	19.98	19.66	5.0	20.5		
	12	0		19.87	19.91	19.92	5.0	20.5		
	12	7		19.97	19.98	20.02	5.0	20.5		
256QAM	12	13		19.87	19.96	19.94	5.0	20.5		
	25	0		19.95	19.94	19.98	5.0	20.5		

LTE Band 12 Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				23025.00	23095.00	23165.00		
				700.5 MHz	707.5 MHz	714.5 MHz		
3 MHz	QPSK	1	0	24.89	24.83	24.88	0.0	25.5
		1	8	24.82	24.76	24.78	0.0	25.5
		1	14	24.82	24.79	24.85	0.0	25.5
		8	0	23.88	23.93	23.90	1.0	24.5
		8	4	23.94	23.98	23.97	1.0	24.5
		8	7	23.93	23.95	23.97	1.0	24.5
	16QAM	15	0	23.93	23.98	24.00	1.0	24.5
		1	0	24.18	23.98	23.82	1.0	24.5
		1	8	24.08	23.89	23.78	1.0	24.5
		1	14	24.15	23.88	23.79	1.0	24.5
		8	0	22.92	22.91	23.03	2.0	23.5
		8	4	23.00	23.06	23.10	2.0	23.5
	64QAM	8	7	22.99	23.01	23.06	2.0	23.5
		15	0	22.96	22.90	22.98	2.0	23.5
		1	0	22.84	23.20	22.81	2.0	23.5
		1	8	22.47	23.10	22.99	2.0	23.5
		1	14	22.61	23.15	23.25	2.0	23.5
		8	0	21.54	21.88	21.67	3.0	22.5
	256QAM	8	4	21.47	21.92	21.80	3.0	22.5
		8	7	21.51	21.90	21.91	3.0	22.5
		15	0	21.50	22.00	21.75	3.0	22.5
		1	0	19.66	19.89	20.26	5.0	20.5
		1	8	19.68	20.02	20.27	5.0	20.5
		1	14	19.69	19.92	20.25	5.0	20.5
1.4 MHz	QPSK	8	0	19.77	19.97	19.94	5.0	20.5
		8	4	19.86	20.09	20.05	5.0	20.5
		8	7	19.84	20.06	20.03	5.0	20.5
		15	0	19.92	20.01	19.97	5.0	20.5
		1	0	24.72	24.84	24.80	0.0	25.5
		1	3	24.71	24.89	24.84	0.0	25.5
	16QAM	1	5	24.71	24.78	24.76	0.0	25.5
		3	0	24.69	24.70	24.84	0.0	25.5
		3	1	24.80	24.85	24.87	0.0	25.5
		3	3	24.73	24.80	24.88	0.0	25.5
		6	0	23.81	23.88	23.84	1.0	24.5
		1	0	23.72	23.98	24.27	1.0	24.5
	64QAM	1	3	23.84	24.03	24.30	1.0	24.5
		1	5	23.73	23.94	24.22	1.0	24.5
		3	0	23.97	23.89	24.07	1.0	24.5
		3	1	23.99	23.89	24.03	1.0	24.5
		3	3	23.99	23.93	24.05	1.0	24.5
		6	0	22.99	22.98	22.72	2.0	23.5
	256QAM	1	0	22.88	23.24	22.91	2.0	23.5
		1	3	22.80	23.32	23.01	2.0	23.5
		1	5	22.66	23.23	22.91	2.0	23.5
		3	0	22.51	23.08	22.90	2.0	23.5
		3	1	22.44	23.15	22.92	2.0	23.5
		3	3	22.26	23.13	23.01	2.0	23.5
256QAM	6	0	21.50	21.87	22.09	3.0	22.5	
	1	0	19.80	19.88	19.90	5.0	20.5	
	1	3	19.98	19.99	20.09	5.0	20.5	
	1	5	19.81	19.89	19.90	5.0	20.5	
	3	0	19.89	19.79	19.75	5.0	20.5	
	3	1	19.81	19.86	19.74	5.0	20.5	
256QAM	3	3	19.84	19.80	19.76	5.0	20.5	
	6	0	19.90	19.79	19.69	5.0	20.5	

LTE Band 13 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)						
				DSI = 0, 1, 2, 3, 4						
				Measured Pwr (dBm)			MPR	Tune-up Limit		
					23230					
				782 MHz						
10 MHz	QPSK	1	0		24.48		0.0	25.5		
		1	25		24.49		0.0	25.5		
		1	49		24.35		0.0	25.5		
		25	0		23.88		1.0	24.5		
		25	12		23.75		1.0	24.5		
		25	25		23.65		1.0	24.5		
	16QAM	50	0		23.65		1.0	24.5		
		1	0		23.46		1.0	24.5		
		1	25		23.77		1.0	24.5		
		1	49		23.60		1.0	24.5		
		25	0		23.00		2.0	23.5		
		25	12		22.95		2.0	23.5		
	64QAM	25	25		22.84		2.0	23.5		
		50	0		22.93		2.0	23.5		
		1	0		21.84		2.0	23.5		
		1	25		22.96		2.0	23.5		
		1	49		22.84		2.0	23.5		
		25	0		21.63		3.0	22.5		
	256QAM	25	12		21.93		3.0	22.5		
		25	25		21.80		3.0	22.5		
50		0		21.83		3.0	22.5			
1		0		19.88		5.0	20.5			
1		25		19.81		5.0	20.5			
1		49		19.71		5.0	20.5			
5 MHz	QPSK	25	0		20.03		5.0	20.5		
		25	12		19.94		5.0	20.5		
		25	25		19.83		5.0	20.5		
		50	0		19.91		5.0	20.5		
						23205.00	23230.00	23255.00		
						779.5 MHz	782 MHz	784.5 MHz		
	5 MHz	QPSK	1	0		24.87		0.0	25.5	
			1	12		24.68		0.0	25.5	
			1	24		24.53		0.0	25.5	
			12	0		23.78		1.0	24.5	
			12	7		23.76		1.0	24.5	
			12	13		23.65		1.0	24.5	
		16QAM	25	0		23.73		1.0	24.5	
			1	0		23.92		1.0	24.5	
			1	12		23.67		1.0	24.5	
			1	24		23.67		1.0	24.5	
			12	0		22.85		2.0	23.5	
			12	7		22.83		2.0	23.5	
		64QAM	12	13		22.72		2.0	23.5	
			25	0		22.71		2.0	23.5	
1			0		22.30		2.0	23.5		
1			12		22.40		2.0	23.5		
1			24		22.53		2.0	23.5		
12			0		21.45		3.0	22.5		
256QAM		12	7		21.54		3.0	22.5		
		12	13		21.66		3.0	22.5		
	25	0		21.51		3.0	22.5			
	1	0		19.58		5.0	20.5			
	1	12		19.49		5.0	20.5			
	1	24		19.33		5.0	20.5			
256QAM	12	0		19.77		5.0	20.5			
	12	7		19.77		5.0	20.5			
	12	13		19.64		5.0	20.5			
	25	0		19.79		5.0	20.5			

LTE Band 14 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)				
				DSI = 0, 1, 2, 3, 4				
				Measured Pwr (dBm)			MPR	Tune-up Limit
				23305.00	23330.00	23355.00		
790.5 MHz	793 MHz	795.5 MHz						
10 MHz	QPSK	1	0		24.44		0.0	25.5
		1	25		24.52		0.0	25.5
		1	49		24.28		0.0	25.5
		25	0		23.49		1.0	24.5
		25	12		23.47		1.0	24.5
		25	25		23.51		1.0	24.5
	16QAM	50	0		23.52		1.0	24.5
		1	0		23.67		1.0	24.5
		1	25		23.44		1.0	24.5
		1	49		23.34		1.0	24.5
		25	0		22.64		2.0	23.5
		25	12		22.64		2.0	23.5
	64QAM	25	25		22.62		2.0	23.5
		50	0		22.57		2.0	23.5
		1	0		23.06		2.0	23.5
		1	25		22.87		2.0	23.5
		1	49		22.64		2.0	23.5
		25	0		21.62		3.0	22.5
	256QAM	25	12		21.59		3.0	22.5
		25	25		21.59		3.0	22.5
		50	0		21.52		3.0	22.5
		1	0		20.12		5.0	20.5
		1	25		20.03		5.0	20.5
		1	49		19.98		5.0	20.5
5 MHz	QPSK	25	0		19.67		5.0	20.5
		25	12		19.66		5.0	20.5
		25	25		19.63		5.0	20.5
		50	0		19.61		5.0	20.5
		1	0		24.63		0.0	25.5
		1	12		24.50		0.0	25.5
	16QAM	1	24		24.55		0.0	25.5
		12	0		23.55		1.0	24.5
		12	7		23.56		1.0	24.5
		12	13		23.46		1.0	24.5
		25	0		23.52		1.0	24.5
		1	0		23.76		1.0	24.5
	64QAM	1	12		23.61		1.0	24.5
		1	24		23.67		1.0	24.5
		12	0		22.66		2.0	23.5
		12	7		22.66		2.0	23.5
		12	13		22.54		2.0	23.5
		25	0		22.59		2.0	23.5
	256QAM	1	0		22.49		2.0	23.5
		1	12		22.53		2.0	23.5
		1	24		22.49		2.0	23.5
		12	0		21.58		3.0	22.5
		12	7		21.59		3.0	22.5
		12	13		21.46		3.0	22.5
256QAM	25	0		21.51		3.0	22.5	
	1	0		19.31		5.0	20.5	
	1	12		19.32		5.0	20.5	
	1	24		19.28		5.0	20.5	
	12	0		19.58		5.0	20.5	
	12	7		19.60		5.0	20.5	
256QAM	12	13		19.48		5.0	20.5	
	25	0		19.60		5.0	20.5	

LTE Band 25 (Main 2 Ant.) Measured Results

BW (MHz)	Mode	RB Allocation	RB off/set	Maximum Allowed Average Power (dBm)														
				DSI = 0, 2					DSI = 3					DSI = 1, 4				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				26140 1860 MHz	26365 1882.5 MHz	26590 1905 MHz			26140 1860 MHz	26365 1882.5 MHz	26590 1905 MHz			26140 1860 MHz	26365 1882.5 MHz	26590 1905 MHz		
20 MHz	QPSK	1	0	24.07	24.16	24.08	0.0	25.0	20.89	21.19	21.18	0.0	22.0	20.97	21.13	21.18	0.0	22.0
		1	49	24.01	24.22	23.66	0.0	25.0	20.92	21.26	21.15	0.0	22.0	20.95	21.21	21.15	0.0	22.0
		1	99	23.94	24.25	23.40	0.0	25.0	20.95	21.28	20.98	0.0	22.0	20.92	21.28	21.00	0.0	22.0
		50	0	23.28	23.26	23.38	1.0	24.0	21.22	21.28	21.36	0.0	22.0	21.21	21.31	21.32	0.0	22.0
		50	24	23.24	23.27	23.29	1.0	24.0	21.27	21.36	21.37	0.0	22.0	21.20	21.33	21.34	0.0	22.0
		50	50	23.11	23.40	23.14	1.0	24.0	21.08	21.38	21.21	0.0	22.0	21.19	21.38	21.18	0.0	22.0
	16QAM	100	0	23.22	23.21	23.39	1.0	24.0	21.19	21.25	21.33	0.0	22.0	21.18	21.26	21.31	0.0	22.0
		1	0	23.22	23.62	23.42	1.0	24.0	21.64	21.63	21.72	0.0	22.0	21.63	21.61	21.60	0.0	22.0
		1	49	23.47	23.52	22.71	1.0	24.0	21.53	21.53	21.77	0.0	22.0	21.52	21.58	21.57	0.0	22.0
		1	99	23.72	23.56	22.54	1.0	24.0	21.51	21.53	21.57	0.0	22.0	21.52	21.59	21.39	0.0	22.0
		50	0	22.08	22.27	22.06	2.0	23.0	21.30	21.30	21.40	0.0	22.0	21.30	21.24	21.31	0.0	22.0
		50	24	22.34	22.36	21.70	2.0	23.0	21.27	21.28	21.41	0.0	22.0	21.28	21.35	21.35	0.0	22.0
	64QAM	50	50	22.30	22.26	21.37	2.0	23.0	21.24	21.21	21.25	0.0	22.0	21.20	21.25	21.16	0.0	22.0
		100	0	22.36	22.31	21.76	2.0	23.0	21.30	21.31	21.38	0.0	22.0	21.26	21.27	21.34	0.0	22.0
		1	0	21.80	22.48	22.31	2.0	23.0	21.59	21.68	21.66	0.0	22.0	21.62	21.54	21.57	0.0	22.0
		1	49	21.85	21.95	21.31	2.0	23.0	21.51	21.58	21.43	0.0	22.0	21.49	21.57	21.29	0.0	22.0
		1	99	22.28	22.01	21.09	2.0	23.0	21.58	21.57	21.18	0.0	22.0	21.56	21.60	21.05	0.0	22.0
		50	0	20.55	21.08	20.60	3.0	22.0	20.49	20.40	20.68	0.0	22.0	20.31	20.90	20.54	0.0	22.0
	256QAM	50	24	20.80	20.96	20.22	3.0	22.0	20.68	20.62	20.28	0.0	22.0	20.56	20.77	20.15	0.0	22.0
		50	50	21.05	20.87	19.98	3.0	22.0	20.92	20.85	20.02	0.0	22.0	20.78	20.67	19.88	0.0	22.0
		100	0	20.83	21.00	20.32	3.0	22.0	20.70	20.62	20.36	0.0	22.0	20.54	20.78	20.21	0.0	22.0
		1	0	19.33	19.28	19.55	5.0	20.0	19.57	19.55	19.59	1.0	21.0	19.59	19.51	19.55	1.0	21.0
		1	49	19.14	19.23	19.43	5.0	20.0	19.41	19.42	19.42	1.0	21.0	19.40	19.45	19.45	1.0	21.0
		1	99	19.21	19.26	19.28	5.0	20.0	19.48	19.48	19.28	1.0	21.0	19.46	19.51	19.29	1.0	21.0
15 MHz	QPSK	50	0	19.36	19.37	19.37	5.0	20.0	19.39	19.37	19.35	1.0	21.0	19.36	19.30	19.35	1.0	21.0
		50	24	19.36	19.42	19.37	5.0	20.0	19.36	19.35	19.36	1.0	21.0	19.34	19.40	19.36	1.0	21.0
		50	50	19.30	19.31	19.22	5.0	20.0	19.30	19.28	19.23	1.0	21.0	19.27	19.30	19.25	1.0	21.0
		100	0	19.35	19.34	19.30	5.0	20.0	19.30	19.29	19.33	1.0	21.0	19.28	19.27	19.33	1.0	21.0
		1	0	23.71	24.17	23.64	0.0	25.0	21.32	21.29	21.22	0.0	22.0	21.44	21.29	21.20	0.0	22.0
		1	37	23.48	23.67	22.64	0.0	25.0	21.23	21.27	21.11	0.0	22.0	21.27	21.25	21.13	0.0	22.0
	16QAM	1	74	24.15	23.55	22.81	0.0	25.0	21.29	21.23	20.96	0.0	22.0	21.30	21.26	20.98	0.0	22.0
		36	0	22.54	23.20	22.46	1.0	24.0	21.44	21.28	21.35	0.0	22.0	21.48	21.32	21.35	0.0	22.0
		36	20	22.68	23.02	22.04	1.0	24.0	21.41	21.37	21.33	0.0	22.0	21.47	21.42	21.33	0.0	22.0
		36	39	22.95	22.99	21.97	1.0	24.0	21.37	21.30	21.18	0.0	22.0	21.41	21.33	21.19	0.0	22.0
		75	0	22.76	23.09	22.22	1.0	24.0	21.36	21.28	21.28	0.0	22.0	21.41	21.32	21.31	0.0	22.0
		1	0	22.95	23.63	22.65	1.0	24.0	21.80	21.75	21.20	0.0	22.0	21.86	21.70	21.21	0.0	22.0
	64QAM	1	37	22.97	23.25	21.81	1.0	24.0	21.75	21.70	21.14	0.0	22.0	21.77	21.74	21.14	0.0	22.0
		1	74	23.65	23.18	22.00	1.0	24.0	21.68	21.74	20.98	0.0	22.0	21.71	21.76	20.99	0.0	22.0
		36	0	21.82	22.30	21.71	2.0	23.0	21.52	21.31	21.35	0.0	22.0	21.52	21.34	21.35	0.0	22.0
		36	20	21.98	22.25	21.30	2.0	23.0	21.48	21.38	21.32	0.0	22.0	21.54	21.37	21.36	0.0	22.0
		36	39	22.26	22.23	21.24	2.0	23.0	21.45	21.31	21.20	0.0	22.0	21.49	21.32	21.23	0.0	22.0
		75	0	22.09	22.30	21.51	2.0	23.0	21.45	21.31	21.31	0.0	22.0	21.46	21.33	21.34	0.0	22.0
	256QAM	1	0	21.64	22.62	21.93	2.0	23.0	21.64	21.88	21.59	0.0	22.0	21.25	21.82	21.49	0.0	22.0
		1	37	21.52	22.14	20.96	2.0	23.0	21.51	20.91	21.02	0.0	22.0	21.09	21.76	20.53	0.0	22.0
		1	74	22.20	22.11	21.15	2.0	23.0	21.48	21.86	21.20	0.0	22.0	21.47	21.70	20.73	0.0	22.0
		36	0	20.52	21.02	20.41	3.0	22.0	20.57	21.09	20.45	0.0	22.0	20.11	20.64	19.99	0.0	22.0
		36	20	20.67	20.85	19.97	3.0	22.0	20.70	20.90	20.01	0.0	22.0	20.26	20.46	19.56	0.0	22.0
		36	39	20.93	20.83	19.90	3.0	22.0	20.96	20.88	19.93	0.0	22.0	20.51	20.41	19.53	0.0	22.0
256QAM	75	0	20.73	20.98	20.13	3.0	22.0	20.75	21.02	20.17	0.0	22.0	20.32	20.56	19.74	0.0	22.0	
	1	0	19.32	19.57	19.73	5.0	20.0	19.36	19.62	19.74	1.0	21.0	19.32	19.57	19.76	1.0	21.0	
	1	37	19.19	19.50	19.61	5.0	20.0	19.26	19.59	19.62	1.0	21.0	19.16	19.49	19.61	1.0	21.0	
	1	74	19.22	19.55	19.46	5.0	20.0	19.24	19.60	19.48	1.0	21.0	19.22	19.50	19.47	1.0	21.0	
	36	0	19.46	19.28	19.35	5.0	20.0	19.50	19.34	19.36	1.0	21.0	19.47	19.32	19.36	1.0	21.0	
	36	20	19.46	19.41	19.39	5.0	20.0	19.49	19.42	19.37	1.0	21.0	19.48	19.38	19.40	1.0	21.0	
36	39	19.41	19.30	19.22	5.0	20.0	19.47	19.34	19.27	1.0	21.0	19.42	19.32	19.25	1.0	21.0		
75	0	19.42	19.30	19.32	5.0	20.0	19.47	19.35	19.35	1.0	21.0	19.45	19.32	19.36	1.0	21.0		

LTE Band 25 (Main 2 Ant.) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	
				26090.00	26365.00	26640.00			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			1855 MHz	1882.5 MHz	1910 MHz			
10 MHz	QPSK	1	0	23.98	24.37	23.05	0.0	25.0	21.50	21.35	21.32	0.0	22.0	21.50	21.37	21.34	0.0	22.0	
		1	25	23.52	23.76	22.76	0.0	25.0	21.47	21.34	21.23	0.0	22.0	21.50	21.35	21.24	0.0	22.0	
		1	49	24.01	23.97	22.91	0.0	25.0	21.42	21.30	21.13	0.0	22.0	21.44	21.31	21.17	0.0	22.0	
		25	0	22.71	23.25	22.20	1.0	24.0	21.57	21.50	21.43	0.0	22.0	21.57	21.51	21.43	0.0	22.0	
		25	12	22.72	23.12	22.08	1.0	24.0	21.57	21.51	21.40	0.0	22.0	21.60	21.52	21.41	0.0	22.0	
		25	25	22.91	23.17	22.17	1.0	24.0	21.55	21.41	21.24	0.0	22.0	21.58	21.41	21.27	0.0	22.0	
	16QAM	50	0	22.82	23.24	22.20	1.0	24.0	21.59	21.50	21.37	0.0	22.0	21.61	21.52	21.40	0.0	22.0	
		1	0	23.19	23.39	22.09	1.0	24.0	21.89	21.42	21.33	0.0	22.0	21.11	21.44	21.31	0.0	22.0	
		1	25	22.95	23.03	21.88	1.0	24.0	21.87	21.43	21.16	0.0	22.0	21.01	21.46	21.20	0.0	22.0	
		1	49	23.52	23.27	22.03	1.0	24.0	21.82	21.33	21.05	0.0	22.0	21.87	21.34	21.05	0.0	22.0	
		25	0	21.90	22.57	21.45	2.0	23.0	21.56	21.59	21.39	0.0	22.0	21.61	21.60	21.45	0.0	22.0	
		25	12	21.95	22.46	21.34	2.0	23.0	21.57	21.61	21.39	0.0	22.0	21.63	21.60	21.41	0.0	22.0	
	64QAM	25	25	22.16	22.46	21.43	2.0	23.0	21.55	21.46	21.20	0.0	22.0	21.57	21.48	21.27	0.0	22.0	
		50	0	22.07	22.53	21.45	2.0	23.0	21.56	21.51	21.32	0.0	22.0	21.56	21.52	21.39	0.0	22.0	
		1	0	21.96	22.62	21.42	2.0	23.0	21.73	21.63	21.36	0.0	22.0	21.44	21.61	20.91	0.0	22.0	
		1	25	21.57	21.94	21.12	2.0	23.0	21.46	21.71	21.08	0.0	22.0	21.05	21.49	20.64	0.0	22.0	
		1	49	22.15	22.21	21.28	2.0	23.0	21.63	21.62	21.23	0.0	22.0	21.59	21.55	20.79	0.0	22.0	
		25	0	20.72	21.23	20.23	3.0	22.0	20.61	21.22	20.18	0.0	22.0	20.19	20.77	19.73	0.0	22.0	
	256QAM	25	12	20.74	21.07	20.09	3.0	22.0	20.64	21.07	20.05	0.0	22.0	20.21	20.62	19.61	0.0	22.0	
		25	25	20.92	21.12	20.19	3.0	22.0	20.83	21.10	20.14	0.0	22.0	20.42	20.66	19.69	0.0	22.0	
		50	0	20.80	21.12	20.19	3.0	22.0	20.71	21.09	20.14	0.0	22.0	20.31	20.67	19.70	0.0	22.0	
		1	0	19.40	19.41	19.89	5.0	20.0	19.38	19.47	19.91	1.0	21.0	19.40	19.38	19.88	1.0	21.0	
		1	25	19.33	19.43	19.81	5.0	20.0	19.31	19.49	19.79	1.0	21.0	19.31	19.41	19.76	1.0	21.0	
		1	49	19.27	19.42	19.65	5.0	20.0	19.28	19.42	19.72	1.0	21.0	19.29	19.35	19.68	1.0	21.0	
	5 MHz	QPSK	25	0	19.62	19.60	19.48	5.0	20.0	19.63	19.61	19.49	1.0	21.0	19.61	19.56	19.46	1.0	21.0
			25	12	19.64	19.59	19.43	5.0	20.0	19.66	19.63	19.44	1.0	21.0	19.64	19.56	19.40	1.0	21.0
			25	25	19.60	19.49	19.29	5.0	20.0	19.60	19.54	19.30	1.0	21.0	19.57	19.48	19.27	1.0	21.0
			50	0	19.57	19.52	19.44	5.0	20.0	19.60	19.56	19.38	1.0	21.0	19.57	19.50	19.38	1.0	21.0
			1	0	24.09	24.33	23.00	0.0	25.0	21.51	21.50	21.36	0.0	22.0	21.51	21.49	21.39	0.0	22.0
			1	12	23.64	23.98	23.00	0.0	25.0	21.39	21.43	21.22	0.0	22.0	21.41	21.42	21.23	0.0	22.0
16QAM		1	24	23.72	24.15	22.98	0.0	25.0	21.48	21.43	21.19	0.0	22.0	21.49	21.44	21.21	0.0	22.0	
		12	0	22.80	23.20	22.25	1.0	24.0	21.56	21.50	21.30	0.0	22.0	21.56	21.49	21.33	0.0	22.0	
		12	7	22.78	23.15	22.29	1.0	24.0	21.59	21.51	21.28	0.0	22.0	21.60	21.53	21.30	0.0	22.0	
		12	13	22.74	23.16	22.31	1.0	24.0	21.54	21.49	21.22	0.0	22.0	21.55	21.50	21.26	0.0	22.0	
		25	0	22.76	23.22	22.31	1.0	24.0	21.55	21.45	21.29	0.0	22.0	21.56	21.47	21.31	0.0	22.0	
		1	0	22.97	23.52	22.63	1.0	24.0	21.48	21.64	21.44	0.0	22.0	21.56	21.65	21.46	0.0	22.0	
64QAM		1	12	22.77	23.23	22.72	1.0	24.0	21.44	21.44	21.29	0.0	22.0	21.42	21.50	21.33	0.0	22.0	
		1	24	22.96	23.45	22.72	1.0	24.0	21.48	21.60	21.28	0.0	22.0	21.52	21.62	21.32	0.0	22.0	
		12	0	22.00	22.47	21.63	2.0	23.0	21.71	21.53	21.36	0.0	22.0	21.70	21.55	21.39	0.0	22.0	
		12	7	22.02	22.45	21.68	2.0	23.0	21.69	21.48	21.38	0.0	22.0	21.69	21.51	21.38	0.0	22.0	
		12	13	22.02	22.47	21.71	2.0	23.0	21.66	21.53	21.30	0.0	22.0	21.66	21.53	21.34	0.0	22.0	
		25	0	21.97	22.47	21.64	2.0	23.0	21.59	21.41	21.29	0.0	22.0	21.57	21.43	21.31	0.0	22.0	
256QAM		1	0	22.26	22.51	21.02	2.0	23.0	21.20	21.74	20.87	0.0	22.0	21.62	21.71	20.48	0.0	22.0	
		1	12	22.05	22.11	21.04	2.0	23.0	21.69	21.65	20.89	0.0	22.0	21.33	21.56	20.50	0.0	22.0	
		1	24	22.14	22.34	21.02	2.0	23.0	21.78	21.64	20.88	0.0	22.0	21.44	21.60	20.49	0.0	22.0	
		12	0	20.82	21.18	20.28	3.0	22.0	20.46	20.99	20.16	0.0	22.0	20.12	20.62	19.76	0.0	22.0	
		12	7	20.80	21.12	20.31	3.0	22.0	20.47	20.93	20.18	0.0	22.0	20.11	20.58	19.77	0.0	22.0	
		12	13	20.77	21.13	20.33	3.0	22.0	20.44	20.94	20.19	0.0	22.0	20.10	20.60	19.79	0.0	22.0	
256QAM		25	0	20.80	21.12	20.25	3.0	22.0	20.49	20.93	20.11	0.0	22.0	20.14	20.58	19.72	0.0	22.0	
		1	0	19.77	19.58	19.14	5.0	20.0	19.77	19.58	19.11	1.0	21.0	19.72	19.55	19.09	1.0	21.0	
		1	12	19.64	19.61	19.06	5.0	20.0	19.65	19.61	19.05	1.0	21.0	19.63	19.54	19.01	1.0	21.0	
		1	24	19.74	19.49	18.93	5.0	20.0	19.72	19.50	18.91	1.0	21.0	19.73	19.46	18.89	1.0	21.0	
		12	0	19.59	19.52	19.34	5.0	20.0	19.56	19.54	19.37	1.0	21.0	19.56	19.47	19.30	1.0	21.0	
		12	7	19.63	19.53	19.34	5.0	20.0	19.57	19.55	19.34	1.0	21.0	19.57	19.48	19.31	1.0	21.0	
256QAM	12	13	19.61	19.49	19.29	5.0	20.0	19.54	19.49	19.29	1.0	21.0	19.55	19.46	19.26	1.0	21.0		
	25	0	19.60	19.54	19.36	5.0	20.0	19.58	19.55	19.36	1.0	21.0	19.56	19.44	19.35	1.0	21.0		

LTE Band 25 (Main 2 Ant.) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				26055.00	26365.00	26675.00			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			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3 MHz	QPSK	1	0	23.98	24.15	23.33	0.0	25.0	21.53	21.39	21.21	0.0	22.0	21.56	21.42	21.24	0.0	22.0
		1	8	23.62	23.92	23.15	0.0	25.0	21.47	21.25	21.07	0.0	22.0	21.52	21.28	21.05	0.0	22.0
		1	14	23.57	24.04	23.10	0.0	25.0	21.52	21.33	21.14	0.0	22.0	21.56	21.34	21.15	0.0	22.0
		8	0	22.82	23.22	22.38	1.0	24.0	21.52	21.45	21.23	0.0	22.0	21.56	21.47	21.28	0.0	22.0
		8	4	22.84	23.22	22.41	1.0	24.0	21.54	21.43	21.24	0.0	22.0	21.58	21.48	21.27	0.0	22.0
		8	7	22.84	23.23	22.43	1.0	24.0	21.56	21.47	21.29	0.0	22.0	21.60	21.48	21.27	0.0	22.0
	16QAM	15	0	22.83	23.25	22.41	1.0	24.0	21.52	21.45	21.28	0.0	22.0	21.56	21.47	21.27	0.0	22.0
		1	0	22.92	23.19	22.81	1.0	24.0	21.86	21.49	21.15	0.0	22.0	21.45	21.46	21.19	0.0	22.0
		1	8	22.77	23.04	22.71	1.0	24.0	21.77	21.41	21.08	0.0	22.0	21.84	21.43	21.11	0.0	22.0
		1	14	22.82	23.14	22.70	1.0	24.0	21.90	21.45	21.02	0.0	22.0	21.43	21.46	21.08	0.0	22.0
		8	0	22.04	22.52	21.69	2.0	23.0	21.49	21.43	21.34	0.0	22.0	21.57	21.46	21.34	0.0	22.0
		8	4	22.10	22.54	21.74	2.0	23.0	21.61	21.46	21.32	0.0	22.0	21.63	21.50	21.35	0.0	22.0
	64QAM	8	7	22.12	22.56	21.76	2.0	23.0	21.62	21.48	21.36	0.0	22.0	21.64	21.52	21.35	0.0	22.0
		15	0	22.03	22.46	21.73	2.0	23.0	21.56	21.41	21.25	0.0	22.0	21.59	21.43	21.27	0.0	22.0
		1	0	21.63	22.01	21.22	2.0	23.0	21.63	21.84	21.43	0.0	22.0	21.46	21.83	21.15	0.0	22.0
		1	8	21.42	21.72	21.08	2.0	23.0	21.51	21.68	21.27	0.0	22.0	21.23	21.60	20.98	0.0	22.0
		1	14	21.43	21.85	21.04	2.0	23.0	21.51	21.74	21.23	0.0	22.0	21.24	21.70	20.94	0.0	22.0
		8	0	20.47	20.67	20.01	3.0	22.0	20.54	20.78	20.20	0.0	22.0	20.28	20.55	19.90	0.0	22.0
	256QAM	8	4	20.51	20.67	20.03	3.0	22.0	20.58	20.77	20.26	0.0	22.0	20.34	20.56	19.93	0.0	22.0
		8	7	20.50	20.68	20.02	3.0	22.0	20.57	20.79	20.26	0.0	22.0	20.34	20.58	19.93	0.0	22.0
		15	0	20.46	20.75	19.93	3.0	22.0	20.54	20.87	20.18	0.0	22.0	20.31	20.65	19.84	0.0	22.0
1		0	19.32	19.51	19.69	5.0	20.0	19.34	19.47	19.71	1.0	21.0	19.35	19.48	19.66	1.0	21.0	
1		8	19.27	19.52	19.62	5.0	20.0	19.29	19.50	19.66	1.0	21.0	19.28	19.48	19.58	1.0	21.0	
1		14	19.31	19.38	19.52	5.0	20.0	19.34	19.39	19.56	1.0	21.0	19.34	19.38	19.52	1.0	21.0	
1.4 MHz	QPSK	8	0	19.42	19.55	19.34	5.0	20.0	19.46	19.58	19.33	1.0	21.0	19.40	19.56	19.36	1.0	21.0
		8	4	19.45	19.60	19.31	5.0	20.0	19.47	19.62	19.34	1.0	21.0	19.46	19.59	19.31	1.0	21.0
		8	7	19.47	19.64	19.32	5.0	20.0	19.50	19.63	19.35	1.0	21.0	19.48	19.63	19.33	1.0	21.0
		15	0	19.60	19.53	19.32	5.0	20.0	19.61	19.54	19.30	1.0	21.0	19.58	19.51	19.26	1.0	21.0
		1	0	24.24	24.18	23.35	0.0	25.0	21.36	21.34	21.04	0.0	22.0	21.52	21.33	21.07	0.0	22.0
		1	3	24.01	24.11	23.27	0.0	25.0	21.40	21.36	21.08	0.0	22.0	21.55	21.35	21.08	0.0	22.0
	16QAM	1	5	23.85	24.02	23.13	0.0	25.0	21.34	21.27	21.00	0.0	22.0	21.50	21.29	21.08	0.0	22.0
		3	0	23.76	23.95	23.19	0.0	25.0	21.31	21.25	21.08	0.0	22.0	21.40	21.34	21.05	0.0	22.0
		3	1	23.75	23.97	23.18	0.0	25.0	21.41	21.30	21.10	0.0	22.0	21.46	21.39	21.13	0.0	22.0
		3	3	23.71	23.95	23.16	0.0	25.0	21.38	21.27	21.10	0.0	22.0	21.44	21.40	21.08	0.0	22.0
		6	0	22.93	23.18	22.38	1.0	24.0	21.43	21.35	21.12	0.0	22.0	21.48	21.41	21.22	0.0	22.0
		1	0	22.97	23.32	22.81	1.0	24.0	21.37	21.48	21.51	0.0	22.0	21.62	21.88	21.12	0.0	22.0
	64QAM	1	3	23.00	23.36	22.81	1.0	24.0	21.46	21.54	21.52	0.0	22.0	21.68	21.77	21.18	0.0	22.0
		1	5	22.97	23.31	22.71	1.0	24.0	21.45	21.42	21.45	0.0	22.0	21.61	21.70	21.12	0.0	22.0
		3	0	23.10	23.28	22.61	1.0	24.0	21.61	21.37	21.34	0.0	22.0	21.50	21.61	21.33	0.0	22.0
		3	1	23.13	23.26	22.63	1.0	24.0	21.62	21.42	21.33	0.0	22.0	21.49	21.61	21.34	0.0	22.0
		3	3	23.12	23.31	22.60	1.0	24.0	21.62	21.44	21.24	0.0	22.0	21.60	21.53	21.36	0.0	22.0
		6	0	22.27	22.52	21.55	2.0	23.0	21.60	21.46	21.00	0.0	22.0	21.63	21.24	21.31	0.0	22.0
	256QAM	1	0	21.79	21.99	21.00	2.0	23.0	21.90	21.46	21.26	0.0	22.0	20.97	21.45	21.35	0.0	22.0
		1	3	21.70	21.97	20.94	2.0	23.0	21.03	21.52	21.24	0.0	22.0	21.06	21.50	21.30	0.0	22.0
		1	5	21.60	21.84	20.77	2.0	23.0	20.99	21.35	21.07	0.0	22.0	21.82	21.34	21.10	0.0	22.0
3		0	21.27	21.81	20.87	2.0	23.0	21.77	21.45	21.16	0.0	22.0	21.73	21.44	21.11	0.0	22.0	
3		1	21.27	21.83	20.90	2.0	23.0	21.79	21.52	21.18	0.0	22.0	21.73	21.51	21.11	0.0	22.0	
3		3	21.25	21.80	20.86	2.0	23.0	21.80	21.54	21.14	0.0	22.0	21.71	21.54	21.08	0.0	22.0	
256QAM	6	0	20.45	20.55	20.14	3.0	22.0	20.76	21.21	20.42	0.0	22.0	20.45	20.98	19.87	0.0	22.0	
	1	0	19.44	19.55	19.04	5.0	20.0	19.64	19.56	19.35	1.0	21.0	19.65	19.24	19.31	1.0	21.0	
	1	3	19.61	19.62	19.02	5.0	20.0	19.80	19.70	19.53	1.0	21.0	19.76	19.56	19.41	1.0	21.0	
	1	5	19.51	19.43	19.00	5.0	20.0	19.63	19.49	19.32	1.0	21.0	19.64	19.37	19.23	1.0	21.0	
	3	0	19.50	19.31	19.04	5.0	20.0	19.43	19.34	19.11	1.0	21.0	19.41	19.47	19.15	1.0	21.0	
	3	1	19.60	19.35	19.03	5.0	20.0	19.48	19.38	19.16	1.0	21.0	19.45	19.45	19.10	1.0	21.0	
256QAM	3	3	19.57	19.26	19.05	5.0	20.0	19.43	19.34	19.13	1.0	21.0	19.41	19.45	19.06	1.0	21.0	
	6	0	19.53	19.28	19.27	5.0	20.0	19.45	19.33	19.12	1.0	21.0	19.43	19.42	19.09	1.0	21.0	

LTE Band 25 (Sub.1 Ant.) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)				
				DSI = 0, 1, 3, 4					DSI =2				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				26140	26365	26590			26140	26365	26590		
1860 MHz	1882.5 MHz	1905 MHz	1860 MHz	1882.5 MHz	1905 MHz								
20 MHz	QPSK	1	0	22.45	22.51	23.05	0.0	23.5	17.9	17.9	18.8	0.0	19.5
		1	49	22.31	22.21	22.89	0.0	23.5	17.8	17.8	18.3	0.0	19.5
		1	99	22.39	22.19	22.89	0.0	23.5	17.9	17.8	18.2	0.0	19.5
		50	0	21.54	21.34	22.16	1.0	22.5	18.0	18.2	18.9	0.0	19.5
		50	24	21.57	21.37	22.15	1.0	22.5	18.1	18.2	18.5	0.0	19.5
		50	50	21.56	21.31	22.12	1.0	22.5	18.0	18.2	18.4	0.0	19.5
	16QAM	100	0	21.60	21.37	22.13	1.0	22.5	18.1	18.2	18.5	0.0	19.5
		1	0	21.49	21.46	22.09	1.0	22.5	17.9	18.6	18.5	0.0	19.5
		1	49	21.34	21.49	21.94	1.0	22.5	17.8	18.6	18.4	0.0	19.5
		1	99	21.34	21.20	21.97	1.0	22.5	17.9	18.5	18.3	0.0	19.5
		50	0	20.53	20.39	21.12	2.0	21.5	18.0	18.2	18.5	0.0	19.5
		50	24	20.57	20.46	21.11	2.0	21.5	18.1	18.2	18.5	0.0	19.5
	64QAM	50	50	20.54	20.33	21.07	2.0	21.5	18.0	18.1	18.4	0.0	19.5
		100	0	20.61	20.45	21.13	2.0	21.5	18.1	18.2	18.5	0.0	19.5
		1	0	20.73	20.42	21.29	2.0	21.5	18.2	18.3	18.7	0.0	19.5
		1	49	20.57	20.44	21.22	2.0	21.5	18.1	18.4	18.5	0.0	19.5
		1	99	20.61	20.64	21.21	2.0	21.5	18.1	18.4	18.4	0.0	19.5
		50	0	19.62	19.49	20.27	3.0	20.5	18.1	18.3	18.7	0.0	19.5
	256QAM	50	24	19.64	19.51	20.23	3.0	20.5	18.2	18.2	18.6	0.0	19.5
		50	50	19.72	19.54	20.12	3.0	20.5	18.2	18.2	18.5	0.0	19.5
		100	0	19.56	19.46	20.17	3.0	20.5	18.1	18.3	18.6	0.0	19.5
		1	0	17.45	17.36	18.16	5.0	18.5	17.0	16.9	17.5	1.0	18.5
		1	49	17.24	17.41	17.96	5.0	18.5	16.8	16.9	17.2	1.0	18.5
		1	99	17.39	17.44	17.97	5.0	18.5	17.0	17.0	17.3	1.0	18.5
15 MHz	QPSK	50	0	17.58	17.46	18.17	5.0	18.5	17.1	17.3	17.6	1.0	18.5
		50	24	17.59	17.45	18.11	5.0	18.5	17.1	17.3	17.5	1.0	18.5
		50	50	17.59	17.41	18.03	5.0	18.5	17.1	17.3	17.4	1.0	18.5
		100	0	17.61	17.47	18.12	5.0	18.5	17.1	17.2	17.6	1.0	18.5
		1	0	22.47	22.48	23.13	0.0	23.5	17.87	17.85	18.52	0.0	19.5
		1	37	22.42	22.44	22.73	0.0	23.5	17.92	18.04	18.18	0.0	19.5
15 MHz	QPSK	1	74	22.48	22.47	22.95	0.0	23.5	18.00	18.10	18.28	0.0	19.5
		36	0	21.52	21.59	20.99	1.0	22.5	18.01	18.42	17.39	0.0	19.5
		36	20	21.57	21.61	20.91	1.0	22.5	18.07	18.43	17.30	0.0	19.5
		36	39	21.54	21.62	20.86	1.0	22.5	18.02	18.46	17.16	0.0	19.5
		75	0	21.59	21.57	20.93	1.0	22.5	18.06	18.39	17.30	0.0	19.5
		1	0	21.71	21.69	22.21	1.0	22.5	18.16	18.79	18.60	0.0	19.5
	16QAM	1	37	21.53	21.71	22.03	1.0	22.5	18.00	18.78	18.44	0.0	19.5
		1	74	21.58	21.69	22.18	1.0	22.5	18.11	19.03	18.48	0.0	19.5
		36	0	20.58	20.58	21.12	2.0	21.5	18.08	18.35	18.52	0.0	19.5
		36	20	20.59	20.64	20.84	2.0	21.5	18.10	18.33	18.22	0.0	19.5
		36	39	20.56	20.67	20.77	2.0	21.5	18.06	18.42	18.11	0.0	19.5
		75	0	20.53	20.65	20.94	2.0	21.5	18.02	18.42	18.35	0.0	19.5
64QAM	1	0	20.77	20.68	21.03	2.0	21.5	18.21	18.60	18.39	0.0	19.5	
	1	37	20.64	20.69	20.78	2.0	21.5	18.20	18.62	18.05	0.0	19.5	
	1	74	20.75	20.68	20.89	2.0	21.5	18.28	18.43	18.11	0.0	19.5	
	36	0	19.58	19.62	20.01	3.0	20.5	18.10	18.38	18.39	0.0	19.5	
	36	20	19.59	19.58	19.92	3.0	20.5	18.11	18.31	18.33	0.0	19.5	
	36	39	19.73	19.74	19.85	3.0	20.5	18.20	18.38	18.25	0.0	19.5	
256QAM	75	0	19.52	19.61	19.94	3.0	20.5	18.10	18.41	18.35	0.0	19.5	
	1	0	17.52	17.53	18.03	5.0	18.5	17.10	17.09	17.37	1.0	18.5	
	1	37	17.52	17.56	17.88	5.0	18.5	17.10	17.00	17.16	1.0	18.5	
	1	74	17.52	17.76	17.92	5.0	18.5	17.15	17.29	17.29	1.0	18.5	
	36	0	17.53	17.53	17.91	5.0	18.5	17.02	17.34	17.33	1.0	18.5	
	36	20	17.47	17.62	17.94	5.0	18.5	16.93	17.43	17.35	1.0	18.5	
15 MHz	256QAM	36	39	17.57	17.59	17.86	5.0	18.5	17.07	17.43	17.23	1.0	18.5
		75	0	17.54	17.61	17.93	5.0	18.5	17.00	17.36	17.36	1.0	18.5

LTE Band 25 (Sub.1 Ant.) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit		
				26090.00	26365.00	26640.00			26090	26365	26640				
				1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz				
10 MHz	QPSK	1	0	22.64	22.60	22.94	0.0	23.5	18.04	17.97	18.33	0.0	19.5		
		1	25	22.56	22.65	22.83	0.0	23.5	18.06	18.25	18.28	0.0	19.5		
		1	49	22.53	22.54	22.85	0.0	23.5	18.05	18.17	18.18	0.0	19.5		
		25	0	21.67	21.69	21.99	1.0	22.5	18.16	18.52	18.39	0.0	19.5		
		25	12	21.79	21.73	21.98	1.0	22.5	18.29	18.55	18.37	0.0	19.5		
		25	25	21.68	21.79	21.93	1.0	22.5	18.16	18.63	18.23	0.0	19.5		
	16QAM	50	0	21.66	21.71	21.98	1.0	22.5	18.13	18.53	18.35	0.0	19.5		
		1	0	21.75	21.89	22.16	1.0	22.5	18.20	18.99	18.55	0.0	19.5		
		1	25	21.79	21.81	22.02	1.0	22.5	18.26	18.88	18.43	0.0	19.5		
		1	49	21.81	21.82	22.08	1.0	22.5	18.34	18.94	18.38	0.0	19.5		
		25	0	20.73	20.69	21.03	2.0	21.5	18.23	18.46	18.43	0.0	19.5		
		25	12	20.78	20.71	20.98	2.0	21.5	18.29	18.40	18.36	0.0	19.5		
	64QAM	25	25	20.69	20.65	20.91	2.0	21.5	18.19	18.40	18.25	0.0	19.5		
		50	0	20.70	20.73	20.93	2.0	21.5	18.19	18.50	18.34	0.0	19.5		
		1	0	20.92	20.81	21.12	2.0	21.5	18.36	18.73	18.48	0.0	19.5		
		1	25	20.77	20.83	21.02	2.0	21.5	18.33	18.76	18.29	0.0	19.5		
		1	49	20.79	20.86	21.07	2.0	21.5	18.32	18.61	18.29	0.0	19.5		
		25	0	19.76	19.73	20.01	3.0	20.5	18.28	18.49	18.39	0.0	19.5		
	256QAM	25	12	19.73	19.74	19.99	3.0	20.5	18.25	18.47	18.40	0.0	19.5		
		25	25	19.67	19.68	19.97	3.0	20.5	18.14	18.32	18.37	0.0	19.5		
		50	0	19.76	19.75	20.01	3.0	20.5	18.34	18.55	18.42	0.0	19.5		
		1	0	17.74	17.64	18.03	5.0	18.5	17.32	17.20	17.37	1.0	18.5		
		1	25	17.63	17.71	17.89	5.0	18.5	17.21	17.15	17.17	1.0	18.5		
		1	49	17.71	17.58	17.91	5.0	18.5	17.34	17.11	17.28	1.0	18.5		
	10 MHz	QPSK	25	0	17.72	17.61	18.04	5.0	18.5	17.21	17.42	17.46	1.0	18.5	
			25	12	17.74	17.72	17.91	5.0	18.5	17.20	17.53	17.32	1.0	18.5	
			25	25	17.67	17.70	17.92	5.0	18.5	17.17	17.54	17.29	1.0	18.5	
			50	0	17.73	17.71	17.99	5.0	18.5	17.19	17.46	17.42	1.0	18.5	
5 MHz			QPSK	1	0	22.67	22.69	22.86	0.0	23.5	18.07	18.06	18.25	0.0	19.5
				1	12	22.74	22.72	22.91	0.0	23.5	18.24	18.32	18.36	0.0	19.5
	1	24		22.59	22.73	22.83	0.0	23.5	18.11	18.36	18.16	0.0	19.5		
	12	0		21.68	21.71	21.96	1.0	22.5	18.17	18.54	18.36	0.0	19.5		
	12	7		21.71	21.73	21.97	1.0	22.5	18.21	18.55	18.36	0.0	19.5		
	12	13		21.68	21.70	21.96	1.0	22.5	18.16	18.54	18.26	0.0	19.5		
	25	0		21.69	21.71	21.92	1.0	22.5	18.16	18.53	18.29	0.0	19.5		
	16QAM	1		0	21.92	21.94	22.21	1.0	22.5	18.37	19.04	18.60	0.0	19.5	
		1	12	21.82	21.76	22.08	1.0	22.5	18.29	18.83	18.49	0.0	19.5		
		1	24	21.93	21.91	22.09	1.0	22.5	18.46	18.88	18.39	0.0	19.5		
		12	0	20.71	20.70	20.92	2.0	21.5	18.21	18.47	18.32	0.0	19.5		
		12	7	20.74	20.65	20.96	2.0	21.5	18.25	18.34	18.34	0.0	19.5		
		12	13	20.70	20.77	20.93	2.0	21.5	18.20	18.52	18.27	0.0	19.5		
	64QAM	25	0	20.72	20.66	20.86	2.0	21.5	18.21	18.43	18.27	0.0	19.5		
		1	0	20.89	20.92	21.11	2.0	21.5	18.33	18.84	18.47	0.0	19.5		
		1	12	20.83	20.72	21.07	2.0	21.5	18.39	18.65	18.34	0.0	19.5		
		1	24	20.81	20.82	21.05	2.0	21.5	18.34	18.57	18.27	0.0	19.5		
		12	0	19.72	19.69	19.93	3.0	20.5	18.24	18.45	18.31	0.0	19.5		
		12	7	19.71	19.69	19.90	3.0	20.5	18.23	18.42	18.31	0.0	19.5		
	256QAM	12	13	19.64	19.69	19.93	3.0	20.5	18.11	18.33	18.33	0.0	19.5		
		25	0	19.64	19.60	19.93	3.0	20.5	18.22	18.40	18.34	0.0	19.5		
		1	0	17.68	17.74	18.02	5.0	18.5	17.26	17.30	17.36	1.0	18.5		
		1	12	17.59	17.71	17.89	5.0	18.5	17.17	17.15	17.17	1.0	18.5		
		1	24	17.71	17.73	17.97	5.0	18.5	17.34	17.26	17.34	1.0	18.5		
		12	0	17.78	17.69	17.95	5.0	18.5	17.27	17.50	17.37	1.0	18.5		
	10 MHz	QPSK	12	7	17.71	17.69	17.99	5.0	18.5	17.17	17.50	17.40	1.0	18.5	
			12	13	17.75	17.74	17.92	5.0	18.5	17.25	17.58	17.29	1.0	18.5	
			25	0	17.65	17.68	17.98	5.0	18.5	17.11	17.43	17.41	1.0	18.5	

