



FCC 47 CFR § 2.1093
IEEE Std 1528-2013

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

FOR

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

MODEL NUMBER: SC-55E, SCG28

FCC ID: A3LSMF956JPN

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TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	5/31/2024	Initial Issue	--
V2	6/12/2024	ULCA measure power modified. -Revised Appendix G. ULCA reported SAR modified. -Revised SAR results in ULCA SAR table in Sec.10.1.9. -Revised SAR results in ULCA SAR table in Sec.10.2.9. Ant.E NR Band n66 for EN-DC added. -Revised Highest Reported SAR table in Sec. 1.1. -Revised Dielectric Property Measurements Results in Sec.8.1. -Revised System Check Results in Sec.8.2. -Revised Appendix C -Added band in SAR Characterizations table in Sec.6.3. -Added band in NR-Sub6 Bands table in Sec.6.4. -Added band in Measured results table in Sec.9.4. -Added band in SAR results table in Sec10.1.11. -Added band in SAR results table in Sec.10.2.11. -Added band in Highest SAR results table in Sec.12.1. -Added band in Highest SAR results table in Sec.12.2. -Added plot in Appendix B	Taehun Kim

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1. Attestation of Test Results

Applicant Name		SAMSUNG ELECTRONICS CO.,LTD.				
FCC ID		A3LSMF956JPN				
Model Number		SC-55E, SCG28				
Applicable Standards		FCC 47 CFR § 2.1093 IEEE Std 1528-2013 Published RF exposure KDB procedures				
Exposure Category		SAR Limits (W/Kg)				
		1g SAR			10g SAR	
General population / Uncontrolled exposure		1.6			4.0	
RF Exposure Conditions		Equipment Class - The Highest Reported SAR (W/kg)				
		PCE	DTS	NII	DSS	DXX
Phablet	Head	1.10	0.37	0.81	0.34	N/A
	Body-worn	1.09	0.36	0.55	0.27	N/A
	Hotspot	1.24	0.37	N/A	0.39	N/A
	Product Specific 10g	3.08	N/A	1.81	N/A	< 0.10
UMPC-mini tablet	Body	1.12	0.39	0.73	0.26	N/A
	Extremity 10g	3.12	1.66	2.01	1.35	< 0.10
Simultaneous TX of Phablet	Head	1.59	1.59	1.59	1.59	N/A
	Body-worn	1.56	1.56	1.56	1.56	N/A
	Hotspot	1.56	1.56	N/A	1.56	N/A
	Product Specific 10g	3.08	3.08	3.08	3.08	3.08
Simultaneous TX of UMPC-mini tablet	Body	1.55	1.55	1.55	1.55	N/A
	Extremity 10g	3.87	3.87	3.87	3.87	3.87
Date Tested		5/3/2024 to 6/12/2024				
Test Results		Pass				

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released By:	Prepared By:
	
Justin Park Operations Leader UL Korea, Ltd. Suwon Laboratory	Sunghoon Kim Senior Laboratory Engineer UL Korea, Ltd. Suwon Laboratory

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

Equipment Class	Band	Antenna	The Highest Reported SAR (W/kg)					
			Phablet mode				UMPC mini tablet mode	
			1g of tissue			10g of tissue	1g of tissue	10g of tissue
			Head Exposure condition	Body-worn Exposure condition	Hotspot Exposure condition	Product Specific Exposure condition	Body Exposure condition	Extremity Exposure condition
PCE	GSM 850	Ant.A & Ant.(A+B)	0.167	0.580	0.580	N/A	1.068	1.640
	GSM 1900	Ant.B	0.065	0.655	0.747	N/A	0.667	1.907
	WCDMA Band V	Ant.A & Ant.(A+B)	0.204	0.542	0.542	N/A	1.048	1.601
	LTE Band 5	Ant.A & Ant.(A+B)	0.258	0.569	0.569	N/A	0.840	1.828
	LTE Band 12	Ant.A & Ant.(A+B)	0.252	0.432	0.521	N/A	0.723	1.978
	LTE Band 13	Ant.A & Ant.(A+B)	0.231	0.418	0.536	N/A	0.741	1.393
	LTE Band 2	Ant.B	0.167	1.088	1.200	N/A	0.820	2.610
	LTE Band 66(4)	Ant.B	0.116	0.632	0.636	N/A	0.687	3.008
	LTE Band 41	Ant.B	0.094	0.462	1.237	3.081	0.519	2.169
	LTE Band 41	Ant.E	1.097	0.475	0.693	N/A	1.117	3.118
	NR Band n5	Ant.A & Ant.(A+B)	0.193	0.484	0.484	N/A	0.680	1.680
	NR Band n66	Ant.B	0.171	0.861	0.861	N/A	0.675	2.620
	NR Band n66	Ant.E	0.654	0.723	0.730	N/A	0.976	2.496
	NR Band n41	Ant.E	0.776	0.422	0.491	N/A	0.778	3.008
NR Band n41	Ant.B	0.094	0.555	0.868	N/A	0.708	2.649	
DTS	2.4GHz WLAN		0.371	0.360	0.371	N/A	0.389	1.655
UNII	5GHz WLAN		0.814	0.549	N/A	1.814	0.732	2.006
DSS	Bluetooth		0.339	0.273	0.394	N/A	0.258	1.352
DXX	NFC		N/A	N/A	N/A	0.011	N/A	0.011

2. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE STD 1528-2013, ANSI C63.26-2015 the following FCC Published RF exposure [KDB](#) procedures:

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D04 Interim General RF Exposure Guidance v01
- 648474 D04 Handset SAR v01r03
- 690783 D01 SAR Listings on Grants v01r03
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D01 3G SAR Procedures v03r01
- 941225 D05 SAR for LTE Devices v02r05
- 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
- 941225 D06 Hotspot Mode v02r01
- 971168 D01 Power Meas License Digital System v03r01
- 941225 D07 UMPC Mini Tablet v01r02

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

- [TCB workshop](#) October, 2014; RF Exposure Procedures Update (Overlapping LTE Bands)
- [TCB workshop](#) October, 2014; RF Exposure Procedures Update (Other LTE Considerations)
- [TCB workshop](#) October, 2016; RF Exposure Procedures (DUT Holder Perturbations)
- [TCB workshop](#) May, 2017; RF Exposure Procedures (LTE Test Conditions)
- [TCB workshop](#) November, 2017; RF Exposure Procedures (LTE UL/DL Carrier Aggregation SAR)
- [TCB workshop](#) April, 2019; RF Exposure Procedures (Tissue Simulating Liquids (TSL))
- [TCB workshop](#) April, 2019; RF Exposure Procedures (Dynamic Antenna Tuning)
- [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.

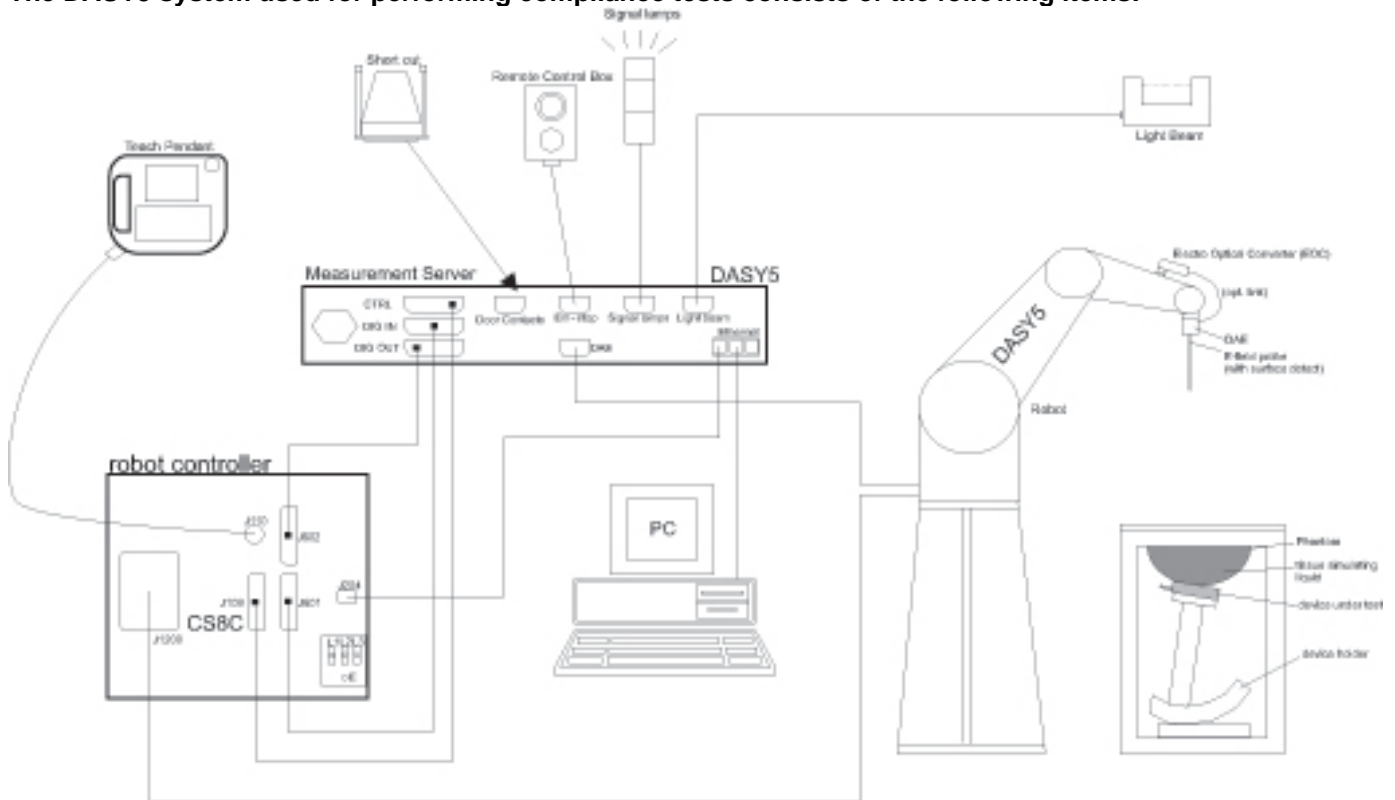
The full scope of accreditation can be viewed at;

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

4. SAR Measurement System & Test Equipment

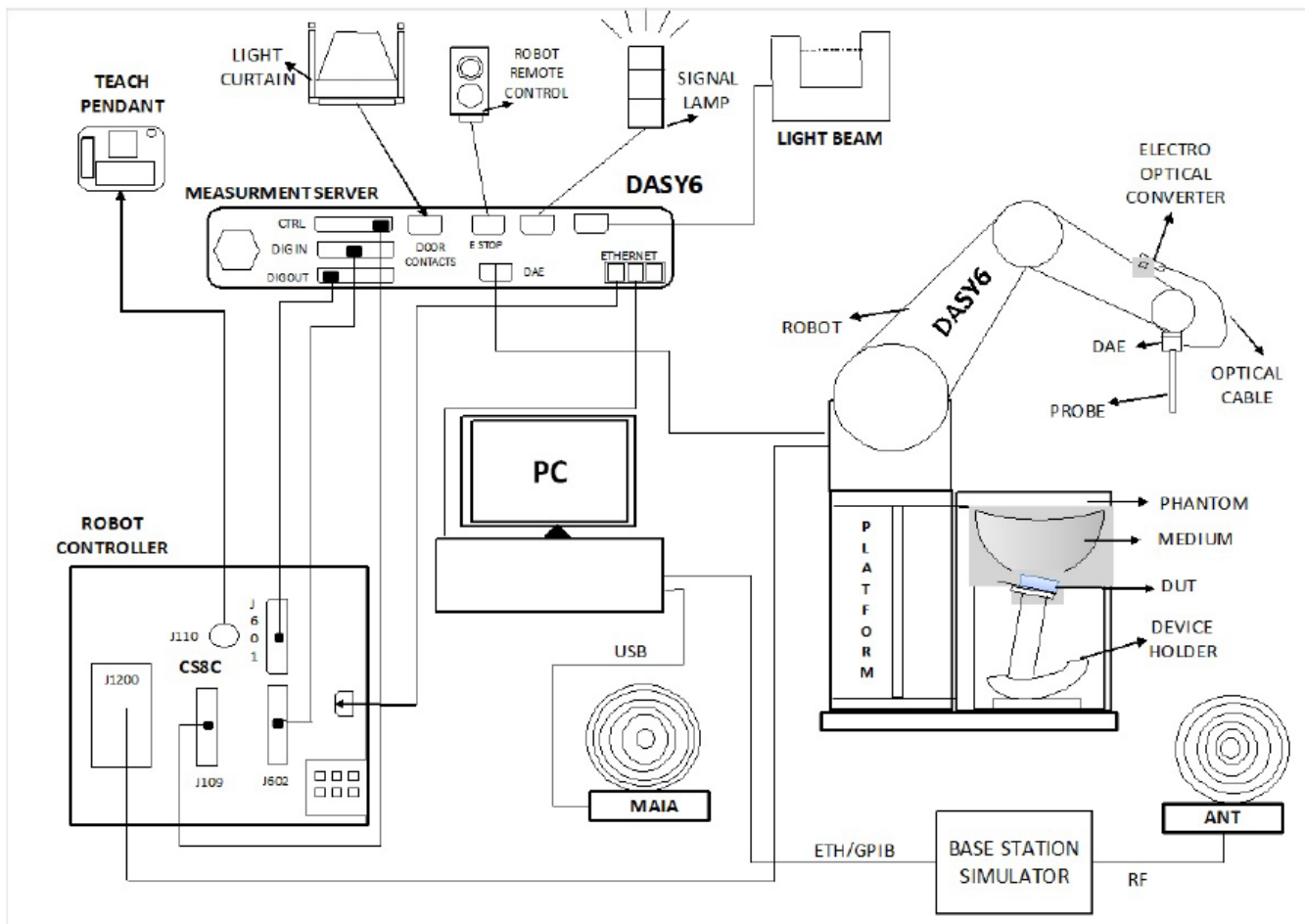
4.1. SAR Measurement System

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 Win11 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 Win11 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. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scan

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

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

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

Step 3: Zoom Scan

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

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

		≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
<p>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.</p> <p>* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</p>			

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	7-24-2024
Network Analyzer	ROHDE & SCHWARZ	ZNB 20	102256	7-24-2024
Dielectric Assessment Kit	SPEAG	DAK-12	1158	9-20-2024
Dielectric Assessment Kit	SPEAG	DAK-3.5	1133	3-12-2025
Dielectric Assessment Kit	SPEAG	DAK-3.5	1196	7-17-2024
Vector Network Analyzer	SPEAG	DAKS_VNA R140	SN0060221	3-21-2025
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Shorting block	SPEAG	DAK-12 Short	SM DAK 220 AD	N/A
Thermometer	LKM	DTM3000	3851	7-25-2024
Thermometer	LKM	DTM3000	3862	7-25-2024

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
MXG Analog Signal Generator	Agilent	N5181A	MY50145882	7-26-2024
MXG Analog Signal Generator	Keysight	N5181B	MY59100587	7-26-2024
MXG Analog Signal Generator	Keysight	N5173B	MY59101083	7-27-2024
MXG Analog Signal Generator	Agilent	E8257D	MY53400994	7-24-2024
Power Sensor	KEYSIGHT	U2000A	MY60180020	7-26-2024
Power Sensor	KEYSIGHT	U2000A	MY60490008	7-25-2024
Power Sensor	KEYSIGHT	U2000A	MY60160004	7-25-2024
Power Sensor	KEYSIGHT	U2000A	MY61010006	7-25-2024
Power Sensor	KEYSIGHT	U2000A	MY61010010	7-25-2024
Power Sensor	KEYSIGHT	U2004A USB Sensor	MY61200006	1-3-2025
Power Sensor	KEYSIGHT	U2004A USB Sensor	MY61280010	1-3-2025
Power Amplifier	EXODUS	AMP2027	1410025-AMP2027-10003	2-14-2025
Power Amplifier	MINI-CIRCUITS	TVA-R5-13A+	2111006	1-3-2025
Power Amplifier	EXODUS	AMP2027ADB	10002	1-5-2025
Power Amplifier	Sambo	BA00T60W2D	S3010-0001	2-21-2025
Directional Coupler	Agilent	772D	MY52180193	7-25-2024
Directional Coupler	H.P	778D	16133	7-25-2024
Directional Coupler	NARDA	4216-10	02835	7-25-2024
Directional Coupler	MINI-CIRCUITS	ZMDC-30-1+	SF569102123	7-25-2024
Directional Coupler	MINI-CIRCUITS	ZUDC20-183+	N/A	7-24-2024
Directional Coupler	MINI-CIRCUITS	ZUDC20-183+	N/A	7-24-2024
Directional Coupler	KRYTAR	100318010	215541	1-4-2025
Directional Coupler	KRYTAR	100318010	215542	1-4-2025
Directional Coupler	MINI-CIRCUITS	ZMDC10-83-S+	2316	2-28-2025
Directional Coupler	MINI-CIRCUITS	ZMDC10-83-S+	2316	2-28-2025
Low Pass Filter	FILTRON	L14012FL	1410003S	7-25-2024
Low Pass Filter	MICROLAB	LA-60N	3942	7-25-2024
Low Pass Filter	MICROLAB	LA-15N	3943	7-25-2024
Low Pass Filter	MINI-CIRCUITS	VLF-6000+	S0141	7-25-2024
Low Pass Filter	MINI-CIRCUITS	VLF-6000+	S0142	7-25-2024
Low Pass Filter	MINI-CIRCUITS	VLF-3000+	S0143	7-25-2024
Low Pass Filter	MINI-CIRCUITS	NLP-1200+	VUU19301915	1-4-2025
Low Pass Filter	MINI-CIRCUITS	NLP-1200+	VUU19301915	1-4-2025
Low Pass Filter	MINI-CIRCUITS	NLP-1200	VUU19301915	7-25-2024
Low Pass Filter	KRYTAR	WLKX10-11000-13640-21000-60TS	1	7-25-2024
Low Pass Filter	MINI-CIRCUITS	VLF-1500+	32333	2-28-2025

Note(s):

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

Test Equipment (Continued)

Low Pass Filter	MINI-CIRCUITS	VLF-1500+	32241	2-28-2025
Low Pass Filter	MINI-CIRCUITS	VLF-3000+	32226	2-28-2025
Attenuator	KEYSIGHT	BW-S3W10+	N/A	1-4-2025
Attenuator	KEYSIGHT	8491B003	MY39272275	7-25-2024
Attenuator	KEYSIGHT	8491B003	MY39272277	7-24-2024
Attenuator	KEYSIGHT	8491B/003	VE2017A0283	7-25-2024
Attenuator	KEYSIGHT	8491B/003	MY39272276	7-25-2024
Attenuator	KEYSIGHT	8491B/010	MY39271981	7-24-2024
Attenuator	KEYSIGHT	8491B/010	MY39272011	7-25-2024
Attenuator	KEYSIGHT	8491B010	MY39272293	7-25-2024
Attenuator	KEYSIGHT	8491B010	MY39272306	7-24-2024
Attenuator	KEYSIGHT	8491B020	MY39272300	7-25-2024
Attenuator	KEYSIGHT	8491B/020	MY39272301	7-25-2024
Attenuator	KEYSIGHT	8491B/020	MY39272302	7-24-2024
Attenuator	KEYSIGHT	8491B/020	MY39271973	7-25-2024
E-Field Probe	SPEAG	EX3DV4	7313	2-21-2025
E-Field Probe	SPEAG	EX3DV4	7330	1-22-2025
E-Field Probe	SPEAG	EX3DV4	7376	7-25-2024
E-Field Probe	SPEAG	EX3DV4	7545	8-25-2024
E-Field Probe	SPEAG	EX3DV4	7645	9-20-2024
E-Field Probe	SPEAG	EX3DV4	7651	3-18-2025
E-Field Probe	SPEAG	EX3DV4	7646	3-15-2025
E-Field Probe	SPEAG	EX3DV4	7652	4-24-2025
Data Acquisition Electronics	SPEAG	DAE4	1447	3-13-2025
Data Acquisition Electronics	SPEAG	DAE4	1468	8-24-2024
Data Acquisition Electronics	SPEAG	DAE4	1494	7-17-2024
Data Acquisition Electronics	SPEAG	DAE4	1591	2-16-2025
Data Acquisition Electronics	SPEAG	DAE4	1671	4-18-2025
Data Acquisition Electronics	SPEAG	DAE4	1667	3-14-2025
Data Acquisition Electronics	SPEAG	DAE4	1343	6-30-2024
Data Acquisition Electronics	SPEAG	DAE4	912	11-17-2024
System Validation Dipole	SPEAG	CLA -13	1015	8-22-2024
System Validation Dipole	SPEAG	D750V3	1122	2-22-2025
System Validation Dipole	SPEAG	D835V2	4d194	3-11-2025
System Validation Dipole	SPEAG	D835V2	4d174	9-21-2024
System Validation Dipole	SPEAG	D1750V2	1125	11-30-2024
System Validation Dipole	SPEAG	D1900V2	5d190	11-16-2024
System Validation Dipole	SPEAG	D2450V2	939	7-19-2024
System Validation Dipole	SPEAG	D5GHzV2	1325	4-21-2025
System Validation Dipole	SPEAG	D5GHzV2	1209	2-28-2025
System Validation Dipole	SPEAG	D1750V2	1180	9-21-2024
System Validation Dipole	SPEAG	D2600V2	1178	4-25-2025
System Validation Dipole	SPEAG	D2600V2	1097	9-26-2024
Thermometer	Lutron	MHB-382SD	AH.50215	1-4-2025
Thermometer	Lutron	MHB-382SD	AH.50213	1-4-2025
Thermometer	Lutron	MHB-382SD	AH.91463	1-4-2025
Thermometer	Lutron	MHB-382SD	AJ.42446	7-31-2024
Thermometer	Lutron	MHB-382SD	AK.12102	7-31-2024
Thermometer	Lutron	MHB-382SD	AK.12103	7-31-2024
Thermometer	Lutron	MHB-382SD	AK.12123	1-8-2025
Thermometer	Lutron	MHB-382SD	AK.18789	7-31-2024

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.

Test Equipment (Continued)**Others**

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	150313	7-27-2024
Base Station Simulator	R & S	CMW500	150314	7-26-2024
Base Station Simulator	R & S	CMW500	162790	7-26-2024
Base Station Simulator	R & S	CMW500	169803	3-25-2025
Base Station Simulator	R & S	CMW500	169801	1-3-2025
Base Station Simulator	R & S	CMW500	169802	1-3-2025
Base Station Simulator	R & S	CMW500	169799	7-26-2024
Base Station Simulator	R & S	CMW500	169800	7-27-2024
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY57510596	7-27-2024
UXM 5G Wireless Test Platform	KEYSIGHT	E751B	MY59150850	1-3-2025
UXM 5G Wireless Test Platform	KEYSIGHT	E751B	MY57510655	1-3-2025
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY58120110	1-3-2025
Radio Communication Test Station	Anritsu	MT8000A	6272466165	10-18-2024
Radio Communication Analyzer	Anritsu	MT8821C	6161094351	11-30-2024

Note(s):

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

5. Measurement Uncertainty

Measurement Uncertainty of 100MHz to 6GHz

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

Measurement Uncertainty of 9MHz to 19MHz

Measurement uncertainty for 9 MHz to 19 MHz

(According to IEEE 62209-1528)

a	b	c		d	e	f	g	h =	l =	k
		Tol. 1 g (±%)	Tol. 10 g (±%)		f(d,k)			cx/f/e	cxg/e	
Uncertainty component	Reference			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	1.0	2.3	Normal	1	1	1	1.0	2.3	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 U _c (y) =								RSS	12.16	12.23
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =								24.33	24.47	

5.1. DECISION RULE

Measurement Uncertainty is not applied when providing statements of conformity in accordance with IEC Guide 115:2023, 4.3.3.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Refer to Appendix A.					
Back Cover	<input checked="" type="checkbox"/> The Back Cover is not removable.					
Battery Options	<input checked="" type="checkbox"/> The rechargeable battery is not user accessible					
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its cellular data connection with other Wi-Fi-enabled devices. <input checked="" type="checkbox"/> Mobile Hotspot (Wi-Fi 2.4 GHz)					
Wi-Fi Direct	Wi-Fi Direct enabled devices transfer data directly between each other <input checked="" type="checkbox"/> Wi-Fi Direct (Wi-Fi 2.4 GHz) <input checked="" type="checkbox"/> Wi-Fi Direct (Wi-Fi 5.2 GHz_UNII-1, Wi-Fi 5.8 GHz_UNII-3)					
Test Sample Information	No.	S/N	Notes	No.	S/N	Notes
	1	R3CX30KWS3R	Main Conducted	14	R3CX30KWZYK	SAR
	2	R3CX30KWW5T	Main Conducted	15	R3CX30KX3KP	SAR
	3	R3CX30KWRRP	Main Conducted			
	4	R3CX30KWVVR	WLAN Conducted			
	5	5a565a5051533698	WLAN Conducted			
	6	R3CX30KWS5E	SAR			
	7	R3CX30KWPWM	SAR			
	8	R3CX30KWQ4A	SAR			
	9	R3CX30KWNFD	SAR			
	10	R3CX30KWT2W	SAR			
	11	R3CX30KWKCB	SAR			
	12	R3CX30KWKRD	SAR			
	13	R3CX30KWSLJ	SAR			

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK)	GPRS Multi-Slot Class:	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
		GPRS (GMSK)	<input type="checkbox"/> Class 8 - 1 Up, 4 Down	
		EGPRS (8PSK)	<input type="checkbox"/> Class 10 - 2 Up, 4 Down	
			<input type="checkbox"/> Class 12 - 4 Up, 4 Down	
			<input checked="" type="checkbox"/> Class 33 - 4 Up, 5 Down	
Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
W-CDMA (UMTS)	Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 10) HSUPA (Category 6) DC-HSDPA (Category 10) HSPA+ (DL only)		100%
LTE	FDD Band 12 / FDD Band 13 FDD Band 5 / Band 66 FDD Band 4 / FDD Band 2 TDD Band 41-PC3	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (2 Uplink and 3 Downlinks)		100% (FDD) 63.3% (TDD) <small>Power Class 3</small>
		UL CA intraband-contiguous (2CC) 41C		
Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
NR (Sub6)	FDD Band n5 / Band n66 TDD Band n41	DFT-s-OFDM: ■ $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: ■ QPSK, 16QAM, 64QAM, 256QAM		100%
Wi-Fi	2.4 GHz	802.11b / 802.11g / 802.11n (HT20) 802.11ac (VHT20) / 802.11ax (HE20)		98.87% (802.11b)
	5 GHz	802.11a / 802.11n (HT20) & (HT40)		98.18% (802.11n (HT40))
		802.11ac (VHT20) & (VHT40) & (VHT80) & (VHT160) 802.11ax (HE20) & (HE40) & (HE80) & (HE160)		94.43% (802.11ac (VHT80))
	6 GHz	802.11a		99.63% (802.11ax (HE160))
		802.11ax (HE20) & (HE40) & (HE80) & (HE160)		
Does this device support bands 5.60 ~ 5.65 GHz? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Does this device support Band gap channel(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Bluetooth	2.4 GHz	Version 5.3 + LE		76.94% (BDR)
NFC	13.56 MHz	Type A/B/F		100%
UWB	6489.6 – 7987.2 MHz	Signal Configurations(0/1/3), PRF modes(BPRF/HPRF)		100%

Notes:

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

6.3. Time-Averaging feature

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

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

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

The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G/WLAN/BT technology bands, and DSI = minimum of " P_{Limit} EFS" and "Maximum tune up output power P_{max} " + 1 dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB 447498 D04.

