FCC 47 CFR § 2.1093
IEEE Std 1528-2013

SAR EVALUATION REPORT
(Part 1 : Test in Static Transmission Condition)

FOR

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

MODEL NUMBER: SC-55D, SCG22

FCC ID: A3LSMF946JPN

REPORT NUMBER: 4790841160-S1V2

ISSUE DATE: 7/7/2023

Prepared for
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Testing Laboratory

TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	7/5/2023	Initial Issue	--
V2	7/7/2023	1 Revised SAR Characterization's table in Sec.6.3. 2 Added DTS's Ch.12/13 target power in Sec.6.4 & Sec.9.5. 3 Revised DSI 0's description in table of Sec.6.5. 4 Revised typo and Added note.4 in Folder Opened of Sec.7. 5 Revised note.2 in Main bands table of Sec.6.4. 6 Revised supported AIT bands. -Revised supported AIT bands in Sec.6.9. -Added Dielectric Property Measurement & system check in Sec.8. -Revised App_H according to retest some AIT tune codes.	Sunghoon Kim

Table of Contents

1. Attestation of Test Results

Applicant Name		SAMSUNG ELECTRONICS CO.,LTD.				
FCC ID		A3LSMF946JPN				
Model Number		SC-55D, SCG22				
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 & Extremity 10g (10g of tissue)		
General population / Uncontrolled exposure		1.6		4.0		
RF Exposure Conditions		Equipment Class - The Highest Reported SAR (W/kg)				
		PCE	DTS	NII	DSS	DXX
Phablet-Head		0.39	1.00	0.24	0.39	N/A
Phablet-Body-worn & Hotspot		0.84	0.53	1.10	0.30	N/A
Phablet-Product Specific 10g		N/A	N/A	1.34	N/A	< 0.10
UMPC Mini Tablet-Body		1.01	0.43	0.95	0.20	N/A
UMPC Mini Tablet-Extremity 10g		3.04	1.89	1.76	0.90	< 0.10
Simultaneous TX of Phablet & UMPC Mini Tablet	Head	1.39	1.39	1.39	1.39	N/A
	Body-worn & Hotspot	0.94	0.94	0.94	0.94	N/A
	Product Specific 10g	1.35	N/A	1.35	N/A	1.35
	Body	1.52	1.52	1.52	1.52	N/A
	Extremity 10g	3.52	3.52	3.52	3.52	3.52
Date Tested		5/31/2023 to 7/7/2023				
Test Results		Pass				

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.

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.

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)				
			Phablet mode			UMPC Mini Tablet mode	
			1g of tissue		10g of tissue	1g of tissue	10g of tissue
			Head Exposure condition	Body-worn & Hotspot Exposure condition	Product Specific Exposure condition	Body Exposure condition	Extremity Exposure condition
PCE	GSM 850	Ant.A & Ant.(A+B)	0.185	0.672	N/A	0.466	1.165
	GSM 1900	Ant.B	0.071	0.549	N/A	0.605	1.780
	WCDMA Band V	Ant.A & Ant.(A+B)	0.170	0.581	N/A	0.750	1.844
	LTE Band 2	Ant.B	0.164	0.686	N/A	0.613	2.418
	LTE Band 4	Ant.B	N/A	N/A	N/A	N/A	N/A
	LTE Band 5	Ant.A & Ant.(A+B)	0.164	0.499	N/A	0.768	1.830
	LTE Band 12	Ant.A & Ant.(A+B)	0.227	0.612	N/A	0.457	1.786
	LTE Band 13	Ant.A & Ant.(A+B)	0.150	0.366	N/A	0.361	0.884
	LTE Band 26	Ant.A & Ant.(A+B)	0.168	0.513	N/A	0.709	1.903
	LTE Band 66	Ant.B	0.128	0.590	N/A	0.559	2.211
	LTE Band 41	Ant.B	0.118	0.784	N/A	**1.005**	**3.035**
	LTE Band 41	Ant.F	0.254	0.215	N/A	0.226	1.177
	NR Band n5	Ant.A & Ant.(A+B)	0.386	0.453	N/A	0.531	1.327
	NR Band n66	Ant.B	0.183	**0.835**	N/A	0.480	1.985
	NR Band n41	Ant.B	0.076	0.571	N/A	0.697	2.662
	NR Band n41	Ant.F	**0.394**	0.381	N/A	0.524	1.993
DTS	2.4GHz WLAN		**1.003**	**0.532**	N/A	**0.425**	**1.892**
UNII	5GHz WLAN		**0.240**	**1.104**	**1.340**	**0.946**	**1.755**
DSS	Bluetooth		**0.394**	**0.296**	N/A	**0.195**	**0.900**
DXX	NFC		N/A	N/A	**0.010**	N/A	**0.011**

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 D04 Interim General RF Exposure Guidance v01
- 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 (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)

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	

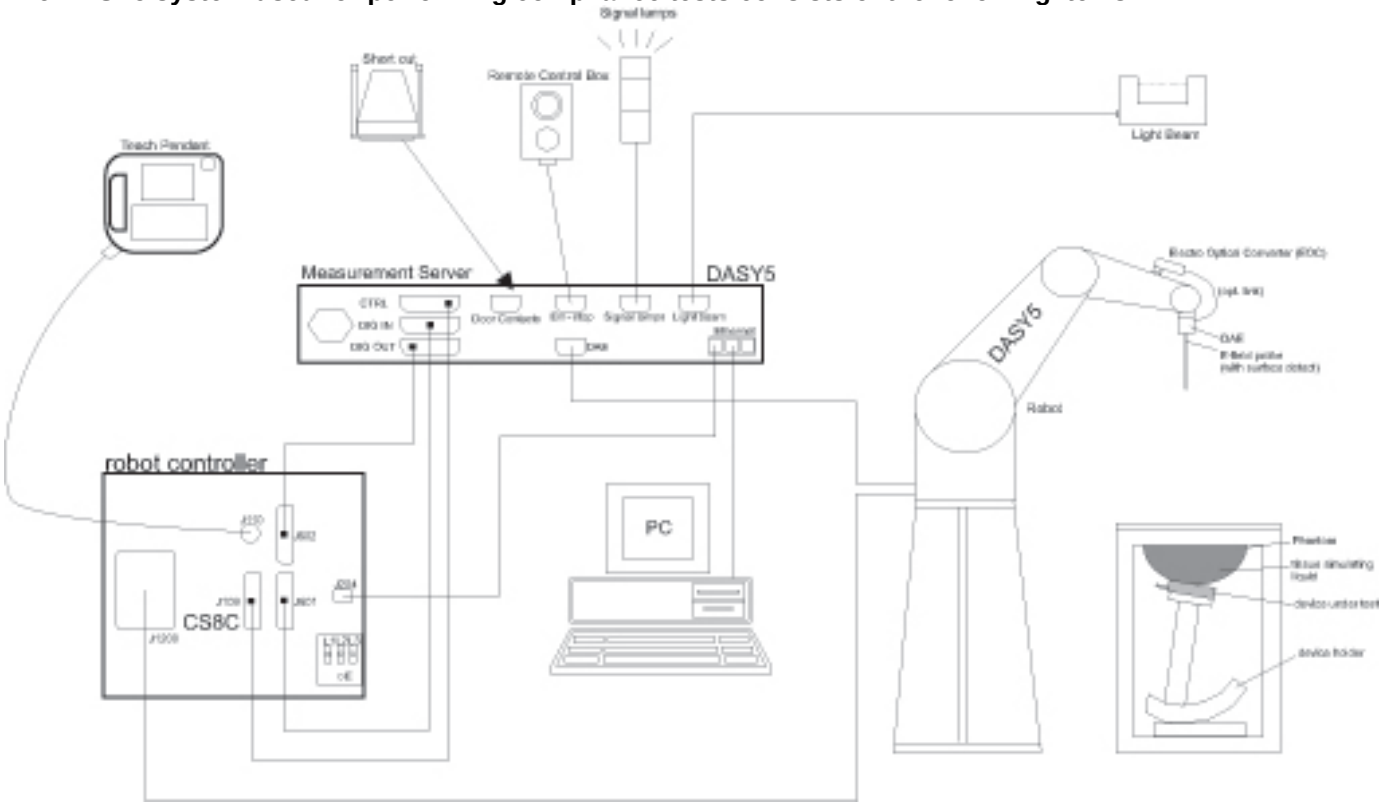
UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.
The full scope of accreditation can be viewed at;

https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf.

4. SAR Measurement System & Test Equipment

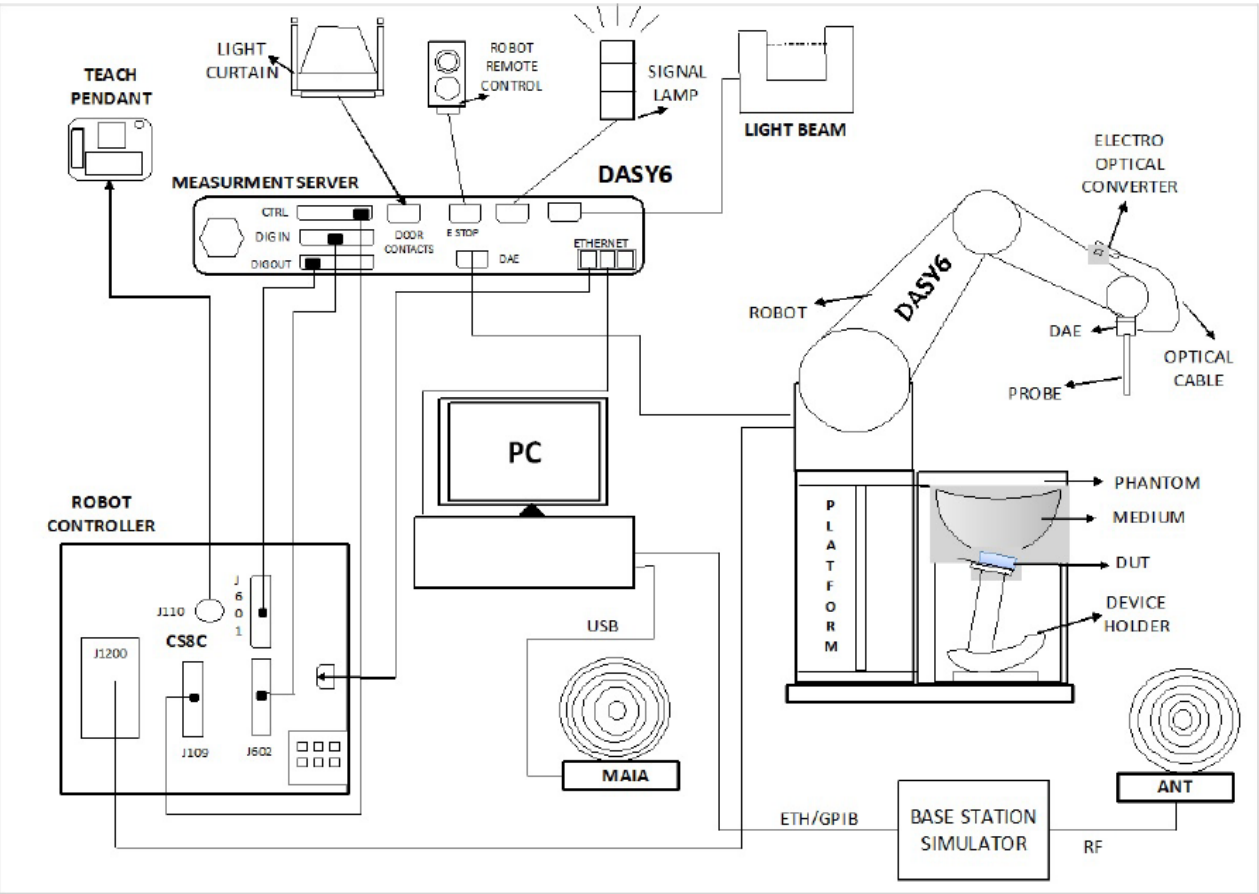
4.1. SAR Measurement System

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

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

Step 3: Zoom Scan

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

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 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 *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

Step 4: Power drift measurement

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

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	8-5-2023
Network Analyzer	ROHDE & SCHWARZ	ZNB 20	102256	8-5-2023
Dielectric Assessment Kit	SPEAG	DAK-12	1158	11-17-2023
Dielectric Assessment Kit	SPEAG	DAK-3.5	1196	7-25-2023
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Shorting block	SPEAG	DAK-12 Short	SM DAK 220 AD	N/A
Thermometer	LKM	DTM3000	3851	8-3-2023
Thermometer	LKM	DTM3000	3862	8-3-2023

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
MXG Analog Signal Generator	Aglient	N5181A	MY50145882	8-4-2023
MXG Analog Signal Generator	Keysight	N5181B	MY59100587	8-4-2023
MXG Analog Signal Generator	Keysight	N5173B	MY59101083	8-4-2023
Power Sensor	KEYSIGHT	U2000A	MY60180020	8-3-2023
Power Sensor	KEYSIGHT	U2000A	MY60490008	8-3-2023
Power Sensor	KEYSIGHT	U2000A	MY60160004	8-3-2023
Power Sensor	KEYSIGHT	U2000A	MY61010010	8-3-2023
Power Amplifier	EXODUS	AMP2027	1410025-AMP2027-10003	11-2-2023
Power Amplifier	MINI-CIRCUITS	TVA-R5-13A+	2111006	1-6-2024
Power Amplifier	EXODUS	AMP2027ADB	10002	1-6-2024
Directional Coupler	Aglient	772D	MY52180193	8-3-2023
Directional Coupler	H.P	778D	16133	8-3-2023
Directional Coupler	NARDA	4216-10	02835	8-3-2023
Directional Coupler	MINI-CIRCUITS	ZMDC-30-1+	SF569102123	8-3-2023
Low Pass Filter	FILTRON	L140012FL	1410003S	8-3-2023
Low Pass Filter	MICROLAB	LA-60N	3942	8-3-2023
Low Pass Filter	MINI-CIRCUITS	VLF-6000+	S0142	8-2-2023
Low Pass Filter	MINI-CIRCUITS	VLF-3000+	S0143	8-2-2023
Low Pass Filter	MINI-CIRCUITS	NLP-1200	VUU19301915	1-5-2024
Attenuator	KEYSIGHT	8491B/003	MY39272276	8-3-2023
Attenuator	KEYSIGHT	8491B/010	MY39271981	8-3-2023
Attenuator	KEYSIGHT	8491B/010	MY39272011	8-2-2023
Attenuator	KEYSIGHT	8491B/020	MY39272301	8-3-2023
Attenuator	KEYSIGHT	8491B/020	MY39272302	8-2-2023
Attenuator	KEYSIGHT	8491B/003	MY39272275	8-2-2023
E-Field Probe	SPEAG	EX3DV4	7313	3-24-2024
E-Field Probe	SPEAG	EX3DV4	7314	5-26-2024
E-Field Probe	SPEAG	EX3DV4	7330	1-24-2024
E-Field Probe	SPEAG	EX3DV4	7376	7-27-2023
E-Field Probe	SPEAG	EX3DV4	7545	8-19-2023
E-Field Probe	SPEAG	EX3DV4	7645	11-15-2023
E-Field Probe	SPEAG	EX3DV4	7651	5-30-2024
E-Field Probe	SPEAG	EX3DV4	7646	3-23-2024
E-Field Probe	SPEAG	EX3DV4	3871	9-26-2023

Note(s):

1. All equipments were used until Cal.Due data.

Test Equipment (Continued)

Data Acquisition Electronics	SPEAG	DAE4	1447	3-22-2024
Data Acquisition Electronics	SPEAG	DAE4	1494	7-18-2023
Data Acquisition Electronics	SPEAG	DAE4	1670	5-24-2024
Data Acquisition Electronics	SPEAG	DAE4	1671	5-25-2024
Data Acquisition Electronics	SPEAG	DAE4	1667	4-24-2024
Data Acquisition Electronics	SPEAG	DAE4	912	11-16-2023
Data Acquisition Electronics	SPEAG	DAE4	1668	4-26-2024
Data Acquisition Electronics	SPEAG	DAE4	1468	8-18-2023
System Validation Dipole	SPEAG	D750V3	1205	4-18-2024
System Validation Dipole	SPEAG	D835V2	4d174	9-21-2023
System Validation Dipole	SPEAG	D835V2	4d194	3-24-2024
System Validation Dipole	SPEAG	D1750V2	1125	11-30-2023
System Validation Dipole	SPEAG	D1900V2	5d190	11-16-2023
System Validation Dipole	SPEAG	D2450V2	939	7-21-2023
System Validation Dipole	SPEAG	D2450V2	960	3-24-2024
System Validation Dipole	SPEAG	D2600V2	1178	4-25-2024
System Validation Dipole	SPEAG	D5GHzV2	1209	2-28-2024
System Validation Dipole	SPEAG	D5GHzV2	1325	4-21-2024
System Validation Dipole	SPEAG	CLA -13	1015	8-23-2023
Thermometer	Lutron	MHB-382SD	AH.50215	1-9-2024
Thermometer	Lutron	MHB-382SD	AH.50213	1-11-2024
Thermometer	Lutron	MHB-382SD	AH.91463	1-11-2024
Thermometer	Lutron	MHB-382SD	AJ.45903	1-9-2024
Thermometer	Lutron	MHB-382SD	AJ.42446	8-9-2023
Thermometer	Lutron	MHB-382SD	AK.12102	8-9-2023
Thermometer	Lutron	MHB-382SD	AK.12103	8-9-2023
Thermometer	Lutron	MHB-382SD	AK.12121	8-9-2023
Thermometer	Lutron	MHB-382SD	AK.12123	1-9-2024
Thermometer	Lutron	MHB-382SD	AK.18789	8-9-2023

Others

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	150313	8-2-2023
Base Station Simulator	R & S	CMW500	150314	8-2-2023
Base Station Simulator	R & S	CMW500	162790	8-2-2023
Base Station Simulator	R & S	CMW500	169803	1-5-2024
Base Station Simulator	R & S	CMW500	169801	1-5-2024
Base Station Simulator	R & S	CMW500	169799	8-2-2023
Base Station Simulator	R & S	CMW500	169800	8-2-2023
Base Station Simulator	R & S	CMW500	169798	8-2-2023
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY57510596	8-5-2023
UXM 5G Wireless Test Platform	KEYSIGHT	E751B	MY59150850	1-9-2024
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY58120110	1-10-2024
Radio Communication Test Station	Anritsu	MT8000A	6272466165	9-8-2023
Radio Communication Analyzer	Anritsu	MT8821C	6161094351	11-29-2023

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

Measurement Uncertainty of 100MHz to 6GHz

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.

Measurement Uncertainty of 9MHz to 19MHz

Measurement uncertainty for 9 MHz to 19 MHz
(According to IEEE 62209-1528)

a	b	c		d	e	f	g	h = *c*×*f*/*e*	l = *c*×*g*/*e*	k
Uncertainty component	Reference	Tol. 1 g (±%)	Tol. 10 g (±%)	Prob. Dist.	Div.	*ci* (1 g)	*ci* (10 g)	1 g *ui* (± %)	10 g *ui* (± %)	vi
Measurement System Errors										
Probe Calibration	8.4.1.1	13.3		Normal	2	1	1	6.7	6.7	∞
Probe Calibration Drift	8.4.1.2	1.7		Rectangular	1.732	1	1	1.0	1.0	∞
Probe Linearity	8.4.1.3	4.7		Rectangular	1.732	1	1	2.7	2.7	∞
Broadband Signal	8.4.1.4	0.8		Rectangular	1.732	1	1	0.5	0.5	∞
Probe Isotropy	8.4.1.5	7.6		Rectangular	1.732	1	1	4.4	4.4	∞
Data Acquisition	8.4.1.6	0.3		Normal	1	1	1	0.3	0.3	∞
RF Ambient	8.4.1.7	1.8		Normal	1	1	1	1.8	1.8	∞
Probe Positioning	8.4.1.8	0.006		Normal	1	0.14	0.14	0.10	0.10	∞
Data Processing	8.4.1.9	1.2		Normal	1	1	1	1.2	1.2	∞
Phantom and Device Errors										
Conductivity (meas.)DAK	8.4.2.1	2.5		Normal	1	0.78	0.71	2.0	1.8	∞
Conductivity (temp.)BB	8.4.2.2	5.4		Rectangular	1.732	0.78	0.71	2.4	2.2	∞
Phantom Permittivity	8.4.2.3	14.0		Rectangular	1.732	0	0	0.0	0.0	∞
Distance DUT -TSL	8.4.2.4	2.0		Normal	1	2	2	4.0	4.0	∞
Device Positioning	8.4.2.5	0.5	0.6	Normal	1	1	1	0.5	0.6	40
Device Holder	8.4.2.6	3.6		Normal	1	1	1	3.6	3.6	∞
DUT Modulation	8.4.2.7	2.4		Rectangular	1.732	1	1	1.4	1.4	∞
Time-average SAR	8.4.2.8	1.7		Rectangular	1.732	1	1	1.0	1.0	∞
DUT drift	8.4.2.9	5.0		Normal	1	1	1	5.0	5.0	∞
Correction to the SAR results										
Deviation to Target	8.4.3.1	1.9		Normal	1	1	0.84	1.9	1.6	∞
Combined Standard Uncertainty Uc(y) =				RSS				12.13	12.02	
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =								**24.26**	**24.05**	

5.1. DECISION RULE

Decision rule for statement(s) of conformity is based on Procedure 2, Clause 4.4.3 in IEC Guide 115:2021.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Refer to Appendix A.
Back Cover	☒ The Back Cover is not removable.
Battery Options	☒ 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. ☒ Mobile Hotspot (Wi-Fi 2.4 GHz)
Wi-Fi Direct	Wi-Fi Direct enabled devices transfer data directly between each other ☒ Wi-Fi Direct (Wi-Fi 2.4 GHz) ☒ Wi-Fi Direct (Wi-Fi 5.2 GHz_UNII-1, Wi-Fi 5.8 GHz_UNII-3)
Test Sample Information	**No. S/N Notes** 1 R3CW408V1HY Main Conducted 2 R3CW408V17F Main Conducted 3 R3CW408VAHK WLAN/BT Conducted 4 732bb529284c7ece WLAN/BT Conducted 5 R3CW408V1JN SAR 6 732bb528e24c7ece SAR 7 R3CW408V1GL SAR 8 R3CW408V0AZ SAR 9 R3CW408V8BK SAR 10 R3CW408VADB SAR 11 R3CW408V29P SAR 12 R3CW408V84A SAR 13 R3CW408U1EX SAR

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: ☐ Class 8 - 1 Up, 4 Down ☐ Class 10 - 2 Up, 4 Down ☐ Class 12 - 4 Up, 4 Down ☒ Class 33 - 4 Up, 5 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
	Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No			
W-CDMA (UMTS)	Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 24) HSUPA (Category 6) DC-HSDPA (Category 24) HSPA+ (DL only)		100%
LTE	FDD Band 12 FDD Band 13 FDD Band 26 FDD Band 5 FDD Band 66 FDD Band 4 FDD Band 2 TDD Band 41 **<u>UL CA intraband-contiguous (2CC)</u>** 41C	QPSK 16QAM 64QAM Rel. 15 Carrier Aggregation (2 Uplink and 3 Downlinks)		100% (FDD) 63.3% (TDD)
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
NR (Sub6)	FDD Band n5 FDD Band n66 FDD Band n41	DFT-s-ODFM: ■ π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-ODFM: ■QPSK, 16QAM, 64QAM, 256QAM		100%
Wi-Fi	2.4 GHz	802.11b / 802.11g / 802.11n (HT20) 802.11ac (VHT20) / 802.11ax (HE20)		98.8% (802.11b-SISO) 98.9% (802.11b-MIMO)
	5 GHz	802.11a / 802.11n (HT20) & (HT40) 802.11ac (VHT20) & (VHT40) & (VHT80) & (VHT160) 802.11ax (HE20) & (HE40) & (HE80) & (HE160)		97.2% (802.11ac (VHT80-MIMO)
	6 GHz	802.11a 802.11ax (HE20) & (HE40) & (HE80) & (HE160)		99.7% (802.11ax (HE160-MIMO)
	Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No			
	Does this device support Band gap channel(s)? ☒ Yes ☐ No			
Bluetooth	2.4 GHz	Version 5.3 LE		76.5% (BT-1Mbps)
NFC	13.56 MHz	Type A/B/F		100%
UWB	6489.6 – 7987.2 MHz	Signal Configurations(0/1/3), PRF modes(BPRF/HPRF)		100%

Notes:

1. Wi-Fi & Bluetooth were tested SAR using highest duty cycle. Measured duty cycle plots are in Section.9.
2. This device supports UL CA intra band-contiguous in LTE Band 41. Detail of configuration refer to appendix.G.
3. 6GHz RF Exposure report has test results of WiFi 6GHz and UWB.

6.3. Time-Averaging feature

The equipment under test (EUT) contains the Qualcomm modems supporting 2G/3G/4G/5G technologies and WLAN/BT technologies. these modems are 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/WLAN/BT technology bands, 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 D04.

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			Folder Open Body	Folder Open Extremity	Folder Closed Body & Hotspot	Folder Closed Product Specific 10-g	Folder Open Head	Folder Closed Head	Pmax (Maximum tune-up Power) (dBm)
Spatial-average			1g	10g	1g	10g	1g	1g	
Test distance (mm)			10	0	10	0	0	0	
Configuration			Folder Open	Folder Open	Folder Closed	Folder Closed	Folder Open	Folder Closed	
DSI:			0		1		2	3	
RF Air Interface	Antenna	Antenna Group	Plimit corresponding to 1.0 W/kg (SAR_design_target) (1g) / 2.5 W/kg (SAR_design_target) (10g)						
GSM 850	A, A+B	AG0	29.79		28.21		33.82	33.82	25.48
GSM 1900	B	AG0	18.49		18.49		34.73	34.73	22.24
WCDMA 5	A, A+B	AG0	26.75		27.86		33.21	33.21	24.50
LTE B2	B	AG0	19.00		19.00		32.85	32.85	24.00
LTE B5	A, A+B	AG0	26.64		28.52		33.35	33.35	24.50
LTE B12	A, A+B	AG0	26.96		27.63		31.93	31.93	24.50
LTE B13	A, A+B	AG0	29.92		29.86		33.75	33.75	24.50
LTE B26	A, A+B	AG0	26.69		28.40		33.25	33.25	24.50
LTE B66(4)	B	AG0	19.00		19.00		33.92	33.92	24.00
LTE B41 pc3	B	AG0	17.00		17.00		32.80	32.80	22.00
LTE B41 pc3 upper	F	AG1	19.00		19.00		18.00	28.95	22.00
NR Bn5	A, A+B	AG0	27.82		28.60		29.13	29.13	24.00
NR Bn66	B	AG0	19.00		19.00		32.39	32.39	24.00
NR Bn41	B	AG0	17.00		17.00		20.00	20.00	24.00
NR Bn41 Upper	F	AG1	19.00		19.00		19.00	20.00	24.00
DTS SISO Ant.2	G	AG1	20.29		23.38		17.00	17.00	18.00
DTS MIMO	H+G	AG1	20.49		21.79		17.00	17.00	18.00
UNII-2A MIMO	H+J	AG1	16.00		16.00		14.00	24.32	17.00
UNII-2C MIMO	H+J	AG1	16.00		16.00		14.00	24.47	17.00
UNII-3 MIMO	H+J	AG1	16.00		16.00		14.00	25.89	17.00
UNII-4 MIMO	H+J	AG1	16.00		16.00		14.00	25.03	17.00
WiFi 6e	H+J	AG1	21.12		15.22		24.43	24.43	9.00
Bluetooth Ant.1	H	AG1	25.12		27.82		28.92	28.92	17.00
Bluetooth Ant.2	G	AG1	20.53		21.38		20.14	20.14	15.00

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.

GSM Bands

RF Air interface	Antenna	Mode	Time Slots	Maximum allowed output power (dBm)									
				Pmax		Plimit							
						DSI = 0 (Folder Opened - Body)		DSI = 1 (Folder Closed - Body)		DSI = 2 (Folder Opened - Head)		DSI = 3 (Folder Closed - Head)	
				Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM850	Ant.A & Ant.A+B	Voice	1	33.00	23.97	33.00	23.97	33.00	23.97	33.00	23.97	33.00	23.97
		GPRS	1	33.00	23.97	33.00	23.97	33.00	23.97	33.00	23.97	33.00	23.97
		GPRS	2	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
		GPRS	4	28.50	25.49	28.50	25.49	28.50	25.49	28.50	25.49	28.50	25.49
		EGPRS	1	28.00	18.97	28.00	18.97	28.00	18.97	28.00	18.97	28.00	18.97
		EGPRS	2	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
		EGPRS	4	23.00	19.99	23.00	19.99	23.00	19.99	23.00	19.99	23.00	19.99
GSM1900	Ant.B	Voice	1	30.50	21.47	28.50	19.47	28.50	19.47	30.50	21.47	30.50	21.47
		GPRS	1	30.50	21.47	28.50	19.47	28.50	19.47	30.50	21.47	30.50	21.47
		GPRS	2	29.00	22.98	25.50	19.48	25.50	19.48	29.00	22.98	29.00	22.98
		GPRS	3	27.50	23.24	23.70	19.44	23.70	19.44	27.50	23.24	27.50	23.24
		GPRS	4	25.50	22.49	22.50	19.49	22.50	19.49	25.50	22.49	25.50	22.49
		EGPRS	1	27.00	17.97	27.00	17.97	27.00	17.97	27.00	17.97	27.00	17.97
		EGPRS	2	25.00	18.98	25.00	18.98	25.00	18.98	25.00	18.98	25.00	18.98
		EGPRS	3	23.00	18.74	23.00	18.74	23.00	18.74	23.00	18.74	23.00	18.74
		EGPRS	4	22.00	18.99	22.00	18.99	22.00	18.99	22.00	18.99	22.00	18.99

WCDMA Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	Plimit			
				DSI = 0 (Folder Opened - Body)	DSI = 1 (Folder Closed - Body)	DSI = 2 (Folder Opened - Head)	DSI = 3 (Folder Closed - Head)
W-CDMA Band V	Ant.A & Ant.A+B	R99	25.50	25.50	25.50	25.50	25.50
		HSDPA	24.50	24.50	24.50	24.50	24.50
		HSUPA	24.50	24.50	24.50	24.50	24.50
		DC-HSDPA	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.
2. Some bands are support to both Ant.A and Ant.A+B configurations in Folder Closed condition using same target power. And SAR test evaluated both Ant.A and AntA+B. and Output power verification was evaluated at Ant.A's conducted port according to manufacturer's guide.

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

LTE Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	Plimit			
				DSI = 0 (Folder Opened - Body)	DSI = 1 (Folder Closed - Body)	DSI = 2 (Folder Opened - Head)	DSI = 3 (Folder Closed - Head)
LTE Band 12	Ant.A & Ant.A+B	QPSK	25.50	25.50	25.50	25.50	25.50
LTE Band 13	Ant.A & Ant.A+B	QPSK	25.50	25.50	25.50	25.50	25.50
LTE Band 26	Ant.A & Ant.A+B	QPSK	25.50	25.50	25.50	25.50	25.50
LTE Band 5	Ant.A & Ant.A+B	QPSK	25.50	25.50	25.50	25.50	25.50
LTE Band 66	Ant.B	QPSK	25.00	20.00	20.00	25.00	25.00
LTE Band 4	Ant.B	QPSK	24.50	20.00	20.00	24.50	24.50
LTE Band 2	Ant.B	QPSK	25.00	20.00	20.00	25.00	25.00
LTE Band 41	Ant.B	QPSK	25.00	20.00	20.00	25.00	25.00
LTE Band 41	Ant.F	QPSK	25.00	22.00	22.00	21.00	25.00

NR Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	Plimit			
				DSI = 0 (Folder Opened - Body)	DSI = 1 (Folder Closed - Body)	DSI = 2 (Folder Opened - Head)	DSI = 3 (Folder Closed - Head)
NR Band n5	Ant.A & Ant.A+B	DFT-s-OFDM QPSK	25.00	25.00	25.00	25.00	25.00
NR Band n66	Ant.B	DFT-s-OFDM QPSK	25.00	20.00	20.00	25.00	25.00
NR Band n41	Ant.B	DFT-s-OFDM QPSK	25.00	18.00	18.00	21.00	21.00
NR Band n41	Ant.F	DFT-s-OFDM QPSK	25.00	20.00	20.00	20.00	21.00

Note(s):

1. Detail of DSI(Device State Index) conditions, please refer to Sec.6.5.
2. Some bands are support to both Ant.A and Ant.A+B configurations in Folder Closed condition using same target power. And SAR test evaluated both Ant.A and AntA+B. and Output power verification was evaluated at Ant.A's conducted port according to manufacturer's guide.
3. NR Band n41 (Ant.B) has support to both SA and NSA modes.
4. NR Band n41 (Ant.F) has support to only SA mode.

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

WLAN output power (Pmax)

RF Air interface	Band		Maximum allowed output power (dBm) - Pmax											
			802.11 mode											
			2.4GHz SISO (Ant.H & Ant.G) / 5GHz SISO (Ant.H & Ant.J)						2.4GHZ MIMO (Ant.H + Ant.G) / 5GHZ MIMO (Ant.H + Ant.J)					
			a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)
WiFi 2.4 GHz	DTS	Ch 1		19.0	18.0	18.0	18.0	16.0		22.0	21.0	21.0	21.0	19.0
		Ch 2 - 10		19.0	18.0	18.0	18.0	18.0		22.0	21.0	21.0	21.0	21.0
		Ch 11		19.0	18.0	18.0	18.0	16.0		22.0	21.0	21.0	21.0	19.0
		Ch 12		6.0	6.0	6.0	6.0	6.0		9.0	9.0	9.0	9.0	9.0
		Ch 13		0.0	0.0	0.0	0.0	0.0		3.0	3.0	3.0	3.0	3.0
WiFi 5 GHz (BW : 20MHz)	UNII-1 & 2A		18.0			18.0	18.0	18.0	21.0			21.0	21.0	21.0
	UNII-2C		18.0			18.0	18.0	18.0	21.0			21.0	21.0	21.0
	UNII-3		18.0			18.0	18.0	18.0	21.0			21.0	21.0	21.0
	UNII-4		18.0			18.0	18.0	18.0	21.0			21.0	21.0	21.0
WiFi 5 GHz (BW : 40MHz)	UNII-1 & 2A					18.0	18.0	18.0				21.0	21.0	21.0
	UNII-2C					18.0	18.0	18.0				21.0	21.0	21.0
	UNII-3					18.0	18.0	18.0				21.0	21.0	21.0
	UNII-4					18.0	18.0	18.0				21.0	21.0	21.0
WiFi 5 GHz (BW : 80MHz)	UNII-1 & 2A						18.0	18.0					21.0	21.0
	UNII-2C						18.0	18.0					21.0	21.0
	UNII-3						18.0	18.0					21.0	21.0
	UNII-4						18.0	18.0					21.0	21.0
WiFi 5 GHz (BW : 160MHz)	UNII-1 & 2A						18.0	18.0					21.0	21.0
	UNII-2C						18.0	18.0					21.0	21.0
	UNII-3 & 4						18.0	18.0					21.0	21.0

WLAN output power (Plimit of DSI 0,1)

RF Air interface	Band		Maximum allowed output power (dBm) - Plimit of DSI 0,1											
			802.11 mode											
			2.4GHz SISO (Ant.H & Ant.G) / 5GHz SISO (Ant.H & Ant.J)						2.4GHZ MIMO (Ant.H + Ant.G) / 5GHZ MIMO (Ant.H + Ant.J)					
			a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)
WiFi 2.4 GHz	DTS	Ch 1		19.0	18.0	18.0	18.0	16.0		22.0	21.0	21.0	21.0	19.0
		Ch 2 - 10		19.0	18.0	18.0	18.0	18.0		22.0	21.0	21.0	21.0	21.0
		Ch 11		19.0	18.0	18.0	18.0	16.0		22.0	21.0	21.0	21.0	19.0
		Ch 12		6.0	6.0	6.0	6.0	6.0		9.0	9.0	9.0	9.0	9.0
		Ch 13		0.0	0.0	0.0	0.0	0.0		3.0	3.0	3.0	3.0	3.0
WiFi 5 GHz (BW : 20MHz)	UNII-1 & 2A		17.0			17.0	17.0	17.0	20.0			20.0	20.0	20.0
	UNII-2C		17.0			17.0	17.0	17.0	20.0			20.0	20.0	20.0
	UNII-3		17.0			17.0	17.0	17.0	20.0			20.0	20.0	20.0
	UNII-4		17.0			17.0	17.0	17.0	20.0			20.0	20.0	20.0
WiFi 5 GHz (BW : 40MHz)	UNII-1 & 2A					17.0	17.0	17.0				20.0	20.0	20.0
	UNII-2C					17.0	17.0	17.0				20.0	20.0	20.0
	UNII-3					17.0	17.0	17.0				20.0	20.0	20.0
	UNII-4					17.0	17.0	17.0				20.0	20.0	20.0
WiFi 5 GHz (BW : 80MHz)	UNII-1 & 2A						17.0	17.0					20.0	20.0
	UNII-2C						17.0	17.0					20.0	20.0
	UNII-3						17.0	17.0					20.0	20.0
	UNII-4						17.0	17.0					20.0	20.0
WiFi 5 GHz (BW : 160MHz)	UNII-1 & 2A						17.0	17.0					20.0	20.0
	UNII-2C						17.0	17.0					20.0	20.0
	UNII-3 & 4						17.0	17.0					20.0	20.0

Notes:

1. DTS mode has support SISO (Only Ant.2) & MIMO mode.
2. UNII mode has support only MIMO mode.
3. RSDB scenarios refer to section.12 in report.

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

WLAN output power (Plimit of DSI 2)

RF Air interface	Band		Maximum allowed output power (dBm) - Plimit of DSI 2											
			802.11 mode											
			2.4GHz SISO (Ant.H & Ant.G) / 5GHz SISO (Ant.H & Ant.J)						2.4GHZ MIMO (Ant.H + Ant.G) / 5GHZ MIMO (Ant.H + Ant.J)					
			a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)
WiFi 2.4 GHz	DTS	Ch 1		18.0	18.0	18.0	18.0	16.0		21.0	21.0	21.0	21.0	19.0
		Ch 2 - 10		18.0	18.0	18.0	18.0	18.0		21.0	21.0	21.0	21.0	21.0
		Ch 11		18.0	18.0	18.0	18.0	16.0		21.0	21.0	21.0	21.0	19.0
		Ch 12		6.0	6.0	6.0	6.0	6.0		9.0	9.0	9.0	9.0	9.0
		Ch 13		0.0	0.0	0.0	0.0	0.0		3.0	3.0	3.0	3.0	3.0
WiFi 5 GHz (BW : 20MHz)	UNII-1 & 2A		15.0			15.0	15.0	15.0	18.0			18.0	18.0	18.0
	UNII-2C		15.0			15.0	15.0	15.0	18.0			18.0	18.0	18.0
	UNII-3		15.0			15.0	15.0	15.0	18.0			18.0	18.0	18.0
	UNII-4		15.0			15.0	15.0	15.0	18.0			18.0	18.0	18.0
WiFi 5 GHz (BW : 40MHz)	UNII-1 & 2A					15.0	15.0	15.0				18.0	18.0	18.0
	UNII-2C					15.0	15.0	15.0				18.0	18.0	18.0
	UNII-3					15.0	15.0	15.0				18.0	18.0	18.0
	UNII-4					15.0	15.0	15.0				18.0	18.0	18.0
WiFi 5 GHz (BW : 80MHz)	UNII-1 & 2A						15.0	15.0					18.0	18.0
	UNII-2C						15.0	15.0					18.0	18.0
	UNII-3						15.0	15.0					18.0	18.0
	UNII-4						15.0	15.0					18.0	18.0
WiFi 5 GHz (BW : 160MHz)	UNII-1 & 2A						15.0	15.0					18.0	18.0
	UNII-2C						15.0	15.0					18.0	18.0
	UNII-3 & 4						15.0	15.0					18.0	18.0

WLAN output power (Plimit of DSI 3)

RF Air interface	Band		Maximum allowed output power (dBm) - Plimit of DSI 3											
			802.11 mode											
			2.4GHz SISO (Ant.H & Ant.G) / 5GHz SISO (Ant.H & Ant.J)						2.4GHZ MIMO (Ant.H + Ant.G) / 5GHZ MIMO (Ant.H + Ant.J)					
			a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)
WiFi 2.4 GHz	DTS	Ch 1		18.0	18.0	18.0	18.0	16.0		21.0	21.0	21.0	21.0	19.0
		Ch 2 - 10		18.0	18.0	18.0	18.0	18.0		21.0	21.0	21.0	21.0	21.0
		Ch 11		18.0	18.0	18.0	18.0	16.0		21.0	21.0	21.0	21.0	19.0
		Ch 12		6.0	6.0	6.0	6.0	6.0		9.0	9.0	9.0	9.0	9.0
		Ch 13		0.0	0.0	0.0	0.0	0.0		3.0	3.0	3.0	3.0	3.0
WiFi 5 GHz (BW : 20MHz)	UNII-1 & 2A		18.0			18.0	18.0	18.0	21.0			21.0	21.0	21.0
	UNII-2C		18.0			18.0	18.0	18.0	21.0			21.0	21.0	21.0
	UNII-3		18.0			18.0	18.0	18.0	21.0			21.0	21.0	21.0
	UNII-4		18.0			18.0	18.0	18.0	21.0			21.0	21.0	21.0
WiFi 5 GHz (BW : 40MHz)	UNII-1 & 2A					18.0	18.0	18.0				21.0	21.0	21.0
	UNII-2C					18.0	18.0	18.0				21.0	21.0	21.0
	UNII-3					18.0	18.0	18.0				21.0	21.0	21.0
	UNII-4					18.0	18.0	18.0				21.0	21.0	21.0
WiFi 5 GHz (BW : 80MHz)	UNII-1 & 2A						18.0	18.0					21.0	21.0
	UNII-2C						18.0	18.0					21.0	21.0
	UNII-3						18.0	18.0					21.0	21.0
	UNII-4						18.0	18.0					21.0	21.0
WiFi 5 GHz (BW : 160MHz)	UNII-1 & 2A						18.0	18.0					21.0	21.0
	UNII-2C						18.0	18.0					21.0	21.0
	UNII-3 & 4						18.0	18.0					21.0	21.0

Notes:

1. DTS mode has support SISO (Only Ant.2) & MIMO mode.
2. UNII mode has support only MIMO mode.
3. RSDB scenarios refer to section.12 in report.

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

Bluetooth & Bluetooth LE maximum output power (Plimit of DSI 0,1,2,3)

RF Air interface	Maximum allowed output power (dBm) - Plimit of DSI 0,1,2,3	
	Ant.H	Ant.G
Bluetooth (1Mbps)	18.0	16.0
Bluetooth (EDR)	15.5	13.0
Bluetooth (LE) (1M/2M)	9.0	6.0
Bluetooth (LE) 125/500kbps	9.0	6.0

Notes:

1. BT Antennas are not work at the same time.

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	Technologuies Supported	DSI conditions	DUT Configuration	Description
Head	WWAN/WLAN/BT bands	DSI = 3	Folder Closed	1. Device positioned next to head 2. Recevier Active
	WWAN/WLAN/BT bands	DSI = 2	Folder Opened	1. Device positioned next to head 2. Recevier Active
Body-worn & Hotspot	WWAN/WLAN/BT bands	DSI = 1	Folder Closed	1. Device transmits in hotspot mode near body 2. Hotspot mode active 3. Device being used with a body-worn accessoy
Product Specific 10-g	WWAN/WLAN/BT bands			1. Device is held with hand
Body	WWAN/WLAN/BT bands	DSI = 0	Folder Opened	1. Device transmits in hotspot mode near body 2. Hotspot mode active
Extremity 10-g	WWAN/WLAN/BT bands			1. Device is held with hand

Note(s):

1. DSI Scenarios priority : DSI=3 → DSI=1 in Folder Closed.
2. DSI Scenarios priority : DSI=2 → DSI=0 in Folder Opened.

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 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 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
	High		26965/ 841.5	26990/ 844	27015/ 846.5	27025/ 847.5	27033/ 848.3
	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					
	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
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
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

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.
pectrum plots for RB configuratior	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:

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

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	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
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 x (T_s) x # of S + # of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = 5120 x [1/(15000 x 2048)] x 2 + 6 ms = 63.33%
where
T_s = 1/(15000 x 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.

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

Item	Description												
Frequency range, Channel Bandwidth, Numbers and Frequencues	Band n5	Frequency range: 824 - 849 MHz											
		Channel Bandwidth											
		100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	40 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz
	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 n41	Frequency range: 2496 - 2690 MHz											
		Channel Bandwidth											
		100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	40 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz
	Low	509202/ 2546.01	508200/ 2541	507204/ 2536.02	506202/ 2531.01	505200/ 2526	504204/ 2512.02	503202/ 2516.01	552200/ 2511		501204/ 2506.02	500700/ 2503.5	500202/ 2501.01	
	Low-Mid							516468/ 2567.34	510402/ 2552.01		509898/ 2549.49	509652/ 2548.26	509400/ 2547	
	Mid	518598/ 2592.99				518598/ 2592.99	518598/ 2592.99		518598/ 2592.99		518598/ 2592.99	518598/ 2592.99	518598/ 2592.99	
	Mid-High	528000/ 2640	528996/ 2644.98	529998/ 2649.99	531000/ 2655	529998/ 2649.99	523734/ 2618.67	523734/ 2618.67	526800/ 2634		527298/ 2636.49	527550/ 2637.75	527802/ 2639.01	
	High							534000/ 2670	534996/ 2674.98		535998/ 2679.99	536496/ 2682.48	537000/ 2685	
	Band n66	Frequency range: 1710 - 1780 MHz											
		Channel Bandwidth											
		100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	40 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz
	Low							346000/ 1730	345000/ 1725	344500/ 1722.5	344000 /1720	343500 /1717.5	343000 /1715	342500 /1712.5
	Mid							349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745
	High							352000/ 1760	353000/ 1765	353500/ 1767.5	354000 /1770	354500 /1772.5	355000 /1775	355500 /1777.5
SCS	NR FDD Bands : 15 kHz, NR TDD Bands : 30kHz													
Modulations Supported in UL	DFT-s-OFDM: π/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 n5	LTE Band 66													
LTE Anchor Bands for NR Band n41	LTE Band 66													
LTE Anchor Bands for NR Band n66	LTE Band 13													

Notes:

1. 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.
2. NR configurations of SAR test were determined according to Section 5.2 of KDB 941225 D05.

6.9. Dynamic Antenna tuner testing

This Device applies Qualcomm chipset solution's Dynamic Antenna tuning technology to some 3G/4G/5G sub6 bands. (WCDMA B5/ LTE B5/B12/B13/B26/ NR Band n5)
Dynamic Antenna tuning was tested in accordance with the April 2019 FCC TCBC Workshop notes.

Per 2019, April TCBC Workshop document

- SAR is measured according to required procedures with dynamic tuner active allowing device to automatically tune. Auto-tune state determined by device during normal SAR measurement verified and listed alongside the reported SAR results.
- Additional single point SAR (time-sweep) measurements were evaluated for other tuner states to determine that the other configurations would result in equivalent or lower SAR values.
- Single point measurements performed at the peak SAR location of the highest measured SAR configuration for each combination. SAR probe remains stationary throughout the entire series of single point measurements for each combination.
- Total number tuner states divided evenly among each supported band / air interface and exposure condition combination. If any single point SAR measurement result is > 1.2 W/kg for a band / exposure condition combination set, all supported tuner states are evaluated with single point SAR measurements for the combination. Tuner state is established remotely so that the device is not moved for the entire series of single point SAR measurements for the tuner states in each combination.

The following test procedures were followed to demonstrate that the SAR results in Section 10 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuning active to allow the device to automatically to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other impedance matching.

To evaluate all the tuner states, the 144 tuner states were divided among the aggregate band, mode and exposure combinations so that each combination was evaluated for at least 26 tuner states and also so that at least 2 single point SAR measurements were made for every available tuner state. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg for a particular band / mode / exposure condition, point SAR measurements were made for all 144 tuner states.

The Evaluation of Dynamic antenna tuner was only evaluated for the band with the larger transmission frequency range. The operational description contains more information about the design and implementation of the dynamic antenna tuning.

Note(s):

All test results are refer to Appendix H "Dynamic Antenna tuner testing".

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.

Folder Closed (Phablet mode)

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WWAN	Head	All 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-worn & Hotspot	All Antennas	10 mm	Rear	N/A	Yes	
				Front	N/A	Yes	
	Hotspot	Ant.A	10 mm	Top	> 25 mm	No	1
				Left	< 25 mm	Yes	
				Bottom	< 25 mm	Yes	
				Right	> 25 mm	No	1
		Ant.(A+B) & Ant.B	10 mm	Top	> 25 mm	No	1
				Left	< 25 mm	Yes	
				Bottom	< 25 mm	Yes	
				Right	< 25 mm	Yes	
		Ant.F	10 mm	Top	< 25 mm	Yes	
				Left	> 25 mm	No	1
				Bottom	> 25 mm	No	1
				Right	< 25 mm	Yes	
	Product Specific 10-g	All Main Antennas	0 mm	Rear	Refer to notes 2 & 3		
				Front			
				Top			
				Left			
				Bottom			
				Right			

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WLAN/BT	Head	All 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-worn	All Antennas	10 mm	Rear	N/A	Yes	
				Front	N/A	Yes	
	Hotspot	Ant.H	10mm	Top	> 25 mm	No	1
				Left	< 25 mm	Yes	
				Bottom	> 25 mm	No	1
				Right	> 25 mm	No	1
	Hotspot	Ant.G	10mm	Top	< 25 mm	Yes	
				Left	< 25 mm	Yes	
				Bottom	> 25 mm	No	1
				Right	< 25 mm	Yes	
	Product Specific 10-g	All Main Antennas	0 mm	Rear	Refer to notes 2 & 4		
				Front			
				Top			
				Left			
				Bottom			
				Right			

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
NFC	Product Specific (Hand) 10-g	NFC Ant.	0 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Top	> 25 mm	No	1
				Left	< 25 mm	Yes	
				Bottom	< 25 mm	Yes	
				Right	< 25 mm	Yes	

Notes:

1. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.
2. 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.
3. 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.
4. 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.
5. Per manufacturer guide, NFC SAR was considered about only hand held condition (Product Specific 10-g).

Folder Opened (UMPC mini tablet mode)

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WWAN	Body & Extremity 10-g	Ant.(A+B) & Ant.B	Body (10 mm) Extremity (0 mm)	Rear	N/A	Yes	
				Front	N/A	Yes	
				Top	> 25 mm	No	1
				Left	< 25 mm	Yes	
				Bottom	< 25 mm	Yes	
				Right	> 25 mm	No	1
		Ant.F	Body (10 mm) Extremity (0 mm)	Rear	N/A	Yes	
				Front	N/A	Yes	
				Top	< 25 mm	Yes	
				Left	> 25 mm	No	1
				Bottom	> 25 mm	No	1
				Right	> 25 mm	No	1

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WLAN/BT	Body & Extremity 10-g	Ant.G & Ant.J	Body (10 mm) Extremity (0 mm)	Rear	N/A	Yes	
				Front	N/A	Yes	
				Top	< 25 mm	Yes	
				Left	< 25 mm	Yes	
				Bottom	> 25 mm	No	1
				Right	> 25 mm	No	1
		Ant.H	Body (10 mm) Extremity (0 mm)	Rear	N/A	Yes	
				Front	N/A	Yes	
				Top	> 25 mm	No	1
				Left	< 25 mm	Yes	
				Bottom	> 25 mm	No	1
				Right	> 25 mm	No	1

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
NFC	Extremity 10-g	NFC Ant.	0 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Top	> 25 mm	No	1
				Left	< 25 mm	Yes	
				Bottom	< 25 mm	Yes	
				Right	> 25 mm	No	1

Notes:

1. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D07 UMPC mini-tablet SAR.
2. Per FCC guide, UMPC mini-tablet SAR evaluated at 1-g body at 10mm and 10-g extremity at 0mm.
3. Per manufacturer guide, NFC SAR was considered about only hand held condition (extremity 10-g).
4. Folder Opened (UMPC mini tablet) mode's head SAR test is not considered according to test plan approved by FCC.

8. Dielectric Property Measurements & System Check

8.1. Dielectric Property Measurements

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized.
The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The Tissue Dielectric parameters (100MHz to 6GHz) 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.
For The Tissue Dielectric parameters (4MHz to 30MHz). The parameters must be measured before 24 hours.