LTE Band 25 (Sub.1 Ant.) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	
				26055.00	26365.00	26675.00			26055	26365	26675			
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz			
3 MHz	QPSK	1	0	22.61	22.59	22.82	0.0	23.5	18.01	17.96	18.21	0.0	19.5	
		1	8	22.65	22.62	22.91	0.0	23.5	18.15	18.22	18.36	0.0	19.5	
		1	14	22.61	22.61	22.84	0.0	23.5	18.13	18.24	18.17	0.0	19.5	
		8	0	21.68	21.63	21.88	1.0	22.5	18.17	18.46	18.28	0.0	19.5	
		8	4	21.74	21.69	21.94	1.0	22.5	18.24	18.51	18.33	0.0	19.5	
		8	7	21.70	21.63	21.91	1.0	22.5	18.18	18.47	18.21	0.0	19.5	
	16QAM	15	0	21.65	21.64	21.89	1.0	22.5	18.12	18.46	18.26	0.0	19.5	
		1	0	21.92	21.88	22.19	1.0	22.5	18.37	18.98	18.58	0.0	19.5	
		1	8	21.93	21.87	22.11	1.0	22.5	18.40	18.94	18.52	0.0	19.5	
		1	14	21.96	21.86	22.07	1.0	22.5	18.49	18.97	18.37	0.0	19.5	
		8	0	20.83	20.65	20.95	2.0	21.5	18.33	18.42	18.35	0.0	19.5	
		8	4	20.75	20.72	20.97	2.0	21.5	18.26	18.41	18.35	0.0	19.5	
	64QAM	8	7	20.73	20.72	20.92	2.0	21.5	18.23	18.47	18.26	0.0	19.5	
		15	0	20.66	20.64	20.89	2.0	21.5	18.15	18.41	18.30	0.0	19.5	
		1	0	20.81	20.83	21.05	2.0	21.5	18.25	18.75	18.41	0.0	19.5	
		1	8	20.91	20.88	21.08	2.0	21.5	18.47	18.81	18.35	0.0	19.5	
		1	14	20.93	20.79	21.03	2.0	21.5	18.46	18.54	18.25	0.0	19.5	
		8	0	19.71	19.72	19.89	3.0	20.5	18.23	18.48	18.27	0.0	19.5	
	256QAM	8	4	19.74	19.72	19.96	3.0	20.5	18.26	18.45	18.37	0.0	19.5	
		8	7	19.71	19.72	19.95	3.0	20.5	18.18	18.36	18.35	0.0	19.5	
		15	0	19.72	19.69	19.89	3.0	20.5	18.30	18.49	18.30	0.0	19.5	
1		0	17.76	17.75	17.99	5.0	18.5	17.34	17.31	17.33	1.0	18.5		
1		8	17.77	17.73	17.95	5.0	18.5	17.35	17.17	17.23	1.0	18.5		
1		14	17.84	17.63	17.94	5.0	18.5	17.47	17.16	17.31	1.0	18.5		
1.4 MHz	QPSK	8	0	17.64	17.64	17.89	5.0	18.5	17.13	17.45	17.31	1.0	18.5	
		8	4	17.73	17.68	18.01	5.0	18.5	17.19	17.49	17.42	1.0	18.5	
		8	7	17.67	17.62	17.92	5.0	18.5	17.17	17.46	17.29	1.0	18.5	
		15	0	17.68	17.64	17.89	5.0	18.5	17.14	17.39	17.32	1.0	18.5	
		16QAM	1	0	22.51	22.59	22.72	0.0	23.5	17.91	17.96	18.11	0.0	19.5
			1	3	22.57	22.56	22.81	0.0	23.5	18.07	18.16	18.26	0.0	19.5
	1		5	22.46	22.47	22.67	0.0	23.5	17.98	18.10	18.00	0.0	19.5	
	3		0	22.49	22.58	22.73	0.0	23.5	17.89	17.95	18.12	0.0	19.5	
	3		1	22.58	22.65	22.94	0.0	23.5	18.08	18.25	18.39	0.0	19.5	
	3		3	22.54	22.56	22.72	0.0	23.5	18.06	18.19	18.05	0.0	19.5	
	6		0	21.56	21.54	21.73	1.0	22.5	18.03	18.36	18.10	0.0	19.5	
	1		0	21.56	21.71	21.95	1.0	22.5	18.01	18.81	18.34	0.0	19.5	
	1		3	21.75	21.77	21.96	1.0	22.5	18.22	18.84	18.37	0.0	19.5	
	1		5	21.78	21.76	21.87	1.0	22.5	18.31	18.87	18.17	0.0	19.5	
	64QAM	3	0	21.66	21.72	21.87	1.0	22.5	18.11	18.82	18.26	0.0	19.5	
		3	1	21.61	21.67	21.83	1.0	22.5	18.08	18.74	18.24	0.0	19.5	
		3	3	21.67	21.67	21.87	1.0	22.5	18.20	19.01	18.17	0.0	19.5	
		6	0	20.63	20.52	20.81	2.0	21.5	18.12	18.29	18.22	0.0	19.5	
		1	0	20.81	20.67	20.86	2.0	21.5	18.25	18.59	18.22	0.0	19.5	
		1	3	20.72	20.77	21.02	2.0	21.5	18.28	18.70	18.29	0.0	19.5	
	256QAM	1	5	20.69	20.65	20.92	2.0	21.5	18.22	18.40	18.14	0.0	19.5	
3		0	20.78	20.56	20.78	2.0	21.5	18.22	18.48	18.14	0.0	19.5		
3		1	20.77	20.67	20.89	2.0	21.5	18.33	18.60	18.16	0.0	19.5		
3		3	20.72	20.64	20.72	2.0	21.5	18.25	18.39	17.94	0.0	19.5		
6		0	19.51	19.64	19.83	3.0	20.5	18.09	18.44	18.24	0.0	19.5		
1		0	17.61	17.56	17.87	5.0	18.5	17.19	17.12	17.21	1.0	18.5		
256QAM	1	3	17.66	17.66	17.92	5.0	18.5	17.24	17.10	17.20	1.0	18.5		
	1	5	17.62	17.62	17.79	5.0	18.5	17.25	17.15	17.16	1.0	18.5		
	3	0	17.64	17.62	17.72	5.0	18.5	17.13	17.43	17.14	1.0	18.5		
	3	1	17.65	17.72	17.82	5.0	18.5	17.11	17.53	17.23	1.0	18.5		
	3	3	17.67	17.62	17.92	5.0	18.5	17.17	17.46	17.29	1.0	18.5		
	6	0	17.61	17.59	17.69	5.0	18.5	17.07	17.34	17.12	1.0	18.5		

LTE Band 26 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)							
				DSI = 0, 1, 2, 3, 4						MPR	Tune-up Limit
				Measured Pwr (dBm)				MPR	Tune-up Limit		
				26765.00	26790.00	26865.00	26965.00				
821.5 MHz	824 MHz	831.5 MHz	841.5 MHz								
15 MHz	QPSK	1	0		24.28	24.24		0.0	25.5		
		1	37		24.23	24.52		0.0	25.5		
		1	74		24.29	24.51		0.0	25.5		
		36	0		23.30	23.59		1.0	24.5		
		36	20		23.35	23.57		1.0	24.5		
		36	39		23.35	23.57		1.0	24.5		
		75	0		23.33	23.57		1.0	24.5		
	16QAM	1	0		23.69	23.80		1.0	24.5		
		1	37		23.72	23.97		1.0	24.5		
		1	74		23.65	23.87		1.0	24.5		
		36	0		22.38	22.65		2.0	23.5		
		36	20		22.41	22.63		2.0	23.5		
		36	39		22.41	22.61		2.0	23.5		
		75	0		22.36	22.59		2.0	23.5		
	64QAM	1	0		22.46	22.95		2.0	23.5		
		1	37		22.45	23.13		2.0	23.5		
		1	74		22.48	23.09		2.0	23.5		
		36	0		21.40	21.57		3.0	22.5		
		36	20		21.41	21.54		3.0	22.5		
		36	39		21.43	21.53		3.0	22.5		
		75	0		21.39	21.59		3.0	22.5		
256QAM	1	0		19.22	19.66		5.0	20.5			
	1	37		19.09	19.80		5.0	20.5			
	1	74		19.23	19.84		5.0	20.5			
	36	0		19.34	19.51		5.0	20.5			
	36	20		19.39	19.53		5.0	20.5			
	36	39		19.40	19.50		5.0	20.5			
	75	0		19.37	19.50		5.0	20.5			
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit		
				26740.00	26790.00	26865.00	26990.00				
				819 MHz	824 MHz	831.5 MHz	844 MHz				
10 MHz	QPSK	1	0	24.04	24.33	24.16	24.20	0.0	25.5		
		1	25	23.94	24.33	24.17	24.14	0.0	25.5		
		1	49	23.98	24.33	24.17	24.06	0.0	25.5		
		25	0	23.13	23.39	23.29	23.20	1.0	24.5		
		25	12	23.11	23.51	23.28	23.15	1.0	24.5		
		25	25	23.11	23.44	23.33	23.15	1.0	24.5		
		50	0	23.13	23.47	23.26	23.14	1.0	24.5		
	16QAM	1	0	23.11	23.92	23.12	23.65	1.0	24.5		
		1	25	23.02	23.94	23.21	23.55	1.0	24.5		
		1	49	23.06	23.93	23.14	23.46	1.0	24.5		
		25	0	22.21	22.57	22.27	22.26	2.0	23.5		
		25	12	22.22	22.65	22.32	22.20	2.0	23.5		
		25	25	22.19	22.56	22.37	22.23	2.0	23.5		
		50	0	22.18	22.48	22.26	22.19	2.0	23.5		
	64QAM	1	0	22.30	22.51	22.36	22.48	2.0	23.5		
		1	25	22.15	22.60	22.48	22.11	2.0	23.5		
		1	49	22.32	22.61	22.49	22.11	2.0	23.5		
		25	0	21.22	21.53	21.37	22.12	3.0	22.5		
		25	12	21.18	21.61	21.35	22.12	3.0	22.5		
		25	25	21.15	21.58	21.44	22.11	3.0	22.5		
		50	0	21.19	21.56	21.34	22.11	3.0	22.5		
	256QAM	1	0	19.00	19.26	18.98	19.79	5.0	20.5		
		1	25	18.86	19.21	19.06	19.73	5.0	20.5		
		1	49	18.89	19.21	19.06	19.76	5.0	20.5		
		25	0	19.17	19.48	19.32	19.34	5.0	20.5		
		25	12	19.20	19.58	19.33	19.32	5.0	20.5		
		25	25	19.23	19.53	19.40	19.34	5.0	20.5		
50		0	19.16	19.51	19.30	19.29	5.0	20.5			

Notes:

For Orange box's output power results, There are measured for the test of Part.90.

LTE Band 26 Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit
				26715.00	26790.00	26865.00	27015.00		
				816.5 MHz	824 MHz	831.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	24.13	24.41	24.31	24.09	0.0	25.5
		1	12	24.08	24.40	24.27	24.02	0.0	25.5
		1	24	24.03	24.42	24.27	24.04	0.0	25.5
		12	0	23.16	23.44	23.22	23.14	1.0	24.5
		12	7	23.17	23.50	23.26	23.16	1.0	24.5
		12	13	23.12	23.48	23.29	23.10	1.0	24.5
		25	0	23.10	23.46	23.23	23.12	1.0	24.5
	16QAM	1	0	23.23	23.60	23.44	23.66	1.0	24.5
		1	12	23.11	23.49	23.40	23.59	1.0	24.5
		1	24	23.21	23.55	23.44	23.57	1.0	24.5
		12	0	22.20	22.45	22.31	22.30	2.0	23.5
		12	7	22.17	22.51	22.34	22.30	2.0	23.5
		12	13	22.14	22.50	22.38	22.24	2.0	23.5
		25	0	22.07	22.39	22.26	22.18	2.0	23.5
	64QAM	1	0	22.55	22.75	22.64	22.54	2.0	23.5
		1	12	22.42	22.82	22.72	22.49	2.0	23.5
		1	24	22.40	22.76	22.65	22.47	2.0	23.5
		12	0	21.09	21.40	21.25	21.16	3.0	22.5
		12	7	21.15	21.50	21.27	21.17	3.0	22.5
		12	13	21.10	21.47	21.29	21.12	3.0	22.5
		25	0	21.12	21.41	21.26	21.12	3.0	22.5
	256QAM	1	0	19.32	19.56	19.38	19.38	5.0	20.5
		1	12	19.20	19.53	19.36	19.22	5.0	20.5
		1	24	19.22	19.62	19.45	19.31	5.0	20.5
		12	0	19.16	19.42	19.26	19.23	5.0	20.5
12		7	19.18	19.54	19.29	19.26	5.0	20.5	
12		13	19.13	19.51	19.37	19.20	5.0	20.5	
25		0	19.15	19.47	19.26	19.19	5.0	20.5	
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit
				26705.00	26790.00	26865.00	27025.00		
				815.5 MHz	824 MHz	831.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	24.03	24.39	24.21	24.09	0.0	25.5
		1	8	23.94	24.36	24.11	24.03	0.0	25.5
		1	14	23.96	24.38	24.23	24.07	0.0	25.5
		8	0	23.15	23.45	23.22	23.10	1.0	24.5
		8	4	23.13	23.48	23.24	23.13	1.0	24.5
		8	7	23.16	23.46	23.29	23.11	1.0	24.5
		15	0	23.13	23.44	23.23	23.10	1.0	24.5
	16QAM	1	0	23.17	23.78	23.16	23.49	1.0	24.5
		1	8	23.06	23.74	23.12	23.36	1.0	24.5
		1	14	23.10	23.78	23.16	23.44	1.0	24.5
		8	0	22.12	22.48	22.32	22.11	2.0	23.5
		8	4	22.16	22.57	22.33	22.16	2.0	23.5
		8	7	22.17	22.55	22.37	22.18	2.0	23.5
		15	0	22.07	22.52	22.27	22.15	2.0	23.5
	64QAM	1	0	22.19	22.41	22.32	22.21	2.0	23.5
		1	8	22.14	22.45	22.36	22.14	2.0	23.5
		1	14	22.18	22.49	22.39	22.19	2.0	23.5
		8	0	21.20	21.50	21.30	21.15	3.0	22.5
		8	4	21.21	21.48	21.30	21.15	3.0	22.5
		8	7	21.18	21.50	21.28	21.15	3.0	22.5
		15	0	21.16	21.51	21.31	21.14	3.0	22.5
	256QAM	1	0	18.98	19.19	19.10	18.99	5.0	20.5
		1	8	18.93	19.25	19.09	18.94	5.0	20.5
		1	14	18.97	19.27	19.18	18.90	5.0	20.5
		8	0	19.08	19.37	19.17	19.08	5.0	20.5
8		4	19.13	19.41	19.22	19.14	5.0	20.5	
8		7	19.12	19.44	19.24	19.16	5.0	20.5	
15		0	19.20	19.46	19.31	19.22	5.0	20.5	

Notes:

For Orange box's output power results, There are measured for the test of Part.90.

LTE Band 26 Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit
				26697.00	26790.00	26865.00	27033.00		
				814.7 MHz	824 MHz	831.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	24.02	24.16	24.11	23.91	0.0	25.5
		1	3	24.03	24.24	24.17	23.90	0.0	25.5
		1	5	24.00	24.22	24.13	23.90	0.0	25.5
		3	0	23.92	24.18	24.14	23.87	0.0	25.5
		3	1	23.99	24.22	24.20	23.94	0.0	25.5
		3	3	23.97	24.20	24.22	23.92	0.0	25.5
	16QAM	6	0	23.05	23.33	23.14	23.06	1.0	24.5
		1	0	23.16	23.27	23.64	22.94	1.0	24.5
		1	3	23.23	23.39	23.63	23.04	1.0	24.5
		1	5	23.13	23.34	23.61	22.98	1.0	24.5
		3	0	23.04	23.50	23.39	23.15	1.0	24.5
		3	1	23.07	23.55	23.35	23.16	1.0	24.5
	64QAM	3	3	23.10	23.57	23.38	23.19	1.0	24.5
		6	0	22.17	22.56	21.99	22.18	2.0	23.5
		1	0	22.50	22.50	22.29	22.51	2.0	23.5
		1	3	22.60	22.60	22.40	22.60	2.0	23.5
		1	5	22.48	22.52	22.34	22.49	2.0	23.5
		3	0	22.32	22.34	22.24	22.35	2.0	23.5
	256QAM	3	1	22.36	22.37	22.31	22.33	2.0	23.5
		3	3	22.34	22.35	22.42	22.34	2.0	23.5
		6	0	21.05	21.46	21.45	21.07	3.0	22.5
		1	0	19.13	19.44	19.11	19.19	5.0	20.5
		1	3	19.25	19.56	19.23	19.32	5.0	20.5
		1	5	19.10	19.44	19.19	19.16	5.0	20.5
	3	0	19.02	19.44	19.23	19.08	5.0	20.5	
	3	1	19.08	19.38	19.14	19.11	5.0	20.5	
	3	3	19.01	19.45	19.22	19.05	5.0	20.5	
	6	0	19.01	19.47	19.21	19.05	5.0	20.5	

Notes:

For Orange box's output power results, There are measured for the test of Part.90.

LTE Band 30 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)														
				DSI = 0, 2				DSI = 3				DSI = 1, 4						
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				27710.00	2310 MHz				27710.00	2310 MHz				27710.00	2310 MHz			
10 MHz	QPSK	1	0		23.28		0.0	24.0		19.98		0.0	21.0		20.05		0.0	21.0
		1	25		23.25		0.0	24.0		19.95		0.0	21.0		20.05		0.0	21.0
		1	49		23.31		0.0	24.0		20.01		0.0	21.0		20.09		0.0	21.0
		25	0		22.28		1.0	23.0		20.00		0.0	21.0		20.02		0.0	21.0
		25	12		22.32		1.0	23.0		19.98		0.0	21.0		20.02		0.0	21.0
		25	25		22.40		1.0	23.0		20.05		0.0	21.0		20.03		0.0	21.0
	50	0		22.31		1.0	23.0		19.92		0.0	21.0		20.01		0.0	21.0	
	16QAM	1	0		22.43		1.0	23.0		20.06		0.0	21.0		20.03		0.0	21.0
		1	25		22.34		1.0	23.0		20.00		0.0	21.0		20.01		0.0	21.0
		1	49		22.39		1.0	23.0		19.99		0.0	21.0		20.02		0.0	21.0
		25	0		21.44		2.0	22.0		20.10		0.0	21.0		20.06		0.0	21.0
		25	12		21.43		2.0	22.0		20.10		0.0	21.0		20.06		0.0	21.0
		25	25		21.52		2.0	22.0		20.08		0.0	21.0		20.08		0.0	21.0
	64QAM	50	0		21.38		2.0	22.0		19.98		0.0	21.0		19.98		0.0	21.0
		1	0		21.79		2.0	22.0		20.43		0.0	21.0		20.50		0.0	21.0
		1	25		21.77		2.0	22.0		20.42		0.0	21.0		20.50		0.0	21.0
		1	49		21.80		2.0	22.0		20.44		0.0	21.0		20.51		0.0	21.0
		25	0		20.42		3.0	21.0		20.08		0.0	21.0		20.13		0.0	21.0
		25	12		20.44		3.0	21.0		20.07		0.0	21.0		20.12		0.0	21.0
	256QAM	25	25		20.44		3.0	21.0		20.07		0.0	21.0		20.13		0.0	21.0
50		0		20.36		3.0	21.0		20.00		0.0	21.0		20.05		0.0	21.0	
1		0		18.87		5.0	19.0		18.48		1.0	20.0		18.54		1.0	20.0	
1		25		18.92		5.0	19.0		18.49		1.0	20.0		18.56		1.0	20.0	
1		49		18.89		5.0	19.0		18.49		1.0	20.0		18.58		1.0	20.0	
25		0		18.46		5.0	19.0		18.06		1.0	20.0		18.16		1.0	20.0	
5 MHz	QPSK	25	12		18.45		5.0	19.0		18.04		1.0	20.0		18.12		1.0	20.0
		25	25		18.47		5.0	19.0		18.08		1.0	20.0		18.14		1.0	20.0
		50	0		18.41		5.0	19.0		18.01		1.0	20.0		18.09		1.0	20.0
		1	0		23.39		0.0	24.0		20.17		0.0	21.0		20.19		0.0	21.0
		1	12		23.29		0.0	24.0		20.25		0.0	21.0		20.12		0.0	21.0
		1	24		23.33		0.0	24.0		20.08		0.0	21.0		20.09		0.0	21.0
	16QAM	12	0		22.23		1.0	23.0		20.01		0.0	21.0		20.02		0.0	21.0
		12	7		22.27		1.0	23.0		20.02		0.0	21.0		20.02		0.0	21.0
		12	13		22.31		1.0	23.0		20.03		0.0	21.0		20.07		0.0	21.0
		25	0		22.27		1.0	23.0		19.97		0.0	21.0		20.01		0.0	21.0
1		0		22.47		1.0	23.0		20.25		0.0	21.0		20.28		0.0	21.0	
1		12		22.39		1.0	23.0		20.18		0.0	21.0		20.19		0.0	21.0	
64QAM	1	24		22.49		1.0	23.0		20.20		0.0	21.0		20.23		0.0	21.0	
	12	0		21.36		2.0	22.0		20.07		0.0	21.0		20.10		0.0	21.0	
	12	7		21.42		2.0	22.0		20.11		0.0	21.0		20.15		0.0	21.0	
	12	13		21.42		2.0	22.0		20.12		0.0	21.0		20.16		0.0	21.0	
	25	0		21.31		2.0	22.0		19.99		0.0	21.0		20.02		0.0	21.0	
	1	0		21.46		2.0	22.0		20.03		0.0	21.0		20.03		0.0	21.0	
256QAM	1	12		21.43		2.0	22.0		20.08		0.0	21.0		20.09		0.0	21.0	
	1	24		21.36		2.0	22.0		20.01		0.0	21.0		20.00		0.0	21.0	
	12	0		20.40		3.0	21.0		20.04		0.0	21.0		20.05		0.0	21.0	
	12	7		20.44		3.0	21.0		20.08		0.0	21.0		20.09		0.0	21.0	
	12	13		20.45		3.0	21.0		20.12		0.0	21.0		20.11		0.0	21.0	
	25	0		20.32		3.0	21.0		19.95		0.0	21.0		19.98		0.0	21.0	
256QAM	1	0		18.08		5.0	19.0		17.76		1.0	20.0		17.76		1.0	20.0	
	1	12		18.23		5.0	19.0		17.90		1.0	20.0		17.87		1.0	20.0	
	1	24		18.10		5.0	19.0		17.74		1.0	20.0		17.75		1.0	20.0	
	12	0		18.35		5.0	19.0		18.06		1.0	20.0		18.08		1.0	20.0	
	12	7		18.41		5.0	19.0		18.10		1.0	20.0		18.09		1.0	20.0	
	12	13		18.44		5.0	19.0		18.11		1.0	20.0		18.10		1.0	20.0	
25	0		18.44		5.0	19.0		18.12		1.0	20.0		18.11		1.0	20.0		

LTE Band 40 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)			
				DSI = 0, 1, 2, 3, 4			
				Measured Pwr (dBm)		MPR	Tune-up Limit
				Lower	Upper		
				38750	39200		
2310 MHz	2355 MHz						
10 MHz	QPSK	1	0	11.44	11.93	0.0	13.0
		1	25	11.57	12.03	0.0	13.0
		1	49	11.51	12.12	0.0	13.0
		25	0	11.58	11.92	0.0	13.0
		25	12	11.68	11.98	0.0	13.0
		25	25	11.66	12.01	0.0	13.0
	16QAM	50	0	11.65	11.99	0.0	13.0
		1	0	11.25	11.74	0.0	13.0
		1	25	11.36	11.87	0.0	13.0
		1	49	11.42	11.95	0.0	13.0
		25	0	11.54	11.89	0.0	13.0
		25	12	11.65	11.99	0.0	13.0
	64QAM	25	25	11.64	11.97	0.0	13.0
		50	0	11.64	11.99	0.0	13.0
		1	0	11.55	11.98	0.0	13.0
		1	25	11.73	12.10	0.0	13.0
		1	49	11.78	12.11	0.0	13.0
		25	0	11.49	11.88	0.0	13.0
	256QAM	25	12	11.65	11.98	0.0	13.0
		25	25	11.64	11.99	0.0	13.0
50		0	11.64	12.02	0.0	13.0	
1		0	11.84	11.88	0.0	13.0	
1		25	11.92	11.99	0.0	13.0	
1		49	11.96	12.12	0.0	13.0	
5 MHz	QPSK	25	0	11.60	12.14	0.0	13.0
		25	12	11.74	12.21	0.0	13.0
		25	25	11.75	12.22	0.0	13.0
		50	0	11.78	12.18	0.0	13.0
		1	0	11.52	11.81	0.0	13.0
		1	12	11.42	11.86	0.0	13.0
	16QAM	1	24	11.48	11.93	0.0	13.0
		12	0	11.50	11.85	0.0	13.0
		12	7	11.70	11.99	0.0	13.0
		12	13	11.64	11.93	0.0	13.0
		25	0	11.62	11.94	0.0	13.0
		1	0	11.56	11.97	0.0	13.0
	64QAM	1	12	11.62	12.02	0.0	13.0
		1	24	11.65	12.15	0.0	13.0
		12	0	11.46	11.87	0.0	13.0
		12	7	11.64	11.99	0.0	13.0
		12	13	11.61	11.99	0.0	13.0
		25	0	11.66	11.91	0.0	13.0
	256QAM	1	0	11.47	12.04	0.0	13.0
		1	12	11.72	12.13	0.0	13.0
1		24	11.58	12.10	0.0	13.0	
12		0	11.54	11.81	0.0	13.0	
12		7	11.69	11.92	0.0	13.0	
12		13	11.66	11.91	0.0	13.0	
5 MHz	256QAM	25	0	11.61	11.83	0.0	13.0
		1	0	11.72	12.23	0.0	13.0
		1	12	11.72	12.44	0.0	13.0
		1	24	11.81	12.34	0.0	13.0
		12	0	11.81	11.94	0.0	13.0
		12	7	11.69	12.03	0.0	13.0
5 MHz	256QAM	12	13	11.67	12.04	0.0	13.0
		25	0	11.71	12.09	0.0	13.0

LTE Band 41(Power Class 3) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)																													
				DSI = 0, 2								DSI = 3								DSI = 1, 4													
				Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit									
				3975.00	40185.00	40620.00	41055.00	41490.00			3975.00	40185.00	40620.00	41055.00	41490.00			3975.00	40185.00	40620.00	41055.00	41490.00											
2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	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	23.97	24.25	24.03	23.61	23.76	0.0	25.0	21.48	21.57	21.46	21.05	21.00	0.0	23.0	21.48	21.59	21.46	21.05	21.00	0.0	23.0	21.50	21.47	21.23	20.90	21.03	0.0	23.0		
		1	49	24.06	24.11	23.79	23.52	23.72	0.0	25.0	21.54	21.46	21.25	20.94	20.91	0.0	23.0	21.50	21.47	21.23	20.90	21.00	0.0	23.0	21.54	21.43	21.19	20.96	20.93	0.0	23.0		
		1	99	24.19	24.03	23.77	23.61	23.78	0.0	25.0	21.56	21.38	21.25	20.96	20.87	0.0	23.0	21.54	21.43	21.19	20.96	20.93	0.0	23.0	21.61	21.64	21.42	21.04	21.07	0.0	23.0		
		50	0	23.09	23.31	22.95	22.60	22.84	1.0	24.0	21.63	21.65	21.46	21.04	21.05	0.0	23.0	21.61	21.64	21.42	21.04	21.07	0.0	23.0	21.61	21.64	21.42	21.04	21.07	0.0	23.0		
		50	24	23.17	23.29	22.99	22.63	22.81	1.0	24.0	21.61	21.64	21.41	21.11	21.11	0.0	23.0	21.61	21.63	21.38	21.07	21.12	0.0	23.0	21.61	21.63	21.38	21.07	21.12	0.0	23.0		
		50	50	23.18	23.17	22.89	22.62	22.89	1.0	24.0	21.61	21.51	21.34	21.04	21.03	0.0	23.0	21.62	21.50	21.29	21.01	21.02	0.0	23.0	21.62	21.50	21.29	21.01	21.02	0.0	23.0		
		100	0	23.18	23.29	22.95	22.66	22.83	1.0	24.0	21.61	21.62	21.39	21.09	20.98	0.0	23.0	21.63	21.61	21.39	21.07	21.01	0.0	23.0	21.63	21.61	21.39	21.07	21.01	0.0	23.0		
	16QAM	1	0	23.05	23.40	23.02	22.73	22.94	1.0	24.0	21.58	21.67	21.39	21.19	21.04	0.0	23.0	21.59	21.55	21.54	21.03	21.07	0.0	23.0	21.59	21.55	21.54	21.03	21.07	0.0	23.0		
		1	49	23.09	23.16	22.88	22.67	22.93	1.0	24.0	21.69	21.48	21.24	21.11	21.05	0.0	23.0	21.56	21.47	21.39	20.97	21.01	0.0	23.0	21.56	21.47	21.39	20.97	21.01	0.0	23.0		
		1	99	23.27	23.14	22.78	22.73	23.09	1.0	24.0	21.71	21.48	21.20	21.11	21.09	0.0	23.0	21.69	21.40	21.34	21.01	21.00	0.0	23.0	21.69	21.40	21.34	21.01	21.00	0.0	23.0		
		50	0	22.12	22.28	21.96	21.67	21.82	2.0	23.0	21.57	21.54	21.38	21.00	20.93	0.0	23.0	21.52	21.55	21.38	20.92	20.98	0.0	23.0	21.52	21.55	21.38	20.92	20.98	0.0	23.0		
		50	24	22.19	22.26	21.99	21.70	21.82	2.0	23.0	21.55	21.53	21.33	21.02	20.96	0.0	23.0	21.50	21.57	21.35	20.94	21.05	0.0	23.0	21.50	21.57	21.35	20.94	21.05	0.0	23.0		
		50	50	22.19	22.12	21.93	21.68	21.87	2.0	23.0	21.58	21.41	21.26	20.97	20.92	0.0	23.0	21.51	21.40	21.24	20.90	20.98	0.0	23.0	21.51	21.40	21.24	20.90	20.98	0.0	23.0		
		100	0	22.17	22.30	22.01	21.64	21.83	2.0	23.0	21.56	21.53	21.32	20.98	20.90	0.0	23.0	21.52	21.54	21.32	20.96	20.95	0.0	23.0	21.52	21.54	21.32	20.96	20.95	0.0	23.0		
	64QAM	1	0	22.42	22.21	22.07	21.99	21.71	2.0	23.0	21.82	21.52	21.53	21.20	20.95	0.0	23.0	21.80	21.51	21.53	21.17	20.98	0.0	23.0	21.80	21.51	21.53	21.17	20.98	0.0	23.0		
		1	49	22.47	22.09	21.91	21.91	21.71	2.0	23.0	21.88	21.51	21.54	21.18	21.00	0.0	23.0	21.87	21.50	21.52	21.25	20.95	0.0	23.0	21.87	21.50	21.52	21.25	20.95	0.0	23.0		
		1	99	22.40	22.03	21.91	22.02	21.76	2.0	23.0	21.91	21.51	21.52	21.17	20.99	0.0	23.0	21.89	21.49	21.51	21.24	20.95	0.0	23.0	21.89	21.49	21.51	21.24	20.95	0.0	23.0		
		50	0	21.11	21.34	20.97	20.63	20.89	3.0	22.0	20.59	21.50	21.53	21.17	21.01	1.0	22.0	20.56	21.50	21.51	21.24	20.96	1.0	22.0	20.56	21.50	21.51	21.24	20.96	1.0	22.0		
		50	24	21.21	21.30	21.03	20.69	20.88	3.0	22.0	20.56	21.50	21.52	21.17	21.01	1.0	22.0	20.57	21.50	21.52	21.25	20.96	1.0	22.0	20.57	21.50	21.52	21.25	20.96	1.0	22.0		
		50	50	21.18	21.19	20.95	20.66	20.93	3.0	22.0	20.59	21.51	21.53	21.17	20.99	1.0	22.0	20.59	21.49	21.52	21.24	20.94	1.0	22.0	20.59	21.49	21.52	21.24	20.94	1.0	22.0		
		100	0	21.18	21.31	21.03	20.67	20.83	3.0	22.0	20.54	21.50	21.51	21.17	20.99	1.0	22.0	20.53	21.49	21.51	21.24	20.98	1.0	22.0	20.53	21.49	21.51	21.24	20.98	1.0	22.0		
	256QAM	1	0	19.06	19.48	19.35	18.62	18.85	5.0	20.0	18.54	18.60	18.77	18.05	18.11	3.0	20.0	18.50	18.61	18.77	18.10	18.09	3.0	20.0	18.50	18.61	18.77	18.10	18.09	3.0	20.0		
		1	49	19.06	19.24	19.22	18.59	18.88	5.0	20.0	18.52	18.52	18.56	17.98	18.02	3.0	20.0	18.50	18.51	18.52	18.59	17.97	18.01	3.0	20.0	18.50	18.51	18.52	18.59	17.97	18.01	3.0	20.0
		1	99	19.23	19.21	19.24	18.66	18.93	5.0	20.0	18.61	18.47	18.58	18.00	17.99	3.0	20.0	18.61	18.48	18.60	18.01	17.97	3.0	20.0	18.61	18.48	18.60	18.01	17.97	3.0	20.0		
		50	0	19.11	19.35	18.97	18.61	18.85	5.0	20.0	18.55	18.57	18.35	17.96	17.99	3.0	20.0	18.54	18.58	18.36	17.97	18.00	3.0	20.0	18.54	18.58	18.36	17.97	18.00	3.0	20.0		
		50	24	19.17	19.30	18.99	18.65	18.83	5.0	20.0	18.52	18.55	18.32	18.00	18.04	3.0	20.0	18.51	18.56	18.32	18.00	18.03	3.0	20.0	18.51	18.56	18.32	18.00	18.03	3.0	20.0		
		50	50	19.15	19.17	18.92	18.64	18.89	5.0	20.0	18.54	18.42	18.24	17.96	17.97	3.0	20.0	18.54	18.42	18.23	17.97	17.98	3.0	20.0	18.54	18.42	18.23	17.97	17.98	3.0	20.0		
		100	0	19.18	19.28	18.99	18.67	18.87	5.0	20.0	18.55	18.55	18.27	18.00	17.97	3.0	20.0	18.53	18.57	18.29	18.00	17.98	3.0	20.0	18.53	18.57	18.29	18.00	17.98	3.0	20.0		
15 MHz	QPSK	1	0	24.09	24.19	24.04	23.69	23.74	0.0	25.0	21.46	21.63	21.39	21.02	21.06	0.0	23.0	21.24	21.61	21.32	20.92	21.02	0.0	23.0	21.24	21.61	21.32	20.92	21.02	0.0	23.0		
		1	37	24.11	24.08	23.90	23.57	23.65	0.0	25.0	21.51	21.47	21.19	20.90	20.97	0.0	23.0	21.28	21.43	21.15	20.77	20.99	0.0	23.0	21.28	21.43	21.15	20.77	20.99	0.0	23.0		
		1	74	24.18	24.05	23.91	23.60	23.67	0.0	25.0	21.54	21.46	21.22	20.87	20.96	0.0	23.0	21.43	21.37	21.12	20.84	21.02	0.0	23.0	21.43	21.37	21.12	20.84	21.02	0.0	23.0		
		36	0	23.23	23.26	23.06	22.69	22.75	1.0	24.0	21.62	21.66	21.42	21.04	21.08	0.0	23.0	21.39	21.66	21.30	20.90	21.11	0.0	23.0	21.39	21.66	21.30	20.90	21.11	0.0	23.0		
		36	20	23.20	23.24	23.02	22.74	22.72	1.0	24.0	21.58	21.63	21.39	21.10	21.02	0.0	23.0	21.45	21.63	21.32	20.87	21.08	0.0	23.0	21.45	21.63	21.32	20.87	21.08	0.0	23.0		
		36	39	23.24	23.14	22.99	22.71	22.76	1.0	24.0	21.60	21.52	21.34	21.06	21.08	0.0	23.0	21.51	21.50	21.25	20.89	21.15	0.0	23.0	21.51	21.50	21.25	20.89	21.15	0.0	23.0		
		75	0	23.20	23.22	22.99	22.73	22.80	1.0	24.0	21.62	21.64	21.35	21.07	21.08	0.0	23.0	21.44	21.61	21.29	20.94	21.07	0.0	23.0	21.44	21.61	21.29	20.94	21.07	0.0	23.0		
	16QAM	1	0	23.11	23.19	23.03	22.83	22.76	1.0	24.0	21.50	21.63	21.52	21.07	21.08	0.0	23.0	21.30	21.64	21.35	21.04	21.06	0.0	23.0	21.30	21.64	21.35						

LTE Band 41(Power Class 3) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	
				39750.00	40185.00	40620.00	41055.00	41490.00			39750.00	40185.00	40620.00	41055.00	41490.00			39750.00	40185.00	40620.00	41055.00	41490.00			
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			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	24.33	24.30	24.17	23.88	23.78	0.0	25.0	21.80	21.62	21.48	21.21	21.10	0.0	23.0	21.49	21.71	21.47	20.94	21.28	0.0	23.0	
		1	25	24.33	24.23	24.13	23.85	23.82	0.0	25.0	21.78	21.61	21.43	21.19	21.10	0.0	23.0	21.46	21.65	21.39	20.93	21.30	0.0	23.0	
		1	49	24.31	24.18	24.05	23.73	23.80	0.0	25.0	21.76	21.50	21.34	21.06	21.05	0.0	23.0	21.57	21.58	21.24	20.90	21.22	0.0	23.0	
		25	0	23.41	23.37	23.15	22.81	22.83	1.0	24.0	21.81	21.74	21.48	21.16	21.15	0.0	23.0	21.59	21.77	21.48	21.02	21.23	0.0	23.0	
		25	12	23.37	23.39	23.18	22.93	22.96	1.0	24.0	21.76	21.77	21.50	21.26	21.26	0.0	23.0	21.66	21.74	21.45	21.08	21.29	0.0	23.0	
		25	25	23.37	23.30	23.16	22.90	22.91	1.0	24.0	21.79	21.69	21.49	21.23	21.24	0.0	23.0	21.66	21.66	21.41	21.08	21.34	0.0	23.0	
	16QAM	50	0	23.34	23.38	23.17	22.91	22.97	1.0	24.0	21.75	21.78	21.51	21.21	21.25	0.0	23.0	21.64	21.77	21.40	21.09	21.26	0.0	23.0	
		1	0	23.42	23.33	23.12	22.99	22.90	1.0	24.0	21.85	21.74	21.50	21.33	21.23	0.0	23.0	21.59	21.84	21.52	21.05	21.40	0.0	23.0	
		1	25	23.43	23.31	23.04	22.94	22.88	1.0	24.0	21.85	21.70	21.40	21.29	21.17	0.0	23.0	21.54	21.65	21.47	21.01	21.21	0.0	23.0	
		1	49	23.47	23.19	22.99	22.91	22.82	1.0	24.0	21.87	21.62	21.34	21.21	21.13	0.0	23.0	21.67	21.56	21.40	20.97	21.17	0.0	23.0	
		25	0	22.39	22.38	22.17	21.83	21.86	2.0	23.0	21.72	21.68	21.40	21.07	21.07	0.0	23.0	21.52	21.72	21.38	20.94	21.18	0.0	23.0	
		25	12	22.38	22.43	22.21	21.92	21.93	2.0	23.0	21.72	21.72	21.41	21.15	21.15	0.0	23.0	21.55	21.71	21.37	21.00	21.22	0.0	23.0	
	64QAM	25	25	22.38	22.30	22.17	21.90	21.92	2.0	23.0	21.70	21.60	21.41	21.11	21.14	0.0	23.0	21.55	21.63	21.35	20.97	21.26	0.0	23.0	
		50	0	22.39	22.40	22.18	21.94	21.97	2.0	23.0	21.73	21.69	21.44	21.20	21.17	0.0	23.0	21.55	21.71	21.41	21.01	21.20	0.0	23.0	
		1	0	22.00	21.46	22.48	22.47	21.87	2.0	23.0	20.70	21.22	21.44	21.60	21.78	0.0	23.0	21.55	21.51	21.42	20.90	21.07	0.0	23.0	
		1	25	21.97	21.39	22.43	22.49	21.93	2.0	23.0	20.71	21.22	21.43	21.59	21.78	0.0	23.0	21.48	21.49	21.43	20.90	21.03	0.0	23.0	
		1	49	21.83	21.44	22.28	22.24	21.88	2.0	23.0	20.63	21.26	21.43	21.58	21.78	0.0	23.0	21.59	21.49	21.43	20.89	21.01	0.0	23.0	
		25	0	20.78	20.88	21.11	21.34	21.43	3.0	22.0	20.16	21.26	21.41	21.61	21.78	1.0	22.0	20.42	21.50	21.43	20.88	20.99	1.0	22.0	
	256QAM	25	12	20.91	20.96	21.14	21.37	21.41	3.0	22.0	20.24	21.24	21.42	21.58	21.77	1.0	22.0	20.49	21.50	21.41	20.92	20.98	1.0	22.0	
		25	25	20.88	20.91	21.14	21.23	21.40	3.0	22.0	20.22	21.24	21.42	21.59	21.77	1.0	22.0	20.50	21.49	21.41	20.91	20.97	1.0	22.0	
		50	0	20.91	20.92	21.19	21.36	21.38	3.0	22.0	20.20	21.25	21.43	21.58	21.76	1.0	22.0	20.48	21.49	21.40	20.91	20.97	1.0	22.0	
		1	0	18.82	19.08	18.90	19.42	19.65	5.0	20.0	18.35	17.84	18.48	18.92	18.42	3.0	20.0	18.46	18.87	18.03	17.96	18.37	3.0	20.0	
		1	25	18.80	19.05	18.89	19.29	19.54	5.0	20.0	18.31	17.85	18.32	18.85	18.44	3.0	20.0	18.41	18.81	18.00	17.92	18.38	3.0	20.0	
		1	49	18.84	19.07	18.83	19.23	19.54	5.0	20.0	18.29	17.80	18.30	18.74	18.40	3.0	20.0	18.50	18.70	17.95	17.91	18.38	3.0	20.0	
	5 MHz	QPSK	25	0	18.81	18.83	19.19	19.34	19.39	5.0	20.0	18.11	18.10	18.41	18.71	18.72	3.0	20.0	18.43	18.69	18.37	17.90	18.18	3.0	20.0
			25	12	18.94	18.92	19.21	19.42	19.35	5.0	20.0	18.20	18.24	18.44	18.70	18.73	3.0	20.0	18.52	18.68	18.39	17.98	18.17	3.0	20.0
			25	25	18.87	18.90	19.13	19.25	19.36	5.0	20.0	18.16	18.17	18.39	18.61	18.71	3.0	20.0	18.54	18.58	18.35	17.98	18.26	3.0	20.0
			50	0	18.94	18.96	19.12	19.35	19.39	5.0	20.0	18.22	18.14	18.41	18.73	18.66	3.0	20.0	18.54	18.68	18.34	18.00	18.23	3.0	20.0
			1	0	24.29	24.17	24.13	23.69	23.77	0.0	25.0	21.69	21.58	21.46	21.05	21.05	0.0	23.0	21.46	21.67	21.25	20.84	21.26	0.0	23.0
			1	12	24.26	24.09	24.07	23.71	23.63	0.0	25.0	21.70	21.49	21.40	21.08	20.98	0.0	23.0	21.33	21.65	21.25	20.78	21.24	0.0	23.0
16QAM		1	24	24.27	24.19	24.15	23.79	23.76	0.0	25.0	21.70	21.58	21.46	21.13	21.09	0.0	23.0	21.48	21.69	21.28	20.89	21.33	0.0	23.0	
		12	0	23.43	23.39	23.16	22.80	22.85	1.0	24.0	21.84	21.76	21.48	21.13	21.11	0.0	23.0	21.58	21.73	21.45	20.99	21.26	0.0	23.0	
		12	7	23.38	23.39	23.19	22.93	22.93	1.0	24.0	21.79	21.80	21.55	21.26	21.27	0.0	23.0	21.63	21.80	21.44	21.06	21.29	0.0	23.0	
		12	13	23.36	23.29	23.14	22.87	22.90	1.0	24.0	21.76	21.69	21.51	21.21	21.25	0.0	23.0	21.64	21.66	21.40	21.04	21.30	0.0	23.0	
		25	0	23.33	23.36	23.12	22.87	22.91	1.0	24.0	21.74	21.75	21.46	21.21	21.24	0.0	23.0	21.61	21.71	21.39	21.07	21.21	0.0	23.0	
		1	0	23.37	23.18	23.03	22.87	22.69	1.0	24.0	21.84	21.63	21.46	21.28	21.06	0.0	23.0	21.43	21.61	21.48	20.88	21.15	0.0	23.0	
64QAM		1	12	23.27	23.13	23.05	22.84	22.66	1.0	24.0	21.76	21.55	21.45	21.21	21.00	0.0	23.0	21.50	21.65	21.33	20.84	21.21	0.0	23.0	
		1	24	23.49	23.17	23.04	22.94	22.78	1.0	24.0	21.95	21.58	21.39	21.36	21.07	0.0	23.0	21.48	21.63	21.44	20.92	21.27	0.0	23.0	
		12	0	22.44	22.40	22.12	21.82	21.87	2.0	23.0	21.74	21.70	21.36	21.07	21.07	0.0	23.0	21.55	21.60	21.36	20.91	21.09	0.0	23.0	
		12	7	22.42	22.39	22.19	21.95	21.95	2.0	23.0	21.73	21.68	21.46	21.19	21.18	0.0	23.0	21.57	21.65	21.38	21.00	21.19	0.0	23.0	
		12	13	22.38	22.30	22.11	21.88	21.93	2.0	23.0	21.70	21.60	21.38	21.15	21.15	0.0	23.0	21.54	21.54	21.33	20.98	21.19	0.0	23.0	
		25	0	22.32	22.38	22.15	21.88	21.91	2.0	23.0	21.64	21.68	21.43	21.13	21.15	0.0	23.0	21.50	21.67	21.32	20.98	21.17	0.0	23.0	
256QAM		1	0	21.56	22.25	22.34	22.05	22.81	2.0	23.0	20.81	21.26	21.65	21.53	21.89	0.0	23.0	21.25	21.83	21.47	20.77	21.32	0.0	23.0	
		1	12	21.64	22.39	22.30	22.14	22.78	2.0	23.0	20.90	21.27	21.65	21.51	21.88	0.0	23.0	21.25	21.83	21.45	20.76	21.24	0.0	23.0	
		1	24	21.65	22.37	22.28	22.00	22.68	2.0	23.0	20.89	21.26	21.65	21.53	21.89	0.0	23.0	21.26	21.83	21.45	20.79	21.21	0.0	23.0	
		12	0	20.89	20.99	21.10	21.40	21.54	3.0	22.0	20.08	21.27	21.65	21.53	21.91	1.0	22.0	20.49	21.81	21.45	20.79	21.19	1.0	22.0	
		12	7	20.97	21.04	21.10	21.40	21.47	3.0	22.0	20.18	21.27	21.65	21.52	21.89	1.0	22.0	20.58	21.84	21.47	20.76	21.18	1.0	22.0	
		12																							

LTE Band 41(Power Class 2) Measured Results

Table with columns: BW (MHz), Mode, RB Allocation, RB offset, Maximum Allowed Average Power (dBm) (DSI = 0, 2; DSI = 3; DSI = 1, 4), Measured Pwr (dBm) (39750, 40185, 40620, 41055, 41490 MHz), MPR, Tune-up Limit.

LTE Band 41(Power Class 2) Measured Results (Continued)

Table with columns: BW (MHz), Mode, RB Allocation, RB offset, Measured Pwr (dBm) (39750.00, 40185.00, 40620.00, 41055.00, 41490.00), MPR, Tune-up Limit, Measured Pwr (dBm) (39750.00, 40185.00, 40620.00, 41055.00, 41490.00), MPR, Tune-up Limit, Measured Pwr (dBm) (39750.00, 40185.00, 40620.00, 41055.00, 41490.00), MPR, Tune-up Limit. Rows include 10 MHz and 5 MHz bandwidths for QPSK, 16QAM, 64QAM, and 256QAM modulation schemes.

