FCC 47 CFR § 2.1093
IEEE Std 1528-2013

SAR EVALUATION REPORT

FOR

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

MODEL NUMBER: SM-A546V

FCC ID: A3LSMA546V

REPORT NUMBER: 4790632299-S1V4

ISSUE DATE: 2/1/2023

Prepared for
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IAS ACCREDITED

Testing Laboratory

TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	1/17/2023	Initial Issue	--
V2	1/25/2023	Revised Pmax target of NR Band n77 PC3 & PC2 in Section.6.3 & 6.4. Added note 6,7 in Section.7. Revised typo in LTE B13 table of Section.9.3. Revised note in Section.12. Revised Appendix A as TCB guide.	Sunghoon Kim
V3	1/30/2023	Revised simultaneous transmission SAR value in Product Specific 10g exposure condition of Sec.1.	Sunghoon Kim
V4	2/1/2023	1. WLAN duty cycle-related information were modified. Revised note.2 in Sec 6.2. Added duty plot in Sec 9.5. Added duty plot in Sec 9.6. 2. Revised typo in Section 10.16.	Sunghoon Kim

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1. Attestation of Test Results

Applicant Name		SAMSUNG ELECTRONICS CO.,LTD.					
FCC ID		A3LSMA546V					
Model Number		SM-A546V					
Applicable Standards		FCC 47 CFR § 2.1093 IEEE Std 1528-2013 Published RF exposure KDB procedures					
Exposure Category		SAR Limits (W/Kg)					
		Peak spatial-average (1g of tissue)			Product Specific 10g (10g of tissue)		
General population / Uncontrolled exposure		1.6			4.0		
RF Exposure Conditions		Equipment Class - The Highest *Reported* SAR (W/kg)					
		PCE	CBE	DTS	NII	DSS	DXX
Head		1.00	1.04	0.25	0.10	0.15	N/A
Body-worn		0.62	0.24	0.27	0.37	< 0.10	N/A
Hotspot		1.24	0.48	0.58	0.22	0.21	N/A
Product Specific 10g		2.58	N/A	N/A	1.27	N/A	< 0.10
Simultaneous TX	Head	1.45		1.45	1.35	1.35	N/A
	Body-worn	1.27		0.89	1.27	1.27	N/A
	Hotspot	1.50		1.50	1.44	1.44	N/A
	Product Specific 10g	3.81		N/A	3.81	N/A	3.81
Date Tested		11/14/2022 to 1/16/2023					
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 Results

Equipment Class	Band	Antenna	The Highest Reported SAR (W/kg) of RF exposure conditions			
			1g of tissue			10g of tissue
			Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific Exposure
PCE	GSM 850	Main.1 Ant	0.402	0.197	0.533	N/A
	GSM 1900	Main.2 Ant	0.122	0.299	0.658	N/A
	WCDMA Band Ⅱ	Main.2 Ant	0.279	0.478	0.789	1.094
	WCDMA Band V	Main.1 Ant	0.242	0.250	0.527	N/A
	LTE Band 2	Main.2 Ant	0.288	**0.619**	**1.237**	2.347
	LTE Band 4	Main.2 Ant	N/A	N/A	N/A	N/A
	LTE Band 5	Main.1 Ant	0.345	0.396	0.662	N/A
	LTE Band 7	Main.2 Ant	0.218	0.355	0.455	N/A
	LTE Band 12	Main.1 Ant	0.308	0.407	0.451	N/A
	LTE Band 13	Main.1 Ant	0.336	0.480	0.686	N/A
	LTE Band 66	Main.2 Ant	0.308	0.604	1.001	**2.578**
	NR Band n2	Main.2 Ant	0.264	0.564	0.874	1.961
	NR Band n5	Main.1 Ant	0.357	0.349	0.630	N/A
	NR Band n66	Main.2 Ant	0.243	0.521	0.798	1.971
	NR Band n77 (Voice/Data/SRS0)	Sub.3 Ant	**0.997**	0.131	0.487	N/A
	NR Band n77-SRS1	Main.2 Ant	0.000	0.020	0.135	N/A
	NR Band n77-SRS2	Sub.5 Ant	0.533	0.070	0.189	N/A
	NR Band n77-SRS3	Sub.8 Ant	0.304	0.098	0.194	N/A
CBE	LTE Band 48	Sub.3 Ant	**1.040**	**0.240**	**0.482**	N/A
	NR Band n48 (Voice/Data/SRS0)	Sub.3 Ant	0.241	0.087	0.201	N/A
	NR Band n48-SRS1	Main.2 Ant	0.000	0.029	0.211	N/A
	NR Band n48-SRS2	Sub.5 Ant	0.249	0.025	0.090	N/A
	NR Band n48-SRS3	Sub.8 Ant	0.083	0.036	0.069	N/A
DTS	2.4GHz WLAN	WiFi/BT Ant.	**0.249**	**0.270**	**0.576**	N/A
UNII	5GHz WLAN	WiFi/BT Ant.	**0.101**	**0.368**	**0.224**	**1.265**
DSS	Bluetooth	WiFi/BT Ant.	**0.154**	**0.094**	**0.206**	N/A
DXX	NFC	NFC Ant.	N/A	N/A	N/A	**0.028**

Note(s):

The Highest Reported SAR Results were listed for each RF exposure conditions for each supported bands based on SAR test results of Section.10.

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, 2016; RF Exposure Procedures (Bluetooth Duty Factor)
- TCB workshop October, 2016; RF Exposure Procedures (DUT Holder Perturbations)
- TCB workshop May, 2017; RF Exposure Procedures (LTE Test Conditions)
- TCB workshop 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	

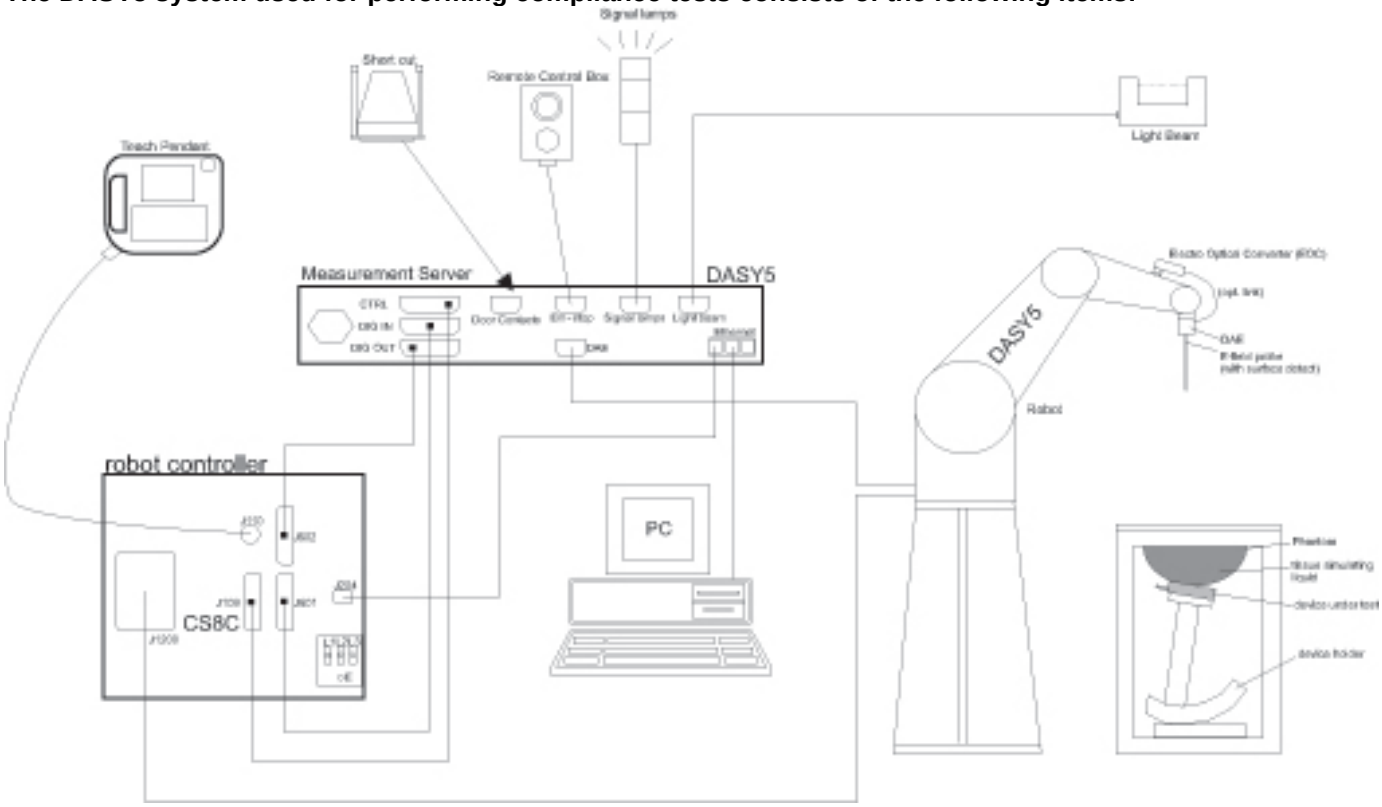
UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.
The full scope of accreditation can be viewed at;

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

4. SAR Measurement System & Test Equipment

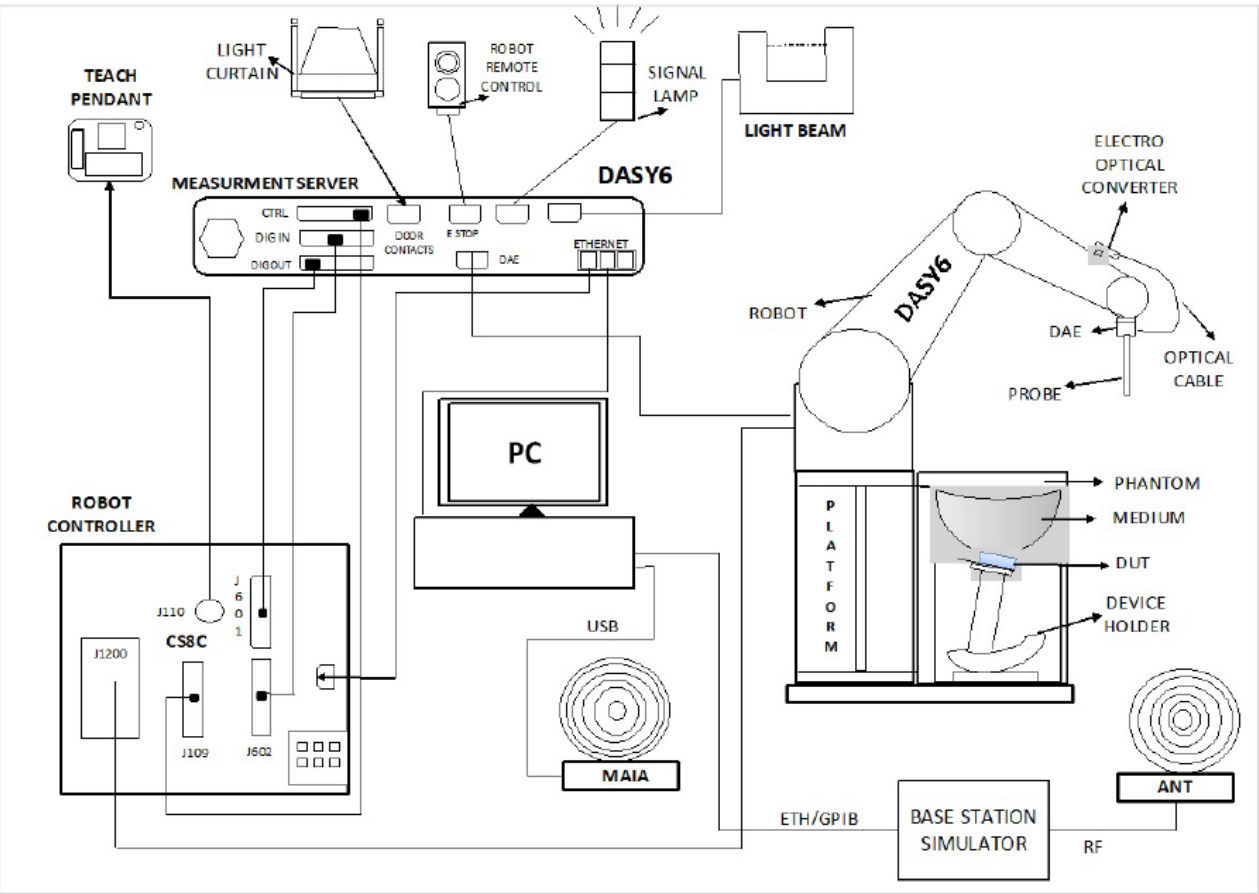
4.1. SAR Measurement System

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

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

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
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	Agilent	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	MY61060004	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	2-15-2023
				1-6-2024
Power Amplifier	EXODUS	AMP2027ADB	10002	3-30-2023
				1-6-2024
Directional Coupler	Agilent	772D	MY52180193	8-3-2023
Directional Coupler	H.P	778D	16133	8-3-2023
Directional Coupler	NARDA	4216-10	02836	8-3-2023
Directional Coupler	MINI-CIRCUITS	ZMDC-30-1+	SF569102123	8-3-2023
Low Pass Filter	FILTRON	L14012FL	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	8-2-2023
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

Note(s):

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

Test Equipment (Continued)

E-Field Probe	SPEAG	EX3DV4	7313	3-2-2023
E-Field Probe	SPEAG	EX3DV4	7330	1-28-2023
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	5-30-2023
E-Field Probe	SPEAG	EX3DV4	7652	4-28-2023
E-Field Probe	SPEAG	EX3DV4	7646	3-29-2023
Data Acquisition Electronics	SPEAG	DAE4	1447	3-25-2023
Data Acquisition Electronics	SPEAG	DAE4	1468	8-18-2023
Data Acquisition Electronics	SPEAG	DAE4	1494	7-18-2023
Data Acquisition Electronics	SPEAG	DAE4	1670	6-7-2023
Data Acquisition Electronics	SPEAG	DAE4	1671	5-31-2023
Data Acquisition Electronics	SPEAG	DAE4	1667	4-27-2023
Data Acquisition Electronics	SPEAG	DAE4	1668	4-27-2023
Data Acquisition Electronics	SPEAG	DAE4	1343	2023-0823
System Validation Dipole	SPEAG	D750V3	1205	4-27-2023
System Validation Dipole	SPEAG	D835V2	4d194	3-24-2023
System Validation Dipole	SPEAG	D835V2	4d174	9-21-2023
System Validation Dipole	SPEAG	D1750V2	1180	9-21-2023
System Validation Dipole	SPEAG	D1900V2	5d190	11-16-2023
System Validation Dipole	SPEAG	D1900V2	5d199	3-25-2023
System Validation Dipole	SPEAG	D2450V2	960	3-24-2023
System Validation Dipole	SPEAG	D2600V2	1178	4-23-2023
System Validation Dipole	SPEAG	D3500V2	1121	4-21-2023
System Validation Dipole	SPEAG	D3700V2	1036	5-21-2023
System Validation Dipole	SPEAG	D3900V2	1069	4-21-2023
System Validation Dipole	SPEAG	D5GHzV2	1184	11-23-2023
System Validation Dipole	SPEAG	CLA-13	1015	8-23-2023
Thermometer	Lutron	MHB-382SD	AH.91463	8-4-2023
				1-11-2024
Thermometer	Lutron	MHB-382SD	AH.50215	8-9-2023
				1-9-2024
Thermometer	Lutron	MHB-382SD	AH.50213	8-4-2023
				1-11-2024
Thermometer	Lutron	MHB-382SD	AH.45903	8-9-2023
				1-9-2024
Thermometer	Lutron	MHB-382SD	AK.12123	8-9-2023
				1-9-2024
Thermometer	Lutron	MHB-382SD	AK.18789	8-9-2023
Thermometer	Lutron	MHB-382SD	AK.12103	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	5-27-2023
				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	MY59150850	**12-13-2022**
				1-9-2024
UXM 5G Wireless Test Platform	Keysight	E7515B	MY58120110	**1-7-2023**
				1-10-2024
UXM 5G Wireless Test Platform	Keysight	E7515B	MY57510596	8-5-2023
Radio Communication Test Station	Anritsu	MT8000A	6272466165	9-8-2023
Radio Communication Analyzer	Anritsu	MT8821C	6161094351	9-8-2023

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(d,k)	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 Procedures 1, Clause 4.4.2 in IEC Guide 115:2007.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Refer to Appendix A.
Back Cover	☒ 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) ☒ Mobile Hotspot (Wi-Fi 5.8 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 R3CTA0AXMYP Main Conducted 2 R3CTA0AXNLK Main Conducted 3 R3CTA0AXNNX Main Conducted 4 'R3CTB0J19BW Main Conducted 5 R3CTB0J1PZV Main Conducted 6 R3CTA0AY1NV Wi-Fi & BT Conducted 7 R3CTA0AXZDA Wi-Fi & BT Conducted 8 R3CTA0AXRWK SAR 9 R3CTA0AXMPB SAR 10 R3CTA0AXQ8A SAR 11 R3CTA0AXN0L SAR 12 R3CTA0AXKZX SAR 13 R3CTA0AXNZT SAR 14 R3CTB0J1NXD SAR 15 R3CTB0J16QA SAR 16 R3CTB0J0YMJ 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 II Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 14) HSUPA (Category 6) DC-HSDPA (Category 14) HSPA+ (DL only)		100%
LTE	FDD Band 2 FDD Band 4 FDD Band 5 FDD Band 7 FDD Band 12 FDD Band 13 FDD Band 66 TDD Band 48	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (2 Uplink and 4 Downlinks) **<u>Uplink Carrier Aggregation(2CC)</u>** CA_48C		100% (FDD) 63.3% (TDD)
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
5G NR (Sub 6)	FDD Band n2 FDD Band n5 FDD Band n66 TDD Band n48 TDD Band n77-Power Class 3 TDD Band n77-Power Class 2	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), 802.11ax (HE20)		SISO : 98.7% (802.11b) MIMO : 98.5% (802.11b)
	5 GHz	802.11a / 802.11n (HT20/40) 802.11ac (VHT20/40/80) 802.11ax (HE20/40/80)		SISO : 96.0% (802.11a) 95.2% (802.11ac (VHT80) MIMO: 97.8% (802.11a)
	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		77.1%
NFC	13.56 MHz	Type A/B/F		100%

Notes:

1. The Bluetooth protocol is considered source-based averaging. Bluetooth was verified to have the highest duty cycle and was considered and used for SAR Testing.
2. Duty cycle plot for Wi-Fi are in Section.9.5 (2.4GHz) & Section.9.6 (5GHz)
3. This device supports Power Class 2(HPUE) and Power Class 3 for NR Band n77
4. This device supports UL CA Intra-band Continues.
5. NR TDD Band n48 & n77 has support SRS (Sounding Reference Signal) 0/1/2/3 operates.

6.3. Time-Averaging feature

The equipment under test (EUT) contains the Samsung S.LSI chipset supporting 4G technologies and 5G NR bands (Sub.6 & mmW). these chipset is enabled with TAS (Time Average SAR) algorithm 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.

The TAS (Time Average SAR) 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.

TAS (Time Average SAR) algorithm 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} NV settings and maximum tune up output power P_{max} configured for this EUT for various transmit conditions (RSI=Radio SAR Index).

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

Exposure condition		Body-Worn	Product Specific 10-g Without triggering sensor	Product Specific 10-g With triggering sensor	Head (RCV)	Hotspot	Ear-jack	Pmax (Maximum tune-up Power) (dBm)
Spatial-average		1g	10g	10g	1g	1g	10g	
Test distance (mm)		15	11/7/0/13	0	0	10	0	
RSI:		0	0	2	4	3	1	
RF Air Interface	Antenna	Plimit (all values are time averaged)						
GSM 850	Main.1	24.98	24.98	24.98	24.98	24.98	21.48	24.98
GSM 1900	Main.2	20.99	20.99	20.99	20.99	20.99	20.99	20.99
WCDMA Band II	Main.2	23.00	23.00	21.00	23.00	21.00	21.00	23.00
WCDMA Band V	Main.1	24.00	24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 2	Main.2	24.00	24.00	22.00	24.00	22.00	22.00	24.00
LTE Band 5	Main.1	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE Band 7	Main.2	23.00	23.00	20.00	23.00	20.00	20.00	23.00
LTE Band 12	Main.1	24.00	24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 13	Main.1	24.00	24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 48	Sub.3	18.00	18.00	18.00	17.50	18.00	18.00	21.00
LTE Band 66(4)	Main.2	24.00	24.00	22.00	24.00	22.00	22.00	24.00
NR Band n2	Main.2	24.00	24.00	22.00	24.00	22.00	22.00	24.00
NR Band n5	Main.1	24.50	24.50	24.50	24.50	24.50	24.50	24.50
NR Band n66	Main.2	24.00	24.00	22.00	24.00	22.00	22.00	24.00
NR Band n48 -SRS 0-	Sub.3	14.00	14.00	14.00	13.00	14.00	14.00	23.00
NR Band n48 -SRS 1-	Main.2	14.50	14.50	14.50	13.50	14.50	14.50	19.00
NR Band n48 -SRS 2-	Sub.5	14.00	14.00	14.00	13.00	14.00	14.00	18.00
NR Band n48 -SRS 3-	Sub.8	14.00	14.00	14.00	12.00	14.00	14.00	17.00
NR Band n77 -SRS 0-PC3/PC2	Sub.3	15.00	15.00	15.00	15.00	15.00	15.00	23.50 / 27.00
NR Band n77 -SRS 1-PC3/PC2 (DoD)	Main.2	13.00	13.00	13.00	13.00	13.00	13.00	19.50
NR Band n77 -SRS 1-PC3/PC2	Main.2	15.50	15.50	15.50	15.50	15.50	15.50	19.50
NR Band n77 -SRS 2-PC3/PC2	Sub.5	14.50	14.50	14.50	14.50	14.50	14.50	21.00
NR Band n77 -SRS 3-PC3/PC2	Sub.8	14.50	14.50	14.50	14.50	14.50	14.50	18.50

Notes:

1. All P_{Limit} NV and maximum tune up output P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (for e.g., GSM/LTE TDD). NR TDD's P_{max} was listed as burst power.
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 SAR report were performed by setting static Power condition.
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}.
5. The 2G/3G technologies are not controlled by the TAS algorithm. But SAR test were considered to determine which P_{Limit} satisfies *SAR_design_target* in each RSIs.

6.4. Maximum Allowed Output power

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

RF Air interface	Antenna	Mode	Time Slots	Maximum allowed output power (dBm)											
				Pmax		Plimit									
						RSI = 0 (Body-worn & Sensor Off)		RSI = 2 (Proximity sensor On)		RSI = 4 (Head-RCV On)		RSI = 3 (Hotspot)		RSI = 1 (Earjack)	
				Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM850	Main.1 Ant.	Voice	1	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47	30.00	20.97
		GPRS	1	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47	33.50	24.47	30.00	20.97
		GPRS	2	32.00	25.98	32.00	25.98	32.00	25.98	32.00	25.98	32.00	25.98	28.50	22.48
		GPRS	3	30.00	25.74	30.00	25.74	30.00	25.74	30.00	25.74	30.00	25.74	26.50	22.24
		GPRS	4	28.00	24.99	28.00	24.99	28.00	24.99	28.00	24.99	28.00	24.99	24.50	21.49
		EGPRS	1	27.50	18.47	27.50	18.47	27.50	18.47	27.50	18.47	27.50	18.47	27.00	17.97
		EGPRS	2	26.00	19.98	26.00	19.98	26.00	19.98	26.00	19.98	26.00	19.98	25.50	19.48
		EGPRS	3	24.00	19.74	24.00	19.74	24.00	19.74	24.00	19.74	24.00	19.74	23.50	19.24
		EGPRS	4	22.50	19.49	22.50	19.49	22.50	19.49	22.50	19.49	22.50	19.49	22.00	18.99
GSM1900	Main.2 Ant.	Voice	1	31.00	21.97	31.00	21.97	31.00	21.97	31.00	21.97	31.00	21.97	31.00	21.97
		GPRS	1	31.00	21.97	31.00	21.97	31.00	21.97	31.00	21.97	31.00	21.97	31.00	21.97
		GPRS	2	28.00	21.98	28.00	21.98	28.00	21.98	28.00	21.98	28.00	21.98	28.00	21.98
		GPRS	3	26.00	21.74	26.00	21.74	26.00	21.74	26.00	21.74	26.00	21.74	26.00	21.74
		GPRS	4	25.00	21.99	25.00	21.99	25.00	21.99	25.00	21.99	25.00	21.99	25.00	21.99
		EGPRS	1	27.00	17.97	27.00	17.97	27.00	17.97	27.00	17.97	27.00	17.97	27.00	17.97
		EGPRS	2	25.50	19.48	25.50	19.48	25.50	19.48	25.50	19.48	25.50	19.48	25.50	19.48
		EGPRS	3	23.00	18.74	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	22.00	18.99

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)					
			Pmax	Plimit				
				RSI = 0 (Body-worn & Sensor Off)	RSI = 2 (Proximity sensor On)	RSI = 4 (Head-RCV On)	RSI = 3 (Hotspot)	RSI = 1 (Earjack)
W-CDMA Band II	Main.2 Ant.	R99	24.00	24.00	22.00	24.00	22.00	22.00
		HSDPA	23.50	23.50	22.00	23.50	22.00	22.00
		HSUPA	23.50	23.50	22.00	23.50	22.00	22.00
		DC-HSDPA	23.50	23.50	22.00	23.50	22.00	22.00
W-CDMA Band V	Main.1 Ant.	R99	25.00	25.00	25.00	25.00	25.00	25.00
		HSDPA	23.50	23.50	23.50	23.50	23.50	23.50
		HSUPA	23.50	23.50	23.50	23.50	23.50	23.50
		DC-HSDPA	23.00	23.00	23.00	23.00	23.00	23.00

Note(s):

1. Detail of RSI(Radio SAR Index) conditions, please refer to Sec.6.5.

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)					
			Pmax	Plimit				
				RSI = 0 (Body-worn & Sensor Off)	RSI = 2 (Proximity sensor On)	RSI = 4 (Head-RCV On)	RSI = 3 (Hotspot)	RSI = 1 (Earjack)
LTE Band 2	Main.2 Ant	QPSK	25.00	25.00	23.00	25.00	23.00	23.00
LTE Band 4	Main.2 Ant	QPSK	25.00	25.00	23.00	25.00	23.00	23.00
LTE Band 5	Main.1 Ant	QPSK	25.50	25.50	25.50	25.50	25.50	25.50
LTE Band 7	Main.2 Ant	QPSK	24.00	24.00	21.00	24.00	21.00	21.00
LTE Band 12	Main.1 Ant	QPSK	25.00	25.00	25.00	25.00	25.00	25.00
LTE Band 13	Main.1 Ant	QPSK	25.00	25.00	25.00	25.00	25.00	25.00
LTE Band 48	Sub.3 Ant	QPSK	24.00	21.00	21.00	20.50	21.00	21.00
LTE Band 66	Main.2 Ant	QPSK	25.00	25.00	23.00	25.00	23.00	23.00
NR Band n2	Main.2 Ant	DFT-s-OFDM	25.00	25.00	23.00	25.00	23.00	23.00
NR Band n5	Main.1 Ant	DFT-s-OFDM	25.50	25.50	25.50	25.50	25.50	25.50
NR Band n48 (Voice/Data/SRS0)	Sub.3 Ant	DFT-s-OFDM	24.00	15.00	15.00	14.00	15.00	15.00
NR Band n48 (SRS1)	Main.2 Ant	SRS CW	20.00	15.50	15.50	14.50	15.50	15.50
NR Band n48 (SRS2)	Sub.5 Ant.	SRS CW	19.00	15.00	15.00	14.00	15.00	15.00
NR Band n48 (SRS3)	Sub.8 Ant	SRS CW	18.00	15.00	15.00	13.00	15.00	15.00
NR Band n66	Main.2 Ant	DFT-s-OFDM	25.00	25.00	23.00	25.00	23.00	23.00
NR Band n77-PC3 (Voice/Data/SRS0)	Sub.3 Ant	DFT-s-OFDM	24.50	16.00	16.00	16.00	16.00	16.00
NR Band n77(DoD)-PC3 (SRS1)	Main.2 Ant	SRS CW	20.50	14.00	14.00	14.00	14.00	14.00
NR Band n77-PC3 (SRS1)	Main.2 Ant	SRS CW	20.50	16.50	16.50	16.50	16.50	16.50
NR Band n77-PC3 (SRS2)	Sub.5 Ant.	SRS CW	22.00	15.50	15.50	15.50	15.50	15.50
NR Band n77-PC3 (SRS3)	Sub.8 Ant	SRS CW	19.50	15.50	15.50	15.50	15.50	15.50
NR Band n77-PC2 (Voice/Data/SRS0)	Sub.3 Ant	DFT-s-OFDM	28.00	16.00	16.00	16.00	16.00	16.00
NR Band n77(DoD)-PC2 (SRS1)	Main.2 Ant	SRS CW	20.50	14.00	14.00	14.00	14.00	14.00
NR Band n77-PC2 (SRS1)	Main.2 Ant	SRS CW	20.50	16.50	16.50	16.50	16.50	16.50
NR Band n77-PC2 (SRS2)	Sub.5 Ant.	SRS CW	22.00	15.50	15.50	15.50	15.50	15.50
NR Band n77-PC2 (SRS3)	Sub.8 Ant	SRS CW	19.50	15.50	15.50	15.50	15.50	15.50

Note(s):

1. Detail of RSI(Radio SAR Index) conditions, please refer to Sec.6.5.
2. LTE Band 48 has support UL CA intra-band-continues mode with same target power in each standalone LTE bands. Details of configuration are refer to Appendix.H.
3. NR Bands support SA and NSA mode as same target power.

WLAN/BT output power

Max output power

RF Air interface	Band	Max. RF Output Power (dBm)											
		SISO(Ant 1/2)						MIMO (Ant1 + Ant2)					
		802.11 mode						802.11 mode					
		a	b	g	n	ac	ax	a	b	g	n	ac	ax
WiFi 2.4 GHz	DTS		19 1ch : 18.0 11ch : 18.0	16.5 1ch : 15.0 11ch : 15.0	16.5 1ch : 15.0 11ch : 15.0		16.5 1ch : 15.0 11ch : 15.0		22 1ch : 21.0 11ch : 21.0	19.5 1ch : 18.0 11ch : 18.0	19.5 1ch : 18.0 11ch : 18.0		19.5 1ch : 18.0 11ch : 18.0
WiFi 5 GHz (BW : 20MHz)	UNII-1 & 2A UNII-2C UNII-3	17.5 64ch : 16.0 100ch : 16.0 140ch : 11.5			17.5 64ch : 16.0 100ch : 16.0 140ch : 11.5	17.5 64ch : 16.0 100ch : 16.0 140ch : 11.5	17.0 64ch : 16.0 100ch : 16.0 140ch : 11.5	20.5 64ch : 19.0 100ch : 19.0 140ch : 14.5			20.5 64ch : 19.0 100ch : 19.0 140ch : 14.5	20.5 64ch : 19.0 100ch : 19.0 140ch : 14.5	20.0 64ch : 19.0 100ch : 19.0 140ch : 14.5
WiFi 5 GHz (BW : 40MHz)	UNII-1 & 2A UNII-2C UNII-3				14.5 62ch : 13.5	14.5 62ch : 13.5	14.5 62ch : 13.5				17.5 62ch : 16.5	17.5 62ch : 16.5	17.5 62ch : 16.5
WiFi 5 GHz (BW : 80MHz)	UNII-1 & 2A UNII-2C UNII-3					12.5	12.5					15.5	15.5

RF Air interface	Max. RF Output Power (dBm)		
	BDR	EDR	LE
Bluetooth	15.5	13.0	14.0

Reduced output power

RF Air interface	Band	Reduced. RF Output Power (dBm)											
		SISO(Ant 1/2)						MIMO (Ant1 + Ant2)					
		802.11 mode						802.11 mode					
		a	b	g	n	ac	ax	a	b	g	n	ac	ax
WiFi 2.4 GHz	DTS		13	13	13		13		16	16	16		16
WiFi 5 GHz (BW : 20MHz)	UNII Bands	11.0			11.0	11.0	11.0	14.0			14.0	14.0	14.0
WiFi 5 GHz (BW : 40MHz)	UNII Bands				11.0	11.0	11.0				14.0	14.0	14.0
WiFi 5 GHz (BW : 80MHz)	UNII Bands					11.0	11.0					14.0	14.0

RF Air interface	Reduced. RF Output Power (dBm)		
	BDR	EDR	LE
Bluetooth	12.0	13.0	9.0

Note(s):

1. This device uses an independent fixed level power reduction mechanism for WLAN & BT mode operations during RCV operation. Detailed descriptions of the power reduction mechanism are included in the operational description.
2. For MIMO mode, each Antennas operated same target power.

6.5. RSI (Radio SAR Index) Scenarios

This device supports multiple RSI Scenarios and Each RSIs operate to each RF exposure Conditions.

Please below table;

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

Note(s):

RSI Scenarios priority: RSI=4 → RSI=3 → RSI=1 → RSI=2 → RSI=0

Product Specific 10g Adjusted SAR Calculation

Wireless technologies	Worst RSI's Maximum tune-up limit (dBm)	RSI = 3 Maximum tune-up limit (dBm)	Power Factor	Reported SAR Limit (W/kg)
WCDMA Band II	24.00	22.00	1.58	0.757
LTE Band 2	25.00	23.00	1.58	0.757
LTE Band 66(4)	25.00	23.00	1.58	0.757
LTE Band 7	24.00	21.00	2.00	0.601
NR Band n2	25.00	23.00	1.58	0.757
NR Band n66	25.00	23.00	1.58	0.757

Note(s):

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

6.6. General LTE SAR Test and Reporting Considerations

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

General LTE SAR Test and Reporting Considerations (Continued)

Frequency range, Channel Bandwidth, Numbers and Frequencues

Band 48	Frequency range: 3550 - 3700 MHz					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	55340/ 3560	55315/ 3557.5	55290/ 3555	55265/ 3552.5		
Low-Mid	55773/ 3603.3	55765/ 3602.5	55757/ 3601.7	55748/ 3600.8		
Mid-High	56207/ 3646.7	56215/ 3647.5	56223/ 3648.3	56232/ 3649.2		
High	56640/ 3690	56665/ 3692.5	56690/ 3695	56715/ 3697.5		

Band 66	Frequency range: 1710 - 1780 MHz					
	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.

Spectrum plots for RB configurations

A properly configured base station simulator was used for the SAR and power measurements; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.

Notes:

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 n2	Frequency range: 1850 - 1910 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							374000/ 1870	373000/ 1865	372500/ 1862.5	372000/ 1860	371500/ 1857.5	371000/ 1855	370500/ 1852.5
	Mid							376000/ 1880	376000/ 1880	376000/ 1880	376000/ 1880	376000/ 1880	376000/ 1880	376000/ 1880
	High							378000/ 1890	379000/ 1895	379500 1897.5	380000/ 1900	380500/ 1902.5	381000/ 1905	381500/ 1907.5
	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 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
	Band n48	Frequency range: 3550 - 3700 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							638000/ 3570			637334/ 3560.01	637168/ 3557.52	637000/ 3555	
	Low-Mid										640222/ 3603.33	640166/ 3602.49	640110/ 3601.65	
	Mid							641666/ 3624.99						
	Mid-High										643112/ 3646.68	643166/ 3647.49	643222/ 3648.33	
	High							645332/ 3679.98			646000/ 3690	646166/ 3692.49	646332/ 3694.98	
	Band n77 -DoD-	Frequency range: 3450 - 3550 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						631668/ 3475.02	631334/ 3470.01	631000/ 3465	630866/ 3462.99	630668/ 3460.02	630500/ 3457.5	630334/ 3455.01	
	Mid	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01			633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	
	High						635000/ 3525	635332/ 3529.98	635666/ 3534.99	635800 3537	636000/ 3540	636166/ 3542.49	636332/ 3544.98	
	Band n77	Frequency range: 3700 - 3980 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	650000 /3750	649668 /3745.02	649334 /3740.01	649000/ 3735	648668 /3730.02	648334 /3725.01	648000 /3720	647668/ 3715.02	647500/ 3712.5	647334 /3710.01	647168/ 3707.52	647000/ 3705	
	Low-Mid				653666/ 3804.99	653556 /3803.34	652166 /3782.49	651200 /3768	651000/ 3765	650900/ 3763.5	650800 /3762	650700/ 3760.5	650600/ 3759	
	Mid-A		656000 /3840	656000 /3840			656000 /3840	654400 /3816	654334/ 3815.01	654300/ 3814.5	654266 /3813.99	654234/ 3813.51	654200/ 3813	
	Mid-B							657600 /3864	657666/ 3864.99	657700/ 3814.5	657734 /3866.01	657766/ 3866.49	657800/ 3867	
	Mid-High	662000 /3930	662332 /3934.98	662666 /3939.99	658334/ 3875.01	658444 /3876.66	659834 /3897.51	660800 /3912	661000/ 3915	661100/ 3916.5	661200 /3918	661300/ 3919.5	661400/ 3921	
	High				663000/ 3945	663332 /3949.98	663666 /3954.99	664000 /3960	664332/ 3964.98	664500/ 3967.5	664666 /3969.99	664832/ 3972.48	665000/ 3975	
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 disabled for SAR Testing?	Yes													
EN-DC Carrier Aggregation Possible Combinations														
LTE Anchor Bands for NR Band n2	LTE Band 5 / 13													
LTE Anchor Bands for NR Band n5	LTE Band 2 / 7 / 48 / 66													
LTE Anchor Bands for NR Band n48	None (SA only)													
LTE Anchor Bands for NR Band n66	LTE Band 5 / 13													
LTE Anchor Bands for NR Band n77	LTE Band 2 / 5 / 7 / 13 / 66													

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.

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.

WWAN

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WWAN	Head	All Main Antennas	0 mm	Left Touch	N/A	Yes	
				Left Tilt (15°)	N/A	Yes	
				Right Touch	N/A	Yes	
				Right Tilt (15°)	N/A	Yes	
	Body	All Main Antennas	15 mm	Rear	N/A	Yes	
				Front	N/A	Yes	
	Hotspot	Main 1 Ant.	10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Edge 1 (Top)	> 25 mm	No	1
				Edge 2 (Right)	< 25 mm	Yes	
				Edge 3 (Bottom)	< 25 mm	Yes	
				Edge 4 (Left)	> 25 mm	No	1
	Hotspot	Main 2 Ant.	10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Edge 1 (Top)	> 25 mm	No	1
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	< 25 mm	Yes	
				Edge 4 (Left)	< 25 mm	Yes	
	Hotspot	Sub.3 Ant.	10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Edge 1 (Top)	< 25 mm	Yes	
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	> 25 mm	No	1
				Edge 4 (Left)	< 25 mm	Yes	
	Hotspot	Sub.5 Ant.	10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Edge 1 (Top)	< 25 mm	Yes	
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	> 25 mm	No	1
				Edge 4 (Left)	< 25 mm	Yes	
	Hotspot	Sub.8 Ant.	10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Edge 1 (Top)	< 25 mm	Yes	
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	> 25 mm	No	1
				Edge 4 (Left)	< 25 mm	Yes	
	Product Specific 10-g	All Main Antennas	0 mm	Rear	Refer to notes 2 & 3		
				Front			
				Edge 1 (Top)			
				Edge 2 (Right)			
				Edge 3 (Bottom)			
				Edge 4 (Left)			

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.

WLAN&BT

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

NFC

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	
				Edge 1 (Top)	< 25 mm	Yes	
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	> 25 mm	No	1
				Edge 4 (Left)	< 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).
6. For 2.4G/BT WiFi Ant.1 & Ant.2, 2.4GHz Ant.1 and BT Ant are same Sub.5 Ant., and 2.4GHz Ant.2 is same Sub.2 Ant.
7. For 5G WiFi Ant.1 & Ant.2, 5GHz Ant.1 is same Sub.3 Ant., and 5GHz Ant.2 is same Sub.9 Ant.

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 (9MHz to 19MHz). 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 (9MHz to 19MHz)

Target Frequency (MHz)	Head	
	ε_r	σ (S/m)
9	55.0	0.75
13	55.0	0.75
19	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 1 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
11-28-2022	Head 1750	e'	38.7000	Relative Permittivity (ϵ_r):	38.70	40.08	-3.45	5
		e''	14.0900	Conductivity (σ):	1.37	1.37	0.15	5
	Head 1710	e'	39.1000	Relative Permittivity (ϵ_r):	39.10	40.15	-2.61	5
		e''	14.2400	Conductivity (σ):	1.35	1.35	0.56	5
	Head 1755	e'	38.7000	Relative Permittivity (ϵ_r):	38.70	40.08	-3.44	5
		e''	14.1000	Conductivity (σ):	1.38	1.37	0.30	5
1-9-2023	Head 3500	e'	38.0800	Relative Permittivity (ϵ_r):	38.08	37.93	0.40	5
		e''	14.8000	Conductivity (σ):	2.88	2.91	-1.08	5
	Head 3600	e'	37.8300	Relative Permittivity (ϵ_r):	37.83	37.82	0.04	5
		e''	14.9200	Conductivity (σ):	2.99	3.01	-0.91	5
	Head 3700	e'	37.5600	Relative Permittivity (ϵ_r):	37.56	37.70	-0.38	5
		e''	15.1200	Conductivity (σ):	3.11	3.12	-0.18	5
	Head 3800	e'	37.3000	Relative Permittivity (ϵ_r):	37.30	37.59	-0.76	5
		e''	15.3700	Conductivity (σ):	3.25	3.22	0.90	5
	Head 3900	e'	37.0500	Relative Permittivity (ϵ_r):	37.05	37.47	-1.13	5
		e''	15.6300	Conductivity (σ):	3.39	3.32	2.06	5
	Head 3950	e'	37.0900	Relative Permittivity (ϵ_r):	37.09	37.42	-0.87	5
		e''	15.7300	Conductivity (σ):	3.45	3.37	2.46	5
1-13-2023	Head 3500	e'	37.8800	Relative Permittivity (ϵ_r):	37.88	37.93	-0.13	5
		e''	14.5600	Conductivity (σ):	2.83	2.91	-2.68	5
	Head 3600	e'	37.4300	Relative Permittivity (ϵ_r):	37.43	37.82	-1.02	5
		e''	14.7700	Conductivity (σ):	2.96	3.01	-1.90	5
	Head 3700	e'	37.0000	Relative Permittivity (ϵ_r):	37.00	37.70	-1.86	5
		e''	14.9000	Conductivity (σ):	3.07	3.12	-1.63	5
	Head 3800	e'	37.0400	Relative Permittivity (ϵ_r):	37.04	37.59	-1.46	5
		e''	15.0900	Conductivity (σ):	3.19	3.22	-0.94	5
	Head 3900	e'	37.0800	Relative Permittivity (ϵ_r):	37.08	37.47	-1.05	5
		e''	15.0100	Conductivity (σ):	3.25	3.32	-1.98	5
	Head 3950	e'	37.1400	Relative Permittivity (ϵ_r):	37.14	37.42	-0.74	5
		e''	15.0900	Conductivity (σ):	3.31	3.37	-1.71	5

SAR 2 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
11-23-2022	Head 1900	e'	40.8200	Relative Permittivity (ϵ_r):	40.82	40.00	2.05	5
		e''	13.4600	Conductivity (σ):	1.42	1.40	1.57	5
	Head 1850	e'	40.8100	Relative Permittivity (ϵ_r):	40.81	40.00	2.03	5
		e''	13.5400	Conductivity (σ):	1.39	1.40	-0.51	5
	Head 1910	e'	40.8300	Relative Permittivity (ϵ_r):	40.83	40.00	2.08	5
		e''	13.4600	Conductivity (σ):	1.43	1.40	2.11	5
11-28-2022	Head 1900	e'	39.5500	Relative Permittivity (ϵ_r):	39.55	40.00	-1.13	5
		e''	13.2400	Conductivity (σ):	1.40	1.40	-0.09	5
	Head 1850	e'	39.5000	Relative Permittivity (ϵ_r):	39.50	40.00	-1.25	5
		e''	13.4200	Conductivity (σ):	1.38	1.40	-1.40	5
	Head 1910	e'	39.5500	Relative Permittivity (ϵ_r):	39.55	40.00	-1.13	5
		e''	13.2100	Conductivity (σ):	1.40	1.40	0.21	5
1-6-2023	Head 3500	e'	39.1300	Relative Permittivity (ϵ_r):	39.13	37.93	3.16	5
		e''	15.4100	Conductivity (σ):	3.00	2.91	3.00	5
	Head 3600	e'	38.7800	Relative Permittivity (ϵ_r):	38.78	37.82	2.55	5
		e''	15.1500	Conductivity (σ):	3.03	3.01	0.62	5
	Head 3700	e'	38.6000	Relative Permittivity (ϵ_r):	38.60	37.70	2.38	5
		e''	14.9700	Conductivity (σ):	3.08	3.12	-1.17	5
	Head 3800	e'	38.0600	Relative Permittivity (ϵ_r):	38.06	37.59	1.26	5
		e''	15.3000	Conductivity (σ):	3.23	3.22	0.44	5
	Head 3900	e'	37.3200	Relative Permittivity (ϵ_r):	37.32	37.47	-0.41	5
		e''	15.5900	Conductivity (σ):	3.38	3.32	1.80	5
	Head 3950	e'	37.0000	Relative Permittivity (ϵ_r):	37.00	37.42	-1.11	5
		e''	15.3800	Conductivity (σ):	3.38	3.37	0.18	5
1-10-2023	Head 5200	e'	35.8900	Relative Permittivity (ϵ_r):	35.89	35.99	-0.28	5
		e''	16.3200	Conductivity (σ):	4.72	4.65	1.46	5
	Head 5250	e'	35.7900	Relative Permittivity (ϵ_r):	35.79	35.93	-0.40	5
		e''	16.3600	Conductivity (σ):	4.78	4.70	1.57	5
	Head 5600	e'	34.9900	Relative Permittivity (ϵ_r):	34.99	35.53	-1.53	5
		e''	16.6600	Conductivity (σ):	5.19	5.06	2.52	5
	Head 5750	e'	34.6100	Relative Permittivity (ϵ_r):	34.61	35.36	-2.13	5
		e''	16.7600	Conductivity (σ):	5.36	5.21	2.78	5
	Head 5800	e'	34.5000	Relative Permittivity (ϵ_r):	34.50	35.30	-2.27	5
		e''	16.7800	Conductivity (σ):	5.41	5.27	2.69	
	Head 5925	e'	34.2800	Relative Permittivity (ϵ_r):	34.28	35.20	-2.61	5
		e''	16.8600	Conductivity (σ):	5.55	5.40	2.86	5

SAR 3 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
12-1-2022	Head 750	e'	42.3300	Relative Permittivity (ϵ_r):	42.33	41.96	0.88	5
		e"	20.8200	Conductivity (σ):	0.87	0.89	-2.78	5
	Head 700	e'	42.5000	Relative Permittivity (ϵ_r):	42.50	42.22	0.67	5
		e"	21.8700	Conductivity (σ):	0.85	0.89	-4.27	5
	Head 790	e'	42.1700	Relative Permittivity (ϵ_r):	42.17	41.76	0.99	5
		e"	20.1100	Conductivity (σ):	0.88	0.90	-1.43	5
12-2-2022	Head 2600	e'	40.3800	Relative Permittivity (ϵ_r):	40.38	39.01	3.51	5
		e"	13.8700	Conductivity (σ):	2.01	1.96	2.19	5
	Head 2500	e'	40.5400	Relative Permittivity (ϵ_r):	40.54	39.14	3.59	5
		e"	13.7000	Conductivity (σ):	1.90	1.85	2.72	5
	Head 2700	e'	40.2000	Relative Permittivity (ϵ_r):	40.20	38.88	3.38	5
		e"	14.0200	Conductivity (σ):	2.10	2.07	1.67	5
12-13-2022	Head 1900	e'	41.3900	Relative Permittivity (ϵ_r):	41.39	40.00	3.48	5
		e"	13.2700	Conductivity (σ):	1.40	1.40	0.14	5
	Head 1850	e'	41.3900	Relative Permittivity (ϵ_r):	41.39	40.00	3.48	5
		e"	13.2400	Conductivity (σ):	1.36	1.40	-2.72	5
	Head 1910	e'	41.3800	Relative Permittivity (ϵ_r):	41.38	40.00	3.45	5
		e"	13.2900	Conductivity (σ):	1.41	1.40	0.82	5
12-19-2022	Head 3500	e'	39.3200	Relative Permittivity (ϵ_r):	39.32	37.93	3.67	5
		e"	14.9500	Conductivity (σ):	2.91	2.91	-0.07	5
	Head 3600	e'	39.0600	Relative Permittivity (ϵ_r):	39.06	37.82	3.29	5
		e"	15.0700	Conductivity (σ):	3.02	3.01	0.09	5
	Head 3700	e'	38.7400	Relative Permittivity (ϵ_r):	38.74	37.70	2.75	5
		e"	15.2700	Conductivity (σ):	3.14	3.12	0.81	5
	Head 3800	e'	38.4400	Relative Permittivity (ϵ_r):	38.44	37.59	2.27	5
		e"	15.4900	Conductivity (σ):	3.27	3.22	1.69	5
	Head 3900	e'	38.1500	Relative Permittivity (ϵ_r):	38.15	37.47	1.81	5
		e"	15.6500	Conductivity (σ):	3.39	3.32	2.19	5
	Head 3950	e'	38.0400	Relative Permittivity (ϵ_r):	38.04	37.42	1.67	5
		e"	15.7700	Conductivity (σ):	3.46	3.37	2.72	5
1-6-2023	Head 3500	e'	39.6800	Relative Permittivity (ϵ_r):	39.68	37.93	4.61	5
		e"	14.9700	Conductivity (σ):	2.91	2.91	0.06	5
	Head 3600	e'	39.1700	Relative Permittivity (ϵ_r):	39.17	37.82	3.58	5
		e"	15.0200	Conductivity (σ):	3.01	3.01	-0.24	5
	Head 3700	e'	39.0600	Relative Permittivity (ϵ_r):	39.06	37.70	3.60	5
		e"	14.9700	Conductivity (σ):	3.08	3.12	-1.17	5
	Head 3800	e'	38.6400	Relative Permittivity (ϵ_r):	38.64	37.59	2.80	5
		e"	14.9500	Conductivity (σ):	3.16	3.22	-1.86	5
	Head 3900	e'	38.2700	Relative Permittivity (ϵ_r):	38.27	37.47	2.13	5
		e"	14.9700	Conductivity (σ):	3.25	3.32	-2.25	5
	Head 3950	e'	38.1300	Relative Permittivity (ϵ_r):	38.13	37.42	1.91	5
		e"	15.0200	Conductivity (σ):	3.30	3.37	-2.17	5
1-9-2023	Head 3500	e'	39.2200	Relative Permittivity (ϵ_r):	39.22	37.93	3.40	5
		e"	14.8800	Conductivity (σ):	2.90	2.91	-0.54	5
	Head 3600	e'	38.9700	Relative Permittivity (ϵ_r):	38.97	37.82	3.05	5
		e"	15.0500	Conductivity (σ):	3.01	3.01	-0.04	5
	Head 3700	e'	38.8400	Relative Permittivity (ϵ_r):	38.84	37.70	3.02	5
		e"	15.1700	Conductivity (σ):	3.12	3.12	0.15	5
	Head 3800	e'	38.7300	Relative Permittivity (ϵ_r):	38.73	37.59	3.04	5
		e"	15.2300	Conductivity (σ):	3.22	3.22	-0.02	5
	Head 3900	e'	38.4600	Relative Permittivity (ϵ_r):	38.46	37.47	2.63	5
		e"	15.2100	Conductivity (σ):	3.30	3.32	-0.68	5
	Head 3950	e'	38.3500	Relative Permittivity (ϵ_r):	38.35	37.42	2.50	5
		e"	15.1900	Conductivity (σ):	3.34	3.37	-1.06	5