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

SAR Characterizations

Exposure condition			Folder Open UMPC Body 1-g	Folder Open UMPC Extremity 10-g	Folder Closed Head	Folder Closed Bodyworn & Hotspot	Folder Closed Phablet Specific 10-g SAR	Pmax (Maximum tune-up Power) (dBm)
Spatial-average			1g	10g	1g	1g	10g	
Test distance (mm)			10	0	0	10	0	
Configuration			Folder Open	Folder Open	Folder Close	Folder Close	Folder Close	
DSI :			0		3	1		
RF Air Interface	Antenna	Antenna Group	Plimit corresponding to 1.0 W/kg (SAR_design_target) (1g) / 2.5 W/kg (SAR_design_target) (10g)					
GSM 850	A, A+B	AG 0	26.20		31.3		26.7	25.3
GSM 1900	B	AG 0	18.30		31.9		18.3	21.8
WCDMA 5	A, A+B	AG 0	25.00		29.5		24.6	24.3
LTE Band 5	A, A+B	AG 0	25.70		28.7		24.9	24.5
LTE Band 12	A, A+B	AG 0	25.20		28.5		25.0	24.2
LTE Band 13	A, A+B	AG 0	26.80		29.1		25.7	24.5
LTE Band 2	B	AG 0	18.00		30.0		19.0	24.0
LTE Band 66(4)	B	AG 0	19.00		31.6		19.0	24.0
LTE Band 41 PC3	B	AG 0	15.50		30.5		18.0	22.0
LTE Band 41 PC3	E	AG 1	19.00		22.7		19.0	22.0
NR Band n5	A, A+B	AG 0	25.50		29.4		24.8	24.0
NR Band n66	B	AG 0	19.00		29.9		19.0	24.0
NR Band n66	E	AG 1	20.00		21.5		20.0	23.5
NR Band n41	E	AG 1	19.00		22.0		19.0	24.0
NR Band n41	B	AG 0	16.50		32.5		18.0	24.0
DTS SISO Ant. 1	G	AG 1	17.00		17.0		17.0	19.0
DTS SISO Ant. 2	F	AG 1	17.00		17.0		17.0	19.0
DTS MIMO	G+F	AG 1	17.00		17.0		17.0	19.0
UNII-2A SISO Ant. 1	G	AG 1	18.50		19.7		20.2	17.0
UNII-2A SISO Ant. 2	D	AG 1	22.00		25.6		22.1	17.0
UNII-2A MIMO	D+G	AG 1	18.50		19.3		19.4	17.0
UNII-2C SISO Ant. 1	G	AG 1	20.00		22.8		20.4	17.0
UNII-2C SISO Ant. 2	D	AG 1	21.50		24.6		20.9	17.0
UNII-2C MIMO	D+G	AG 1	18.50		22.2		19.9	17.0
UNII-3 SISO Ant. 1	G	AG 1	19.00		22.0		21.1	17.0
UNII-3 SISO Ant. 2	D	AG 1	21.10		21.1		20.8	17.0
UNII-3 MIMO	D+G	AG 1	18.70		20.8		20.5	17.0
UNI-4 SISO Ant. 1	G	AG 1	18.70		20.7		21.9	17.0
UNI-4 SISO Ant. 2	D	AG 1	20.70		21.2		21.7	17.0
UNI-4 MIMO	D+G	AG 1	18.50		19.1		20.2	17.0
WiFi 6E SISO Ant. 1	G	AG 1	10.00		12.0		12.0	16.0
WiFi 6E SISO Ant. 2	D	AG 1	10.00		12.0		12.0	16.0
WiFi 6E MIMO	D+G	AG 1	10.00		12.0		12.0	16.0
Bluetooth Ant. 1	G	AG 1	24.80		31.4		26.1	18.5
Bluetooth Ant. 2	F	AG 1	22.20		24.3		20.9	18.5
Bluetooth MIMO	G+F	AG 1	23.40		27.0		23.6	18.0

Notes:

1. If *Plimit* is higher than *Pmax* for some modes / bands, The modes/bands will operate at a power level up to *Pmax*.
2. *Pmax* (Maximum tune-up power) is specified in tune-up document. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty.
3. All *Plimit* EFS and maximum tune up output *Pmax* levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (e.g GSM and LTE TDD).
4. *Plimit*(DSI=0) was determined to be the lower of "UMPC Body 1-g" and "UMPC Extremity 10-g" in each Bands.
5. *Plimit*(DSI=1) was determined to be the lower of "Body-worn & Hotspot" and "Product Specific 10-g" in each Bands.
6. Some band's DSIs were determined more conservative *Plimit* instead of calculation *Plimit* in Section.7.

6.4. Maximum Allowed Output power

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

GSM Bands

RF Air interface	Antenna	Mode	Time Slots	Maximum allowed output power (dBm)									
				Pmax		PLimit							
						DSI = 0 (Folder Opened - Body)		DSI = 1 (Folder Closed - Body)		DSI = 2 (Folder Opened - Head)		DSI = 3 (Folder Closed - Head)	
						Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM850	Ant.A & Ant.A+B	Voice	1	33.30	24.11	33.30	24.11	33.30	24.11	33.30	24.11	33.30	24.11
		GPRS	1	33.30	24.11	33.30	24.11	33.30	24.11	33.30	24.11	33.30	24.11
		GPRS	2	32.50	26.32	32.50	26.32	32.50	26.32	32.50	26.32	32.50	26.32
		GPRS	3	30.50	26.08	30.50	26.08	30.50	26.08	30.50	26.08	30.50	26.08
		GPRS	4	28.50	25.33	28.50	25.33	28.50	25.33	28.50	25.33	28.50	25.33
		EGPRS	1	28.00	18.81	28.00	18.81	28.00	18.81	28.00	18.81	28.00	18.81
		EGPRS	2	26.00	19.82	26.00	19.82	26.00	19.82	26.00	19.82	26.00	19.82
		EGPRS	3	24.00	19.58	24.00	19.58	24.00	19.58	24.00	19.58	24.00	19.58
GSM1900	Ant.B	Voice	1	30.50	21.31	28.50	19.31	28.50	19.31	30.50	21.31	30.50	21.31
		GPRS	1	30.50	21.31	28.50	19.31	28.50	19.31	30.50	21.31	30.50	21.31
		GPRS	2	29.00	22.82	25.50	19.32	25.50	19.32	29.00	22.82	29.00	22.82
		GPRS	3	27.00	22.58	23.70	19.28	23.70	19.28	27.00	22.58	27.00	22.58
		GPRS	4	25.50	22.33	22.50	19.33	22.50	19.33	25.50	22.33	25.50	22.33
		EGPRS	1	27.00	17.81	27.00	17.81	27.00	17.81	27.00	17.81	27.00	17.81
		EGPRS	2	25.00	18.82	25.00	18.82	25.00	18.82	25.00	18.82	25.00	18.82
		EGPRS	3	23.00	18.58	23.00	18.58	23.00	18.58	23.00	18.58	23.00	18.58
		EGPRS	4	22.00	18.83	22.00	18.83	22.00	18.83	22.00	18.83	22.00	

WCDMA Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	PLimit			
				DSI = 0 (Folder Opened - Body)	DSI = 1 (Folder Closed - Body)	DSI = 2 (Folder Opened - Head)	DSI = 3 (Folder Closed - Head)
W-CDMA Band V	Ant.A & Ant.A+B	R99	25.30	25.30	25.30	25.30	25.30
		HSDPA	24.30	24.30	24.30	24.30	24.30
		HSUPA	24.30	24.30	24.30	24.30	24.30
		DC-HSDPA	24.30	24.30	24.30	24.30	24.30

Note(s):

1. Detail of DSI (Device State Index) conditions, please refer to Sec.6.5.
2. Some bands are support to both Ant.A and Ant.A+B configurations in Folder Closed condition using same target power.
3. For Both Ant.A and Ant.A+B configurations, Folder Opened condition has support only Ant.A+B configuration.

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

LTE Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	PLimit			
				DSI = 0 (Folder Opened - Body)	DSI = 1 (Folder Closed - Body)	DSI = 2 (Folder Opened - Head)	DSI = 3 (Folder Closed - Head)
LTE FDD Band 12	Ant.A & Ant.A+B	QPSK	25.20	25.20	25.20	25.20	25.20
LTE FDD Band 13	Ant.A & Ant.A+B	QPSK	25.50	25.50	25.50	25.50	25.50
LTE FDD Band 5	Ant.A & Ant.A+B	QPSK	25.50	25.50	25.50	25.50	25.50
LTE FDD Band 66	Ant.B	QPSK	25.00	20.00	20.00	25.00	25.00
LTE FDD Band 4	Ant.B	QPSK	25.00	20.00	20.00	25.00	25.00
LTE FDD Band 2	Ant.B	QPSK	25.00	19.00	20.00	25.00	25.00
LTE TDD Band 41 (PC3)	Ant.B	QPSK	25.00	18.50	21.00	25.00	25.00
LTE TDD Band 41 (PC3)	Ant.E	QPSK	25.00	22.00	22.00	25.00	25.00

Note(s):

1. Detail of DSI (Device State Index) conditions, please refer to Sec.6.5.
2. Some bands are support to both Ant.A and Ant.A+B configurations in Folder Closed condition using same target power.
3. For Both Ant.A and Ant.A+B configurations, Folder Opened condition has support only Ant.A+B configuration.

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

NR-Sub6 Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	PLimit			
				DSI = 0 (Folder Opened - Body)	DSI = 1 (Folder Closed - Body)	DSI = 2 (Folder Opened - Head)	DSI = 3 (Folder Closed - Head)
NR Band n5	Ant.A & Ant.A+B	DFT-s-OFDM QPSK	25.00	25.00	25.00	25.00	25.00
NR Band n66	Ant.B	DFT-s-OFDM QPSK	25.00	20.00	20.00	25.00	25.00
NR Band n66	Ant.E	DFT-s-OFDM QPSK	24.50	21.00	21.00	22.50	22.50
NR Band n41	Ant.E	DFT-s-OFDM QPSK	25.00	20.00	20.00	23.00	23.00
NR Band n41	Ant.B	DFT-s-OFDM QPSK	25.00	17.50	19.00	25.00	25.00

Note(s):

1. Detail of DSI(Device State Index) conditions, please refer to Sec.6.5.
2. Some bands are support to both Ant.A and Ant.A+B configurations in Folder Closed condition using same target power.
3. For Both Ant.A and Ant.A+B configurations, Folder Opened condition has support only Ant.A+B configuration.
4. NR Band n66(Ant.E) only operates during EN-DC operation.

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

WLAN output power (Pmax)

RF Air interface	Band	Maximum allowed output power (dBm) - Pmax												
		802.11 mode												
		2.4GHz SISO (Ant.G & Ant.F) / 5GHz SISO (Ant.G & Ant.D)						2.4GHz MIMO (Ant.G + Ant.F) / 5GHz MIMO (Ant.G + Ant.D)						
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)	
WiFi 2.4 GHz	DTS	Ch 1		19	18	18	18	16		22	21	21	21	19
		Ch 2 - 10		20	18	18	18	18		23	21	21	21	21
		Ch 11		20	16	16	16	16		23	19	19	19	19
		Ch 12		6	6	6	6	6		9	9	9	9	9
		Ch 13		0	0	0	0	0		3	3	3	3	3
WiFi 5 GHz (BW : 20MHz)	UNII-1	18.0			18.0	18.0	18.0	21.0				21.0	21.0	21.0
	UNII-1 (Ch.36)	17.0			18.0	18.0	16.0	20.0				21.0	21.0	19.0
	UNII-2A	18.0			18.0	18.0	18.0	21.0				21.0	21.0	21.0
	UNII-2A (Ch.64)	17.0			18.0	18.0	16.0	20.0				21.0	21.0	19.0
	UNII-2C	18.0			18.0	18.0	18.0	21.0				21.0	21.0	21.0
	UNII-3	18.0			18.0	18.0	18.0	21.0				21.0	21.0	21.0
WiFi 5 GHz (BW : 40MHz)	UNII-1				18.0	18.0	18.0					21.0	21.0	21.0
	UNII-1 (Ch.38)				16.0	16.0	16.0					19.0	19.0	19.0
	UNII-2A				18.0	18.0	18.0					21.0	21.0	21.0
	UNII-2A (Ch.62)				15.5	15.5	15.5					18.5	18.5	18.5
	UNII-2C				18.0	18.0	18.0					21.0	21.0	21.0
	UNII-2C (Ch.102)				16.0	16.0	16.0					19.0	19.0	19.0
	UNII-3				18.0	18.0	18.0					21.0	21.0	21.0
WiFi 5 GHz (BW : 80MHz)	UNII-1					16.0	16.0						19.0	19.0
	UNII-2A					16.0	16.0						19.0	19.0
	UNII-2C					18.0	18.0						21.0	21.0
	UNII-2C (Ch.106)					16.0	16.0						19.0	19.0
	UNII-3					18.0	18.0						21.0	21.0
WiFi 5 GHz (BW : 160MHz)	UNII-1 & 2A					16.0	16.0						19.0	19.0
	UNII-2C					14.0	14.0						17.0	17.0
	UNII-3 & 4					16.0	16.0						19.0	19.0

WLAN output power (DSI=0, 1, 2, 3)

RF Air interface	Band	Maximum allowed output power (dBm) - DSI= 0, 1, 2, 3												
		802.11 mode												
		2.4GHz SISO (Ant.G & Ant.F) / 5GHz SISO (Ant.G & Ant.D)						2.4GHz MIMO (Ant.G + Ant.F) / 5GHz MIMO (Ant.G + Ant.D)						
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)	
WiFi 2.4 GHz	DTS	Ch 1		18	18	18	18	16		21	21	21	21	19
		Ch 2 - 10		18	18	18	18	18		21	21	21	21	21
		Ch 11		18	16	16	16	16		21	19	19	19	19
		Ch 12		6	6	6	6	6		9	9	9	9	9
		Ch 13		0	0	0	0	0		3	3	3	3	3
WiFi 5 GHz (BW : 20MHz)	UNII-1	18.0			18.0	18.0	18.0	21.0				21.0	21.0	21.0
	UNII-1 (Ch.36)	17.0			18.0	18.0	16.0	20.0				21.0	21.0	19.0
	UNII-2A	18.0			18.0	18.0	18.0	21.0				21.0	21.0	21.0
	UNII-2A (Ch.64)	17.0			18.0	18.0	16.0	20.0				21.0	21.0	19.0
	UNII-2C	18.0			18.0	18.0	18.0	21.0				21.0	21.0	21.0
	UNII-3	18.0			18.0	18.0	18.0	21.0				21.0	21.0	21.0
WiFi 5 GHz (BW : 40MHz)	UNII-1				18.0	18.0	18.0					21.0	21.0	21.0
	UNII-1 (Ch.38)				16.0	16.0	16.0					19.0	19.0	19.0
	UNII-2A				18.0	18.0	18.0					21.0	21.0	21.0
	UNII-2A (Ch.62)				15.5	15.5	15.5					18.5	18.5	18.5
	UNII-2C				18.0	18.0	18.0					21.0	21.0	21.0
	UNII-2C (Ch.102)				16.0	16.0	16.0					19.0	19.0	19.0
	UNII-3				18.0	18.0	18.0					21.0	21.0	21.0
WiFi 5 GHz (BW : 80MHz)	UNII-1					16.0	16.0						19.0	19.0
	UNII-2A					16.0	16.0						19.0	19.0
	UNII-2C					18.0	18.0						21.0	21.0
	UNII-2C (Ch.106)					16.0	16.0						19.0	19.0
	UNII-3					18.0	18.0						21.0	21.0
WiFi 5 GHz (BW : 160MHz)	UNII-1 & 2A					16.0	16.0						19.0	19.0
	UNII-2C					14.0	14.0						17.0	17.0
	UNII-3 & 4					16.0	16.0						19.0	19.0

Notes:

1. DTS/UNII has support SISO & MIMO mode.
2. WLAN has support RSDB operate. The RSDB scenarios refer to section.12 in report.

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

RF Air interface	Maximum allowed output power (dBm) - Pmax & Plimit of DSI 0,1,2,3						
	PL11		PL10		PL9		Dual (only PL10 + PL10)
	Ant.G	Ant.F	Ant.G	Ant.F	Ant.G	Ant.F	Ant.G + F
Bluetooth (BDR) (1Mbps)	19.5	19.5	16.0	16.0	N/A	N/A	19.0
Bluetooth (EDR) (2Mbps)	16.5	16.5	14.0	14.0	N/A	N/A	17.0
Bluetooth (EDR) (3Mbps)	16.5	16.5	14.0	14.0	N/A	N/A	17.0
Bluetooth (LE) (1M)	N/A	N/A	N/A	N/A	10.5	10.5	N/A
Bluetooth (LE) (2M)	N/A	N/A	N/A	N/A	10.5	10.5	N/A
Bluetooth (LE) (125kbps)	N/A	N/A	N/A	N/A	10.5	10.5	N/A
Bluetooth (LE) (500kbps)	N/A	N/A	N/A	N/A	10.5	10.5	N/A

Notes:

- BT Antennas are work at the same time through only Dual mode operation.

6.5. DSI (Device State Index) Scenarios

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

Please below table;

RF exposure Conditions	Technologies Supported	DSI conditions	DUT Configuration	Description
Head	WWAN/WLAN/BT bands	DSI = 3	Folder Closed	1. Next to the ear exposure condition. 2. Handset's Receiver(ear piece) is active during voice or VoIP call.
	WWAN/WLAN/BT bands	DSI = 2	Folder Opened	1. Next to the ear exposure condition. 2. Handset's Receiver(ear piece) is active during voice or VoIP call.
Body-worn & Hotspot	WWAN/WLAN/BT bands	DSI = 1	Folder Closed	1. Handsets supports Hotspot mode that Active near body. 2. Handsets are carried in body-worn accessories. 3. Hand use conditions for Handsets(Phablet).
Product Specific 10-g	WWAN/WLAN/BT bands			
Body	WWAN/WLAN/BT bands	DSI = 0	Folder Opened	1. UMPC-mini Tablet are designed for interactive hand-held use next to or near the body of users.
Extremity 10-g	WWAN/WLAN/BT bands	DSI = 0	Folder Opened	

Notes:

The device uses a hall effect sensor to determine if it is in the closed position or open position. The sensing mechanism has been validated, refer to Appendix I In addition it uses the RCV status to determine if the device is being held to head (RCV active) or not.

6.6. General LTE SAR Test and Reporting Considerations

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

General LTE SAR Test and Reporting Considerations (Continued)

Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 41	Frequency range: 2496 - 2690 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	39750 / 2506.0					
	Low-Mid	40185 / 2549.5					
	Mid	40620 / 2593.0					
	Mid-High	41055 / 2636.5					
	High	41490 / 2680.0					
	Band 66	Frequency range: 1710 - 1780 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low		132072/ 1720	132047/ 1717.5	132022/ 1715	131997/ 1712.5	131987/ 1711.5	131979/ 1710.7
Mid		132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745
High	132572/ 1770	132597/ 1772.5	132622/ 1775	132647/ 1777.5	132657/ 1778.5	132665/ 1779.3	
LTE transmitter and antenna implementation	Refer to Appendix A.						
Maximum power reduction (MPR)	Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3						
	Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})					MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
256 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
	≥ 1						≤ 5
	MPR Built-in by design The manufacturer MPR values are always within the 3GPP maximum MPR allowance but may not follow the default MPR values. A-MPR (additional MPR) was disabled during SAR testing						
Power reduction	Yes.						
Spectrum plots for RB configurations	A properly configured base station simulator was used for the SAR and power measurements; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.						

Notes:

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

6.7. LTE (TDD) Considerations

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

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

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

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
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 = $5120 \times [1/(15000 \times 2048)] \times 2 + 6 \text{ ms} = 63.33\%$
 where
 $T_s = 1/(15000 \times 2048)$ seconds

Note(s):
 This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used for SAR Testing: configuration 0 at 63.3% duty cycle..

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

Item	Description														
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band n5	Frequency range: 824 - 849 MHz													
		Channel Bandwidth													
		100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	40 MHz	35 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz
	Low											166800/834	166300/831.5	165800/829	165300/826.5
	Mid											167300/836.5	167300/836.5	167300/836.5	167300/836.5
	High											167800/839	168300/841.5	168800/844	169300/846.5
	Band n41	Frequency range: 2496 - 2690 MHz													
		Channel Bandwidth													
		100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	40 MHz	35 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz
	Low							503202/2516.01		552200/2511	501696/2508.48	501204/2506.02	500700/2503.5	500202/2501.01	
	Low-Mid	509202/2546.01	508200/2541	507204/2536.02	506202/2531.01	505200/2526	504204/2512.02		513468/2567.34		510402/2552.01	510150/2550.75	509898/2549.49	509652/2548.26	509400/2547
	Mid	518598/2592.99				518598/2592.99	518598/2592.99				518598/2592.99	518598/2592.99	518598/2592.99	518598/2592.99	518598/2592.99
	Mid-High							523734/2618.67		526800/2634	527046/2635.23	527298/2636.49	527550/2637.75	527802/2639.01	
	High	528000/2640	528996/2644.98	529998/2649.99	531000/2655	531996/2659.98	532998/2664.99		534000/2670		534996/2674.98	535500/2677.5	535998/2679.99	536496/2682.48	537000/2685
	Band n66	Frequency range: 1710 - 1780 MHz													
		Channel Bandwidth													
		100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	40 MHz	35 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz
	Low							346000/1730	345500/1727.5	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	349000/1745
	High							352000/1760	352500/1762.5	353000/1765	353500/1767.5	354000/1770	354500/1772.5	355000/1775	355500/1777.5
SCS	NR FDD Bands : 15 kHz, NR TDD Bands : 30kHz														
Modulations Supported in UL	DFT-s-OFDM: $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM & CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM														
A-MPR (Additional MPR) disabled for SAR Testing?	Yes														
EN-DC Carrier Aggregation Possible Combinations															
NR Band n5	LTE Band 2/66														
NR Band n41	LTE Band 66														
NR Band n66	LTE Band 2/13														

Notes:

- SAR test for NR bands and LTE anchor Bands were performed separately due to limitations in SAR probe calibration factors. And, Due to test setup limitations, NR TDD' SAR testing was performed using test mode software to establish the connection. And NR FDD's SAR testing was performed using Call box. Call box setup refer to Sec.9.4 in report.
- NR configurations of SAR test were determined according to Section 5.2 of KDB 941225 D05.

6.9. Dynamic Antenna tuner testing

This Device applies Qualcomm chipset solution's Dynamic Antenna tuning technology to some 3G /4G /5G sub6 bands. (WCDMA B5/ LTE B5/B12/B13/ NR Band n5)

Dynamic Antenna tuning was tested in accordance with the April 2019 FCC TCBC Workshop notes.

Per 2019, April TCBC Workshop document

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

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

To evaluate all the tuner states, the 144 tuner states were divided among the aggregate band, mode and exposure combinations so that each combination was evaluated for at least 15 tuner states and also so that at least 2 single point SAR measurements were made for every available tuner state. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg for a particular band / mode / exposure condition, point SAR measurements were made for all 144 tuner states.

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

Note(s):

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

7. RF Exposure Conditions (Test Configurations)

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

Folder Closed (Phablet mode)

Wireless technologies	RF Exposure Conditions	Antennas	DUT-to-User Separation	Test Positions			
				Right Touch	Right Tilt	Left Touch	Left Tilt
WWAN & WLAN/BT	Head	All WWAN/WLAN/BT Antennas (Ant.A/A+B/B/C/D/E/F/G)	0 mm	Yes	Yes	Yes	Yes

Wireless technologies	RF Exposure Conditions	Antennas	DUT-to-User Separation	Test Positions					
				Rear	Front	Top	Left	Bottom	Right
WWAN	Body-worn & Hotspot	Ant.A	10 mm	Yes	Yes	No	No	Yes	Yes
		Ant.A+B	10 mm	Yes	Yes	No	Yes	Yes	Yes
		Ant.B	10 mm	Yes	Yes	No	Yes	Yes	Yes
		Ant.E	10 mm	Yes	Yes	Yes	Yes	No	No
	Product Specific 10-g	All WWAN Antennas (Ant.A/A+B/B/E)	0 mm	Refer to note 2 and 3.					
WLAN/BT	Body-worn & Hotspot	Ant.D	10 mm	Yes	Yes	Yes	No	No	Yes
		Ant.G	10 mm	Yes	Yes	No	No	No	Yes
		Ant.F	10 mm	Yes	Yes	Yes	Yes	No	Yes
	Product Specific 10-g	All WLAN/BT Antennas (Ant.D/G/F)	0 mm	Refer to note 2 and 4.					
NFC	Product Specific 10-g	NFC Ant.	0 mm	Yes	Yes	Yes	Yes	No	No

Notes:

- For Hotspot exposure condition, SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.
- For Phablet devices: When hotspot mode applies, Product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.
- For Phablet devices: When hotspot mode applies and power reduction applies to hotspot mode, Product specific 10-g SAR is required for each test position that has and adjusted SAR to maximum power that is > 1.2 W/kg.
- For Phablet devices: When hotspot mode is not supported, Product specific 10-g SAR is required for all surfaces and edges with an antenna located at ≤ 25mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.
- Per manufacturer guide, NFC SAR was considered about only hand held condition (Product Specific 10-g).
- For Body-worn exposure condition, SAR test is considered for Rear and Front test positions.
- For Head exposure condition, All WWAN/WLAN/BT Antennas are required Head SAR test.