LTE Band 48 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)							
				DSI = 0, 1, 2, 3, 4						MPR	Tune-up Limit
				Measured Pwr (dBm)							
				55340	55773	56207	56640				
3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz								
20 MHz	QPSK	1	0	19.26	19.34	19.49	19.41	0.0	20.0		
		1	49	19.29	19.35	19.45	19.34	0.0	20.0		
		1	99	19.32	19.38	19.41	19.35	0.0	20.0		
		50	0	19.42	19.45	19.60	19.52	0.0	20.0		
		50	24	19.46	19.47	19.61	19.54	0.0	20.0		
		50	50	19.47	19.60	19.62	19.53	0.0	20.0		
	16QAM	100	0	19.46	19.50	19.61	19.53	0.0	20.0		
		1	0	19.37	19.43	19.58	19.38	0.0	20.0		
		1	49	19.37	19.43	19.55	19.32	0.0	20.0		
		1	99	19.43	19.43	19.54	19.31	0.0	20.0		
		50	0	19.46	19.44	19.63	19.54	0.0	20.0		
		50	24	19.49	19.46	19.64	19.54	0.0	20.0		
	64QAM	50	50	19.51	19.54	19.65	19.54	0.0	20.0		
		100	0	19.44	19.46	19.60	19.54	0.0	20.0		
		1	0	19.72	19.30	19.96	19.49	0.0	20.0		
		1	49	19.76	19.37	19.90	19.43	0.0	20.0		
		1	99	19.79	19.34	19.85	19.41	0.0	20.0		
		50	0	19.50	19.52	19.67	19.61	0.0	20.0		
	256QAM	50	24	19.49	19.55	19.67	19.59	0.0	20.0		
		50	50	19.53	19.65	19.67	19.56	0.0	20.0		
		100	0	19.48	19.55	19.65	19.59	0.0	20.0		
		1	0	18.80	18.90	19.06	19.27	0.0	20.0		
		1	49	18.77	18.92	18.93	19.15	0.0	20.0		
		1	99	18.91	18.95	18.95	19.22	0.0	20.0		
15 MHz	QPSK	50	0	18.87	18.93	19.03	19.00	0.0	20.0		
		50	24	18.91	18.95	19.06	18.99	0.0	20.0		
		50	50	18.90	19.06	19.07	19.00	0.0	20.0		
		100	0	18.91	18.95	19.05	19.00	0.0	20.0		
		1	0	19.38	19.50	19.66	19.35	0.0	20.0		
		1	37	19.40	19.57	19.55	19.27	0.0	20.0		
	16QAM	1	74	19.49	19.66	19.53	19.25	0.0	20.0		
		36	0	19.50	19.63	19.77	19.53	0.0	20.0		
		36	20	19.61	19.77	19.76	19.49	0.0	20.0		
		36	39	19.64	19.77	19.67	19.42	0.0	20.0		
		75	0	19.58	19.74	19.76	19.51	0.0	20.0		
		1	0	19.43	19.55	19.66	19.44	0.0	20.0		
	64QAM	1	37	19.44	19.66	19.59	19.33	0.0	20.0		
		1	74	19.53	19.74	19.54	19.31	0.0	20.0		
		36	0	19.56	19.67	19.82	19.58	0.0	20.0		
		36	20	19.64	19.73	19.81	19.55	0.0	20.0		
		36	39	19.69	19.81	19.73	19.45	0.0	20.0		
		75	0	19.66	19.77	19.78	19.53	0.0	20.0		
	256QAM	1	0	19.78	19.46	19.37	19.75	0.0	20.0		
		1	37	19.85	19.57	19.27	19.67	0.0	20.0		
		1	74	19.95	19.65	19.22	19.60	0.0	20.0		
		36	0	19.70	19.74	19.91	19.68	0.0	20.0		
		36	20	19.80	19.82	19.92	19.66	0.0	20.0		
		36	39	19.87	19.86	19.82	19.57	0.0	20.0		
256QAM	75	0	19.79	19.88	19.85	19.63	0.0	20.0			
	1	0	18.25	18.58	18.81	18.20	0.0	20.0			
	1	37	18.31	18.69	18.66	18.02	0.0	20.0			
	1	74	18.48	18.86	18.72	18.14	0.0	20.0			
	36	0	18.56	18.61	18.74	18.52	0.0	20.0			
	36	20	18.66	18.74	18.75	18.47	0.0	20.0			
256QAM	36	39	18.72	18.78	18.66	18.40	0.0	20.0			
	75	0	18.65	18.75	18.75	18.45	0.0	20.0			

LTE Band 48 Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit
				55290.00	55757.00	56223.00	56690.00		
				3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz		
10 MHz	QPSK	1	0	19.47	19.73	19.99	19.56	0.0	20.0
		1	25	19.40	19.77	19.86	19.48	0.0	20.0
		1	49	19.43	19.85	19.77	19.50	0.0	20.0
		25	0	19.50	19.82	19.98	19.64	0.0	20.0
		25	12	19.53	19.93	19.98	19.61	0.0	20.0
		25	25	19.53	19.97	19.88	19.59	0.0	20.0
	16QAM	50	0	19.51	19.93	19.95	19.59	0.0	20.0
		1	0	19.57	19.83	20.00	19.60	0.0	20.0
		1	25	19.56	19.80	19.95	19.47	0.0	20.0
		1	49	19.59	19.82	19.90	19.52	0.0	20.0
		25	0	19.48	19.81	19.94	19.68	0.0	20.0
		25	12	19.54	19.91	19.93	19.72	0.0	20.0
	64QAM	25	25	19.55	19.92	19.85	19.67	0.0	20.0
		50	0	19.57	19.92	19.98	19.67	0.0	20.0
		1	0	19.78	19.90	19.59	19.18	0.0	20.0
		1	25	19.65	19.93	19.49	19.16	0.0	20.0
		1	49	19.86	19.96	19.37	19.18	0.0	20.0
		25	0	19.57	19.80	19.95	19.72	0.0	20.0
	256QAM	25	12	19.56	19.95	19.99	19.69	0.0	20.0
		25	25	19.56	19.96	19.93	19.71	0.0	20.0
		50	0	19.54	19.94	19.96	19.69	0.0	20.0
		1	0	18.13	18.73	18.99	18.71	0.0	20.0
		1	25	18.12	18.78	18.90	18.64	0.0	20.0
		1	49	18.10	18.78	18.78	18.58	0.0	20.0
5 MHz	QPSK	25	0	18.48	18.75	18.87	18.59	0.0	20.0
		25	12	18.55	18.85	18.88	18.57	0.0	20.0
		25	25	18.52	18.90	18.77	18.54	0.0	20.0
		50	0	18.49	18.88	18.88	18.58	0.0	20.0
		1	0	19.68	19.65	19.82	19.50	0.0	20.0
		1	12	19.68	19.67	19.80	19.47	0.0	20.0
	16QAM	1	24	19.69	19.76	19.79	19.56	0.0	20.0
		12	0	19.77	19.91	19.96	19.60	0.0	20.0
		12	7	19.79	19.91	19.95	19.64	0.0	20.0
		12	13	19.77	19.90	19.84	19.58	0.0	20.0
		25	0	19.72	19.89	19.91	19.59	0.0	20.0
		1	0	19.80	19.67	19.92	19.51	0.0	20.0
	64QAM	1	12	19.76	19.68	19.88	19.54	0.0	20.0
		1	24	19.90	19.81	19.97	19.59	0.0	20.0
		12	0	19.81	19.90	19.95	19.60	0.0	20.0
		12	7	19.85	19.93	19.96	19.65	0.0	20.0
		12	13	19.81	19.92	19.85	19.60	0.0	20.0
		25	0	19.78	19.88	19.90	19.62	0.0	20.0
	256QAM	1	0	19.56	19.98	19.67	19.76	0.0	20.0
		1	12	19.61	19.94	19.67	19.74	0.0	20.0
		1	24	19.60	19.95	19.62	19.77	0.0	20.0
		12	0	19.82	19.85	19.93	19.62	0.0	20.0
		12	7	19.87	19.91	19.93	19.62	0.0	20.0
		12	13	19.84	19.83	19.80	19.59	0.0	20.0
256QAM	25	0	19.88	19.89	19.94	19.53	0.0	20.0	
	1	0	18.93	18.75	19.00	18.54	0.0	20.0	
	1	12	19.05	18.77	19.11	18.71	0.0	20.0	
	1	24	19.04	18.89	19.00	18.62	0.0	20.0	
	12	0	18.75	18.79	18.81	18.55	0.0	20.0	
	12	7	18.78	18.86	18.83	18.55	0.0	20.0	
	12	13	18.72	18.81	18.71	18.51	0.0	20.0	
	25	0	18.79	18.82	18.82	18.49	0.0	20.0	

LTE Band 66 (Main 2 Ant.) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)														
				DSI = 0, 2					DSI = 3					DSI = 1, 4				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				132072	132322	132572			1720 MHz	1745 MHz	1770 MHz			132072	132322	132572		
20 MHz	QPSK	1	0	22.83	22.90	22.08	0.0	24	20.95	20.98	20.59	0.0	22	20.94	20.99	20.60	0.0	22
		1	49	21.91	22.71	22.48	0.0	24	20.97	20.87	20.60	0.0	22	20.96	20.83	20.59	0.0	22
		1	99	22.17	22.02	21.76	0.0	24	20.97	20.69	20.71	0.0	22	20.98	20.66	20.71	0.0	22
		50	0	21.44	22.45	21.71	1.0	23	21.04	21.08	20.71	0.0	22	21.01	21.09	20.69	0.0	22
		50	24	20.99	22.21	21.85	1.0	23	21.07	20.97	20.72	0.0	22	21.08	20.96	20.68	0.0	22
		50	50	20.92	21.77	21.58	1.0	23	21.05	20.80	20.67	0.0	22	21.03	20.78	20.63	0.0	22
	100	0	21.09	22.15	21.66	1.0	23	21.05	20.96	20.72	0.0	22	21.05	20.96	20.72	0.0	22	
	16QAM	1	0	22.21	22.75	21.67	1.0	23	21.44	21.44	21.02	0.0	22	21.43	21.44	21.03	0.0	22
		1	49	21.14	22.48	22.35	1.0	23	21.31	21.32	21.01	0.0	22	21.42	21.31	21.02	0.0	22
		1	99	21.55	21.61	21.48	1.0	23	21.37	21.16	21.13	0.0	22	21.34	21.14	21.12	0.0	22
		50	0	20.42	21.62	20.94	2.0	22	21.06	21.05	20.65	0.0	22	21.05	21.03	20.65	0.0	22
		50	24	20.06	21.39	21.10	2.0	22	21.11	20.97	20.72	0.0	22	21.04	20.97	20.69	0.0	22
		50	50	20.03	20.93	20.84	2.0	22	21.07	20.80	20.64	0.0	22	21.05	20.83	20.65	0.0	22
	100	0	20.23	21.36	20.94	2.0	22	21.11	20.95	20.73	0.0	22	21.09	20.99	20.72	0.0	22	
	64QAM	1	0	21.66	21.96	20.29	2.0	22	21.29	21.51	20.95	0.0	22	21.31	21.51	20.92	0.0	22
		1	49	20.34	21.57	20.95	2.0	22	20.65	21.27	20.92	0.0	22	20.61	21.23	20.95	0.0	22
		1	99	20.61	20.68	20.00	2.0	22	21.18	21.35	20.90	0.0	22	21.15	21.24	20.91	0.0	22
		50	0	19.48	20.43	19.67	3.0	21	19.94	20.92	20.73	1.0	21	19.90	20.89	20.73	1.0	21
		50	24	19.06	20.16	19.80	3.0	21	19.55	20.96	20.73	1.0	21	19.52	20.96	20.75	1.0	21
		50	50	19.00	19.67	19.53	3.0	21	19.58	20.41	20.45	1.0	21	19.56	20.41	20.46	1.0	21
	100	0	19.15	20.03	19.61	3.0	21	19.71	20.86	20.63	1.0	21	19.69	20.85	20.63	1.0	21	
	256QAM	1	0	19.32	19.39	18.68	4.0	20	19.15	19.23	18.60	2.0	20	19.20	19.26	18.65	2.0	20
		1	49	18.93	19.24	18.71	4.0	20	19.23	19.11	18.64	2.0	20	19.23	19.12	18.66	2.0	20
		1	99	19.34	19.00	18.73	4.0	20	19.24	18.92	18.70	2.0	20	19.24	18.93	18.71	2.0	20
50		0	19.21	19.19	18.77	4.0	20	19.01	19.07	18.75	2.0	20	19.02	19.07	18.76	2.0	20	
50		24	18.81	19.09	18.83	4.0	20	19.09	19.00	18.76	2.0	20	19.10	19.01	18.79	2.0	20	
50		50	18.76	18.91	18.79	4.0	20	19.03	18.86	18.72	2.0	20	19.08	18.85	18.72	2.0	20	
100	0	18.92	19.06	18.81	4.0	20	19.07	18.97	18.75	2.0	20	19.06	18.98	18.77	2.0	20		
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				132047.00	132322.00	132597.00			1717.5 MHz	1745 MHz	1772.5 MHz			132047.00	132322.00	132597.00		
15 MHz	QPSK	1	0	22.55	22.89	22.45	0.0	24	20.83	20.94	20.47	0.0	22	20.80	20.78	20.43	0.0	22
		1	37	21.53	22.75	22.49	0.0	24	20.88	20.84	20.49	0.0	22	20.76	20.62	20.49	0.0	22
		1	74	21.68	22.29	21.78	0.0	24	20.91	20.65	20.59	0.0	22	20.78	20.46	20.55	0.0	22
		36	0	21.22	22.44	21.93	1.0	23	20.99	20.93	20.57	0.0	22	20.83	20.76	20.46	0.0	22
		36	20	20.82	22.19	21.82	1.0	23	20.72	20.80	20.63	0.0	22	20.79	20.73	20.52	0.0	22
		36	39	20.58	21.87	21.52	1.0	23	20.70	20.73	20.58	0.0	22	20.81	20.56	20.47	0.0	22
	75	0	20.87	22.15	21.71	1.0	23	20.84	20.77	20.63	0.0	22	20.76	20.70	20.51	0.0	22	
	16QAM	1	0	22.00	22.90	21.66	1.0	23	20.82	21.44	20.94	0.0	22	20.69	21.15	20.85	0.0	22
		1	37	21.03	22.44	21.67	1.0	23	20.50	21.35	21.06	0.0	22	20.77	21.11	20.90	0.0	22
		1	74	20.92	21.86	20.94	1.0	23	20.93	21.13	21.06	0.0	22	20.78	20.89	21.04	0.0	22
		36	0	20.42	21.59	21.14	2.0	22	20.18	20.93	20.62	0.0	22	20.84	20.81	20.48	0.0	22
		36	20	20.05	21.33	21.04	2.0	22	19.93	20.78	20.66	0.0	22	20.63	20.75	20.50	0.0	22
		36	39	19.84	21.03	20.77	2.0	22	19.94	20.74	20.67	0.0	22	20.37	20.62	20.47	0.0	22
	75	0	20.12	21.35	20.97	2.0	22	20.11	20.79	20.63	0.0	22	20.72	20.70	20.52	0.0	22	
	64QAM	1	0	21.09	21.53	20.63	2.0	22	21.58	21.12	20.66	0.0	22	20.81	20.29	20.45	0.0	22
		1	37	19.89	20.91	20.56	2.0	22	21.09	21.09	20.50	0.0	22	20.77	20.29	20.43	0.0	22
		1	74	19.73	20.28	19.76	2.0	22	21.50	20.95	20.49	0.0	22	20.80	20.28	20.44	0.0	22
		36	0	18.85	20.15	19.80	3.0	21	19.96	20.86	20.49	1.0	21	20.80	20.28	20.14	1.0	21
		36	20	19.56	19.89	19.67	3.0	21	19.78	20.87	20.48	1.0	21	20.78	20.29	20.21	1.0	21
		36	39	19.68	19.56	19.38	3.0	21	19.91	20.80	20.46	1.0	21	20.80	20.28	19.88	1.0	21
	75	0	18.59	19.85	19.53	3.0	21	20.01	20.81	20.41	1.0	21	20.80	20.30	20.11	1.0	21	
	256QAM	1	0	19.35	19.50	18.56	4.0	20	19.21	19.27	19.08	2.0	20	19.16	19.26	18.96	2.0	20
		1	37	18.57	19.39	18.67	4.0	20	19.28	19.26	18.94	2.0	20	19.14	19.17	19.00	2.0	20
		1	74	18.48	19.18	18.65	4.0	20	19.15	19.15	18.91	2.0	20	19.18	18.96	18.99	2.0	20
36		0	18.85	19.10	18.76	4.0	20	18.99	18.99	18.66	2.0	20	18.89	19.40	18.65	2.0	20	
36		20	18.44	19.05	18.82	4.0	20	19.02	19.02	18.63	2.0	20	18.87	19.38	18.67	2.0	20	
36		39	18.22	18.94	18.78	4.0	20	18.98	18.96	18.60	2.0	20	18.88	19.22	18.63	2.0	20	
75	0	18.53	19.04	18.77	4.0	20	18.99	18.98	18.62	2.0	20	18.83	19.35	18.68	2.0	20		

LTE Band 66 (Main 2 Ant.) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	
				132022.00	132322.00	132622.00			132022.00	132322.00	132622.00			132022.00	132322.00	132622.00			
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz			
10 MHz	QPSK	1	0	22.97	22.90	22.55	0.0	24	20.93	21.00	20.62	0.0	22	20.94	20.91	20.66	0.0	22	
		1	25	22.50	22.77	22.57	0.0	24	20.97	20.86	20.68	0.0	22	20.87	20.83	20.69	0.0	22	
		1	49	22.08	22.60	22.24	0.0	24	20.99	20.70	20.71	0.0	22	20.75	20.70	20.71	0.0	22	
		25	0	21.84	22.68	22.05	1.0	23	21.07	21.01	20.74	0.0	22	21.01	20.99	20.77	0.0	22	
		25	12	21.49	22.44	21.77	1.0	23	20.96	20.88	20.81	0.0	22	20.95	20.94	20.80	0.0	22	
		25	25	21.25	22.22	21.54	1.0	23	20.87	20.86	20.74	0.0	22	20.76	20.85	20.80	0.0	22	
	16QAM	50	0	21.49	22.45	21.80	1.0	23	21.04	20.91	20.79	0.0	22	20.96	20.94	20.78	0.0	22	
		1	0	22.37	22.86	22.21	1.0	23	20.90	21.05	21.14	0.0	22	21.00	20.87	21.12	0.0	22	
		1	25	21.63	22.31	21.58	1.0	23	20.77	21.02	21.17	0.0	22	20.86	20.80	21.16	0.0	22	
		1	49	21.37	22.00	21.31	1.0	23	20.84	20.84	21.21	0.0	22	20.76	20.66	21.18	0.0	22	
		25	0	20.84	21.90	21.22	2.0	22	20.42	21.17	20.79	0.0	22	21.03	21.04	20.79	0.0	22	
		25	12	20.55	21.69	20.99	2.0	22	20.17	21.06	20.83	0.0	22	21.01	21.00	20.84	0.0	22	
	64QAM	25	25	20.36	21.49	20.78	2.0	22	20.11	20.91	20.81	0.0	22	20.89	20.88	20.90	0.0	22	
		50	0	20.58	21.67	21.02	2.0	22	20.28	20.96	20.81	0.0	22	20.94	20.95	20.80	0.0	22	
		1	0	20.79	21.70	21.12	2.0	22	21.39	21.19	20.64	0.0	22	20.72	20.41	20.66	0.0	22	
		1	25	19.81	21.05	20.39	2.0	22	21.24	21.24	20.69	0.0	22	20.71	20.42	20.67	0.0	22	
		1	49	19.53	20.72	20.10	2.0	22	21.32	21.11	20.68	0.0	22	20.73	20.43	20.59	0.0	22	
		25	0	19.14	20.24	19.80	3.0	21	20.42	20.96	20.59	1.0	21	20.69	20.42	20.30	1.0	21	
	256QAM	25	12	18.84	20.01	19.55	3.0	21	20.18	20.96	20.61	1.0	21	20.72	20.37	20.16	1.0	21	
		25	25	18.63	19.81	19.32	3.0	21	20.19	20.90	20.57	1.0	21	20.70	20.42	19.79	1.0	21	
		50	0	18.82	20.02	19.55	3.0	21	20.19	20.91	20.58	1.0	21	20.71	20.42	20.05	1.0	21	
		1	0	19.21	19.71	18.68	4.0	20	19.66	19.60	18.62	2.0	20	18.52	19.37	18.73	2.0	20	
		1	25	18.69	19.59	18.72	4.0	20	19.53	19.57	18.71	2.0	20	19.51	19.21	18.73	2.0	20	
		1	49	18.52	19.50	18.73	4.0	20	19.49	19.53	18.65	2.0	20	19.35	19.06	18.75	2.0	20	
	5 MHz	QPSK	25	0	19.17	19.25	18.96	4.0	20	19.20	19.19	18.73	2.0	20	19.33	19.52	18.64	2.0	20
25			12	18.85	19.17	19.00	4.0	20	19.18	19.17	18.74	2.0	20	19.21	19.50	18.65	2.0	20	
25			25	18.65	19.07	19.03	4.0	20	19.13	19.11	18.72	2.0	20	19.20	19.40	18.69	2.0	20	
50			0	18.85	19.15	18.96	4.0	20	19.14	19.16	18.69	2.0	20	18.57	19.46	18.63	2.0	20	
16QAM			1	0	23.01	22.92	22.82	0.0	24	20.58	20.53	20.19	0.0	22	20.51	20.40	20.29	0.0	22
			1	12	22.60	22.86	22.30	0.0	24	20.51	20.48	20.13	0.0	22	20.40	20.33	20.22	0.0	22
	1	24	22.34	22.78	22.22	0.0	24	20.59	20.39	20.20	0.0	22	20.34	20.28	20.28	0.0	22		
	12	0	21.84	22.54	21.55	1.0	23	20.50	20.53	20.27	0.0	22	20.47	20.42	20.22	0.0	22		
	12	7	21.70	22.41	21.42	1.0	23	20.51	20.43	20.35	0.0	22	20.44	20.42	20.24	0.0	22		
	12	13	21.53	22.29	21.34	1.0	23	20.51	20.38	20.30	0.0	22	20.32	20.30	20.23	0.0	22		
64QAM	25	0	21.63	22.39	21.46	1.0	23	20.52	20.38	20.29	0.0	22	20.40	20.39	20.25	0.0	22		
	1	0	22.36	22.76	21.96	1.0	23	20.68	20.72	20.81	0.0	22	20.61	20.59	20.40	0.0	22		
	1	12	22.00	22.40	21.50	1.0	23	20.61	20.56	20.81	0.0	22	20.45	20.41	20.33	0.0	22		
	1	24	21.82	22.32	21.51	1.0	23	20.69	20.63	20.83	0.0	22	20.52	20.43	20.44	0.0	22		
	12	0	20.97	21.71	20.81	2.0	22	20.09	20.55	20.23	0.0	22	20.49	20.47	20.30	0.0	22		
	12	7	20.87	21.60	20.71	2.0	22	19.96	20.45	20.22	0.0	22	20.46	20.45	20.35	0.0	22		
256QAM	12	13	20.75	21.51	20.65	2.0	22	19.85	20.46	20.32	0.0	22	20.34	20.32	20.34	0.0	22		
	25	0	20.78	21.53	20.70	2.0	22	19.93	20.39	20.22	0.0	22	20.34	20.32	20.29	0.0	22		
	1	0	20.85	21.45	20.71	2.0	22	21.54	21.14	20.39	0.0	22	20.92	20.59	20.64	0.0	22		
	1	12	20.18	21.01	20.16	2.0	22	21.09	21.10	20.24	0.0	22	20.92	20.61	20.65	0.0	22		
	1	24	19.85	20.88	20.13	2.0	22	21.21	21.09	20.41	0.0	22	20.47	20.59	20.61	0.0	22		
	12	0	19.35	19.91	19.29	3.0	21	19.98	20.97	20.48	1.0	21	20.15	20.58	20.59	1.0	21		
5 MHz	16QAM	12	7	19.18	19.77	19.17	3.0	21	19.87	20.93	20.47	1.0	21	19.94	20.57	20.57	1.0	21	
		12	13	19.02	19.69	19.09	3.0	21	19.84	20.93	20.47	1.0	21	19.73	20.57	20.55	1.0	21	
		25	0	19.06	19.85	19.15	3.0	21	19.95	20.92	20.43	1.0	21	19.79	20.57	20.54	1.0	21	
		1	0	19.01	19.35	19.04	4.0	20	19.20	19.18	18.57	2.0	20	19.27	19.49	18.79	2.0	20	
		1	12	18.73	19.19	19.09	4.0	20	19.11	19.22	18.59	2.0	20	19.28	19.47	18.76	2.0	20	
		1	24	18.55	19.16	18.98	4.0	20	19.13	19.14	18.56	2.0	20	19.18	19.45	18.79	2.0	20	
256QAM	12	0	19.16	19.14	18.99	4.0	20	19.13	19.14	18.76	2.0	20	19.49	19.44	18.78	2.0	20		
	12	7	19.02	19.16	19.03	4.0	20	19.15	19.14	18.71	2.0	20	19.46	19.46	18.80	2.0	20		
	12	13	18.87	19.02	18.98	4.0	20	19.10	19.11	18.65	2.0	20	19.42	19.32	18.79	2.0	20		
	25	0	19.04	19.11	18.97	4.0	20	19.13	19.15	18.69	2.0	20	19.47	19.41	18.78	2.0	20		

LTE Band 66 (Main 2 Ant.) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				131987.00	132322.00	132657.00			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			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	22.79	22.87	22.36	0.0	24	20.72	20.70	20.53	0.0	22	20.42	20.37	20.25	0.0	22
		1	8	22.39	22.76	22.03	0.0	24	20.65	20.58	20.52	0.0	22	20.23	20.20	20.21	0.0	22
		1	14	22.22	22.76	22.04	0.0	24	20.79	20.60	20.50	0.0	22	20.40	20.36	20.20	0.0	22
		8	0	21.56	22.40	21.31	1.0	23	20.80	20.78	20.57	0.0	22	20.45	20.41	20.24	0.0	22
		8	4	21.58	22.36	21.29	1.0	23	20.83	20.82	20.57	0.0	22	20.46	20.43	20.27	0.0	22
		8	7	21.58	22.30	21.28	1.0	23	20.88	20.73	20.60	0.0	22	20.47	20.44	20.30	0.0	22
	15	0	21.58	22.32	21.30	1.0	23	20.81	20.68	20.56	0.0	22	20.44	20.42	20.26	0.0	22	
	16QAM	1	0	21.60	22.54	21.35	1.0	23	20.71	20.89	20.97	0.0	22	20.31	20.33	20.60	0.0	22
		1	8	21.43	22.26	21.13	1.0	23	20.72	20.81	20.93	0.0	22	20.31	20.29	20.57	0.0	22
		1	14	21.34	22.22	21.13	1.0	23	20.72	20.77	20.95	0.0	22	20.25	20.24	20.60	0.0	22
		8	0	20.91	21.58	20.62	2.0	22	20.52	20.76	20.49	0.0	22	20.55	20.53	20.27	0.0	22
		8	4	20.93	21.58	20.62	2.0	22	20.48	20.82	20.55	0.0	22	20.54	20.58	20.34	0.0	22
		8	7	20.93	21.55	20.63	2.0	22	20.44	20.74	20.60	0.0	22	20.57	20.57	20.35	0.0	22
	15	0	20.87	21.49	20.58	2.0	22	20.40	20.67	20.52	0.0	22	20.44	20.48	20.33	0.0	22	
	64QAM	1	0	21.65	21.57	20.54	2.0	22	21.17	21.25	20.95	0.0	22	20.54	20.21	20.70	0.0	22
		1	8	21.14	21.12	20.24	2.0	22	20.96	21.13	21.06	0.0	22	20.45	20.21	20.41	0.0	22
		1	14	20.76	21.02	20.24	2.0	22	21.00	21.21	20.88	0.0	22	20.42	20.22	20.40	0.0	22
		8	0	19.84	20.04	19.17	3.0	21	20.09	20.80	20.53	1.0	21	20.39	20.21	20.41	1.0	21
		8	4	19.80	20.01	19.17	3.0	21	20.07	20.80	20.59	1.0	21	20.39	20.22	20.25	1.0	21
		8	7	19.72	19.97	19.16	3.0	21	20.04	20.81	20.51	1.0	21	20.39	20.22	20.15	1.0	21
	15	0	19.67	20.08	19.10	3.0	21	20.05	20.92	20.52	1.0	21	20.38	20.22	20.22	1.0	21	
256QAM	1	0	19.04	19.26	19.42	4.0	20	19.28	19.47	19.00	2.0	20	19.47	19.19	19.48	2.0	20	
	1	8	18.98	19.19	19.44	4.0	20	19.32	19.48	19.49	2.0	20	19.49	19.14	19.47	2.0	20	
	1	14	18.91	19.13	19.38	4.0	20	19.26	19.45	19.41	2.0	20	19.39	19.13	19.49	2.0	20	
	8	0	19.12	19.27	19.10	4.0	20	19.39	19.11	18.58	2.0	20	19.48	19.30	19.35	2.0	20	
	8	4	19.17	19.31	19.11	4.0	20	19.45	19.13	18.64	2.0	20	19.45	19.31	19.35	2.0	20	
	8	7	19.21	19.34	19.14	4.0	20	19.48	19.16	18.58	2.0	20	19.49	19.35	19.35	2.0	20	
15	0	19.29	19.23	19.04	4.0	20	19.37	19.12	18.79	2.0	20	19.48	19.42	19.29	2.0	20		
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				131979.00	132322.00	132665.00			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			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	22.92	22.83	22.24	0.0	24	20.37	20.39	20.09	0.0	22	20.36	20.30	20.08	0.0	22
		1	3	22.88	22.83	22.15	0.0	24	20.39	20.39	20.14	0.0	22	20.36	20.33	20.11	0.0	22
		1	5	22.82	22.79	22.05	0.0	24	20.38	20.35	20.08	0.0	22	20.31	20.28	20.09	0.0	22
		3	0	22.88	22.75	22.04	0.0	24	20.36	20.23	20.08	0.0	22	20.22	20.20	20.10	0.0	22
		3	1	22.82	22.77	22.03	0.0	24	20.45	20.35	20.09	0.0	22	20.26	20.27	20.18	0.0	22
		3	3	22.76	22.79	22.01	0.0	24	20.43	20.32	20.11	0.0	22	20.24	20.25	20.18	0.0	22
	6	0	21.92	22.20	21.21	1.0	23	20.45	20.37	20.24	0.0	22	20.27	20.28	20.16	0.0	22	
	16QAM	1	0	22.31	22.38	21.65	1.0	23	20.82	20.51	20.17	0.0	22	20.44	20.47	20.55	0.0	22
		1	3	22.32	22.38	21.66	1.0	23	20.84	20.64	20.30	0.0	22	20.56	20.55	20.57	0.0	22
		1	5	22.23	22.29	21.61	1.0	23	20.83	20.52	20.23	0.0	22	20.45	20.45	20.54	0.0	22
		3	0	22.06	22.31	21.44	1.0	23	20.62	20.41	20.41	0.0	22	20.38	20.38	20.39	0.0	22
		3	1	22.06	22.33	21.48	1.0	23	20.63	20.52	20.41	0.0	22	20.43	20.42	20.36	0.0	22
		3	3	22.04	22.30	21.46	1.0	23	20.63	20.56	20.45	0.0	22	20.45	20.46	20.37	0.0	22
	6	0	20.93	21.54	20.36	2.0	22	19.96	20.54	20.40	0.0	22	20.44	20.46	20.04	0.0	22	
	64QAM	1	0	21.30	21.46	20.53	2.0	22	21.05	21.00	21.00	0.0	22	20.41	20.21	19.97	0.0	22
		1	3	20.95	21.42	20.49	2.0	22	21.12	21.11	21.06	0.0	22	20.46	20.22	19.87	0.0	22
		1	5	20.72	21.22	20.36	2.0	22	21.08	21.05	20.90	0.0	22	20.35	20.21	19.81	0.0	22
		3	0	20.38	21.25	20.31	2.0	22	20.77	20.78	20.70	1.0	21	20.43	20.22	19.79	1.0	21
		3	1	20.34	21.26	20.33	2.0	22	20.79	20.77	20.71	1.0	21	20.45	20.21	19.76	1.0	21
		3	3	20.27	21.22	20.31	2.0	22	20.77	20.76	20.72	1.0	21	20.47	20.20	19.75	1.0	21
	6	0	19.44	19.96	19.06	3.0	21	20.87	20.86	20.38	1.0	21	20.35	20.20	19.74	1.0	21	
256QAM	1	0	19.27	19.22	19.11	4.0	20	19.48	19.44	19.49	2.0	20	19.06	19.47	19.02	2.0	20	
	1	3	19.37	19.28	19.20	4.0	20	19.49	19.49	19.46	2.0	20	19.24	19.49	19.06	2.0	20	
	1	5	19.18	19.18	19.07	4.0	20	19.00	19.44	19.48	2.0	20	19.17	19.48	19.01	2.0	20	
	3	0	19.28	19.22	18.93	4.0	20	19.21	19.18	19.49	2.0	20	19.20	19.26	19.08	2.0	20	
	3	1	19.27	19.20	18.93	4.0	20	19.16	19.15	19.46	2.0	20	19.19	19.31	19.04	2.0	20	
	3	3	19.21	19.15	18.88	4.0	20	19.22	19.14	19.47	2.0	20	19.21	19.26	19.04	2.0	20	
6	0	19.20	19.16	18.89	4.0	20	19.07	19.08	19.48	2.0	20	19.43	19.31	19.29	2.0	20		

LTE Band 66 (Sub 1 Ant.) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)				
				DSI = 0, 1, 3, 4					DSI = 2				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				132072	132322	132572			132072	132322	132572		
1720 MHz	1745 MHz	1770 MHz	1720 MHz	1745 MHz	1770 MHz								
20 MHz	QPSK	1	0	23.01	22.94	22.51	0.0	23.5	20.33	20.46	19.90	0.0	21.5
		1	49	22.81	22.83	22.43	0.0	23.5	20.28	20.29	19.82	0.0	21.5
		1	99	23.04	22.67	22.30	0.0	23.5	20.49	20.29	19.76	0.0	21.5
		50	0	22.06	22.08	21.52	1.0	22.5	20.48	20.47	20.09	0.0	21.5
		50	24	22.05	21.97	21.46	1.0	22.5	20.52	20.48	20.06	0.0	21.5
		50	50	22.09	21.99	21.40	1.0	22.5	20.54	20.39	20.02	0.0	21.5
	16QAM	100	0	22.06	21.99	21.42	1.0	22.5	20.49	20.45	20.07	0.0	21.5
		1	0	21.98	22.47	22.02	1.0	22.5	20.38	20.85	19.97	0.0	21.5
		1	49	21.96	22.45	21.92	1.0	22.5	20.29	20.41	19.95	0.0	21.5
		1	99	22.11	22.49	21.78	1.0	22.5	20.45	20.32	19.92	0.0	21.5
		50	0	21.00	21.04	20.61	2.0	21.5	20.48	20.43	20.12	0.0	21.5
		50	24	21.05	21.05	20.56	2.0	21.5	20.46	20.42	20.11	0.0	21.5
	64QAM	50	50	20.06	21.01	20.43	2.0	21.5	20.51	20.41	20.03	0.0	21.5
		100	0	21.03	21.09	20.44	2.0	21.5	20.53	20.46	20.06	0.0	21.5
		1	0	21.25	21.45	20.68	2.0	21.5	20.72	20.78	20.27	0.0	21.5
		1	49	21.13	21.22	20.63	2.0	21.5	20.77	20.46	20.21	0.0	21.5
		1	99	21.34	21.17	20.51	2.0	21.5	20.81	20.53	20.13	0.0	21.5
		50	0	20.09	20.10	19.56	3.0	20.5	19.57	19.55	19.21	1.0	20.5
	256QAM	50	24	20.12	20.08	19.52	3.0	20.5	19.58	19.53	19.16	1.0	20.5
		50	50	20.14	20.04	19.43	3.0	20.5	19.63	19.46	19.13	1.0	20.5
		100	0	20.10	20.07	19.43	3.0	20.5	19.51	19.50	19.06	1.0	20.5
		1	0	17.95	18.02	17.83	5.0	18.5	17.42	17.49	17.03	3.0	18.5
		1	49	18.04	17.75	17.71	5.0	18.5	17.29	17.34	16.93	3.0	18.5
		1	99	17.95	17.88	17.42	5.0	18.5	17.42	17.32	16.89	3.0	18.5
15 MHz	QPSK	50	0	18.01	18.15	17.47	5.0	18.5	17.74	17.46	17.08	3.0	18.5
		50	24	18.01	18.09	17.41	5.0	18.5	17.53	17.47	17.05	3.0	18.5
		50	50	18.04	18.05	17.35	5.0	18.5	17.50	17.39	17.05	3.0	18.5
		100	0	18.04	18.06	17.45	5.0	18.5	17.52	17.51	17.04	3.0	18.5
		1	0	22.97	22.61	22.21	0.0	23.5	20.29	20.13	19.60	0.0	21.5
		1	37	22.91	22.58	22.09	0.0	23.5	20.38	20.04	19.48	0.0	21.5
	16QAM	1	74	23.01	22.53	22.15	0.0	23.5	20.46	20.15	19.61	0.0	21.5
		36	0	22.01	21.67	21.23	1.0	22.5	20.43	20.06	19.80	0.0	21.5
		36	20	21.96	21.61	21.19	1.0	22.5	20.43	20.12	19.79	0.0	21.5
		36	39	21.98	21.58	21.16	1.0	22.5	20.43	19.98	19.78	0.0	21.5
		75	0	21.99	21.63	21.20	1.0	22.5	20.42	20.09	19.85	0.0	21.5
		1	0	22.17	21.74	21.39	1.0	22.5	20.57	20.12	19.34	0.0	21.5
	64QAM	1	37	22.02	21.69	21.33	1.0	22.5	20.35	19.65	19.36	0.0	21.5
		1	74	22.16	21.65	21.27	1.0	22.5	20.50	19.48	19.41	0.0	21.5
		36	0	21.02	20.68	20.25	2.0	21.5	20.50	20.07	19.76	0.0	21.5
		36	20	21.04	20.61	20.24	2.0	21.5	20.45	19.98	19.79	0.0	21.5
		36	39	20.98	20.61	20.13	2.0	21.5	20.63	20.01	19.73	0.0	21.5
		75	0	21.06	20.65	20.21	2.0	21.5	20.56	20.02	19.83	0.0	21.5
	256QAM	1	0	21.15	20.73	20.43	2.0	21.5	20.62	20.06	20.02	0.0	21.5
		1	37	21.11	20.81	20.31	2.0	21.5	20.75	20.05	19.89	0.0	21.5
		1	74	21.13	20.76	20.29	2.0	21.5	20.60	20.12	19.91	0.0	21.5
		36	0	19.99	19.62	19.31	3.0	20.5	19.47	19.07	18.96	1.0	20.5
		36	20	20.01	19.66	19.28	3.0	20.5	19.47	19.11	18.92	1.0	20.5
		36	39	20.04	19.59	19.22	3.0	20.5	19.53	19.01	18.92	1.0	20.5
QPSK	75	0	20.03	19.68	19.22	3.0	20.5	19.44	19.11	18.85	1.0	20.5	
	1	0	18.01	17.64	17.19	5.0	18.5	17.48	17.11	16.39	3.0	18.5	
	1	37	17.92	17.62	17.23	5.0	18.5	17.17	17.21	16.45	3.0	18.5	
	1	74	18.08	17.54	17.08	5.0	18.5	17.55	16.98	16.55	3.0	18.5	
	36	0	18.00	17.64	17.22	5.0	18.5	17.73	16.95	16.83	3.0	18.5	
	36	20	18.02	17.62	17.80	5.0	18.5	17.54	17.00	17.44	3.0	18.5	
16QAM	36	39	17.97	17.56	17.14	5.0	18.5	17.43	16.90	16.84	3.0	18.5	
	75	0	17.99	17.63	17.20	5.0	18.5	17.47	17.08	16.79	3.0	18.5	

LTE Band 66 (Sub 1 Ant.) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				132022.00	132322.00	132622.00			132022	132322	132622		
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	22.72	22.67	22.27	0.0	23.5	20.04	20.19	19.66	0.0	21.5
		1	25	22.68	22.65	22.16	0.0	23.5	20.15	20.11	19.55	0.0	21.5
		1	49	22.51	22.57	22.05	0.0	23.5	19.96	20.19	19.51	0.0	21.5
		25	0	21.77	21.77	21.34	1.0	22.5	20.19	20.16	19.91	0.0	21.5
		25	12	21.75	21.77	21.27	1.0	22.5	20.22	20.28	19.87	0.0	21.5
		25	25	21.64	21.72	21.21	1.0	22.5	20.09	20.12	19.83	0.0	21.5
	16QAM	50	0	21.69	21.74	21.22	1.0	22.5	20.12	20.20	19.87	0.0	21.5
		1	0	21.91	21.84	21.42	1.0	22.5	20.31	20.22	19.37	0.0	21.5
		1	25	21.76	21.71	21.23	1.0	22.5	20.09	19.67	19.26	0.0	21.5
		1	49	21.65	21.78	21.27	1.0	22.5	19.99	19.61	19.41	0.0	21.5
		25	0	20.78	20.68	20.34	2.0	21.5	20.26	20.07	19.85	0.0	21.5
		25	12	20.73	20.76	20.28	2.0	21.5	20.14	20.13	19.83	0.0	21.5
	64QAM	25	25	20.59	20.65	20.19	2.0	21.5	21.02	20.05	19.79	0.0	21.5
		50	0	20.70	20.69	20.23	2.0	21.5	20.20	20.06	19.85	0.0	21.5
		1	0	20.95	20.78	20.45	2.0	21.5	20.42	20.11	20.04	0.0	21.5
		1	25	20.89	20.76	20.31	2.0	21.5	20.53	20.00	19.89	0.0	21.5
		1	49	20.70	20.84	20.27	2.0	21.5	20.17	20.20	19.89	0.0	21.5
		25	0	19.85	19.75	19.40	3.0	20.5	19.33	19.20	19.05	1.0	20.5
	256QAM	25	12	19.79	19.78	19.28	3.0	20.5	19.25	19.23	18.92	1.0	20.5
		25	25	19.68	19.69	19.26	3.0	20.5	19.17	19.11	18.96	1.0	20.5
		50	0	19.75	19.72	19.22	3.0	20.5	19.16	19.15	18.85	1.0	20.5
		1	0	17.75	17.72	17.26	5.0	18.5	17.22	17.19	16.46	3.0	18.5
		1	25	17.66	17.65	17.15	5.0	18.5	16.91	17.24	16.37	3.0	18.5
		1	49	17.49	17.66	17.12	5.0	18.5	16.96	17.10	16.59	3.0	18.5
	5 MHz	QPSK	25	0	17.83	17.65	17.36	5.0	18.5	17.56	16.96	16.97	3.0
25			12	17.73	17.74	17.25	5.0	18.5	17.25	17.12	16.89	3.0	18.5
25			25	17.60	17.68	17.17	5.0	18.5	17.06	17.02	16.87	3.0	18.5
50			0	17.65	17.73	17.22	5.0	18.5	17.13	17.18	16.81	3.0	18.5
1			0	22.73	22.64	22.23	0.0	23.5	20.05	20.16	19.62	0.0	21.5
1			12	22.69	22.61	22.07	0.0	23.5	20.16	20.07	19.46	0.0	21.5
16QAM		1	24	22.71	22.61	22.09	0.0	23.5	20.16	20.23	19.55	0.0	21.5
		12	0	21.76	21.71	21.24	1.0	22.5	20.18	20.10	19.81	0.0	21.5
		12	7	21.83	21.68	21.24	1.0	22.5	20.30	20.19	19.84	0.0	21.5
		12	13	21.75	21.75	21.07	1.0	22.5	20.20	20.15	19.69	0.0	21.5
		25	0	21.77	21.73	21.26	1.0	22.5	20.20	20.19	19.91	0.0	21.5
		1	0	21.91	21.98	21.52	1.0	22.5	20.31	20.36	19.47	0.0	21.5
64QAM		1	12	21.95	21.89	21.32	1.0	22.5	20.28	19.85	19.35	0.0	21.5
		1	24	21.91	21.92	21.46	1.0	22.5	20.25	19.75	19.60	0.0	21.5
	12	0	20.72	20.74	20.25	2.0	21.5	20.20	20.13	19.76	0.0	21.5	
	12	7	20.83	20.75	20.25	2.0	21.5	20.24	20.12	19.80	0.0	21.5	
	12	13	20.77	20.74	20.16	2.0	21.5	20.93	20.14	19.76	0.0	21.5	
	25	0	20.83	20.67	20.25	2.0	21.5	20.33	20.04	19.87	0.0	21.5	
256QAM	1	0	20.93	20.92	20.46	2.0	21.5	20.40	20.25	20.05	0.0	21.5	
	1	12	20.99	20.92	20.26	2.0	21.5	20.63	20.16	19.84	0.0	21.5	
	1	24	20.95	20.79	20.26	2.0	21.5	20.42	20.15	19.88	0.0	21.5	
	12	0	19.76	19.72	19.23	3.0	20.5	19.24	19.17	18.88	1.0	20.5	
	12	7	19.85	19.77	19.28	3.0	20.5	19.31	19.22	18.92	1.0	20.5	
	12	13	19.74	19.63	19.04	3.0	20.5	19.23	19.05	18.74	1.0	20.5	
256QAM	25	0	19.77	19.72	19.22	3.0	20.5	19.18	19.15	18.85	1.0	20.5	
	1	0	17.77	17.71	17.29	5.0	18.5	17.24	17.18	16.49	3.0	18.5	
	1	12	17.79	17.64	17.11	5.0	18.5	17.04	17.23	16.33	3.0	18.5	
	1	24	17.86	17.71	17.09	5.0	18.5	17.33	17.15	16.56	3.0	18.5	
	12	0	17.78	17.65	17.25	5.0	18.5	17.51	16.96	16.86	3.0	18.5	
	12	7	17.81	17.67	17.28	5.0	18.5	17.33	17.05	16.92	3.0	18.5	
	12	13	17.76	17.69	17.15	5.0	18.5	17.22	17.03	16.85	3.0	18.5	
25	0	17.77	17.66	17.22	5.0	18.5	17.25	17.11	16.81	3.0	18.5		

LTE Band 66 (Sub 1 Ant.) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	
				131987.00	132322.00	132657.00			131987	132322	132657			
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz			
3 MHz	QPSK	1	0	22.74	22.61	22.12	0.0	23.5	20.06	20.13	19.51	0.0	21.5	
		1	8	22.83	22.76	22.11	0.0	23.5	20.30	20.22	19.50	0.0	21.5	
		1	14	22.66	22.65	22.03	0.0	23.5	20.11	20.27	19.49	0.0	21.5	
		8	0	21.76	21.67	21.17	1.0	22.5	20.18	20.06	19.74	0.0	21.5	
		8	4	21.75	21.81	21.21	1.0	22.5	20.22	20.32	19.81	0.0	21.5	
		8	7	21.72	21.73	21.15	1.0	22.5	20.17	20.13	19.77	0.0	21.5	
	16QAM	15	0	21.79	21.65	21.18	1.0	22.5	20.22	20.11	19.83	0.0	21.5	
		1	0	21.91	21.88	21.42	1.0	22.5	20.31	20.26	19.37	0.0	21.5	
		1	8	21.90	21.95	21.46	1.0	22.5	20.23	19.91	19.49	0.0	21.5	
		1	14	21.92	21.81	21.31	1.0	22.5	20.26	19.64	19.45	0.0	21.5	
		8	0	20.79	20.71	20.27	2.0	21.5	20.27	20.10	19.78	0.0	21.5	
		8	4	20.79	20.67	20.23	2.0	21.5	20.20	20.04	19.78	0.0	21.5	
	64QAM	8	7	20.76	20.68	20.15	2.0	21.5	20.42	20.08	19.75	0.0	21.5	
		15	0	20.72	20.65	20.16	2.0	21.5	20.22	20.02	19.78	0.0	21.5	
		1	0	20.85	20.79	20.37	2.0	21.5	20.32	20.12	19.96	0.0	21.5	
		1	8	20.93	20.91	20.28	2.0	21.5	20.57	20.15	19.86	0.0	21.5	
		1	14	20.84	20.83	20.24	2.0	21.5	20.31	20.19	19.86	0.0	21.5	
		8	0	19.79	19.64	19.15	3.0	20.5	19.27	19.09	18.80	1.0	20.5	
	256QAM	8	4	19.83	19.76	19.24	3.0	20.5	19.29	19.21	18.88	1.0	20.5	
		8	7	19.73	19.67	19.13	3.0	20.5	19.22	19.09	18.83	1.0	20.5	
		15	0	19.71	19.65	19.18	3.0	20.5	19.12	19.08	18.81	1.0	20.5	
		1	0	17.78	17.69	17.25	5.0	18.5	17.25	17.16	16.45	3.0	18.5	
		1	8	17.76	17.78	17.18	5.0	18.5	17.01	17.37	16.40	3.0	18.5	
		1	14	17.76	17.71	17.02	5.0	18.5	17.23	17.15	16.49	3.0	18.5	
	1.4 MHz	QPSK	8	0	17.76	17.61	17.19	5.0	18.5	17.49	16.92	16.80	3.0	18.5
			8	4	17.76	17.74	17.23	5.0	18.5	17.28	17.12	16.87	3.0	18.5
			8	7	17.71	17.62	17.09	5.0	18.5	17.17	16.96	16.79	3.0	18.5
			15	0	17.70	17.62	17.16	5.0	18.5	17.18	17.07	16.75	3.0	18.5
			1	0	22.61	22.56	22.07	0.0	23.5	19.93	20.08	19.46	0.0	21.5
			1	3	22.69	22.64	22.04	0.0	23.5	20.16	20.10	19.43	0.0	21.5
16QAM		1	5	22.59	22.53	21.93	0.0	23.5	20.04	20.15	19.39	0.0	21.5	
		3	0	22.68	22.57	22.05	0.0	23.5	20.00	20.09	19.44	0.0	21.5	
		3	1	22.77	22.57	22.12	0.0	23.5	20.24	20.03	19.51	0.0	21.5	
		3	3	22.64	22.61	22.04	0.0	23.5	20.09	20.23	19.50	0.0	21.5	
		6	0	21.67	21.57	21.01	1.0	22.5	20.10	20.03	19.66	0.0	21.5	
		1	0	21.84	21.86	21.11	1.0	22.5	20.24	20.24	19.06	0.0	21.5	
64QAM		1	3	21.82	21.92	21.36	1.0	22.5	20.15	19.88	19.39	0.0	21.5	
		1	5	21.78	21.78	21.21	1.0	22.5	20.12	19.61	19.35	0.0	21.5	
		3	0	21.72	21.71	21.09	1.0	22.5	20.12	20.09	19.04	0.0	21.5	
		3	1	21.79	21.73	21.22	1.0	22.5	20.12	19.69	19.25	0.0	21.5	
		3	3	21.75	21.65	21.23	1.0	22.5	20.09	19.48	19.37	0.0	21.5	
		6	0	20.68	20.64	20.24	2.0	21.5	20.18	20.01	19.86	0.0	21.5	
256QAM		1	0	20.81	20.79	20.28	2.0	21.5	20.28	20.12	19.87	0.0	21.5	
		1	3	20.92	20.89	20.27	2.0	21.5	20.56	20.13	19.85	0.0	21.5	
		1	5	20.74	20.82	20.22	2.0	21.5	20.21	20.18	19.84	0.0	21.5	
		3	0	20.67	20.72	20.23	2.0	21.5	20.15	20.17	19.88	1.0	20.5	
		3	1	20.73	20.71	20.11	2.0	21.5	20.19	20.16	19.75	1.0	20.5	
		3	3	20.72	20.70	20.29	2.0	21.5	20.21	20.12	19.99	1.0	20.5	
QPSK		6	0	19.68	19.62	19.13	3.0	20.5	19.09	19.05	18.76	1.0	20.5	
		1	0	17.63	17.72	17.11	5.0	18.5	17.10	17.19	16.31	3.0	18.5	
		1	3	17.68	17.63	17.16	5.0	18.5	16.93	17.22	16.38	3.0	18.5	
		1	5	17.72	17.64	16.97	5.0	18.5	17.19	17.08	16.44	3.0	18.5	
		3	0	17.68	17.67	17.23	5.0	18.5	17.41	16.98	16.84	3.0	18.5	
		3	1	17.82	17.74	17.28	5.0	18.5	17.34	17.12	16.92	3.0	18.5	
16QAM	3	3	17.73	17.69	17.17	5.0	18.5	17.19	17.03	16.87	3.0	18.5		
	6	0	17.68	17.63	17.16	5.0	18.5	17.16	17.08	16.75	3.0	18.5		