SAR 4 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
12-1-2022	Head 1750	e'	40.4500	Relative Permittivity (ϵ_r):	40.45	40.08	0.91	5
		e"	14.6100	Conductivity (σ):	1.42	1.37	3.85	5
	Head 1710	e'	40.6000	Relative Permittivity (ϵ_r):	40.60	40.15	1.13	5
		e"	14.6600	Conductivity (σ):	1.39	1.35	3.53	5
	Head 1755	e'	40.4400	Relative Permittivity (ϵ_r):	40.44	40.08	0.91	5
		e"	14.6000	Conductivity (σ):	1.42	1.37	3.86	5
12-1-2022	Head 1900	e'	38.4900	Relative Permittivity (ϵ_r):	38.49	40.00	-3.78	5
		e"	13.5900	Conductivity (σ):	1.44	1.40	2.55	5
	Head 1850	e'	38.6000	Relative Permittivity (ϵ_r):	38.60	40.00	-3.50	5
		e"	13.6500	Conductivity (σ):	1.40	1.40	0.29	5
	Head 1910	e'	38.4700	Relative Permittivity (ϵ_r):	38.47	40.00	-3.83	5
		e"	13.5900	Conductivity (σ):	1.44	1.40	3.09	5
12-5-2022	Head 1750	e'	40.2700	Relative Permittivity (ϵ_r):	40.27	40.08	0.46	5
		e"	13.5800	Conductivity (σ):	1.32	1.37	-3.47	5
	Head 1710	e'	40.4600	Relative Permittivity (ϵ_r):	40.46	40.15	0.78	5
		e"	13.9500	Conductivity (σ):	1.33	1.35	-1.49	5
	Head 1755	e'	40.2400	Relative Permittivity (ϵ_r):	40.24	40.08	0.41	5
		e"	13.5500	Conductivity (σ):	1.32	1.37	-3.61	5
12-5-2022	Head 1900	e'	40.0900	Relative Permittivity (ϵ_r):	40.09	40.00	0.23	5
		e"	12.8800	Conductivity (σ):	1.36	1.40	-2.81	5
	Head 1850	e'	40.2100	Relative Permittivity (ϵ_r):	40.21	40.00	0.53	5
		e"	13.0900	Conductivity (σ):	1.35	1.40	-3.82	5
	Head 1910	e'	40.0700	Relative Permittivity (ϵ_r):	40.07	40.00	0.18	5
		e"	12.9000	Conductivity (σ):	1.37	1.40	-2.14	5
12-9-2022	Head 1750	e'	40.3200	Relative Permittivity (ϵ_r):	40.32	40.08	0.59	5
		e"	14.6600	Conductivity (σ):	1.43	1.37	4.20	5
	Head 1710	e'	40.3900	Relative Permittivity (ϵ_r):	40.39	40.15	0.61	5
		e"	14.7600	Conductivity (σ):	1.40	1.35	4.23	5
	Head 1755	e'	40.3100	Relative Permittivity (ϵ_r):	40.31	40.08	0.58	5
		e"	14.6600	Conductivity (σ):	1.43	1.37	4.28	5
12-9-2022	Head 1900	e'	40.0600	Relative Permittivity (ϵ_r):	40.06	40.00	0.15	5
		e"	13.5300	Conductivity (σ):	1.43	1.40	2.10	5
	Head 1850	e'	40.0800	Relative Permittivity (ϵ_r):	40.08	40.00	0.20	5
		e"	13.7700	Conductivity (σ):	1.42	1.40	1.18	5
	Head 1910	e'	40.0500	Relative Permittivity (ϵ_r):	40.05	40.00	0.12	5
		e"	13.5200	Conductivity (σ):	1.44	1.40	2.56	5
12-13-2022	Head 1900	e'	41.4700	Relative Permittivity (ϵ_r):	41.47	40.00	3.68	5
		e"	13.7500	Conductivity (σ):	1.45	1.40	3.76	5
	Head 1850	e'	41.5100	Relative Permittivity (ϵ_r):	41.51	40.00	3.78	5
		e"	13.8100	Conductivity (σ):	1.42	1.40	1.47	5
	Head 1910	e'	41.4700	Relative Permittivity (ϵ_r):	41.47	40.00	3.68	5
		e"	13.7500	Conductivity (σ):	1.46	1.40	4.31	5
12-16-2022	Head 2600	e'	38.8100	Relative Permittivity (ϵ_r):	38.81	39.01	-0.51	5
		e"	13.1900	Conductivity (σ):	1.91	1.96	-2.82	5
	Head 2500	e'	39.0000	Relative Permittivity (ϵ_r):	39.00	39.14	-0.35	5
		e"	13.1900	Conductivity (σ):	1.83	1.85	-1.11	5
	Head 2700	e'	38.6900	Relative Permittivity (ϵ_r):	38.69	38.88	-0.50	5
		e"	13.1800	Conductivity (σ):	1.98	2.07	-4.42	5
12-20-2022	Head 2600	e'	38.8200	Relative Permittivity (ϵ_r):	38.82	39.01	-0.49	5
		e"	13.1900	Conductivity (σ):	1.91	1.96	-2.82	5
	Head 2500	e'	39.0100	Relative Permittivity (ϵ_r):	39.01	39.14	-0.32	5
		e"	13.1900	Conductivity (σ):	1.83	1.85	-1.11	5
	Head 2700	e'	38.7000	Relative Permittivity (ϵ_r):	38.70	38.88	-0.47	5
		e"	13.1800	Conductivity (σ):	1.98	2.07	-4.42	5
1-11-2023	Head 2450	e'	38.4000	Relative Permittivity (ϵ_r):	38.40	39.20	-2.04	5
		e"	13.0400	Conductivity (σ):	1.78	1.80	-1.31	5
	Head 2400	e'	38.5600	Relative Permittivity (ϵ_r):	38.56	39.30	-1.87	5
		e"	12.9500	Conductivity (σ):	1.73	1.75	-1.34	5
	Head 2480	e'	38.3100	Relative Permittivity (ϵ_r):	38.31	39.16	-2.18	5
		e"	13.0800	Conductivity (σ):	1.80	1.83	-1.57	5

SAR 5 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
11-14-2022	Head 750	e'	42.2000	Relative Permittivity (ϵ_r):	42.20	41.96	0.57	5
		e"	22.1400	Conductivity (σ):	0.92	0.89	3.38	5
	Head 700	e'	42.2000	Relative Permittivity (ϵ_r):	42.20	42.22	-0.04	5
		e"	23.0900	Conductivity (σ):	0.90	0.89	1.07	5
	Head 790	e'	42.2100	Relative Permittivity (ϵ_r):	42.21	41.76	1.09	5
		e"	21.2500	Conductivity (σ):	0.93	0.90	4.16	5
11-14-2022	Head 835	e'	41.9500	Relative Permittivity (ϵ_r):	41.95	41.50	1.08	5
		e"	20.1900	Conductivity (σ):	0.94	0.90	4.15	5
	Head 820	e'	42.0500	Relative Permittivity (ϵ_r):	42.05	41.60	1.08	5
		e"	20.5200	Conductivity (σ):	0.94	0.90	4.13	5
	Head 850	e'	41.8600	Relative Permittivity (ϵ_r):	41.86	41.50	0.87	5
		e"	19.9100	Conductivity (σ):	0.94	0.92	2.84	5
11-18-2022	Head 835	e'	40.6100	Relative Permittivity (ϵ_r):	40.61	41.50	-2.14	5
		e"	20.2100	Conductivity (σ):	0.94	0.90	4.26	5
	Head 820	e'	40.7000	Relative Permittivity (ϵ_r):	40.70	41.60	-2.17	5
		e"	20.4400	Conductivity (σ):	0.93	0.90	3.73	5
	Head 850	e'	40.5400	Relative Permittivity (ϵ_r):	40.54	41.50	-2.31	5
		e"	20.0300	Conductivity (σ):	0.95	0.92	3.46	5
11-22-2022	Head 835	e'	41.4500	Relative Permittivity (ϵ_r):	41.45	41.50	-0.12	5
		e"	19.1600	Conductivity (σ):	0.89	0.90	-1.16	5
	Head 820	e'	41.4600	Relative Permittivity (ϵ_r):	41.46	41.60	-0.34	5
		e"	19.4200	Conductivity (σ):	0.89	0.90	-1.45	5
	Head 850	e'	41.4300	Relative Permittivity (ϵ_r):	41.43	41.50	-0.17	5
		e"	18.8800	Conductivity (σ):	0.89	0.92	-2.48	5
11-28-2022	Head 750	e'	40.4300	Relative Permittivity (ϵ_r):	40.43	41.96	-3.65	5
		e"	21.5300	Conductivity (σ):	0.90	0.89	0.53	5
	Head 700	e'	40.5200	Relative Permittivity (ϵ_r):	40.52	42.22	-4.02	5
		e"	22.7700	Conductivity (σ):	0.89	0.89	-0.33	5
	Head 790	e'	40.3700	Relative Permittivity (ϵ_r):	40.37	41.76	-3.32	5
		e"	20.7300	Conductivity (σ):	0.91	0.90	1.61	5
11-28-2022	Head 835	e'	40.1000	Relative Permittivity (ϵ_r):	40.10	41.50	-3.37	5
		e"	19.3800	Conductivity (σ):	0.90	0.90	-0.02	5
	Head 820	e'	40.2100	Relative Permittivity (ϵ_r):	40.21	41.60	-3.35	5
		e"	19.8700	Conductivity (σ):	0.91	0.90	0.84	5
	Head 850	e'	39.9700	Relative Permittivity (ϵ_r):	39.97	41.50	-3.69	5
		e"	18.9400	Conductivity (σ):	0.90	0.92	-2.17	5
12-2-2022	Head 835	e'	41.5400	Relative Permittivity (ϵ_r):	41.54	41.50	0.10	5
		e"	20.1400	Conductivity (σ):	0.94	0.90	3.90	5
	Head 820	e'	41.5800	Relative Permittivity (ϵ_r):	41.58	41.60	-0.05	5
		e"	20.4000	Conductivity (σ):	0.93	0.90	3.52	5
	Head 850	e'	41.4900	Relative Permittivity (ϵ_r):	41.49	41.50	-0.02	5
		e"	19.9000	Conductivity (σ):	0.94	0.92	2.79	5
12-6-2022	Head 750	e'	41.2700	Relative Permittivity (ϵ_r):	41.27	41.96	-1.65	5
		e"	21.5900	Conductivity (σ):	0.90	0.89	0.81	5
	Head 700	e'	41.4900	Relative Permittivity (ϵ_r):	41.49	42.22	-1.72	5
		e"	22.9500	Conductivity (σ):	0.89	0.89	0.45	5
	Head 790	e'	41.0600	Relative Permittivity (ϵ_r):	41.06	41.76	-1.67	5
		e"	20.7200	Conductivity (σ):	0.91	0.90	1.56	5
12-12-2022	Head 835	e'	41.5800	Relative Permittivity (ϵ_r):	41.58	41.50	0.19	5
		e"	19.6300	Conductivity (σ):	0.91	0.90	1.27	5
	Head 820	e'	41.6200	Relative Permittivity (ϵ_r):	41.62	41.60	0.04	5
		e"	19.9600	Conductivity (σ):	0.91	0.90	1.29	5
	Head 850	e'	41.5400	Relative Permittivity (ϵ_r):	41.54	41.50	0.10	5
		e"	19.3500	Conductivity (σ):	0.91	0.92	-0.05	5
12-20-2022	Head 835	e'	43.0300	Relative Permittivity (ϵ_r):	43.03	41.50	3.69	5
		e"	19.7300	Conductivity (σ):	0.92	0.90	1.78	5
	Head 820	e'	43.0500	Relative Permittivity (ϵ_r):	43.05	41.60	3.48	5
		e"	20.0100	Conductivity (σ):	0.91	0.90	1.55	5
	Head 850	e'	43.0000	Relative Permittivity (ϵ_r):	43.00	41.50	3.61	5
		e"	19.4600	Conductivity (σ):	0.92	0.92	0.52	5
1-2-2023	Head 835	e'	40.1000	Relative Permittivity (ϵ_r):	40.10	41.50	-3.37	5
		e"	20.1200	Conductivity (σ):	0.93	0.90	3.79	5
	Head 820	e'	40.1500	Relative Permittivity (ϵ_r):	40.15	41.60	-3.49	5
		e"	20.4200	Conductivity (σ):	0.93	0.90	3.63	5
	Head 850	e'	40.0700	Relative Permittivity (ϵ_r):	40.07	41.50	-3.45	5
		e"	19.8300	Conductivity (σ):	0.94	0.92	2.43	5

SAR 6 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
12-6-2022	Head 2450	e'	40.9500	Relative Permittivity (ϵ_r):	40.95	39.20	4.46	5
		e''	12.7000	Conductivity (σ):	1.73	1.80	-3.88	5
	Head 2410	e'	40.9600	Relative Permittivity (ϵ_r):	40.96	39.28	4.28	5
		e''	12.7500	Conductivity (σ):	1.71	1.76	-2.95	5
	Head 2480	e'	40.9400	Relative Permittivity (ϵ_r):	40.94	39.16	4.54	5
		e''	12.6700	Conductivity (σ):	1.75	1.83	-4.65	5
12-12-2022	Head 2450	e'	40.4100	Relative Permittivity (ϵ_r):	40.41	39.20	3.09	5
		e''	13.0200	Conductivity (σ):	1.77	1.80	-1.46	5
	Head 2400	e'	40.4700	Relative Permittivity (ϵ_r):	40.47	39.30	2.99	5
		e''	12.8900	Conductivity (σ):	1.72	1.75	-1.80	5
	Head 2480	e'	40.3800	Relative Permittivity (ϵ_r):	40.38	39.16	3.11	5
		e''	13.0700	Conductivity (σ):	1.80	1.83	-1.64	5
12-26-2022	Head 2450	e'	40.3300	Relative Permittivity (ϵ_r):	40.33	39.20	2.88	5
		e''	13.0400	Conductivity (σ):	1.78	1.80	-1.31	5
	Head 2400	e'	40.0300	Relative Permittivity (ϵ_r):	40.03	39.30	1.87	5
		e''	13.0000	Conductivity (σ):	1.73	1.75	-0.96	5
	Head 2480	e'	40.4600	Relative Permittivity (ϵ_r):	40.46	39.16	3.31	5
		e''	13.0100	Conductivity (σ):	1.79	1.83	-2.10	5
1-2-2023	Head 2450	e'	39.5600	Relative Permittivity (ϵ_r):	39.56	39.20	0.92	5
		e''	12.8100	Conductivity (σ):	1.75	1.80	-3.05	5
	Head 2400	e'	39.6000	Relative Permittivity (ϵ_r):	39.60	39.30	0.77	5
		e''	12.8000	Conductivity (σ):	1.71	1.75	-2.48	5
	Head 2480	e'	39.5200	Relative Permittivity (ϵ_r):	39.52	39.16	0.91	5
		e''	12.7800	Conductivity (σ):	1.76	1.83	-3.83	5
1-6-2023	Head 2450	e'	38.5000	Relative Permittivity (ϵ_r):	38.50	39.20	-1.79	5
		e''	13.5900	Conductivity (σ):	1.85	1.80	2.85	5
	Head 2400	e'	38.7300	Relative Permittivity (ϵ_r):	38.73	39.30	-1.44	5
		e''	13.6600	Conductivity (σ):	1.82	1.75	4.07	5
	Head 2480	e'	38.4200	Relative Permittivity (ϵ_r):	38.42	39.16	-1.90	5
		e''	13.6100	Conductivity (σ):	1.88	1.83	2.42	5

SAR 7 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
12-9-2022	Head 5250	e'	36.4500	Relative Permittivity (ϵ_r):	36.45	35.93	1.44	5
		e"	16.5800	Conductivity (σ):	4.84	4.70	2.93	5
	Head 5260	e'	36.4400	Relative Permittivity (ϵ_r):	36.44	35.92	1.44	5
		e"	16.5800	Conductivity (σ):	4.85	4.71	2.90	5
	Head 5600	e'	36.9200	Relative Permittivity (ϵ_r):	36.92	35.53	3.90	5
		e"	16.8000	Conductivity (σ):	5.23	5.06	3.38	5
	Head 5800	e'	35.5300	Relative Permittivity (ϵ_r):	35.53	35.30	0.65	5
		e"	16.8600	Conductivity (σ):	5.44	5.27	3.17	5
	Head 5825	e'	35.4400	Relative Permittivity (ϵ_r):	35.44	35.30	0.40	5
		e"	16.8600	Conductivity (σ):	5.46	5.27	3.62	5
12-14-2022	Head 13	e'	54.47	Relative Permittivity (ϵ_r):	54.47	55.00	-0.96	5
		e"	1020.00	Conductivity (σ):	0.74	0.75	-1.69	5
	Head 12	e'	54.47	Relative Permittivity (ϵ_r):	54.47	55.00	-0.96	5
		e"	1105.00	Conductivity (σ):	0.74	0.75	-1.69	5
	Head 14	e'	54.30	Relative Permittivity (ϵ_r):	54.30	55.00	-1.27	5
		e"	947.20	Conductivity (σ):	0.74	0.75	-1.69	5
12-15-2022	Head 5250	e'	36.8100	Relative Permittivity (ϵ_r):	36.81	35.93	2.44	5
		e"	16.0400	Conductivity (σ):	4.68	4.70	-0.42	5
	Head 5260	e'	36.7400	Relative Permittivity (ϵ_r):	36.74	35.92	2.28	5
		e"	16.1000	Conductivity (σ):	4.71	4.71	-0.08	5
	Head 5600	e'	36.5100	Relative Permittivity (ϵ_r):	36.51	35.53	2.75	5
		e"	16.1100	Conductivity (σ):	5.02	5.06	-0.87	5
	Head 5800	e'	36.1900	Relative Permittivity (ϵ_r):	36.19	35.30	2.52	5
		e"	16.0800	Conductivity (σ):	5.19	5.27	-1.60	5
	Head 5825	e'	36.1400	Relative Permittivity (ϵ_r):	36.14	35.30	2.38	5
		e"	16.2100	Conductivity (σ):	5.25	5.27	-0.38	5
12-19-2022	Head 5250	e'	36.0400	Relative Permittivity (ϵ_r):	36.04	35.93	0.30	5
		e"	15.9600	Conductivity (σ):	4.66	4.70	-0.92	5
	Head 5260	e'	36.7000	Relative Permittivity (ϵ_r):	36.70	35.92	2.17	5
		e"	15.9900	Conductivity (σ):	4.68	4.71	-0.76	5
	Head 5600	e'	35.4600	Relative Permittivity (ϵ_r):	35.46	35.53	-0.21	5
		e"	15.8800	Conductivity (σ):	4.94	5.06	-2.28	5
	Head 5800	e'	35.1200	Relative Permittivity (ϵ_r):	35.12	35.30	-0.51	5
		e"	16.2300	Conductivity (σ):	5.23	5.27	-0.68	5
	Head 5825	e'	35.0600	Relative Permittivity (ϵ_r):	35.06	35.30	-0.68	5
		e"	16.1600	Conductivity (σ):	5.23	5.27	-0.68	5
12-22-2022	Head 13	e'	55.2700	Relative Permittivity (ϵ_r):	55.27	55.00	0.49	5
		e"	1021.0000	Conductivity (σ):	0.74	0.75	-1.60	5
	Head 12	e'	55.3400	Relative Permittivity (ϵ_r):	55.34	55.00	0.62	5
		e"	1106.0000	Conductivity (σ):	0.74	0.75	-1.60	5
	Head 14	e'	55.2300	Relative Permittivity (ϵ_r):	55.23	55.00	0.42	5
		e"	948.5000	Conductivity (σ):	0.74	0.75	-1.55	5
1-2-2023	Head 5250	e'	36.5600	Relative Permittivity (ϵ_r):	36.56	35.93	1.74	5
		e"	16.3200	Conductivity (σ):	4.76	4.70	1.32	5
	Head 5260	e'	36.4700	Relative Permittivity (ϵ_r):	36.47	35.92	1.53	5
		e"	16.2300	Conductivity (σ):	4.75	4.71	0.73	5
	Head 5600	e'	36.3700	Relative Permittivity (ϵ_r):	36.37	35.53	2.35	5
		e"	15.8800	Conductivity (σ):	4.94	5.06	-2.28	5
	Head 5800	e'	35.4000	Relative Permittivity (ϵ_r):	35.40	35.30	0.28	5
		e"	15.7200	Conductivity (σ):	5.07	5.27	-3.80	5
	Head 5825	e'	35.2600	Relative Permittivity (ϵ_r):	35.26	35.30	-0.11	5
		e"	15.9000	Conductivity (σ):	5.15	5.27	-2.28	5
1-10-2023	Head 3500	e'	38.9500	Relative Permittivity (ϵ_r):	38.95	37.93	2.69	5
		e"	14.8000	Conductivity (σ):	2.88	2.91	-1.08	5
	Head 3600	e'	38.7500	Relative Permittivity (ϵ_r):	38.75	37.82	2.47	5
		e"	14.9300	Conductivity (σ):	2.99	3.01	-0.84	5
	Head 3700	e'	38.5500	Relative Permittivity (ϵ_r):	38.55	37.70	2.25	5
		e"	15.0400	Conductivity (σ):	3.09	3.12	-0.71	5
	Head 3800	e'	38.3700	Relative Permittivity (ϵ_r):	38.37	37.59	2.08	5
		e"	15.1400	Conductivity (σ):	3.20	3.22	-0.61	5
	Head 3900	e'	38.2100	Relative Permittivity (ϵ_r):	38.21	37.47	1.97	5
		e"	15.1800	Conductivity (σ):	3.29	3.32	-0.87	5
	Head 3950	e'	38.1300	Relative Permittivity (ϵ_r):	38.13	37.42	1.91	5
		e"	15.2200	Conductivity (σ):	3.34	3.37	-0.87	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 9MHz to 19MHz 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 (13MHz):

- 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	4-27-2021	4-27-2023	1g	8.66
				10g	5.65
D835V2	4d174	9-21-2022	9-21-2023	1g	9.63
				10g	6.29
D835V2	4d194	3-24-2022	3-24-2023	1g	9.77
				10g	6.39
D1750V2	1180	9-21-2022	9-21-2023	1g	35.60
				10g	18.90
D1900V2	5d190	11-16-2022	11-16-2023	1g	39.70
				10g	20.70
D1900V2	5d199	3-25-2022	3-25-2023	1g	39.40
				10g	20.50
D2450V2	960	3-24-2022	3-24-2023	1g	51.90
				10g	24.00
D2600V2	1178	4-23-2021	4-23-2023	1g	56.60
				10g	25.40
D3500V2	1121	4-21-2021	4-21-2023	1g	66.30
				10g	25.00
D3700V2	1036	5-21-2021	5-21-2023	1g	67.90
				10g	24.30
D3900V2	1069	4-21-2021	4-24-2023	1g	70.10
				10g	24.30
D5GHzV2 (5250)	1184	11-23-2022	11-23-2023	1g	79.00
				10g	22.90
D5GHzV2 (5600)				1g	81.60
				10g	23.10
D5GHzV2 (5750)				1g	79.50
				10g	22.60
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 1 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
11-28-2022	D1750V2	1180	Head	1g	3.64	36.4	35.60	2.25	
				10g	1.95	19.5	18.90	3.17	
1-9-2023	D3500V2	1121	Head	1g	6.25	62.5	66.30	-5.73	1
				10g	2.43	24.3	25.00	-2.80	
1-9-2023	D3700V2	1036	Head	1g	6.65	66.5	67.90	-2.06	
				10g	2.51	25.1	24.30	3.29	
1-9-2023	D3900V2	1069	Head	1g	6.76	67.6	70.10	-3.57	
				10g	2.44	24.4	24.30	0.41	
1-13-2023	D3500V2	1121	Head	1g	6.39	63.9	66.30	-3.62	
				10g	2.50	25.0	25.00	0.00	
1-13-2023	D3700V2	1036	Head	1g	6.83	68.3	67.90	0.59	
				10g	2.58	25.8	24.30	6.17	
1-13-2023	D3900V2	1069	Head	1g	6.77	67.7	70.10	-3.42	
				10g	2.45	24.5	24.30	0.82	

SAR 2 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			
11-23-2022	D1900V2	5d199	Head	1g	4.17	41.7	39.40	5.84	2
				10g	2.15	21.5	20.50	4.88	
11-28-2022	D1900V2	5d199	Head	1g	4.16	41.6	39.40	5.58	
				10g	2.18	21.8	20.50	6.34	
1-6-2023	D3500V2	1121	Head	1g	6.59	65.9	66.30	-0.60	
				10g	2.55	25.5	25.00	2.00	
1-6-2023	D3700V2	1036	Head	1g	6.80	68.0	67.90	0.15	
				10g	2.52	25.2	24.30	3.70	
1-6-2023	D3900V2	1069	Head	1g	7.02	70.2	70.10	0.14	
				10g	2.51	25.1	24.30	3.29	
1-10-2023	D5GHzV2	1184	Head	1g	8.55	85.5	79.00	8.23	3
				10g	2.46	24.6	22.90	7.42	
1-10-2023	D5GHzV2	1184	Head	1g	8.25	82.5	81.60	1.10	
				10g	2.33	23.3	23.10	0.87	
1-10-2023	D5GHzV2 (5800)	1184	Head	1g	7.75	77.5	79.50	-2.52	
				10g	2.19	21.9	22.60	-3.10	

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			
12-1-2022	D750V3	1205	Head	1g	0.83	8.3	8.66	-4.04	4
				10g	0.56	5.6	5.65	-1.42	
12-2-2022	D2600V2	1178	Head	1g	5.43	54.3	56.60	-4.06	
				10g	2.43	24.3	25.40	-4.33	
12-13-2022	D1900V2	5d190	Head	1g	3.82	38.2	39.70	-3.78	
				10g	2.01	20.1	20.70	-2.90	
12-19-2022	D3500V2	1121	Head	1g	6.32	63.2	66.30	-4.68	
				10g	2.35	23.5	25.00	-6.00	
12-19-2022	D3700V2	1036	Head	1g	6.38	63.8	67.90	-6.04	
				10g	2.30	23.0	24.30	-5.35	
12-19-2022	D3900V2	1069	Head	1g	6.45	64.5	70.10	-7.99	5
				10g	2.23	22.3	24.30	-8.23	
1-6-2023	D3500V2	1121	Head	1g	6.61	66.1	66.30	-0.30	
				10g	2.51	25.1	25.00	0.40	
1-6-2023	D3700V2	1036	Head	1g	6.72	67.2	67.90	-1.03	
				10g	2.46	24.6	24.30	1.23	
1-6-2023	D3900V2	1069	Head	1g	6.66	66.6	70.10	-4.99	
				10g	2.34	23.4	24.30	-3.70	
1-9-2023	D3500V2	1121	Head	1g	6.36	63.6	66.30	-4.07	
				10g	2.43	24.3	25.00	-2.80	
1-9-2023	D3700V2	1036	Head	1g	6.30	63.0	67.90	-7.22	6
				10g	2.32	23.2	24.30	-4.53	
1-9-2023	D3900V2	1069	Head	1g	6.87	68.7	70.10	-2.00	
				10g	2.45	24.5	24.30	0.82	

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			
12-1-2022	D1750V2	1180	Head	1g	3.69	36.9	35.60	3.65	
				10g	1.99	19.9	18.90	5.29	
12-1-2022	D1900V2	5d199	Head	1g	3.81	38.1	39.40	-3.30	
				10g	1.99	19.9	20.50	-2.93	
12-5-2022	D1750V2	1180	Head	1g	3.30	33.0	35.60	-7.30	
				10g	1.78	17.8	18.90	-5.82	
12-5-2022	D1900V2	5d190	Head	1g	3.88	38.8	39.70	-2.27	
				10g	2.02	20.2	20.70	-2.42	
12-9-2022	D1750V2	1180	Head	1g	3.64	36.4	35.60	2.25	7
				10g	1.97	19.7	18.90	4.23	
12-9-2022	D1900V2	5d190	Head	1g	3.82	38.2	39.70	-3.78	
				10g	2.01	20.1	20.70	-2.90	
12-13-2022	D1900V2	5d190	Head	1g	3.68	36.8	39.70	-7.30	8
				10g	1.93	19.3	20.70	-6.76	
12-16-2022	D2600V2	1178	Head	1g	5.90	59.0	56.60	4.24	
				10g	2.64	26.4	25.40	3.94	
12-20-2022	D2600V2	1178	Head	1g	5.32	53.2	56.60	-6.01	9
				10g	2.38	23.8	25.40	-6.30	
1-11-2023	D2450V2	960	Head	1g	4.98	49.8	51.90	-4.05	
				10g	2.32	23.2	24.00	-3.33	

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			
11-14-2022	D750V3	1205	Head	1g	0.88	8.8	8.66	2.08	
				10g	0.60	6.0	5.65	5.31	
11-14-2022	D835V2	4d194	Head	1g	1.03	10.3	9.77	5.42	
				10g	0.68	6.8	6.39	6.10	
11-18-2022	D835V2	4d194	Head	1g	1.01	10.1	9.77	3.38	
				10g	0.67	6.7	6.39	4.54	
11-22-2022	D835V2	4d194	Head	1g	0.96	9.6	9.77	-1.74	
				10g	0.64	6.4	6.39	0.47	
11-28-2022	D750V3	1205	Head	1g	0.84	8.4	8.66	-3.35	
				10g	0.55	5.5	5.65	-2.30	
11-28-2022	D835V2	4d194	Head	1g	0.93	9.3	9.77	-4.61	
				10g	0.61	6.1	6.39	-5.01	
12-2-2022	D835V2	4d194	Head	1g	0.99	9.9	9.77	1.74	
				10g	0.65	6.5	6.39	1.72	
12-6-2022	D750V3	1205	Head	1g	0.86	8.6	8.66	-1.27	
				10g	0.56	5.6	5.65	-0.71	
12-12-2022	D835V2	4d194	Head	1g	1.01	10.1	9.77	3.38	
				10g	0.68	6.8	6.39	6.73	
12-20-2022	D835V2	4d194	Head	1g	0.92	9.2	9.77	-6.14	10
				10g	0.61	6.1	6.39	-5.16	
1-2-2023	D835V2	4d174	Head	1g	0.99	9.9	9.63	2.49	11
				10g	0.67	6.7	6.29	7.15	

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			
12-6-2022	D2450V2	960	Head	1g	5.47	54.7	51.90	5.39	
				10g	2.55	25.5	24.00	6.25	
12-12-2022	D2450V2	960	Head	1g	5.06	50.6	51.90	-2.50	
				10g	2.34	23.4	24.00	-2.50	
12-26-2022	D2450V2	960	Head	1g	4.94	49.4	51.90	-4.82	
				10g	2.31	23.1	24.00	-3.75	
1-2-2023	D2450V2	960	Head	1g	5.02	50.2	51.90	-3.28	
				10g	2.32	23.2	24.00	-3.33	
1-6-2023	D2450V2	960	Head	1g	4.82	48.2	51.90	-7.13	12
				10g	2.25	22.5	24.00	-6.25	

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			
12-9-2022	D5GHzV2	1184	Head	1g	8.18	81.8	79.00	3.54	
				10g	2.37	23.7	22.90	3.49	
12-9-2022	D5GHzV2	1184	Head	1g	8.41	84.1	81.60	3.06	
				10g	2.42	24.2	23.10	4.76	
12-9-2022	D5GHzV2 (5800)	1184	Head	1g	8.21	82.1	79.50	3.27	
				10g	2.37	23.7	22.60	4.87	
12-14-2022	CLA-13	1015	Head	1g	0.05	0.5	0.55	-1.46	13
				10g	0.03	0.3	0.34	-2.94	
12-15-2022	D5GHzV2	1184	Head	1g	7.34	73.4	79.00	-7.09	
				10g	2.11	21.1	22.90	-7.86	
12-15-2022	D5GHzV2	1184	Head	1g	8.43	84.3	81.60	3.31	
				10g	2.41	24.1	23.10	4.33	
12-15-2022	D5GHzV2 (5800)	1184	Head	1g	8.08	80.8	79.50	1.64	
				10g	2.31	23.1	22.60	2.21	
12-19-2022	D5GHzV2	1184	Head	1g	7.56	75.6	79.00	-4.30	
				10g	2.17	21.7	22.90	-5.24	
12-19-2022	D5GHzV2	1184	Head	1g	8.36	83.6	81.60	2.45	
				10g	2.38	23.8	23.10	3.03	
12-19-2022	D5GHzV2 (5800)	1184	Head	1g	8.44	84.4	79.50	6.16	
				10g	2.39	23.9	22.60	5.75	
12-22-2022	CLA-13	1015	Head	1g	0.05	0.5	0.55	-1.46	
				10g	0.03	0.3	0.34	-2.94	
1-2-2023	D5GHzV2	1184	Head	1g	7.31	73.1	79.00	-7.47	
				10g	2.09	20.9	22.90	-8.73	
1-2-2023	D5GHzV2	1184	Head	1g	8.55	85.5	81.60	4.78	
				10g	2.42	24.2	23.10	4.76	
1-2-2023	D5GHzV2 (5800)	1184	Head	1g	8.38	83.8	79.50	5.41	
				10g	2.40	24.0	22.60	6.19	
1-10-2023	D3500V2	1121	Head	1g	6.28	62.8	66.30	-5.28	
				10g	2.44	24.4	25.00	-2.40	
1-10-2023	D3700V2	1036	Head	1g	6.94	69.4	67.90	2.21	
				10g	2.59	25.9	24.30	6.58	
1-10-2023	D3900V2	1069	Head	1g	7.33	73.3	70.10	4.56	
				10g	2.63	26.3	24.30	8.23	

9. Conducted Output Power Measurements

9.1. GSM

Per KDB 941225 D01 3G SAR Procedures:

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

GSM850 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)							
					RSI = 0, 2, 3, 4				RSI = 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	128	824.2	32.81	23.78	33.50	24.47	28.72	19.69	30.00	20.97
			190	836.6	32.24	23.21			28.89	19.86		
			251	848.8	32.11	23.08			28.66	19.63		
GPRS (GMSK)	CS1	1	128	824.2	32.40	23.37	33.50	24.47	28.54	19.51	30.00	20.97
			190	836.6	33.06	24.03			28.94	19.91		
			251	848.8	32.07	23.04			28.69	19.66		
		2	128	824.2	30.42	24.40	32.00	**25.98**	26.66	20.64	28.50	**22.48**
			190	836.6	30.58	24.56			26.78	20.76		
			251	848.8	30.29	24.27			26.52	20.50		
		3	128	824.2	28.81	24.55	30.00	25.74	25.63	21.37	26.50	22.24
			190	836.6	28.69	24.43			25.98	21.72		
			251	848.8	28.87	24.61			25.72	21.46		
		4	128	824.2	27.34	24.33	28.00	24.99	24.01	21.00	24.50	21.49
			190	836.6	27.47	24.46			24.12	21.11		
			251	848.8	27.19	24.18			23.83	20.82		
EGPRS (8PSK)	MCS5	1	128	824.2	26.20	17.17	27.50	18.47	26.36	17.33	27.00	17.97
			190	836.6	26.24	17.21			26.45	17.42		
			251	848.8	26.14	17.11			26.17	17.14		
		2	128	824.2	24.36	18.34	26.00	19.98	24.23	18.21	25.50	19.48
			190	836.6	24.36	18.34			24.52	18.50		
			251	848.8	24.36	18.34			24.49	18.47		
		3	128	824.2	22.82	18.56	24.00	19.74	23.04	18.78	23.50	19.24
			190	836.6	23.01	18.75			23.08	18.82		
			251	848.8	22.79	18.53			22.83	18.57		
		4	128	824.2	21.41	18.40	22.50	19.49	21.64	18.63	22.00	18.99
			190	836.6	21.66	18.65			21.71	18.70		
			251	848.8	21.44	18.43			21.37	18.36		

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 Average Power (dBm)			
					RSI = 0, 1, 2, 3, 4			
					Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM (Voice)	CS1	1	512	1850.2	30.50	21.47	31.00	21.97
			661	1880.0	28.88	19.85		
			810	1909.8	28.82	19.79		
GPRS (GMSK)	CS1	1	512	1850.2	29.36	20.33	31.00	21.97
			661	1880.0	30.46	21.43		
			810	1909.8	30.33	21.30		
		2	512	1850.2	26.60	20.58	28.00	21.98
			661	1880.0	26.90	20.88		
			810	1909.8	26.85	20.83		
		3	512	1850.2	24.88	20.62	26.00	21.74
			661	1880.0	24.86	20.60		
			810	1909.8	24.79	20.53		
		4	512	1850.2	23.29	20.28	25.00	**21.99**
			661	1880.0	23.52	20.51		
			810	1909.8	23.52	20.51		
EGPRS (8PSK)	MCS5	1	512	1850.2	26.03	17.00	27.00	17.97
			661	1880.0	26.10	17.07		
			810	1909.8	26.06	17.03		
		2	512	1850.2	23.80	17.78	25.50	19.48
			661	1880.0	23.75	17.73		
			810	1909.8	23.80	17.78		
		3	512	1850.2	22.44	18.18	23.00	18.74
			661	1880.0	20.95	16.69		
			810	1909.8	22.10	17.84		
		4	512	1850.2	20.77	17.76	22.00	18.99
			661	1880.0	20.82	17.81		
			810	1909.8	20.93	17.92		

Notes:

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

- GMSK (GPRS) mode with 4 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.

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.		

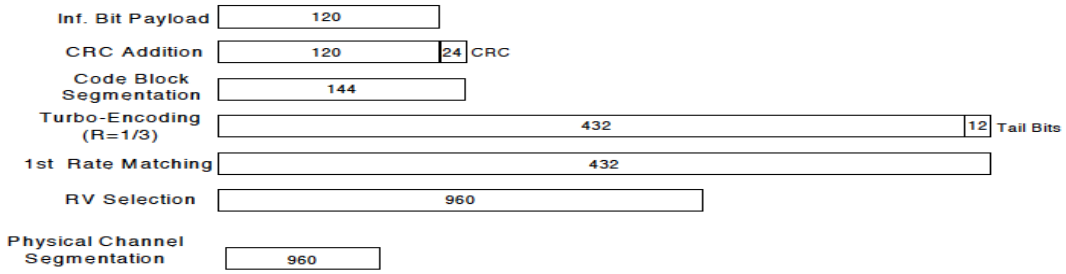


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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 II Measured Results

Mode		UL Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)								
				RSI = 0, 4			RSI = 3			RSI = 1, 2		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	22.67	N/A	24.0	20.68	N/A	22.0	20.76	N/A	22.0
		9400	1880.0	22.89			20.91			20.94		
		9538	1907.6	22.96			20.82			20.93		
HSDPA	Subtest 1	9262	1852.4	22.79	0	23.5	20.72	0	22.0	20.73	0	22.0
		9400	1880.0	22.91			20.85			20.86		
		9538	1907.6	23.03			20.92			20.94		
	Subtest 2	9262	1852.4	22.31	0	23.5	20.75	0	22.0	20.76	0	22.0
		9400	1880.0	22.39			20.85			20.84		
		9538	1907.6	22.49			20.92			20.94		
	Subtest 3	9262	1852.4	21.85	0.5	23.0	20.75	0.0	22.0	20.76	0.5	21.5
		9400	1880.0	21.90			20.81			20.85		
		9538	1907.6	21.97			20.95			20.95		
	Subtest 4	9262	1852.4	21.32	0.5	23.0	20.77	0.0	22.0	20.76	0.5	21.5
		9400	1880.0	21.43			20.85			20.86		
		9538	1907.6	21.47			20.92			20.93		
HSUPA	Subtest 1	9262	1852.4	21.82	0	23.5	19.74	0	22.0	19.74	0	22.0
		9400	1880.0	21.81			19.77			19.78		
		9538	1907.6	21.86			19.83			19.83		
	Subtest 2	9262	1852.4	19.15	2	21.5	19.22	2	20.0	19.24	2	20.0
		9400	1880.0	19.22			19.22			19.22		
		9538	1907.6	19.28			19.29			19.30		
	Subtest 3	9262	1852.4	21.80	1	22.5	19.74	0	22.0	19.74	1	21.0
		9400	1880.0	21.81			19.76			19.74		
		9538	1907.6	21.86			19.81			19.83		
	Subtest 4	9262	1852.4	19.64	2	21.5	19.63	2	20.0	19.74	2	20.0
		9400	1880.0	19.77			19.76			19.76		
		9538	1907.6	19.83			19.83			19.81		
	Subtest 5	9262	1852.4	23.01	0	23.5	20.94	0	22.0	20.94	0	22.0
		9400	1880.0	23.02			20.94			20.91		
		9538	1907.6	23.11			21.04			21.06		
DC-HSDPA	Subtest 1	9262	1852.4	22.98	0	23.5	20.87	0	22.0	20.89	0	22.0
		9400	1880.0	22.83			20.74			20.76		
		9538	1907.6	22.85			20.76			20.76		
	Subtest 2	9262	1852.4	22.34	0	23.5	20.75	0	22.0	20.74	0	22.0
		9400	1880.0	22.33			20.68			20.70		
		9538	1907.6	22.29			20.75			20.75		
	Subtest 3	9262	1852.4	21.31	0.5	23.0	20.71	0.5	21.5	20.72	0.5	21.5
		9400	1880.0	21.29			20.70			20.71		
		9538	1907.6	21.33			20.71			20.73		
	Subtest 4	9262	1852.4	21.33	0.5	23.0	20.74	0.5	21.5	20.75	0.5	21.5
		9400	1880.0	21.34			20.74			20.79		
		9538	1907.6	21.32			20.73			20.76		

W-CDMA Band V Measured Results

Mode		UL Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)		
				RSI = 0, 1, 2, 3, 4		
				Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	23.53	N/A	25.0
		4183	836.6	23.69		
		4233	846.6	23.63		
HSDPA	Subtest 1	4132	826.4	22.50	0	23.5
		4183	836.6	22.71		
		4233	846.6	22.64		
	Subtest 2	4132	826.4	22.10	0	23.5
		4183	836.6	22.28		
		4233	846.6	22.21		
	Subtest 3	4132	826.4	21.61	0.5	23.0
		4183	836.6	21.80		
		4233	846.6	21.70		
	Subtest 4	4132	826.4	21.00	0.5	23.0
		4183	836.6	21.26		
		4233	846.6	21.18		
HSUPA	Subtest 1	4132	826.4	21.58	0	23.5
		4183	836.6	21.74		
		4233	846.6	21.65		
	Subtest 2	4132	826.4	19.52	2	21.5
		4183	836.6	19.64		
		4233	846.6	19.54		
	Subtest 3	4132	826.4	20.55	1	22.5
		4183	836.6	20.67		
		4233	846.6	20.56		
	Subtest 4	4132	826.4	19.51	2	21.5
		4183	836.6	19.62		
		4233	846.6	19.53		
	Subtest 5	4132	826.4	22.69	0	23.5
		4183	836.6	22.78		
		4233	846.6	22.70		
DC-HSDPA	Subtest 1	4132	826.4	22.49	0	23.0
		4183	836.6	22.69		
		4233	846.6	22.56		
	Subtest 2	4132	826.4	22.10	0	23.0
		4183	836.6	22.30		
		4233	846.6	22.23		
	Subtest 3	4132	826.4	20.52	0.5	22.5
		4183	836.6	20.68		
		4233	846.6	20.53		
	Subtest 4	4132	826.4	20.97	0.5	22.5
		4183	836.6	21.19		
		4233	846.6	21.14		

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 Average Power (dBm)													
				RSI = 0, 4					RSI = 3					RSI = 1, 2			
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				18700	18900	19100			18700	18900	19100			18700	18900	19100		
				1860 MHz	1880 MHz	1900 MHz			1860 MHz	1880 MHz	1900 MHz			1860 MHz	1880 MHz	1900 MHz		
20 MHz	QPSK	1	0	23.98	24.35	24.22	0.0	25.0	22.00	21.98	21.96	0.0	23.0	22.14	22.08	22.01	0.0	23.0
		1	49	24.26	24.31	24.32	0.0	25.0	21.92	21.88	22.00	0.0	23.0	22.11	21.95	22.07	0.0	23.0
		1	99	24.38	24.27	24.17	0.0	25.0	22.15	22.05	21.92	0.0	23.0	22.15	22.06	22.04	0.0	23.0
		50	0	23.36	23.24	23.18	1.0	24.0	22.14	22.09	21.99	0.0	23.0	22.14	22.05	22.06	0.0	23.0
		50	24	23.34	23.22	23.15	1.0	24.0	22.07	22.03	21.97	0.0	23.0	22.13	22.06	22.05	0.0	23.0
		50	50	23.30	23.23	23.12	1.0	24.0	22.05	22.04	21.95	0.0	23.0	22.11	22.06	22.04	0.0	23.0
		100	0	23.31	23.24	23.15	1.0	24.0	22.08	22.04	22.00	0.0	23.0	22.13	22.08	22.06	0.0	23.0
	16QAM	1	0	23.42	23.22	23.40	1.0	24.0	22.39	22.33	22.21	0.0	23.0	22.31	22.28	22.20	0.0	23.0
		1	49	23.45	23.15	23.39	1.0	24.0	22.29	22.35	22.00	0.0	23.0	22.23	22.29	21.98	0.0	23.0
		1	99	23.40	23.22	23.29	1.0	24.0	22.36	22.36	22.12	0.0	23.0	22.21	22.28	22.12	0.0	23.0
		50	0	22.26	22.11	22.05	2.0	23.0	22.09	22.00	21.91	0.0	23.0	22.11	22.01	22.04	0.0	23.0
		50	24	22.22	22.13	22.02	2.0	23.0	22.07	22.01	21.90	0.0	23.0	22.09	22.03	22.02	0.0	23.0
		50	50	22.16	22.14	22.02	2.0	23.0	22.03	22.01	21.92	0.0	23.0	22.05	22.03	21.99	0.0	23.0
		100	0	22.23	22.13	22.05	2.0	23.0	22.06	22.01	21.91	0.0	23.0	22.07	22.05	22.00	0.0	23.0
	64QAM	1	0	22.28	22.03	22.21	2.0	23.0	22.11	22.03	22.16	0.0	23.0	22.19	22.07	22.01	0.0	23.0
		1	49	22.36	22.05	22.02	2.0	23.0	22.22	22.14	22.18	0.0	23.0	22.18	22.19	22.04	0.0	23.0
		1	99	22.16	22.10	22.12	2.0	23.0	22.05	22.03	22.11	0.0	23.0	22.12	22.08	21.94	0.0	23.0
		50	0	21.13	21.00	20.91	3.0	22.0	21.09	21.01	21.09	1.0	22.0	21.14	21.06	21.08	1.0	22.0
		50	24	21.10	21.01	20.93	3.0	22.0	21.06	21.00	21.07	1.0	22.0	21.11	21.06	21.05	1.0	22.0
		50	50	21.04	21.01	20.89	3.0	22.0	21.02	21.01	21.09	1.0	22.0	21.07	21.06	21.02	1.0	22.0
		100	0	21.08	20.98	20.88	3.0	22.0	21.05	20.98	21.07	1.0	22.0	21.07	21.01	21.00	1.0	22.0
	256QAM	1	0	19.35	19.19	19.17	5.0	20.0	19.26	19.22	19.34	3.0	20.0	19.07	19.16	19.18	3.0	20.0
		1	49	19.58	19.28	19.32	5.0	20.0	19.44	19.41	19.39	3.0	20.0	19.24	19.28	19.39	3.0	20.0
		1	99	19.27	19.15	19.09	5.0	20.0	19.22	19.19	19.28	3.0	20.0	19.03	19.14	19.13	3.0	20.0
		50	0	19.15	19.04	19.00	5.0	20.0	19.11	19.06	19.13	3.0	20.0	19.17	19.09	19.11	3.0	20.0
		50	24	19.14	19.02	18.99	5.0	20.0	19.10	19.05	19.11	3.0	20.0	19.16	19.09	19.08	3.0	20.0
		50	50	19.12	19.01	18.95	5.0	20.0	19.08	19.06	19.13	3.0	20.0	19.13	19.08	19.07	3.0	20.0
		100	0	19.14	19.02	18.98	5.0	20.0	19.11	19.06	19.14	3.0	20.0	19.15	19.10	19.07	3.0	20.0
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
				18675	18900	19125			18675	18900	19125			18675	18900	19125		
				1857.5 MHz	1880 MHz	1902.5 MHz			1857.5 MHz	1880 MHz	1902.5 MHz			1857.5 MHz	1880 MHz	1902.5 MHz		
15 MHz	QPSK	1	0	23.95	24.16	24.02	0.0	25.0	22.49	22.40	22.32	0.0	23.0	22.32	22.18	22.12	0.0	23.0
		1	37	24.46	24.22	24.07	0.0	25.0	22.50	22.43	22.34	0.0	23.0	22.50	22.28	22.17	0.0	23.0
		1	74	24.26	24.13	23.97	0.0	25.0	22.44	22.36	22.21	0.0	23.0	22.24	22.13	22.03	0.0	23.0
		36	0	23.39	23.31	23.17	1.0	24.0	22.56	22.51	22.42	0.0	23.0	22.36	22.31	22.22	0.0	23.0
		36	20	23.34	23.24	23.12	1.0	24.0	22.55	22.48	22.38	0.0	23.0	22.36	22.29	22.18	0.0	23.0
		36	39	23.34	23.23	23.10	1.0	24.0	22.56	22.46	22.33	0.0	23.0	22.36	22.27	22.13	0.0	23.0
		75	0	23.35	23.23	23.13	1.0	24.0	22.56	22.49	22.40	0.0	23.0	22.38	22.31	22.18	0.0	23.0
	16QAM	1	0	22.96	23.11	23.03	1.0	24.0	22.37	22.43	22.29	0.0	23.0	22.18	22.37	22.12	0.0	23.0
		1	37	23.06	23.22	23.23	1.0	24.0	22.33	22.46	22.46	0.0	23.0	22.20	22.48	22.26	0.0	23.0
		1	74	23.01	23.09	23.01	1.0	24.0	22.28	22.43	22.27	0.0	23.0	22.10	22.36	22.11	0.0	23.0
		36	0	22.24	22.12	22.09	2.0	23.0	22.48	22.37	22.33	0.0	23.0	22.28	22.19	22.14	0.0	23.0
		36	20	22.21	22.10	22.03	2.0	23.0	22.46	22.36	22.32	0.0	23.0	22.28	22.17	22.12	0.0	23.0
		36	39	22.21	22.09	22.00	2.0	23.0	22.45	22.36	22.31	0.0	23.0	22.27	22.16	22.11	0.0	23.0
		75	0	22.20	22.10	22.01	2.0	23.0	22.46	22.39	22.30	0.0	23.0	22.27	22.20	22.11	0.0	23.0
	64QAM	1	0	22.28	21.92	21.85	2.0	23.0	22.34	22.42	22.07	0.0	23.0	22.44	22.14	22.11	0.0	23.0
		1	37	22.45	22.04	21.92	2.0	23.0	22.45	22.52	22.31	0.0	23.0	22.57	22.29	22.23	0.0	23.0
		1	74	22.23	21.91	21.87	2.0	23.0	22.28	22.43	22.12	0.0	23.0	22.38	22.11	22.13	0.0	23.0
		36	0	21.08	21.01	20.82	3.0	22.0	21.45	21.33	21.18	1.0	22.0	21.43	21.36	21.17	1.0	22.0
		36	20	21.06	21.00	20.79	3.0	22.0	21.45	21.30	21.15	1.0	22.0	21.41	21.35	21.15	1.0	22.0
		36	39	21.03	20.99	20.76	3.0	22.0	21.42	21.30	21.12	1.0	22.0	21.39	21.34	21.10	1.0	22.0
		75	0	21.05	20.96	20.84	3.0	22.0	21.39	21.30	21.20	1.0	22.0	21.41	21.30	21.18	1.0	22.0
	256QAM	1	0	19.39	19.19	18.98	5.0	20.0	19.35	19.54	19.26	3.0	20.0	19.65	19.27	19.37	3.0	20.0
		1	37	19.49	19.22	18.97	5.0	20.0	19.54	19.76	19.38	3.0	20.0	19.86	19.49	19.44	3.0	20.0
		1	74	19.35	19.16	18.89	5.0	20.0	19.31	19.52	19.15	3.0	20.0	19.61	19.24	19.31	3.0	20.0
		36	0	19.09	18.94	18.83	5.0	20.0	19.38	19.31	19.18	3.0	20.0	19.41	19.29	19.17	3.0	20.0
		36	20	19.07	18.93	18.81	5.0	20.0	19.37	19.29	19.17	3.0	20.0	19.40	19.28	19.14	3.0	20.0
		36	39	19.03	18.91	18.79	5.0	20.0	19.34	19.27	19.17	3.0	20.0	19.37	19.27	19.14	3.0	20.0
		75	0	19.04	18.92	18.81	5.0	20.0	19.35	19.29	19.18	3.0	20.0	19.40	19.26	19.17	3.0	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	Measured Pwr (dBm)			MPR	Tune-up Limit
				18650	18900	19150			18650	18900	19150			18650	18900	19150		
				1855 MHz	1880 MHz	1905 MHz			1855 MHz	1880 MHz	1905 MHz			1855 MHz	1880 MHz	1905 MHz		
10 MHz	QPSK	1	0	24.48	24.39	24.18	0.0	25.0	22.48	22.45	22.26	0.0	23.0	22.33	22.28	22.13	0.0	23.0
		1	25	24.61	24.35	24.31	0.0	25.0	22.64	22.44	22.36	0.0	23.0	22.50	22.12	22.22	0.0	23.0
		1	49	24.49	24.34	24.19	0.0	25.0	22.49	22.37	22.22	0.0	23.0	22.33	22.21	22.09	0.0	23.0
		25	0	23.41	23.29	23.20	1.0	24.0	22.43	22.34	22.24	0.0	23.0	22.29	22.20	22.08	0.0	23.0
		25	12	23.41	23.28	23.18	1.0	24.0	22.42	22.31	22.22	0.0	23.0	22.28	22.18	22.07	0.0	23.0
		25	25	23.38	23.26	23.15	1.0	24.0	22.41	22.30	22.19	0.0	23.0	22.28	22.19	22.05	0.0	23.0
		50	0	23.40	23.28	23.17	1.0	24.0	22.42	22.31	22.22	0.0	23.0	22.29	22.19	22.09	0.0	23.0
	16QAM	1	0	23.52	23.35	23.33	1.0	24.0	22.50	22.45	22.40	0.0	23.0	22.26	22.26	22.09	0.0	23.0
		1	25	23.57	23.37	23.20	1.0	24.0	22.56	22.48	22.35	0.0	23.0	22.33	22.24	22.11	0.0	23.0
		1	49	23.46	23.38	23.22	1.0	24.0	22.42	22.46	22.28	0.0	23.0	22.18	22.24	21.99	0.0	23.0
		25	0	22.35	22.18	22.14	2.0	23.0	22.39	22.25	22.23	0.0	23.0	22.22	22.10	22.07	0.0	23.0
		25	12	22.34	22.19	22.12	2.0	23.0	22.38	22.25	22.21	0.0	23.0	22.22	22.11	22.06	0.0	23.0
		25	25	22.33	22.17	22.07	2.0	23.0	22.38	22.24	22.20	0.0	23.0	22.23	22.11	22.05	0.0	23.0
		50	0	22.33	22.18	22.08	2.0	23.0	22.39	22.26	22.16	0.0	23.0	22.27	22.11	22.02	0.0	23.0
	64QAM	1	0	22.07	22.21	21.93	2.0	23.0	22.24	22.29	21.86	0.0	23.0	22.14	22.22	22.01	0.0	23.0
		1	25	22.21	22.14	21.68	2.0	23.0	22.34	22.29	21.86	0.0	23.0	22.13	22.12	21.96	0.0	23.0
		1	49	22.03	22.30	21.96	2.0	23.0	22.32	22.36	21.75	0.0	23.0	22.11	22.29	22.03	0.0	23.0
		25	0	21.21	21.06	21.02	3.0	22.0	21.30	21.14	21.06	1.0	22.0	21.24	21.11	21.08	1.0	22.0
		25	12	21.19	21.03	20.99	3.0	22.0	21.30	21.12	21.05	1.0	22.0	21.25	21.09	21.09	1.0	22.0
		25	25	21.17	21.06	20.97	3.0	22.0	21.28	21.13	21.04	1.0	22.0	21.23	21.10	21.06	1.0	22.0
		50	0	21.17	21.03	20.95	3.0	22.0	21.25	21.11	21.04	1.0	22.0	21.23	21.10	21.01	1.0	22.0
	256QAM	1	0	19.26	19.32	19.18	5.0	20.0	19.33	19.37	19.07	3.0	20.0	19.38	19.50	19.11	3.0	20.0
		1	25	19.48	19.49	19.27	5.0	20.0	19.46	19.42	19.11	3.0	20.0	19.45	19.58	19.27	3.0	20.0
		1	49	19.27	19.29	19.09	5.0	20.0	19.30	19.32	19.01	3.0	20.0	19.36	19.45	19.05	3.0	20.0
		25	0	19.32	19.14	19.01	5.0	20.0	19.30	19.20	19.16	3.0	20.0	19.36	19.21	19.10	3.0	20.0
		25	12	19.29	19.13	18.99	5.0	20.0	19.30	19.20	19.16	3.0	20.0	19.36	19.20	19.09	3.0	20.0
		25	25	19.27	19.13	18.96	5.0	20.0	19.26	19.20	19.12	3.0	20.0	19.34	19.19	19.06	3.0	20.0
		50	0	19.22	19.08	18.95	5.0	20.0	19.25	19.18	19.08	3.0	20.0	19.27	19.17	19.05	3.0	20.0