Folder Opened (UMPC-mini tablet mode)

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Positions					
				Rear	Front	Top	Left	Bottom	Right
WWAN	1g Body / 10g Extremity	Ant.A+B	10 mm / 0mm	Yes	Yes	No	No	Yes	Yes
		Ant.B	10 mm / 0mm	Yes	Yes	No	No	Yes	Yes
		Ant.E	10 mm / 0mm	Yes	Yes	Yes	No	No	No
WLAN/BT	1g Body / 10g Extremity	Ant.D	10 mm / 0mm	Yes	Yes	Yes	No	No	Yes
		Ant.G	10 mm / 0mm	Yes	Yes	No	No	No	Yes
		Ant.F	10 mm / 0mm	Yes	Yes	Yes	No	No	Yes
NFC	10g Extremity	NFC Ant.	0 mm	Yes	Yes	Yes	No	No	No

Notes:

- SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D07 UMPC mini-tablet SAR.
- Per FCC guide, UMPC mini-tablet SAR evaluated at 1-g body at 10mm and 10-g extremity at 0mm.
- Per manufacturer guide, NFC SAR was considered about only hand held condition (extremity 10-g).

8. Dielectric Property Measurements & System Check

8.1. Dielectric Property Measurements

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The Tissue Dielectric parameters (100MHz to 6GHz) should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

For The Tissue Dielectric parameters (4MHz to 30MHz). The parameters must be measured before 24 hours.

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

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

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

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

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

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

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

IEC_ IEEE Std 62209-1528 : 2020

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

Dielectric Property Measurements Results:

SAR 1 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
5-14-2024	Head 5250	e'	37.0100	Relative Permittivity (ϵ_r):	37.01	35.93	3.00	5	
		e"	15.7000	Conductivity (σ):	4.58	4.70	-2.53	5	
	Head 5260	e'	36.9900	Relative Permittivity (ϵ_r):	36.99	35.92	2.97	5	
		e"	15.7200	Conductivity (σ):	4.60	4.71	-2.43	5	
	Head 5600	e'	36.4300	Relative Permittivity (ϵ_r):	36.43	35.53	2.52	5	
		e"	15.9400	Conductivity (σ):	4.96	5.06	-1.91	5	
	Head 5800	e'	36.0400	Relative Permittivity (ϵ_r):	36.04	35.30	2.10	5	
		e"	16.1200	Conductivity (σ):	5.20	5.27	-1.35	5	
	Head 5925	e'	35.9400	Relative Permittivity (ϵ_r):	35.94	35.20	2.10	5	
		e"	16.2200	Conductivity (σ):	5.34	5.40	-1.04	5	
	5-20-2024	Head 5250	e'	36.6000	Relative Permittivity (ϵ_r):	36.60	35.93	1.86	5
			e"	15.9300	Conductivity (σ):	4.65	4.70	-1.10	5
Head 5260		e'	36.5900	Relative Permittivity (ϵ_r):	36.59	35.92	1.86	5	
		e"	15.9400	Conductivity (σ):	4.66	4.71	-1.07	5	
Head 5600		e'	35.9600	Relative Permittivity (ϵ_r):	35.96	35.53	1.20	5	
		e"	16.2000	Conductivity (σ):	5.04	5.06	-0.31	5	
Head 5800		e'	35.6000	Relative Permittivity (ϵ_r):	35.60	35.30	0.85	5	
		e"	16.3700	Conductivity (σ):	5.28	5.27	0.18	5	
Head 5925		e'	35.3600	Relative Permittivity (ϵ_r):	35.36	35.20	0.45	5	
		e"	16.4700	Conductivity (σ):	5.43	5.40	0.48	5	
5-24-2024		Head 5250	e'	35.2000	Relative Permittivity (ϵ_r):	35.20	35.93	-2.04	5
			e"	16.3400	Conductivity (σ):	4.77	4.70	1.44	5
	Head 5260	e'	35.1800	Relative Permittivity (ϵ_r):	35.18	35.92	-2.06	5	
		e"	16.3500	Conductivity (σ):	4.78	4.71	1.48	5	
	Head 5600	e'	34.4700	Relative Permittivity (ϵ_r):	34.47	35.53	-2.99	5	
		e"	16.7500	Conductivity (σ):	5.22	5.06	3.07	5	
	Head 5800	e'	34.0600	Relative Permittivity (ϵ_r):	34.06	35.30	-3.51	5	
		e"	16.8800	Conductivity (σ):	5.44	5.27	3.30	5	
	Head 5925	e'	33.8200	Relative Permittivity (ϵ_r):	33.82	35.20	-3.92	5	
		e"	16.9500	Conductivity (σ):	5.58	5.40	3.41	5	
	5-24-2024	Head 2450	e'	39.0000	Relative Permittivity (ϵ_r):	39.00	39.20	-0.51	5
			e"	12.8700	Conductivity (σ):	1.75	1.80	-2.60	5
Head 2400		e'	39.0900	Relative Permittivity (ϵ_r):	39.09	39.30	-0.53	5	
		e"	12.8600	Conductivity (σ):	1.72	1.75	-2.03	5	
Head 2500		e'	38.9300	Relative Permittivity (ϵ_r):	38.93	39.14	-0.53	5	
		e"	12.9000	Conductivity (σ):	1.79	1.85	-3.28	5	
5-28-2024	Head 2450	e'	40.8800	Relative Permittivity (ϵ_r):	40.88	39.20	4.29	5	
		e"	13.2100	Conductivity (σ):	1.80	1.80	-0.02	5	
	Head 2400	e'	40.9700	Relative Permittivity (ϵ_r):	40.97	39.30	4.26	5	
		e"	13.2100	Conductivity (σ):	1.76	1.75	0.64	5	
	Head 2500	e'	40.8100	Relative Permittivity (ϵ_r):	40.81	39.14	4.27	5	
		e"	13.2600	Conductivity (σ):	1.84	1.85	-0.58	5	

SAR 2 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)		
05-07-2024	Head 5250	e'	35.9000	Relative Permittivity (ϵ_r):	36.73	35.93	2.22	
		e"	16.4200	Conductivity (σ):	4.50	4.70	-4.21	
	Head 5260	e'	35.8800	Relative Permittivity (ϵ_r):	36.71	35.92	2.19	
		e"	16.4200	Conductivity (σ):	4.51	4.71	-4.21	
	Head 5600	e'	35.2900	Relative Permittivity (ϵ_r):	36.14	35.53	1.71	
		e"	16.6700	Conductivity (σ):	4.88	5.06	-3.60	
	Head 5800	e'	34.9200	Relative Permittivity (ϵ_r):	35.81	35.30	1.44	
		e"	16.8200	Conductivity (σ):	5.11	5.27	-3.13	
	Head 5925	e'	34.7100	Relative Permittivity (ϵ_r):	35.61	35.20	1.16	
		e"	16.8900	Conductivity (σ):	5.24	5.40	-2.89	
	5-13-2024	Head 2600	e'	38.9500	Relative Permittivity (ϵ_r):	39.67	39.01	1.69
			e"	13.4500	Conductivity (σ):	1.93	1.96	-1.54
Head 2495		e'	39.0500	Relative Permittivity (ϵ_r):	39.77	39.14	1.60	
		e"	13.4400	Conductivity (σ):	1.85	1.85	-0.09	
Head 2700		e'	38.7800	Relative Permittivity (ϵ_r):	39.50	38.88	1.58	
		e"	13.5000	Conductivity (σ):	2.02	2.07	-2.57	
5-17-2024	Head 2600	e'	38.9500	Relative Permittivity (ϵ_r):	38.95	39.01	-0.16	
		e"	13.4500	Conductivity (σ):	1.92	1.96	-2.15	
	Head 2495	e'	39.0500	Relative Permittivity (ϵ_r):	39.09	39.14	-0.14	
		e"	13.4400	Conductivity (σ):	1.84	1.85	-0.36	
	Head 2700	e'	38.7800	Relative Permittivity (ϵ_r):	38.79	38.88	-0.24	
		e"	13.5000	Conductivity (σ):	2.00	2.07	-3.44	
5-21-2024	Head 2600	e'	38.9500	Relative Permittivity (ϵ_r):	37.62	39.01	-3.57	
		e"	13.4500	Conductivity (σ):	1.96	1.96	-0.11	
	Head 2495	e'	39.0500	Relative Permittivity (ϵ_r):	37.78	39.14	-3.48	
		e"	13.4400	Conductivity (σ):	1.88	1.85	1.48	
	Head 2700	e'	38.7800	Relative Permittivity (ϵ_r):	37.44	38.88	-3.72	
		e"	13.5000	Conductivity (σ):	2.04	2.07	-1.37	
5-23-2024	Head 2450	e'	38.5100	Relative Permittivity (ϵ_r):	37.73	39.20	-3.75	
		e"	13.3300	Conductivity (σ):	1.80	1.80	-0.06	
	Head 2400	e'	38.5400	Relative Permittivity (ϵ_r):	37.82	39.30	-3.76	
		e"	13.3100	Conductivity (σ):	1.77	1.75	0.82	
	Head 2500	e'	38.5100	Relative Permittivity (ϵ_r):	37.65	39.14	-3.80	
		e"	13.3500	Conductivity (σ):	1.84	1.85	-0.81	

SAR 3 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
5-08-2024	Head 5200	e'	35.9100	Relative Permittivity (ϵ_r):	35.91	35.99	-0.22	5	
		e"	16.0300	Conductivity (σ):	4.63	4.65	-0.35	5	
	Head 5250	e'	35.7700	Relative Permittivity (ϵ_r):	35.77	35.93	-0.45	5	
		e"	16.1100	Conductivity (σ):	4.70	4.70	0.01	5	
	Head 5600	e'	35.6400	Relative Permittivity (ϵ_r):	35.64	35.53	0.30	5	
		e"	16.4500	Conductivity (σ):	5.12	5.06	1.22	5	
	Head 5750	e'	35.3600	Relative Permittivity (ϵ_r):	35.36	35.36	-0.01	5	
		e"	16.3600	Conductivity (σ):	5.23	5.21	0.32	5	
	Head 5800	e'	35.2000	Relative Permittivity (ϵ_r):	35.20	35.30	-0.28	5	
		e"	16.3100	Conductivity (σ):	5.26	5.27	-0.19	5	
	Head 5925	e'	34.8800	Relative Permittivity (ϵ_r):	34.88	35.20	-0.91	5	
		e"	16.2900	Conductivity (σ):	5.37	5.40	-0.62	5	
	5-13-2024	Head 5200	e'	36.0800	Relative Permittivity (ϵ_r):	36.08	35.99	0.25	5
			e"	15.6500	Conductivity (σ):	4.52	4.65	-2.71	5
Head 5250		e'	35.9900	Relative Permittivity (ϵ_r):	35.99	35.93	0.16	5	
		e"	15.6900	Conductivity (σ):	4.58	4.70	-2.59	5	
Head 5600		e'	35.3500	Relative Permittivity (ϵ_r):	35.35	35.53	-0.52	5	
		e"	15.9300	Conductivity (σ):	4.96	5.06	-1.98	5	
Head 5750		e'	35.1000	Relative Permittivity (ϵ_r):	35.10	35.36	-0.74	5	
		e"	16.0500	Conductivity (σ):	5.13	5.21	-1.58	5	
Head 5800		e'	35.0200	Relative Permittivity (ϵ_r):	35.02	35.30	-0.79	5	
		e"	16.0800	Conductivity (σ):	5.19	5.27	-1.60	5	
Head 5925		e'	34.8200	Relative Permittivity (ϵ_r):	34.82	35.20	-1.08	5	
		e"	16.1600	Conductivity (σ):	5.32	5.40	-1.41	5	
5-17-2024		Head 5200	e'	35.9100	Relative Permittivity (ϵ_r):	35.91	35.99	-0.22	5
			e"	15.9400	Conductivity (σ):	4.61	4.65	-0.91	5
	Head 5250	e'	35.8100	Relative Permittivity (ϵ_r):	35.81	35.93	-0.34	5	
		e"	15.9600	Conductivity (σ):	4.66	4.70	-0.92	5	
	Head 5600	e'	35.2100	Relative Permittivity (ϵ_r):	35.21	35.53	-0.91	5	
		e"	16.2100	Conductivity (σ):	5.05	5.06	-0.25	5	
	Head 5750	e'	34.9600	Relative Permittivity (ϵ_r):	34.96	35.36	-1.14	5	
		e"	16.3500	Conductivity (σ):	5.23	5.21	0.26	5	
	Head 5800	e'	34.8900	Relative Permittivity (ϵ_r):	34.89	35.30	-1.16	5	
		e"	16.3900	Conductivity (σ):	5.29	5.27	0.30	5	
	Head 5925	e'	34.6900	Relative Permittivity (ϵ_r):	34.69	35.20	-1.45	5	
		e"	16.4700	Conductivity (σ):	5.43	5.40	0.48	5	
	5-21-2024	Head 2600	e'	37.6900	Relative Permittivity (ϵ_r):	37.69	39.01	-3.39	5
			e"	13.2500	Conductivity (σ):	1.92	1.96	-2.38	5
Head 2495		e'	37.9600	Relative Permittivity (ϵ_r):	37.96	39.14	-3.02	5	
		e"	13.2200	Conductivity (σ):	1.83	1.85	-0.79	5	
Head 2700		e'	37.3200	Relative Permittivity (ϵ_r):	37.32	38.88	-4.02	5	
		e"	13.3000	Conductivity (σ):	2.00	2.07	-3.55	5	
5-27-2024	Head 2450	e'	37.7300	Relative Permittivity (ϵ_r):	37.73	39.20	-3.75	5	
		e"	13.4600	Conductivity (σ):	1.83	1.80	1.87	5	
	Head 2400	e'	37.8100	Relative Permittivity (ϵ_r):	37.81	39.30	-3.78	5	
		e"	13.4700	Conductivity (σ):	1.80	1.75	2.62	5	
	Head 2480	e'	37.6900	Relative Permittivity (ϵ_r):	37.69	39.16	-3.76	5	
		e"	13.4600	Conductivity (σ):	1.86	1.83	1.29	5	
5-27-2024	Head 2600	e'	37.5100	Relative Permittivity (ϵ_r):	37.51	39.01	-3.85	5	
		e"	13.4900	Conductivity (σ):	1.95	1.96	-0.61	5	
	Head 2495	e'	37.6700	Relative Permittivity (ϵ_r):	37.67	39.14	-3.76	5	
		e"	13.4600	Conductivity (σ):	1.87	1.85	1.01	5	
	Head 2700	e'	37.3500	Relative Permittivity (ϵ_r):	37.35	38.88	-3.95	5	
		e"	13.5100	Conductivity (σ):	2.03	2.07	-2.03	5	

SAR 4 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
5-17-2024	Head 835	e'	41.6700	Relative Permittivity (ϵ_r):	41.67	41.50	0.41	5
		e"	19.7900	Conductivity (σ):	0.92	0.90	2.09	5
	Head 810	e'	41.7300	Relative Permittivity (ϵ_r):	41.73	41.65	0.18	5
		e"	20.2200	Conductivity (σ):	0.91	0.90	1.45	5
	Head 850	e'	41.6400	Relative Permittivity (ϵ_r):	41.64	41.50	0.34	5
		e"	19.5400	Conductivity (σ):	0.92	0.92	0.93	5
5-21-2024	Head 750	e'	42.8700	Relative Permittivity (ϵ_r):	42.87	41.96	2.16	5
		e"	21.6000	Conductivity (σ):	0.90	0.89	0.86	5
	Head 660	e'	43.1500	Relative Permittivity (ϵ_r):	43.15	42.42	1.71	5
		e"	23.7800	Conductivity (σ):	0.87	0.89	-1.52	5
	Head 800	e'	42.7500	Relative Permittivity (ϵ_r):	42.75	41.71	2.51	5
		e"	20.6100	Conductivity (σ):	0.92	0.90	2.21	5
5-21-2024	Head 835	e'	42.6700	Relative Permittivity (ϵ_r):	42.67	41.50	2.82	5
		e"	19.9600	Conductivity (σ):	0.93	0.90	2.97	5
	Head 810	e'	42.7300	Relative Permittivity (ϵ_r):	42.73	41.65	2.58	5
		e"	20.4200	Conductivity (σ):	0.92	0.90	2.45	5
	Head 850	e'	42.6400	Relative Permittivity (ϵ_r):	42.64	41.50	2.75	5
		e"	19.7100	Conductivity (σ):	0.93	0.92	1.81	5
5-21-2024	Head 1750	e'	41.1600	Relative Permittivity (ϵ_r):	41.16	40.08	2.68	5
		e"	13.6600	Conductivity (σ):	1.33	1.37	-2.91	5
	Head 1695	e'	41.2400	Relative Permittivity (ϵ_r):	41.24	40.17	2.67	5
		e"	13.8100	Conductivity (σ):	1.30	1.34	-2.72	5
	Head 1780	e'	41.1200	Relative Permittivity (ϵ_r):	41.12	40.04	2.70	5
		e"	13.5800	Conductivity (σ):	1.34	1.39	-3.02	5
5-21-2024	Head 1900	e'	40.9800	Relative Permittivity (ϵ_r):	40.98	40.00	2.45	5
		e"	13.3200	Conductivity (σ):	1.41	1.40	0.51	5
	Head 1850	e'	41.0100	Relative Permittivity (ϵ_r):	41.01	40.00	2.53	5
		e"	13.4300	Conductivity (σ):	1.38	1.40	-1.32	5
	Head 1915	e'	40.9600	Relative Permittivity (ϵ_r):	40.96	40.00	2.40	5
		e"	13.3100	Conductivity (σ):	1.42	1.40	1.23	5
5-27-2024	Head 750	e'	43.3000	Relative Permittivity (ϵ_r):	43.30	41.96	3.19	5
		e"	21.0500	Conductivity (σ):	0.88	0.89	-1.71	5
	Head 660	e'	43.6800	Relative Permittivity (ϵ_r):	43.68	42.42	2.96	5
		e"	23.1400	Conductivity (σ):	0.85	0.89	-4.17	5
	Head 800	e'	43.1200	Relative Permittivity (ϵ_r):	43.12	41.71	3.39	5
		e"	20.1100	Conductivity (σ):	0.89	0.90	-0.27	5
5-27-2024	Head 835	e'	43.0200	Relative Permittivity (ϵ_r):	43.02	41.50	3.66	5
		e"	19.5100	Conductivity (σ):	0.91	0.90	0.65	5
	Head 810	e'	43.0900	Relative Permittivity (ϵ_r):	43.09	41.65	3.45	5
		e"	19.9300	Conductivity (σ):	0.90	0.90	-0.01	5
	Head 850	e'	42.9700	Relative Permittivity (ϵ_r):	42.97	41.50	3.54	5
		e"	19.2800	Conductivity (σ):	0.91	0.92	-0.41	5
2024-05-30	Head 1900	e'	39.0600	Relative Permittivity (ϵ_r):	39.06	40.00	-2.35	5
		e"	13.0800	Conductivity (σ):	1.38	1.40	-1.30	5
	Head 1850	e'	39.1900	Relative Permittivity (ϵ_r):	39.19	40.00	-2.03	5
		e"	13.1700	Conductivity (σ):	1.35	1.40	-3.23	5
	Head 1915	e'	39.0100	Relative Permittivity (ϵ_r):	39.01	40.00	-2.48	5
		e"	13.0500	Conductivity (σ):	1.39	1.40	-0.75	5

SAR 5 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	
5-07-2024	Head 750	e'	41.9300	Relative Permittivity (ϵ_r):	41.93	41.96	-0.08
		e"	21.2800	Conductivity (σ):	0.89	0.89	-0.63
	Head 660	e'	42.2000	Relative Permittivity (ϵ_r):	42.20	42.42	-0.53
		e"	23.3800	Conductivity (σ):	0.86	0.89	-3.18
	Head 800	e'	41.8100	Relative Permittivity (ϵ_r):	41.81	41.71	0.25
		e"	20.3500	Conductivity (σ):	0.91	0.90	0.92
5-07-2024	Head 835	e'	41.7200	Relative Permittivity (ϵ_r):	41.72	41.50	0.53
		e"	19.7500	Conductivity (σ):	0.92	0.90	1.88
	Head 810	e'	41.7900	Relative Permittivity (ϵ_r):	41.79	41.65	0.33
		e"	20.1700	Conductivity (σ):	0.91	0.90	1.20
	Head 850	e'	41.6800	Relative Permittivity (ϵ_r):	41.68	41.50	0.43
		e"	19.5100	Conductivity (σ):	0.92	0.92	0.78
5-13-2024	Head 835	e'	40.8900	Relative Permittivity (ϵ_r):	40.89	41.50	-1.47
		e"	20.2000	Conductivity (σ):	0.94	0.90	4.21
	Head 810	e'	40.9600	Relative Permittivity (ϵ_r):	40.96	41.65	-1.67
		e"	20.6500	Conductivity (σ):	0.93	0.90	3.60
	Head 850	e'	40.8600	Relative Permittivity (ϵ_r):	40.86	41.50	-1.54
		e"	19.9500	Conductivity (σ):	0.94	0.92	3.05
5-16-2024	Head 1900	e'	39.1000	Relative Permittivity (ϵ_r):	39.10	40.00	-2.25
		e"	13.6000	Conductivity (σ):	1.44	1.40	2.63
	Head 1850	e'	39.1200	Relative Permittivity (ϵ_r):	39.12	40.00	-2.20
		e"	13.6900	Conductivity (σ):	1.41	1.40	0.59
	Head 1915	e'	39.0900	Relative Permittivity (ϵ_r):	39.09	40.00	-2.27
		e"	13.5900	Conductivity (σ):	1.45	1.40	3.36
5-20-2024	Head 1750	e'	39.1300	Relative Permittivity (ϵ_r):	39.13	40.08	-2.38
		e"	14.1200	Conductivity (σ):	1.37	1.37	0.36
	Head 1710	e'	39.2400	Relative Permittivity (ϵ_r):	39.24	40.15	-2.26
		e"	14.2000	Conductivity (σ):	1.35	1.35	0.28
	Head 1780	e'	39.0600	Relative Permittivity (ϵ_r):	39.06	40.04	-2.44
		e"	14.0300	Conductivity (σ):	1.39	1.39	0.19
5-20-2024	Head 1900	e'	38.8900	Relative Permittivity (ϵ_r):	38.89	40.00	-2.78
		e"	13.7600	Conductivity (σ):	1.45	1.40	3.83
	Head 1850	e'	38.9500	Relative Permittivity (ϵ_r):	38.95	40.00	-2.62
		e"	13.8700	Conductivity (σ):	1.43	1.40	1.91
	Head 1915	e'	38.8800	Relative Permittivity (ϵ_r):	38.88	40.00	-2.80
		e"	13.7400	Conductivity (σ):	1.46	1.40	4.50
5-22-2024	Head 2450	e'	37.7900	Relative Permittivity (ϵ_r):	37.79	39.20	-3.60
		e"	13.5000	Conductivity (σ):	1.84	1.80	2.17
	Head 2400	e'	37.9000	Relative Permittivity (ϵ_r):	37.90	39.30	-3.55
		e"	13.5200	Conductivity (σ):	1.80	1.75	3.00
	Head 2500	e'	37.7300	Relative Permittivity (ϵ_r):	37.73	39.14	-3.59
		e"	13.5300	Conductivity (σ):	1.88	1.85	1.44
5-27-2024	Head 835	e'	40.9100	Relative Permittivity (ϵ_r):	40.91	41.50	-1.42
		e"	20.3400	Conductivity (σ):	0.94	0.90	4.93
	Head 810	e'	40.9800	Relative Permittivity (ϵ_r):	40.98	41.65	-1.62
		e"	20.7800	Conductivity (σ):	0.94	0.90	4.26
	Head 850	e'	40.8600	Relative Permittivity (ϵ_r):	40.86	41.50	-1.54
		e"	20.0900	Conductivity (σ):	0.95	0.92	3.77
2024-05-28	Head 5180	e'	36.3700	Relative Permittivity (ϵ_r):	36.37	36.01	0.99
		e"	15.8000	Conductivity (σ):	4.55	4.63	-1.72
	Head 5200	e'	36.3400	Relative Permittivity (ϵ_r):	36.34	35.99	0.97
		e"	15.8200	Conductivity (σ):	4.57	4.65	-1.65
	Head 5600	e'	35.6100	Relative Permittivity (ϵ_r):	35.61	35.53	0.21
		e"	16.1400	Conductivity (σ):	5.03	5.06	-0.68
	Head 5800	e'	35.2500	Relative Permittivity (ϵ_r):	35.25	35.30	-0.14
		e"	16.3400	Conductivity (σ):	5.27	5.27	-0.01
	Head 5925	e'	35.0500	Relative Permittivity (ϵ_r):	35.05	35.20	-0.43
		e"	16.4500	Conductivity (σ):	5.42	5.40	0.36
2024-05-31	Head 835	e'	41.8400	Relative Permittivity (ϵ_r):	41.84	41.50	0.82
		e"	19.4100	Conductivity (σ):	0.90	0.90	0.13
	Head 810	e'	41.8800	Relative Permittivity (ϵ_r):	41.88	41.65	0.54
		e"	19.8000	Conductivity (σ):	0.89	0.90	-0.66
	Head 850	e'	41.8300	Relative Permittivity (ϵ_r):	41.83	41.50	0.80
		e"	19.2000	Conductivity (σ):	0.91	0.92	-0.83