1. Tissue Dielectric Parameters (100MHz to 6GHz)

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Target Frequency (MHz)	Head	
	ε_r	σ (S/m)
150	52.3	0.76
300	45.3	0.87
450	43.5	0.87
835	41.5	0.90
900	41.5	0.97
915	41.5	0.98
1450	40.5	1.20
1610	40.3	1.29
1800 – 2000	40.0	1.40
2450	39.2	1.80
3000	38.5	2.40
5000	36.2	4.45
5100	36.1	4.55
5200	36.0	4.66
5300	35.9	4.76
5400	35.8	4.86
5500	35.6	4.96
5600	35.5	5.07
5700	35.4	5.17
5800	35.3	5.27
6000	35.1	5.48

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

2. Tissue Dielectric Parameters (4MHz to 30MHz)

Target Frequency (MHz)	Head	
	ε_r	σ (S/m)
4	55.0	0.75
13	55.0	0.75
30	55.0	0.75

IEC_IEEE Std 62209-1528 : 2020

Refer to Table 2 within the IEC_IEEE Std 62209-1528 : 2020.

Dielectric Property Measurements Results:

SAR 3 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
6-7-2023	Head 1750	e'	40.1800	Relative Permittivity (ϵ_r):	40.18	40.08	0.24	5
		e''	13.7700	Conductivity (σ):	1.34	1.37	-2.12	5
	Head 1710	e'	40.3000	Relative Permittivity (ϵ_r):	40.30	40.15	0.38	5
		e''	13.8000	Conductivity (σ):	1.31	1.35	-2.55	5
	Head 1755	e'	40.1600	Relative Permittivity (ϵ_r):	40.16	40.08	0.21	5
		e''	13.7700	Conductivity (σ):	1.34	1.37	-2.05	5
6-7-2023	Head 1900	e'	39.9800	Relative Permittivity (ϵ_r):	39.98	40.00	-0.05	5
		e''	13.5000	Conductivity (σ):	1.43	1.40	1.87	5
	Head 1850	e'	40.0300	Relative Permittivity (ϵ_r):	40.03	40.00	0.08	5
		e''	13.4900	Conductivity (σ):	1.39	1.40	-0.88	5
	Head 1910	e'	39.9700	Relative Permittivity (ϵ_r):	39.97	40.00	-0.08	5
		e''	13.5200	Conductivity (σ):	1.44	1.40	2.56	5
6-12-2023	Head 1750	e'	41.4900	Relative Permittivity (ϵ_r):	41.49	40.08	3.51	5
		e''	13.5300	Conductivity (σ):	1.32	1.37	-3.83	5
	Head 1710	e'	41.5700	Relative Permittivity (ϵ_r):	41.57	40.15	3.55	5
		e''	13.6000	Conductivity (σ):	1.29	1.35	-3.96	5
	Head 1780	e'	41.4100	Relative Permittivity (ϵ_r):	41.41	40.04	3.43	5
		e''	13.4400	Conductivity (σ):	1.33	1.39	-4.02	5
6-12-2023	Head 1900	e'	41.3200	Relative Permittivity (ϵ_r):	41.32	40.00	3.30	5
		e''	13.1500	Conductivity (σ):	1.39	1.40	-0.77	5
	Head 1850	e'	41.3000	Relative Permittivity (ϵ_r):	41.30	40.00	3.25	5
		e''	13.2400	Conductivity (σ):	1.36	1.40	-2.72	5
	Head 1910	e'	41.3200	Relative Permittivity (ϵ_r):	41.32	40.00	3.30	5
		e''	13.1400	Conductivity (σ):	1.40	1.40	-0.32	5
6-15-2023	Head 1900	e'	40.5100	Relative Permittivity (ϵ_r):	40.51	40.00	1.28	5
		e''	13.8300	Conductivity (σ):	1.46	1.40	4.36	5
	Head 1850	e'	40.4400	Relative Permittivity (ϵ_r):	40.44	40.00	1.10	5
		e''	14.0200	Conductivity (σ):	1.44	1.40	3.01	5
	Head 1915	e'	40.5300	Relative Permittivity (ϵ_r):	40.53	40.00	1.33	5
		e''	13.7500	Conductivity (σ):	1.46	1.40	4.58	5

SAR 4 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
6-7-2023	Head 2600	e'	39.3000	Relative Permittivity (ϵ_r):	39.30	39.01	0.74	5
		e''	13.2000	Conductivity (σ):	1.91	1.96	-2.75	5
	Head 2500	e'	39.3700	Relative Permittivity (ϵ_r):	39.37	39.14	0.60	5
		e''	13.0700	Conductivity (σ):	1.82	1.85	-2.01	5
	Head 2700	e'	39.1400	Relative Permittivity (ϵ_r):	39.14	38.88	0.66	5
		e''	13.3100	Conductivity (σ):	2.00	2.07	-3.48	5
6-12-2023	Head 2600	e'	38.4100	Relative Permittivity (ϵ_r):	38.41	39.01	-1.54	5
		e''	13.6600	Conductivity (σ):	1.97	1.96	0.64	5
	Head 2495	e'	38.6100	Relative Permittivity (ϵ_r):	38.61	39.14	-1.36	5
		e''	13.7600	Conductivity (σ):	1.91	1.85	3.26	5
	Head 2700	e'	38.1600	Relative Permittivity (ϵ_r):	38.16	38.88	-1.86	5
		e''	13.6700	Conductivity (σ):	2.05	2.07	-0.87	5

SAR 5 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
5-31-2023	Head 2450	e'	39.7300	Relative Permittivity (ϵ_r):	39.73	39.20	1.35	5
		e''	13.4900	Conductivity (σ):	1.84	1.80	2.10	5
	Head 2400	e'	39.8200	Relative Permittivity (ϵ_r):	39.82	39.30	1.33	5
		e''	13.5300	Conductivity (σ):	1.81	1.75	3.08	5
	Head 2480	e'	39.5400	Relative Permittivity (ϵ_r):	39.54	39.16	0.96	5
		e''	13.4300	Conductivity (σ):	1.85	1.83	1.06	5
6-5-2023	Head 2450	e'	38.8900	Relative Permittivity (ϵ_r):	38.89	39.20	-0.79	5
		e''	13.3000	Conductivity (σ):	1.81	1.80	0.66	5
	Head 2400	e'	38.8600	Relative Permittivity (ϵ_r):	38.86	39.30	-1.11	5
		e''	13.2700	Conductivity (σ):	1.77	1.75	1.10	5
	Head 2480	e'	38.9600	Relative Permittivity (ϵ_r):	38.96	39.16	-0.52	5
		e''	13.3100	Conductivity (σ):	1.84	1.83	0.16	5
6-9-2023	Head 2450	e'	38.5400	Relative Permittivity (ϵ_r):	38.54	39.20	-1.68	5
		e''	13.1400	Conductivity (σ):	1.79	1.80	-0.55	5
	Head 2400	e'	38.7000	Relative Permittivity (ϵ_r):	38.70	39.30	-1.52	5
		e''	13.1300	Conductivity (σ):	1.75	1.75	0.03	5
	Head 2480	e'	38.4100	Relative Permittivity (ϵ_r):	38.41	39.16	-1.92	5
		e''	13.1400	Conductivity (σ):	1.81	1.83	-1.12	5
6-13-2023	Head 2450	e'	39.2200	Relative Permittivity (ϵ_r):	39.22	39.20	0.05	5
		e''	13.4500	Conductivity (σ):	1.83	1.80	1.79	5
	Head 2400	e'	39.2800	Relative Permittivity (ϵ_r):	39.28	39.30	-0.04	5
		e''	13.6200	Conductivity (σ):	1.82	1.75	3.76	5
	Head 2500	e'	39.1100	Relative Permittivity (ϵ_r):	39.11	39.14	-0.07	5
		e''	13.3600	Conductivity (σ):	1.86	1.85	0.17	5

SAR 6 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
6-7-2023	Head 5250	e'	36.2100	Relative Permittivity (ε_r):	36.21	35.93	0.77	5
		e''	15.5100	Conductivity (σ):	4.53	4.70	-3.71	5
	Head 5260	e'	36.2100	Relative Permittivity (ε_r):	36.21	35.92	0.80	5
		e''	15.5100	Conductivity (σ):	4.54	4.71	-3.74	5
	Head 5600	e'	35.8200	Relative Permittivity (ε_r):	35.82	35.53	0.81	5
		e''	15.6700	Conductivity (σ):	4.88	5.06	-3.58	5
	Head 5750	e'	35.6800	Relative Permittivity (ε_r):	35.68	35.36	0.90	5
		e''	15.7300	Conductivity (σ):	5.03	5.21	-3.54	5
	Head 5825	e'	35.6800	Relative Permittivity (ε_r):	35.68	35.30	1.08	5
		e''	15.7500	Conductivity (σ):	5.10	5.27	-3.20	5
6-14-2023	Head 5250	e'	36.2600	Relative Permittivity (ε_r):	36.26	35.93	0.91	5
		e''	15.5400	Conductivity (σ):	4.54	4.70	-3.53	5
	Head 5260	e'	36.2400	Relative Permittivity (ε_r):	36.24	35.92	0.89	5
		e''	15.5500	Conductivity (σ):	4.55	4.71	-3.49	5
	Head 5600	e'	35.6300	Relative Permittivity (ε_r):	35.63	35.53	0.27	5
		e''	15.8000	Conductivity (σ):	4.92	5.06	-2.78	5
	Head 5750	e'	35.3700	Relative Permittivity (ε_r):	35.37	35.36	0.02	5
		e''	15.9100	Conductivity (σ):	5.09	5.21	-2.44	5
	Head 5825	e'	35.2500	Relative Permittivity (ε_r):	35.25	35.30	-0.14	5
		e''	15.9600	Conductivity (σ):	5.17	5.27	-1.91	5
6-23-2023	Head 7000	e'	33.3500	Relative Permittivity (ε_r):	33.35	33.90	-1.62	5
		e''	17.7100	Conductivity (σ):	6.89	6.65	3.66	5
	Head 7250	e'	32.9900	Relative Permittivity (ε_r):	32.99	33.60	-1.82	5
		e''	17.9600	Conductivity (σ):	7.24	6.95	4.25	5
	Head 7500	e'	32.5600	Relative Permittivity (ε_r):	32.56	33.30	-2.22	5
		e''	18.0300	Conductivity (σ):	7.52	7.24	3.85	5
	Head 7800	e'	31.9700	Relative Permittivity (ε_r):	31.97	32.94	-2.94	5
		e''	18.1000	Conductivity (σ):	7.85	7.60	3.29	5
	Head 8000	e'	31.6500	Relative Permittivity (ε_r):	31.65	32.70	-3.21	5
		e''	18.2800	Conductivity (σ):	8.13	7.84	3.72	5
	Head 8100	e'	31.5200	Relative Permittivity (ε_r):	31.52	32.58	-3.25	5
		e''	18.3900	Conductivity (σ):	8.28	7.96	4.00	5
6-27-2023	Head 5250	e'	35.2900	Relative Permittivity (ε_r):	35.29	35.93	-1.79	5
		e''	16.0900	Conductivity (σ):	4.70	4.70	-0.11	5
	Head 5260	e'	35.2700	Relative Permittivity (ε_r):	35.27	35.92	-1.81	5
		e''	16.1000	Conductivity (σ):	4.71	4.71	-0.08	5
	Head 5600	e'	34.6200	Relative Permittivity (ε_r):	34.62	35.53	-2.57	5
		e''	16.3600	Conductivity (σ):	5.09	5.06	0.67	5
	Head 5750	e'	34.3200	Relative Permittivity (ε_r):	34.32	35.36	-2.95	5
		e''	16.4600	Conductivity (σ):	5.26	5.21	0.94	5
	Head 5895	e'	34.0300	Relative Permittivity (ε_r):	34.03	35.21	-3.34	5
		e''	16.5800	Conductivity (σ):	5.43	5.37	1.20	5
6-28-2023	Head 835	e'	39.7600	Relative Permittivity (ε_r):	39.76	41.50	-4.19	5
		e''	20.3100	Conductivity (σ):	0.94	0.90	4.77	5
	Head 820	e'	39.8000	Relative Permittivity (ε_r):	39.80	41.60	-4.33	5
		e''	20.5700	Conductivity (σ):	0.94	0.90	4.39	5
	Head 850	e'	39.7100	Relative Permittivity (ε_r):	39.71	41.50	-4.31	5
		e''	20.0700	Conductivity (σ):	0.95	0.92	3.67	5
6-28-2023	Head 2450	e'	37.4700	Relative Permittivity (ε_r):	37.47	39.20	-4.41	5
		e''	13.6500	Conductivity (σ):	1.86	1.80	3.31	5
	Head 2400	e'	37.6300	Relative Permittivity (ε_r):	37.63	39.30	-4.24	5
		e''	13.6600	Conductivity (σ):	1.82	1.75	4.07	5
	Head 2500	e'	37.3300	Relative Permittivity (ε_r):	37.33	39.14	-4.62	5
		e''	13.6200	Conductivity (σ):	1.89	1.85	2.12	5
7-3-2023	Head 835	e'	41.7100	Relative Permittivity (ε_r):	41.71	41.50	0.51	5
		e''	20.1900	Conductivity (σ):	0.94	0.90	4.15	5
	Head 810	e'	41.8000	Relative Permittivity (ε_r):	41.80	41.65	0.35	5
		e''	20.6000	Conductivity (σ):	0.93	0.90	3.35	5
	Head 850	e'	41.6800	Relative Permittivity (ε_r):	41.68	41.50	0.43	5
		e''	19.9600	Conductivity (σ):	0.94	0.92	3.10	5

SAR 7 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
6-7-2023	Head 835	e'	41.4500	Relative Permittivity (ϵ_r):	41.45	41.50	-0.12	5
		e''	19.8800	Conductivity (σ):	0.92	0.90	2.56	5
	Head 814	e'	41.4900	Relative Permittivity (ϵ_r):	41.49	41.65	-0.39	5
		e''	20.2200	Conductivity (σ):	0.92	0.90	1.95	5
	Head 850	e'	41.4300	Relative Permittivity (ϵ_r):	41.43	41.50	-0.17	5
		e''	19.6400	Conductivity (σ):	0.93	0.92	1.45	5
6-14-2023	Head 835	e'	42.6800	Relative Permittivity (ϵ_r):	42.68	41.50	2.84	5
		e''	19.9700	Conductivity (σ):	0.93	0.90	3.02	5
	Head 810	e'	42.8200	Relative Permittivity (ϵ_r):	42.82	41.65	2.80	5
		e''	20.1700	Conductivity (σ):	0.91	0.90	1.20	5
	Head 850	e'	42.6100	Relative Permittivity (ϵ_r):	42.61	41.50	2.67	5
		e''	19.7300	Conductivity (σ):	0.93	0.92	1.91	5
6-16-2023	Head 1750	e'	39.3900	Relative Permittivity (ϵ_r):	39.39	40.08	-1.73	5
		e''	14.0300	Conductivity (σ):	1.37	1.37	-0.28	5
	Head 1710	e'	39.5100	Relative Permittivity (ϵ_r):	39.51	40.15	-1.58	5
		e''	14.1000	Conductivity (σ):	1.34	1.35	-0.43	5
	Head 1780	e'	39.3200	Relative Permittivity (ϵ_r):	39.32	40.04	-1.79	5
		e''	13.9200	Conductivity (σ):	1.38	1.39	-0.59	5
6-16-2023	Head 1900	e'	39.2800	Relative Permittivity (ϵ_r):	39.28	40.00	-1.80	5
		e''	13.6600	Conductivity (σ):	1.44	1.40	3.08	5
	Head 1850	e'	39.2500	Relative Permittivity (ϵ_r):	39.25	40.00	-1.88	5
		e''	13.7000	Conductivity (σ):	1.41	1.40	0.66	5
	Head 1915	e'	39.2800	Relative Permittivity (ϵ_r):	39.28	40.00	-1.80	5
		e''	13.6600	Conductivity (σ):	1.45	1.40	3.89	5
6-20-2023	Head 1750	e'	38.7000	Relative Permittivity (ϵ_r):	38.70	40.08	-3.45	5
		e''	14.0800	Conductivity (σ):	1.37	1.37	0.08	5
	Head 1710	e'	38.8100	Relative Permittivity (ϵ_r):	38.81	40.15	-3.33	5
		e''	14.1000	Conductivity (σ):	1.34	1.35	-0.43	5
	Head 1780	e'	38.6400	Relative Permittivity (ϵ_r):	38.64	40.04	-3.49	5
		e''	14.0100	Conductivity (σ):	1.39	1.39	0.05	5
6-24-2023	Head 1750	e'	38.8000	Relative Permittivity (ϵ_r):	38.80	40.08	-3.20	5
		e''	13.9800	Conductivity (σ):	1.36	1.37	-0.63	5
	Head 1710	e'	38.9600	Relative Permittivity (ϵ_r):	38.96	40.15	-2.95	5
		e''	14.1400	Conductivity (σ):	1.34	1.35	-0.15	5
	Head 1780	e'	38.7300	Relative Permittivity (ϵ_r):	38.73	40.04	-3.27	5
		e''	13.8500	Conductivity (σ):	1.37	1.39	-1.09	5
6-24-2023	Head 1900	e'	38.8100	Relative Permittivity (ϵ_r):	38.81	40.00	-2.97	5
		e''	13.4800	Conductivity (σ):	1.42	1.40	1.72	5
	Head 1850	e'	38.7500	Relative Permittivity (ϵ_r):	38.75	40.00	-3.13	5
		e''	13.6200	Conductivity (σ):	1.40	1.40	0.07	5
	Head 1915	e'	38.8400	Relative Permittivity (ϵ_r):	38.84	40.00	-2.90	5
		e''	13.4600	Conductivity (σ):	1.43	1.40	2.37	5
6-26-2023	Head 2600	e'	40.3900	Relative Permittivity (ϵ_r):	40.39	39.01	3.54	5
		e''	13.6200	Conductivity (σ):	1.97	1.96	0.35	5
	Head 2495	e'	40.5400	Relative Permittivity (ϵ_r):	40.54	39.14	3.57	5
		e''	13.6600	Conductivity (σ):	1.90	1.85	2.51	5
	Head 2700	e'	40.2400	Relative Permittivity (ϵ_r):	40.24	38.88	3.49	5
		e''	13.6700	Conductivity (σ):	2.05	2.07	-0.87	5
6-30-2023	Head 13	e'	57.0600	Relative Permittivity (ϵ_r):	57.06	55.00	3.75	5
		e''	1069.0000	Conductivity (σ):	0.77	0.75	3.03	5
	Head 12	e'	57.0700	Relative Permittivity (ϵ_r):	57.07	55.00	3.76	5
		e''	1158.0000	Conductivity (σ):	0.77	0.75	3.02	5
	Head 14	e'	57.0400	Relative Permittivity (ϵ_r):	57.04	55.00	3.71	5
		e''	992.0400	Conductivity (σ):	0.77	0.75	2.97	5
6-30-2023	Head 2600	e'	37.9100	Relative Permittivity (ϵ_r):	37.91	39.01	-2.82	5
		e''	13.9000	Conductivity (σ):	2.01	1.96	2.41	5
	Head 2495	e'	37.9900	Relative Permittivity (ϵ_r):	37.99	39.14	-2.95	5
		e''	13.8900	Conductivity (σ):	1.93	1.85	4.24	5
	Head 2700	e'	37.7400	Relative Permittivity (ϵ_r):	37.74	38.88	-2.94	5
		e''	13.9600	Conductivity (σ):	2.10	2.07	1.23	5
7-4-2023	Head 2600	e'	37.3300	Relative Permittivity (ϵ_r):	37.33	39.01	-4.31	5
		e''	13.9700	Conductivity (σ):	2.02	1.96	2.93	5
	Head 2495	e'	37.4900	Relative Permittivity (ϵ_r):	37.49	39.14	-4.22	5
		e''	13.9100	Conductivity (σ):	1.93	1.85	4.39	5
	Head 2700	e'	37.1100	Relative Permittivity (ϵ_r):	37.11	38.88	-4.56	5
		e''	14.0200	Conductivity (σ):	2.10	2.07	1.67	5
7-5-2023	Head 5200	e'	35.5200	Relative Permittivity (ϵ_r):	35.52	35.99	-1.31	5
		e''	16.0000	Conductivity (σ):	4.63	4.65	-0.53	5
	Head 5250	e'	35.4300	Relative Permittivity (ϵ_r):	35.43	35.93	-1.40	5
		e''	16.0500	Conductivity (σ):	4.69	4.70	-0.36	5
	Head 5600	e'	34.8200	Relative Permittivity (ϵ_r):	34.82	35.53	-2.01	5
		e''	16.2800	Conductivity (σ):	5.07	5.06	0.18	5
	Head 5750	e'	34.5800	Relative Permittivity (ϵ_r):	34.58	35.36	-2.21	5
		e''	16.4200	Conductivity (σ):	5.25	5.21	0.69	5
	Head 5800	e'	34.5000	Relative Permittivity (ϵ_r):	34.50	35.30	-2.27	5
		e''	16.4600	Conductivity (σ):	5.31	5.27	0.73	5
	Head 5925	e'	34.3100	Relative Permittivity (ϵ_r):	34.31	35.20	-2.53	5
		e''	16.5500	Conductivity (σ):	5.45	5.40	0.97	5

SAR 7 Room_(continued)

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
7-6-2023	Head 835	e'	41.4200	Relative Permittivity (ε_r):	41.42	41.50	-0.19	5
		e''	20.1500	Conductivity (σ):	0.94	0.90	3.95	5
	Head 810	e'	41.5000	Relative Permittivity (ε_r):	41.50	41.65	-0.37	5
		e''	20.5800	Conductivity (σ):	0.93	0.90	3.25	5
	Head 850	e'	41.3900	Relative Permittivity (ε_r):	41.39	41.50	-0.27	5
		e''	19.9000	Conductivity (σ):	0.94	0.92	2.79	5

SAR 8 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
6-30-2023	Head 835	e'	41.1800	Relative Permittivity (ε_r):	41.18	41.50	-0.77	5
		e''	19.5200	Conductivity (σ):	0.91	0.90	0.70	5
	Head 810	e'	41.4500	Relative Permittivity (ε_r):	41.45	41.65	-0.49	5
		e''	19.6200	Conductivity (σ):	0.88	0.90	-1.56	5
	Head 850	e'	41.0300	Relative Permittivity (ε_r):	41.03	41.50	-1.13	5
		e''	19.4600	Conductivity (σ):	0.92	0.92	0.52	5

SAR 9 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
6-19-2023	Head 835	e'	41.4900	Relative Permittivity (ε_r):	41.49	41.50	-0.02	5
		e''	19.5600	Conductivity (σ):	0.91	0.90	0.90	5
	Head 814	e'	41.7100	Relative Permittivity (ε_r):	41.71	41.65	0.13	5
		e''	19.6500	Conductivity (σ):	0.89	0.90	-0.93	5
	Head 850	e'	41.3000	Relative Permittivity (ε_r):	41.30	41.50	-0.48	5
		e''	19.4700	Conductivity (σ):	0.92	0.92	0.57	5
6-23-2023	Head 750	e'	42.8700	Relative Permittivity (ε_r):	42.87	41.96	2.16	5
		e''	21.4300	Conductivity (σ):	0.89	0.89	0.07	5
	Head 700	e'	43.5800	Relative Permittivity (ε_r):	43.58	42.22	3.23	5
		e''	21.7300	Conductivity (σ):	0.85	0.89	-4.89	5
	Head 790	e'	42.3600	Relative Permittivity (ε_r):	42.36	41.76	1.45	5
		e''	21.2300	Conductivity (σ):	0.93	0.90	4.06	5
6-23-2023	Head 835	e'	41.1800	Relative Permittivity (ε_r):	41.18	41.50	-0.77	5
		e''	19.5200	Conductivity (σ):	0.91	0.90	0.70	5
	Head 810	e'	41.4500	Relative Permittivity (ε_r):	41.45	41.65	-0.49	5
		e''	19.6200	Conductivity (σ):	0.88	0.90	-1.56	5
	Head 850	e'	41.0300	Relative Permittivity (ε_r):	41.03	41.50	-1.13	5
		e''	19.4600	Conductivity (σ):	0.92	0.92	0.52	5
6-28-2023	Head 2600	e'	39.2600	Relative Permittivity (ε_r):	39.26	39.01	0.64	5
		e''	13.9700	Conductivity (σ):	2.02	1.96	2.93	5
	Head 2495	e'	39.5900	Relative Permittivity (ε_r):	39.59	39.14	1.14	5
		e''	13.7100	Conductivity (σ):	1.90	1.85	2.89	5
	Head 2700	e'	38.9000	Relative Permittivity (ε_r):	38.90	38.88	0.04	5
		e''	14.2100	Conductivity (σ):	2.13	2.07	3.05	5
7-3-2023	Head 2600	e'	37.3700	Relative Permittivity (ε_r):	37.37	39.01	-4.21	5
		e''	13.9100	Conductivity (σ):	2.01	1.96	2.49	5
	Head 2495	e'	37.6800	Relative Permittivity (ε_r):	37.68	39.14	-3.74	5
		e''	13.6800	Conductivity (σ):	1.90	1.85	2.66	5
	Head 2700	e'	37.0700	Relative Permittivity (ε_r):	37.07	38.88	-4.67	5
		e''	14.2100	Conductivity (σ):	2.13	2.07	3.05	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 of 100MHZ to 6GHz frequency range 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.
For The System verification of 4MHz to 30MHz frequency range, The System verification must be performed before 24 hours.

System Performance Check Measurement Conditions (100MHz to 6GHz):

- 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.

System Performance Check Measurement Conditions (4MHz to 30MHz):

- 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
- The DASY system with an E-Field Probe was used for the measurements.
- The CLA(Confined Loop Antennas) was mounted on the small tripod so that the CLA feed point was positioned below the center marking of the flat phantom section and the CLA was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 0 mm separation distance from CLA center to the Phantom surface.
- The CLA 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	4-18-2023	4-18-2024	1g	8.55
				10g	5.59
D835V2	4d174	9-21-2022	9-21-2023	1g	9.63
				10g	6.29
D835V2	4d194	3-24-2022	3-24-2024	1g	9.77
				10g	6.39
D1750V2	1125	11-30-2022	11-30-2023	1g	37.40
				10g	19.70
D1900V2	5d190	11-16-2022	11-16-2023	1g	39.70
				10g	20.70
D2450V2	960	3-24-2022	3-24-2024	1g	51.90
				10g	24.00
D2450V2	939	7-21-2021	7-21-2023	1g	53.00
				10g	24.70
D2600V2	1178	4-25-2023	4-25-2024	1g	57.40
				10g	25.70
D5GHzV2	1325	4-21-2023	4-21-2024	1g	83.90
				10g	23.80
				1g	80.50
				10g	22.50
D5GHzV2	1209	2-28-2023	2-28-2024	1g	80.40
				10g	22.90
				1g	83.10
				10g	23.60
				1g	81.20
				10g	22.90
CLA-13	1015	8-23-2022	8-23-2023	1g	0.55
				10g	0.34

Note(s):

1. For System Validation Dipole, Calibration interval applied every 2 years according to referencing KDB 865664 guidance.
2. For CLA, Calibration interval applied every year.
3. Refer to Appendix F that mentioned about justification

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 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			
6-7-2023	D1750V2	1125	Head	1g	3.60	36.0	37.40	-3.74	
				10g	1.98	19.8	19.70	0.51	
6-7-2023	D1900V2	5d190	Head	1g	4.13	41.3	39.70	4.03	
				10g	2.22	22.2	20.70	7.25	
6-12-2023	D1750V2	1125	Head	1g	3.51	35.1	37.40	-6.15	1
				10g	1.95	19.5	19.70	-1.02	
6-12-2023	D1900V2	5d190	Head	1g	3.75	37.5	39.70	-5.54	
				10g	2.03	20.3	20.70	-1.93	
6-15-2023	D1900V2	5d190	Head	1g	3.62	36.2	39.70	-8.82	2
				10g	1.88	18.8	20.70	-9.18	

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			
6-7-2023	D2600V2	1178	Head	1g	5.80	58.0	57.40	1.05	3
				10g	2.70	27.0	25.70	5.06	
6-12-2023	D2600V2	1178	Head	1g	5.76	57.6	57.40	0.35	
				10g	2.68	26.8	25.70	4.28	

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			
5-31-2023	D2450V2	939	Head	1g	5.65	56.5	53.00	6.60	
				10g	2.59	25.9	24.70	4.86	
6-5-2023	D2450V2	939	Head	1g	5.27	52.7	53.00	-0.57	
				10g	2.41	24.1	24.70	-2.43	
6-9-2023	D2450V2	939	Head	1g	5.72	57.2	53.00	7.92	4
				10g	2.61	26.1	24.70	5.67	
6-13-2023	D2450V2	939	Head	1g	5.31	53.1	53.00	0.19	
				10g	2.61	26.1	24.70	5.67	

SAR 6 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			
6-7-2023	D5GHzV2 (5250)	1209	Head	1g	7.82	78.2	80.40	-2.74	5
				10g	2.29	22.9	22.90	0.00	
6-14-2023	D5GHzV2 (5250)	1209	Head	1g	7.98	79.8	80.40	-0.75	
				10g	2.33	23.3	22.90	1.75	
6-14-2023	D5GHzV2 (5600)	1209	Head	1g	7.91	79.1	83.10	-4.81	
				10g	2.30	23.0	23.60	-2.54	
6-23-2023	D5GHzV2 (5600)	1325	Head	1g	8.96	89.6	83.90	6.79	6
				10g	2.59	25.9	23.80	8.82	
6-23-2023	D5GHzV2 (5800)	1325	Head	1g	8.26	82.6	80.50	2.61	7
				10g	2.38	23.8	22.50	5.78	
6-27-2023	D5GHzV2 (5800)	1325	Head	1g	7.88	78.8	80.50	-2.11	
				10g	2.28	22.8	22.50	1.33	
6-28-2023	D835V2	4d194	Head	1g	0.95	9.5	9.77	-3.28	
				10g	0.62	6.2	6.39	-2.66	
6-28-2023	D2450V2	960	Head	1g	5.34	53.4	51.90	2.89	
				10g	2.50	25.0	24.00	4.17	
7-3-2023	D835V2	4d194	Head	1g	0.94	9.4	9.77	-3.89	
				10g	0.61	6.1	6.39	-4.69	

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			
6-7-2023	D835V2	4d174	Head	1g	0.98	9.8	9.63	1.87	
				10g	0.61	6.1	6.29	-3.50	
6-14-2023	D835V2	4d174	Head	1g	0.96	9.6	9.63	-0.42	
				10g	0.63	6.3	6.29	0.32	
6-16-2023	D1750V2	1125	Head	1g	3.79	37.9	37.40	1.34	
				10g	2.02	20.2	19.70	2.54	
6-16-2023	D1900V2	5d190	Head	1g	4.15	41.5	39.70	4.53	
				10g	2.16	21.6	20.70	4.35	
6-20-2023	D1750V2	1125	Head	1g	3.80	38.0	37.40	1.60	
				10g	2.02	20.2	19.70	2.54	
6-24-2023	D1750V2	1125	Head	1g	3.54	35.4	37.40	-5.35	
				10g	1.88	18.8	19.70	-4.57	
6-24-2023	D1900V2	5d190	Head	1g	4.16	41.6	39.70	4.79	
				10g	2.15	21.5	20.70	3.86	
6-26-2023	D2600V2	1178	Head	1g	5.47	54.7	57.40	-4.70	
				10g	2.48	24.8	25.70	-3.50	
6-30-2023	CLA-13	1015	Head	1g	0.06	0.6	0.55	9.49	8
				10g	0.04	0.4	0.34	8.82	
6-30-2023	D2600V2	1178	Head	1g	5.70	57.0	57.40	-0.70	
				10g	2.57	25.7	25.70	0.00	
7-4-2023	D2600V2	1178	Head	1g	5.62	56.2	57.40	-2.09	
				10g	2.52	25.2	25.70	-1.95	
7-5-2023	D5GHzV2 (5800)	1325	Head	1g	8.16	81.6	80.50	1.37	
				10g	2.34	23.4	22.50	4.00	
7-6-2023	D835V2	4d174	Head	1g	1.01	10.1	9.63	4.88	
				10g	0.65	6.5	6.29	2.86	

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			
6-30-2023	D835V2	4d174	Head	1g	0.97	9.7	9.63	1.04	9
				10g	0.64	6.4	6.29	1.75	

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			
6-19-2023	D835V2	4d174	Head	1g	0.94	9.4	9.63	-2.28	
				10g	0.58	5.8	6.29	-7.15	
6-23-2023	D750V2	1205	Head	1g	0.87	8.7	8.55	1.99	10
				10g	0.58	5.8	5.59	3.04	
6-23-2023	D835V2	4d174	Head	1g	0.91	9.1	9.63	-5.40	11
				10g	0.60	6.0	6.29	-4.93	
6-28-2023	D2600V2	1178	Head	1g	5.37	53.7	57.40	-6.45	12
				10g	2.40	24.0	25.70	-6.61	
7-3-2023	D2600V2	1178	Head	1g	5.76	57.6	57.40	0.35	
				10g	2.51	25.1	25.70	-2.33	

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 output power (dBm)			
					DSI = 0, 1, 2, 3			
					Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM (Voice)	CS1	1	128	824.2	32.20	23.17	33.0	24.0
			190	836.6	32.10	23.07		
			251	848.8	32.04	23.01		
GPRS (GMSK)	CS1	1	128	824.2	32.18	23.15	33.0	24.0
			190	836.6	32.04	23.01		
			251	848.8	32.02	22.99		
		2	128	824.2	30.57	24.55	32.5	**26.5**
			190	836.6	30.77	24.75		
			251	848.8	30.58	24.56		
		3	128	824.2	28.80	24.54	30.5	26.2
			190	836.6	28.80	24.54		
			251	848.8	28.84	24.58		
		4	128	824.2	27.01	24.00	28.5	25.5
			190	836.6	27.64	24.63		
			251	848.8	27.70	24.69		
EGPRS (8PSK)	MCS5	1	128	824.2	26.41	17.38	28.0	19.0
			190	836.6	27.05	18.02		
			251	848.8	27.14	18.11		
		2	128	824.2	24.77	18.75	26.0	20.0
			190	836.6	24.93	18.91		
			251	848.8	24.90	18.88		
		3	128	824.2	22.96	18.70	24.0	19.7
			190	836.6	22.57	18.31		
			251	848.8	23.02	18.76		
		4	128	824.2	21.86	18.85	23.0	20.0
			190	836.6	22.12	19.11		
			251	848.8	22.28	19.27		

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 ≤ 1/4dB higher than GMSK GPRS or the adjusted SAR of the highest reported SAR of GMSK GPRS is ≤ 1.2W/kg.

GSM1900 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Maximum allowed output power (dBm)							
					DSI = 2, 3				DSI = 0, 1			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM (Voice)	CS1	1	512	1850.2	29.59	20.56	30.5	21.5	28.09	19.06	28.5	19.5
			661	1880.0	29.65	20.62			27.46	18.43		
			810	1909.8	29.06	20.03			27.06	18.03		
GPRS (GMSK)	CS1	1	512	1850.2	29.58	20.55	30.5	21.5	28.14	19.11	28.5	19.5
			661	1880.0	29.63	20.60			27.52	18.49		
			810	1909.8	29.02	19.99			27.06	18.03		
		2	512	1850.2	27.25	21.23	29.0	23.0	25.22	19.20	25.5	19.5
			661	1880.0	28.68	22.66			24.64	18.62		
			810	1909.8	27.54	21.52			24.37	18.35		
		3	512	1850.2	26.78	22.52	27.5	**23.2**	22.88	18.62	23.7	19.4
			661	1880.0	26.77	22.51			22.23	17.97		
			810	1909.8	25.24	20.98			21.84	17.58		
		4	512	1850.2	24.51	21.50	25.5	22.5	21.55	18.54	22.5	**19.5**
			661	1880.0	24.56	21.55			21.06	18.05		
			810	1909.8	23.96	20.95			20.81	17.80		
EGPRS (8PSK)	MCS5	1	512	1850.2	25.37	16.34	27.0	18.0	25.73	16.70	27.0	18.0
			661	1880.0	25.42	16.39			25.37	16.34		
			810	1909.8	24.92	15.89			25.02	15.99		
		2	512	1850.2	24.29	18.27	25.0	19.0	24.55	18.53	25.0	19.0
			661	1880.0	24.24	18.22			23.89	17.87		
			810	1909.8	23.69	17.67			23.56	17.54		
		3	512	1850.2	22.22	17.96	23.0	18.7	22.47	18.21	23.0	18.7
			661	1880.0	22.21	17.95			21.83	17.57		
			810	1909.8	21.60	17.34			21.51	17.25		
		4	512	1850.2	21.34	18.33	22.0	19.0	21.47	18.46	22.0	19.0
			661	1880.0	21.27	18.26			20.89	17.88		
			810	1909.8	20.70	17.69			20.63	17.62		

Notes:

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

- GMSK (GPRS) mode with 3 time slots for DSI 2, 3, GMSK (GPRS) mode with 4 time slots for DSI 0,1 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
	βc/βd	8/15

HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests were completed according to Release 5 procedures in 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			
	βc	2/15	11/15	15/15	15/15
	βd	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	βc/βd	2/15	11/15	15/8	15/4
	βhs	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			
	Ahs=βhs/βc	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
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	15/15	0
	βec	209/225	12/15	30/15	2/15	5/15
	βc/βd	11/15	6/15	15/9	2/15	-
	βhs	22/15	12/15	30/15	4/15	5/15
	βed	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				
	Ahs = βhs/βc	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.		

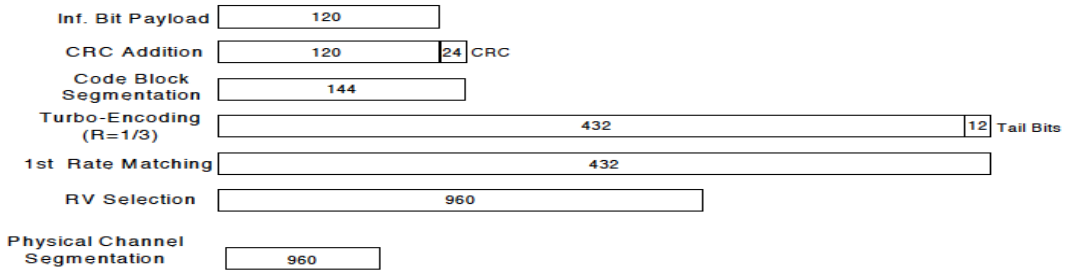


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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	HSDPA	HSDPA	HSDPA
	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			
	βc	2/15	11/15	15/15	15/15
	βd	15/15	15/15	8/15	4/15
	βd (SF)	64			
	βc/βd	2/15	11/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	MPR (dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack Repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	Ahs = βhs/ βc	30/15			

HSPA+

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

W-CDMA Band V Measured Results

Mode		UL Ch No.	Freq. (MHz)	Maximum allowed output power (dBm)		
				DSI = 0, 1, 2, 3		
				Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	24.53	N/A	25.5
		4183	836.6	24.21		
		4233	846.6	24.32		
HSDPA	Subtest 1	4132	826.4	23.53	0	24.5
		4183	836.6	23.22		
		4233	846.6	23.32		
	Subtest 2	4132	826.4	23.50	0	24.5
		4183	836.6	23.21		
		4233	846.6	23.31		
	Subtest 3	4132	826.4	23.02	0.5	24.0
		4183	836.6	22.71		
		4233	846.6	22.83		
	Subtest 4	4132	826.4	23.00	0.5	24.0
		4183	836.6	22.71		
		4233	846.6	22.82		
HSUPA	Subtest 1	4132	826.4	23.47	0	24.5
		4183	836.6	23.16		
		4233	846.6	23.28		
	Subtest 2	4132	826.4	21.47	2	22.5
		4183	836.6	21.17		
		4233	846.6	21.28		
	Subtest 3	4132	826.4	22.48	1	23.5
		4183	836.6	22.17		
		4233	846.6	22.25		
	Subtest 4	4132	826.4	21.51	2	22.5
		4183	836.6	21.18		
		4233	846.6	21.27		
	Subtest 5	4132	826.4	23.09	0	24.5
		4183	836.6	22.75		
		4233	846.6	22.86		
DC-HSDPA	Subtest 1	4132	826.4	23.52	0	24.5
		4183	836.6	23.23		
		4233	846.6	23.25		
	Subtest 2	4132	826.4	23.51	0	24.5
		4183	836.6	23.22		
		4233	846.6	23.27		
	Subtest 3	4132	826.4	23.02	0.5	24.0
		4183	836.6	22.71		
		4233	846.6	22.76		
	Subtest 4	4132	826.4	23.01	0.5	24.0
		4183	836.6	22.71		
		4233	846.6	22.76		

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 4 (1710 – 1755 MHz) is covered by LTE Band 66 (1710 – 1780 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 2 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)									
				DSI = 2, 3					DSI = 0, 1				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				18700	18900	19100			18700	18900	19100		
				1860 MHz	1880 MHz	1900 MHz			1860 MHz	1880 MHz	1900 MHz		
20 MHz	QPSK	1	0	24.34	24.23	23.87	0.0	25.0	19.21	18.98	18.76	0.0	20.0
		1	49	24.32	24.09	23.83	0.0	25.0	19.19	18.93	18.74	0.0	20.0
		1	99	24.16	24.02	23.72	0.0	25.0	19.07	18.81	18.57	0.0	20.0
		50	0	23.40	23.11	22.94	1.0	24.0	19.34	19.03	18.87	0.0	20.0
		50	24	23.42	23.10	22.93	1.0	24.0	19.35	19.01	18.86	0.0	20.0
		50	50	23.28	22.98	22.80	1.0	24.0	19.21	18.94	18.73	0.0	20.0
		100	0	23.32	23.08	22.93	1.0	24.0	19.25	19.01	18.86	0.0	20.0
	16QAM	1	0	23.65	23.56	23.06	1.0	24.0	19.60	19.39	19.07	0.0	20.0
		1	49	23.70	23.77	23.05	1.0	24.0	19.66	19.42	19.03	0.0	20.0
		1	99	23.49	23.42	22.87	1.0	24.0	19.43	19.14	18.87	0.0	20.0
		50	0	22.41	22.14	21.94	2.0	23.0	19.38	19.06	18.93	0.0	20.0
		50	24	22.42	22.10	21.94	2.0	23.0	19.38	19.06	18.91	0.0	20.0
		50	50	22.29	22.02	21.79	2.0	23.0	19.27	18.94	18.79	0.0	20.0
		100	0	22.30	22.08	21.91	2.0	23.0	19.28	19.03	18.89	0.0	20.0
	64QAM	1	0	22.74	22.37	22.17	2.0	23.0	19.53	19.16	18.98	0.0	20.0
		1	49	22.81	22.36	22.23	2.0	23.0	19.55	19.18	19.02	0.0	20.0
		1	99	22.66	22.14	21.97	2.0	23.0	19.41	19.01	18.79	0.0	20.0
		50	0	21.41	21.15	20.96	3.0	22.0	19.37	19.06	18.89	0.0	20.0
		50	24	21.43	21.11	20.93	3.0	22.0	19.38	19.04	18.88	0.0	20.0
		50	50	21.30	21.02	20.78	3.0	22.0	19.25	18.92	18.75	0.0	20.0
		100	0	21.33	21.11	20.92	3.0	22.0	19.26	19.04	18.87	0.0	20.0
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				18675	18900	19125			18675	18900	19125		
				1857.5 MHz	1880 MHz	1902.5 MHz			1857.5 MHz	1880 MHz	1902.5 MHz		
15 MHz	QPSK	1	0	24.36	23.98	23.85	0.0	25.0	19.19	18.91	18.62	0.0	20.0
		1	37	24.32	23.92	23.83	0.0	25.0	19.19	18.88	18.62	0.0	20.0
		1	74	24.31	23.82	23.73	0.0	25.0	19.12	18.74	18.45	0.0	20.0
		36	0	23.50	23.16	22.87	1.0	24.0	19.32	19.00	18.69	0.0	20.0
		36	20	23.40	23.16	22.86	1.0	24.0	19.21	18.91	18.67	0.0	20.0
		36	39	23.38	23.05	22.74	1.0	24.0	19.19	18.84	18.54	0.0	20.0
		75	0	23.40	23.16	22.85	1.0	24.0	19.21	18.95	18.66	0.0	20.0
	16QAM	1	0	23.62	23.58	23.23	1.0	24.0	19.60	19.27	18.90	0.0	20.0
		1	37	23.59	23.63	23.14	1.0	24.0	19.64	19.24	18.84	0.0	20.0
		1	74	23.57	23.37	23.05	1.0	24.0	19.54	19.09	18.73	0.0	20.0
		36	0	22.48	22.15	21.86	2.0	23.0	19.33	19.01	18.73	0.0	20.0
		36	20	22.37	22.07	21.84	2.0	23.0	19.24	18.97	18.71	0.0	20.0
		36	39	22.34	22.00	21.73	2.0	23.0	19.22	18.86	18.61	0.0	20.0
		75	0	22.35	22.09	21.84	2.0	23.0	19.23	18.98	18.69	0.0	20.0
	64QAM	1	0	22.60	22.36	22.07	2.0	23.0	19.39	19.22	18.88	0.0	20.0
		1	37	22.81	22.25	22.27	2.0	23.0	19.40	19.21	18.88	0.0	20.0
		1	74	22.72	22.23	22.07	2.0	23.0	19.29	19.10	18.72	0.0	20.0
		36	0	21.45	21.13	20.84	3.0	22.0	19.35	19.02	18.73	0.0	20.0
		36	20	21.38	21.12	20.82	3.0	22.0	19.27	18.97	18.68	0.0	20.0
		36	39	21.36	21.02	20.74	3.0	22.0	19.23	18.90	18.62	0.0	20.0
		75	0	21.38	21.12	20.81	3.0	22.0	19.26	18.95	18.71	0.0	20.0

LTE Band 2 Measured Results_(Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				18650	18900	19150			18650	18900	19150		
				1855 MHz	1880 MHz	1905 MHz			1855 MHz	1880 MHz	1905 MHz		
10 MHz	QPSK	1	0	24.56	24.17	23.90	0.0	25.0	19.42	19.03	18.75	0.0	20.0
		1	25	24.62	24.20	23.88	0.0	25.0	19.44	19.07	18.72	0.0	20.0
		1	49	24.51	24.08	23.81	0.0	25.0	19.37	18.95	18.65	0.0	20.0
		25	0	23.52	23.14	22.85	1.0	24.0	19.44	19.05	18.77	0.0	20.0
		25	12	23.44	23.16	22.89	1.0	24.0	19.39	19.10	18.79	0.0	20.0
		25	25	23.41	23.03	22.83	1.0	24.0	19.34	18.98	18.72	0.0	20.0
		50	0	22.93	22.62	22.35	1.0	24.0	19.37	19.04	18.78	0.0	20.0
	16QAM	1	0	23.82	23.32	23.15	1.0	24.0	19.70	19.27	19.08	0.0	20.0
		1	25	23.86	23.33	23.13	1.0	24.0	19.78	19.27	19.02	0.0	20.0
		1	49	23.71	23.26	23.07	1.0	24.0	19.71	19.19	18.95	0.0	20.0
		25	0	22.51	22.12	21.88	2.0	23.0	19.48	19.10	18.80	0.0	20.0
		25	12	22.45	22.09	21.88	2.0	23.0	19.44	19.11	18.81	0.0	20.0
		25	25	22.42	22.01	21.82	2.0	23.0	19.41	19.00	18.76	0.0	20.0
		50	0	22.42	22.11	21.82	2.0	23.0	19.39	19.08	18.78	0.0	20.0
	64QAM	1	0	22.70	22.48	22.12	2.0	23.0	19.53	19.28	18.97	0.0	20.0
		1	25	22.77	22.50	22.07	2.0	23.0	19.58	19.27	18.93	0.0	20.0
		1	49	22.71	22.50	22.07	2.0	23.0	19.51	19.23	18.85	0.0	20.0
		25	0	21.56	21.19	20.92	3.0	22.0	19.45	19.10	18.79	0.0	20.0
		25	12	21.51	21.21	20.92	3.0	22.0	19.40	19.12	18.80	0.0	20.0
		25	25	21.47	21.10	20.86	3.0	22.0	19.38	19.01	18.75	0.0	20.0
		50	0	21.47	21.19	20.88	3.0	22.0	19.36	19.08	18.80	0.0	20.0
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				18625	18900	19175			18625	18900	19175		
				1852.5 MHz	1880 MHz	1907.5 MHz			1852.5 MHz	1880 MHz	1907.5 MHz		
5 MHz	QPSK	1	0	24.55	24.12	23.81	0.0	25.0	19.40	18.95	18.67	0.0	20.0
		1	12	24.62	24.20	23.84	0.0	25.0	19.44	19.03	18.73	0.0	20.0
		1	24	24.54	24.11	23.75	0.0	25.0	19.37	18.91	18.62	0.0	20.0
		12	0	23.51	23.13	22.81	1.0	24.0	19.47	19.05	18.69	0.0	20.0
		12	7	23.53	23.17	22.81	1.0	24.0	19.46	19.07	18.76	0.0	20.0
		12	13	23.53	23.06	22.78	1.0	24.0	19.44	18.96	18.73	0.0	20.0
		25	0	23.50	23.10	22.83	1.0	24.0	19.44	19.03	18.68	0.0	20.0
	16QAM	1	0	23.91	23.46	23.14	1.0	24.0	19.83	19.33	18.93	0.0	20.0
		1	12	23.67	23.46	23.23	1.0	24.0	19.62	19.37	19.05	0.0	20.0
		1	24	23.98	23.43	23.13	1.0	24.0	19.81	19.27	18.94	0.0	20.0
		12	0	22.62	22.15	21.94	2.0	23.0	19.52	19.10	18.83	0.0	20.0
		12	7	22.66	22.15	21.97	2.0	23.0	19.57	19.10	18.88	0.0	20.0
		12	13	22.63	22.06	21.95	2.0	23.0	19.51	19.02	18.86	0.0	20.0
		25	0	22.53	22.11	21.83	2.0	23.0	19.50	19.09	18.72	0.0	20.0
	64QAM	1	0	22.87	22.42	22.04	2.0	23.0	19.62	19.23	18.92	0.0	20.0
		1	12	22.99	22.41	22.09	2.0	23.0	19.70	19.26	19.07	0.0	20.0
		1	24	22.88	22.34	21.95	2.0	23.0	19.59	19.16	18.93	0.0	20.0
		12	0	21.64	21.18	20.83	3.0	22.0	19.45	18.99	18.75	0.0	20.0
		12	7	21.67	21.20	20.86	3.0	22.0	19.51	19.07	18.79	0.0	20.0
		12	13	21.65	21.09	20.84	3.0	22.0	19.45	18.89	18.78	0.0	20.0
		25	0	21.54	21.18	20.82	3.0	22.0	19.45	19.05	18.70	0.0	20.0