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
				18625	18900	19175			18625	18900	19175			18625	18900	19175		
				1852.5 MHz	1880 MHz	1907.5 MHz			1852.5 MHz	1880 MHz	1907.5 MHz			1852.5 MHz	1880 MHz	1907.5 MHz		
5 MHz	QPSK	1	0	24.24	24.11	23.89	0.0	25.0	22.21	22.16	22.01	0.0	23.0	22.27	22.16	22.05	0.0	23.0
		1	12	24.23	24.07	23.97	0.0	25.0	22.27	22.31	22.09	0.0	23.0	22.33	22.21	22.12	0.0	23.0
		1	24	24.31	24.14	23.95	0.0	25.0	22.26	22.18	22.02	0.0	23.0	22.32	22.17	22.05	0.0	23.0
		12	0	23.27	23.12	22.98	1.0	24.0	22.25	22.17	22.06	0.0	23.0	22.30	22.17	22.06	0.0	23.0
		12	7	23.24	23.11	22.95	1.0	24.0	22.24	22.16	22.05	0.0	23.0	22.28	22.16	22.05	0.0	23.0
		12	13	23.24	23.10	22.95	1.0	24.0	22.25	22.16	22.05	0.0	23.0	22.29	22.16	22.04	0.0	23.0
		25	0	23.23	23.11	22.94	1.0	24.0	22.25	22.17	22.05	0.0	23.0	22.28	22.17	22.05	0.0	23.0
	16QAM	1	0	23.35	23.00	23.19	1.0	24.0	22.42	22.30	22.09	0.0	23.0	22.47	22.33	22.10	0.0	23.0
		1	12	23.42	23.12	22.94	1.0	24.0	22.50	21.95	22.04	0.0	23.0	22.30	22.50	22.28	0.0	23.0
		1	24	23.38	22.96	23.09	1.0	24.0	22.40	22.26	22.07	0.0	23.0	22.43	22.37	22.01	0.0	23.0
		12	0	22.13	21.97	21.94	2.0	23.0	22.21	22.06	22.00	0.0	23.0	22.24	22.08	22.03	0.0	23.0
		12	7	22.11	21.95	21.91	2.0	23.0	22.21	22.04	21.98	0.0	23.0	22.24	22.07	22.02	0.0	23.0
		12	13	22.11	21.95	21.88	2.0	23.0	22.23	22.08	21.97	0.0	23.0	22.26	22.09	21.98	0.0	23.0
		25	0	22.14	21.95	21.84	2.0	23.0	22.23	22.06	22.03	0.0	23.0	22.21	22.11	21.97	0.0	23.0
	64QAM	1	0	22.07	21.86	21.81	2.0	23.0	22.48	22.23	22.28	0.0	23.0	22.50	22.03	22.00	0.0	23.0
		1	12	22.03	21.95	22.02	2.0	23.0	22.56	22.36	22.41	0.0	23.0	22.56	22.21	22.11	0.0	23.0
		1	24	22.09	21.92	21.83	2.0	23.0	22.58	22.30	22.20	0.0	23.0	22.51	22.12	22.05	0.0	23.0
		12	0	20.95	20.93	20.73	3.0	22.0	21.31	21.29	21.08	1.0	22.0	21.14	21.14	20.97	1.0	22.0
		12	7	20.92	20.90	20.72	3.0	22.0	21.32	21.28	21.03	1.0	22.0	21.11	21.12	20.96	1.0	22.0
		12	13	20.97	20.91	20.66	3.0	22.0	21.32	21.29	21.04	1.0	22.0	21.15	21.12	20.93	1.0	22.0
		25	0	21.02	20.87	20.71	3.0	22.0	21.31	21.19	21.12	1.0	22.0	21.19	21.06	20.92	1.0	22.0
	256QAM	1	0	19.35	18.82	18.75	5.0	20.0	19.49	19.34	19.41	3.0	20.0	19.43	19.15	18.99	3.0	20.0
		1	12	19.56	18.91	18.83	5.0	20.0	19.67	19.24	19.42	3.0	20.0	19.60	19.21	19.19	3.0	20.0
		1	24	19.34	18.84	18.70	5.0	20.0	19.45	19.40	19.36	3.0	20.0	19.44	19.15	18.93	3.0	20.0
		12	0	19.11	18.93	18.80	5.0	20.0	19.39	19.27	19.19	3.0	20.0	19.32	19.17	19.06	3.0	20.0
		12	7	19.08	18.94	18.80	5.0	20.0	19.41	19.26	19.15	3.0	20.0	19.28	19.16	19.05	3.0	20.0
		12	13	19.10	18.91	18.77	5.0	20.0	19.41	19.24	19.15	3.0	20.0	19.31	19.14	19.05	3.0	20.0
		25	0	19.04	18.92	18.78	5.0	20.0	19.40	19.32	19.13	3.0	20.0	19.22	19.16	19.01	3.0	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	Measured Pwr (dBm)			MPR	Tune-up Limit
				18615	18900	19185			18615	18900	19185			18615	18900	19185		
				1851.5 MHz	1880 MHz	1908.5 MHz			1851.5 MHz	1880 MHz	1908.5 MHz			1851.5 MHz	1880 MHz	1908.5 MHz		
3 MHz	QPSK	1	0	24.12	24.14	24.00	0.0	25.0	22.11	22.19	22.09	0.0	23.0	22.27	22.10	22.11	0.0	23.0
		1	8	24.31	24.30	24.28	0.0	25.0	22.23	22.31	22.31	0.0	23.0	22.49	22.22	22.19	0.0	23.0
		1	14	24.14	24.20	24.07	0.0	25.0	22.12	22.19	22.13	0.0	23.0	22.35	22.05	22.13	0.0	23.0
		8	0	23.27	23.20	23.05	1.0	24.0	22.23	22.17	22.05	0.0	23.0	22.33	22.19	22.11	0.0	23.0
		8	4	23.24	23.16	22.94	1.0	24.0	22.26	22.17	22.01	0.0	23.0	22.25	22.20	22.07	0.0	23.0
		8	7	23.25	23.15	22.99	1.0	24.0	22.25	22.15	22.05	0.0	23.0	22.32	22.21	22.07	0.0	23.0
		15	0	23.21	23.09	22.94	1.0	24.0	22.21	22.12	22.02	0.0	23.0	22.26	22.15	22.04	0.0	23.0
	16QAM	1	0	23.35	23.17	23.11	1.0	24.0	22.35	22.10	21.98	0.0	23.0	22.29	22.23	22.15	0.0	23.0
		1	8	23.46	23.40	23.20	1.0	24.0	22.44	22.26	22.00	0.0	23.0	22.45	22.36	22.35	0.0	23.0
		1	14	23.39	23.11	22.99	1.0	24.0	22.40	22.06	21.87	0.0	23.0	22.23	22.27	22.06	0.0	23.0
		8	0	22.30	22.06	21.98	2.0	23.0	22.28	22.05	22.07	0.0	23.0	22.30	22.20	21.95	0.0	23.0
		8	4	22.22	22.02	21.92	2.0	23.0	22.23	22.01	22.02	0.0	23.0	22.26	22.13	21.92	0.0	23.0
		8	7	22.23	22.04	21.93	2.0	23.0	22.25	22.05	22.02	0.0	23.0	22.26	22.14	21.95	0.0	23.0
		15	0	22.14	22.00	21.84	2.0	23.0	22.20	22.08	21.95	0.0	23.0	22.22	22.06	22.02	0.0	23.0
	64QAM	1	0	21.79	22.14	21.85	2.0	23.0	22.43	22.39	21.97	0.0	23.0	22.00	22.28	21.92	0.0	23.0
		1	8	21.87	22.35	21.99	2.0	23.0	22.59	22.49	22.12	0.0	23.0	22.14	22.41	22.09	0.0	23.0
		1	14	21.78	22.21	21.90	2.0	23.0	22.55	22.47	21.88	0.0	23.0	21.98	22.36	21.97	0.0	23.0
		8	0	21.01	21.01	20.82	3.0	22.0	21.55	21.40	21.22	1.0	22.0	21.21	21.18	21.05	1.0	22.0
		8	4	20.99	20.98	20.79	3.0	22.0	21.50	21.37	21.14	1.0	22.0	21.17	21.15	21.00	1.0	22.0
		8	7	20.96	20.98	20.74	3.0	22.0	21.45	21.35	21.16	1.0	22.0	21.20	21.13	20.98	1.0	22.0
		15	0	20.98	20.83	20.82	3.0	22.0	21.43	21.24	21.15	1.0	22.0	21.17	21.03	21.02	1.0	22.0
	256QAM	1	0	19.04	19.23	19.01	5.0	20.0	19.58	19.40	19.22	3.0	20.0	19.15	19.30	19.08	3.0	20.0
		1	8	19.16	19.35	19.08	5.0	20.0	19.77	19.62	19.28	3.0	20.0	19.12	19.51	19.30	3.0	20.0
		1	14	19.09	19.16	19.00	5.0	20.0	19.53	19.40	19.11	3.0	20.0	19.14	19.28	19.03	3.0	20.0
		8	0	19.07	18.97	18.87	5.0	20.0	19.45	19.34	19.15	3.0	20.0	19.21	19.20	19.05	3.0	20.0
		8	4	19.07	18.97	18.82	5.0	20.0	19.42	19.31	19.11	3.0	20.0	19.24	19.12	19.00	3.0	20.0
		8	7	19.08	18.98	18.88	5.0	20.0	19.46	19.34	19.11	3.0	20.0	19.25	19.15	19.06	3.0	20.0
		15	0	19.12	18.95	18.85	5.0	20.0	19.44	19.28	19.18	3.0	20.0	19.34	19.12	19.06	3.0	20.0

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
				18607	18900	19193			18607	18900	19193			18607	18900	19193		
				1850.7 MHz	1880 MHz	1909.3 MHz			1850.7 MHz	1880 MHz	1909.3 MHz			1850.7 MHz	1880 MHz	1909.3 MHz		
1.4 MHz	QPSK	1	0	24.15	24.08	23.94	0.0	25.0	22.10	22.10	22.01	0.0	23.0	22.05	22.06	22.05	0.0	23.0
		1	3	24.24	24.08	24.06	0.0	25.0	21.97	22.10	22.06	0.0	23.0	22.06	22.03	22.10	0.0	23.0
		1	5	24.19	24.10	23.98	0.0	25.0	22.12	22.09	22.01	0.0	23.0	22.10	22.08	22.04	0.0	23.0
		3	0	24.07	24.06	23.93	0.0	25.0	22.20	22.13	21.81	0.0	23.0	22.12	22.12	22.01	0.0	23.0
		3	1	24.08	24.05	23.93	0.0	25.0	22.12	22.03	21.88	0.0	23.0	22.06	22.09	21.95	0.0	23.0
		3	3	24.16	23.99	23.93	0.0	25.0	22.07	21.98	21.93	0.0	23.0	22.12	22.03	21.95	0.0	23.0
		6	0	23.28	23.17	23.03	1.0	24.0	22.17	22.10	21.99	0.0	23.0	22.05	22.17	22.03	0.0	23.0
	16QAM	1	0	22.92	22.93	23.03	1.0	24.0	22.09	22.13	21.76	0.0	23.0	22.23	22.06	22.08	0.0	23.0
		1	3	23.01	22.83	23.17	1.0	24.0	22.22	22.12	21.85	0.0	23.0	22.12	22.16	22.12	0.0	23.0
		1	5	22.95	22.97	23.07	1.0	24.0	22.16	22.16	21.80	0.0	23.0	22.15	22.12	22.11	0.0	23.0
		3	0	23.12	22.97	22.76	1.0	24.0	22.11	21.97	21.87	0.0	23.0	22.16	22.10	21.95	0.0	23.0
		3	1	23.04	22.93	22.71	1.0	24.0	22.05	21.93	21.85	0.0	23.0	22.20	22.09	21.92	0.0	23.0
		3	3	23.13	22.88	22.73	1.0	24.0	22.06	21.91	21.85	0.0	23.0	22.03	22.02	21.94	0.0	23.0
		6	0	22.13	22.10	21.88	2.0	23.0	22.18	22.00	21.97	0.0	23.0	22.15	22.10	21.96	0.0	23.0
	64QAM	1	0	22.01	22.00	21.62	2.0	23.0	22.30	22.38	21.96	0.0	23.0	22.29	21.99	21.65	0.0	23.0
		1	3	22.13	21.72	21.82	2.0	23.0	22.29	22.47	22.06	0.0	23.0	22.43	21.88	21.78	0.0	23.0
		1	5	21.96	21.98	21.69	2.0	23.0	22.27	22.36	22.02	0.0	23.0	22.26	21.95	21.70	0.0	23.0
		3	0	22.05	21.95	21.70	2.0	23.0	22.00	21.85	21.97	1.0	22.0	21.88	21.98	21.74	1.0	22.0
		3	1	22.00	21.89	21.61	2.0	23.0	21.89	21.87	21.88	1.0	22.0	21.89	21.87	21.70	1.0	22.0
		3	3	22.02	21.93	21.64	2.0	23.0	21.88	21.87	21.98	1.0	22.0	21.98	21.88	21.77	1.0	22.0
		6	0	20.93	20.95	20.72	3.0	22.0	21.50	21.28	21.06	1.0	22.0	21.16	21.18	20.89	1.0	22.0
	256QAM	1	0	19.02	19.11	18.87	5.0	20.0	19.48	19.35	19.14	3.0	20.0	19.04	19.32	18.97	3.0	20.0
		1	3	19.24	19.29	19.05	5.0	20.0	19.63	19.41	19.11	3.0	20.0	19.15	19.50	18.93	3.0	20.0
		1	5	19.01	19.09	18.83	5.0	20.0	19.47	19.31	19.10	3.0	20.0	19.04	19.34	18.91	3.0	20.0
		3	0	18.93	18.92	18.83	5.0	20.0	19.43	19.32	19.18	3.0	20.0	19.11	19.02	19.05	3.0	20.0
		3	1	18.90	18.83	18.75	5.0	20.0	19.40	19.31	19.08	3.0	20.0	19.12	18.95	19.01	3.0	20.0
		3	3	18.87	18.86	18.73	5.0	20.0	19.47	19.29	19.06	3.0	20.0	19.20	19.00	18.95	3.0	20.0
		6	0	18.96	18.86	18.74	5.0	20.0	19.41	19.28	19.10	3.0	20.0	19.13	19.06	18.93	3.0	20.0

LTE Band 5 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)			MPR	Tune-up Limit
				RSI = 0, 1, 2, 3, 4				
				Measured Pwr (dBm)				
				[redacted]	20525	[redacted]		
					836.5 MHz			
10 MHz	QPSK	1	0		24.37		0.0	25.5
		1	25		24.36		0.0	25.5
		1	49		24.24		0.0	25.5
		25	0		23.27		1.0	24.5
		25	12		23.24		1.0	24.5
		25	25		23.19		1.0	24.5
		50	0		23.23		1.0	24.5
	16QAM	1	0		23.58		1.0	24.5
		1	25		23.71		1.0	24.5
		1	49		23.57		1.0	24.5
		25	0		22.24		2.0	23.5
		25	12		22.21		2.0	23.5
		25	25		22.18		2.0	23.5
		50	0		22.17		2.0	23.5
	64QAM	1	0		22.44		2.0	23.5
		1	25		22.45		2.0	23.5
		1	49		22.43		2.0	23.5
		25	0		21.40		3.0	22.5
		25	12		21.38		3.0	22.5
		25	25		21.36		3.0	22.5
		50	0		21.36		3.0	22.5
	256QAM	1	0		19.76		5.0	20.5
		1	25		19.87		5.0	20.5
		1	49		19.65		5.0	20.5
		25	0		19.45		5.0	20.5
		25	12		19.41		5.0	20.5
		25	25		19.37		5.0	20.5
		50	0		19.35		5.0	20.5

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	24.09	23.98	23.89	0.0	25.5
		1	12	24.09	24.07	23.96	0.0	25.5
		1	24	24.06	24.01	23.91	0.0	25.5
		12	0	23.10	23.01	22.93	1.0	24.5
		12	7	23.09	23.00	22.90	1.0	24.5
		12	13	23.05	22.99	22.88	1.0	24.5
		25	0	23.05	22.99	22.90	1.0	24.5
	16QAM	1	0	23.51	23.31	23.23	1.0	24.5
		1	12	23.43	23.36	23.18	1.0	24.5
		1	24	23.41	23.33	23.09	1.0	24.5
		12	0	22.09	21.95	21.93	2.0	23.5
		12	7	22.08	21.93	21.88	2.0	23.5
		12	13	22.05	21.90	21.85	2.0	23.5
		25	0	22.02	21.95	21.87	2.0	23.5
	64QAM	1	0	22.13	22.49	22.19	2.0	23.5
		1	12	22.20	22.42	22.17	2.0	23.5
		1	24	22.14	22.43	22.16	2.0	23.5
		12	0	21.14	21.15	21.11	3.0	22.5
		12	7	21.14	21.14	21.07	3.0	22.5
		12	13	21.09	21.15	21.08	3.0	22.5
		25	0	21.17	21.17	21.04	3.0	22.5
	256QAM	1	0	19.30	19.43	19.22	5.0	20.5
		1	12	19.16	19.33	19.28	5.0	20.5
		1	24	19.23	19.51	19.17	5.0	20.5
		12	0	19.16	19.30	19.04	5.0	20.5
		12	7	19.16	19.15	19.01	5.0	20.5
		12	13	19.13	19.14	19.02	5.0	20.5
		25	0	19.18	19.10	19.02	5.0	20.5

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	23.99	24.00	23.96	0.0	25.5
		1	8	24.03	24.05	23.71	0.0	25.5
		1	14	23.95	24.05	24.00	0.0	25.5
		8	0	23.05	22.98	22.92	1.0	24.5
		8	4	23.04	22.98	22.89	1.0	24.5
		8	7	23.01	23.01	22.86	1.0	24.5
		15	0	23.03	22.93	22.85	1.0	24.5
	16QAM	1	0	23.26	23.22	23.00	1.0	24.5
		1	8	23.25	23.27	22.96	1.0	24.5
		1	14	23.26	23.17	22.87	1.0	24.5
		8	0	22.16	22.02	21.88	2.0	23.5
		8	4	22.12	22.01	21.89	2.0	23.5
		8	7	22.11	22.01	21.89	2.0	23.5
		15	0	22.06	21.97	21.81	2.0	23.5
	64QAM	1	0	22.48	22.54	22.29	2.0	23.5
		1	8	22.37	22.60	22.33	2.0	23.5
		1	14	22.37	22.58	22.32	2.0	23.5
		8	0	21.40	21.42	21.28	3.0	22.5
		8	4	21.37	21.40	21.27	3.0	22.5
		8	7	21.38	21.45	21.28	3.0	22.5
		15	0	21.43	21.32	21.33	3.0	22.5
	256QAM	1	0	19.53	19.81	19.38	5.0	20.5
		1	8	19.59	19.77	19.43	5.0	20.5
		1	14	19.53	19.76	19.36	5.0	20.5
		8	0	19.40	19.43	19.35	5.0	20.5
		8	4	19.38	19.47	19.28	5.0	20.5
		8	7	19.38	19.41	19.28	5.0	20.5
		15	0	19.48	19.36	19.31	5.0	20.5

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	24.36	24.21	24.08	0.0	25.5
		1	3	24.21	24.26	23.99	0.0	25.5
		1	5	24.36	24.21	24.10	0.0	25.5
		3	0	24.32	24.21	24.14	0.0	25.5
		3	1	24.26	24.25	24.08	0.0	25.5
		3	3	24.30	24.15	23.95	0.0	25.5
		6	0	23.27	23.20	23.12	1.0	24.5
	16QAM	1	0	23.27	23.24	23.20	1.0	24.5
		1	3	23.35	23.15	23.26	1.0	24.5
		1	5	23.49	23.27	23.22	1.0	24.5
		3	0	23.41	23.20	23.01	1.0	24.5
		3	1	23.29	23.14	23.06	1.0	24.5
		3	3	23.31	23.20	22.95	1.0	24.5
		6	0	22.38	22.21	22.00	2.0	23.5
	64QAM	1	0	22.49	22.09	21.88	2.0	23.5
		1	3	22.65	21.95	22.05	2.0	23.5
		1	5	22.44	22.07	21.94	2.0	23.5
		3	0	22.32	22.15	21.91	2.0	23.5
		3	1	22.19	22.03	21.92	2.0	23.5
		3	3	22.10	22.10	21.87	2.0	23.5
		6	0	21.15	21.13	20.93	3.0	22.5
	256QAM	1	0	19.31	19.12	19.06	5.0	20.5
		1	3	19.38	19.30	19.13	5.0	20.5
		1	5	19.26	19.12	19.06	5.0	20.5
		3	0	19.14	19.07	19.05	5.0	20.5
		3	1	19.09	19.05	19.04	5.0	20.5
		3	3	19.01	18.99	18.99	5.0	20.5
		6	0	19.13	19.11	18.96	5.0	20.5

LTE Band 7 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)														
				RSI = 0, 4					RSI = 3					RSI = 1, 2				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				20850	21100	21350			20850	21100	21350			20850	21100	21350		
				2510 MHz	2535 MHz	2560 MHz			2510 MHz	2535 MHz	2560 MHz			2510 MHz	2535 MHz	2560 MHz		
20 MHz	QPSK	1	0	23.24	22.68	22.66	0.0	24.0	20.02	19.84	19.68	0.0	21.0	20.04	19.87	19.69	0.0	21.0
		1	49	23.06	22.59	22.48	0.0	24.0	19.90	19.93	19.52	0.0	21.0	19.96	19.81	19.74	0.0	21.0
		1	99	23.10	22.61	22.49	0.0	24.0	19.82	19.65	19.45	0.0	21.0	19.92	19.69	19.45	0.0	21.0
		50	0	22.16	21.71	21.65	1.0	23.0	20.02	19.83	19.62	0.0	21.0	20.03	19.87	19.68	0.0	21.0
		50	24	22.11	21.67	21.57	1.0	23.0	19.99	19.79	19.57	0.0	21.0	20.01	19.83	19.61	0.0	21.0
		50	50	22.08	21.65	21.51	1.0	23.0	19.93	19.74	19.49	0.0	21.0	19.96	19.79	19.54	0.0	21.0
		100	0	22.12	21.70	21.59	1.0	23.0	19.99	19.78	19.58	0.0	21.0	20.00	19.84	19.61	0.0	21.0
	16QAM	1	0	22.51	22.03	22.06	1.0	23.0	20.45	20.08	19.95	0.0	21.0	20.43	20.27	20.04	0.0	21.0
		1	49	22.36	22.05	21.83	1.0	23.0	20.38	19.86	19.79	0.0	21.0	20.46	20.16	19.54	0.0	21.0
		1	99	22.24	21.92	21.74	1.0	23.0	20.30	19.92	19.59	0.0	21.0	20.23	20.18	19.68	0.0	21.0
		50	0	21.12	20.68	20.57	2.0	22.0	20.00	19.79	19.58	0.0	21.0	20.01	19.82	19.64	0.0	21.0
		50	24	21.06	20.63	20.46	2.0	22.0	19.98	19.76	19.51	0.0	21.0	19.99	19.79	19.57	0.0	21.0
		50	50	21.00	20.59	20.39	2.0	22.0	19.93	19.71	19.44	0.0	21.0	19.97	19.76	19.47	0.0	21.0
		100	0	21.06	20.66	20.50	2.0	22.0	19.98	19.75	19.54	0.0	21.0	20.03	19.81	19.58	0.0	21.0
	64QAM	1	0	21.29	20.86	20.98	2.0	22.0	20.10	20.07	19.81	0.0	21.0	20.16	20.08	19.87	0.0	21.0
		1	49	21.14	20.75	20.64	2.0	22.0	20.17	19.54	19.67	0.0	21.0	20.20	19.69	19.78	0.0	21.0
		1	99	21.12	20.84	20.74	2.0	22.0	20.06	19.93	19.47	0.0	21.0	20.09	19.94	19.53	0.0	21.0
		50	0	20.05	19.64	19.58	3.0	21.0	19.99	19.80	19.66	0.0	21.0	20.04	19.83	19.70	0.0	21.0
		50	24	20.00	19.61	19.46	3.0	21.0	19.97	19.77	19.58	0.0	21.0	20.02	19.80	19.63	0.0	21.0
		50	50	19.91	19.57	19.38	3.0	21.0	19.93	19.74	19.49	0.0	21.0	19.97	19.78	19.51	0.0	21.0
		100	0	19.99	19.60	19.47	3.0	21.0	19.97	19.75	19.55	0.0	21.0	20.02	19.79	19.58	0.0	21.0
	256QAM	1	0	18.17	17.91	17.72	5.0	19.0	18.20	18.04	17.56	2.0	19.0	18.39	18.17	17.78	2.0	19.0
		1	49	18.11	17.85	17.56	5.0	19.0	18.19	18.03	17.52	2.0	19.0	18.39	18.07	17.66	2.0	19.0
		1	99	17.96	17.78	17.44	5.0	19.0	18.02	17.90	17.28	2.0	19.0	18.22	18.02	17.48	2.0	19.0
		50	0	18.03	17.60	17.53	5.0	19.0	17.97	17.82	17.63	2.0	19.0	18.02	17.83	17.68	2.0	19.0
		50	24	17.95	17.55	17.44	5.0	19.0	17.91	17.76	17.56	2.0	19.0	17.98	17.80	17.59	2.0	19.0
		50	50	17.91	17.54	17.38	5.0	19.0	17.89	17.72	17.47	2.0	19.0	17.94	17.76	17.49	2.0	19.0
		100	0	17.95	17.55	17.44	5.0	19.0	17.93	17.76	17.56	2.0	19.0	17.96	17.80	17.58	2.0	19.0
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
				20825	21100	21375			20825	21100	21375			20825	21100	21375		
				2507.5 MHz	2535 MHz	2562.5 MHz			2507.5 MHz	2535 MHz	2562.5 MHz			2507.5 MHz	2535 MHz	2562.5 MHz		
15 MHz	QPSK	1	0	23.14	22.66	22.61	0.0	24.0	20.09	19.98	19.78	0.0	21.0	20.28	20.12	19.86	0.0	21.0
		1	37	23.09	22.56	22.51	0.0	24.0	20.20	20.16	19.82	0.0	21.0	20.12	20.19	19.82	0.0	21.0
		1	74	22.99	22.61	22.47	0.0	24.0	19.99	19.91	19.59	0.0	21.0	20.19	20.00	19.69	0.0	21.0
		36	0	22.21	21.80	21.74	1.0	23.0	20.19	20.05	19.81	0.0	21.0	20.38	20.16	19.91	0.0	21.0
		36	20	22.16	21.74	21.70	1.0	23.0	20.15	20.02	19.79	0.0	21.0	20.34	20.13	19.88	0.0	21.0
		36	39	22.15	21.72	21.66	1.0	23.0	20.14	19.99	19.76	0.0	21.0	20.32	20.12	19.88	0.0	21.0
		75	0	22.18	21.77	21.69	1.0	23.0	20.17	20.03	19.82	0.0	21.0	20.36	20.14	19.89	0.0	21.0
	16QAM	1	0	22.31	21.74	21.69	1.0	23.0	20.34	20.20	20.21	0.0	21.0	20.47	20.42	20.09	0.0	21.0
		1	37	21.88	21.60	21.20	1.0	23.0	20.45	20.30	20.26	0.0	21.0	20.49	20.51	19.68	0.0	21.0
		1	74	22.11	21.64	21.50	1.0	23.0	20.22	20.10	19.97	0.0	21.0	20.46	20.36	19.82	0.0	21.0
		36	0	21.10	20.73	20.60	2.0	22.0	20.18	20.05	19.79	0.0	21.0	20.36	20.10	19.87	0.0	21.0
		36	20	21.06	20.70	20.55	2.0	22.0	20.15	20.03	19.74	0.0	21.0	20.34	20.08	19.83	0.0	21.0
		36	39	21.01	20.67	20.50	2.0	22.0	20.14	20.02	19.69	0.0	21.0	20.32	20.06	19.79	0.0	21.0
		75	0	21.05	20.68	20.54	2.0	22.0	20.17	20.01	19.79	0.0	21.0	20.32	20.10	19.84	0.0	21.0
	64QAM	1	0	21.19	20.88	20.69	2.0	22.0	20.18	20.10	19.80	0.0	21.0	20.13	20.19	19.82	0.0	21.0
		1	37	21.33	20.72	20.67	2.0	22.0	20.33	20.07	19.74	0.0	21.0	20.32	20.07	19.78	0.0	21.0
		1	74	21.08	20.83	20.60	2.0	22.0	20.14	20.01	19.56	0.0	21.0	20.10	20.11	19.59	0.0	21.0
		36	0	20.06	19.74	19.58	3.0	21.0	20.22	20.06	19.85	0.0	21.0	20.15	19.98	19.79	0.0	21.0
		36	20	20.02	19.70	19.52	3.0	21.0	20.21	20.03	19.80	0.0	21.0	20.14	19.95	19.75	0.0	21.0
		36	39	19.97	19.68	19.45	3.0	21.0	20.17	20.01	19.77	0.0	21.0	20.09	19.94	19.71	0.0	21.0
		75	0	20.05	19.68	19.53	3.0	21.0	20.25	20.02	19.77	0.0	21.0	20.18	19.95	19.70	0.0	21.0
	256QAM	1	0	18.07	17.88	17.62	5.0	19.0	18.37	18.34	17.89	2.0	19.0	18.41	18.04	17.65	2.0	19.0
		1	37	18.10	18.00	17.58	5.0	19.0	18.28	18.51	17.96	2.0	19.0	18.28	18.25	17.67	2.0	19.0
		1	74	17.90	17.79	17.44	5.0	19.0	18.24	18.25	17.64	2.0	19.0	18.30	17.96	17.43	2.0	19.0
		36	0	18.04	17.68	17.54	5.0	19.0	18.22	18.03	17.75	2.0	19.0	18.14	17.94	17.69	2.0	19.0
		36	20	17.99	17.63	17.48	5.0	19.0	18.18	18.02	17.70	2.0	19.0	18.10	17.93	17.64	2.0	19.0
		36	39	17.95	17.61	17.43	5.0	19.0	18.17	17.99	17.64	2.0	19.0	18.08	17.89	17.59	2.0	19.0
		75	0	18.00	17.64	17.50	5.0	19.0	18.22	18.00	17.71	2.0	19.0	18.11	17.91	17.65	2.0	19.0

LTE Band 7 Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				20800	21100	21400			20800	21100	21400			20800	21100	21400		
				2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz		
10 MHz	QPSK	1	0	23.09	22.58	22.49	0.0	24.0	20.07	19.86	19.58	0.0	21.0	20.27	20.11	19.74	0.0	21.0
		1	25	23.17	22.71	22.58	0.0	24.0	20.19	19.82	19.65	0.0	21.0	20.37	20.08	19.81	0.0	21.0
		1	49	23.05	22.62	22.44	0.0	24.0	20.01	19.76	19.48	0.0	21.0	20.24	20.01	19.65	0.0	21.0
		25	0	22.05	21.62	21.49	1.0	23.0	20.07	19.81	19.55	0.0	21.0	20.28	20.02	19.71	0.0	21.0
		25	12	22.01	21.61	21.46	1.0	23.0	20.05	19.78	19.52	0.0	21.0	20.27	20.02	19.68	0.0	21.0
		25	25	21.99	21.59	21.45	1.0	23.0	20.03	19.76	19.48	0.0	21.0	20.25	19.99	19.64	0.0	21.0
		50	0	22.03	21.62	21.48	1.0	23.0	20.03	19.79	19.52	0.0	21.0	20.27	20.02	19.70	0.0	21.0
	16QAM	1	0	22.20	21.79	21.71	1.0	23.0	20.37	20.06	19.94	0.0	21.0	20.46	20.28	20.10	0.0	21.0
		1	25	21.86	21.57	21.42	1.0	23.0	20.20	19.92	19.80	0.0	21.0	20.20	20.02	19.92	0.0	21.0
		1	49	22.03	21.70	21.61	1.0	23.0	20.24	20.02	19.75	0.0	21.0	20.33	20.27	19.91	0.0	21.0
		25	0	21.03	20.59	20.45	2.0	22.0	20.03	19.75	19.53	0.0	21.0	20.25	20.00	19.70	0.0	21.0
		25	12	21.01	20.57	20.42	2.0	22.0	20.02	19.74	19.49	0.0	21.0	20.25	20.02	19.66	0.0	21.0
		25	25	20.96	20.56	20.39	2.0	22.0	20.02	19.75	19.45	0.0	21.0	20.22	19.99	19.62	0.0	21.0
		50	0	20.99	20.58	20.44	2.0	22.0	20.04	19.76	19.44	0.0	21.0	20.26	20.00	19.62	0.0	21.0
	64QAM	1	0	21.07	20.69	20.55	2.0	22.0	20.05	20.14	19.69	0.0	21.0	20.02	20.06	19.58	0.0	21.0
		1	25	21.07	20.81	20.50	2.0	22.0	19.99	20.00	19.69	0.0	21.0	20.02	19.94	19.59	0.0	21.0
		1	49	21.02	20.73	20.56	2.0	22.0	19.92	20.15	19.63	0.0	21.0	19.93	20.07	19.53	0.0	21.0
		25	0	19.97	19.59	19.45	3.0	21.0	20.25	19.95	19.66	0.0	21.0	20.16	19.87	19.63	0.0	21.0
		25	12	19.94	19.58	19.42	3.0	21.0	20.23	19.93	19.61	0.0	21.0	20.14	19.85	19.58	0.0	21.0
		25	25	19.90	19.55	19.39	3.0	21.0	20.24	19.93	19.58	0.0	21.0	20.15	19.86	19.56	0.0	21.0
		50	0	19.89	19.57	19.39	3.0	21.0	20.21	19.93	19.60	0.0	21.0	20.12	19.84	19.53	0.0	21.0
	256QAM	1	0	18.21	17.88	17.81	5.0	19.0	18.33	18.26	17.60	2.0	19.0	18.29	18.04	17.66	2.0	19.0
		1	25	18.11	17.84	17.75	5.0	19.0	18.37	18.23	17.61	2.0	19.0	18.42	18.02	17.67	2.0	19.0
		1	49	18.03	17.73	17.67	5.0	19.0	18.24	18.18	17.39	2.0	19.0	18.22	17.97	17.49	2.0	19.0
		25	0	17.92	17.61	17.43	5.0	19.0	18.24	17.96	17.60	2.0	19.0	18.18	17.89	17.57	2.0	19.0
		25	12	17.89	17.60	17.42	5.0	19.0	18.22	17.95	17.55	2.0	19.0	18.15	17.87	17.50	2.0	19.0
		25	25	17.85	17.57	17.38	5.0	19.0	18.21	17.93	17.51	2.0	19.0	18.14	17.86	17.47	2.0	19.0
		50	0	17.89	17.57	17.37	5.0	19.0	18.18	17.91	17.56	2.0	19.0	18.09	17.82	17.48	2.0	19.0
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
				20775	21100	21425			20775	21100	21425			20775	21100	21425		
				2502.5 MHz	2535 MHz	2567.5 MHz			2502.5 MHz	2535 MHz	2567.5 MHz			2502.5 MHz	2535 MHz	2567.5 MHz		
5 MHz	QPSK	1	0	22.92	22.54	22.34	0.0	24.0	19.89	19.74	19.42	0.0	21.0	20.02	19.91	19.62	0.0	21.0
		1	12	22.97	22.48	22.50	0.0	24.0	19.95	19.75	19.55	0.0	21.0	20.10	19.92	19.55	0.0	21.0
		1	24	22.95	22.61	22.40	0.0	24.0	19.89	19.72	19.39	0.0	21.0	20.09	19.92	19.62	0.0	21.0
		12	0	21.95	21.58	21.47	1.0	23.0	19.95	19.73	19.44	0.0	21.0	20.15	19.95	19.63	0.0	21.0
		12	7	21.94	21.56	21.44	1.0	23.0	19.95	19.73	19.42	0.0	21.0	20.15	19.93	19.61	0.0	21.0
		12	13	21.95	21.56	21.44	1.0	23.0	19.96	19.70	19.42	0.0	21.0	20.18	19.94	19.60	0.0	21.0
		25	0	21.96	21.57	21.44	1.0	23.0	19.96	19.73	19.44	0.0	21.0	20.16	19.94	19.61	0.0	21.0
	16QAM	1	0	22.16	21.73	21.70	1.0	23.0	20.22	20.06	19.81	0.0	21.0	20.51	20.40	19.91	0.0	21.0
		1	12	22.20	21.78	21.61	1.0	23.0	20.11	20.08	19.68	0.0	21.0	20.41	20.28	19.76	0.0	21.0
		1	24	22.16	21.68	21.76	1.0	23.0	20.23	20.00	19.75	0.0	21.0	20.52	20.34	19.82	0.0	21.0
		12	0	20.95	20.58	20.41	2.0	22.0	20.01	19.75	19.48	0.0	21.0	20.18	19.99	19.63	0.0	21.0
		12	7	20.92	20.56	20.39	2.0	22.0	20.01	19.73	19.46	0.0	21.0	20.17	19.97	19.62	0.0	21.0
		12	13	20.93	20.57	20.36	2.0	22.0	20.00	19.74	19.46	0.0	21.0	20.16	19.96	19.61	0.0	21.0
		25	0	20.93	20.56	20.36	2.0	22.0	20.00	19.70	19.37	0.0	21.0	20.18	19.91	19.59	0.0	21.0
	64QAM	1	0	20.88	20.61	20.37	2.0	22.0	20.14	20.17	19.63	0.0	21.0	20.13	20.03	19.64	0.0	21.0
		1	12	21.08	20.76	20.50	2.0	22.0	20.43	20.29	19.87	0.0	21.0	20.29	20.16	19.87	0.0	21.0
		1	24	20.87	20.66	20.44	2.0	22.0	20.22	20.15	19.60	0.0	21.0	20.21	19.99	19.64	0.0	21.0
		12	0	19.82	19.49	19.37	3.0	21.0	20.08	19.89	19.55	0.0	21.0	20.10	19.76	19.47	0.0	21.0
		12	7	19.79	19.47	19.34	3.0	21.0	20.08	19.87	19.52	0.0	21.0	20.09	19.73	19.44	0.0	21.0
		12	13	19.77	19.48	19.36	3.0	21.0	20.07	19.87	19.51	0.0	21.0	20.09	19.76	19.45	0.0	21.0
		25	0	19.80	19.53	19.39	3.0	21.0	20.06	19.89	19.47	0.0	21.0	20.14	19.81	19.44	0.0	21.0
	256QAM	1	0	17.82	17.62	17.44	5.0	19.0	18.03	18.18	17.59	2.0	19.0	18.13	18.11	17.54	2.0	19.0
		1	12	18.06	17.86	17.66	5.0	19.0	18.29	18.25	17.56	2.0	19.0	18.38	18.13	17.54	2.0	19.0
		1	24	17.75	17.57	17.40	5.0	19.0	18.00	18.12	17.52	2.0	19.0	18.10	18.09	17.53	2.0	19.0
		12	0	17.84	17.55	17.41	5.0	19.0	18.10	17.91	17.48	2.0	19.0	18.13	17.81	17.44	2.0	19.0
		12	7	17.82	17.54	17.40	5.0	19.0	18.11	17.87	17.45	2.0	19.0	17.99	17.76	17.42	2.0	19.0
		12	13	17.82	17.54	17.40	5.0	19.0	18.10	17.91	17.45	2.0	19.0	18.00	17.81	17.41	2.0	19.0
		25	0	17.80	17.51	17.39	5.0	19.0	18.12	17.82	17.48	2.0	19.0	18.07	17.74	17.45	2.0	19.0

LTE Band 12 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)				
				RSI = 0, 1, 2, 3, 4				
				Measured Pwr (dBm)			MPR	Tune-up Limit
				[redacted]	23095	[redacted]		
					707.5 MHz			
10 MHz	QPSK	1	0		24.20		0.0	25.0
		1	25		23.20		0.0	25.0
		1	49		24.21		0.0	25.0
		25	0		23.10		1.0	24.0
		25	12		23.08		1.0	24.0
		25	25		23.12		1.0	24.0
		50	0		23.08		1.0	24.0
	16QAM	1	0		23.32		1.0	24.0
		1	25		23.39		1.0	24.0
		1	49		23.24		1.0	24.0
		25	0		22.11		2.0	23.0
		25	12		22.07		2.0	23.0
		25	25		22.05		2.0	23.0
		50	0		22.04		2.0	23.0
	64QAM	1	0		22.17		2.0	23.0
		1	25		22.17		2.0	23.0
		1	49		22.14		2.0	23.0
		25	0		21.01		3.0	22.0
		25	12		20.99		3.0	22.0
		25	25		20.97		3.0	22.0
		50	0		20.98		3.0	22.0
	256QAM	1	0		19.25		5.0	20.0
		1	25		19.23		5.0	20.0
		1	49		19.14		5.0	20.0
		25	0		19.05		5.0	20.0
		25	12		19.02		5.0	20.0
		25	25		18.99		5.0	20.0
		50	0		18.97		5.0	20.0

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	23.06	23.99	23.92	0.0	25.0
		1	12	24.16	24.00	24.00	0.0	25.0
		1	24	24.10	23.97	23.92	0.0	25.0
		12	0	23.10	23.02	23.00	1.0	24.0
		12	7	23.07	23.02	22.99	1.0	24.0
		12	13	23.05	22.99	22.97	1.0	24.0
		25	0	23.09	23.01	22.97	1.0	24.0
	16QAM	1	0	23.33	23.41	23.19	1.0	24.0
		1	12	23.28	23.32	23.42	1.0	24.0
		1	24	23.25	23.31	23.35	1.0	24.0
		12	0	22.09	22.12	21.95	2.0	23.0
		12	7	22.05	22.12	21.94	2.0	23.0
		12	13	22.05	22.10	21.90	2.0	23.0
		25	0	22.06	21.98	21.90	2.0	23.0
	64QAM	1	0	22.35	22.22	22.03	2.0	23.0
		1	12	22.34	22.29	22.09	2.0	23.0
		1	24	22.26	22.22	22.05	2.0	23.0
		12	0	21.07	21.06	20.96	3.0	22.0
		12	7	21.06	21.05	20.95	3.0	22.0
		12	13	21.01	21.03	20.94	3.0	22.0
		25	0	21.05	20.95	20.94	3.0	22.0
	256QAM	1	0	19.20	18.88	19.08	5.0	20.0
		1	12	19.11	18.90	18.85	5.0	20.0
		1	24	19.13	18.85	18.97	5.0	20.0
		12	0	19.15	19.05	19.00	5.0	20.0
		12	7	19.13	19.03	18.99	5.0	20.0
		12	13	19.07	19.03	18.95	5.0	20.0
		25	0	19.04	18.98	18.96	5.0	20.0

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	23.06	24.10	24.06	0.0	25.0
		1	8	24.06	24.12	23.83	0.0	25.0
		1	14	24.04	24.10	24.10	0.0	25.0
		8	0	23.12	23.03	23.01	1.0	24.0
		8	4	23.13	23.04	22.99	1.0	24.0
		8	7	23.12	23.09	22.96	1.0	24.0
		15	0	23.11	23.00	22.96	1.0	24.0
	16QAM	1	0	23.33	23.29	23.14	1.0	24.0
		1	8	23.34	23.30	23.16	1.0	24.0
		1	14	23.34	23.21	23.03	1.0	24.0
		8	0	22.09	22.05	21.90	2.0	23.0
		8	4	22.12	21.99	21.96	2.0	23.0
		8	7	22.09	22.02	21.90	2.0	23.0
		15	0	22.06	22.04	21.93	2.0	23.0
	64QAM	1	0	22.26	22.25	22.02	2.0	23.0
		1	8	22.28	22.25	21.98	2.0	23.0
		1	14	22.30	22.31	21.95	2.0	23.0
		8	0	21.19	21.01	20.99	3.0	22.0
		8	4	21.14	21.05	20.93	3.0	22.0
		8	7	21.15	21.05	20.93	3.0	22.0
		15	0	21.00	21.08	20.92	3.0	22.0
	256QAM	1	0	19.37	19.08	18.95	5.0	20.0
		1	8	19.23	19.00	18.94	5.0	20.0
		1	14	19.21	19.04	18.92	5.0	20.0
		8	0	19.14	19.06	18.97	5.0	20.0
		8	4	19.15	19.04	18.98	5.0	20.0
		8	7	19.12	19.05	18.98	5.0	20.0
		15	0	19.10	19.08	19.01	5.0	20.0

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	24.03	24.02	23.98	0.0	25.0
		1	3	24.03	24.09	23.69	0.0	25.0
		1	5	24.08	24.00	23.96	0.0	25.0
		3	0	24.08	24.06	24.02	0.0	25.0
		3	1	24.01	24.05	23.99	0.0	25.0
		3	3	24.08	23.96	23.87	0.0	25.0
		6	0	23.08	23.01	23.04	1.0	24.0
	16QAM	1	0	23.25	23.06	23.16	1.0	24.0
		1	3	23.39	23.06	23.27	1.0	24.0
		1	5	23.28	23.09	23.18	1.0	24.0
		3	0	23.20	23.04	22.99	1.0	24.0
		3	1	23.09	22.93	22.99	1.0	24.0
		3	3	23.07	23.03	22.88	1.0	24.0
		6	0	22.14	22.07	21.95	2.0	23.0
	64QAM	1	0	22.35	22.08	22.18	2.0	23.0
		1	3	22.37	22.03	22.48	2.0	23.0
		1	5	22.29	22.04	22.28	2.0	23.0
		3	0	22.22	22.03	21.91	2.0	23.0
		3	1	22.18	21.95	21.86	2.0	23.0
		3	3	22.16	21.94	21.76	2.0	23.0
		6	0	21.14	21.09	20.97	3.0	22.0
	256QAM	1	0	18.98	19.21	18.97	5.0	20.0
		1	3	19.25	19.31	19.13	5.0	20.0
		1	5	18.94	19.17	18.91	5.0	20.0
		3	0	19.07	18.86	19.03	5.0	20.0
		3	1	19.02	18.84	19.04	5.0	20.0
		3	3	18.93	18.79	18.95	5.0	20.0
		6	0	19.10	18.98	18.88	5.0	20.0

LTE Band 13 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)		
				RSI = 0, 1, 2, 3, 4		
				Measured Pwr (dBm)	MPR	Tune-up Limit
				23230		
				782 MHz		
10 MHz	QPSK	1	0	23.58	0.0	25.0
		1	25	23.56	0.0	25.0
		1	49	23.56	0.0	25.0
		25	0	22.55	1.0	24.0
		25	12	22.53	1.0	24.0
		25	25	22.50	1.0	24.0
		50	0	22.54	1.0	24.0
	16QAM	1	0	22.76	1.0	24.0
		1	25	22.88	1.0	24.0
		1	49	22.70	1.0	24.0
		25	0	21.54	2.0	23.0
		25	12	21.54	2.0	23.0
		25	25	21.51	2.0	23.0
		50	0	21.49	2.0	23.0
	64QAM	1	0	21.60	2.0	23.0
		1	25	21.64	2.0	23.0
		1	49	21.67	2.0	23.0
		25	0	20.50	3.0	22.0
		25	12	20.48	3.0	22.0
		25	25	20.47	3.0	22.0
		50	0	20.46	3.0	22.0
	256QAM	1	0	18.75	5.0	20.0
		1	25	18.85	5.0	20.0
		1	49	18.72	5.0	20.0
		25	0	18.54	5.0	20.0
		25	12	18.49	5.0	20.0
		25	25	18.48	5.0	20.0
		50	0	18.46	5.0	20.0
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)	MPR	Tune-up Limit
				23230		
				782 MHz		
5 MHz	QPSK	1	0	23.41	0.0	25.0
		1	12	23.51	0.0	25.0
		1	24	23.47	0.0	25.0
		12	0	22.51	1.0	24.0
		12	7	22.51	1.0	24.0
		12	13	22.49	1.0	24.0
		25	0	22.51	1.0	24.0
	16QAM	1	0	22.83	1.0	24.0
		1	12	22.96	1.0	24.0
		1	24	22.87	1.0	24.0
		12	0	21.48	2.0	23.0
		12	7	21.48	2.0	23.0
		12	13	21.45	2.0	23.0
		25	0	21.47	2.0	23.0
	64QAM	1	0	21.49	2.0	23.0
		1	12	21.57	2.0	23.0
		1	24	21.58	2.0	23.0
		12	0	20.42	3.0	22.0
		12	7	20.42	3.0	22.0
		12	13	20.40	3.0	22.0
		25	0	20.45	3.0	22.0
	256QAM	1	0	18.56	5.0	20.0
		1	12	18.43	5.0	20.0
		1	24	18.54	5.0	20.0
		12	0	18.42	5.0	20.0
		12	7	18.43	5.0	20.0
		12	13	18.38	5.0	20.0
		25	0	18.44	5.0	20.0