SAR 6 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
5-14-2024	Head 2600	e'	38.9500	Relative Permittivity (ϵ_r):	38.95	39.01	-0.16	5
		e"	13.6700	Conductivity (σ):	1.98	1.96	0.72	5
	Head 2495	e'	39.1500	Relative Permittivity (ϵ_r):	39.15	39.14	0.02	5
		e"	13.6200	Conductivity (σ):	1.89	1.85	2.21	5
	Head 2700	e'	38.7500	Relative Permittivity (ϵ_r):	38.75	38.88	-0.35	5
		e"	13.6600	Conductivity (σ):	2.05	2.07	-0.94	5
5-20-2024	Head 2600	e'	37.6800	Relative Permittivity (ϵ_r):	37.68	39.01	-3.41	5
		e"	13.1100	Conductivity (σ):	1.90	1.96	-3.41	5
	Head 2495	e'	37.8400	Relative Permittivity (ϵ_r):	37.84	39.14	-3.33	5
		e"	13.0100	Conductivity (σ):	1.80	1.85	-2.37	5
	Head 2700	e'	37.4400	Relative Permittivity (ϵ_r):	37.44	38.88	-3.72	5
		e"	13.1300	Conductivity (σ):	1.97	2.07	-4.79	5
5-24-2024	Head 2600	e'	38.5300	Relative Permittivity (ϵ_r):	38.53	39.01	-1.23	5
		e"	13.1800	Conductivity (σ):	1.91	1.96	-2.89	5
	Head 2495	e'	38.7100	Relative Permittivity (ϵ_r):	38.71	39.14	-1.11	5
		e"	13.2600	Conductivity (σ):	1.84	1.85	-0.49	5
	Head 2700	e'	38.3800	Relative Permittivity (ϵ_r):	38.38	38.88	-1.30	5
		e"	13.1500	Conductivity (σ):	1.97	2.07	-4.64	5
2024-05-30	Head 2600	e'	39.7100	Relative Permittivity (ϵ_r):	39.71	39.01	1.79	5
		e"	13.2600	Conductivity (σ):	1.92	1.96	-2.30	5
	Head 2495	e'	39.9000	Relative Permittivity (ϵ_r):	39.90	39.14	1.93	5
		e"	13.1300	Conductivity (σ):	1.82	1.85	-1.47	5
	Head 2700	e'	39.5000	Relative Permittivity (ϵ_r):	39.50	38.88	1.58	5
		e"	13.3800	Conductivity (σ):	2.01	2.07	-2.97	5

SAR 7 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
5-07-2024	Head 1900	e'	40.0500	Relative Permittivity (ϵ_r):	40.05	40.00	0.12	5
		e"	13.5800	Conductivity (σ):	1.43	1.40	2.48	5
	Head 1850	e'	40.1400	Relative Permittivity (ϵ_r):	40.14	40.00	0.35	5
		e"	13.5900	Conductivity (σ):	1.40	1.40	-0.15	5
	Head 1915	e'	40.0300	Relative Permittivity (ϵ_r):	40.03	40.00	0.08	5
		e"	13.5500	Conductivity (σ):	1.44	1.40	3.06	5
5-09-2024	Head 13	e'	53.4400	Relative Permittivity (ϵ_r):	53.44	55.00	-2.84	5
		e"	1088.0700	Conductivity (σ):	0.79	0.75	4.87	5
	Head 12	e'	53.4300	Relative Permittivity (ϵ_r):	53.43	55.00	-2.85	5
		e"	1148.8900	Conductivity (σ):	0.77	0.75	2.21	5
	Head 14	e'	53.4000	Relative Permittivity (ϵ_r):	53.40	55.00	-2.91	5
		e"	1005.9200	Conductivity (σ):	0.78	0.75	4.41	5
2024-06-10	Head 1750	e'	39.6700	Relative Permittivity (ϵ_r):	39.67	40.08	-1.03	5
		e"	14.2300	Conductivity (σ):	1.38	1.37	1.15	5
	Head 1710	e'	39.7600	Relative Permittivity (ϵ_r):	39.76	40.15	-0.96	5
		e"	14.3300	Conductivity (σ):	1.36	1.35	1.20	5
	Head 1780	e'	39.5700	Relative Permittivity (ϵ_r):	39.57	40.04	-1.17	5
		e"	14.1600	Conductivity (σ):	1.40	1.39	1.12	5

SAR 8 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
5-07-2024	Head 5200	e'	35.3000	Relative Permittivity (ϵ_r):	35.30	35.99	-1.92	5
		e"	15.6300	Conductivity (σ):	4.52	4.65	-2.83	5
	Head 5250	e'	35.2900	Relative Permittivity (ϵ_r):	35.29	35.93	-1.79	5
		e"	15.5600	Conductivity (σ):	4.54	4.70	-3.40	5
	Head 5600	e'	34.7000	Relative Permittivity (ϵ_r):	34.70	35.53	-2.35	5
		e"	15.9100	Conductivity (σ):	4.95	5.06	-2.10	5
	Head 5800	e'	34.5800	Relative Permittivity (ϵ_r):	34.58	35.30	-2.04	5
		e"	16.0500	Conductivity (σ):	5.18	5.27	-1.78	5
	Head 5925	e'	34.1100	Relative Permittivity (ϵ_r):	34.11	35.20	-3.10	5
		e"	15.7900	Conductivity (σ):	5.20	5.40	-3.67	5
5-14-2024	Head 1750	e'	39.8100	Relative Permittivity (ϵ_r):	39.81	40.08	-0.69	5
		e"	13.6500	Conductivity (σ):	1.33	1.37	-2.98	5
	Head 1710	e'	39.7800	Relative Permittivity (ϵ_r):	39.78	40.15	-0.91	5
		e"	13.6700	Conductivity (σ):	1.30	1.35	-3.46	5
	Head 1780	e'	39.7800	Relative Permittivity (ϵ_r):	39.78	40.04	-0.65	5
		e"	13.6400	Conductivity (σ):	1.35	1.39	-2.59	5
5-14-2024	Head 1900	e'	39.5900	Relative Permittivity (ϵ_r):	39.59	40.00	-1.02	5
		e"	13.5900	Conductivity (σ):	1.44	1.40	2.55	5
	Head 1850	e'	39.7100	Relative Permittivity (ϵ_r):	39.71	40.00	-0.72	5
		e"	13.5800	Conductivity (σ):	1.40	1.40	-0.22	5
	Head 1915	e'	39.5200	Relative Permittivity (ϵ_r):	39.52	40.00	-1.20	5
		e"	13.5800	Conductivity (σ):	1.45	1.40	3.29	5
5-20-2024	Head 1750	e'	40.2000	Relative Permittivity (ϵ_r):	40.20	40.08	0.29	5
		e"	13.9400	Conductivity (σ):	1.36	1.37	-0.92	5
	Head 1710	e'	40.2500	Relative Permittivity (ϵ_r):	40.25	40.15	0.26	5
		e"	14.1000	Conductivity (σ):	1.34	1.35	-0.43	5
	Head 1780	e'	40.1700	Relative Permittivity (ϵ_r):	40.17	40.04	0.33	5
		e"	13.8500	Conductivity (σ):	1.37	1.39	-1.09	5
5-24-2024	Head 1750	e'	39.7900	Relative Permittivity (ϵ_r):	39.79	40.08	-0.73	5
		e"	13.6600	Conductivity (σ):	1.33	1.37	-2.91	5
	Head 1710	e'	39.9000	Relative Permittivity (ϵ_r):	39.90	40.15	-0.61	5
		e"	13.7800	Conductivity (σ):	1.31	1.35	-2.69	5
	Head 1780	e'	39.6800	Relative Permittivity (ϵ_r):	39.68	40.04	-0.90	5
		e"	13.5900	Conductivity (σ):	1.35	1.39	-2.95	5
2024-06-10	Head 1750	e'	39.3600	Relative Permittivity (ϵ_r):	39.36	40.08	-1.81	5
		e"	13.8200	Conductivity (σ):	1.34	1.37	-1.77	5
	Head 1710	e'	39.4700	Relative Permittivity (ϵ_r):	39.47	40.15	-1.68	5
		e"	13.9400	Conductivity (σ):	1.33	1.35	-1.56	5
	Head 1780	e'	39.2600	Relative Permittivity (ϵ_r):	39.26	40.04	-1.94	5
		e"	13.7500	Conductivity (σ):	1.36	1.39	-1.80	5

8.2. System Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification of 100MHz to 6GHz frequency range should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements. For The System verification of 4MHz to 30MHz frequency range, The System verification must be performed before 24 hours.

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

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 ±0.2 mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 1.4 mm.
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

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

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 ±0.2 mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements
- The DASY system with an E-Field Probe was used for the measurements.
- The CLA(Confined Loop Antennas) was mounted on the small tripod so that the CLA feed point was positioned below the center marking of the flat phantom section and the CLA was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 0 mm separation distance from CLA center to the Phantom surface.
- The CLA input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

Reference Target SAR Values

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

System Dipole	Serial No.	Cal. Date	Cal.due date	Target SAR Values (W/kg)	
				1g/10g	Head
D750V3	1122	2-22-2024	2-22-2025	1g	8.58
				10g	5.62
D835V2	4d174	9-21-2022	9-21-2024	1g	9.63
				10g	6.29
D835V2	4d194	3-11-2024	3-11-2025	1g	9.86
				10g	6.45
D1750V2	1125	11-30-2022	11-30-2024	1g	37.40
				10g	19.70
D1750V2	1180	9-21-2022	9-21-2024	1g	35.60
				10g	18.90
D1900V2	5d190	11-16-2022	11-16-2024	1g	39.7
				10g	20.7
D2450V2	939	7-19-2023	7-19-2024	1g	52.3
				10g	24.7
D2600V2	1097	9-26-2023	9-26-2024	1g	57.3
				10g	25.7
D2600V2	1178	4-25-2023	4-25-2025	1g	57.4
				10g	25.7
D5GHzV2 (5250 MHz)	1209	2-28-2023	2-28-2025	1g	80.4
				10g	22.9
D5GHzV2 (5600 MHz)	1209	2-28-2023	2-28-2025	1g	83.1
				10g	23.6
D5GHzV2 (5800 MHz)	1209	2-28-2023	2-28-2025	1g	81.2
				10g	22.9
D5GHzV2 (5250 MHz)	1325	4-21-2023	4-21-2025	1g	79.6
				10g	22.7
D5GHzV2 (5600 MHz)	1325	4-21-2023	4-21-2025	1g	83.9
				10g	23.8
D5GHzV2 (5800 MHz)	1325	4-21-2023	4-21-2025	1g	80.5
				10g	22.5
CLA-13	1015	8-22-2023	8-22-2024	1g	0.533
				10g	0.333

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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				
5-14-2024	D5GHzV2 (5250)	1325	Head	1g	8.19	81.9	79.60	2.89	
				10g	2.41	24.1	22.70	6.17	
5-20-2024	D5GHzV2 (5600)	1325	Head	1g	8.30	83.0	83.90	-1.07	
				10g	2.41	24.1	23.80	1.26	
5-20-2024	D5GHzV2 (5800)	1325	Head	1g	8.34	83.4	80.50	3.60	1
				10g	2.43	24.3	22.50	8.00	
5-24-2024	D2450V2	939	Head	1g	5.29	52.9	53.00	-0.19	
				10g	2.53	25.3	24.70	2.43	
5-24-2024	D5GHzV2 (5250)	1325	Head	1g	8.00	80.0	79.60	0.50	
				10g	2.39	23.9	22.70	5.29	
5-24-2024	D5GHzV2 (5800)	1325	Head	1g	8.15	81.5	80.50	1.24	
				10g	2.40	24.0	22.50	6.67	
5-28-2024	D2450V2	939	Head	1g	5.12	51.2	53.00	-3.40	
				10g	2.46	24.6	24.70	-0.40	

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				
5-7-2024	D5GHzV2 (5250)	1209	Head	1g	8.27	82.7	80.40	2.86	
				10g	2.40	24.0	22.90	4.80	
5-7-2024	D5GHzV2 (5600)	1209	Head	1g	8.68	86.8	83.10	4.45	
				10g	2.49	24.9	23.60	5.51	
5-13-2024	D2600V2	1097	Head	1g	6.27	62.7	57.30	9.42	2
				10g	2.78	27.8	25.70	8.17	
5-17-2024	D2600V2	1097	Head	1g	6.23	62.3	57.30	8.73	
				10g	2.75	27.5	25.70	7.00	
5-21-2024	D2600V2	1097	Head	1g	6.12	61.2	57.30	6.81	
				10g	2.72	27.2	25.70	5.84	
5-23-2024	D2450V2	939	Head	1g	5.69	56.9	52.30	8.80	3
				10g	2.61	26.1	24.70	5.67	

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				
5-8-2024	D5GHzV2 (5800)	1209	Head	1g	8.56	85.6	81.20	5.42	
				10g	2.43	24.3	22.90	6.11	
5-13-2024	D5GHzV2 (5600)	1325	Head	1g	7.90	79.0	83.90	-5.84	4
				10g	2.26	22.6	23.80	-5.04	
5-13-2024	D5GHzV2 (5800)	1325	Head	1g	7.46	74.6	80.50	-7.33	5
				10g	2.13	21.3	22.50	-5.33	
5-17-2024	D5GHzV2 (5250)	1209	Head	1g	7.67	76.7	80.40	-4.60	6
				10g	2.22	22.2	22.90	-3.06	
5-17-2024	D5GHzV2 (5600)	1209	Head	1g	8.46	84.6	83.10	1.81	
				10g	2.42	24.2	23.60	2.54	
5-21-2024	D2600V2	1097	Head	1g	5.83	58.3	57.30	1.75	
				10g	2.63	26.3	25.70	2.33	
5-27-2024	D2450V2	939	Head	1g	5.35	53.5	52.30	2.29	
				10g	2.50	25.0	24.70	1.21	
5-27-2024	D2600V2	1097	Head	1g	6.14	61.4	57.30	7.16	
				10g	2.76	27.6	25.70	7.39	

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				
5-17-2024	D835V2	4d194	Head	1g	1.01	10.1	9.86	2.43	
				10g	0.66	6.6	6.45	2.48	
5-21-2024	D750V3	1122	Head	1g	0.86	8.6	8.58	0.12	
				10g	0.58	5.8	5.62	2.85	
5-21-2024	D835V2	4d194	Head	1g	0.96	9.6	9.86	-2.23	
				10g	0.65	6.5	6.45	0.00	
5-21-2024	D1750V2	1125	Head	1g	3.64	36.4	37.40	-2.67	
				10g	2.00	20.0	19.70	1.52	
5-21-2024	D1900V2	5d190	Head	1g	4.02	40.2	39.70	1.26	
				10g	2.16	21.6	20.70	4.35	
5-27-2024	D750V3	1122	Head	1g	0.85	8.5	8.58	-1.40	
				10g	0.57	5.7	5.62	1.25	
5-27-2024	D835V2	4d174	Head	1g	1.00	10.0	9.63	3.84	7
				10g	0.67	6.7	6.29	6.04	
5-30-2024	D1900V2	5d190	Head	1g	4.12	41.2	39.70	3.78	
				10g	2.19	21.9	20.70	5.80	

SAR 5 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
5-7-2024	D750V3	1122	Head	1g	0.80	8.0	8.58	-6.29	8
				10g	0.53	5.3	5.62	-5.16	
5-7-2024	D835V2	4d174	Head	1g	1.04	10.4	9.63	8.00	9
				10g	0.65	6.5	6.29	3.50	
5-13-2024	D835V2	4d174	Head	1g	0.99	9.9	9.63	2.39	
				10g	0.65	6.5	6.29	3.34	
5-16-2024	D1900V2	5d190	Head	1g	3.75	37.5	39.70	-5.54	10
				10g	1.95	19.5	20.70	-5.80	
5-20-2024	D1750V2	1125	Head	1g	3.42	34.2	37.40	-8.56	11
				10g	1.82	18.2	19.70	-7.61	
5-20-2024	D1900V2	5d190	Head	1g	3.81	38.1	39.70	-4.03	
				10g	1.98	19.8	20.70	-4.35	
5-22-2024	D2450V2	939	Head	1g	5.04	50.4	52.30	-3.63	
				10g	2.34	23.4	24.70	-5.26	
5-27-2024	D835V2	4d174	Head	1g	0.94	9.4	9.63	-1.97	
				10g	0.62	6.2	6.29	-1.43	
5-28-2024	D5GHzV2 (5800)	1209	Head	1g	7.62	76.2	81.20	-6.16	
				10g	2.19	21.9	22.90	-4.37	
5-31-2024	D835V2	4d174	Head	1g	0.93	9.3	9.63	-3.12	
				10g	0.61	6.1	6.29	-2.70	

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				
5-14-2024	D2600V2	1178	Head	1g	5.71	57.1	57.40	-0.52	
				10g	2.77	27.7	25.70	7.78	
5-20-2024	D2600V2	1178	Head	1g	5.41	54.1	57.40	-5.75	12
				10g	2.64	26.4	25.70	2.72	
5-24-2024	D2600V2	1178	Head	1g	5.97	59.7	57.40	4.01	
				10g	2.78	27.8	25.70	8.17	
5-30-2024	D2600V2	1178	Head	1g	5.48	54.8	57.40	-4.53	
				10g	2.63	26.3	25.70	2.33	

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				
5-7-2024	D1900V2	5d190	Head	1g	4.02	40.2	39.70	1.26	
				10g	2.13	21.3	20.70	2.90	
5-9-2024	CLA-13	1015	Head	1g	0.06	0.6	0.53	6.94	13
				10g	0.04	0.4	0.33	5.11	
6-10-2024	D1750V2	1180	Head	1g	3.52	35.2	35.60	-1.12	
				10g	1.98	19.8	18.90	4.76	

SAR 8 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
5-7-2024	D5GHzV2 (5250)	1325	Head	1g	8.09	80.9	79.60	1.63	
				10g	2.41	24.1	22.70	6.17	
5-14-2024	D1750V2	1125	Head	1g	3.73	37.3	37.40	-0.27	
				10g	2.11	21.1	19.70	7.11	
5-14-2024	D1900V2	5d190	Head	1g	3.88	38.8	39.70	-2.27	
				10g	2.14	21.4	20.70	3.38	
5-20-2024	D1750V2	1180	Head	1g	3.36	33.6	35.60	-5.62	
				10g	1.88	18.8	18.90	-0.53	
5-24-2024	D1750V2	1180	Head	1g	3.44	34.4	35.60	-3.37	
				10g	1.89	18.9	18.90	0.00	
6-10-2024	D1750V2	1180	Head	1g	3.33	33.3	35.60	-6.46	14
				10g	1.78	17.8	18.90	-5.82	

9. Conducted Output Power Measurements

9.1. GSM

Per KDB 941225 D01 3G SAR Procedures:

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

GSM850 (Ant.A & Ant.A+B) Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)			
					DSI=0,1,2,3			
					Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM (Voice)	CS1	1	128	824.2	32.22	23.03	33.3	24.1
			190	836.6	32.37	23.18		
			251	848.8	32.39	23.20		
GPRS (GMSK)	CS1	1	128	824.2	32.21	23.02	33.3	24.1
			190	836.6	32.28	23.09		
			251	848.8	32.28	23.09		
		2	128	824.2	30.59	24.41	32.5	26.3
			190	836.6	31.18	25.00		
			251	848.8	30.92	24.74		
		3	128	824.2	28.79	24.37	30.5	26.1
			190	836.6	29.05	24.63		
			251	848.8	28.84	24.42		
		4	128	824.2	26.86	23.69	28.5	25.3
			190	836.6	27.16	23.99		
			251	848.8	26.77	23.60		
EGPRS (8PSK)	MCS5	1	128	824.2	25.92	16.73	28.0	18.8
			190	836.6	26.20	17.01		
			251	848.8	26.33	17.14		
		2	128	824.2	24.61	18.43	26.0	19.8
			190	836.6	24.96	18.78		
			251	848.8	25.08	18.90		
		3	128	824.2	22.60	18.18	24.0	19.6
			190	836.6	22.75	18.33		
			251	848.8	22.71	18.29		
		4	128	824.2	21.61	18.44	23.0	19.8
			190	836.6	21.74	18.57		
			251	848.8	22.03	18.86		

Notes:

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

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

GSM1900 (Ant.B) Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)				Maximum Allowed Average Power (dBm)			
					DSI=2,3				DSI=0,1			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM (Voice)	CS1	1	512	1850.2	29.74	20.55	30.5	21.3	27.41	18.22	28.5	19.3
			661	1880.0	29.78	20.59			27.58	18.39		
			810	1909.8	29.90	20.71			27.60	18.41		
GPRS (GMSK)	CS1	1	512	1850.2	29.74	20.55	30.5	21.3	27.40	18.21	28.5	19.3
			661	1880.0	29.58	20.39			27.48	18.29		
			810	1909.8	29.76	20.57			27.45	18.26		
		2	512	1850.2	27.55	21.37	29.0	22.8	23.98	17.80	25.5	19.3
			661	1880.0	27.66	21.48			24.24	18.06		
			810	1909.8	27.60	21.42			24.21	18.03		
		3	512	1850.2	25.07	20.65	27.0	22.6	22.36	17.94	23.7	19.3
			661	1880.0	25.13	20.71			22.53	18.11		
			810	1909.8	25.13	20.71			22.35	17.93		
		4	512	1850.2	24.21	21.04	25.5	22.3	20.99	17.82	22.5	19.3
			661	1880.0	24.68	21.51			21.60	18.43		
			810	1909.8	24.82	21.65			21.45	18.28		
EGPRS (8PSK)	MCS5	1	512	1850.2	25.17	15.98	27.0	17.8	24.94	15.75	27.0	17.8
			661	1880.0	26.95	17.76			26.55	17.36		
			810	1909.8	26.90	17.71			26.51	17.32		
		2	512	1850.2	23.68	17.50	25.0	18.8	23.46	17.28	25.0	18.8
			661	1880.0	23.90	17.72			23.79	17.61		
			810	1909.8	23.79	17.61			23.61	17.43		
		3	512	1850.2	21.56	17.14	23.0	18.6	21.59	17.17	23.0	18.6
			661	1880.0	21.70	17.28			21.66	17.24		
			810	1909.8	21.65	17.23			21.39	16.97		
		4	512	1850.2	20.47	17.30	22.0	18.8	20.32	17.15	22.0	18.8
			661	1880.0	21.38	18.21			21.10	17.93		
			810	1909.8	21.33	18.16			20.96	17.79		

Notes:

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

- GMSK (GPRS) mode with 2 time slots for DSI 2, 3, GMSK (GPRS) mode with 4 time slots for DSI 0,1 based on the Tune-up Procedure. Refer to §6.3.
- SAR is not required for EGPRS (8PSK) mode because the maximum output power and tune-up limit is ≤ 1/4dB higher than GMSK GPRS or the adjusted SAR of the highest reported SAR of GMSK GPRS is ≤ 1.2W/kg.