LTE Band 2 Measured Results_(Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				18615	18900	19185			18615	18900	19185		
				1851.5 MHz	1880 MHz	1908.5 MHz			1851.5 MHz	1880 MHz	1908.5 MHz		
3 MHz	QPSK	1	0	24.57	24.16	23.77	0.0	25.0	19.40	18.97	18.58	0.0	20.0
		1	8	24.64	24.20	23.86	0.0	25.0	19.48	19.04	18.68	0.0	20.0
		1	14	24.53	24.09	23.75	0.0	25.0	19.36	18.91	18.59	0.0	20.0
		8	0	23.57	23.17	22.80	1.0	24.0	19.43	19.01	18.69	0.0	20.0
		8	4	23.60	23.22	22.86	1.0	24.0	19.50	19.03	18.70	0.0	20.0
		8	7	23.60	23.11	22.86	1.0	24.0	19.49	18.94	18.68	0.0	20.0
		15	0	23.50	23.14	22.79	1.0	24.0	19.45	19.02	18.66	0.0	20.0
	16QAM	1	0	23.88	23.44	23.18	1.0	24.0	19.71	19.27	18.99	0.0	20.0
		1	8	23.87	23.50	23.19	1.0	24.0	19.81	19.28	19.09	0.0	20.0
		1	14	23.76	23.35	23.16	1.0	24.0	19.72	19.20	18.93	0.0	20.0
		8	0	22.55	22.19	21.85	2.0	23.0	19.52	19.07	18.75	0.0	20.0
		8	4	22.62	22.21	21.90	2.0	23.0	19.53	19.07	18.76	0.0	20.0
		8	7	22.60	22.09	21.88	2.0	23.0	19.52	19.03	18.75	0.0	20.0
		15	0	22.56	22.11	21.80	2.0	23.0	19.49	19.07	18.71	0.0	20.0
	64QAM	1	0	22.65	22.49	21.98	2.0	23.0	19.51	19.21	18.91	0.0	20.0
		1	8	22.72	22.52	22.12	2.0	23.0	19.57	19.26	18.93	0.0	20.0
		1	14	22.59	22.35	22.05	2.0	23.0	19.48	19.10	18.80	0.0	20.0
		8	0	21.53	21.13	20.91	3.0	22.0	19.53	19.09	18.79	0.0	20.0
		8	4	21.56	21.20	20.91	3.0	22.0	19.56	19.10	18.82	0.0	20.0
		8	7	21.55	21.09	20.90	3.0	22.0	19.51	19.05	18.84	0.0	20.0
		15	0	21.56	21.18	20.82	3.0	22.0	19.46	19.05	18.75	0.0	20.0
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				18607	18900	19193			18607	18900	19193		
				1850.7 MHz	1880 MHz	1909.3 MHz			1850.7 MHz	1880 MHz	1909.3 MHz		
1.4 MHz	QPSK	1	0	24.54	24.15	23.78	0.0	25.0	19.39	18.98	18.62	0.0	20.0
		1	3	24.55	24.16	23.83	0.0	25.0	19.43	18.99	18.65	0.0	20.0
		1	5	24.51	24.13	23.78	0.0	25.0	19.39	19.01	18.60	0.0	20.0
		3	0	24.49	24.13	23.73	0.0	25.0	19.46	19.04	18.63	0.0	20.0
		3	1	24.51	24.12	23.75	0.0	25.0	19.44	19.05	18.63	0.0	20.0
		3	3	24.51	24.11	23.76	0.0	25.0	19.45	19.03	18.62	0.0	20.0
		6	0	23.57	23.16	22.79	1.0	24.0	19.41	19.03	18.59	0.0	20.0
	16QAM	1	0	23.69	23.44	23.11	1.0	24.0	19.59	19.32	18.86	0.0	20.0
		1	3	23.72	23.47	23.10	1.0	24.0	19.61	19.38	18.92	0.0	20.0
		1	5	23.69	23.43	23.07	1.0	24.0	19.60	19.35	18.89	0.0	20.0
		3	0	23.61	23.22	22.90	1.0	24.0	19.58	19.18	18.79	0.0	20.0
		3	1	23.63	23.23	22.89	1.0	24.0	19.61	19.17	18.80	0.0	20.0
		3	3	23.59	23.21	22.89	1.0	24.0	19.61	19.18	18.82	0.0	20.0
		6	0	22.57	22.07	21.87	2.0	23.0	19.47	19.03	18.72	0.0	20.0
	64QAM	1	0	22.89	22.34	22.05	2.0	23.0	19.71	19.12	18.86	0.0	20.0
		1	3	22.89	22.37	22.11	2.0	23.0	19.79	19.13	18.88	0.0	20.0
		1	5	22.83	22.28	22.09	2.0	23.0	19.71	19.08	18.88	0.0	20.0
		3	0	22.68	22.25	21.87	2.0	23.0	19.56	19.11	18.78	0.0	20.0
		3	1	22.69	22.25	21.87	2.0	23.0	19.53	19.12	18.77	0.0	20.0
		3	3	22.67	22.29	21.88	2.0	23.0	19.56	19.10	18.80	0.0	20.0
		6	0	21.59	21.24	20.92	3.0	22.0	19.50	18.94	18.62	0.0	20.0

LTE Band 5 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)			MPR	Tune-up Limit
				DSI = 0, 1, 2, 3				
				Measured Pwr (dBm)				
				[redacted]	20525	[redacted]		
				[redacted]	836.5 MHz	[redacted]		
10 MHz	QPSK	1	0	[redacted]	24.18	[redacted]	0.0	25.5
		1	25	[redacted]	24.12	[redacted]	0.0	25.5
		1	49	[redacted]	24.11	[redacted]	0.0	25.5
		25	0	[redacted]	23.14	[redacted]	1.0	24.5
		25	12	[redacted]	23.13	[redacted]	1.0	24.5
		25	25	[redacted]	23.12	[redacted]	1.0	24.5
		50	0	[redacted]	23.14	[redacted]	1.0	24.5
	16QAM	1	0	[redacted]	23.44	[redacted]	1.0	24.5
		1	25	[redacted]	23.44	[redacted]	1.0	24.5
		1	49	[redacted]	23.44	[redacted]	1.0	24.5
		25	0	[redacted]	22.16	[redacted]	2.0	23.5
		25	12	[redacted]	22.16	[redacted]	2.0	23.5
		25	25	[redacted]	22.16	[redacted]	2.0	23.5
		50	0	[redacted]	22.13	[redacted]	2.0	23.5
	64QAM	1	0	[redacted]	22.20	[redacted]	2.0	23.5
		1	25	[redacted]	22.20	[redacted]	2.0	23.5
		1	49	[redacted]	22.24	[redacted]	2.0	23.5
		25	0	[redacted]	21.08	[redacted]	3.0	22.5
		25	12	[redacted]	21.09	[redacted]	3.0	22.5
		25	25	[redacted]	21.05	[redacted]	3.0	22.5
		50	0	[redacted]	21.05	[redacted]	3.0	22.5

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				20425	20525	20625		
				826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	24.27	24.10	24.14	0.0	25.5
		1	12	24.29	24.15	24.14	0.0	25.5
		1	24	24.15	24.03	24.05	0.0	25.5
		12	0	23.29	24.07	24.09	1.0	24.5
		12	7	23.24	24.08	24.11	1.0	24.5
		12	13	23.22	24.09	24.11	1.0	24.5
		25	0	23.19	23.08	23.11	1.0	24.5
	16QAM	1	0	24.14	23.42	23.41	1.0	24.5
		1	12	23.49	23.43	23.41	1.0	24.5
		1	24	23.36	23.32	23.31	1.0	24.5
		12	0	23.15	23.17	23.20	2.0	23.5
		12	7	23.18	23.17	23.24	2.0	23.5
		12	13	23.17	23.19	23.25	2.0	23.5
		25	0	22.11	22.08	22.10	2.0	23.5
	64QAM	1	0	22.65	22.35	22.54	2.0	23.5
		1	12	22.72	22.40	22.66	2.0	23.5
		1	24	22.62	22.36	22.59	2.0	23.5
		12	0	21.54	21.17	21.18	3.0	22.5
		12	7	21.47	21.16	21.27	3.0	22.5
		12	13	21.41	21.16	21.25	3.0	22.5
		25	0	21.32	21.25	21.22	3.0	22.5

LTE Band 5 Measured Results_(continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				20415	20525	20635		
				825.5 MHz	836.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	24.27	23.95	24.06	0.0	25.5
		1	8	24.35	24.03	24.13	0.0	25.5
		1	14	24.22	23.94	24.03	0.0	25.5
		8	0	23.34	23.04	23.07	1.0	24.5
		8	4	23.33	23.07	23.09	1.0	24.5
		8	7	23.25	23.04	23.15	1.0	24.5
		15	0	23.31	23.00	23.04	1.0	24.5
	16QAM	1	0	23.59	23.36	23.37	1.0	24.5
		1	8	23.59	23.46	23.48	1.0	24.5
		1	14	23.45	23.33	23.43	1.0	24.5
		8	0	22.36	22.11	22.12	2.0	23.5
		8	4	22.39	22.13	22.14	2.0	23.5
		8	7	22.29	22.13	22.21	2.0	23.5
		15	0	22.33	22.08	22.07	2.0	23.5
	64QAM	1	0	22.56	22.41	22.45	2.0	23.5
		1	8	22.66	22.46	22.47	2.0	23.5
		1	14	22.52	22.27	22.45	2.0	23.5
		8	0	21.46	21.19	21.17	3.0	22.5
		8	4	21.50	21.20	21.22	3.0	22.5
		8	7	21.42	21.22	21.30	3.0	22.5
		15	0	21.45	21.16	21.23	3.0	22.5

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				20407	20525	20643		
				824.7 MHz	836.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	24.11	24.09	24.16	0.0	25.5
		1	3	24.15	24.13	24.17	0.0	25.5
		1	5	24.11	24.12	24.13	0.0	25.5
		3	0	24.12	24.13	24.09	0.0	25.5
		3	1	24.12	24.10	24.10	0.0	25.5
		3	3	24.11	24.10	24.13	0.0	25.5
		6	0	24.11	24.11	24.12	1.0	24.5
	16QAM	1	0	23.29	23.31	23.33	1.0	24.5
		1	3	23.33	23.38	23.33	1.0	24.5
		1	5	23.34	23.31	23.30	1.0	24.5
		3	0	23.24	23.27	23.28	1.0	24.5
		3	1	23.29	23.29	23.30	1.0	24.5
		3	3	23.29	23.28	23.31	1.0	24.5
		6	0	23.20	23.21	23.22	2.0	23.5
	64QAM	1	0	22.67	22.43	22.47	2.0	23.5
		1	3	22.77	22.43	22.54	2.0	23.5
		1	5	22.61	22.36	22.45	2.0	23.5
		3	0	22.49	22.20	22.37	2.0	23.5
		3	1	22.54	22.24	22.36	2.0	23.5
		3	3	22.49	22.24	22.38	2.0	23.5
		6	0	21.29	21.15	21.32	3.0	22.5

LTE Band 12 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)			MPR	Tune-up Limit
				DSI = 0, 1, 2, 3				
				Measured Pwr (dBm)				
				[redacted]	23095	[redacted]		
				[redacted]	707.5 MHz	[redacted]		
10 MHz	QPSK	1	0	[redacted]	23.73	[redacted]	0.0	25.5
		1	25	[redacted]	23.74	[redacted]	0.0	25.5
		1	49	[redacted]	23.81	[redacted]	0.0	25.5
		25	0	[redacted]	22.76	[redacted]	1.0	24.5
		25	12	[redacted]	22.82	[redacted]	1.0	24.5
		25	25	[redacted]	22.75	[redacted]	1.0	24.5
		50	0	[redacted]	22.79	[redacted]	1.0	24.5
	16QAM	1	0	[redacted]	23.00	[redacted]	1.0	24.5
		1	25	[redacted]	22.92	[redacted]	1.0	24.5
		1	49	[redacted]	22.98	[redacted]	1.0	24.5
		25	0	[redacted]	21.73	[redacted]	2.0	23.5
		25	12	[redacted]	21.80	[redacted]	2.0	23.5
		25	25	[redacted]	21.75	[redacted]	2.0	23.5
		50	0	[redacted]	21.82	[redacted]	2.0	23.5
	64QAM	1	0	[redacted]	21.91	[redacted]	2.0	23.5
		1	25	[redacted]	22.03	[redacted]	2.0	23.5
		1	49	[redacted]	22.04	[redacted]	2.0	23.5
		25	0	[redacted]	20.79	[redacted]	3.0	22.5
		25	12	[redacted]	20.83	[redacted]	3.0	22.5
		25	25	[redacted]	20.79	[redacted]	3.0	22.5
		50	0	[redacted]	20.82	[redacted]	3.0	22.5

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				23035	23095	23155		
				701.5 MHz	707.5 MHz	713.5 MHz		
5 MHz	QPSK	1	0	23.72	23.65	23.78	0.0	25.5
		1	12	23.80	23.75	23.93	0.0	25.5
		1	24	23.68	23.76	23.83	0.0	25.5
		12	0	22.74	22.73	22.81	1.0	24.5
		12	7	22.86	22.84	22.85	1.0	24.5
		12	13	22.80	22.79	22.90	1.0	24.5
		25	0	22.79	22.78	22.82	1.0	24.5
	16QAM	1	0	23.09	23.09	23.18	1.0	24.5
		1	12	23.16	23.07	23.33	1.0	24.5
		1	24	23.07	23.10	23.19	1.0	24.5
		12	0	21.75	21.77	21.89	2.0	23.5
		12	7	21.84	21.85	21.94	2.0	23.5
		12	13	21.78	21.85	21.95	2.0	23.5
		25	0	21.84	21.79	21.83	2.0	23.5
	64QAM	1	0	22.08	22.03	23.34	2.0	23.5
		1	12	22.17	22.10	22.10	2.0	23.5
		1	24	22.05	22.04	22.01	2.0	23.5
		12	0	20.73	20.85	21.76	3.0	22.5
		12	7	20.82	20.91	21.77	3.0	22.5
		12	13	20.80	20.87	21.75	3.0	22.5
		25	0	20.86	20.80	20.75	3.0	22.5

LTE Band 12 Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				23025	23095	23165		
				700.5 MHz	707.5 MHz	714.5 MHz		
3 MHz	QPSK	1	0	23.71	23.79	23.45	0.0	25.5
		1	8	23.78	23.78	23.60	0.0	25.5
		1	14	23.66	23.85	23.72	0.0	25.5
		8	0	22.82	23.77	23.73	1.0	24.5
		8	4	22.84	23.81	23.78	1.0	24.5
		8	7	22.77	23.81	23.79	1.0	24.5
		15	0	22.81	22.77	22.78	1.0	24.5
	16QAM	1	0	23.07	23.02	23.15	1.0	24.5
		1	8	23.10	23.00	23.13	1.0	24.5
		1	14	22.95	23.07	23.19	1.0	24.5
		8	0	21.84	22.82	22.87	2.0	23.5
		8	4	21.88	22.85	22.86	2.0	23.5
		8	7	21.87	22.83	22.88	2.0	23.5
		15	0	21.85	21.78	21.80	2.0	23.5
	64QAM	1	0	22.78	22.07	21.84	2.0	23.5
		1	8	22.10	22.07	22.05	2.0	23.5
		1	14	22.11	22.11	22.17	2.0	23.5
		8	0	21.85	21.85	21.88	3.0	22.5
		8	4	21.84	21.86	21.86	3.0	22.5
		8	7	21.84	21.84	21.87	3.0	22.5
		15	0	20.80	20.80	20.78	3.0	22.5

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				23017	23095	23173		
				699.7 MHz	707.5 MHz	715.3 MHz		
1.4 MHz	QPSK	1	0	23.67	23.63	23.87	0.0	25.5
		1	3	23.70	23.66	23.88	0.0	25.5
		1	5	23.66	23.62	23.86	0.0	25.5
		3	0	23.77	23.70	23.84	0.0	25.5
		3	1	23.77	23.72	23.91	0.0	25.5
		3	3	23.79	23.76	23.94	0.0	25.5
		6	0	22.73	22.71	22.81	1.0	24.5
	16QAM	1	0	22.91	22.86	23.18	1.0	24.5
		1	3	22.91	22.90	23.24	1.0	24.5
		1	5	22.87	22.92	23.23	1.0	24.5
		3	0	22.88	22.80	23.03	1.0	24.5
		3	1	22.85	22.81	23.07	1.0	24.5
		3	3	22.81	22.85	23.07	1.0	24.5
		6	0	21.80	21.77	21.85	2.0	23.5
	64QAM	1	0	21.98	22.01	22.16	2.0	23.5
		1	3	22.07	22.04	22.27	2.0	23.5
		1	5	22.02	22.02	22.13	2.0	23.5
		3	0	21.88	21.86	22.05	2.0	23.5
		3	1	21.92	21.88	22.05	2.0	23.5
		3	3	21.82	21.89	22.03	2.0	23.5
		6	0	20.80	20.80	20.88	3.0	22.5

LTE Band 13 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)			
				DSI = 0, 1, 2, 3			
				Measured Pwr (dBm)		MPR	Tune-up Limit
				[redacted]	23230 / 782 MHz		
10 MHz	QPSK	1	0	[redacted]	24.47	0.0	25.5
		1	25		24.25	0.0	25.5
		1	49		24.01	0.0	25.5
		25	0		23.55	1.0	24.5
		25	12		23.29	1.0	24.5
		25	25		23.11	1.0	24.5
		50	0		23.40	1.0	24.5
	16QAM	1	0		23.68	1.0	24.5
		1	25		23.45	1.0	24.5
		1	49		23.28	1.0	24.5
		25	0		22.58	2.0	23.5
		25	12		22.31	2.0	23.5
		25	25		22.11	2.0	23.5
		50	0		22.36	2.0	23.5
	64QAM	1	0		22.90	2.0	23.5
		1	25		22.53	2.0	23.5
		1	49		22.34	2.0	23.5
		25	0		21.59	3.0	22.5
		25	12		21.33	3.0	22.5
		25	25		21.14	3.0	22.5
		50	0		21.40	3.0	22.5
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)		MPR	Tune-up Limit
				[redacted]	23230 / 782 MHz		
5 MHz	QPSK	1	0	[redacted]	24.56	0.0	25.5
		1	12		24.47	0.0	25.5
		1	24		24.14	0.0	25.5
		12	0		23.27	1.0	24.5
		12	7		24.43	1.0	24.5
		12	13		24.30	1.0	24.5
		25	0		23.43	1.0	24.5
	16QAM	1	0		23.74	1.0	24.5
		1	12		23.65	1.0	24.5
		1	24		23.27	1.0	24.5
		12	0		22.47	2.0	23.5
		12	7		23.48	2.0	23.5
		12	13		23.32	2.0	23.5
		25	0		22.45	2.0	23.5
	64QAM	1	0		22.37	2.0	23.5
		1	12		22.12	2.0	23.5
		1	24		21.96	2.0	23.5
		12	0		20.90	3.0	22.5
		12	7		20.85	3.0	22.5
		12	13		20.72	3.0	22.5
		25	0		20.81	3.0	22.5

LTE Band 26 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)			MPR	Tune-up Limit
				DSI = 0, 1, 2, 3				
				Measured Pwr (dBm)				
				[redacted]	26865	[redacted]		
				[redacted]	831.5 MHz	[redacted]		
15 MHz	QPSK	1	0	[redacted]	23.87	[redacted]	0.0	25.5
		1	37	[redacted]	24.01	[redacted]	0.0	25.5
		1	74	[redacted]	23.89	[redacted]	0.0	25.5
		36	0	[redacted]	23.10	[redacted]	1.0	24.5
		36	20	[redacted]	23.20	[redacted]	1.0	24.5
		36	39	[redacted]	23.19	[redacted]	1.0	24.5
		75	0	[redacted]	23.13	[redacted]	1.0	24.5
	16QAM	1	0	[redacted]	23.26	[redacted]	1.0	24.5
		1	37	[redacted]	23.48	[redacted]	1.0	24.5
		1	74	[redacted]	23.30	[redacted]	1.0	24.5
		36	0	[redacted]	22.10	[redacted]	2.0	23.5
		36	20	[redacted]	22.12	[redacted]	2.0	23.5
		36	39	[redacted]	22.19	[redacted]	2.0	23.5
		75	0	[redacted]	22.15	[redacted]	2.0	23.5
	64QAM	1	0	[redacted]	22.22	[redacted]	2.0	23.5
		1	37	[redacted]	22.30	[redacted]	2.0	23.5
		1	74	[redacted]	22.25	[redacted]	2.0	23.5
		36	0	[redacted]	21.14	[redacted]	3.0	22.5
		36	20	[redacted]	21.12	[redacted]	3.0	22.5
		36	39	[redacted]	21.23	[redacted]	3.0	22.5
		75	0	[redacted]	21.14	[redacted]	3.0	22.5

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				26740	26865	26990		
				819 MHz	831.5 MHz	844 MHz		
10 MHz	QPSK	1	0	24.03	24.06	24.09	0.0	25.5
		1	25	24.10	24.17	24.16	0.0	25.5
		1	49	23.99	24.08	24.07	0.0	25.5
		25	0	23.07	23.12	23.11	1.0	24.5
		25	12	23.17	23.16	23.15	1.0	24.5
		25	25	23.15	23.19	23.20	1.0	24.5
		50	0	23.13	23.13	23.12	1.0	24.5
	16QAM	1	0	23.31	23.38	23.34	1.0	24.5
		1	25	24.02	23.37	23.32	1.0	24.5
		1	49	23.33	23.33	23.32	1.0	24.5
		25	0	22.21	22.24	22.17	2.0	23.5
		25	12	22.20	22.20	22.18	2.0	23.5
		25	25	22.25	22.28	22.24	2.0	23.5
		50	0	22.12	22.14	22.13	2.0	23.5
	64QAM	1	0	22.38	22.45	22.38	2.0	23.5
		1	25	22.40	22.46	22.41	2.0	23.5
		1	49	22.29	22.43	22.33	2.0	23.5
		25	0	21.11	21.21	21.18	3.0	22.5
		25	12	21.23	21.22	21.20	3.0	22.5
		25	25	21.20	21.26	21.23	3.0	22.5
		50	0	21.20	21.24	21.16	3.0	22.5

LTE Band 26 Measured Results_(Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				26715	26865	27015		
				816.5 MHz	831.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	23.96	24.07	24.08	0.0	25.5
		1	12	24.06	24.16	24.17	0.0	25.5
		1	24	23.97	24.09	24.02	0.0	25.5
		12	0	23.00	23.12	23.08	1.0	24.5
		12	7	23.12	23.14	23.22	1.0	24.5
		12	13	23.10	23.17	23.17	1.0	24.5
		25	0	23.08	23.10	23.18	1.0	24.5
	16QAM	1	0	23.35	23.50	23.55	1.0	24.5
		1	12	23.46	23.57	23.69	1.0	24.5
		1	24	23.36	23.49	23.56	1.0	24.5
		12	0	22.01	22.13	22.20	2.0	23.5
		12	7	22.11	22.16	22.29	2.0	23.5
		12	13	22.09	22.20	22.27	2.0	23.5
		25	0	22.10	22.16	22.11	2.0	23.5
	64QAM	1	0	22.37	22.45	22.60	2.0	23.5
		1	12	22.43	22.58	22.64	2.0	23.5
		1	24	22.32	22.50	22.58	2.0	23.5
		12	0	21.15	21.12	21.25	3.0	22.5
		12	7	21.27	21.13	21.37	3.0	22.5
		12	13	21.23	21.21	21.31	3.0	22.5
		25	0	21.20	21.20	21.25	3.0	22.5
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				26705	26865	27025		
				815.5 MHz	831.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	23.85	23.89	23.06	0.0	25.5
		1	8	23.90	23.91	23.90	0.0	25.5
		1	14	23.95	23.97	23.97	0.0	25.5
		8	0	23.92	23.95	23.91	1.0	24.5
		8	4	23.92	23.94	23.92	1.0	24.5
		8	7	23.91	23.95	23.92	1.0	24.5
		15	0	23.92	23.95	23.93	1.0	24.5
	16QAM	1	0	23.26	23.26	23.30	1.0	24.5
		1	8	23.27	23.30	23.39	1.0	24.5
		1	14	23.39	23.37	23.33	1.0	24.5
		8	0	23.03	23.03	23.00	2.0	23.5
		8	4	23.03	23.04	23.04	2.0	23.5
		8	7	23.02	23.03	23.08	2.0	23.5
		15	0	23.01	23.02	23.01	2.0	23.5
	64QAM	1	0	22.26	22.42	22.34	2.0	23.5
		1	8	22.47	22.48	22.44	2.0	23.5
		1	14	22.36	22.39	22.31	2.0	23.5
		8	0	21.12	21.25	21.15	3.0	22.5
		8	4	21.19	21.27	21.25	3.0	22.5
		8	7	21.19	21.32	21.25	3.0	22.5
		15	0	21.15	21.19	21.23	3.0	22.5
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				26697	26865	27033		
				814.7 MHz	831.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	23.99	24.07	24.03	0.0	25.5
		1	3	24.02	24.18	23.99	0.0	25.5
		1	5	23.99	24.13	23.87	0.0	25.5
		3	0	24.06	24.09	24.13	0.0	25.5
		3	1	24.06	24.10	24.13	0.0	25.5
		3	3	24.10	24.17	24.15	0.0	25.5
		6	0	22.54	22.61	22.63	1.0	24.5
	16QAM	1	0	23.32	23.39	23.31	1.0	24.5
		1	3	23.36	23.48	23.39	1.0	24.5
		1	5	23.27	23.44	23.35	1.0	24.5
		3	0	23.17	23.23	23.27	1.0	24.5
		3	1	23.15	23.23	23.20	1.0	24.5
		3	3	23.19	23.34	23.20	1.0	24.5
		6	0	22.07	22.18	22.20	2.0	23.5
	64QAM	1	0	22.32	22.26	22.44	2.0	23.5
		1	3	22.33	22.42	22.50	2.0	23.5
		1	5	22.26	22.30	22.34	2.0	23.5
		3	0	22.11	22.21	22.31	2.0	23.5
		3	1	22.12	22.23	22.26	2.0	23.5
		3	3	22.13	22.33	22.32	2.0	23.5
		6	0	21.07	21.22	21.29	3.0	22.5

LTE Band 41 (Ant.B) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)													
				DSI = 2, 3							DSI = 0,1						
				Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				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	23.43	23.32	23.41	23.78	23.59	0.0	25.0	18.65	18.55	18.70	19.00	18.81	0.0	20.0
		1	49	23.49	23.31	23.50	23.70	23.53	0.0	25.0	18.64	18.49	18.70	18.92	18.73	0.0	20.0
		1	99	23.44	23.19	23.66	23.72	23.53	0.0	25.0	18.63	18.41	18.91	18.94	18.76	0.0	20.0
		50	0	22.52	22.40	22.56	22.85	22.64	1.0	24.0	18.71	18.61	18.77	19.08	18.86	0.0	20.0
		50	24	22.56	22.38	22.67	22.84	22.65	1.0	24.0	18.77	18.58	18.91	19.06	18.87	0.0	20.0
		50	50	22.55	22.26	22.69	22.74	22.56	1.0	24.0	18.76	18.47	18.90	18.99	18.80	0.0	20.0
		100	0	22.55	22.41	22.65	22.84	22.66	1.0	24.0	18.79	18.61	18.88	19.05	18.83	0.0	20.0
	16QAM	1	0	22.56	22.34	22.47	22.93	22.61	1.0	24.0	18.83	18.56	18.71	19.23	18.91	0.0	20.0
		1	49	22.75	22.45	22.62	22.86	22.78	1.0	24.0	18.99	18.78	18.85	19.13	19.04	0.0	20.0
		1	99	22.58	22.28	22.76	22.87	22.60	1.0	24.0	18.79	18.52	18.94	19.10	18.85	0.0	20.0
		50	0	21.46	21.42	21.56	21.86	21.66	2.0	23.0	18.73	18.65	18.78	19.18	18.88	0.0	20.0
		50	24	21.57	21.40	21.68	21.88	21.67	2.0	23.0	18.79	18.63	18.88	19.09	18.98	0.0	20.0
		50	50	21.52	21.28	21.70	21.76	21.56	2.0	23.0	18.78	18.49	18.91	19.01	18.90	0.0	20.0
		100	0	21.55	21.40	21.67	21.87	21.62	2.0	23.0	18.78	18.62	18.91	19.08	18.85	0.0	20.0
	64QAM	1	0	21.43	21.20	21.38	21.80	21.51	2.0	23.0	18.67	18.49	18.71	19.03	18.83	0.0	20.0
		1	49	21.58	21.26	21.54	21.96	21.56	2.0	23.0	18.71	18.49	18.94	19.01	18.77	0.0	20.0
		1	99	21.48	21.07	21.58	21.71	21.45	2.0	23.0	18.65	18.38	18.97	18.99	18.59	0.0	20.0
		50	0	20.46	20.35	20.54	20.81	20.58	3.0	22.0	18.71	18.63	18.76	19.08	18.86	0.0	20.0
		50	24	20.52	20.35	20.63	20.82	20.61	3.0	22.0	18.79	18.63	18.92	19.08	18.86	0.0	20.0
		50	50	20.50	20.21	20.62	20.73	20.49	3.0	22.0	18.76	18.49	18.93	18.99	18.77	0.0	20.0
		100	0	20.53	20.30	20.59	20.78	20.59	3.0	22.0	18.79	18.60	18.91	19.08	18.87	0.0	20.0
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
15 MHz	QPSK	1	0	23.41	22.56	23.43	23.80	23.56	0.0	25.0	18.66	18.51	18.68	18.68	18.75	0.0	20.0
		1	37	23.50	23.63	23.64	23.93	23.69	0.0	25.0	18.65	18.48	18.74	18.84	18.83	0.0	20.0
		1	74	23.41	23.69	23.73	23.85	23.65	0.0	25.0	18.58	18.47	18.84	18.90	18.81	0.0	20.0
		36	0	22.45	22.61	22.59	22.94	22.73	1.0	24.0	18.72	18.63	18.82	18.77	18.87	0.0	20.0
		36	20	22.53	22.63	22.61	22.93	22.71	1.0	24.0	18.78	18.61	18.89	18.80	18.86	0.0	20.0
		36	39	22.50	22.70	22.70	22.91	22.71	1.0	24.0	18.77	18.52	18.92	18.88	18.82	0.0	20.0
		75	0	22.55	22.61	22.62	22.91	22.72	1.0	24.0	18.80	18.61	18.92	18.80	18.86	0.0	20.0
	16QAM	1	0	22.46	22.63	22.61	22.86	22.65	1.0	24.0	18.66	18.44	18.72	18.73	18.87	0.0	20.0
		1	37	22.60	22.97	22.78	23.11	22.81	1.0	24.0	18.74	18.37	18.82	19.07	19.02	0.0	20.0
		1	74	22.41	22.86	22.82	22.95	22.69	1.0	24.0	18.66	18.41	18.84	18.96	18.91	0.0	20.0
		36	0	21.50	21.59	21.57	21.92	21.69	2.0	23.0	18.70	18.63	18.81	18.77	18.87	0.0	20.0
		36	20	21.58	21.63	21.63	21.92	21.68	2.0	23.0	18.79	18.60	18.66	18.80	18.89	0.0	20.0
		36	39	21.55	21.72	21.70	21.91	21.79	2.0	23.0	18.75	18.50	18.88	18.87	18.86	0.0	20.0
		75	0	21.57	21.58	21.59	21.88	21.87	2.0	23.0	18.79	18.62	18.81	18.78	18.86	0.0	20.0
	64QAM	1	0	21.49	21.36	21.53	21.71	21.52	2.0	23.0	18.69	18.38	18.69	19.04	18.74	0.0	20.0
		1	37	21.47	21.39	21.61	21.74	21.57	2.0	23.0	18.81	18.42	18.71	19.08	18.75	0.0	20.0
		1	74	21.44	21.33	21.67	21.72	21.54	2.0	23.0	18.63	18.38	18.83	19.03	18.72	0.0	20.0
		36	0	20.44	20.37	20.59	20.94	20.64	3.0	22.0	18.60	18.54	18.78	19.08	18.80	0.0	20.0
		36	20	20.55	20.36	20.67	20.83	20.63	3.0	22.0	18.68	18.53	18.85	19.04	18.77	0.0	20.0
		36	39	20.52	20.27	20.67	20.82	20.53	3.0	22.0	18.67	18.40	18.85	19.03	18.69	0.0	20.0
		75	0	20.52	20.33	20.66	20.80	20.61	3.0	22.0	18.70	18.51	18.85	19.04	18.81	0.0	20.0

LTE Band 41 (Ant.B) Measured Results_(Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				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	23.61	23.45	23.63	23.85	23.55	0.0	25.0	18.69	18.87	18.92	19.13	18.82	0.0	20.0
		1	25	23.65	23.49	23.75	23.86	23.62	0.0	25.0	18.74	18.78	18.95	19.16	18.90	0.0	20.0
		1	49	23.61	23.40	23.72	23.76	23.52	0.0	25.0	18.67	18.71	18.94	19.05	18.79	0.0	20.0
		25	0	22.60	22.49	22.68	22.85	22.65	1.0	24.0	18.63	18.74	18.94	19.16	18.94	0.0	20.0
		25	12	22.69	22.49	22.82	22.89	22.69	1.0	24.0	18.66	18.78	19.02	19.20	18.95	0.0	20.0
		25	25	22.67	22.42	23.31	22.88	22.68	1.0	24.0	18.68	18.80	19.01	19.18	18.86	0.0	20.0
		50	0	22.67	22.49	22.42	22.86	22.64	1.0	24.0	18.68	18.77	19.00	19.16	18.93	0.0	20.0
	16QAM	1	0	22.64	22.34	22.48	22.83	22.67	1.0	24.0	18.86	18.81	18.90	19.00	18.97	0.0	20.0
		1	25	22.73	22.39	22.50	22.91	22.72	1.0	24.0	18.77	18.98	18.99	19.07	18.94	0.0	20.0
		1	49	22.62	22.32	22.38	22.89	22.59	1.0	24.0	18.85	18.98	19.00	19.03	18.91	0.0	20.0
		25	0	21.53	21.47	21.34	21.88	21.66	2.0	23.0	18.69	18.79	18.91	19.17	18.94	0.0	20.0
		25	12	21.65	21.49	21.33	21.87	21.71	2.0	23.0	18.69	18.79	19.06	19.18	18.95	0.0	20.0
		25	25	21.62	21.40	21.27	21.88	21.73	2.0	23.0	18.67	18.80	19.01	19.20	18.86	0.0	20.0
		50	0	21.63	21.51	21.43	21.86	21.66	2.0	23.0	18.69	18.77	19.00	19.20	18.90	0.0	20.0
	64QAM	1	0	21.51	21.33	21.63	21.81	21.55	2.0	23.0	18.71	18.55	18.85	19.06	18.80	0.0	20.0
		1	25	21.60	21.33	21.69	21.91	21.62	2.0	23.0	18.80	18.59	18.90	19.10	18.83	0.0	20.0
		1	49	21.57	21.28	21.66	21.75	21.60	2.0	23.0	18.75	18.50	18.88	19.02	18.82	0.0	20.0
		25	0	20.60	20.45	20.64	20.90	20.67	3.0	22.0	18.69	18.59	18.85	19.12	18.91	0.0	20.0
		25	12	20.63	20.46	20.74	20.97	20.70	3.0	22.0	18.77	18.62	18.97	19.14	18.91	0.0	20.0
		25	25	20.59	20.35	20.75	20.91	20.57	3.0	22.0	18.75	18.52	18.93	19.11	18.81	0.0	20.0
		50	0	20.63	20.43	20.74	20.93	20.69	3.0	22.0	18.79	18.61	18.89	19.15	18.87	0.0	20.0

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
5 MHz	QPSK	1	0	23.60	23.44	23.46	23.80	23.60	0.0	25.0	18.66	18.52	18.64	18.95	18.65	0.0	20.0
		1	12	23.66	23.51	23.50	23.79	23.63	0.0	25.0	18.69	18.52	18.67	18.94	18.67	0.0	20.0
		1	24	23.64	23.62	23.59	23.86	23.72	0.0	25.0	18.78	18.56	18.77	19.04	18.81	0.0	20.0
		12	0	22.66	23.56	23.54	23.84	23.61	1.0	24.0	18.73	18.50	18.74	18.99	18.73	0.0	20.0
		12	7	22.68	23.54	23.53	23.83	23.59	1.0	24.0	18.70	18.50	18.70	18.98	18.74	0.0	20.0
		12	13	22.67	23.55	23.54	23.83	23.57	1.0	24.0	18.72	18.50	18.73	18.97	18.76	0.0	20.0
		25	0	22.65	22.55	22.53	22.86	22.67	1.0	24.0	18.71	18.55	18.72	19.04	18.71	0.0	20.0
	16QAM	1	0	22.75	22.53	22.55	22.88	22.68	1.0	24.0	18.78	18.59	18.73	19.19	18.72	0.0	20.0
		1	12	22.85	22.59	22.62	22.91	22.65	1.0	24.0	18.84	18.58	18.75	19.11	18.78	0.0	20.0
		1	24	22.75	22.69	22.70	23.00	22.79	1.0	24.0	18.91	18.63	18.85	19.26	18.90	0.0	20.0
		12	0	21.68	22.58	22.35	22.70	22.63	2.0	23.0	18.73	18.58	18.67	19.00	18.74	0.0	20.0
		12	7	21.64	22.47	22.34	22.69	22.60	2.0	23.0	18.74	18.57	18.65	18.98	18.70	0.0	20.0
		12	13	21.63	22.49	22.34	22.70	22.61	2.0	23.0	18.75	18.56	18.66	19.19	18.71	0.0	20.0
		25	0	21.63	21.52	21.55	21.83	21.64	2.0	23.0	18.70	18.55	18.69	19.11	18.74	0.0	20.0
	64QAM	1	0	21.60	21.41	21.62	21.81	21.74	2.0	23.0	18.72	18.48	18.85	19.06	18.81	0.0	20.0
		1	12	21.63	21.52	21.85	21.92	21.81	2.0	23.0	18.72	18.56	18.97	19.12	18.87	0.0	20.0
		1	24	21.54	21.40	21.72	21.82	21.70	2.0	23.0	18.71	18.43	18.87	19.04	18.73	0.0	20.0
		12	0	20.64	20.50	20.60	20.93	20.60	3.0	22.0	18.82	18.62	18.77	19.02	18.78	0.0	20.0
		12	7	20.65	20.50	20.73	20.97	20.63	3.0	22.0	18.83	18.69	18.93	19.04	18.82	0.0	20.0
		12	13	20.61	20.49	20.68	20.93	20.60	3.0	22.0	18.77	18.64	18.83	19.14	18.83	0.0	20.0
		25	0	20.57	20.42	20.69	20.92	20.65	3.0	22.0	18.74	18.61	18.89	19.07	18.83	0.0	20.0

LTE Band 41 (Ant.F) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)																				
				DSI = 3							DSI = 0, 1							DSI = 2						
				Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				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	23.62	23.44	23.35	23.55	23.93	0.0	25.0	20.87	20.68	20.57	20.78	21.23	0.0	22.0	19.87	19.86	19.62	19.90	20.27	0.0	21.0
		1	49	23.56	23.35	23.34	23.65	23.99	0.0	25.0	20.82	20.54	20.59	20.82	21.21	0.0	22.0	19.89	19.73	19.66	19.96	20.32	0.0	21.0
		1	99	23.52	23.21	23.51	23.76	24.05	0.0	25.0	20.78	20.44	20.69	20.98	21.28	0.0	22.0	19.86	19.61	19.80	20.09	20.38	0.0	21.0
		50	0	22.72	22.55	22.48	22.70	23.01	1.0	24.0	20.92	20.75	20.66	20.87	21.22	0.0	22.0	19.98	19.87	19.73	19.98	20.31	0.0	21.0
		50	24	22.79	22.52	22.57	22.73	23.14	1.0	24.0	21.00	20.72	20.75	20.89	21.31	0.0	22.0	20.05	19.85	19.82	19.99	20.41	0.0	21.0
		50	50	22.75	22.37	22.57	22.79	23.16	1.0	24.0	20.95	20.57	20.75	20.98	21.32	0.0	22.0	20.01	19.79	19.82	20.08	20.42	0.0	21.0
		100	0	22.75	22.51	22.54	22.71	23.05	1.0	24.0	20.95	20.69	20.73	20.88	21.22	0.0	22.0	20.02	19.83	19.80	19.98	20.33	0.0	21.0
	16QAM	1	0	22.81	22.56	22.46	22.70	22.98	1.0	24.0	20.98	20.73	20.64	20.91	21.26	0.0	22.0	20.10	19.86	19.72	20.06	20.35	0.0	21.0
		1	49	22.82	22.47	22.56	22.84	23.17	1.0	24.0	21.09	20.82	20.75	21.08	21.51	0.0	22.0	20.19	19.90	19.83	20.24	20.57	0.0	21.0
		1	99	22.72	22.34	22.59	22.92	23.12	1.0	24.0	20.94	20.55	20.80	21.15	21.39	0.0	22.0	20.05	19.63	19.87	20.27	20.47	0.0	21.0
		50	0	21.73	21.55	21.49	21.68	22.04	2.0	23.0	20.89	20.74	20.64	20.85	21.22	0.0	22.0	20.01	19.86	19.73	19.98	20.27	0.0	21.0
		50	24	21.81	21.52	21.57	21.69	22.13	2.0	23.0	20.97	20.71	20.74	20.86	21.33	0.0	22.0	20.06	19.83	19.83	20.01	20.38	0.0	21.0
		50	50	21.77	21.38	21.57	21.76	22.15	2.0	23.0	20.93	20.53	20.73	20.94	21.34	0.0	22.0	20.03	19.67	19.83	20.08	20.40	0.0	21.0
		100	0	21.80	21.50	21.57	21.69	22.05	2.0	23.0	20.96	20.69	20.73	20.88	21.25	0.0	22.0	20.03	19.81	19.81	20.00	20.33	0.0	21.0
	64QAM	1	0	21.63	21.60	21.39	21.66	22.01	2.0	23.0	20.95	20.73	20.65	20.81	21.12	0.0	22.0	19.88	19.67	19.61	19.83	20.27	0.0	21.0
		1	49	21.69	21.55	21.44	21.70	22.15	2.0	23.0	21.00	20.65	20.78	20.91	21.15	0.0	22.0	19.97	19.58	19.72	19.88	20.28	0.0	21.0
		1	99	21.71	21.34	21.56	21.86	22.15	2.0	23.0	20.91	20.45	20.83	21.05	21.20	0.0	22.0	19.90	19.32	19.79	20.07	20.29	0.0	21.0
		50	0	20.73	20.57	20.49	20.70	21.01	3.0	22.0	20.73	20.55	20.47	20.64	20.98	0.0	22.0	19.89	19.71	19.65	19.85	20.19	0.0	21.0
		50	24	20.80	20.52	20.57	20.71	21.13	3.0	22.0	20.80	20.51	20.56	20.69	21.10	0.0	22.0	19.96	19.67	19.73	19.88	20.31	0.0	21.0
		50	50	20.78	20.39	20.56	20.78	21.13	3.0	22.0	20.76	20.37	20.55	20.75	21.11	0.0	22.0	19.93	19.53	19.73	19.94	20.31	0.0	21.0
		100	0	20.80	20.53	20.61	20.69	21.05	3.0	22.0	20.78	20.51	20.58	20.69	21.03	0.0	22.0	19.95	19.68	19.74	19.87	20.24	0.0	21.0

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	40185	40620	41055	41490			39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				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		
15 MHz	QPSK	1	0	23.59	22.56	23.42	23.67	23.81	0.0	25.0	20.89	20.73	20.65	20.95	20.85	0.0	22.0	19.91	19.85	19.96	20.27	20.59	0.0	21.0
		1	37	23.63	23.47	23.61	23.86	23.84	0.0	25.0	20.93	20.73	20.81	21.17	20.78	0.0	22.0	19.96	19.95	20.03	20.39	20.69	0.0	21.0
		1	74	23.56	23.38	23.62	23.92	23.91	0.0	25.0	20.92	20.66	20.84	21.22	20.85	0.0	22.0	19.91	19.87	20.00	20.32	20.64	0.0	21.0
		36	0	22.68	22.63	22.51	22.82	22.75	1.0	24.0	20.94	20.83	20.77	21.03	20.79	0.0	22.0	19.94	19.95	19.95	20.23	20.57	0.0	21.0
		36	20	22.74	22.59	22.54	22.85	22.85	1.0	24.0	20.94	20.81	20.78	21.08	20.76	0.0	22.0	20.04	19.96	20.08	20.29	20.70	0.0	21.0
		36	39	22.71	22.58	22.59	22.91	22.81	1.0	24.0	21.02	20.78	20.86	21.14	20.83	0.0	22.0	20.04	19.94	20.06	20.33	20.66	0.0	21.0
		75	0	22.77	22.62	22.53	22.84	22.71	1.0	24.0	20.79	20.84	20.79	21.07	20.77	0.0	22.0	20.03	19.92	20.04	20.25	20.67	0.0	21.0
	16QAM	1	0	22.57	22.69	22.52	22.76	22.34	1.0	24.0	20.79	20.91	20.79	21.02	20.80	0.0	22.0	19.95	19.85	20.05	20.28	20.59	0.0	21.0
		1	37	22.66	22.86	22.80	23.01	23.03	1.0	24.0	20.88	20.97	20.92	21.30	21.00	0.0	22.0	20.05	19.92	20.12	20.41	20.71	0.0	21.0
		1	74	22.57	22.59	22.75	23.01	23.01	1.0	24.0	20.84	20.82	20.89	21.25	21.06	0.0	22.0	20.02	19.80	20.06	20.36	20.65	0.0	21.0
		36	0	21.66	21.61	21.52	21.81	21.89	2.0	23.0	20.79	20.79	20.79	21.05	20.76	0.0	22.0	20.09	19.82	19.98	20.21	20.57	0.0	21.0
		36	20	21.73	21.61	21.54	21.83	21.94	2.0	23.0	20.81	20.80	20.77	21.06	20.78	0.0	22.0	20.09	19.87	20.09	20.24	20.68	0.0	21.0
		36	39	21.71	21.59	21.59	21.89	21.95	2.0	23.0	20.84	20.75	20.84	21.08	20.87	0.0	22.0	20.09	19.80	20.09	20.29	20.65	0.0	21.0
		75	0	21.77	21.63	21.52	21.82	21.85	2.0	23.0	20.77	20.82	20.71	21.05	20.76	0.0	22.0	20.04	19.90	19.98	20.24	20.60	0.0	21.0
	64QAM	1	0	21.63	21.60	21.39	21.66	22.01	2.0	23.0	21.31	21.61	21.63	21.11	21.06	0.0	22.0	20.04	19.89	19.99	20.29	20.60	0.0	21.0
		1	37	21.21	21.55	21.44	21.70	22.15	2.0	23.0	21.42	21.45	21.56	21.12	21.03	0.0	22.0	20.14	19.97	20.13	20.34	20.60	0.0	21.0
		1	74	22.01	21.34	21.51	21.88	21.13	2.0	23.0	21.03	21.56	21.46	21.02	21.19	0.0	22.0	20.03	19.85	20.03	20.31	20.65	0.0	21.0
		36	0	21.89	20.57	20.49	20.91	21.15	3.0	22.0	21.31	21.64	21.77	21.03	21.17	0.0	22.0	20.13	19.91	19.88	20.26	20.45	0.0	21.0
		36	20	21.44	21.70	20.57	20.71	21.13	3.0	22.0	21.48	21.45	21.66	21.11	21.14	0.0	22.0	20.17	19.91	20.00	20.24	20.56	0.0	21.0
		36	39	21.56	21.86	20.71	20.78	20.87	3.0	22.0	21.22	21.46	21.46	21.16	21.14	0.0	22.0	20.16	19.90	20.14	20.28	20.54	0.0	21.0
		75	0	20.49	20.70	20.54	20.69	20.94	3.0	22.0	21.26	21.57	21.63	21.31	21.03	0.0	22.0	20.08	19.88	20.07	20.26	20.65	0.0	21.0

LTE Band 41 (Ant.F) 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	40185	40620	41055	41490			39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				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	23.76	23.62	23.58	23.46	23.57	0.0	25.0	20.99	20.80	20.66	20.96	21.06	0.0	22.0	19.94	19.87	19.94	20.22	20.45	0.0	21.0
		1	25	23.75	23.63	23.59	23.61	23.55	0.0	25.0	21.02	20.76	20.82	21.04	21.01	0.0	22.0	19.99	19.85	20.01	20.34	20.56	0.0	21.0
		1	49	23.73	23.53	23.61	23.94	23.81	0.0	25.0	20.96	20.64	20.67	20.97	21.04	0.0	22.0	19.96	19.84	19.98	20.41	20.62	0.0	21.0
		25	0	22.82	22.70	22.84	22.48	22.46	1.0	24.0	21.05	20.82	20.73	20.99	21.04	0.0	22.0	20.00	19.93	19.99	20.23	20.56	0.0	21.0
		25	12	22.90	22.71	22.60	22.61	22.45	1.0	24.0	21.14	20.82	20.78	21.04	21.03	0.0	22.0	20.11	19.98	20.11	20.27	20.61	0.0	21.0
		25	25	22.85	22.67	22.91	22.81	22.61	1.0	24.0	21.11	20.82	20.79	21.03	21.01	0.0	22.0	20.06	19.93	20.09	20.36	20.71	0.0	21.0
		50	0	22.87	22.68	22.79	22.49	22.45	1.0	24.0	21.10	20.84	20.76	21.01	21.10	0.0	22.0	20.08	19.92	20.06	20.24	20.49	0.0	21.0
	16QAM	1	0	22.88	22.71	22.84	22.87	22.89	1.0	24.0	21.16	20.80	20.76	20.88	20.95	0.0	22.0	20.14	19.95	20.00	19.95	20.51	0.0	21.0
		1	25	22.96	22.68	22.76	22.86	22.69	1.0	24.0	21.22	20.89	20.87	21.14	21.12	0.0	22.0	20.17	19.97	20.12	19.96	20.52	0.0	21.0
		1	49	22.97	22.63	22.59	22.49	22.38	1.0	24.0	21.11	20.91	20.74	21.04	20.94	0.0	22.0	20.09	19.88	20.01	19.94	20.54	0.0	21.0
		25	0	21.86	21.71	21.81	21.51	21.65	2.0	23.0	20.93	20.82	20.72	20.95	20.76	0.0	22.0	20.05	19.91	19.98	19.98	20.49	0.0	21.0
		25	12	21.98	21.73	21.76	21.89	21.49	2.0	23.0	20.93	20.82	20.77	21.02	20.94	0.0	22.0	20.16	19.93	20.09	19.85	20.56	0.0	21.0
		25	25	21.90	21.70	21.82	21.86	21.69	2.0	23.0	20.92	20.80	20.82	21.05	20.89	0.0	22.0	20.13	19.91	20.09	19.79	20.46	0.0	21.0
		50	0	21.88	21.72	21.67	21.79	21.48	2.0	23.0	20.98	20.85	20.76	20.99	20.97	0.0	22.0	20.11	19.90	20.06	19.78	20.71	0.0	21.0
	64QAM	1	0	21.19	21.31	21.49	21.59	21.63	2.0	23.0	21.31	21.61	21.63	21.11	21.06	0.0	22.0	20.03	19.90	20.02	19.67	20.67	0.0	21.0
		1	25	21.91	21.21	21.57	21.64	21.45	2.0	23.0	21.42	21.45	21.45	21.12	21.03	0.0	22.0	20.07	19.95	20.05	19.89	20.65	0.0	21.0
		1	49	22.01	22.01	22.01	22.45	21.94	2.0	23.0	21.34	21.56	21.46	21.06	21.07	0.0	22.0	20.02	19.81	20.08	19.61	20.64	0.0	21.0
		25	0	21.88	21.89	21.59	21.19	21.45	3.0	22.0	21.21	21.64	21.76	21.07	21.07	0.0	22.0	20.04	19.93	19.96	20.22	20.56	0.0	21.0
		25	12	21.73	21.77	21.68	21.64	21.51	3.0	22.0	21.48	21.45	21.66	21.32	21.09	0.0	22.0	20.16	19.95	20.08	20.26	20.64	0.0	21.0
		25	25	21.81	21.45	21.94	21.56	21.64	3.0	22.0	21.47	21.49	21.46	21.16	21.14	0.0	22.0	20.11	19.93	20.06	20.41	20.61	0.0	21.0
		50	0	21.68	21.56	21.84	21.88	21.36	3.0	22.0	21.46	21.57	21.63	21.15	21.08	0.0	22.0	20.12	19.92	20.08	20.35	20.56	0.0	21.0