LTE Band 48 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)											
				RSI = 0, 1, 2, 3						RSI = 4					
				Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
				55340	55773	56207	56640			55340	55773	56207	56640		
				3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz			3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz		
20 MHz	QPSK	1	0	19.85	20.44	19.82	20.04	0.0	21.0	19.71	19.51	18.61	18.97	0.0	20.5
		1	49	20.01	20.51	19.83	19.95	0.0	21.0	19.66	19.49	18.77	18.78	0.0	20.5
		1	99	19.97	20.65	19.80	19.94	0.0	21.0	19.60	19.48	18.71	18.82	0.0	20.5
		50	0	19.92	20.49	19.85	20.00	0.0	21.0	19.64	19.52	18.66	18.96	0.0	20.5
		50	24	19.95	20.52	19.85	19.99	0.0	21.0	19.68	19.57	18.67	18.95	0.0	20.5
		50	50	19.92	20.56	19.85	19.97	0.0	21.0	19.72	19.59	18.68	18.95	0.0	20.5
		100	0	19.93	20.53	19.86	19.97	0.0	21.0	19.67	19.56	18.66	18.96	0.0	20.5
	16QAM	1	0	20.09	20.53	19.96	19.84	0.0	21.0	19.30	19.72	18.71	19.36	0.0	20.5
		1	49	20.37	20.55	20.10	20.18	0.0	21.0	19.95	19.74	18.86	18.91	0.0	20.5
		1	99	20.26	20.65	19.92	20.23	0.0	21.0	19.49	19.48	18.76	19.06	0.0	20.5
		50	0	19.94	20.51	19.75	20.02	0.0	21.0	19.71	19.61	18.72	18.97	0.0	20.5
		50	24	19.92	20.56	19.77	19.97	0.0	21.0	19.74	19.60	18.72	18.96	0.0	20.5
		50	50	19.94	20.54	19.77	19.97	0.0	21.0	19.78	19.67	18.72	18.96	0.0	20.5
		100	0	19.96	20.51	19.80	19.98	0.0	21.0	19.74	19.62	18.71	19.01	0.0	20.5
	64QAM	1	0	20.59	20.00	19.99	19.87	0.0	21.0	19.32	19.59	18.72	19.34	0.0	20.5
		1	49	20.65	20.21	20.03	19.76	0.0	21.0	19.57	19.76	19.01	18.94	0.0	20.5
		1	99	20.81	20.27	20.06	19.83	0.0	21.0	19.43	19.76	18.82	19.44	0.0	20.5
		50	0	20.56	20.37	19.83	19.76	0.0	21.0	19.68	19.62	18.69	19.03	0.0	20.5
		50	24	20.61	20.44	19.80	19.76	0.0	21.0	19.70	19.66	18.72	18.98	0.0	20.5
		50	50	20.64	20.50	19.82	19.76	0.0	21.0	19.80	19.66	18.74	19.01	0.0	20.5
		100	0	20.62	20.44	19.79	19.77	0.0	21.0	19.74	19.63	18.68	19.03	0.0	20.5
	256QAM	1	0	18.77	18.66	18.18	18.23	1.5	19.5	18.72	18.97	18.46	18.31	1.0	19.5
		1	49	18.81	18.52	18.01	18.03	1.5	19.5	19.19	19.45	18.08	18.69	1.0	19.5
		1	99	18.85	18.51	18.02	18.01	1.5	19.5	19.23	19.30	18.25	18.14	1.0	19.5
		50	0	18.74	18.53	18.00	18.05	1.5	19.5	19.21	19.06	18.20	18.53	1.0	19.5
		50	24	18.76	18.59	18.03	18.05	1.5	19.5	19.23	19.11	18.20	18.47	1.0	19.5
		50	50	18.77	18.58	18.01	18.12	1.5	19.5	19.26	19.17	18.21	18.46	1.0	19.5
		100	0	18.74	18.57	18.02	18.03	1.5	19.5	19.22	19.12	18.19	18.48	1.0	19.5
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
				55315	55765	56215	56665			55315	55765	56215	56665		
				3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz			3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz		
15 MHz	QPSK	1	0	20.51	20.11	20.03	19.61	0.0	21.0	19.45	19.39	18.64	18.90	0.0	20.5
		1	37	20.25	20.12	20.05	19.52	0.0	21.0	19.95	19.69	18.92	19.18	0.0	20.5
		1	74	20.55	20.22	20.10	19.52	0.0	21.0	19.76	19.60	18.60	18.84	0.0	20.5
		36	0	20.57	20.26	20.10	19.63	0.0	21.0	19.55	19.47	18.62	18.85	0.0	20.5
		36	20	20.61	20.32	20.13	19.64	0.0	21.0	19.58	19.48	18.61	18.86	0.0	20.5
		36	39	20.63	20.34	20.15	19.60	0.0	21.0	19.61	19.50	18.63	18.84	0.0	20.5
		75	0	20.60	20.33	20.12	19.64	0.0	21.0	19.59	19.49	18.61	18.85	0.0	20.5
	16QAM	1	0	20.24	20.17	20.35	19.51	0.0	21.0	20.05	19.70	18.26	18.73	0.0	20.5
		1	37	20.41	20.17	20.00	19.02	0.0	21.0	19.46	19.43	18.73	18.70	0.0	20.5
		1	74	20.32	20.29	19.93	19.40	0.0	21.0	19.68	19.79	18.64	18.73	0.0	20.5
		36	0	20.54	20.28	20.08	19.68	0.0	21.0	19.62	19.55	18.62	18.91	0.0	20.5
		36	20	20.55	20.28	20.15	19.63	0.0	21.0	19.66	19.56	18.68	18.86	0.0	20.5
		36	39	20.58	20.34	20.15	19.60	0.0	21.0	19.68	19.57	18.63	18.85	0.0	20.5
		75	0	20.56	20.30	20.13	19.60	0.0	21.0	19.64	19.55	18.67	18.91	0.0	20.5
	64QAM	1	0	20.69	20.00	19.94	19.53	0.0	21.0	19.58	19.32	18.55	18.84	0.0	20.5
		1	37	20.37	19.97	19.92	19.80	0.0	21.0	19.61	19.71	18.77	18.98	0.0	20.5
		1	74	20.53	20.26	20.07	19.83	0.0	21.0	19.73	19.52	18.61	18.52	0.0	20.5
		36	0	20.52	20.11	20.08	19.84	0.0	21.0	19.61	19.45	18.66	18.95	0.0	20.5
		36	20	20.51	20.05	20.13	19.67	0.0	21.0	19.61	19.49	18.68	18.92	0.0	20.5
		36	39	20.61	20.44	20.16	19.85	0.0	21.0	19.62	19.51	18.65	18.90	0.0	20.5
		75	0	20.56	20.47	20.15	19.85	0.0	21.0	19.64	19.51	18.61	18.90	0.0	20.5
	256QAM	1	0	18.71	18.31	18.31	17.07	1.5	19.5	18.92	19.21	18.53	18.26	1.0	19.5
		1	37	18.87	18.66	18.53	17.80	1.5	19.5	18.88	18.78	18.44	18.35	1.0	19.5
		1	74	18.82	18.79	18.30	17.58	1.5	19.5	18.95	18.90	18.46	18.19	1.0	19.5
		36	0	18.56	18.40	18.18	17.61	1.5	19.5	19.09	18.95	18.18	18.35	1.0	19.5
		36	20	18.60	18.40	18.17	17.59	1.5	19.5	19.12	18.97	18.19	18.37	1.0	19.5
		36	39	18.60	18.41	18.16	17.56	1.5	19.5	19.16	18.98	18.14	18.32	1.0	19.5
		75	0	18.60	18.39	18.16	17.57	1.5	19.5	19.11	18.97	18.16	18.40	1.0	19.5

LTE Band 48 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
				55290	55757	56223	56690			55290	55757	56223	56690		
				3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz			3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz		
10 MHz	QPSK	1	0	20.60	20.14	20.04	19.30	0.0	21.0	19.58	19.49	18.62	18.86	0.0	20.5
		1	25	20.49	20.16	20.08	19.25	0.0	21.0	19.72	19.46	18.44	18.77	0.0	20.5
		1	49	20.65	20.23	20.09	19.24	0.0	21.0	19.63	19.52	18.66	18.79	0.0	20.5
		25	0	20.57	20.19	20.01	19.30	0.0	21.0	19.64	19.52	18.65	18.83	0.0	20.5
		25	12	20.59	20.21	20.02	19.30	0.0	21.0	19.67	19.52	18.64	18.82	0.0	20.5
		25	25	20.61	20.26	20.02	19.29	0.0	21.0	19.67	19.54	18.65	18.81	0.0	20.5
		50	0	20.57	20.23	20.03	19.30	0.0	21.0	19.68	19.53	18.64	18.82	0.0	20.5
	16QAM	1	0	20.48	20.49	19.90	19.50	0.0	21.0	19.82	19.40	18.69	18.72	0.0	20.5
		1	25	20.39	20.48	19.79	19.48	0.0	21.0	19.98	19.44	18.83	18.74	0.0	20.5
		1	49	20.59	20.61	19.89	19.52	0.0	21.0	19.97	19.49	18.66	18.74	0.0	20.5
		25	0	20.52	20.23	19.98	19.31	0.0	21.0	19.71	19.53	18.67	18.88	0.0	20.5
		25	12	20.54	20.24	19.98	19.30	0.0	21.0	19.73	19.53	18.67	18.86	0.0	20.5
		25	25	20.56	20.25	20.01	19.27	0.0	21.0	19.75	19.56	18.67	18.85	0.0	20.5
		50	0	20.54	20.27	19.98	19.31	0.0	21.0	19.76	19.59	18.68	18.86	0.0	20.5
	64QAM	1	0	20.35	19.92	20.21	19.29	0.0	21.0	19.53	19.35	18.47	18.88	0.0	20.5
		1	25	20.42	19.91	20.20	19.34	0.0	21.0	19.57	19.65	18.70	18.97	0.0	20.5
		1	49	20.54	20.07	20.20	19.35	0.0	21.0	19.61	19.48	18.57	18.86	0.0	20.5
		25	0	20.44	20.12	20.00	19.36	0.0	21.0	19.66	19.53	18.67	18.85	0.0	20.5
		25	12	20.44	20.14	19.99	19.37	0.0	21.0	19.66	19.53	18.67	18.83	0.0	20.5
		25	25	20.46	20.19	20.01	19.37	0.0	21.0	19.68	19.56	18.65	18.82	0.0	20.5
		50	0	20.51	20.18	20.02	19.37	0.0	21.0	19.69	19.56	18.67	18.84	0.0	20.5
	256QAM	1	0	18.72	18.43	18.14	17.46	1.5	19.5	18.98	18.95	18.04	18.24	1.0	19.5
		1	25	18.66	18.36	18.07	17.45	1.5	19.5	19.21	18.95	18.04	18.24	1.0	19.5
		1	49	18.73	18.41	18.08	17.39	1.5	19.5	19.06	18.99	18.06	18.25	1.0	19.5
		25	0	18.66	18.34	18.14	17.35	1.5	19.5	19.15	19.07	18.19	18.37	1.0	19.5
		25	12	18.65	18.36	18.13	17.32	1.5	19.5	19.17	19.05	18.17	18.36	1.0	19.5
		25	25	18.69	18.37	18.11	17.31	1.5	19.5	19.20	19.06	18.17	18.34	1.0	19.5
		50	0	18.65	18.36	18.06	17.33	1.5	19.5	19.20	19.04	18.14	18.31	1.0	19.5
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
				55265	55748	56232	56715			55265	55748	56232	56715		
				3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz			3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz		
5 MHz	QPSK	1	0	20.30	19.92	20.00	19.05	0.0	21.0	19.56	19.42	18.66	18.78	0.0	20.5
		1	12	20.35	19.89	20.18	19.20	0.0	21.0	19.83	19.69	18.79	18.78	0.0	20.5
		1	24	20.39	20.00	19.96	19.02	0.0	21.0	19.57	19.45	18.61	18.76	0.0	20.5
		12	0	20.38	20.03	19.96	19.02	0.0	21.0	19.62	19.47	18.64	18.79	0.0	20.5
		12	7	20.39	20.05	19.96	19.02	0.0	21.0	19.62	19.47	18.64	18.78	0.0	20.5
		12	13	20.44	20.08	19.97	19.02	0.0	21.0	19.63	19.48	18.63	18.77	0.0	20.5
		25	0	20.44	20.09	19.98	19.01	0.0	21.0	19.64	19.48	18.65	18.80	0.0	20.5
	16QAM	1	0	20.24	19.80	20.02	19.10	0.0	21.0	19.69	19.79	18.87	18.62	0.0	20.5
		1	12	20.09	19.61	20.08	18.85	0.0	21.0	19.97	20.07	19.09	18.86	0.0	20.5
		1	24	20.34	19.90	20.10	19.10	0.0	21.0	19.72	19.86	18.91	18.66	0.0	20.5
		12	0	20.41	20.07	19.93	19.04	0.0	21.0	19.68	19.49	18.68	18.78	0.0	20.5
		12	7	20.41	20.08	19.93	19.04	0.0	21.0	19.69	19.51	18.68	18.75	0.0	20.5
		12	13	20.46	20.11	19.94	19.02	0.0	21.0	19.68	19.50	18.67	18.77	0.0	20.5
		25	0	20.45	20.11	19.99	19.02	0.0	21.0	19.73	19.54	18.69	18.82	0.0	20.5
	64QAM	1	0	20.22	20.16	20.15	18.98	0.0	21.0	19.40	19.18	18.66	18.86	0.0	20.5
		1	12	20.31	20.20	20.18	19.02	0.0	21.0	19.62	19.29	18.66	18.94	0.0	20.5
		1	24	20.29	20.22	20.02	19.03	0.0	21.0	19.47	19.24	18.72	18.78	0.0	20.5
		12	0	20.38	20.23	20.22	19.03	0.0	21.0	19.66	19.49	18.70	18.75	0.0	20.5
		12	7	20.40	20.24	20.19	19.05	0.0	21.0	19.70	19.53	18.69	18.72	0.0	20.5
		12	13	20.43	20.25	20.25	19.05	0.0	21.0	19.70	19.52	18.70	18.73	0.0	20.5
		25	0	20.51	20.27	20.23	19.06	0.0	21.0	19.68	19.50	18.68	18.75	0.0	20.5
	256QAM	1	0	18.82	18.40	18.55	17.36	1.5	19.5	19.37	19.23	18.06	18.33	1.0	19.5
		1	12	18.67	18.32	18.12	17.21	1.5	19.5	19.45	19.43	18.28	18.56	1.0	19.5
		1	24	18.83	18.41	18.36	17.27	1.5	19.5	19.41	19.26	18.07	18.31	1.0	19.5
		12	0	18.56	18.32	18.33	17.02	1.5	19.5	19.17	19.00	18.16	18.31	1.0	19.5
		12	7	18.56	18.26	18.33	17.01	1.5	19.5	19.20	19.02	18.15	18.29	1.0	19.5
		12	13	18.57	18.33	18.27	17.00	1.5	19.5	19.21	19.01	18.16	18.29	1.0	19.5
		25	0	18.58	18.25	18.31	17.00	1.5	19.5	19.16	19.00	18.09	18.24	1.0	19.5

LTE Band 66 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)														
				RSI = 0, 4					RSI = 3					RSI = 1, 2				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				132072	132322	132572			132072	132322	132572			132072	132322	132572		
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	QPSK	1	0	23.29	24.04	23.89	0.0	25.0	21.45	21.68	21.83	0.0	23.0	21.45	21.71	21.83	0.0	23.0
		1	49	23.58	24.17	24.31	0.0	25.0	21.62	21.92	22.05	0.0	23.0	21.12	21.98	22.09	0.0	23.0
		1	99	23.78	24.13	24.07	0.0	25.0	21.48	21.69	21.83	0.0	23.0	21.44	21.72	21.83	0.0	23.0
		50	0	22.71	23.13	23.23	1.0	24.0	21.48	21.71	21.85	0.0	23.0	21.44	21.72	21.85	0.0	23.0
		50	24	22.70	23.07	23.21	1.0	24.0	21.48	21.70	21.84	0.0	23.0	21.47	21.68	21.83	0.0	23.0
		50	50	22.70	23.08	23.19	1.0	24.0	21.48	21.70	21.84	0.0	23.0	21.46	21.69	21.80	0.0	23.0
		100	0	22.70	23.08	23.22	1.0	24.0	21.48	21.73	21.86	0.0	23.0	21.47	21.71	21.83	0.0	23.0
	16QAM	1	0	22.53	23.47	23.21	1.0	24.0	21.76	22.10	22.15	0.0	23.0	21.71	21.92	22.00	0.0	23.0
		1	49	23.03	23.44	23.29	1.0	24.0	21.84	21.97	21.99	0.0	23.0	21.69	21.74	21.73	0.0	23.0
		1	99	22.99	23.47	23.39	1.0	24.0	21.75	22.03	22.06	0.0	23.0	21.74	21.90	21.93	0.0	23.0
		50	0	21.63	22.03	22.16	2.0	23.0	21.45	21.66	21.80	0.0	23.0	21.44	21.65	21.76	0.0	23.0
		50	24	21.63	21.97	22.14	2.0	23.0	21.44	21.64	21.75	0.0	23.0	21.44	21.63	21.74	0.0	23.0
		50	50	21.63	21.97	22.10	2.0	23.0	21.43	21.66	21.75	0.0	23.0	21.44	21.64	21.73	0.0	23.0
		100	0	21.67	22.01	22.10	2.0	23.0	21.47	21.69	21.81	0.0	23.0	21.46	21.67	21.78	0.0	23.0
	64QAM	1	0	21.56	21.57	21.32	2.0	23.0	21.64	21.45	21.46	0.0	23.0	21.44	20.76	20.54	0.0	23.0
		1	49	21.86	21.72	21.40	2.0	23.0	21.96	21.94	22.02	0.0	23.0	21.98	21.98	22.04	0.0	23.0
		1	99	21.66	21.56	21.27	2.0	23.0	21.72	21.71	21.81	0.0	23.0	21.79	21.87	21.86	0.0	23.0
		50	0	20.30	20.33	20.33	3.0	22.0	20.47	20.44	20.40	1.0	22.0	20.47	20.80	20.57	1.0	22.0
		50	24	20.30	20.29	20.30	3.0	22.0	20.47	20.45	20.37	1.0	22.0	20.46	20.78	20.58	1.0	22.0
		50	50	20.29	20.30	20.31	3.0	22.0	20.46	20.45	20.37	1.0	22.0	20.45	20.76	20.57	1.0	22.0
		100	0	20.31	20.28	20.30	3.0	22.0	20.46	20.42	20.37	1.0	22.0	20.45	20.78	20.57	1.0	22.0
	256QAM	1	0	18.43	18.60	18.52	5.0	20.0	18.82	18.75	18.66	3.0	20.0	18.75	18.91	18.87	3.0	20.0
		1	49	18.38	18.82	18.64	5.0	20.0	18.90	18.98	18.60	3.0	20.0	18.86	19.11	18.79	3.0	20.0
		1	99	18.41	18.60	18.51	5.0	20.0	18.80	18.77	18.64	3.0	20.0	18.74	18.87	18.84	3.0	20.0
		50	0	18.31	18.34	18.34	5.0	20.0	18.46	18.45	18.41	3.0	20.0	18.45	18.84	18.56	3.0	20.0
		50	24	18.29	18.33	18.32	5.0	20.0	18.46	18.46	18.38	3.0	20.0	18.41	18.83	18.55	3.0	20.0
		50	50	18.31	18.31	18.34	5.0	20.0	18.45	18.44	18.38	3.0	20.0	18.42	18.83	18.54	3.0	20.0
		100	0	18.30	18.34	18.34	5.0	20.0	18.45	18.46	18.39	3.0	20.0	18.43	18.84	18.55	3.0	20.0
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
				132047	132322	132597			132047	132322	132597			132047	132322	132597		
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	23.30	23.60	23.57	0.0	25.0	21.57	22.00	22.00	0.0	23.0	21.64	22.18	22.11	0.0	23.0
		1	37	23.81	24.16	24.23	0.0	25.0	22.26	22.06	22.07	0.0	23.0	22.33	22.26	22.30	0.0	23.0
		1	74	23.64	23.87	23.70	0.0	25.0	22.00	21.99	21.96	0.0	23.0	22.19	22.13	22.05	0.0	23.0
		36	0	22.75	23.10	23.06	1.0	24.0	21.98	22.09	22.09	0.0	23.0	22.12	22.23	22.20	0.0	23.0
		36	20	22.72	23.23	23.32	1.0	24.0	22.07	22.07	22.07	0.0	23.0	22.29	22.21	22.18	0.0	23.0
		36	39	22.73	23.23	23.35	1.0	24.0	22.10	22.07	22.06	0.0	23.0	22.28	22.21	22.19	0.0	23.0
		75	0	22.76	23.25	23.22	1.0	24.0	22.12	22.11	22.10	0.0	23.0	22.30	22.23	22.19	0.0	23.0
	16QAM	1	0	22.62	22.91	22.91	1.0	24.0	21.58	22.25	22.24	0.0	23.0	21.63	22.38	22.08	0.0	23.0
		1	37	22.87	23.19	23.62	1.0	24.0	22.31	22.39	22.46	0.0	23.0	22.42	22.28	22.04	0.0	23.0
		1	74	22.74	23.24	23.14	1.0	24.0	22.11	22.22	22.22	0.0	23.0	22.25	22.33	21.98	0.0	23.0
		36	0	21.67	22.15	22.23	2.0	23.0	21.89	22.03	22.07	0.0	23.0	22.05	22.14	22.10	0.0	23.0
		36	20	21.65	22.10	22.22	2.0	23.0	22.03	22.02	22.06	0.0	23.0	22.25	22.13	22.10	0.0	23.0
		36	39	21.65	22.09	22.20	2.0	23.0	22.05	22.02	22.05	0.0	23.0	22.25	22.11	22.10	0.0	23.0
		75	0	21.64	22.08	22.19	2.0	23.0	22.06	22.01	22.04	0.0	23.0	22.24	22.16	22.07	0.0	23.0
	64QAM	1	0	21.72	21.80	21.79	2.0	23.0	21.70	22.17	21.89	0.0	23.0	21.74	21.69	21.72	0.0	23.0
		1	37	21.56	21.81	21.80	2.0	23.0	22.00	22.26	22.04	0.0	23.0	21.94	21.73	21.91	0.0	23.0
		1	74	21.74	21.82	21.78	2.0	23.0	22.01	22.16	21.85	0.0	23.0	21.83	21.65	21.70	0.0	23.0
		36	0	20.63	20.79	20.86	3.0	22.0	20.99	21.00	21.02	1.0	22.0	20.73	20.73	20.61	1.0	22.0
		36	20	20.62	20.78	20.82	3.0	22.0	20.98	20.98	21.02	1.0	22.0	20.71	20.73	20.59	1.0	22.0
		36	39	20.62	20.75	20.83	3.0	22.0	20.94	20.96	21.00	1.0	22.0	20.72	20.71	20.55	1.0	22.0
		75	0	20.61	20.74	20.81	3.0	22.0	21.01	20.99	20.96	1.0	22.0	20.71	20.67	20.65	1.0	22.0
	256QAM	1	0	18.85	18.96	18.86	5.0	20.0	19.08	19.07	18.96	3.0	20.0	18.90	18.82	18.74	3.0	20.0
		1	37	18.96	19.24	19.03	5.0	20.0	19.08	19.25	19.12	3.0	20.0	19.04	18.92	18.80	3.0	20.0
		1	74	18.83	19.06	18.85	5.0	20.0	19.05	19.04	18.89	3.0	20.0	18.92	18.74	18.66	3.0	20.0
		36	0	18.62	18.76	18.86	5.0	20.0	18.99	18.99	18.95	3.0	20.0	18.75	18.66	18.64	3.0	20.0
		36	20	18.62	18.74	18.85	5.0	20.0	18.97	18.98	18.94	3.0	20.0	18.76	18.65	18.59	3.0	20.0
		36	39	18.60	18.71	18.82	5.0	20.0	18.98	18.96	18.91	3.0	20.0	18.74	18.62	18.60	3.0	20.0
		75	0	18.59	18.75	18.82	5.0	20.0	18.99	18.98	18.91	3.0	20.0	18.72	18.67	18.62	3.0	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	Measured Pwr (dBm)			MPR	Tune-up Limit
				132022	132322	132622			132022	132322	132622			132022	132322	132622		
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	23.72	23.74	23.81	0.0	25.0	21.93	22.04	21.97	0.0	23.0	21.99	22.06	21.98	0.0	23.0
		1	25	23.93	23.97	24.03	0.0	25.0	22.06	22.00	22.19	0.0	23.0	22.07	21.91	22.09	0.0	23.0
		1	49	23.78	23.81	23.91	0.0	25.0	22.01	21.97	22.00	0.0	23.0	22.02	22.00	21.99	0.0	23.0
		25	0	22.71	22.77	22.86	1.0	24.0	21.98	21.98	21.98	0.0	23.0	21.98	21.97	21.96	0.0	23.0
		25	12	22.70	22.76	22.86	1.0	24.0	21.98	21.97	21.97	0.0	23.0	21.99	21.97	21.95	0.0	23.0
		25	25	22.69	22.76	22.86	1.0	24.0	21.97	21.96	21.95	0.0	23.0	21.98	21.95	21.94	0.0	23.0
		50	0	22.71	22.77	22.86	1.0	24.0	22.00	21.96	21.97	0.0	23.0	21.99	21.96	21.95	0.0	23.0
	16QAM	1	0	22.81	22.98	23.01	1.0	24.0	21.84	22.18	22.26	0.0	23.0	21.96	22.20	22.23	0.0	23.0
		1	25	22.67	22.76	22.77	1.0	24.0	21.76	21.90	22.23	0.0	23.0	21.81	22.09	22.18	0.0	23.0
		1	49	22.80	22.96	22.93	1.0	24.0	21.99	22.20	22.16	0.0	23.0	22.02	22.24	22.17	0.0	23.0
		25	0	21.66	21.75	21.85	2.0	23.0	21.94	21.92	21.95	0.0	23.0	21.93	21.95	21.93	0.0	23.0
		25	12	21.64	21.73	21.83	2.0	23.0	21.94	21.94	21.96	0.0	23.0	21.92	21.96	21.94	0.0	23.0
		25	25	21.65	21.73	21.83	2.0	23.0	21.95	21.94	21.95	0.0	23.0	21.93	21.95	21.92	0.0	23.0
		50	0	21.67	21.73	21.79	2.0	23.0	21.96	21.89	21.92	0.0	23.0	21.92	21.89	21.90	0.0	23.0
	64QAM	1	0	21.56	21.90	21.71	2.0	23.0	21.93	22.18	21.93	0.0	23.0	21.72	22.03	21.75	0.0	23.0
		1	25	21.61	22.04	21.90	2.0	23.0	21.97	22.24	21.81	0.0	23.0	21.71	22.03	21.83	0.0	23.0
		1	49	21.67	21.99	21.77	2.0	23.0	21.91	22.21	21.95	0.0	23.0	21.63	22.06	21.83	0.0	23.0
		25	0	20.64	20.73	20.83	3.0	22.0	20.96	20.92	20.95	1.0	22.0	20.75	20.79	20.87	1.0	22.0
		25	12	20.63	20.71	20.81	3.0	22.0	20.96	20.91	20.94	1.0	22.0	20.72	20.77	20.87	1.0	22.0
		25	25	20.64	20.71	20.79	3.0	22.0	20.97	20.93	20.93	1.0	22.0	20.72	20.76	20.86	1.0	22.0
		50	0	20.61	20.69	20.77	3.0	22.0	20.94	20.92	20.90	1.0	22.0	20.74	20.77	20.84	1.0	22.0
	256QAM	1	0	18.87	18.91	19.03	5.0	20.0	19.03	19.02	18.92	3.0	20.0	18.80	19.11	18.93	3.0	20.0
		1	25	19.04	18.96	19.12	5.0	20.0	19.00	19.22	19.12	3.0	20.0	18.71	19.20	19.06	3.0	20.0
		1	49	18.85	18.84	18.96	5.0	20.0	19.01	19.00	18.87	3.0	20.0	18.72	19.08	18.86	3.0	20.0
		25	0	18.70	18.78	18.85	5.0	20.0	19.09	18.99	18.97	3.0	20.0	18.85	18.84	18.92	3.0	20.0
		25	12	18.69	18.78	18.85	5.0	20.0	19.06	18.97	18.96	3.0	20.0	18.84	18.86	18.92	3.0	20.0
		25	25	18.69	18.77	18.83	5.0	20.0	19.07	18.97	18.93	3.0	20.0	18.83	18.84	18.90	3.0	20.0
		50	0	18.67	18.77	18.82	5.0	20.0	18.97	18.95	18.93	3.0	20.0	18.79	18.84	18.89	3.0	20.0
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
				131997	132322	132647			131997	132322	132647			131997	132322	132647		
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	23.61	23.65	23.76	0.0	25.0	21.69	21.73	21.72	0.0	23.0	21.75	21.69	21.69	0.0	23.0
		1	12	23.65	23.77	23.88	0.0	25.0	21.74	21.92	21.92	0.0	23.0	21.82	21.95	21.61	0.0	23.0
		1	24	23.68	23.74	23.88	0.0	25.0	21.73	21.75	21.76	0.0	23.0	21.75	21.71	21.73	0.0	23.0
		12	0	22.66	22.74	22.86	1.0	24.0	21.72	21.74	21.75	0.0	23.0	21.73	21.73	21.70	0.0	23.0
		12	7	22.66	22.74	22.85	1.0	24.0	21.73	21.73	21.74	0.0	23.0	21.74	21.73	21.68	0.0	23.0
		12	13	22.64	22.72	22.85	1.0	24.0	21.74	21.72	21.73	0.0	23.0	21.72	21.72	21.71	0.0	23.0
		25	0	22.65	22.72	22.85	1.0	24.0	21.73	21.73	21.74	0.0	23.0	21.71	21.69	21.67	0.0	23.0
	16QAM	1	0	22.80	22.81	23.14	1.0	24.0	22.05	21.95	22.08	0.0	23.0	22.00	22.08	21.99	0.0	23.0
		1	12	22.86	22.88	23.09	1.0	24.0	22.14	22.02	21.77	0.0	23.0	22.15	21.81	22.19	0.0	23.0
		1	24	22.79	22.85	23.15	1.0	24.0	22.10	21.92	22.03	0.0	23.0	21.98	22.04	22.02	0.0	23.0
		12	0	21.63	21.68	21.81	2.0	23.0	21.72	21.75	21.76	0.0	23.0	21.69	21.72	21.70	0.0	23.0
		12	7	21.62	21.66	21.79	2.0	23.0	21.71	21.73	21.75	0.0	23.0	21.69	21.72	21.69	0.0	23.0
		12	13	21.65	21.65	21.76	2.0	23.0	21.70	21.76	21.76	0.0	23.0	21.70	21.71	21.66	0.0	23.0
		25	0	21.64	21.66	21.78	2.0	23.0	21.70	21.69	21.71	0.0	23.0	21.66	21.66	21.62	0.0	23.0
	64QAM	1	0	21.56	21.69	21.85	2.0	23.0	21.86	21.93	21.70	0.0	23.0	22.16	22.15	22.09	0.0	23.0
		1	12	21.82	21.92	22.14	2.0	23.0	22.13	21.91	21.77	0.0	23.0	22.19	22.16	22.28	0.0	23.0
		1	24	21.70	21.76	21.91	2.0	23.0	21.95	21.92	21.73	0.0	23.0	22.22	22.10	22.15	0.0	23.0
		12	0	20.58	20.59	20.74	3.0	22.0	20.62	20.63	20.68	1.0	22.0	20.94	20.99	21.14	1.0	22.0
		12	7	20.59	20.58	20.73	3.0	22.0	20.63	20.61	20.65	1.0	22.0	20.92	20.96	21.11	1.0	22.0
		12	13	20.59	20.59	20.72	3.0	22.0	20.60	20.63	20.65	1.0	22.0	20.91	20.97	21.11	1.0	22.0
		25	0	20.58	20.62	20.74	3.0	22.0	20.65	20.65	20.63	1.0	22.0	20.89	21.03	21.07	1.0	22.0
	256QAM	1	0	18.56	18.69	18.86	5.0	20.0	18.85	18.99	18.80	3.0	20.0	19.06	19.24	19.20	3.0	20.0
		1	12	18.74	18.90	19.08	5.0	20.0	18.90	19.17	18.99	3.0	20.0	19.23	19.21	19.14	3.0	20.0
		1	24	18.55	18.65	18.85	5.0	20.0	18.84	18.96	18.76	3.0	20.0	18.98	19.18	19.21	3.0	20.0
		12	0	18.65	18.69	18.81	5.0	20.0	18.76	18.73	18.69	3.0	20.0	19.00	19.13	19.18	3.0	20.0
		12	7	18.66	18.70	18.81	5.0	20.0	18.77	18.69	18.70	3.0	20.0	19.00	19.07	19.17	3.0	20.0
		12	13	18.67	18.70	18.81	5.0	20.0	18.76	18.70	18.67	3.0	20.0	19.00	19.12	19.17	3.0	20.0
		25	0	18.64	18.69	18.82	5.0	20.0	18.74	18.68	18.69	3.0	20.0	19.02	19.02	19.15	3.0	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	Measured Pwr (dBm)			MPR	Tune-up Limit
				131987	132322	132657			131987	132322	132657			131987	132322	132657		
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	23.76	23.59	23.72	0.0	25.0	21.82	21.69	21.81	0.0	23.0	21.74	21.73	21.86	0.0	23.0
		1	8	24.02	23.75	23.86	0.0	25.0	21.95	21.79	21.96	0.0	23.0	21.77	21.83	21.99	0.0	23.0
		1	14	23.84	23.62	23.77	0.0	25.0	21.86	21.65	21.82	0.0	23.0	21.79	21.69	21.90	0.0	23.0
		8	0	22.80	22.74	22.89	1.0	24.0	21.82	21.77	21.81	0.0	23.0	21.81	21.82	21.83	0.0	23.0
		8	4	22.71	22.74	22.88	1.0	24.0	21.75	21.77	21.79	0.0	23.0	21.70	21.74	21.71	0.0	23.0
		8	7	22.77	22.74	22.90	1.0	24.0	21.81	21.75	21.76	0.0	23.0	21.78	21.75	21.78	0.0	23.0
		15	0	22.71	22.71	22.84	1.0	24.0	21.76	21.70	21.73	0.0	23.0	21.72	21.72	21.74	0.0	23.0
	16QAM	1	0	22.80	22.85	23.02	1.0	24.0	21.88	22.00	22.09	0.0	23.0	21.88	21.87	22.13	0.0	23.0
		1	8	22.97	23.03	23.16	1.0	24.0	22.02	22.19	22.31	0.0	23.0	22.03	22.02	22.29	0.0	23.0
		1	14	22.74	22.90	23.04	1.0	24.0	21.82	22.05	22.01	0.0	23.0	21.83	21.93	22.05	0.0	23.0
		8	0	21.68	21.77	21.94	2.0	23.0	21.74	21.75	21.74	0.0	23.0	21.64	21.82	21.83	0.0	23.0
		8	4	21.67	21.72	21.86	2.0	23.0	21.75	21.70	21.71	0.0	23.0	21.67	21.80	21.76	0.0	23.0
		8	7	21.62	21.73	21.90	2.0	23.0	21.73	21.69	21.74	0.0	23.0	21.61	21.78	21.79	0.0	23.0
		15	0	21.64	21.70	21.79	2.0	23.0	21.75	21.69	21.65	0.0	23.0	21.75	21.73	21.72	0.0	23.0
	64QAM	1	0	21.71	21.81	21.70	2.0	23.0	21.51	21.94	21.68	0.0	23.0	21.74	22.12	22.21	0.0	23.0
		1	8	21.65	21.92	21.60	2.0	23.0	21.62	22.01	21.83	0.0	23.0	21.92	22.20	22.34	0.0	23.0
		1	14	21.78	21.93	21.78	2.0	23.0	21.46	22.00	21.74	0.0	23.0	21.68	22.17	22.31	0.0	23.0
		8	0	20.64	20.60	20.77	3.0	22.0	20.76	20.79	20.78	1.0	22.0	20.99	21.09	21.14	1.0	22.0
		8	4	20.58	20.57	20.76	3.0	22.0	20.77	20.77	20.75	1.0	22.0	20.94	21.06	21.07	1.0	22.0
		8	7	20.61	20.62	20.79	3.0	22.0	20.75	20.76	20.71	1.0	22.0	20.96	21.02	21.09	1.0	22.0
		15	0	20.53	20.64	20.74	3.0	22.0	20.73	20.67	20.73	1.0	22.0	20.96	20.98	21.13	1.0	22.0
	256QAM	1	0	18.76	18.94	19.04	5.0	20.0	18.80	18.98	18.77	3.0	20.0	19.12	19.24	19.30	3.0	20.0
		1	8	18.83	19.06	19.06	5.0	20.0	18.90	19.08	18.90	3.0	20.0	19.16	19.43	19.51	3.0	20.0
		1	14	18.72	18.87	18.97	5.0	20.0	18.78	18.95	18.74	3.0	20.0	19.12	19.20	19.26	3.0	20.0
		8	0	18.70	18.77	18.89	5.0	20.0	18.77	18.77	18.76	3.0	20.0	19.06	19.12	19.11	3.0	20.0
		8	4	18.68	18.72	18.84	5.0	20.0	18.77	18.76	18.74	3.0	20.0	19.03	19.07	19.14	3.0	20.0
		8	7	18.66	18.75	18.85	5.0	20.0	18.78	18.79	18.77	3.0	20.0	19.05	19.09	19.16	3.0	20.0
		15	0	18.65	18.74	18.84	5.0	20.0	18.85	18.75	18.78	3.0	20.0	19.08	19.05	19.24	3.0	20.0

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
				131979	132322	132665			131979	132322	132665			131979	132322	132665		
				1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	23.61	24.05	24.14	0.0	25.0	21.71	21.75	21.77	0.0	23.0	21.71	21.73	21.77	0.0	23.0
		1	3	23.76	24.06	24.18	0.0	25.0	21.70	21.75	21.73	0.0	23.0	21.67	21.72	21.75	0.0	23.0
		1	5	23.90	24.11	24.13	0.0	25.0	21.71	21.74	21.74	0.0	23.0	21.71	21.74	21.76	0.0	23.0
		3	0	22.80	23.08	23.17	0.0	25.0	21.74	21.77	21.58	0.0	23.0	21.74	21.81	21.59	0.0	23.0
		3	1	22.85	23.07	23.15	0.0	25.0	21.70	21.65	21.62	0.0	23.0	21.63	21.72	21.63	0.0	23.0
		3	3	22.83	23.06	23.17	0.0	25.0	21.61	21.64	21.69	0.0	23.0	21.61	21.67	21.72	0.0	23.0
		6	0	22.84	23.06	23.15	1.0	24.0	21.75	21.73	21.74	0.0	23.0	21.76	21.70	21.73	0.0	23.0
	16QAM	1	0	22.81	23.27	23.48	1.0	24.0	21.76	21.90	21.74	0.0	23.0	21.72	21.88	21.72	0.0	23.0
		1	3	22.88	23.20	23.09	1.0	24.0	22.01	21.84	21.60	0.0	23.0	21.97	21.97	21.74	0.0	23.0
		1	5	23.08	23.24	23.44	1.0	24.0	21.81	21.95	21.80	0.0	23.0	21.77	21.91	21.77	0.0	23.0
		3	0	21.83	22.04	22.13	1.0	24.0	21.65	21.73	21.69	0.0	23.0	21.58	21.78	21.69	0.0	23.0
		3	1	21.82	22.03	22.10	1.0	24.0	21.67	21.70	21.71	0.0	23.0	21.66	21.71	21.73	0.0	23.0
		3	3	21.81	22.03	22.10	1.0	24.0	21.70	21.76	21.69	0.0	23.0	21.75	21.73	21.69	0.0	23.0
		6	0	21.76	21.99	22.07	2.0	23.0	21.78	21.61	21.74	0.0	23.0	21.78	21.63	21.75	0.0	23.0
	64QAM	1	0	21.66	21.73	21.78	2.0	23.0	21.48	21.89	21.73	0.0	23.0	22.05	21.82	21.46	0.0	23.0
		1	3	21.81	21.84	21.90	2.0	23.0	21.62	22.09	21.52	0.0	23.0	22.25	21.73	21.57	0.0	23.0
		1	5	21.66	21.80	21.87	2.0	23.0	21.58	21.86	21.70	0.0	23.0	22.03	21.80	21.56	0.0	23.0
		3	0	21.57	21.65	21.69	2.0	23.0	21.58	21.74	21.68	1.0	22.0	21.78	21.71	21.44	1.0	22.0
		3	1	21.47	21.59	21.69	2.0	23.0	21.50	21.69	21.61	1.0	22.0	21.81	21.75	21.35	1.0	22.0
		3	3	21.50	21.64	21.64	2.0	23.0	21.61	21.70	21.65	1.0	22.0	21.84	21.72	21.53	1.0	22.0
		6	0	20.53	20.62	20.69	3.0	22.0	20.79	20.64	20.78	1.0	22.0	20.84	20.78	20.69	1.0	22.0
	256QAM	1	0	18.50	18.59	18.84	5.0	20.0	18.73	18.79	18.74	3.0	20.0	18.88	18.73	18.88	3.0	20.0
		1	3	18.70	18.71	19.01	5.0	20.0	18.72	18.88	18.80	3.0	20.0	18.99	18.88	18.87	3.0	20.0
		1	5	18.50	18.53	18.76	5.0	20.0	18.66	18.77	18.72	3.0	20.0	18.86	18.73	18.88	3.0	20.0
		3	0	18.49	18.69	18.82	5.0	20.0	18.78	18.58	18.73	3.0	20.0	18.78	18.64	18.73	3.0	20.0
		3	1	18.48	18.67	18.77	5.0	20.0	18.77	18.58	18.67	3.0	20.0	18.88	18.62	18.69	3.0	20.0
		3	3	18.45	18.65	18.71	5.0	20.0	18.69	18.60	18.70	3.0	20.0	18.87	18.65	18.56	3.0	20.0
		6	0	18.47	18.62	18.78	5.0	20.0	18.70	18.63	18.69	3.0	20.0	18.73	18.72	18.68	3.0	20.0

9.4. NR (Sub 6GHz)

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

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

Table 6.2.2.3-1: 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

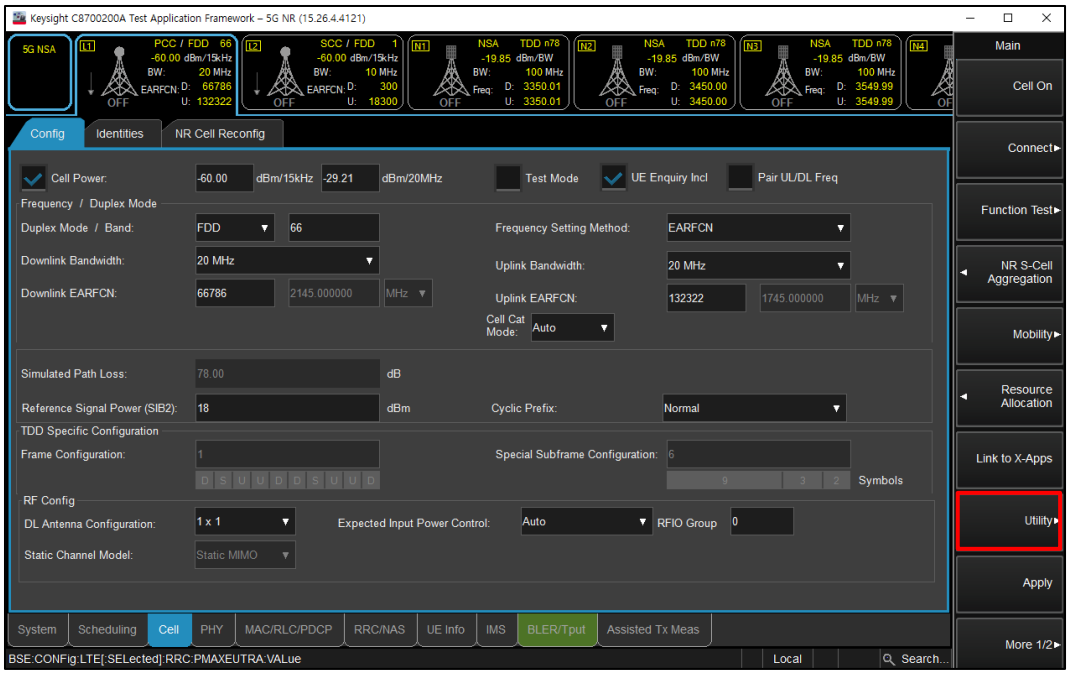
Uplink RB allocations were used to Table 6.1-1 of the 3GPP TS 138.521-1.

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

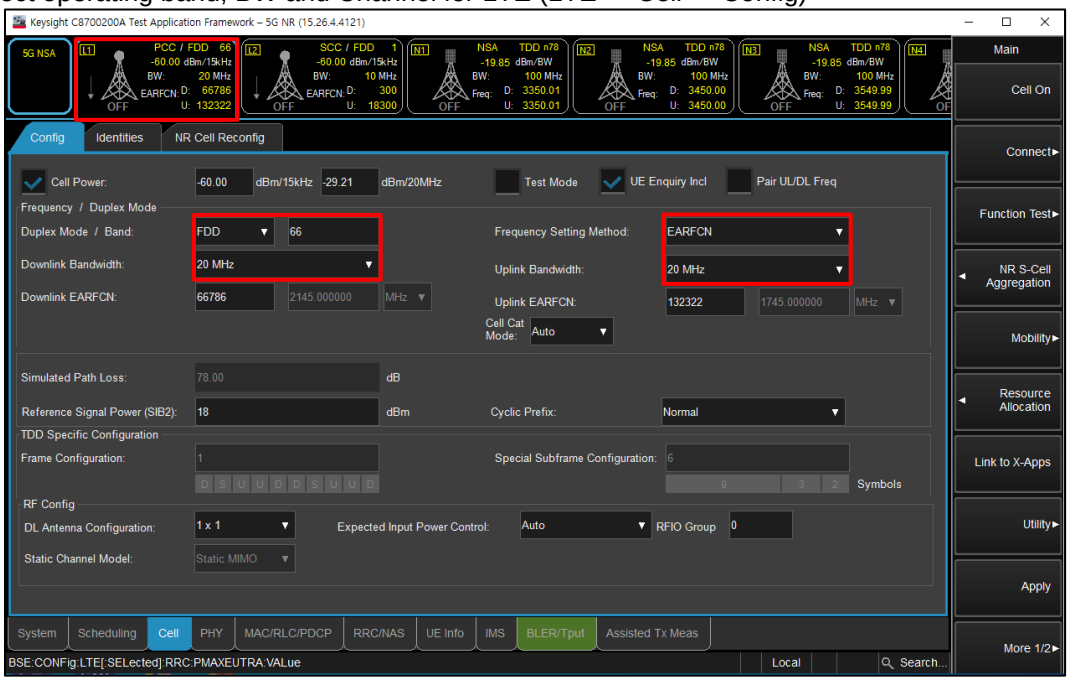


(Figure 1-1)

(Figure 1-2)

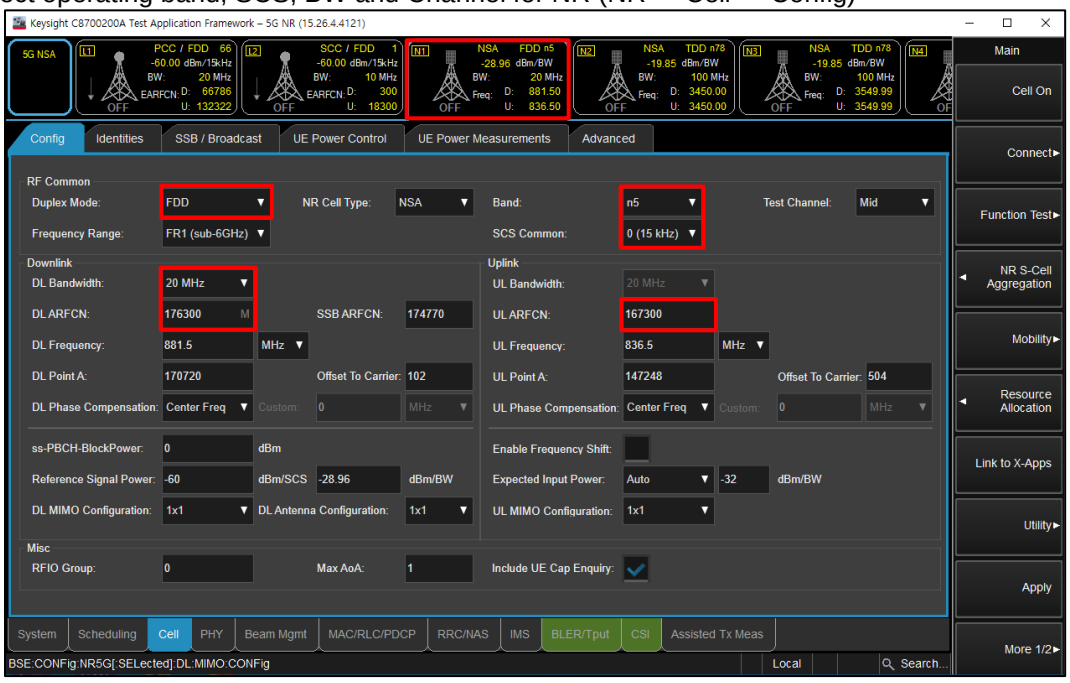
NSA Mode

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



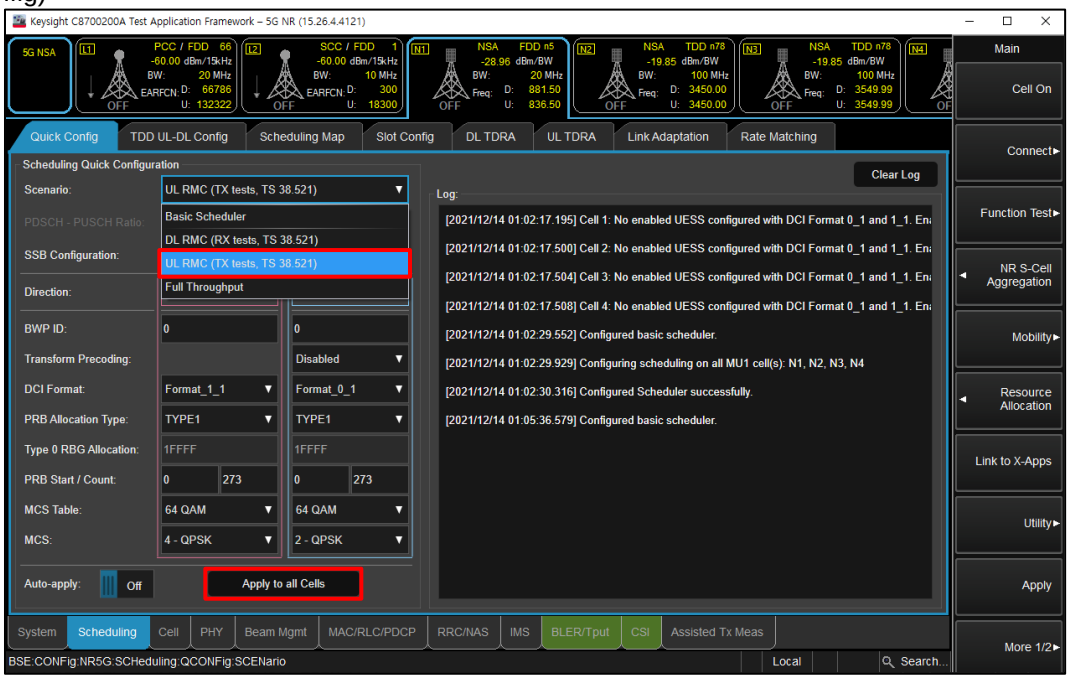
(Figure 2-1)

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



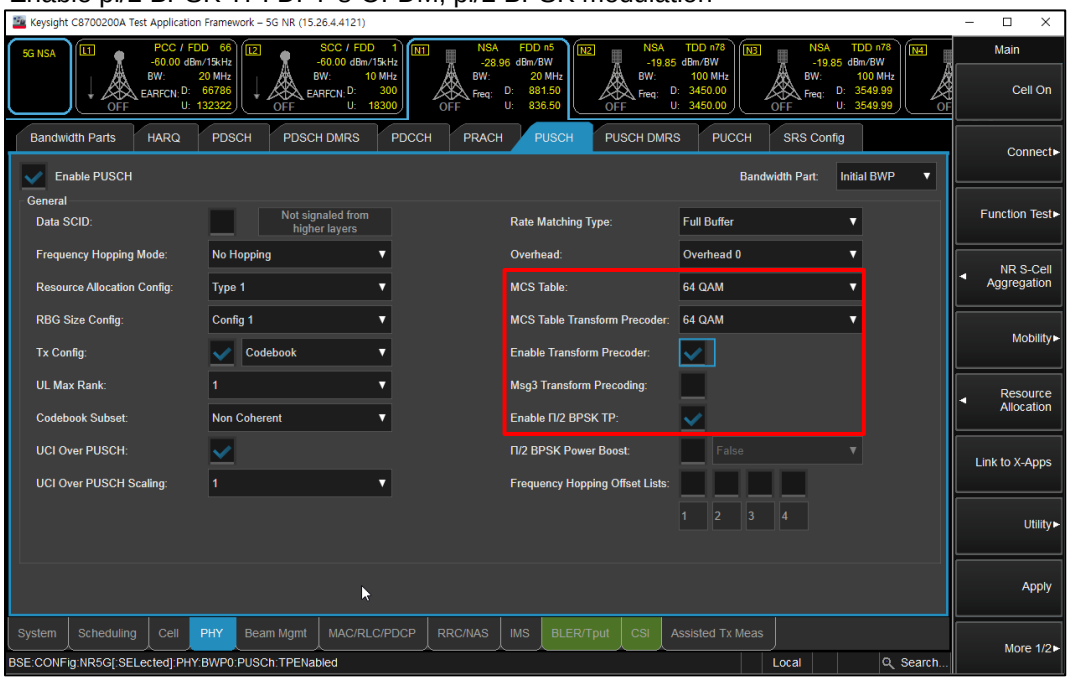
(Figure 2-2)

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



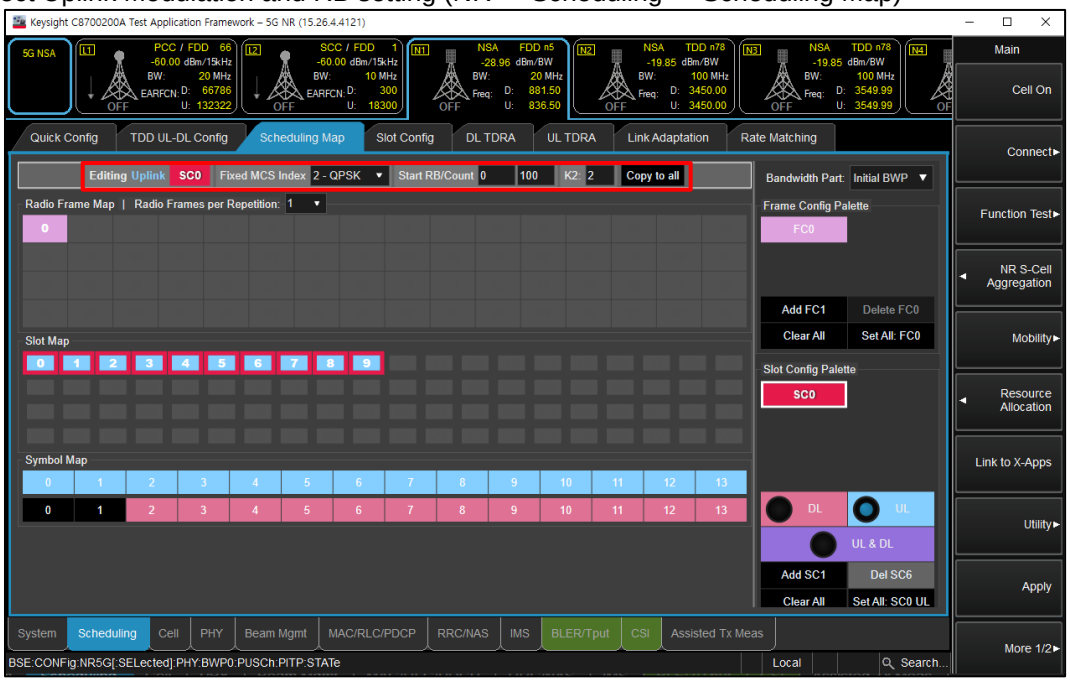
(Figure 2-3)