9.2. W-CDMA

Release 99 Setup Procedures used to establish the test signals

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

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

HSDPA Setup Procedures used to establish the test signals

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

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

HSPA (HSDPA & HSUPA) Setup Procedures used to establish the test signals

The following 5 Sub-tests were completed according to Release 6 procedures in table C,11.1.3 of 3GPP TS 34.121-1 v13. A summary of these settings are illustrated below:

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

DC-HSDPA Setup Procedures used to establish the test signals

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

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

Table E.5.0: Levels for HSDPA connection setup

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

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

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

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

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

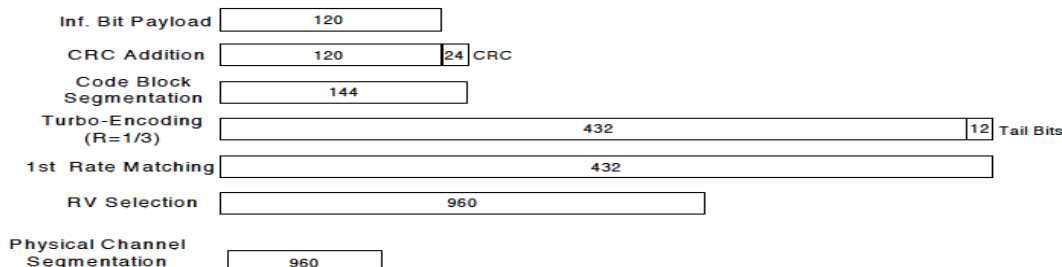


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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

	Mode	HSDPA 1	HSDPA 2	HSDPA 3	HSDPA 4	
WCDMA General Settings	Subtest	1	2	3	4	
	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set 12				
	Power Control Algorithm	Algorithm2				
	β_c	2/15	11/15	15/15	15/15	
	β_d	15/15	15/15	8/15	4/15	
	β_d (SF)	64				
	β_c/β_d	2/15	11/15	15/8	15/4	
β_{hs}	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				
	$A_{hs} = \beta_{hs}/\beta_c$	30/15				

HSPA+

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

W-CDMA Band V (Ant.A & Ant.A+B) Measured Results

Mode		UL Ch No.	Freq. (MHz)	Maximum Allowed Average Power (dBm)		
				DSI=0,1,2,3		
				Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	24.46	N/A	25.3
		4183	836.6	24.43		
		4233	846.6	24.46		
HSDPA	Subtest 1	4132	826.4	23.48	0	24.3
		4183	836.6	23.40		
		4233	846.6	23.49		
	Subtest 2	4132	826.4	23.49	0	24.3
		4183	836.6	23.45		
		4233	846.6	23.24		
	Subtest 3	4132	826.4	23.01	0.5	23.8
		4183	836.6	22.91		
		4233	846.6	22.99		
	Subtest 4	4132	826.4	22.99	0.5	23.8
		4183	836.6	22.91		
		4233	846.6	22.99		
HSUPA	Subtest 1	4132	826.4	23.26	0	24.3
		4183	836.6	23.03		
		4233	846.6	23.22		
	Subtest 2	4132	826.4	21.25	2	22.3
		4183	836.6	21.23		
		4233	846.6	21.36		
	Subtest 3	4132	826.4	22.39	1	23.3
		4183	836.6	22.31		
		4233	846.6	22.37		
	Subtest 4	4132	826.4	21.38	2	22.3
		4183	836.6	21.33		
		4233	846.6	21.34		
	Subtest 5	4132	826.4	22.92	0	24.3
		4183	836.6	22.90		
		4233	846.6	22.97		
DC-HSDPA	Subtest 1	4132	826.4	23.47	0	24.3
		4183	836.6	23.43		
		4233	846.6	23.44		
	Subtest 2	4132	826.4	23.50	0	24.3
		4183	836.6	23.42		
		4233	846.6	23.47		
	Subtest 3	4132	826.4	23.00	0.5	23.8
		4183	836.6	22.90		
		4233	846.6	22.95		
	Subtest 4	4132	826.4	23.00	0.5	23.8
		4183	836.6	22.89		
		4233	846.6	22.69		

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 12 (Ant A & Ant.A+B) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					
				DSI=0,1,2,3			MPR	Tune-up Limit	
				Measured Pwr (dBm)					
				23060 704 MHz	23095 707.5 MHz	23130 711 MHz			
10 MHz	QPSK	1	0		23.70		0.0	25.2	
		1	25		23.61		0.0	25.2	
		1	49		23.76		0.0	25.2	
		25	0		22.66		1.0	24.2	
		25	12		22.68		1.0	24.2	
		25	25		22.69		1.0	24.2	
	16QAM	50	0		22.66		1.0	24.2	
		1	0		22.92		1.0	24.2	
		1	25		22.94		1.0	24.2	
		1	49		22.88		1.0	24.2	
		25	0		21.69		2.0	23.2	
		25	12		21.66		2.0	23.2	
	64QAM	25	25		21.66		2.0	23.2	
		50	0		21.67		2.0	23.2	
		1	0		22.03		2.0	23.2	
		1	25		21.98		2.0	23.2	
		1	49		22.07		2.0	23.2	
		25	0		20.82		3.0	22.2	
	256QAM	25	12		20.81		3.0	22.2	
		25	25		20.79		3.0	22.2	
		50	0		20.79		3.0	22.2	
		1	0		18.90		5.0	20.2	
		1	25		18.94		5.0	20.2	
		1	49		18.83		5.0	20.2	
5 MHz	QPSK	25	0		18.77		5.0	20.2	
		25	12		18.80		5.0	20.2	
		25	25		18.78		5.0	20.2	
		50	0		18.79		5.0	20.2	
		1	0		23.92	23.67	23.71	0.0	25.2
		1	12		23.95	23.67	23.69	0.0	25.2
	16QAM	1	24		23.64	23.61	23.63	0.0	25.2
		12	0		22.85	22.70	22.64	1.0	24.2
		12	7		22.83	22.71	22.65	1.0	24.2
		12	13		22.72	22.65	22.69	1.0	24.2
		25	0		22.76	22.64	22.58	1.0	24.2
		1	0		23.30	23.16	23.11	1.0	24.2
	64QAM	1	12		23.47	23.15	23.17	1.0	24.2
		1	24		23.28	22.98	23.17	1.0	24.2
		12	0		21.92	21.76	21.74	2.0	23.2
		12	7		21.87	21.79	21.69	2.0	23.2
		12	13		21.76	21.75	21.73	2.0	23.2
		25	0		21.76	21.65	21.65	2.0	23.2
	256QAM	1	0		22.52	22.10	22.19	2.0	23.2
		1	12		22.37	22.05	22.22	2.0	23.2
		1	24		22.16	21.96	22.29	2.0	23.2
		12	0		21.03	20.81	20.77	3.0	22.2
		12	7		21.07	20.90	20.96	3.0	22.2
		12	13		20.92	20.79	20.82	3.0	22.2
256QAM	25	0		20.96	20.82	20.77	3.0	22.2	
	1	0		19.12	18.79	18.90	5.0	20.2	
	1	12		19.17	19.00	19.07	5.0	20.2	
	1	24		18.95	18.66	18.86	5.0	20.2	
	12	0		19.08	18.84	18.71	5.0	20.2	
	12	7		19.05	18.83	18.88	5.0	20.2	
256QAM	12	13		18.84	18.80	18.82	5.0	20.2	
	25	0		19.01	18.75	18.75	5.0	20.2	

LTE Band 12 (Ant A & Ant.A+B) 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	23.85	23.58	23.56	0.0	25.2
		1	8	23.90	23.63	23.69	0.0	25.2
		1	14	23.79	23.52	23.57	0.0	25.2
		8	0	22.93	22.59	22.57	1.0	24.2
		8	4	22.88	22.62	22.61	1.0	24.2
		8	7	22.79	22.63	22.65	1.0	24.2
	16QAM	15	0	22.81	22.62	22.63	1.0	24.2
		1	0	23.29	23.04	22.92	1.0	24.2
		1	8	23.27	23.05	23.04	1.0	24.2
		1	14	23.08	22.97	22.85	1.0	24.2
		8	0	21.92	21.78	21.67	2.0	23.2
		8	4	21.99	21.74	21.70	2.0	23.2
	64QAM	8	7	21.86	21.66	21.81	2.0	23.2
		15	0	21.90	21.68	21.64	2.0	23.2
		1	0	22.35	21.91	21.75	2.0	23.2
		1	8	22.46	22.19	22.03	2.0	23.2
		1	14	22.24	21.90	21.72	2.0	23.2
		8	0	21.12	20.98	20.86	3.0	22.2
	256QAM	8	4	21.11	20.94	20.95	3.0	22.2
		8	7	21.07	20.94	20.91	3.0	22.2
		15	0	20.96	20.81	20.74	3.0	22.2
		1	0	19.13	18.84	18.76	5.0	20.2
		1	8	19.34	18.98	18.99	5.0	20.2
		1	14	18.93	18.76	18.84	5.0	20.2
8		0	19.02	18.85	18.82	5.0	20.2	
8		4	19.08	18.87	18.86	5.0	20.2	
8		7	18.95	18.83	18.85	5.0	20.2	
		15	0	19.00	18.76	18.74	5.0	20.2
BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				23017	23095	23173		
				699.7 MHz	707.5 MHz	715.3 MHz		
1.4 MHz	QPSK	1	0	23.77	23.53	23.59	0.0	25.2
		1	3	23.81	23.56	23.56	0.0	25.2
		1	5	23.74	23.50	23.57	0.0	25.2
		3	0	23.79	23.53	23.55	0.0	25.2
		3	1	23.78	23.55	23.56	0.0	25.2
		3	3	23.76	23.51	23.57	0.0	25.2
	16QAM	6	0	22.82	22.56	22.57	1.0	24.2
		1	0	23.04	22.81	22.80	1.0	24.2
		1	3	23.05	22.95	22.82	1.0	24.2
		1	5	22.99	22.87	22.89	1.0	24.2
		3	0	22.89	22.69	22.67	1.0	24.2
		3	1	22.91	22.64	22.70	1.0	24.2
	64QAM	3	3	22.90	22.66	22.76	1.0	24.2
		6	0	21.86	21.61	21.69	2.0	23.2
		1	0	22.15	21.92	21.97	2.0	23.2
		1	3	22.34	22.04	21.74	2.0	23.2
		1	5	22.12	21.89	22.01	2.0	23.2
		3	0	21.97	21.77	21.84	2.0	23.2
	256QAM	3	1	22.11	21.78	21.93	2.0	23.2
		3	3	22.13	21.84	21.86	2.0	23.2
		6	0	20.99	20.79	20.82	3.0	22.2
		1	0	18.94	18.88	18.79	5.0	20.2
		1	3	19.13	18.98	18.91	5.0	20.2
		1	5	19.02	18.80	18.90	5.0	20.2
3		0	19.02	18.67	18.84	5.0	20.2	
3		1	19.06	18.80	18.82	5.0	20.2	
3		3	18.99	18.84	18.77	5.0	20.2	
		6	0	19.04	18.68	18.85	5.0	20.2

LTE Band 13 (Ant A & Ant.A+B) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)				
				DSI=0,1,2,3			MPR	Tune-up Limit
				Measured Pwr (dBm)				
				23230	782 MHz			
10 MHz	QPSK	1	0	24.63			0.0	25.5
		1	25	24.78			0.0	25.5
		1	49	24.77			0.0	25.5
		25	0	23.80			1.0	24.5
		25	12	23.76			1.0	24.5
		25	25	23.86			1.0	24.5
	16QAM	50	0	23.88			1.0	24.5
		1	0	24.12			1.0	24.5
		1	25	24.01			1.0	24.5
		1	49	24.24			1.0	24.5
		25	0	22.91			2.0	23.5
		25	12	22.84			2.0	23.5
	64QAM	25	25	22.84			2.0	23.5
		50	0	22.91			2.0	23.5
		1	0	22.91			2.0	23.5
		1	25	23.01			2.0	23.5
		1	49	22.98			2.0	23.5
		25	0	21.84			3.0	22.5
	256QAM	25	12	21.85			3.0	22.5
		25	25	21.73			3.0	22.5
		50	0	21.77			3.0	22.5
		1	0	19.92			5.0	20.5
		1	25	19.86			5.0	20.5
		1	49	19.70			5.0	20.5
5 MHz	QPSK	25	0	19.83			5.0	20.5
		25	12	19.81			5.0	20.5
		25	25	19.74			5.0	20.5
		50	0	19.77			5.0	20.5
		1	0	24.76	24.91	24.86	0.0	25.5
		1	12	25.01	24.92	24.82	0.0	25.5
	16QAM	1	24	24.81	24.81	24.71	0.0	25.5
		12	0	23.86	23.81	23.77	1.0	24.5
		12	7	23.92	23.85	23.90	1.0	24.5
		12	13	23.83	23.86	23.86	1.0	24.5
		25	0	23.86	23.84	23.83	1.0	24.5
		1	0	24.30	24.40	24.15	1.0	24.5
	64QAM	1	12	24.29	24.37	24.39	1.0	24.5
		1	24	24.28	24.29	24.22	1.0	24.5
		12	0	22.93	22.92	22.85	2.0	23.5
		12	7	22.97	22.96	23.02	2.0	23.5
		12	13	22.89	22.99	22.91	2.0	23.5
		25	0	22.90	22.87	22.84	2.0	23.5
	256QAM	1	0	23.08	23.13	23.01	2.0	23.5
		1	12	23.31	23.00	23.23	2.0	23.5
		1	24	23.19	23.07	22.78	2.0	23.5
		12	0	21.91	21.71	21.75	3.0	22.5
		12	7	21.91	21.88	21.81	3.0	22.5
		12	13	21.79	21.73	21.75	3.0	22.5
256QAM	25	0	21.86	21.73	21.75	3.0	22.5	
	1	0	19.95	20.04	19.97	5.0	20.5	
	1	12	20.06	20.11	19.95	5.0	20.5	
	1	24	19.94	19.73	19.60	5.0	20.5	
	12	0	19.84	19.89	19.86	5.0	20.5	
	12	7	19.87	19.92	19.79	5.0	20.5	
256QAM	12	13	19.79	19.84	19.74	5.0	20.5	
	25	0	19.84	19.76	19.80	5.0	20.5	

LTE Band 5 (Ant A & Ant.A+B) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)						
				DSI=0,1,2,3					MPR	Tune-up Limit
				Measured Pwr (dBm)			MPR	Tune-up Limit		
				20450	20525	20600				
			829 MHz	836.5 MHz	844 MHz					
10 MHz	QPSK	1	0		24.31		0.0	25.5		
		1	25		24.26		0.0	25.5		
		1	49		24.30		0.0	25.5		
		25	0		23.31		1.0	24.5		
		25	12		23.34		1.0	24.5		
		25	25		23.30		1.0	24.5		
	16QAM	50	0		23.28		1.0	24.5		
		1	0		23.39		1.0	24.5		
		1	25		23.46		1.0	24.5		
		1	49		23.44		1.0	24.5		
		25	0		22.37		2.0	23.5		
		25	12		22.37		2.0	23.5		
	64QAM	25	25		22.32		2.0	23.5		
		50	0		22.30		2.0	23.5		
		1	0		22.56		2.0	23.5		
		1	25		22.42		2.0	23.5		
		1	49		22.58		2.0	23.5		
		25	0		21.38		3.0	22.5		
	256QAM	25	12		21.41		3.0	22.5		
		25	25		21.32		3.0	22.5		
		50	0		21.39		3.0	22.5		
		1	0		19.36		5.0	20.5		
		1	25		19.51		5.0	20.5		
		1	49		19.59		5.0	20.5		
	5 MHz	QPSK	25	0		19.42		5.0	20.5	
25			12		19.42		5.0	20.5		
25			25		19.41		5.0	20.5		
50			0		19.41		5.0	20.5		
1			0		24.39	24.30	24.22	0.0	25.5	
1			12		24.34	24.17	24.32	0.0	25.5	
16QAM		1	24		24.30	24.18	24.30	0.0	25.5	
		12	0		23.40	23.25	23.25	1.0	24.5	
		12	7		23.40	23.30	23.31	1.0	24.5	
		12	13		23.36	23.25	23.30	1.0	24.5	
		25	0		23.37	23.28	23.32	1.0	24.5	
		1	0		24.01	23.70	23.66	1.0	24.5	
64QAM		1	12		23.90	23.62	23.80	1.0	24.5	
		1	24		23.72	23.62	23.66	1.0	24.5	
		12	0		22.51	22.34	22.35	2.0	23.5	
		12	7		22.51	22.31	22.40	2.0	23.5	
		12	13		22.45	22.27	22.42	2.0	23.5	
		25	0		22.44	22.29	22.36	2.0	23.5	
256QAM		1	0		23.03	22.87	22.69	2.0	23.5	
		1	12		22.74	22.69	22.85	2.0	23.5	
		1	24		22.64	22.48	22.80	2.0	23.5	
		12	0		21.49	21.47	21.48	3.0	22.5	
		12	7		21.61	21.36	21.47	3.0	22.5	
		12	13		21.49	21.41	21.51	3.0	22.5	
256QAM		25	0		21.50	21.40	21.40	3.0	22.5	
	1	0		19.57	19.39	19.56	5.0	20.5		
	1	12		19.64	19.63	19.70	5.0	20.5		
	1	24		19.43	19.26	19.53	5.0	20.5		
	12	0		19.53	19.39	19.46	5.0	20.5		
	12	7		19.49	19.44	19.41	5.0	20.5		
256QAM	12	13		19.47	19.35	19.54	5.0	20.5		
	25	0		19.51	19.37	19.40	5.0	20.5		

LTE Band 5 (Ant A & Ant.A+B) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
				20415	20525	20635		
				825.5 MHz	836.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	24.39	24.30	24.23	0.0	25.5
		1	8	24.43	24.25	24.26	0.0	25.5
		1	14	24.26	24.17	24.14	0.0	25.5
		8	0	23.35	23.21	23.19	1.0	24.5
		8	4	23.35	23.23	23.26	1.0	24.5
		8	7	23.35	23.20	23.27	1.0	24.5
	16QAM	15	0	23.38	23.27	23.20	1.0	24.5
		1	0	23.78	23.53	23.54	1.0	24.5
		1	8	23.70	23.61	23.87	1.0	24.5
		1	14	23.66	23.50	23.74	1.0	24.5
		8	0	22.56	22.35	22.32	2.0	23.5
		8	4	22.49	22.28	22.31	2.0	23.5
	64QAM	8	7	22.46	22.27	22.37	2.0	23.5
		15	0	22.46	22.28	22.23	2.0	23.5
		1	0	22.81	22.53	22.73	2.0	23.5
		1	8	22.68	22.54	22.75	2.0	23.5
		1	14	22.54	22.47	22.73	2.0	23.5
		8	0	21.51	21.45	21.48	3.0	22.5
	256QAM	8	4	21.57	21.48	21.41	3.0	22.5
		8	7	21.53	21.49	21.60	3.0	22.5
		15	0	21.48	21.41	21.36	3.0	22.5
		1	0	19.51	19.58	19.48	5.0	20.5
		1	8	19.67	19.57	19.38	5.0	20.5
		1	14	19.69	19.32	19.36	5.0	20.5
1.4 MHz	QPSK	8	0	19.45	19.45	19.49	5.0	20.5
		8	4	19.52	19.32	19.45	5.0	20.5
		8	7	19.54	19.34	19.44	5.0	20.5
		15	0	19.50	19.32	19.40	5.0	20.5
		1	0	24.34	24.16	24.24	0.0	25.5
		1	3	24.30	24.18	24.16	0.0	25.5
	16QAM	1	5	24.33	24.17	24.15	0.0	25.5
		3	0	24.32	24.14	24.17	0.0	25.5
		3	1	24.22	24.15	24.15	0.0	25.5
		3	3	24.34	24.12	24.15	0.0	25.5
		6	0	23.33	23.16	23.20	1.0	24.5
		1	0	23.70	23.39	23.41	1.0	24.5
	64QAM	1	3	23.63	23.44	23.43	1.0	24.5
		1	5	23.64	23.37	23.46	1.0	24.5
		3	0	23.55	23.26	23.33	1.0	24.5
		3	1	23.39	23.28	23.29	1.0	24.5
		3	3	23.43	23.28	23.27	1.0	24.5
		6	0	22.38	22.24	22.31	2.0	23.5
	256QAM	1	0	22.76	22.56	22.42	2.0	23.5
		1	3	22.81	22.73	22.57	2.0	23.5
		1	5	22.74	22.52	22.51	2.0	23.5
		3	0	22.54	22.43	22.51	2.0	23.5
		3	1	22.56	22.47	22.43	2.0	23.5
		3	3	22.57	22.51	22.52	2.0	23.5
256QAM	6	0	21.50	21.44	21.49	3.0	22.5	
	1	0	19.54	19.41	19.54	5.0	20.5	
	1	3	19.68	19.46	19.57	5.0	20.5	
	1	5	19.59	19.39	19.56	5.0	20.5	
	3	0	19.49	19.41	19.41	5.0	20.5	
	3	1	19.50	19.32	19.50	5.0	20.5	
256QAM	3	3	19.67	19.27	19.44	5.0	20.5	
	6	0	19.57	19.28	19.41	5.0	20.5	

LTE Band 2 (Ant B) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)				
				Pmax, DSI=2.3			MPR	Tune-up Limit	DSI=0			MPR	Tune-up Limit	DSI=1			MPR	Tune-up Limit
				Measured Pwr (dBm)					Measured Pwr (dBm)					Measured Pwr (dBm)				
				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	23.91	23.95	0.0	25.0	17.98	17.96	17.79	0.0	19.0	19.01	18.97	18.96	0.0	20.0
		1	49	23.95	23.88	23.85	0.0	25.0	17.89	17.92	17.85	0.0	19.0	18.83	18.96	18.95	0.0	20.0
		1	99	23.91	23.87	23.97	0.0	25.0	17.79	17.86	17.76	0.0	19.0	18.77	18.94	18.93	0.0	20.0
		50	0	22.97	22.99	22.95	1.0	24.0	17.86	17.88	17.82	0.0	19.0	18.79	18.91	18.92	0.0	20.0
		50	24	23.04	23.03	22.91	1.0	24.0	17.93	17.91	17.84	0.0	19.0	19.03	18.88	18.97	0.0	20.0
		50	50	23.03	22.97	22.95	1.0	24.0	17.87	17.91	17.83	0.0	19.0	18.98	18.95	18.99	0.0	20.0
	100	0	23.01	22.97	22.93	1.0	24.0	17.89	17.85	17.84	0.0	19.0	18.84	18.81	18.83	0.0	20.0	
	16QAM	1	0	23.36	23.40	23.11	1.0	24.0	18.22	18.10	18.15	0.0	19.0	19.25	19.24	19.39	0.0	20.0
		1	49	23.60	23.37	23.12	1.0	24.0	18.32	18.28	18.12	0.0	19.0	19.26	19.28	19.40	0.0	20.0
		1	99	23.29	23.30	23.06	1.0	24.0	18.30	18.21	18.03	0.0	19.0	19.22	19.28	19.36	0.0	20.0
		50	0	21.93	21.97	21.98	2.0	23.0	17.88	17.91	17.85	0.0	19.0	18.84	18.98	18.99	0.0	20.0
		50	24	22.07	22.05	22.05	2.0	23.0	17.97	17.92	17.89	0.0	19.0	18.89	18.99	19.00	0.0	20.0
		50	50	21.97	22.01	21.99	2.0	23.0	17.94	17.96	17.92	0.0	19.0	18.84	19.00	19.02	0.0	20.0
	100	0	22.01	22.04	21.92	2.0	23.0	17.92	17.87	17.91	0.0	19.0	18.85	18.95	18.98	0.0	20.0	
	64QAM	1	0	22.36	22.40	22.10	2.0	23.0	18.18	18.11	18.25	0.0	19.0	19.00	19.17	19.20	0.0	20.0
		1	49	22.55	22.14	22.11	2.0	23.0	18.04	18.31	18.29	0.0	19.0	19.09	19.24	19.23	0.0	20.0
		1	99	22.36	22.22	22.04	2.0	23.0	18.10	18.20	18.22	0.0	19.0	19.06	19.22	19.23	0.0	20.0
		50	0	20.96	20.93	21.02	3.0	22.0	17.89	17.93	17.86	0.0	19.0	18.86	19.00	19.05	0.0	20.0
		50	24	21.05	21.05	20.97	3.0	22.0	17.98	17.94	17.88	0.0	19.0	18.93	19.03	19.04	0.0	20.0
		50	50	21.02	21.00	20.99	3.0	22.0	17.96	17.95	17.86	0.0	19.0	18.92	19.06	19.06	0.0	20.0
	100	0	21.04	20.98	20.90	3.0	22.0	17.97	17.87	17.89	0.0	19.0	18.92	18.97	18.99	0.0	20.0	
	256QAM	1	0	19.02	19.07	19.04	5.0	20.0	17.95	18.15	18.18	0.0	19.0	18.97	19.10	19.14	0.0	20.0
		1	49	19.23	19.17	19.17	5.0	20.0	17.99	18.19	18.21	0.0	19.0	19.07	19.19	19.20	0.0	20.0
		1	99	19.13	19.14	19.08	5.0	20.0	17.83	18.05	18.05	0.0	19.0	18.97	19.14	19.14	0.0	20.0
50		0	18.94	18.91	18.94	5.0	20.0	17.93	17.92	17.94	0.0	19.0	18.85	18.95	19.01	0.0	20.0	
50		24	19.02	19.02	18.98	5.0	20.0	17.95	17.99	17.93	0.0	19.0	18.93	18.98	19.03	0.0	20.0	
50		50	19.00	18.99	18.95	5.0	20.0	17.92	18.00	17.96	0.0	19.0	18.93	19.00	19.05	0.0	20.0	
100	0	18.98	19.04	18.92	5.0	20.0	17.91	17.93	17.87	0.0	19.0	18.94	18.96	19.00	0.0	20.0		
15 MHz	QPSK	1	0	23.90	23.84	23.87	0.0	25.0	17.82	17.83	17.77	0.0	19.0	18.76	18.88	18.89	0.0	20.0
		1	37	23.99	23.92	23.92	0.0	25.0	17.81	18.01	17.85	0.0	19.0	18.80	18.94	18.94	0.0	20.0
		1	74	24.08	23.94	23.83	0.0	25.0	17.78	17.87	17.71	0.0	19.0	18.74	18.91	18.86	0.0	20.0
		36	0	23.04	22.87	22.88	1.0	24.0	17.92	17.83	17.79	0.0	19.0	18.84	18.88	18.91	0.0	20.0
		36	20	23.06	22.93	22.86	1.0	24.0	17.92	17.82	17.85	0.0	19.0	18.85	18.89	18.97	0.0	20.0
		36	39	22.99	22.94	22.86	1.0	24.0	17.81	17.88	17.80	0.0	19.0	18.84	18.96	18.95	0.0	20.0
	75	0	22.99	22.93	22.86	1.0	24.0	17.86	17.78	17.82	0.0	19.0	18.83	18.87	18.95	0.0	20.0	
	16QAM	1	0	23.24	23.31	22.95	1.0	24.0	18.19	18.17	18.13	0.0	19.0	19.04	19.20	19.25	0.0	20.0
		1	37	23.22	23.23	23.13	1.0	24.0	18.14	18.47	18.09	0.0	19.0	19.09	19.22	19.20	0.0	20.0
		1	74	23.05	23.20	23.09	1.0	24.0	18.02	18.26	18.06	0.0	19.0	19.06	19.18	19.21	0.0	20.0
		36	0	22.11	21.94	21.91	2.0	23.0	17.93	17.93	17.88	0.0	19.0	18.89	18.92	18.93	0.0	20.0
		36	20	22.06	21.92	21.92	2.0	23.0	17.95	17.91	17.87	0.0	19.0	18.91	18.91	19.01	0.0	20.0
		36	39	22.04	21.99	21.97	2.0	23.0	17.89	17.96	17.87	0.0	19.0	18.87	18.98	18.97	0.0	20.0
	75	0	22.05	22.01	21.91	2.0	23.0	17.90	17.89	17.87	0.0	19.0	18.88	18.89	19.01	0.0	20.0	
	64QAM	1	0	22.05	22.27	21.97	2.0	23.0	18.10	18.15	18.17	0.0	19.0	18.90	19.07	19.10	0.0	20.0
		1	37	22.27	22.22	22.28	2.0	23.0	18.22	18.02	18.18	0.0	19.0	18.99	19.12	19.12	0.0	20.0
		1	74	22.21	22.15	22.09	2.0	23.0	18.04	18.27	18.25	0.0	19.0	18.92	19.08	19.10	0.0	20.0
		36	0	21.07	21.00	20.92	3.0	22.0	17.94	17.93	17.84	0.0	19.0	18.90	18.93	18.95	0.0	20.0
		36	20	21.09	20.91	20.94	3.0	22.0	17.99	17.93	17.93	0.0	19.0	18.90	18.95	19.04	0.0	20.0
		36	39	20.96	20.96	20.96	3.0	22.0	17.92	17.94	17.83	0.0	19.0	18.85	19.02	19.00	0.0	20.0
	75	0	21.03	21.01	20.90	3.0	22.0	17.94	17.85	17.90	0.0	19.0	18.86	18.92	19.05	0.0	20.0	
	256QAM	1	0	19.00	18.82	19.11	5.0	20.0	17.90	17.99	17.96	0.0	19.0	18.85	19.02	19.03	0.0	20.0
		1	37	19.23	19.24	19.04	5.0	20.0	18.04	18.15	18.08	0.0	19.0	18.96	19.14	19.12	0.0	20.0
		1	74	19.02	19.02	18.99	5.0	20.0	17.95	17.91	17.79	0.0	19.0	18.92	19.08	19.08	0.0	20.0
36		0	19.07	18.96	18.94	5.0	20.0	17.94	17.96	17.88	0.0	19.0	18.90	18.90	18.92	0.0	20.0	
36		20	19.06	18.98	18.84	5.0	20.0	17.92	17.96	17.96	0.0	19.0	18.91	18.93	18.99	0.0	20.0	
36		39	19.02	18.97	18.92	5.0	20.0	17.94	18.01	17.91	0.0	19.0	18.86	18.97	18.96	0.0	20.0	
75	0	18.98	18.92	18.87	5.0	20.0	17.97	17.95	17.90	0.0	19.0	18.84	18.84	18.99	0.0	20.0		