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	40185	40620	41055	41490			39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				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		
5 MHz	QPSK	1	0	23.74	23.57	23.54	23.84	24.18	0.0	25.0	20.98	20.77	20.64	20.94	21.29	0.0	22.0	19.87	19.87	19.94	20.22	20.50	0.0	21.0
		1	12	23.83	23.62	23.60	23.87	24.22	0.0	25.0	20.87	20.77	20.71	21.06	21.34	0.0	22.0	20.21	19.85	20.01	20.31	20.58	0.0	21.0
		1	24	23.76	23.52	23.65	23.97	24.35	0.0	25.0	20.91	20.79	20.78	21.07	21.44	0.0	22.0	19.96	19.68	19.98	20.31	20.57	0.0	21.0
		12	0	22.83	22.69	23.63	23.86	23.97	1.0	24.0	20.89	20.75	20.75	20.93	21.28	0.0	22.0	20.31	19.87	19.99	20.23	20.56	0.0	21.0
		12	7	22.87	22.70	23.64	23.85	23.98	1.0	24.0	20.90	20.75	20.75	20.97	21.34	0.0	22.0	20.11	19.98	20.11	20.27	20.59	0.0	21.0
		12	13	22.85	22.67	23.64	23.86	23.79	1.0	24.0	20.89	20.75	20.76	21.01	21.33	0.0	22.0	20.06	19.86	20.09	20.36	20.66	0.0	21.0
		25	0	22.83	22.67	22.63	22.89	23.81	1.0	24.0	20.91	20.81	20.73	20.99	21.35	0.0	22.0	20.11	19.92	20.06	20.24	20.66	0.0	21.0
	16QAM	1	0	22.83	22.72	22.68	22.83	23.32	1.0	24.0	21.02	20.86	20.72	21.00	21.32	0.0	22.0	20.01	20.21	20.00	20.27	20.51	0.0	21.0
		1	12	22.94	22.86	22.72	22.95	23.29	1.0	24.0	21.03	20.84	20.79	21.06	21.39	0.0	22.0	20.31	19.97	20.12	20.40	20.54	0.0	21.0
		1	24	22.92	22.86	22.87	23.06	23.40	1.0	24.0	21.13	20.89	20.89	21.16	21.49	0.0	22.0	20.12	19.82	20.01	20.32	20.54	0.0	21.0
		12	0	21.84	22.59	22.60	22.86	22.98	2.0	23.0	20.97	20.78	20.78	20.99	21.37	0.0	22.0	20.24	19.78	19.98	20.22	20.49	0.0	21.0
		12	7	21.88	22.57	22.60	22.89	22.91	2.0	23.0	20.95	20.77	20.75	21.03	21.39	0.0	22.0	20.34	19.97	20.09	20.27	20.51	0.0	21.0
		12	13	21.82	22.57	22.61	22.90	22.71	2.0	23.0	20.95	20.77	20.77	21.04	21.41	0.0	22.0	20.14	19.91	20.09	20.33	20.61	0.0	21.0
		25	0	21.84	21.60	21.60	21.88	22.26	2.0	23.0	20.91	20.79	20.71	20.94	21.30	0.0	22.0	20.11	19.90	20.06	20.26	20.65	0.0	21.0
	64QAM	1	0	22.33	22.34	22.14	22.45	22.34	2.0	23.0	20.96	20.67	20.67	20.94	21.03	0.0	22.0	20.32	19.90	20.02	20.24	20.65	0.0	21.0
		1	12	22.57	22.45	22.42	22.64	22.45	2.0	23.0	20.96	20.49	20.76	20.89	20.19	0.0	22.0	20.16	19.95	20.05	20.34	20.61	0.0	21.0
		1	24	22.47	22.45	22.61	22.45	22.51	2.0	23.0	20.94	20.91	20.84	20.79	20.94	0.0	22.0	20.61	19.81	20.08	20.38	20.64	0.0	21.0
		12	0	21.41	21.46	21.95	21.49	21.45	3.0	22.0	21.01	20.67	20.76	20.77	20.96	0.0	22.0	20.04	19.93	19.96	20.22	20.56	0.0	21.0
		12	7	21.51	21.56	21.85	21.89	21.34	3.0	22.0	21.04	20.98	20.81	20.76	20.88	0.0	22.0	20.16	20.06	20.08	20.27	20.64	0.0	21.0
		12	13	21.48	21.45	21.75	21.45	21.51	3.0	22.0	20.34	20.94	20.43	20.69	20.67	0.0	22.0	20.11	19.85	20.06	20.33	20.61	0.0	21.0
		25	0	21.32	21.81	21.64	21.44	21.44	3.0	22.0	20.37	20.88	20.91	20.81	20.76	0.0	22.0	20.12	19.89	20.08	20.25	20.59	0.0	21.0

LTE Band 66 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)									
				DSI = 2, 3					DIS = 0, 1				
				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	23.97	24.13	23.99	0.0	25.0	18.86	19.03	18.91	0.0	20.0
		1	49	23.69	24.03	24.03	0.0	25.0	18.86	18.85	18.91	0.0	20.0
		1	99	24.04	24.06	23.92	0.0	25.0	18.91	18.92	18.86	0.0	20.0
		50	0	23.12	23.16	23.13	1.0	24.0	19.00	19.04	18.98	0.0	20.0
		50	24	23.18	23.21	23.20	1.0	24.0	19.01	19.14	19.07	0.0	20.0
		50	50	23.09	23.17	23.19	1.0	24.0	18.95	19.02	19.06	0.0	20.0
		100	0	23.04	23.16	23.19	1.0	24.0	18.92	19.02	19.05	0.0	20.0
	16QAM	1	0	23.57	23.32	23.43	1.0	24.0	19.24	19.43	19.17	0.0	20.0
		1	49	23.52	23.34	23.54	1.0	24.0	19.30	19.50	19.29	0.0	20.0
		1	99	23.53	23.32	23.41	1.0	24.0	19.30	19.35	19.12	0.0	20.0
		50	0	22.19	22.17	22.14	2.0	23.0	19.01	19.06	19.01	0.0	20.0
		50	24	22.20	22.20	22.23	2.0	23.0	19.03	19.09	19.11	0.0	20.0
		50	50	22.12	22.19	22.22	2.0	23.0	18.99	19.07	19.09	0.0	20.0
		100	0	22.09	22.18	22.19	2.0	23.0	18.93	19.02	19.07	0.0	20.0
	64QAM	1	0	22.41	22.53	22.40	2.0	23.0	19.44	19.44	19.23	0.0	20.0
		1	49	22.57	22.45	22.41	2.0	23.0	19.42	19.38	19.42	0.0	20.0
		1	99	22.40	22.41	22.35	2.0	23.0	19.33	19.26	19.17	0.0	20.0
		50	0	21.11	21.17	21.16	3.0	22.0	19.05	19.06	19.06	0.0	20.0
		50	24	21.21	21.19	21.18	3.0	22.0	19.08	19.07	19.14	0.0	20.0
		50	50	21.22	21.18	21.09	3.0	22.0	19.04	19.05	19.10	0.0	20.0
		100	0	21.21	21.17	21.08	3.0	22.0	19.02	19.03	19.10	0.0	20.0
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				132047	132322	132597			132047	132322	132597		
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	23.85	23.88	24.06	0.0	25.0	18.68	18.79	18.97	0.0	20.0
		1	37	23.62	23.83	24.08	0.0	25.0	18.78	18.77	19.01	0.0	20.0
		1	74	23.88	23.89	23.86	0.0	25.0	18.81	18.81	18.95	0.0	20.0
		36	0	22.75	23.04	23.09	1.0	24.0	18.88	18.94	19.00	0.0	20.0
		36	20	23.00	23.00	23.06	1.0	24.0	18.86	18.91	19.00	0.0	20.0
		36	39	23.03	23.01	23.15	1.0	24.0	18.88	18.93	19.05	0.0	20.0
		75	0	22.83	23.02	23.10	1.0	24.0	18.91	18.95	19.01	0.0	20.0
	16QAM	1	0	23.12	23.40	23.40	1.0	24.0	19.02	19.25	19.36	0.0	20.0
		1	37	23.16	23.35	23.58	1.0	24.0	19.03	19.33	19.46	0.0	20.0
		1	74	23.25	23.35	23.32	1.0	24.0	19.13	19.24	19.28	0.0	20.0
		36	0	21.91	22.04	22.08	2.0	23.0	18.88	18.94	18.99	0.0	20.0
		36	20	21.99	22.03	22.09	2.0	23.0	18.90	18.93	18.99	0.0	20.0
		36	39	22.02	22.03	22.15	2.0	23.0	18.89	18.93	19.06	0.0	20.0
		75	0	21.92	22.01	22.10	2.0	23.0	18.88	18.92	18.99	0.0	20.0
	64QAM	1	0	22.27	22.34	22.21	2.0	23.0	18.98	19.12	19.22	0.0	20.0
		1	37	22.25	22.20	22.22	2.0	23.0	18.94	19.12	19.27	0.0	20.0
		1	74	22.36	22.31	22.20	2.0	23.0	19.02	19.21	19.12	0.0	20.0
		36	0	20.99	21.05	21.10	3.0	22.0	18.84	18.89	19.00	0.0	20.0
		36	20	21.01	21.04	21.10	3.0	22.0	18.85	18.91	18.98	0.0	20.0
		36	39	21.00	21.03	21.18	3.0	22.0	18.88	18.88	19.05	0.0	20.0
		75	0	21.01	21.02	21.09	3.0	22.0	18.87	18.90	18.93	0.0	20.0

LTE Band 66 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	132322	132622			132022	132322	132622		
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	23.73	24.08	24.17	0.0	25.0	18.85	19.00	19.10	0.0	20.0
		1	25	23.43	24.04	24.18	0.0	25.0	18.89	19.01	19.13	0.0	20.0
		1	49	23.54	24.02	24.08	0.0	25.0	18.88	18.95	19.11	0.0	20.0
		25	0	22.64	23.10	23.18	1.0	24.0	18.97	19.04	19.09	0.0	20.0
		25	12	22.84	23.15	23.20	1.0	24.0	18.98	19.04	19.12	0.0	20.0
		25	25	23.02	23.13	23.27	1.0	24.0	18.96	19.05	19.18	0.0	20.0
		50	0	22.07	22.11	22.17	1.0	24.0	18.95	19.03	19.09	0.0	20.0
	16QAM	1	0	23.26	23.30	23.46	1.0	24.0	19.20	19.29	19.35	0.0	20.0
		1	25	22.95	23.33	23.51	1.0	24.0	19.22	19.26	19.37	0.0	20.0
		1	49	23.11	23.32	23.54	1.0	24.0	19.27	19.29	19.33	0.0	20.0
		25	0	21.82	22.20	22.23	2.0	23.0	18.97	19.06	19.12	0.0	20.0
		25	12	22.06	22.23	22.28	2.0	23.0	18.99	19.09	19.14	0.0	20.0
		25	25	22.16	22.18	22.33	2.0	23.0	19.01	19.08	19.20	0.0	20.0
		50	0	21.69	22.10	22.22	2.0	23.0	18.95	19.02	19.08	0.0	20.0
	64QAM	1	0	22.18	22.41	22.54	2.0	23.0	19.21	19.22	19.24	0.0	20.0
		1	25	22.02	22.42	22.58	2.0	23.0	19.26	19.26	19.27	0.0	20.0
		1	49	22.13	22.40	22.52	2.0	23.0	19.22	19.25	19.27	0.0	20.0
		25	0	21.08	21.16	21.22	3.0	22.0	18.99	19.03	19.07	0.0	20.0
		25	12	21.15	21.17	21.27	3.0	22.0	19.04	19.06	19.09	0.0	20.0
		25	25	21.11	21.15	21.29	3.0	22.0	19.01	19.04	19.16	0.0	20.0
		50	0	21.01	21.12	21.24	3.0	22.0	18.97	18.99	19.08	0.0	20.0

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				131997	132322	132647			131997	132322	132647		
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	23.54	24.01	24.10	0.0	25.0	18.92	19.03	19.13	0.0	20.0
		1	12	23.34	24.05	24.05	0.0	25.0	19.04	19.09	19.25	0.0	20.0
		1	24	23.33	23.99	23.98	0.0	25.0	18.92	18.99	19.15	0.0	20.0
		12	0	22.58	23.09	23.17	1.0	24.0	19.07	19.10	19.18	0.0	20.0
		12	7	22.64	23.14	23.27	1.0	24.0	19.08	19.15	19.26	0.0	20.0
		12	13	22.72	23.07	23.24	1.0	24.0	19.05	19.10	19.22	0.0	20.0
		25	0	22.43	23.09	23.18	1.0	24.0	19.05	19.09	19.21	0.0	20.0
	16QAM	1	0	23.06	23.40	23.64	1.0	24.0	19.38	19.42	19.45	0.0	20.0
		1	12	22.89	23.50	23.70	1.0	24.0	19.56	19.51	19.46	0.0	20.0
		1	24	22.82	23.43	23.65	1.0	24.0	19.42	19.44	19.49	0.0	20.0
		12	0	21.80	22.18	22.16	2.0	23.0	19.11	19.09	19.27	0.0	20.0
		12	7	21.89	22.23	22.26	2.0	23.0	19.20	19.14	19.38	0.0	20.0
		12	13	21.97	22.21	22.22	2.0	23.0	19.17	19.12	19.33	0.0	20.0
		25	0	21.43	22.15	22.21	2.0	23.0	19.05	19.07	19.23	0.0	20.0
	64QAM	1	0	22.27	22.40	22.58	2.0	23.0	19.13	19.22	19.46	0.0	20.0
		1	12	22.07	22.38	22.69	2.0	23.0	19.19	19.26	19.46	0.0	20.0
		1	24	21.96	22.38	22.62	2.0	23.0	19.14	19.17	19.42	0.0	20.0
		12	0	21.09	21.13	21.27	3.0	22.0	19.01	19.01	19.06	0.0	20.0
		12	7	21.15	21.17	21.40	3.0	22.0	19.10	19.02	19.19	0.0	20.0
		12	13	21.14	21.14	21.35	3.0	22.0	19.07	19.01	19.17	0.0	20.0
		25	0	20.86	21.11	21.24	3.0	22.0	18.92	18.93	19.12	0.0	20.0

LTE Band 66 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	132322	132657			131987	132322	132657		
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	23.44	24.02	24.04	0.0	25.0	18.90	19.04	19.07	0.0	20.0
		1	8	23.33	24.09	24.11	0.0	25.0	19.01	19.10	19.22	0.0	20.0
		1	14	23.22	23.96	24.01	0.0	25.0	18.90	18.98	19.13	0.0	20.0
		8	0	22.58	23.07	23.16	1.0	24.0	19.03	19.09	19.14	0.0	20.0
		8	4	22.65	23.09	23.16	1.0	24.0	19.06	19.11	19.18	0.0	20.0
		8	7	22.65	23.07	23.26	1.0	24.0	19.04	19.12	19.23	0.0	20.0
		15	0	22.61	23.07	23.13	1.0	24.0	19.03	19.10	19.15	0.0	20.0
	16QAM	1	0	22.99	23.38	23.53	1.0	24.0	19.25	19.29	19.44	0.0	20.0
		1	8	22.93	23.42	23.65	1.0	24.0	19.33	19.42	19.59	0.0	20.0
		1	14	22.85	23.29	23.56	1.0	24.0	19.25	19.30	19.51	0.0	20.0
		8	0	21.73	22.14	22.21	2.0	23.0	19.08	19.15	19.22	0.0	20.0
		8	4	21.78	22.19	22.24	2.0	23.0	19.12	19.16	19.26	0.0	20.0
		8	7	21.80	22.18	22.33	2.0	23.0	19.14	19.16	19.31	0.0	20.0
		15	0	21.76	22.08	22.19	2.0	23.0	19.10	19.10	19.19	0.0	20.0
	64QAM	1	0	22.19	22.32	22.38	2.0	23.0	19.19	19.14	19.17	0.0	20.0
		1	8	22.04	22.39	22.45	2.0	23.0	19.23	19.25	19.25	0.0	20.0
		1	14	21.88	22.33	22.42	2.0	23.0	19.15	19.15	19.20	0.0	20.0
		8	0	21.04	21.11	21.18	3.0	22.0	18.98	19.04	19.07	0.0	20.0
		8	4	21.06	21.17	21.20	3.0	22.0	18.99	19.04	19.09	0.0	20.0
		8	7	21.08	21.14	21.28	3.0	22.0	19.03	19.06	19.19	0.0	20.0
		15	0	21.07	21.14	21.23	3.0	22.0	18.97	19.03	19.05	0.0	20.0

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				131979	132322	132665			131979	132322	132665		
				1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	23.34	24.00	24.09	0.0	25.0	18.94	19.03	19.15	0.0	20.0
		1	3	23.31	23.98	24.03	0.0	25.0	18.96	19.04	19.20	0.0	20.0
		1	5	23.26	23.99	23.98	0.0	25.0	18.93	19.00	19.15	0.0	20.0
		3	0	23.43	24.08	24.04	0.0	25.0	19.02	19.09	19.20	0.0	20.0
		3	1	23.38	24.09	24.03	0.0	25.0	19.03	19.11	19.23	0.0	20.0
		3	3	23.42	24.08	24.05	0.0	25.0	19.03	19.10	19.23	0.0	20.0
		6	0	22.60	23.05	23.19	1.0	24.0	19.01	19.07	19.17	0.0	20.0
	16QAM	1	0	22.78	23.36	23.35	1.0	24.0	19.13	19.42	19.48	0.0	20.0
		1	3	22.71	23.42	23.36	1.0	24.0	19.15	19.41	19.52	0.0	20.0
		1	5	22.68	23.42	23.34	1.0	24.0	19.16	19.39	19.54	0.0	20.0
		3	0	22.70	23.24	23.25	1.0	24.0	19.13	19.23	19.34	0.0	20.0
		3	1	22.65	23.20	23.30	1.0	24.0	19.13	19.22	19.33	0.0	20.0
		3	3	22.69	23.22	23.25	1.0	24.0	19.14	19.21	19.33	0.0	20.0
		6	0	21.76	22.13	22.30	2.0	23.0	19.05	19.10	19.28	0.0	20.0
	64QAM	1	0	21.75	22.46	22.41	2.0	23.0	19.25	19.10	19.32	0.0	20.0
		1	3	21.69	22.48	22.45	2.0	23.0	19.33	19.21	19.43	0.0	20.0
		1	5	21.56	22.44	22.39	2.0	23.0	19.35	19.10	19.40	0.0	20.0
		3	0	22.12	22.23	22.41	2.0	23.0	19.06	19.11	19.20	0.0	20.0
		3	1	22.13	22.24	22.42	2.0	23.0	19.03	19.13	19.21	0.0	20.0
		3	3	22.12	22.23	22.39	2.0	23.0	19.09	19.13	19.26	0.0	20.0
		6	0	21.13	21.09	21.29	3.0	22.0	18.94	19.08	19.09	0.0	20.0

9.4. NR (Sub 6)

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

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

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

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

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

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

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

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

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

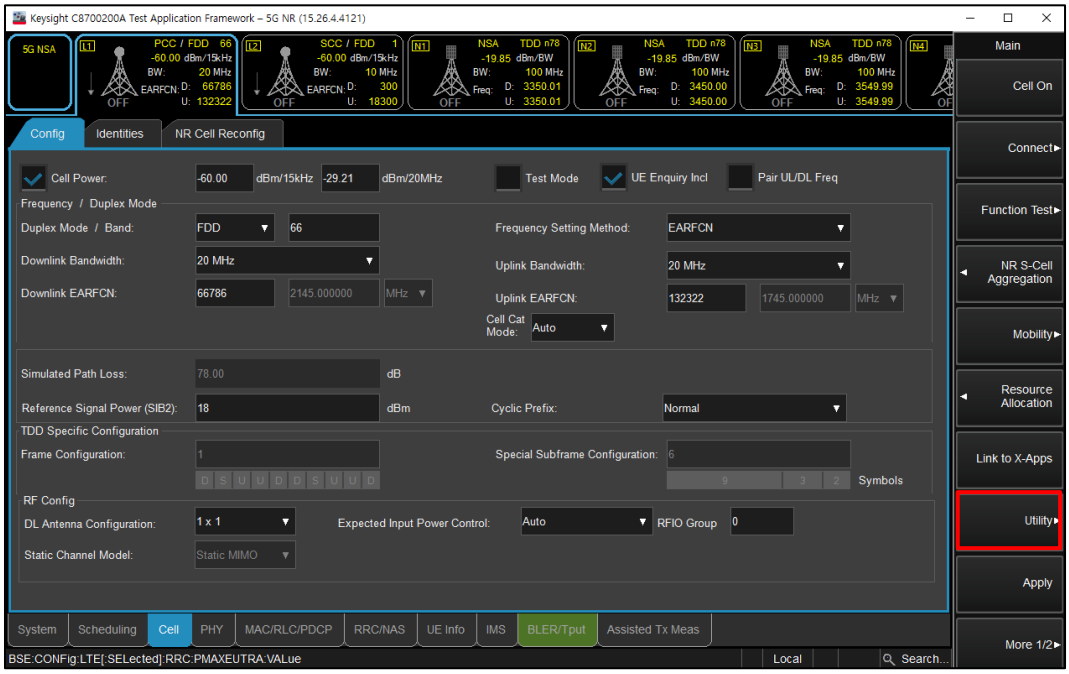
Uplink RB allocations were used to Table 6.1-1 of the 3GPP TS 138.521-1.

Channel Bandwidth	SCS(kHz)	OFDM	RB allocation							
			Edge_Full_Left	Edge_Full_Right	Edge_1RB_Left	Edge_1RB_Right	Outer_Full	Inner_Full	Inner_1RB_Left	Inner_1RB_Right
5MHz	15	DFT-s	2@0	2@23	1@0	1@24	25@0	12@6	1@1	1@23
		CP	2@0	2@23	1@0	1@24	25@0	13@6	1@1	1@23
	30	DFT-s	2@0	2@9	1@0	1@10	10@0	5@2[1]	1@1	1@9
		CP	2@0	2@9	1@0	1@10	11@0	5@2[1]	1@1	1@9
	60	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10MHz	15	DFT-s	2@0	2@50	1@0	1@51	50@0	25@12	1@1	1@50
		CP	2@0	2@50	1@0	1@51	52@0	26@13	1@1	1@50
	30	DFT-s	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
		CP	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
	60	DFT-s	2@0	2@9	1@0	1@10	10@0	5@2[1]	1@1	1@9
		CP	2@0	2@9	1@0	1@10	11@0	5@2[1]	1@1	1@9
15MHz	15	DFT-s	2@0	2@77	1@0	1@78	75@0	36@18	1@1	1@77
		CP	2@0	2@77	1@0	1@78	79@0	39@19[1]	1@1	1@77
	30	DFT-s	2@0	2@36	1@0	1@37	36@0	18@9	1@1	1@36
		CP	2@0	2@36	1@0	1@37	38@0	19@9	1@1	1@36
	60	DFT-s	2@0	2@16	1@0	1@17	18@0	9@4	1@1	1@16
		CP	2@0	2@16	1@0	1@17	18@0	9@4	1@1	1@16
20MHz	15	DFT-s	2@0	2@104	1@0	1@105	100@0	50@25	1@1	1@104
		CP	2@0	2@104	1@0	1@105	106@0	53@26	1@1	1@104
	30	DFT-s	2@0	2@49	1@0	1@50	50@0	25@12	1@1	1@49
		CP	2@0	2@49	1@0	1@50	51@0	25@12[1]	1@1	1@49
	60	DFT-s	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
		CP	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22

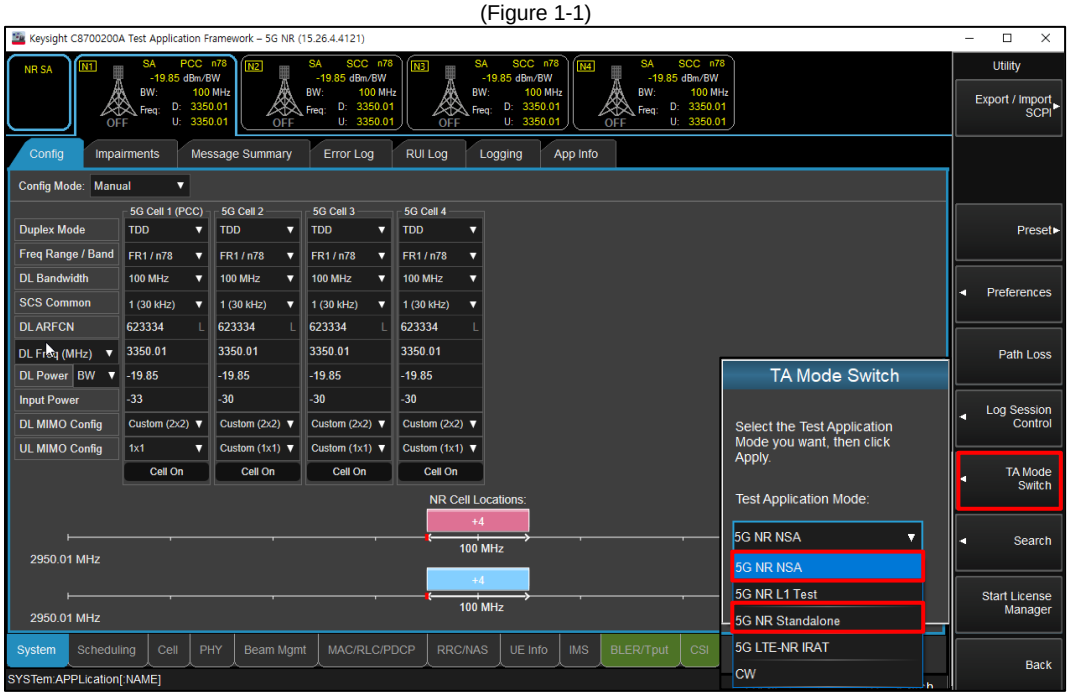
Procedures used to establish power measurement for NR Bands

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



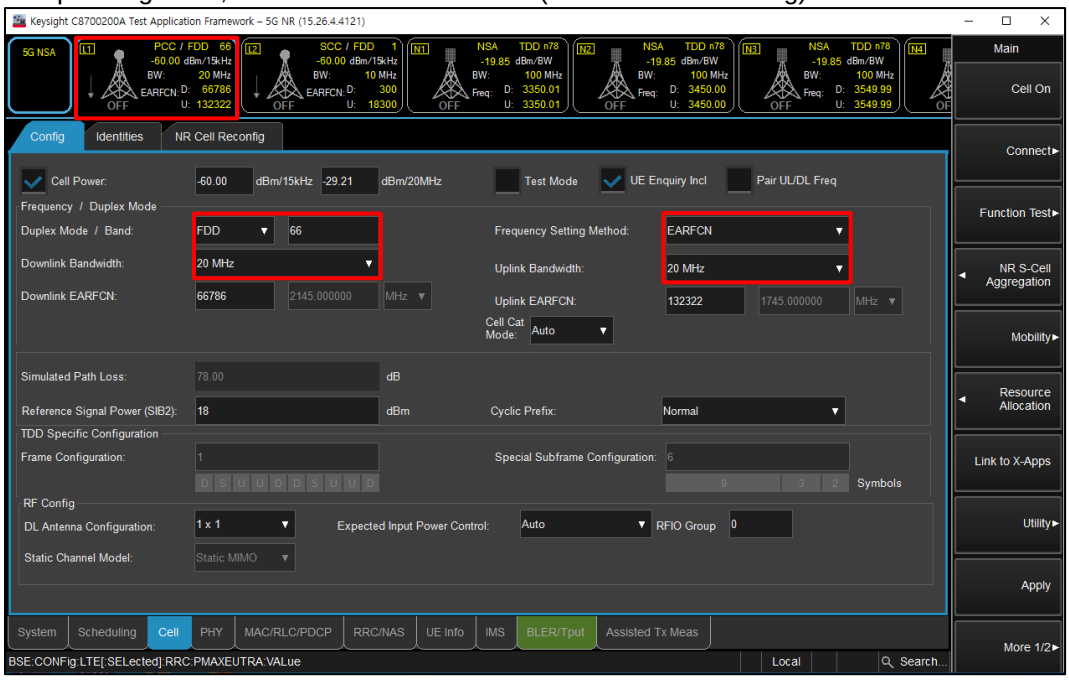
(Figure 1-1)



(Figure 1-2)

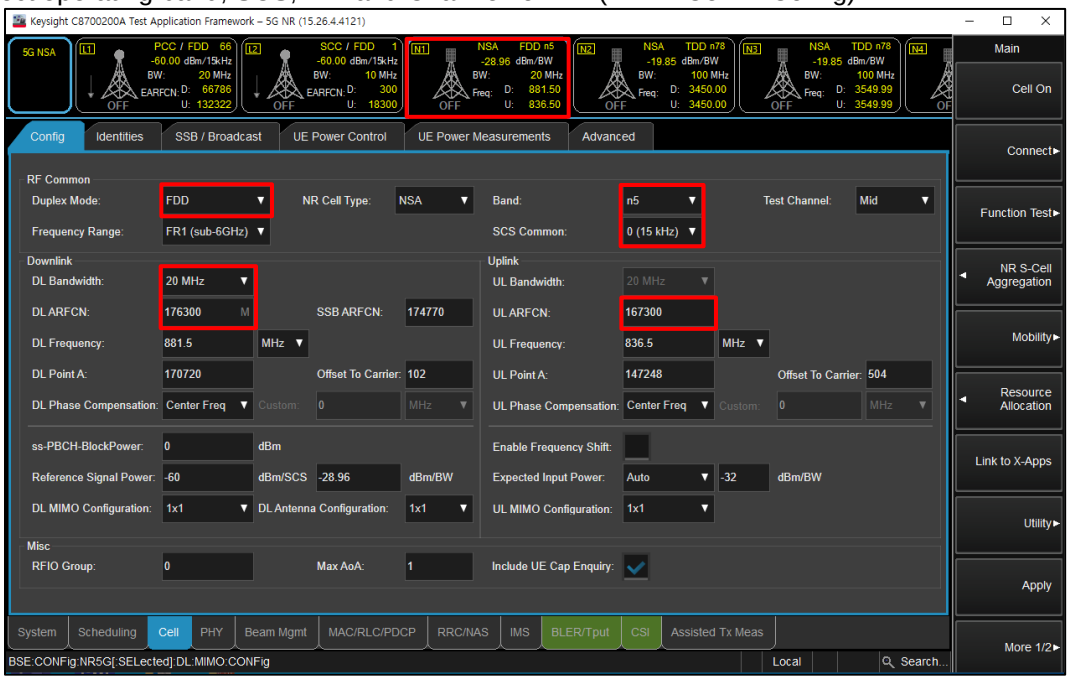
NSA Mode

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



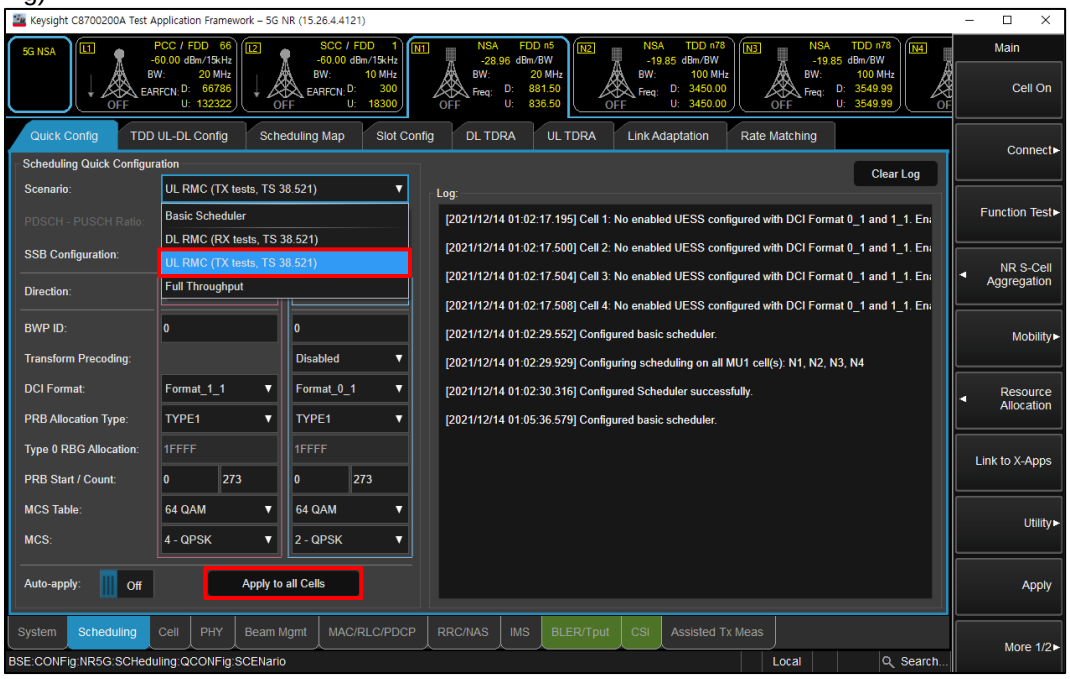
(Figure 2-1)

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



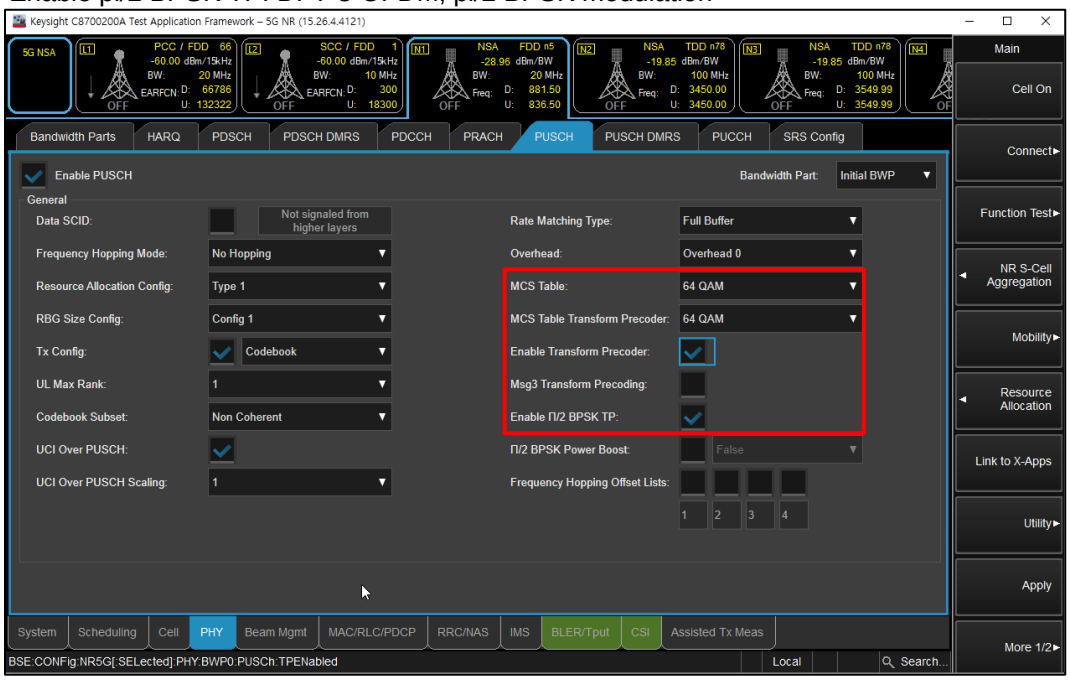
(Figure 2-2)

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



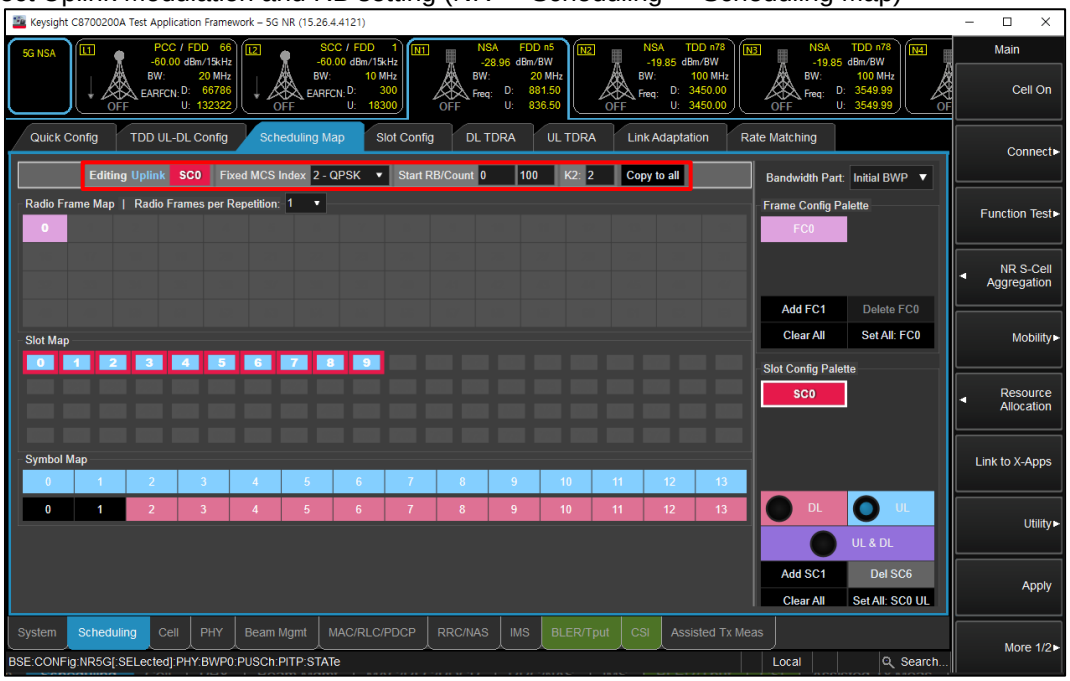
(Figure 2-3)

- 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



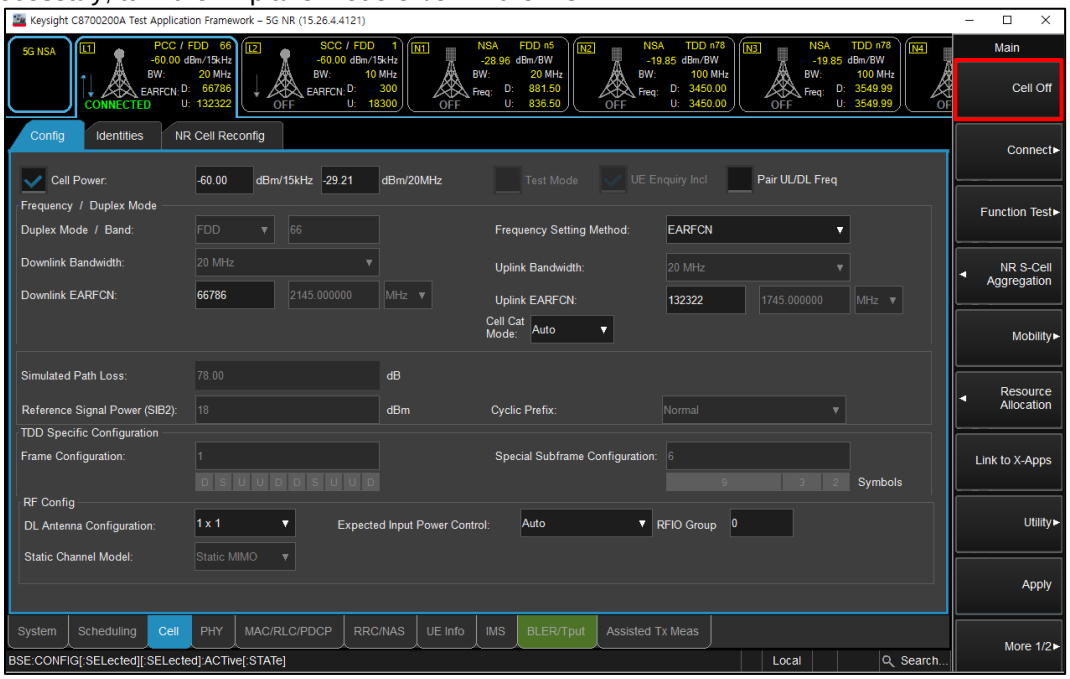
(Figure 2-4)

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



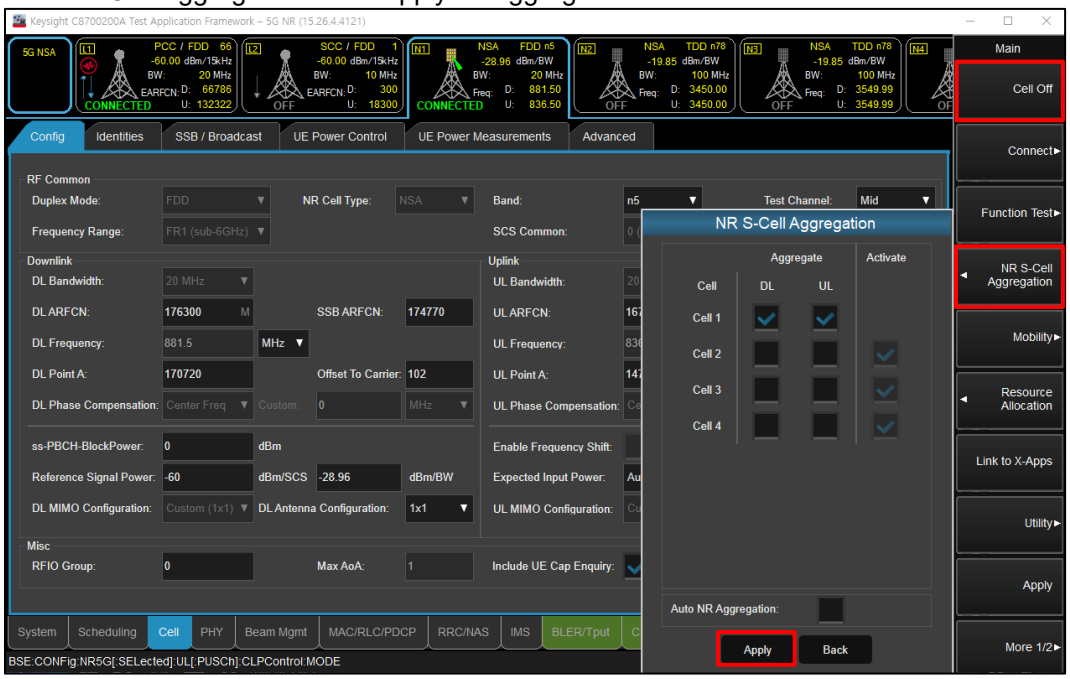
(Figure 2-5)

- 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



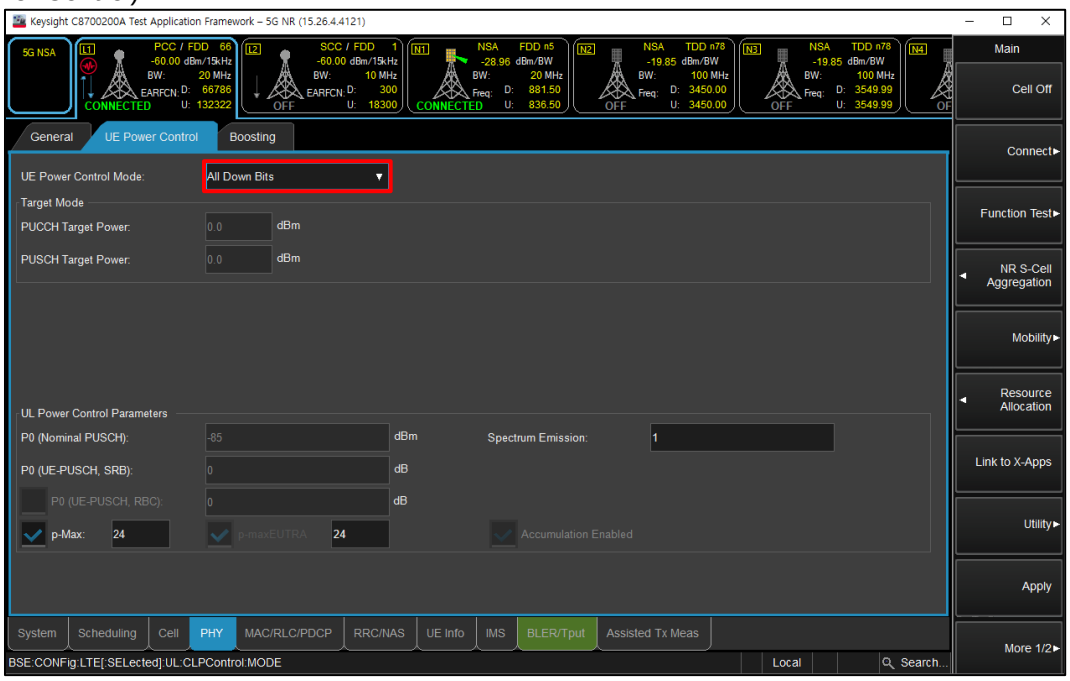
(Figure 2-6)

- 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



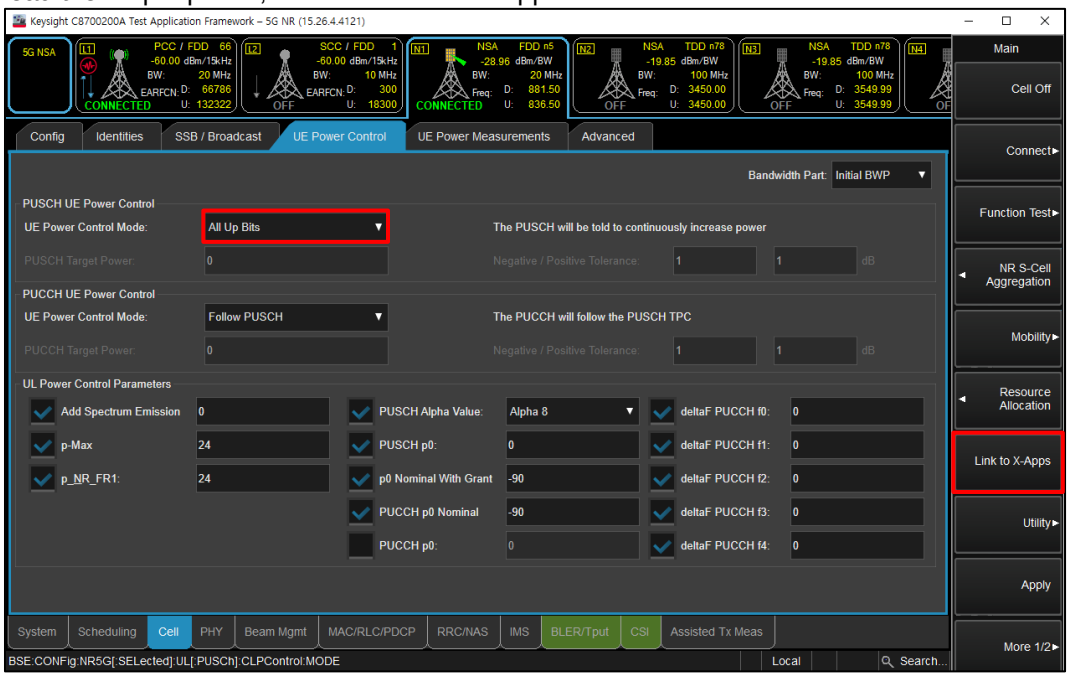
(Figure 2-7)

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



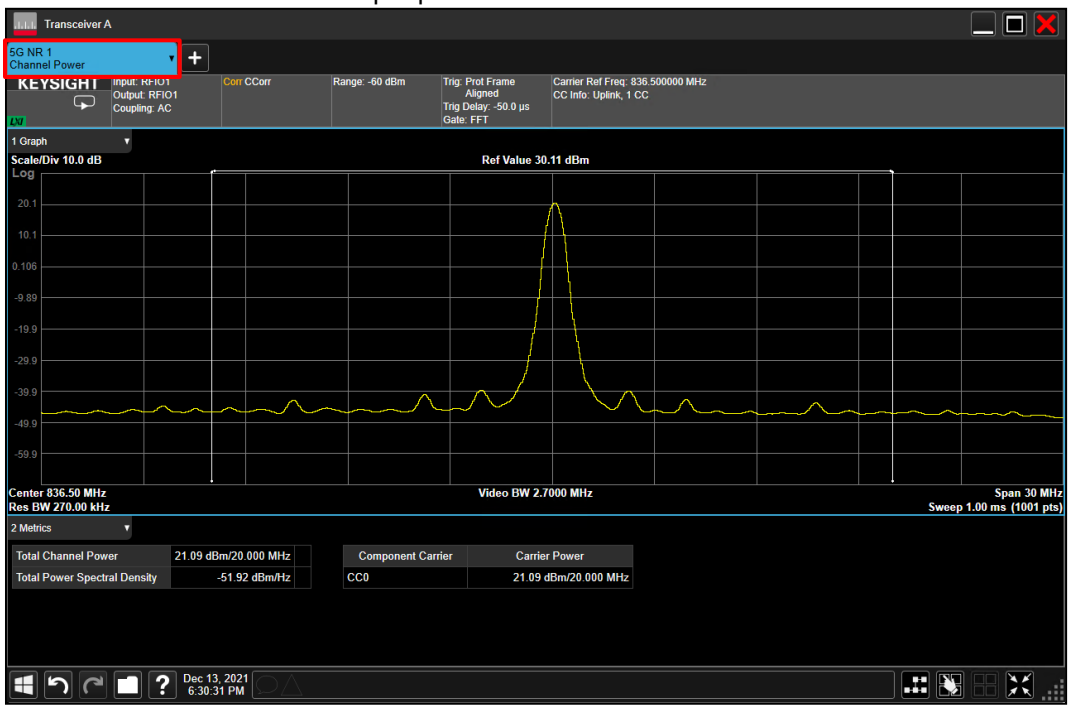
(Figure 2-8)

- 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”



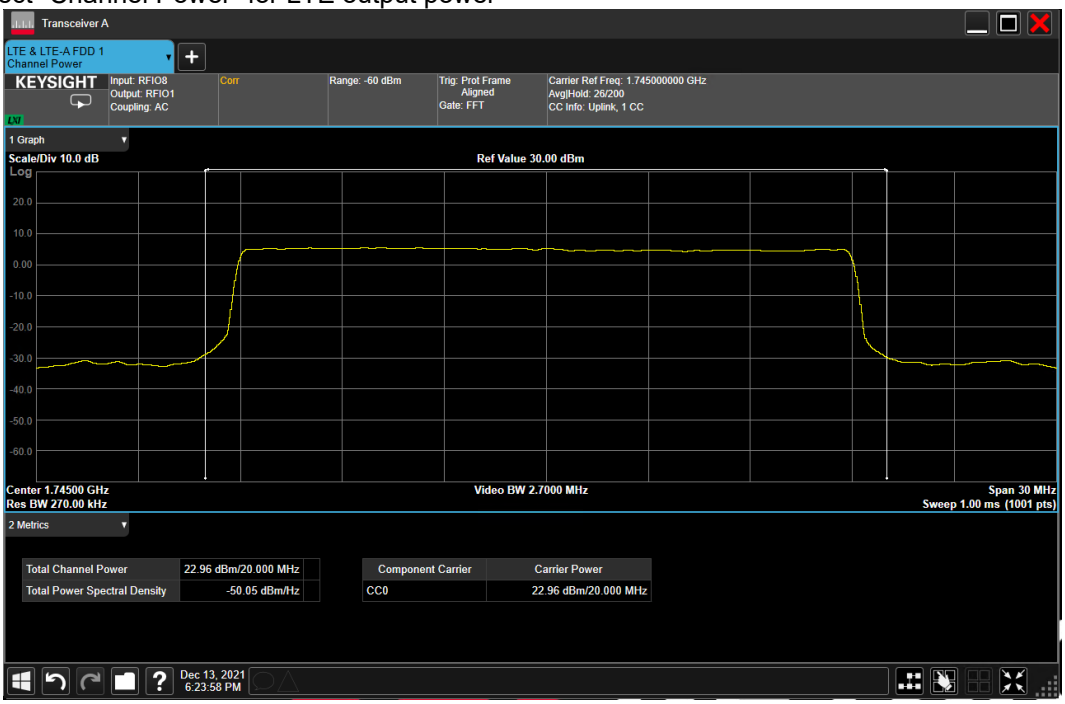
(Figure 2-9)

- Select “Channel Power” for NR output power



(Figure 2-10)

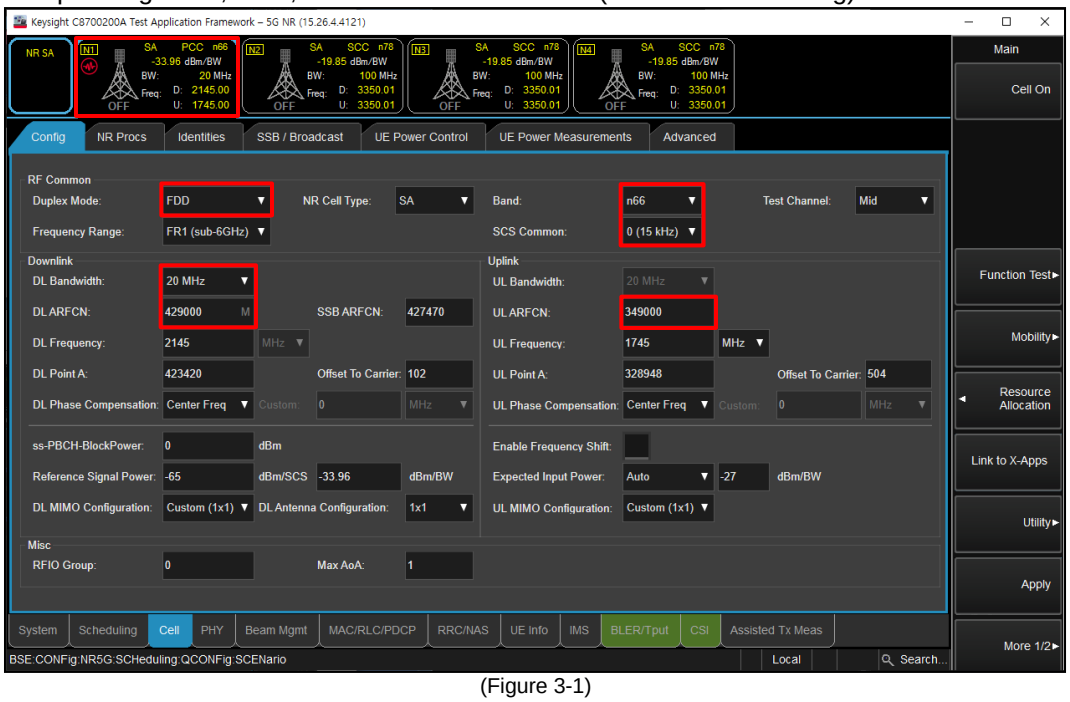
- Select “Channel Power” for LTE output power