LTE Band 71 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)						
				DSI = 0, 1, 2, 3, 4					MPR	Tune-up Limit
				Measured Pwr (dBm)			MPR	Tune-up Limit		
				133222	133297	133372				
			673 MHz	680.5 MHz	688 MHz					
20 MHz	QPSK	1	0		24.83		0.0	25.5		
		1	49		24.76		0.0	25.5		
		1	99		24.65		0.0	25.5		
		50	0		23.87		1.0	24.5		
		50	24		23.88		1.0	24.5		
		50	50		23.79		1.0	24.5		
	16QAM	100	0		23.85		1.0	24.5		
		1	0		24.25		1.0	24.5		
		1	49		24.17		1.0	24.5		
		1	99		24.08		1.0	24.5		
		50	0		22.90		2.0	23.5		
		50	24		22.86		2.0	23.5		
	64QAM	50	50		22.80		2.0	23.5		
		100	0		22.87		2.0	23.5		
		1	0		23.18		2.0	23.5		
		1	49		23.16		2.0	23.5		
		1	99		23.08		2.0	23.5		
		50	0		21.99		3.0	22.5		
	256QAM	50	24		21.99		3.0	22.5		
		50	50		21.87		3.0	22.5		
		100	0		21.90		3.0	22.5		
		1	0		19.93		5.0	20.5		
		1	49		19.98		5.0	20.5		
		1	99		19.93		5.0	20.5		
15 MHz	QPSK	50	0		19.92		5.0	20.5		
		50	24		19.92		5.0	20.5		
		50	50		19.84		5.0	20.5		
		100	0		19.83		5.0	20.5		
		1	0		24.18		0.0	25.5		
		1	37		24.08		0.0	25.5		
	16QAM	1	74		24.07		0.0	25.5		
		36	0		23.19		1.0	24.5		
		36	20		23.24		1.0	24.5		
		36	39		23.21		1.0	24.5		
		75	0		23.20		1.0	24.5		
		1	0		23.16		1.0	24.5		
	64QAM	1	37		23.08		1.0	24.5		
		1	74		23.01		1.0	24.5		
		36	0		22.20		2.0	23.5		
		36	20		22.23		2.0	23.5		
		36	39		22.20		2.0	23.5		
		75	0		22.24		2.0	23.5		
	256QAM	1	0		22.51		2.0	23.5		
		1	37		22.51		2.0	23.5		
		1	74		22.47		2.0	23.5		
		36	0		21.24		3.0	22.5		
		36	20		21.29		3.0	22.5		
		36	39		21.25		3.0	22.5		
QPSK	75	0		21.24		3.0	22.5			
	1	0		19.72		5.0	20.5			
	1	37		19.57		5.0	20.5			
	1	74		19.65		5.0	20.5			
	36	0		19.25		5.0	20.5			
	36	20		19.29		5.0	20.5			
16QAM	36	39		19.27		5.0	20.5			
	75	0		19.26		5.0	20.5			

LTE Band 71 Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				133172.00	133297.00	133422.00		
				668 MHz	680.5 MHz	693 MHz		
10 MHz	QPSK	1	0	24.09	24.24	24.32	0.0	25.5
		1	25	24.22	24.15	24.28	0.0	25.5
		1	49	24.33	24.25	24.32	0.0	25.5
		25	0	23.27	23.30	23.25	1.0	24.5
		25	12	23.33	23.24	23.24	1.0	24.5
		25	25	23.37	23.20	23.31	1.0	24.5
	16QAM	50	0	23.34	23.25	23.32	1.0	24.5
		1	0	23.15	23.28	23.75	1.0	24.5
		1	25	23.28	23.18	23.68	1.0	24.5
		1	49	23.37	23.16	23.73	1.0	24.5
		25	0	22.36	22.32	22.37	2.0	23.5
		25	12	22.43	22.27	22.32	2.0	23.5
	64QAM	25	25	22.47	22.25	22.34	2.0	23.5
		50	0	22.38	22.23	22.34	2.0	23.5
		1	0	22.46	22.56	22.48	2.0	23.5
		1	25	22.60	22.51	22.46	2.0	23.5
		1	49	22.78	22.52	22.25	2.0	23.5
		25	0	21.30	21.42	21.38	3.0	22.5
	256QAM	25	12	21.43	21.47	21.36	3.0	22.5
		25	25	21.44	21.45	21.31	3.0	22.5
		50	0	21.36	21.41	21.40	3.0	22.5
1		0	18.90	19.08	19.06	5.0	20.5	
1		25	19.03	19.10	19.07	5.0	20.5	
1		49	19.15	19.05	19.07	5.0	20.5	
5 MHz	QPSK	25	0	19.30	19.42	19.31	5.0	20.5
		25	12	19.40	19.47	19.30	5.0	20.5
		25	25	19.41	19.33	19.27	5.0	20.5
		50	0	19.34	19.37	19.33	5.0	20.5
		1	0	24.19	24.45	24.22	0.0	25.5
		1	12	24.24	24.34	24.23	0.0	25.5
16QAM	QPSK	1	24	24.34	24.29	24.22	0.0	25.5
		12	0	23.24	23.37	23.24	1.0	24.5
		12	7	23.30	23.37	23.30	1.0	24.5
		12	13	23.30	23.33	23.28	1.0	24.5
		25	0	23.22	23.34	23.23	1.0	24.5
		1	0	23.33	23.52	23.79	1.0	24.5
	16QAM	1	12	23.24	23.48	23.83	1.0	24.5
		1	24	23.47	23.40	23.79	1.0	24.5
		12	0	22.32	22.42	22.38	2.0	23.5
		12	7	22.34	22.44	22.41	2.0	23.5
		12	13	22.34	22.37	22.45	2.0	23.5
		25	0	22.23	22.36	22.28	2.0	23.5
64QAM	1	0	22.18	22.72	22.56	2.0	23.5	
	1	12	22.27	22.68	22.51	2.0	23.5	
	1	24	22.28	22.57	22.26	2.0	23.5	
	12	0	21.22	21.37	21.23	3.0	22.5	
	12	7	21.28	21.34	21.21	3.0	22.5	
	12	13	21.29	21.32	21.10	3.0	22.5	
256QAM	25	0	21.23	21.31	21.17	3.0	22.5	
	1	0	19.19	19.50	19.36	5.0	20.5	
	1	12	19.26	19.39	19.37	5.0	20.5	
	1	24	19.38	19.41	19.42	5.0	20.5	
	12	0	19.21	19.39	19.25	5.0	20.5	
	12	7	19.28	19.42	19.31	5.0	20.5	
5 MHz	256QAM	12	13	19.24	19.35	19.32	5.0	20.5
		25	0	19.26	19.36	19.23	5.0	20.5

9.4. NR (Sub 6GHz)

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 6.2.3-1: 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
DFT-s-OFDM QPSK		≤ 0.5 ²	0 ²
DFT-s-OFDM 16 QAM	≤ 1		0
DFT-s-OFDM 64 QAM	≤ 2		≤ 1
DFT-s-OFDM 256 QAM		≤ 2.5	
CP-OFDM QPSK		≤ 4.5	
CP-OFDM 16 QAM	≤ 3		≤ 1.5
CP-OFDM 64 QAM	≤ 3		≤ 2
CP-OFDM 256 QAM		≤ 3.5	
		≤ 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

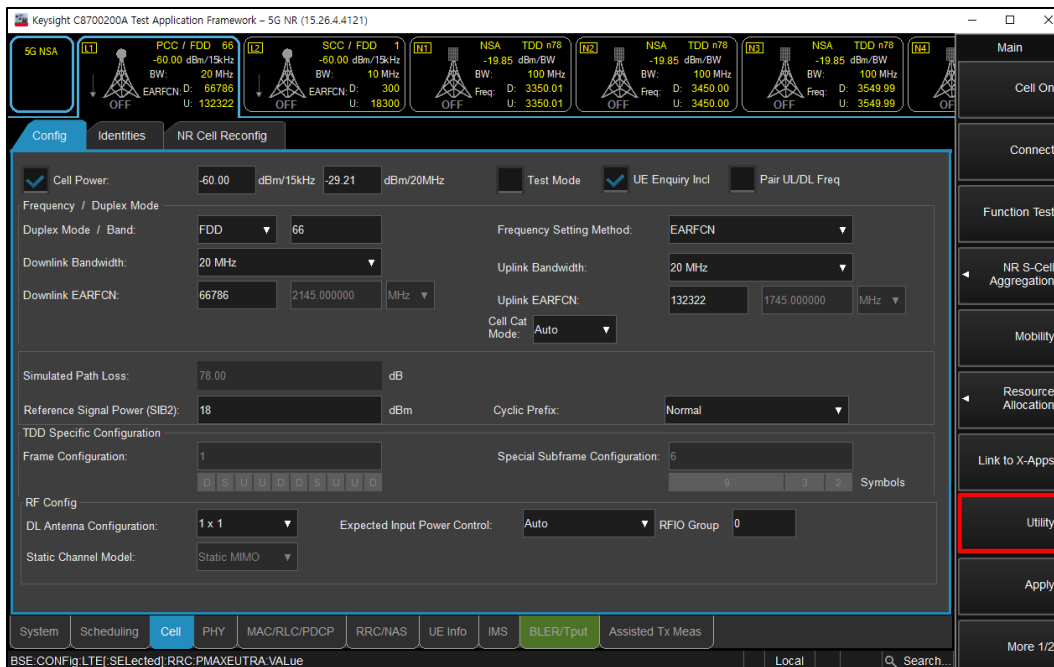
Uplink RB allocations were used to Table 6.1-1 of the 3GPP TS 138.521-1.

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	38@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	38@0	19@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

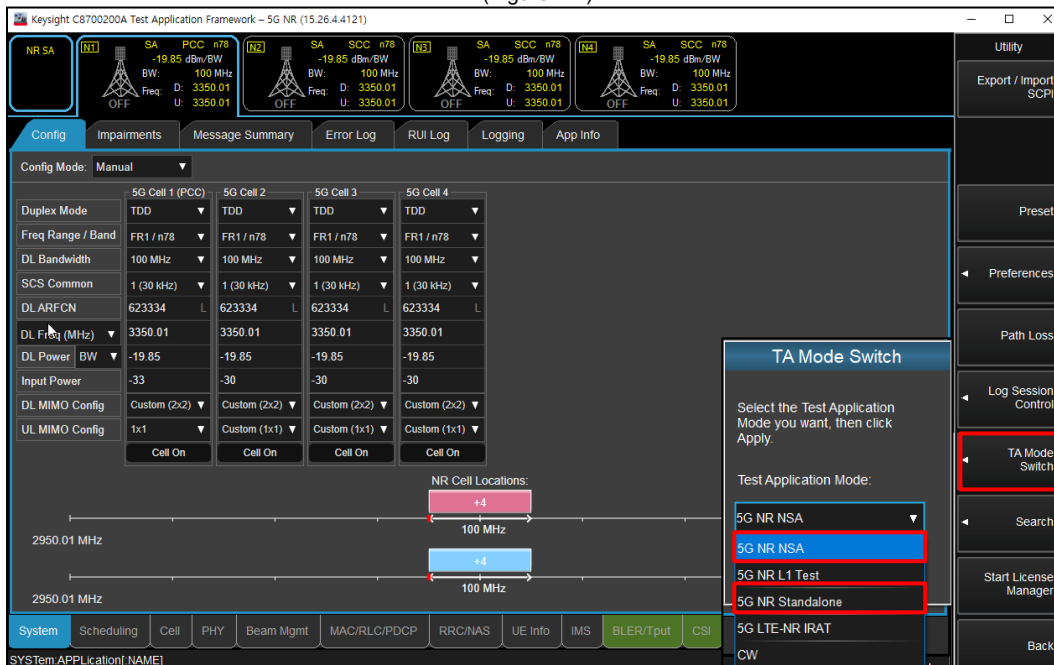
Procedures used to establish power measurement for NR Bands

Switching to NSA mode or SA mode

- Click the “Utility” button in the right of Test application screen
- Select “5G NR NSA” in the “TA Mode Switch” for NSA mode
- Select “5G NR Standalone” in the “TA Mode Switch” for SA mode



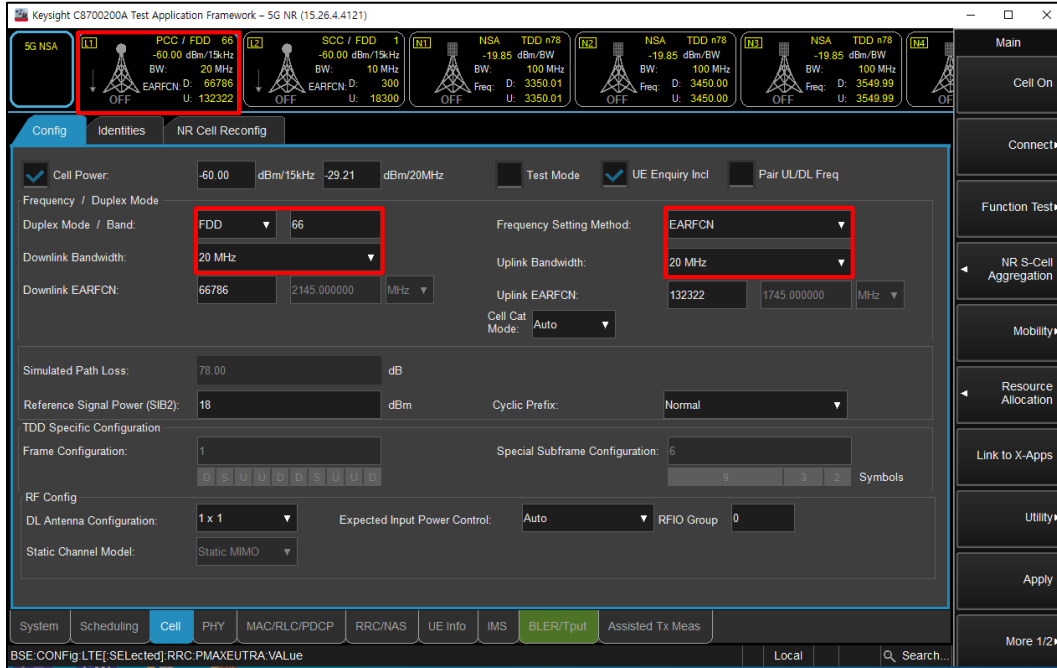
(Figure 1-1)



(Figure 1-2)

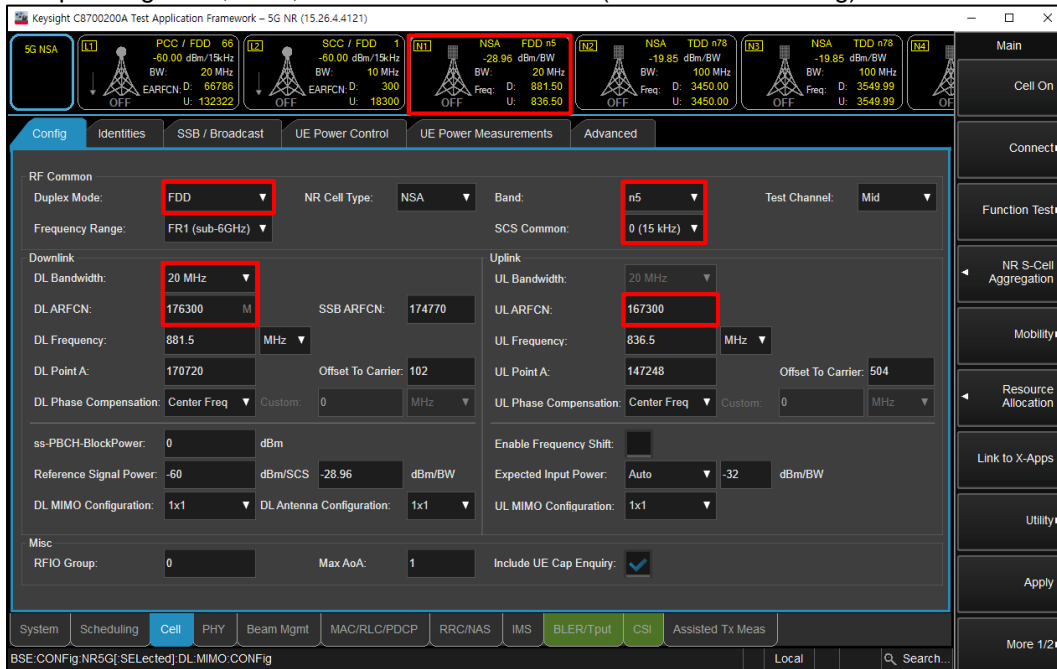
NSA Mode

- Select operating band, BW and Channel for LTE (LTE -> Cell -> Config)



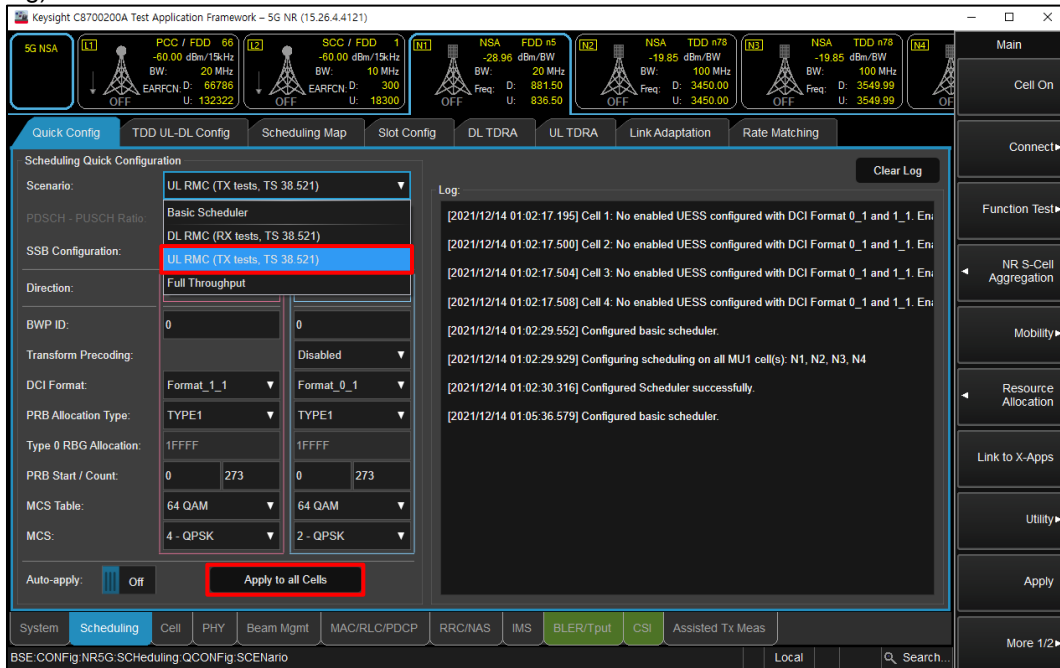
(Figure 2-1)

- Select operating band, SCS, BW and Channel for NR (NR -> Cell -> Config)



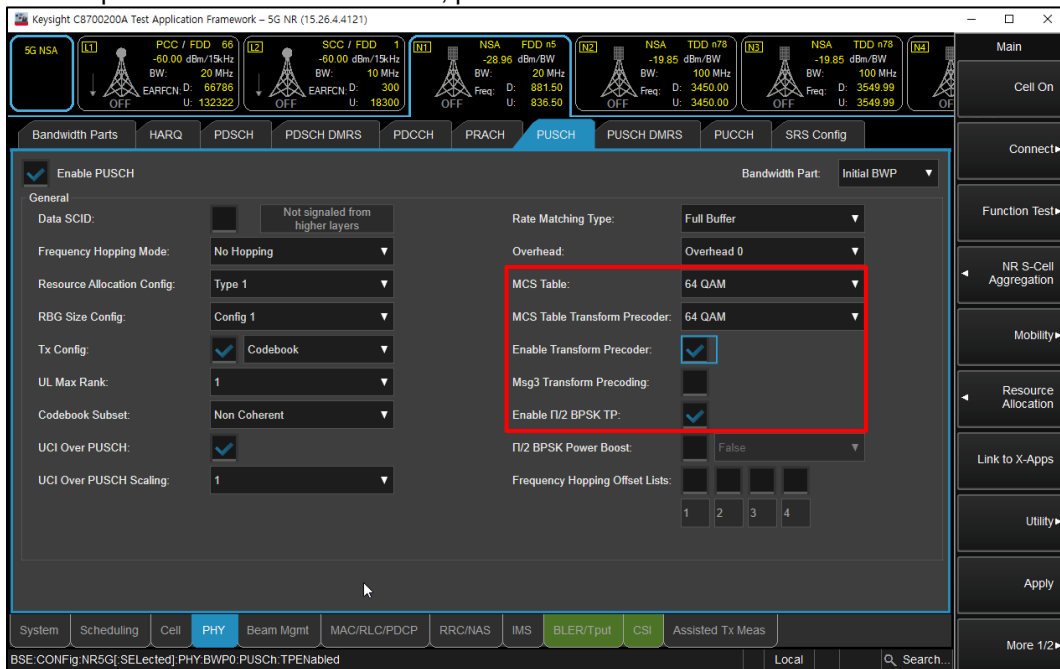
(Figure 2-2)

- Select “UL RMC (TX tests, TS 38.521)” for maximum power RB scheduling (NR -> Scheduling -> Quick Config)



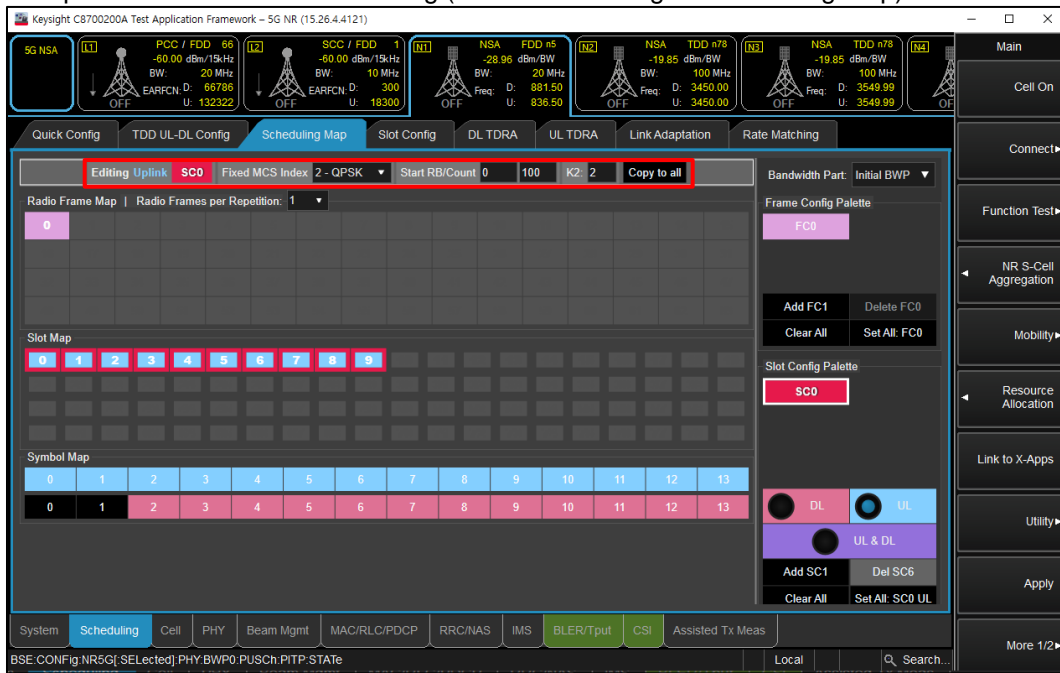
(Figure 2-3)

- To set waveform for NR Band (NR -> PHY -> PUSCH)
 - Select highest modulation in the MCS Table and MCS Table Transform Precoder
 - Enable Transform Precoder: DFT-s-OFDM / disable for CP-OFDM
 - Enable pi/2 BPSK TP: DFT-s-OFDM, pi/2 BPSK modulation



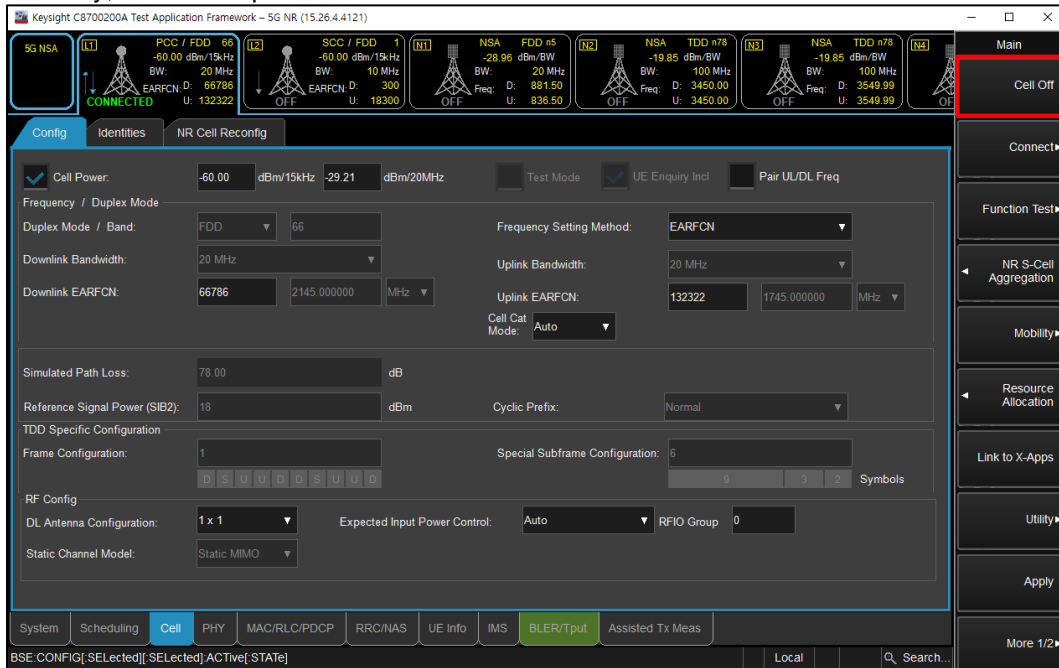
(Figure 2-4)

- Select Uplink Modulation and RB setting (NR -> Scheduling -> Scheduling Map)



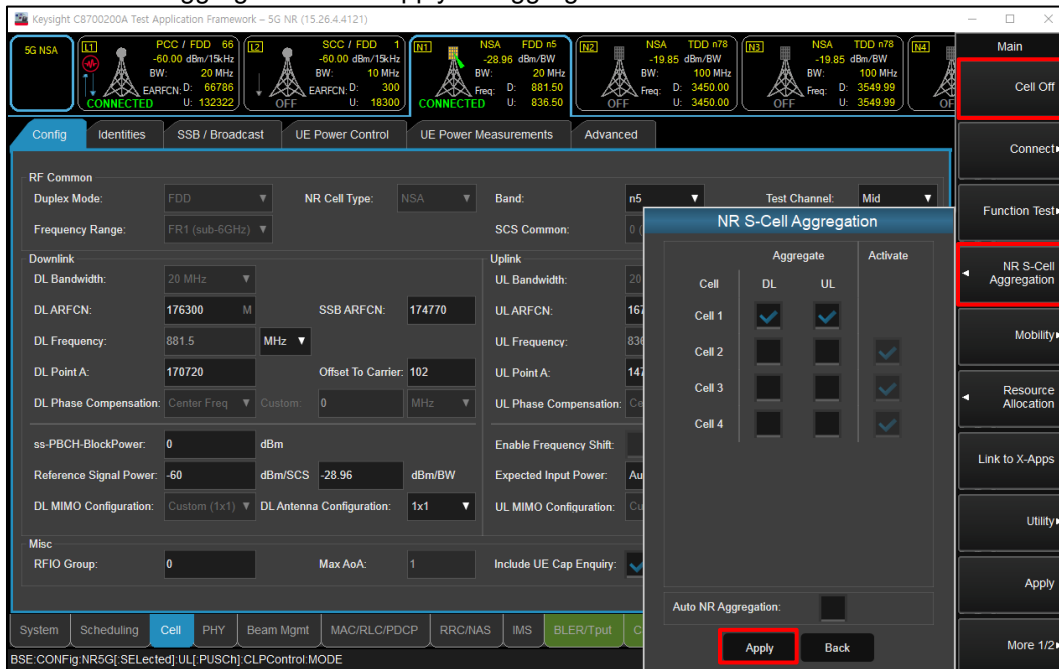
(Figure 2-5)

- Click “Cell On” button in the right of Test application screen in the LTE tab
- If necessary, turn the Airplane Mode on/off in the DUT



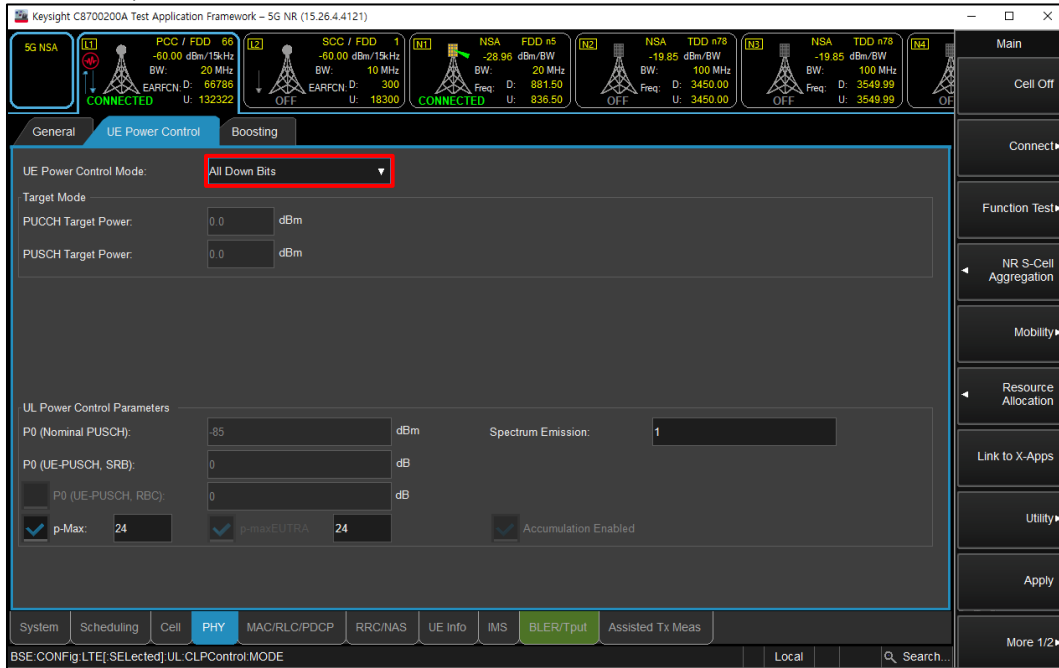
(Figure 2-6)

- Click “Cell On” button in the right of Test application screen in the NR tab
- Click “NR S-Cell Aggregation” and “Apply” to aggregate NR band



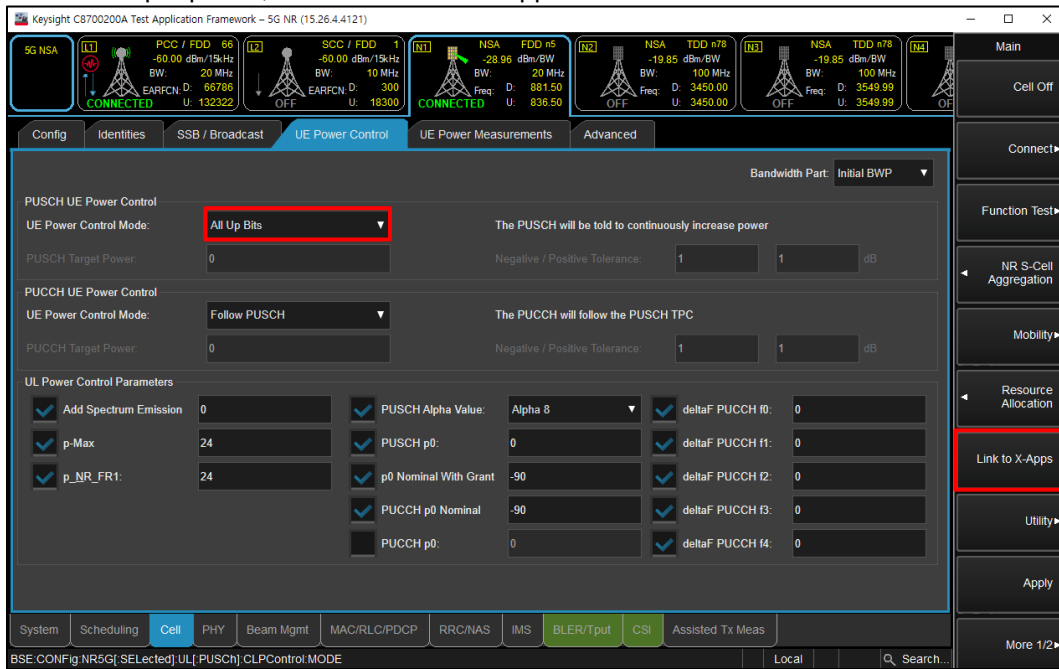
(Figure 2-7)

- Select “All Down Bits” of UL Power control Mode in LTE tab for NR maximum power (LTE -> PHY -> UE Power Control)



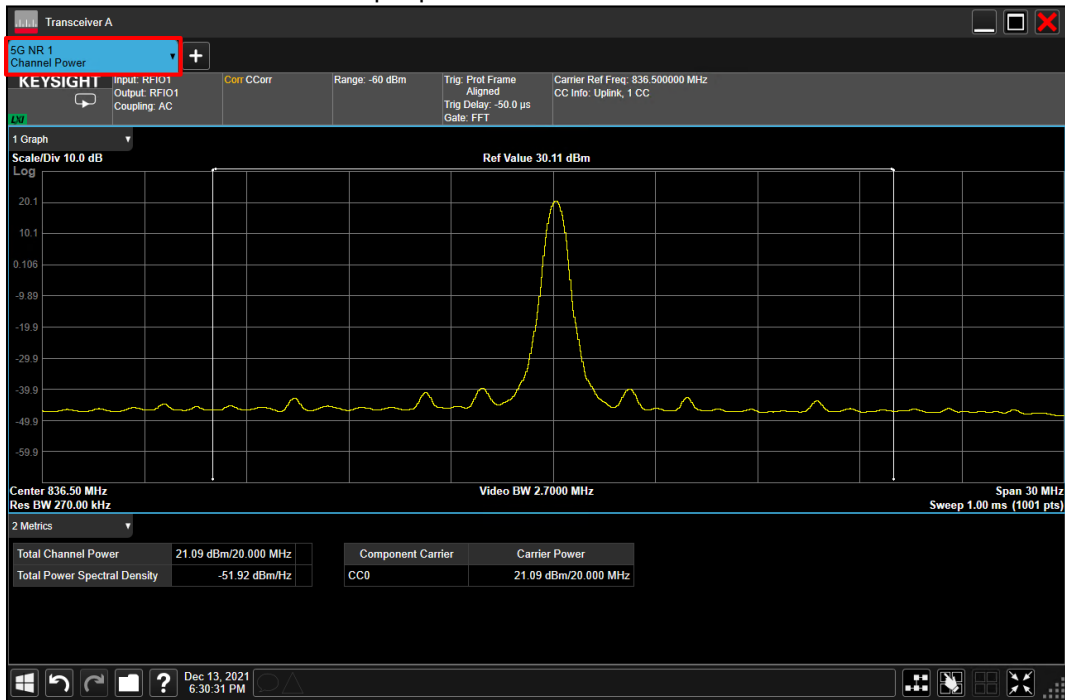
(Figure 2-8)

- Select “All Up Bits” of UL Power control Mode in NR tab for NR maximum power (NR -> Cell -> UE Power Control)
- To read the output power, click the “Link to X-Apps”



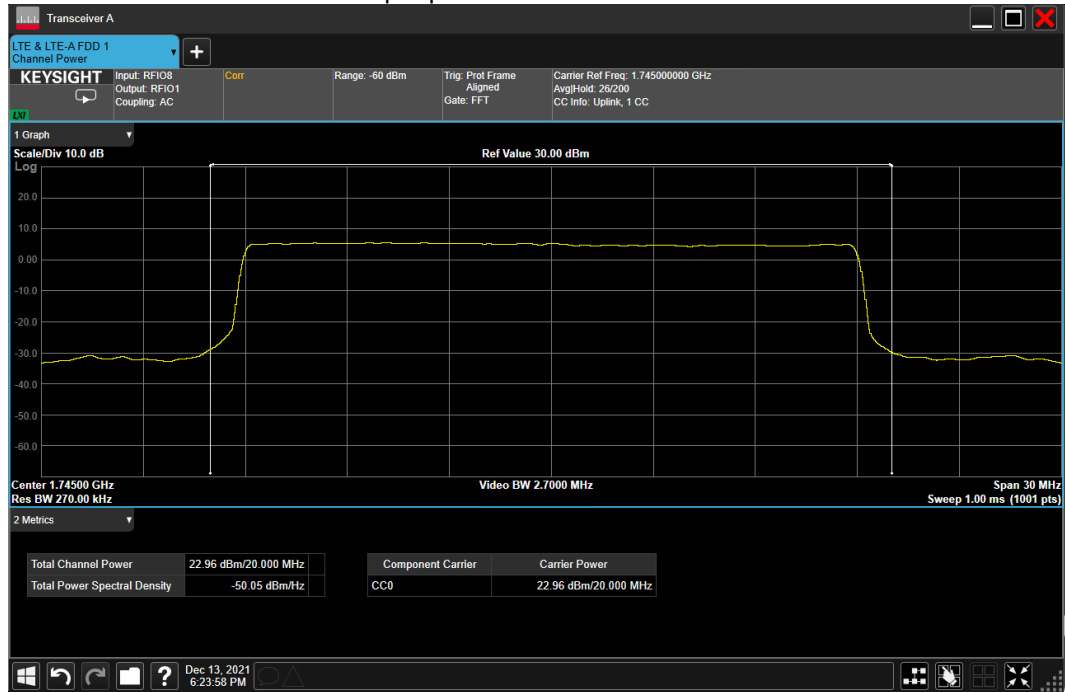
(Figure 2-9)

- Select “Channel Power” for NR output power



(Figure 2-10)

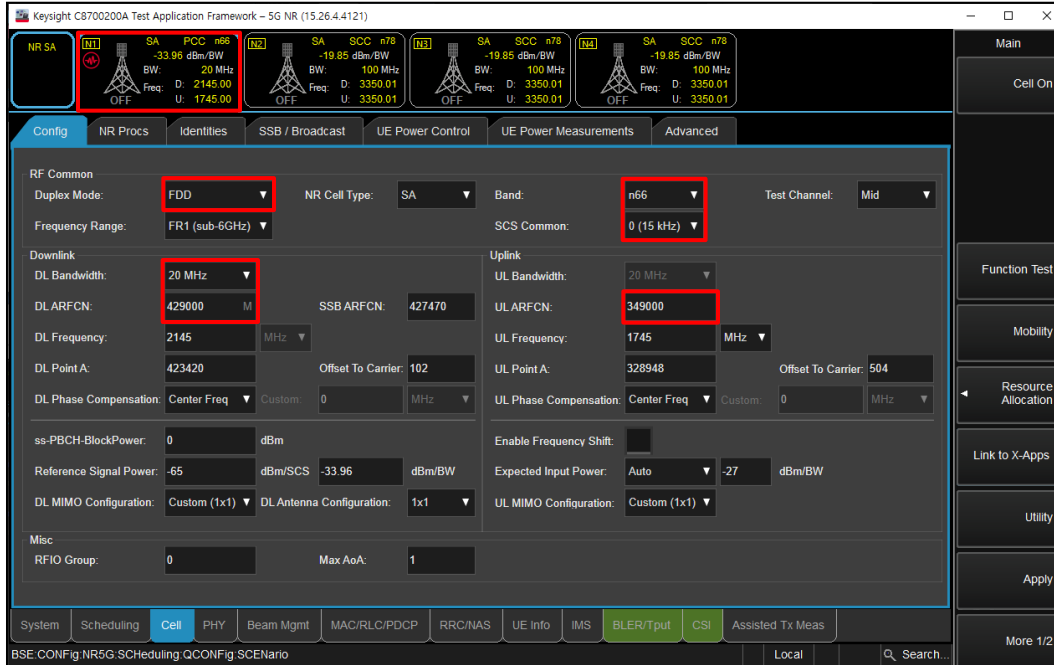
- Select “Channel Power” for LTE output power



(Figure 2-11)

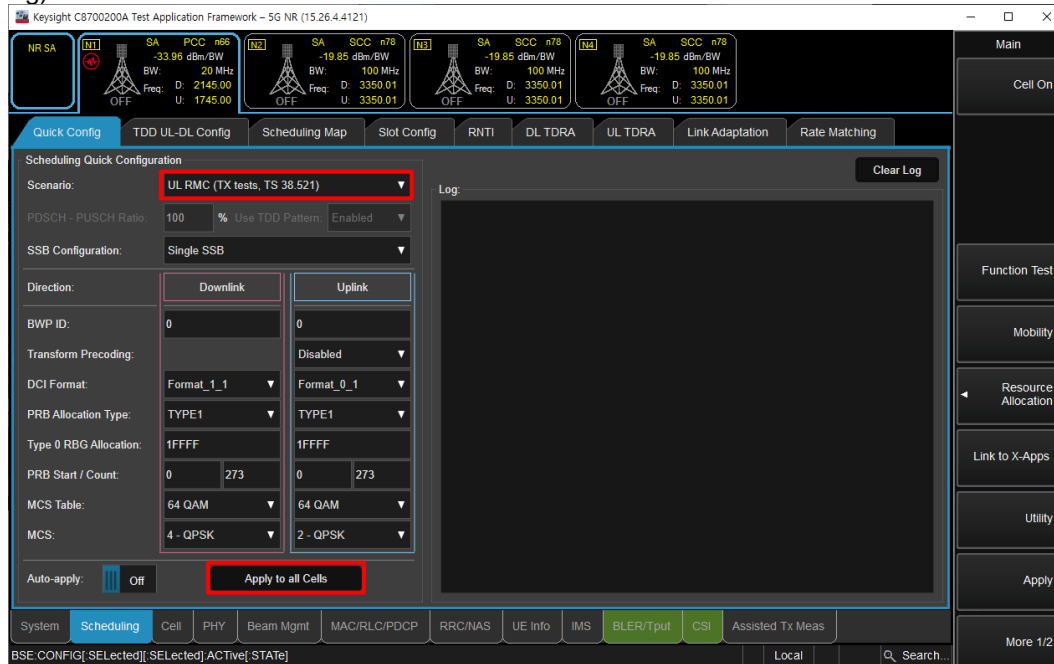
SA Mode

- Select operating band, SCS, BW and Channel for NR (NR -> Cell -> Config)



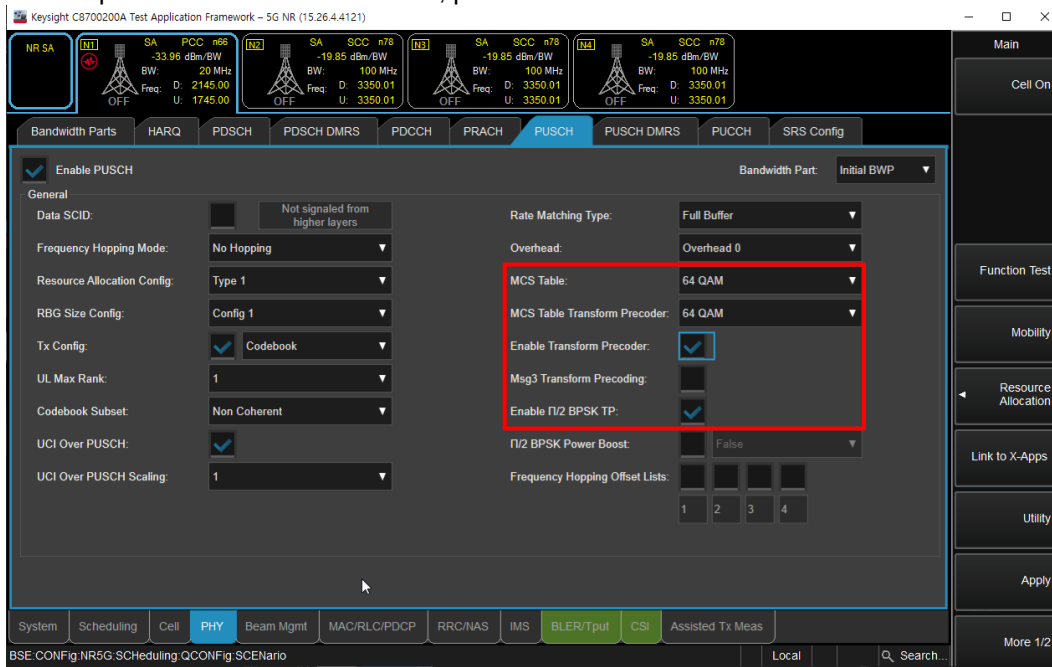
(Figure 3-1)

- Select "UL RMC (TX tests, TS 38.521)" for maximum power RB scheduling (NR -> Scheduling -> Quick Config)



(Figure 3-2)

- To set waveform for NR Band (NR -> PHY -> PUSCH)
 - Select highest modulation in the MCS Table and MCS Table Transform Precoder
 - Enable Transform Precoder: DFT-s-OFDM / disable for CP-OFDM
 - Enable $\pi/2$ BPSK TP: DFT-s-OFDM, $\pi/2$ BPSK modulation



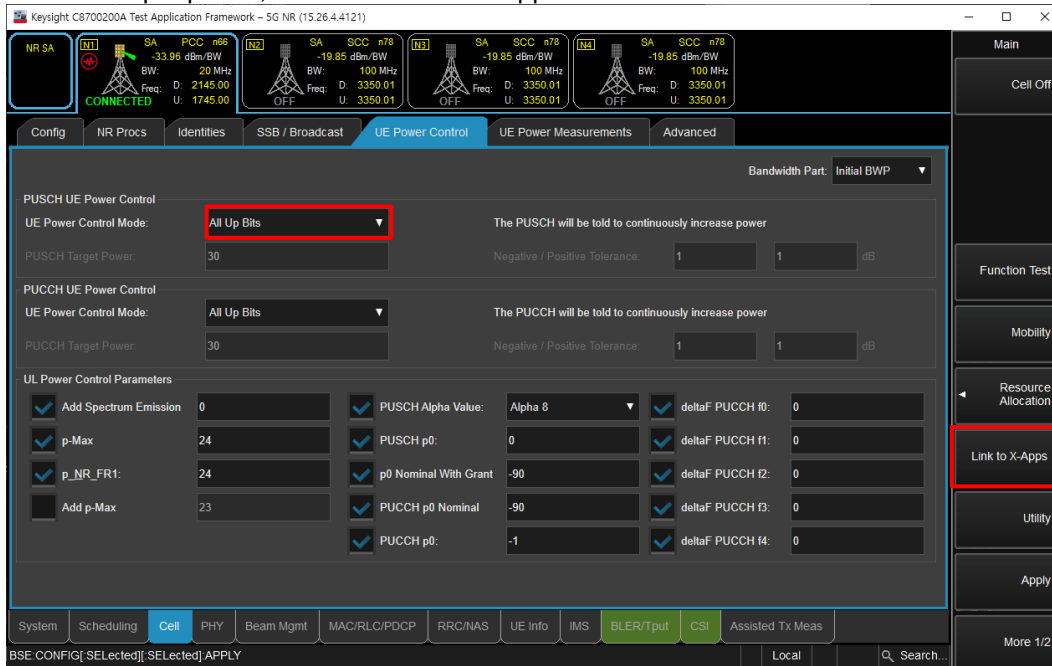
(Figure 3-3)

- Select Uplink Modulation and RB setting (NR -> Scheduling -> Scheduling Map)



(Figure 3-4)

- Click “Cell On” button in the right of Test application screen
- If necessary, turn the Airplane Mode on/off in the DUT
- Select “All Up Bits” of UL Power control Mode (Cell -> UE Power Control)
- To read the output power, click the “Link to X-Apps”



(Figure 3-5)

- Select “Channel Power”



(Figure 3-6)

NR Band n5 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)				
					DSI = 0, 1, 2, 3, 4				
					Measured Pwr (dBm)			MPR	Tune-up Limit
					166800 834 MHz	167300 836.5 MHz	167800 839 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.52		0.0	25.5
			1	53		24.52		0.0	25.5
			1	104		24.36		0.0	25.5
			50	0		23.58		0.5	25.0
			50	28		24.55		0.0	25.5
			50	56		23.50		0.5	25.0
		100	0		23.55		0.5	25.0	
		QPSK	1	1		24.65		0.0	25.5
			1	53		24.66		0.0	25.5
			1	104		24.45		0.0	25.5
			50	0		23.64		1.0	24.5
			50	28		24.60		0.0	25.5
			50	56		23.47		1.0	24.5
		16QAM	100	0		23.60		1.0	24.5
	1		1		23.53		1.0	24.5	
1	137			23.51		1.0	24.5		
64QAM	1	271		23.38		1.0	24.5		
	1	1		22.21		2.5	23.0		
256QAM	1	1		19.57		4.5	21.0		
	CP-OFDM	QPSK	1	1		23.40		1.5	24.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					166300.00 831.5 MHz	167300.00 836.5 MHz	168300.00 841.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.25		0.0	25.5
			1	40		24.30		0.0	25.5
			1	77		24.31		0.0	25.5
			36	0		23.41		0.5	25.0
			36	22		24.36		0.0	25.5
			36	43		23.26		0.5	25.0
		75	0		23.36		0.5	25.0	
		QPSK	1	1		24.41		0.0	25.5
			1	40		24.41		0.0	25.5
			1	77		24.41		0.0	25.5
			36	0		23.42		1.0	24.5
			36	22		24.19		0.0	25.5
			36	43		22.12		1.0	24.5
		75	0		23.21		1.0	24.5	
	16QAM	1	1		23.29		1.0	24.5	
64QAM	1	1		21.98		2.5	23.0		
256QAM	1	1		19.19		4.5	21.0		
	CP-OFDM	QPSK	1	1		22.82		1.5	24.0

NR Band n5 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					165800.00	167300.00	168800.00		
					829 MHz	836.5 MHz	844 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.34		0.0	25.5
			1	26		24.33		0.0	25.5
			1	50		24.41		0.0	25.5
			25	0		23.35		0.5	25.0
			25	14		24.49		0.0	25.5
			25	27		23.37		0.5	25.0
			50	0		23.48		0.5	25.0
		QPSK	1	1		24.42		0.0	25.5
			1	26		24.49		0.0	25.5
			1	50		24.49		0.0	25.5
			25	0		23.40		1.0	24.5
			25	14		24.46		0.0	25.5
			25	27		23.45		1.0	24.5
			50	0		23.48		1.0	24.5
		16QAM	1	1		23.33		1.0	24.5
		64QAM	1	1		22.00		2.5	23.0
		256QAM	1	1		19.16		4.5	21.0
		CP-OFDM	QPSK	1	1		22.80		1.5
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					165300.00	167300.00	169300.00		
					826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.44	24.36	24.57	0.0	25.5
			1	13	24.37	24.39	24.44	0.0	25.5
			1	23	24.35	24.41	24.45	0.0	25.5
			12	0	23.36	23.42	23.55	0.5	25.0
			12	7	24.42	24.47	24.47	0.0	25.5
			12	13	23.38	23.39	23.49	0.5	25.0
			25	0	23.37	23.44	23.49	0.5	25.0
		QPSK	1	1	24.53	24.48	24.61	0.0	25.5
			1	13	24.38	24.47	24.54	0.0	25.5
			1	23	24.46	24.50	24.60	0.0	25.5
			12	0	23.22	23.48	23.51	1.0	24.5
			12	7	23.34	24.43	24.52	0.0	25.5
			12	13	23.35	23.46	23.50	1.0	24.5
			25	0	23.39	23.45	23.53	1.0	24.5
		16QAM	1	1	23.46	23.40	23.56	1.0	24.5
		64QAM	1	1	22.10	22.06	22.21	2.5	23.0
		256QAM	1	1	19.32	19.25	19.38	4.5	21.0
		CP-OFDM	QPSK	1	1	22.88	22.85	23.02	1.5