- 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



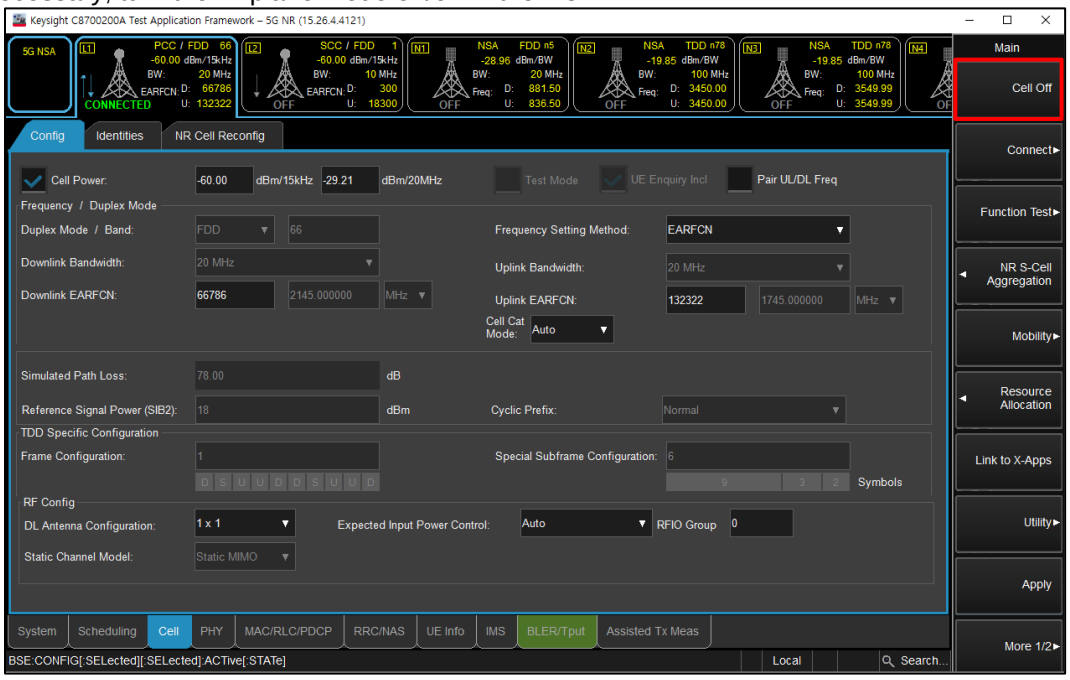
(Figure 2-4)

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



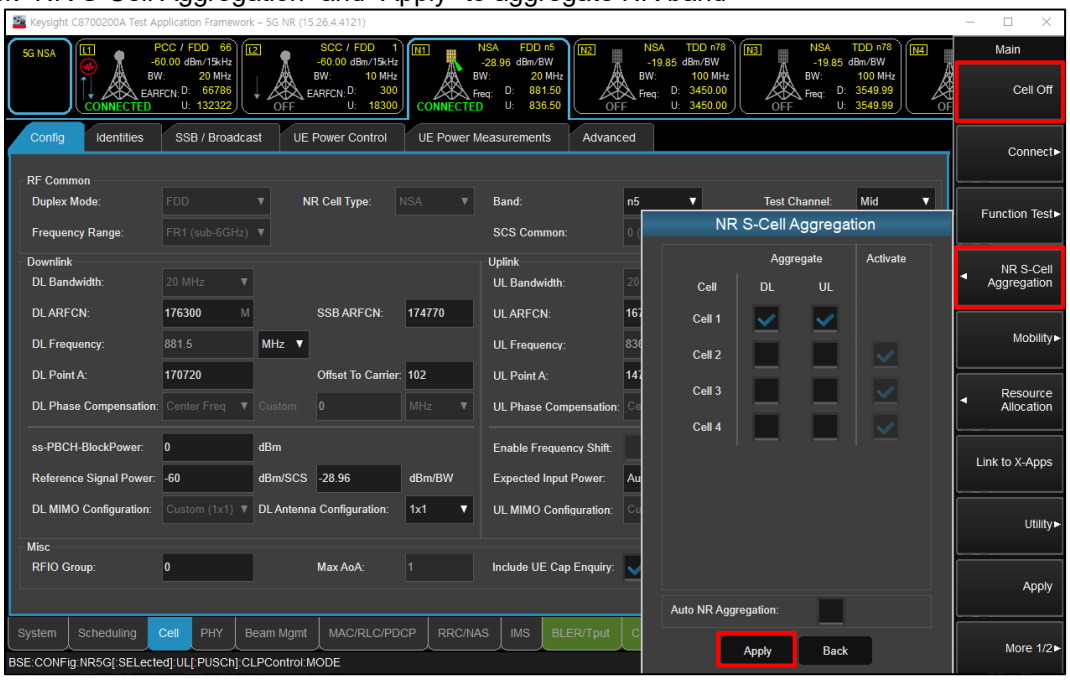
(Figure 2-5)

- 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



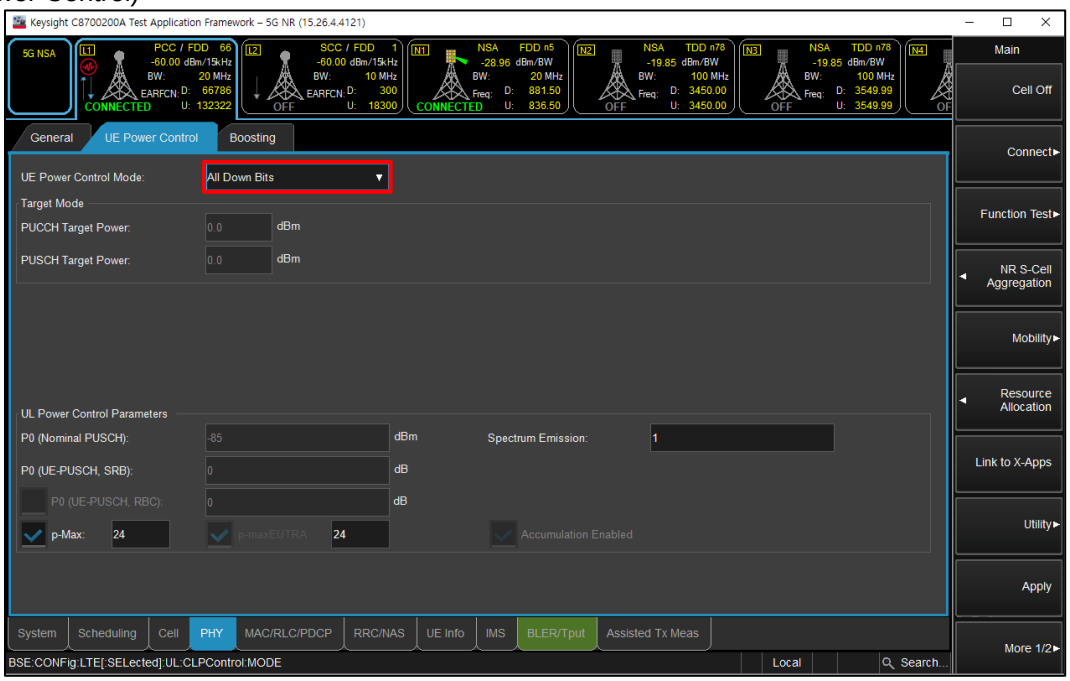
(Figure 2-6)

- 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



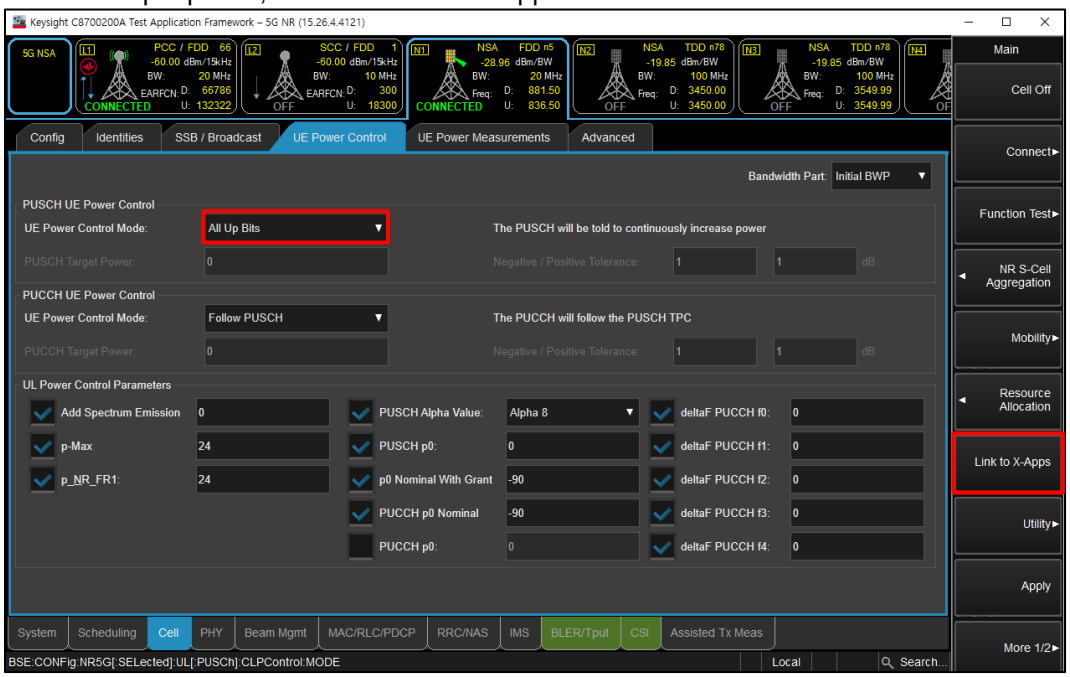
(Figure 2-7)

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



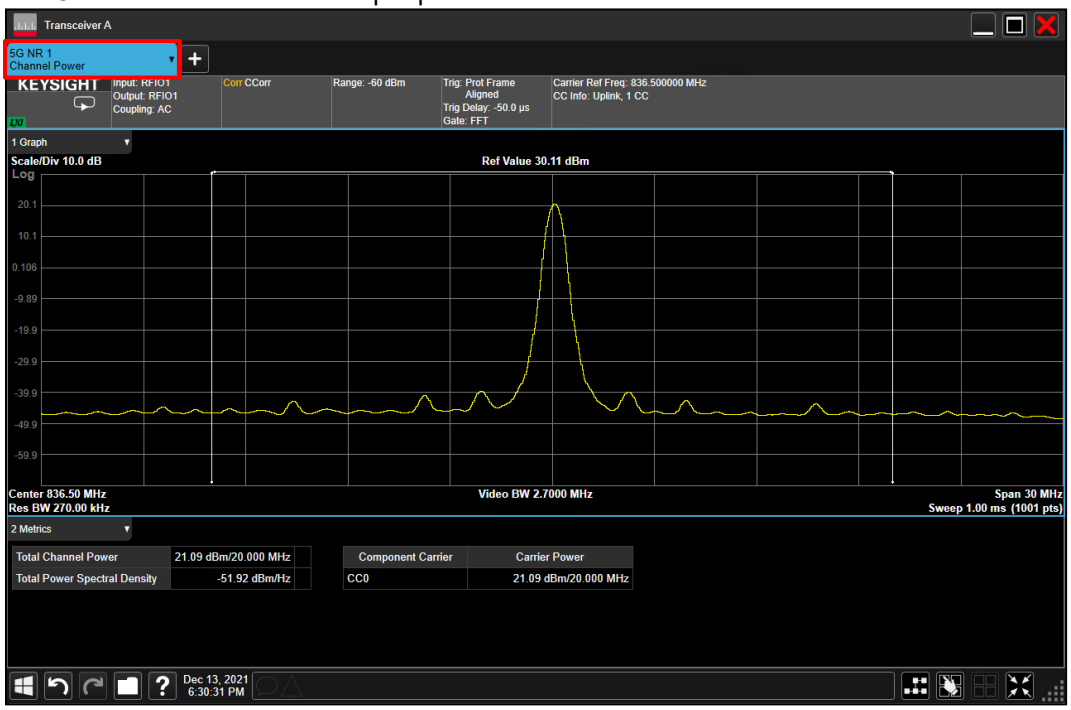
(Figure 2-8)

- 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”



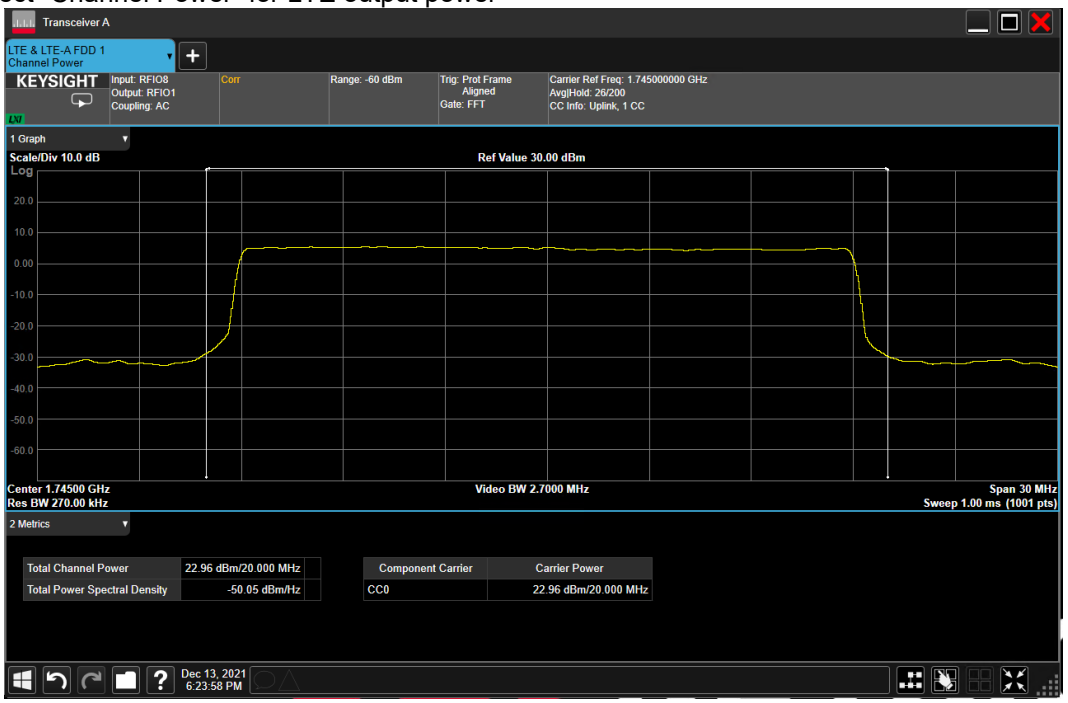
(Figure 2-9)

- Select “Channel Power” for NR output power



(Figure 2-10)

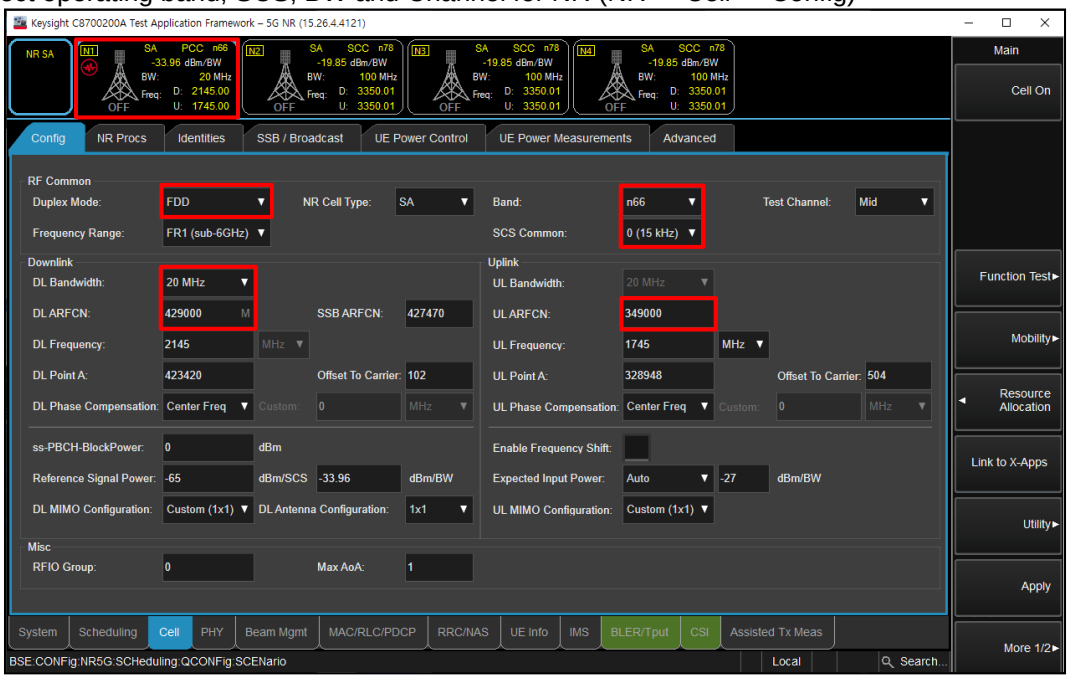
- Select “Channel Power” for LTE output power



(Figure 2-11)

SA Mode

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

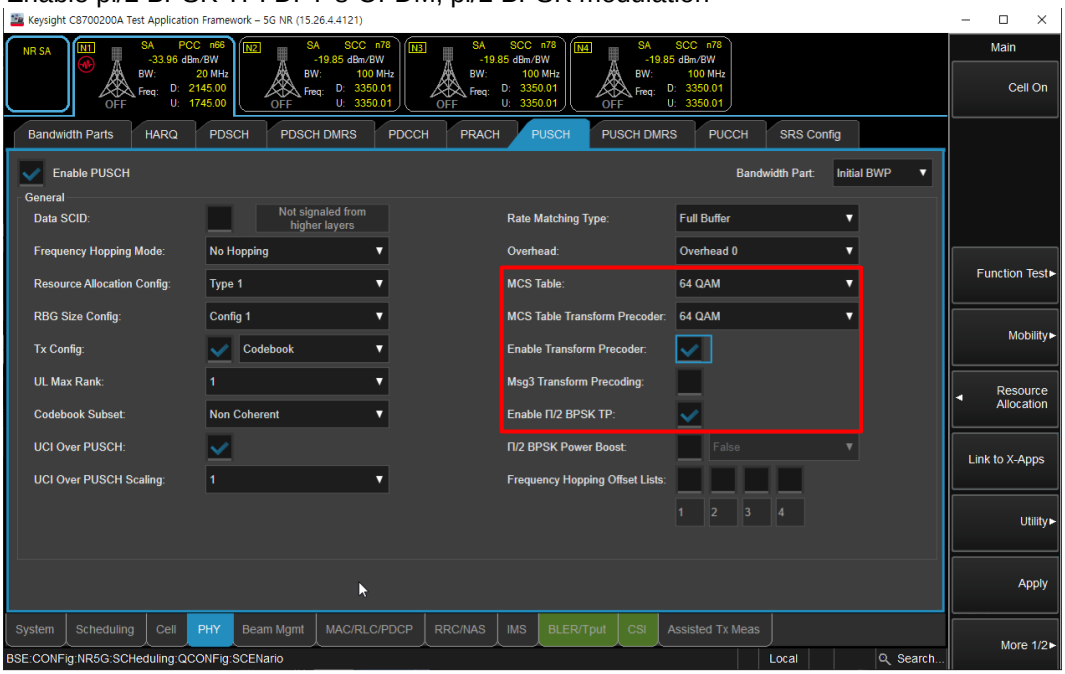


(Figure 3-1)

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

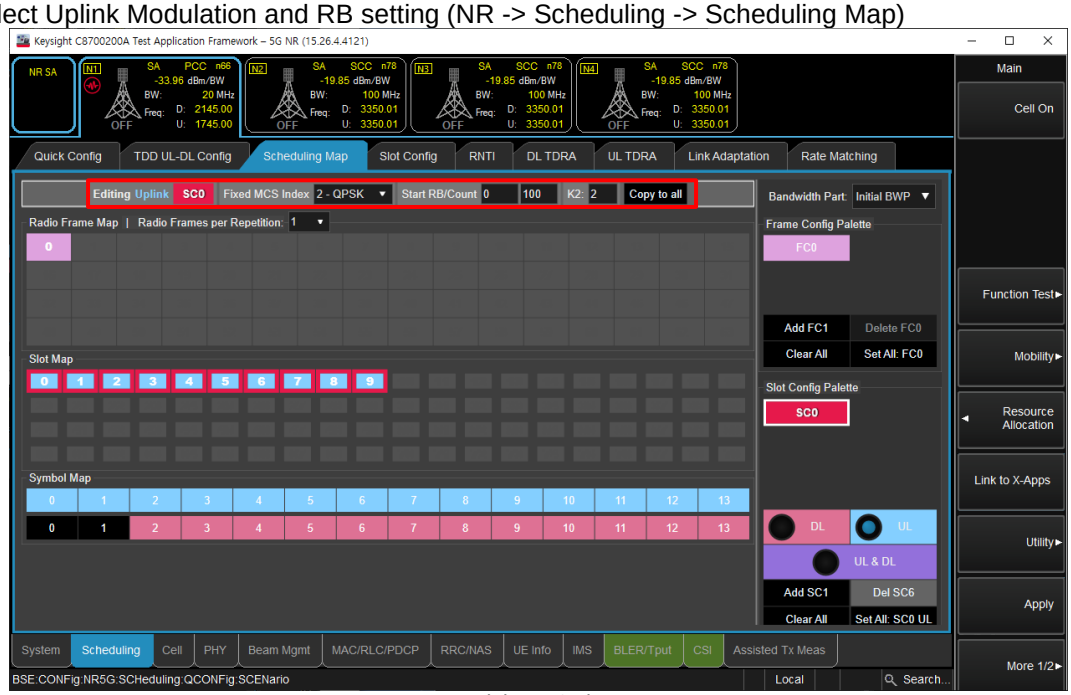
(Figure 3-2)

- 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



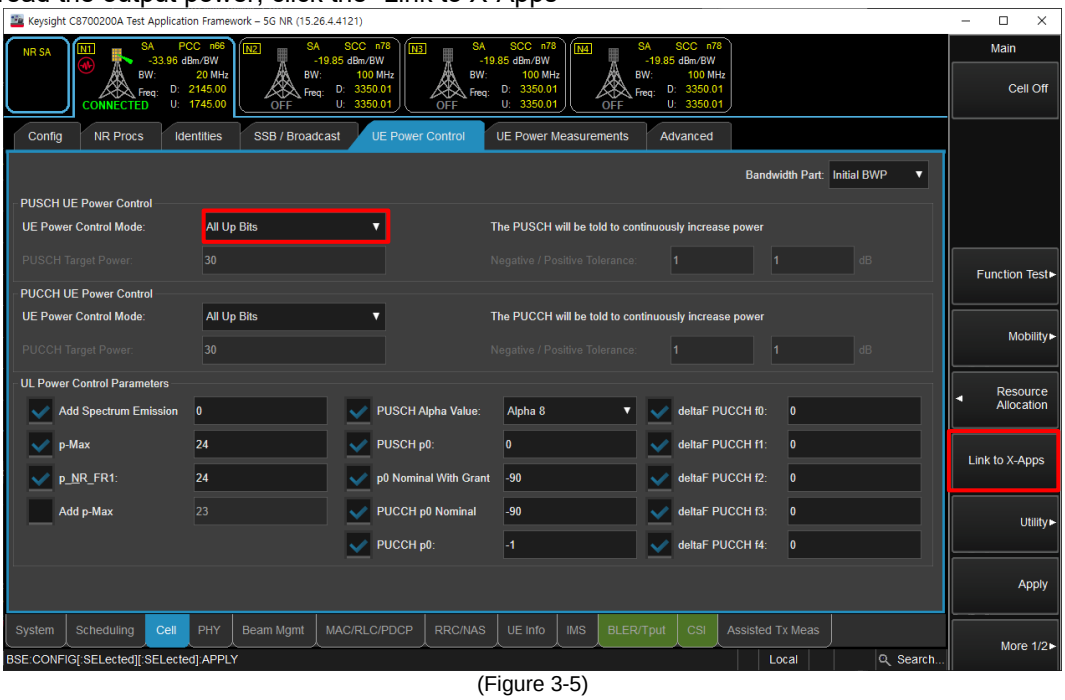
(Figure 3-3)

- 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 n2 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)								
					RSI = 0, 4			RSI = 3			RSI = 1, 2		
					Measured Pwr (dBm) 376000 1880 MHz	MPR	Tune-up Limit	Measured Pwr (dBm) 376000 1880 MHz	MPR	Tune-up Limit	Measured Pwr (dBm) 376000 1880 MHz	MPR	Tune-up Limit
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.31	0.0	25.0	21.99	0.0	23.0	22.12	0.0	23.0
			1	108	24.17	0.0	25.0	22.05	0.0	23.0	22.12	0.0	23.0
			1	214	24.22	0.0	25.0	21.88	0.0	23.0	21.97	0.0	23.0
			108	0	23.42	0.5	24.5	22.12	0.0	23.0	22.18	0.0	23.0
			108	54	24.31	0.0	25.0	22.08	0.0	23.0	22.14	0.0	23.0
			108	108	23.42	0.5	24.5	22.02	0.0	23.0	22.10	0.0	23.0
			216	0	23.21	0.5	24.5	21.95	0.0	23.0	22.03	0.0	23.0
		QPSK	1	1	24.36	0.0	25.0	22.15	0.0	23.0	22.17	0.0	23.0
			1	108	24.23	0.0	25.0	22.12	0.0	23.0	22.15	0.0	23.0
			1	214	24.26	0.0	25.0	21.95	0.0	23.0	22.00	0.0	23.0
			108	0	23.24	1.0	24.0	22.13	0.0	23.0	22.19	0.0	23.0
			108	54	24.30	0.0	25.0	22.14	0.0	23.0	22.20	0.0	23.0
			108	108	23.33	1.0	24.0	22.04	0.0	23.0	22.11	0.0	23.0
			216	0	23.26	1.0	24.0	21.94	0.0	23.0	22.08	0.0	23.0
		16QAM	1	1	23.72	1.0	24.0	22.09	0.0	23.0	22.18	0.0	23.0
			1	108	23.25	1.0	24.0	22.18	0.0	23.0	22.20	0.0	23.0
			1	214	23.16	1.0	24.0	21.97	0.0	23.0	22.06	0.0	23.0
		64QAM	1	1	21.96	2.5	22.5	21.65	0.5	22.5	21.75	0.5	22.5
		256QAM	1	1	19.96	4.5	20.5	19.46	2.5	20.5	19.63	2.5	20.5
	CP-OFDM	QPSK	1	1	22.00	1.5	23.5	22.07	0.0	23.0	22.11	0.0	23.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm) 376000 1880 MHz	MPR	Tune-up Limit	Measured Pwr (dBm) 376000 1880 MHz	MPR	Tune-up Limit	Measured Pwr (dBm) 376000 1880 MHz	MPR	Tune-up Limit
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.31	0.0	25.0	22.08	0.0	23.0	22.11	0.0	23.0
			1	80	24.25	0.0	25.0	22.06	0.0	23.0	22.10	0.0	23.0
			1	158	24.30	0.0	25.0	22.01	0.0	23.0	22.01	0.0	23.0
			80	0	23.32	0.5	24.5	22.18	0.0	23.0	22.20	0.0	23.0
			80	40	24.28	0.0	25.0	22.10	0.0	23.0	22.13	0.0	23.0
			80	80	23.29	0.5	24.5	22.04	0.0	23.0	22.07	0.0	23.0
			160	0	23.16	0.5	24.5	22.02	0.0	23.0	22.05	0.0	23.0
		QPSK	1	1	24.12	0.0	25.0	22.09	0.0	23.0	22.13	0.0	23.0
			1	80	24.20	0.0	25.0	22.14	0.0	23.0	22.17	0.0	23.0
			1	158	24.30	0.0	25.0	22.04	0.0	23.0	22.09	0.0	23.0
			80	0	23.32	1.0	24.0	22.18	0.0	23.0	22.22	0.0	23.0
			80	40	24.22	0.0	25.0	22.10	0.0	23.0	22.14	0.0	23.0
			80	80	23.27	1.0	24.0	22.06	0.0	23.0	22.08	0.0	23.0
			160	0	23.30	1.0	24.0	22.04	0.0	23.0	22.07	0.0	23.0
		16QAM	1	1	23.22	1.0	24.0	22.10	0.0	23.0	22.16	0.0	23.0
		64QAM	1	1	21.79	2.5	22.5	21.67	0.5	22.5	21.66	0.5	22.5
		256QAM	1	1	19.70	4.5	20.5	19.64	2.5	20.5	19.74	2.5	20.5
	CP-OFDM	QPSK	1	1	21.70	1.5	23.5	22.17	0.0	23.0	22.19	0.0	23.0

NR Band n2 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
						376000					376000					376000			
						1880 MHz					1880 MHz					1880 MHz			
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.22		0.0	25.0		22.10		0.0	23.0		22.12		0.0	23.0
			1	67		24.24		0.0	25.0		21.97		0.0	23.0		21.99		0.0	23.0
			1	131		24.34		0.0	25.0		22.00		0.0	23.0		22.05		0.0	23.0
			64	0		23.40		0.5	24.5		22.19		0.0	23.0		22.22		0.0	23.0
			64	35		24.33		0.0	25.0		22.11		0.0	23.0		22.14		0.0	23.0
			64	69		23.37		0.5	24.5		22.04		0.0	23.0		22.08		0.0	23.0
			128	0		23.19		0.5	24.5		22.02		0.0	23.0		22.08		0.0	23.0
		QPSK	1	1		24.37		0.0	25.0		22.08		0.0	23.0		22.02		0.0	23.0
			1	67		24.16		0.0	25.0		22.00		0.0	23.0		22.06		0.0	23.0
			1	131		24.31		0.0	25.0		22.03		0.0	23.0		22.04		0.0	23.0
			64	0		23.36		1.0	24.0		22.20		0.0	23.0		22.23		0.0	23.0
			64	35		24.26		0.0	25.0		22.09		0.0	23.0		22.15		0.0	23.0
			64	69		23.27		1.0	24.0		22.05		0.0	23.0		22.08		0.0	23.0
			128	0		23.31		1.0	24.0		22.06		0.0	23.0		22.09		0.0	23.0
		16QAM	1	1		23.34		1.0	24.0		22.10		0.0	23.0		22.23		0.0	23.0
		64QAM	1	1		22.23		2.5	22.5		21.66		0.5	22.5		21.61		0.5	22.5
		256QAM	1	1		19.82		4.5	20.5		19.51		2.5	20.5		19.58		2.5	20.5
	CP-OFDM	QPSK	1	1		21.29		1.5	23.5		22.15		0.0	23.0		22.18		0.0	23.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					372000	376000	380000			372000	376000	380000			372000	376000	380000		
					1860 MHz	1880 MHz	1900 MHz			1860 MHz	1880 MHz	1900 MHz			1860 MHz	1880 MHz	1900 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.10	24.24	24.19	0.0	25.0	22.14	22.07	22.03	0.0	23.0	22.33	22.17	22.05	0.0	23.0
			1	53	24.26	24.09	24.09	0.0	25.0	21.98	22.07	22.13	0.0	23.0	22.31	22.13	22.12	0.0	23.0
			1	104	24.23	24.10	24.11	0.0	25.0	22.00	21.97	22.04	0.0	23.0	22.23	22.07	22.07	0.0	23.0
			50	0	23.42	23.74	23.75	0.5	24.5	22.38	22.17	22.10	0.0	23.0	22.41	22.23	22.15	0.0	23.0
			50	28	24.35	24.21	24.18	0.0	25.0	22.33	22.10	22.15	0.0	23.0	22.31	22.15	22.18	0.0	23.0
			50	56	23.31	23.67	23.66	0.5	24.5	22.35	22.04	22.13	0.0	23.0	22.29	22.10	22.15	0.0	23.0
			100	0	23.36	23.71	23.72	0.5	24.5	22.29	22.01	22.07	0.0	23.0	22.30	22.12	22.09	0.0	23.0
		QPSK	1	1	24.12	24.08	24.11	0.0	25.0	22.10	22.14	22.07	0.0	23.0	22.35	22.22	22.11	0.0	23.0
			1	53	24.28	24.05	24.08	0.0	25.0	22.00	22.19	22.19	0.0	23.0	22.33	22.20	22.22	0.0	23.0
			1	104	24.27	24.06	24.15	0.0	25.0	22.03	22.02	22.07	0.0	23.0	22.25	22.10	22.11	0.0	23.0
			50	0	23.44	23.22	23.20	1.0	24.0	22.12	22.19	22.13	0.0	23.0	22.41	22.24	22.17	0.0	23.0
			50	28	24.37	24.14	24.15	0.0	25.0	22.13	22.12	22.16	0.0	23.0	22.32	22.15	22.20	0.0	23.0
			50	56	23.32	23.13	23.22	1.0	24.0	22.05	22.05	22.14	0.0	23.0	22.29	22.10	22.15	0.0	23.0
			100	0	23.38	23.17	23.18	1.0	24.0	22.13	22.05	22.12	0.0	23.0	22.31	22.14	22.13	0.0	23.0
		16QAM	1	1	23.36	23.21	23.32	1.0	24.0	22.12	22.10	22.16	0.0	23.0	22.41	22.27	22.12	0.0	23.0
			1	53	23.27	23.14	23.22	1.0	24.0	22.16	22.07	22.17	0.0	23.0	22.37	22.07	22.28	0.0	23.0
			1	104	23.23	23.13	23.32	1.0	24.0	22.11	22.04	22.17	0.0	23.0	22.29	22.00	22.08	0.0	23.0
		64QAM	1	1	21.80	21.80	21.68	2.5	22.5	21.56	21.60	21.62	0.5	22.5	21.87	21.69	21.61	0.5	22.5
		256QAM	1	1	19.78	19.66	19.62	4.5	20.5	19.58	19.57	19.56	2.5	20.5	19.83	19.79	19.42	2.5	20.5
	CP-OFDM	QPSK	1	1	22.84	22.72	22.64	1.5	23.5	22.19	22.23	22.15	0.0	23.0	22.40	22.28	22.14	0.0	23.0

NR Band n2 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
					387500	392000	396500			387500	392000	396500			387500	392000	396500		
					1857.5 MHz	1880 MHz	1902.5 MHz			1857.5 MHz	1880 MHz	1902.5 MHz			1857.5 MHz	1880 MHz	1902.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.20	24.13	23.90	0.0	25.0	22.29	22.14	22.03	0.0	23.0	22.28	22.12	22.02	0.0	23.0
			1	40	24.20	24.00	23.85	0.0	25.0	22.24	21.98	21.98	0.0	23.0	22.26	21.95	21.98	0.0	23.0
			1	77	24.19	24.09	23.97	0.0	25.0	22.15	22.02	22.00	0.0	23.0	22.19	21.86	22.04	0.0	23.0
			36	0	23.39	23.69	23.01	0.5	24.5	22.38	22.14	22.07	0.0	23.0	22.40	22.12	22.07	0.0	23.0
			36	22	24.36	24.16	24.00	0.0	25.0	22.33	22.10	22.11	0.0	23.0	22.36	22.09	22.11	0.0	23.0
			36	43	23.33	23.65	23.06	0.5	24.5	22.25	22.08	22.11	0.0	23.0	22.31	22.05	22.09	0.0	23.0
			75	0	23.40	23.68	23.03	0.5	24.5	22.26	22.05	22.03	0.0	23.0	22.29	22.16	22.04	0.0	23.0
		QPSK	1	1	24.14	24.13	24.05	0.0	25.0	22.35	22.16	22.05	0.0	23.0	22.34	22.10	22.05	0.0	23.0
			1	40	24.29	24.01	23.95	0.0	25.0	22.24	22.02	22.03	0.0	23.0	22.30	22.00	22.04	0.0	23.0
			1	77	24.26	24.10	24.03	0.0	25.0	22.19	22.03	22.08	0.0	23.0	22.21	22.00	22.06	0.0	23.0
			36	0	23.48	23.20	23.06	1.0	24.0	22.39	22.16	22.09	0.0	23.0	22.43	22.15	22.09	0.0	23.0
			36	22	24.43	24.14	24.05	0.0	25.0	22.35	22.13	22.10	0.0	23.0	22.37	22.11	22.11	0.0	23.0
			36	43	23.39	23.15	23.12	1.0	24.0	22.28	22.08	22.12	0.0	23.0	22.31	22.06	22.12	0.0	23.0
			75	0	23.44	23.18	23.08	1.0	24.0	22.29	22.08	22.07	0.0	23.0	22.32	21.97	22.08	0.0	23.0
		16QAM	1	1	23.30	23.17	23.05	1.0	24.0	22.38	22.14	22.12	0.0	23.0	22.33	22.15	22.09	0.0	23.0
		64QAM	1	1	21.96	21.71	21.77	2.5	22.5	21.94	21.81	21.48	0.5	22.5	21.92	21.71	21.64	0.5	22.5
		256QAM	1	1	19.80	19.55	19.56	4.5	20.5	19.83	19.63	19.61	2.5	20.5	19.81	19.61	19.58	2.5	20.5
	CP-OFDM	QPSK	1	1	22.92	22.61	22.51	1.5	23.5	22.41	22.23	22.10	0.0	23.0	22.39	22.19	22.06	0.0	23.0

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
					387000	392000	397000			387000	392000	397000			387000	392000	397000		
					1855 MHz	1880 MHz	1905 MHz			1855 MHz	1880 MHz	1905 MHz			1855 MHz	1880 MHz	1905 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.29	23.01	24.03	0.0	25.0	22.27	22.14	22.10	0.0	23.0	22.30	22.16	22.16	0.0	23.0
			1	26	24.28	24.02	24.06	0.0	25.0	22.32	22.09	22.18	0.0	23.0	22.37	22.11	22.19	0.0	23.0
			1	50	24.28	23.97	24.11	0.0	25.0	22.21	21.98	22.05	0.0	23.0	22.26	22.03	22.15	0.0	23.0
			25	0	23.35	23.60	23.13	0.5	24.5	22.39	22.14	22.15	0.0	23.0	22.41	22.16	22.20	0.0	23.0
			25	14	24.35	24.14	24.12	0.0	25.0	22.38	22.10	22.16	0.0	23.0	22.42	22.14	22.20	0.0	23.0
			25	27	23.35	23.67	23.14	0.5	24.5	22.35	22.11	22.15	0.0	23.0	22.39	22.10	22.21	0.0	23.0
			50	0	23.36	23.69	23.15	0.5	24.5	22.29	22.05	22.05	0.0	23.0	22.35	22.07	22.15	0.0	23.0
		QPSK	1	1	24.29	24.22	24.07	0.0	25.0	22.31	22.17	22.15	0.0	23.0	22.36	22.16	22.17	0.0	23.0
			1	26	24.33	24.10	24.11	0.0	25.0	22.42	22.11	22.18	0.0	23.0	22.42	22.09	22.24	0.0	23.0
			1	50	24.32	24.15	24.13	0.0	25.0	22.25	22.03	22.11	0.0	23.0	22.30	22.02	22.15	0.0	23.0
			25	0	23.37	23.20	23.15	1.0	24.0	22.40	22.14	22.17	0.0	23.0	22.44	22.15	22.21	0.0	23.0
			25	14	24.36	23.96	24.14	0.0	25.0	22.39	22.11	22.18	0.0	23.0	22.42	22.14	22.22	0.0	23.0
			25	27	23.36	22.98	23.17	1.0	24.0	22.37	22.10	22.16	0.0	23.0	22.38	22.11	22.22	0.0	23.0
			50	0	23.36	23.01	23.17	1.0	24.0	22.34	22.08	22.12	0.0	23.0	22.38	22.09	22.16	0.0	23.0
		16QAM	1	1	23.42	22.99	23.17	1.0	24.0	22.28	22.07	22.13	0.0	23.0	22.44	22.16	22.21	0.0	23.0
		64QAM	1	1	21.86	21.66	21.63	2.5	22.5	21.87	21.74	21.67	0.5	22.5	21.91	21.72	21.73	0.5	22.5
		256QAM	1	1	19.73	19.53	19.55	4.5	20.5	19.81	19.61	19.66	2.5	20.5	19.95	19.72	19.74	2.5	20.5
	CP-OFDM	QPSK	1	1	22.84	22.71	22.51	1.5	23.5	22.41	22.26	22.22	0.0	23.0	22.42	22.25	22.24	0.0	23.0

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
					386500	392000	397500			386500	392000	397500			386500	392000	397500		
					1852.5 MHz	1880 MHz	1907.5 MHz			1852.5 MHz	1880 MHz	1907.5 MHz			1852.5 MHz	1880 MHz	1907.5 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.86	23.94	23.98	0.0	25.0	22.27	22.10	22.14	0.0	23.0	22.29	22.12	22.16	0.0	23.0
			1	13	23.93	23.87	23.90	0.0	25.0	22.23	22.03	22.05	0.0	23.0	22.30	22.01	22.06	0.0	23.0
			1	23	24.06	23.93	24.00	0.0	25.0	22.30	22.01	22.11	0.0	23.0	22.34	22.02	22.09	0.0	23.0
			12	0	23.11	23.67	23.51	0.5	24.5	22.30	22.11	22.16	0.0	23.0	22.34	22.15	22.20	0.0	23.0
			12	7	24.10	24.18	24.20	0.0	25.0	22.34	22.11	22.16	0.0	23.0	22.38	22.14	22.18	0.0	23.0
			12	13	23.19	23.65	23.68	0.5	24.5	22.34	22.08	22.14	0.0	23.0	22.39	22.11	22.17	0.0	23.0
			25	0	23.17	23.63	22.97	0.5	24.5	22.28	22.04	22.13	0.0	23.0	22.34	22.07	22.10	0.0	23.0
		QPSK	1	1	24.12	23.93	24.04	0.0	25.0	22.28	22.10	22.14	0.0	23.0	22.33	22.15	22.17	0.0	23.0
			1	13	24.09	23.88	23.96	0.0	25.0	22.25	22.03	22.10	0.0	23.0	22.28	22.08	22.12	0.0	23.0
			1	23	24.22	23.97	24.06	0.0	25.0	22.34	22.05	22.11	0.0	23.0	22.37	22.07	22.15	0.0	23.0
			12	0	23.21	23.00	23.10	1.0	24.0	22.33	22.13	22.18	0.0	23.0	22.36	22.17	22.21	0.0	23.0
			12	7	24.19	23.98	24.05	0.0	25.0	22.34	22.11	22.15	0.0	23.0	22.39	22.16	22.19	0.0	23.0
			12	13	23.25	23.00	23.07	1.0	24.0	22.35	22.08	22.15	0.0	23.0	22.38	22.13	22.20	0.0	23.0
			25	0	23.23	23.01	23.08	1.0	24.0	22.32	22.08	22.15	0.0	23.0	22.36	22.11	22.15	0.0	23.0
		16QAM	1	1	23.25	23.00	23.19	1.0	24.0	22.38	22.12	22.16	0.0	23.0	22.40	22.16	22.24	0.0	23.0
		64QAM	1	1	21.67	21.52	21.70	2.5	22.5	21.81	21.70	21.77	0.5	22.5	21.74	21.68	21.71	0.5	22.5
		256QAM	1	1	19.56	19.27	19.52	4.5	20.5	19.68	19.63	19.63	2.5	20.5	19.84	19.63	19.64	2.5	20.5
	CP-OFDM	QPSK	1	1	22.59	22.48	22.59	1.5	23.5	22.32	22.12	22.20	0.0	23.0	22.42	22.15	22.23	0.0	23.0

NR Band n5 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)		
					RSI = 0, 1, 2, 3, 4		
					Measured Pwr (dBm)	MPR	Tune-up Limit
					167300		
					836.5 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.13	0.0	25.5
			1	53	24.25	0.0	25.5
			1	104	24.11	0.0	25.5
			50	0	23.27	0.5	25.0
			50	28	24.28	0.0	25.5
			50	56	23.26	0.5	25.0
			100	0	23.29	0.5	25.0
		QPSK	1	1	24.20	0.0	25.5
			1	53	24.37	0.0	25.5
			1	104	24.17	0.0	25.5
			50	0	23.31	1.0	24.5
			50	28	24.32	0.0	25.5
			50	56	23.29	1.0	24.5
			100	0	23.32	1.0	24.5
		16QAM	1	1	23.24	1.0	24.5
			1	53	23.39	1.0	24.5
			1	104	23.18	1.0	24.5
		64QAM	1	1	21.74	2.5	23.0
		256QAM	1	1	19.75	4.5	21.0
	CP-OFDM	QPSK	1	1	22.78	1.5	24.0
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	24.20	0.0	25.5
			1	40	24.17	0.0	25.5
			1	77	24.18	0.0	25.5
			36	0	23.31	0.5	25.0
			36	22	24.30	0.0	25.5
			36	43	23.32	0.5	25.0
			75	0	23.32	0.5	25.0
		QPSK	1	1	24.29	0.0	25.5
			1	40	24.23	0.0	25.5
			1	77	24.23	0.0	25.5
			36	0	23.37	1.0	24.5
			36	22	24.27	0.0	25.5
			36	43	23.34	1.0	24.5
			75	0	23.35	1.0	24.5
		16QAM	1	1	23.39	1.0	24.5
		64QAM	1	1	21.91	2.5	23.0
		256QAM	1	1	19.70	4.5	21.0
	CP-OFDM	QPSK	1	1	22.82	1.5	24.0

NR Band n5 Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
						167300			
						836.5 MHz			
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.29		0.0	25.5
			1	26		24.33		0.0	25.5
			1	50		24.30		0.0	25.5
			25	0		23.38		0.5	25.0
			25	14		24.36		0.0	25.5
			25	27		23.38		0.5	25.0
			50	0		23.37		0.5	25.0
		QPSK	1	1		24.35		0.0	25.5
			1	26		24.35		0.0	25.5
			1	50		24.34		0.0	25.5
			25	0		23.40		1.0	24.5
			25	14		24.38		0.0	25.5
			25	27		23.38		1.0	24.5
			50	0		23.39		1.0	24.5
		16QAM	1	1		23.40		1.0	24.5
		64QAM	1	1		21.84		2.5	23.0
		256QAM	1	1		19.75		4.5	21.0
	CP-OFDM	QPSK	1	1		22.87		1.5	24.0

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	24.18	24.36	24.18	0.0	25.5
			1	13	24.12	24.23	24.10	0.0	25.5
			1	23	24.25	24.31	24.24	0.0	25.5
			12	0	23.23	23.36	23.26	0.5	25.0
			12	7	24.25	24.35	24.20	0.0	25.5
			12	13	23.29	23.36	23.25	0.5	25.0
			25	0	23.29	23.37	22.53	0.5	25.0
		QPSK	1	1	24.26	24.39	24.24	0.0	25.5
			1	13	24.21	24.28	24.19	0.0	25.5
			1	23	24.33	24.37	24.21	0.0	25.5
			12	0	23.28	23.39	23.29	1.0	24.5
			12	7	24.29	24.37	24.27	0.0	25.5
			12	13	23.33	23.39	23.24	1.0	24.5
			25	0	23.33	23.40	23.29	1.0	24.5
		16QAM	1	1	23.36	23.47	23.26	1.0	24.5
		64QAM	1	1	21.75	21.83	21.85	2.5	23.0
		256QAM	1	1	19.74	19.73	19.71	4.5	21.0
	CP-OFDM	QPSK	1	1	22.83	22.94	22.76	1.5	24.0

NR Band n66 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)								
					RSI = 0, 4			RSI = 3			RSI = 1, 2		
					Measured Pwr (dBm)	MPR	Tune-up Limit	Measured Pwr (dBm)	MPR	Tune-up Limit	Measured Pwr (dBm)	MPR	Tune-up Limit
					349000			349000			349000		
					1745 MHz			1745 MHz			1745 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.59	0.0	25.0	21.43	0.0	23.0	21.43	0.0	23.0
			1	108	24.13	0.0	25.0	21.91	0.0	23.0	21.96	0.0	23.0
			1	214	24.24	0.0	25.0	22.02	0.0	23.0	22.03	0.0	23.0
			108	0	22.92	0.5	24.5	21.71	0.0	23.0	21.73	0.0	23.0
			108	54	24.18	0.0	25.0	21.98	0.0	23.0	22.00	0.0	23.0
			108	108	23.37	0.5	24.5	21.95	0.0	23.0	21.96	0.0	23.0
			216	0	23.16	0.5	24.5	22.16	0.0	23.0	22.17	0.0	23.0
		QPSK	1	1	23.61	0.0	25.0	21.47	0.0	23.0	21.48	0.0	23.0
			1	108	24.15	0.0	25.0	22.03	0.0	23.0	22.03	0.0	23.0
			1	214	24.28	0.0	25.0	22.04	0.0	23.0	22.04	0.0	23.0
			108	0	22.94	1.0	24.0	21.75	0.0	23.0	21.76	0.0	23.0
			108	54	24.17	0.0	25.0	22.20	0.0	23.0	22.18	0.0	23.0
			108	108	23.37	1.0	24.0	22.18	0.0	23.0	22.16	0.0	23.0
			216	0	23.17	1.0	24.0	21.99	0.0	23.0	22.00	0.0	23.0
		16QAM	1	1	22.63	1.0	24.0	21.53	0.0	23.0	21.64	0.0	23.0
			1	108	23.19	1.0	24.0	22.04	0.0	23.0	22.10	0.0	23.0
			1	214	23.29	1.0	24.0	22.17	0.0	23.0	22.12	0.0	23.0
		64QAM	1	1	21.21	2.5	22.5	20.92	0.5	22.5	20.98	0.5	22.5
		256QAM	1	1	19.06	4.5	20.5	19.10	2.5	20.5	19.07	2.5	20.5
	CP-OFDM	QPSK	1	1	22.18	1.5	23.5	21.51	0.0	23.0	21.50	0.0	23.0
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
					349000			349000			349000		
					1745 MHz			1745 MHz			1745 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.71	0.0	25.0	21.71	0.0	23.0	21.54	0.0	23.0
			1	80	24.15	0.0	25.0	22.09	0.0	23.0	21.99	0.0	23.0
			1	158	24.36	0.0	25.0	22.27	0.0	23.0	22.10	0.0	23.0
			80	0	23.04	0.5	24.5	21.96	0.0	23.0	21.81	0.0	23.0
			80	40	24.20	0.0	25.0	22.16	0.0	23.0	22.00	0.0	23.0
			80	80	23.35	0.5	24.5	22.13	0.0	23.0	21.98	0.0	23.0
			160	0	23.20	0.5	24.5	22.27	0.0	23.0	22.12	0.0	23.0
		QPSK	1	1	23.75	0.0	25.0	21.73	0.0	23.0	21.59	0.0	23.0
			1	80	24.19	0.0	25.0	22.13	0.0	23.0	22.00	0.0	23.0
			1	158	24.38	0.0	25.0	22.30	0.0	23.0	22.11	0.0	23.0
			80	0	23.05	1.0	24.0	21.97	0.0	23.0	21.85	0.0	23.0
			80	40	24.23	0.0	25.0	22.16	0.0	23.0	22.03	0.0	23.0
			80	80	23.36	1.0	24.0	22.27	0.0	23.0	22.15	0.0	23.0
			160	0	23.22	1.0	24.0	22.14	0.0	23.0	22.02	0.0	23.0
		16QAM	1	1	22.81	1.0	24.0	21.76	0.0	23.0	21.65	0.0	23.0
		64QAM	1	1	21.24	2.5	22.5	21.07	0.5	22.5	21.17	0.5	22.5
		256QAM	1	1	19.18	4.5	20.5	19.19	2.5	20.5	19.21	2.5	20.5
	CP-OFDM	QPSK	1	1	22.27	1.5	23.5	21.71	0.0	23.0	21.68	0.0	23.0

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	Measured Pwr (dBm)			MPR	Tune-up Limit
						349000					349000					349000			
						1745 MHz					1745 MHz					1745 MHz			
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1		23.79		0.0	25.0		21.50		0.0	23.0		21.64		0.0	23.0
			1	67		24.09		0.0	25.0		21.79		0.0	23.0		21.91		0.0	23.0
			1	131		24.37		0.0	25.0		22.06		0.0	23.0		22.16		0.0	23.0
			64	0		23.09		0.5	24.5		21.80		0.0	23.0		21.89		0.0	23.0
			64	35		24.22		0.0	25.0		21.95		0.0	23.0		22.03		0.0	23.0
			64	69		23.37		0.5	24.5		21.94		0.0	23.0		22.02		0.0	23.0
			128	0		23.21		0.5	24.5		22.07		0.0	23.0		22.15		0.0	23.0
		QPSK	1	1		23.85		0.0	25.0		21.61		0.0	23.0		21.67		0.0	23.0
			1	67		24.13		0.0	25.0		21.87		0.0	23.0		21.95		0.0	23.0
			1	131		24.40		0.0	25.0		22.14		0.0	23.0		22.19		0.0	23.0
			64	0		23.09		1.0	24.0		21.87		0.0	23.0		21.92		0.0	23.0
			64	35		24.24		0.0	25.0		21.99		0.0	23.0		22.05		0.0	23.0
			64	69		23.36		1.0	24.0		22.09		0.0	23.0		22.18		0.0	23.0
			128	0		23.21		1.0	24.0		21.99		0.0	23.0		22.04		0.0	23.0
		16QAM	1	1		22.78		1.0	24.0		21.67		0.0	23.0		21.75		0.0	23.0
		64QAM	1	1		21.35		2.5	22.5		21.11		0.5	22.5		21.16		0.5	22.5
		256QAM	1	1		19.32		4.5	20.5		19.06		2.5	20.5		19.27		2.5	20.5
	CP-OFDM	QPSK	1	1		22.39		1.5	23.5		21.72		0.0	23.0		21.72		0.0	23.0