LTE Band 2 (Ant B) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	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	23.94	23.85	23.81	0.0	25.0	17.88	17.85	17.74	0.0	19.0	18.81	18.86	18.91	0.0	20.0	
		1	25	24.04	23.96	23.90	0.0	25.0	17.93	17.93	17.83	0.0	19.0	18.81	18.99	18.95	0.0	20.0	
		1	49	23.95	23.87	23.74	0.0	25.0	17.82	17.79	17.79	0.0	19.0	18.74	18.85	18.87	0.0	20.0	
		25	0	23.03	22.94	22.93	1.0	24.0	17.92	17.87	17.74	0.0	19.0	18.90	18.88	18.88	0.0	20.0	
		25	12	23.08	22.97	22.98	1.0	24.0	17.92	17.88	17.77	0.0	19.0	18.91	18.92	18.88	0.0	20.0	
		25	25	23.01	23.00	22.99	1.0	24.0	17.91	17.91	17.79	0.0	19.0	18.88	18.97	18.95	0.0	20.0	
	50	0	22.94	22.91	22.82	1.0	24.0	17.89	17.88	17.73	0.0	19.0	18.90	18.88	18.88	0.0	20.0		
	16QAM	1	0	23.34	23.63	23.27	1.0	24.0	18.18	18.18	18.04	0.0	19.0	19.17	19.19	19.12	0.0	20.0	
		1	25	23.20	23.37	23.10	1.0	24.0	18.24	18.28	18.15	0.0	19.0	19.23	19.29	19.17	0.0	20.0	
		1	49	23.18	23.24	23.27	1.0	24.0	18.25	18.10	17.97	0.0	19.0	19.10	19.19	19.15	0.0	20.0	
		25	0	22.09	21.98	21.94	2.0	23.0	17.93	17.89	17.83	0.0	19.0	18.92	18.92	18.95	0.0	20.0	
		25	12	22.11	21.96	22.05	2.0	23.0	17.95	17.91	17.81	0.0	19.0	18.93	18.93	18.92	0.0	20.0	
		25	25	22.12	22.05	22.04	2.0	23.0	17.91	17.95	17.89	0.0	19.0	18.91	19.00	19.00	0.0	20.0	
	50	0	22.13	22.04	21.99	2.0	23.0	17.90	17.92	17.82	0.0	19.0	18.90	18.90	18.89	0.0	20.0		
	64QAM	1	0	22.11	22.11	21.98	2.0	23.0	18.24	18.19	18.00	0.0	19.0	19.05	19.05	19.07	0.0	20.0	
		1	25	22.27	22.27	21.97	2.0	23.0	18.09	18.15	18.10	0.0	19.0	19.06	19.22	19.17	0.0	20.0	
		1	49	22.04	21.98	22.16	2.0	23.0	18.12	17.95	17.87	0.0	19.0	19.00	19.06	19.13	0.0	20.0	
		25	0	21.12	20.99	20.91	3.0	22.0	18.00	17.90	17.81	0.0	19.0	18.88	18.89	18.89	0.0	20.0	
		25	12	21.09	20.94	21.05	3.0	22.0	18.00	17.93	17.86	0.0	19.0	18.89	18.92	18.92	0.0	20.0	
		25	25	21.03	21.02	21.03	3.0	22.0	18.00	18.02	17.88	0.0	19.0	18.84	18.95	18.96	0.0	20.0	
	50	0	21.05	20.99	20.96	3.0	22.0	17.96	17.88	17.79	0.0	19.0	18.89	18.88	18.89	0.0	20.0		
	256QAM	1	0	19.19	18.94	19.10	5.0	20.0	18.13	18.06	18.01	0.0	19.0	18.95	18.99	19.01	0.0	20.0	
		1	25	19.19	18.94	19.10	5.0	20.0	18.29	18.05	18.13	0.0	19.0	19.05	19.15	19.14	0.0	20.0	
		1	49	18.98	19.13	18.96	5.0	20.0	17.95	17.99	17.89	0.0	19.0	18.92	19.08	19.01	0.0	20.0	
		25	0	19.01	18.86	18.97	5.0	20.0	18.01	17.94	17.90	0.0	19.0	18.86	18.89	18.85	0.0	20.0	
		25	12	19.06	18.99	19.06	5.0	20.0	17.96	17.97	17.83	0.0	19.0	18.87	18.91	18.89	0.0	20.0	
		25	25	19.00	18.98	18.99	5.0	20.0	17.90	17.97	17.91	0.0	19.0	18.85	18.95	18.93	0.0	20.0	
	50	0	19.04	18.99	18.99	5.0	20.0	17.99	17.96	17.85	0.0	19.0	18.87	18.89	18.86	0.0	20.0		
	5 MHz	QPSK	1	0	23.97	23.86	23.84	0.0	25.0	17.84	17.83	17.71	0.0	19.0	18.79	18.90	18.84	0.0	20.0
			1	12	24.15	24.05	23.96	0.0	25.0	17.82	18.01	17.84	0.0	19.0	18.90	19.02	18.96	0.0	20.0
1			24	24.07	23.96	23.82	0.0	25.0	17.86	17.81	17.78	0.0	19.0	18.79	18.90	18.86	0.0	20.0	
12			0	23.03	22.90	22.85	1.0	24.0	17.92	17.86	17.77	0.0	19.0	18.85	18.86	18.81	0.0	20.0	
12			7	23.11	23.02	23.03	1.0	24.0	17.97	17.91	17.82	0.0	19.0	18.91	18.93	18.90	0.0	20.0	
12			13	23.06	23.01	22.95	1.0	24.0	17.96	17.94	17.89	0.0	19.0	18.89	18.96	18.95	0.0	20.0	
25		0	23.06	22.96	22.98	1.0	24.0	17.93	17.84	17.75	0.0	19.0	18.84	18.89	18.84	0.0	20.0		
16QAM		1	0	23.40	23.43	23.48	1.0	24.0	18.21	18.22	18.12	0.0	19.0	19.16	19.20	19.23	0.0	20.0	
		1	12	23.55	23.45	23.30	1.0	24.0	18.29	18.33	18.30	0.0	19.0	19.23	19.32	19.30	0.0	20.0	
		1	24	23.42	23.28	23.14	1.0	24.0	18.25	18.25	18.23	0.0	19.0	19.18	19.30	19.19	0.0	20.0	
		12	0	22.11	22.03	21.95	2.0	23.0	17.94	17.90	17.81	0.0	19.0	18.86	18.94	18.92	0.0	20.0	
		12	7	22.16	22.15	22.14	2.0	23.0	18.04	17.96	17.86	0.0	19.0	18.95	19.06	19.00	0.0	20.0	
		12	13	22.18	22.11	22.03	2.0	23.0	18.00	17.98	17.92	0.0	19.0	18.89	19.06	19.07	0.0	20.0	
25		0	22.11	21.98	21.95	2.0	23.0	17.99	17.91	17.82	0.0	19.0	18.87	18.89	18.86	0.0	20.0		
64QAM		1	0	22.20	22.17	21.93	2.0	23.0	18.34	18.10	18.17	0.0	19.0	18.92	18.98	19.01	0.0	20.0	
		1	12	22.42	22.40	22.38	2.0	23.0	18.23	18.23	18.12	0.0	19.0	18.98	19.13	19.07	0.0	20.0	
		1	24	22.24	22.10	22.25	2.0	23.0	18.20	18.12	18.06	0.0	19.0	18.89	19.10	18.99	0.0	20.0	
		12	0	21.03	20.86	20.89	3.0	22.0	17.97	17.92	17.69	0.0	19.0	18.91	18.89	18.87	0.0	20.0	
		12	7	21.20	21.02	21.02	3.0	22.0	18.05	17.97	17.82	0.0	19.0	18.97	18.98	18.89	0.0	20.0	
		12	13	21.07	21.04	20.99	3.0	22.0	17.96	18.01	17.91	0.0	19.0	18.95	19.01	18.94	0.0	20.0	
25		0	21.09	21.01	20.93	3.0	22.0	18.00	17.86	17.77	0.0	19.0	18.88	18.88	18.85	0.0	20.0		
256QAM		1	0	19.24	18.80	19.00	5.0	20.0	18.08	18.22	17.81	0.0	19.0	19.04	18.95	18.98	0.0	20.0	
		1	12	19.19	19.31	19.31	5.0	20.0	18.21	18.17	18.07	0.0	19.0	19.07	19.16	19.15	0.0	20.0	
		1	24	18.96	19.03	19.02	5.0	20.0	18.24	18.08	18.01	0.0	19.0	18.98	19.04	19.08	0.0	20.0	
		12	0	18.99	18.87	18.92	5.0	20.0	18.01	17.92	17.82	0.0	19.0	18.88	18.87	18.86	0.0	20.0	
		12	7	19.03	19.06	19.02	5.0	20.0	18.11	17.99	17.89	0.0	19.0	18.95	18.93	18.93	0.0	20.0	
		12	13	19.05	19.02	18.95	5.0	20.0	18.09	18.06	17.93	0.0	19.0	18.92	18.99	18.98	0.0	20.0	
25		0	19.10	18.94	18.90	5.0	20.0	17.99	17.94	17.78	0.0	19.0	18.86	18.91	18.85	0.0	20.0		

LTE Band 2 (Ant B) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	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	23.88	23.90	23.81	0.0	25.0	17.74	17.81	17.68	0.0	19.0	18.72	18.78	18.79	0.0	20.0	
		1	8	24.15	24.01	23.99	0.0	25.0	17.93	17.98	17.85	0.0	19.0	18.87	18.93	18.98	0.0	20.0	
		1	14	24.06	23.91	23.97	0.0	25.0	17.86	17.80	17.68	0.0	19.0	18.74	18.85	18.83	0.0	20.0	
		8	0	23.03	22.89	22.79	1.0	24.0	17.88	17.81	17.80	0.0	19.0	18.81	18.83	18.92	0.0	20.0	
		8	4	23.07	22.99	22.84	1.0	24.0	17.97	17.87	17.79	0.0	19.0	18.88	18.89	18.91	0.0	20.0	
		8	7	23.07	22.98	23.01	1.0	24.0	18.01	17.88	17.87	0.0	19.0	18.88	18.96	18.92	0.0	20.0	
	15	0	23.07	22.98	22.89	1.0	24.0	17.95	17.81	17.85	0.0	19.0	18.87	18.86	18.94	0.0	20.0		
	16QAM	1	0	23.32	23.27	23.29	1.0	24.0	18.24	18.00	18.06	0.0	19.0	19.07	19.12	19.16	0.0	20.0	
		1	8	23.60	23.37	23.39	1.0	24.0	18.40	18.22	18.15	0.0	19.0	19.16	19.38	19.32	0.0	20.0	
		1	14	23.33	23.34	23.18	1.0	24.0	18.27	18.09	18.05	0.0	19.0	19.03	19.21	19.21	0.0	20.0	
		8	0	22.09	21.91	21.91	2.0	23.0	17.97	17.95	17.93	0.0	19.0	18.90	18.91	18.98	0.0	20.0	
		8	4	22.17	22.06	21.98	2.0	23.0	18.11	17.82	17.94	0.0	19.0	18.89	18.97	19.06	0.0	20.0	
		8	7	22.18	22.09	22.05	2.0	23.0	18.02	18.02	17.90	0.0	19.0	18.91	19.02	19.04	0.0	20.0	
	15	0	22.13	22.06	21.97	2.0	23.0	18.00	17.88	17.93	0.0	19.0	18.88	18.88	18.98	0.0	20.0		
	64QAM	1	0	22.43	21.95	21.97	2.0	23.0	18.00	17.92	18.04	0.0	19.0	19.00	19.03	19.04	0.0	20.0	
		1	8	22.55	22.29	22.34	2.0	23.0	18.14	18.05	18.00	0.0	19.0	19.13	19.22	19.18	0.0	20.0	
		1	14	22.24	22.11	21.92	2.0	23.0	18.34	18.11	17.87	0.0	19.0	18.93	19.08	19.09	0.0	20.0	
		8	0	21.06	20.91	20.95	3.0	22.0	18.08	17.91	17.79	0.0	19.0	18.92	18.88	18.97	0.0	20.0	
		8	4	21.16	21.21	21.05	3.0	22.0	18.10	17.99	17.90	0.0	19.0	18.93	18.91	19.00	0.0	20.0	
		8	7	21.18	21.02	21.06	3.0	22.0	18.11	17.94	17.98	0.0	19.0	18.97	19.01	19.01	0.0	20.0	
	15	0	21.15	21.00	20.91	3.0	22.0	17.99	17.87	17.84	0.0	19.0	18.89	18.91	18.96	0.0	20.0		
	256QAM	1	0	19.10	18.86	18.89	5.0	20.0	17.89	17.76	18.12	0.0	19.0	18.86	18.86	18.93	0.0	20.0	
		1	8	19.17	19.42	19.01	5.0	20.0	18.21	18.13	18.02	0.0	19.0	19.09	19.14	19.14	0.0	20.0	
		1	14	19.30	19.05	19.17	5.0	20.0	18.14	18.15	17.87	0.0	19.0	18.91	19.01	19.03	0.0	20.0	
		8	0	19.00	18.90	18.95	5.0	20.0	17.92	17.82	17.87	0.0	19.0	18.89	18.87	18.97	0.0	20.0	
		8	4	19.05	19.09	18.94	5.0	20.0	18.05	17.95	17.90	0.0	19.0	18.92	18.90	18.99	0.0	20.0	
		8	7	19.14	19.01	18.98	5.0	20.0	18.08	18.09	17.95	0.0	19.0	18.96	18.99	18.98	0.0	20.0	
	15	0	19.06	19.04	18.88	5.0	20.0	18.08	17.84	17.84	0.0	19.0	18.90	18.88	18.96	0.0	20.0		
	1.4 MHz	QPSK	1	0	23.96	23.85	23.86	0.0	25.0	17.95	17.84	17.74	0.0	19.0	18.78	18.89	18.81	0.0	20.0
			1	3	23.94	23.83	23.85	0.0	25.0	18.02	17.81	17.76	0.0	19.0	18.74	18.83	18.77	0.0	20.0
1			5	23.94	23.88	23.83	0.0	25.0	17.86	17.83	17.78	0.0	19.0	18.78	18.84	18.79	0.0	20.0	
3			0	23.98	23.89	23.88	0.0	25.0	17.83	17.83	17.72	0.0	19.0	18.72	18.89	18.80	0.0	20.0	
3			1	23.98	23.91	23.81	0.0	25.0	17.81	17.77	17.79	0.0	19.0	18.76	18.88	18.86	0.0	20.0	
3			3	24.00	23.89	23.85	0.0	25.0	17.79	17.85	17.79	0.0	19.0	18.71	18.87	18.82	0.0	20.0	
6		0	22.99	22.94	22.89	1.0	24.0	17.83	17.91	17.77	0.0	19.0	18.80	18.88	18.86	0.0	20.0		
16QAM		1	0	23.19	23.08	23.10	1.0	24.0	17.87	18.09	17.99	0.0	19.0	18.97	19.07	19.08	0.0	20.0	
		1	3	23.13	23.13	23.13	1.0	24.0	18.14	18.16	18.11	0.0	19.0	19.00	19.04	19.04	0.0	20.0	
		1	5	23.16	23.08	23.05	1.0	24.0	18.15	18.08	18.09	0.0	19.0	18.97	19.09	19.01	0.0	20.0	
		3	0	23.09	22.97	23.02	1.0	24.0	18.02	18.10	17.89	0.0	19.0	18.92	18.97	18.96	0.0	20.0	
		3	1	23.13	22.98	22.96	1.0	24.0	18.05	18.11	18.05	0.0	19.0	18.91	18.98	18.97	0.0	20.0	
		3	3	23.11	23.00	23.04	1.0	24.0	18.04	17.99	17.97	0.0	19.0	18.91	18.95	18.95	0.0	20.0	
6		0	22.09	21.97	22.00	2.0	23.0	17.96	18.01	17.84	0.0	19.0	18.91	18.96	18.98	0.0	20.0		
64QAM		1	0	22.28	21.88	22.28	2.0	23.0	18.19	18.03	18.16	0.0	19.0	18.86	19.04	19.05	0.0	20.0	
		1	3	22.23	22.13	22.23	2.0	23.0	18.24	18.19	18.08	0.0	19.0	18.93	19.01	19.05	0.0	20.0	
		1	5	22.10	22.15	22.07	2.0	23.0	18.07	18.05	17.91	0.0	19.0	18.89	18.96	19.06	0.0	20.0	
		3	0	22.18	22.05	21.99	2.0	23.0	18.04	18.07	17.96	0.0	19.0	18.99	18.95	18.95	0.0	20.0	
		3	1	22.05	22.07	21.95	2.0	23.0	17.88	18.03	17.84	0.0	19.0	18.98	19.05	18.93	0.0	20.0	
		3	3	22.12	22.22	21.97	2.0	23.0	18.03	18.04	18.01	0.0	19.0	19.01	18.98	18.95	0.0	20.0	
6		0	21.08	21.02	20.94	3.0	22.0	17.94	17.93	17.74	0.0	19.0	18.87	18.93	18.92	0.0	20.0		
256QAM		1	0	19.21	19.11	18.96	5.0	20.0	17.93	18.06	17.91	0.0	19.0	18.94	19.04	19.01	0.0	20.0	
		1	3	19.08	19.11	19.04	5.0	20.0	18.02	17.94	18.12	0.0	19.0	18.97	19.03	19.03	0.0	20.0	
		1	5	19.09	19.03	18.93	5.0	20.0	18.07	17.98	17.90	0.0	19.0	18.90	19.03	19.00	0.0	20.0	
		3	0	19.00	19.03	18.95	5.0	20.0	18.00	18.00	18.03	0.0	19.0	18.82	18.96	18.99	0.0	20.0	
		3	1	19.07	18.98	18.84	5.0	20.0	17.94	17.94	17.86	0.0	19.0	18.82	18.97	18.92	0.0	20.0	
		3	3	18.92	19.01	18.97	5.0	20.0	17.99	17.98	17.90	0.0	19.0	18.88	18.94	18.96	0.0	20.0	
6		0	19.16	18.93	19.00	5.0	20.0	17.94	17.97	17.92	0.0	19.0	18.87	18.96	18.89	0.0	20.0		

LTE Band 66 (Ant B) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)				
				DSI=2,3					DSI=0,1				
				Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				132072	132322	132572			132072	132322	132572		
1720 MHz	1745 MHz	1770 MHz	1720 MHz	1745 MHz	1770 MHz								
20 MHz	QPSK	1	0	24.31	24.02	23.89	0.0	25.0	19.09	18.89	18.85	0.0	20.0
		1	49	24.26	24.01	23.83	0.0	25.0	19.08	19.00	18.85	0.0	20.0
		1	99	24.08	23.93	23.78	0.0	25.0	18.97	18.78	18.81	0.0	20.0
		50	0	23.33	23.07	22.89	1.0	24.0	19.12	18.95	18.90	0.0	20.0
		50	24	23.22	23.00	22.87	1.0	24.0	19.09	19.02	18.92	0.0	20.0
		50	50	23.15	22.99	22.84	1.0	24.0	19.09	18.99	18.83	0.0	20.0
	16QAM	100	0	23.19	23.01	22.85	1.0	24.0	19.11	18.99	18.87	0.0	20.0
		1	0	23.47	23.47	23.23	1.0	24.0	19.48	19.38	19.25	0.0	20.0
		1	49	23.55	23.33	23.31	1.0	24.0	19.24	19.38	19.12	0.0	20.0
		1	99	23.35	23.21	23.09	1.0	24.0	19.28	19.20	19.10	0.0	20.0
		50	0	22.37	22.04	21.88	2.0	23.0	19.19	18.97	18.92	0.0	20.0
		50	24	22.26	22.03	21.91	2.0	23.0	19.19	19.05	18.93	0.0	20.0
	64QAM	50	50	22.17	22.00	21.91	2.0	23.0	19.10	19.00	18.88	0.0	20.0
		100	0	22.18	22.02	21.88	2.0	23.0	19.15	18.95	18.89	0.0	20.0
		1	0	22.60	22.35	21.94	2.0	23.0	19.45	19.41	19.34	0.0	20.0
		1	49	22.56	22.25	22.08	2.0	23.0	19.52	19.44	19.35	0.0	20.0
		1	99	22.39	22.12	22.19	2.0	23.0	19.41	19.17	19.01	0.0	20.0
		50	0	21.33	21.07	20.88	3.0	22.0	19.18	18.98	18.89	0.0	20.0
	256QAM	50	24	21.28	20.99	20.91	3.0	22.0	19.17	19.03	18.92	0.0	20.0
		50	50	21.18	20.94	20.84	3.0	22.0	19.16	18.98	18.89	0.0	20.0
		100	0	21.20	20.98	20.88	3.0	22.0	19.11	18.90	18.94	0.0	20.0
		1	0	19.31	19.07	19.01	5.0	20.0	19.16	19.20	19.00	0.0	20.0
		1	49	19.50	18.97	19.03	5.0	20.0	19.08	19.28	18.84	0.0	20.0
		1	99	19.31	18.87	18.66	5.0	20.0	19.03	18.94	18.82	0.0	20.0
15 MHz	QPSK	50	0	19.31	19.00	18.91	5.0	20.0	19.15	19.03	18.88	0.0	20.0
		50	24	19.28	18.97	18.91	5.0	20.0	19.12	19.08	18.91	0.0	20.0
		50	50	19.12	18.91	18.83	5.0	20.0	19.07	19.07	18.87	0.0	20.0
		100	0	19.20	19.01	18.87	5.0	20.0	19.10	18.93	18.87	0.0	20.0
		1	0	24.33	23.96	23.87	0.0	25.0	19.08	19.01	18.84	0.0	20.0
		1	37	24.31	23.87	23.80	0.0	25.0	19.01	18.95	18.86	0.0	20.0
15 MHz	16QAM	1	74	24.14	23.83	23.79	0.0	25.0	19.02	18.82	18.79	0.0	20.0
		36	0	23.30	23.00	22.84	1.0	24.0	19.05	19.01	18.92	0.0	20.0
		36	20	23.22	22.97	22.82	1.0	24.0	19.10	18.99	18.92	0.0	20.0
		36	39	23.18	22.93	22.83	1.0	24.0	19.08	18.94	18.89	0.0	20.0
		75	0	23.17	22.93	22.82	1.0	24.0	19.03	19.00	18.89	0.0	20.0
		1	0	23.53	23.23	23.07	1.0	24.0	19.40	19.19	19.06	0.0	20.0
	64QAM	1	37	23.45	23.22	23.19	1.0	24.0	19.28	19.33	19.13	0.0	20.0
		1	74	23.34	23.17	23.07	1.0	24.0	19.15	19.13	18.99	0.0	20.0
		36	0	22.37	22.02	21.89	2.0	23.0	19.12	19.03	18.95	0.0	20.0
		36	20	22.26	21.99	21.89	2.0	23.0	19.17	19.02	18.93	0.0	20.0
		36	39	22.23	22.00	21.88	2.0	23.0	19.13	18.99	18.91	0.0	20.0
		75	0	22.24	21.99	21.87	2.0	23.0	19.09	19.01	18.90	0.0	20.0
256QAM	1	0	22.47	22.29	22.05	2.0	23.0	19.35	18.99	19.20	0.0	20.0	
	1	37	22.46	22.28	22.14	2.0	23.0	19.46	19.23	19.09	0.0	20.0	
	1	74	22.27	22.31	22.11	2.0	23.0	19.17	19.16	19.11	0.0	20.0	
	36	0	21.35	21.01	20.90	3.0	22.0	19.18	19.06	18.90	0.0	20.0	
	36	20	21.33	21.01	20.85	3.0	22.0	19.21	19.07	18.98	0.0	20.0	
	36	39	21.18	20.94	20.91	3.0	22.0	19.09	19.03	18.93	0.0	20.0	
256QAM	75	0	21.25	20.98	20.83	3.0	22.0	19.15	19.04	18.98	0.0	20.0	
	1	0	19.33	19.13	18.85	5.0	20.0	19.34	19.32	19.06	0.0	20.0	
	1	37	19.21	18.96	18.87	5.0	20.0	19.24	19.20	19.07	0.0	20.0	
	1	74	19.25	19.10	18.95	5.0	20.0	19.17	19.22	19.06	0.0	20.0	
	36	0	19.34	19.01	18.82	5.0	20.0	19.14	19.01	18.93	0.0	20.0	
	36	20	19.28	18.98	18.79	5.0	20.0	19.14	18.98	18.96	0.0	20.0	
256QAM	36	39	19.14	18.98	18.89	5.0	20.0	19.08	19.00	18.91	0.0	20.0	
	75	0	19.32	18.96	18.74	5.0	20.0	19.04	19.03	18.91	0.0	20.0	