NR Band n25 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)														
					DSI = 0, 2					DSI = 3					DSI = 1, 4				
					Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					374000 1870 MHz	376500 1882.5 MHz	379000 1895 MHz			373000 1865 MHz	376500 1882.5 MHz	380000 1900 MHz			374000 1870 MHz	376500 1882.5 MHz	379000 1895 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.40		0.0	25.0		20.97		0.0	22.0		20.97		0.0	22.0
			1	108		24.53		0.0	25.0		21.05		0.0	22.0		21.04		0.0	22.0
			1	214		23.82		0.0	25.0		21.16		0.0	22.0		21.16		0.0	22.0
			108	0		24.16		0.5	24.5		21.20		0.0	22.0		21.19		0.0	22.0
			108	54		24.51		0.0	25.0		21.21		0.0	22.0		21.21		0.0	22.0
			108	108		23.98		0.5	24.5		21.20		0.0	22.0		21.23		0.0	22.0
			216	0		24.05		0.5	24.5		21.26		0.0	22.0		21.24		0.0	22.0
		QPSK	1	1		24.49		0.0	25.0		21.15		0.0	22.0		21.18		0.0	22.0
			1	108		23.98		0.0	25.0		21.10		0.0	22.0		21.08		0.0	22.0
			1	214		23.45		0.0	25.0		21.13		0.0	22.0		21.11		0.0	22.0
			108	0		23.72		1.0	24.0		21.21		0.0	22.0		21.26		0.0	22.0
			108	54		24.22		0.0	25.0		21.28		0.0	22.0		21.30		0.0	22.0
			108	108		23.75		1.0	24.0		21.26		0.0	22.0		21.28		0.0	22.0
			216	0		23.48		1.0	24.0		21.28		0.0	22.0		21.34		0.0	22.0
16QAM	1	1		23.72		1.0	24.0		21.07		0.0	22.0		21.00		0.0	22.0		
	1	108		23.11		1.0	24.0		21.12		0.0	22.0		21.19		0.0	22.0		
	1	214		22.55		1.0	24.0		21.24		0.0	22.0		21.27		0.0	22.0		
64QAM	1	1		22.42		2.5	22.5		21.19		0.0	22.0		21.12		0.0	22.0		
	1	1		19.95		4.5	20.5		19.97		0.0	22.0		19.99		0.0	22.0		
CP-OFDM	QPSK	1	1		23.05		1.5	23.5		21.17		0.0	22.0		21.16		0.0	22.0	
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.57		0.0	25.0		20.99		0.0	22.0		20.98		0.0	22.0
			1	80		24.52		0.0	25.0		21.08		0.0	22.0		21.02		0.0	22.0
			1	158		24.55		0.0	25.0		21.29		0.0	22.0		21.27		0.0	22.0
			80	0		24.12		0.5	24.5		21.09		0.0	22.0		21.12		0.0	22.0
			80	40		24.57		0.0	25.0		21.04		0.0	22.0		21.07		0.0	22.0
			80	80		24.16		0.5	24.5		21.08		0.0	22.0		21.07		0.0	22.0
			160	0		24.18		0.5	24.5		21.07		0.0	22.0		21.09		0.0	22.0
		QPSK	1	1		24.77		0.0	25.0		21.01		0.0	22.0		21.02		0.0	22.0
			1	80		24.59		0.0	25.0		21.11		0.0	22.0		21.06		0.0	22.0
			1	158		24.94		0.0	25.0		21.16		0.0	22.0		21.26		0.0	22.0
			80	0		23.56		1.0	24.0		21.12		0.0	22.0		21.07		0.0	22.0
			80	40		24.47		0.0	25.0		21.04		0.0	22.0		21.08		0.0	22.0
			80	80		23.58		1.0	24.0		21.08		0.0	22.0		21.03		0.0	22.0
			160	0		23.63		1.0	24.0		21.12		0.0	22.0		21.05		0.0	22.0
16QAM	1	1		23.41		1.0	24.0		21.02		0.0	22.0		21.23		0.0	22.0		
	1	1		22.18		2.5	22.5		21.14		0.0	22.0		20.63		0.0	22.0		
	1	1		19.55		4.5	20.5		19.55		0.0	22.0		19.56		0.0	22.0		
CP-OFDM	QPSK	1	1		22.89		1.5	23.5		21.05		0.0	22.0		21.07		0.0	22.0	

NR Band n25 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
					372500.00	376500.00	380500.00	MPR			372500.00	376500.00	380500.00	MPR			372500.00	376500.00	380500.00	MPR		
					1862.5 MHz	1882.5 MHz	1902.5 MHz				1862.5 MHz	1882.5 MHz	1902.5 MHz				1862.5 MHz	1882.5 MHz	1902.5 MHz			
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.45		0.0	25.0		21.12		0.0	22.0		21.12		0.0	22.0			
			1	67		24.36		0.0	25.0		21.01		0.0	22.0		21.02		0.0	22.0			
			1	131		24.38		0.0	25.0		21.08		0.0	22.0		21.08		0.0	22.0			
			64	0		23.99		0.5	24.5		21.08		0.0	22.0		21.06		0.0	22.0			
			64	35		24.42		0.0	25.0		21.06		0.0	22.0		21.03		0.0	22.0			
			64	69		23.92		0.5	24.5		21.03		0.0	22.0		21.08		0.0	22.0			
			128	0		23.90		0.5	24.5		21.03		0.0	22.0		21.08		0.0	22.0			
		QPSK	1	1		24.51		0.0	25.0		21.10		0.0	22.0		21.17		0.0	22.0			
			1	67		24.39		0.0	25.0		21.03		0.0	22.0		21.07		0.0	22.0			
			1	131		24.42		0.0	25.0		21.06		0.0	22.0		21.08		0.0	22.0			
			64	0		23.42		1.0	24.0		21.05		0.0	22.0		21.02		0.0	22.0			
			64	35		24.40		0.0	25.0		21.04		0.0	22.0		21.05		0.0	22.0			
			64	69		23.37		1.0	24.0		21.06		0.0	22.0		21.02		0.0	22.0			
			128	0		23.39		1.0	24.0		21.09		0.0	22.0		21.08		0.0	22.0			
		16QAM	1	1		23.36		1.0	24.0		21.17		0.0	22.0		21.18		0.0	22.0			
64QAM	1	1		22.18		2.5	22.5		21.29		0.0	22.0		21.24		0.0	22.0					
256QAM	1	1		19.61		4.5	20.5		19.63		0.0	22.0		19.66		0.0	22.0					
CP-OFDM	QPSK	1	1		22.92		1.5	23.5		21.16		0.0	22.0		21.17		0.0	22.0				
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
					372000.00	376500.00	381000.00	MPR			371500.00	376500.00	381500.00	MPR			371500.00	376500.00	381500.00	MPR		
					1860 MHz	1882.5 MHz	1905 MHz				1857.5 MHz	1882.5 MHz	1907.5 MHz				1857.5 MHz	1882.5 MHz	1907.5 MHz			
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.81	24.32	23.90	0.0	25.0	20.87	20.94	21.00	0.0	22.0	20.81	20.88	20.98	0.0	22.0			
			1	53	24.30	23.90	23.03	0.0	25.0	20.90	20.93	21.06	0.0	22.0	20.89	20.82	21.02	0.0	22.0			
			1	104	24.52	23.92	22.74	0.0	25.0	20.97	20.87	21.08	0.0	22.0	20.94	20.85	21.02	0.0	22.0			
			50	0	23.51	23.69	23.13	0.5	24.5	20.99	21.06	21.23	0.0	22.0	21.02	21.06	21.15	0.0	22.0			
			50	28	24.08	23.93	23.09	0.0	25.0	21.06	21.08	21.24	0.0	22.0	21.07	21.02	21.23	0.0	22.0			
			50	56	23.87	23.46	22.53	0.5	24.5	21.03	21.06	21.26	0.0	22.0	21.06	20.99	21.16	0.0	22.0			
			100	0	23.27	23.18	22.44	0.5	24.5	21.09	21.10	21.19	0.0	22.0	21.03	21.02	21.16	0.0	22.0			
		QPSK	1	1	23.49	24.23	23.81	0.0	25.0	21.00	21.07	21.09	0.0	22.0	20.95	21.06	21.07	0.0	22.0			
			1	53	24.06	23.88	22.99	0.0	25.0	21.03	21.02	21.13	0.0	22.0	21.00	20.98	21.08	0.0	22.0			
			1	104	24.43	23.94	22.70	0.0	25.0	21.12	21.01	21.17	0.0	22.0	21.07	20.94	21.10	0.0	22.0			
			50	0	23.28	23.65	23.06	1.0	24.0	21.07	21.06	21.15	0.0	22.0	21.03	21.05	21.12	0.0	22.0			
			50	28	24.03	23.91	23.03	0.0	25.0	21.08	21.11	21.22	0.0	22.0	21.03	21.04	21.18	0.0	22.0			
			50	56	23.89	23.46	22.47	1.0	24.0	21.09	21.07	21.27	0.0	22.0	21.03	21.03	21.21	0.0	22.0			
			100	0	23.22	23.18	22.39	1.0	24.0	21.04	21.08	21.20	0.0	22.0	21.06	21.06	21.19	0.0	22.0			
		16QAM	1	1	22.53	23.33	22.86	1.0	24.0	20.99	21.06	21.13	0.0	22.0	20.92	21.06	21.07	0.0	22.0			
64QAM	1	1	21.87	22.49	22.22	2.5	22.5	21.16	21.24	21.28	0.0	22.0	21.19	21.23	21.29	0.0	22.0					
256QAM	1	1	19.63	19.87	20.01	4.5	20.5	19.66	19.78	19.80	0.0	22.0	19.73	19.86	19.84	0.0	22.0					
CP-OFDM	QPSK	1	1	23.04	23.26	23.07	1.5	23.5	20.96	21.05	21.10	0.0	22.0	20.92	21.02	21.05	0.0	22.0				

NR Band n25 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					371500.00	376500.00	381500.00			371500.00	376500.00	381500.00			371500.00	376500.00	381500.00		
					1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.50	24.40	23.51	0.0	25.0	20.89	20.96	21.04	0.0	22.0	20.68	20.96	21.00	0.0	22.0
			1	40	23.75	23.89	22.83	0.0	25.0	20.95	20.86	21.11	0.0	22.0	20.68	20.90	21.01	0.0	22.0
			1	77	24.48	24.09	22.62	0.0	25.0	20.88	20.91	21.11	0.0	22.0	20.78	20.90	21.07	0.0	22.0
			36	0	23.06	23.71	22.67	0.5	24.5	20.93	21.00	21.23	0.0	22.0	20.79	21.03	21.15	0.0	22.0
			36	22	23.71	23.90	22.85	0.0	25.0	20.93	20.95	21.27	0.0	22.0	20.82	21.06	21.18	0.0	22.0
			36	43	23.75	23.53	22.46	0.5	24.5	20.97	20.91	21.26	0.0	22.0	20.83	21.02	21.18	0.0	22.0
			75	0	22.92	23.12	22.17	0.5	24.5	20.96	20.97	21.25	0.0	22.0	20.84	21.04	21.20	0.0	22.0
		QPSK	1	1	23.41	24.27	23.42	0.0	25.0	20.94	20.98	21.19	0.0	22.0	20.76	21.06	21.08	0.0	22.0
			1	40	23.70	23.81	22.79	0.0	25.0	20.96	20.88	21.20	0.0	22.0	20.70	20.94	21.11	0.0	22.0
			1	77	24.47	24.04	22.59	0.0	25.0	21.01	20.84	21.21	0.0	22.0	20.78	20.97	21.15	0.0	22.0
			36	0	22.97	23.60	22.58	1.0	24.0	20.87	21.00	21.26	0.0	22.0	20.84	21.00	21.15	0.0	22.0
			36	22	23.65	23.82	22.76	0.0	25.0	21.05	20.93	21.22	0.0	22.0	20.79	21.00	21.20	0.0	22.0
			36	43	23.70	23.48	22.39	1.0	24.0	20.94	20.90	21.24	0.0	22.0	20.76	20.98	21.21	0.0	22.0
		CP-OFDM	QPSK	75	0	22.88	23.09	22.14	1.0	24.0	21.00	20.88	21.24	0.0	22.0	20.78	20.99	21.20	0.0
16QAM	1			1	22.48	23.35	22.48	1.0	24.0	20.92	21.14	21.17	0.0	22.0	20.88	21.04	21.06	0.0	22.0
64QAM	1			1	21.85	22.46	21.84	2.5	22.5	21.27	21.30	21.31	0.0	22.0	21.13	21.17	21.17	0.0	22.0
256QAM	1	1	19.66	19.94	20.05	4.5	20.5	19.72	19.78	19.83	0.0	22.0	19.71	19.81	19.88	0.0	22.0		
CP-OFDM	QPSK	1	1	23.10	23.08	23.05	1.5	23.5	21.01	21.11	21.10	0.0	22.0	20.96	21.02	20.94	0.0	22.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					371000.00	376500.00	382000.00			371000.00	376500.00	382000.00			371000.00	376500.00	382000.00		
					1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.66	24.39	22.98	0.0	25.0	20.86	20.85	21.19	0.0	22.0	20.79	20.87	21.13	0.0	22.0
			1	26	23.59	23.89	22.95	0.0	25.0	20.96	20.87	21.22	0.0	22.0	20.84	20.87	21.18	0.0	22.0
			1	50	24.29	24.20	22.61	0.0	25.0	20.97	20.76	21.21	0.0	22.0	20.94	20.85	21.16	0.0	22.0
			25	0	23.07	23.71	22.53	0.5	24.5	21.34	21.04	21.29	0.0	22.0	20.93	20.94	21.31	0.0	22.0
			25	14	23.59	23.97	22.98	0.0	25.0	20.89	21.04	21.30	0.0	22.0	21.03	20.93	21.33	0.0	22.0
			25	27	23.52	23.67	22.53	0.5	24.5	21.03	21.05	21.29	0.0	22.0	21.17	20.99	21.28	0.0	22.0
			50	0	22.79	23.21	22.19	0.5	24.5	21.00	21.04	21.31	0.0	22.0	21.08	20.96	21.32	0.0	22.0
		QPSK	1	1	23.53	24.32	22.91	0.0	25.0	20.96	21.06	21.29	0.0	22.0	20.94	20.99	21.25	0.0	22.0
			1	26	23.51	23.87	22.93	0.0	25.0	20.97	21.02	21.33	0.0	22.0	20.97	20.92	21.30	0.0	22.0
			1	50	24.25	24.19	22.60	0.0	25.0	21.04	21.00	21.31	0.0	22.0	21.08	20.93	21.28	0.0	22.0
			25	0	23.00	23.66	22.47	1.0	24.0	20.94	21.06	21.34	0.0	22.0	20.95	21.00	21.29	0.0	22.0
			25	14	23.52	23.92	22.94	0.0	25.0	20.90	21.04	21.32	0.0	22.0	20.97	20.94	21.31	0.0	22.0
			25	27	23.47	23.61	22.50	1.0	24.0	21.04	21.05	21.34	0.0	22.0	21.12	20.94	21.27	0.0	22.0
			50	0	22.76	23.19	22.17	1.0	24.0	20.97	21.04	21.33	0.0	22.0	21.05	20.92	21.29	0.0	22.0
CP-OFDM	QPSK	16QAM	1	1	22.59	23.39	22.00	1.0	24.0	20.86	21.07	21.28	0.0	22.0	20.90	20.94	21.26	0.0	22.0
		64QAM	1	1	21.94	22.46	21.32	2.5	22.5	21.02	21.21	21.44	0.0	22.0	21.12	21.10	21.36	0.0	22.0
		256QAM	1	1	19.71	19.89	19.82	4.5	20.5	19.69	19.75	19.95	0.0	22.0	19.73	19.76	20.01	0.0	22.0
		CP-OFDM	QPSK	1	1	22.99	23.07	23.17	1.5	23.5	20.96	20.99	21.18	0.0	22.0	20.84	20.91	21.13	0.0

NR Band n25 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	
					370500.00	376500.00	382500.00			370500.00	376500.00	382500.00			370500.00	376500.00	382500.00			
					1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz			
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.50	24.47	23.30	0.0	25.0	20.80	20.87	21.09	0.0	22.0	20.95	20.86	21.09	0.0	22.0	
			1	13	23.34	24.16	23.16	0.0	25.0	20.74	20.62	21.14	0.0	22.0	20.91	20.81	21.10	0.0	22.0	
			1	23	23.64	24.30	22.81	0.0	25.0	20.75	20.59	21.09	0.0	22.0	20.97	20.83	21.10	0.0	22.0	
			12	0	22.52	23.36	22.40	0.5	24.5	20.93	20.49	21.17	0.0	22.0	20.99	20.87	21.21	0.0	22.0	
			12	7	23.30	24.04	23.06	0.0	25.0	20.76	20.46	21.15	0.0	22.0	20.96	20.84	21.19	0.0	22.0	
			12	13	22.65	23.33	22.16	0.5	24.5	20.82	20.50	21.19	0.0	22.0	20.96	20.87	21.21	0.0	22.0	
			25	0	22.57	23.31	22.27	0.5	24.5	20.64	20.57	21.15	0.0	22.0	20.96	20.94	21.22	0.0	22.0	
		QPSK	1	1	23.43	24.23	23.13	0.0	25.0	20.74	20.69	21.13	0.0	22.0	21.02	20.91	21.20	0.0	22.0	
			1	13	23.31	23.99	22.95	0.0	25.0	20.74	20.68	21.06	0.0	22.0	20.95	20.86	21.22	0.0	22.0	
			1	23	23.65	24.19	22.62	0.0	25.0	20.47	20.82	21.05	0.0	22.0	21.02	20.92	21.24	0.0	22.0	
			12	0	22.46	23.22	22.30	1.0	24.0	20.67	20.88	21.11	0.0	22.0	20.93	20.90	21.24	0.0	22.0	
			12	7	23.26	23.93	22.98	0.0	25.0	20.45	20.87	21.07	0.0	22.0	20.92	20.89	21.18	0.0	22.0	
			12	13	22.61	23.23	22.08	1.0	24.0	20.56	20.82	21.06	0.0	22.0	20.96	20.88	21.22	0.0	22.0	
			25	0	22.55	23.24	22.21	1.0	24.0	20.58	20.79	21.05	0.0	22.0	20.93	20.90	21.22	0.0	22.0	
		16QAM	1	1	22.53	23.28	22.20	1.0	24.0	20.63	20.84	21.03	0.0	22.0	21.04	20.56	21.19	0.0	22.0	
		64QAM	1	1	21.42	22.15	21.09	2.5	22.5	20.84	20.90	21.26	0.0	22.0	21.14	20.83	21.42	0.0	22.0	
		256QAM	1	1	19.47	20.04	19.34	4.5	20.5	19.79	19.82	20.04	0.0	22.0	19.77	19.83	20.06	0.0	22.0	
		CP-OFDM	QPSK	1	1	23.05	23.14	23.12	1.5	23.5	20.66	20.79	21.00	0.0	22.0	20.87	20.77	21.15	0.0	22.0

NR Band n30 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)														
					DSI = 0, 2					DSI = 3					DSI = 1, 4				
					Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					462000	2310 MHz				462000	2310 MHz				462000	2310 MHz			
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1		23.2		0.0	24.0		20.2		0.0	21.0		20.2		0.0	21.0
			1	26		23.2		0.0	24.0		20.3		0.0	21.0		20.3		0.0	21.0
			1	50		23.2		0.0	24.0		20.3		0.0	21.0		20.3		0.0	21.0
			25	0		22.2		0.5	23.5		20.3		0.0	21.0		20.3		0.0	21.0
			25	14		23.3		0.0	24.0		20.4		0.0	21.0		20.4		0.0	21.0
			25	27		22.3		0.5	23.5		20.4		0.0	21.0		20.3		0.0	21.0
		50	0		22.3		0.5	23.5		20.3		0.0	21.0		20.3		0.0	21.0	
		QPSK	1	1		23.3		0.0	24.0		20.3		0.0	21.0		20.4		0.0	21.0
			1	26		23.3		0.0	24.0		20.4		0.0	21.0		20.4		0.0	21.0
			1	50		23.3		0.0	24.0		20.4		0.0	21.0		20.4		0.0	21.0
			25	0		22.3		1.0	23.0		20.3		0.0	21.0		20.3		0.0	21.0
			25	14		23.3		0.0	24.0		20.4		0.0	21.0		20.4		0.0	21.0
			25	27		22.3		1.0	23.0		20.3		0.0	21.0		20.3		0.0	21.0
		16QAM	1	1		22.3		1.0	23.0		20.3		0.0	21.0		20.3		0.0	21.0
			1	26		22.4		1.0	23.0		20.3		0.0	21.0		20.3		0.0	21.0
			1	50		22.3		1.0	23.0		20.3		0.0	21.0		20.3		0.0	21.0
	64QAM	1	1		21.1		2.5	21.5		20.5		0.0	21.0		20.5		0.0	21.0	
256QAM	1	1		18.3		4.5	19.5		18.5		0.0	21.0		18.5		0.0	21.0		
CP-OFDM	QPSK	1	1		21.8		1.5	22.5		20.3		0.0	21.0		20.4		0.0	21.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					461500	462000	462500			461500	462000	462500			461500	462000	462500		
					2307.5 MHz	2310 MHz	2312.5 MHz	2307.5 MHz	2310 MHz	2312.5 MHz	2307.5 MHz	2310 MHz	2312.5 MHz						
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1		23.2		0.0	24.0		20.1		0.0	21.0		20.1		0.0	21.0
			1	13		23.3		0.0	24.0		20.3		0.0	21.0		20.3		0.0	21.0
			1	23		23.2		0.0	24.0		20.3		0.0	21.0		20.3		0.0	21.0
			12	0		22.3		0.5	23.5		20.4		0.0	21.0		20.4		0.0	21.0
			12	7		23.3		0.0	24.0		20.4		0.0	21.0		20.4		0.0	21.0
			12	13		22.4		0.5	23.5		20.3		0.0	21.0		20.3		0.0	21.0
		25	0		22.4		0.5	23.5		20.4		0.0	21.0		20.4		0.0	21.0	
		QPSK	1	1		23.5		0.0	24.0		20.2		0.0	21.0		20.3		0.0	21.0
			1	13		23.6		0.0	24.0		20.4		0.0	21.0		20.4		0.0	21.0
			1	23		23.5		0.0	24.0		20.3		0.0	21.0		20.3		0.0	21.0
			12	0		22.4		1.0	23.0		20.4		0.0	21.0		20.4		0.0	21.0
			12	7		23.3		0.0	24.0		20.4		0.0	21.0		20.3		0.0	21.0
			12	13		22.4		1.0	23.0		20.3		0.0	21.0		20.4		0.0	21.0
		25	0		22.4		1.0	23.0		20.4		0.0	21.0		20.3		0.0	21.0	
		16QAM	1	1		22.3		1.0	23.0		20.2		0.0	21.0		20.2		0.0	21.0
		64QAM	1	1		21.0		2.5	21.5		20.4		0.0	21.0		20.4		0.0	21.0
	256QAM	1	1		18.3		4.5	19.5		18.5		0.0	21.0		18.5		0.0	21.0	
CP-OFDM	QPSK	1	1		21.7		1.5	22.5		20.2		0.0	21.0		20.3		0.0	21.0	

NR Band n41 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)														
					DSI = 0.2					DSI = 1, 3, 4									
					Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit					
					509202 2546.01 MHz	518598 2592.99 MHz	528000 2640 MHz			509202 2546.01 MHz	518598 2592.99 MHz	528000 2640 MHz							
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1			19.39			0.0	20.5			17.46			0.0	18.0	
			1	137			19.56			0.0	20.5				17.58			0.0	18.0
			1	271			19.44			0.0	20.5				17.45			0.0	18.0
			135	0			19.57			0.5	20.0				17.64			0.0	18.0
			135	69			19.59			0.0	20.5				17.63			0.0	18.0
			135	138			19.55			0.5	20.0				17.58			0.0	18.0
		270	0			19.51			0.5	20.0				17.55			0.0	18.0	
		QPSK	1	1			19.36			0.0	20.5				17.40			0.0	18.0
			1	137			19.55			0.0	20.5				17.55			0.0	18.0
			1	271			19.41			0.0	20.5				17.42			0.0	18.0
			135	0			19.58			0.0	20.5				17.54			0.0	18.0
			135	69			19.61			0.0	20.5				17.57			0.0	18.0
			135	138			19.58			0.0	20.5				17.52			0.0	18.0
		270	0			19.54			0.0	20.5				17.51			0.0	18.0	
		16QAM	1	1			19.12			0.0	20.5				17.16			0.0	18.0
			1	137			19.00			0.0	20.5				17.26			0.0	18.0
			1	271			19.19			0.0	20.5				17.18			0.0	18.0
		64QAM	1	1			19.51			0.0	20.5				17.44			0.0	18.0
256QAM	1	1			19.45			0.0	20.5				17.38			0.0	18.0		
CP-OFDM	QPSK	1	1			19.42			0.0	20.5			17.42			0.0	18.0		
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit					
					508200.00 2541 MHz		528996.00 2644.98 MHz			508200.00 2541 MHz		528996.00 2644.98 MHz							
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.11			19.55	0.0	20.5	17.05			17.63	0.0	18.0			
			1	123	19.49			19.39	0.0	20.5	17.49			17.54	0.0	18.0			
			1	243	19.70			19.30	0.0	20.5	17.72			17.30	0.0	18.0			
			120	0	19.31			19.52	0.0	20.5	17.27			17.66	0.0	18.0			
			120	63	19.50			19.43	0.0	20.5	17.58			17.54	0.0	18.0			
			120	125	19.51			19.32	0.0	20.5	17.59			17.46	0.0	18.0			
		243	0	19.46			19.44	0.0	20.5	17.48			17.59	0.0	18.0				
		QPSK	1	1	18.97			19.55	0.0	20.5	17.14			17.73	0.0	18.0			
			1	123	19.35			19.30	0.0	20.5	17.55			17.47	0.0	18.0			
			1	243	19.63			19.19	0.0	20.5	17.79			17.30	0.0	18.0			
			120	0	19.25			19.50	0.0	20.5	17.34			17.67	0.0	18.0			
			120	63	19.49			19.54	0.0	20.5	17.59			17.56	0.0	18.0			
			120	125	19.45			19.42	0.0	20.5	17.59			17.42	0.0	18.0			
		243	0	19.42			19.49	0.0	20.5	17.50			17.53	0.0	18.0				
		16QAM	1	1	19.16			19.35	0.0	20.5	17.21			17.76	0.0	18.0			
		64QAM	1	1	19.01			19.34	0.0	20.5	16.88			17.42	0.0	18.0			
		256QAM	1	1	19.10			19.40	0.0	20.5	17.01			17.56	0.0	18.0			
		CP-OFDM	QPSK	1	1	18.99			19.45	0.0	20.5	17.40			17.77	0.0	18.0		

NR Band n41 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit		
					507204.00			529998.00			507204.00			529998.00				
					2536.02 MHz			2649.99 MHz			2536.02 MHz			2649.99 MHz				
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.23				19.41	0.0	20.5	17.09				17.59	0.0	18.0
			1	109	19.62				19.38	0.0	20.5	17.60				17.59	0.0	18.0
			1	215	19.59				19.13	0.0	20.5	17.70				17.27	0.0	18.0
			108	0	19.51				19.48	0.0	20.5	17.42				17.57	0.0	18.0
			108	55	19.44				19.38	0.0	20.5	17.59				17.49	0.0	18.0
			108	109	19.49				19.30	0.0	20.5	17.66				17.45	0.0	18.0
		216	0	19.45				19.32	0.0	20.5	17.61				17.51	0.0	18.0	
		QPSK	1	1	19.03				19.39	0.0	20.5	17.16				17.62	0.0	18.0
			1	109	19.38				19.35	0.0	20.5	17.61				17.57	0.0	18.0
			1	215	19.51				19.13	0.0	20.5	17.77				17.29	0.0	18.0
			108	0	19.30				19.43	0.0	20.5	17.36				17.62	0.0	18.0
			108	55	19.47				19.35	0.0	20.5	17.57				17.48	0.0	18.0
			108	109	19.49				19.30	0.0	20.5	17.67				17.39	0.0	18.0
		216	0	19.43				19.36	0.0	20.5	17.55				17.55	0.0	18.0	
		16QAM	1	1	19.26				19.49	0.0	20.5	17.20				17.65	0.0	18.0
		64QAM	1	1	19.05				19.42	0.0	20.5	16.90				17.33	0.0	18.0
256QAM	1	1	18.89				19.33	0.0	20.5	16.99				17.52	0.0	18.0		
CP-OFDM	QPSK	1	1	18.95				19.32	0.0	20.5	17.24				17.83	0.0	18.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit		
					505200.00		518598.00				531996.00	505200.00		518598.00				531996.00
					2526 MHz		2592.99 MHz				2659.98 MHz	2526 MHz		2592.99 MHz				2659.98 MHz
60 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.09		19.50		19.34	0.0	20.5	17.26		17.74		17.68	0.0	18.0
			1	81	19.44		19.52		19.21	0.0	20.5	17.56		17.87		17.52	0.0	18.0
			1	160	19.63		19.46		19.00	0.0	20.5	17.70		17.77		17.32	0.0	18.0
			81	0	19.30		19.43		19.28	0.0	20.5	17.36		17.72		17.50	0.0	18.0
			81	41	19.47		19.53		19.22	0.0	20.5	17.49		17.73		17.43	0.0	18.0
			81	81	19.55		19.54		19.18	0.0	20.5	17.62		17.76		17.32	0.0	18.0
		162	0	19.46		19.45		19.21	0.0	20.5	17.47		17.76		17.34	0.0	18.0	
		QPSK	1	1	19.15		19.34		19.36	0.0	20.5	17.20		17.68		17.55	0.0	18.0
			1	81	19.48		19.51		19.22	0.0	20.5	17.50		17.73		17.43	0.0	18.0
			1	160	19.58		19.43		19.01	0.0	20.5	17.68		17.70		17.22	0.0	18.0
			81	0	19.35		19.41		19.26	0.0	20.5	17.41		17.68		17.47	0.0	18.0
			81	41	19.46		19.48		19.24	0.0	20.5	17.53		17.76		17.42	0.0	18.0
			81	81	19.57		19.54		19.19	0.0	20.5	17.71		17.74		17.33	0.0	18.0
		162	0	19.47		19.50		19.18	0.0	20.5	17.65		17.72		17.35	0.0	18.0	
		16QAM	1	1	19.25		19.40		19.42	0.0	20.5	17.32		17.62		17.56	0.0	18.0
		64QAM	1	1	18.98		19.14		19.10	0.0	20.5	17.28		17.53		17.48	0.0	18.0
256QAM	1	1	19.05		19.25		19.22	0.0	20.5	17.29		17.59		17.51	0.0	18.0		
CP-OFDM	QPSK	1	1	19.46		19.59		19.55	0.0	20.5	17.23		17.53		17.46	0.0	18.0	

NR Band n41 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit		
					503202.00	513468.00		523734.00	534000.00			503202.00	513468.00		523734.00	534000.00				
					2516.01 MHz	2567.34 MHz		2618.67 MHz	2670 MHz			2516.01 MHz	2567.34 MHz		2618.67 MHz	2670 MHz				
50 MHz	DFT-s-OFDM	$\pi/2$ BPSK	1	1	18.90	19.47		19.43	19.20	0.0	20.5	17.32	17.64		17.75	17.52	0.0	18.0		
			1	67	19.21	19.52		19.40	19.13	0.0	20.5	17.48	17.91		17.72	17.44	0.0	18.0		
			1	131	19.40	19.63		19.33	18.99	0.0	20.5	17.75	17.95		17.61	17.22	0.0	18.0		
			64	0	19.08	19.46		19.52	19.24	0.0	20.5	17.32	17.70		17.75	17.48	0.0	18.0		
			64	35	19.21	19.55		19.52	19.17	0.0	20.5	17.42	17.77		17.72	17.38	0.0	18.0		
			64	69	19.30	19.51		19.43	19.06	0.0	20.5	17.52	17.78		17.61	17.20	0.0	18.0		
			128	0	19.17	19.55		19.49	19.23	0.0	20.5	17.43	17.78		17.76	17.34	0.0	18.0		
		QPSK	1	1	19.01	19.29		19.52	19.24	0.0	20.5	17.34	17.60		17.77	17.46	0.0	18.0		
			1	67	19.19	19.51		19.47	19.17	0.0	20.5	17.46	17.79		17.62	17.38	0.0	18.0		
			1	131	19.41	19.59		19.33	19.00	0.0	20.5	17.66	17.79		17.51	17.11	0.0	18.0		
			64	0	19.09	19.41		19.48	19.22	0.0	20.5	17.37	17.68		17.76	17.43	0.0	18.0		
			64	35	19.22	19.50		19.50	19.17	0.0	20.5	17.45	17.74		17.75	17.34	0.0	18.0		
			64	69	19.34	19.49		19.42	19.04	0.0	20.5	17.55	17.76		17.66	17.20	0.0	18.0		
		CP-OFDM	QPSK	128	0	19.21	19.50		19.47	19.18	0.0	20.5	17.45	17.76		17.70	17.33	0.0	18.0	
				16QAM	1	1	19.21	19.41		19.52	19.31	0.0	20.5	17.33	17.57		17.72	17.40	0.0	18.0
				64QAM	1	1	18.82	19.05		19.21	18.95	0.0	20.5	17.24	17.49		17.67	17.33	0.0	18.0
		256QAM	1	1	18.88	19.25		19.33	19.09	0.0	20.5	17.27	17.51		17.65	17.38	0.0	18.0		
		CP-OFDM	QPSK	1	1	19.30	19.53		19.57	19.43	0.0	20.5	17.22	17.48		17.63	17.31	0.0	18.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit		
					502200.00	510402.00	518598.00	526800.00	534996.00			502200.00	510402.00	518598.00	526800.00	534996.00				
					2511 MHz	2552.01 MHz	2592.99 MHz	2634 MHz	2674.98 MHz			2511 MHz	2552.01 MHz	2592.99 MHz	2634 MHz	2674.98 MHz				
40 MHz	DFT-s-OFDM	$\pi/2$ BPSK	1	1	19.05	19.33	19.54	19.40	19.26	0.0	20.5	17.39	17.64	17.83	17.71	17.44	0.0	18.0		
			1	53	19.18	19.37	19.55	19.28	19.05	0.0	20.5	17.43	17.62	17.77	17.52	17.24	0.0	18.0		
			1	104	19.40	19.57	19.66	19.32	18.88	0.0	20.5	17.71	17.79	17.83	17.56	17.07	0.0	18.0		
			50	0	19.12	19.47	19.55	19.29	19.19	0.0	20.5	17.26	17.61	17.72	17.57	17.34	0.0	18.0		
			50	28	19.23	19.47	19.60	19.35	19.12	0.0	20.5	17.42	17.63	17.74	17.56	17.27	0.0	18.0		
			50	56	19.30	19.60	19.58	19.40	19.13	0.0	20.5	17.47	17.76	17.72	17.59	17.29	0.0	18.0		
			100	0	19.26	19.47	19.61	19.41	19.14	0.0	20.5	17.44	17.61	17.75	17.54	17.30	0.0	18.0		
		QPSK	1	1	19.16	19.48	19.56	19.53	19.30	0.0	20.5	17.32	17.76	17.91	17.67	17.44	0.0	18.0		
			1	53	19.26	19.44	19.50	19.30	19.09	0.0	20.5	17.35	17.75	17.82	17.47	17.17	0.0	18.0		
			1	104	19.53	19.60	19.59	19.37	18.92	0.0	20.5	17.59	17.99	17.79	17.51	17.04	0.0	18.0		
			50	0	19.20	19.44	19.61	19.34	19.20	0.0	20.5	17.29	17.64	17.72	17.53	17.33	0.0	18.0		
			50	28	19.30	19.45	19.47	19.32	19.12	0.0	20.5	17.39	17.59	17.72	17.53	17.28	0.0	18.0		
			50	56	19.36	19.59	19.48	19.41	19.10	0.0	20.5	17.49	17.73	17.78	17.57	17.23	0.0	18.0		
		CP-OFDM	QPSK	100	0	19.29	19.47	19.51	19.33	19.11	0.0	20.5	17.43	17.60	17.83	17.54	17.32	0.0	18.0	
				16QAM	1	1	19.25	19.52	19.61	19.49	19.34	0.0	20.5	17.36	17.80	17.98	17.98	17.71	0.0	18.0
				64QAM	1	1	18.96	19.19	19.31	19.24	19.05	0.0	20.5	17.29	17.67	17.73	17.64	17.39	0.0	18.0
		256QAM	1	1	19.11	19.34	19.41	19.39	19.15	0.0	20.5	17.34	17.65	17.82	17.71	17.50	0.0	18.0		
		CP-OFDM	QPSK	1	1	19.42	19.65	19.71	19.73	19.50	0.0	20.5	17.29	17.61	17.80	17.71	17.44	0.0	18.0	

NR Band n41 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	
					501204.00	509898.00	518598.00	527298.00	535998.00			501204.00	509898.00	518598.00	527298.00	535998.00			
					2506.02 MHz	2549.49 MHz	2592.99 MHz	2636.49 MHz	2679.99 MHz			2506.02 MHz	2549.49 MHz	2592.99 MHz	2636.49 MHz	2679.99 MHz			
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.04	19.17	19.38	19.31	18.96	0.0	20.5	17.35	17.56	17.78	17.60	17.29	0.0	18.0	
			1	26	19.00	19.24	19.38	19.13	18.88	0.0	20.5	17.32	17.64	17.77	17.39	17.17	0.0	18.0	
			1	49	19.11	19.39	19.34	19.22	18.89	0.0	20.5	17.48	17.81	17.75	17.48	17.16	0.0	18.0	
			25	0	19.05	19.33	19.46	19.28	19.02	0.0	20.5	17.36	17.70	17.78	17.54	17.23	0.0	18.0	
			25	13	19.07	19.34	19.48	19.18	18.95	0.0	20.5	17.34	17.68	17.79	17.50	17.22	0.0	18.0	
			25	26	19.04	19.36	19.44	19.24	18.94	0.0	20.5	17.35	17.62	17.73	17.53	17.20	0.0	18.0	
			50	0	19.07	19.33	19.51	19.19	18.96	0.0	20.5	17.38	17.68	17.78	17.52	17.25	0.0	18.0	
		QPSK	1	1	18.99	19.27	19.46	19.28	19.06	0.0	20.5	17.40	17.58	17.75	17.60	17.23	0.0	18.0	
			1	26	18.98	19.26	19.40	19.13	18.91	0.0	20.5	17.35	17.61	17.69	17.41	17.12	0.0	18.0	
			1	49	19.12	19.38	19.39	19.21	18.89	0.0	20.5	17.48	17.77	17.72	17.49	17.12	0.0	18.0	
			25	0	19.03	19.31	19.48	19.26	19.00	0.0	20.5	17.39	17.66	17.84	17.53	17.24	0.0	18.0	
			25	13	19.04	19.33	19.50	19.21	18.97	0.0	20.5	17.43	17.65	17.80	17.49	17.22	0.0	18.0	
			25	26	19.03	19.29	19.43	19.22	18.90	0.0	20.5	17.42	17.63	17.77	17.54	17.19	0.0	18.0	
			50	0	19.06	19.32	19.45	19.17	18.95	0.0	20.5	17.39	17.63	17.78	17.46	17.21	0.0	18.0	
		16QAM	1	1	19.00	19.35	19.35	19.33	19.05	0.0	20.5	17.70	17.87	17.95	17.84	17.58	0.0	18.0	
		64QAM	1	1	19.03	19.03	19.16	19.04	18.77	0.0	20.5	17.35	17.53	17.63	17.50	17.21	0.0	18.0	
		256QAM	1	1	18.99	19.14	19.32	19.17	18.91	0.0	20.5	17.43	17.61	17.74	17.58	17.27	0.0	18.0	
		CP-OFDM	QPSK	1	1	19.24	19.44	19.64	19.48	19.18	0.0	20.5	17.43	17.56	17.77	17.58	17.29	0.0	18.0

NR Band n66 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)																			
					DSI = 0, 2					DSI = 3					DSI = 1, 4									
					Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit					
					346000 1730 MHz	349000 1745 MHz	352000 1760 MHz			346000 1730 MHz	349000 1745 MHz	352000 1760 MHz			346000 1730 MHz	349000 1745 MHz	352000 1760 MHz							
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.06		0.0	25		21.58		0.0	22		21.51		0.0	22					
			1	108		24.23		0.0	25		21.56		0.0	22		21.46		0.0	22					
			1	214		23.88		0.0	25		21.63		0.0	22		21.44		0.0	22					
			108	0		24.04		0.5	24.5		21.82		0.0	22		21.66		0.0	22					
			108	54		24.39		0.0	25		21.65		0.0	22		21.54		0.0	22					
			108	108		23.35		0.5	24.5		21.74		0.0	22		21.64		0.0	22					
			216	0		23.61		0.5	24.5		21.75		0.0	22		21.68		0.0	22					
		QPSK	1	1		23.41		0.0	25		21.63		0.0	22		21.55		0.0	22					
			1	108		24.27		0.0	25		21.67		0.0	22		21.59		0.0	22					
			1	214		23.52		0.0	25		21.65		0.0	22		21.58		0.0	22					
			108	0		23.56		1.0	24		21.79		0.0	22		21.68		0.0	22					
			108	54		24.13		0.0	25		21.83		0.0	22		21.69		0.0	22					
			108	108		23.15		1.0	24		21.79		0.0	22		21.55		0.0	22					
			216	0		23.08		1.0	24		21.82		0.0	22		21.71		0.0	22					
		16QAM	1	1		22.54		1.0	24		21.73		0.0	22		21.82		0.0	22					
1	108			23.17		1.0	24		21.64		0.0	22		21.53		0.0	22							
1	214			22.72		1.0	24		21.67		0.0	22		21.63		0.0	22							
64QAM	1		1		22.18		2.5	22.5		21.92		0.0	22		21.86		0.0	22						
256QAM	1	1		19.78		4.5	20.5		19.72		0.0	22		19.71		0.0	22							
CP-OFDM	QPSK	1	1		22.47		1.5	23.5		21.53		0.0	22		21.46		0.0	22						
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit					
					345000.00 1725 MHz	349000.00 1745 MHz	353000.00 1765 MHz			345000.00 1725 MHz	349000.00 1745 MHz	353000.00 1765 MHz			345000.00 1725 MHz	349000.00 1745 MHz	353000.00 1765 MHz							
					30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.09	24.63	24.61	0.0	25	21.63	21.69	21.54	0.0	22	21.65	21.67	21.58	0.0	22
								1	80	24.20	24.50	24.56	0.0	25	21.67	21.60	21.68	0.0	22	21.70	21.62	21.70	0.0	22
1	158	24.56	24.60	24.42				0.0	25	21.66	21.78	21.78	0.0	22	21.61	21.78	21.76	0.0	22					
80	0	23.56	23.82	23.79				0.5	24.5	21.78	21.71	21.86	0.0	22	21.81	21.72	21.82	0.0	22					
80	40	24.24	24.73	24.69				0.0	25	21.83	21.72	21.82	0.0	22	21.82	21.74	21.85	0.0	22					
80	80	23.90	23.85	23.90				0.5	24.5	21.90	21.86	21.90	0.0	22	21.91	21.87	21.88	0.0	22					
160	0	23.61	23.82	23.83				0.5	24.5	21.82	21.85	21.87	0.0	22	21.83	21.88	21.88	0.0	22					
QPSK	1	1	24.01	24.70			24.54	0.0	25	21.74	21.78	21.63	0.0	22	21.74	21.79	21.63	0.0	22					
	1	80	24.17	24.71			24.75	0.0	25	21.77	21.75	21.79	0.0	22	21.78	21.72	21.84	0.0	22					
	1	158	24.76	24.59			24.35	0.0	25	21.76	21.90	21.88	0.0	22	21.79	21.85	21.89	0.0	22					
	80	0	23.47	23.83			23.83	1.0	24	21.77	21.72	21.82	0.0	22	21.79	21.76	21.82	0.0	22					
	80	40	24.18	24.75			24.68	0.0	25	21.80	21.75	21.86	0.0	22	21.86	21.72	21.85	0.0	22					
	80	80	23.94	23.88			23.89	1.0	24	21.90	21.90	21.89	0.0	22	21.93	21.90	21.90	0.0	22					
	160	0	23.58	23.87			23.85	1.0	24	21.89	21.86	21.93	0.0	22	21.88	21.87	21.92	0.0	22					
16QAM	1	1	23.12	23.66			23.54	1.0	24	21.74	21.73	21.63	0.0	22	21.72	21.76	21.62	0.0	22					
64QAM	1	1	22.42	22.43	22.27	2.5	22.5	21.95	21.96	21.82	0.0	22	21.91	22.00	21.86	0.0	22							
256QAM	1	1	19.72	19.84	19.66	4.5	20.5	19.76	19.75	19.66	0.0	22	19.77	19.78	19.66	0.0	22							
CP-OFDM	QPSK	1	1	22.81	23.23	23.10	1.5	23.5	21.72	21.77	21.64	0.0	22	21.72	21.78	21.69	0.0	22						

NR Band n66 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit		
					344000.00	349000.00	354000.00			344000.00	349000.00	354000.00			344000.00	349000.00	354000.00				
					1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz				
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.40	24.49	24.41	0.0	25	21.36	21.47	21.38	0.0	22	21.32	21.26	21.29	0.0	22		
			1	53	24.37	24.31	24.32	0.0	25	21.36	21.28	21.24	0.0	22	21.26	21.12	21.17	0.0	22		
			1	104	24.53	24.54	24.45	0.0	25	21.47	21.49	21.41	0.0	22	21.37	21.40	21.33	0.0	22		
			50	0	24.09	24.06	24.09	0.5	24.5	21.50	21.47	21.46	0.0	22	21.40	21.34	21.35	0.0	22		
			50	28	24.62	24.56	24.57	0.0	25	21.49	21.50	21.51	0.0	22	21.38	21.33	21.39	0.0	22		
			50	56	24.17	23.99	24.08	0.5	24.5	21.47	21.42	21.49	0.0	22	21.41	21.31	21.36	0.0	22		
		100	0	24.15	24.06	24.09	0.5	24.5	21.48	21.43	21.50	0.0	22	21.42	21.31	21.33	0.0	22			
		QPSK	1	1	24.47	24.60	24.49	0.0	25	21.39	21.55	21.41	0.0	22	21.34	21.30	21.35	0.0	22		
			1	53	24.47	24.38	24.36	0.0	25	21.39	21.31	21.31	0.0	22	21.26	21.15	21.21	0.0	22		
			1	104	24.62	24.61	24.48	0.0	25	21.53	21.55	21.43	0.0	22	21.36	21.39	21.35	0.0	22		
			50	0	23.85	23.59	23.60	1.0	24	21.46	21.48	21.47	0.0	22	21.38	21.30	21.35	0.0	22		
			50	28	24.64	24.57	24.58	0.0	25	21.52	21.44	21.44	0.0	22	21.45	21.29	21.36	0.0	22		
			50	56	23.79	23.51	23.38	1.0	24	21.60	21.43	21.51	0.0	22	21.47	21.27	21.40	0.0	22		
		CP-OFDM	QPSK	100	0	23.69	23.56	23.58	1.0	24	21.55	21.46	21.49	0.0	22	21.44	21.35	21.34	0.0	22	
				16QAM	1	1	23.46	23.67	23.42	1.0	24	21.48	21.55	21.46	0.0	22	21.45	21.52	21.46	0.0	22
				64QAM	1	1	22.19	22.29	22.30	2.5	22.5	21.72	21.82	21.86	0.0	22	21.74	21.81	21.86	0.0	22
1	1	19.56	19.64	19.64	4.5	20.5	19.52	19.58	19.65	0.0	22	19.53	19.60	19.64	0.0	22					
1	1	23.04	23.06	23.10	1.5	23.5	21.59	21.66	21.70	0.0	22	21.60	21.68	21.67	0.0	22					
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.44	24.50	24.37	0.0	25	21.25	21.29	21.23	0.0	22	21.24	21.26	21.20	0.0	22		
			1	40	24.42	24.36	24.35	0.0	25	21.25	21.16	21.13	0.0	22	21.23	21.15	21.22	0.0	22		
			1	77	24.59	24.42	24.50	0.0	25	21.37	21.17	21.27	0.0	22	21.34	21.17	21.25	0.0	22		
			36	0	24.18	24.16	24.13	0.5	24.5	21.43	21.36	21.38	0.0	22	21.44	21.33	21.34	0.0	22		
			36	22	24.27	24.59	24.59	0.0	25	21.42	21.28	21.35	0.0	22	21.41	21.28	21.38	0.0	22		
			36	43	24.13	24.07	24.14	0.5	24.5	21.43	21.28	21.36	0.0	22	21.46	21.34	21.38	0.0	22		
			75	0	24.06	24.12	24.12	0.5	24.5	21.44	21.29	21.33	0.0	22	21.41	21.27	21.33	0.0	22		
		QPSK	1	1	24.46	24.52	24.38	0.0	25	21.22	21.29	21.21	0.0	22	21.30	21.26	21.23	0.0	22		
			1	40	24.04	24.41	24.43	0.0	25	21.34	21.11	21.15	0.0	22	21.28	21.07	21.21	0.0	22		
			1	77	24.67	24.45	24.51	0.0	25	21.42	21.13	21.25	0.0	22	21.34	21.19	21.25	0.0	22		
			36	0	23.72	23.66	23.65	1.0	24	21.40	21.37	21.36	0.0	22	21.41	21.33	21.32	0.0	22		
			36	22	24.12	24.58	24.62	0.0	25	21.43	21.28	21.34	0.0	22	21.35	21.30	21.32	0.0	22		
			36	43	23.78	23.72	23.67	1.0	24	21.44	21.35	21.36	0.0	22	21.43	21.32	21.32	0.0	22		
			75	0	23.55	23.65	23.62	1.0	24	21.45	21.36	21.34	0.0	22	21.38	21.33	21.37	0.0	22		
		CP-OFDM	QPSK	16QAM	1	1	23.44	23.52	23.38	1.0	24	21.27	21.43	21.33	0.0	22	21.27	21.45	21.23	0.0	22
				64QAM	1	1	22.26	22.33	22.28	2.5	22.5	21.79	21.80	21.77	0.0	22	21.74	21.79	21.78	0.0	22
256QAM	1			1	19.56	19.61	19.59	4.5	20.5	19.59	19.56	19.62	0.0	22	19.58	19.62	19.57	0.0	22		
1	1	23.05	23.10	23.05	1.5	23.5	21.57	21.60	21.61	0.0	22	21.56	21.62	21.60	0.0	22					