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
					344000	349000	354000			344000	349000	354000			344000	349000	354000		
					1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.47	23.49	23.47	0.0	25.0	21.86	21.70	22.26	0.0	23.0	21.87	21.75	22.14	0.0	23.0
			1	53	23.80	23.82	23.81	0.0	25.0	21.65	21.95	22.19	0.0	23.0	21.68	21.98	22.11	0.0	23.0
			1	104	23.87	23.89	23.90	0.0	25.0	21.56	22.13	22.15	0.0	23.0	21.55	22.18	22.01	0.0	23.0
			50	0	23.19	23.20	23.21	0.5	24.5	21.86	21.92	22.26	0.0	23.0	21.88	21.95	22.15	0.0	23.0
			50	28	23.77	23.78	23.81	0.0	25.0	21.73	22.01	22.24	0.0	23.0	21.76	22.03	22.11	0.0	23.0
			50	56	23.40	23.37	23.41	0.5	24.5	21.76	22.00	22.23	0.0	23.0	21.77	22.04	22.13	0.0	23.0
			100	0	23.30	23.29	23.32	0.5	24.5	21.60	22.11	22.16	0.0	23.0	21.61	22.14	22.06	0.0	23.0
		QPSK	1	1	23.63	23.61	23.58	0.0	25.0	21.85	21.79	22.28	0.0	23.0	21.91	21.81	22.12	0.0	23.0
			1	53	23.87	23.87	23.79	0.0	25.0	21.74	21.95	22.21	0.0	23.0	21.77	21.99	22.07	0.0	23.0
			1	104	24.01	24.00	23.96	0.0	25.0	21.54	22.09	22.13	0.0	23.0	21.55	22.14	22.00	0.0	23.0
			50	0	22.76	22.75	22.79	1.0	24.0	21.90	21.95	22.25	0.0	23.0	21.91	21.98	22.17	0.0	23.0
			50	28	23.83	23.82	23.86	0.0	25.0	21.76	22.03	22.22	0.0	23.0	21.79	22.06	22.16	0.0	23.0
			50	56	22.94	22.94	22.94	1.0	24.0	21.63	22.15	22.15	0.0	23.0	21.64	22.17	22.08	0.0	23.0
			100	0	22.85	22.79	22.85	1.0	24.0	21.79	22.02	22.24	0.0	23.0	21.81	22.06	22.17	0.0	23.0
		16QAM	1	1	22.62	22.62	22.65	1.0	24.0	21.94	21.85	22.30	0.0	23.0	22.02	21.86	22.24	0.0	23.0
			1	53	22.88	22.86	22.91	1.0	24.0	21.78	22.08	22.20	0.0	23.0	21.60	22.01	22.20	0.0	23.0
			1	104	23.02	22.97	23.02	1.0	24.0	21.64	22.23	22.07	0.0	23.0	21.48	22.19	22.10	0.0	23.0
		64QAM	1	1	21.25	21.09	21.10	2.5	22.5	21.41	21.34	21.86	0.5	22.5	21.46	21.21	21.82	0.5	22.5
		256QAM	1	1	18.98	18.99	19.05	4.5	20.5	19.42	19.24	19.77	2.5	20.5	19.37	19.28	19.67	2.5	20.5
	CP-OFDM	QPSK	1	1	21.91	22.06	22.14	1.5	23.5	21.99	21.90	22.31	0.0	23.0	21.94	21.83	22.27	0.0	23.0

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	Measured Pwr (dBm)			MPR	Tune-up Limit
					343500	349000	354500			343500	349000	354500			343500	349000	354500		
					1717.5 MHz	1745 MHz	1772.5 MHz			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	23.72	22.81	22.85	0.0	25.0	21.98	21.75	22.07	0.0	23.0	21.85	22.08	21.89	0.0	23.0
			1	40	23.55	23.73	23.79	0.0	25.0	21.78	21.86	21.91	0.0	23.0	21.67	21.90	21.86	0.0	23.0
			1	77	23.45	23.95	23.83	0.0	25.0	21.67	22.07	22.02	0.0	23.0	21.55	21.97	21.75	0.0	23.0
			36	0	23.28	23.25	23.31	0.5	24.5	21.96	21.92	22.11	0.0	23.0	21.90	22.09	21.94	0.0	23.0
			36	22	23.66	23.87	23.92	0.0	25.0	21.88	22.01	22.05	0.0	23.0	21.82	22.03	21.91	0.0	23.0
			36	43	23.06	23.46	23.50	0.5	24.5	21.89	22.02	22.07	0.0	23.0	21.83	22.05	21.91	0.0	23.0
			75	0	23.19	23.15	23.43	0.5	24.5	21.79	22.07	22.08	0.0	23.0	21.72	22.05	21.87	0.0	23.0
		QPSK	1	1	23.72	23.63	23.88	0.0	25.0	22.04	21.82	22.10	0.0	23.0	21.93	22.09	21.97	0.0	23.0
			1	40	23.57	23.75	23.80	0.0	25.0	21.83	21.89	21.95	0.0	23.0	21.75	21.94	21.92	0.0	23.0
			1	77	23.41	23.94	23.85	0.0	25.0	21.68	22.08	22.00	0.0	23.0	21.64	21.98	21.78	0.0	23.0
			36	0	22.81	22.78	22.92	1.0	24.0	21.99	21.98	22.16	0.0	23.0	21.94	22.14	21.97	0.0	23.0
			36	22	23.68	23.83	23.87	0.0	25.0	21.90	22.04	22.09	0.0	23.0	21.85	22.07	21.93	0.0	23.0
			36	43	22.58	22.91	22.86	1.0	24.0	21.81	22.11	22.09	0.0	23.0	21.76	22.08	21.88	0.0	23.0
			75	0	22.69	22.85	22.91	1.0	24.0	21.94	22.04	22.09	0.0	23.0	21.87	22.09	21.96	0.0	23.0
		16QAM	1	1	22.72	22.64	22.90	1.0	24.0	21.94	21.82	22.30	0.0	23.0	21.97	22.15	21.93	0.0	23.0
		64QAM	1	1	21.27	21.24	21.54	2.5	22.5	21.49	21.32	21.72	0.5	22.5	21.52	21.51	21.50	0.5	22.5
		256QAM	1	1	19.25	19.05	19.30	4.5	20.5	19.63	19.45	19.70	2.5	20.5	19.39	19.64	19.58	2.5	20.5
	CP-OFDM	QPSK	1	1	22.22	22.15	22.38	1.5	23.5	22.06	21.83	22.12	0.0	23.0	21.92	22.17	22.01	0.0	23.0

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
					343000	349000	355000			343000	349000	355000			343000	349000	355000		
					1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.40	23.53	23.64	0.0	25.0	21.88	21.88	22.12	0.0	23.0	21.93	22.08	21.87	0.0	23.0
			1	26	23.45	23.58	23.67	0.0	25.0	21.82	21.96	22.04	0.0	23.0	21.96	22.04	21.77	0.0	23.0
			1	50	23.31	23.71	23.64	0.0	25.0	21.77	22.09	22.08	0.0	23.0	22.09	22.03	21.85	0.0	23.0
			25	0	23.01	23.10	23.20	0.5	24.5	21.95	21.97	22.11	0.0	23.0	21.96	22.08	21.90	0.0	23.0
			25	14	23.47	23.63	23.66	0.0	25.0	21.91	22.02	22.09	0.0	23.0	22.01	22.07	21.90	0.0	23.0
			25	27	22.93	23.17	23.17	0.5	24.5	21.93	22.03	22.10	0.0	23.0	22.01	22.08	21.91	0.0	23.0
			50	0	23.00	23.15	23.20	0.5	24.5	21.86	22.07	22.11	0.0	23.0	22.04	22.10	21.89	0.0	23.0
		QPSK	1	1	23.51	23.51	23.70	0.0	25.0	21.97	21.95	22.19	0.0	23.0	21.95	22.14	21.93	0.0	23.0
			1	26	23.45	23.56	23.68	0.0	25.0	21.88	22.00	22.06	0.0	23.0	22.03	22.05	21.82	0.0	23.0
			1	50	23.34	23.66	23.63	0.0	25.0	21.77	22.10	22.06	0.0	23.0	22.09	22.08	21.83	0.0	23.0
			25	0	22.58	22.63	22.74	1.0	24.0	21.99	22.01	22.13	0.0	23.0	21.98	22.12	21.92	0.0	23.0
			25	14	23.52	23.64	23.70	0.0	25.0	21.94	22.03	22.13	0.0	23.0	22.03	22.11	21.91	0.0	23.0
			25	27	22.47	22.69	22.71	1.0	24.0	21.89	22.08	22.14	0.0	23.0	22.06	22.12	21.91	0.0	23.0
			50	0	22.54	22.63	22.71	1.0	24.0	21.96	22.04	22.13	0.0	23.0	22.03	22.11	21.93	0.0	23.0
		16QAM	1	1	22.55	22.58	22.75	1.0	24.0	21.99	21.97	22.24	0.0	23.0	21.94	22.15	22.01	0.0	23.0
		64QAM	1	1	21.05	21.12	21.25	2.5	22.5	21.52	21.54	21.73	0.5	22.5	21.62	21.68	21.41	0.5	22.5
		256QAM	1	1	18.98	18.99	19.23	4.5	20.5	19.53	19.45	19.54	2.5	20.5	19.40	19.77	19.41	2.5	20.5
	CP-OFDM	QPSK	1	1	22.08	21.97	22.20	1.5	23.5	22.02	21.99	22.20	0.0	23.0	21.92	22.15	21.95	0.0	23.0

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
					342500	349000	355500			342500	349000	355500			342500	349000	355500		
					1712.5 MHz	1745 MHz	1777.5 MHz			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	23.65	23.56	23.73	0.0	25.0	21.88	21.94	21.96	0.0	23.0	21.89	21.93	22.06	0.0	23.0
			1	13	23.64	23.56	23.70	0.0	25.0	21.79	21.90	21.86	0.0	23.0	21.63	21.84	21.98	0.0	23.0
			1	23	23.69	23.72	23.79	0.0	25.0	21.86	22.03	21.96	0.0	23.0	21.69	21.97	22.10	0.0	23.0
			12	0	23.36	23.22	23.32	0.5	24.5	21.89	21.99	22.01	0.0	23.0	21.90	21.95	22.10	0.0	23.0
			12	7	23.84	23.75	23.81	0.0	25.0	21.89	22.01	22.02	0.0	23.0	21.73	21.97	22.10	0.0	23.0
			12	13	23.33	23.29	23.35	0.5	24.5	21.90	22.02	22.02	0.0	23.0	21.98	21.98	22.11	0.0	23.0
			25	0	23.34	23.30	23.34	0.5	24.5	21.88	22.04	22.03	0.0	23.0	22.01	22.01	22.10	0.0	23.0
		QPSK	1	1	23.81	23.77	23.79	0.0	25.0	21.93	22.00	22.05	0.0	23.0	22.20	21.95	22.11	0.0	23.0
			1	13	23.75	23.72	23.71	0.0	25.0	21.86	21.96	21.97	0.0	23.0	22.14	21.91	22.01	0.0	23.0
			1	23	23.62	23.83	23.80	0.0	25.0	21.89	22.07	22.04	0.0	23.0	22.05	22.01	22.09	0.0	23.0
			12	0	22.67	22.80	22.88	1.0	24.0	21.93	22.01	22.06	0.0	23.0	22.27	21.98	22.11	0.0	23.0
			12	7	23.66	23.79	23.85	0.0	25.0	21.92	22.03	22.06	0.0	23.0	22.22	22.01	22.12	0.0	23.0
			12	13	22.70	22.83	22.87	1.0	24.0	21.90	22.04	22.05	0.0	23.0	22.10	22.03	22.12	0.0	23.0
			25	0	22.71	22.82	22.87	1.0	24.0	21.93	22.03	22.07	0.0	23.0	22.20	22.01	22.12	0.0	23.0
		16QAM	1	1	22.80	22.78	22.89	1.0	24.0	21.92	21.99	22.06	0.0	23.0	22.05	22.05	22.14	0.0	23.0
		64QAM	1	1	21.24	21.36	21.31	2.5	22.5	21.41	21.53	21.57	0.5	22.5	21.47	21.47	21.58	0.5	22.5
		256QAM	1	1	19.25	19.29	19.25	4.5	20.5	19.30	19.40	19.55	2.5	20.5	19.46	19.46	19.63	2.5	20.5
	CP-OFDM	QPSK	1	1	22.17	22.22	22.31	1.5	23.5	21.96	22.04	22.07	0.0	23.0	22.05	22.05	22.14	0.0	23.0

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)											
					RSI = 0, 1, 2, 3						RSI = 4					
					Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
					638000	641666		645332			638000	641666		645332		
					3570 MHz	3624.99 MHz		3679.98 MHz			3570 MHz	3624.99 MHz		3679.98 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.10	14.07		13.73	0.0	15.0	12.99	12.98		12.77	0.0	14.0
			1	53	14.18	14.55		14.11	0.0	15.0	13.08	13.42		13.18	0.0	14.0
			1	104	13.89	14.36		13.95	0.0	15.0	12.82	13.22		12.95	0.0	14.0
			50	0	14.10	14.35		13.95	0.0	15.0	13.05	13.21		12.96	0.0	14.0
			50	28	14.12	14.56		14.09	0.0	15.0	12.96	13.35		13.10	0.0	14.0
			50	56	14.04	14.51		14.05	0.0	15.0	13.02	13.36		13.02	0.0	14.0
			100	0	14.11	14.46		14.09	0.0	15.0	13.00	13.32		13.06	0.0	14.0
		QPSK	1	1	14.09	14.07		13.75	0.0	15.0	13.01	12.95		12.75	0.0	14.0
			1	53	14.10	14.45		14.08	0.0	15.0	12.82	13.34		13.07	0.0	14.0
			1	104	13.90	14.34		13.95	0.0	15.0	13.02	13.21		12.91	0.0	14.0
			50	0	14.12	14.33		13.98	0.0	15.0	13.04	13.23		12.95	0.0	14.0
			50	28	14.11	14.49		14.13	0.0	15.0	12.95	13.36		13.08	0.0	14.0
			50	56	14.01	14.49		14.06	0.0	15.0	13.03	13.33		13.01	0.0	14.0
			100	0	14.10	14.47		14.12	0.0	15.0	13.06	13.31		13.06	0.0	14.0
		16QAM	1	1	14.13	14.09		13.81	0.0	15.0	13.06	13.01		12.82	0.0	14.0
		64QAM	1	1	14.10	14.09		13.79	0.0	15.0	12.99	12.94		12.73	0.0	14.0
		256QAM	1	1	12.56	12.55		12.25	1.0	14.0	13.00	12.95		12.74	0.0	14.0
	CP-OFDM	QPSK	1	1	14.05	14.02		13.78	0.0	15.0	12.97	12.93		12.70	0.0	14.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
					637334	640222	643112	646000			637334	640222	643112	646000		
					3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz			3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.05	14.52	14.16	13.87	0.0	15.0	13.35	13.15	12.73	12.87	0.0	14.0
			1	26	14.06	14.54	14.08	13.83	0.0	15.0	13.27	13.15	12.73	12.83	0.0	14.0
			1	49	14.06	14.44	14.10	13.95	0.0	15.0	13.18	13.08	12.75	12.93	0.0	14.0
			25	0	14.11	14.52	14.14	13.88	0.0	15.0	13.18	13.20	12.80	12.80	0.0	14.0
			25	13	14.10	14.55	14.08	13.90	0.0	15.0	13.15	13.21	12.75	12.82	0.0	14.0
			25	26	14.09	14.49	14.05	13.92	0.0	15.0	13.14	13.16	12.76	12.84	0.0	14.0
			50	0	14.10	14.56	14.08	13.91	0.0	15.0	13.14	13.23	12.78	12.82	0.0	14.0
		QPSK	1	1	14.10	14.51	14.16	13.92	0.0	15.0	13.12	13.17	12.84	12.85	0.0	14.0
			1	26	14.08	14.52	14.06	13.88	0.0	15.0	13.11	13.21	12.76	12.79	0.0	14.0
			1	49	14.05	14.46	14.08	13.98	0.0	15.0	13.09	13.10	12.77	12.89	0.0	14.0
			25	0	14.13	14.52	14.11	13.87	0.0	15.0	13.12	13.24	12.84	12.80	0.0	14.0
			25	13	14.13	14.53	14.08	13.89	0.0	15.0	13.12	13.24	12.79	12.82	0.0	14.0
			25	26	14.11	14.47	14.06	13.91	0.0	15.0	13.09	13.19	12.77	12.85	0.0	14.0
			50	0	14.12	14.55	14.08	13.90	0.0	15.0	13.10	13.27	12.80	12.82	0.0	14.0
		16QAM	1	1	14.16	14.53	14.18	13.96	0.0	15.0	13.15	13.20	12.88	12.90	0.0	14.0
		64QAM	1	1	14.14	14.42	14.08	13.87	0.0	15.0	13.12	13.20	12.79	12.85	0.0	14.0
		256QAM	1	1	12.63	12.97	12.62	12.40	1.0	14.0	13.10	13.14	12.84	12.82	0.0	14.0
	CP-OFDM	QPSK	1	1	14.07	14.44	14.07	13.87	0.0	15.0	13.06	13.17	12.77	12.78	0.0	14.0

NR Band n48(Voice/data/SRS0) 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
					637168	640166	643166	646166			637168	640166	643166	646166		
					3557.52 MHz	3602.49 MHz	3647.49 MHz	3692.49 MHz			3557.52 MHz	3602.49 MHz	3647.49 MHz	3692.49 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.23	14.53	14.19	13.95	0.0	15.0	13.30	13.26	13.14	13.24	0.0	14.0
			1	19	14.21	14.56	14.15	13.96	0.0	15.0	13.38	13.29	13.19	13.18	0.0	14.0
			1	36	14.19	14.47	14.11	13.95	0.0	15.0	13.33	13.23	13.15	13.16	0.0	14.0
			18	0	14.20	14.50	14.14	13.93	0.0	15.0	13.36	13.29	13.09	13.14	0.0	14.0
			18	10	14.19	14.52	14.14	13.93	0.0	15.0	13.33	13.25	13.11	13.22	0.0	14.0
			18	20	14.20	14.48	14.11	13.95	0.0	15.0	13.35	13.22	13.12	13.15	0.0	14.0
			36	0	14.20	14.51	14.15	13.92	0.0	15.0	13.36	13.26	13.11	13.22	0.0	14.0
		QPSK	1	1	14.21	14.48	14.15	13.95	0.0	15.0	13.37	13.32	13.12	13.21	0.0	14.0
			1	19	14.19	14.52	14.13	13.93	0.0	15.0	13.34	13.23	13.08	13.09	0.0	14.0
			1	36	14.18	14.43	14.08	13.96	0.0	15.0	13.35	13.24	13.16	13.10	0.0	14.0
			18	0	14.20	14.50	14.16	13.95	0.0	15.0	13.37	13.29	13.09	13.24	0.0	14.0
			18	10	14.18	14.52	14.14	13.92	0.0	15.0	13.38	13.27	13.11	13.21	0.0	14.0
			18	20	14.19	14.45	14.09	13.94	0.0	15.0	13.37	13.22	13.13	13.14	0.0	14.0
			36	0	14.20	14.51	14.14	13.94	0.0	15.0	13.37	13.25	13.09	13.13	0.0	14.0
		16QAM	1	1	14.29	14.54	14.26	14.01	0.0	15.0	13.41	13.31	13.14	13.19	0.0	14.0
		64QAM	1	1	14.22	14.45	14.16	13.94	0.0	15.0	13.38	13.24	13.08	13.15	0.0	14.0
		256QAM	1	1	12.70	13.02	12.70	12.51	1.0	14.0	13.35	13.30	13.11	13.13	0.0	14.0
	CP-OFDM	QPSK	1	1	14.16	14.41	14.10	13.88	0.0	15.0	13.34	13.28	13.06	13.16	0.0	14.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
					637000	640110	643222	646332			637000	640110	643222	646332		
					3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz			3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.19	14.45	14.16	13.96	0.0	15.0	13.05	13.33	12.96	12.77	0.0	14.0
			1	12	14.25	14.45	14.18	14.01	0.0	15.0	13.01	13.34	12.95	12.76	0.0	14.0
			1	22	14.21	14.39	14.13	13.97	0.0	15.0	13.00	13.30	12.94	12.74	0.0	14.0
			12	0	14.22	14.46	14.14	13.91	0.0	15.0	13.03	13.31	12.94	12.75	0.0	14.0
			12	6	14.22	14.42	14.09	13.93	0.0	15.0	13.01	13.32	12.93	12.76	0.0	14.0
			12	12	14.21	14.41	14.08	13.91	0.0	15.0	12.98	13.29	12.92	12.72	0.0	14.0
			24	0	14.21	14.45	14.11	13.92	0.0	15.0	12.99	13.31	12.93	12.73	0.0	14.0
		QPSK	1	1	14.26	14.49	14.12	13.96	0.0	15.0	13.04	13.27	12.94	12.76	0.0	14.0
			1	12	14.21	14.42	14.10	13.91	0.0	15.0	12.97	13.32	12.91	12.73	0.0	14.0
			1	22	14.23	14.40	14.09	13.97	0.0	15.0	12.97	13.26	12.89	12.72	0.0	14.0
			12	0	14.23	14.44	14.10	13.93	0.0	15.0	13.03	13.32	12.92	12.75	0.0	14.0
			12	6	14.23	14.41	14.09	13.92	0.0	15.0	12.99	13.33	12.92	12.74	0.0	14.0
			12	12	14.23	14.40	14.08	13.95	0.0	15.0	13.00	13.28	12.92	12.72	0.0	14.0
			24	0	14.20	14.45	14.08	13.93	0.0	15.0	13.01	13.32	12.93	12.72	0.0	14.0
		16QAM	1	1	14.23	14.51	14.15	13.95	0.0	15.0	13.06	13.28	12.95	12.77	0.0	14.0
		64QAM	1	1	14.19	14.48	14.10	13.94	0.0	15.0	13.04	13.27	12.91	12.73	0.0	14.0
		256QAM	1	1	12.69	12.98	12.59	12.42	1.0	14.0	12.95	13.24	12.88	12.67	0.0	14.0
	CP-OFDM	QPSK	1	1	14.15	14.45	14.08	13.89	0.0	15.0	12.98	13.21	12.93	12.72	0.0	14.0

NR Band n48(SRS1) Measured Results

BW (MHz)	Modulation	Mode	Maximum Allowed Average Power (dBm)									
			RSI = 0 , 1, 2, 3					RSI = 4				
			Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			638000	641666		645332		638000	641666		645332	
			3570 MHz	3624.99 MHz		3679.98 MHz		3570 MHz	3624.99 MHz		3679.98 MHz	
40 MHz	DFT-s-OFDM	SRS CW	14.40	15.26		14.93	15.5	13.39	14.29		13.95	14.5
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637334	640222	643112	646000		637334	640222	643112	646000	
			3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz		3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz	
20 MHz	DFT-s-OFDM	SRS CW	14.37	14.62	14.62	14.55	15.5	13.34	13.61	13.70	13.71	14.5
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637168	640166	643166	646166		637168	640166	643166	646166	
			3557.52 MHz	3602.49 MHz	3647.49 MHz	3692.49 MHz		3557.52 MHz	3602.49 MHz	3647.49 MHz	3692.49 MHz	
15 MHz	DFT-s-OFDM	SRS CW	14.31	14.09	14.55	14.54	15.5	13.33	13.70	13.69	13.08	14.5
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637000	640110	643222	646332		637000	640110	643222	646332	
			3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz		3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz	
10 MHz	DFT-s-OFDM	SRS CW	14.50	13.92	14.55	14.46	15.5	13.49	13.59	13.72	12.90	14.5

NR Band n48(SRS2) Measured Results

BW (MHz)	Modulation	Mode	Maximum Allowed Average Power (dBm)									
			RSI = 0, 1, 2, 3					RSI = 4				
			Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			638000	641666		645332		638000	641666		645332	
			3570 MHz	3624.99 MHz		3679.98 MHz		3570 MHz	3624.99 MHz		3679.98 MHz	
40 MHz	DFT-s-OFDM	SRS CW	13.90	14.42		14.09	15.0	12.69	13.16		12.85	14.0
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637334	640222	643112	646000		637334	640222	643112	646000	
			3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz		3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz	
20 MHz	DFT-s-OFDM	SRS CW	13.87	14.28	13.87	13.60	15.0	12.64	13.10	12.75	12.48	14.0
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637168	640166	643166	646166		637168	640166	643166	646166	
			3557.52 MHz	3602.49 MHz	3647.49 MHz	3692.49 MHz		3557.52 MHz	3602.49 MHz	3647.49 MHz	3692.49 MHz	
15 MHz	DFT-s-OFDM	SRS CW	13.96	14.23	13.93	13.68	15.0	12.88	13.11	12.83	12.57	14.0
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637000	640110	643222	646332		637000	640110	643222	646332	
			3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz		3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz	
10 MHz	DFT-s-OFDM	SRS CW	13.98	14.02	13.93	13.65	15.0	12.81	12.79	12.72	12.56	14.0

NR Band n48(SRS3) Measured Results

BW (MHz)	Modulation	Mode	Maximum Allowed Average Power (dBm)									
			RSI = 0, 1, 2, 3					RSI = 4				
			Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			638000	641666		645332		638000	641666		645332	
			3570 MHz	3624.99 MHz		3679.98 MHz		3570 MHz	3624.99 MHz		3679.98 MHz	
40 MHz	DFT-s-OFDM	SRS CW	13.18	13.70		13.11	15.0	12.18	12.72		12.07	13.0
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637334	640222	643112	646000		637334	640222	643112	646000	
			3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz		3560.01 MHz	3603.33 MHz	3646.68 MHz	3690 MHz	
20 MHz	DFT-s-OFDM	SRS CW	13.41	13.89	13.11	13.02	15.0	12.28	12.81	12.02	11.94	13.0
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637168	640166	643166	646166		637168	640166	643166	646166	
			3557.52 MHz	3602.49 MHz	3647.49 MHz	3692.49 MHz		3557.52 MHz	3602.49 MHz	3647.49 MHz	3692.49 MHz	
15 MHz	DFT-s-OFDM	SRS CW	13.34	13.75	13.08	13.01	15.0	12.28	12.79	12.02	11.93	13.0
BW (MHz)	Modulation	Mode	Measured Pwr (dBm)				Tune-up Limit	Measured Pwr (dBm)				Tune-up Limit
			637000	640110	643222	646332		637000	640110	643222	646332	
			3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz		3555 MHz	3601.65 MHz	3648.33 MHz	3694.98 MHz	
10 MHz	DFT-s-OFDM	SRS CW	13.52	13.58	13.10	13.02	15.0	12.41	12.57	12.02	11.94	13.0

Notes:

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

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm) RSI = 0, 1, 2, 3, 4 Measured Pwr (dBm) 633334 3500.01 MHz	MPR	Tune-up Limit
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.52	0.0	16.0
			1	137	14.89	0.0	16.0
			1	271	14.83	0.0	16.0
			135	0	14.68	0.0	16.0
			135	69	14.86	0.0	16.0
			135	138	15.09	0.0	16.0
			270	0	14.83	0.0	16.0
		QPSK	1	1	14.58	0.0	16.0
			1	137	14.91	0.0	16.0
			1	271	14.87	0.0	16.0
			135	0	14.68	0.0	16.0
			135	69	14.88	0.0	16.0
			135	138	15.11	0.0	16.0
			270	0	14.83	0.0	16.0
		16QAM	1	1	14.60	0.0	16.0
			1	137	14.94	0.0	16.0
			1	271	14.91	0.0	16.0
		64QAM	1	1	14.52	0.0	16.0
		256QAM	1	1	14.55	0.0	16.0
	CP-OFDM	QPSK	1	1	14.55	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm) 633334 3500.01 MHz	MPR	Tune-up Limit
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.54	0.0	16.0
			1	123	14.86	0.0	16.0
			1	243	14.89	0.0	16.0
			120	0	14.68	0.0	16.0
			120	63	14.91	0.0	16.0
			120	125	15.14	0.0	16.0
			243	0	14.89	0.0	16.0
		QPSK	1	1	14.64	0.0	16.0
			1	123	14.96	0.0	16.0
			1	243	14.94	0.0	16.0
			120	0	14.74	0.0	16.0
			120	63	14.98	0.0	16.0
			120	125	15.19	0.0	16.0
			243	0	14.93	0.0	16.0
		16QAM	1	1	14.71	0.0	16.0
		64QAM	1	1	14.69	0.0	16.0
		256QAM	1	1	14.68	0.0	16.0
	CP-OFDM	QPSK	1	1	14.65	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm) 633334 3500.01 MHz	MPR	Tune-up Limit
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.74	0.0	16.0
			1	109	15.02	0.0	16.0
			1	215	14.83	0.0	16.0
			108	0	14.84	0.0	16.0
			108	55	14.99	0.0	16.0
			108	109	15.23	0.0	16.0
			216	0	14.94	0.0	16.0
		QPSK	1	1	14.76	0.0	16.0
			1	109	15.00	0.0	16.0
			1	215	15.18	0.0	16.0
			108	0	14.83	0.0	16.0
			108	55	14.99	0.0	16.0
			108	109	15.25	0.0	16.0
			216	0	14.93	0.0	16.0
		16QAM	1	1	14.80	0.0	16.0
		64QAM	1	1	14.75	0.0	16.0
		256QAM	1	1	14.77	0.0	16.0
	CP-OFDM	QPSK	1	1	14.72	0.0	16.0

Notes:

NR Band n77 were measured output power through FTM mode provided by manufacturer.

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)	MPR	Tune-up Limit
					633334		
					3500.01 MHz		
70 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.88	0.0	16.0
			1	95	15.05	0.0	16.0
			1	188	15.39	0.0	16.0
			90	0	14.96	0.0	16.0
			90	50	15.01	0.0	16.0
			90	99	15.28	0.0	16.0
			180	0	14.98	0.0	16.0
		QPSK	1	1	14.88	0.0	16.0
			1	95	15.05	0.0	16.0
			1	188	15.37	0.0	16.0
			90	0	14.95	0.0	16.0
			90	50	15.01	0.0	16.0
			90	99	15.29	0.0	16.0
			180	0	14.98	0.0	16.0
		16QAM	1	1	14.88	0.0	16.0
		64QAM	1	1	14.86	0.0	16.0
		256QAM	1	1	14.85	0.0	16.0
	CP-OFDM	QPSK	1	1	14.81	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)	MPR	Tune-up Limit
					633334		
					3500.01 MHz		
60 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.90	0.0	16.0
			1	81	15.03	0.0	16.0
			1	160	15.37	0.0	16.0
			81	0	14.96	0.0	16.0
			81	41	14.98	0.0	16.0
			81	81	15.19	0.0	16.0
			162	0	14.98	0.0	16.0
		QPSK	1	1	14.88	0.0	16.0
			1	81	15.00	0.0	16.0
			1	160	15.36	0.0	16.0
			81	0	14.96	0.0	16.0
			81	41	14.99	0.0	16.0
			81	81	15.19	0.0	16.0
			162	0	14.98	0.0	16.0
		16QAM	1	1	14.89	0.0	16.0
		64QAM	1	1	14.89	0.0	16.0
		256QAM	1	1	14.90	0.0	16.0
	CP-OFDM	QPSK	1	1	14.84	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)		MPR	Tune-up Limit
					631668	635000		
					3475.02 MHz	3525 MHz		
50 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.89	14.94	0.0	16.0
			1	67	14.95	15.24	0.0	16.0
			1	131	15.05	15.48	0.0	16.0
			64	0	14.80	14.98	0.0	16.0
			64	35	14.92	15.22	0.0	16.0
			64	69	15.05	15.44	0.0	16.0
			128	0	14.94	15.21	0.0	16.0
		QPSK	1	1	14.86	14.90	0.0	16.0
			1	67	14.94	15.23	0.0	16.0
			1	131	15.04	15.48	0.0	16.0
			64	0	14.79	14.99	0.0	16.0
			64	35	14.95	15.24	0.0	16.0
			64	69	15.04	15.44	0.0	16.0
			128	0	14.92	15.19	0.0	16.0
		16QAM	1	1	14.87	14.93	0.0	16.0
		64QAM	1	1	14.84	14.89	0.0	16.0
		256QAM	1	1	14.83	14.92	0.0	16.0
	CP-OFDM	QPSK	1	1	14.82	14.87	0.0	16.0

Notes:

NR Band n77 were measured output power through FTM mode provided by manufacturer.

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					631334	[redacted]	635332		
					3470.01 MHz		3529.98 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.89		15.33	0.0	16.0
			1	53	15.12		15.54	0.0	16.0
			1	104	15.00		15.18	0.0	16.0
			50	0	14.99		15.42	0.0	16.0
			50	28	15.05		15.48	0.0	16.0
			50	56	14.99		15.32	0.0	16.0
			100	0	15.03		15.45	0.0	16.0
		QPSK	1	1	14.93		15.33	0.0	16.0
			1	53	15.02		15.42	0.0	16.0
			1	104	14.99		15.15	0.0	16.0
			50	0	15.00		15.42	0.0	16.0
			50	28	15.07		15.45	0.0	16.0
			50	56	14.99		15.33	0.0	16.0
			100	0	15.04		15.45	0.0	16.0
		16QAM	1	1	14.96		15.35	0.0	16.0
		64QAM	1	1	14.90		15.32	0.0	16.0
		256QAM	1	1	14.90		15.32	0.0	16.0
	CP-OFDM	QPSK	1	1	14.85		15.26	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					631000	633334	635666		
					3465 MHz	3500.01 MHz	3534.99 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.73	14.79	15.16	0.0	16.0
			1	39	14.87	14.94	15.26	0.0	16.0
			1	76	14.88	15.14	15.07	0.0	16.0
			36	0	14.74	15.14	15.21	0.0	16.0
			36	21	14.82	14.90	15.17	0.0	16.0
			36	42	14.86	15.02	15.16	0.0	16.0
			75	0	14.82	14.88	15.23	0.0	16.0
		QPSK	1	1	14.69	14.76	15.14	0.0	16.0
			1	39	14.84	14.92	15.24	0.0	16.0
			1	76	14.85	15.12	15.06	0.0	16.0
			36	0	14.73	14.80	15.19	0.0	16.0
			36	21	14.82	14.90	15.17	0.0	16.0
			36	42	14.85	15.01	15.16	0.0	16.0
			75	0	14.80	14.88	15.23	0.0	16.0
		16QAM	1	1	14.67	14.79	15.18	0.0	16.0
		64QAM	1	1	14.66	14.77	15.12	0.0	16.0
		256QAM	1	1	14.65	14.73	15.11	0.0	16.0
	CP-OFDM	QPSK	1	1	14.65	14.70	15.08	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					630866	633334	635800		
					3462.99 MHz	3500.01 MHz	3537 MHz		
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.53	14.72	15.15	0.0	16.0
			1	32	14.75	14.96	15.17	0.0	16.0
			1	63	14.77	15.12	15.00	0.0	16.0
			32	0	14.76	14.90	15.23	0.0	16.0
			32	17	14.82	15.02	15.17	0.0	16.0
			32	33	14.83	15.13	15.06	0.0	16.0
			64	0	14.81	15.04	15.16	0.0	16.0
		QPSK	1	1	14.65	14.76	15.14	0.0	16.0
			1	32	14.77	14.96	15.12	0.0	16.0
			1	63	14.82	15.16	14.93	0.0	16.0
			32	0	14.77	14.88	15.20	0.0	16.0
			32	17	14.82	14.99	15.12	0.0	16.0
			32	33	14.83	15.07	15.03	0.0	16.0
			64	0	14.83	14.98	15.13	0.0	16.0
		16QAM	1	1	14.68	14.83	15.14	0.0	16.0
		64QAM	1	1	14.70	14.82	15.12	0.0	16.0
		256QAM	1	1	14.72	14.88	15.19	0.0	16.0
	CP-OFDM	QPSK	1	1	14.73	14.83	15.14	0.0	16.0

Notes:

NR Band n77 were measured output power through FTM mode provided by manufacturer.

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					630668	633334	636000		
					3460.02 MHz	3500.01 MHz	3540 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.56	14.65	15.12	0.0	16.0
			1	26	14.73	14.93	15.11	0.0	16.0
			1	49	14.81	15.07	14.99	0.0	16.0
			25	0	14.74	14.86	15.17	0.0	16.0
			25	13	14.78	14.94	15.15	0.0	16.0
			25	26	14.80	15.01	15.05	0.0	16.0
			50	0	14.79	14.96	15.14	0.0	16.0
		QPSK	1	1	14.62	14.64	15.07	0.0	16.0
			1	26	14.74	14.86	15.06	0.0	16.0
			1	49	14.77	15.02	14.94	0.0	16.0
			25	0	14.72	14.85	15.13	0.0	16.0
			25	13	14.75	14.90	15.10	0.0	16.0
			25	26	14.80	14.99	15.03	0.0	16.0
			50	0	14.78	14.92	15.11	0.0	16.0
		16QAM	1	1	14.61	14.70	15.13	0.0	16.0
		64QAM	1	1	14.65	14.76	15.13	0.0	16.0
		256QAM	1	1	14.69	14.74	15.16	0.0	16.0
	CP-OFDM	QPSK	1	1	14.68	14.79	15.19	0.0	16.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					630500	633334	636166		
					3457.5 MHz	3500.01 MHz	3542.49 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.52	14.62	14.98	0.0	16.0
			1	19	14.76	14.86	15.02	0.0	16.0
			1	36	14.72	14.92	14.88	0.0	16.0
			18	0	14.67	14.78	15.04	0.0	16.0
			18	10	14.71	14.83	14.97	0.0	16.0
			18	20	14.74	14.91	14.93	0.0	16.0
			36	0	14.70	14.86	15.01	0.0	16.0
		QPSK	1	1	14.60	14.74	15.07	0.0	16.0
			1	19	14.69	14.87	14.99	0.0	16.0
			1	36	14.71	14.93	14.87	0.0	16.0
			18	0	14.68	14.81	15.04	0.0	16.0
			18	10	14.71	14.86	15.00	0.0	16.0
			18	20	14.74	14.91	14.93	0.0	16.0
			36	0	14.69	14.87	14.99	0.0	16.0
		16QAM	1	1	14.65	14.74	15.05	0.0	16.0
		64QAM	1	1	14.58	14.71	15.04	0.0	16.0
		256QAM	1	1	14.70	14.83	15.05	0.0	16.0
	CP-OFDM	QPSK	1	1	14.61	14.74	15.02	0.0	16.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					630334	633334	636332		
					3455.01 MHz	3500.01 MHz	3544.98 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.54	14.76	14.91	0.0	16.0
			1	12	14.68	14.92	15.00	0.0	16.0
			1	22	14.70	14.96	14.92	0.0	16.0
			12	0	14.62	14.87	15.01	0.0	16.0
			12	6	14.67	14.92	14.99	0.0	16.0
			12	12	14.69	14.95	14.94	0.0	16.0
			24	0	14.66	14.91	15.01	0.0	16.0
		QPSK	1	1	14.65	14.84	15.07	0.0	16.0
			1	12	14.71	14.87	14.99	0.0	16.0
			1	22	14.70	14.96	14.97	0.0	16.0
			12	0	14.66	14.90	15.04	0.0	16.0
			12	6	14.68	14.91	15.01	0.0	16.0
			12	12	14.70	14.95	14.99	0.0	16.0
			24	0	14.69	14.91	15.00	0.0	16.0
		16QAM	1	1	14.55	14.87	15.09	0.0	16.0
		64QAM	1	1	14.60	14.76	15.06	0.0	16.0
		256QAM	1	1	14.67	14.79	15.01	0.0	16.0
	CP-OFDM	QPSK	1	1	14.61	14.80	15.02	0.0	16.0

Notes:

NR Band n77 were measured output power through FTM mode provided by manufacturer.

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

BW (MHz)	Mode	SRS1 - Maximum Allowed Average Power (dBm)				SRS2 - Maximum Allowed Average Power (dBm)				SRS3 - Maximum Allowed Average Power (dBm)			
		RSI = 0, 1, 2, 3, 4				RSI = 0, 1, 2, 3, 4				RSI = 0, 1, 2, 3, 4			
		Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
			633334				633334				633334		
			3500.01 MHz				3500.01 MHz				3500.01 MHz		
100 MHz	SRS CW		13.15		14.0		15.06		15.5		13.82		15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		633000	633334	633666		633000	633334	633666		633000	633334	633666	
		3495 MHz	3500.01 MHz	3504.99 MHz		3495 MHz	3500.01 MHz	3504.99 MHz		3495 MHz	3500.01 MHz	3504.99 MHz	
90 MHz	SRS CW		13.09		14.0		15.13		15.5		13.87		15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		632668	633334	634000		632668	633334	634000		632668	633334	634000	
		3490.02 MHz	3500.01 MHz	3510 MHz		3490.02 MHz	3500.01 MHz	3510 MHz		3490.02 MHz	3500.01 MHz	3510 MHz	
80 MHz	SRS CW		13.12		14.0		15.16		15.5		13.91		15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		632334	633334	634332		632334	633334	634332		632334	633334	634332	
		3485.01 MHz	3500.01 MHz	3514.98 MHz		3485.01 MHz	3500.01 MHz	3514.98 MHz		3485.01 MHz	3500.01 MHz	3514.98 MHz	
70 MHz	SRS CW		13.11		14.0		15.14		15.5		13.89		15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		632000	633334	634666		632000	633334	634666		632000	633334	634666	
		3480 MHz	3500.01 MHz	3519.99 MHz		3480 MHz	3500.01 MHz	3519.99 MHz		3480 MHz	3500.01 MHz	3519.99 MHz	
60 MHz	SRS CW		13.14		14.0		15.21		15.5		13.93		15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		631668	633334	635000		631668	633334	635000		631668	633334	635000	
		3475.02 MHz	3500.01 MHz	3525 MHz		3475.02 MHz	3500.01 MHz	3525 MHz		3475.02 MHz	3500.01 MHz	3525 MHz	
50 MHz	SRS CW	12.45		13.19	14.0	14.84		15.33	15.5	13.78		13.83	15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		631334	633334	635332		631334	633334	635332		631334	633334	635332	
		3470.01 MHz	3500.01 MHz	3529.98 MHz		3470.01 MHz	3500.01 MHz	3529.98 MHz		3470.01 MHz	3500.01 MHz	3529.98 MHz	
40 MHz	SRS CW	12.44		13.31	14.0	14.77		15.33	15.5	13.91		13.92	15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		631000	633334	635666		631000	633334	635666		631000	633334	635666	
		3465 MHz	3500.01 MHz	3534.99 MHz		3465 MHz	3500.01 MHz	3534.99 MHz		3465 MHz	3500.01 MHz	3534.99 MHz	
30 MHz	SRS CW	12.43	13.12	13.45	14.0	14.74	15.27	15.33	15.5	14.09	13.99	13.89	15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		630866	633334	635800		630866	633334	635800		630866	633334	635800	
		3462.99 MHz	3500.01 MHz	3537 MHz		3462.99 MHz	3500.01 MHz	3537 MHz		3462.99 MHz	3500.01 MHz	3537 MHz	
25 MHz	SRS CW	12.31	13.02	13.34	14.0	14.77	15.11	15.20	15.5	14.05	13.99	13.95	15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		630668	633334	636000		630668	633334	636000		630668	633334	636000	
		3460.02 MHz	3500.01 MHz	3540 MHz		3460.02 MHz	3500.01 MHz	3540 MHz		3460.02 MHz	3500.01 MHz	3540 MHz	
20 MHz	SRS CW	12.52	13.11	13.48	14.0	14.79	15.30	15.30	15.5	14.13	13.98	13.75	15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		630500	633334	636166		630500	633334	636166		630500	633334	636166	
		3457.5 MHz	3500.01 MHz	3542.49 MHz		3457.5 MHz	3500.01 MHz	3542.49 MHz		3457.5 MHz	3500.01 MHz	3542.49 MHz	
15 MHz	SRS CW	12.61	13.15	13.57	14.0	14.72	15.26	15.25	15.5	14.11	14.01	13.74	15.5
BW (MHz)	Mode	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit	Measured Pwr (dBm)			Tune-up Limit
		630334	633334	636332		630334	633334	636332		630334	633334	636332	
		3455.01 MHz	3500.01 MHz	3544.98 MHz		3455.01 MHz	3500.01 MHz	3544.98 MHz		3455.01 MHz	3500.01 MHz	3544.98 MHz	
10 MHz	SRS CW	12.51	13.22	13.51	14.0	14.75	15.31	15.15	15.5	14.15	14.02	13.75	15.5

Notes:

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

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)						MPR	Tune-up Limit
					RSI = 0, 1, 2, 3, 4							
					Measured Pwr (dBm)							
					650000		656000		662000			
					3750 MHz		3840 MHz		3930 MHz			
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.79				14.81		0.0	16.0
			1	137	14.44				15.14		0.0	16.0
			1	271	14.45				14.99		0.0	16.0
			135	0	14.70				14.94		0.0	16.0
			135	69	14.43				15.13		0.0	16.0
			135	138	14.41				15.11		0.0	16.0
			270	0	14.39				15.08		0.0	16.0
		QPSK	1	1	14.86				14.86		0.0	16.0
			1	137	14.48				15.11		0.0	16.0
			1	271	14.51				14.95		0.0	16.0
			135	0	14.73				14.89		0.0	16.0
			135	69	14.46				15.09		0.0	16.0
			135	138	14.42				15.05		0.0	16.0
			270	0	14.42				15.08		0.0	16.0
		16QAM	1	1	14.90				14.86		0.0	16.0
			1	137	14.51				15.16		0.0	16.0
			1	271	14.55				14.99		0.0	16.0
		64QAM	1	1	14.84				14.81		0.0	16.0
		256QAM	1	1	14.83				14.84		0.0	16.0
	CP-OFDM	QPSK	1	1	14.86				14.85		0.0	16.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					649668		656000		662332			
					3745.02 MHz		3840 MHz		3934.98 MHz			
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.84		14.33		14.92		0.0	16.0
			1	123	14.60		14.70		15.26		0.0	16.0
			1	243	14.49		14.81		15.07		0.0	16.0
			120	0	14.92		14.69		15.08		0.0	16.0
			120	63	14.66		14.79		15.25		0.0	16.0
			120	125	14.53		14.86		15.19		0.0	16.0
			243	0	14.55		14.76		15.20		0.0	16.0
		QPSK	1	1	14.86		14.52		14.93		0.0	16.0
			1	123	14.58		14.80		15.24		0.0	16.0
			1	243	14.56		14.88		15.03		0.0	16.0
			120	0	14.80		14.73		15.06		0.0	16.0
			120	63	14.58		14.82		15.25		0.0	16.0
			120	125	14.52		14.87		15.19		0.0	16.0
			243	0	14.60		14.79		15.21		0.0	16.0
		16QAM	1	1	14.96		14.59		14.94		0.0	16.0
		64QAM	1	1	14.88		14.50		14.88		0.0	16.0
		256QAM	1	1	14.91		14.48		14.93		0.0	16.0
	CP-OFDM	QPSK	1	1	14.89		14.48		14.88		0.0	16.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					649334		656000		662666			
					3740.01 MHz		3840 MHz		3939.99 MHz			
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1	15.02		14.70		15.08		0.0	16.0
			1	109	14.79		14.95		15.40		0.0	16.0
			1	215	14.56		14.99		15.16		0.0	16.0
			108	0	14.99		14.88		15.29		0.0	16.0
			108	55	14.79		14.93		15.39		0.0	16.0
			108	109	14.56		14.99		15.30		0.0	16.0
			216	0	14.76		14.89		15.32		0.0	16.0
		QPSK	1	1	15.02		14.64		15.08		0.0	16.0
			1	109	14.79		14.93		15.39		0.0	16.0
			1	215	14.56		14.96		15.14		0.0	16.0
			108	0	14.98		14.91		15.27		0.0	16.0
			108	55	14.79		14.92		15.37		0.0	16.0
			108	109	14.56		14.99		15.31		0.0	16.0
			216	0	14.77		14.90		15.32		0.0	16.0
		16QAM	1	1	15.08		14.71		15.11		0.0	16.0
		64QAM	1	1	14.99		14.64		15.02		0.0	16.0
		256QAM	1	1	14.96		14.59		14.99		0.0	16.0
	CP-OFDM	QPSK	1	1	14.95		14.60		15.02		0.0	16.0

Notes:

NR Band n77 were measured output power through FTM mode provided by manufacturer.

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					649000	653666			658334	663000		
					3735 MHz	3804.99 MHz			3875.01 MHz	3945 MHz		
70 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.92	14.56			14.90	15.16	0.0	16.0
			1	95	14.83	14.85			15.15	15.42	0.0	16.0
			1	188	14.55	14.86			15.15	15.18	0.0	16.0
			90	0	14.98	14.66			15.02	15.34	0.0	16.0
			90	50	14.89	14.83			15.12	15.41	0.0	16.0
			90	99	14.63	14.93			15.11	15.31	0.0	16.0
			180	0	14.88	14.78			15.09	15.35	0.0	16.0
		QPSK	1	1	15.05	14.63			14.90	15.14	0.0	16.0
			1	95	14.87	14.83			15.11	15.41	0.0	16.0
			1	188	14.58	14.88			15.13	15.15	0.0	16.0
			90	0	15.02	14.68			15.01	15.34	0.0	16.0
			90	50	14.93	14.85			15.13	15.41	0.0	16.0
			90	99	14.64	14.95			15.11	15.29	0.0	16.0
			180	0	14.91	14.79			15.09	15.36	0.0	16.0
		16QAM	1	1	15.05	14.64			14.92	15.16	0.0	16.0
		64QAM	1	1	14.99	14.59			14.84	15.11	0.0	16.0
		256QAM	1	1	15.04	14.60			14.88	15.14	0.0	16.0
	CP-OFDM	QPSK	1	1	15.03	14.56			14.82	15.09	0.0	16.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					648668	653556			658444	663332		
					3730.02 MHz	3803.34 MHz			3876.66 MHz	3949.98 MHz		
60 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.99	14.60			14.85	15.29	0.0	16.0
			1	81	14.99	14.91			15.15	15.52	0.0	16.0
			1	160	14.53	14.92			15.13	15.23	0.0	16.0
			81	0	15.00	14.71			15.06	15.40	0.0	16.0
			81	41	14.98	14.89			15.15	15.45	0.0	16.0
			81	81	14.73	14.95			15.12	15.34	0.0	16.0
			162	0	14.98	14.84			15.14	15.42	0.0	16.0
		QPSK	1	1	15.15	14.66			14.93	15.26	0.0	16.0
			1	81	15.06	14.90			15.15	15.44	0.0	16.0
			1	160	14.62	14.95			15.14	15.20	0.0	16.0
			81	0	15.11	14.74			15.07	15.41	0.0	16.0
			81	41	15.06	14.88			15.15	15.44	0.0	16.0
			81	81	14.83	14.98			15.14	15.33	0.0	16.0
			162	0	15.04	14.85			15.13	15.42	0.0	16.0
		16QAM	1	1	15.21	14.70			14.94	15.26	0.0	16.0
		64QAM	1	1	15.16	14.65			14.92	15.25	0.0	16.0
		256QAM	1	1	15.19	14.63			14.88	15.19	0.0	16.0
	CP-OFDM	QPSK	1	1	15.08	14.64			14.89	15.22	0.0	16.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					648334	652166	656000		659834	663666		
					3725.01 MHz	3782.49 MHz	3840 MHz		3897.51 MHz	3954.99 MHz		
50 MHz	DFT-s-OFDM	π/2 BPSK	1	1	14.99	14.64	14.95		15.10	15.38	0.0	16.0
			1	67	14.94	14.75	15.02		15.21	15.43	0.0	16.0
			1	131	14.62	14.84	15.07		15.32	15.24	0.0	16.0
			64	0	15.02	14.75	15.01		15.13	15.41	0.0	16.0
			64	35	15.02	14.77	15.03		15.22	15.42	0.0	16.0
			64	69	14.88	14.77	15.03		15.25	15.33	0.0	16.0
			128	0	15.02	14.72	15.01		15.20	15.40	0.0	16.0
		QPSK	1	1	15.10	14.62	14.91		15.07	15.35	0.0	16.0
			1	67	15.03	14.73	14.99		15.19	15.39	0.0	16.0
			1	131	14.67	14.82	15.04		15.29	15.22	0.0	16.0
			64	0	15.08	14.73	15.01		15.13	15.41	0.0	16.0
			64	35	15.05	14.75	15.01		15.21	15.42	0.0	16.0
			64	69	14.90	14.76	15.04		15.24	15.35	0.0	16.0
			128	0	15.06	14.72	15.00		15.19	15.41	0.0	16.0
		16QAM	1	1	15.21	14.70	14.99		15.14	15.41	0.0	16.0
		64QAM	1	1	15.20	14.64	14.93		15.07	15.34	0.0	16.0
		256QAM	1	1	15.15	14.63	14.92		15.10	15.39	0.0	16.0
	CP-OFDM	QPSK	1	1	15.07	14.55	14.88		15.01	15.30	0.0	16.0

Notes:

NR Band n77 were measured output power through FTM mode provided by manufacturer.