LTE Band 66 (Ant B) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	
				132022	132322	132622			132022	132322	132622			
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz			
10 MHz	QPSK	1	0	24.26	23.95	23.88	0.0	25.0	19.04	18.99	18.90	0.0	20.0	
		1	25	24.33	24.03	23.82	0.0	25.0	19.09	18.92	18.93	0.0	20.0	
		1	49	24.15	23.87	23.77	0.0	25.0	19.02	18.77	18.80	0.0	20.0	
		25	0	23.36	23.00	22.87	1.0	24.0	19.13	19.01	18.94	0.0	20.0	
		25	12	23.35	23.06	22.90	1.0	24.0	19.15	19.05	18.97	0.0	20.0	
		25	25	23.27	23.01	22.89	1.0	24.0	19.07	19.04	18.89	0.0	20.0	
	16QAM	50	0	23.27	22.91	22.79	1.0	24.0	19.12	19.04	18.90	0.0	20.0	
	16QAM	1	0	23.47	23.30	23.12	1.0	24.0	19.30	19.18	18.92	0.0	20.0	
		1	25	23.52	23.34	23.22	1.0	24.0	19.39	19.08	19.06	0.0	20.0	
		1	49	23.35	23.16	23.10	1.0	24.0	19.24	19.05	18.96	0.0	20.0	
		25	0	22.38	22.04	21.87	2.0	23.0	19.10	19.05	18.92	0.0	20.0	
		25	12	22.45	22.05	21.93	2.0	23.0	19.12	19.08	18.90	0.0	20.0	
		25	25	22.28	22.07	21.91	2.0	23.0	19.12	19.00	18.93	0.0	20.0	
	64QAM	50	0	22.39	21.99	21.84	2.0	23.0	19.09	19.07	18.93	0.0	20.0	
		1	0	22.58	22.10	21.98	2.0	23.0	19.25	19.27	19.34	0.0	20.0	
		1	25	22.63	22.16	22.11	2.0	23.0	19.34	19.20	19.27	0.0	20.0	
		1	49	22.37	22.01	21.80	2.0	23.0	19.19	19.26	19.04	0.0	20.0	
		25	0	21.34	20.98	20.97	3.0	22.0	19.19	19.05	18.94	0.0	20.0	
		25	12	21.29	20.98	20.88	3.0	22.0	19.26	19.08	18.99	0.0	20.0	
	256QAM	25	25	21.28	21.00	20.92	3.0	22.0	19.23	19.05	18.92	0.0	20.0	
		50	0	21.19	20.98	20.90	3.0	22.0	19.18	19.02	18.90	0.0	20.0	
		1	0	19.44	19.12	19.06	5.0	20.0	19.29	18.97	18.96	0.0	20.0	
		1	25	19.63	19.04	18.99	5.0	20.0	19.18	19.13	19.25	0.0	20.0	
		1	49	19.19	18.94	18.80	5.0	20.0	19.36	19.25	18.88	0.0	20.0	
25		0	19.31	18.99	18.90	5.0	20.0	19.23	19.01	18.95	0.0	20.0		
256QAM	25	12	19.27	18.93	18.90	5.0	20.0	19.22	19.04	18.99	0.0	20.0		
	25	25	19.21	18.98	18.97	5.0	20.0	19.18	19.00	18.90	0.0	20.0		
	50	0	19.24	18.96	18.82	5.0	20.0	19.17	19.00	18.91	0.0	20.0		
	5 MHz	QPSK	1	0	24.31	24.00	23.85	0.0	25.0	19.06	18.93	18.92	0.0	20.0
			1	12	24.40	23.97	23.97	0.0	25.0	19.26	19.17	18.86	0.0	20.0
			1	24	24.25	23.97	23.81	0.0	25.0	18.99	18.91	18.83	0.0	20.0
12			0	23.36	23.02	22.86	1.0	24.0	19.08	19.03	18.89	0.0	20.0	
12			7	23.39	23.04	22.93	1.0	24.0	19.19	19.06	18.97	0.0	20.0	
12			13	23.27	23.02	22.84	1.0	24.0	19.14	18.99	18.91	0.0	20.0	
16QAM		25	0	23.23	23.02	22.86	1.0	24.0	19.16	18.99	18.92	0.0	20.0	
		1	0	23.70	23.55	23.35	1.0	24.0	19.41	19.46	19.20	0.0	20.0	
		1	12	23.91	23.62	23.36	1.0	24.0	19.62	19.24	19.27	0.0	20.0	
		1	24	23.61	23.38	23.16	1.0	24.0	19.50	19.18	19.18	0.0	20.0	
		12	0	22.49	22.11	21.91	2.0	23.0	19.18	19.04	18.98	0.0	20.0	
		12	7	22.51	22.15	21.92	2.0	23.0	19.17	19.06	18.97	0.0	20.0	
64QAM		12	13	22.42	22.08	21.88	2.0	23.0	19.12	19.04	18.93	0.0	20.0	
		25	0	22.31	22.01	21.89	2.0	23.0	19.16	19.07	18.93	0.0	20.0	
		1	0	22.72	22.27	22.25	2.0	23.0	19.34	19.16	19.07	0.0	20.0	
		1	12	22.46	22.25	22.36	2.0	23.0	19.48	19.44	19.09	0.0	20.0	
		1	24	22.50	22.12	22.27	2.0	23.0	19.39	19.29	19.19	0.0	20.0	
		12	0	21.34	20.99	20.93	3.0	22.0	19.12	19.01	18.99	0.0	20.0	
256QAM		12	7	21.43	21.02	21.00	3.0	22.0	19.27	19.13	18.97	0.0	20.0	
		12	13	21.30	20.95	20.92	3.0	22.0	19.17	19.01	18.90	0.0	20.0	
		25	0	21.32	20.95	20.87	3.0	22.0	19.14	18.93	18.89	0.0	20.0	
		1	0	19.38	19.05	18.95	5.0	20.0	19.28	19.09	19.09	0.0	20.0	
		1	12	19.57	19.37	19.04	5.0	20.0	19.21	19.08	19.13	0.0	20.0	
		1	24	19.28	19.05	18.97	5.0	20.0	19.20	18.95	18.94	0.0	20.0	
256QAM	12	0	19.33	18.90	18.91	5.0	20.0	19.11	19.06	18.91	0.0	20.0		
	12	7	19.38	19.01	18.93	5.0	20.0	19.25	19.06	18.92	0.0	20.0		
	12	13	19.27	18.95	18.92	5.0	20.0	19.17	19.03	18.90	0.0	20.0		
	25	0	19.27	18.90	18.83	5.0	20.0	19.14	18.99	18.89	0.0	20.0		

LTE Band 66 (Ant B) Measured Results (Continued)

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
				131987	132322	132657			131987	132322	132657		
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	24.32	23.96	23.81	0.0	25.0	19.08	18.86	18.73	0.0	20.0
		1	8	24.40	24.05	23.97	0.0	25.0	19.13	19.06	18.90	0.0	20.0
		1	14	24.30	23.87	23.71	0.0	25.0	19.10	18.90	18.78	0.0	20.0
		8	0	23.38	23.02	22.83	1.0	24.0	19.06	18.98	18.86	0.0	20.0
		8	4	23.32	23.06	22.88	1.0	24.0	19.13	18.99	18.89	0.0	20.0
		8	7	23.31	23.05	22.85	1.0	24.0	19.14	19.00	18.86	0.0	20.0
	16QAM	15	0	23.32	23.02	22.86	1.0	24.0	19.12	18.99	18.88	0.0	20.0
		1	0	23.64	23.47	23.19	1.0	24.0	19.37	19.12	19.01	0.0	20.0
		1	8	23.79	23.55	23.22	1.0	24.0	19.65	19.49	19.34	0.0	20.0
		1	14	23.64	23.36	23.08	1.0	24.0	19.34	19.26	18.95	0.0	20.0
		8	0	22.44	22.12	21.98	2.0	23.0	19.16	19.10	18.92	0.0	20.0
		8	4	22.42	22.13	21.92	2.0	23.0	19.18	19.13	18.90	0.0	20.0
	64QAM	8	7	22.44	22.13	21.96	2.0	23.0	19.14	19.07	18.96	0.0	20.0
		15	0	22.31	22.02	21.92	2.0	23.0	19.21	19.01	18.91	0.0	20.0
		1	0	22.70	22.21	22.02	2.0	23.0	19.27	19.27	18.93	0.0	20.0
		1	8	22.59	22.24	22.03	2.0	23.0	19.53	19.30	19.31	0.0	20.0
		1	14	22.53	22.38	22.08	2.0	23.0	19.39	19.14	19.01	0.0	20.0
		8	0	21.44	21.08	20.94	3.0	22.0	19.19	19.05	18.92	0.0	20.0
	256QAM	8	4	21.42	21.10	20.96	3.0	22.0	19.18	19.10	18.98	0.0	20.0
		8	7	21.38	21.10	21.03	3.0	22.0	19.29	19.03	19.01	0.0	20.0
		15	0	21.35	20.98	20.88	3.0	22.0	19.16	19.02	18.96	0.0	20.0
1		0	19.60	19.13	19.14	5.0	20.0	19.21	19.07	18.92	0.0	20.0	
1		8	19.47	19.21	19.01	5.0	20.0	19.33	19.19	19.03	0.0	20.0	
1		14	19.21	19.05	18.99	5.0	20.0	19.09	19.08	18.97	0.0	20.0	
1.4 MHz	QPSK	8	0	19.50	19.04	18.96	5.0	20.0	19.18	19.11	18.91	0.0	20.0
		8	4	19.36	19.01	18.95	5.0	20.0	19.23	18.98	18.98	0.0	20.0
		8	7	19.36	19.05	18.94	5.0	20.0	19.23	19.08	18.90	0.0	20.0
		15	0	19.29	18.93	18.87	5.0	20.0	19.12	18.98	18.90	0.0	20.0
		1	0	24.29	23.97	23.78	0.0	25.0	19.00	18.90	18.76	0.0	20.0
		1	3	24.27	23.95	23.74	0.0	25.0	19.00	18.95	18.71	0.0	20.0
	16QAM	1	5	24.34	23.94	23.81	0.0	25.0	19.04	18.85	18.76	0.0	20.0
		3	0	24.33	23.90	23.78	0.0	25.0	19.01	18.85	18.75	0.0	20.0
		3	1	24.32	23.94	23.78	0.0	25.0	19.05	18.87	18.76	0.0	20.0
		3	3	24.31	23.96	23.76	0.0	25.0	19.02	18.91	18.74	0.0	20.0
		6	0	23.37	22.98	22.80	1.0	24.0	19.08	18.95	18.82	0.0	20.0
		1	0	23.72	23.22	23.00	1.0	24.0	19.39	19.14	18.98	0.0	20.0
	64QAM	1	3	23.79	23.20	22.92	1.0	24.0	19.29	19.10	19.04	0.0	20.0
		1	5	23.68	23.13	22.91	1.0	24.0	19.11	19.20	19.11	0.0	20.0
		3	0	23.43	23.10	22.87	1.0	24.0	19.17	19.02	18.95	0.0	20.0
3		1	23.47	23.07	22.93	1.0	24.0	19.08	19.13	18.81	0.0	20.0	
3		3	23.46	23.11	22.90	1.0	24.0	19.15	19.03	18.88	0.0	20.0	
6		0	22.37	22.05	21.87	2.0	23.0	19.18	19.04	18.90	0.0	20.0	
256QAM	1	0	22.54	22.26	22.14	2.0	23.0	19.26	19.21	18.99	0.0	20.0	
	1	3	22.58	22.43	22.12	2.0	23.0	19.33	18.95	19.20	0.0	20.0	
	1	5	22.61	22.13	22.16	2.0	23.0	19.54	19.25	19.11	0.0	20.0	
	3	0	22.38	22.23	22.02	2.0	23.0	19.23	19.07	18.94	0.0	20.0	
	3	1	22.51	22.04	21.95	2.0	23.0	19.12	19.13	18.80	0.0	20.0	
	3	3	22.50	22.13	21.98	2.0	23.0	19.21	19.03	18.90	0.0	20.0	
256QAM	6	0	21.39	21.01	20.86	3.0	22.0	19.20	19.04	18.88	0.0	20.0	
	1	0	19.41	18.88	18.85	5.0	20.0	19.29	19.01	19.09	0.0	20.0	
	1	3	19.70	18.98	18.89	5.0	20.0	19.37	19.11	18.93	0.0	20.0	
	1	5	19.49	19.14	19.03	5.0	20.0	19.11	19.16	18.81	0.0	20.0	
	3	0	19.34	18.92	18.86	5.0	20.0	19.10	18.97	18.93	0.0	20.0	
	3	1	19.37	19.03	18.82	5.0	20.0	19.06	19.05	18.88	0.0	20.0	
256QAM	3	3	19.37	18.92	18.90	5.0	20.0	19.06	19.00	18.87	0.0	20.0	
	6	0	19.4	18.9	18.9	5.0	20.0	19.13	19.06	18.93	0.0	20.0	

LTE Band 41 (Power Class 3) (Ant B) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)										Maximum Allowed Average Power (dBm)										Maximum Allowed Average Power (dBm)									
				DSI=2.3					MPR	Tune-up Limit	DSI=0					MPR	Tune-up Limit	DSI=1					MPR	Tune-up Limit									
				Measured Pwr (dBm)							Measured Pwr (dBm)							Measured Pwr (dBm)															
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490			39750	40185	40620	41055	41490											
2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz																			
20 MHz	QPSK	1	0	23.88	23.97	24.03	24.40	24.12	0.0	25.0	17.98	17.75	17.61	17.83	17.63	0.0	18.5	20.56	20.25	20.13	20.46	20.26	0.0	21.0									
		1	49	23.84	24.00	24.17	24.30	24.27	0.0	25.0	17.89	17.66	17.70	17.88	17.79	0.0	18.5	20.51	20.26	20.31	20.48	20.44	0.0	21.0									
		1	99	23.88	23.93	24.17	24.38	24.16	0.0	25.0	17.86	17.61	17.71	17.72	17.69	0.0	18.5	20.37	20.04	20.21	20.39	20.35	0.0	21.0									
		50	0	22.84	22.87	23.12	23.46	23.23	1.0	24.0	18.01	17.72	17.66	17.82	17.76	0.0	18.5	20.53	20.28	20.21	20.41	20.32	0.0	21.0									
		50	24	22.91	22.87	23.23	23.43	23.33	1.0	24.0	17.89	17.72	17.75	17.87	17.84	0.0	18.5	20.46	20.29	20.32	20.49	20.49	0.0	21.0									
		50	50	22.88	22.97	23.18	23.45	23.27	1.0	24.0	17.87	17.61	17.76	17.89	17.81	0.0	18.5	20.41	20.17	20.34	20.49	20.39	0.0	21.0									
	100	0	22.90	22.86	23.20	23.39	23.30	1.0	24.0	17.86	17.71	17.73	17.80	17.84	0.0	18.5	20.47	20.24	20.27	20.44	20.45	0.0	21.0										
	16QAM	1	0	23.32	23.33	23.43	23.75	23.53	1.0	24.0	18.04	17.70	17.71	18.00	17.83	0.0	18.5	20.70	20.43	20.19	20.50	20.34	0.0	21.0									
		1	49	23.31	23.23	23.39	23.98	23.68	1.0	24.0	17.99	17.72	17.81	18.11	17.98	0.0	18.5	20.65	20.39	20.40	20.65	20.66	0.0	21.0									
		1	99	23.27	23.23	23.71	23.71	23.50	1.0	24.0	17.93	17.80	17.72	18.01	17.82	0.0	18.5	20.53	20.25	20.32	20.50	20.56	0.0	21.0									
		50	0	21.78	21.91	22.10	22.43	22.20	2.0	23.0	18.03	17.76	17.62	17.84	17.74	0.0	18.5	20.53	20.34	20.24	20.40	20.35	0.0	21.0									
		50	24	21.96	21.92	22.23	22.38	22.30	2.0	23.0	17.97	17.71	17.77	17.89	17.86	0.0	18.5	20.49	20.31	20.36	20.43	20.38	0.0	21.0									
		50	50	21.89	22.00	22.21	22.47	22.26	2.0	23.0	17.91	17.83	17.79	17.95	17.85	0.0	18.5	20.42	20.22	20.37	20.51	20.43	0.0	21.0									
	100	0	21.91	21.86	22.22	22.38	22.29	2.0	23.0	17.89	17.68	17.78	17.88	17.88	0.0	18.5	20.44	20.34	20.35	20.40	20.45	0.0	21.0										
	64QAM	1	0	22.09	22.17	22.09	22.65	22.33	2.0	23.0	18.05	17.83	17.59	17.82	17.78	0.0	18.5	20.56	20.42	20.29	20.26	20.40	0.0	21.0									
		1	49	22.08	22.27	22.49	22.65	22.43	2.0	23.0	17.84	17.64	17.89	18.02	18.05	0.0	18.5	20.42	20.59	20.45	20.71	20.46	0.0	21.0									
		1	99	22.20	22.30	22.57	22.69	22.61	2.0	23.0	17.90	17.76	17.74	17.76	17.69	0.0	18.5	20.62	20.08	20.36	20.52	20.40	0.0	21.0									
		50	0	20.86	20.88	21.08	21.39	21.25	3.0	22.0	18.04	17.78	17.69	17.84	17.70	0.0	18.5	20.55	20.33	20.25	20.37	20.33	0.0	21.0									
		50	24	20.96	20.94	21.22	21.39	21.32	3.0	22.0	17.91	17.73	17.78	17.88	17.87	0.0	18.5	20.45	20.32	20.36	20.46	20.48	0.0	21.0									
		50	50	20.91	20.96	21.25	21.42	21.30	3.0	22.0	17.94	17.61	17.80	17.93	17.88	0.0	18.5	20.42	20.16	20.33	20.48	20.44	0.0	21.0									
	100	0	20.93	20.89	21.23	21.37	21.29	3.0	22.0	17.95	17.73	17.76	17.85	17.82	0.0	18.5	20.46	20.29	20.33	20.43	20.41	0.0	21.0										
	256QAM	1	0	18.98	18.91	19.15	19.36	19.36	5.0	20.0	17.76	17.54	17.63	17.51	17.70	0.0	18.5	19.36	19.16	18.95	19.03	19.12	0.0	21.0									
		1	49	19.20	19.03	19.42	19.45	19.49	5.0	20.0	17.97	17.71	17.80	17.98	17.87	0.0	18.5	19.23	19.13	19.20	19.15	19.22	0.0	21.0									
		1	99	19.11	19.02	19.34	19.44	19.47	5.0	20.0	17.84	17.36	17.87	17.78	17.84	0.0	18.5	19.04	18.63	18.92	19.28	19.16	0.0	21.0									
50		0	18.80	18.88	19.13	19.34	19.12	5.0	20.0	18.01	17.77	17.69	17.93	17.77	0.0	18.5	19.37	19.12	19.06	19.25	19.14	0.0	21.0										
50		24	18.89	18.93	19.22	19.38	19.28	5.0	20.0	17.94	17.79	17.84	17.93	17.89	0.0	18.5	19.29	19.13	19.17	19.28	19.25	0.0	21.0										
50		50	18.89	18.93	19.19	19.41	19.25	5.0	20.0	17.87	17.64	17.85	17.94	17.89	0.0	18.5	19.29	18.94	19.15	19.30	19.21	0.0	21.0										
100	0	18.87	18.86	19.17	19.34	19.22	5.0	20.0	17.91	17.75	17.76	17.86	17.87	0.0	18.5	19.26	19.08	19.12	19.22	19.20	0.0	21.0											
BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)										Maximum Allowed Average Power (dBm)										Maximum Allowed Average Power (dBm)									
				DSI=2.3					MPR	Tune-up Limit	DSI=0					MPR	Tune-up Limit	DSI=1					MPR	Tune-up Limit									
				Measured Pwr (dBm)							Measured Pwr (dBm)							Measured Pwr (dBm)															
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490			39750	40185	40620	41055	41490											
2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz																			
15 MHz	QPSK	1	0	23.84	23.87	24.02	24.45	24.08	0.0	25.0	17.94	17.66	17.67	17.78	17.68	0.0	18.5	20.58	20.07	20.27	20.43	20.23	0.0	21.0									
		1	37	23.88	23.99	24.09	24.41	24.22	0.0	25.0	17.95	17.73	17.75	17.83	17.72	0.0	18.5	20.62	20.15	20.26	20.37	20.35	0.0	21.0									
		1	74	23.85	23.86	24.08	24.40	24.25	0.0	25.0	17.88	17.54	17.79	17.70	17.70	0.0	18.5	20.41	20.08	20.33	20.40	20.32	0.0	21.0									
		36	0	22.78	22.83	23.06	23.33	23.16	1.0	24.0	17.95	17.66	17.70	17.80	17.67	0.0	18.5	20.49	20.25	20.19	20.41	20.29	0.0	21.0									
		36	20	22.85	22.89	23.19	23.34	23.23	1.0	24.0	17.84	17.69	17.76	17.83	17.77	0.0	18.5	20.38	20.25	20.34	20.45	20.43	0.0	21.0									
		36	39	22.82	22.88	23.19	23.40	23.27	1.0	24.0	17.81	17.56	17.74	17.87	17.75	0.0	18.5	20.39	20.17	20.32	20.47	20.38	0.0	21.0									
	75	0	22.76	22.82	23.18	23.28	23.22	1.0	24.0	17.81	17.67	17.73	17.75	17.74	0.0	18.5	20.41	20.23	20.30	20.38	20.35	0.0	21.0										
	16QAM	1	0	23.22	23.23	23.40	23.91	23.51	1.0	24.0	18.03	17.84	17.71	17.75	17.64	0.0	18.5	20.39	20.09	20.00	20.46	20.48	0.0	21.0									
		1	37	23.37	23.25	23.58	23.70	23.48	1.0	24.0	17.89	17.69	17.76	17.78	17.66	0.0	18.5	20.61	20.25	20.29	20.55	20.46	0.0	21.0									
		1	74	23.16	23.17	23.33	23.79	23.56	1.0	24.0	17.95	17.60	17.79	17.75	17.48	0.0	18.5	20.51	20.22	20.26	20.49	20.38	0.0	21.0									
		36	0	21.81	21.94	22.13	22.34	22.16	2.0	23.0	17.97	17.75	17.74	17.81	17.73	0.0	18.5	20.58	20.29	20.36	20.45	20.29	0.0	21.0									
		36	20	21.91	21.96	22.26	22.38	22.27	2.0	23.0	17.95	17.75	17.84	17.87	17.83	0.0	18.5	20.52	20.32	20.39	20.43	20.38	0.0	21.0									
		36	39	21.86	21.98	22.21	22.44	22.24	2.0	23.0	17.92	17.58	17.79	17.92	17.80	0.0	18.5	20.46	20.22	20.37	20.44	20.42	0.0	21.0									
	75	0	21.83	21.84	22.19	22.34	22.30	2.0	23.0	17.87	17.70	17.82	17.90	17.82	0.0	18.5	20.43	20.29	20.35	20.40	20.36	0.0	21.0										
	64QAM	1	0	22.05	22.15	22.24	22.73	22.30	2.0	23.0	17.78	17.55	17.75	17.76	17.80	0.0	18.5	20.49	20.11	20.19	20.34	20.11	0.0	21.0									
		1	37	22.22	22.40	22.29	22.81	22.60	2.0	23.0	17.87	17.61	17.78	17.74	17.74	0.0	18.5	20.47	20.06	20.39	20.31	20.39	0.0	21.0									
		1	74	22.06	22.18	22.49	22.74	22.50	2.0	23.0	17.75	17.51	17.74	17.85	17.49	0.0	18.5	20.30	20.05	19.97	20.20	20.30	0.0	21.0									
		36	0	20.80	20.89	21.10	21.34	21.14	3.0	22.0	17.99	17.68	17.69	17.83	17.63	0.0	18.5	20.51	20.27	20.26	20.42	20.29	0.0	21.0									
		36	20	20.88	20.89	21.24	21.38	21.28	3.0	22.0	17.88	17.72	17.80	17.87	17.74	0.0	18.5	20.47	20.31	20.39	20.42	20.44	0.0	21.0									
		36	39	20.82	20.95	21.20	21.41	21.26	3.0	22.0	17.90	17.63	17.75	17.84	17.76	0.0	18.5	20.42	20.22	20.37	20.45	20.45	0.0	21.0									
	75	0	20.84	20.87	21.19	21.35	21.26	3.0	22.0	17.84	17.68	17.80	17.82	17.82	0.0	18.5	20.36	20.27	20.40														