NR Band n66 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	
					343000.00	349000.00	355000.00			343000.00	349000.00	355000.00			343000.00	349000.00	355000.00			
					1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz			
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.70	24.61	24.55	0.0	25	21.40	21.46	21.36	0.0	22	21.44	21.37	21.35	0.0	22	
			1	26	24.56	24.59	24.57	0.0	25	21.51	21.39	21.38	0.0	22	21.47	21.32	21.39	0.0	22	
			1	50	24.74	24.53	24.56	0.0	25	21.49	21.30	21.35	0.0	22	21.44	21.29	21.37	0.0	22	
			25	0	24.31	24.22	24.23	0.5	24.5	21.52	21.48	21.48	0.0	22	21.51	21.47	21.42	0.0	22	
			25	14	24.47	24.71	24.70	0.0	25	21.52	21.47	21.43	0.0	22	21.56	21.38	21.44	0.0	22	
			25	27	24.15	24.16	24.22	0.5	24.5	21.56	21.39	21.43	0.0	22	21.55	21.40	21.44	0.0	22	
			50	0	24.17	24.18	24.22	0.5	24.5	21.53	21.43	21.47	0.0	22	21.52	21.40	21.44	0.0	22	
		QPSK	1	1	24.71	24.63	24.57	0.0	25	21.45	21.46	21.40	0.0	22	21.43	21.40	21.35	0.0	22	
			1	26	24.24	24.63	24.61	0.0	25	21.47	21.35	21.41	0.0	22	21.42	21.29	21.42	0.0	22	
			1	50	24.54	24.56	24.67	0.0	25	21.40	21.27	21.43	0.0	22	21.45	21.29	21.32	0.0	22	
			25	0	23.86	23.68	23.26	1.0	24	21.50	21.40	21.47	0.0	22	21.50	21.45	21.47	0.0	22	
			25	14	24.27	24.70	24.66	0.0	25	21.54	21.42	21.49	0.0	22	21.56	21.42	21.42	0.0	22	
		16QAM	1	1	23.69	23.61	23.54	1.0	24	21.42	21.65	21.34	0.0	22	21.58	21.56	21.37	0.0	22	
			64QAM	1	1	22.53	22.53	22.39	2.5	22.5	21.85	21.79	21.92	0.0	22	21.77	21.89	21.92	0.0	22
			256QAM	1	1	19.72	19.79	19.78	4.5	20.5	19.67	20.12	19.67	0.0	22	19.64	19.70	19.71	0.0	22
		CP-OFDM	QPSK	1	1	23.23	23.17	23.11	1.5	23.5	21.63	21.79	21.62	0.0	22	21.63	21.76	21.63	0.0	22
		5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.65	24.53	24.55	0.0	25	21.45	21.43	21.36	0.0	22	21.39	21.33	21.35	0.0
1	13				24.71	24.55	24.58	0.0	25	21.45	21.51	21.37	0.0	22	21.50	21.39	21.46	0.0	22	
1	23				24.66	24.49	24.56	0.0	25	21.51	21.49	21.43	0.0	22	21.42	21.29	21.37	0.0	22	
12	0				24.29	24.15	24.15	0.5	24.5	21.52	21.52	21.46	0.0	22	21.52	21.48	21.45	0.0	22	
12	7				24.58	24.62	24.68	0.0	25	21.50	21.54	21.52	0.0	22	21.55	21.41	21.49	0.0	22	
12	13				24.30	24.14	24.16	0.5	24.5	21.51	21.58	21.52	0.0	22	21.51	21.48	21.46	0.0	22	
25	0				24.37	24.17	24.22	0.5	24.5	21.54	21.54	21.47	0.0	22	21.56	21.39	21.47	0.0	22	
QPSK	1			1	24.60	24.57	24.57	0.0	25	21.53	21.33	21.36	0.0	22	21.37	21.32	21.38	0.0	22	
	1			13	24.51	24.59	24.55	0.0	25	21.53	21.37	21.39	0.0	22	21.36	21.26	21.36	0.0	22	
	1			23	24.62	24.55	24.61	0.0	25	21.55	21.29	21.40	0.0	22	21.44	21.30	21.38	0.0	22	
	12			0	23.82	23.65	23.69	1.0	24	21.53	21.55	21.50	0.0	22	21.50	21.46	21.44	0.0	22	
	12			7	24.48	24.65	24.53	0.0	25	21.51	21.57	21.42	0.0	22	21.49	21.39	21.50	0.0	22	
	12			13	23.81	23.70	23.72	1.0	24	21.54	21.57	21.50	0.0	22	21.52	21.41	21.52	0.0	22	
	25			0	23.83	23.66	23.71	1.0	24	21.56	21.57	21.44	0.0	22	21.53	21.45	21.49	0.0	22	
16QAM	1			1	23.67	23.77	23.57	1.0	24	21.55	21.61	21.41	0.0	22	21.66	21.51	21.39	0.0	22	
	64QAM			1	1	22.49	22.40	22.34	2.5	22.5	21.88	21.87	21.94	0.0	22	21.88	21.86	21.92	0.0	22
	256QAM			1	1	19.75	19.74	19.76	4.5	20.5	19.71	19.68	19.77	0.0	22	19.68	19.66	19.74	0.0	22
CP-OFDM	QPSK	1	1	23.19	23.07	23.10	1.5	23.5	21.64	21.60	21.70	0.0	22	21.67	21.59	21.64	0.0	22		

NR Band n70 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)				
					DSI = 0, 1, 2, 3, 4				
					Measured Pwr (dBm)			MPR	Tune-up Limit
						340500	1702.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1		22.53		0.0	23
			1	40		22.63		0.0	23
			1	77		22.74		0.0	23
			36	0		22.38		0.5	22.5
			36	22		22.85		0.0	23
			36	43		22.38		0.5	22.5
		QPSK	75	0		22.40		0.5	22.5
			1	1		22.69		0.0	23
			1	40		22.76		0.0	23
			1	77		22.83		0.0	23
			36	0		21.75		1.0	22
			36	22		22.79		0.0	23
		16QAM	36	43		21.87		1.0	22
			75	0		21.87		1.0	22
			1	1		21.66		1.0	22
		64QAM	1	40		21.74		1.0	22
1	77			21.82		1.0	22		
256QAM	1	1		20.43		2.5	20.5		
	1	1		17.56		4.5	18.5		
	CP-OFDM	QPSK	1	1		21.19		1.5	21.5
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					343000.00	349000.00	355000.00		
					1715 MHz	1745 MHz	1775 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	22.61	22.73	22.75	0.0	23
			1	26	22.78	22.89	22.90	0.0	23
			1	50	22.88	22.86	22.87	0.0	23
			25	0	21.78	21.88	21.98	0.5	22.5
			25	14	22.87	22.98	22.96	0.0	23
			25	27	22.04	21.99	22.02	0.5	22.5
		QPSK	50	0	21.92	21.98	21.99	0.5	22.5
			1	1	22.77	22.88	22.90	0.0	23
			1	26	22.89	22.97	22.99	0.0	23
			1	50	22.89	22.98	22.98	0.0	23
			25	0	21.77	21.91	21.98	1.0	22
			25	14	22.87	22.98	22.97	0.0	23
		16QAM	25	27	21.96	21.98	21.99	1.0	22
			50	0	21.93	21.97	22.00	1.0	22
			1	1	21.75	21.84	21.82	1.0	22
		64QAM	1	1	20.47	20.48	20.49	2.5	20.5
1	1		17.61	17.64	17.66	4.5	18.5		
	CP-OFDM	QPSK	1	1	21.22	21.29	21.31	1.5	21.5
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					342500.00	349000.00	355500.00		
					1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	22.45	22.50	22.59	0.0	23
			1	13	22.56	22.60	22.63	0.0	23
			1	23	22.53	22.64	22.58	0.0	23
			12	0	21.56	21.59	21.74	0.5	22.5
			12	7	22.63	22.71	22.66	0.0	23
			12	13	21.67	21.72	21.69	0.5	22.5
		QPSK	25	0	21.57	21.72	21.76	0.5	22.5
			1	1	22.54	22.59	22.72	0.0	23
			1	13	22.67	22.77	22.71	0.0	23
			1	23	22.67	22.67	22.73	0.0	23
			12	0	21.56	21.62	21.76	1.0	22
			12	7	22.62	22.67	22.70	0.0	23
		16QAM	12	13	21.69	21.72	21.74	1.0	22
			25	0	21.57	21.78	21.72	1.0	22
			1	1	21.52	21.57	21.70	1.0	22
		64QAM	1	1	20.29	20.32	20.50	2.5	20.5
1	1		17.64	17.64	17.75	4.5	18.5		
	CP-OFDM	QPSK	1	1	21.01	21.07	21.17	1.5	21.5

NR Band n71 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)				
					DSI = 0, 1, 2, 3, 4				
					Measured Pwr (dBm)			MPR	Tune-up Limit
					134600 673 MHz	136100 680.5 MHz	137600 688 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1		23.01		0.0	24.5
			1	53		23.12		0.0	24.5
			1	104		23.24		0.0	24.5
			50	0		22.21		0.5	24
			50	28		23.06		0.0	24.5
			50	56		22.13		0.5	24
			100	0		22.12		0.5	24
		QPSK	1	1		23.13		0.0	24.5
			1	53		23.18		0.0	24.5
			1	104		23.30		0.0	24.5
			50	0		22.18		1.0	23.5
			50	28		23.20		0.0	24.5
			50	56		22.25		1.0	23.5
		16QAM	100	0		22.23		1.0	23.5
			1	1		22.14		1.0	23.5
	1		53		22.18		1.0	23.5	
64QAM	1	104		22.28		1.0	23.5		
	1	1		20.80		2.5	22		
256QAM	1	1		17.55		4.5	20		
CP-OFDM	QPSK	1	1		21.67		1.5	23	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					134100.00 670.5 MHz	136100.00 680.5 MHz	138100.00 690.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1		23.04		0.0	24.5
			1	40		23.01		0.0	24.5
			1	77		23.02		0.0	24.5
			36	0		22.11		0.5	24
			36	22		23.14		0.0	24.5
			36	43		22.14		0.5	24
			75	0		22.17		0.5	24
		QPSK	1	1		23.20		0.0	24.5
			1	40		23.18		0.0	24.5
			1	77		23.18		0.0	24.5
			36	0		22.14		1.0	23.5
			36	22		23.18		0.0	24.5
			36	43		22.19		1.0	23.5
		16QAM	75	0		22.16		1.0	23.5
			1	1		22.18		1.0	23.5
	1		1		20.85		2.5	22	
64QAM	1	1		18.03		4.5	20		
256QAM	1	1		18.03		4.5	20		
CP-OFDM	QPSK	1	1		21.74		1.5	23	

NR Band n71 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					133600.00	136100.00	138600.00		
					668 MHz	680.5 MHz	693 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	22.97	23.23	23.16	0.0	24.5
			1	26	23.00	23.26	23.26	0.0	24.5
			1	50	23.20	23.33	23.26	0.0	24.5
			25	0	22.00	22.24	22.25	0.5	24
			25	14	23.11	23.25	23.32	0.0	24.5
			25	27	22.18	22.29	22.38	0.5	24
			50	0	22.15	22.29	22.35	0.5	24
		QPSK	1	1	23.07	23.33	23.29	0.0	24.5
			1	26	23.11	23.30	23.35	0.0	24.5
			1	50	23.25	23.40	23.38	0.0	24.5
			25	0	22.07	22.23	22.30	1.0	23.5
			25	14	23.18	23.31	23.36	0.0	24.5
			25	27	22.17	22.35	22.42	1.0	23.5
			50	0	22.15	22.26	22.38	1.0	23.5
16QAM	1	1	21.99	22.26	22.27	1.0	23.5		
64QAM	1	1	20.69	20.94	20.97	2.5	22		
256QAM	1	1	17.89	18.11	18.17	4.5	20		
CP-OFDM	QPSK	1	1	21.53	21.81	21.77	1.5	23	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					133100.00	136100.00	139100.00		
					665.5 MHz	680.5 MHz	695.5 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	22.96	23.14	23.25	0.0	24.5
			1	13	22.99	23.22	23.32	0.0	24.5
			1	23	23.01	23.10	23.24	0.0	24.5
			12	0	22.03	22.18	22.27	0.5	24
			12	7	23.02	23.28	23.36	0.0	24.5
			12	13	22.03	22.25	22.34	0.5	24
			25	0	22.07	22.28	22.35	0.5	24
		QPSK	1	1	23.07	23.21	23.25	0.0	24.5
			1	13	23.04	23.30	23.41	0.0	24.5
			1	23	23.07	23.18	23.30	0.0	24.5
			12	0	22.08	22.18	22.24	1.0	23.5
			12	7	23.07	23.28	23.37	0.0	24.5
			12	13	22.05	22.24	22.28	1.0	23.5
			25	0	22.06	22.27	22.36	1.0	23.5
16QAM	1	1	22.01	22.14	22.22	1.0	23.5		
64QAM	1	1	20.70	20.86	20.98	2.5	22		
256QAM	1	1	17.87	18.08	18.23	4.5	20		
CP-OFDM	QPSK	1	1	21.51	21.69	21.77	1.5	23	

NR Band n48(Voice/data/SRS0) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					
					DSI = 0, 1, 2, 3, 4					
					Measured Pwr (dBm)				MPR	Tune-up Limit
					638000	640444	642888	645332		
3570 MHz	3606.66 MHz	3643.32 MHz	3679.98 MHz							
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.76	16.74	16.24	16.32	0.0	17.0
			1	53	16.61	16.62	16.28	16.53	0.0	17.0
			1	104	16.58	16.54	16.57	16.68	0.0	17.0
			50	0	16.77	16.78	16.37	16.49	0.0	17.0
			50	28	16.61	16.67	16.35	16.62	0.0	17.0
			50	56	16.71	16.56	16.49	16.67	0.0	17.0
		100	0	16.66	16.63	16.36	16.59	0.0	17.0	
		QPSK	1	1	16.59	16.84	16.22	16.22	0.0	17.0
			1	53	16.41	16.60	16.29	16.38	0.0	17.0
			1	104	16.31	16.57	16.61	16.60	0.0	17.0
			50	0	16.58	16.62	16.39	16.32	0.0	17.0
			50	28	16.42	16.46	16.38	16.34	0.0	17.0
			50	56	16.38	16.51	16.42	16.51	0.0	17.0
		100	0	16.51	16.52	16.35	16.42	0.0	17.0	
		16QAM	1	1	16.75	16.75	16.24	16.38	0.0	17.0
	16QAM	1	53	16.60	16.60	16.21	16.51	0.0	17.0	
16QAM	1	104	16.69	16.48	16.39	16.63	0.0	17.0		
64QAM	1	1	16.72	16.69	16.26	16.36	0.0	17.0		
256QAM	1	1	16.61	16.57	16.12	16.26	0.0	17.0		
CP-OFDM	QPSK	1	1	16.82	16.92	16.21	16.37	0.0	17.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit
					637334.00	640222.00	643112.00	646000.00		
					3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.67	16.45	15.98	16.53	0.0	17.0
			1	26	16.54	16.27	16.05	16.66	0.0	17.0
			1	49	16.62	16.09	16.12	16.64	0.0	17.0
			25	0	16.61	16.33	16.08	16.57	0.0	17.0
			25	13	16.64	16.33	16.05	16.71	0.0	17.0
			25	26	16.79	16.32	16.22	16.81	0.0	17.0
		50	0	16.64	16.31	16.07	16.56	0.0	17.0	
		QPSK	1	1	16.67	16.50	16.13	16.59	0.0	17.0
			1	26	16.57	16.14	16.05	16.57	0.0	17.0
			1	49	16.63	16.29	16.12	16.67	0.0	17.0
			25	0	16.62	16.42	16.18	16.63	0.0	17.0
			25	13	16.74	16.35	16.21	16.79	0.0	17.0
			25	26	16.67	16.25	16.17	16.85	0.0	17.0
		50	0	16.73	16.23	16.13	16.73	0.0	17.0	
		16QAM	1	1	16.63	16.42	16.04	16.67	0.0	17.0
	64QAM	1	1	16.46	16.30	16.03	16.55	0.0	17.0	
256QAM	1	1	16.36	16.46	16.09	16.63	0.0	17.0		
CP-OFDM	QPSK	1	1	16.61	16.38	16.13	16.59	0.0	17.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit
					637000.00	640110.00	643222.00	646332.00		
					3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.80	16.41	16.18	16.70	0.0	17.0
			1	26	16.77	16.48	16.34	16.71	0.0	17.0
			1	49	16.74	16.49	16.13	16.88	0.0	17.0
			25	0	16.77	16.33	16.19	16.88	0.0	17.0
			25	13	16.85	16.44	16.27	16.99	0.0	17.0
			25	26	16.75	16.44	16.39	16.92	0.0	17.0
		50	0	16.79	16.48	16.35	16.88	0.0	17.0	
		QPSK	1	1	16.74	16.54	16.20	16.84	0.0	17.0
			1	26	16.79	16.52	16.27	16.76	0.0	17.0
			1	49	16.79	16.47	16.31	16.88	0.0	17.0
			25	0	16.77	16.52	16.20	16.80	0.0	17.0
			25	13	16.78	16.41	16.36	16.85	0.0	17.0
			25	26	16.85	16.54	16.28	16.97	0.0	17.0
		50	0	16.79	16.46	16.19	16.85	0.0	17.0	
		16QAM	1	1	16.62	16.35	16.12	16.73	0.0	17.0
	64QAM	1	1	16.59	16.29	16.05	16.62	0.0	17.0	
256QAM	1	1	16.70	16.39	16.22	16.70	0.0	17.0		
CP-OFDM	QPSK	1	1	16.60	16.32	16.14	16.82	0.0	17.0	

NR Band n48(SRS1/SRS2/SRS3) Measured Results

BW (MHz)	Mode	Maximum Allowed Average Power (dBm)				Tune-up Limit	Maximum Allowed Average Power (dBm)				Tune-up Limit	Maximum Allowed Average Power (dBm)				Tune-up Limit	
		DSI = 0, 1, 2, 3, 4					DSI = 0, 1, 2, 3, 4					DSI = 0, 1, 2, 3, 4					
		SRS 1 Measured Pwr (dBm)					SRS 2 Measured Pwr (dBm)					SRS 2 Measured Pwr (dBm)					
		638000	640444	642888	645332		638000	640444	642888	645332		638000	640444	642888	645332		
		3570 MHz	3606.66 MHz	3643.32 MHz	3679.98 MHz			3570 MHz	3606.66 MHz	3643.32 MHz	3679.98 MHz			3570 MHz	3606.66 MHz	3643.32 MHz	3679.98 MHz
40 MHz	SRS CW	9.42	9.89	9.65	9.47	10.5	12.62	12.75	12.82	12.54	13.0	16.53	16.61	16.43	16.13	17.5	
BW (MHz)	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit	
		637334	640222	643112	646000		637334	640222	643112	646000		637334	640222	643112	646000		
		3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz		3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz		3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz		
20 MHz	SRS CW	9.45	9.65	9.57	9.32	10.5	12.54	12.68	12.73	12.35	13.0	16.61	16.67	16.43	16.05	17.5	
BW (MHz)	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit	
		637000	640110	643222	646332		637000	640110	643222	646332		637000	640110	643222	646332		
		3555 MHz	3601.65MHz	3648.33MHz	3694.98MHz		3555 MHz	3601.65MHz	3648.33MHz	3694.98MHz		3555 MHz	3601.65MHz	3648.33MHz	3694.98MHz		
10 MHz	SRS CW	9.52	9.80	9.69	9.42	10.5	12.56	12.63	12.66	12.34	13.0	16.62	16.61	16.36	16.01	17.5	

Notes:
 SRS1/SRS2/SRS3 were measured output power through FTM mode provided by manufacturer.

NR Band n77 -Lower Band- (Voice/data/SRS0) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Average Power (dBm)				
					DSI = 0, 1, 2, 3, 4				
					Measured Pwr (dBm)			MPR	Tune-up Limit
						633334			
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1		16.99		0.0	18.0
			1	137		17.21		0.0	18.0
			1	271		16.96		0.0	18.0
			135	0		17.21		0.0	18.0
			135	69		17.30		0.0	18.0
			135	138		17.16		0.0	18.0
		270	0		17.18		0.0	18.0	
		QPSK	1	1		17.01		0.0	18.0
			1	137		17.19		0.0	18.0
			1	271		17.26		0.0	18.0
			135	0		17.24		0.0	18.0
			135	69		17.23		0.0	18.0
			135	138		17.25		0.0	18.0
		16QAM	270	0		17.19		0.0	18.0
			1	1		17.34		0.0	18.0
			1	137		17.54		0.0	18.0
	64QAM	1	271		17.34		0.0	18.0	
1		1		17.21		0.0	18.0		
256QAM	1	1		16.69		0.0	18.0		
CP-OFDM	QPSK	1	1		17.08		0.0	18.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
						633334.00			
						3500.01 MHz			
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1		17.13		0.0	18.0
			1	123		17.20		0.0	18.0
			1	243		16.96		0.0	18.0
			120	0		17.24		0.0	18.0
			120	63		17.29		0.0	18.0
			120	125		17.16		0.0	18.0
		243	0		17.21		0.0	18.0	
		QPSK	1	1		17.08		0.0	18.0
			1	123		17.17		0.0	18.0
			1	243		16.92		0.0	18.0
			120	0		17.27		0.0	18.0
			120	63		17.24		0.0	18.0
			120	125		17.16		0.0	18.0
		16QAM	243	0		17.22		0.0	18.0
			1	1		17.14		0.0	18.0
			1	1		17.44		0.0	18.0
	64QAM	1	1		17.04		0.0	18.0	
256QAM	1	1		17.04		0.0	18.0		
CP-OFDM	QPSK	1	1		16.87		0.0	18.0	

NR Band n77 -Lower Band- (Voice/data/SRS0) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	
					633334.00					
					3500.01 MHz					
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1		17.09		0.0	18.0	
			1	109		17.14		0.0	18.0	
			1	215		16.88		0.0	18.0	
			108	0		17.34		0.0	18.0	
			108	55		17.25		0.0	18.0	
			108	109		17.14		0.0	18.0	
			216	0		17.28		0.0	18.0	
		QPSK	1	1		17.23		0.0	18.0	
			1	109		17.15		0.0	18.0	
			1	215		16.81		0.0	18.0	
			108	0		17.24		0.0	18.0	
			108	55		17.27		0.0	18.0	
			108	109		17.12		0.0	18.0	
			216	0		17.21		0.0	18.0	
16QAM	1	1		17.27		0.0	18.0			
64QAM	1	1		17.37		0.0	18.0			
256QAM	1	1		17.08		0.0	18.0			
CP-OFDM	QPSK	1	1		17.19		0.0	18.0		
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	
					633334.00					
					3500.01 MHz					
70 MHz	DFT-s-OFDM	π/2 BPSK	1	1		17.18		0.0	18.0	
			1	95		17.23		0.0	18.0	
			1	188		16.90		0.0	18.0	
			90	0		17.26		0.0	18.0	
			90	50		17.24		0.0	18.0	
			90	99		17.23		0.0	18.0	
			180	0		17.26		0.0	18.0	
		QPSK	1	1		17.09		0.0	18.0	
			1	95		17.14		0.0	18.0	
			1	188		16.92		0.0	18.0	
			90	0		17.28		0.0	18.0	
			90	50		17.36		0.0	18.0	
			90	99		17.21		0.0	18.0	
			180	0		17.29		0.0	18.0	
		16QAM	1	1		17.28		0.0	18.0	
		64QAM	1	1		17.46		0.0	18.0	
		256QAM	1	1		17.26		0.0	18.0	
		CP-OFDM	QPSK	1	1		17.25		0.0	18.0

NR Band n77 -Lower Band- (Voice/data/SRS0) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	
					633334.00	3500.01 MHz				
60 MHz	DFT-s-OFDM	π/2 BPSK	1	1		17.35		0.0	18.0	
			1	81		17.33		0.0	18.0	
			1	160		17.09		0.0	18.0	
			81	0		17.44		0.0	18.0	
			81	41		17.47		0.0	18.0	
			81	81		17.29		0.0	18.0	
			162	0		17.46		0.0	18.0	
		QPSK	1	1		17.25		0.0	18.0	
			1	81		17.32		0.0	18.0	
			1	160		17.05		0.0	18.0	
			81	0		17.48		0.0	18.0	
			81	41		17.49		0.0	18.0	
			81	81		17.28		0.0	18.0	
			162	0		17.39		0.0	18.0	
16QAM	1	1		17.48		0.0	18.0			
64QAM	1	1		17.67		0.0	18.0			
256QAM	1	1		17.31		0.0	18.0			
CP-OFDM	QPSK	1	1		17.38		0.0	18.0		
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	
					631668.00	3475.02 MHz	635000.00			
50 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.34		17.35	0.0	18.0	
			1	67	17.31		17.14	0.0	18.0	
			1	131	17.31		17.11	0.0	18.0	
			64	0	17.34		17.35	0.0	18.0	
			64	35	17.34		17.20	0.0	18.0	
			64	69	17.43		17.09	0.0	18.0	
			128	0	17.35		17.20	0.0	18.0	
		QPSK	1	1	17.36		17.35	0.0	18.0	
			1	67	17.28		17.21	0.0	18.0	
			1	131	17.36		17.02	0.0	18.0	
			64	0	17.46		17.28	0.0	18.0	
			64	35	17.41		17.23	0.0	18.0	
			64	69	17.51		17.08	0.0	18.0	
			128	0	17.38		17.24	0.0	18.0	
		16QAM	1	1	17.24		17.67	0.0	18.0	
		64QAM	1	1	17.46		17.53	0.0	18.0	
		256QAM	1	1	17.08		17.06	0.0	18.0	
		CP-OFDM	QPSK	1	1	17.32		17.38	0.0	18.0

NR Band n77 -Lower Band- (Voice/data/SRS0) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					631334.00		635332.00		
					3470.01 MHz		3529.98 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.34		17.57	0.0	18.0
			1	53	17.24		17.26	0.0	18.0
			1	104	17.36		17.33	0.0	18.0
			50	0	17.38		17.43	0.0	18.0
			50	28	17.31		17.37	0.0	18.0
			50	56	17.41		17.37	0.0	18.0
		QPSK	100	0	17.34		17.39	0.0	18.0
			1	1	17.27		17.54	0.0	18.0
			1	53	17.16		17.29	0.0	18.0
			1	104	17.42		17.42	0.0	18.0
			50	0	17.31		17.48	0.0	18.0
			50	28	17.25		17.44	0.0	18.0
		16QAM	50	56	17.42		17.34	0.0	18.0
			100	0	17.37		17.42	0.0	18.0
			16QAM	1	1	17.47		17.65	0.0
		64QAM	1	1	17.69		17.63	0.0	18.0
256QAM	1		1	17.37		17.43	0.0	18.0	
CP-OFDM	QPSK	1	1	17.36		17.44	0.0	18.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					631000.00	633334.00	635666.00		
					3465 MHz	3500.01 MHz	3534.99 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.39	17.62	17.52	0.0	18.0
			1	39	17.34	17.46	17.21	0.0	18.0
			1	76	17.45	17.48	17.26	0.0	18.0
			36	0	17.43	17.59	17.43	0.0	18.0
			36	21	17.35	17.47	17.28	0.0	18.0
			36	42	17.52	17.58	17.37	0.0	18.0
		QPSK	75	0	17.51	17.64	17.34	0.0	18.0
			1	1	17.39	17.59	17.35	0.0	18.0
			1	39	17.35	17.43	17.43	0.0	18.0
			1	76	17.49	17.43	17.45	0.0	18.0
			36	0	17.42	17.44	17.53	0.0	18.0
			36	21	17.37	17.39	17.43	0.0	18.0
		16QAM	36	42	17.43	17.47	17.32	0.0	18.0
			75	0	17.43	17.35	17.39	0.0	18.0
			16QAM	1	1	17.41	17.44	17.58	0.0
		64QAM	1	1	17.31	17.86	17.76	0.0	18.0
256QAM	1		1	17.37	17.56	17.41	0.0	18.0	
CP-OFDM	QPSK	1	1	17.38	17.64	17.54	0.0	18.0	

NR Band n77 -Lower Band- (Voice/data/SRS0) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					630668.00	633334.00	636000.00		
					3460.02 MHz	3500.01 MHz	3540 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.31	17.59	17.38	0.0	18.0
			1	26	17.34	17.43	17.28	0.0	18.0
			1	49	17.35	17.48	17.22	0.0	18.0
			25	0	17.41	17.51	17.30	0.0	18.0
			25	13	17.41	17.50	17.31	0.0	18.0
			25	26	17.41	17.48	17.34	0.0	18.0
			50	0	17.44	17.55	17.34	0.0	18.0
		QPSK	1	1	17.43	17.59	17.39	0.0	18.0
			1	26	17.39	17.55	17.31	0.0	18.0
			1	49	17.41	17.50	17.30	0.0	18.0
			25	0	17.33	17.54	17.36	0.0	18.0
			25	13	17.35	17.54	17.27	0.0	18.0
			25	26	17.41	17.59	17.34	0.0	18.0
			50	0	17.36	17.55	17.37	0.0	18.0
		16QAM	1	1	17.78	17.82	17.61	0.0	18.0
		64QAM	1	1	17.56	17.75	17.55	0.0	18.0
		256QAM	1	1	17.05	17.33	17.42	0.0	18.0
CP-OFDM	QPSK	1	1	17.43	17.62	17.32	0.0	18.0	

NR Band n77 -Lower Band- (SRS1/SRS2/SRS3) Measured Results

BW (MHz)	Mode	Maximum Allowed Average Power (dBm)				Maximum Allowed Average Power (dBm)				Maximum Allowed Average Power (dBm)			
		DSI = 0, 1, 2, 3, 4				DSI = 0, 1, 2, 3, 4				DSI = 0, 1, 2, 3, 4			
		SRS 1 Measured Pwr (dBm)			Tune-up Limit	SRS 2 Measured Pwr (dBm)			Tune-up Limit	SRS 3 Measured Pwr (dBm)			Tune-up Limit
	633334			633334				633334					
			3500.01 MHz				3500.01 MHz					3500.01 MHz	
100 MHz	SRS CW		10.01		10.5		11.58		12.0		16.35		17.0
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
			633334				633334				633334		
			3500.01 MHz				3500.01 MHz				3500.01 MHz		
90 MHz	SRS CW		9.77		10.5		11.64		12.0		16.20		17.0
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
			633334				633334				633334		
			3500.01 MHz				3500.01 MHz				3500.01 MHz		
80 MHz	SRS CW		9.87		10.5		11.64		12.0		16.21		17.0
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
			633334				633334				633334		
			3500.01 MHz				3500.01 MHz				3500.01 MHz		
70 MHz	SRS CW		9.82		10.5		11.63		12.0		16.14		17.0
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
			633334				633334				633334		
			3500.01 MHz				3500.01 MHz				3500.01 MHz		
60 MHz	SRS CW		9.95		10.5		11.75		12.0		16.24		17.0
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		631668		635000			631668			635000		631668	
		3475.02 MHz		3525 MHz		3475.02 MHz		3525 MHz		3475.02 MHz		3525 MHz	
50 MHz	SRS CW	9.92		9.92	10.5	11.81		11.64	12.0	16.33		16.07	17.0
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		631334		635332			631334			635332		631334	
		3470.01 MHz		3529.98 MHz		3470.01 MHz		3529.98 MHz		3470.01 MHz		3529.98 MHz	
40 MHz	SRS CW	10.01		10.18	10.5	11.89		11.92	12.0	16.65		16.31	17.0
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		631000	633334	635666			631000	633334		635666		631000	
		3465 MHz	3500.01 MHz	3534.99 MHz		3465 MHz	3500.01 MHz	3534.99 MHz		3465 MHz	3500.01 MHz	3534.99 MHz	
30 MHz	SRS CW	10.13	10.27	10.18	10.5	11.97	11.86	11.90	12.0	16.67	16.51	16.28	17.0
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		630668	633334	636000			630668	633334		636000		630668	
		3460.02 MHz	3500.01 MHz	3540 MHz		3460.02 MHz	3500.01 MHz	3540 MHz		3460.02 MHz	3500.01 MHz	3540 MHz	
20 MHz	SRS CW	10.18	10.14	10.03	10.5	11.93	11.84	11.78	12.0	16.56	16.32	16.18	17.0

Notes:

SRS1/SRS2/SRS3 were measured output power through FTM mode provided by manufacturer.

NR Band n77 -Upper Band- (Voice/data/SRS0) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)								
					DSI = 0, 1, 2, 3, 4							MPR	Tune-up Limit
					Measured Pwr (dBm)								
					650000 3750 MHz		656000 3840 MHz		662000 3930 MHz				
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.24				16.39		0.0	18.0	
			1	137	16.34				16.30		0.0	18.0	
			1	271	16.16				16.45		0.0	18.0	
			135	0	16.49				16.36		0.0	18.0	
			135	69	16.43				16.38		0.0	18.0	
			135	138	16.35				16.41		0.0	18.0	
		270	0	16.31				16.44		0.0	18.0		
		QPSK	1	1	16.20				16.35		0.0	18.0	
			1	137	16.31				16.20		0.0	18.0	
			1	271	16.28				16.54		0.0	18.0	
			135	0	16.44				16.27		0.0	18.0	
			135	69	16.37				16.31		0.0	18.0	
			135	138	16.35				16.48		0.0	18.0	
		270	0	16.22				16.34		0.0	18.0		
		16QAM	1	1	16.57				16.57		0.0	18.0	
			1	137	16.77				16.55		0.0	18.0	
			1	271	16.57				16.66		0.0	18.0	
		64QAM	1	1	16.31				16.49		0.0	18.0	
256QAM	1	1	15.88				16.08		0.0	18.0			
CP-OFDM	QPSK	1	1	16.27				16.53		0.0	18.0		
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)								
					649666.00 3744.99 MHz		656000.00 3840 MHz		662334.00 3935.01 MHz				
					MPR							Tune-up Limit	
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.15		16.28		16.42		0.0	18.0	
			1	123	16.19		16.37		16.37		0.0	18.0	
			1	243	16.07		16.46		16.51		0.0	18.0	
			120	0	16.22		16.32		16.36		0.0	18.0	
			120	63	16.18		16.38		16.47		0.0	18.0	
			120	125	16.14		16.47		16.41		0.0	18.0	
		243	0	16.11		16.37		16.48		0.0	18.0		
		QPSK	1	1	16.06		16.25		16.44		0.0	18.0	
			1	123	16.19		16.39		16.31		0.0	18.0	
			1	243	16.03		16.40		16.59		0.0	18.0	
			120	0	16.22		16.29		16.38		0.0	18.0	
			120	63	16.25		16.45		16.38		0.0	18.0	
			120	125	16.19		16.43		16.40		0.0	18.0	
		243	0	16.13		16.42		16.39		0.0	18.0		
		16QAM	1	1	16.48		16.39		16.51		0.0	18.0	
		64QAM	1	1	16.19		16.41		16.74		0.0	18.0	
		256QAM	1	1	15.77		15.92		16.39		0.0	18.0	
		CP-OFDM	QPSK	1	1	16.15		16.22		16.49		0.0	18.0

NR Band n77 -Upper Band- (Voice/data/SRS0) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					662666.00	653800.00			658200.00	662666.00		
					3739.99 MHz	3807 MHz			3873 MHz	3939.99 MHz		
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.32	16.13			16.33	16.31	0.0	18.0
			1	109	16.35	16.22			16.35	16.29	0.0	18.0
			1	215	16.41	16.37			16.18	16.41	0.0	18.0
			108	0	16.42	16.13			16.46	16.35	0.0	18.0
			108	55	16.42	16.26			16.36	16.37	0.0	18.0
			108	109	16.37	16.43			16.33	16.43	0.0	18.0
		216	0	16.48	16.28			16.38	16.37	0.0	18.0	
		QPSK	1	1	16.39	16.09			16.28	16.29	0.0	18.0
			1	109	16.27	16.08			16.38	16.24	0.0	18.0
			1	215	16.53	16.49			16.23	16.35	0.0	18.0
			108	0	16.41	16.21			16.41	16.38	0.0	18.0
			108	55	16.43	16.25			16.39	16.41	0.0	18.0
			108	109	16.47	16.31			16.32	16.31	0.0	18.0
		216	0	16.44	16.26			16.41	16.41	0.0	18.0	
16QAM	1	1	16.19	15.90			16.18	16.16	0.0	18.0		
64QAM	1	1	16.22	16.52			16.78	16.71	0.0	18.0		
256QAM	1	1	16.32	16.09			16.26	16.23	0.0	18.0		
CP-OFDM	QPSK	1	1	16.42	16.08			16.36	16.34	0.0	18.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					649000.00	654334.00			658334.00	663000.00		
					3735 MHz	3805.01 MHz			3875.01 MHz	3945 MHz		
70 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.09	16.11			16.29	16.34	0.0	18.0
			1	95	16.14	16.23			16.50	16.32	0.0	18.0
			1	188	16.05	16.32			16.21	16.35	0.0	18.0
			90	0	16.26	16.21			16.49	16.39	0.0	18.0
			90	50	16.19	16.27			16.42	16.43	0.0	18.0
			90	99	16.17	16.39			16.44	16.49	0.0	18.0
		180	0	16.16	16.30			16.43	16.47	0.0	18.0	
		QPSK	1	1	16.10	16.09			16.36	16.29	0.0	18.0
			1	95	16.17	16.19			16.33	16.32	0.0	18.0
			1	188	16.06	16.29			16.21	16.40	0.0	18.0
			90	0	16.24	16.26			16.53	16.40	0.0	18.0
			90	50	16.24	16.33			16.46	16.46	0.0	18.0
			90	99	16.21	16.39			16.42	16.48	0.0	18.0
		180	0	16.21	16.37			16.53	16.48	0.0	18.0	
16QAM	1	1	16.47	16.06			16.44	16.14	0.0	18.0		
64QAM	1	1	16.19	16.54			16.69	16.77	0.0	18.0		
256QAM	1	1	15.74	16.13			16.31	16.37	0.0	18.0		
CP-OFDM	QPSK	1	1	16.08	16.13			16.43	16.41	0.0	18.0	

NR Band n77 -Upper Band- (Voice/data/SRS0) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit	
					648666.00	652334.00	656000.00		659666.00	663334.00			
					3729.99 MHz	3785.01 MHz	3840 MHz		3894.99 MHz	3950.01 MHz			
60 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.24	16.17	16.30		16.50	16.34	0.0	18.0	
			1	81	16.27	16.23	16.36		16.33	16.37	0.0	18.0	
			1	160	16.17	16.29	16.48		16.30	16.68	0.0	18.0	
			81	0	16.40	16.20	16.37		16.58	16.48	0.0	18.0	
			81	41	16.28	16.30	16.47		16.47	16.57	0.0	18.0	
			81	81	16.32	16.30	16.58		16.39	16.65	0.0	18.0	
				162	0	16.30	16.31	16.48		16.44	16.58	0.0	18.0
			QPSK	1	1	16.23	16.18	16.27		16.47	16.34	0.0	18.0
		1		81	16.30	16.17	16.47		16.40	16.31	0.0	18.0	
		1		160	16.19	16.22	16.46		16.36	16.61	0.0	18.0	
		81		0	16.38	16.26	16.40		16.58	16.45	0.0	18.0	
		81		41	16.35	16.29	16.42		16.48	16.56	0.0	18.0	
		81		81	16.35	16.41	16.62		16.39	16.57	0.0	18.0	
				162	0	16.27	16.31	16.51		16.53	16.55	0.0	18.0
			16QAM	1	1	16.74	16.26	16.42		16.61	16.51	0.0	18.0
			64QAM	1	1	16.41	16.71	16.67		16.88	16.67	0.0	18.0
	256QAM	1	1	15.95	16.01	16.32		16.52	16.67	0.0	18.0		
	CP-OFDM	QPSK	1	1	16.23	16.27	16.39		16.59	16.47	0.0	18.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit	
					648334.00	652134.00	655934.00		659800.00	663666.00			
					3725.01 MHz	3782.01 MHz	3839.01 MHz		3897 MHz	3954.99 MHz			
50 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.33	16.27	16.32		16.47	16.31	0.0	18.0	
			1	67	16.27	16.21	16.38		16.50	16.37	0.0	18.0	
			1	131	16.20	16.34	16.57		16.50	16.65	0.0	18.0	
			64	0	16.38	16.31	16.53		16.48	16.73	0.0	18.0	
			64	35	16.42	16.38	16.52		16.48	16.68	0.0	18.0	
			64	69	16.30	16.37	16.55		16.48	16.68	0.0	18.0	
				128	0	16.42	16.34	16.45		16.48	16.73	0.0	18.0
			QPSK	1	1	16.34	16.42	16.30		16.48	16.68	0.0	18.0
		1		67	16.22	16.17	16.39		16.40	16.70	0.0	18.0	
		1		131	16.33	16.39	16.63		16.34	16.68	0.0	18.0	
		64		0	16.38	16.31	16.53		16.47	16.57	0.0	18.0	
		64		35	16.46	16.34	16.49		16.39	16.64	0.0	18.0	
		64		69	16.37	16.33	16.52		16.29	16.76	0.0	18.0	
				128	0	16.40	16.35	16.44		16.38	16.63	0.0	18.0
			16QAM	1	1	16.36	16.94	16.94		16.92	16.93	0.0	18.0
			64QAM	1	1	16.79	16.56	16.57		16.76	16.59	0.0	18.0
	256QAM	1	1	16.07	16.02	16.13		16.31	16.17	0.0	18.0		
	CP-OFDM	QPSK	1	1	16.40	16.43	16.41		16.43	16.46	0.0	18.0	

NR Band n77 -Upper Band- (Voice/data/SRS0) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					648000.00	651200.00	654400.00	657600.00	660800.00	664000.00		
					3720 MHz	3768 MHz	3816 MHz	3864 MHz	3912 MHz	3960 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.57	16.49	16.61	16.82	16.82	16.54	0.0	18.0
			1	53	16.28	16.36	16.51	16.72	16.52	16.60	0.0	18.0
			1	104	16.49	16.32	16.69	16.73	16.60	16.89	0.0	18.0
			50	0	16.54	16.37	16.59	16.84	16.73	16.57	0.0	18.0
			50	28	16.46	16.33	16.64	16.79	16.59	16.64	0.0	18.0
			50	56	16.52	16.37	16.67	16.80	16.59	16.91	0.0	18.0
			100	0	16.47	16.37	16.68	16.80	16.68	16.72	0.0	18.0
		QPSK	1	1	16.60	16.33	16.69	16.80	16.73	16.64	0.0	18.0
			1	53	16.43	16.33	16.63	16.83	16.63	16.73	0.0	18.0
			1	104	16.64	16.45	16.75	16.72	16.50	16.92	0.0	18.0
			50	0	16.51	16.52	16.56	16.90	16.75	16.59	0.0	18.0
			50	28	16.43	16.44	16.65	16.82	16.62	16.69	0.0	18.0
			50	56	16.54	16.52	16.66	16.76	16.54	16.89	0.0	18.0
		16QAM	100	0	16.48	16.47	16.65	16.88	16.65	16.70	0.0	18.0
			1	1	16.94	16.61	16.71	16.91	16.89	16.97	0.0	18.0
1	1		16.75	16.92	16.93	16.90	16.99	16.72	0.0	18.0		
256QAM	1	1	16.26	16.33	16.61	16.75	16.78	16.87	0.0	18.0		
	CP-OFDM	QPSK	1	1	16.72	16.59	16.67	16.84	16.95	16.76	0.0	18.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					647666.00	651000.00	654334.00	657666.00	661000.00	664334.00		
					3714.99 MHz	3765 MHz	3815.01 MHz	3864.99 MHz	3915 MHz	3965.01 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.36	16.38	16.47	16.74	16.60	16.48	0.0	18.0
			1	39	16.40	16.33	16.52	16.66	16.47	16.61	0.0	18.0
			1	76	16.40	16.46	16.51	16.66	16.51	16.83	0.0	18.0
			36	0	16.45	16.39	16.47	16.82	16.67	16.65	0.0	18.0
			36	21	16.49	16.39	16.58	16.75	16.47	16.65	0.0	18.0
			36	42	16.43	16.37	16.63	16.78	16.48	16.85	0.0	18.0
			75	0	16.49	16.47	16.59	16.80	16.56	16.71	0.0	18.0
		QPSK	1	1	16.47	16.49	16.51	16.73	16.70	16.49	0.0	18.0
			1	39	16.42	16.25	16.49	16.63	16.54	16.59	0.0	18.0
			1	76	16.39	16.54	16.57	16.79	16.64	16.94	0.0	18.0
			36	0	16.45	16.43	16.55	16.82	16.62	16.62	0.0	18.0
			36	21	16.47	16.44	16.63	16.77	16.50	16.68	0.0	18.0
			36	42	16.45	16.36	16.60	16.79	16.52	16.85	0.0	18.0
		16QAM	75	0	16.52	16.43	16.61	16.78	16.59	16.69	0.0	18.0
			1	1	16.93	16.53	16.52	16.78	16.23	16.63	0.0	18.0
1	1		16.67	16.91	16.87	16.38	16.65	16.16	0.0	18.0		
256QAM	1	1	16.12	16.25	16.23	16.21	16.23	15.81	0.0	18.0		
	CP-OFDM	QPSK	1	1	16.47	16.49	16.59	16.29	16.19	16.12	0.0	18.0

NR Band n77 -Upper Band- (Voice/data/SRS0) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					647334.00	650800.00	654266.00	657734.00	661200.00	664666.00		
					3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.39	16.32	16.53	16.72	16.46	16.61	0.0	18.0
			1	26	16.38	16.36	16.46	16.60	16.40	16.69	0.0	18.0
			1	49	16.31	16.39	16.57	16.61	16.50	16.83	0.0	18.0
			25	0	16.47	16.39	16.56	16.78	16.54	16.70	0.0	18.0
			25	13	16.44	16.46	16.66	16.71	16.48	16.67	0.0	18.0
			25	26	16.54	16.42	16.67	16.75	16.52	16.84	0.0	18.0
		50	0	16.46	16.51	16.70	16.73	16.48	16.76	0.0	18.0	
		QPSK	1	1	16.30	16.33	16.51	16.63	16.51	16.75	0.0	18.0
			1	26	16.28	16.41	16.51	16.59	16.43	16.66	0.0	18.0
			1	49	16.40	16.49	16.60	16.75	16.59	16.91	0.0	18.0
			25	0	16.40	16.45	16.61	16.76	16.57	16.75	0.0	18.0
			25	13	16.46	16.44	16.64	16.73	16.50	16.73	0.0	18.0
	25		26	16.52	16.48	16.65	16.75	16.49	16.90	0.0	18.0	
	50	0	16.48	16.47	16.66	16.78	16.51	16.78	0.0	18.0		
	16QAM	1	1	16.57	16.62	16.40	16.47	16.90	16.78	0.0	18.0	
	64QAM	1	1	16.47	16.23	16.22	16.36	16.13	16.56	0.0	18.0	
	256QAM	1	1	16.12	16.16	16.58	16.44	16.49	16.41	0.0	18.0	
	CP-OFDM	QPSK	1	1	16.23	16.21	16.23	16.14	16.23	16.22	0.0	18.0

NR Band n77 -Upper Band- (SRS1/SRS2/SRS3) Measured Results

BW (MHz)	Mode	Maximum Allowed Average Power (dBm)						Maximum Allowed Average Power (dBm)						Maximum Allowed Average Power (dBm)								
		DSI = 0, 1, 2, 3, 4						DSI = 0, 1, 2, 3, 4						DSI = 0, 1, 2, 3, 4								
		SRS1 Measured Pwr (dBm)						SRS2 Measured Pwr (dBm)						SRS3 Measured Pwr (dBm)								
		65000	65000	65000	66200		Tune-up Limit	65000	65000	65000	66200		Tune-up Limit	65000	65000	65000	66200		Tune-up Limit			
3750 MHz		3840 MHz		3930 MHz		3750 MHz		3840 MHz		3930 MHz		3750 MHz		3840 MHz		3930 MHz						
100 MHz	SRS CW	9.45				9.78		10.5	10.97				11.38		12.0	15.58				16.45		17.0
BW (MHz)	Mode	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
		649668		656000		662332		Tune-up Limit	649668		656000		662332		Tune-up Limit	649668		656000		662332		Tune-up Limit
		3745.02 MHz		3840 MHz		3934.98 MHz		3745.02 MHz		3840 MHz		3934.98 MHz		3745.02 MHz		3840 MHz		3934.98 MHz				
90 MHz	SRS CW	9.57		9.91		9.76		10.5	10.93		11.23		11.39		12.0	15.43		16.15		16.50		17.0
BW (MHz)	Mode	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
		649334		656000		662666		Tune-up Limit	649334		656000		662666		Tune-up Limit	649334		656000		662666		Tune-up Limit
		3740.01 MHz		3840 MHz		3939.99 MHz		3740.01 MHz		3840 MHz		3939.99 MHz		3740.01 MHz		3840 MHz		3939.99 MHz				
80 MHz	SRS CW	9.61		9.82		9.71		10.5	11.02		11.27		11.29		12.0	15.52		16.21		16.45		17.0
BW (MHz)	Mode	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
		649000	653666			658334	663000	Tune-up Limit	649000	653666			658334	663000	Tune-up Limit	649000	653666			658334	663000	Tune-up Limit
		3735 MHz	3804.99 MHz			3875.01 MHz	3945 MHz	3735 MHz	3804.99 MHz			3875.01 MHz	3945 MHz	3735 MHz	3804.99 MHz			3875.01 MHz	3945 MHz			
70 MHz	SRS CW	9.57	9.77			9.81	9.68	10.5	10.99	11.15			11.43	11.37	12.0	15.53	15.88			16.31	16.42	17.0
BW (MHz)	Mode	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
		649668	653556			658444	663332	Tune-up Limit	649668	653556			658444	663332	Tune-up Limit	649668	653556			658444	663332	Tune-up Limit
		3730.02 MHz	3803.34 MHz			3876.66 MHz	3949.98 MHz	3730.02 MHz	3803.34 MHz			3876.66 MHz	3949.98 MHz	3730.02 MHz	3803.34 MHz			3876.66 MHz	3949.98 MHz			
60 MHz	SRS CW	9.70	9.92			9.96	9.67	10.5	11.08	11.23			11.44	11.38	12.0	15.53	16.01			16.45	16.42	17.0
BW (MHz)	Mode	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
		649334	652166	656000		659834	663666	Tune-up Limit	649334	652166	656000		659834	663666	Tune-up Limit	649334	652166	656000		659834	663666	Tune-up Limit
		3725.01 MHz	3782.49 MHz	3840 MHz		3897.51 MHz	3954.99 MHz	3725.01 MHz	3782.49 MHz	3840 MHz		3897.51 MHz	3954.99 MHz	3725.01 MHz	3782.49 MHz	3840 MHz		3897.51 MHz	3954.99 MHz			
50 MHz	SRS CW	9.78	9.72	9.93		9.83	9.61	10.5	11.24	11.04	11.40		11.47	11.42	12.0	15.68	15.77	16.30		16.45	16.45	17.0
BW (MHz)	Mode	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
		648000	651200	654400	657600	660800	664000	Tune-up Limit	648000	651200	654400	657600	660800	664000	Tune-up Limit	648000	651200	654400	657600	660800	664000	Tune-up Limit
		3720 MHz	3768 MHz	3816 MHz	3864 MHz	3912 MHz	3960 MHz	3720 MHz	3768 MHz	3816 MHz	3864 MHz	3912 MHz	3960 MHz	3720 MHz	3768 MHz	3816 MHz	3864 MHz	3912 MHz	3960 MHz			
40 MHz	SRS CW	9.98	9.9	10.1	10.2	10.1	9.9	10.5	11.49	11.28	11.54	11.84	11.76	11.74	12.0	15.99	15.90	16.33	16.70	16.81	16.66	17.0
BW (MHz)	Mode	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
		647668	651000	654334	657666	661000	664332	Tune-up Limit	647668	651000	654334	657666	661000	664332	Tune-up Limit	647668	651000	654334	657666	661000	664332	Tune-up Limit
		3715.02 MHz	3765 MHz	3815.01 MHz	3864.99 MHz	3915 MHz	3964.98 MHz	3715.02 MHz	3765 MHz	3815.01 MHz	3864.99 MHz	3915 MHz	3964.98 MHz	3715.02 MHz	3765 MHz	3815.01 MHz	3864.99 MHz	3915 MHz	3964.98 MHz			
30 MHz	SRS CW	10.12	9.88	10.10	10.24	10.12	9.89	10.5	11.50	11.28	11.54	11.83	11.81	11.76	12.0	15.93	15.83	16.23	16.67	16.76	16.58	17.0
BW (MHz)	Mode	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
		647334	650800	654266	657734	661200	664666	Tune-up Limit	647334	650800	654266	657734	661200	664666	Tune-up Limit	647334	650800	654266	657734	661200	664666	Tune-up Limit
		3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz	3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz	3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz			
20 MHz	SRS CW	10.09	9.77	10.06	10.13	9.92	9.73	10.5	11.52	11.30	11.54	11.71	11.64	11.69	12.0	15.94	15.70	16.19	16.53	16.66	16.55	17.0

Notes:
 SRS1/SRS2/SRS3 were measured output power through FTM mode provided by manufacturer.