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					648000	651200	654400	657600	660800	664000		
					3720 MHz	3768 MHz	3816 MHz	3864 MHz	3912 MHz	3960 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	15.03	14.75	14.81	15.01	15.16	15.42	0.0	16.0
			1	53	15.06	14.83	15.10	15.23	15.37	15.48	0.0	16.0
			1	104	14.80	14.73	15.02	15.16	15.42	15.26	0.0	16.0
			50	0	15.05	14.70	14.91	15.06	15.24	15.29	0.0	16.0
			50	28	15.07	14.75	15.02	15.15	15.30	15.40	0.0	16.0
			50	56	14.99	14.74	15.03	15.16	15.38	15.35	0.0	16.0
			100	0	15.07	14.75	14.99	15.13	15.27	15.39	0.0	16.0
		QPSK	1	1	15.14	14.70	14.78	15.00	15.14	15.38	0.0	16.0
			1	53	15.09	14.73	15.01	15.11	15.28	15.37	0.0	16.0
			1	104	14.85	14.73	14.99	15.13	15.40	15.23	0.0	16.0
			50	0	15.10	14.70	14.90	15.06	15.24	15.43	0.0	16.0
			50	28	15.09	14.77	15.01	15.13	15.29	15.40	0.0	16.0
			50	56	15.02	14.75	15.03	15.16	15.37	15.34	0.0	16.0
			100	0	15.10	14.74	14.97	15.11	15.28	15.38	0.0	16.0
		16QAM	1	1	15.18	14.75	14.80	15.01	15.19	15.40	0.0	16.0
		64QAM	1	1	15.12	14.65	14.72	14.94	15.11	15.32	0.0	16.0
		256QAM	1	1	15.12	14.71	14.74	14.95	15.13	15.36	0.0	16.0
	CP-OFDM	QPSK	1	1	15.10	14.68	14.75	14.94	15.09	15.32	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					647668	651000	654334	657666	661000	664332		
					3715.02 MHz	3765 MHz	3815.01 MHz	3864.99 MHz	3915 MHz	3964.98 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	15.09	14.76	14.86	15.06	15.25	15.43	0.0	16.0
			1	39	15.10	14.83	15.08	15.23	15.41	15.46	0.0	16.0
			1	76	14.99	14.77	15.03	15.18	15.43	15.31	0.0	16.0
			36	0	15.11	14.72	14.93	15.10	15.26	15.42	0.0	16.0
			36	21	15.11	14.75	15.00	15.15	15.33	15.40	0.0	16.0
			36	42	15.07	14.76	15.04	15.18	15.38	15.35	0.0	16.0
			75	0	15.12	14.72	15.01	15.14	15.33	15.38	0.0	16.0
		QPSK	1	1	15.22	14.75	14.85	15.04	15.21	15.43	0.0	16.0
			1	39	15.13	14.75	15.02	15.13	15.32	15.38	0.0	16.0
			1	76	15.04	14.76	15.03	15.16	15.42	15.27	0.0	16.0
			36	0	15.13	14.72	14.92	15.11	15.27	15.41	0.0	16.0
			36	21	15.12	14.73	15.01	15.15	15.33	15.38	0.0	16.0
			36	42	15.09	14.75	15.04	15.16	15.37	15.33	0.0	16.0
			75	0	15.12	14.72	14.99	15.13	15.31	15.37	0.0	16.0
		16QAM	1	1	15.25	14.78	14.89	15.08	15.27	15.46	0.0	16.0
		64QAM	1	1	15.18	14.72	14.83	14.99	15.22	15.38	0.0	16.0
		256QAM	1	1	15.16	14.71	14.82	15.01	15.19	15.39	0.0	16.0
	CP-OFDM	QPSK	1	1	15.16	14.67	14.81	14.99	15.17	15.37	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					647500	650900	654300	657700	661100	664500		
					3712.5 MHz	3763.5 MHz	3814.5 MHz	3865.5 MHz	3916.5 MHz	3967.5 MHz		
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1	15.11	14.77	14.93	15.10	15.25	15.48	0.0	16.0
			1	32	15.03	14.78	15.04	15.18	15.37	15.47	0.0	16.0
			1	63	15.02	14.79	15.06	15.18	15.47	15.41	0.0	16.0
			32	0	15.14	14.74	14.97	15.14	15.30	15.47	0.0	16.0
			32	17	15.11	14.75	15.02	15.15	15.37	15.48	0.0	16.0
			32	33	15.09	14.78	15.07	15.18	15.42	15.44	0.0	16.0
			64	0	15.11	14.74	15.04	15.17	15.36	15.44	0.0	16.0
		QPSK	1	1	15.17	14.74	14.90	15.07	15.26	15.45	0.0	16.0
			1	32	15.10	14.74	15.02	15.14	15.35	15.43	0.0	16.0
			1	63	15.06	14.75	15.05	15.15	15.45	15.37	0.0	16.0
			32	0	15.15	14.73	14.99	15.12	15.30	15.46	0.0	16.0
			32	17	15.12	14.76	15.03	15.15	15.35	15.45	0.0	16.0
			32	33	15.10	14.78	15.06	15.16	15.41	15.42	0.0	16.0
			64	0	15.10	14.74	15.03	15.16	15.34	15.44	0.0	16.0
		16QAM	1	1	15.20	14.76	14.92	15.11	15.30	15.49	0.0	16.0
		64QAM	1	1	15.15	14.70	14.86	15.06	15.23	15.43	0.0	16.0
		256QAM	1	1	15.16	14.74	14.92	15.08	15.27	15.48	0.0	16.0
	CP-OFDM	QPSK	1	1	15.12	14.69	14.85	15.01	15.22	15.39	0.0	16.0

Notes:

NR Band n77 were measured output power through FTM mode provided by manufacturer.

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

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					647334	650800	654266	657734	661200	664666		
					3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	15.31	14.80	14.88	15.07	15.26	15.42	0.0	16.0
			1	26	15.25	14.76	15.01	15.15	15.34	15.40	0.0	16.0
			1	49	15.20	14.78	15.05	15.20	15.41	15.38	0.0	16.0
			25	0	15.26	14.78	14.90	15.09	15.26	15.40	0.0	16.0
			25	13	15.21	14.75	14.98	15.14	15.31	15.39	0.0	16.0
			25	26	15.19	14.76	15.01	15.16	15.36	15.37	0.0	16.0
			50	0	15.22	14.74	14.96	15.14	15.30	15.39	0.0	16.0
		QPSK	1	1	15.29	14.80	14.85	15.06	15.24	15.42	0.0	16.0
			1	26	15.23	14.78	15.00	15.15	15.34	15.40	0.0	16.0
			1	49	15.15	14.77	15.04	15.19	15.41	15.34	0.0	16.0
			25	0	15.24	14.77	14.90	15.08	15.25	15.39	0.0	16.0
			25	13	15.22	14.73	14.96	15.12	15.32	15.39	0.0	16.0
			25	26	15.16	14.74	15.00	15.16	15.35	15.38	0.0	16.0
			50	0	15.21	14.74	14.95	15.12	15.30	15.38	0.0	16.0
		16QAM	1	1	15.31	14.85	14.88	15.08	15.29	15.44	0.0	16.0
		64QAM	1	1	15.27	14.78	14.83	15.04	15.20	15.41	0.0	16.0
		256QAM	1	1	15.26	14.74	14.83	15.00	15.21	15.35	0.0	16.0
	CP-OFDM	QPSK	1	1	15.24	14.73	14.79	15.01	15.19	15.33	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					647168	650700	654234	657766	661300	664832		
					3707.52 MHz	3760.5 MHz	3813.51 MHz	3866.49 MHz	3919.5 MHz	3972.48 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	15.34	14.50	14.80	15.02	15.24	15.34	0.0	16.0
			1	19	15.29	14.55	14.91	15.09	15.34	15.35	0.0	16.0
			1	36	15.24	14.52	14.92	15.06	15.34	15.24	0.0	16.0
			18	0	15.31	14.53	14.85	15.04	15.25	15.29	0.0	16.0
			18	10	15.26	14.53	14.87	15.05	15.28	15.28	0.0	16.0
			18	20	15.24	14.55	14.89	15.06	15.32	15.26	0.0	16.0
			36	0	15.27	14.52	14.85	15.04	15.29	15.28	0.0	16.0
		QPSK	1	1	15.35	14.57	14.79	15.03	15.23	15.31	0.0	16.0
			1	19	15.27	14.54	14.87	15.07	15.29	15.28	0.0	16.0
			1	36	15.21	14.60	14.92	15.08	15.36	15.24	0.0	16.0
			18	0	15.31	14.56	14.83	15.03	15.26	15.29	0.0	16.0
			18	10	15.27	14.55	14.86	15.05	15.29	15.29	0.0	16.0
			18	20	15.27	14.58	14.89	15.07	15.33	15.26	0.0	16.0
			36	0	15.27	14.55	14.87	15.05	15.29	15.28	0.0	16.0
		16QAM	1	1	15.35	14.59	14.77	15.00	15.24	15.29	0.0	16.0
		64QAM	1	1	15.31	14.56	14.77	14.97	15.22	15.27	0.0	16.0
		256QAM	1	1	15.30	14.57	14.76	14.98	15.20	15.26	0.0	16.0
	CP-OFDM	QPSK	1	1	15.29	14.53	14.73	14.94	15.18	15.24	0.0	16.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						MPR	Tune-up Limit
					647000	650600	654200	657800	661400	665000		
					3705 MHz	3759 MHz	3813 MHz	3867 MHz	3921 MHz	3975 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	15.16	14.79	14.97	15.16	15.35	15.38	0.0	16.0
			1	12	15.29	14.81	15.08	15.23	15.47	15.40	0.0	16.0
			1	22	15.21	14.76	15.02	15.20	15.42	15.32	0.0	16.0
			12	0	15.24	14.74	14.96	15.14	15.37	15.34	0.0	16.0
			12	6	15.23	14.72	15.00	15.15	15.39	15.33	0.0	16.0
			12	12	15.20	14.73	15.01	15.16	15.41	15.32	0.0	16.0
			24	0	15.22	14.75	15.00	15.17	15.39	15.33	0.0	16.0
		QPSK	1	1	15.24	14.74	14.96	15.13	15.34	15.34	0.0	16.0
			1	12	15.22	14.74	14.98	15.14	15.36	15.32	0.0	16.0
			1	22	15.16	14.72	15.01	15.17	15.41	15.29	0.0	16.0
			12	0	15.24	14.72	14.96	15.13	15.34	15.34	0.0	16.0
			12	6	15.21	14.72	14.99	15.15	15.38	15.32	0.0	16.0
			12	12	15.19	14.73	15.03	15.18	15.40	15.33	0.0	16.0
			24	0	15.21	14.75	14.99	15.18	15.38	15.32	0.0	16.0
		16QAM	1	1	15.31	14.80	15.02	15.21	15.38	15.39	0.0	16.0
		64QAM	1	1	15.22	14.73	14.94	15.08	15.29	15.32	0.0	16.0
		256QAM	1	1	15.25	14.71	14.94	15.15	15.34	15.34	0.0	16.0
	CP-OFDM	QPSK	1	1	15.17	14.66	14.92	15.06	15.30	15.29	0.0	16.0

Notes:

NR Band n77 were measured output power through FTM mode provided by manufacturer.

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

BW (MHz)	Mode	SRS1 - Maximum Allowed Average Power (dBm)							SRS2 - Maximum Allowed Average Power (dBm)							SRS3 - Maximum Allowed Average Power (dBm)						
		RSI = 0, 1, 2, 3, 4							RSI = 0, 1, 2, 3, 4							RSI = 0, 1, 2, 3, 4						
		Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		650000		656000		662000			650000		656000		662000			650000		656000		662000		
		3750 MHz		3840 MHz		3930 MHz			3750 MHz		3840 MHz		3930 MHz			3750 MHz		3840 MHz		3930 MHz		
100 MHz	SRS CW	14.68				16.41		16.5	14.54				13.69		15.5	14.61				14.26		15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		649668		656000		662332			649668		656000		662332			649668		656000		662332		
		3745.02 MHz		3840 MHz		3934.98 MHz			3745.02 MHz		3840 MHz		3934.98 MHz			3745.02 MHz		3840 MHz		3934.98 MHz		
90 MHz	SRS CW	14.95		14.89		16.40		16.5	14.35		14.78		13.66		15.5	14.69		14.60		14.38		15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		649334		656000		662666			649334		656000		662666			649334		656000		662666		
		3740.01 MHz		3840 MHz		3939.99 MHz			3740.01 MHz		3840 MHz		3939.99 MHz			3740.01 MHz		3840 MHz		3939.99 MHz		
80 MHz	SRS CW	15.11		14.92		16.49		16.5	14.56		14.82		13.56		15.5	14.77		14.59		14.48		15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		649000	653666			658334	663000		649000	653666			658334	663000		649000	653666			658334	663000	
		3735 MHz	3804.99 MHz			3875.01 MHz	3945 MHz		3735 MHz	3804.99 MHz			3875.01 MHz	3945 MHz		3735 MHz	3804.99 MHz			3875.01 MHz	3945 MHz	
70 MHz	SRS CW	15.33	14.40			15.64	16.48	16.5	14.65	14.61			14.44	13.59	15.5	14.88	14.61			14.47	14.69	15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		648668	653556			658444	663332		648668	653556			658444	663332		648668	653556			658444	663332	
		3730.02 MHz	3803.34 MHz			3876.66 MHz	3949.98 MHz		3730.02 MHz	3803.34 MHz			3876.66 MHz	3949.98 MHz		3730.02 MHz	3803.34 MHz			3876.66 MHz	3949.98 MHz	
60 MHz	SRS CW	15.48	14.39			15.63	16.48	16.5	14.73	14.62			14.49	13.60	15.5	14.84	14.61			14.24	14.79	15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		648334	652166	656000		659834	663666		648334	652166	656000		659834	663666		648334	652166	656000		659834	663666	
		3725.01 MHz	3782.49 MHz	3840 MHz		3897.51 MHz	3954.99 MHz		3725.01 MHz	3782.49 MHz	3840 MHz		3897.51 MHz	3954.99 MHz		3725.01 MHz	3782.49 MHz	3840 MHz		3897.51 MHz	3954.99 MHz	
50 MHz	SRS CW	15.59	14.52	14.92		15.85	16.34	16.5	14.78	14.49	14.85		13.81	13.60	15.5	14.84	14.66	14.58		13.94	14.72	15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		648000	651200	654400	657600	660800	664000		648000	651200	654400	657600	660800	664000		648000	651200	654400	657600	660800	664000	
		3720 MHz	3768 MHz	3816 MHz	3864 MHz	3912 MHz	3960 MHz		3720 MHz	3768 MHz	3816 MHz	3864 MHz	3912 MHz	3960 MHz		3720 MHz	3768 MHz	3816 MHz	3864 MHz	3912 MHz	3960 MHz	
40 MHz	SRS CW	15.66	14.58	14.73	15.44	15.78	16.21	16.5	14.83	14.45	14.88	14.87	13.77	13.39	15.5	14.80	14.66	14.71	14.60	14.04	14.30	15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		647668	651000	654334	657666	661000	664332		647668	651000	654334	657666	661000	664332		647668	651000	654334	657666	661000	664332	
		3715.02 MHz	3765 MHz	3815.01 MHz	3864.99 MHz	3915 MHz	3964.98 MHz		3715.02 MHz	3765 MHz	3815.01 MHz	3864.99 MHz	3915 MHz	3964.98 MHz		3715.02 MHz	3765 MHz	3815.01 MHz	3864.99 MHz	3915 MHz	3964.98 MHz	
30 MHz	SRS CW	15.75	14.66	14.62	15.44	15.92	16.07	16.5	14.85	14.48	14.88	14.77	13.75	13.13	15.5	14.75	14.66	14.72	14.71	14.07	14.19	15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		647500	650900	654300	657700	661100	664500		647500	650900	654300	657700	661100	664500		647500	650900	654300	657700	661100	664500	
		3712.5 MHz	3763.5 MHz	3814.5 MHz	3865.5 MHz	3916.5 MHz	3967.5 MHz		3712.5 MHz	3763.5 MHz	3814.5 MHz	3865.5 MHz	3916.5 MHz	3967.5 MHz		3712.5 MHz	3763.5 MHz	3814.5 MHz	3865.5 MHz	3916.5 MHz	3967.5 MHz	
25 MHz	SRS CW	15.64	14.62	14.65	15.51	15.84	16.12	16.5	14.89	14.39	14.83	14.68	13.69	13.09	15.5	14.76	14.57	14.80	14.81	14.03	14.32	15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		647334	650800	654266	657734	661200	664666		647334	650800	654266	657734	661200	664666		647334	650800	654266	657734	661200	664666	
		3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz		3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz		3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz	
20 MHz	SRS CW	15.76	14.58	14.64	15.45	15.97	16.24	16.5	14.87	14.41	14.88	14.81	13.78	13.15	15.5	14.71	14.66	14.72	14.71	14.66	14.32	15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		647168	650700	654234	657766	661300	664832		647168	650700	654234	657766	661300	664832		647168	650700	654234	657766	661300	664832	
		3707.52 MHz	3760.5 MHz	3813.51 MHz	3866.49 MHz	3919.5 MHz	3972.48 MHz		3707.52 MHz	3760.5 MHz	3813.51 MHz	3866.49 MHz	3919.5 MHz	3972.48 MHz		3707.52 MHz	3760.5 MHz	3813.51 MHz	3866.49 MHz	3919.5 MHz	3972.48 MHz	
15 MHz	SRS CW	15.78	14.59	14.64	15.55	16.04	16.23	16.5	14.91	14.42	14.89	14.79	13.79	13.16	15.5	14.74	14.52	14.63	14.60	14.02	14.26	15.5
BW (MHz)	Mode	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit	Measured Pwr (dBm)						Tune-up Limit
		647000	650600	654200	657800	661400	665000		647000	650600	654200	657800	661400	665000		647000	650600	654200	657800	661400	665000	
		3705 MHz	3759 MHz	3813 MHz	3867 MHz	3921 MHz	3975 MHz		3705 MHz	3759 MHz	3813 MHz	3867 MHz	3921 MHz	3975 MHz		3705 MHz	3759 MHz	3813 MHz	3867 MHz	3921 MHz	3975 MHz	
10 MHz	SRS CW	15.84	14.58	14.61	15.56	16.01	16.20	16.5	14.91	14.45	14.93	14.81	13.40	13.03	15.5	14.64	14.73	14.82	14.83	14.24	14.40	15.5

Notes:

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

9.5. Wi-Fi 2.4 GHz (DTS Band)

WLAN SISO mode output power results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Max.Average Power (dBm)			Reduced.Average Power (dBm)		
					Meas. Avg Pwr	Max. Tune-up Limit	SAR Test (Yes/No)	Meas. Avg Pwr	Max. Tune-up Limit	SAR Test (Yes/No)
WiFi 2.4G SISO Ant.1	802.11b	1 Mbps	1	2412.0	17.07	18.0	Yes	11.75	13.0	Yes
			6	2437.0	18.75	19.0		12.32		
			11	2462.0	16.94	18.0		11.78		
	802.11g	6 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No	Not Required	13.0	No
	802.11n	6.5 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No	Not Required	13.0	No
	802.11ax	7.3 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No	Not Required	13.0	No
WiFi 2.4G SISO Ant.2	802.11b	1 Mbps	1	2412.0	17.56	18.0	Yes	12.08	13.0	Yes
			6	2437.0	18.29	19.0		12.07		
			11	2462.0	17.12	18.0		11.84		
	802.11g	6 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No	Not Required	13.0	No
	802.11n	6.5 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No	Not Required	13.0	No
	802.11ax	7.3 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No	Not Required	13.0	No

WLAN MIMO mode output power results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Max.Average Power (dBm)		
					Meas. Avg Pwr	Max. Tune-up Limit	SAR Test (Yes/No)
WiFi 2.4G MIMO Ant.1	802.11b	1 Mbps	1	2412.0	17.09	18.0	Yes
			6	2437.0	18.29	19.0	
			11	2462.0	16.72	18.0	
	802.11g	6 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No
	802.11n	6.5 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No
	802.11ax	7.3 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No
WiFi 2.4G MIMO Ant.2	802.11b	1 Mbps	1	2412.0	17.45	18.0	Yes
			6	2437.0	18.51	19.0	
			11	2462.0	17.26	18.0	
	802.11g	6 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No
	802.11n	6.5 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No
	802.11ax	7.3 Mbps	1 - 11	2412 - 2472	Not Required	16.5	No

Note(s):

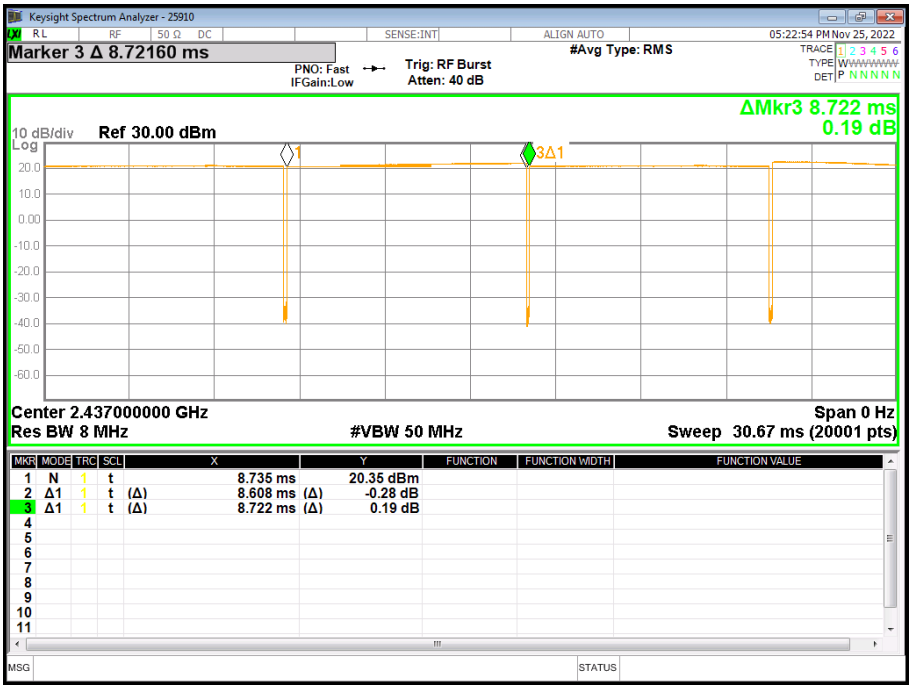
1. SAR is not required for 802.11g/n modes when the adjusted SAR for 802.11b is < 1.2 W/kg.
2. For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel 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.
3. For Max power conditions (Body-worn & Hotspot), MIMO SAR additionally tested to satisfy simultaneous transmission analysis.

Duty Factor Measured Results for SAR testing

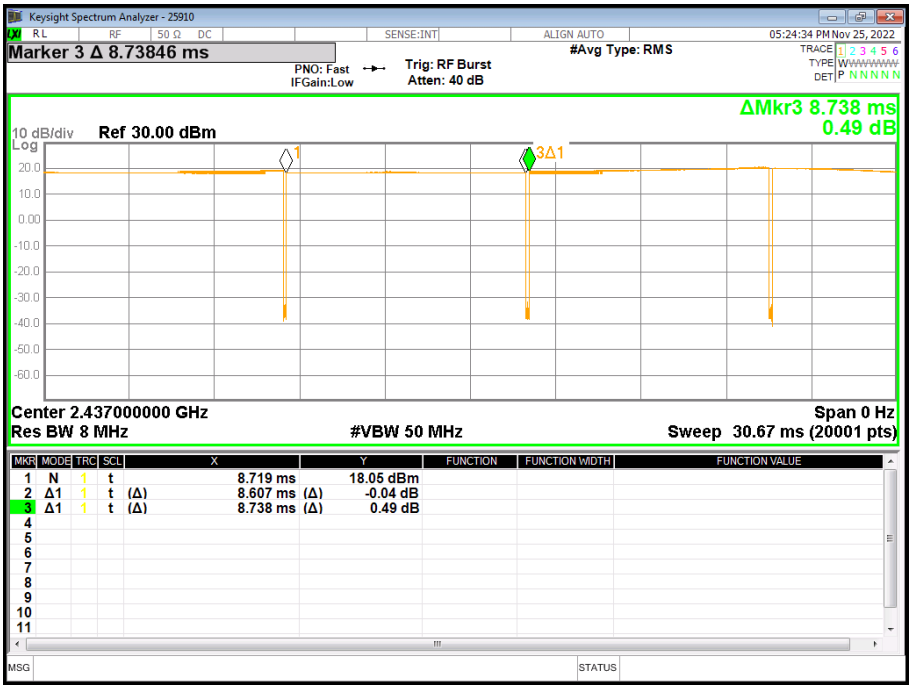
Mode		T on (ms)	Period (ms)	Measured Duty Cycle	Crest Factor (100% / measured duty cycle(%))
802.11b	SISO	8.722	8.608	98.7%	1.01
802.11b	MIMO	8.738	8.607	98.5%	1.02

Duty Cycle plots

802.11b_SISO



802.11b_MIMO



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

WLAN SISO Ant.1 output power Results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
						Max. Average Power			Reduced Average Power		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 5GHz Ant.1	5.3 (UNII 2A)	802.11a	6 Mbps	52	5260.0	16.38	17.5	Yes	Not Required	11.0	No
				56	5280.0	17.07					
				60	5300.0	16.93					
				64	5320.0	15.60	16.0				
		802.11n (HT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	12.5	No	10.41	11.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	11.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			12.5	No	Not Required	11.0	No
	5.5 (U-NII 2C)	802.11a	6 Mbps	100	5500.0	15.40	16.0	Yes	Not Required	11.0	No
				120	5600.0	16.74	17.5				
				124	5620.0	16.43					
				144	5720.0	16.40					
		802.11n (HT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	Not Required	12.5	No	10.65	11.0	Yes
				122	5610.0	Not Required			9.96		
				138	5690.0	Not Required			10.80		
		802.11ax (HE20)	7.3 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			12.5	No	Not Required	11.0	No
	5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	16.63	17.5	Yes	Not Required	11.0	No
				157	5785.0	16.60					
				165	5825.0	16.51					
		802.11n (HT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	Not Required	12.5	No	10.04	11.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			12.5	No	Not Required	11.0	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 SISO Ant.2 output power Results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power					
						Max. Average Power			Reduced Average Power		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 5GHz Ant.2	5.3 (UNII 2A)	802.11a	6 Mbps	52	5260.0	15.96	17.5	Yes	Not Required	11.0	No
				56	5280.0	16.01					
				60	5300.0	16.21					
				64	5320.0	14.99	16.0				
		802.11n (HT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	12.5	No	9.55	11.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.0	No	Not Required	11.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			12.5	No	Not Required	11.0	No
	5.5 (U-NII 2C)	802.11a	6 Mbps	100	5500.0	15.21	16.0	Yes	Not Required	11.0	No
				120	5600.0	16.28	17.5				
				124	5620.0	16.09					
				144	5720.0	16.24					
		802.11n (HT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	Not Required	12.5	No	10.02	11.0	Yes
				122	5610.0	Not Required			9.89		
				138	5690.0	Not Required			10.38		
		802.11ax (HE20)	7.3 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			12.5	No	Not Required	11.0	No
	5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	16.85	17.5	Yes	Not Required	11.0	No
				157	5785.0	16.97					
				165	5825.0	16.67					
		802.11n (HT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11n (HT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT20)	6.5 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ac (VHT40)	13.5 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	Not Required	12.5	No	10.73	11.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required			17.5	No	Not Required	11.0	No
		802.11ax (HE40)	14.6 Mbps	Not Required			14.5	No	Not Required	11.0	No
		802.11ax (HE80)	36.0 Mbps	Not Required			12.5	No	Not Required	11.0	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.1 & Ant.2 Max.output power Results

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN MIMO mode power			
					Max. Average Power			
					UNII Ant.1	UNII Ant.2	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
					Avg Pwr (dBm)	Avg Pwr (dBm)		
5.3 (UNII 2A)	802.11a	6 Mbps	52	5260.0	16.37	15.67	17.5	Yes
			56	5280.0	16.94	15.70		
			60	5300.0	16.71	15.77		
			64	5320.0	15.49	14.79	16.0	
	802.11n (HT20)	6.5 Mbps	Not Required				17.5	No
	802.11n (HT40)	13.5 Mbps	Not Required				14.5	No
	802.11ac (VHT20)	6.5 Mbps	Not Required				17.5	No
	802.11ac (VHT40)	13.5 Mbps	Not Required				14.5	No
	802.11ac (VHT80)	29.3 Mbps	Not Required				12.5	No
	802.11ax (HE20)	7.3 Mbps	Not Required				17.0	No
	802.11ax (HE40)	14.6 Mbps	Not Required				14.5	No
	802.11ax (HE80)	36.0 Mbps	Not Required				12.5	No
5.5 (U-NII 2C)	802.11a	6 Mbps	100	5500.0	15.31	14.52	16.0	Yes
			120	5600.0	16.47	16.23	17.5	
			124	5620.0	16.11	16.12		
			144	5720.0	16.27	16.31		
	802.11n (HT20)	6.5 Mbps	Not Required				17.5	No
	802.11n (HT40)	13.5 Mbps	Not Required				14.5	No
	802.11ac (VHT20)	6.5 Mbps	Not Required				17.5	No
	802.11ac (VHT40)	13.5 Mbps	Not Required				14.5	No
	802.11ac (VHT80)	29.3 Mbps	Not Required				12.5	No
	802.11ax (HE20)	7.3 Mbps	Not Required				17.5	No
	802.11ax (HE40)	14.6 Mbps	Not Required				14.5	No
	802.11ax (HE80)	36.0 Mbps	Not Required				12.5	No

Note(s):

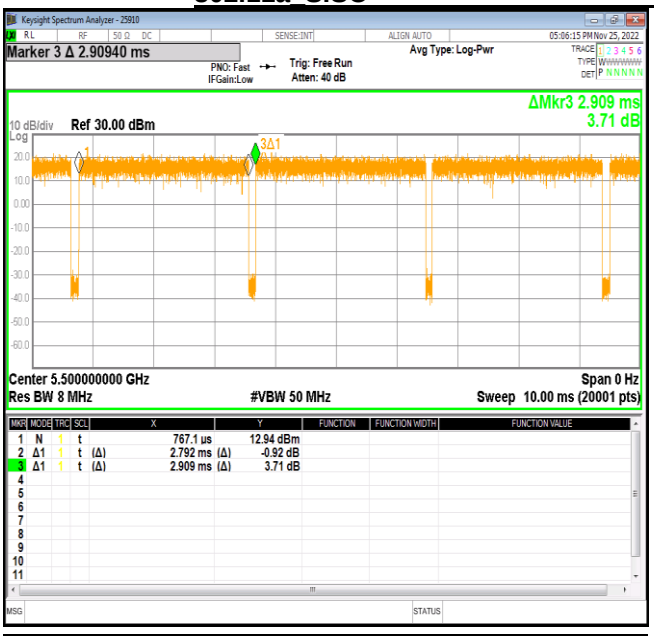
1. For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode 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.
4. For Max power conditions (Product Specific 10-g), MIMO SAR additionally tested to satisfy TER (Total Exposure Ratio) with mmW bands.

Duty Factor Measured Results for SAR testing

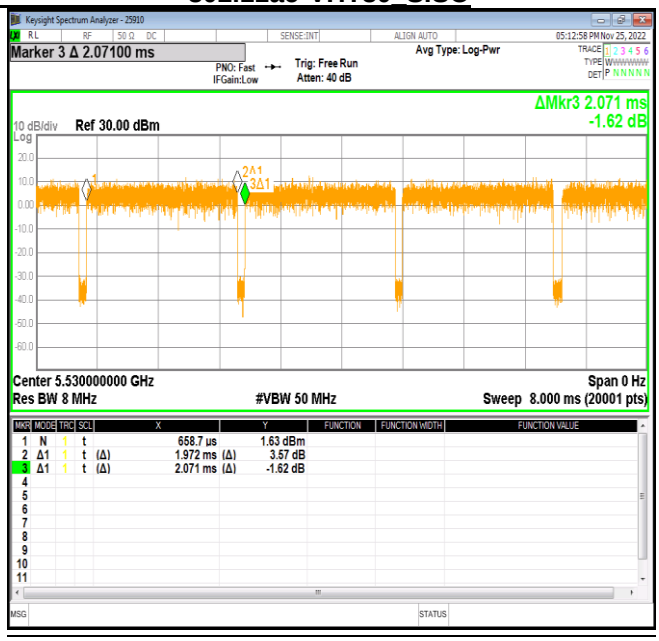
Mode		T on (ms)	Period (ms)	Measured Duty Cycle	Crest Factor (100% / measured duty cycle(%))
802.11a	SISO	2.909	2.792	96.0%	1.04
802.11ac-VHT80	SISO	2.071	1.972	95.2%	1.05
802.11a	MIMO	2.855	2.792	97.8%	1.02

Duty Cycle plots

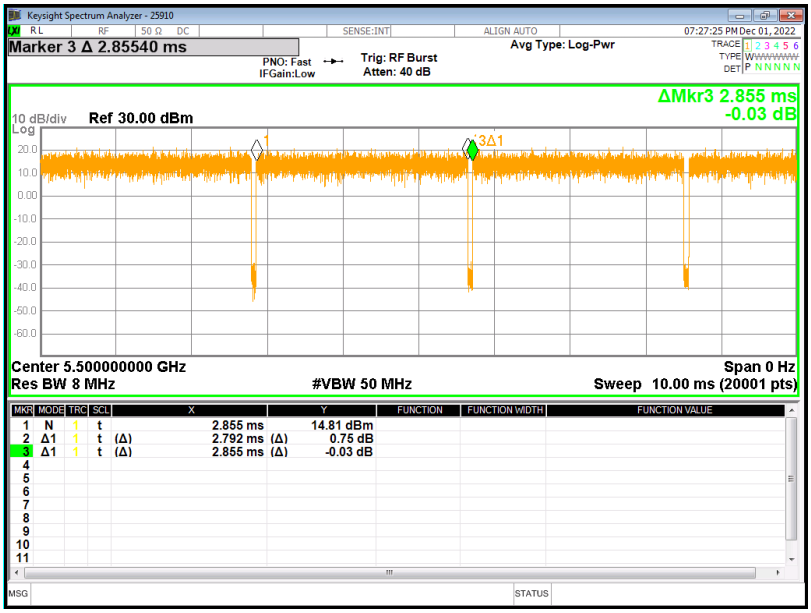
802.11a_SISO



802.11ac-VHT80_SISO



802.11a_MIMO



9.7. Bluetooth

Bluetooth output power Results

Band (GHz)	Antenna	Mode	Ch #	Freq. (MHz)	Max. Average Power (dBm)		Reduced. Average Power (dBm)	
					Meas Pwr	Tune-up Limit	Meas Pwr	Tune-up Limit
2.4	BT Ant.	GFSK (BDR)	0	2402	14.73	15.5	9.50	11.0
			39	2441	14.57		10.92	12.0
			78	2480	14.75		11.82	12.0
		EDR	0	2402	12.70	13.0	12.70	13.0
			39	2441	11.60		11.60	
			78	2480	11.64		11.64	
		LE	0	2402	12.80	14.0	7.27	9.0
			19	2440	12.58		7.01	
			39	2480	12.47		7.28	

Duty Factor Measured Results

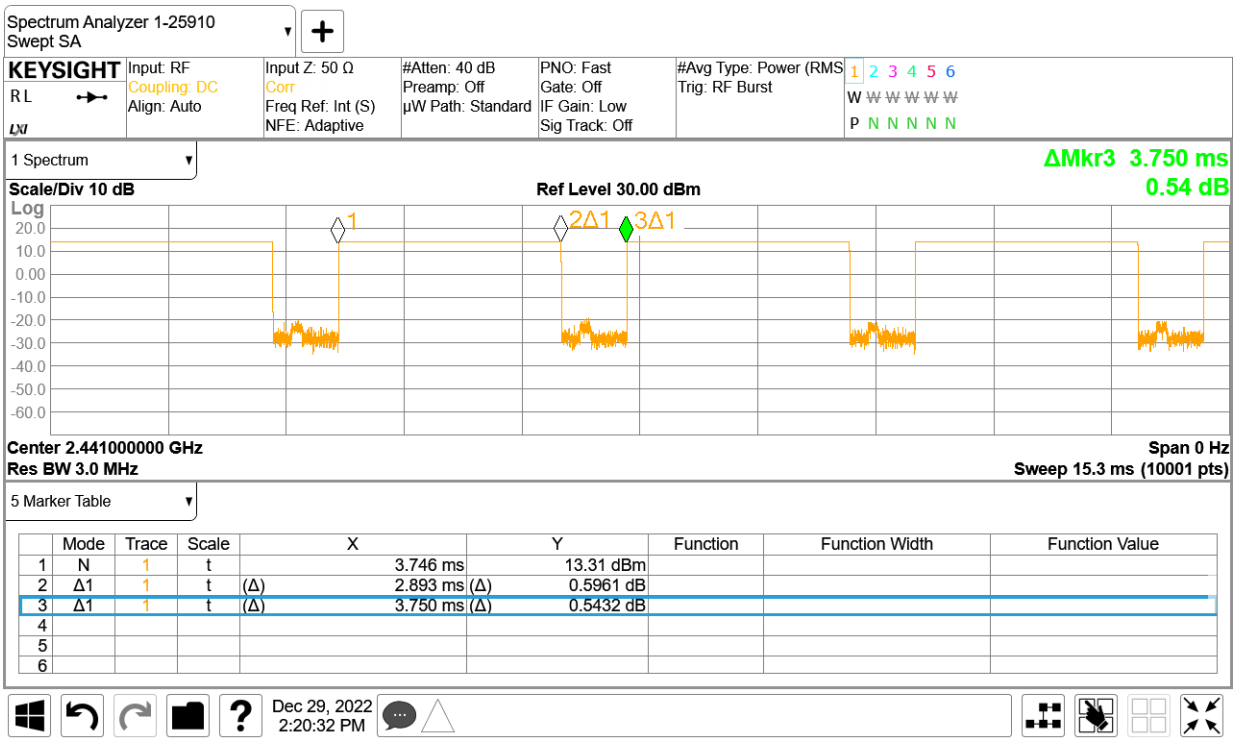
Mode	Type	T on (ms)	Period (ms)	Maximum Duty Cyle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
GFSK / EDR	DH5	2.893	3.750	78.00%	77.10%	1.01

Note(s):

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

Duty Cycle plots

GFSK / EDR



10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

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

KDB 447498 D01 General RF Exposure Guidance:

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

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

KDB 648474 D04 Handset SAR:

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

KDB 648474 D04 Handset SAR (Phablet Only):

For smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm.
When hotspot mode does not apply, 10-g extremity SAR is required for all surfaces and edges with an antenna located at ≤ 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. GSM 850

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	GPRS 2 Slots	0	Left Touch	190	836.6	32.00	30.58	0.225	0.312	
				Left Tilt	190	836.6	32.00	30.58	0.109	0.151	
				Right Touch	190	836.6	32.00	30.58	0.290	0.402	1
				Right Tilt	190	836.6	32.00	30.58	0.136	0.189	
	Body-worn	GPRS 2 Slots	15	Rear	190	836.6	32.00	30.58	0.137	0.190	
				Front	190	836.6	32.00	30.58	0.142	0.197	2
	Hotspot	GPRS 2 Slots	10	Rear	190	836.6	32.00	30.58	0.384	0.533	3
				Front	190	836.6	32.00	30.58	0.129	0.179	
				Edge 2	190	836.6	32.00	30.58	0.284	0.394	
				Edge 3	190	836.6	32.00	30.58	0.185	0.257	

10.2. GSM 1900

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	GPRS 4 Slots	0	Left Touch	661	1880.0	25.00	23.52	0.087	0.122	4
				Left Tilt	661	1880.0	25.00	23.52	0.068	0.096	
				Right Touch	661	1880.0	25.00	23.52	0.085	0.120	
				Right Tilt	661	1880.0	25.00	23.52	0.067	0.094	
	Body-worn	GPRS 4 Slots	15	Rear	661	1880.0	25.00	23.52	0.213	0.299	5
				Front	661	1880.0	25.00	23.52	0.150	0.211	
	Hotspot	GPRS 4 Slots	10	Rear	661	1880.0	25.00	23.52	0.398	0.560	
				Front	661	1880.0	25.00	23.52	0.282	0.397	
				Edge 3	661	1880.0	25.00	23.52	0.468	0.658	6
				Edge 4	661	1880.0	25.00	23.52	0.158	0.222	

10.3. WCDMA Band II

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	Rel 99 RMC	0	Left Touch	9400	1880.0	24.00	22.89	0.216	0.279	7
				Left Tilt	9400	1880.0	24.00	22.89	0.134	0.173	
				Right Touch	9400	1880.0	24.00	22.89	0.208	0.269	
				Rightt Tilt	9400	1880.0	24.00	22.89	0.109	0.141	
	Body-worn	Rel 99 RMC	15	Rear	9400	1880.0	24.00	22.89	0.370	0.478	8
				Front	9400	1880.0	24.00	22.89	0.294	0.380	
	Hotspot	Rel 99 RMC	10	Rear	9400	1880.0	22.00	20.91	0.433	0.557	
				Front	9400	1880.0	22.00	20.91	0.306	0.393	
				Edge 3	9400	1880.0	22.00	20.91	0.614	0.789	9
				Edge 4	9400	1880.0	22.00	20.91	0.206	0.265	
Antenna	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	
Main 2 Ant.	Product Specific 10-g	Rel 99 RMC	13	Edge 3	9400	1880.0	24.00	22.89	0.391	0.505	
			0	Edge 3	9400	1880.0	22.00	20.94	0.857	1.094	10

10.4. WCDMA Band V

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main 1 Ant.	Head	Rel 99 RMC	0	Left Touch	4183	836.6	25.00	23.69	0.140	0.189	
				Left Tilt	4183	836.6	25.00	23.69	0.066	0.089	
				Right Touch	4183	836.6	25.00	23.69	0.179	0.242	11
				Rightt Tilt	4183	836.6	25.00	23.69	0.085	0.115	
	Body-worn	Rel 99 RMC	15	Rear	4183	836.6	25.00	23.69	0.185	0.250	12
				Front	4183	836.6	25.00	23.69	0.140	0.189	
	Hotspot	Rel 99 RMC	10	Rear	4183	836.6	25.00	23.69	0.390	0.527	13
				Front	4183	836.6	25.00	23.69	0.166	0.224	
				Edge 2	4183	836.6	25.00	23.69	0.179	0.242	
				Edge 3	4183	836.6	25.00	23.69	0.239	0.323	

10.5. 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	
Main 2 Ant.	Head	QPSK	0	Left Touch	18700	1860.0	1	99	25.00	24.38	0.250	0.288	14
							50	0	24.00	23.36	0.201	0.233	
				Left Tilt	18700	1860.0	1	99	25.00	24.38	0.141	0.163	
							50	0	24.00	23.36	0.127	0.147	
				Right Touch	18700	1860.0	1	99	25.00	24.38	0.233	0.269	
							50	0	24.00	23.36	0.179	0.207	
				Right Tilt	18700	1860.0	1	99	25.00	24.38	0.161	0.186	
							50	0	24.00	23.36	0.118	0.137	
	Body-worn	QPSK	15	Rear	18700	1860.0	1	99	25.00	24.38	0.537	0.619	15
							50	0	24.00	23.36	0.415	0.481	
				Front	18700	1860.0	1	99	25.00	24.38	0.460	0.531	
							50	0	24.00	23.36	0.363	0.421	
	Hotspot	QPSK	10	Rear	18700	1860.0	1	99	23.00	22.15	0.683	0.831	
							50	0	23.00	22.14	0.684	0.834	
							100	0	23.00	22.08	0.687	0.849	
					18900	1880.0	1	99	23.00	22.05	0.706	0.879	
							50	0	23.00	22.09	0.694	0.856	
					18100	1900.0	1	99	23.00	21.92	0.722	0.926	
							50	0	23.00	21.99	0.720	0.909	
				Front	18700	1860.0	1	99	23.00	22.15	0.543	0.660	
							50	0	23.00	22.14	0.545	0.664	
				Edge 3	18700	1860.0	1	99	23.00	22.15	0.809	0.984	
							50	0	23.00	22.14	0.812	0.990	
							100	0	23.00	22.08	0.821	1.015	
					18900	1880.0	1	99	23.00	22.05	0.889	1.106	
							50	0	23.00	22.09	0.853	1.052	
					18100	1900.0	1	99	23.00	21.92	0.965	1.237	16
							50	0	23.00	21.99	0.936	1.181	
				Edge 4	18700	1860.0	1	99	23.00	22.15	0.289	0.351	
							50	0	23.00	22.14	0.348	0.424	

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	
Main 2 Ant.	Product Specific 10-g	QPSK	11	Rear	18700	1860.0	1	99	25.00	24.38	0.597	0.689	
			13	Edge 3	18700	1860.0	1	99	25.00	24.38	0.707	0.815	
			0	Rear	18700	1860.0	1	99	23.00	22.15	1.910	2.323	
					18900	1880.0	1	99	23.00	22.06	1.890	2.347	17
					19100	1900.0	1	99	23.00	22.04	1.870	2.333	
			0	Edge 3	18700	1860.0	1	99	23.00	22.15	1.410	1.715	
							50	0	23.00	22.14	1.470	1.792	

10.6. 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	
Main 1 Ant.	Head	QPSK	0	Left Touch	20525	836.5	1	0	25.50	24.37	0.238	0.309	
							25	0	24.50	23.27	0.185	0.246	
				Left Tilt	20525	836.5	1	0	25.50	24.37	0.120	0.156	
							25	0	24.50	23.27	0.097	0.128	
				Right Touch	20525	836.5	1	0	25.50	24.37	0.266	0.345	18
							25	0	24.50	23.27	0.224	0.297	
				Right Tilt	20525	836.5	1	0	25.50	24.37	0.145	0.188	
							25	0	24.50	23.27	0.107	0.142	
	Body-worn	QPSK	15	Rear	20525	836.5	1	0	25.50	24.37	0.305	0.396	19
							25	0	24.50	23.27	0.232	0.308	
				Front	20525	836.5	1	0	25.50	24.37	0.279	0.362	
							25	0	24.50	23.27	0.214	0.284	
	Hotspot	QPSK	10	Rear	20525	836.5	1	0	25.50	24.37	0.510	0.662	20
							25	0	24.50	23.27	0.405	0.538	
				Front	20525	836.5	1	0	25.50	24.37	0.256	0.332	
							25	0	24.50	23.27	0.220	0.292	
				Edge 2	20525	836.5	1	0	25.50	24.37	0.389	0.505	
							25	0	24.50	23.27	0.299	0.397	
				Edge 3	20525	836.5	1	0	25.50	24.37	0.346	0.449	
							25	0	24.50	23.27	0.283	0.376	

10.7. LTE Band 7 (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	
Main 2 Ant.	Head	QPSK	0	Left Touch	20850	2510.0	1	0	24.00	23.24	0.183	0.218	21
							50	0	23.00	22.16	0.133	0.161	
				Left Tilt	20850	2510.0	1	0	24.00	23.24	0.058	0.069	
							50	0	23.00	22.16	0.043	0.052	
				Right Touch	20850	2510.0	1	0	24.00	23.24	0.128	0.152	
							50	0	23.00	22.16	0.102	0.124	
				Right Tilt	20850	2510.0	1	0	24.00	23.24	0.104	0.124	
							50	0	23.00	22.16	0.086	0.104	
	Body-worn	QPSK	15	Rear	20850	2510.0	1	0	24.00	23.24	0.298	0.355	22
							50	0	23.00	22.16	0.247	0.300	
				Front	20850	2510.0	1	0	24.00	23.24	0.277	0.330	
							50	0	23.00	22.16	0.214	0.260	
	Hotspot	QPSK	10	Rear	20850	2510.0	1	0	21.00	20.02	0.363	0.455	23
							50	0	21.00	20.02	0.362	0.454	
				Front	20850	2510.0	1	0	21.00	20.02	0.246	0.308	
							50	0	21.00	20.02	0.241	0.302	
				Edge 3	20850	2510.0	1	0	21.00	20.02	0.341	0.427	
							50	0	21.00	20.02	0.336	0.421	
				Edge 4	20850	2510.0	1	0	21.00	20.02	0.100	0.125	
							50	0	21.00	20.02	0.097	0.121	

10.8. 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	
Main 1 Ant.	Head	QPSK	0	Left Touch	23095	707.5	1	49	25.00	24.21	0.218	0.261	
							25	25	24.00	23.12	0.153	0.187	
				Left Tilt	23095	707.5	1	49	25.00	24.21	0.130	0.156	
							25	25	24.00	23.12	0.092	0.113	
				Right Touch	23095	707.5	1	49	25.00	24.21	0.257	0.308	24
							25	25	24.00	23.12	0.201	0.246	
				Right Tilt	23095	707.5	1	49	25.00	24.21	0.132	0.158	
							25	25	24.00	23.12	0.105	0.129	
	Body-worn	QPSK	15	Rear	23095	707.5	1	49	25.00	24.21	0.339	0.407	25
							25	25	24.00	23.12	0.259	0.317	
				Front	23095	707.5	1	49	25.00	24.21	0.299	0.359	
							25	25	24.00	23.12	0.229	0.280	
	Hotspot	QPSK	10	Rear	23095	707.5	1	49	25.00	24.21	0.376	0.451	26
							25	25	24.00	23.12	0.301	0.369	
				Front	23095	707.5	1	49	25.00	24.21	0.288	0.345	
							25	25	24.00	23.12	0.228	0.279	
				Edge 2	23095	707.5	1	49	25.00	24.21	0.359	0.431	
							25	25	24.00	23.12	0.273	0.334	
				Edge 3	23095	707.5	1	49	25.00	24.21	0.266	0.319	
							25	25	24.00	23.12	0.206	0.252	

10.9. 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	
Main 1 Ant.	Head	QPSK	0	Left Touch	23230	782.0	1	0	25.00	23.58	0.177	0.245	
							25	0	24.00	22.55	0.133	0.186	
				Left Tilt	23230	782.0	1	0	25.00	23.58	0.098	0.136	
							25	0	24.00	22.55	0.081	0.113	
				Right Touch	23230	782.0	1	0	25.00	23.58	0.242	0.336	27
							25	0	24.00	22.55	0.198	0.276	
				Right Tilt	23230	782.0	1	0	25.00	23.58	0.146	0.202	
							25	0	24.00	22.55	0.115	0.161	
	Body-worn	QPSK	15	Rear	23230	782.0	1	0	25.00	23.58	0.346	0.480	28
							25	0	24.00	22.55	0.286	0.399	
				Front	23230	782.0	1	0	25.00	23.58	0.271	0.376	
							25	0	24.00	22.55	0.259	0.362	
	Hotspot	QPSK	10	Rear	23230	782.0	1	0	25.00	23.58	0.402	0.557	
							25	0	24.00	22.55	0.315	0.440	
				Front	23230	782.0	1	0	25.00	23.58	0.277	0.384	
							25	0	24.00	22.55	0.212	0.296	
				Edge 2	23230	782.0	1	0	25.00	23.58	0.495	0.686	29
							25	0	24.00	22.55	0.357	0.499	
				Edge 3	23230	782.0	1	0	25.00	23.58	0.259	0.359	
							25	0	24.00	22.55	0.202	0.282	

10.10. LTE Band 48 (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	
Sub 3 Ant.	Head	QPSK	0	Left Touch	55340	3560.0	1	0	20.50	19.71	0.154	0.185	
							50	50	20.50	19.72	0.150	0.180	
				Left Tilt	55340	3560.0	1	0	20.50	19.71	0.136	0.163	
							50	50	20.50	19.72	0.140	0.168	
				Right Touch	55340	3560.0	1	0	20.50	19.71	0.765	0.918	
							50	50	20.50	19.72	0.747	0.894	
							100	0	20.50	19.72	0.715	0.856	
					55773	3603.3	1	0	20.50	19.51	0.659	0.828	
							50	50	20.50	19.59	0.666	0.821	
					56207	3646.7	1	0	20.50	18.61	0.673	1.040	30
							50	50	20.50	18.68	0.674	1.025	
					56640	3690.0	1	0	20.50	18.97	0.665	0.946	
							50	50	20.50	18.95	0.659	0.942	
				Right Tilt	55340	3560.0	1	0	20.50	19.71	0.397	0.476	
							50	50	20.50	19.72	0.402	0.481	
	Body-worn	QPSK	15	Rear	55773	3603.3	1	99	21.00	20.65	0.176	0.191	
							50	50	21.00	20.56	0.180	0.199	31
				Front	55773	3603.3	1	99	21.00	20.65	0.077	0.084	
							50	50	21.00	20.56	0.077	0.085	
	Hotspot	QPSK	10	Rear	55773	3603.3	1	99	21.00	20.65	0.352	0.382	
							50	50	21.00	20.56	0.356	0.394	
				Front	55773	3603.3	1	99	21.00	20.65	0.166	0.180	
							50	50	21.00	20.56	0.163	0.180	
				Edge 1	55773	3603.3	1	99	21.00	20.65	0.203	0.220	
							50	50	21.00	20.56	0.226	0.250	
				Edge 4	55773	3603.3	1	99	21.00	20.65	0.382	0.414	
							50	50	21.00	20.56	0.381	0.422	32

UL CA 48C

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	
Sub 3 Ant.	Head	QPSK	0	Right Touch	56207	3646.7	1	0	56009	3626.9	1	99	20.50	18.70	0.564	0.854	33
	Body-worn	QPSK	15	Rear	55773	3603.3	50	50	55971	3623.1	50	0	21.00	20.55	0.216	0.240	34
	Hotspot	QPSK	10	Edge 4	55773	3603.3	50	50	55971	3623.1	50	0	21.00	20.55	0.435	0.482	35

10.11. 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	
Main 2 Ant.	Head	QPSK	0	Left Touch	132572	1770.0	1	49	25.00	24.31	0.263	0.308	36
							50	0	24.00	23.23	0.214	0.256	
				Left Tilt	132572	1770.0	1	49	25.00	24.31	0.178	0.209	
							50	0	24.00	23.23	0.139	0.166	
				Right Touch	132572	1770.0	1	49	25.00	24.31	0.236	0.277	
							50	0	24.00	23.23	0.189	0.226	
				Right Tilt	132572	1770.0	1	49	25.00	24.31	0.151	0.177	
							50	0	24.00	23.23	0.123	0.147	
	Body-worn	QPSK	15	Rear	132572	1770.0	1	49	25.00	24.31	0.515	0.604	37
							50	0	24.00	23.23	0.412	0.492	
				Front	132572	1770.0	1	49	25.00	24.31	0.432	0.506	
							50	0	24.00	23.23	0.353	0.421	
	Hotspot	QPSK	10	Rear	132572	1770.0	1	49	23.00	22.05	0.584	0.727	
							50	0	23.00	21.85	0.576	0.751	
				Front	132572	1770.0	1	49	23.00	22.05	0.510	0.635	
							50	0	23.00	21.85	0.503	0.655	
				Edge 3	132072	1720.0	1	49	23.00	21.62	0.631	0.867	
							50	0	23.00	21.48	0.584	0.829	
					132322	1745.0	1	49	23.00	21.92	0.673	0.863	
							50	0	23.00	21.71	0.688	0.926	
					132572	1770.0	1	49	23.00	22.05	0.733	0.912	
							50	0	23.00	21.85	0.768	1.001	38
							100	0	23.00	21.86	0.749	0.974	
				Edge 4	132572	1770.0	1	49	23.00	22.05	0.273	0.340	
							50	0	23.00	21.85	0.276	0.360	

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	
Main 2 Ant.	Product Specific 10-g	QPSK	13	Edge 3	132572	1770.0	1	49	25.00	24.31	0.635	0.744	
							50	0	24.00	23.23	0.545	0.651	
			0	Edge 3	132072	1720.0	1	49	23.00	21.12	1.390	2.143	
							50	0	23.00	21.44	1.420	2.034	
					132322	1745.0	1	49	23.00	21.98	1.950	2.466	
							50	0	23.00	21.72	1.920	2.578	39
					132572	1770.0	1	49	23.00	22.09	1.930	2.380	
							50	0	23.00	21.85	1.950	2.541	
							100	0	23.00	21.83	1.940	2.540	

10.12. NR Band n2 (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	
Main 2 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	376000	1880.0	1	1	25.00	24.36	0.203	0.235	
								108	54	25.00	24.30	0.225	0.264	40
					Left Tilt	376000	1880.0	1	1	25.00	24.36	0.146	0.169	
								108	54	25.00	24.30	0.146	0.172	
					Right Touch	376000	1880.0	1	1	25.00	24.36	0.160	0.185	
								108	54	25.00	24.30	0.160	0.188	
					Right Tilt	376000	1880.0	1	1	25.00	24.36	0.098	0.113	
								108	54	25.00	24.30	0.090	0.106	
		CP-OFDM	QPSK	0	Left Touch	376000	1880.0	1	1	23.50	22.00	0.163	0.230	
	Body-worn	DFT-s-OFDM	QPSK	15	Rear	376000	1880.0	1	1	25.00	24.36	0.440	0.510	
								108	54	25.00	24.30	0.480	0.564	41
					Front	376000	1880.0	1	1	25.00	24.36	0.360	0.417	
								108	54	25.00	24.30	0.390	0.458	
		CP-OFDM	QPSK	15	Rear	376000	1880.0	1	1	23.50	22.00	0.298	0.421	
	Hotspot	DFT-s-OFDM	QPSK	10	Rear	376000	1880.0	1	1	23.00	22.15	0.641	0.780	
								108	54	23.00	22.14	0.653	0.796	
					Front	376000	1880.0	1	1	23.00	22.15	0.376	0.457	
								108	54	23.00	22.14	0.394	0.480	
					Edge 3	376000	1880.0	1	1	23.00	22.15	0.688	0.837	
								108	54	23.00	22.14	0.717	0.874	42
								216	0	23.00	21.94	0.675	0.862	
					Edge 4	376000	1880.0	1	1	23.00	22.15	0.252	0.306	
								108	54	23.00	22.14	0.267	0.325	
		CP-OFDM	QPSK	10	Edge 3	376000	1880.0	1	1	23.00	22.07	0.551	0.683	
Antenna	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	
Main 2 Ant.	Product Specific-10g	DFT-s-OFDM	QPSK	11	Rear	376000	1880.0	1	1	25.00	24.36	0.469	0.543	
								108	54	25.00	24.30	0.523	0.614	
				13	Edge 3	376000	1880.0	1	1	25.00	24.36	0.362	0.419	
								108	54	25.00	24.30	0.462	0.543	
				0	Rear	376000	1880.0	1	1	23.00	22.17	1.620	1.961	43
								108	54	23.00	22.20	1.590	1.912	
				0	Edge 3	376000	1880.0	1	1	23.00	22.17	0.865	1.047	
								108	54	23.00	22.20	1.010	1.214	
		CP-OFDM	QPSK	0	Rear	376000	1880.0	1	1	23.00	22.11	1.390	1.706	

Note(s):

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

10.13. 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	
Main 1 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	167300	836.5	1	67	25.50	24.37	0.196	0.254	
								64	35	25.50	24.32	0.190	0.249	
					Left Tilt	167300	836.5	1	67	25.50	24.37	0.108	0.140	
								64	35	25.50	24.32	0.103	0.135	
					Right Touch	167300	836.5	1	67	25.50	24.37	0.262	0.340	
								64	35	25.50	24.32	0.272	0.357	44
					Right Tilt	167300	836.5	1	67	25.50	24.37	0.132	0.171	
								64	35	25.50	24.32	0.134	0.176	
		CP-OFDM	QPSK	0	Right Touch	167300	836.5	1	1	24.00	22.78	0.163	0.216	
	Body-worn	DFT-s-OFDM	QPSK	15	Rear	167300	836.5	1	67	25.50	24.37	0.255	0.331	
								64	35	25.50	24.32	0.266	0.349	45
					Front	167300	836.5	1	67	25.50	24.37	0.252	0.327	
								64	35	25.50	24.32	0.252	0.331	
		CP-OFDM	QPSK	15	Rear	167300	836.5	1	1	24.00	22.78	0.186	0.246	
	Hotspot	DFT-s-OFDM	QPSK	10	Rear	167300	836.5	1	67	25.50	24.37	0.435	0.564	
								64	35	25.50	24.32	0.480	0.630	46
					Front	167300	836.5	1	67	25.50	24.37	0.288	0.374	
								64	35	25.50	24.32	0.296	0.388	
					Edge 2	167300	836.5	1	67	25.50	24.37	0.302	0.392	
								64	35	25.50	24.32	0.307	0.403	
					Edge 3	167300	836.5	1	67	25.50	24.37	0.303	0.393	
								64	35	25.50	24.32	0.306	0.402	
		CP-OFDM	QPSK	10	Rear	167300	836.5	1	1	24.00	22.78	0.240	0.318	

10.14. NR Band n48 (Voice/data/SRS0) (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	
Sub 3 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	641666	3625.0	1	53	14.00	13.34	0.063	0.073	
								50	28	14.00	13.36	0.069	0.079	
					Left Tilt	641666	3625.0	1	53	14.00	13.34	0.055	0.064	
								50	28	14.00	13.36	0.062	0.071	
					Right Touch	641666	3625.0	1	53	14.00	13.34	0.209	0.243	
								50	28	14.00	13.36	0.208	0.241	47
					Right Tilt	641666	3625.0	1	53	14.00	13.34	0.129	0.150	
								50	28	14.00	13.36	0.138	0.160	
		CP-OFDM	QPSK	0	Right Touch	641666	3625.0	1	1	14.00	12.93	0.162	0.207	
	Body-worn	DFT-s-OFDM	QPSK	15	Rear	641666	3625.0	1	53	15.00	14.45	0.060	0.068	
								50	28	15.00	14.49	0.077	0.087	48
					Front	641666	3625.0	1	53	15.00	14.45	0.042	0.048	
								50	28	15.00	14.49	0.037	0.041	
		CP-OFDM	QPSK	15	Rear	641666	3625.0	1	1	15.00	14.02	0.059	0.074	
	Hotspot	DFT-s-OFDM	QPSK	10	Rear	641666	3625.0	1	53	15.00	14.45	0.110	0.125	
								50	28	15.00	14.49	0.135	0.152	
					Front	641666	3625.0	1	53	15.00	14.45	0.075	0.085	
								50	28	15.00	14.49	0.051	0.058	
					Edge 1	641666	3625.0	1	53	15.00	14.45	0.062	0.070	
								50	28	15.00	14.49	0.066	0.074	
					Edge 4	641666	3625.0	1	53	15.00	14.45	0.177	0.201	49
								50	28	15.00	14.49	0.160	0.180	
		CP-OFDM	QPSK	10	Edge 4	641666	3624.99	1	1	15.00	14.02	0.113	0.142	

Note(s):

1. CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in standalone exposure conditions.
2. NR Band n48 tested using FTM mode.