(Figure 2-11)

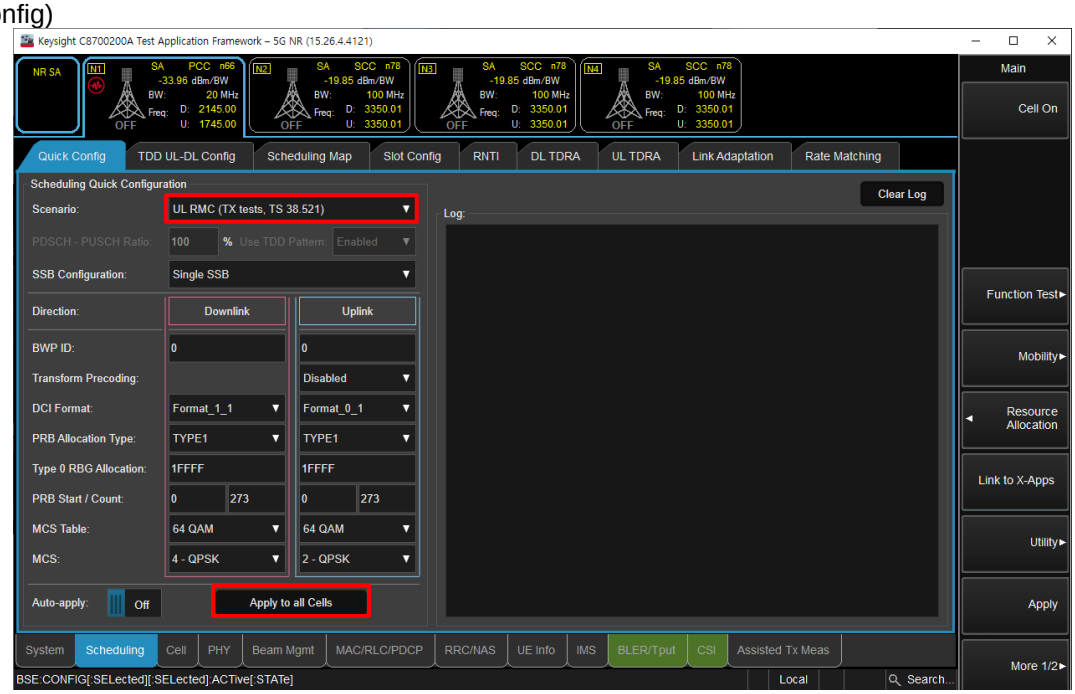
SA Mode

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



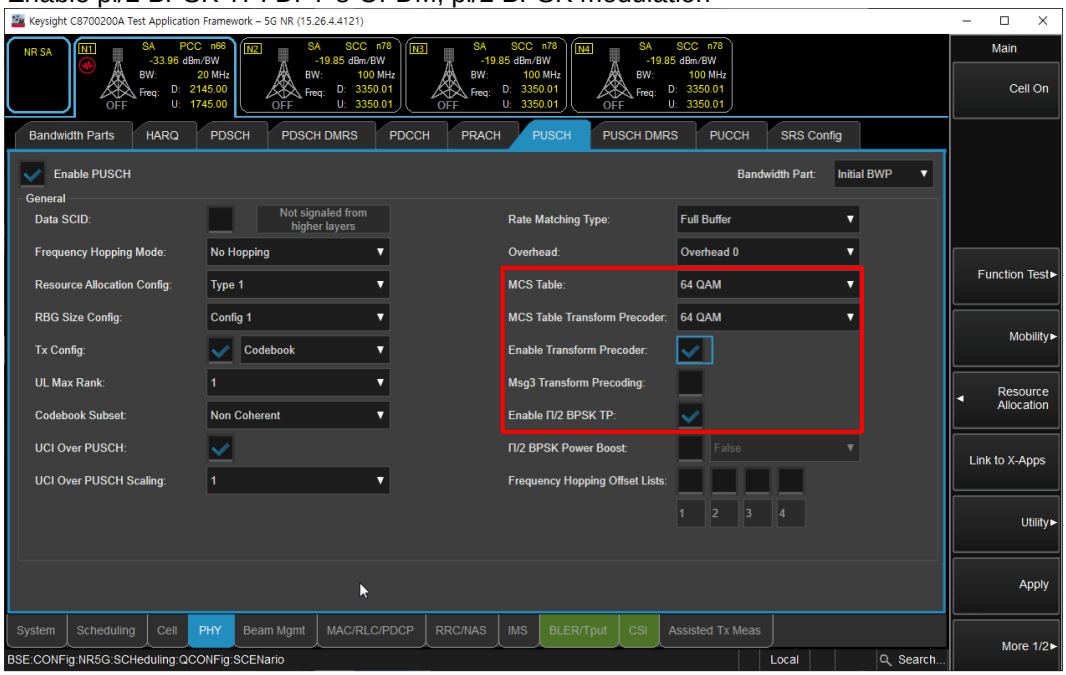
(Figure 3-1)

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



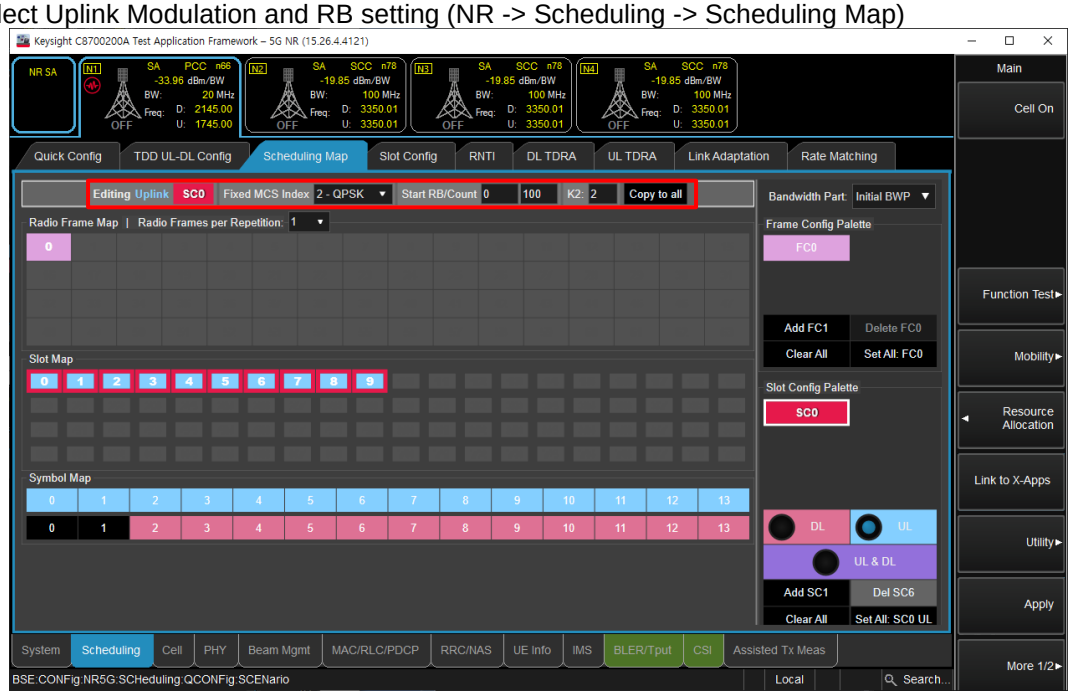
(Figure 3-2)

- 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



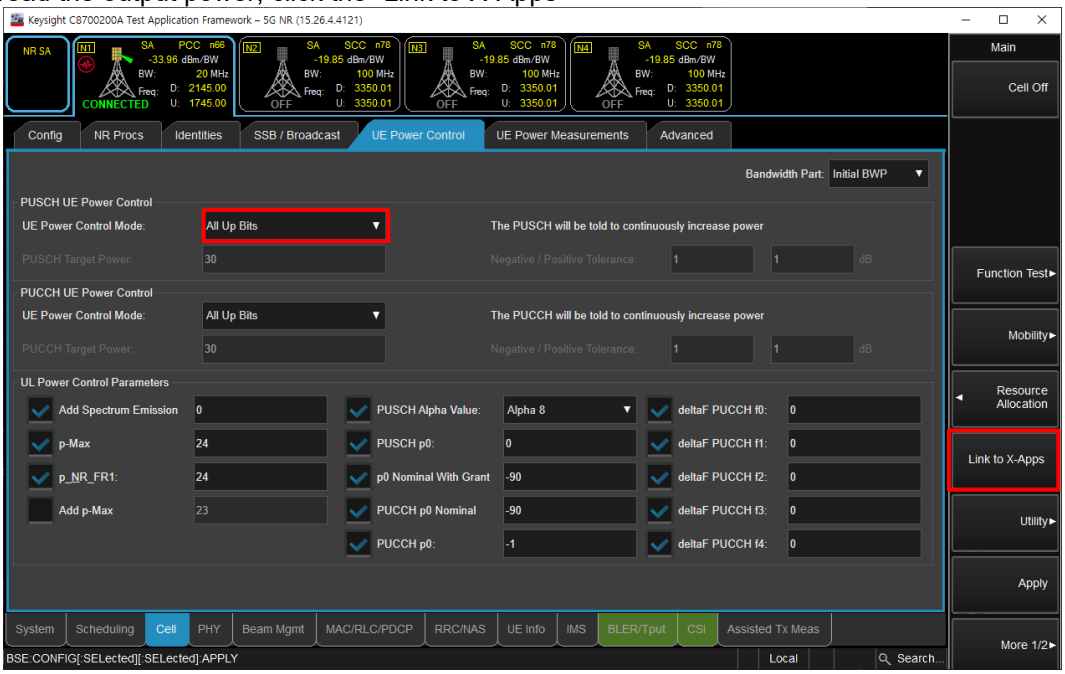
(Figure 3-3)

- 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 output power (dBm)		
					DSI = 0, 1, 2, 3		
					Measured Pwr (dBm)	MPR	Tune-up Limit
					167300		
					836.5 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.79	0.0	25.0
			1	53	23.87	0.0	25.0
			1	104	23.29	0.0	25.0
			50	0	23.95	0.5	24.5
			50	28	23.99	0.0	25.0
			50	56	23.97	0.5	24.5
			100	0	23.96	0.5	24.5
		QPSK	1	1	23.80	0.0	25.0
			1	53	23.90	0.0	25.0
			1	104	23.25	0.0	25.0
			50	0	23.61	1.0	24.0
			50	28	24.07	0.0	25.0
			50	56	23.42	1.0	24.0
			100	0	23.69	1.0	24.0
		16QAM	1	1	23.61	1.0	24.0
			1	53	23.61	1.0	24.0
			1	104	22.36	1.0	24.0
		64QAM	1	1	22.45	2.5	22.5
		256QAM	1	1	20.32	4.5	20.5
	CP-OFDM	QPSK	1	1	22.85	1.5	23.5
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)	MPR	Tune-up Limit
					167300		
					836.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.39	0.0	25.0
			1	40	24.36	0.0	25.0
			1	77	24.51	0.0	25.0
			36	0	24.05	0.5	24.5
			36	22	24.50	0.0	25.0
			36	43	24.11	0.5	24.5
			75	0	24.05	0.5	24.5
		QPSK	1	1	24.33	0.0	25.0
			1	40	24.36	0.0	25.0
			1	77	24.45	0.0	25.0
			36	0	23.60	1.0	24.0
			36	22	24.51	0.0	25.0
			36	43	23.69	1.0	24.0
			75	0	23.54	1.0	24.0
		16QAM	1	1	23.53	1.0	24.0
		64QAM	1	1	22.30	2.5	22.5
		256QAM	1	1	20.18	4.5	20.5
	CP-OFDM	QPSK	1	1	22.97	1.5	23.5

NR Band n5 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
						167300			
						836.5 MHz			
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.47		0.0	25.0
			1	26		24.43		0.0	25.0
			1	50		24.46		0.0	25.0
			25	0		23.92		0.5	24.5
			25	14		24.45		0.0	25.0
			25	27		23.90		0.5	24.5
			50	0		23.87		0.5	24.5
		QPSK	1	1		24.49		0.0	25.0
			1	26		24.47		0.0	25.0
			1	50		24.48		0.0	25.0
			25	0		23.40		1.0	24.0
			25	14		24.41		0.0	25.0
			25	27		23.26		1.0	24.0
			50	0		23.46		1.0	24.0
		16QAM	1	1		23.71		1.0	24.0
		64QAM	1	1		22.48		2.5	22.5
		256QAM	1	1		20.16		4.5	20.5
	CP-OFDM	QPSK	1	1		22.88		1.5	23.5

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					165300	167300	169300		
					826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.50	24.48	24.42	0.0	25.0
			1	13	24.50	24.41	23.75	0.0	25.0
			1	23	24.48	24.48	23.46	0.0	25.0
			12	0	23.95	23.96	23.58	0.5	24.5
			12	7	24.41	24.38	23.78	0.0	25.0
			12	13	23.91	23.84	23.19	0.5	24.5
			25	0	23.90	23.87	23.27	0.5	24.5
		QPSK	1	1	24.52	24.41	24.18	0.0	25.0
			1	13	24.37	24.30	23.51	0.0	25.0
			1	23	24.37	24.32	23.25	0.0	25.0
			12	0	23.46	23.43	23.05	1.0	24.0
			12	7	24.42	24.35	23.66	0.0	25.0
			12	13	23.47	23.31	22.65	1.0	24.0
			25	0	23.41	23.34	22.74	1.0	24.0
		16QAM	1	1	23.61	23.58	23.36	1.0	24.0
		64QAM	1	1	22.45	22.39	22.28	2.5	22.5
		256QAM	1	1	20.21	20.19	20.24	4.5	20.5
	CP-OFDM	QPSK	1	1	22.95	22.96	22.97	1.5	23.5

NR Band n66 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)					
					DSI = 2, 3			DSI = 0, 1		
					Measured Pwr (dBm)	MPR	Tune-up Limit	Measured Pwr (dBm)	MPR	Tune-up Limit
					349000 1745 MHz			349000 1745 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	22.96	0.0	25.0	18.73	0.0	20.0
			1	108	23.52	0.0	25.0	18.90	0.0	20.0
			1	214	23.37	0.0	25.0	18.79	0.0	20.0
			108	0	23.23	0.5	24.5	18.89	0.0	20.0
			108	54	23.83	0.0	25.0	18.83	0.0	20.0
			108	108	23.22	0.5	24.5	19.05	0.0	20.0
			216	0	23.33	0.5	24.5	18.85	0.0	20.0
		QPSK	1	1	23.08	0.0	25.0	18.72	0.0	20.0
			1	108	23.54	0.0	25.0	18.86	0.0	20.0
			1	214	23.40	0.0	25.0	18.78	0.0	20.0
			108	0	23.06	1.0	24.0	18.88	0.0	20.0
			108	54	23.94	0.0	25.0	18.87	0.0	20.0
			108	108	23.91	1.0	24.0	18.97	0.0	20.0
			216	0	22.82	1.0	24.0	18.90	0.0	20.0
		16QAM	1	1	22.90	1.0	24.0	18.81	0.0	20.0
			1	108	23.14	1.0	24.0	18.99	0.0	20.0
			1	214	23.02	1.0	24.0	18.91	0.0	20.0
		64QAM	1	1	21.26	2.5	22.5	18.78	0.0	20.0
		256QAM	1	1	19.09	4.5	20.5	18.38	0.0	20.0
	CP-OFDM	QPSK	1	1	21.89	1.5	23.5	19.16	0.0	20.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)	MPR	Tune-up Limit	Measured Pwr (dBm)	MPR	Tune-up Limit
					349000 1745 MHz			349000 1745 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.62	0.0	25.0	18.84	0.0	20.0
			1	80	23.83	0.0	25.0	18.86	0.0	20.0
			1	158	23.71	0.0	25.0	18.82	0.0	20.0
			80	0	23.04	0.5	24.5	18.81	0.0	20.0
			80	40	23.95	0.0	25.0	18.79	0.0	20.0
			80	80	23.49	0.5	24.5	18.92	0.0	20.0
			160	0	23.49	0.5	24.5	18.89	0.0	20.0
		QPSK	1	1	23.60	0.0	25.0	18.72	0.0	20.0
			1	80	23.81	0.0	25.0	18.86	0.0	20.0
			1	158	23.74	0.0	25.0	18.77	0.0	20.0
			80	0	23.04	1.0	24.0	18.78	0.0	20.0
			80	40	23.73	0.0	25.0	18.79	0.0	20.0
			80	80	23.15	1.0	24.0	18.95	0.0	20.0
			160	0	23.10	1.0	24.0	18.79	0.0	20.0
		16QAM	1	1	22.83	1.0	24.0	18.78	0.0	20.0
		64QAM	1	1	21.77	2.5	22.5	19.24	0.0	20.0
		256QAM	1	1	19.82	4.5	20.5	19.21	0.0	20.0
	CP-OFDM	QPSK	1	1	22.34	1.5	23.5	18.89	0.0	20.0

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
					[redacted]	349000	[redacted]			[redacted]	349000	[redacted]		
					[redacted]	1745 MHz	[redacted]			[redacted]	1745 MHz	[redacted]		
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1	[redacted]	23.46	[redacted]	0.0	25.0	[redacted]	18.95	[redacted]	0.0	20.0
			1	67	[redacted]	23.52	[redacted]	0.0	25.0	[redacted]	18.93	[redacted]	0.0	20.0
			1	131	[redacted]	23.48	[redacted]	0.0	25.0	[redacted]	19.02	[redacted]	0.0	20.0
			64	0	[redacted]	23.16	[redacted]	0.5	24.5	[redacted]	18.89	[redacted]	0.0	20.0
			64	35	[redacted]	23.85	[redacted]	0.0	25.0	[redacted]	18.89	[redacted]	0.0	20.0
			64	69	[redacted]	23.51	[redacted]	0.5	24.5	[redacted]	19.00	[redacted]	0.0	20.0
			128	0	[redacted]	23.49	[redacted]	0.5	24.5	[redacted]	18.83	[redacted]	0.0	20.0
		QPSK	1	1	[redacted]	23.78	[redacted]	0.0	25.0	[redacted]	18.97	[redacted]	0.0	20.0
			1	67	[redacted]	23.88	[redacted]	0.0	25.0	[redacted]	18.84	[redacted]	0.0	20.0
			1	131	[redacted]	23.74	[redacted]	0.0	25.0	[redacted]	18.98	[redacted]	0.0	20.0
			64	0	[redacted]	22.57	[redacted]	1.0	24.0	[redacted]	18.87	[redacted]	0.0	20.0
			64	35	[redacted]	23.77	[redacted]	0.0	25.0	[redacted]	18.83	[redacted]	0.0	20.0
			64	69	[redacted]	23.10	[redacted]	1.0	24.0	[redacted]	18.95	[redacted]	0.0	20.0
			128	0	[redacted]	23.12	[redacted]	1.0	24.0	[redacted]	19.01	[redacted]	0.0	20.0
		16QAM	1	1	[redacted]	22.95	[redacted]	1.0	24.0	[redacted]	19.18	[redacted]	0.0	20.0
		64QAM	1	1	[redacted]	21.61	[redacted]	2.5	22.5	[redacted]	18.81	[redacted]	0.0	20.0
		256QAM	1	1	[redacted]	19.89	[redacted]	4.5	20.5	[redacted]	19.22	[redacted]	0.0	20.0
	CP-OFDM	QPSK	1	1	[redacted]	22.41	[redacted]	1.5	23.5	[redacted]	19.12	[redacted]	0.0	20.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					344000	349000	354000			344000	349000	354000		
					1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.28	23.12	23.17	0.0	25.0	18.10	18.87	18.79	0.0	20.0
			1	53	23.99	23.45	23.85	0.0	25.0	18.82	18.79	18.72	0.0	20.0
			1	104	23.58	22.98	23.54	0.0	25.0	18.47	18.78	18.76	0.0	20.0
			50	0	23.01	22.73	23.02	0.5	24.5	18.64	18.85	18.83	0.0	20.0
			50	28	23.75	23.52	23.72	0.0	25.0	18.81	18.87	18.84	0.0	20.0
			50	56	23.37	23.30	22.98	0.5	24.5	18.75	18.84	18.82	0.0	20.0
			100	0	23.26	23.28	22.89	0.5	24.5	18.64	18.83	18.76	0.0	20.0
		QPSK	1	1	23.32	23.31	23.09	0.0	25.0	18.07	18.90	18.91	0.0	20.0
			1	53	23.45	23.65	23.50	0.0	25.0	18.73	18.72	18.69	0.0	20.0
			1	104	23.28	22.95	23.21	0.0	25.0	18.34	18.88	18.87	0.0	20.0
			50	0	22.82	22.77	22.78	1.0	24.0	18.62	18.87	18.88	0.0	20.0
			50	28	23.69	23.47	23.59	0.0	25.0	18.84	18.87	18.92	0.0	20.0
			50	56	22.62	22.78	22.94	1.0	24.0	18.71	18.87	18.94	0.0	20.0
			100	0	22.81	22.72	22.91	1.0	24.0	18.71	18.82	18.86	0.0	20.0
		16QAM	1	1	22.38	22.99	22.58	1.0	24.0	18.27	19.04	18.91	0.0	20.0
			1	53	22.36	23.08	22.99	1.0	24.0	18.84	18.92	18.86	0.0	20.0
			1	104	22.41	22.90	22.89	1.0	24.0	18.49	19.01	18.96	0.0	20.0
		64QAM	1	1	21.17	21.75	21.89	2.5	22.5	18.48	19.32	19.32	0.0	20.0
		256QAM	1	1	19.09	19.61	19.67	4.5	20.5	18.41	19.14	19.10	0.0	20.0
	CP-OFDM	QPSK	1	1	22.08	22.10	22.12	1.5	23.5	18.54	19.04	18.98	0.0	20.0

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
					343500	349000	354500			343500	349000	354500		
					1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.53	23.35	23.56	0.0	25.0	18.34	18.91	18.79	0.0	20.0
			1	40	23.66	23.17	23.64	0.0	25.0	18.75	18.82	18.73	0.0	20.0
			1	77	23.25	23.56	23.66	0.0	25.0	18.62	18.91	18.76	0.0	20.0
			36	0	22.66	22.74	23.01	0.5	24.5	18.61	18.89	18.83	0.0	20.0
			36	22	23.43	23.54	23.72	0.0	25.0	18.62	18.91	18.81	0.0	20.0
			36	43	22.68	23.21	22.98	0.5	24.5	18.65	18.86	18.79	0.0	20.0
			75	0	22.74	23.50	22.96	0.5	24.5	18.76	18.85	18.84	0.0	20.0
		QPSK	1	1	23.54	23.27	23.49	0.0	25.0	18.76	18.91	18.75	0.0	20.0
			1	40	23.58	23.36	23.55	0.0	25.0	18.76	18.75	18.73	0.0	20.0
			1	77	23.62	22.98	23.62	0.0	25.0	18.53	18.91	18.76	0.0	20.0
			36	0	22.78	22.77	22.99	1.0	24.0	18.64	18.96	18.74	0.0	20.0
			36	22	23.65	23.47	23.75	0.0	25.0	18.82	18.80	18.82	0.0	20.0
			36	43	22.96	23.06	23.11	1.0	24.0	18.81	18.88	18.84	0.0	20.0
			75	0	22.84	22.53	23.01	1.0	24.0	18.81	18.90	18.81	0.0	20.0
		16QAM	1	1	22.54	22.75	23.12	1.0	24.0	18.67	18.81	19.01	0.0	20.0
		64QAM	1	1	21.20	21.62	21.62	2.5	22.5	18.51	18.97	18.95	0.0	20.0
		256QAM	1	1	19.56	19.56	19.62	4.5	20.5	18.82	19.08	19.01	0.0	20.0
	CP-OFDM	QPSK	1	1	22.28	22.25	22.31	1.5	23.5	18.84	18.90	18.98	0.0	20.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					343000	349000	355000			343000	349000	355000		
					1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.34	23.40	23.31	0.0	25.0	18.62	19.01	18.78	0.0	20.0
			1	26	23.34	23.34	23.34	0.0	25.0	18.68	19.06	18.79	0.0	20.0
			1	50	23.12	23.41	23.51	0.0	25.0	18.72	19.09	18.75	0.0	20.0
			25	0	22.74	23.11	23.07	0.5	24.5	18.75	19.09	18.76	0.0	20.0
			25	14	23.35	23.49	23.64	0.0	25.0	18.72	19.02	18.84	0.0	20.0
			25	27	23.01	23.10	22.82	0.5	24.5	18.72	19.01	18.72	0.0	20.0
			50	0	22.89	22.89	22.91	0.5	24.5	18.78	19.01	18.73	0.0	20.0
		QPSK	1	1	23.03	23.16	23.66	0.0	25.0	18.62	19.07	18.72	0.0	20.0
			1	26	23.12	23.32	23.37	0.0	25.0	18.66	19.06	18.78	0.0	20.0
			1	50	23.09	23.38	23.56	0.0	25.0	18.72	19.10	18.82	0.0	20.0
			25	0	22.80	22.82	22.98	1.0	24.0	18.74	19.04	18.82	0.0	20.0
			25	14	23.49	23.48	23.75	0.0	25.0	18.68	19.10	18.86	0.0	20.0
			25	27	22.85	22.90	22.89	1.0	24.0	18.75	19.06	18.81	0.0	20.0
			50	0	22.84	22.73	22.91	1.0	24.0	18.79	19.09	18.89	0.0	20.0
		16QAM	1	1	22.70	22.57	22.83	1.0	24.0	18.91	18.83	19.05	0.0	20.0
		64QAM	1	1	21.46	21.73	21.54	2.5	22.5	18.81	19.14	19.01	0.0	20.0
		256QAM	1	1	19.54	19.65	19.48	4.5	20.5	18.95	19.08	19.11	0.0	20.0
	CP-OFDM	QPSK	1	1	22.25	22.34	22.27	1.5	23.5	18.87	18.76	18.86	0.0	20.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					342500	349000	355500			342500	349000	355500		
					1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.14	23.54	23.45	0.0	25.0	18.60	18.76	18.89	0.0	20.0
			1	13	23.21	23.53	23.25	0.0	25.0	18.66	18.75	18.94	0.0	20.0
			1	23	23.12	23.43	23.21	0.0	25.0	18.70	18.78	19.03	0.0	20.0
			12	0	22.47	23.02	22.47	0.5	24.5	18.71	18.76	18.75	0.0	20.0
			12	7	23.23	23.56	23.47	0.0	25.0	18.69	18.76	18.82	0.0	20.0
			12	13	22.56	23.01	23.49	0.5	24.5	18.72	18.72	18.76	0.0	20.0
			25	0	22.61	22.92	22.93	0.5	24.5	18.82	18.77	18.81	0.0	20.0
		QPSK	1	1	22.97	23.44	23.64	0.0	25.0	18.61	18.69	18.69	0.0	20.0
			1	13	23.18	23.36	23.50	0.0	25.0	18.67	18.80	18.77	0.0	20.0
			1	23	23.17	23.40	23.50	0.0	25.0	18.78	18.76	18.69	0.0	20.0
			12	0	22.51	22.73	22.94	1.0	24.0	18.65	18.68	18.70	0.0	20.0
			12	7	23.35	23.75	23.77	0.0	25.0	18.75	18.78	18.81	0.0	20.0
			12	13	22.67	22.95	22.89	1.0	24.0	18.76	18.77	18.79	0.0	20.0
			25	0	22.71	22.79	22.89	1.0	24.0	18.89	19.03	18.73	0.0	20.0
		16QAM	1	1	22.49	23.02	22.91	1.0	24.0	19.01	19.12	19.05	0.0	20.0
		64QAM	1	1	21.53	21.45	21.57	2.5	22.5	19.05	18.87	18.91	0.0	20.0
		256QAM	1	1	19.48	19.56	19.64	4.5	20.5	19.11	18.97	18.95	0.0	20.0
	CP-OFDM	QPSK	1	1	22.24	22.34	22.35	1.5	23.5	18.97	18.89	18.89	0.0	20.0

NR Band n41 (Ant.B) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)					
					DSI = 0, 1			DSI =2, 3		
					Measured Pwr (dBm)	MPR	Tune-up Limit	Measured Pwr (dBm)	MPR	Tune-up Limit
					518598			518598		
					2592.99 MHz			2592.99 MHz		
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.92	0.0	18.0	19.87	0.0	21.0
			1	137	17.18	0.0	18.0	20.21	0.0	21.0
			1	271	17.79	0.0	18.0	20.79	0.0	21.0
			135	0	17.04	0.0	18.0	20.08	0.0	21.0
			135	69	17.28	0.0	18.0	20.34	0.0	21.0
			135	138	17.59	0.0	18.0	20.61	0.0	21.0
			270	0	17.31	0.0	18.0	20.29	0.0	21.0
		QPSK	1	1	16.86	0.0	18.0	19.92	0.0	21.0
			1	137	17.17	0.0	18.0	20.24	0.0	21.0
			1	271	17.82	0.0	18.0	20.85	0.0	21.0
			135	0	17.05	0.0	18.0	20.09	0.0	21.0
			135	69	17.33	0.0	18.0	20.34	0.0	21.0
			135	138	17.61	0.0	18.0	20.64	0.0	21.0
			270	0	17.27	0.0	18.0	20.37	0.0	21.0
		16QAM	1	1	17.25	0.0	18.0	20.23	0.0	21.0
			1	137	17.52	0.0	18.0	20.56	0.0	21.0
			1	271	17.80	0.0	18.0	20.81	0.0	21.0
		64QAM	1	1	16.77	0.0	18.0	19.81	0.0	21.0
		256QAM	1	1	17.08	0.0	18.0	20.13	0.0	21.0
	CP-OFDM	QPSK	1	1	16.88	0.0	18.0	19.95	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
					508200	528996			508200	528996		
					2541 MHz	2644.98 MHz			2541 MHz	2644.98 MHz		
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.94	17.31	0.0	18.0	19.89	20.31	0.0	21.0
			1	123	17.16	17.69	0.0	18.0	20.19	20.68	0.0	21.0
			1	243	17.11	17.96	0.0	18.0	20.24	20.72	0.0	21.0
			120	0	17.05	17.55	0.0	18.0	20.04	20.59	0.0	21.0
			120	63	17.07	17.76	0.0	18.0	20.12	20.74	0.0	21.0
			120	125	17.11	17.86	0.0	18.0	20.11	20.88	0.0	21.0
			243	0	17.09	17.72	0.0	18.0	20.06	20.78	0.0	21.0
		QPSK	1	1	16.88	17.41	0.0	18.0	20.02	20.81	0.0	21.0
			1	123	17.14	17.75	0.0	18.0	20.23	20.38	0.0	21.0
			1	243	17.01	17.98	0.0	18.0	20.28	20.73	0.0	21.0
			120	0	17.09	17.60	0.0	18.0	20.27	20.67	0.0	21.0
			120	63	17.06	17.58	0.0	18.0	20.17	20.18	0.0	21.0
			120	125	17.08	17.82	0.0	18.0	20.14	20.93	0.0	21.0
			243	0	17.06	17.76	0.0	18.0	20.11	20.77	0.0	21.0
		16QAM	1	1	16.81	17.36	0.0	18.0	20.27	20.41	0.0	21.0
		64QAM	1	1	16.85	17.04	0.0	18.0	20.12	20.36	0.0	21.0
		256QAM	1	1	17.22	17.51	0.0	18.0	20.17	19.66	0.0	21.0
	CP-OFDM	QPSK	1	1	16.95	17.32	0.0	18.0	19.96	20.41	0.0	21.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.B) 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		529998			507204		529998		
					2536.02 MHz		2649.99 MHz			2536.02 MHz		2649.99 MHz		
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1	16.99		17.51	0.0	18.0	19.94		20.52	0.0	21.0
			1	109	17.12		17.47	0.0	18.0	20.09		20.88	0.0	21.0
			1	215	17.08		17.86	0.0	18.0	20.08		20.94	0.0	21.0
			108	0	17.07		17.69	0.0	18.0	20.09		20.76	0.0	21.0
			108	55	17.09		17.71	0.0	18.0	20.06		20.77	0.0	21.0
			108	109	17.12		17.82	0.0	18.0	20.10		20.86	0.0	21.0
			216	0	17.11		17.71	0.0	18.0	20.14		20.78	0.0	21.0
		QPSK	1	1	16.92		17.57	0.0	18.0	20.13		20.56	0.0	21.0
			1	109	17.13		17.85	0.0	18.0	20.10		20.82	0.0	21.0
			1	215	17.04		17.85	0.0	18.0	20.09		20.91	0.0	21.0
			108	0	17.12		17.69	0.0	18.0	20.15		20.73	0.0	21.0
			108	55	17.11		17.70	0.0	18.0	20.16		20.76	0.0	21.0
			108	109	17.13		17.88	0.0	18.0	20.13		20.95	0.0	21.0
			216	0	17.15		17.84	0.0	18.0	20.14		20.78	0.0	21.0
		16QAM	1	1	17.16		17.66	0.0	18.0	19.91		20.55	0.0	21.0
		64QAM	1	1	16.92		17.29	0.0	18.0	19.85		20.91	0.0	21.0
		256QAM	1	1	17.19		17.72	0.0	18.0	20.18		20.54	0.0	21.0
	CP-OFDM	QPSK	1	1	16.99		17.46	0.0	18.0	19.96		20.56	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
					505200	518598	531996			505200	518598	531996		
					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	17.11	17.13	17.85	0.0	18.0	20.13	20.15	20.77	0.0	21.0
			1	81	17.33	17.43	17.81	0.0	18.0	20.19	20.43	20.84	0.0	21.0
			1	160	17.17	17.75	17.96	0.0	18.0	20.22	20.34	20.84	0.0	21.0
			81	0	17.13	17.28	17.83	0.0	18.0	20.15	20.39	20.62	0.0	21.0
			81	41	17.31	17.45	17.83	0.0	18.0	20.32	20.08	20.86	0.0	21.0
			81	81	17.28	17.60	17.98	0.0	18.0	20.32	20.47	20.96	0.0	21.0
			162	0	17.25	17.42	17.88	0.0	18.0	20.27	20.15	20.79	0.0	21.0
		QPSK	1	1	17.11	17.18	17.89	0.0	18.0	20.20	20.20	20.77	0.0	21.0
			1	81	17.29	17.51	17.91	0.0	18.0	20.42	20.21	20.81	0.0	21.0
			1	160	17.19	17.75	17.97	0.0	18.0	20.33	20.18	20.76	0.0	21.0
			81	0	17.15	17.27	17.87	0.0	18.0	20.18	20.21	20.78	0.0	21.0
			81	41	17.26	17.43	17.81	0.0	18.0	20.37	20.27	20.80	0.0	21.0
			81	81	17.28	17.56	17.87	0.0	18.0	20.29	20.36	20.96	0.0	21.0
			162	0	17.23	17.61	17.97	0.0	18.0	20.26	20.40	20.92	0.0	21.0
		16QAM	1	1	17.29	17.43	17.88	0.0	18.0	20.43	20.15	20.81	0.0	21.0
		64QAM	1	1	16.85	17.08	17.84	0.0	18.0	20.43	20.25	20.83	0.0	21.0
		256QAM	1	1	17.28	17.29	17.88	0.0	18.0	20.21	20.02	20.86	0.0	21.0
	CP-OFDM	QPSK	1	1	17.04	17.02	17.50	0.0	18.0	20.28	20.23	20.84	0.0	21.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.B) 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
					504204	518598	532998			504204	518598	532998		
					2521.02 MHz	2592.99 MHz	2664.99 MHz			2512.02 MHz	2592.99 MHz	2664.99 MHz		
50 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.13	17.16	17.83	0.0	18.0	19.92	20.20	20.80	0.0	21.0
			1	81	17.34	17.68	17.97	0.0	18.0	19.68	20.41	20.96	0.0	21.0
			1	160	17.24	17.85	17.59	0.0	18.0	19.87	20.33	20.81	0.0	21.0
			81	0	17.18	17.41	17.84	0.0	18.0	19.89	20.44	20.69	0.0	21.0
			81	41	17.23	17.56	17.97	0.0	18.0	19.78	20.15	20.93	0.0	21.0
			81	81	17.03	17.86	17.28	0.0	18.0	19.91	20.48	20.91	0.0	21.0
			162	0	17.22	17.85	17.67	0.0	18.0	19.87	20.20	20.86	0.0	21.0
		QPSK	1	1	17.16	17.23	17.82	0.0	18.0	19.89	20.15	20.81	0.0	21.0
			1	81	17.60	17.22	17.97	0.0	18.0	19.69	20.19	20.86	0.0	21.0
			1	160	17.25	17.86	17.71	0.0	18.0	20.17	20.18	20.71	0.0	21.0
			81	0	17.25	17.36	17.65	0.0	18.0	19.92	20.23	20.84	0.0	21.0
			81	41	17.33	17.58	17.94	0.0	18.0	20.07	20.33	20.75	0.0	21.0
			81	81	17.03	17.96	17.29	0.0	18.0	20.08	20.37	20.98	0.0	21.0
			162	0	17.23	17.84	17.68	0.0	18.0	19.79	20.39	20.93	0.0	21.0
		16QAM	1	1	17.17	17.41	17.98	0.0	18.0	20.41	20.19	20.83	0.0	21.0
		64QAM	1	1	17.12	16.96	17.86	0.0	18.0	20.15	20.20	20.78	0.0	21.0
		256QAM	1	1	17.29	16.97	17.85	0.0	18.0	20.19	19.99	20.85	0.0	21.0
	CP-OFDM	QPSK	1	1	17.05	17.08	17.81	0.0	18.0	20.06	20.22	20.82	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
					503202	513468	523734 534000			503202	513468	523734 534000		
					2516.01 MHz	2567.34 MHz	2618.67 MHz 2670 MHz			2516.01 MHz	2567.34 MHz	2618.67 MHz 2670 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.26	17.24	17.56 17.95	0.0	18.0	19.93	20.26	20.62 20.78	0.0	21.0
			1	67	17.42	17.19	17.77 17.92	0.0	18.0	19.71	20.10	20.74 20.91	0.0	21.0
			1	131	17.42	17.23	17.86 17.89	0.0	18.0	19.94	20.13	20.71 20.88	0.0	21.0
			64	0	17.25	17.09	17.61 17.96	0.0	18.0	19.91	20.10	20.65 20.75	0.0	21.0
			64	35	17.32	17.26	17.86 17.89	0.0	18.0	19.77	20.12	20.66 20.93	0.0	21.0
			64	69	17.81	17.28	17.86 17.88	0.0	18.0	19.89	20.12	20.80 20.92	0.0	21.0
			128	0	17.43	17.88	17.91 17.86	0.0	18.0	19.89	20.11	20.77 20.85	0.0	21.0
		QPSK	1	1	17.31	17.21	17.62 17.97	0.0	18.0	19.90	20.05	20.60 20.85	0.0	21.0
			1	67	17.41	17.20	17.83 17.96	0.0	18.0	19.76	20.14	20.74 20.92	0.0	21.0
			1	131	17.44	17.27	17.96 17.94	0.0	18.0	20.12	20.00	20.49 20.78	0.0	21.0
			64	0	17.25	17.17	17.64 17.96	0.0	18.0	19.90	20.12	20.75 20.87	0.0	21.0
			64	35	17.31	17.32	17.85 17.98	0.0	18.0	20.04	20.19	20.85 20.72	0.0	21.0
			64	69	17.89	17.35	17.99 17.96	0.0	18.0	20.11	20.11	20.74 20.93	0.0	21.0
			128	0	17.43	17.86	17.92 17.88	0.0	18.0	19.78	20.06	20.63 20.92	0.0	21.0
		16QAM	1	1	17.05	17.46	17.93 17.98	0.0	18.0	20.45	20.15	20.60 20.81	0.0	21.0
		64QAM	1	1	17.21	17.36	17.43 17.92	0.0	18.0	20.10	20.23	20.59 20.84	0.0	21.0
		256QAM	1	1	17.62	17.33	17.75 17.94	0.0	18.0	20.14	20.58	20.71 20.83	0.0	21.0
	CP-OFDM	QPSK	1	1	17.30	17.24	17.77 17.97	0.0	18.0	20.07	20.09	20.59 20.84	0.0	21.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.B) 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
					502200	510402	518598	526800	534996			502200	510402	518598	526800	534996		
					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		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.21	17.31	17.34	17.76	17.85	0.0	18.0	19.96	20.26	20.18	20.69	20.82	0.0	21.0
			1	53	17.34	17.36	17.51	17.87	17.97	0.0	18.0	19.67	20.10	20.36	20.77	20.89	0.0	21.0
			1	104	17.28	17.48	17.88	17.84	17.97	0.0	18.0	20.00	20.17	20.40	20.72	20.95	0.0	21.0
			50	0	17.24	17.21	17.34	17.82	17.97	0.0	18.0	19.87	20.07	20.37	20.65	20.78	0.0	21.0
			50	28	17.23	17.29	17.54	17.83	17.86	0.0	18.0	19.81	20.07	20.26	20.61	20.96	0.0	21.0
			50	56	17.58	17.02	17.46	17.86	17.53	0.0	18.0	19.85	20.11	20.44	20.79	20.96	0.0	21.0
			100	0	17.36	17.09	17.88	17.81	17.71	0.0	18.0	19.91	20.10	20.17	20.83	20.87	0.0	21.0
		QPSK	1	1	17.21	17.27	17.29	17.87	17.99	0.0	18.0	19.87	20.11	20.21	20.66	20.91	0.0	21.0
			1	53	17.21	17.31	17.49	17.89	17.95	0.0	18.0	19.81	20.11	20.33	20.71	20.87	0.0	21.0
			1	104	17.68	17.48	17.77	17.98	17.96	0.0	18.0	20.09	20.07	20.22	20.55	20.83	0.0	21.0
			50	0	17.27	17.25	17.35	17.88	17.92	0.0	18.0	19.90	20.07	20.34	20.72	20.87	0.0	21.0
			50	28	17.23	17.31	17.60	17.82	17.95	0.0	18.0	20.07	20.22	20.27	20.85	20.76	0.0	21.0
			50	56	17.58	17.07	17.54	17.86	17.46	0.0	18.0	20.08	20.07	20.29	20.70	20.94	0.0	21.0
			100	0	17.36	17.11	17.92	17.78	17.72	0.0	18.0	19.85	20.02	20.47	20.64	20.87	0.0	21.0
		16QAM	1	1	17.06	17.29	17.89	17.86	17.95	0.0	18.0	20.45	20.11	20.20	20.67	20.81	0.0	21.0
		64QAM	1	1	17.08	17.15	17.23	17.72	17.85	0.0	18.0	20.06	20.26	20.15	20.64	20.80	0.0	21.0
		256QAM	1	1	17.34	17.34	17.61	17.95	17.89	0.0	18.0	20.14	20.61	20.08	20.68	20.87	0.0	21.0
	CP-OFDM	QPSK	1	1	17.21	17.31	17.33	17.81	17.86	0.0	18.0	20.03	20.09	20.22	20.65	20.86	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
					501204	509898	518598	527298	535998			501204	509898	518598	527298	535998		
					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	17.68	17.22	17.35	17.85	17.96	0.0	18.0	19.96	20.21	20.19	20.64	20.82	0.0	21.0
			1	26	17.54	17.19	17.47	17.77	17.98	0.0	18.0	19.72	20.14	20.34	20.75	20.94	0.0	21.0
			1	49	17.67	17.21	17.56	17.91	17.92	0.0	18.0	19.97	20.16	20.39	20.71	20.97	0.0	21.0
			25	0	17.13	17.17	17.42	17.77	17.95	0.0	18.0	19.85	20.14	20.36	20.65	20.85	0.0	21.0
			25	13	17.10	17.25	17.51	17.78	17.96	0.0	18.0	19.86	20.06	20.25	20.64	20.93	0.0	21.0
			25	26	17.22	17.26	17.47	17.84	17.98	0.0	18.0	19.88	20.11	20.42	20.85	20.95	0.0	21.0
			50	0	17.13	17.23	17.48	17.76	17.97	0.0	18.0	19.96	20.16	20.24	20.81	20.90	0.0	21.0
		QPSK	1	1	17.18	17.23	17.27	17.83	17.97	0.0	18.0	19.92	20.14	20.28	20.63	20.91	0.0	21.0
			1	26	17.23	17.17	17.35	17.71	17.86	0.0	18.0	19.87	20.07	20.32	20.71	20.93	0.0	21.0
			1	49	17.26	17.24	17.54	17.78	17.94	0.0	18.0	20.08	20.05	20.26	20.62	20.87	0.0	21.0
			25	0	17.24	17.21	17.42	17.85	17.98	0.0	18.0	19.96	20.06	20.33	20.67	20.90	0.0	21.0
			25	13	17.21	17.25	17.53	17.81	17.96	0.0	18.0	20.03	20.18	20.33	20.86	20.74	0.0	21.0
			25	26	17.31	17.28	17.49	17.74	17.98	0.0	18.0	20.04	20.11	20.32	20.69	20.94	0.0	21.0
			50	0	17.16	17.27	17.47	17.84	17.97	0.0	18.0	19.89	20.09	20.44	20.63	20.88	0.0	21.0
		16QAM	1	1	17.38	17.72	17.54	17.76	17.96	0.0	18.0	20.46	20.11	20.18	20.62	20.86	0.0	21.0
		64QAM	1	1	17.40	17.02	17.35	17.91	17.84	0.0	18.0	20.07	20.31	20.20	20.62	20.85	0.0	21.0
		256QAM	1	1	17.67	17.31	17.71	17.67	17.89	0.0	18.0	20.09	20.63	20.13	20.72	20.90	0.0	21.0
	CP-OFDM	QPSK	1	1	17.26	17.26	17.34	17.86	17.98	0.0	18.0	20.06	20.04	20.19	20.67	20.91	0.0	21.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.B) 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
					500700	509652	518598	527550	536496			500700	509652	518598	527550	536496		
					2503.5 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz			2503.5 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.26	17.26	17.47	17.86	17.86	0.0	18.0	19.92	20.20	20.22	20.61	20.87	0.0	21.0
			1	19	17.15	17.21	17.45	17.78	17.85	0.0	18.0	19.78	20.11	20.29	20.73	20.99	0.0	21.0
			1	36	17.32	17.50	17.61	17.80	17.94	0.0	18.0	20.00	20.22	20.36	20.78	20.94	0.0	21.0
			18	0	17.24	17.15	17.42	17.74	17.94	0.0	18.0	19.87	20.11	20.34	20.71	20.81	0.0	21.0
			18	10	17.32	17.21	17.42	17.84	17.94	0.0	18.0	19.93	20.12	20.32	20.66	20.93	0.0	21.0
			18	20	17.14	17.26	17.49	17.75	17.95	0.0	18.0	19.89	20.17	20.41	20.81	20.97	0.0	21.0
			36	0	17.19	17.23	17.52	17.81	17.93	0.0	18.0	19.91	20.14	20.26	20.79	20.91	0.0	21.0
		QPSK	1	1	17.15	17.24	17.44	17.65	17.96	0.0	18.0	19.99	20.17	20.28	20.65	20.94	0.0	21.0
			1	19	17.16	17.27	17.45	17.72	17.92	0.0	18.0	19.93	20.06	20.27	20.77	20.92	0.0	21.0
			1	36	17.26	17.31	17.66	17.75	17.91	0.0	18.0	20.04	20.02	20.33	20.68	20.92	0.0	21.0
			18	0	17.24	17.20	17.43	17.74	17.95	0.0	18.0	19.92	20.09	20.37	20.74	20.93	0.0	21.0
			18	10	17.15	17.21	17.51	17.86	17.96	0.0	18.0	19.98	20.14	20.38	20.82	20.81	0.0	21.0
			18	20	17.32	17.27	17.49	17.86	17.97	0.0	18.0	20.03	20.17	20.33	20.76	20.92	0.0	21.0
			36	0	17.33	17.24	17.51	17.75	17.97	0.0	18.0	19.95	20.12	20.39	20.68	20.92	0.0	21.0
		16QAM	1	1	17.21	17.12	17.05	17.62	17.92	0.0	18.0	20.52	20.15	20.22	20.63	20.84	0.0	21.0
		64QAM	1	1	17.47	17.14	17.31	17.89	17.98	0.0	18.0	20.05	20.28	20.23	20.59	20.85	0.0	21.0
		256QAM	1	1	17.34	17.56	17.76	17.85	17.96	0.0	18.0	20.12	20.59	20.18	20.71	20.96	0.0	21.0
	CP-OFDM	QPSK	1	1	17.19	17.27	17.51	17.86	17.95	0.0	18.0	20.03	20.06	20.24	20.71	20.91	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
					500202	509400	518598	527802	537000			500202	509400	518598	527802	537000		
					2501.01 MHz	2547 MHz	2592.99 MHz	2639.01 MHz	2685 MHz			2501.01 MHz	2547 MHz	2592.99 MHz	2639.01 MHz	2685 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.05	17.27	17.35	17.72	17.89	0.0	18.0	19.88	20.18	20.27	20.63	20.91	0.0	21.0
			1	12	17.02	17.22	17.44	17.82	17.97	0.0	18.0	19.83	20.18	20.34	20.72	20.96	0.0	21.0
			1	22	17.13	17.29	17.42	17.83	17.94	0.0	18.0	19.95	20.21	20.42	20.79	20.92	0.0	21.0
			12	0	17.02	17.26	17.57	17.81	17.86	0.0	18.0	19.94	20.17	20.39	20.70	20.88	0.0	21.0
			12	6	17.04	17.22	17.42	17.78	17.97	0.0	18.0	19.91	20.14	20.30	20.72	20.95	0.0	21.0
			12	12	17.03	17.21	17.49	17.77	17.92	0.0	18.0	19.90	20.13	20.38	20.79	20.98	0.0	21.0
			24	0	17.01	17.19	17.48	17.78	17.97	0.0	18.0	19.94	20.12	20.33	20.76	20.96	0.0	21.0
		QPSK	1	1	17.02	17.26	17.48	17.68	17.88	0.0	18.0	19.94	20.15	20.32	20.65	20.94	0.0	21.0
			1	12	17.05	17.25	17.36	17.79	17.98	0.0	18.0	19.91	20.13	20.34	20.76	20.95	0.0	21.0
			1	22	17.06	17.25	17.41	17.83	17.90	0.0	18.0	20.01	20.09	20.37	20.74	20.94	0.0	21.0
			12	0	16.99	17.26	17.46	17.79	17.94	0.0	18.0	19.98	20.13	20.39	20.75	20.89	0.0	21.0
			12	6	17.16	17.23	17.47	17.83	17.95	0.0	18.0	19.99	20.13	20.37	20.78	20.84	0.0	21.0
			12	12	17.02	17.25	17.48	17.78	17.96	0.0	18.0	20.02	20.15	20.37	20.75	20.95	0.0	21.0
			24	0	17.06	17.21	17.47	17.81	17.86	0.0	18.0	19.99	20.16	20.36	20.75	20.97	0.0	21.0
		16QAM	1	1	17.04	17.41	17.36	17.87	17.96	0.0	18.0	20.50	20.13	20.25	20.66	20.91	0.0	21.0
		64QAM	1	1	16.97	17.09	17.17	17.57	17.90	0.0	18.0	20.03	20.24	20.19	20.65	20.87	0.0	21.0
		256QAM	1	1	17.24	17.35	17.63	17.54	17.86	0.0	18.0	20.08	20.58	20.24	20.70	20.92	0.0	21.0
	CP-OFDM	QPSK	1	1	16.95	17.23	17.58	17.91	17.96	0.0	18.0	20.02	20.07	20.19	20.69	20.94	0.0	21.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.F) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum allowed output power (dBm)								
					DSI = 0, 1			DSI = 3			DSI = 2		
					Measured Pwr (dBm)	MPR	Tune-up Limit	Measured Pwr (dBm)	MPR	Tune-up Limit	Measured Pwr (dBm)	MPR	Tune-up Limit
					518598			518598			518598		
					2592.99 MHz			2592.99 MHz			2592.99 MHz		
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.61	0.0	20.0	20.97	0.0	21.0	19.38	0.0	20.0
			1	137	19.32	0.0	20.0	20.69	0.0	21.0	19.05	0.0	20.0
			1	271	19.18	0.0	20.0	20.64	0.0	21.0	18.76	0.0	20.0
			135	0	19.53	0.0	20.0	20.88	0.0	21.0	19.25	0.0	20.0
			135	69	19.35	0.0	20.0	20.78	0.0	21.0	19.16	0.0	20.0
			135	138	19.21	0.0	20.0	20.65	0.0	21.0	18.94	0.0	20.0
			270	0	19.35	0.0	20.0	20.76	0.0	21.0	19.10	0.0	20.0
		QPSK	1	1	19.63	0.0	20.0	20.98	0.0	21.0	19.36	0.0	20.0
			1	137	19.31	0.0	20.0	20.79	0.0	21.0	19.03	0.0	20.0
			1	271	19.21	0.0	20.0	20.69	0.0	21.0	18.83	0.0	20.0
			135	0	19.55	0.0	20.0	20.93	0.0	21.0	19.15	0.0	20.0
			135	69	19.40	0.0	20.0	20.81	0.0	21.0	18.96	0.0	20.0
			135	138	19.23	0.0	20.0	20.67	0.0	21.0	18.84	0.0	20.0
			270	0	19.42	0.0	20.0	20.81	0.0	21.0	18.44	0.0	20.0
		16QAM	1	1	19.87	0.0	20.0	20.84	0.0	21.0	19.72	0.0	20.0
			1	137	19.55	0.0	20.0	20.52	0.0	21.0	19.42	0.0	20.0
			1	271	19.43	0.0	20.0	20.47	0.0	21.0	19.26	0.0	20.0
		64QAM	1	1	19.84	0.0	20.0	20.81	0.0	21.0	19.43	0.0	20.0
		256QAM	1	1	19.94	0.0	20.0	20.88	0.0	21.0	19.70	0.0	20.0
	CP-OFDM	QPSK	1	1	19.86	0.0	20.0	20.97	0.0	21.0	19.27	0.0	20.0