9.5. Wi-Fi 2.4 GHz (DTS Band)

WLAN output power results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Max.Average Power (dBm)		
					Meas. Avg Pwr	Max. Tune-up Limit	SAR Test (Yes/No)
WiFi 2.4G Ant.	802.11b	1 Mbps	1	2412.0	20.24	21.0	Yes
			6	2437.0	20.12		
			11	2462.0	20.76		
			12	2467.0	7.24	8.0	No
			13	2472.0	7.72	8.0	
	802.11g	6 Mbps	1 - 13	2412 - 2472	Not Required	19.0	No
	802.11n	6.5 Mbps	1 - 13	2412 - 2472	Not Required	19.0	No
Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Reduced Average Power		
					Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 2.4G Ant.	802.11b	1 Mbps	1	2412.0	11.45	12.0	Yes
			6	2437.0	11.18		
			11	2462.0	11.83		
			12	2467.0	7.24	8.0	No
			13	2472.0	7.72	8.0	
	802.11g	6 Mbps	1 - 13	2412 - 2472	Not Required	12.0	No
	802.11n	6.5 Mbps	1 - 13	2412 - 2472	Not Required	12.0	No

Note(s):

- SAR is not required for 802.11g/n modes when the adjusted SAR for 802.11b is < 1.2 W/kg.
- For "Not required", 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 802.11n/g/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.
- Additionally, SAR is not required for Channels 12 and 13 because the tune-up limit and the measured output power for these two channels are no greater than those for the default test channels. Refer to §6.3.

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

WLAN output power Results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
						Max. Average Power			Reduced Average Power		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 5GHz Ant.	5.3 (UNII 2A)	802.11a	6 Mbps	52	5260.0	15.42	16.0	Yes	Not Required	11.0	No
				56	5280.0	15.57					
				60	5300.0	15.60					
				64	5320.0	15.45					
		802.11n (HT20)	6.5 Mbps	Not Required			16.0	No	Not Required	11.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			15.0	No	Not Required	11.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			16.0	No	Not Required	11.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			15.0	No	Not Required	11.0	No
	802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	13.0	No	10.32	11.0	Yes	
	5.5 (U-NII 2C)	802.11a	6 Mbps	100	5500.0	15.56	16.0	Yes	Not Required	11.0	No
				120	5600.0	15.36					
				124	5620.0	15.31					
				144	5720.0	15.21					
		802.11n (HT20)	6.5 Mbps	Not Required			16.0	No	Not Required	11.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			15.0	No	Not Required	11.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			16.0	No	Not Required	11.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			15.0	No	Not Required	11.0	No
	802.11ac (VHT80)	29.3 Mbps	106	5530.0	Not Required	13.0	No	10.24	11.0	Yes	
	122	5610.0	Not Required	10.64							
	138	5690.0	Not Required	10.42							
	5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	15.43	16.0	Yes	Not Required	11.0	No
157				5785.0	15.43						
165				5825.0	15.48						
802.11n (HT20)		6.5 Mbps	Not Required			16.0	No	Not Required	11.0	No	
802.11n (HT40)		13.5 Mbps	Not Required			15.0	No	Not Required	11.0	No	
802.11ac (VHT20)		6.5 Mbps	Not Required			16.0	No	Not Required	11.0	No	
802.11ac (VHT40)		13.5 Mbps	Not Required			15.0	No	Not Required	11.0	No	
802.11ac (VHT80)	29.3 Mbps	155	5775.0	Not Required	13.0	No	10.17	11.0	Yes		

Note(s):

- For "Not required", 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.
- When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.
- When the specified maximum output power is the same for both UNII band I and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest reported SAR for UNII band 2A is
 - ≤ 1.2 W/kg, SAR is not required for UNII band I
 - > 1.2 W/kg, both bands should be tested independently for SAR.

9.7. Bluetooth

Bluetooth output power Results

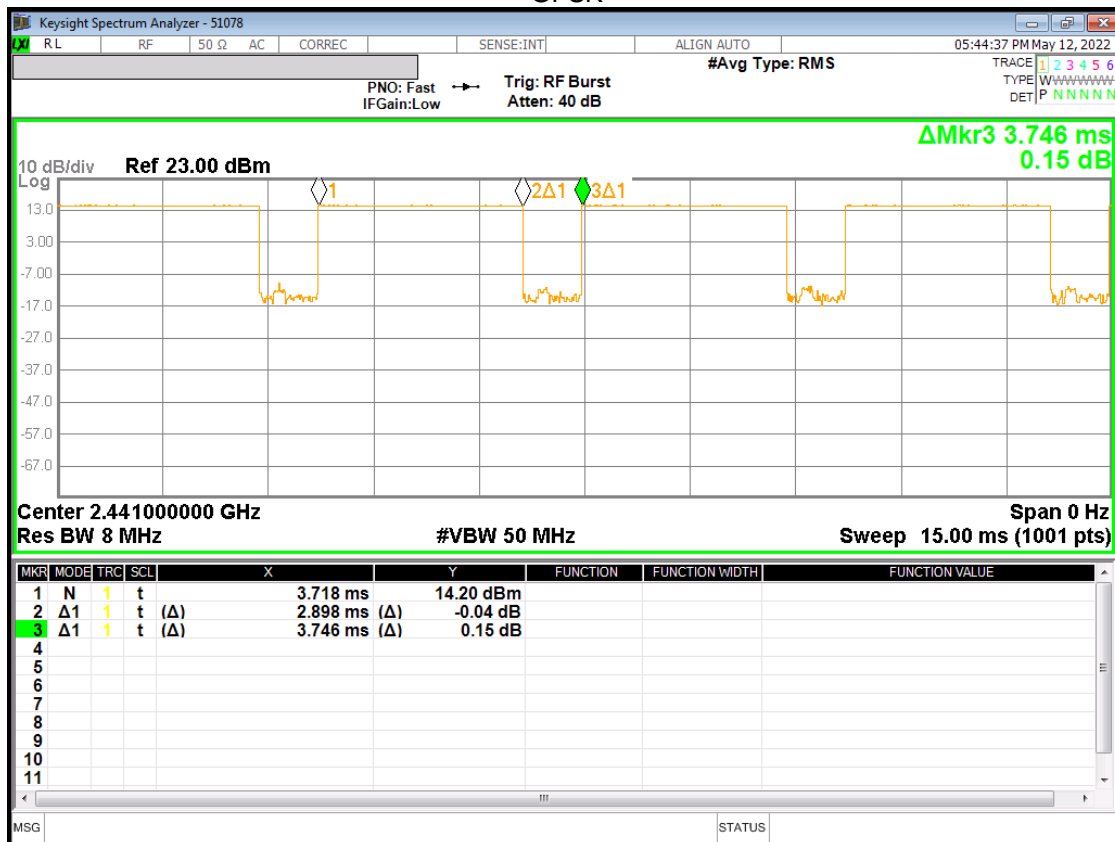
Band (GHz)	Antenna	Mode	Ch #	Freq. (MHz)	Maximum Average Power (dBm)	
					Meas Pw r	Tune-up Limit
2.4	BT Ant.	GFSK	0	2402	16.54	17.0
			39	2441	15.76	
			78	2480	13.89	
		EDR	0	2402	11.92	12.5
			39	2441	11.18	
			78	2480	9.36	
		LE-1 Mbps	0	2402	6.41	8.0
			19	2440	7.66	
			39	2480	7.42	
		LE-2 Mbps	0	2402	5.42	8.0
			19	2440	6.45	
			39	2480	6.58	

Duty Factor Measured Results

Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
GFSK	DH5	2.898	3.746	77.4%	1.29

Duty Cycle plots

GFSK



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 648474 D04 Handset SAR (Phablet Only):

For smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm.

When hotspot mode does not apply, 10-g extremity SAR is required for all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

Additional 1-g SAR testing at 5 mm is not required when hotspot mode 10-g extremity SAR is not required for the surfaces and edges; since all 1-g reported SAR < 1.2 W/kg.

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 $\leq \frac{1}{4}$ 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:

- ≤ 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.

10.1. GSM 850

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	GPRS 2 Slots	0	Left Touch	251	848.8	32.50	31.99	0.295	0.332	
				Left Tilt	251	848.8	32.50	31.99	0.163	0.183	
				Right Touch	251	848.8	32.50	31.99	0.349	0.392	1
				Right Tilt	251	848.8	32.50	31.99	0.196	0.220	
	Body-worn	GPRS 2 Slots	15	Rear	251	848.8	32.50	31.99	0.466	0.524	2
				Front	251	848.8	32.50	31.99	0.234	0.263	
	Hotspot	GPRS 2 Slots	10	Rear	128	824.4	32.50	31.76	0.706	0.837	
					190	836.6	32.50	31.21	0.866	1.166	3
					251	848.8	32.50	31.99	0.975	1.096	
				Front	251	848.8	32.50	31.99	0.225	0.253	
				Edge 2	251	848.8	32.50	31.99	0.404	0.454	
				Edge 3	251	848.8	32.50	31.99	0.476	0.535	
Edge 4	251	848.8	32.50	31.99	0.194	0.218					

10.2. GSM 1900

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	GPRS 2 Slots	0	Left Touch	810	1909.8	29.50	28.85	0.122	0.142	4
				Left Tilt	810	1909.8	29.50	28.85	0.063	0.073	
				Right Touch	810	1909.8	29.50	28.85	0.106	0.123	
				Right Tilt	810	1909.8	29.50	28.85	0.057	0.067	
	Body-worn	GPRS 2 Slots	15	Rear	810	1909.8	29.50	28.85	0.217	0.252	5
				Front	810	1909.8	29.50	28.85	0.171	0.199	
	Hotspot	GPRS 4 Slots	10	Rear	661	1880.0	21.50	20.88	0.161	0.186	6
				Front	661	1880.0	21.50	20.88	0.094	0.108	
				Edge 3	661	1880.0	21.50	20.88	0.117	0.135	
				Edge 4	661	1880.0	21.50	20.88	0.069	0.080	

10.3. WCDMA Band II

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	Rel 99 RMC	0	Left Touch	9400	1880.0	24.50	24.17	0.166	0.179	7
				Left Tilt	9400	1880.0	24.50	24.17	0.095	0.103	
				Right Touch	9400	1880.0	24.50	24.17	0.174	0.188	
				Rightt Tilt	9400	1880.0	24.50	24.17	0.087	0.094	
	Body-w orn	Rel 99 RMC	15	Rear	9400	1880.0	24.50	24.17	0.341	0.368	8
				Front	9400	1880.0	24.50	24.17	0.247	0.266	
	Hotspot	Rel 99 RMC	10	Rear	9400	1880.0	21.50	21.20	0.306	0.328	9
				Front	9400	1880.0	21.50	21.20	0.238	0.255	
				Edge 2	9400	1880.0	21.50	21.20	0.321	0.344	
				Edge 4	9400	1880.0	21.50	21.20	0.148	0.158	

10.4. WCDMA Band IV

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	Rel 99 RMC	0	Left Touch	1413	1732.6	23.50	22.80	0.119	0.140	10
				Left Tilt	1413	1732.6	23.50	22.80	0.097	0.114	
				Right Touch	1413	1732.6	23.50	22.80	0.126	0.148	
				Rightt Tilt	1413	1732.6	23.50	22.80	0.097	0.114	
	Body-w orn	Rel 99 RMC	15	Rear	1413	1732.6	23.50	22.80	0.256	0.301	11
				Front	1413	1732.6	23.50	22.80	0.211	0.248	
	Hotspot	Rel 99 RMC	10	Rear	1413	1732.6	21.50	20.71	0.355	0.426	12
				Front	1413	1732.6	21.50	20.71	0.281	0.337	
				Edge 2	1413	1732.6	21.50	20.71	0.329	0.395	
				Edge 4	1413	1732.6	21.50	20.71	0.186	0.223	

10.5. WCDMA Band V

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	Rel 99 RMC	0	Left Touch	4183	836.6	25.20	24.53	0.227	0.265	13
				Left Tilt	4183	836.6	25.20	24.53	0.120	0.140	
				Right Touch	4183	836.6	25.20	24.53	0.265	0.309	
				Rightt Tilt	4183	836.6	25.20	24.53	0.143	0.167	
	Body-w orn	Rel 99 RMC	15	Rear	4183	836.6	25.20	24.53	0.290	0.339	14
				Front	4183	836.6	25.20	24.53	0.211	0.246	
	Hotspot	Rel 99 RMC	10	Rear	4183	836.6	25.20	24.53	0.661	0.772	15
				Front	4183	836.6	25.20	24.53	0.199	0.232	
				Edge 2	4183	836.6	25.20	24.53	0.378	0.441	
				Edge 3	4183	836.6	25.20	24.53	0.370	0.432	
Edge 4	4183	836.6	25.20	24.53	0.182	0.212					

10.6. LTE Band 7 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	QPSK	0	Left Touch	21100	2535.0	1	0	23.00	22.15	0.278	0.338	16
							50	24	23.00	22.21	0.298	0.358	
				Left Tilt	21100	2535.0	1	0	23.00	22.15	0.076	0.092	
							50	24	23.00	22.21	0.074	0.089	
				Right Touch	21100	2535.0	1	0	23.00	22.15	0.166	0.202	
							50	24	23.00	22.21	0.173	0.208	
				Right Tilt	21100	2535.0	1	0	23.00	22.15	0.159	0.193	
							50	24	23.00	22.21	0.160	0.192	
	Body-worn	QPSK	15	Rear	21100	2535.0	1	0	23.00	22.15	0.422	0.513	17
				50	24	23.00	22.21	0.447	0.536				
	Front	21100	2535.0	1	0	23.00	22.15	0.288	0.350				
				50	24	23.00	22.21	0.291	0.349				
	Hotspot	QPSK	10	Rear	21100	2535.0	1	0	21.50	20.77	0.579	0.685	18
							50	24	21.50	21.01	0.605	0.677	
				Front	21100	2535.0	1	0	21.50	20.77	0.397	0.470	
							50	24	21.50	21.01	0.402	0.450	
Edge 3				21100	2535.0	1	0	21.50	20.77	0.500	0.592		
						50	24	21.50	21.01	0.497	0.556		
Edge 4				21100	2535.0	1	0	21.50	20.77	0.257	0.304		
						50	24	21.50	21.01	0.274	0.307		

10.7. LTE Band 12 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	QPSK	0	Left Touch	23095	707.5	1	49	25.50	24.78	0.185	0.218	
							25	12	24.50	23.94	0.116	0.132	
				Left Tilt	23095	707.5	1	49	25.50	24.78	0.092	0.108	
							25	12	24.50	23.94	0.054	0.061	
				Right Touch	23095	707.5	1	49	25.50	24.78	0.186	0.220	19
							25	12	24.50	23.94	0.179	0.204	
				Right Tilt	23095	707.5	1	49	25.50	24.78	0.089	0.105	
							25	12	24.50	23.94	0.069	0.078	
	Body-worn	QPSK	15	Rear	23095	707.5	1	49	25.50	24.78	0.270	0.319	20
				25	12	24.50	23.94	0.248	0.282				
	Front	23095	707.5	1	49	25.50	24.78	0.183	0.216				
				25	12	24.50	23.94	0.142	0.162				
	Hotspot	QPSK	10	Rear	23095	707.5	1	49	25.50	24.78	0.549	0.648	21
							25	12	25.50	23.94	0.418	0.599	
				Front	23095	707.5	1	49	25.50	24.78	0.163	0.192	
							25	12	25.50	23.94	0.126	0.180	
				Edge 2	23095	707.5	1	49	25.50	24.78	0.275	0.325	
							25	12	25.50	23.94	0.212	0.304	
Edge 3				23095	707.5	1	49	25.50	24.78	0.239	0.282		
						25	12	25.50	23.94	0.178	0.255		
Edge 4	23095	707.5	1	49	25.50	24.78	0.152	0.179					
			25	12	25.50	23.94	0.133	0.190					

10.8. LTE Band 13 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	QPSK	0	Left Touch	23230	782.0	1	25	25.50	24.49	0.195	0.246	
							25	0	24.50	23.88	0.154	0.178	
				Left Tilt	23230	782.0	1	25	25.50	24.49	0.097	0.122	
							25	0	24.50	23.88	0.080	0.093	
				Right Touch	23230	782.0	1	25	25.50	24.49	0.228	0.288	22
							25	0	24.50	23.88	0.173	0.200	
				Right Tilt	23230	782.0	1	25	25.50	24.49	0.097	0.122	
							25	0	24.50	23.88	0.081	0.093	
	Body-worn	QPSK	15	Rear	23230	782.0	1	25	25.50	24.49	0.367	0.463	23
							25	0	24.50	23.88	0.301	0.347	
				Front	23230	782.0	1	25	25.50	24.49	0.226	0.285	
							25	0	24.50	23.88	0.187	0.216	
	Hotspot	QPSK	10	Rear	23230	782.0	1	25	25.50	24.49	0.539	0.680	24
							25	0	25.50	23.88	0.432	0.627	
				Front	23230	782.0	1	25	25.50	24.49	0.206	0.260	
							25	0	25.50	23.88	0.164	0.238	
				Edge 2	23230	782.0	1	25	25.50	24.49	0.377	0.476	
							25	0	25.50	23.88	0.310	0.450	
				Edge 3	23230	782.0	1	25	25.50	24.49	0.251	0.317	
							25	0	25.50	23.88	0.200	0.290	
				Edge 4	23230	782.0	1	25	25.50	24.49	0.194	0.245	
							25	0	25.50	23.88	0.164	0.238	

10.9. LTE Band 14 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	QPSK	0	Left Touch	23330	793.0	1	25	25.50	24.52	0.146	0.183	
							25	25	24.50	23.51	0.131	0.165	
				Left Tilt	23330	793.0	1	25	25.50	24.52	0.088	0.110	
							25	25	24.50	23.51	0.076	0.095	
				Right Touch	23330	793.0	1	25	25.50	24.52	0.211	0.264	25
							25	25	24.50	23.51	0.165	0.207	
				Right Tilt	23330	793.0	1	25	25.50	24.52	0.126	0.158	
							25	25	24.50	23.51	0.099	0.124	
	Body-worn	QPSK	15	Rear	23330	793.0	1	25	25.50	24.52	0.342	0.429	26
							25	25	24.50	23.51	0.274	0.344	
				Front	23330	793.0	1	25	25.50	24.52	0.213	0.267	
							25	25	24.50	23.51	0.171	0.215	
	Hotspot	QPSK	10	Rear	23330	793.0	1	25	25.50	24.52	0.560	0.702	
							25	25	25.50	23.51	0.460	0.727	27
				Front	23330	793.0	1	25	25.50	24.52	0.177	0.222	
							25	25	25.50	23.51	0.140	0.221	
				Edge 2	23330	793.0	1	25	25.50	24.52	0.366	0.459	
							25	25	25.50	23.51	0.297	0.470	
				Edge 3	23330	793.0	1	25	25.50	24.52	0.253	0.317	
							25	25	25.50	23.51	0.208	0.329	
				Edge 4	23330	793.0	1	25	25.50	24.52	0.189	0.237	
							25	25	25.50	23.51	0.152	0.240	

10.10. LTE Band 25 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	QPSK	0	Left Touch	26365	1882.5	1	99	25.00	24.25	0.158	0.188	28
							50	50	24.00	23.40	0.132	0.152	
				Left Tilt	26365	1882.5	1	99	25.00	24.25	0.102	0.121	
							50	50	24.00	23.40	0.070	0.081	
				Right Touch	26365	1882.5	1	99	25.00	24.25	0.126	0.150	
							50	50	24.00	23.40	0.104	0.119	
	Right Tilt	26365	1882.5	1	99	25.00	24.25	0.088	0.105				
				50	50	24.00	23.40	0.074	0.085				
	Body-worn	QPSK	15	Rear	26365	1882.5	1	99	25.00	24.25	0.316	0.376	29
							50	50	24.00	23.40	0.249	0.286	
				Front	26365	1882.5	1	99	25.00	24.25	0.224	0.266	
							50	50	24.00	23.40	0.178	0.204	
	Hotspot	QPSK	10	Rear	26365	1882.5	1	99	22.00	21.28	0.315	0.372	30
							50	50	22.00	21.38	0.315	0.363	
				Front	26365	1882.5	1	99	22.00	21.28	0.226	0.267	
							50	50	22.00	21.38	0.230	0.265	
				Edge 3	26365	1882.5	1	99	22.00	21.28	0.280	0.330	
							50	50	22.00	21.38	0.280	0.323	
Edge 4				26365	1882.5	1	99	22.00	21.28	0.149	0.176		
						50	50	22.00	21.38	0.156	0.180		

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Sub.1 Ant.	Head	QPSK	0	Left Touch	26590	1905.0	1	0	19.50	18.84	0.514	0.598	31
							50	0	19.50	18.92	0.527	0.602	
				Left Tilt	26590	1905.0	1	0	19.50	18.84	0.415	0.483	
							50	0	19.50	18.92	0.432	0.494	
				Right Touch	26590	1905.0	1	0	19.50	18.84	0.219	0.255	
							50	0	19.50	18.92	0.230	0.263	
	Right Tilt	26590	1905.0	1	0	19.50	18.84	0.235	0.274				
				50	0	19.50	18.92	0.250	0.286				
	Body-worn	QPSK	15	Rear	26590	1905.0	1	0	23.50	23.05	0.228	0.253	32
							50	0	22.50	22.16	0.184	0.199	
				Front	26590	1905.0	1	0	23.50	23.05	0.137	0.152	
							50	0	22.50	22.16	0.108	0.117	
	Hotspot	QPSK	10	Rear	26590	1905.0	1	0	23.50	23.05	0.432	0.479	33
							50	0	22.50	22.16	0.348	0.376	
				Front	26590	1905.0	1	0	23.50	23.05	0.248	0.275	
							50	0	22.50	22.16	0.199	0.215	
				Edge 1	26590	1905.0	1	0	23.50	23.05	0.384	0.426	
							50	0	22.50	22.16	0.309	0.334	
Edge 2				26590	1905.0	1	0	23.50	23.05	0.118	0.131		
						50	0	22.50	22.16	0.102	0.110		

10.11. LTE Band 26 (15MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	QPSK	0	Left Touch	26865	831.5	1	37	25.50	24.52	0.196	0.246	
							36	0	24.50	23.59	0.160	0.197	
				Left Tilt	26865	831.5	1	37	25.50	24.52	0.103	0.129	
							36	0	24.50	23.59	0.082	0.101	
				Right Touch	26865	831.5	1	37	25.50	24.52	0.268	0.336	34
							36	0	24.50	23.59	0.190	0.234	
				Right Tilt	26865	831.5	1	37	25.50	24.52	0.132	0.165	
							36	0	24.50	23.59	0.101	0.125	
	Body-worn	QPSK	15	Rear	26865	831.5	1	37	25.50	24.52	0.296	0.371	35
							36	0	24.50	23.59	0.217	0.268	
				Front	26865	831.5	1	37	25.50	24.52	0.187	0.234	
							36	0	24.50	23.59	0.153	0.189	
	Hotspot	QPSK	10	Rear	26865	831.5	1	37	25.50	24.52	0.684	0.857	36
							36	0	24.50	23.59	0.513	0.633	
				Front	26865	831.5	1	37	25.50	24.52	0.170	0.213	
							36	0	24.50	23.59	0.134	0.165	
				Edge 2	26865	831.5	1	37	25.50	24.52	0.284	0.356	
							36	0	24.50	23.59	0.236	0.291	
				Edge 3	26865	831.5	1	37	25.50	24.52	0.360	0.451	
							36	0	24.50	23.59	0.248	0.306	
				Edge 4	26865	831.5	1	37	25.50	24.52	0.133	0.167	
							36	0	24.50	23.59	0.113	0.139	

10.12. LTE Band 30 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	QPSK	0	Left Touch	27710	2310.0	1	49	24.00	23.31	0.153	0.179	37
							25	25	23.00	22.40	0.118	0.136	
				Left Tilt	27710	2310.0	1	49	24.00	23.31	0.058	0.068	
							25	25	23.00	22.40	0.044	0.050	
				Right Touch	27710	2310.0	1	49	24.00	23.31	0.103	0.121	
							25	25	23.00	22.40	0.082	0.094	
				Right Tilt	27710	2310.0	1	49	24.00	23.31	0.085	0.100	
							25	25	23.00	22.40	0.070	0.081	
	Body-worn	QPSK	15	Rear	27710	2310.0	1	49	24.00	23.31	0.206	0.242	38
							25	25	23.00	22.40	0.162	0.186	
				Front	27710	2310.0	1	49	24.00	23.31	0.175	0.205	
							25	25	23.00	22.40	0.139	0.160	
	Hotspot	QPSK	10	Rear	27710	2310.0	1	49	21.00	20.01	0.174	0.219	
							25	25	21.00	20.05	0.181	0.225	39
				Front	27710	2310.0	1	49	21.00	20.01	0.132	0.166	
							25	25	21.00	20.05	0.132	0.164	
				Edge 3	27710	2310.0	1	49	21.00	20.01	0.178	0.224	
							25	25	21.00	20.05	0.179	0.223	
				Edge 4	27710	2310.0	1	49	21.00	20.01	0.109	0.137	
							25	25	21.00	20.05	0.109	0.136	

10.13. LTE Band 40 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Note.	Plot No.			
									Tune-up limit	Meas.	Meas.	Scaled					
Main 2 Ant.	Head	QPSK	0	Left Touch	39200	2355.0	1	25	13.00	12.03	0.156	0.195		40			
							25	25	13.00	12.01	0.128	0.161					
					38750	2310.0	1	25	13.00	11.57	0.138	0.192	1				
							25	25	13.00	12.03	0.056	0.070					
					Left Tilt	39200	2355.0	1	25	13.00	12.03	0.046	0.058				
								25	25	13.00	12.01	0.046	0.058				
				Right Touch	39200	2355.0	1	25	13.00	12.03	0.088	0.111					
							25	25	13.00	12.01	0.075	0.094					
				Right Tilt	39200	2355.0	1	25	13.00	12.03	0.087	0.109					
							25	25	13.00	12.01	0.072	0.091					
				Body-w orn	QPSK	15	Rear	39200	2355.0	1	25	13.00	12.03	0.194	0.243		41
										25	25	13.00	12.01	0.158	0.198		
	38750	2310.0	1					25	13.00	11.57	0.168	0.234	1				
			25				25	13.00	12.03	0.159	0.199						
	Front	39200	2355.0				1	25	13.00	12.03	0.159	0.199					
							25	25	13.00	12.01	0.129	0.162					
				25	25	13.00	12.01	0.129	0.162								
	Hotspot	QPSK	10	Rear	39200	2355.0	1	25	13.00	12.03	0.036	0.045					
							25	25	13.00	12.01	0.036	0.045					
					38750	2310.0	1	25	13.00	11.57	0.038	0.053	1	42			
							25	25	13.00	12.03	0.024	0.030					
					Front	39200	2355.0	1	25	13.00	12.03	0.024	0.030				
								25	25	13.00	12.01	0.025	0.031				
				Edge 3	39200	2355.0	1	25	13.00	12.03	0.032	0.040					
25							25	13.00	12.01	0.032	0.040						
Edge 4				39200	2355.0	1	25	13.00	12.03	0.024	0.030						
						25	25	13.00	12.01	0.026	0.033						

Note(s):

1. LTE Band 40-Lower Band- are tested at worst configuration of LTE Band 40-Upper band.

10.14. LTE Band 41 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.			
									Tune-up limit	Meas.	Meas.	Scaled				
Main 2 Ant.	Head	QPSK	0	Left Touch	40185	2549.5	1	0	25.00	24.25	0.259	0.308				
							50	0	24.00	23.31	0.203	0.238				
				Left Tilt	40185	2549.5	1	0	25.00	24.25	0.077	0.091				
							50	0	24.00	23.31	0.060	0.070				
				Right Touch	40185	2549.5	1	0	25.00	24.25	0.171	0.203				
							50	0	24.00	23.31	0.137	0.160				
				Right Tilt	40185	2549.5	1	0	25.00	24.25	0.146	0.173				
							50	0	24.00	23.31	0.124	0.145				
				Body-worn	QPSK	15	Rear	40185	2549.5	1	0	25.00	24.25	0.419	0.498	44
										50	0	24.00	23.31	0.334	0.391	
							Front	40185	2549.5	1	0	25.00	24.25	0.323	0.384	
										50	0	24.00	23.31	0.260	0.305	
	Hotspot	QPSK	10	Rear	39750	2506.0	1	0	23.00	21.48	0.451	0.640				
							50	0	23.00	21.63	0.467	0.640				
					40185	2549.5	1	0	23.00	21.57	0.578	0.803				
							50	0	23.00	21.65	0.594	0.811	45			
					40620	2593.0	1	0	23.00	21.46	0.474	0.676				
							50	0	23.00	21.46	0.484	0.690				
					41055	2636.5	1	0	23.00	21.05	0.481	0.754				
							50	0	23.00	21.04	0.485	0.762				
				41490	2680.0	1	0	23.00	21.00	0.495	0.785					
						50	0	23.00	21.05	0.486	0.761					
				Front	40185	2549.5	1	0	23.00	21.57	0.372	0.517				
							50	0	23.00	21.65	0.385	0.525				
				Edge 3	40185	2549.5	1	0	23.00	21.57	0.413	0.574				
							50	0	23.00	21.65	0.418	0.570				
				Edge 4	40185	2549.5	1	0	23.00	21.57	0.181	0.252				
							50	0	23.00	21.65	0.203	0.277				
Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		10-g SAR (W/kg)		Plot No.			
Main 2 Ant.	Product Specific 10-g	QPSK	13	Rear	40185	2549.5	1	0	25.00	24.25	0.226	0.268				
		QPSK	0	Rear	39750	2506.0	1	0	23.00	21.48	1.910	2.710				
					40185	2549.5	1	0	23.00	21.59	1.950	2.698				
					40620	2593.0	1	0	23.00	21.46	1.990	2.837				
					41055	2636.5	1	0	23.00	21.05	1.960	3.071				
				41490	2680.0	1	0	23.00	21.00	2.000	3.170	46				

LTE Band 41 (20MHz Bandwidth) (Continued)

LTE Band 41 Power Class 2

Antenna	RF Exposure Conditions	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	
Main 2 Ant.	Head	QPSK	0	Left Touch	40185	2549.5	1	0	26.50	26.40	0.303	0.310			43
	Body-worn	QPSK	15	Rear	40185	2549.5	1	0	26.50	26.40	0.443	0.453			
	Hotspot	QPSK	10	Rear	40185	2549.5	50	0	24.60	24.10	0.536	0.601			
	Product Specific 10-g	QPSK	0	Rear	41490	2680.0	1	0	24.60	23.56			1.850	2.353	

Note(s):

For Hotspot exposure condition, Both Power Class 3 and Power Class 2 are same target power. So additional SAR test are not necessary for Power Class 2 in Hotspot exposure condition. 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 or 3.5 W/kg (1-g or 10-g respectively)

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)	Fram Avg. Power (dBm)	Reported SAR (W/kg)	Duty Cycle	Tune-up Power (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)		
Main 2 Ant.	Head	43.3	26.5	193.4	0.31	63.3	25.0	200.2	0.308	0.298	4.2
	Body-worn	43.3	26.5	193.4	0.453	63.3	25.0	200.2	0.498	0.481	-5.9
	Hotspot	43.3	24.6	124.9	0.601	63.3	23.0	126.3	0.811	0.802	-25.1
	Product Specific 10-g	43.3	24.6	124.9	2.353	63.3	23.0	126.3	3.170	3.134	-24.9

Note(s):

SAR test for Power Class 2 is not required base on the reported SAR < 1.4 or 3.5 W/kg (1-g or 10-g respectively) and reported SAR vs. output power linearly scaled < 10%.

10.15. LTE Band 48 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.			
									Tune-up limit	Meas.	Meas.	Scaled				
Sub.3 Ant.	Head	QPSK	0	Left Touch	56207	3646.7	1	0	20.00	19.49	0.047	0.053				
							50	50	20.00	19.62	0.050	0.055				
				Left Tilt	56207	3646.7	1	0	20.00	19.49	0.027	0.030				
							50	50	20.00	19.62	0.031	0.034				
				Right Touch	56207	3646.7	1	0	20.00	19.49	0.261	0.294				
							50	50	20.00	19.62	0.283	0.309	47			
			Right Tilt	56207	3646.7	1	0	20.00	19.49	0.084	0.094					
						50	50	20.00	19.62	0.084	0.092					
			Body-worn	QPSK	15	Rear	56207	3646.7	1	0	20.00	19.49	0.215	0.242		
									50	50	20.00	19.62	0.222	0.242	48	
						Front	56207	3646.7	1	0	20.00	19.49	0.033	0.037		
									50	50	20.00	19.62	0.036	0.039		
	Hotspot	QPSK				10	Rear	56207	3646.7	1	0	20.00	19.49	0.533	0.599	49
										50	50	20.00	19.62	0.532	0.581	
			Front	56207	3646.7		1	0	20.00	19.49	0.074	0.083				
							50	50	20.00	19.62	0.075	0.082				
	Edge 1	56207	3646.7	1	0	20.00	19.49	0.056	0.063							
				50	50	20.00	19.62	0.058	0.063							
	Edge 4	56207	3646.7	1	0	20.00	19.49	0.272	0.306							
				50	50	20.00	19.62	0.272	0.297							

10.16. LTE Band 66 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	QPSK	0	Left Touch	132322	1745.0	1	0	24.00	22.90	0.130	0.167	
							50	0	23.00	22.45	0.132	0.150	
				Left Tilt	132322	1745.0	1	0	24.00	22.90	0.093	0.120	
							50	0	23.00	22.45	0.095	0.108	
				Right Touch	132322	1745.0	1	0	24.00	22.90	0.131	0.169	50
							50	0	23.00	22.45	0.130	0.148	
	Right Tilt	132322	1745.0	1	0	24.00	22.90	0.089	0.115				
				50	0	23.00	22.45	0.089	0.101				
	Body-w orn	QPSK	15	Rear	132322	1745.0	1	0	24.00	22.90	0.445	0.573	51
							50	0	23.00	22.45	0.426	0.484	
				Front	132322	1745.0	1	0	24.00	22.90	0.217	0.280	
							50	0	23.00	22.45	0.207	0.235	
	Hotspot	QPSK	10	Rear	132322	1745.0	1	0	22.00	20.98	0.291	0.368	
							50	0	22.00	21.08	0.275	0.340	
				Front	132322	1745.0	1	0	22.00	20.98	0.232	0.293	
							50	0	22.00	21.08	0.222	0.274	
				Edge 3	132322	1745.0	1	0	22.00	20.98	0.313	0.396	52
							50	0	22.00	21.08	0.303	0.374	
Edge 4				132322	1745.0	1	0	22.00	20.98	0.189	0.239		
						50	0	22.00	21.08	0.183	0.226		

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Sub.1 Ant.	Head	QPSK	0	Left Touch	132072	1720.0	1	99	21.50	20.49	0.257	0.324	53
							50	50	21.50	20.54	0.249	0.311	
				Left Tilt	132072	1720.0	1	99	21.50	20.49	0.211	0.266	
							50	50	21.50	20.54	0.205	0.256	
				Right Touch	132072	1720.0	1	99	21.50	20.49	0.166	0.209	
							50	50	21.50	20.54	0.160	0.200	
	Right Tilt	132072	1720.0	1	99	21.50	20.49	0.170	0.215				
				50	50	21.50	20.54	0.162	0.202				
	Body-w orn	QPSK	15	Rear	132072	1720.0	1	99	23.50	23.04	0.097	0.107	54
							50	50	22.50	22.09	0.074	0.082	
				Front	132072	1720.0	1	99	23.50	23.04	0.062	0.068	
							50	50	22.50	22.09	0.046	0.051	
	Hotspot	QPSK	10	Rear	132072	1720.0	1	99	23.50	23.04	0.259	0.288	55
							50	50	22.50	22.09	0.199	0.219	
				Front	132072	1720.0	1	99	23.50	23.04	0.131	0.146	
							50	50	22.50	22.09	0.099	0.109	
				Edge 1	132072	1720.0	1	99	23.50	23.04	0.190	0.211	
							50	50	22.50	22.09	0.146	0.160	
Edge 2				132072	1720.0	1	99	23.50	23.04	0.056	0.063		
						50	50	22.50	22.09	0.042	0.046		

10.17. LTE Band 71 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	QPSK	0	Left Touch	133297	680.5	1	0	25.50	24.83	0.112	0.131	
							50	24	24.50	23.88	0.122	0.141	
				Left Tilt	133297	680.5	1	0	25.50	24.83	0.053	0.062	
							50	24	24.50	23.88	0.066	0.076	
				Right Touch	133297	680.5	1	0	25.50	24.83	0.174	0.203	56
							50	24	24.50	23.88	0.155	0.179	
				Right Tilt	133297	680.5	1	0	25.50	24.83	0.091	0.106	
							50	24	24.50	23.88	0.077	0.089	
	Body-worn	QPSK	15	Rear	133297	680.5	1	0	25.50	24.83	0.273	0.318	57
							50	24	24.50	23.88	0.261	0.301	
				Front	133297	680.5	1	0	25.50	24.83	0.154	0.180	
							50	24	24.50	23.88	0.150	0.173	
	Hotspot	QPSK	10	Rear	133297	680.5	1	0	25.50	24.83	0.472	0.550	58
							50	24	24.50	23.88	0.421	0.486	
				Front	133297	680.5	1	0	25.50	24.83	0.141	0.164	
							50	24	24.50	23.88	0.144	0.166	
				Edge 2	133297	680.5	1	0	25.50	24.83	0.227	0.265	
							50	24	24.50	23.88	0.217	0.250	
				Edge 3	133297	680.5	1	0	25.50	24.83	0.170	0.198	
							50	24	24.50	23.88	0.160	0.185	
				Edge 4	133297	680.5	1	0	25.50	24.83	0.134	0.156	
							50	24	24.50	23.88	0.120	0.138	

10.18. NR Band n5 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.				
										Tune-up limit	Meas.	Meas.	Scaled					
Main 1 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	167300	836.5	1	53	25.50	24.66	0.194	0.235					
								50	28	25.50	24.60	0.204	0.251					
					Left Tilt	167300	836.5	1	53	25.50	24.66	0.115	0.140					
								50	28	25.50	24.60	0.115	0.141					
					Right Touch	167300	836.5	1	53	25.50	24.66	0.237	0.288					
								50	28	25.50	24.60	0.238	0.293	59				
		Right Tilt	167300	836.5	1	53	25.50	24.66	0.131	0.159								
					50	28	25.50	24.60	0.131	0.161								
		CP-OFDM	QPSK	0	Right Touch	167300	836.5	1	1	24.00	23.40	0.165	0.189					
					Body-worn	DFT-s-OFDM	QPSK	15	Rear	167300	836.5	1	53	25.50	24.66	0.346	0.420	
												50	28	25.50	24.60	0.347	0.427	60
					Front	167300	836.5	1	53	25.50	24.66	0.178	0.216					
	50							28	25.50	24.60	0.180	0.221						
	CP-OFDM				QPSK	15	Rear	167300	836.5	1	1	24.00	23.40	0.182	0.209			
		Hotspot	DFT-s-OFDM	QPSK			10	Rear	167300	836.5	1	53	25.50	24.66	0.694	0.842		
	50				28	25.50					24.60	0.706	0.869	61				
	Front				167300	836.5		1	53	25.50	24.66	0.157	0.191					
								50	28	25.50	24.60	0.173	0.213					
	Edge 2				167300	836.5		1	53	25.50	24.66	0.252	0.306					
								50	28	25.50	24.60	0.257	0.316					
	Edge 3				167300	836.5		1	53	25.50	24.66	0.360	0.437					
								50	28	25.50	24.60	0.362	0.445					
	Edge 4				167300	836.5		1	53	25.50	24.66	0.127	0.154					
								50	28	25.50	24.60	0.131	0.161					
CP-OFDM	QPSK				10	Rear		167300	836.5	1	1	24.00	23.40	0.408	0.468			

Note(s):

CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in each exposure conditions.

10.19. NR Band n25 (40MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.	
										Tune-up limit	Meas.	Meas.	Scaled		
Main 2 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	376500	1882.5	1	1	25.00	24.49	0.190	0.214	62	
								108	54	25.00	24.22	0.162	0.194		
					Left Tilt	376500	1882.5	1	1	25.00	24.49	0.112	0.126		
								108	54	25.00	24.22	0.091	0.109		
		Right Touch	376500	1882.5	1	1	25.00	24.49	0.168	0.189					
					108	54	25.00	24.22	0.136	0.163					
		Right Tilt	376500	1882.5	1	1	25.00	24.49	0.096	0.108					
					108	54	25.00	24.22	0.087	0.104					
	CP-OFDM	QPSK	0	Left Touch	376500	1882.5	1	1	23.50	23.05	0.111	0.123			
	Body-w orn	DFT-s-OFDM	QPSK	15	Rear	376500	1882.5	1	1	25.00	24.49	0.413	0.464	63	
					Front	376500	1882.5	108	54	25.00	24.22	0.355	0.425		
								1	1	25.00	24.49	0.314	0.353		
		CP-OFDM	QPSK	15	Rear	376500	1882.5	1	1	23.50	23.05	0.323	0.358		
		Hotspot	DFT-s-OFDM	QPSK	10	Rear	376500	1882.5	1	1	22.00	21.15	0.414	0.503	64
									108	54	22.00	21.28	0.327	0.386	
	Front					376500	1882.5	1	1	22.00	21.15	0.258	0.314		
								108	54	22.00	21.28	0.266	0.314		
	Edge 3		376500	1882.5	1	1	22.00	21.15	0.360	0.438					
					108	54	22.00	21.28	0.369	0.436					
	Edge 4		376500	1882.5	1	1	22.00	21.15	0.164	0.199					
108					54	22.00	21.28	0.169	0.200						
CP-OFDM	QPSK	10	Rear	376500	1882.5	1	1	22.00	21.17	0.362	0.438				

10.20. NR Band n30 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.	
										Tune-up limit	Meas.	Meas.	Scaled		
Main 2 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	462000	2310.0	1	26	24.00	23.34	0.137	0.159	65	
								25	14	24.00	23.34	0.138	0.161		
					Left Tilt	462000	2310.0	1	26	24.00	23.34	0.048	0.056		
								25	14	24.00	23.34	0.050	0.058		
		Right Touch	462000	2310.0	1	26	24.00	23.34	0.090	0.105					
					25	14	24.00	23.34	0.090	0.105					
		Right Tilt	462000	2310.0	1	26	24.00	23.34	0.092	0.107					
					25	14	24.00	23.34	0.089	0.104					
	CP-OFDM	QPSK	0	Left Touch	462000	2310.0	1	1	22.50	21.77	0.114	0.135			
	Body-w orn	DFT-s-OFDM	QPSK	15	Rear	462000	2310.0	1	26	24.00	23.34	0.193	0.225	66	
					Front	462000	2310.0	25	14	24.00	23.34	0.200	0.233		
								1	26	24.00	23.34	0.164	0.191		
		CP-OFDM	QPSK	15	Rear	462000	2310.0	1	1	22.50	21.77	0.173	0.205		
		Hotspot	DFT-s-OFDM	QPSK	10	Rear	462000	2310.0	1	26	21.00	20.40	0.189	0.217	67
									25	14	21.00	20.36	0.193	0.224	
	Front					462000	2310.0	1	26	21.00	20.40	0.125	0.144		
								25	14	21.00	20.36	0.125	0.145		
	Edge 3		462000	2310.0	1	26	21.00	20.40	0.150	0.172					
					25	14	21.00	20.36	0.147	0.170					
	Edge 4		462000	2310.0	1	26	21.00	20.40	0.097	0.111					
25					14	21.00	20.36	0.093	0.108						
CP-OFDM	QPSK	10	Rear	462000	2310	1	1	21.00	20.34	0.174	0.203				

Note(s):

CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in each exposure conditions.

10.21. NR Band n41 (100MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.			
										Tune-up limit	Meas.	Meas.	Scaled				
Main 2 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	518598	2593.0	1	137	20.50	19.55	0.188	0.234	68			
								135	69	20.50	19.61	0.166	0.204				
					Left Tilt	518598	2593.0	1	137	20.50	19.55	0.057	0.071				
								135	69	20.50	19.61	0.053	0.065				
					Right Touch	518598	2593.0	1	137	20.50	19.55	0.121	0.151				
								135	69	20.50	19.61	0.097	0.119				
					Right Tilt	518598	2593.0	1	137	20.50	19.55	0.114	0.142				
								135	69	20.50	19.61	0.103	0.126				
	CP-OFDM	QPSK	0	Left Touch	518598	2593.0	1	1	20.50	19.42	0.150	0.192					
	Body-w orn	DFT-s-OFDM	QPSK	15	Rear	518598	2593.0	1	137	20.50	19.55	0.230	0.286	69			
								135	69	20.50	19.61	0.229	0.281				
					Front	518598	2593.0	1	137	20.50	19.55	0.151	0.188				
								135	69	20.50	19.61	0.155	0.190				
					CP-OFDM	QPSK	15	Rear	518598	2593.0	1	1	20.50	19.42	0.206	0.264	
					Hotspot	DFT-s-OFDM	QPSK	10	Rear	518598	2593.0	1	137	18.00	17.55	0.302	0.335
	135	69	18.00	17.57								0.320	0.353				
	Front	518598	2593.0	1					137	18.00	17.55	0.203	0.225				
				135					69	18.00	17.57	0.193	0.213				
	Edge 3	518598	2593.0	1					137	18.00	17.55	0.210	0.233				
				135					69	18.00	17.57	0.202	0.223				
	Edge 4	518598	2593.0	1					137	18.00	17.55	0.126	0.140				
135				69					18.00	17.57	0.130	0.144					
CP-OFDM	QPSK	10	Rear	518598	2593	1	1	18.00	17.42	0.305	0.349						

10.22. NR Band n66 (40MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.			
										Tune-up limit	Meas.	Meas.	Scaled				
Main 2 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	349000	1745.0	1	108	25.00	24.27	0.185	0.219	71			
								108	54	25.00	24.13	0.191	0.234				
					Left Tilt	349000	1745.0	1	108	25.00	24.27	0.148	0.175				
								108	54	25.00	24.13	0.155	0.190				
					Right Touch	349000	1745.0	1	108	25.00	24.27	0.177	0.209				
								108	54	25.00	24.13	0.181	0.221				
					Right Tilt	349000	1745.0	1	108	25.00	24.27	0.144	0.170				
								108	54	25.00	24.13	0.145	0.177				
					CP-OFDM	QPSK	0	Left Touch	349000	1745.0	1	1	23.50	22.47	0.176	0.223	
					Body-w orn	DFT-s-OFDM	QPSK	15	Rear	349000	1745.0	1	108	25.00	24.27	0.320	0.379
	108	54	25.00	24.13								0.315	0.385				
	Front	349000	1745.0	1					108	25.00	24.27	0.315	0.373				
				108					54	25.00	24.13	0.321	0.393				
	CP-OFDM	QPSK	15	Front					349000	1745.0	1	1	23.50	22.47	0.251	0.318	
	Hotspot	DFT-s-OFDM	QPSK	10					Rear	349000	1745.0	1	108	22.00	21.67	0.357	0.385
					108	54	22.00	21.83				0.369	0.384				
					Front	349000	1745.0	1	108	22.00	21.67	0.330	0.356				
								108	54	22.00	21.83	0.344	0.358				
					Edge 3	349000	1745.0	1	108	22.00	21.67	0.342	0.369				
								108	54	22.00	21.83	0.327	0.340				
					Edge 4	349000	1745.0	1	108	22.00	21.67	0.246	0.265				
108								54	22.00	21.83	0.255	0.265					
CP-OFDM	QPSK	10	Rear	349000	1745	1	1	22.00	21.53	0.333	0.371						

Note(s):

CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in each exposure conditions.