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

Antenna	RF Exposure Conditions	Modulation	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	
Main.2 Ant. (SRS1)	Head	SRS CW	0	Left Touch	641666	3625.0	14.50	14.29	0.000	0.000	
				Left Tilt	641666	3625.0	14.50	14.29	0.000	0.000	
				Right Touch	641666	3625.0	14.50	14.29	0.000	0.000	
				Right Tilt	641666	3625.0	14.50	14.29	0.000	0.000	
	Body-worn	SRS CW	15	Rear	641666	3625.0	15.50	15.26	0.025	0.026	
				Front	641666	3625.0	15.50	15.26	0.027	0.029	
	Hotspot	SRS CW	10	Rear	641666	3625.0	15.50	15.26	0.062	0.066	
				Front	641666	3625.0	15.50	15.26	0.065	0.069	
				Edge 3	641666	3625.0	15.50	15.26	0.200	0.211	50
				Edge 4	641666	3625.0	15.50	15.26	0.019	0.020	
Sub.5 Ant. (SRS2)	Head	SRS CW	0	Left Touch	641666	3625.0	14.00	13.16	0.056	0.067	
				Left Tilt	641666	3625.0	14.00	13.16	0.006	0.007	
				Right Touch	641666	3625.0	14.00	13.16	0.205	0.249	51
				Right Tilt	641666	3625.0	14.00	13.16	0.034	0.041	
	Body-worn	SRS CW	15	Rear	641666	3625.0	15.00	14.42	0.022	0.025	
				Front	641666	3625.0	15.00	14.42	0.015	0.017	
	Hotspot	SRS CW	10	Rear	641666	3625.0	15.00	14.42	0.049	0.056	
				Front	641666	3625.0	15.00	14.42	0.025	0.029	
				Edge 1	641666	3625.0	15.00	14.42	0.004	0.005	
				Edge 4	641666	3625.0	15.00	14.42	0.079	0.090	
Sub.8 Ant. (SRS3)	Head	SRS CW	0	Left Touch	641666	3625.0	13.00	12.72	0.034	0.036	
				Left Tilt	641666	3625.0	13.00	12.72	0.041	0.044	
				Right Touch	641666	3625.0	13.00	12.72	0.066	0.071	
				Right Tilt	641666	3625.0	13.00	12.72	0.078	0.083	
	Body-worn	SRS CW	15	Rear	641666	3625.0	15.00	13.70	0.027	0.036	52
				Front	641666	3625.0	15.00	13.70	0.006	0.008	
	Hotspot	SRS CW	10	Rear	641666	3625.0	15.00	13.70	0.051	0.069	
				Front	641666	3625.0	15.00	13.70	0.014	0.019	
				Edge 1	641666	3625.0	15.00	13.70	0.038	0.051	
				Edge 4	641666	3625.0	15.00	13.70	0.012	0.016	

Note(s):

NR Band n48(SRS1/SRS2/SRS3) tested using FTM mode.

10.16. NR Band n66 (40MHz Bandwidth)

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	349000	1745.0	1	214	25.00	24.28	0.146	0.172	
								108	54	25.00	24.17	0.201	0.243	53
					Left Tilt	349000	1745.0	1	214	25.00	24.28	0.086	0.101	
								108	54	25.00	24.17	0.089	0.108	
					Right Touch	349000	1745.0	1	214	25.00	24.28	0.169	0.199	
								108	54	25.00	24.17	0.184	0.223	
					Right Tilt	349000	1745.0	1	214	25.00	24.28	0.084	0.099	
								108	54	25.00	24.17	0.102	0.123	
		CP-OFDM	QPSK	0	Left Touch	349000	1745.0	1	1	23.50	22.44	0.121	0.154	
	Body-worn	DFT-s-OFDM	QPSK	15	Rear	349000	1745.0	1	214	25.00	24.28	0.378	0.446	
								108	54	25.00	24.17	0.430	0.521	54
					Front	349000	1745.0	1	214	25.00	24.28	0.299	0.353	
								108	54	25.00	24.17	0.281	0.340	
		CP-OFDM	QPSK	15	Rear	349000	1745.0	1	1	23.50	22.44	0.341	0.435	
	Hotspot	DFT-s-OFDM	QPSK	10	Rear	349000	1745.0	1	214	23.00	22.04	0.608	0.758	
								108	54	23.00	22.20	0.596	0.717	
					Front	349000	1745.0	1	214	23.00	22.04	0.475	0.593	
								108	54	23.00	22.20	0.479	0.576	
					Edge 3	349000	1745.0	1	214	23.00	22.04	0.640	0.798	55
								108	54	23.00	22.20	0.599	0.720	
					Edge 4	349000	1745.0	1	214	23.00	22.04	0.257	0.321	
								108	54	23.00	22.20	0.257	0.309	
		CP-OFDM	QPSK	10	Edge 3	349000	1745.0	1	1	23.00	21.51	0.517	0.729	

Antenna	RF Exposure Conditions	Modulation	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 2 Ant.	Product Specific-10g	DFT-s-OFDM	QPSK	11	Rear	349000	1745.0	1	214	25.00	24.28	0.392	0.463	
								108	54	25.00	24.17	0.435	0.527	
				13	Edge 3	349000	1745.0	1	214	25.00	24.28	0.414	0.489	
								108	54	25.00	24.17	0.463	0.561	
				0	Rear	349000	1745.0	1	214	23.00	22.04	1.510	1.884	
								108	54	23.00	22.18	1.500	1.812	
				0	Edge 3	349000	1745.0	1	214	23.00	22.04	1.580	1.971	56
								108	54	23.00	22.18	1.580	1.908	
		CP-OFDM	QPSK	0	Edge 3	349000	1745.0	1	1	23.00	21.50	1.380	1.949	

Note(s):

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

10.17. NR Band n77 (Voice/data/SRS0) (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)		Note.	Plot No.
										Tune-up limit	Meas.	Meas.	Scaled		
Sub 3 Ant.	Head	DFT-s-OFDM	QPSK	0	Left Touch	662000	3930.0	1	137	16.00	15.11	0.158	0.194		
								135	69	16.00	15.09	0.160	0.197		
					Left Tilt	662000	3930.0	1	137	16.00	15.11	0.126	0.155		
								135	69	16.00	15.09	0.130	0.160		
					Right Touch	633334	3500.0	1	137	16.00	14.91	0.556	0.715	1	
						650000	3750.0	1	137	16.00	14.48	0.506	0.718		
								135	69	16.00	14.46	0.558	0.795		
						662000	3930.0	1	137	16.00	15.11	0.761	0.935		
								135	69	16.00	15.09	0.753	0.929		
								270	0	16.00	15.08	0.807	0.997		57
					Right Tilt	650000	3750.0	1	137	16.00	14.48	0.307	0.436		
								135	69	16.00	14.46	0.304	0.433		
						662000	3930.0	1	137	16.00	15.11	0.365	0.448		
								135	69	16.00	15.09	0.371	0.457		
		CP-OFDM	QPSK	0	Right Touch	662000	3930.0	1	1	16.00	14.86	0.739	0.961	2	
	Body-worn	DFT-s-OFDM	QPSK	15	Rear	633334	3500.0	1	137	16.00	14.91	0.100	0.129	1	
						662000	3930.0	1	137	16.00	15.11	0.107	0.131		58
								135	69	16.00	15.09	0.105	0.129		
					Front	662000	3930.0	1	137	16.00	15.11	0.094	0.116		
								135	69	16.00	15.09	0.082	0.101		
		CP-OFDM	QPSK	15	Rear	662000	3930.0	1	1	16.00	14.86	0.086	0.112	2	
	Hotspot	DFT-s-OFDM	QPSK	10	Rear	662000	3930.0	1	137	16.00	15.11	0.207	0.254		
								135	69	16.00	15.09	0.198	0.244		
					Front	662000	3930.0	1	137	16.00	15.11	0.184	0.226		
								135	69	16.00	15.09	0.171	0.211		
					Edge 1	662000	3930.0	1	137	16.00	15.11	0.101	0.124		
								135	69	16.00	15.09	0.104	0.128		
					Edge 4	633334	3500.0	1	137	16.00	14.91	0.177	0.227	1	
						650000	3750.0	1	137	16.00	14.48	0.198	0.281		
								135	69	16.00	14.46	0.203	0.289		
						662000	3930.0	1	137	16.00	15.11	0.397	0.487		59
								135	69	16.00	15.09	0.373	0.460		
		CP-OFDM	QPSK	10	Edge 4	662000	3930	1	1	16.00	14.86	0.367	0.477	2	

Note(s):

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

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

Antenna	RF Exposure Conditions	Modulation	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Note.	Plot No.
							Tune-up limit	Meas.	Meas.	Scaled		
Main.2 Ant. (SRS1)	Head	SRS CW	0	Left Touch	633334	3500.0	14.00	13.15	0.000	0.000	1	
					662000	3930.0	16.50	16.41	0.000	0.000		
				Left Tilt	662000	3930.0	16.50	16.41	0.000	0.000		
				Right Touch	662000	3930.0	16.50	16.41	0.000	0.000		
				Right Tilt	662000	3930.0	16.50	16.41	0.000	0.000		
	Body-worn	SRS CW	15	Rear	662000	3930.0	16.50	16.41	0.000	0.000		
				Front	633334	3500.0	14.00	13.15	0.000	0.000	1	
					662000	3930.0	16.50	16.41	0.020	0.020		
	Hotspot	SRS CW	10	Rear	662000	3930.0	16.50	16.41	0.036	0.037		
				Front	662000	3930.0	16.50	16.41	0.061	0.062		
				Edge 3	633334	3500.0	14.00	13.15	0.004	0.005	1	
					662000	3930.0	16.50	16.41	0.132	0.135		
				Edge 4	662000	3930.0	16.50	16.41	0.011	0.011		
Sub.5 Ant. (SRS2)	Head	SRS CW	0	Left Touch	633334	3500.0	15.50	15.06	0.177	0.196		
				Left Tilt	633334	3500.0	15.50	15.06	0.060	0.067		
				Right Touch	633334	3500.0	15.50	15.06	0.482	0.533		60
					650000	3750.0	15.50	14.54	0.254	0.317	2	
				Right Tilt	633334	3500.0	15.50	15.06	0.097	0.108		
	Body-worn	SRS CW	15	Rear	633334	3500.0	15.50	15.06	0.063	0.070		
					650000	3750.0	15.50	14.54	0.024	0.030	2	
				Front	633334	3500.0	15.50	15.06	0.042	0.046		
	Hotspot	SRS CW	10	Rear	633334	3500.0	15.50	15.06	0.128	0.142		
				Front	633334	3500.0	15.50	15.06	0.069	0.076		
				Edge 1	633334	3500.0	15.50	15.06	0.002	0.002		
				Edge 4	633334	3500.0	15.50	15.06	0.171	0.189		
					650000	3750.0	15.50	14.54	0.071	0.088	2	
Sub.8 Ant. (SRS3)	Head	SRS CW	0	Left Touch	650000	3750.0	15.50	14.61	0.120	0.147		
				Left Tilt	650000	3750.0	15.50	14.61	0.144	0.177		
				Right Touch	650000	3750.0	15.50	14.61	0.234	0.287		
				Right Tilt	633334	3500.0	15.50	13.82	0.026	0.038	1	
					650000	3750.0	15.50	14.61	0.248	0.304		
	Body-worn	SRS CW	15	Rear	633334	3500.0	15.5	13.8	0.009	0.014	1	
					650000	3750.0	15.50	14.61	0.080	0.098		61
				Front	650000	3750.0	15.50	14.61	0.000	0.000		
	Hotspot	SRS CW	10	Rear	633334	3500.0	15.50	13.82	0.011	0.016	1	
					650000	3750.0	15.50	14.61	0.158	0.194		62
				Front	650000	3750.0	15.50	14.61	0.027	0.034		
				Edge 1	650000	3750.0	15.50	14.61	0.092	0.113		
				Edge 4	650000	3750.0	15.50	14.61	0.025	0.030		

Note(s):

1. NR Band n77-DoD are tested at worst configuration of NR Band n77 band.
2. NR Band n77 are tested at worst configuration of NR Band n77-DoD band.
3. NR Band n77(SRS1/SRS2/SRS3) tested using FTM mode.

10.19. Wi-Fi (DTS Band)

DTS SISO SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled		
SISO Ant.1	2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	6	2437.0	0.055	98.7%	13.00	12.32				
						Left Tilt	6	2437.0	0.037	98.7%	13.00	12.32				
						Right Touch	6	2437.0	0.278	98.7%	13.00	12.32	0.210	0.249	1	63
						Rightt Tilt	6	2437.0	0.100	98.7%	13.00	12.32				
			Body-worn	Off	15	Rear	6	2437.0	0.332	98.7%	19.00	18.75	0.252	0.270	1	64
						Front	6	2437.0	0.113	98.7%	19.00	18.75				
			Hotspot	Off	10	Rear	6	2437.0	0.706	98.7%	19.00	18.75	0.537	0.576		65
						Front	6	2437.0	0.248	98.7%	19.00	18.75				
						Edge 1	6	2437.0	0.108	98.7%	19.00	18.75				
						Edge 4	6	2437.0	0.547	98.7%	19.00	18.75	0.406	0.436	2	
SISO Ant.2	2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	1	2412.0	0.064	98.7%	13.00	12.08				
						Left Tilt	1	2412.0	0.101	98.7%	13.00	12.08				
						Right Touch	1	2412.0	0.163	98.7%	13.00	12.08				
						Rightt Tilt	1	2412.0	0.175	98.7%	13.00	12.08	0.129	0.162	1	
			Body-worn	Off	15	Rear	6	2437.0	0.076	98.7%	19.00	18.29	0.061	0.073	1	
						Front	6	2437.0	0.046	98.7%	19.00	18.29				
			Hotspot	Off	10	Rear	6	2437.0	0.180	98.7%	19.00	18.29	0.147	0.175	1	
						Front	6	2437.0	0.074	98.7%	19.00	18.29				
						Edge 1	6	2437.0	0.134	98.7%	19.00	18.29				
						Edge 4	6	2437.0	0.046	98.7%	19.00	18.29				

DTS MIMO SAR results

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled		
MIMO Ant.1	2.4GHz	802.11b 1 Mbps	Body-worn	Off	15	Rear	6	2437.0	0.205	98.5%	19.00	18.29				
						Front	6	2437.0	0.081	98.5%	19.00	18.29				
			Hotspot	Off	10	Rear	6	2437.0	0.391	98.5%	19.00	18.29	0.320	0.383	1	66
						Front	6	2437.0	0.133	98.5%	19.00	18.29				
						Edge 1	6	2437.0	0.295	98.5%	19.00	18.29				
						Edge 4	6	2437.0	0.137	98.5%	19.00	18.29	0.114	0.136	4	
MIMO Ant.2	2.4GHz	802.11b 1 Mbps	Body-worn	Off	15	Rear	6	2437.0	0.205	98.5%	19.00	18.51	0.165	0.188	1	67
						Front	6	2437.0	0.081	98.5%	19.00	18.51				
			Hotspot	Off	10	Rear	6	2437.0	0.391	98.5%	19.00	18.51				
						Front	6	2437.0	0.133	98.5%	19.00	18.51				
						Edge 1	6	2437.0	0.295	98.5%	19.00	18.51	0.231	0.263	4	
						Edge 4	6	2437.0	0.137	98.5%	19.00	18.51				

Note(s):

1. When the Highest reported SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest reported SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest reported SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was reported.
3. Testing for a second channel was required because the reported SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
5. SAR testing is not required for OFDM mode(s) when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

10.20. Wi-Fi (U-NII Bands)

U-NII 2A SISO SAR Results

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled		
SISO Ant.1	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	58	5290.0	0.062	95.2%	11.00	10.41						
						Left Tilt	58	5290.0	0.061	95.2%	11.00	10.41						
						Right Touch	58	5290.0	0.123	95.2%	11.00	10.41	0.084	0.101			1	68
						Right Tilt	58	5290.0	0.077	95.2%	11.00	10.41						
		802.11a 6 Mbps	Body-worn	Off	15	Rear	56	5280.0	0.460	96.0%	17.50	17.07	0.320	0.368			1	69
						Front	56	5280.0	0.136	96.0%	17.50	17.07						
			Product Specific 10-g	Off	0	Rear	56	5280.0	4.268	96.0%	17.50	17.07			0.490	0.564	2	
						Front	56	5280.0	2.940	96.0%	17.50	17.07			0.501	0.576	4	
						Edge 1	56	5280.0	0.552	96.0%	17.50	17.07						
						Edge 4	56	5280.0	6.020	96.0%	17.50	17.07			1.100	1.265		70
SISO Ant.2	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	58	5290.0	0.015	95.2%	11.00	9.55						
						Left Tilt	58	5290.0	0.016	95.2%	11.00	9.55						
						Right Touch	58	5290.0	0.028	95.2%	11.00	9.55	0.000	0.000			1	
						Right Tilt	58	5290.0	0.010	95.2%	11.00	9.55						
		802.11a 6 Mbps	Body-worn	Off	15	Rear	60	5300.0	0.232	96.0%	17.50	16.21	0.100	0.140			1	
						Front	60	5300.0	0.009	96.0%	17.50	16.21						
			Product Specific 10-g	Off	0	Rear	60	5300.0	3.787	96.0%	17.50	16.21			0.439	0.616	1	
						Front	60	5300.0	0.469	96.0%	17.50	16.21						
						Edge 1	60	5300.0	0.914	96.0%	17.50	16.21						
						Edge 4	60	5300.0	0.107	96.0%	17.50	16.21						

U-NII 2A MIMO SAR Results

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled		
MIMO Ant.1	5.3 GHz U-NII 2A	802.11a 6 Mbps	Product Specific 10-g	Off	0	Rear	56	5280.0	1.891	97.8%	17.50	16.94			0.336	0.391		
						Front	56	5280.0	2.949	97.8%	17.50	16.94						
						Edge 1	56	5280.0	0.893	97.8%	17.50	16.94						
						Edge 4	56	5280.0	5.824	97.8%	17.50	16.94			0.756	0.879		71
MIMO Ant.2	5.3 GHz U-NII 2A	802.11a 6 Mbps	Product Specific 10-g	Off	0	Rear	56	5280.0	1.891	97.8%	17.50	15.70			0.290	0.449	2	
						Front	56	5280.0	2.949	97.8%	17.50	15.70						
						Edge 1	56	5280.0	0.893	97.8%	17.50	15.70						
						Edge 4	56	5280.0	5.824	97.8%	17.50	15.70						

Note(s):

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

U-NII 2C SISO SAR Results

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled		
SISO Ant.1	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	138	5690.0	0.018	95.2%	11.00	10.80						
						Left Tilt	138	5690.0	0.017	95.2%	11.00	10.80						
						Right Touch	138	5690.0	0.096	95.2%	11.00	10.80	0.085	0.093			1	72
						Right Tilt	138	5690.0	0.036	95.2%	11.00	10.80						
		802.11a 6 Mbps	Body-worn	Off	15	Rear	120	5600.0	0.140	96.0%	17.50	16.74	0.049	0.061				
						Front	120	5600.0	0.085	96.0%	17.50	16.74						
			Product Specific 10-g	Off	0	Rear	120	5600.0	1.920	96.0%	17.50	16.74			0.168	0.209	4	
						Front	120	5600.0	3.466	96.0%	17.50	16.74						
						Edge 1	120	5600.0	0.321	96.0%	17.50	16.74						
						Edge 4	120	5600.0	5.944	96.0%	17.50	16.74			0.419	0.520	1	
SISO Ant.2	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	138	5690.0	0.038	95.2%	11.00	10.38						
						Left Tilt	138	5690.0	0.035	95.2%	11.00	10.38						
						Right Touch	138	5690.0	0.041	95.2%	11.00	10.38	0.032	0.039			1	
						Right Tilt	138	5690.0	0.040	95.2%	11.00	10.38						
		802.11a 6 Mbps	Body-worn	Off	15	Rear	120	5600.0	0.297	96.0%	17.50	16.28	0.138	0.190			1	73
						Front	120	5600.0	0.009	96.0%	17.50	16.28						
			Product Specific 10-g	Off	0	Rear	120	5600.0	3.935	96.0%	17.50	16.28			0.632	0.872	1	74
						Front	120	5600.0	0.694	96.0%	17.50	16.28						
						Edge 1	120	5600.0	1.244	96.0%	17.50	16.28						
						Edge 4	120	5600.0	0.118	96.0%	17.50	16.28						

U-NII 2C MIMO SAR Results

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled		
MIMO Ant.1	5.5 GHz U-NII 2C	802.11a 6 Mbps	Product Specific 10-g	Off	0	Rear	120	5600.0	5.146	97.8%	17.50	16.47						
						Front	120	5600.0	3.422	97.8%	17.50	16.47						
						Edge 1	120	5600.0	0.730	97.8%	17.50	16.47						
						Edge 4	120	5600.0	2.446	97.8%	17.50	16.47						
MIMO Ant.2	5.5 GHz U-NII 2C	802.11a 6 Mbps	Product Specific 10-g	Off	0	Rear	120	5600.0	5.146	97.8%	17.50	16.23			0.507	0.695	1	75
						Front	120	5600.0	3.422	97.8%	17.50	16.23						
						Edge 1	120	5600.0	0.730	97.8%	17.50	16.23						
						Edge 4	120	5600.0	2.446	97.8%	17.50	16.23						

Note(s):

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

U-NII 3 Results

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled		
SISO Ant.1	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	155	5775.0	0.016	95.2%	11.00	10.04				
						Left Tilt	155	5775.0	0.013	95.2%	11.00	10.04				
						Right Touch	155	5775.0	0.097	95.2%	11.00	10.04	0.063	0.083	1	76
						Right Tilt	155	5775.0	0.045	95.2%	11.00	10.04				
		802.11a 6 Mbps	Body-worn	Off	15	Rear	149	5745.0	0.038	96.0%	17.50	16.63	0.018	0.023	1	
						Front	149	5745.0	0.033	96.0%	17.50	16.63				
			Hotspot	Off	10	Rear	149	5745.0	0.099	96.0%	17.50	16.63	0.066	0.084	4	
						Front	149	5745.0	0.117	96.0%	17.50	16.63				
						Edge 1	149	5745.0	0.053	96.0%	17.50	16.63				
						Edge 4	149	5745.0	0.138	96.0%	17.50	16.63	0.098	0.125	1	
SISO Ant.2	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	155	5775.0	0.043	95.2%	11.00	10.73				
						Left Tilt	155	5775.0	0.040	95.2%	11.00	10.73				
						Right Touch	155	5775.0	0.052	95.2%	11.00	10.73				
						Right Tilt	155	5775.0	0.089	95.2%	11.00	10.73	0.051	0.057	1	
		802.11a 6 Mbps	Body-worn	Off	15	Rear	157	5785.0	0.153	96.0%	17.50	16.97	0.103	0.121	1	77
						Front	157	5785.0	0.052	96.0%	17.50	16.97				
			Hotspot	Off	10	Rear	149	5745.0	0.217	96.0%	17.50	16.85	0.185	0.224	1	78
						Front	149	5745.0	0.085	96.0%	17.50	16.85				
						Edge 1	149	5745.0	0.171	96.0%	17.50	16.85				
						Edge 4	149	5745.0	0.047	96.0%	17.50	16.85				

Note(s):

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

10.21. Bluetooth

Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
2.4GHz	EDR	Head	On	0	Left Touch	0	2402.0	77.1%	13.00	12.70	0.030	0.033	
					Left Tilt	0	2402.0	77.1%	13.00	12.70	0.015	0.016	
					Right Touch	0	2402.0	77.1%	13.00	12.70	0.142	0.154	79
					Rightt Tilt	0	2402.0	77.1%	13.00	12.70	0.063	0.068	
	GFSK (BDR)	Body-worn	Off	15	Rear	78	2480.0	77.1%	15.50	14.75	0.078	0.094	80
					Front	78	2480.0	77.1%	15.50	14.75	0.035	0.042	
		Hotspot	Off	10	Rear	78	2480.0	77.1%	15.50	14.75	0.171	0.206	81
					Front	78	2480.0	77.1%	15.50	14.75	0.068	0.082	
					Edge 1	78	2480.0	77.1%	15.50	14.75	0.025	0.030	
					Edge 4	78	2480.0	77.1%	15.50	14.75	0.138	0.166	

10.22. NFC

Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Test setup		Freq. (MHz)	10-g SAR (W/kg)	Plot No.
				Type	Bitrate		Meas.	
PBRS	Product Specific 10-g	0	Rear	A	106	13.6	0.023	
				B	106	13.6	0.028	82
				F	212	13.6	0.016	
				B	212	13.6	0.015	
				B	424	13.6	0.015	
			Front	B	106	13.6	0.000	
			Edge 1	B	106	13.6	0.000	
			Edge 4	B	106	13.6	0.000	

Note(s):
NFC SAR tested using worst configuration in all test positions.

11. SAR Measurement Variability

In accordance with published RF Exposure KDB 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is <0.8 or 2 W/kg (1-g or 10-g respectively); steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.8 or 2 W/kg (1-g or 10-g respectively), repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 or 3.6 W/kg (~ 10% from the 1-g or 10-g respective SAR limit).
4) Perform a third repeated measurement only if the original, first, or second repeated measurement is ≥ 1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Peak spatial-average (1g of tissue)

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
1900	LTE Band 2	Hotspot	Edge 3	Yes	0.965	0.959	1.01
3900	NR Band n77	Head	Right Touch	Yes	0.807	0.802	1.01

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	Simultaneous transmission scenarios						
Head & Body-worn & Hotspot & Phablet-10g	1	WWAN (2G/3G/LTE/NR)	+	(DTS Ant.1	or	DTS Ant.2)		
	2	WWAN (2G/3G/LTE/NR)	+	DTS MIMO				
	3	WWAN (2G/3G/LTE/NR)	+	(UNII Ant.1	or	UNII Ant.2)		
	4	WWAN (2G/3G/LTE/NR)	+	UNII MIMO				
	5	WWAN (2G/3G/LTE/NR)	+	BT				
	6	WWAN (2G/3G/LTE/NR)	+	BT	+	(UNII Ant.1	or	UNII Ant.2)
	7	WWAN (2G/3G/LTE/NR)	+	BT	+	UNII MIMO		
	8	ENDC (LTE + NR)	+	(DTS Ant.1	or	DTS Ant.2)		
	9	ENDC (LTE + NR)	+	DTS MIMO				
	10	ENDC (LTE + NR)	+	(UNII Ant.1	or	UNII Ant.2)		
	11	ENDC (LTE + NR)	+	UNII MIMO				
	12	ENDC (LTE + NR)	+	BT				
	13	ENDC (LTE + NR)	+	BT	+	(UNII Ant.1	or	UNII Ant.2)
	14	ENDC (LTE + NR)	+	BT	+	UNII MIMO		
Phablet-10g	15	Scenatios item (1-14)	+	NFC				

Notes:

1. DTS supports Wi-Fi Direct, Hotspot and VoIP.
2. U-NII supports Wi-Fi Direct, Hotspot and VoIP.
3. GPRS, W-CDMA, LTE, NR supports Hotspot and VoIP
4. U-NII Radio can transmit simultaneously with Bluetooth Radio.
5. NR Radio support to both SA and NSA(ENDC) Radio.
6. BT tethering is considered about each RF exposure conditions.
7. NFC can transmit simultaneously with other Radios in Phablet-10g condition.

Note(s):

For EN-DC mode, LSI TAS algorithm in WWAN adds directly the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from 5G NR. LSI TAS algorithm controls the total RF exposure from both 4G and 5G NR to not exceed the RF exposure from each 4G or 5G individually. Therefore, simultaneous transmission compliance between 4G+5G NR operation is demonstrated in the TAS validation Report during algorithm validation. In this SAR Report, simultaneous transmission compliance was evaluated individually with other Radios (WLAN or BT) using one of 4G or 5G NR.

Simultaneous transmission SAR test exclusion considerations

KDB 447498 D04 Interim General RF Exposure Guidance provides two procedures for determining simultaneous transmission SAR test exclusion: Sum of SAR

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.

12.1. Sum of the SAR for GSM850 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.402	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.651	0.564	0.813	0.560	0.556	0.714
Body-Worn (1-g SAR)	All positions	0.197	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.467	0.270	0.385	0.755	0.291	0.849
Hotspot (1-g SAR)	Rear	0.533	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.109	0.708	0.916	0.841	0.739	1.047
	Front	0.179	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.755	0.354	0.562	0.528	0.261	0.610
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2	0.394													
	Edge 3	0.257													
	Edge 4		0.436	0.175	0.136	0.125	0.224	0.349	0.166						
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2					0.000	0.000	0.000							
	Edge 3					0.000	0.000	0.000							
	Edge 4					1.265	0.872	2.137							

12.2. Sum of the SAR for GSM1900 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.122	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.371	0.284	0.533	0.280	0.276	0.434
Body-Worn (1-g SAR)	All positions	0.299	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.569	0.372	0.487	0.857	0.393	0.951
Hotspot (1-g SAR)	Rear	0.560	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.136	0.735	0.943	0.868	0.766	1.074
	Front	0.397	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.973	0.572	0.780	0.746	0.479	0.828
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	0.658													
	Edge 4	0.222	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.658	0.397	0.358	0.571	0.388	0.737
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2					0.000	0.000	0.000							
	Edge 3					0.000	0.000	0.000							
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.3. Sum of the SAR for WCDMA Band II & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.279	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.528	0.441	0.690	0.437	0.433	0.591
Body-Worn (1-g SAR)	All positions	0.478	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.748	0.551	0.666	1.036	0.572	1.130
Hotspot (1-g SAR)	Rear	0.557	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.133	0.732	0.940	0.865	0.763	1.071
	Front	0.393	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.969	0.568	0.776	0.742	0.475	0.824
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	0.789													
	Edge 4	0.265	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.701	0.440	0.401	0.614	0.431	0.780
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3	1.094													
	Edge 4					1.265	0.872	2.137							

12.4. Sum of the SAR for WCDMA Band V & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.242	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.491	0.404	0.653	0.400	0.396	0.554
Body-Worn (1-g SAR)	All positions	0.250	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.520	0.323	0.438	0.808	0.344	0.902
Hotspot (1-g SAR)	Rear	0.527	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.103	0.702	0.910	0.835	0.733	1.041
	Front	0.224	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.800	0.399	0.607	0.573	0.306	0.655
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2	0.242													
	Edge 3	0.323													
	Edge 4		0.436	0.175	0.136	0.125	0.224	0.349	0.166						
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2					0.000	0.000	0.000							
	Edge 3					0.000	0.000	0.000							
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.5. Sum of the SAR for LTE Band 2 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.288	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.537	0.450	0.699	0.446	0.442	0.600
Body-Worn (1-g SAR)	All positions	0.619	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.889	0.692	0.807	1.177	0.713	1.271
Hotspot (1-g SAR)	Rear	0.926	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.502	1.101	1.309	1.234	1.132	1.440
	Front	0.664	0.576	0.175	0.383	0.125	0.224	0.349	0.082	1.240	0.839	1.047	1.013	0.746	1.095
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	1.237													
	Edge 4	0.424	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.860	0.599	0.560	0.773	0.590	0.939
Product Specific (10-g SAR)	Rear	2.347				0.564	0.872	1.436		2.347	2.347	2.347	3.783	2.347	3.783
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3	1.792													
	Edge 4					1.265	0.872	2.137							

12.6. Sum of the SAR for LTE Band 5 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.345	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.594	0.507	0.756	0.503	0.499	0.657
Body-Worn (1-g SAR)	All positions	0.396	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.666	0.469	0.584	0.954	0.490	1.048
Hotspot (1-g SAR)	Rear	0.662	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.238	0.837	1.045	0.970	0.868	1.176
	Front	0.332	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.908	0.507	0.715	0.681	0.414	0.763
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2	0.505													
	Edge 3	0.449													
	Edge 4		0.436	0.175	0.136	0.125	0.224	0.349	0.166						
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2					0.000	0.000	0.000							
	Edge 3					0.000	0.000	0.000							
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.7. Sum of the SAR for LTE Band 7 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.218	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.467	0.380	0.629	0.376	0.372	0.530
Body-Worn (1-g SAR)	All positions	0.355	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.625	0.428	0.543	0.913	0.449	1.007
Hotspot (1-g SAR)	Rear	0.455	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.031	0.630	0.838	0.763	0.661	0.969
	Front	0.308	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.884	0.483	0.691	0.657	0.390	0.739
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	0.427													
	Edge 4	0.125	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.561	0.300	0.261	0.474	0.291	0.640
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

12.8. Sum of the SAR for LTE Band 12 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.308	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.557	0.470	0.719	0.466	0.462	0.620
Body-Worn (1-g SAR)	All positions	0.407	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.677	0.480	0.595	0.965	0.501	1.059
Hotspot (1-g SAR)	Rear	0.451	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.027	0.626	0.834	0.759	0.657	0.965
	Front	0.345	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.921	0.520	0.728	0.694	0.427	0.776
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2	0.431													
	Edge 3	0.319													
	Edge 4		0.436	0.175	0.136	0.125	0.224	0.349	0.166						
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2					0.000	0.000	0.000							
	Edge 3					0.000	0.000	0.000							
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.9. Sum of the SAR for LTE Band 13 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.336	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.585	0.498	0.747	0.494	0.490	0.648
Body-Worn (1-g SAR)	All positions	0.480	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.750	0.553	0.668	1.038	0.574	1.132
Hotspot (1-g SAR)	Rear	0.557	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.133	0.732	0.940	0.865	0.763	1.071
	Front	0.384	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.960	0.559	0.767	0.733	0.466	0.815
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2	0.686													
	Edge 3	0.359													
	Edge 4		0.436	0.175	0.136	0.125	0.224	0.349	0.166						
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2					0.000	0.000	0.000							
	Edge 3					0.000	0.000	0.000							
	Edge 4					1.265	0.872	2.137							

12.10. Sum of the SAR for LTE Band 48 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	1.040	0.249	0.162	0.411	0.101	0.057	0.158	0.154	1.289	1.202	1.451	1.198	1.194	1.352
Body-Worn (1-g SAR)	All positions	0.240	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.510	0.313	0.428	0.798	0.334	0.892
Hotspot (1-g SAR)	Rear	0.394	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.970	0.569	0.777	0.702	0.600	0.908
	Front	0.180	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.756	0.355	0.563	0.529	0.262	0.611
	Edge 1	0.250	0.576	0.175	0.263	0.125	0.224	0.349	0.030	0.826	0.425	0.513	0.599	0.280	0.629
	Edge 2														
	Edge 3														
	Edge 4	0.482	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.918	0.657	0.618	0.831	0.648	0.997
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.11. Sum of the SAR for LTE Band 66 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.308	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.557	0.470	0.719	0.466	0.462	0.620
Body-Worn (1-g SAR)	All positions	0.604	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.874	0.677	0.792	1.162	0.698	1.256
Hotspot (1-g SAR)	Rear	0.751	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.327	0.926	1.134	1.059	0.957	1.265
	Front	0.655	0.576	0.175	0.383	0.125	0.224	0.349	0.082	1.231	0.830	1.038	1.004	0.737	1.086
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	1.001													
	Edge 4	0.360	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.796	0.535	0.496	0.709	0.526	0.875
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3	2.578													
	Edge 4					1.265	0.872	2.137							

12.12. Sum of the SAR for NR Band n2 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.264	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.513	0.426	0.675	0.422	0.418	0.576
Body-Worn (1-g SAR)	All positions	0.564	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.834	0.637	0.752	1.122	0.658	1.216
Hotspot (1-g SAR)	Rear	0.796	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.372	0.971	1.179	1.104	1.002	1.310
	Front	0.480	0.576	0.175	0.383	0.125	0.224	0.349	0.082	1.056	0.655	0.863	0.829	0.562	0.911
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	0.874													
	Edge 4	0.325	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.761	0.500	0.461	0.674	0.491	0.840
Product Specific (10-g SAR)	Rear	1.961				0.564	0.872	1.436		1.961	1.961	1.961	3.397	1.961	3.397
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3	1.214													
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.13. Sum of the SAR for NR Band n5 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.357	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.606	0.519	0.768	0.515	0.511	0.669
Body-Worn (1-g SAR)	All positions	0.349	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.619	0.422	0.537	0.907	0.443	1.001
Hotspot (1-g SAR)	Rear	0.630	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.206	0.805	1.013	0.938	0.836	1.144
	Front	0.388	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.964	0.563	0.771	0.737	0.470	0.819
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2	0.403													
	Edge 3	0.402													
	Edge 4		0.436	0.175	0.136	0.125	0.224	0.349	0.166						
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2					0.000	0.000	0.000							
	Edge 3					0.000	0.000	0.000							
	Edge 4					1.265	0.872	2.137							

12.14. Sum of the SAR for NR Band n48 (Voice/data/SRS0) & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.241	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.490	0.403	0.652	0.399	0.395	0.553
Body-Worn (1-g SAR)	All positions	0.087	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.357	0.160	0.275	0.645	0.181	0.739
Hotspot (1-g SAR)	Rear	0.152	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.728	0.327	0.535	0.460	0.358	0.666
	Front	0.085	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.661	0.260	0.468	0.434	0.167	0.516
	Edge 1	0.074	0.576	0.175	0.263	0.125	0.224	0.349	0.030	0.650	0.249	0.337	0.423	0.104	0.453
	Edge 2														
	Edge 3														
	Edge 4	0.201	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.637	0.376	0.337	0.550	0.367	0.716
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.15. Sum of the SAR for NR Band n48 (SRS1) & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.000	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.249	0.162	0.411	0.158	0.154	0.312
Body-Worn (1-g SAR)	All positions	0.029	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.299	0.102	0.217	0.587	0.123	0.681
Hotspot (1-g SAR)	Rear	0.066	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.642	0.241	0.449	0.374	0.272	0.580
	Front	0.069	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.645	0.244	0.452	0.418	0.151	0.500
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	0.211													
	Edge 4	0.020	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.456	0.195	0.156	0.369	0.186	0.535
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

12.16. Sum of the SAR for NR Band n48 (SRS2) & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.249	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.498	0.411	0.660	0.407	0.403	0.561
Body-Worn (1-g SAR)	All positions	0.025	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.295	0.098	0.213	0.583	0.119	0.677
Hotspot (1-g SAR)	Rear	0.056	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.632	0.231	0.439	0.364	0.262	0.570
	Front	0.029	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.605	0.204	0.412	0.378	0.111	0.460
	Edge 1	0.005	0.576	0.175	0.263	0.125	0.224	0.349	0.030	0.581	0.180	0.268	0.354	0.035	0.384
	Edge 2														
	Edge 3														
	Edge 4	0.090	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.526	0.265	0.226	0.439	0.256	0.605
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.17. Sum of the SAR for NR Band n48 (SRS3) & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5 / 1+6)	1+8	1+7+8 (1+5+8 / 1+6+8)
Head (1-g SAR)	All positions	0.083	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.332	0.245	0.494	0.241	0.237	0.395
Body-Worn (1-g SAR)	All positions	0.036	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.306	0.109	0.224	0.594	0.130	0.688
Hotspot (1-g SAR)	Rear	0.069	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.645	0.244	0.452	0.377	0.275	0.583
	Front	0.019	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.595	0.194	0.402	0.368	0.101	0.450
	Edge 1	0.051	0.576	0.175	0.263	0.125	0.224	0.349	0.030	0.627	0.226	0.314	0.400	0.081	0.430
	Edge 2														
	Edge 3														
	Edge 4	0.016	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.452	0.191	0.152	0.365	0.182	0.531
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

12.18. Sum of the SAR for NR Band n66 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5 / 1+6)	1+8	1+7+8 (1+5+8 / 1+6+8)
Head (1-g SAR)	All positions	0.243	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.492	0.405	0.654	0.401	0.397	0.555
Body-Worn (1-g SAR)	All positions	0.521	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.791	0.594	0.709	1.079	0.615	1.173
Hotspot (1-g SAR)	Rear	0.758	0.576	0.175	0.383	0.084	0.224	0.308	0.206	1.334	0.933	1.141	1.066	0.964	1.272
	Front	0.593	0.576	0.175	0.383	0.125	0.224	0.349	0.082	1.169	0.768	0.976	0.942	0.675	1.024
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	0.798													
	Edge 4	0.321	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.757	0.496	0.457	0.670	0.487	0.836
Product Specific (10-g SAR)	Rear	1.884				0.564	0.872	1.436		1.884	1.884	1.884	3.320	1.884	3.320
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3	1.971													
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.19. Sum of the SAR for NR Band n77 (Voice/data/SRS0) & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5 / 1+6)	1+8	1+7+8 (1+5+8 / 1+6+8)
Head (1-g SAR)	All positions	0.997	0.249	0.162	0.411	0.101	0.057	0.158	0.154	1.246	1.159	1.408	1.155	1.151	1.309
Body-Worn (1-g SAR)	All positions	0.131	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.401	0.204	0.319	0.689	0.225	0.783
Hotspot (1-g SAR)	Rear	0.254	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.830	0.429	0.637	0.562	0.460	0.768
	Front	0.226	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.802	0.401	0.609	0.575	0.308	0.657
	Edge 1	0.128	0.576	0.175	0.263	0.125	0.224	0.349	0.030	0.704	0.303	0.391	0.477	0.158	0.507
	Edge 2														
	Edge 3														
	Edge 4	0.487	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.923	0.662	0.623	0.836	0.653	1.002
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

12.20. Sum of the SAR for NR Band n77 (SRS1) & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5 / 1+6)	1+8	1+7+8 (1+5+8 / 1+6+8)
Head (1-g SAR)	All positions	0.000	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.249	0.162	0.411	0.158	0.154	0.312
Body-Worn (1-g SAR)	All positions	0.020	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.290	0.093	0.208	0.578	0.114	0.672
Hotspot (1-g SAR)	Rear	0.037	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.613	0.212	0.420	0.345	0.243	0.551
	Front	0.062	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.638	0.237	0.445	0.411	0.144	0.493
	Edge 1		0.576	0.175	0.263	0.125	0.224	0.349	0.030						
	Edge 2														
	Edge 3	0.135													
	Edge 4	0.011	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.447	0.186	0.147	0.360	0.177	0.526
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.21. Sum of the SAR for NR Band n77 (SRS2) & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.533	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.782	0.695	0.944	0.691	0.687	0.845
Body-Worn (1-g SAR)	All positions	0.070	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.340	0.143	0.258	0.628	0.164	0.722
Hotspot (1-g SAR)	Rear	0.142	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.718	0.317	0.525	0.450	0.348	0.656
	Front	0.076	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.652	0.251	0.459	0.425	0.158	0.507
	Edge 1	0.002	0.576	0.175	0.263	0.125	0.224	0.349	0.030	0.578	0.177	0.265	0.351	0.032	0.381
	Edge 2														
	Edge 3														
	Edge 4	0.189	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.625	0.364	0.325	0.538	0.355	0.704
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

12.22. Sum of the SAR for NR Band n77 (SRS3) & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)								Sum of SAR (W/kg)					
		WWAN	DTS Ant.1	DTS Ant.2	DTS MIMO	UNII Ant.1	UNII Ant.2	UNII MIMO	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS MIMO	WWAN + UNII MIMO	WWAN + BT	WWAN + BT + UNII MIMO
		1	2	3	4	5	6	7	8	1+2	1+3	1+4	1+7 (1+5/1+6)	1+8	1+7+8 (1+5+8/1+6+8)
Head (1-g SAR)	All positions	0.304	0.249	0.162	0.411	0.101	0.057	0.158	0.154	0.553	0.466	0.715	0.462	0.458	0.616
Body-Worn (1-g SAR)	All positions	0.098	0.270	0.073	0.188	0.368	0.190	0.558	0.094	0.368	0.171	0.286	0.656	0.192	0.750
Hotspot (1-g SAR)	Rear	0.194	0.576	0.175	0.383	0.084	0.224	0.308	0.206	0.770	0.369	0.577	0.502	0.400	0.708
	Front	0.034	0.576	0.175	0.383	0.125	0.224	0.349	0.082	0.610	0.209	0.417	0.383	0.116	0.465
	Edge 1	0.113	0.576	0.175	0.263	0.125	0.224	0.349	0.030	0.689	0.288	0.376	0.462	0.143	0.492
	Edge 2														
	Edge 3														
	Edge 4	0.030	0.436	0.175	0.136	0.125	0.224	0.349	0.166	0.466	0.205	0.166	0.379	0.196	0.545
Product Specific (10-g SAR)	Rear					0.564	0.872	1.436							
	Front					0.576	0.872	1.448							
	Edge 1					1.265	0.872	2.137							
	Edge 2														
	Edge 3														
	Edge 4					1.265	0.872	2.137							

Note(s):

1. Green value is estimated SAR value.
2. Blue value is sum SAR of (DTS Ant.1+Ant.2 or UNII Ant.1 + Ant.2).
3. UNII MIMO SAR are using the sum of UNII Ant.1 and UNII Ant.2 in All RF exposure conditions.
   So Simultaneous transmission scenario (1+7 / 1+7+8) contains to (1+5 & 1+6) / (1+5+8 & 1+6+8) respectively.

12.23. Sum of the SAR for WWAN & Wi-Fi & BT & NFC

Product Specific 10-g exposure condition

RF Exposure	Test Position	WWAN & WLAN & BT's Highest Sum SAR (W/kg)	Highest NFC SAR (W/kg)	WWAN & WLAN & BT & NFC's Sum SAR (W/kg)
Product Specific (10-g SAR)	All positions	3.783	0.028	3.811

Note(s):

1. WWAN & WLAN & BT's highest sum SAR refer to Sum SAR result of Section.12.5.

Conclusion:

Simultaneous Transmission SAR analysis results is satisfied the FCC Limit requirement according to follow procedures with "Sum of SAR".

Appendixes

Refer to separated files for the following appendixes.

4790632299-S1 FCC Report SAR_App A_Photos & Ant. Locations

4790632299-S1 FCC Report SAR_App B_Highest SAR Test Plots

4790632299-S1 FCC Report SAR_App C_System Check Plots

4790632299-S1 FCC Report SAR_App D_SAR Tissue Ingredients

4790632299-S1 FCC Report SAR_App E_Probe Cal. Certificates

4790632299-S1 FCC Report SAR_App F_Dipole Cal. Certificates

4790632299-S1 FCC Report SAR_App G_Proximity Sensor feature

4790632299-S1 FCC Report SAR_App H_LTE Carrier Aggregation

END OF REPORT