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
					508200	528996			508200	528996			508200	528996		
					2541 MHz	2644.98 MHz			2541 MHz	2644.98 MHz			2541 MHz	2644.98 MHz		
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.67	19.12	0.0	20.0	20.80	20.73	0.0	21.0	19.13	19.31	0.0	20.0
			1	123	19.45	18.92	0.0	20.0	20.80	20.57	0.0	21.0	19.17	19.33	0.0	20.0
			1	243	19.93	19.11	0.0	20.0	20.96	20.65	0.0	21.0	19.35	19.22	0.0	20.0
			120	0	19.50	19.19	0.0	20.0	20.56	20.65	0.0	21.0	19.43	19.47	0.0	20.0
			120	63	19.68	18.98	0.0	20.0	20.54	20.70	0.0	21.0	19.29	19.12	0.0	20.0
			120	125	19.69	18.90	0.0	20.0	20.85	20.62	0.0	21.0	19.38	19.27	0.0	20.0
			243	0	19.89	18.95	0.0	20.0	20.71	20.73	0.0	21.0	19.24	19.09	0.0	20.0
		QPSK	1	1	19.71	19.08	0.0	20.0	20.84	20.83	0.0	21.0	19.40	19.40	0.0	20.0
			1	123	19.66	19.36	0.0	20.0	20.69	20.57	0.0	21.0	19.35	19.21	0.0	20.0
			1	243	19.70	19.00	0.0	20.0	20.67	20.64	0.0	21.0	19.56	19.20	0.0	20.0
			120	0	19.62	19.04	0.0	20.0	20.68	20.55	0.0	21.0	19.38	19.14	0.0	20.0
			120	63	19.58	19.09	0.0	20.0	20.97	20.79	0.0	21.0	19.25	19.27	0.0	20.0
			120	125	19.68	19.13	0.0	20.0	20.86	20.59	0.0	21.0	19.30	19.23	0.0	20.0
			243	0	19.90	19.09	0.0	20.0	20.84	20.82	0.0	21.0	19.45	19.23	0.0	20.0
		16QAM	1	1	19.75	19.19	0.0	20.0	20.69	20.89	0.0	21.0	19.06	19.51	0.0	20.0
		64QAM	1	1	19.72	18.92	0.0	20.0	20.55	20.75	0.0	21.0	19.13	19.16	0.0	20.0
		256QAM	1	1	19.66	19.13	0.0	20.0	20.51	20.26	0.0	21.0	19.28	19.41	0.0	20.0
	CP-OFDM	QPSK	1	1	19.45	19.18	0.0	20.0	20.80	20.54	0.0	21.0	19.18	19.33	0.0	20.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.F) 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
					507204		529998			507204		529998			507204		529998		
					2536.02 MHz		2649.99 MHz			2536.02 MHz		2649.99 MHz			2536.02 MHz		2649.99 MHz		
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.65		19.14	0.0	20.0	20.77		20.74	0.0	21.0	19.16		19.28	0.0	20.0
			1	109	19.49		19.01	0.0	20.0	20.82		20.62	0.0	21.0	19.22		19.38	0.0	20.0
			1	215	19.89		19.07	0.0	20.0	20.94		20.64	0.0	21.0	19.38		19.26	0.0	20.0
			108	0	19.51		19.24	0.0	20.0	20.62		20.65	0.0	21.0	19.43		19.46	0.0	20.0
			108	55	19.73		18.98	0.0	20.0	20.58		20.72	0.0	21.0	19.35		19.09	0.0	20.0
			108	109	19.75		18.97	0.0	20.0	20.88		20.63	0.0	21.0	19.44		19.33	0.0	20.0
			216	0	19.85		18.91	0.0	20.0	20.73		20.69	0.0	21.0	19.25		19.14	0.0	20.0
		QPSK	1	1	19.66		19.17	0.0	20.0	20.80		20.83	0.0	21.0	19.46		19.44	0.0	20.0
			1	109	19.68		19.42	0.0	20.0	20.72		20.59	0.0	21.0	19.34		19.24	0.0	20.0
			1	215	19.69		19.05	0.0	20.0	20.70		20.61	0.0	21.0	19.52		19.17	0.0	20.0
			108	0	19.62		19.08	0.0	20.0	20.73		20.53	0.0	21.0	19.38		19.17	0.0	20.0
			108	55	19.55		19.07	0.0	20.0	20.94		20.77	0.0	21.0	19.30		19.28	0.0	20.0
			108	109	19.66		19.12	0.0	20.0	20.82		20.63	0.0	21.0	19.28		19.24	0.0	20.0
			216	0	19.96		19.05	0.0	20.0	20.85		20.81	0.0	21.0	19.43		19.29	0.0	20.0
		16QAM	1	1	19.71		19.14	0.0	20.0	20.68		20.84	0.0	21.0	19.07		19.56	0.0	20.0
		64QAM	1	1	19.70		19.00	0.0	20.0	20.54		20.74	0.0	21.0	19.15		19.17	0.0	20.0
		256QAM	1	1	19.71		19.21	0.0	20.0	20.54		20.32	0.0	21.0	19.30		19.43	0.0	20.0
	CP-OFDM	QPSK	1	1	19.47		19.21	0.0	20.0	20.80		20.58	0.0	21.0	19.15		19.34	0.0	20.0

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
					505200	518598	531996			505200	518598	531996			505200	518598	531996		
					2526 MHz	2592.99 MHz	2659.98 MHz			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	19.63	19.31	19.15	0.0	20.0	20.74	20.89	20.77	0.0	21.0	19.16	19.41	19.27	0.0	20.0
			1	81	19.58	19.18	19.00	0.0	20.0	20.85	20.92	20.60	0.0	21.0	19.22	19.43	19.35	0.0	20.0
			1	160	19.95	19.22	19.15	0.0	20.0	20.96	20.88	20.63	0.0	21.0	19.33	19.46	19.23	0.0	20.0
			81	0	19.50	19.04	19.26	0.0	20.0	20.57	20.74	20.69	0.0	21.0	19.44	19.48	19.41	0.0	20.0
			81	41	19.76	19.25	19.02	0.0	20.0	20.56	20.84	20.70	0.0	21.0	19.40	19.47	19.15	0.0	20.0
			81	81	19.76	19.28	19.03	0.0	20.0	20.85	20.77	20.66	0.0	21.0	19.42	19.35	19.39	0.0	20.0
			162	0	19.80	19.35	18.98	0.0	20.0	20.68	20.98	20.65	0.0	21.0	19.26	19.42	19.18	0.0	20.0
		QPSK	1	1	19.70	19.37	19.13	0.0	20.0	20.82	20.80	20.78	0.0	21.0	19.49	19.35	19.43	0.0	20.0
			1	81	19.67	19.24	19.38	0.0	20.0	20.72	20.77	20.61	0.0	21.0	19.32	19.44	19.23	0.0	20.0
			1	160	19.69	19.31	19.01	0.0	20.0	20.72	20.84	20.63	0.0	21.0	19.53	19.39	19.20	0.0	20.0
			81	0	19.68	19.06	19.16	0.0	20.0	20.77	20.75	20.56	0.0	21.0	19.39	19.31	19.20	0.0	20.0
			81	41	19.62	18.97	19.02	0.0	20.0	20.89	20.96	20.80	0.0	21.0	19.35	19.36	19.23	0.0	20.0
			81	81	19.68	19.07	19.11	0.0	20.0	20.76	20.94	20.68	0.0	21.0	19.23	19.52	19.20	0.0	20.0
			162	0	19.92	19.36	19.07	0.0	20.0	20.81	20.82	20.76	0.0	21.0	19.43	19.36	19.26	0.0	20.0
		16QAM	1	1	19.69	19.01	19.13	0.0	20.0	20.67	20.87	20.82	0.0	21.0	19.12	19.61	19.59	0.0	20.0
		64QAM	1	1	19.79	18.81	19.00	0.0	20.0	20.59	20.77	20.79	0.0	21.0	19.16	19.49	19.23	0.0	20.0
		256QAM	1	1	19.73	19.45	19.29	0.0	20.0	20.48	20.58	20.30	0.0	21.0	19.31	19.65	19.48	0.0	20.0
	CP-OFDM	QPSK	1	1	19.48	19.28	19.18	0.0	20.0	20.85	20.89	20.62	0.0	21.0	19.13	19.39	19.31	0.0	20.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.F) 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
					504204	518598	532998			504204	518598	532998			504204	518598	532998		
					2512.02 MHz	2592.99 MHz	2664.99 MHz			2512.02 MHz	2592.99 MHz	2664.99 MHz			2512.02 MHz	2592.99 MHz	2664.99 MHz		
50 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.66	19.36	19.14	0.0	20.0	20.78	20.90	20.73	0.0	21.0	19.18	19.37	19.30	0.0	20.0
			1	81	19.65	19.21	18.99	0.0	20.0	20.86	20.95	20.65	0.0	21.0	19.28	19.41	19.33	0.0	20.0
			1	160	19.91	19.21	19.15	0.0	20.0	20.93	20.92	20.67	0.0	21.0	19.29	19.45	19.19	0.0	20.0
			81	0	19.50	19.05	19.25	0.0	20.0	20.60	20.76	20.69	0.0	21.0	19.41	19.47	19.39	0.0	20.0
			81	41	19.84	19.32	18.99	0.0	20.0	20.62	20.90	20.67	0.0	21.0	19.35	19.47	19.12	0.0	20.0
			81	81	19.84	19.23	19.11	0.0	20.0	20.85	20.82	20.72	0.0	21.0	19.38	19.41	19.38	0.0	20.0
			162	0	19.78	19.34	19.04	0.0	20.0	20.72	20.93	20.69	0.0	21.0	19.26	19.44	19.22	0.0	20.0
		QPSK	1	1	19.71	19.32	19.13	0.0	20.0	20.85	20.83	20.76	0.0	21.0	19.49	19.36	19.38	0.0	20.0
			1	81	19.69	19.33	19.34	0.0	20.0	20.78	20.72	20.57	0.0	21.0	19.31	19.43	19.20	0.0	20.0
			1	160	19.72	19.35	18.99	0.0	20.0	20.74	20.83	20.64	0.0	21.0	19.50	19.36	19.19	0.0	20.0
			81	0	19.66	19.09	19.14	0.0	20.0	20.82	20.79	20.61	0.0	21.0	19.37	19.26	19.22	0.0	20.0
			81	41	19.65	19.06	19.03	0.0	20.0	20.84	20.97	20.81	0.0	21.0	19.37	19.42	19.23	0.0	20.0
			81	81	19.67	19.04	19.14	0.0	20.0	20.78	20.89	20.66	0.0	21.0	19.24	19.50	19.23	0.0	20.0
			162	0	19.88	19.34	19.14	0.0	20.0	20.87	20.80	20.82	0.0	21.0	19.45	19.39	19.25	0.0	20.0
		16QAM	1	1	19.73	18.98	19.16	0.0	20.0	20.63	20.89	20.88	0.0	21.0	19.18	19.64	19.55	0.0	20.0
		64QAM	1	1	19.80	18.80	19.02	0.0	20.0	20.60	20.77	20.80	0.0	21.0	19.18	19.50	19.26	0.0	20.0
		256QAM	1	1	19.77	19.42	19.26	0.0	20.0	20.48	20.53	20.35	0.0	21.0	19.36	19.63	19.45	0.0	20.0
	CP-OFDM	QPSK	1	1	19.50	19.25	19.25	0.0	20.0	20.81	20.86	20.68	0.0	21.0	19.12	19.39	19.28	0.0	20.0

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
					503202	513468	523734	534000			503202	513468	523734	534000			503202	513468	523734	534000		
					2516.01 MHz	2567.34 MHz	2618.67 MHz	2670 MHz			2516.01 MHz	2567.34 MHz	2618.67 MHz	2670 MHz			2516.01 MHz	2567.34 MHz	2618.67 MHz	2670 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.70	19.32	18.98	19.15	0.0	20.0	20.74	20.68	20.61	20.72	0.0	21.0	19.23	19.25	19.23	19.35	0.0	20.0
			1	67	19.61	19.20	18.90	19.05	0.0	20.0	20.87	20.81	20.75	20.63	0.0	21.0	19.33	19.41	19.19	19.33	0.0	20.0
			1	131	19.99	19.20	18.90	19.21	0.0	20.0	20.99	20.65	20.67	20.65	0.0	21.0	19.28	19.30	19.29	19.24	0.0	20.0
			64	0	19.58	19.02	18.95	19.29	0.0	20.0	20.61	20.75	20.47	20.74	0.0	21.0	19.44	19.48	19.21	19.39	0.0	20.0
			64	35	19.80	19.27	19.01	19.05	0.0	20.0	20.64	20.63	20.64	20.69	0.0	21.0	19.36	19.34	19.29	19.15	0.0	20.0
			64	69	19.86	19.27	19.19	19.09	0.0	20.0	20.80	20.76	20.75	20.70	0.0	21.0	19.33	19.28	19.34	19.40	0.0	20.0
			128	0	19.86	19.29	19.05	19.04	0.0	20.0	20.67	20.79	20.68	20.73	0.0	21.0	19.25	19.29	19.15	19.28	0.0	20.0
		QPSK	1	1	19.77	19.30	19.07	19.12	0.0	20.0	20.85	20.91	20.68	20.78	0.0	21.0	19.50	19.25	19.43	19.44	0.0	20.0
			1	67	19.69	19.30	19.23	19.29	0.0	20.0	20.83	20.69	20.74	20.63	0.0	21.0	19.33	19.32	19.26	19.22	0.0	20.0
			1	131	19.81	19.41	19.03	19.07	0.0	20.0	20.74	20.74	20.58	20.64	0.0	21.0	19.45	19.27	19.16	19.18	0.0	20.0
			64	0	19.63	19.16	19.12	19.23	0.0	20.0	20.78	20.76	20.58	20.65	0.0	21.0	19.38	19.45	19.22	19.24	0.0	20.0
			64	35	19.69	19.12	18.99	19.03	0.0	20.0	20.80	20.73	20.83	20.85	0.0	21.0	19.32	19.29	19.32	19.19	0.0	20.0
			64	69	19.62	19.09	18.97	19.12	0.0	20.0	20.74	20.74	20.96	20.70	0.0	21.0	19.29	19.32	19.25	19.19	0.0	20.0
			128	0	19.84	19.39	19.11	19.17	0.0	20.0	20.82	20.70	20.70	20.77	0.0	21.0	19.48	19.37	19.15	19.27	0.0	20.0
		16QAM	1	1	19.80	19.00	19.31	19.18	0.0	20.0	20.69	20.71	20.93	20.93	0.0	21.0	19.16	19.33	19.59	19.54	0.0	20.0
		64QAM	1	1	19.77	18.82	18.99	19.10	0.0	20.0	20.55	20.77	20.62	20.78	0.0	21.0	19.16	19.34	19.62	19.23	0.0	20.0
		256QAM	1	1	19.77	19.44	19.19	19.30	0.0	20.0	20.45	20.55	20.25	20.38	0.0	21.0	19.34	19.71	19.38	19.46	0.0	20.0
	CP-OFDM	QPSK	1	1	19.54	19.32	18.97	19.26	0.0	20.0	20.79	20.64	20.72	20.65	0.0	21.0	19.18	19.18	19.29	19.30	0.0	20.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.F) 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
					502200	510402	518598	526800	534996			502200	510402	518598	526800	534996			502200	510402	518598	526800	534996		
					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			2511 MHz	2552.01 MHz	2592.99 MHz	2634 MHz	2674.98 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.75	19.79	19.35	19.01	19.17	0.0	20.0	20.76	20.65	20.97	20.65	20.77	0.0	21.0	19.27	19.24	19.38	19.28	19.30	0.0	20.0
			1	53	19.68	19.98	19.18	18.91	19.00	0.0	20.0	20.84	20.76	20.97	20.70	20.68	0.0	21.0	19.32	19.36	19.38	19.19	19.31	0.0	20.0
			1	104	19.97	19.88	19.28	18.94	19.20	0.0	20.0	20.94	20.69	20.96	20.65	20.68	0.0	21.0	19.34	19.28	19.47	19.31	19.21	0.0	20.0
			50	0	19.64	19.84	19.07	19.02	19.32	0.0	20.0	20.67	20.72	20.75	20.52	20.69	0.0	21.0	19.40	19.46	19.49	19.24	19.43	0.0	20.0
			50	28	19.80	19.88	19.31	18.99	19.08	0.0	20.0	20.62	20.67	20.93	20.62	20.66	0.0	21.0	19.34	19.35	19.45	19.29	19.17	0.0	20.0
			50	56	19.92	19.89	19.22	19.21	19.17	0.0	20.0	20.85	20.73	20.82	20.74	20.74	0.0	21.0	19.33	19.30	19.39	19.31	19.44	0.0	20.0
			100	0	19.86	19.84	19.38	19.14	19.02	0.0	20.0	20.68	20.80	20.85	20.74	20.70	0.0	21.0	19.29	19.35	19.38	19.13	19.30	0.0	20.0
		QPSK	1	1	19.79	19.77	19.35	19.11	19.11	0.0	20.0	20.82	20.89	20.91	20.68	20.77	0.0	21.0	19.49	19.27	19.33	19.39	19.39	0.0	20.0
			1	53	19.75	19.92	19.36	19.18	19.26	0.0	20.0	20.85	20.74	20.81	20.74	20.66	0.0	21.0	19.34	19.27	19.43	19.28	19.22	0.0	20.0
			1	104	19.89	19.83	19.38	19.10	19.15	0.0	20.0	20.75	20.79	20.88	20.58	20.60	0.0	21.0	19.42	19.22	19.43	19.20	19.24	0.0	20.0
			50	0	19.67	19.79	19.15	19.11	19.21	0.0	20.0	20.75	20.78	20.83	20.61	20.69	0.0	21.0	19.40	19.45	19.35	19.27	19.25	0.0	20.0
			50	28	19.70	19.94	19.16	19.07	19.05	0.0	20.0	20.82	20.79	20.93	20.80	20.86	0.0	21.0	19.36	19.27	19.42	19.37	19.23	0.0	20.0
			50	56	19.70	19.88	19.14	19.04	19.11	0.0	20.0	20.69	20.74	20.85	20.99	20.67	0.0	21.0	19.35	19.27	19.46	19.25	19.18	0.0	20.0
			100	0	19.84	19.73	19.36	19.15	19.19	0.0	20.0	20.83	20.75	20.84	20.66	20.78	0.0	21.0	19.44	19.34	19.41	19.21	19.29	0.0	20.0
		16QAM	1	1	19.81	19.92	18.99	19.34	19.25	0.0	20.0	20.68	20.66	20.95	20.91	20.88	0.0	21.0	19.22	19.33	19.60	19.58	19.53	0.0	20.0
		64QAM	1	1	19.84	19.75	18.91	18.97	19.12	0.0	20.0	20.61	20.77	20.87	20.66	20.73	0.0	21.0	19.14	19.34	19.41	19.57	19.27	0.0	20.0
		256QAM	1	1	19.82	19.89	19.49	19.23	19.33	0.0	20.0	20.42	20.59	20.49	20.30	20.43	0.0	21.0	19.40	19.72	19.65	19.41	19.48	0.0	20.0
	CP-OFDM	QPSK	1	1	19.62	19.82	19.33	18.96	19.22	0.0	20.0	20.79	20.64	20.83	20.74	20.71	0.0	21.0	19.23	19.21	19.44	19.29	19.31	0.0	20.0

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
					501204	509898	518598	527298	535998			501204	509898	518598	527298	535998			501204	509898	518598	527298	535998		
					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			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	19.79	19.87	19.35	19.05	19.18	0.0	20.0	20.78	20.71	20.99	20.69	20.75	0.0	21.0	19.31	19.28	19.43	19.31	19.27	0.0	20.0
			1	26	19.74	19.92	19.13	18.95	19.02	0.0	20.0	20.83	20.78	20.95	20.73	20.63	0.0	21.0	19.38	19.35	19.42	19.16	19.28	0.0	20.0
			1	49	19.99	19.95	19.29	18.95	19.19	0.0	20.0	20.91	20.69	20.93	20.66	20.71	0.0	21.0	19.40	19.25	19.45	19.31	19.25	0.0	20.0
			25	0	19.71	19.92	19.12	19.04	19.30	0.0	20.0	20.71	20.75	20.73	20.55	20.75	0.0	21.0	19.35	19.42	19.44	19.20	19.38	0.0	20.0
			25	13	19.82	19.83	19.28	19.05	19.14	0.0	20.0	20.63	20.66	20.92	20.64	20.69	0.0	21.0	19.36	19.34	19.43	19.24	19.20	0.0	20.0
			25	26	19.93	19.97	19.20	19.21	19.16	0.0	20.0	20.88	20.74	20.86	20.71	20.72	0.0	21.0	19.33	19.36	19.35	19.29	19.39	0.0	20.0
			50	0	19.87	19.91	19.33	19.10	19.10	0.0	20.0	20.74	20.83	20.87	20.71	20.70	0.0	21.0	19.26	19.39	19.41	19.18	19.29	0.0	20.0
		QPSK	1	1	19.85	19.82	19.31	19.12	19.15	0.0	20.0	20.83	20.86	20.92	20.71	20.72	0.0	21.0	19.48	19.33	19.36	19.34	19.38	0.0	20.0
			1	26	19.79	19.93	19.41	19.19	19.24	0.0	20.0	20.87	20.69	20.80	20.77	20.66	0.0	21.0	19.39	19.33	19.39	19.34	19.25	0.0	20.0
			1	49	19.92	19.88	19.35	19.15	19.15	0.0	20.0	20.74	20.85	20.90	20.61	20.61	0.0	21.0	19.39	19.21	19.49	19.24	19.26	0.0	20.0
			25	0	19.64	19.85	19.19	19.13	19.16	0.0	20.0	20.78	20.80	20.86	20.66	20.75	0.0	21.0	19.39	19.45	19.40	19.24	19.27	0.0	20.0
			25	13	19.76	19.98	19.24	19.09	19.06	0.0	20.0	20.79	20.79	20.98	20.75	20.81	0.0	21.0	19.36	19.26	19.47	19.34	19.29	0.0	20.0
			25	26	19.79	19.86	19.17	19.04	19.15	0.0	20.0	20.68	20.78	20.90	20.98	20.67	0.0	21.0	19.35	19.31	19.48	19.22	19.24	0.0	20.0
			50	0	19.84	19.82	19.33	19.24	19.21	0.0	20.0	20.82	20.76	20.84	20.66	20.78	0.0	21.0	19.42	19.38	19.40	19.24	19.30	0.0	20.0
		16QAM	1	1	19.90	19.91	19.06	19.32	19.31	0.0	20.0	20.65	20.67	20.91	20.94	20.88	0.0	21.0	19.17	19.29	19.56	19.61	19.55	0.0	20.0
		64QAM	1	1	19.89	19.70	18.88	19.04	19.16	0.0	20.0	20.64	20.79	20.82	20.71	20.75	0.0	21.0	19.15	19.38	19.40	19.53	19.26	0.0	20.0
		256QAM	1	1	19.84	19.98	19.57	19.32	19.39	0.0	20.0	20.44	20.59	20.53	20.34	20.45	0.0	21.0	19.45	19.67	19.69	19.40	19.52	0.0	20.0
	CP-OFDM	QPSK	1	1	19.66	19.91	19.31	18.99	19.20	0.0	20.0	20.80	20.60	20.89	20.73	20.70	0.0	21.0	19.25	19.22	19.42	19.33	19.33	0.0	20.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

NR Band n41 (Ant.F) 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
					500700	509652	518598	527550	536496			500700	509652	518598	527550	536496			500700	509652	518598	527550	536496		
					2503.5 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz			2503.5 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz			2503.5 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.86	19.88	19.31	19.13	19.19	0.0	20.0	20.81	20.73	20.98	20.71	20.73	0.0	21.0	19.36	19.33	19.45	19.32	19.33	0.0	20.0
			1	19	19.82	19.97	19.20	19.00	19.07	0.0	20.0	20.85	20.76	20.97	20.76	20.65	0.0	21.0	19.37	19.30	19.48	19.21	19.34	0.0	20.0
			1	36	19.94	19.94	19.27	18.99	19.22	0.0	20.0	20.87	20.75	20.90	20.69	20.69	0.0	21.0	19.40	19.31	19.50	19.29	19.24	0.0	20.0
			18	0	19.73	19.98	19.21	19.03	19.25	0.0	20.0	20.73	20.80	20.79	20.61	20.75	0.0	21.0	19.35	19.43	19.39	19.23	19.33	0.0	20.0
			18	10	19.79	19.92	19.27	19.14	19.09	0.0	20.0	20.69	20.71	20.91	20.64	20.74	0.0	21.0	19.36	19.40	19.42	19.23	19.23	0.0	20.0
			18	20	19.93	19.98	19.20	19.19	19.19	0.0	20.0	20.83	20.73	20.87	20.72	20.77	0.0	21.0	19.37	19.36	19.38	19.24	19.34	0.0	20.0
			36	0	19.89	19.93	19.30	19.16	19.13	0.0	20.0	20.78	20.85	20.84	20.66	20.72	0.0	21.0	19.28	19.40	19.41	19.23	19.27	0.0	20.0
		QPSK	1	1	19.81	19.89	19.29	19.19	19.13	0.0	20.0	20.83	20.86	20.87	20.67	20.72	0.0	21.0	19.47	19.33	19.41	19.35	19.34	0.0	20.0
			1	19	19.81	19.95	19.38	19.18	19.20	0.0	20.0	20.82	20.71	20.85	20.72	20.71	0.0	21.0	19.40	19.35	19.41	19.29	19.29	0.0	20.0
			1	36	19.93	19.96	19.35	19.19	19.19	0.0	20.0	20.78	20.84	20.94	20.67	20.67	0.0	21.0	19.36	19.26	19.46	19.25	19.27	0.0	20.0
			18	0	19.68	19.92	19.21	19.16	19.17	0.0	20.0	20.77	20.86	20.87	20.69	20.75	0.0	21.0	19.40	19.40	19.43	19.29	19.26	0.0	20.0
			18	10	19.83	19.95	19.20	19.08	19.13	0.0	20.0	20.77	20.85	20.94	20.71	20.78	0.0	21.0	19.41	19.30	19.45	19.35	19.31	0.0	20.0
			18	20	19.76	19.94	19.21	19.05	19.23	0.0	20.0	20.73	20.78	20.85	20.98	20.69	0.0	21.0	19.36	19.30	19.44	19.26	19.29	0.0	20.0
			36	0	19.93	19.88	19.31	19.20	19.27	0.0	20.0	20.77	20.80	20.83	20.71	20.78	0.0	21.0	19.41	19.44	19.44	19.27	19.31	0.0	20.0
		16QAM	1	1	19.96	19.95	19.14	19.41	19.37	0.0	20.0	20.60	20.72	20.91	20.98	20.84	0.0	21.0	19.20	19.26	19.60	19.59	19.51	0.0	20.0
		64QAM	1	1	19.97	19.77	18.96	19.11	19.25	0.0	20.0	20.67	20.78	20.83	20.72	20.75	0.0	21.0	19.16	19.33	19.35	19.56	19.26	0.0	20.0
		256QAM	1	1	19.90	19.94	19.55	19.40	19.47	0.0	20.0	20.48	20.62	20.53	20.33	20.46	0.0	21.0	19.48	19.70	19.72	19.39	19.54	0.0	20.0
	CP-OFDM	QPSK	1	1	19.70	19.99	19.27	19.06	19.21	0.0	20.0	20.81	20.65	20.92	20.71	20.71	0.0	21.0	19.24	19.26	19.42	19.30	19.35	0.0	20.0

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
					500202	509400	518598	527802	537000			500202	509400	518598	527802	537000			500202	509400	518598	527802	537000		
					2501.01 MHz	2547 MHz	2592.99 MHz	2639.01 MHz	2685 MHz			2501.01 MHz	2547 MHz	2592.99 MHz	2639.01 MHz	2685 MHz			2501.01 MHz	2547 MHz	2592.99 MHz	2639.01 MHz	2685 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.82	19.95	19.31	19.13	19.19	0.0	20.0	20.85	20.68	20.93	20.73	20.76	0.0	21.0	19.36	19.36	19.48	19.38	19.32	0.0	20.0
			1	12	19.86	19.97	19.27	19.08	19.16	0.0	20.0	20.83	20.73	20.94	20.71	20.69	0.0	21.0	19.37	19.36	19.46	19.26	19.29	0.0	20.0
			1	22	19.91	19.96	19.26	19.06	19.21	0.0	20.0	20.82	20.74	20.95	20.75	20.74	0.0	21.0	19.35	19.37	19.51	19.31	19.29	0.0	20.0
			12	0	19.72	19.96	19.25	19.12	19.21	0.0	20.0	20.76	20.81	20.85	20.64	20.73	0.0	21.0	19.36	19.41	19.42	19.28	19.34	0.0	20.0
			12	6	19.81	19.95	19.30	19.18	19.16	0.0	20.0	20.74	20.76	20.88	20.62	20.71	0.0	21.0	19.32	19.36	19.42	19.24	19.24	0.0	20.0
			12	12	19.91	19.97	19.27	19.15	19.20	0.0	20.0	20.78	20.79	20.87	20.69	20.73	0.0	21.0	19.34	19.33	19.39	19.26	19.31	0.0	20.0
			24	0	19.86	19.90	19.27	19.14	19.17	0.0	20.0	20.78	20.81	20.87	20.71	20.74	0.0	21.0	19.32	19.42	19.45	19.26	19.25	0.0	20.0
		QPSK	1	1	19.86	19.94	19.36	19.17	19.15	0.0	20.0	20.86	20.84	20.90	20.72	20.76	0.0	21.0	19.47	19.32	19.45	19.31	19.31	0.0	20.0
			1	12	19.86	19.93	19.33	19.15	19.18	0.0	20.0	20.82	20.76	20.88	20.67	20.72	0.0	21.0	19.38	19.34	19.41	19.24	19.27	0.0	20.0
			1	22	19.98	19.94	19.34	19.14	19.23	0.0	20.0	20.80	20.86	20.92	20.65	20.73	0.0	21.0	19.39	19.26	19.43	19.25	19.32	0.0	20.0
			12	0	19.76	19.95	19.25	19.15	19.19	0.0	20.0	20.78	20.84	20.84	20.73	20.72	0.0	21.0	19.35	19.38	19.42	19.28	19.29	0.0	20.0
			12	6	19.82	19.96	19.27	19.16	19.17	0.0	20.0	20.74	20.82	20.92	20.71	20.74	0.0	21.0	19.36	19.34	19.47	19.31	19.29	0.0	20.0
			12	12	19.82	19.99	19.30	19.11	19.22	0.0	20.0	20.78	20.84	20.88	20.94	20.69	0.0	21.0	19.32	19.34	19.43	19.25	19.29	0.0	20.0
			24	0	19.96	19.97	19.29	19.16	19.24	0.0	20.0	20.76	20.79	20.85	20.66	20.74	0.0	21.0	19.37	19.41	19.46	19.28	19.31	0.0	20.0
		16QAM	1	1	19.96	19.96	19.22	19.42	19.37	0.0	20.0	20.63	20.78	20.88	20.97	20.89	0.0	21.0	19.21	19.28	19.61	19.58	19.47	0.0	20.0
		64QAM	1	1	19.96	19.75	19.01	19.11	19.22	0.0	20.0	20.70	20.73	20.88	20.69	20.76	0.0	21.0	19.22	19.29	19.41	19.59	19.29	0.0	20.0
		256QAM	1	1	19.99	19.98	19.58	19.39	19.46	0.0	20.0	20.54	20.68	20.59	20.36	20.46	0.0	21.0	19.53	19.71	19.71	19.42	19.53	0.0	20.0
	CP-OFDM	QPSK	1	1	19.75	19.94	19.31	19.10	19.28	0.0	20.0	20.76	20.66	20.92	20.76	20.76	0.0	21.0	19.28	19.21	19.46	19.31	19.36	0.0	20.0

Notes:

NR Band n41 were measured output power through FTM mode provided by manufacturer.

9.5. Wi-Fi 2.4 GHz (DTS Band)

WLAN SISO output power results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
					Maximum Allowed Average power (dBm)					
					DSI = 0,1			DSI = 2,3		
					Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 2.4G Ant.G	802.11b	1 Mbps	1	2412.0	18.38	19.0	Yes	17.27	18.0	Yes
			6	2437.0	18.74			17.63		
			11	2462.0	18.53			17.35		
			12	2467.0	Not Required	6.0	No	Not Required	6.0	No
			13	2472.0	Not Required	0.0		Not Required	0.0	
	802.11g	6 Mbps	Not Required			18.0	No	Not Required	18.0	No
	802.11n	6.5 Mbps				18.0			18.0	
	802.11ac	6.5 Mbps				18.0			18.0	
	802.11ax	7.3 Mbps				16.0			16.0	

WLAN MIMO output power results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
					Maximum Allowed Average power (dBm)					
					DSI = 0,1			DSI = 2,3		
					Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 2.4G (MIMO) Ant.H	802.11b	1 Mbps	1	2412.0	18.28	19.0	Yes	17.62	18.0	Yes
			6	2437.0	18.07			17.70		
			11	2462.0	18.33			17.80		
			12	2467.0	Not Required	6.0	No	Not Required	6.0	No
			13	2472.0	Not Required	0.0		Not Required	0.0	
	802.11g	6 Mbps	Not Required			18.0	No	Not Required	18.0	No
	802.11n	6.5 Mbps				18.0			18.0	
	802.11ac	6.5 Mbps				18.0			18.0	
	802.11ax	7.3 Mbps				16.0			16.0	
WiFi 2.4G (MIMO Ant.G	802.11b	1 Mbps	1	2412.0	18.04	19.0	Yes	17.42	18.0	Yes
			6	2437.0	18.35			17.73		
			11	2462.0	18.05			17.35		
			12	2467.0	Not Required	6.0	No	Not Required	6.0	No
			13	2472.0	Not Required	0.0		Not Required	0.0	
	802.11g	6 Mbps	Not Required			18.0	No	Not Required	18.0	No
	802.11n	6.5 Mbps				18.0			18.0	
	802.11ac	6.5 Mbps				18.0			18.0	
	802.11ax	7.3 Mbps				16.0			16.0	

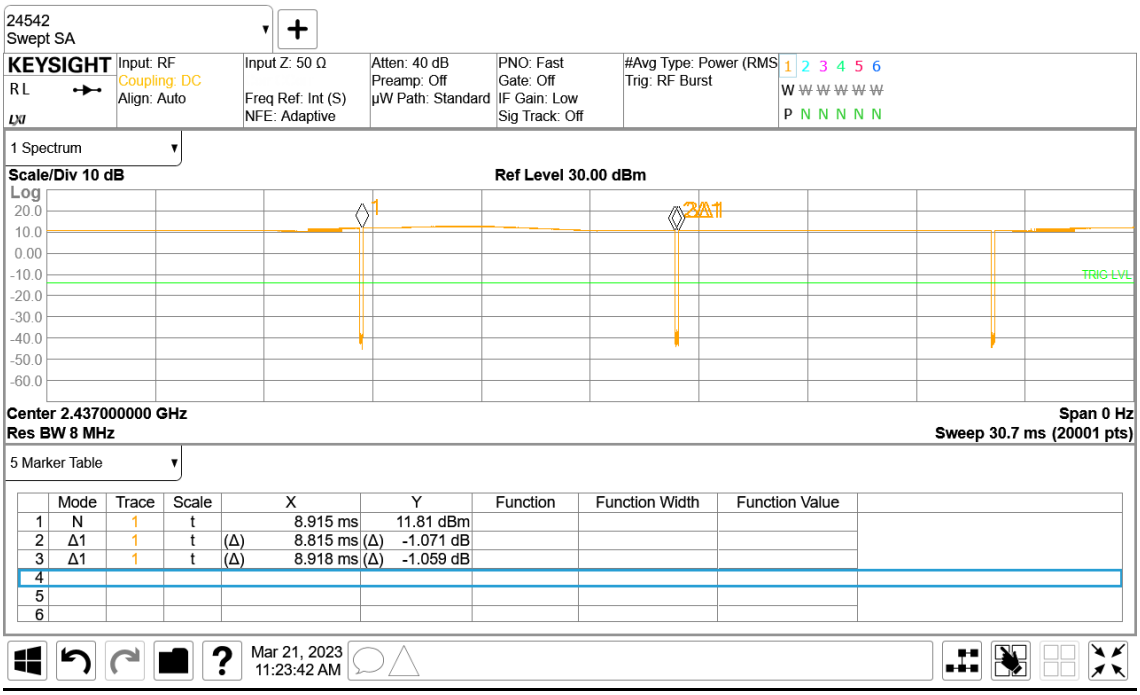
Note(s):

1. SAR is not required for 802.11g/n modes when the adjusted SAR for 802.11b is < 1.2 W/kg.
2. 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.

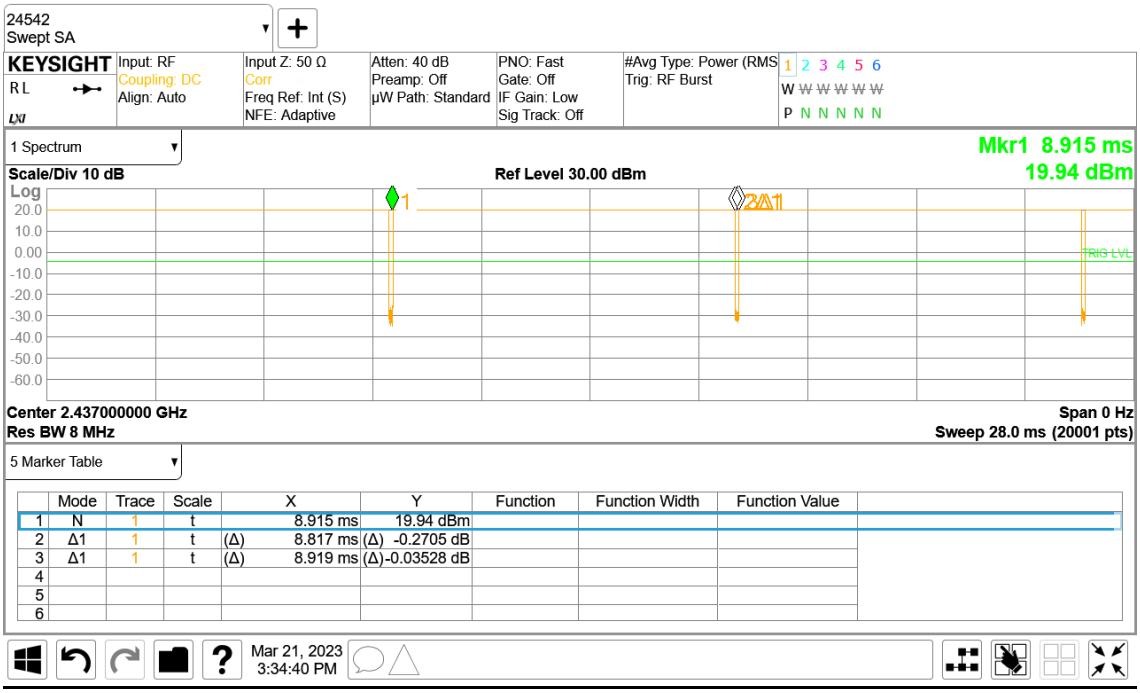
Duty Factor Measured Results

Mode	T on (ms)	Period (ms)	Maximum Duty Cyle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
802.11b-SISO	8.815	8.918	100.00%	98.8%	1.01
802.11b-MIMO	8.817	8.919	100.00%	98.9%	1.01

Duty Cycle plots (802.11b-SISO)



Duty Cycle plots (802.11b-MIMO)



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

WLAN MIMO Ant.H output power results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
						Maximum Allowed Averag power (dBm)					
						DSI = 0,1			DSI = 3		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
5GHz MIMO Ant.H	5.3 (UNII 2A)	802.11a	6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	16.72	17.0	Yes	17.08	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			17.0	No	Not Required	18.0	No
	UNII 1 & UNII 2A	802.11ac (VHT160)	58.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE160)	72.0 Mbps	Not Required			17.0	No	Not Required	18.0	No
	5.5 (U-NII 2C)	802.11a	6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	16.64	17.0	Yes	16.81	18.0	Yes
				122	5610.0	16.70			16.70		
				138	5690.0	16.71			17.07		
		802.11ac (VHT160)	58.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE160)	72.0 Mbps	Not Required			17.0	No	Not Required	18.0	No

Note(s):

1. 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.
2. 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.
3. 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.

WLAN MIMO Ant.H output power results (Continued)

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
						Maximum Allowed Averag power (dBm)					
						DSI = 0,1			DSI = 3		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
5GHz MIMO Ant.H	5.8 (UNII 3)	802.11a	6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	16.33	17.0	Yes	16.53	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			17.0	No	Not Required	18.0	No
	5.9 (U-NII 4)	802.11a	6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT80)	29.3 Mbps	171	5855.0	16.37	17.0	Yes	16.85	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE80)	30.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
	UNII 3 & UNII 4	802.11ac (VHT160)	58.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE160)	72.0 Mbps	Not Required			17.0	No	Not Required	18.0	No

Note(s):

1. 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.
2. 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.
3. 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.

WLAN MIMO Ant.J output power results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
						Maximum Allowed Averag power (dBm)					
						DSI = 0,1			DSI = 3		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
5GHz MIMO Ant.J	5.3 (UNII 2A)	802.11a	6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	15.44	17.0	Yes	16.77	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			17.0	No	Not Required	18.0	No
	UNII 1 & UNII 2A	802.11ac (VHT160)	58.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE160)	72.0 Mbps	Not Required			17.0	No	Not Required	18.0	No
	5.5 (U-NII 2C)	802.11a	6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	15.85	17.0	Yes	16.91	18.0	Yes
				122	5610.0	16.40			17.04		
				138	5690.0	16.11			17.27		
		802.11ac (VHT160)	58.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE160)	72.0 Mbps	Not Required			17.0	No	Not Required	18.0	No

Note(s):

1. 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.
2. 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.
3. 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.

WLAN MIMO Ant.J output power results (Continued)

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
						Maximum Allowed Averag power (dBm)					
						DSI = 0,1			DSI = 3		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
5GHz MIMO Ant.J	5.8 (UNII 3)	802.11a	6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	15.68	17.0	Yes	17.69	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			17.0	No	Not Required	18.0	No
	5.9 (U-NII 4)	802.11a	6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ac (VHT80)	29.3 Mbps	171	5855.0	15.86	17.0	Yes	17.19	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE80)	30.6 Mbps	Not Required			17.0	No	Not Required	18.0	No
	UNII 3 & UNII 4	802.11ac (VHT160)	58.5 Mbps	Not Required			17.0	No	Not Required	18.0	No
		802.11ax (HE160)	72.0 Mbps	Not Required			17.0	No	Not Required	18.0	No

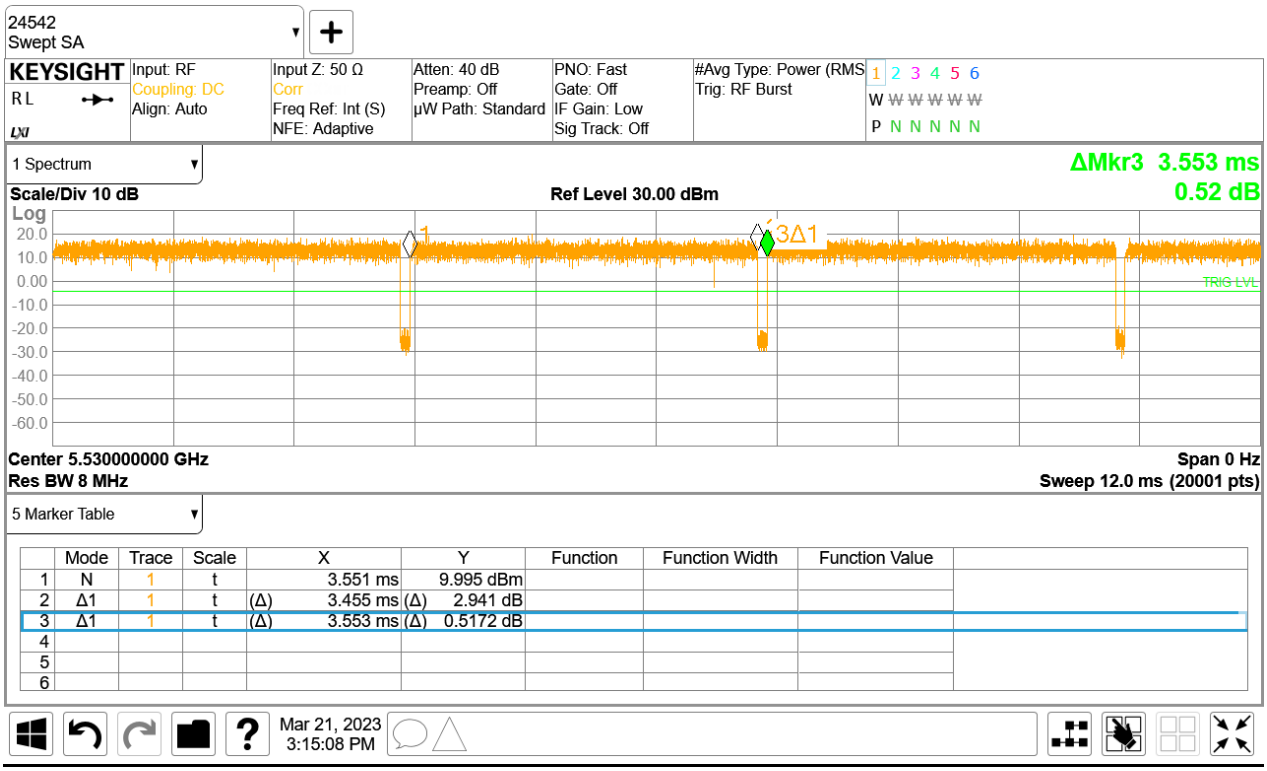
Note(s):

1. 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.
2. 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.
3. 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.

Duty Factor Measured Results

Mode	T on (ms)	Period (ms)	Maximum Duty Cyle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
802.11ax VHT80 MIMO	3.455	3.553	100.00%	97.2%	1.03

Duty Cycle plots (802.11ax VHT80-MIMO)



9.7. Bluetooth

Bluetooth SISO output power Results

Band (GHz)	Antenna	Mode	Ch #	Freq. (MHz)	Maximum Allowed Average power (dBm) DSI = 0, 1, 2, 3		SAR test
					Meas Pwr	Tune-up Limit	
2.4	BT Ant.H	Bluetooth(1Mbps)	0	2402	16.67	18.0	Yes
			39	2441	17.86		
			78	2480	16.13		
		Bluetooth(EDR)	0	2402	Not Required	15.5	No
			39	2441			
			78	2480			
		Bluetooth(LE) (1M/2M)	0	2402		9.0	No
			19	2440			
			39	2480			
		Bluetooth(LE) (125/500kbps)	0	2402		9.0	No
			19	2441			
			39	2480			
2.4	BT Ant.G	Bluetooth(1Mbps)	0	2402	15.07	16.0	Yes
			39	2441	14.99		
			78	2480	14.37		
		Bluetooth(EDR)	0	2402	Not Required	13.0	No
			39	2441			
			78	2480			
		Bluetooth(LE) (1M/2M)	0	2402		6.0	No
			19	2440			
			39	2480			
		Bluetooth(LE) (125/500kbps)	0	2402		6.0	No
			19	2440			
			39	2480			

Duty Factor Measured Results

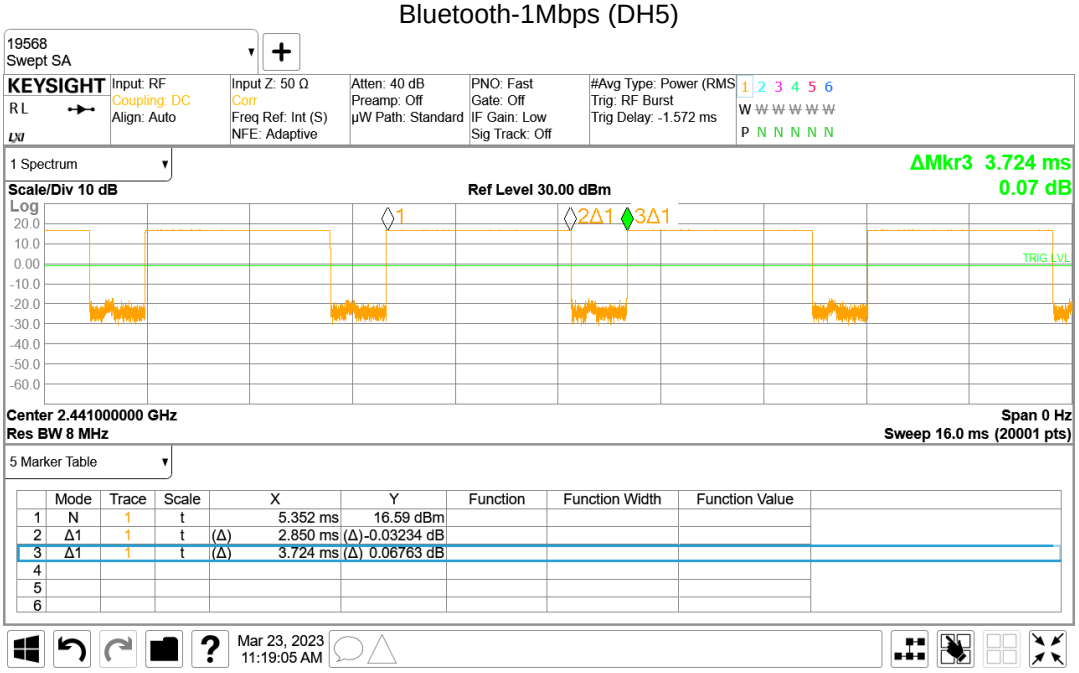
Mode	Type	T on (ms)	Period (ms)	Maximum Duty Cyle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
BT-1Mbps	DH5	2.850	3.724	78.1%	76.5%	1.02

Note(s):

Maximum Duty Cycle is mentioned in Operational description. Detail of BT Duty Cycle refer to Operational description.