10.23. NR Band n70 (15MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.		
										Tune-up limit	Meas.	Meas.	Scaled			
Main 2 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	340500	1702.5	1	77	23.00	22.83	0.113	0.118			
								36	22	23.00	22.79	0.112	0.118			
					Left Tilt	340500	1702.5	1	77	23.00	22.83	0.088	0.091			
								36	22	23.00	22.79	0.082	0.086			
				Right Touch	340500	1702.5	1	77	23.00	22.83	0.113	0.118				
							36	22	23.00	22.79	0.133	0.140	74			
				Right Tilt	340500	1702.5	1	77	23.00	22.83	0.083	0.086				
							36	22	23.00	22.79	0.071	0.075				
	CP-OFDM	QPSK	0	Right Touch	340500	1702.5	1	1	21.50	21.19	0.084	0.090				
	Body-w orn	DFT-s-OFDM	QPSK	15	Rear	340500	1702.5	1	77	23.00	22.83	0.302	0.314	75		
								36	22	23.00	22.79	0.270	0.283			
					Front	340500	1702.5	1	77	23.00	22.83	0.246	0.256			
				CP-OFDM	QPSK	15	Rear	340500	1702.5	1	77	23.00	22.79	0.233	0.245	
										36	22	23.00	22.79	0.229	0.256	
							Rear	340500	1702.5	1	1	21.00	20.51	0.229	0.256	
	Hotspot	DFT-s-OFDM	QPSK	10	Rear	340500	1702.5	1	77	21.00	20.63	0.274	0.298	76		
								36	22	21.00	20.72	0.261	0.278			
					Front	340500	1702.5	1	77	21.00	20.63	0.236	0.257			
								36	22	21.00	20.72	0.235	0.251			
					Edge 3	340500	1702.5	1	77	21.00	20.63	0.228	0.248			
				36				22	21.00	20.72	0.232	0.247				
Edge 4				340500	1702.5	1	77	21.00	20.63	0.158	0.172					
						36	22	21.00	20.72	0.157	0.167					
CP-OFDM				QPSK	10	Rear	340500	1702.5	1	1	21.00	20.51	0.229	0.256		

10.24. NR Band n71 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.		
										Tune-up limit	Meas.	Meas.	Scaled			
Main 1 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	136100	680.5	1	104	24.50	23.30	0.090	0.119			
								50	28	24.50	23.20	0.094	0.127			
					Left Tilt	136100	680.5	1	104	24.50	23.30	0.051	0.067			
								50	28	24.50	23.20	0.050	0.067			
				Right Touch	136100	680.5	1	104	24.50	23.30	0.161	0.212	77			
							50	28	24.50	23.20	0.155	0.209				
				Right Tilt	136100	680.5	1	104	24.50	23.30	0.058	0.076				
							50	28	24.50	23.20	0.060	0.081				
	CP-OFDM	QPSK	0	Right Touch	136100	680.5	1	1	23.00	21.67	0.089	0.120				
	Body-w orn	DFT-s-OFDM	QPSK	15	Rear	136100	680.5	1	104	24.50	23.30	0.236	0.311			
								50	28	24.50	23.20	0.232	0.313	78		
					Front	136100	680.5	1	104	24.50	23.30	0.122	0.161			
				CP-OFDM	QPSK	15	Rear	136100	680.5	50	28	24.50	23.20	0.123	0.166	
										1	1	23.00	21.67	0.181	0.246	
							Rear	136100	680.5	1	1	23.00	21.67	0.181	0.246	
	Hotspot	DFT-s-OFDM	QPSK	10	Rear	136100	680.5	1	104	24.50	23.30	0.384	0.506			
								50	28	24.50	23.20	0.403	0.544	79		
					Front	136100	680.5	1	104	24.50	23.30	0.115	0.152			
								50	28	24.50	23.20	0.121	0.163			
					Edge 2	136100	680.5	1	104	24.50	23.30	0.237	0.312			
				50				28	24.50	23.20	0.228	0.308				
Edge 3				136100	680.5	1	104	24.50	23.30	0.121	0.160					
						50	28	24.50	23.20	0.143	0.193					
Edge 4				136100	680.5	1	104	24.50	23.30	0.127	0.167					
						50	28	24.50	23.20	0.121	0.163					
CP-OFDM	QPSK	10	Rear	136100	680.5	1	1	23.00	21.67	0.260	0.353					

Note(s):

CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in each exposure conditions.

10.25. NR Band n48 (Voice/Data/SRS0) (40MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.		
										Tune-up limit	Meas.	Meas.	Scaled			
Sub.3 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	640444	3606.7	1	1	17.00	16.84	0.046	0.048	80		
					Left Tilt	640444	3606.7	1	1	17.00	16.84	0.022	0.023			
					Right Touch	640444	3606.7	1	1	17.00	16.84	0.319	0.331			
					Right Tilt	640444	3606.7	1	1	17.00	16.84	0.080	0.083			
		CP-OFDM	QPSK	0	Right Touch	640444	3606.7	1	1	17.00	16.92	0.323	0.329			
		Body-worn	DFT-s-OFDM	QPSK	15	Rear	640444	3606.7	1	1	17.00	16.84	0.204		0.212	81
						Front	640444	3606.7	1	1	17.00	16.84	0.034		0.035	
			CP-OFDM	QPSK	15	Rear	640444	3606.7	1	1	17.00	16.92	0.290		0.295	
	Hotspot		DFT-s-OFDM	QPSK	10	Rear	638000	3570.0	1	1	17.00	16.59	0.538	0.591	82	
		640444					3606.7	1	1	17.00	16.84	0.714	0.741			
		642888					3643.3	1	1	17.00	16.62	0.668	0.799			
		645332				3679.3	1	0	17.00	16.22	0.579	0.666				
		Front				640444	3606.7	1	1	17.00	16.84	0.082	0.085			
		Edge 1				640444	3606.7	1	1	17.00	16.84	0.039	0.040			
		CP-OFDM	QPSK	10	Rear	640444	3606.66	1	1	17.00	16.92	0.723	0.736			

Note(s):

CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in each exposure conditions.

10.26. NR Band n48 (SRS1/SRS2/SRS3) (40MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.	
							Tune-up limit	Meas.	Meas.	Scaled		
Sub.5 Ant. (SRS 1)	Head	SRS CW	0	Left Touch	640444	3606.7	10.50	9.89	0.016	0.018		
				Left Tilt	640444	3606.7	10.50	9.89	0.024	0.028		
				Right Touch	640444	3606.7	10.50	9.89	0.002	0.002		
				Right Tilt	640444	3606.7	10.50	9.89	0.022	0.025		
	Body-worn	SRS CW	15	Rear	640444	3606.7	10.50	9.89	0.011	0.013		
				Front	640444	3606.7	10.50	9.89	< 0.001	< 0.001		
	Hotspot	SRS CW	10	Rear	640444	3606.7	10.50	9.89	0.023	0.026		
				Front	640444	3606.7	10.50	9.89	0.004	0.005		
				Edge 1	640444	3606.7	10.50	9.89	0.021	0.024		
				Edge 4	640444	3606.7	10.50	9.89	0.007	0.008		
	Sub.2 Ant. (SRS 2)	Head	SRS CW	0	Left Touch	642888	3646.3	13.00	12.82	0.243	0.253	
					Left Tilt	642888	3646.3	13.00	12.82	0.231	0.241	
Right Touch					642888	3646.3	13.00	12.82	0.387	0.403		
Right Tilt					642888	3646.3	13.00	12.82	0.399	0.416		
Body-worn		SRS CW	15	Rear	642888	3646.3	13.00	12.82	0.046	0.048		
				Front	642888	3646.3	13.00	12.82	0.046	0.048		
Hotspot		SRS CW	10	Rear	642888	3646.3	13.00	12.82	0.116	0.121		
				Front	642888	3646.3	13.00	12.82	0.091	0.095		
				Edge 1	642888	3646.3	13.00	12.82	0.114	0.119		
				Edge 4	642888	3646.3	13.00	12.82	0.029	0.030		
Main 2 Ant. (SRS 3)		Head	SRS CW	0	Left Touch	640444	3606.7	17.50	16.61	0.010	0.012	
					Left Tilt	640444	3606.7	17.50	16.61	0.005	0.006	
	Right Touch				640444	3606.7	17.50	16.61	0.005	0.006		
	Right Tilt				640444	3606.7	17.50	16.61	0.016	0.020		
	Body-worn	SRS CW	15	Rear	640444	3606.7	17.50	16.61	0.061	0.075	84	
				Front	640444	3606.7	17.50	16.61	0.013	0.016		
	Hotspot	SRS CW	10	Rear	640444	3606.7	17.50	16.61	0.197	0.242	85	
				Front	640444	3606.7	17.50	16.61	0.036	0.044		
				Edge 3	640444	3606.7	17.50	16.61	0.070	0.086		
				Edge 4	640444	3606.7	17.50	16.61	0.028	0.034		

Note(s):

SRS1/SRS2/SRS3 tested using FTM mode.

10.27. NR Band n77 (Voice/Data/SRS0) (100MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Note.	Plot No.
										Tune-up limit	Meas.	Meas.	Scaled		
Sub.3 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	662000	3930.0	1	271	18.00	16.54	0.074	0.104		
								135	138	18.00	16.48	0.055	0.078		
					Left Tilt	662000	3930.0	1	271	18.00	16.54	0.020	0.028		
								135	138	18.00	16.48	0.019	0.027		
					Right Touch	633334	3500.0	1	271	18.00	17.26	0.172	0.204	2	
						662000	3930.0	1	271	18.00	16.54	0.231	0.323		86
		Right Tilt	662000	3930.0	1	271	18.00	16.54	0.060	0.084					
					135	138	18.00	16.48	0.074	0.105					
		CP-OFDM	QPSK	0	Right Touch	662000	3930.0	1	1	18.00	16.53	0.158	0.222	1	
		Body-worn	DFT-s-OFDM	QPSK	15	Rear	633334	3500.0	1	271	18.00	17.26	0.203	0.241	2
	662000						3930.0	1	271	18.00	16.54	0.177	0.248		87
								135	138	18.00	16.48	0.163	0.231		
	CP-OFDM		QPSK	15	Rear	662000	3930.0	1	271	18.00	16.54	0.030	0.042		
							135	138	18.00	16.48	0.022	0.031			
	Hotspot	DFT-s-OFDM	QPSK	10	Rear	650000	3750.0	1	271	18.00	16.28	0.409	0.608		
								135	138	18.00	16.35	0.420	0.614		
						633334	3500.0	1	271	18.00	17.26	0.442	0.524	2	
						662000	3930.0	1	271	18.00	16.54	0.441	0.617		88
								135	138	18.00	16.48	0.389	0.552		
								270	0	18.00	16.34	0.402	0.589		
					Front	662000	3930.0	1	271	18.00	16.54	0.058	0.081		
								135	138	18.00	16.48	0.042	0.060		
					Edge 1	662000	3930.0	1	271	18.00	16.54	0.027	0.038		
								135	138	18.00	16.48	0.026	0.037		
Edge 4		662000	3930.0	1	271	18.00	16.54	0.272	0.381						
				135	138	18.00	16.48	0.281	0.399						
CP-OFDM		QPSK	10	Rear	662000	3930	1	1	18.00	16.53	0.328	0.460	1		

Note(s):

1. CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in standalone exposure conditions.
2. NR Band n77-Lower Band- are tested at worst configuration of NR Band n77-Upper band.

10.28. NR Band n77 (SRS1/SRS2/SRS3) (100MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Note.	Plot No.
							Tune-up limit	Meas.	Meas.	Scaled		
Sub.5 (SRS 1)	Head	SRS CW	0	Left Touch	662000	3930.0	10.50	9.78	0.043	0.051		
				Left Tilt	633334	3500.0	10.50	10.01	0.069	0.077	1	
					662000	3930.0	10.50	9.78	0.060	0.071		
				Right Touch	662000	3930.0	10.50	9.78	0.044	0.052		
	Right Tilt	662000	3930.0	10.50	9.78	0.029	0.034					
		633334	3500.0	10.50	10.01	0.013	0.015	1				
	Body-w orn	SRS CW	15	Rear	662000	3930.0	10.50	9.78	0.014	0.017		
				Front	662000	3930.0	10.50	9.78	0.006	0.007		
	Hotspot	SRS CW	10	Rear	633334	3500.0	10.50	10.01	0.026	0.029	1	
					662000	3930.0	10.50	9.78	0.040	0.047		
				Front	662000	3930.0	10.50	9.78	0.011	0.013		
				Edge 1	662000	3930.0	10.50	9.78	0.032	0.038		
Edge 4	662000	3930.0	10.50	9.78	<0.001	< 0.001						
Sub.2 (SRS 2)	Head	SRS CW	0	Left Touch	662000	3930.0	12.00	11.38	0.161	0.186		
				Left Tilt	662000	3930.0	12.00	11.38	0.180	0.208		
				Right Touch	662000	3930.0	12.00	11.38	0.336	0.388		
				Right Tilt	633334	3500.0	12.00	11.58	0.237	0.261	1	
	650000	3750.0	12.00		10.97	0.005	0.006					
	Body-w orn	SRS CW	15	Rear	633334	3500.0	12.00	11.58	0.014	0.015	1	
				662000	3930.0	12.00	11.38	0.054	0.062			
	Front	662000	3930.0	12.00	11.38	0.045	0.052					
	Hotspot	SRS CW	10	Rear	633334	3500.0	12.00	11.58	0.037	0.041	1	
					662000	3930.0	12.00	11.38	0.101	0.116		
				Front	662000	3930.0	12.00	11.38	0.075	0.087		
				Edge 1	662000	3930.0	12.00	11.38	0.111	0.128		
Edge 4	662000	3930.0	12.00	11.38	0.034	0.039						
Main 2 Ant. (SRS 3)	Head	SRS CW	0	Left Touch	662000	3930.0	17.00	16.45	<0.001	<0.001		
				Left Tilt	662000	3930.0	17.00	16.45	<0.001	<0.001		
				Right Touch	633334	3500.0	17.00	16.35	<0.001	<0.001	1	
					662000	3930.0	17.00	16.45	<0.001	<0.001		
	Right Tilt	662000	3930.0	17.00	16.45	<0.001	<0.001					
	Body-w orn	SRS CW	15	Rear	633334	3500.0	17.00	16.35	0.057	0.066	1	
				662000	3930.0	17.00	16.45	0.101	0.115		90	
	Front	662000	3930.0	17.00	16.45	0.011	0.012					
	Hotspot	SRS CW	10	Rear	633334	3500.0	17.00	16.35	0.158	0.184	1	
					662000	3930.0	17.00	16.45	0.177	0.201		91
				Front	662000	3930.0	17.00	16.45	0.018	0.020		
				Edge 3	662000	3930.0	17.00	16.45	0.080	0.091		
Edge 4	662000	3930.0	17.00	16.45	0.031	0.035						

Note(s):

1. NR Band n77-Lower Band- are tested at worst configuration of NR Band n77-Upper band.
2. SRS1/SRS2/SRS3 tested using FTM mode.

10.29. LTE-uplink 2CA Band 41 (20MHz + 20MHz)

Antenna	RF Exposure Conditions	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 offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Main 2 Ant.	Head	QPSK	0	Left Touch	40185	2549.5	1	0	39987	2529.7	1	99	25.00	24.05	0.223	0.278			
	Body-worn	QPSK	15	Rear	40185	2549.5	1	0	39987	2529.7	1	99	25.00	24.05	0.333	0.414			
	Hotspot	QPSK	10	Rear	40185	2549.5	50	0	39987	2529.7	50	50	23.00	21.43	0.387	0.556			92
	Product Specific 10-g	QPSK	0	Rear	41490	2680.0	1	0	41292	2660.2	1	99	23.00	21.48			1.640	2.327	93

10.30. LTE-uplink 2CA Band 48 (20MHz + 20MHz)

Antenna	RF Exposure Conditions	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 offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Sub.3 Ant.	Head	QPSK	0	Left Touch	56207	3646.7	50	50	56405	3666.5	50	0	20.00	19.61	0.197	0.216			94
	Body-worn	QPSK	15	Rear	56207	3646.7	50	50	56405	3666.5	50	0	20.00	19.61	0.200	0.219			
	Hotspot	QPSK	10	Rear	56207	3646.7	1	0	56009	3626.9	1	99	20.00	19.61	0.428	0.468			95

10.31. Wi-Fi (DTS Band)

Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	11	2462.0	99.0%	12.00	11.83	0.031	0.033	
					Left Tilt	11	2462.0	99.0%	12.00	11.83	0.029	0.030	
					Right Touch	11	2462.0	99.0%	12.00	11.83	0.052	0.055	96
					Rightt Tilt	11	2462.0	99.0%	12.00	11.83	0.052	0.055	
		Body-worn	Off	15	Rear	11	2462.0	99.0%	21.00	20.76	0.200	0.214	97
					Front	11	2462.0	99.0%	21.00	20.76	0.047	0.050	
		Hotspot	Off	10	Rear	11	2462.0	99.0%	21.00	20.76	0.375	0.400	98
					Front	11	2462.0	99.0%	21.00	20.76	0.106	0.113	
					Edge 1	11	2462.0	99.0%	21.00	20.76	0.142	0.152	
					Edge 4	11	2462.0	99.0%	21.00	20.76	0.060	0.064	

Note(s):

- 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.

10.32. Wi-Fi (U-NII Bands)

U-NII 2A Results

Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	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)		Note	Plot No.		
										Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled				
5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	58	5290.0	0.831	98.4%	11.00	10.32	0.424	0.504			4			
					Left Tilt	58	5290.0	0.991	98.4%	11.00	10.32	0.575	0.683				99		
					Right Touch	58	5290.0	0.702	98.4%	11.00	10.32	0.392	0.466				4		
					Right Tilt	58	5290.0	0.857	98.4%	11.00	10.32	0.532	0.632				2		
	802.11a 6 Mbps	Body-worn	Off	15	Rear	60	5300.0	0.533	98.7%	16.00	15.60	0.393	0.437				100		
					Front	60	5300.0	0.139	98.7%	16.00	15.60	0.097	0.108				2		
		Product Specific 10-g	Off	0	Rear	60	5300.0	7.150	98.7%	16.00	15.60			1.310	1.456		2		
					Front	60	5300.0	0.952	98.7%	16.00	15.60								
					Edge 1	60	5300.0	9.350	98.7%	16.00	15.60					1.420	1.578		101
					Edge 4	60	5300.0	1.980	98.7%	16.00	15.60								

U-NII 2C Results

Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	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)		Note	Plot No.		
										Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled				
5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	122	5610.0	1.114	98.4%	11.00	10.64	0.513	0.566			4			
					Left Tilt	122	5610.0	1.292	98.4%	11.00	10.64	0.616	0.680				2	102	
					Right Touch	122	5610.0	0.831	98.4%	11.00	10.64	0.505	0.557					4	
					Right Tilt	122	5610.0	1.428	98.4%	11.00	10.64	0.600	0.662						
	802.11a 6 Mbps	Body-worn	Off	15	Rear	100	5500.0	0.404	98.7%	16.00	15.56	0.307	0.344				1	103	
					Front	100	5500.0	0.243	98.7%	16.00	15.56								
		Product Specific 10-g	Off	0	Rear	100	5500.0	8.430	98.7%	16.00	15.56			1.500	1.683		2		
					Front	100	5500.0	1.340	98.7%	16.00	15.56								
					Edge 1	100	5500.0	10.800	98.7%	16.00	15.56					1.950	2.187		104
						120	5600.0	9.400	98.7%	16.00	15.36					1.700	1.997		3
Edge 4	100	5500.0	2.940	98.7%	16.00	15.56													

U-NII 3 Results

Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.	
										Tune-up limit	Meas.	Meas.	Scaled			
5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	155	5775.0	0.873	98.4%	11.00	10.17	0.402	0.494		4	
					Left Tilt	155	5775.0	1.060	98.4%	11.00	10.17	0.507	0.624		2	
					Right Touch	155	5775.0	0.916	98.4%	11.00	10.17	0.410	0.504		4	
					Right Tilt	155	5775.0	1.295	98.4%	11.00	10.17	0.525	0.646		105	
	802.11a 6 Mbps	Body-worn	Off	15	Rear	165	5825.0	0.785	98.7%	16.00	15.48	0.300	0.343		1	106
					Front	165	5825.0	0.435	98.7%	16.00	15.48					
		Hotspot	Off	10	Rear	149	5745.0	1.151	98.7%	16.00	15.43	0.466	0.539		2	
					Front	149	5745.0	0.798	98.7%	16.00	15.43	0.365	0.422		4	
					Edge 1	149	5745.0	1.619	98.7%	16.00	15.43	0.772	0.892		107	
					Edge 4	149	5745.0	0.555	98.7%	16.00	15.43	0.270	0.312		4	

Note(s):

1. When the Highest reported SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest reported SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest reported SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was reported.
3. Testing for a second channel was required because the reported SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.

10.33. Bluetooth

Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
2.4GHz	GFSK	Head	N/A	0	Left Touch	0	2402.0	77.4%	17.00	16.54	0.060	0.086	
					Left Tilt	0	2402.0	77.4%	17.00	16.54	0.062	0.089	
					Right Touch	0	2402.0	77.4%	17.00	16.54	0.117	0.168	
					Righttt Tilt	0	2402.0	77.4%	17.00	16.54	0.156	0.224	108
		Body-worn	N/A	15	Rear	0	2402.0	77.4%	17.00	16.54	0.057	0.082	109
					Front	0	2402.0	77.4%	17.00	16.54	0.011	0.016	
		Hotspot	N/A	10	Rear	0	2402.0	77.4%	17.00	16.54	0.110	0.158	110
					Front	0	2402.0	77.4%	17.00	16.54	0.020	0.029	
					Edge 1	0	2402.0	77.4%	17.00	16.54	0.044	0.063	
					Edge 4	0	2402.0	77.4%	17.00	16.54	0.020	0.029	

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.

Peak spatial-average (1g of tissue)

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
835	GSM850	Hotspot	Rear	Yes	0.975	0.931	1.05

Peak spatial-average (10g of tissue)

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
2600	LTE Band 41	Product Specific 10-g	Rear	Yes	2.000	1.950	1.03

Note(s):

1. In above table, Only some bands above 0.8 or 2.0 W/kg (1-g or 10-g Measured SAR) were listed.
2. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20.

12. Simultaneous Transmission SAR Analysis

Simultaneous Transmission Condition

RF Exposure Condition	Item	Capable Transmit Configurations			
Head & Body-worn & Hotspot & Phablet-10g	1	WWAN (2G/3G/LTE/NR)	+	DTS	
	2	WWAN (2G/3G/LTE/NR)	+	UNII	
	3	WWAN (2G/3G/LTE/NR)	+	BT	
	4	WWAN (2G/3G/LTE/NR)	+	UNII	+ BT
	5	ENDC(LTE+NR)	+	DTS	
	6	ENDC(LTE+NR)	+	UNII	
	7	ENDC(LTE+NR)	+	BT	
	8	ENDC(LTE+NR)	+	UNII	+ BT

Notes:

1. DTS supports Wi-Fi Direct, Hotspot and VoIP.
2. U-NII supports Wi-Fi Direct, Hotspot and VoIP.
3. GPRS, W-CDMA, LTE, NR supports Hotspot and VoIP
4. U-NII Radio can transmit simultaneously with Bluetooth Radio.
5. DTS Radio cannot transmit simultaneously with Bluetooth Radio.
6. NR Radio support to both SA and NSA(ENDC) Radio.
7. BT tethering is considered about each RF exposure conditions.
8. LTE support UL CA intraband continued configurations.

Note(s):

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.

12.1. Sub6 Antenna Groups

The 2nd generation of Smart Transmit (GEN2) operates based on pre-defined sub6 antenna groups(AG) and mmW module groups (MG). Sub6 Tx antennas in UE are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from the other AG. This is accomplished by demonstrating below conditions for all RF exposure scenarios (This procedures are follow according to Qualcomm’s document (80-W2112-4));

1. (Condition#1 Sum of SAR) : Demonstrate that the sum of maximum *reported* SAR from each of the sub6 AGs and the *reported* SAR values from radios outside Smart Transmit(WLAN/BT) should be less than the regulatory limit for each supported DSI.

2. If the condition#1 is not met, then for a given antenna grouping scheme plus external radios/antennas (ERs), demonstrate all AG pairs, all ER pairs and all (AG, ER) pairs in the configuration meet SPLSR (SAR to Peak Location Ratio) criteria for each supported DSI (each RF exposure scenarios).
 For a conservative assessment of SPLSR, the separation distance between each AGs were determined using only the y-axis coordinates of the peak locations.

$$SPLSR = (SAR_1 + SAR_2)^{1.5} / R_i$$

This device supports antenna groups like below table.

Antenna Groups	Grouped antenna list			
AG0	Main.1	Main.2		
AG1	Sub.1	Sub.2	Sub.3	Sub.5
ER(s)	WLAN/BT Ant.			
ER = Exteral radios/antennas supported ourtside of Smart Transmit (ex; WLAN/BT...)				

This section is a step in evaluating whether each AGs are mutually exclusive using Condition#1 and Condition#2 guide. And If it is evaluated that each AGs are mutually exclusive for all DSIs (each RF exposure scenarios),

Additional analysis for Simultaneous transmission SAR test exclusion for Both AGs and ER(s) compliance demonstration evaluate at Section.12.2.

12.1.1 Head exposure (DSI = 2) Antenna group analysis

Condition#1

Antenna group : AG0

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)				
			Antenna Group : AG0				Highest SAR level
			Main.1	Main.2			
Head (1-g SAR)	DSI=2	Left Touch	0.332	0.338			0.338
		Left Tilt	0.183	0.190			0.190
		Right Touch	0.392	0.221			0.392
		Right Tilt	0.220	0.193			0.220

Antenna group : AG1

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)				
			Antenna Group : AG1				Highest SAR level
			Sub.1	Sub.3	Sub.5	Sub.2	
Head (1-g SAR)	DSI=2	Left Touch	0.602	0.104	0.051	0.253	0.602
		Left Tilt	0.494	0.034	0.077	0.241	0.494
		Right Touch	0.263	0.331	0.052	0.403	0.403
		Right Tilt	0.286	0.105	0.034	0.438	0.438

SUM for Antenna groups

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)			
			Antenna Groups			SUM SAR
			AG0 Highest SAR	AG1 Highest SAR	ER Highest SAR	
Head (1-g SAR)	DSI=2	Left Touch	0.338	0.602	0.652	1.592
		Left Tilt	0.190	0.494	0.772	1.456
		Right Touch	0.392	0.403	0.725	1.520
		Right Tilt	0.220	0.438	0.886	1.544

ER = Exteral radios/antennas suppered outside of Smart Transmit (ex; WLAN/BT...)

Note(s):

- For ER' Highest SAR, please refer to section.12.2.
- SUM SAR results are below 1.6 or 4.0 W/kg (1-g or 10-g respectively), So Condition#2 is not required.

12.1.2 Body-worn exposure (DSI = 0) Antenna group analysis

Condition#1

Antenna group : AG0

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)					Highest SAR level
			Antenna Group : AG0					
			Main.1	Main.2				
Body-worn (1-g SAR)	0	Rear	0.524	0.573			0.573	
		Front	0.285	0.393			0.393	

Antenna group : AG1

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)					Highest SAR level
			Antenna Group : AG1					
			Sub.1	Sub.3	Sub.5	Sub.2		
Body-worn (1-g SAR)	0	Rear	0.253	0.327	0.017	0.048	0.327	
		Front	0.152	0.051	0.007	0.048	0.152	

SUM for Antenna groups

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)				SUM SAR
			Antenna Groups				
			AG0 Highest SAR	AG1 Highest SAR	ER Highest SAR		
Body-worn (1-g SAR)	0	Rear	0.573	0.327	0.519	1.419	
		Front	0.393	0.152	0.360	0.905	

ER = External radios/antennas supported outside of Smart Transmit (ex; WLAN/BT...)

Note(s):

1. For ER' Highest SAR, please refer to section.12.2.
2. SUM SAR results are below 1.6 or 4.0 W/kg (1-g or 10-g respectively), So Condition#2 is not required.

12.1.3 Hotspot exposure (DSI = 3) Antenna group analysis

Condition#1

Antenna group : AG0

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)					Highest SAR level
			Antenna Group : AG0					
			Main.1	Main.2				
Hotspot (1-g SAR)	3	Rear	1.166	0.811				1.166
		Front	0.260	0.525				0.525
		Edge 1	0.000	0.000				0.000
		Edge 2	0.476	0.000				0.476
		Edge 3	0.535	0.592				0.592
		Edge 4	0.245	0.307				0.307

Antenna group : AG1

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)					Highest SAR level
			Antenna Group : AG1					
			Sub.1	Sub.3	Sub.5	Sub.2		
Hotspot (1-g SAR)	3	Rear	0.479	0.802	0.047	0.121		0.802
		Front	0.275	0.091	0.013	0.095		0.275
		Edge 1	0.426	0.063	0.038	0.128		0.426
		Edge 2	0.131	0.000	0.000	0.000		0.131
		Edge 3	0.000	0.000	0.000	0.000		0.000
		Edge 4	0.000	0.520	0.008	0.039		0.520

SUM for Antenna groups

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)				SUM SAR	
			Antenna Groups					
			AG0 Highest SAR	AG1 Highest SAR	ER Highest SAR			
Hotspot (1-g SAR)	3	Rear	1.166	0.802	0.697	2.665	Note.2	
		Front	0.525	0.275	0.451	1.251		
		Edge 1	0.000	0.426	0.152	0.578		
		Edge 2	0.476	0.131	0.000	0.607		
		Edge 3	0.592	0.000	0.892	1.484		
		Edge 4	0.307	0.520	0.341	1.168		

ER = Exteral radios/antennas supported outside of Smart Transmit (ex; WLAN/BT...)

Note(s):

1. For ER' Highest SAR, please refer to section.12.2.
2. Additional evaluation is required due to over FCC limit. So please refer to Condition#2.

Condition#2

Test position	No.	Antenna pairs		AG0		AG1		ER SAR (W/kg)	AG0+AG1+ER SUM SAR (W/kg)	SPLSR of AG0 & AG1
		AG0	AG1	SAR (W/kg)	Y-axis location (mm)	SAR (W/kg)	Y-axis location (mm)			
Rear	1	Main.1	Sub.1	1.166	-73.5	0.479	73.0	0.697	2.342	0.01
	2	Main.1	Sub.3	1.166	-73.5	0.802	54.5	0.697	2.665	0.02
	3	Main.1	Sub.5	1.166	-73.5	0.047	63.5	0.697	1.910	0.01
	4	Main.1	Sub.2	1.166	-73.5	0.121	81.9	0.697	1.984	0.01
	5	Main.2	Sub.1	0.811	-62.0	0.479	73.0	0.697	1.987	0.01
	6	Main.2	Sub.3	0.811	-62.0	0.802	54.5	0.697	2.310	0.02
	7	Main.2	Sub.5	0.811	N/A	0.047	N/A	0.697	1.555	N/A
	8	Main.2	Sub.2	0.811	-62.0	0.121	81.9	0.697	1.629	0.01

Highest Reported SAR and Peak SAR location (only Y-axis location) in each WWAN Bands in each Antennas

Antenna Group	Antenna	Bands	SAR (W/kg)	Y-axis(mm)	Antenna Group	Antenna	Bands	SAR (W/kg)	Y-axis(mm)
AG0	Main 1	GSM 850	1.166	-82.5	AG1	Sub.1 Ant.	LTE Band 25	0.479	73.0
		WCDMA B5	0.722	-76.0			LTE Band 66	0.288	77.0
		LTE Band 12	0.648	-75.0			Worst configuration	0.479	73.0
		LTE Band 13	0.680	-73.5		Sub.3 Ant.	LTE Band 48	0.599	58.5
		LTE Band 14	0.727	-75.0			NR Band n48-SRS0	0.802	54.5
		LTE Band 26	0.857	-76.5			NR Band n77-SRS0	0.617	55.0
		LTE Band 71	0.550	-73.5		Worst configuration	0.802	54.5	
		NR Band n5	0.869	-75.0		Sub.5 Ant	NR Band n48-SRS1	0.026	63.5
		NR Band n71	0.544	-75.0			NR Band n77-SRS1	0.047	74.0
	Worst configuration	1.166	-73.5	Worst configuration	0.047		63.5		
	Main 2	Sub.2 Ant	GSM 1900	0.186	-72.0	NR Band n48-SRS2	0.121	81.9	
			WCDMA B2	0.328	-75.5	NR Band n77-SRS2	0.116	82.0	
			WCDMA B4	0.426	-75.5	Worst configuration	0.121	81.9	
		LTE Band 7	0.685	-75.4					
		LTE Band 25	0.372	-70.5					
		LTE Band 30	0.225	-68.2					
		LTE Band 40	0.053	-67.0					
		LTE Band 41	0.811	-75.4					
		LTE Band 66	0.368	-62.0					
		NR Band n25	0.503	-80.1					
		NR Band n30	0.224	-67.5					
		NR Band n41	0.353	-69.5					
		NR Band n66	0.385	-79.1					
		NR Band n70	0.298	-77.5					
		NR Band n48-SRS3	0.242	-76.0					
		NR Band n77-SRS3	0.201	-78.0					
		Worst configuration	0.811	-62.0					

Note(s):

1. If Antenna pair's SUM SAR results are below 1.6 or 4.0 W/kg (1-g or 10-g respectively), then Condition#2 is not required.
2. If SPLSR criteria is below 0.04 or 1.0 (1-g or 10-g respectively) in all antenna pair (AG0 & AG1), additional evaluation is not required.

12.1.4 Product Specific 10-g exposure (DSI = 0, 1, 4) Antenna group analysis

Condition#1

Antenna group : AG0

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)					Highest SAR level
			Antenna Group : AG0					
			Main.1	Main.2				
Product Specific 10-g (10-g SAR)	0,1,4	Rear	N/A	3.170				3.170
		Front	N/A	0.000				0.000
		Edge 1	N/A	0.000				0.000
		Edge 2	N/A	0.000				0.000
		Edge 3	N/A	0.000				0.000
		Edge 4	N/A	0.000				0.000

Antenna group : AG1

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)					Highest SAR level
			Antenna Group : AG1					
			Sub.1	Sub.3	Sub.5	Sub.2		
Product Specific 10-g (10-g SAR)	0,1,4	Rear	N/A	N/A	N/A	N/A	N/A	N/A
		Front	N/A	N/A	N/A	N/A	N/A	N/A
		Edge 1	N/A	N/A	N/A	N/A	N/A	N/A
		Edge 2	N/A	N/A	N/A	N/A	N/A	N/A
		Edge 3	N/A	N/A	N/A	N/A	N/A	N/A
		Edge 4	N/A	N/A	N/A	N/A	N/A	N/A

SUM for Antenna groups

RF Exposure	DSI state	Test Position	Standalone SAR (W/kg)				SUM SAR	
			Antenna Groups			ER Highest SAR		
			AG0 Highest SAR	AG1 Highest SAR	ER Highest SAR			
Product Specific 10-g (10-g SAR)	0,1,4	Rear	3.170	N/A	1.683	4.853	<u>Note.2</u>	
		Front	0.000	N/A	2.187	2.187		
		Edge 1	0.000	N/A	2.187	2.187		
		Edge 2	0.000	N/A	0.000	0.000		
		Edge 3	0.000	N/A	0.000	0.000		
		Edge 4	0.000	N/A	2.187	2.187		

ER = External radios/antennas supported outside of Smart Transmit (ex; WLAN/BT...)

Note(s):

1. For ER' Highest SAR, please refer to section.12.2.
2. AG0+ER simultaneous transmission scenario consider at Section.12.2.

Conclusion:

1. Head & Body-worn exposure condition (DSI = 0, 2) : AG0+AG1+ER's sum is below FCC limit. So additional analysis is not required for AG0 and AG1.
2. Hotspot exposure condition (DSI = 3) : Sub6 antenna group is demonstrated to show that AG0 is mutually exclusive from AG1 in Hotspot exposure condition (DSI=3) according to SPLSR criteria.
3. Product Specific 10-g exposure condition (DSI = 0, 1, 4) : This condition consider at Section.12.2.

Simultaneous transmission SAR test exclusion considerations

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 Separation 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:

SAR₁ 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

SAR₂ 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 **SAR₁** or **SAR₂**. 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

The antennas for the unlicensed transmitters are closely situated. As a result, the associated SAR hotspots are also closely situated. Some of the sum of SAR calculations yielded results over 1.6 W/kg. The SPLSR calculations for these situations were performed by treating the unlicensed SAR values as a single transmitter. The most conservative distance between all the unlicensed hotspots to the licensed hotspot was used for the value of *d* in the SPLSR calculation.

Sum to Peak Location Separation Ratio

Instead of doing a small volume scan over a co-located antenna pair (Hybrid SPLSR guide), Simultaneous transmission SAR test exclusion may algebraically sum the SAR values of the co-located pair and use that value in SPLSR calculation;

-In the calculation Separation distance must use the minimum distance between the spatially separated antenna and the closest antenna of the co-located antenna pair to be conservative.

12.2. Simultaneous transmission analysis

12.2.1. Head exposure condition

ER's SAR (DTS & BT & UNII)

RF Exposure	Test Position	ER's SAR (W/kg)					Worst case Combination
		DTS	BT	UNII	BT+UNII		
		1	2	3	4		
Head (1-g SAR)	Left Touch	0.033	0.086	0.566	0.652	0.652	
	Left Tilt	0.030	0.089	0.683	0.772	0.772	
	Right Touch	0.055	0.168	0.557	0.725	0.725	
	Right Tilt	0.055	0.224	0.662	0.886	0.886	

Simultaneous Transmission Analysis

RF Exposure	Test Position	Highest SAR (W/kg)				Sum SAR (W/kg)	
		AG0	AG1	ER		AG0 + AG1 + ER(UNII+BT)	AG0 + AG1 + ER(DTS)
				UNII+BT	DTS		
Head (1-g SAR)	Left Touch	0.338	0.602	0.652	0.033	1.592	0.973
	Left Tilt	0.190	0.494	0.772	0.030	1.456	0.714
	Right Touch	0.392	0.403	0.725	0.055	1.520	0.850
	Right Tilt	0.220	0.438	0.886	0.055	1.544	0.713

12.2.2. Body-worn exposure condition

ER's SAR (DTS & BT & UNII)

RF Exposure	Test Position	ER's SAR (W/kg)					Worst case Combination
		DTS	BT	UNII	BT+UNII		
		1	2	3	4		
Body-worn (1-g SAR)	Rear	0.214	0.082	0.437	0.519	0.519	
	Front	0.050	0.016	0.344	0.360	0.360	

Simultaneous Transmission Analysis

RF Exposure	Test Position	Highest SAR (W/kg)				Sum SAR (W/kg)	
		AG0	AG1	ER		AG0 + AG1 + ER(UNII+BT)	AG0 + AG1 + ER(DTS)
				UNII+BT	DTS		
Body-worn (1-g SAR)	Rear	0.573	0.327	0.519	0.214	1.419	1.114
	Front	0.393	0.152	0.360	0.050	0.905	0.595

Note(s):

- Green value is estimated SAR value.

12.2.3. Hotspot exposure condition

ER's SAR (DTS & BT & UNII)

RF Exposure	Test Position	Highest SAR (W/kg)				
		DTS	BT	UNII	BT+UNII	Worst case Combination
		1	2	3	4	
Hotspot (1-g SAR)	Rear	0.400	0.158	0.539	0.697	0.697
	Front	0.113	0.029	0.422	0.451	0.451
	Edge 1	0.152	0.063	0.000	0.063	0.152
	Edge 2					
	Edge 3					
	Edge 4	0.064	0.029	0.312	0.341	0.341

Simultaneous Transmission Analysis

RF Exposure	Test Position	Highest SAR (W/kg)				Sum SAR (W/kg)			
		AG0	AG1	ER		AG0+ER(UNII+BT)	AG0+ER(DTS)	AG1+ER(UNII+BT)	AG1+ER(DTS)
				UNII+BT	DTS				
Hotspot (1-g SAR)	Rear	1.166	0.802	0.697	0.400	1.863	1.566	1.499	1.202
	Front	0.525	0.275	0.451	0.113	0.976	0.638	0.726	0.388
	Edge 1		0.426	0.152	0.152	0.152	0.152	0.578	0.578
	Edge 2	0.476	0.131			0.476	0.476	0.131	0.131
	Edge 3	0.592				0.592	0.592		
	Edge 4	0.307	0.520	0.341	0.064	0.648	0.371	0.861	0.584

Simultaneous Transmission Analysis (AG0+ER)

RF Exposure	Test Position	Highest SAR (W/kg)			Sum SAR (W/kg)	
		Main.1	Main.2	ER	Main.1 + ER	Main.2 + ER
Hotspot (1-g SAR)	Rear	1.166	0.811	0.697	1.863	1.508

Simultaneous Transmission Analysis (Main.1+ER)

RF Exposure	Test Position	Highest SAR (W/kg)				Sum SAR (W/kg)	
		Main.1		ER		Main.1 + ER(UNII+BT)	Main.1 + ER(DTS)
		Bands	SAR (W/kg)	UNII + BT	DTS		
Hotspot (1-g SAR)	Rear	GSM 850	1.166	0.697	0.400	1.863	1.566
		WCDMA B5	0.772	0.697	0.400	1.469	1.172
		LTE B12	0.648	0.697	0.400	1.345	1.048
		LTE B13	0.680	0.697	0.400	1.377	1.080
		LTE B14	0.727	0.697	0.400	1.424	1.127
		LTE B26	0.857	0.697	0.400	1.554	1.257
		LTE B71	0.550	0.697	0.400	1.247	0.950
		NR Bn5	0.869	0.697	0.400	1.566	1.269
NR Bn71	0.544	0.697	0.400	1.241	0.944		

Sum-Peak Location Separation Ratio

RF Exposure	Test Position	Standalone SAR (W/kg)			Sum of SAR (W/kg) (1-g or 10-g)	Calculated Distance (mm)	1-g SPLSR (<=0.04) or 10-g SPLSR (<=0.10)	Volume Scan (Yes/No)	Figure
		Main.1	UNI	BT					
Hotspot (1-g SAR)	Rear	GSM 850	1.166	0.539	GSM850+UNII+BT	1.863			1
	Rear	GSM 850	1.166	0.697	GSM850+UNII+BT	1.863	160.7	0.02	
Sum-Peak Location Separation <i>Note.2</i>				0.697	UNII+BT				

Note(s):

- For Hotspot exposure condition, AG0 and AG1 are mutually exclusive according to Hotspot exposure antenna group analysis in Section.12.1.3. So Simultaneous transmission for AG0 + AG1 + ER were considered each AG0 + ER and AG1 + ER.
- Per April.2022 TCBC workshop note (Sum-Peak Location Separation Ratio), co-located pair's sum SAR and minimum distance are used for SPLSR calculation.

12.2.4. Product Specific 10-g exposure condition

ER's SAR (DTS & BT & UNII)

RF Exposure	Test Position	Highest SAR (W/kg)				
		DTS	BT	UNII	BT+UNII	Worst case Combination
		1	2	3	4	
Product Specific 10-g (10-g SAR)	Rear	N/A	N/A	1.683	1.683	1.683
	Front	N/A	N/A	2.187	2.187	2.187
	Edge 1	N/A	N/A	2.187	2.187	2.187
	Edge 2	N/A	N/A			
	Edge 3	N/A	N/A			
	Edge 4	N/A	N/A	2.187	2.187	2.187

Simultaneous Transmission Analysis

RF Exposure	Test Position	Highest SAR (W/kg)			Sum SAR (W/kg)	
		AG0	AG1	ER	AG0+ER	AG1+ER
Product Specific 10-g (10-g SAR)	Rear	3.170	N/A	1.683	4.853	N/A
	Front	0.000	N/A	2.187	2.187	N/A
	Edge 1	0.000	N/A	2.187	2.187	N/A
	Edge 2	0.000	N/A			N/A
	Edge 3	0.000	N/A			N/A
	Edge 4	0.000	N/A	2.187	2.187	N/A

Simultaneous Transmission Analysis (AG0+ER)

RF Exposure	Test Position	Highest SAR (W/kg)			Sum SAR (W/kg)	
		Main.1	Main.2	ER	Main.1 + ER	Main.2 + ER
Product Specific 10-g (10-g SAR)	Rear	N/A	3.170	1.683	N/A	4.853

Simultaneous Transmission Analysis (Main.1+ER)

RF Exposure	Test Position	Highest SAR (W/kg)			Sum SAR (W/kg)	
		Main.2		ER	Main.1 + ER(UNII)	
		Bands	SAR (W/kg)	UNII		
Product Specific 10-g (10-g SAR)	Rear	LTE Band 41	3.170	1.683	4.853	

Sum-Peak Location Separation Ratio

RF Exposure	Test Position	Standalone SAR (W/kg)			Sum of SAR (W/kg) (1-g or 10-g)	Calculated Distance (mm)	1-g SPLSR (<=0.04) or 10-g SPLSR (<=0.10)	Volume Scan (Yes/No)	Figure
		Main.1	UNII						
Product Specific 10-g (10-g SAR)	Rear	LTE Band 41	3.170	1.683	LTE Band 41+UNII 4.853	156.4	0.07	No	2

Note(s):

- Green value is estimated SAR value.

Conclusion:

Simultaneous Transmission SAR analysis results is satisfied the FCC Limit requirement according to follow procedures with "Sum of SAR" or "Sum-Peak Location Separation Ratio".

Figure (1)

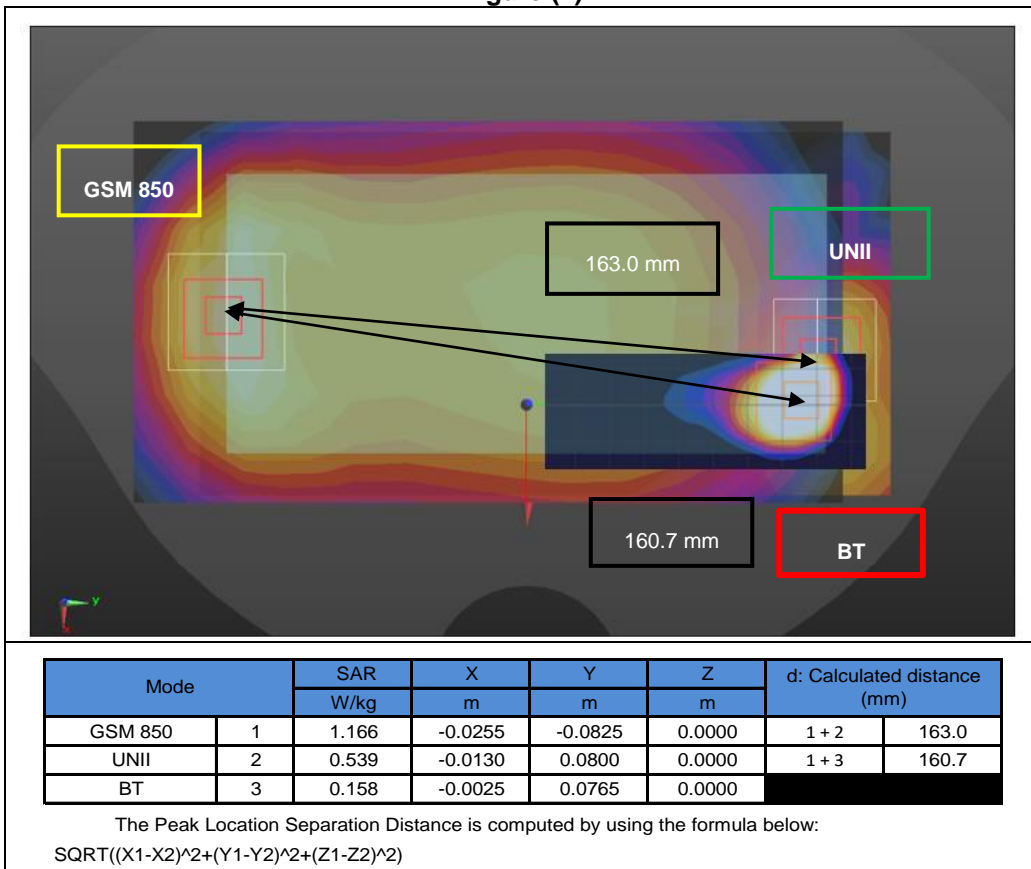
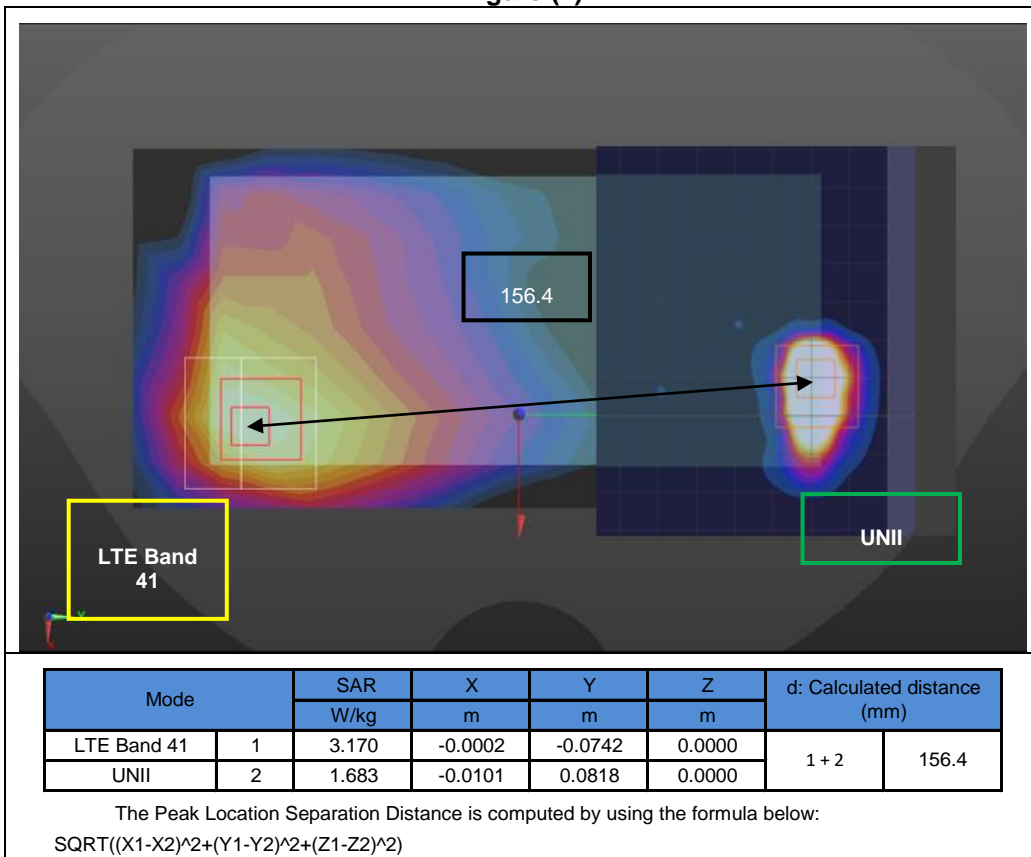


Figure (2)



Appendixes

Refer to separated files for the following appendixes.

4790379967-S1 FCC Report SAR_App A_Photos & Ant. Locations

4790379967-S1 FCC Report SAR_App B_Highest SAR Test Plots

4790379967-S1 FCC Report SAR_App C_System Check Plots

4790379967-S1 FCC Report SAR_App D_SAR Tissue Ingredients

4790379967-S1 FCC Report SAR_App E_Probe Cal. Certificates

4790379967-S1 FCC Report SAR_App F_Dipole Cal. Certificates

4790379967-S1 FCC Report SAR_App G_Proximity Sensor feature

4790379967-S1 FCC Report SAR_App H_LTE Carrier Aggregation

END OF REPORT