Duty Cycle plots

Bluetooth-1Mbps (DH5)



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
- Wi-Fi Duty Cycle scaling factor = 1 / Duty cycle (%)
- BT Duty Cycle scaling factor = Maximum Duty cycle / 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.

When the separation distance required for body-worn accessory testing is greater than or equal to that tested for hotspot mode, using the same wireless mode test configuration for voice and data, the hotspot SAR data may be used to support body-worn accessory SAR compliance for that particular configuration.

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 ≤ 25mm 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 ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

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

configuration, the middle channel of the group of overlapping channels should be selected for testing; therefore, the requirement for H, M and L channels may not fully apply.

KDB 248227 D01 SAR meas for 802.11:

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

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

- ≤ 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. Folder Closed (Phablet) SAR Results

10.1.1. 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	
Ant.(A+B)	Head	GPRS 2 Slots	0	Left Touch	190	836.6	32.50	30.77	0.098	0.146	
				Left Tilt	190	836.6	32.50	30.77	0.058	0.086	
				Right Touch	190	836.6	32.50	30.77	0.124	0.185	1
				Right Tilt	190	836.6	32.50	30.77	0.065	0.097	
	Body-worn & Hotspot	GPRS 2 Slots	10	Rear	190	836.6	32.50	30.77	0.451	0.672	2
				Front	190	836.6	32.50	30.77	0.152	0.226	
	Hotspot	GPRS 2 Slots	10	Left	190	836.6	32.50	30.77	0.336	0.500	
				Bottom	190	836.6	32.50	30.77	0.135	0.201	
				Right	190	836.6	32.50	30.77	0.138	0.206	

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	
Ant.(A)	Head	GPRS 2 Slots	0	Left Touch	190	836.6	32.50	30.77	0.027	0.040	
				Left Tilt	190	836.6	32.50	30.77	0.026	0.039	
				Right Touch	190	836.6	32.50	30.77	0.035	0.052	
				Right Tilt	190	836.6	32.50	30.77	0.022	0.033	
	Body-worn & Hotspot	GPRS 2 Slots	10	Rear	190	836.6	32.50	30.77	0.121	0.180	3
				Front	190	836.6	32.50	30.77	0.043	0.064	
	Hotspot	GPRS 2 Slots	10	Left	190	836.6	32.50	30.77	0.087	0.130	
				Bottom	190	836.6	32.50	30.77	0.041	0.061	

10.1.2. 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	
Ant.(B)	Head	GPRS 3 Slots	0	Left Touch	661	1880.0	27.50	26.77	0.028	0.033	
				Left Tilt	661	1880.0	27.50	26.77	0.022	0.026	
				Right Touch	661	1880.0	27.50	26.77	0.060	0.071	4
				Right Tilt	661	1880.0	27.50	26.77	0.026	0.031	
	Body-worn & Hotspot	GPRS 4 Slots	10	Rear	512	1850.2	22.50	21.55	0.293	0.365	
				Front	512	1850.2	22.50	21.55	0.090	0.112	
	Hotspot	GPRS 4 Slots	10	Left	512	1850.2	22.50	21.55	0.122	0.152	
				Bottom	512	1850.2	22.50	21.55	0.441	0.549	5
				Right	512	1850.2	22.50	21.55	0.030	0.037	

10.1.3. 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	
Ant.(A+B)	Head	Rel 99 RMC	0	Left Touch	4183	836.6	25.50	24.21	0.094	0.127	
				Left Tilt	4183	836.6	25.50	24.21	0.066	0.089	
				Right Touch	4183	836.6	25.50	24.21	0.115	0.155	
				Right Tilt	4183	836.6	25.50	24.21	0.070	0.094	
	Body-worn & Hotspot	Rel 99 RMC	10	Rear	4183	836.6	25.50	24.21	0.432	0.581	6
				Front	4183	836.6	25.50	24.21	0.128	0.172	
	Hotspot	Rel 99 RMC	10	Left	4183	836.6	25.50	24.21	0.243	0.327	
				Bottom	4183	836.6	25.50	24.21	0.128	0.172	
				Right	4183	836.6	25.50	24.21	0.098	0.132	

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	
Ant.(A)	Head	Rel 99 RMC	0	Left Touch	4183	836.6	25.50	24.21	0.099	0.133	
				Left Tilt	4183	836.6	25.50	24.21	0.070	0.094	
				Right Touch	4183	836.6	25.50	24.21	0.126	0.170	7
				Right Tilt	4183	836.6	25.50	24.21	0.083	0.112	
	Body-worn & Hotspot	Rel 99 RMC	10	Rear	4183	836.6	25.50	24.21	0.376	0.506	8
				Front	4183	836.6	25.50	24.21	0.143	0.192	
	Hotspot	Rel 99 RMC	10	Left	4183	836.6	25.50	24.21	0.212	0.285	
				Bottom	4183	836.6	25.50	24.21	0.128	0.172	

10.1.4. LTE Band 2 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Head	QPSK	0	Left Touch	18700	1860.0	1	0	25.00	24.34	0.057	0.067	
							50	24	24.00	23.42	0.044	0.050	
				Left Tilt	18700	1860.0	1	0	25.00	24.34	0.034	0.039	
							50	24	24.00	23.42	0.020	0.023	
				Right Touch	18700	1860.0	1	0	25.00	24.34	0.141	0.164	9
							50	24	24.00	23.42	0.111	0.127	
				Right Tilt	18700	1860.0	1	0	25.00	24.34	0.032	0.037	
							50	24	24.00	23.42	0.021	0.024	
	Body-worn & Hotspot	QPSK	10	Rear	18700	1860.0	1	0	20.00	19.21	0.381	0.457	
							50	24	20.00	19.35	0.404	0.469	
				Front	18700	1860.0	1	0	20.00	19.21	0.187	0.224	
							50	24	20.00	19.35	0.195	0.226	
	Hotspot	QPSK	10	Left	18700	1860.0	1	0	20.00	19.21	0.169	0.203	
							50	24	20.00	19.35	0.168	0.195	
				Bottom	18700	1860.0	1	0	20.00	19.21	0.572	0.686	10
							50	24	20.00	19.35	0.581	0.675	
				Right	18700	1860.0	1	0	20.00	19.21	0.045	0.054	
							50	24	20.00	19.35	0.044	0.051	

10.1.5. LTE Band 5 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Head	QPSK	0	Left Touch	20525	836.5	1	0	25.50	24.18	0.102	0.138	
							25	0	24.50	23.14	0.079	0.108	
				Left Tilt	20525	836.5	1	0	25.50	24.18	0.075	0.102	
							25	0	24.50	23.14	0.059	0.081	
				Right Touch	20525	836.5	1	0	25.50	24.18	0.121	0.164	11
							25	0	24.50	23.14	0.093	0.127	
				Right Tilt	20525	836.5	1	0	25.50	24.18	0.061	0.083	
							25	0	24.50	23.14	0.047	0.064	
	Body-worn & Hotspot	QPSK	10	Rear	20525	836.5	1	0	25.50	24.18	0.368	0.499	12
							25	0	25.50	23.14	0.289	0.498	
				Front	20525	836.5	1	0	25.50	24.18	0.135	0.183	
							25	0	25.50	23.14	0.141	0.242	
	Hotspot	QPSK	10	Left	20525	836.5	1	0	25.50	24.18	0.266	0.360	
							25	0	25.50	23.14	0.206	0.355	
				Bottom	20525	836.5	1	0	25.50	24.18	0.122	0.165	
							25	0	25.50	23.14	0.095	0.164	
				Right	20525	836.5	1	0	25.50	24.18	0.112	0.152	
							25	0	25.50	23.14	0.087	0.150	

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A)	Head	QPSK	0	Left Touch	20525	836.5	1	0	25.50	24.18	0.096	0.130	
							25	0	24.50	23.14	0.076	0.104	
				Left Tilt	20525	836.5	1	0	25.50	24.18	0.072	0.098	
							25	0	24.50	23.14	0.057	0.078	
				Right Touch	20525	836.5	1	0	25.50	24.18	0.112	0.152	
							25	0	24.50	23.14	0.089	0.122	
				Right Tilt	20525	836.5	1	0	25.50	24.18	0.068	0.092	
							25	0	24.50	23.14	0.054	0.074	
	Body-worn & Hotspot	QPSK	10	Rear	20525	836.5	1	0	25.50	24.18	0.360	0.488	13
							25	0	24.50	23.14	0.286	0.391	
				Front	20525	836.5	1	0	25.50	24.18	0.126	0.171	
							25	0	24.50	23.14	0.105	0.144	
	Hotspot	QPSK	10	Left	20525	836.5	1	0	25.50	24.18	0.239	0.324	
							25	0	24.50	23.14	0.186	0.254	
				Bottom	20525	836.5	1	0	25.50	24.18	0.127	0.172	
							25	0	24.50	23.14	0.099	0.135	

10.1.6. LTE Band 12 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Head	QPSK	0	Left Touch	23095	707.5	1	49	25.50	23.81	0.119	0.176	
							25	12	24.50	22.82	0.090	0.133	
				Left Tilt	23095	707.5	1	49	25.50	23.81	0.075	0.111	
							25	12	24.50	22.82	0.051	0.075	
				Right Touch	23095	707.5	1	49	25.50	23.81	0.154	0.227	14
							25	12	24.50	22.82	0.114	0.168	
				Right Tilt	23095	707.5	1	49	25.50	23.81	0.096	0.142	
							25	12	24.50	22.82	0.064	0.094	
	Body-worn & Hotspot	QPSK	10	Rear	23095	707.5	1	49	25.50	23.81	0.257	0.379	
							25	12	24.50	22.82	0.201	0.296	
				Front	23095	707.5	1	49	25.50	23.81	0.153	0.226	
							25	12	24.50	22.82	0.124	0.183	
	Hotspot	QPSK	10	Left	23095	707.5	1	49	25.50	23.81	0.415	0.612	15
							25	12	24.50	22.82	0.307	0.452	
				Bottom	23095	707.5	1	49	25.50	23.81	0.098	0.145	
							25	12	24.50	22.82	0.074	0.109	
				Right	23095	707.5	1	49	25.50	23.81	0.235	0.347	
							25	12	24.50	22.82	0.186	0.274	

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A)	Head	QPSK	0	Left Touch	23095	707.5	1	49	25.50	23.81	0.087	0.128	
							25	12	24.50	22.82	0.069	0.102	
				Left Tilt	23095	707.5	1	49	25.50	23.81	0.052	0.077	
							25	12	24.50	22.82	0.040	0.059	
				Right Touch	23095	707.5	1	49	25.50	23.81	0.135	0.199	
							25	12	24.50	22.82	0.105	0.155	
				Right Tilt	23095	707.5	1	49	25.50	23.81	0.075	0.111	
							25	12	24.50	22.82	0.054	0.080	
	Body-worn & Hotspot	QPSK	10	Rear	23095	707.5	1	49	25.50	23.81	0.185	0.273	
							25	12	24.50	22.82	0.149	0.219	
				Front	23095	707.5	1	49	25.50	23.81	0.130	0.192	
							25	12	24.50	22.82	0.103	0.152	
	Hotspot	QPSK	10	Left	23095	707.5	1	49	25.50	23.81	0.336	0.496	16
							25	12	24.50	22.82	0.275	0.405	
				Bottom	23095	707.5	1	49	25.50	23.81	0.075	0.111	
							25	12	24.50	22.82	0.056	0.082	

10.1.7. LTE Band 13 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Head	QPSK	0	Left Touch	23230	782.0	1	0	25.50	24.47	0.094	0.119	
							25	0	24.50	23.55	0.072	0.090	
				Left Tilt	23230	782.0	1	0	25.50	24.47	0.058	0.074	
							25	0	24.50	23.55	0.044	0.055	
				Right Touch	23230	782.0	1	0	25.50	24.47	0.118	0.150	17
							25	0	24.50	23.55	0.091	0.113	
				Right Tilt	23230	782.0	1	0	25.50	24.47	0.067	0.085	
							25	0	24.50	23.55	0.050	0.062	
	Body-worn & Hotspot	QPSK	10	Rear	23230	782.0	1	0	25.50	24.47	0.226	0.286	
							25	0	24.50	23.55	0.183	0.228	
				Front	23230	782.0	1	0	25.50	24.47	0.125	0.158	
							25	0	24.50	23.55	0.097	0.121	
	Hotspot	QPSK	10	Left	23230	782.0	1	0	25.50	24.47	0.289	0.366	18
							25	0	24.50	23.55	0.210	0.261	
				Bottom	23230	782.0	1	0	25.50	24.47	0.071	0.090	
							25	0	24.50	23.55	0.055	0.068	
				Right	23230	782.0	1	0	25.50	24.47	0.110	0.139	
							25	0	24.50	23.55	0.082	0.102	

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A)	Head	QPSK	0	Left Touch	23230	782.0	1	0	25.50	24.47	0.079	0.100	
							25	0	24.50	23.55	0.063	0.078	
				Left Tilt	23230	782.0	1	0	25.50	24.47	0.044	0.056	
							25	0	24.50	23.55	0.033	0.041	
				Right Touch	23230	782.0	1	0	25.50	24.47	0.096	0.122	
							25	0	24.50	23.55	0.074	0.092	
				Right Tilt	23230	782.0	1	0	25.50	24.47	0.053	0.067	
							25	0	24.50	23.55	0.040	0.050	
	Body-worn & Hotspot	QPSK	10	Rear	23230	782.0	1	0	25.50	24.47	0.186	0.236	
							25	0	24.50	23.55	0.154	0.192	
				Front	23230	782.0	1	0	25.50	24.47	0.101	0.128	
							25	0	24.50	23.55	0.078	0.097	
	Hotspot	QPSK	10	Left	23230	782.0	1	0	25.50	24.47	0.256	0.325	19
							25	0	24.50	23.55	0.193	0.240	
				Bottom	23230	782.0	1	0	25.50	24.47	0.091	0.115	
							25	0	24.50	23.55	0.072	0.090	

10.1.8. LTE Band 26 (15MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Head	QPSK	0	Left Touch	26865	831.5	1	37	25.50	24.01	0.099	0.140	
							36	20	24.50	23.20	0.078	0.105	
				Left Tilt	26865	831.5	1	37	25.50	24.01	0.073	0.103	
							36	20	24.50	23.20	0.058	0.078	
				Right Touch	26865	831.5	1	37	25.50	24.01	0.119	0.168	20
							36	20	24.50	23.20	0.092	0.124	
				Right Tilt	26865	831.5	1	37	25.50	24.01	0.060	0.085	
							36	20	24.50	23.20	0.047	0.063	
	Body-worn & Hotspot	QPSK	10	Rear	26865	831.5	1	37	25.50	24.0	0.355	0.500	21
							36	20	24.50	23.2	0.287	0.387	
				Front	26865	831.5	1	37	25.50	24.0	0.133	0.187	
							36	20	24.50	23.2	0.105	0.142	
	Hotspot	QPSK	10	Left	26865	831.5	1	37	25.50	24.0	0.261	0.368	
							36	20	24.50	23.2	0.206	0.278	
				Bottom	26865	831.5	1	37	25.50	24.0	0.119	0.168	
							36	20	24.50	23.2	0.093	0.125	
				Right	26865	831.5	1	37	25.50	24.0	0.109	0.154	
							36	20	24.50	23.2	0.086	0.116	

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A)	Head	QPSK	0	Left Touch	26865	831.5	1	37	25.50	24.01	0.095	0.134	
							36	20	24.50	23.20	0.076	0.103	
				Left Tilt	26865	831.5	1	37	25.50	24.01	0.069	0.097	
							36	20	24.50	23.20	0.055	0.074	
				Right Touch	26865	831.5	1	37	25.50	24.01	0.104	0.147	
							36	20	24.50	23.20	0.083	0.112	
				Right Tilt	26865	831.5	1	37	25.50	24.01	0.064	0.090	
							36	20	24.50	23.20	0.051	0.069	
	Body-worn & Hotspot	QPSK	10	Rear	26865	831.5	1	37	25.50	24.01	0.364	0.513	22
							36	20	24.50	23.20	0.296	0.399	
				Front	26865	831.5	1	37	25.50	24.01	0.133	0.187	
							36	20	24.50	23.20	0.106	0.143	
	Hotspot	QPSK	10	Left	26865	831.5	1	37	25.50	24.01	0.212	0.299	
							36	20	24.50	23.20	0.172	0.232	
				Bottom	26865	831.5	1	37	25.50	24.01	0.131	0.185	
							36	20	24.50	23.20	0.106	0.143	

10.1.9. LTE Band 41 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Head	QPSK	0	Left Touch	41055	2636.5	1	0	25.00	23.78	0.043	0.057	
							50	0	24.00	22.85	0.032	0.042	
				Left Tilt	41055	2636.5	1	0	25.00	23.78	0.019	0.025	
							50	0	24.00	22.85	0.015	0.020	
				Right Touch	41055	2636.5	1	0	25.00	23.78	0.079	0.105	
							50	0	24.00	22.85	0.062	0.081	
				Right Tilt	41055	2636.5	1	0	25.00	23.78	0.019	0.025	
							50	0	24.00	22.85	0.017	0.022	
	Body-worn & Hotspot	QPSK	10	Rear	41055	2636.5	1	0	20.00	19.00	0.349	0.439	
							50	0	20.00	19.08	0.366	0.452	
				Front	41055	2636.5	1	0	20.00	19.00	0.059	0.074	
							50	0	20.00	19.08	0.060	0.074	
	Hotspot	QPSK	10	Left	41055	2636.5	1	0	20.00	19.00	0.087	0.110	
							50	0	20.00	19.08	0.086	0.106	
				Bottom	39750	2506.0	1	0	20.00	18.65	0.424	0.579	
							50	0	20.00	18.71	0.426	0.573	
					40185	2549.5	1	0	20.00	18.55	0.424	0.592	
							50	0	20.00	18.61	0.410	0.565	
					40620	2593.0	1	0	20.00	18.70	0.502	0.677	
							50	0	20.00	18.77	0.505	0.670	
					41055	2636.5	1	0	20.00	19.00	0.517	0.651	
							50	0	20.00	19.08	0.532	0.658	
					41490	2680.0	1	0	20.00	18.81	0.585	0.769	
							50	0	20.00	18.81	0.596	0.784	23
				Right	41055	2636.5	1	0	20.00	19.00	0.025	0.031	
							50	0	20.00	19.08	0.026	0.032	

UL CA (Intraband-contiguous)_41C test results

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		Plot No.
					Ch #.	Freq. (MHz)	RB Allocation	RB offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Head	QPSK	0	Right Touch	41055	2636.5	1	0	40857	2616.7	1	99	25.00	24.14	0.097	0.118	24
	Body-worn & Hotspot	QPSK	10	Bottom	41490	2680.0	50	0	41292	2660.2	50	50	20.00	19.23	0.471	0.562	

LTE Band 41 (20MHz Bandwidth)_(Continued)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(F)	Head	QPSK	0	Left Touch	41490	2680.0	1	0	25.00	24.05	0.135	0.168	
							50	50	24.00	23.16	0.106	0.129	
				Left Tilt	41490	2680.0	1	0	25.00	24.05	0.169	0.210	
							50	50	24.00	23.16	0.131	0.159	
				Right Touch	41490	2680.0	1	0	25.00	24.05	0.204	0.254	25
							50	50	24.00	23.16	0.155	0.188	
				Right Tilt	41490	2680.0	1	0	25.00	24.05	0.172	0.214	
							50	50	24.00	23.16	0.200	0.243	
	Body-worn & Hotspot	QPSK	10	Rear	41490	2680.0	1	0	22.00	21.28	0.158	0.186	
							50	50	22.00	21.32	0.157	0.184	
				Front	41490	2680.0	1	0	22.00	21.28	0.034	0.040	
							50	50	22.00	21.32	0.031	0.036	
	Hotspot	QPSK	10	Top	41490	2680.0	1	0	22.00	21.28	0.182	0.215	26
							50	50	22.00	21.32	0.180	0.211	
				Right	41490	2680.0	1	0	22.00	21.28	0.053	0.063	
							50	50	22.00	21.32	0.058	0.068	

UL CA (Intraband-contiguous)_41C test results

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		Plot No.
					Ch #.	Freq. (MHz)	RB Allocation	RB offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	
Ant.(F)	Head	QPSK	0	Right Touch	41490	2680.0	1	0	41292	2660.2	1	99	25.00	24.33	0.164	0.191	
	Body-worn & Hotspot	QPSK	10	Top	41490	2680.0	1	0	41292	2660.2	1	99	22.00	21.49	0.174	0.196	

10.1.10. LTE Band 66 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Head	QPSK	0	Left Touch	132322	1745.0	1	0	25.00	24.13	0.052	0.063	
							50	24	24.00	23.21	0.038	0.045	
				Left Tilt	132322	1745.0	1	0	25.00	24.13	0.015	0.018	
							50	24	24.00	23.21	0.010	0.012	
				Right Touch	132322	1745.0	1	0	25.00	24.13	0.105	0.128	27
							50	24	24.00	23.21	0.078	0.093	
				Right Tilt	132322	1745.0	1	0	25.00	24.13	0.048	0.058	
							50	24	24.00	23.21	0.030	0.036	
	Body-worn & Hotspot	QPSK	10	Rear	132322	1745.0	1	0	20.00	19.03	0.386	0.483	
							50	24	20.00	19.14	0.381	0.464	
				Front	132322	1745.0	1	0	20.00	19.03	0.107	0.134	
							50	24	20.00	19.14	0.107	0.130	
	Hotspot	QPSK	10	Left	132322	1745.0	1	0	20.00	19.03	0.121	0.151	
							50	24	20.00	19.14	0.120	0.146	
				Bottom	132322	1745.0	1	0	20.00	19.03	0.469	0.586	
							50	24	20.00	19.14	0.484	0.590	28
				Right	132322	1745.0	1	0	20.00	19.03	0.048	0.060	
							50	24	20.00	19.14	0.044	0.054	

10.1.11. NR Band n5 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Head	DFT-s-OFDM	QPSK	0	Left Touch	167300	836.5	1	53	25.00	23.90	0.197	0.254	
								50	28	25.00	24.07	0.194	0.240	
					Left Tilt	167300	836.5	1	53	25.00	23.90	0.264	0.340	
								50	28	25.00	24.07	0.257	0.318	
					Right Touch	167300	836.5	1	53	25.00	23.90	0.264	0.340	
								50	28	25.00	24.07	0.259	0.321	
					Right Tilt	167300	836.5	1	53	25.00	23.90	0.300	0.386	29
								50	28	25.00	24.07	0.299	0.370	
		CP-OFDM	QPSK	0	Right Tilt	167300	836.5	1	1	23.50	22.85	0.035	0.041	
	Body-worn & Hotspot	DFT-s-OFDM	QPSK	10	Rear	167300	836.5	1	53	25.00	23.90	0.352	0.453	30
								50	28	25.00	24.07	0.352	0.436	
					Front	167300	836.5	1	53	25.00	23.90	0.109	0.140	
								50	28	25.00	24.07	0.108	0.134	
	Hotspot	DFT-s-OFDM	QPSK	10	Left	167300	836.5	1	53	25.00	23.90	0.251	0.323	
								50	28	25.00	24.07	0.251	0.311	
					Bottom	167300	836.5	1	53	25.00	23.90	0.111	0.143	
								50	28	25.00	24.07	0.111	0.138	
					Right	167300	836.5	1	53	25.00	23.90	0.109	0.140	
								50	28	25.00	24.07	0.109	0.135	
		CP-OFDM	QPSK	10	Rear	167300	836.5	1	1	23.50	22.85	0.230	0.267	

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A)	Head	DFT-s-OFDM	QPSK	0	Left Touch	167300	836.5	1	53	25.00	23.90	0.085	0.110	
								50	28	25.00	24.07	0.087	0.108	
					Left Tilt	167300	836.5	1	53	25.00	23.90	0.078	0.100	
								50	28	25.00	24.07	0.079	0.098	
					Right Touch	167300	836.5	1	53	25.00	23.90	0.070	0.090	
								50	28	25.00	24.07	0.067	0.083	
					Right Tilt	167300	836.5	1	53	25.00	23.90	0.064	0.082	
								50	28	25.00	24.07	0.062	0.077	
		CP-OFDM	QPSK	0	Left Touch	167300	836.5	1	1	23.50	22.85	0.051	0.059	
	Body-worn & Hotspot	DFT-s-OFDM	QPSK	10	Rear	167300	836.5	1	53	25.00	23.90	0.278	0.358	
								50	28	25.00	24.07	0.326	0.404	31
					Front	167300	836.5	1	53	25.00	23.90	0.085	0.110	
								50	28	25.00	24.07	0.078	0.097	
	Hotspot	DFT-s-OFDM	QPSK	10	Left	167300	836.5	1	53	25.00	23.90	0.161	0.207	
								50	28	25.00	24.07	0.164	0.203	
					Bottom	167300	836.5	1	53	25.00	23.90	0.096	0.124	
								50	28	25.00	24.07	0.069	0.085	
		CP-OFDM	QPSK	10	Rear	167300	836.5	1	1	23.50	22.85	0.253	0.294	

Note(s):

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

10.1.12. NR Band n41 (100MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Head	DFT-s-OFDM	QPSK	0	Left Touch	518598	2593.0	1	271	21.0	20.9	0.068	0.070	
								135	138	21.0	20.6	0.045	0.049	
					Left Tilt	518598	2593.0	1	271	21.0	20.9	0.036	0.037	
								135	138	21.0	20.6	0.028	0.030	
					Right Touch	518598	2593.0	1	271	21.0	20.9	0.065	0.067	
								135	138	21.0	20.6	0.070	0.076	32
					Right Tilt	518598	2593.0	1	271	21.0	20.9	0.021	0.022	
								135	138	21.0	20.6	0.017	0.018	
		CP-OFDM	QPSK	0	Right Touch	518598	2593.0	1	1	21.00	20.00	0.000	0.000	
	Body-worn & Hotspot	DFT-s-OFDM	QPSK	10	Rear	518598	2593.0	1	271	18.00	17.82	0.340	0.354	
								135	138	18.00	17.61	0.320	0.350	
					Front	518598	2593.0	1	271	18.00	17.82	0.056	0.058	
								135	138	18.00	17.61	0.062	0.068	
	Hotspot	DFT-s-OFDM	QPSK	10	Left	518598	2593.0	1	271	18.00	17.82	0.060	0.063	
								135	138	18.00	17.61	0.085	0.093	
					Bottom	518598	2593.0	1	271	18.00	17.82	0.416	0.434	
								135	138	18.00	17.61	0.522	0.571	33
					Right	518598	2593.0	1	271	18.00	17.82	0.028	0.029	
								135	138	18.00	17.61	0.028	0.031	
		CP-OFDM	QPSK	10	Bottom	518598	2593.0	1	1	18.00	16.88	0.426	0.551	

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(F)	Head	DFT-s-OFDM	QPSK	0	Left Touch	518598	2593.0	1	1	21.00	20.98	0.309	0.310	
								135	0	21.00	20.93	0.296	0.301	
					Left Tilt	518598	2593.0	1	1	21.00	20.98	0.333	0.335	
								135	0	21.00	20.93	0.325	0.330	
					Right Touch	518598	2593.0	1	1	21.00	20.98	0.392	0.394	34
								135	0	21.00	20.93	0.201	0.204	
					Right Tilt	518598	2593.0	1	1	21.00	20.98	0.338	0.340	
								135	0	21.00	20.93	0.253	0.257	
		CP-OFDM	QPSK	0	Right Touch	518598	2593.0	1	1	21.00	20.97	0.218	0.220	
	Body-worn & Hotspot	DFT-s-OFDM	QPSK	10	Rear	518598	2593.0	1	1	20.00	19.63	0.228	0.248	
								135	0	20.00	19.55	0.207	0.230	
					Front	518598	2593.0	1	1	20.00	19.63	0.069	0.075	
								135	0	20.00	19.55	0.060	0.067	
	Hotspot	DFT-s-OFDM	QPSK	10	Top	518598	2593.0	1	1	20.00	19.63	0.350	0.381	35
								135	0	20.00	19.55	0.295	0.327	
					Right	518598	2593.0	1	1	20.00	19.63	0.052	0.057	
								135	0	20.00	19.55	0.051	0.057	
		CP-OFDM	QPSK	10	Top	518598	2593.0	1	1	20.00	19.86	0.260	0.269	

Note(s):

1. CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in each exposure conditions.
2. NR Band n41 were evaluated using FTM mode.

10.1.13. NR Band n66 (40MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Head	DFT-s-OFDM	QPSK	0	Left Touch	349000	1745.0	1	108	25.00	23.54	0.079	0.111	
								108	54	25.00	23.94	0.076	0.097	
					Left Tilt	349000	1745.0	1	108	25.00	23.54	0.028	0.039	
								108	54	25.00	23.94	0.029	0.037	
					Right Touch	349000	1745.0	1	108	25.00	23.54	0.120	0.168	
								108	54	25.00	23.94	0.143	0.183	36
					Right Tilt	349000	1745.0	1	108	25.00	23.54	0.085	0.119	
								108	54	25.00	23.94	0.049	0.063	
		CP-OFDM	QPSK	0	Right Touch	349000	1745.0	1	1	23.50	21.89	0.095	0.138	
	Body-worn & Hotspot	DFT-s-OFDM	QPSK	10	Rear	349000	1745.0	1	108	20.00	18.86	0.534	0.694	
								108	54	20.00	18.87	0.520	0.675	
					Front	349000	1745.0	1	108	20.00	18.86	0.241	0.313	
								108	54	20.00	18.87	0.203	0.263	
	Hotspot	DFT-s-OFDM	QPSK	10	Left	349000	1745.0	1	108	20.00	18.86	0.138	0.179	
								108	54	20.00	18.87	0.140	0.182	
					Bottom	349000	1745.0	1	108	20.00	18.86	0.609	0.792	
								108	54	20.00	18.87	0.644	0.835	37
					Right	349000	1745.0	1	108	20.00	18.86	0.064	0.083	
								108	54	20.00	18.87	0.067	0.087	
		CP-OFDM	QPSK	10	Bottom	349000	1745.0	1	1	20.00	19.16	0.430	0.522	

Note(s):

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

10.1.14. Wi-Fi (DTS Band)

DTS SISO Ant.G SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN SISO Ant.G	2.4GHz	802.11b 1 Mbps	Head	0	Left Touch	6	2437.0	98.8%	18.0	17.63	0.339	0.373	
					Left Tilt	6	2437.0	98.8%	18.0	17.63	0.508	0.560	38
					Right Touch	6	2437.0	98.8%	18.0	17.63	0.354	0.390	
					Right Tilt	6	2437.0	98.8%	18.0	17.63	0.457	0.503	
			Body-worn & Hotspot	10	Rear	6	2437.0	98.8%	19.0	18.74	0.219	0.235	
					Front	6	2437.0	98.8%	19.0	18.74	0.089	0.095	
			Hotspot	10	Top	6	2437.0	98.8%	19.0	18.74	0.336	0.361	
					Left	6	2437.0	98.8%	19.0	18.74	0.068	0.073	
					Right	6	2437.0	98.8%	19.0	18.74	0.017	0.018	

DTS MIMO Ant.H+G SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
									Tune-up limit	Meas.	Meas.	Scaled		
WLAN MIMO Ant.H	2.4GHz	802.11b 1 Mbps	Head	0	Left Touch	11	2462.0	98.9%	18.0	17.80				
					Left Tilt	6	2437.0	98.9%	18.0	17.70				
						11	2462.0	98.9%	18.0	17.80				
					Right Touch	6	2437.0	98.9%	18.0	17.70				
						11	2462.0	98.9%	18.0	17.80				
					Right Tilt	6	2437.0	98.9%	18.0	17.70				
						11	2462.0	98.9%	18.0	17.80				
			Body-worn & Hotspot	10	Rear	6	2437.0	98.9%	19.0	18.07	0.128	0.160		
					Front	6	2437.0	98.9%	19.0	18.07				
			Hotspot	10	Top	6	2437.0	98.9%	19.0	18.07				
					Left	6	2437.0	98.9%	19.0	18.07				
					Right	6	2437.0	98.9%	19.0	18.07	0.092	0.115		
WLAN MIMO Ant.G	2.4GHz	802.11b 1 Mbps	Head	0	Left Touch	11	2462.0	98.9%	18.0	17.35	0.650	0.764		
					Left Tilt	6	2437.0	98.9%	18.0	17.73	0.560	0.603	1	
						11	2462.0	98.9%	18.0	17.35	0.790	0.928		
					Right Touch	6	2437.0	98.9%	18.0	17.73	0.460	0.495	1	
						11	2462.0	98.9%	18.0	17.35	0.744	0.874		
					Right Tilt	6	2437.0	98.9%	18.0	17.73	0.646	0.695	1	
						11	2462.0	98.9%	18.0	17.35	0.854	1.003		39
			Body-worn & Hotspot	10	Rear	6	2437.0	98.9%	19.0	18.35	0.150	0.176		
					Front	6	2437.0	98.9%	19.0	18.35	0.131	0.154		
			Hotspot	10	Top	6	2437.0	98.9%	19.0	18.35	0.453	0.532		40
					Left	6	2437.0	98.9%	19.0	18.35	0.257	0.302		
					Right	6	2437.0	98.9%	19.0	18.35	0.010	0.012		

Note(s):

1. 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).

10.1.15. Wi-Fi (U-NII Bands)

U-NII 2A MIMO Ant.H+J SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
WLAN MIMO Ant.H	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	0	Left Touch	58	5290.0	97.2%	18.0	17.08	0.148	0.188			
					Left Tilt	58	5290.0	97.2%	18.0	17.08					
					Right Touch	58	5290.0	97.2%	18.0	17.08	0.189	0.240			41
					Right Tilt	58	5290.0	97.2%	18.0	17.08					
			Body-worn	10	Rear	58	5290.0	97.2%	17.0	16.72					
					Front	58	5290.0	97.2%	17.0	16.72	0.019	0.021			
			Product Specific 10-g	0	Rear	58	5290.0	97.2%	17.0	16.72					
					Front	58	5290.0	97.2%	17.0	16.72			0.067	0.073	
					Top	58	5290.0	97.2%	17.0	16.72					
					Left	58	5290.0	97.2%	17.0	16.72			0.308	0.338	
					Right	58	5290.0	97.2%	17.0	16.72			0.040	0.044	
WLAN MIMO Ant.J	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	0	Left Touch	58	5290.0	97.2%	18.0	16.77					
					Left Tilt	58	5290.0	97.2%	18.0	16.77	0.077	0.105			
					Right Touch	58	5290.0	97.2%	18.0	16.77					
					Right Tilt	58	5290.0	97.2%	18.0	16.77	0.056	0.076			
			Body-worn	10	Rear	58	5290.0	97.2%	17.0	15.44	0.563	0.829			42
					Front	58	5290.0	97.2%	17.0	15.44					
			Product Specific 10-g	0	Rear	58	5290.0	97.2%	17.0	15.44			0.910	1.340	43
					Front	58	5290.0	97.2%	17.0	15.44					
					Top	58	5290.0	97.2%	17.0	15.44			0.151	0.222	
					Left	58	5290.0	97.2%	17.0	15.44					
					Right	58	5290.0	97.2%	17.0	15.44					

U-NII 2C MIMO Ant.H+J SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	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		
WLAN MIMO Ant.H	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	0	Left Touch	138	5690.0	97.2%	18.0	17.07						
					Left Tilt	138	5690.0	97.2%	18.0	17.07	0.060	0.076				
					Right Touch	138	5690.0	97.2%	18.0	17.07	0.182	0.232				44
					Right Tilt	138	5690.0	97.2%	18.0	17.07						
			Body-worn	10	Rear	122	5610.0	97.2%	17.0	16.70						
						138	5690.0	97.2%	17.0	16.71						
					Front	138	5690.0	97.2%	17.0	16.71	0.013	0.014				
			Product Specific 10-g	0	Rear	138	5690.0	97.2%	17.0	16.71						
					Front	138	5690.0	97.2%	17.0	16.71			0.122	0.134		
					Top	138	5690.0	97.2%	17.0	16.71						
					Left	138	5690.0	97.2%	17.0	16.71			0.329	0.362		
					Right	138	5690.0	97.2%	17.0	16.71			0.030	0.033		
WLAN MIMO Ant.J	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	0	Left Touch	138	5690.0	97.2%	18.0	17.27	0.134	0.163				
					Left Tilt	138	5690.0	97.2%	18.0	17.27						
					Right Touch	138	5690.0	97.2%	18.0	17.27						
					Right Tilt	138	5690.0	97.2%	18.0	17.27	0.059	0.072				
			Body-worn	10	Rear	122	5610.0	97.2%	17.0	16.40	0.601	0.710			1	
						138	5690.0	97.2%	17.0	16.11	0.654	0.826				45
					Front	138	5690.0	97.2%	17.0	16.11						
			Product Specific 10-g	0	Rear	138	5690.0	97.2%	17.0	16.11			0.938	1.184		46
					Front	138	5690.0	97.2%	17.0	16.11						
					Top	138	5690.0	97.2%	17.0	16.11			0.161	0.203		
					Left	138	5690.0	97.2%	17.0	16.11						
					Right	138	5690.0	97.2%	17.0	16.11						

Note(s):

1. 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).

Wi-Fi (U-NII Bands) (Continued)

U-NII 3 MIMO Ant.H+J SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
WLAN MIMO Ant.H	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	0	Left Touch	155	5775.0	97.2%	18.0	16.53	0.036	0.052			
					Left Tilt	155	5775.0	97.2%	18.0	16.53					
					Right Touch	155	5775.0	97.2%	18.0	16.53	0.116	0.167			47
					Right Tilt	155	5775.0	97.2%	18.0	16.53					
			Body-worn	10	Rear	155	5775.0	97.2%	17.0	16.33					
					Front	155	5775.0	97.2%	17.0	16.33					
			Product Specific 10-g	0	Rear	155	5775.0	97.2%	17.0	16.33					
					Front	155	5775.0	97.2%	17.0	16.33			0.044	0.053	
					Top	155	5775.0	97.2%	17.0	16.33					
					Left	155	5775.0	97.2%	17.0	16.33			0.255	0.306	
					Right	155	5775.0	97.2%	17.0	16.33					
WLAN MIMO Ant.J	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	0	Left Touch	155	5775.0	97.2%	18.0	17.69					
					Left Tilt	155	5775.0	97.2%	18.0	17.69	0.057	0.063			
					Right Touch	155	5775.0	97.2%	18.0	17.69					
					Right Tilt	155	5775.0	97.2%	18.0	17.69	0.055	0.061			
			Body-worn	10	Rear	155	5775.0	97.2%	17.0	15.68	0.792	1.104			48
					Front	155	5775.0	97.2%	17.0	15.68	0.011	0.015			
			Product Specific 10-g	0	Rear	155	5775.0	97.2%	17.0	15.68			0.640	0.892	49
					Front	155	5775.0	97.2%	17.0	15.68					
					Top	155	5775.0	97.2%	17.0	15.68			0.092	0.128	
					Left	155	5775.0	97.2%	17.0	15.68					
					Right	155	5775.0	97.2%	17.0	15.68			0.008	0.011	

U-NII 4 MIMO Ant.H+J SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
WLAN MIMO Ant.H	5.9 GHz U-NII 4	802.11ac VHT 80 29.3 Mbps	Head	0	Left Touch	171	5855.0	97.2%	18.0	16.85	0.103	0.138			
					Left Tilt	171	5855.0	97.2%	18.0	16.85					
					Right Touch	171	5855.0	97.2%	18.0	16.85	0.152	0.204			50
					Right Tilt	171	5855.0	97.2%	18.0	16.85					
			Body-worn	10	Rear	171	5855.0	97.2%	17.0	16.37					
					Front	171	5855.0	97.2%	17.0	16.37	0.017	0.020			
			Product Specific 10-g	0	Rear	171	5855.0	97.2%	17.0	16.37					
					Front	171	5855.0	97.2%	17.0	16.37			0.056	0.067	
					Top	171	5855.0	97.2%	17.0	16.37					
					Left	171	5855.0	97.2%	17.0	16.37			0.413	0.491	
					Right	171	5855.0	97.2%	17.0	16.37			0.028	0.033	
WLAN MIMO Ant.J	5.9 GHz U-NII 4	802.11ac VHT 80 29.3 Mbps	Head	0	Left Touch	171	5855.0	97.2%	18.0	17.19					
					Left Tilt	171	5855.0	97.2%	18.0	17.19	0.055	0.068			
					Right Touch	171	5855.0	97.2%	18.0	17.19					
					Right Tilt	171	5855.0	97.2%	18.0	17.19	0.053	0.066			
			Body-worn	10	Rear	171	5855.0	97.2%	17.0	15.86	0.646	0.864			51
					Front	171	5855.0	97.2%	17.0	15.86					
			Product Specific 10-g	0	Rear	171	5855.0	97.2%	17.0	15.86			0.868	1.161	52
					Front	171	5855.0	97.2%	17.0	15.86					
					Top	171	5855.0	97.2%	17.0	15.86			0.148	0.198	
					Left	171	5855.0	97.2%	17.0	15.86					
					Right	171	5855.0	97.2%	17.0	15.86					

10.1.16. Bluetooth

Bluetooth SISO SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
BT SISO Ant.H	2.4GHz	BT 1Mbps (DH5)	Head	0	Left Touch	39	2441.0	76.5%	18.00	17.86	0.078	0.083	
					Left Tilt	39	2441.0	76.5%	18.00	17.86	0.043	0.046	
					Right Touch	39	2441.0	76.5%	18.00	17.86	0.052	0.055	
					Right Tilt	39	2441.0	76.5%	18.00	17.86	0.046	0.049	
			Body-worn & Hotspot	10	Rear	39	2441.0	76.5%	18.00	17.86	0.082	0.087	
					Front	39	2441.0	76.5%	18.00	17.86	0.017	0.018	
			Hotspot	10	Left	39	2441.0	76.5%	18.00	17.86	0.101	0.106	53
BT SISO Ant.G	2.4GHz	BT 1Mbps (DH5)	Head	0	Left Touch	0	2402.0	76.5%	16.00	15.07	0.227	0.287	
					Left Tilt	0	2402.0	76.5%	16.00	15.07	0.311	0.394	54
					Right Touch	0	2402.0	76.5%	16.00	15.07	0.142	0.180	
					Right Tilt	0	2402.0	76.5%	16.00	15.07	0.306	0.387	
			Body-worn & Hotspot	10	Rear	0	2402.0	76.5%	16.00	15.07	0.134	0.170	
					Front	0	2402.0	76.5%	16.00	15.07	0.049	0.061	
			Hotspot	10	Top	0	2402.0	76.5%	16.00	15.07	0.234	0.296	55
					Left	0	2402.0	76.5%	16.00	15.07	0.041	0.051	
					Right	0	2402.0	76.5%	16.00	15.07	0.012	0.015	

10.1.17. NFC

Antenna	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Test setup		Freq. (MHz)	10-g SAR (W/kg)	Plot No.
					Type	Bitrate		Meas.	
NFC	PBRS	Product Specific 10-g	0	Rear	A	106	13.6	0.010	56
				Front	A	106	13.6	0.000	
				Left	A	106	13.6	0.000	
				Bottom	A	106	13.6	0.000	
				Right	A	106	13.6	0.000	

10.2. Folder Opened (UMPC Mini Tablet) SAR Results

10.2.1. 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	
Ant.(A+B)	Body	GPRS 2 Slots	10	Rear	190	836.6	32.50	30.77	0.313	0.466	1
				Front	190	836.6	32.50	30.77	0.193	0.287	
				Left	190	836.6	32.50	30.77	0.184	0.274	
				Bottom	190	836.6	32.50	30.77	0.171	0.255	
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	GPRS 2 Slots	0	Rear	190	836.6	32.50	30.77	0.527	0.785	
				Front	190	836.6	32.50	30.77	0.505	0.752	
				Left	190	836.6	32.50	30.77	0.782	1.165	2
				Bottom	190	836.6	32.50	30.77	0.459	0.684	

10.2.2. 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	
Ant.(B)	Body	GPRS 4 Slots	10	Rear	512	1850.2	22.50	21.55	0.253	0.315	
				Front	512	1850.2	22.50	21.55	0.193	0.240	
				Left	512	1850.2	22.50	21.55	0.140	0.174	
				Bottom	512	1850.2	22.50	21.55	0.486	0.605	3
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	GPRS 4 Slots	0	Rear	512	1850.2	22.50	21.55	0.885	1.101	
				Front	512	1850.2	22.50	21.55	0.594	0.739	
				Left	512	1850.2	22.50	21.55	0.296	0.368	
				Bottom	512	1850.2	22.50	21.55	1.430	1.780	4

10.2.3. 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	
Ant.(A+B)	Body	Rel.99 RMC	10	Rear	4183	836.6	25.50	24.21	0.557	0.750	5
				Front	4183	836.6	25.50	24.21	0.414	0.557	
				Left	4183	836.6	25.50	24.21	0.252	0.339	
				Bottom	4183	836.6	25.50	24.21	0.273	0.367	
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	Rel.99 RMC	0	Rear	4183	836.6	25.50	24.21	1.150	1.548	
				Front	4183	836.6	25.50	24.21	0.956	1.287	
				Left	4183	836.6	25.50	24.21	1.370	1.844	6
				Bottom	4183	836.6	25.50	24.21	0.833	1.121	

10.2.4. LTE Band 2 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Body	QPSK	10	Rear	18700	1860.0	1	0	20.00	19.21	0.304	0.365	
							50	24	20.00	19.35	0.308	0.358	
				Front	18700	1860.0	1	0	20.00	19.21	0.199	0.239	
							50	24	20.00	19.35	0.203	0.236	
				Left	18700	1860.0	1	0	20.00	19.21	0.125	0.150	
							50	24	20.00	19.35	0.121	0.141	
				Bottom	18700	1860.0	1	0	20.00	19.21	0.511	0.613	7
							50	24	20.00	19.35	0.512	0.595	
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	QPSK	0	Rear	18700	1860.0	1	0	20.00	19.21	0.956	1.147	
							50	24	20.00	19.35	0.990	1.150	
				Front	18700	1860.0	1	0	20.00	19.21	0.800	0.960	
							50	24	20.00	19.35	0.829	0.963	
				Left	18700	1860.0	1	0	20.00	19.21	0.291	0.349	
							50	24	20.00	19.35	0.276	0.321	
				Bottom	18700	1860.0	1	0	20.00	19.21	1.720	2.063	
							50	24	20.00	19.35	1.770	2.056	
							100	0	20.00	19.25	1.740	2.068	
					18900	1880.0	1	0	20.00	18.98	1.640	2.074	
							50	24	20.00	19.01	1.720	2.160	
					19100	1900.0	1	0	20.00	18.76	1.720	2.288	
							50	24	20.00	18.86	1.860	2.418	8

10.2.5. LTE Band 5 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Body	QPSK	10	Rear	20525	836.5	1	0	25.50	24.18	0.567	0.768	9
							25	0	24.50	23.14	0.428	0.585	
				Front	20525	836.5	1	0	25.50	24.18	0.356	0.482	
							25	0	24.50	23.14	0.283	0.387	
				Left	20525	836.5	1	0	25.50	24.18	0.251	0.340	
							25	0	24.50	23.14	0.197	0.269	
				Bottom	20525	836.5	1	0	25.50	24.18	0.259	0.351	
							25	0	24.50	23.14	0.205	0.280	
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	QPSK	0	Rear	20525	836.5	1	0	25.50	24.18	0.914	1.239	
							25	0	24.50	23.14	0.833	1.139	
				Front	20525	836.5	1	0	25.50	24.18	0.931	1.262	
							25	0	24.50	23.14	0.719	0.983	
				Left	20525	836.5	1	0	25.50	24.18	1.350	1.830	10
							25	0	24.50	23.14	1.060	1.450	
				Bottom	20525	836.5	1	0	25.50	24.18	0.824	1.117	
							25	0	24.50	23.14	0.634	0.867	

10.2.6. LTE Band 12 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Body	QPSK	10	Rear	23095	707.5	1	49	25.50	23.81	0.310	0.457	11
							25	12	24.50	22.82	0.245	0.361	
				Front	23095	707.5	1	49	25.50	23.81	0.227	0.335	
							25	12	24.50	22.82	0.160	0.236	
				Left	23095	707.5	1	49	25.50	23.81	0.115	0.170	
							25	12	24.50	22.82	0.202	0.297	
				Bottom	23095	707.5	1	49	25.50	23.81	0.205	0.303	
							25	12	24.50	22.82	0.158	0.233	
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	QPSK	0	Rear	23095	707.5	1	49	25.50	23.81	0.742	1.095	
							25	12	24.50	22.82	0.594	0.875	
				Front	23095	707.5	1	49	25.50	23.81	0.724	1.068	
							25	12	24.50	22.82	0.578	0.851	
				Left	23095	707.5	1	49	25.50	23.81	1.210	1.786	12
							25	12	24.50	22.82	0.991	1.459	
				Bottom	23095	707.5	1	49	25.50	23.81	1.060	1.564	
							25	12	24.50	22.82	0.820	1.207	

10.2.7. LTE Band 13 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Body	QPSK	10	Rear	23230	782.0	1	0	25.50	24.47	0.285	0.361	13
							25	0	24.50	23.55	0.233	0.290	
				Front	23230	782.0	1	0	25.50	24.47	0.204	0.259	
							25	0	24.50	23.55	0.169	0.210	
				Left	23230	782.0	1	0	25.50	24.47	0.244	0.309	
							25	0	24.50	23.55	0.170	0.212	
				Bottom	23230	782.0	1	0	25.50	24.47	0.174	0.221	
							25	0	24.50	23.55	0.146	0.182	
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	QPSK	0	Rear	23230	782.0	1	0	25.50	24.47	0.483	0.612	
							25	0	24.50	23.55	0.482	0.600	
				Front	23230	782.0	1	0	25.50	24.47	0.491	0.622	
							25	0	24.50	23.55	0.406	0.505	
				Left	23230	782.0	1	0	25.50	24.47	0.697	0.884	14
							25	0	24.50	23.55	0.550	0.684	
				Bottom	23230	782.0	1	0	25.50	24.47	0.547	0.693	
							25	0	24.50	23.55	0.440	0.548	

10.2.8. LTE Band 26 (15MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Body	QPSK	10	Rear	26865	831.5	1	37	25.50	24.01	0.503	0.709	15
							36	20	24.50	23.20	0.410	0.553	
				Front	26865	831.5	1	37	25.50	24.01	0.374	0.527	
							36	20	24.50	23.20	0.299	0.403	
				Left	26865	831.5	1	37	25.50	24.01	0.237	0.334	
							36	20	24.50	23.20	0.188	0.254	
				Bottom	26865	831.5	1	37	25.50	24.01	0.257	0.362	
							36	20	24.50	23.20	0.207	0.279	
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	QPSK	0	Rear	26865	831.5	1	37	25.50	24.01	0.916	1.291	
							36	20	24.50	23.20	0.730	0.985	
				Front	26865	831.5	1	37	25.50	24.01	0.942	1.328	
							36	20	24.50	23.20	0.766	1.033	
				Left	26865	831.5	1	37	25.50	24.01	1.350	1.903	16
							36	20	24.50	23.20	1.070	1.443	
				Bottom	26865	831.5	1	37	25.50	24.01	0.856	1.206	
							36	20	24.50	23.20	0.682	0.920	

10.2.9. LTE Band 41 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Body	QPSK	10	Rear	41055	2636.5	1	0	20.00	19.00	0.454	0.572	
							50	0	20.00	19.08	0.464	0.573	
				Front	41055	2636.5	1	0	20.00	19.00	0.245	0.308	
							50	0	20.00	19.08	0.246	0.304	
				Left	41055	2636.5	1	0	20.00	19.00	0.229	0.288	
							50	0	20.00	19.08	0.178	0.220	
				Bottom	39750	2506.0	1	0	20.00	18.65	0.645	0.880	
							50	0	20.00	18.71	0.628	0.845	
					40185	2549.5	1	0	20.00	18.55	0.640	0.894	
							50	0	20.00	18.61	0.631	0.869	
					40620	2593.0	1	0	20.00	18.70	0.745	1.005	17
							50	0	20.00	18.77	0.717	0.952	
					41055	2636.5	1	0	20.00	19.00	0.710	0.894	
							50	0	20.00	19.08	0.729	0.901	
							100	0	20.00	19.05	0.807	1.004	
					41490	2680.0	1	0	20.00	18.81	0.599	0.788	
							50	0	20.00	18.86	0.604	0.785	

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Extremity 10-g	QPSK	0	Rear	41055	2636.5	1	0	20.00	19.00	1.040	1.309	
							50	0	20.00	19.08	1.050	1.298	
				Front	41055	2636.5	1	0	20.00	19.00	0.886	1.115	
							50	0	20.00	19.08	0.885	1.094	
				Left	41055	2636.5	1	0	20.00	19.00	0.692	0.871	
							50	0	20.00	19.08	0.538	0.665	
				Bottom	39750	2506.0	1	0	20.00	18.65	2.100	2.866	
							50	0	20.00	18.71	2.080	2.799	
					40185	2549.5	1	0	20.00	18.55	2.140	2.988	
							50	0	20.00	18.61	2.130	2.933	
					40620	2593.0	1	0	20.00	18.70	2.250	3.035	18
							50	0	20.00	18.77	2.210	2.934	
					41055	2636.5	1	0	20.00	19.00	2.270	2.858	
							50	0	20.00	19.08	2.240	2.769	
							100	0	20.00	19.05	2.150	2.676	
					41490	2680.0	1	0	20.00	18.81	2.120	2.788	
							50	0	20.00	18.86	2.130	2.769	

UL CA (Intraband-contiguous)_41C test results

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 offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Ant.(B)	Body	QPSK	10	Bottom	40620	2593.0	1	0	40422	2573.2	1	99	20.00	19.12	0.615	0.753			
	Extremity	QPSK	0	Bottom	40620	2593.0	1	0	40422	2573.2	1	99	20.00	19.12			2.030	2.486	

LTE Band 41 (20MHz Bandwidth)_(continued)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(F)	Body	QPSK	10	Rear	41490	2680.0	1	0	22.00	21.28	0.165	0.195	
							50	0	22.00	21.32	0.166	0.194	
				Front	41490	2680.0	1	0	22.00	21.28	0.108	0.127	
							50	0	22.00	21.32	0.108	0.126	
				Top	41490	2680.0	1	0	22.00	21.28	0.191	0.225	
							50	0	22.00	21.32	0.193	0.226	19
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	QPSK	0	Rear	41490	2680.0	1	0	22.00	21.28	0.627	0.740	
							50	0	22.00	21.32	0.660	0.772	
				Front	41490	2680.0	1	0	22.00	21.28	0.591	0.698	
							50	0	22.00	21.32	0.592	0.692	
				Top	41490	2680.0	1	0	22.00	21.28	0.997	1.177	20
							50	0	22.00	21.32	1.000	1.169	

UL CA (Intraband-contiguous)_41C test results

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 offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Ant.(F)	Body	QPSK	10	Top	41490	2680.0	50	0	41292	2660.2	50	50	22.00	21.56	0.174	0.193			
	Extremity	QPSK	0	Top	41490	2680.0	1	0	41292	2660.2	1	99	22.00	21.49			0.979	1.101	

10.2.10. LTE Band 66 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Body	QPSK	10	Rear	132322	1745.0	1	0	20.00	19.03	0.358	0.448	
							50	24	20.00	19.14	0.362	0.441	
				Front	132322	1745.0	1	0	20.00	19.03	0.286	0.358	
							50	24	20.00	19.14	0.288	0.351	
				Left	132322	1745.0	1	0	20.00	19.03	0.129	0.161	
							50	24	20.00	19.14	0.122	0.149	
				Bottom	132322	1745.0	1	0	20.00	19.03	0.447	0.559	21
							50	24	20.00	19.14	0.457	0.557	
	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	QPSK	0	Rear	132322	1745.0	1	0	20.00	19.03	1.300	1.625	
							50	24	20.00	19.14	1.320	1.609	
				Front	132322	1745.0	1	0	20.00	19.03	1.060	1.325	
							50	24	20.00	19.14	1.100	1.341	
				Left	132322	1745.0	1	0	20.00	19.03	0.262	0.328	
							50	24	20.00	19.14	0.273	0.333	
				Bottom	132072	1720.0	1	0	20.00	18.86	1.680	2.184	
							50	24	20.00	19.01	1.760	2.211	22
					132322	1745.0	1	0	20.00	19.03	1.750	2.188	
							50	24	20.00	19.14	1.770	2.158	
					132572	1770.0	1	0	20.00	18.91	1.700	2.185	
							50	24	20.00	19.07	1.760	2.180	
							100	0	20.00	19.06	1.770	2.198	

10.2.11. NR Band n5 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(A+B)	Body	DFT-s-OFDM	QPSK	10	Rear	167300	836.5	1	53	25.00	23.90	0.412	0.531	23
								50	28	25.00	24.07	0.422	0.523	
					Front	167300	836.5	1	53	25.00	23.90	0.260	0.335	
								50	28	25.00	24.07	0.260	0.322	
					Left	167300	836.5	1	53	25.00	23.90	0.169	0.218	
								50	28	25.00	24.07	0.175	0.217	
					Bottom	167300	836.5	1	53	25.00	23.90	0.213	0.274	
								50	28	25.00	24.07	0.218	0.270	
		CP-OFDM	QPSK	10	Rear	167300	836.5	1	1	23.50	22.45	0.293	0.373	
	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	DFT-s-OFDM	QPSK	0	Rear	167300	836.5	1	53	25.00	23.90	1.030	1.327	24
								50	28	25.00	24.07	1.050	1.301	
					Front	167300	836.5	1	53	25.00	23.90	0.897	1.156	
								50	28	25.00	24.07	0.773	0.958	
					Left	167300	836.5	1	53	25.00	23.90	0.759	0.978	
								50	28	25.00	24.07	0.753	0.933	
					Bottom	167300	836.5	1	53	25.00	23.90	0.718	0.925	
								50	28	25.00	24.07	0.854	1.058	
		CP-OFDM	QPSK	0	Rear	167300	836.5	1	1	23.50	22.45	0.693	0.883	

Note(s):

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

10.2.12. NR Band n41 (100MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Body	DFT-s-OFDM	QPSK	10	Rear	518598	2593.0	1	271	18.00	17.82	0.353	0.368	
								135	138	18.00	17.61	0.346	0.379	
					Front	518598	2593.0	1	271	18.00	17.82	0.225	0.235	
								135	138	18.00	17.61	0.189	0.207	
					Left	518598	2593.0	1	271	18.00	17.82	0.088	0.092	
								135	138	18.00	17.61	0.069	0.075	
					Bottom	518598	2593.0	1	271	18.00	17.82	0.624	0.650	
								135	138	18.00	17.61	0.637	0.697	25
		CP-OFDM	QPSK	10	Bottom	518598	2593.0	1	1	18.00	16.88	0.487	0.630	
	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	DFT-s-OFDM	QPSK	0	Rear	518598	2593.0	1	271	18.00	17.82	0.799	0.833	
								135	138	18.00	17.61	0.897	0.981	
					Front	518598	2593.0	1	271	18.00	17.82	0.785	0.818	
								135	138	18.00	17.61	0.693	0.758	
					Left	518598	2593.0	1	271	18.00	17.82	0.230	0.240	
								135	138	18.00	17.61	0.170	0.186	
					Bottom	518598	2593.0	1	271	18.00	17.82	2.200	2.293	
								135	138	18.00	17.61	2.260	2.472	
								270	0	18.00	17.27	2.250	2.662	26
		CP-OFDM	QPSK	0	Bottom	518598	2593.0	1	1	18.00	16.88	1.850	2.394	

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(F)	Body	DFT-s-OFDM	QPSK	10	Rear	518598	2593.0	1	1	20.00	19.63	0.275	0.299	
								135	0	20.00	19.55	0.248	0.275	
					Front	518598	2593.0	1	1	20.00	19.63	0.240	0.261	
								135	0	20.00	19.55	0.173	0.192	
					Top	518598	2593.0	1	1	20.00	19.63	0.481	0.524	27
								135	0	20.00	19.55	0.366	0.406	
		CP-OFDM	QPSK	10	Top	518598	2593.0	1	1	20.00	19.86	0.355	0.367	
	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	DFT-s-OFDM	QPSK	0	Rear	518598	2593.0	1	1	20.00	19.63	0.493	0.537	
								135	0	20.00	19.55	0.702	0.779	
					Front	518598	2593.0	1	1	20.00	19.63	0.702	0.764	
								135	0	20.00	19.55	0.634	0.703	
					Top	518598	2593.0	1	1	20.00	19.63	1.830	1.993	28
								135	0	20.00	19.55	1.430	1.586	
		CP-OFDM	QPSK	0	Top	518598	2593.0	1	1	20.00	19.86	1.670	1.725	

Note(s):

1. CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in each exposure conditions.
2. NR Band n41 were evaluated using FTM mode.

10.2.13. NR Band n66 (40MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Ant.(B)	Body	DFT-s-OFDM	QPSK	10	Rear	349000	1745.0	1	108	20.00	18.86	0.268	0.348	
								108	54	20.00	18.87	0.272	0.353	
					Front	349000	1745.0	1	108	20.00	18.86	0.159	0.207	
								108	54	20.00	18.87	0.159	0.206	
					Left	349000	1745.0	1	108	20.00	18.86	0.129	0.168	
								108	54	20.00	18.87	0.128	0.166	
					Bottom	349000	1745.0	1	108	20.00	18.86	0.364	0.473	
								108	54	20.00	18.87	0.370	0.480	29
		CP-OFDM	QPSK	10	Bottom	349000	1745.0	1	1	20.00	19.16	0.328	0.398	
Ant.(B)	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
	Extremity 10-g	DFT-s-OFDM	QPSK	0	Rear	349000	1745.0	1	108	20.00	18.86	0.825	1.073	
								108	54	20.00	18.87	0.813	1.055	
					Front	349000	1745.0	1	108	20.00	18.86	0.720	0.936	
								108	54	20.00	18.87	0.670	0.869	
					Left	349000	1745.0	1	108	20.00	18.86	0.269	0.350	
								108	54	20.00	18.87	0.268	0.348	
					Bottom	349000	1745.0	1	108	20.00	18.86	1.510	1.963	
								108	54	20.00	18.87	1.530	1.985	30
		CP-OFDM	QPSK	0	Bottom	349000	1745.0	1	1	20.00	19.16	1.490	1.808	

Note(s):

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

10.2.14. Wi-Fi (DTS Band)

DTS SISO Ant.G SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN SISO Ant.G	2.4GHz	802.11b 1 Mbps	Body	10	Rear	6	2437.0	98.8%	19.0	18.74	0.211	0.227	
					Front	6	2437.0	98.8%	19.0	18.74	0.089	0.095	
					Top	6	2437.0	98.8%	19.0	18.74	0.282	0.303	31
					Left	6	2437.0	98.8%	19.0	18.74	0.095	0.102	
			RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
			Extremity 10-g	0	Rear	6	2437.0	98.8%	19.0	18.74	0.484	0.520	
					Front	6	2437.0	98.8%	19.0	18.74	0.609	0.654	
					Top	6	2437.0	98.8%	19.0	18.74	1.710	1.837	32
					Left	6	2437.0	98.8%	19.0	18.74	0.273	0.293	

DTS MIMO Ant.H+G SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN MIMO Ant.H	2.4GHz	802.11b 1 Mbps	Body	10	Rear	6	2437.0	98.9%	19.0	18.07	0.259	0.325	
					Front	6	2437.0	98.9%	19.0	18.07			
					Top	6	2437.0	98.9%	19.0	18.07			
					Left	6	2437.0	98.9%	19.0	18.07	0.295	0.370	
WLAN MIMO Ant.G			Body	10	Rear	6	2437.0	98.9%	19.0	18.35	0.240	0.282	
					Front	6	2437.0	98.9%	19.0	18.35	0.208	0.244	
					Top	6	2437.0	98.9%	19.0	18.35	0.362	0.425	33
					Left	6	2437.0	98.9%	19.0	18.35	0.361	0.424	
Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN MIMO Ant.H	2.4GHz	802.11b 1 Mbps	Extremity 10-g	0	Rear	6	2437.0	98.9%	19.0	18.07			
					Front	6	2437.0	98.9%	19.0	18.07			
					Top	6	2437.0	98.9%	19.0	18.07			
					Left	6	2437.0	98.9%	19.0	18.07	1.290	1.617	
WLAN MIMO Ant.G			Extremity 10-g	0	Rear	6	2437.0	98.9%	19.0	18.35	0.724	0.851	
					Front	6	2437.0	98.9%	19.0	18.35	0.850	0.999	
					Top	6	2437.0	98.9%	19.0	18.35	1.610	1.892	34
					Left	6	2437.0	98.9%	19.0	18.35			

10.2.15. Wi-Fi (U-NII Bands)

U-NII 2A MIMO Ant.H+J SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN MIMO Ant.H	5.3GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Body	10	Rear	58	5290.0	97.2%	17.0	16.72			
					Front	58	5290.0	97.2%	17.0	16.72	0.104	0.114	
					Top	58	5290.0	97.2%	17.0	16.72			
					Left	58	5290.0	97.2%	17.0	16.72	0.142	0.156	
WLAN MIMO Ant.J			Body	10	Rear	58	5290.0	97.2%	17.0	15.44	0.642	0.946	35
					Front	58	5290.0	97.2%	17.0	15.44			
					Top	58	5290.0	97.2%	17.0	15.44	0.074	0.109	
					Left	58	5290.0	97.2%	17.0	15.44			
Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN MIMO Ant.H	5.3GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Extremity 10-g	0	Rear	58	5290.0	97.2%	17.0	16.72			
					Front	58	5290.0	97.2%	17.0	16.72	0.621	0.681	
					Top	58	5290.0	97.2%	17.0	16.72			
					Left	58	5290.0	97.2%	17.0	16.72	0.505	0.554	
WLAN MIMO Ant.J			Extremity 10-g	0	Rear	58	5290.0	97.2%	17.0	15.44	0.855	1.259	36
					Front	58	5290.0	97.2%	17.0	15.44			
					Top	58	5290.0	97.2%	17.0	15.44	0.115	0.169	
					Left	58	5290.0	97.2%	17.0	15.44			

U-NII 2C MIMO Ant.H+J SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
									Tune-up limit	Meas.	Meas.	Scaled		
WLAN MIMO Ant.H	5.5GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Body	10	Rear	122	5610.0	97.2%	17.0	16.70				
						138	5690.0	97.2%	17.0	16.71				
					Front	138	5690.0	97.2%	17.0	16.71	0.201	0.221		
					Top	138	5690.0	97.2%	17.0	16.71				
					Left	138	5690.0	97.2%	17.0	16.71	0.277	0.305		
WLAN MIMO Ant.J			Body	10	Rear	122	5610.0	97.2%	17.0	16.40	0.642	0.758	1	
						138	5690.0	97.2%	17.0	16.11	0.736	0.929		37
					Front	138	5690.0	97.2%	17.0	16.11				
					Top	138	5690.0	97.2%	17.0	16.11	0.155	0.196		
					Left	138	5690.0	97.2%	17.0	16.11				
Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		10-g SAR (W/kg)		Note	Plot No.
									Tune-up limit	Meas.	Meas.	Scaled		
WLAN MIMO Ant.H	5.5GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Extremity 10-g	0	Rear	138	5690.0	97.2%	17.0	16.71				
					Front	138	5690.0	97.2%	17.0	16.71	0.769	0.845		
					Top	138	5690.0	97.2%	17.0	16.71	0.105	0.115		
					Left	138	5690.0	97.2%	17.0	16.71	0.625	0.687		
WLAN MIMO Ant.J			Extremity 10-g	0	Rear	138	5690.0	97.2%	17.0	16.11	1.390	1.755		38
					Front	138	5690.0	97.2%	17.0	16.11				
					Top	138	5690.0	97.2%	17.0	16.11				
					Left	138	5690.0	97.2%	17.0	16.11				

Note(s):

1. 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).

Wi-Fi (U-NII Bands) (Continued)

U-NII 3 MIMO Ant.H+J SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN MIMO Ant.H	5.8GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Body	10	Rear	155	5775.0	97.2%	17.0	16.33			
					Front	155	5775.0	97.2%	17.0	16.33	0.200	0.240	
					Top	155	5775.0	97.2%	17.0	16.33			
					Left	155	5775.0	97.2%	17.0	16.33	0.271	0.325	
WLAN MIMO Ant.J			Body	10	Rear	155	5775.0	97.2%	17.0	15.68	0.656	0.914	39
					Front	155	5775.0	97.2%	17.0	15.68			
					Top	155	5775.0	97.2%	17.0	15.68	0.155	0.216	
					Left	155	5775.0	97.2%	17.0	15.68			
Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN MIMO Ant.H	5.8GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Extremity 10-g	0	Rear	155	5775.0	97.2%	17.0	16.33	0.878	1.054	
					Front	155	5775.0	97.2%	17.0	16.33	0.924	1.109	40
					Top	155	5775.0	97.2%	17.0	16.33			
					Left	155	5775.0	97.2%	17.0	16.33	0.653	0.784	
WLAN MIMO Ant.J			Extremity 10-g	0	Rear	155	5775.0	97.2%	17.0	15.68			
					Front	155	5775.0	97.2%	17.0	15.68			
					Top	155	5775.0	97.2%	17.0	15.68	0.174	0.242	
					Left	155	5775.0	97.2%	17.0	15.68			

U-NII 4 MIMO Ant.H+J SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN MIMO Ant.H	5.9GHz U-NII 4	802.11ac VHT 80 29.3 Mbps	Body	10	Rear	171	5855.0	97.2%	17.0	16.37			
					Front	171	5855.0	97.2%	17.0	16.37	0.222	0.264	
					Top	171	5855.0	97.2%	17.0	16.37			
					Left	171	5855.0	97.2%	17.0	16.37	0.260	0.309	
WLAN MIMO Ant.J			Body	10	Rear	171	5855.0	97.2%	17.0	15.86	0.584	0.781	41
					Front	171	5855.0	97.2%	17.0	15.86			
					Top	171	5855.0	97.2%	17.0	15.86	0.119	0.159	
					Left	171	5855.0	97.2%	17.0	15.86			
Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WLAN MIMO Ant.H	5.9GHz U-NII 4	802.11ac VHT 80 29.3 Mbps	Extremity 10-g	0	Rear	171	5855.0	97.2%	17.0	16.37			
					Front	171	5855.0	97.2%	17.0	16.37	0.870	1.034	
					Top	171	5855.0	97.2%	17.0	16.37			
					Left	171	5855.0	97.2%	17.0	16.37	0.509	0.605	
WLAN MIMO Ant.J			Extremity 10-g	0	Rear	171	5855.0	97.2%	17.0	15.86	0.996	1.332	42
					Front	171	5855.0	97.2%	17.0	15.86			
					Top	171	5855.0	97.2%	17.0	15.86	0.143	0.191	
					Left	171	5855.0	97.2%	17.0	15.86			

10.2.16. Bluetooth

Bluetooth SISO SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
BT SISO Ant.H	2.4GHz	BT 1Mbps (DH5)	Body	10	Rear	39	2441.0	76.5%	18.0	17.86	0.089	0.094	
					Front	39	2441.0	76.5%	18.0	17.86	0.100	0.105	
					Left	39	2441.0	76.5%	18.0	17.86	0.141	0.149	43
			RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
			Extremity 10-g	0	Rear	39	2441.0	76.5%	18.0	17.86	0.205	0.216	
					Front	39	2441.0	76.5%	18.0	17.86	0.435	0.459	
					Left	39	2441.0	76.5%	18.0	17.86	0.470	0.496	44
BT SISO Ant.G	2.4GHz	BT 1Mbps (DH5)	Body	10	Rear	0	2402.0	76.5%	16.0	15.07	0.086	0.109	
					Front	0	2402.0	76.5%	16.0	15.07	0.061	0.078	
					Top	0	2402.0	76.5%	16.0	15.07	0.154	0.195	45
					Left	0	2402.0	76.5%	16.0	15.07	0.036	0.046	
			RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
			Extremity 10-g	0	Rear	0	2402.0	76.5%	16.0	15.07	0.314	0.397	
					Front	0	2402.0	76.5%	16.0	15.07	0.272	0.344	
					Top	0	2402.0	76.5%	16.0	15.07	0.711	0.900	46
					Left	0	2402.0	76.5%	16.0	15.07	0.116	0.147	

10.2.17. NFC

Antenna	Frequency Band	RF Exposure Conditions	Dist. (mm)	Test Position	Test setup		Freq. (MHz)	10-g SAR (W/kg)	Plot No.
					Type	Bitrate		Meas.	
NFC	PBRS	Extremity 10-g	0	Rear	A	106	13.6	0.011	47
				Front	A	106	13.6	0.000	
				Left	A	106	13.6	0.000	
				Bottom	A	106	13.6	0.000	

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	Antenna	DUT Configuration	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
2400	DTS MIMO	Ant.H+G	Folder Closed	Head	Right Tilt	Yes	0.854	0.831	1.03
2600	LTE B41	Ant.B	Folder Opened	Body	Bottom	Yes	0.807	0.805	1.00

Peak spatial-average (10g of tissue)

Frequency Band (MHz)	Air Interface	Antenna	DUT Configuration	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 B41	Ant.B	Folder Opened	Extremity 10-g	Bottom	Yes	2.270	2.200	1.03
	NR Bn41	Ant.B	Folder Opened	Extremity 10-g	Bottom	No	2.260	N/A	N/A

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
Folder Closed Head & Body-worn/Hotspot & Phablet-10g **Folder Opened** Body & Phablet-10g	1	WWAN (2G/3G/LTE/NR) + BT Ant.1 (Ant.H)
	2	WWAN (2G/3G/LTE/NR) + BT Ant.2 (Ant.G)
	3	WWAN (2G/3G/LTE/NR) + BT Ant.1 (Ant.H) + DTS Ant.2 (Ant.G)
	4	WWAN (2G/3G/LTE/NR) + DTS MIMO
	5	WWAN (2G/3G/LTE/NR) + UNII MIMO
	6	WWAN (2G/3G/LTE/NR) + BT Ant.1 (Ant.H) + UNII MIMO
	7	WWAN (2G/3G/LTE/NR) + BT Ant.2 (Ant.G) + UNII MIMO
	8	WWAN (2G/3G/LTE/NR) + DTS MIMO + UNII MIMO
	9	WWAN (2G/3G/LTE/NR) + BT Ant.1 (Ant.H) + DTS Ant.2 (Ant.G) + UNII MIMO
	10	ENDC + BT Ant.1 (Ant.H)
	11	ENDC + BT Ant.2 (Ant.G)
	12	ENDC + BT Ant.1 (Ant.H) + DTS Ant.2 (Ant.G)
	13	ENDC + DTS MIMO
	14	ENDC + UNII MIMO
	15	ENDC + BT Ant.1 (Ant.H) + UNII MIMO
	16	ENDC + BT Ant.2 (Ant.G) + UNII MIMO
	17	ENDC + DTS MIMO + UNII MIMO
	18	ENDC + BT Ant.1 (Ant.H) + DTS Ant.2 (Ant.G) + UNII MIMO
	19	Item (1-19) + UWB + NFC in Pablet-10g or Extremity 10-g conditions

Notes:

1. DTS supports Wi-Fi Direct, Hotspot and VoIP.
2. U-NII supports Wi-Fi Direct 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 can transmit simultaneously with Bluetooth Radio.
6. RSDB support to both DTS & UNII bands.
7. NR Radio support to both SA and NSA(ENDC) Radio.
8. BT tethering is considered about each RF exposure conditions.
9. DTS support SISO(Only Ant.G) and MIMO modes.
10. Bluetooh support only SISO mode.
11. UNII support only MIMO mode.

Note(s):

Qualcomm Smart Transmit algorithm support to WWAN/WLAN/BT except NFC and UWB. And This device has support 2 Antenna groups.

Each antenna group has controls the total RF exposure from all transmitter to not exceed FCC limit. Therefore, in Part.1 report, it is evaluated whether the sum of the groups of each antenna does not exceed FCC limit or spatial separation is applied. In addition, each antenna group need to satisfies simultaneous transmission analysis with External radios (NFC and UWB) in Part.1 report.

For Qualcomm Smart Transmit algorithm verification of each antenna group, please refer to the Part.2 test report.

12.1. Sub6 Antenna Groups

The 3nd generation of Smart Transmit (GEN3) operates based on pre-defined sub6 antenna groups(AG). 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/NFC/UWB) 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.

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

   For a conservative assessment of SPLSR in Head exposure condition, the y-axis coordinates of the peak locations was used based on the ERP of each Right and Left phantoms.

This device supports antenna groups like below table.

Antenna Groups	Grouped antenna list				
AG0	Ant.A	Ant.A+B	Ant.B		
AG1	Ant.F	Ant.H	Ant.G	Ant.H+G	Ant.H+J
ER(s)	NFC Ant.	UWB Ant.			
ER = Exteral radios/antennas suppored ourtside of Smart Transmit					

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 Folder Closed (Phablet) condition

12.1.1.1 Head(DSI=3)/Body&Hotspot(DSI=1)/Product Specific 10-g(DSI=1) exposure Antenna group analysis

Condition#1

Antenna Group : AG0_Ant.A

Antenna Group		AG0	AG0	AG0	AG0	AG0	AG0	AG0	Highest SAR
Antenna		Ant.A	Ant.A	Ant.A	Ant.A	Ant.A	Ant.A	Ant.A	
RF exposure	Test position	GSM850	WCDMA B5	LTE B5	LTE B12	LTE B13	LTE B26	NR Bn5	
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Head	Left Touch	0.040	0.133	0.130	0.128	0.100	0.134	0.110	0.134
	Left Tilt	0.039	0.094	0.098	0.077	0.056	0.097	0.100	0.100
	Right Touch	0.052	0.170	0.152	0.199	0.122	0.147	0.090	0.199
	Right Tilt	0.033	0.112	0.092	0.111	0.067	0.090	0.082	0.112
Body-worn & Hotspot	Rear	0.180	0.506	0.488	0.273	0.236	0.513	0.404	0.513
	Front	0.064	0.192	0.171	0.192	0.128	0.187	0.110	0.192
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.130	0.285	0.324	0.496	0.325	0.299	0.207	0.496
	Bottom	0.061	0.172	0.172	0.111	0.115	0.185	0.124	0.185
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Product Specific 10-g	Rear	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Front	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Antenna Group : AG0_Ant.A+B

Antenna Group		AG0	AG0	AG0	AG0	AG0	AG0	AG0	Highest SAR
Antenna		Ant.A+B	Ant.A+B	Ant.A+B	Ant.A+B	Ant.A+B	Ant.A+B	Ant.A+B	
RF exposure	Test position	GSM850	WCDMA B5	LTE B5	LTE B12	LTE B13	LTE B26	NR Bn5	
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Head	Left Touch	0.146	0.127	0.138	0.176	0.119	0.140	0.254	0.254
	Left Tilt	0.086	0.089	0.102	0.111	0.074	0.103	0.340	0.340
	Right Touch	0.185	0.155	0.164	0.227	0.150	0.168	0.340	0.340
	Right Tilt	0.097	0.094	0.083	0.142	0.085	0.085	0.386	0.386
Body-worn & Hotspot	Rear	0.672	0.581	0.499	0.379	0.286	0.500	0.453	0.672
	Front	0.226	0.172	0.242	0.226	0.158	0.187	0.140	0.242
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.500	0.327	0.360	0.612	0.366	0.368	0.323	0.612
	Bottom	0.201	0.172	0.165	0.145	0.090	0.168	0.143	0.201
	Right	0.206	0.132	0.152	0.347	0.139	0.154	0.140	0.347
Product Specific 10-g	Rear	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Front	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Antenna Group : AG0_Ant.B

Antenna Group		AG0	AG0	AG0	AG0	AG0	AG0	Highest SAR
Antenna		Ant.B	Ant.B	Ant.B	Ant.B	Ant.B	Ant.B	
RF exposure	Test position	GSM1900	LTE B2	LTE B41	LTE B66	NR Bn41	NR Bn66	
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Head	Left Touch	0.033	0.067	0.057	0.063	0.070	0.111	0.111
	Left Tilt	0.026	0.039	0.025	0.018	0.037	0.039	0.039
	Right Touch	0.071	0.164	0.118	0.128	0.076	0.183	0.183
	Right Tilt	0.031	0.037	0.025	0.058	0.022	0.119	0.119
Body-worn & Hotspot	Rear	0.365	0.469	0.452	0.483	0.354	0.694	0.694
	Front	0.112	0.226	0.074	0.134	0.068	0.313	0.313
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.152	0.203	0.110	0.151	0.093	0.182	0.203
	Bottom	0.549	0.686	0.784	0.590	0.571	0.835	0.835
	Right	0.037	0.054	0.032	0.060	0.031	0.087	0.087
Product Specific 10-g	Rear	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Front	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000

AG0's Highest SAR results

Antenna Group		AG0			Worst SAR
Antenna		Ant.A	Ant.A+B	Ant.B	
RF exposure	Test position				
Head	Left Touch	0.134	0.254	0.111	**0.254**
	Left Tilt	0.100	0.340	0.039	**0.340**
	Right Touch	0.199	0.340	0.183	**0.340**
	Right Tilt	0.112	0.386	0.119	**0.386**
Body-worn & Hotspot	Rear	0.513	0.672	0.694	**0.694**
	Front	0.192	0.242	0.313	**0.313**
	Top	0.000	0.000	0.000	**0.000**
	Left	0.496	0.612	0.203	**0.612**
	Bottom	0.185	0.201	0.835	**0.835**
	Right	0.000	0.347	0.087	**0.347**
Product Specific 10-g	Rear	0.000	0.000	0.000	**0.000**
	Front	0.000	0.000	0.000	**0.000**
	Top	0.000	0.000	0.000	**0.000**
	Left	0.000	0.000	0.000	**0.000**
	Bottom	0.000	0.000	0.000	**0.000**
	Right	0.000	0.000	0.000	**0.000**

Antenna Group : AG1_Ant.F

Antenna Group		AG1	AG1	Highest SAR
Antenna		Ant.F	Ant.F	
RF exposure	Test position	LTE B41	NR Bn41	
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Head	Left Touch	0.168	0.310	0.310
	Left Tilt	0.210	0.335	0.335
	Right Touch	0.254	0.394	0.394
	Right Tilt	0.243	0.340	0.340
Body-worn & Hotspot	Rear	0.186	0.248	0.248
	Front	0.040	0.075	0.075
	Top	0.215	0.381	0.381
	Left	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000
	Right	0.068	0.057	0.068
Product Specific 10-g	Rear	0.000	0.000	0.000
	Front	0.000	0.000	0.000
	Top	0.000	0.000	0.000
	Left	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000
	Right	0.000	0.000	0.000

Antenna Group : AG1_Ant.H & Ant.G & Ant.H+G & Ant.H+J

Antenna Group		AG1	AG1	Highest SAR	AG1	Highest SAR	AG1	Highest SAR	AG1	AG1	Highest SAR
Antenna		Ant.G	Ant.G		Ant.H		Ant.G+H		AntJ+H	AntJ+H	
RF exposure	Test position	BT Ant.2	2.4G Ant.2		BT Ant.1		2.4G MIMO		5G MIMO	6G MIMO	
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Head	Left Touch	0.287	0.373	0.373	0.083	0.083	0.764	0.764	0.188	0.020	0.188
	Left Tilt	0.394	0.560	0.560	0.046	0.046	0.928	0.928	0.105	0.002	0.105
	Right Touch	0.180	0.390	0.390	0.055	0.055	0.874	0.874	0.240	0.070	0.240
	Right Tilt	0.387	0.503	0.503	0.049	0.049	1.003	1.003	0.076	0.000	0.076
Body-worn & Hotspot	Rear	0.170	0.235	0.235	0.087	0.087	0.176	0.176	1.104	0.302	1.104
	Front	0.061	0.095	0.095	0.018	0.018	0.154	0.154	0.021	0.014	0.021
	Top	0.296	0.361	0.361	0.000	0.000	0.532	0.532	0.000	0.000	0.000
	R/Left	0.051	0.073	0.073	0.106	0.106	0.302	0.302	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	R/Right	0.015	0.018	0.018	0.000	0.000	0.012	0.012	0.000	0.000	0.000
Product Specific 10-g	Rear	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.340	0.065	1.340
	Front	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.134	0.037	0.134
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.222	0.024	0.222
	R/Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.491	0.162	0.491
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	R/Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.000	0.044

AG1's Highest SAR results

Antenna Group		AG1					Worst SAR
Antenna		Ant.F	Ant.G	Ant.H	Ant.H+G	Ant.H+J	
RF exposure	Test position						
Head	Left Touch	0.310	0.373	0.083	0.764	0.188	**0.764**
	Left Tilt	0.335	0.560	0.046	0.928	0.105	**0.928**
	Right Touch	0.394	0.390	0.055	0.874	0.240	**0.874**
	Right Tilt	0.340	0.503	0.049	1.003	0.076	**1.003**
Body-worn & Hotspot	Rear	0.248	0.235	0.087	0.176	1.104	**1.104**
	Front	0.075	0.095	0.018	0.154	0.021	**0.154**
	Top	0.381	0.361	0.000	0.532	0.000	**0.532**
	Left	0.000	0.073	0.106	0.302	0.000	**0.302**
	Bottom	0.000	0.000	0.000	0.000	0.000	**0.000**
	Right	0.068	0.018	0.000	0.012	0.000	**0.068**
Product Specific 10-g	Rear	0.000	0.000	0.000	0.000	1.340	**1.340**
	Front	0.000	0.000	0.000	0.000	0.134	**0.134**
	Top	0.000	0.000	0.000	0.000	0.222	**0.222**
	Left	0.000	0.000	0.000	0.000	0.491	**0.491**
	Bottom	0.000	0.000	0.000	0.000	0.000	**0.000**
	Right	0.000	0.000	0.000	0.000	0.044	**0.044**

Summation of AG0 and AG1

Configurations		AG0				AG1						SUM	SUM (for UNII 6e)	FCC Limit
		Ant.A	Ant.A+B	Ant.B	Worst	Ant.F	Ant.G	Ant.H	Ant.H+G	Ant.H+J	Worst			
Head	Left Touch	0.134	0.254	0.111	**0.254**	0.310	0.373	0.083	0.764	0.188	**0.764**	**1.018**	**1.018**	1.6
	Left Tilt	0.100	0.340	0.039	**0.340**	0.335	0.560	0.046	0.928	0.105	**0.928**	**1.268**	**1.268**	
	Right Touch	0.199	0.340	0.183	**0.340**	0.394	0.390	0.055	0.874	0.240	**0.874**	**1.214**	**1.214**	
	Right Tilt	0.112	0.386	0.119	**0.386**	0.340	0.503	0.049	1.003	0.076	**1.003**	**1.389**	**1.389**	
Body-worn & Hotspot	Rear	0.513	0.672	0.694	**0.694**	0.248	0.235	0.087	0.176	1.104	**1.104**	**1.798**	**0.996**	1.6
	Front	0.192	0.242	0.313	**0.313**	0.075	0.095	0.018	0.154	0.021	**0.154**	**0.467**	**0.467**	
	Top	0.000	0.000	0.000	**0.000**	0.381	0.361	0.000	0.532	0.000	**0.532**	**0.532**	**0.532**	
	Left	0.496	0.612	0.203	**0.612**	0.000	0.073	0.106	0.302	0.000	**0.302**	**0.914**	**0.914**	
	Bottom	0.185	0.201	0.835	**0.835**	0.000	0.000	0.000	0.000	0.000	**0.000**	**0.835**	**0.835**	
	Right	0.000	0.347	0.087	**0.347**	0.068	0.018	0.000	0.012	0.000	**0.068**	**0.415**	**0.415**	
Product Specific 10-g	Rear	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	1.340	**1.340**	**1.340**	**0.065**	4.0
	Front	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	0.134	**0.134**	**0.134**	**0.037**	
	Top	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	0.222	**0.222**	**0.222**	**0.024**	
	Left	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	0.491	**0.491**	**0.491**	**0.162**	
	Bottom	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	0.000	**0.000**	**0.000**	**0.000**	
	Right	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	0.044	**0.044**	**0.044**	**0.000**	

Note(s):

1. For Head & Product Specific 10-g exposure conditions, Additional evaluation is not required due to satisfy FCC limit.
2. For Body-worn & Hotspot exposure conditions, Additional evaluation is required due to over FCC limit. So please refer to Condition#2.

Condition#2

Test position	No.	Antenna pairs		AG0		AG1		AG0+AG1 SUM SAR (W/kg)	SPLSR of AG0 & AG1
		AG0	AG1	SAR (W/kg)	Y-axis location (mm)	SAR (W/kg)	Y-axis location (mm)		
Body-worn & Hotspot (Rear)	1	Ant.A	Ant.F	0.513	N/A	0.248	N/A	0.761	N/A
	2	Ant.A	Ant.G	0.513	N/A	0.235	N/A	0.748	N/A
	3	Ant.A	Ant.H	0.513	N/A	0.087	N/A	0.600	N/A
	4	Ant.A	Ant.H+G	0.513	N/A	0.176	N/A	0.689	N/A
	5	Ant.A	Ant.H+J	0.513	-70.6	1.104	65.7	1.617	0.02
	6	Ant.A+B	Ant.F	0.672	N/A	0.248	N/A	0.920	N/A
	7	Ant.A+B	Ant.G	0.672	N/A	0.235	N/A	0.907	N/A
	8	Ant.A+B	Ant.H	0.672	N/A	0.087	N/A	0.759	N/A
	9	Ant.A+B	Ant.H+G	0.672	N/A	0.176	N/A	0.848	N/A
	10	Ant.A+B	Ant.H+J	0.672	-63.9	1.104	65.7	1.776	0.02
	11	Ant.B	Ant.F	0.694	N/A	0.248	N/A	0.942	N/A
	12	Ant.B	Ant.G	0.694	N/A	0.235	N/A	0.929	N/A
	13	Ant.B	Ant.H	0.694	N/A	0.087	N/A	0.781	N/A
	14	Ant.B	Ant.H+G	0.694	N/A	0.176	N/A	0.870	N/A
	15	Ant.B	Ant.H+J	0.694	-75.2	1.104	65.7	1.798	0.02

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

Antenna Group	Antenna	Bands	SAR (W/kg)	Y-axis(mm) from ERP point
AG0	Ant.A	GSM 850	0.180	-72.8
		WCDMA B5	0.506	-74.1
		LTE B5	0.488	-74.1
		LTE B12	0.273	-71.3
		LTE B13	0.236	**-70.6**
		LTE B26	**0.513**	-74.1
		NR Bn5	0.404	-74.4
		Worst configuration	**0.513**	**-70.6**
	Ant.A+B	GSM 850	**0.672**	-72.6
		WCDMA B5	0.581	-71.4
		LTE B5	0.499	-72.1
		LTE B12	0.379	**-63.9**
		LTE B13	0.286	-79.0
		LTE B26	0.500	-72.6
		NR Bn5	0.453	-71.3
		Worst configuration	**0.672**	**-63.9**
	Ant.B	GSM 1900	0.365	-76.2
		LTE Band 2	0.469	-79.5
		LTE Band 41	0.452	-77.0
		LTE Band 66	0.483	-83.0
		NR Band n41	0.354	-78.0
		NR Band n66	**0.694**	**-75.2**
	Worst configuration		**0.694**	**-75.2**

Antenna Group	Antenna	Bands	SAR (W/kg)	Y-axis(mm) from ERP point
AG1	Ant.H+J	5G MIMO	**1.104**	**65.7**
		6G MIMO	0.302	68.6
		Worst configuration	**1.104**	**65.7**

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 0.10 (1-g or 10-g respectively) in all antenna pair (AG0 & AG1), additional evaluation is not required.

12.1.2 Folder Opened (UMPC mini tablet) condition

12.1.2.1 Body(DSI=0)/Extremity 10-g(DSI=0) exposure Antenna group analysis

Condition#1

Antenna Group : AG0_Ant.A+B

Antenna Group		AG0	AG0	AG0	AG0	AG0	AG0	AG0	Highest SAR
Antenna		Ant.A+B	Ant.A+B	Ant.A+B	Ant.A+B	Ant.A+B	Ant.A+B	Ant.A+B	
RF exposure	Test position	GSM850	WCDMA B5	LTE B5	LTE B12	LTE B13	LTE B26	NR Bn5	
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Body -10mm	Rear	0.466	0.750	0.768	0.457	0.361	0.709	0.531	0.768
	Front	0.287	0.557	0.482	0.335	0.259	0.527	0.335	0.557
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.274	0.339	0.340	0.297	0.309	0.334	0.218	0.340
	Bottom	0.255	0.367	0.351	0.303	0.221	0.362	0.274	0.367
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Extremity -0mm	Rear	0.785	1.548	1.239	1.095	0.612	1.291	1.327	1.548
	Front	0.752	1.287	1.262	1.068	0.622	1.328	1.156	1.328
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	1.165	1.844	1.830	1.786	0.884	1.903	0.978	1.903
	Bottom	0.684	1.121	1.117	1.564	0.693	1.206	1.058	1.564
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Antenna Group : AG0_Ant.B

Antenna Group		AG0	AG0	AG0	AG0	AG0	AG0	Highest SAR
Antenna		Ant.B	Ant.B	Ant.B	Ant.B	Ant.B	Ant.B	
RF exposure	Test position	GSM1900	LTE B2	LTE B41	LTE B66	NR Bn41	NR Bn66	
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Body -10mm	Rear	0.315	0.365	0.573	0.448	0.379	0.353	0.573
	Front	0.240	0.239	0.308	0.358	0.235	0.207	0.358
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.174	0.150	0.288	0.161	0.092	0.168	0.288
	Bottom	0.605	0.613	1.005	0.559	0.697	0.480	1.005
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Extremity -0mm	Rear	1.101	1.150	1.309	1.625	0.981	1.073	1.625
	Front	0.739	0.963	1.115	1.341	0.818	0.936	1.341
	Top	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Left	0.368	0.349	0.871	0.333	0.240	0.350	0.871
	Bottom	1.780	2.418	3.035	2.211	2.662	1.985	3.035
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000

AG0's Highest SAR results

Antenna Group		AG0		Worst SAR
Antenna		Ant.A+B	Ant.B	
RF exposure	Test position			
Body -10mm	Rear	0.768	0.573	**0.768**
	Front	0.557	0.358	**0.557**
	Top	0.000	0.000	**0.000**
	Left	0.340	0.288	**0.340**
	Bottom	0.367	1.005	**1.005**
	Right	0.000	0.000	**0.000**
Extremity -0mm	Rear	1.548	1.625	**1.625**
	Front	1.328	1.341	**1.341**
	Top	0.000	0.000	**0.000**
	Left	1.903	0.871	**1.903**
	Bottom	1.564	3.035	**3.035**
	Right	0.000	0.000	**0.000**

Antenna Group : AG1 Ant.F

Antenna		Ant.F	Ant.F	Highest SAR
RF exposure	Test position	LTE B41	NR Bn41	
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Body -10mm	Rear	**0.195**	**0.299**	**0.299**
	Front	**0.127**	**0.261**	**0.261**
	Top	**0.226**	**0.524**	**0.524**
	Left	**0.000**	**0.000**	**0.000**
	Bottom	**0.000**	**0.000**	**0.000**
	Right	**0.000**	**0.000**	**0.000**
Extremity -0mm	Rear	**0.772**	**0.779**	**0.779**
	Front	**0.698**	**0.764**	**0.764**
	Top	**1.177**	**1.993**	**1.993**
	Left	**0.000**	**0.000**	**0.000**
	Bottom	**0.000**	**0.000**	**0.000**
	Right	**0.000**	**0.000**	**0.000**

Antenna Group : AG1 Ant.G & Ant.H & Ant.H+G & Ant.H+J

Antenna Group		AG1	AG1		AG1		AG1		AG1	AG1	
Antenna		Ant.G	Ant.G		Ant.H		Ant.G+H		Ant.J+H	Ant.J+H	
RF exposure	Test position	BT Ant.2	2.4G Ant.2	Highest SAR	BT Ant.1	Highest SAR	2.4G MIMO	Highest SAR	5G MIMO	6G MIMO	Highest SAR
		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)		If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	If Plimit < Pmax, (Reported SAR x Multi-Tx factor)	
Body -10mm	Rear	0.109	0.227	0.227	0.094	0.094	0.325	0.325	0.946	0.200	0.946
	Front	0.078	0.095	0.095	0.105	0.105	0.244	0.244	0.264	0.036	0.264
	Top	0.195	0.303	0.303	0.000	0.000	0.425	0.425	0.216	0.012	0.216
	Left	0.046	0.102	0.102	0.149	0.149	0.424	0.424	0.325	0.003	0.325
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Extremity -0mm	Rear	0.397	0.520	0.520	0.216	0.216	0.851	0.851	1.755	0.112	1.755
	Front	0.344	0.654	0.654	0.459	0.459	0.999	0.999	1.109	0.211	1.109
	Top	0.900	1.837	1.837	0.000	0.000	1.892	1.892	0.242	0.001	0.242
	Left	0.147	0.293	0.293	0.496	0.496	1.617	1.617	0.784	0.098	0.784
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

AG1's Highest SAR results

Antenna Group		AG1					Worst SAR
Antenna		Ant.F	Ant.G	Ant.H	Ant.H+G	Ant.H+J	
RF exposure	Test position						
Body -10mm	Rear	0.299	0.227	0.094	0.325	0.946	**0.946**
	Front	0.261	0.095	0.105	0.244	0.264	**0.264**
	Top	0.524	0.303	0.000	0.425	0.216	**0.524**
	Left	0.000	0.102	0.149	0.424	0.325	**0.424**
	Bottom	0.000	0.000	0.000	0.000	0.000	**0.000**
	Right	0.000	0.000	0.000	0.000	0.000	**0.000**
Extremity -0mm	Rear	0.779	0.520	0.216	0.851	1.755	**1.755**
	Front	0.764	0.654	0.459	0.999	1.109	**1.109**
	Top	1.993	1.837	0.000	1.892	0.242	**1.993**
	Left	0.000	0.293	0.496	1.617	0.784	**1.617**
	Bottom	0.000	0.000	0.000	0.000	0.000	**0.000**
	Right	0.000	0.000	0.000	0.000	0.000	**0.000**

Summation of AG0 and AG1

Configurations		AG0			AG1						SUM	SUM (For UNII 6e)	FCC Limit
		Ant.A+B	Ant.B	Worst	Ant.F	Ant.G	Ant.H	Ant.H+G	Ant.H+G	Worst			
Body -10mm	Rear	0.768	0.573	**0.768**	0.299	0.227	0.094	0.325	0.946	**0.946**	**1.714**	**1.093**	**1.6**
	Front	0.557	0.358	**0.557**	0.261	0.095	0.105	0.244	0.264	**0.264**	**0.821**	**0.818**	
	Top	0.000	0.000	**0.000**	0.524	0.303	0.000	0.425	0.216	**0.524**	**0.524**	**0.524**	
	R/Left	0.340	0.288	**0.340**	0.000	0.102	0.149	0.424	0.325	**0.424**	**0.764**	**0.764**	
	Bottom	0.367	1.005	**1.005**	0.000	0.000	0.000	0.000	0.000	**0.000**	**1.005**	**1.005**	
	R/Right	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	0.000	**0.000**	**0.000**	**0.000**	
Extremity -0mm	Rear	1.548	1.625	**1.625**	0.779	0.520	0.216	0.851	1.755	**1.755**	**3.380**	**2.476**	**4.0**
	Front	1.328	1.341	**1.341**	0.764	0.654	0.459	0.999	1.109	**1.109**	**2.450**	**2.340**	
	Top	0.000	0.000	**0.000**	1.993	1.837	0.000	1.892	0.242	**1.993**	**1.993**	**1.993**	
	R/Left	1.903	0.871	**1.903**	0.000	0.293	0.496	1.617	0.784	**1.617**	**3.520**	**3.520**	
	Bottom	1.564	3.035	**3.035**	0.000	0.000	0.000	0.000	0.000	**0.000**	**3.035**	**3.035**	
	R/Right	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000	0.000	**0.000**	**0.000**	**0.000**	

Note(s):

1. For Extremity 10-g exposure conditions, Additional evaluation is not required due to satisfy FCC limit.
2. For Body conditions, Additional evaluation is required due to over FCC limit. So please refer to Condition#2.

Condition#2

Test position	No.	Antenna pairs		AG0		AG1		AG0+AG1 SUM SAR (W/kg)	SPLSR of AG0 & AG1
		AG0	AG1	SAR (W/kg)	Y-axis location (mm)	SAR (W/kg)	Y-axis location (mm)		
Body-10mm (Rear)	1	Ant.A+B	Ant.F	0.768	N/A	0.299	N/A	1.067	N/A
	2	Ant.A+B	Ant.G	0.768	N/A	0.227	N/A	0.995	N/A
	3	Ant.A+B	Ant.H	0.768	N/A	0.094	N/A	0.862	N/A
	4	Ant.A+B	Ant.H+G	0.768	N/A	0.325	N/A	1.093	N/A
	5	Ant.A+B	Ant.H+J	0.768	-61.2	0.946	63.2	1.714	0.02
	6	Ant.B	Ant.F	0.573	N/A	0.299	N/A	0.872	N/A
	7	Ant.B	Ant.G	0.573	N/A	0.227	N/A	0.800	N/A
	8	Ant.B	Ant.H	0.573	N/A	0.094	N/A	0.667	N/A
	9	Ant.B	Ant.H+G	0.573	N/A	0.325	N/A	0.898	N/A
	10	Ant.B	Ant.H+J	0.573	N/A	0.946	N/A	1.519	N/A

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

Antenna Group	Antenna	Bands	SAR (W/kg)	Y-axis(mm) from ERP point	Antenna Group	Antenna	Bands	SAR (W/kg)	Y-axis(mm) from ERP point
AG0	Ant.A+B	GSM 850	0.466	-65.1	AG1	Ant.H+J	5G MIMO	**0.946**	**63.2**
		WCDMA B5	0.750	-64.1			6G MIMO	0.200	63.7
		LTE B5	**0.768**	-61.9			Worst configuration	**0.946**	**63.2**
		LTE B12	0.457	-69.6					
		LTE B13	0.361	-70.6					
		LTE B26	0.709	**-61.2**					
		NR Bn5	0.531	-68.9					
		Worst configuration	**0.768**	**-61.2**					

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 0.10 (1-g or 10-g respectively) in all antenna pair (AG0 & AG1), additional evaluation is not required.

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.

12.2. Simultaneous transmission analysis

ER(External Radio) only evaluated at Product Specific 10-g of Folder Closed (Phablet) condition and Extremity 10-g of Folder Opened (UMPC mini tablet) condition.

12.2.1. Folder Closed_Product Specific 10-g exposure condition

AG0+AG1+ER

RF Exposure	Test Position	Highest SAR of each groups (W/kg)				SUM SAR (W/kg)	SUM SAR (For UNII 6e) (W/kg)
		AG0	AG1	ER-NFC	ER-UWB		
Product Specific10-g	Rear	0.000	1.340	0.010	0.001	1.351	0.076
	Front	0.000	0.134	0.000	0.000	0.134	0.037
	Top	0.000	0.222	0.000	0.002	0.224	0.026
	Left	0.000	0.491	0.000	0.000	0.491	0.162
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.000	0.044	0.000	0.000	0.044	0.000

12.2.2. Folder Opened_Extremity 10-g exposure condition

AG0+AG1+ER

RF Exposure	Test Position	Highest SAR of each groups (W/kg)				SUM SAR (W/kg)	SUM SAR (For UNII 6e) (W/kg)
		AG0	AG1	ER-NFC	ER-UWB		
Extremity 10-g	Rear	1.625	1.755	0.011	0.001	3.392	2.488
	Front	1.341	1.109	0.000	0.000	2.450	2.340
	Top	0.000	1.993	0.000	0.000	1.993	1.993
	Left	1.903	1.617	0.000	0.000	3.520	3.520
	Bottom	3.035	0.000	0.000	0.000	3.035	3.035
	Right	0.000	0.000	0.000	0.000	0.000	0.000

Note(s):
UWB SAR data refer to 4790841160-S2V1 FCC Report_Above 6GHz.

Conclusion:

Simultaneous Transmission SAR analysis results is satisfied the FCC Limit requirement.

Appendixes

Refer to separated files for the following appendixes.

4790841160-S1 FCC Report SAR_App A_Photos & Ant. Locations

4790841160-S1 FCC Report SAR_App B_Highest SAR Test Plots

4790841160-S1 FCC Report SAR_App C_System Check Plots

4790841160-S1 FCC Report SAR_App D_SAR Tissue Ingredients

4790841160-S1 FCC Report SAR_App E_Probe Cal. Certificates

4790841160-S1 FCC Report SAR_App F_Dipole Cal. Certificates

4790841160-S1 FCC Report SAR_App G_LTE Carrier Aggregation

4790841160-S1 FCC Report SAR_App H_Dynamic Antenna tuner testing

END OF REPORT