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

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit		
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490			39750	40185	40620	41055	41490				
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz				
10 MHz	QPSK	1	0	23.83	23.93	24.09	24.29	24.20	0.0	25.0	17.78	17.67	17.65	17.82	17.63	0.0	18.5	20.48	20.20	20.19	20.39	20.25	0.0	21.0		
		1	25	23.79	24.01	24.17	24.45	24.41	0.0	25.0	17.99	17.61	17.88	17.81	17.78	0.0	18.5	20.50	20.27	20.28	20.49	20.36	0.0	21.0		
		1	49	23.78	23.89	24.12	24.35	24.10	0.0	25.0	17.70	17.62	17.67	17.81	17.65	0.0	18.5	20.49	20.09	20.34	20.33	20.35	0.0	21.0		
		25	0	22.84	22.88	23.13	23.37	23.24	1.0	24.0	17.90	17.68	17.67	17.82	17.70	0.0	18.5	20.54	20.34	20.26	20.39	20.27	0.0	21.0		
		25	12	22.89	22.92	23.21	23.41	23.26	1.0	24.0	17.83	17.69	17.81	17.84	17.84	0.0	18.5	20.49	20.24	20.45	20.49	20.36	0.0	21.0		
		25	25	22.84	22.94	23.23	23.47	23.21	1.0	24.0	17.81	17.63	17.75	17.89	17.78	0.0	18.5	20.50	20.15	20.36	20.51	20.44	0.0	21.0		
	16QAM	50	0	22.84	22.92	23.17	23.30	23.25	1.0	24.0	17.83	17.70	17.74	17.84	17.79	0.0	18.5	20.47	20.26	20.36	20.45	20.41	0.0	21.0		
		1	0	22.95	23.25	23.47	23.72	23.62	1.0	24.0	18.02	17.66	17.72	17.47	17.65	0.0	18.5	20.63	20.30	20.38	20.45	20.22	0.0	21.0		
		1	25	23.05	23.12	23.65	23.77	23.52	1.0	24.0	17.99	17.78	17.76	17.79	17.99	0.0	18.5	20.63	20.34	20.56	20.61	20.26	0.0	21.0		
		1	49	23.55	23.24	23.39	23.77	23.62	1.0	24.0	17.94	17.66	17.44	17.84	17.57	0.0	18.5	20.49	20.13	20.38	20.31	20.20	0.0	21.0		
		25	0	21.76	21.85	22.13	22.39	22.28	2.0	23.0	17.94	17.73	17.72	17.85	17.74	0.0	18.5	20.56	20.33	20.34	20.46	20.37	0.0	21.0		
		25	12	21.93	21.92	22.28	22.41	22.29	2.0	23.0	17.92	17.68	17.80	17.93	17.81	0.0	18.5	20.40	20.30	20.36	20.51	20.40	0.0	21.0		
		25	25	21.88	21.96	22.24	22.45	22.28	2.0	23.0	17.96	17.66	17.79	17.93	17.84	0.0	18.5	20.45	20.23	20.44	20.49	20.39	0.0	21.0		
		50	0	21.84	21.86	22.23	22.40	22.22	2.0	23.0	17.89	17.74	17.80	17.88	17.81	0.0	18.5	20.43	20.32	20.37	20.47	20.44	0.0	21.0		
		64QAM	1	0	22.14	22.15	22.28	22.71	22.31	2.0	23.0	17.97	17.63	17.68	17.87	17.62	0.0	18.5	20.32	20.10	20.13	20.28	20.20	0.0	21.0	
			1	25	22.03	22.16	22.32	22.81	22.38	2.0	23.0	18.03	17.49	17.78	17.99	17.65	0.0	18.5	20.40	20.33	20.17	20.50	20.22	0.0	21.0	
			1	49	22.02	22.03	22.32	22.65	22.47	2.0	23.0	17.77	17.52	17.58	17.77	17.74	0.0	18.5	20.27	20.20	20.38	20.25	20.15	0.0	21.0	
			25	0	20.80	20.91	21.09	21.45	21.28	3.0	22.0	17.98	17.76	17.70	17.78	17.78	0.0	18.5	20.48	20.23	20.29	20.43	20.28	0.0	21.0	
	25		12	20.87	20.90	21.19	21.42	21.28	3.0	22.0	17.91	17.72	17.72	17.74	17.87	0.0	18.5	20.42	20.29	20.39	20.51	20.40	0.0	21.0		
	25		25	20.84	20.98	21.21	21.48	21.32	3.0	22.0	17.87	17.69	17.73	17.89	17.88	0.0	18.5	20.48	20.19	20.36	20.51	20.44	0.0	21.0		
	256QAM	50	0	20.86	20.87	21.22	21.41	21.27	3.0	22.0	17.85	17.70	17.78	17.87	17.88	0.0	18.5	20.47	20.33	20.38	20.47	20.39	0.0	21.0		
		1	0	18.69	18.90	19.29	19.59	19.42	5.0	20.0	17.80	17.60	17.65	17.88	17.66	0.0	18.5	19.17	18.99	19.11	19.30	18.80	0.0	21.0		
		1	25	19.17	18.93	19.24	19.58	19.58	5.0	20.0	17.73	17.49	17.78	17.87	17.79	0.0	18.5	19.38	19.12	19.26	19.33	19.12	0.0	21.0		
		1	49	18.88	19.01	19.22	19.65	19.19	5.0	20.0	17.67	17.49	17.79	17.93	17.62	0.0	18.5	19.10	18.86	18.96	19.31	19.13	0.0	21.0		
		25	0	18.76	18.84	19.08	19.39	19.25	5.0	20.0	17.99	17.78	17.78	17.89	17.78	0.0	18.5	19.28	19.06	19.09	19.19	19.12	0.0	21.0		
		25	12	18.89	18.91	19.24	19.39	19.24	5.0	20.0	17.86	17.78	17.82	17.96	17.84	0.0	18.5	19.23	19.12	19.18	19.29	19.19	0.0	21.0		
		25	25	18.78	18.97	19.18	19.42	19.23	5.0	20.0	17.87	17.68	17.87	17.98	17.86	0.0	18.5	19.19	18.99	19.13	19.32	19.19	0.0	21.0		
		50	0	18.88	18.89	19.22	19.37	19.31	5.0	20.0	17.90	17.74	17.85	17.92	17.81	0.0	18.5	19.27	19.14	19.20	19.24	19.22	0.0	21.0		
		5 MHz	QPSK	1	0	23.72	23.88	24.15	24.38	24.17	0.0	25.0	17.87	17.59	17.58	17.89	17.65	0.0	18.5	20.40	20.18	20.38	20.48	20.43	0.0	21.0
				1	12	23.85	23.97	24.22	24.41	24.24	0.0	25.0	17.78	17.72	17.72	17.90	17.78	0.0	18.5	20.52	20.24	20.42	20.44	20.39	0.0	21.0
1				24	23.74	23.86	24.13	24.45	24.19	0.0	25.0	17.77	17.55	17.60	17.73	17.59	0.0	18.5	20.39	20.13	20.26	20.42	20.32	0.0	21.0	
12				0	22.71	22.91	23.16	23.41	23.27	1.0	24.0	17.83	17.65	17.74	17.79	17.75	0.0	18.5	20.49	20.27	20.34	20.38	20.38	0.0	21.0	
12	7			22.81	23.00	23.17	23.48	23.28	1.0	24.0	17.84	17.66	17.75	17.80	17.80	0.0	18.5	20.44	20.30	20.37	20.45	20.39	0.0	21.0		
12	13			22.81	22.91	23.27	23.45	23.25	1.0	24.0	17.80	17.62	17.74	17.87	17.74	0.0	18.5	20.41	20.28	20.40	20.49	20.37	0.0	21.0		
16QAM	25		0	22.82	22.82	23.20	23.32	23.26	1.0	24.0	17.75	17.60	17.71	17.80	17.74	0.0	18.5	20.44	20.30	20.38	20.37	20.39	0.0	21.0		
	1		0	23.07	23.06	23.41	23.69	23.51	1.0	24.0	17.69	17.67	17.73	17.89	17.73	0.0	18.5	20.52	20.40	20.25	20.60	20.39	0.0	21.0		
	1		12	23.26	23.40	23.51	23.91	23.61	1.0	24.0	18.09	17.77	17.86	17.93	17.69	0.0	18.5	20.32	20.38	20.36	20.67	20.36	0.0	21.0		
	1		24	23.07	23.32	23.48	23.66	23.55	1.0	24.0	17.87	17.60	17.65	17.68	17.78	0.0	18.5	20.37	20.10	20.27	20.62	20.36	0.0	21.0		
	12		0	21.88	21.95	22.17	22.39	22.37	2.0	23.0	17.84	17.72	17.84	17.82	17.83	0.0	18.5	20.56	20.40	20.35	20.40	20.48	0.0	21.0		
	12		7	21.96	22.02	22.26	22.50	22.39	2.0	23.0	17.89	17.73	17.75	17.83	17.76	0.0	18.5	20.45	20.33	20.36	20.45	20.47	0.0	21.0		
64QAM	12		13	21.96	21.95	22.26	22.50	22.30	2.0	23.0	17.85	17.72	17.84	17.96	17.82	0.0	18.5	20.38	20.29	20.37	20.54	20.43	0.0	21.0		
	25		0	21.85	21.85	22.21	22.38	22.28	2.0	23.0	17.79	17.61	17.75	17.82	17.77	0.0	18.5	20.41	20.21	20.35	20.45	20.41	0.0	21.0		
	1		0	22.07	22.07	22.27	22.70	22.40	2.0	23.0	17.97	17.67	17.72	17.87	17.85	0.0	18.5	20.54	20.22	20.36	20.46	20.49	0.0	21.0		
	1		12	22.07	22.16	22.61	22.77	22.54	2.0	23.0	17.90	17.60	17.70	18.03	17.92	0.0	18.5	20.44	20.39	20.37	20.50	20.51	0.0	21.0		
	1		24	22.06	22.14	22.49	22.64	22.45	2.0	23.0	17.70	17.48	17.75	17.94	17.85	0.0	18.5	20.49	20.10	20.22	20.27	20.26	0.0	21.0		
	12		0	20.74	20.87	21.17	21.42	21.23	3.0	22.0	17.87	17.72	17.72	17.81	17.75	0.0	18.5	20.51	20.24	20.31	20.40	20.41	0.0	21.0		
256QAM	12		7	20.87	21.00	21.25	21.37	21.23	3.0	22.0	17.87	17.63	17.71	17.77	17.76	0.0	18.5	20.41	20.27	20.31	20.46	20.43	0.0	21.0		
	12		13	20.75	20.94	21.2																				

LTE Band 41 (Power Class 3) (Ant E) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)							Maximum Allowed Average Power (dBm)						
				Pmax, DSI=2,3					MPR	Tune-up Limit	DSI=0,1					MPR	Tune-up Limit
				Measured Pwr (dBm)							Measured Pwr (dBm)						
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz								
20 MHz	QPSK	1	0	23.85	23.62	23.83	24.00	23.72	0.0	25.0	21.02	20.81	20.81	20.97	20.86	0.0	22.0
		1	49	24.02	23.53	23.99	24.06	23.66	0.0	25.0	20.96	20.70	20.88	21.03	20.93	0.0	22.0
		1	99	24.03	23.54	23.85	23.89	23.50	0.0	25.0	20.81	20.59	20.84	20.92	20.76	0.0	22.0
		50	0	23.01	22.67	22.84	22.99	22.71	1.0	24.0	20.98	20.81	20.83	20.96	20.87	0.0	22.0
		50	24	22.97	22.71	22.92	23.01	22.79	1.0	24.0	20.91	20.79	20.96	21.01	20.86	0.0	22.0
		50	50	22.97	22.66	22.96	23.02	22.75	1.0	24.0	20.91	20.90	20.93	21.05	20.85	0.0	22.0
	16QAM	100	0	22.96	22.66	22.92	23.01	22.75	1.0	24.0	20.88	20.75	20.90	20.93	20.81	0.0	22.0
		1	0	23.45	23.19	23.17	23.48	22.97	1.0	24.0	21.19	20.88	21.01	21.02	21.04	0.0	22.0
		1	49	23.40	23.10	23.31	23.39	23.08	1.0	24.0	21.12	20.87	21.10	21.13	20.92	0.0	22.0
		1	99	23.31	22.85	23.18	23.41	23.07	1.0	24.0	21.03	20.78	20.93	20.92	20.89	0.0	22.0
		50	0	22.05	21.77	21.92	22.09	21.80	2.0	23.0	21.08	20.83	20.87	21.00	20.85	0.0	22.0
		50	24	22.06	21.78	22.05	22.08	21.82	2.0	23.0	20.95	20.82	20.99	20.99	20.87	0.0	22.0
	64QAM	50	50	21.98	21.72	21.98	22.11	21.85	2.0	23.0	20.89	20.69	20.95	21.03	20.91	0.0	22.0
		100	0	21.93	21.73	21.93	21.97	21.77	2.0	23.0	20.94	20.80	20.90	20.99	20.87	0.0	22.0
		1	0	22.19	21.88	22.09	22.27	21.97	2.0	23.0	21.30	21.27	20.82	21.02	20.92	0.0	22.0
		1	49	22.33	21.76	22.25	22.28	22.05	2.0	23.0	21.20	20.81	20.86	21.24	20.87	0.0	22.0
		1	99	22.33	21.83	22.37	22.39	21.84	2.0	23.0	21.04	20.61	20.99	20.95	20.82	0.0	22.0
		50	0	21.05	20.56	20.82	21.06	20.77	3.0	22.0	21.05	20.82	20.89	21.01	20.94	0.0	22.0
	256QAM	50	24	20.96	20.74	20.87	21.02	20.80	3.0	22.0	20.98	20.83	21.01	21.08	20.98	0.0	22.0
		50	50	20.92	20.63	20.94	21.01	20.81	3.0	22.0	20.95	20.76	21.01	21.10	20.97	0.0	22.0
		100	0	20.96	20.64	20.90	21.00	20.77	3.0	22.0	20.91	20.77	20.96	20.96	20.91	0.0	22.0
		1	0	19.08	18.94	18.87	19.28	18.93	5.0	20.0	18.86	18.61	18.76	19.04	18.85	2.0	20.0
		1	49	19.11	19.00	18.93	19.35	19.20	5.0	20.0	18.79	18.46	18.88	18.95	18.91	2.0	20.0
		1	99	19.16	18.75	19.13	19.27	19.05	5.0	20.0	18.73	18.61	18.97	18.99	19.05	2.0	20.0
15 MHz	QPSK	50	0	18.86	18.73	18.91	19.15	18.96	5.0	20.0	19.08	18.85	18.87	19.06	18.92	2.0	20.0
		50	24	18.91	18.74	19.06	19.15	19.02	5.0	20.0	18.98	18.85	19.00	19.04	18.91	2.0	20.0
		50	50	18.98	18.56	19.05	19.14	18.95	5.0	20.0	19.00	18.69	18.94	19.06	18.96	2.0	20.0
		100	0	18.99	18.68	18.93	19.03	18.94	5.0	20.0	18.96	18.79	18.93	19.01	18.91	2.0	20.0
		1	0	24.04	23.66	23.81	24.11	23.76	0.0	25.0	21.14	20.86	20.93	21.14	21.00	0.0	22.0
		1	37	23.97	23.79	23.94	24.14	23.75	0.0	25.0	21.19	20.91	21.09	21.15	21.00	0.0	22.0
	16QAM	1	74	24.00	23.49	23.87	23.95	23.68	0.0	25.0	21.10	20.80	21.08	21.13	20.89	0.0	22.0
		36	0	23.07	22.72	22.85	23.00	22.76	1.0	24.0	21.19	20.90	20.99	21.12	20.96	0.0	22.0
		36	20	22.97	22.71	22.96	23.06	22.79	1.0	24.0	21.05	20.94	21.10	21.11	20.95	0.0	22.0
		36	39	22.91	22.70	22.99	23.06	22.79	1.0	24.0	21.03	20.87	21.09	21.18	20.99	0.0	22.0
		75	0	22.90	22.70	22.93	23.03	22.83	1.0	24.0	21.06	20.91	21.03	21.12	20.92	0.0	22.0
		1	0	23.40	22.97	23.09	23.34	23.15	1.0	24.0	21.11	20.94	20.76	21.22	21.05	0.0	22.0
	64QAM	1	37	23.31	22.86	23.31	23.28	22.98	1.0	24.0	21.14	20.70	20.96	21.06	21.01	0.0	22.0
		1	74	23.18	22.71	23.15	23.32	22.93	1.0	24.0	21.03	20.77	20.96	21.12	20.83	0.0	22.0
		36	0	22.12	21.77	21.93	22.04	21.82	2.0	23.0	21.19	20.92	21.04	21.13	20.99	0.0	22.0
		36	20	21.99	21.77	22.04	22.10	21.88	2.0	23.0	21.11	20.95	21.11	21.16	20.98	0.0	22.0
		36	39	21.98	21.75	22.03	22.12	21.86	2.0	23.0	21.11	20.89	21.08	21.19	20.99	0.0	22.0
		75	0	21.95	21.72	21.94	22.03	21.92	2.0	23.0	21.15	20.88	21.10	21.15	20.97	0.0	22.0
	256QAM	1	0	22.26	21.95	22.02	22.52	22.05	2.0	23.0	21.15	20.99	21.06	21.20	20.82	0.0	22.0
		1	37	22.22	21.85	22.30	22.44	22.11	2.0	23.0	21.31	20.97	21.26	21.27	20.92	0.0	22.0
		1	74	22.17	21.81	22.11	22.45	22.09	2.0	23.0	21.17	20.66	21.20	21.24	20.91	0.0	22.0
		36	0	21.05	20.74	20.81	21.06	20.71	3.0	22.0	21.21	20.97	20.99	21.18	20.98	0.0	22.0
		36	20	20.88	20.77	20.98	21.04	20.74	3.0	22.0	21.18	21.01	21.15	21.18	20.89	0.0	22.0
		36	39	20.89	20.70	20.96	21.07	20.82	3.0	22.0	21.12	20.97	21.18	21.19	21.05	0.0	22.0
256QAM	75	0	20.97	20.70	20.98	21.05	20.86	3.0	22.0	21.10	20.94	21.13	21.14	20.95	0.0	22.0	
	1	0	18.96	18.96	18.89	19.01	19.12	5.0	20.0	19.01	18.93	18.92	19.07	19.02	2.0	20.0	
	1	37	19.16	18.83	19.05	19.11	19.09	5.0	20.0	19.26	18.93	18.97	19.15	18.89	2.0	20.0	
	1	74	18.95	18.65	19.14	19.13	18.95	5.0	20.0	19.10	18.93	19.02	19.08	18.90	2.0	20.0	
	36	0	18.98	18.65	18.85	18.85	18.85	5.0	20.0	19.18	18.95	19.04	19.15	19.00	2.0	20.0	
	36	20	18.93	18.66	18.71	18.78	18.76	5.0	20.0	19.17	18.94	19.12	19.20	19.04	2.0	20.0	
36	39	18.86	18.58	18.85	18.68	18.85	5.0	20.0	19.13	18.92	19.12	19.23	19.06	2.0	20.0		
75	0	18.89	18.65	18.42	18.26	18.26	5.0	20.0	19.13	18.99	19.12	19.17	18.99	2.0	20.0		

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

BW (MHz)	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490			39750	40185	40620	41055	41490		
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
10 MHz	QPSK	1	0	24.02	23.63	23.86	24.18	23.79	0.0	25.0	21.10	20.95	20.98	21.06	20.91	0.0	22.0
		1	25	24.01	23.68	23.95	24.13	23.88	0.0	25.0	21.18	20.88	21.04	21.15	20.98	0.0	22.0
		1	49	23.92	23.57	23.96	24.00	23.67	0.0	25.0	20.96	20.72	21.04	21.09	20.90	0.0	22.0
		25	0	23.05	22.72	22.82	23.05	22.76	1.0	24.0	21.21	20.96	21.04	21.12	20.97	0.0	22.0
		25	12	22.96	22.70	22.93	23.07	22.77	1.0	24.0	21.17	20.89	21.07	21.16	20.94	0.0	22.0
		25	25	22.96	22.60	22.95	23.07	22.77	1.0	24.0	21.11	20.89	21.09	21.17	21.02	0.0	22.0
	50	0	22.92	22.67	22.89	23.00	22.73	1.0	24.0	21.08	20.92	21.07	21.10	20.94	0.0	22.0	
	16QAM	1	0	23.43	22.97	23.03	23.39	22.97	1.0	24.0	21.35	20.75	21.12	21.01	20.88	0.0	22.0
		1	25	23.37	23.10	23.27	23.38	23.02	1.0	24.0	21.31	20.95	21.20	21.05	20.87	0.0	22.0
		1	49	23.17	22.87	23.28	23.30	22.89	1.0	24.0	21.27	20.70	21.07	20.93	20.99	0.0	22.0
		25	0	22.09	21.74	21.86	22.09	21.80	2.0	23.0	21.17	20.95	21.01	21.21	20.99	0.0	22.0
		25	12	22.01	21.74	22.02	22.09	21.80	2.0	23.0	21.12	20.93	21.14	21.15	21.02	0.0	22.0
		25	25	21.95	21.65	21.95	22.12	21.84	2.0	23.0	21.10	20.99	21.12	21.19	21.06	0.0	22.0
	50	0	22.01	21.72	21.97	22.02	21.78	2.0	23.0	21.13	21.00	21.14	21.18	20.96	0.0	22.0	
	64QAM	1	0	22.34	22.04	22.14	22.28	21.92	2.0	23.0	21.16	20.95	20.93	21.01	20.94	0.0	22.0
		1	25	22.10	21.93	22.26	22.42	21.94	2.0	23.0	21.06	20.92	21.20	20.96	20.93	0.0	22.0
		1	49	22.08	21.64	22.13	22.22	21.96	2.0	23.0	21.08	20.83	21.07	21.15	20.86	0.0	22.0
		25	0	21.06	20.74	20.89	21.08	20.79	3.0	22.0	21.25	20.89	21.04	21.12	20.95	0.0	22.0
		25	12	20.98	20.75	20.99	21.08	20.77	3.0	22.0	21.15	20.95	21.14	21.17	20.98	0.0	22.0
		25	25	20.99	20.63	20.95	21.09	20.82	3.0	22.0	21.10	20.98	21.12	21.24	21.06	0.0	22.0
	50	0	20.94	20.68	20.94	21.04	20.78	3.0	22.0	21.15	20.93	21.09	21.22	20.97	0.0	22.0	
	256QAM	1	0	19.04	18.83	18.90	19.21	18.97	5.0	20.0	19.11	18.85	19.14	19.18	18.86	2.0	20.0
		1	25	19.16	18.77	18.95	19.41	19.19	5.0	20.0	18.96	19.00	18.99	19.27	19.08	2.0	20.0
		1	49	18.88	18.55	19.19	19.10	18.94	5.0	20.0	19.05	18.89	19.04	19.15	18.74	2.0	20.0
		25	0	19.04	18.71	18.85	19.17	18.87	5.0	20.0	19.20	18.93	19.01	19.15	19.01	2.0	20.0
25		12	18.97	18.75	19.00	19.14	18.86	5.0	20.0	19.09	18.99	19.10	19.20	19.02	2.0	20.0	
25		25	19.01	18.72	19.03	19.21	18.95	5.0	20.0	19.10	18.94	19.09	19.27	19.09	2.0	20.0	
50	0	18.88	18.68	19.01	19.13	19.00	5.0	20.0	19.14	18.98	19.14	19.19	18.99	2.0	20.0		
5 MHz	QPSK	1	0	24.11	23.79	23.72	24.04	23.89	0.0	25.0	21.04	20.80	20.97	21.11	20.89	0.0	22.0
		1	12	24.14	23.70	23.86	24.22	23.89	0.0	25.0	21.14	21.02	21.06	21.21	21.01	0.0	22.0
		1	24	24.03	23.64	23.90	24.02	23.63	0.0	25.0	21.00	20.84	20.99	21.12	20.95	0.0	22.0
		12	0	23.13	22.77	22.82	23.07	22.80	1.0	24.0	21.07	20.90	20.95	21.11	20.91	0.0	22.0
		12	7	23.04	22.73	22.98	23.06	22.92	1.0	24.0	21.09	20.93	21.07	21.11	20.96	0.0	22.0
		12	13	23.01	22.62	22.95	23.09	22.81	1.0	24.0	20.95	20.88	21.03	21.17	20.98	0.0	22.0
	25	0	22.97	22.71	22.91	23.05	22.78	1.0	24.0	21.02	20.87	21.05	21.07	20.92	0.0	22.0	
	16QAM	1	0	23.40	22.93	23.15	23.37	23.26	1.0	24.0	21.18	20.91	21.01	20.99	20.99	0.0	22.0
		1	12	23.45	23.07	23.25	23.43	23.34	1.0	24.0	21.07	20.82	21.06	21.33	21.06	0.0	22.0
		1	24	23.36	23.05	23.29	23.30	23.01	1.0	24.0	21.09	20.94	21.01	21.09	21.15	0.0	22.0
		12	0	22.15	21.77	21.81	22.07	21.76	2.0	23.0	21.16	20.97	21.16	21.13	20.93	0.0	22.0
		12	7	22.04	21.78	21.96	22.09	21.87	2.0	23.0	21.09	20.89	21.09	21.16	21.01	0.0	22.0
		12	13	21.99	21.66	21.95	22.07	21.82	2.0	23.0	21.02	20.90	21.12	21.23	20.98	0.0	22.0
	25	0	21.98	21.68	21.96	22.04	21.82	2.0	23.0	21.00	20.88	21.05	21.13	20.90	0.0	22.0	
	64QAM	1	0	22.39	22.10	22.00	22.34	22.10	2.0	23.0	21.21	20.95	21.19	21.21	21.05	0.0	22.0
		1	12	22.21	22.04	22.15	22.39	22.16	2.0	23.0	21.20	20.92	21.09	21.25	21.05	0.0	22.0
		1	24	22.29	21.89	22.10	22.25	21.93	2.0	23.0	21.02	20.80	21.03	21.09	20.84	0.0	22.0
		12	0	21.13	20.77	20.80	21.08	20.76	3.0	22.0	21.15	20.91	21.03	21.14	21.03	0.0	22.0
		12	7	21.03	20.71	20.95	21.06	20.91	3.0	22.0	21.12	20.89	21.10	21.13	20.94	0.0	22.0
		12	13	20.99	20.58	20.95	21.09	20.83	3.0	22.0	21.12	20.90	21.09	21.18	21.07	0.0	22.0
	25	0	20.98	20.72	20.88	21.07	20.74	3.0	22.0	21.08	20.97	21.08	21.07	21.00	0.0	22.0	
	256QAM	1	0	19.14	18.64	19.15	19.20	19.11	5.0	20.0	18.94	18.88	18.89	19.20	18.84	2.0	20.0
		1	12	19.24	18.69	19.11	19.41	19.18	5.0	20.0	19.15	19.04	19.12	19.27	19.29	2.0	20.0
		1	24	19.03	18.68	19.05	19.20	18.79	5.0	20.0	19.17	18.85	19.13	18.99	18.96	2.0	20.0
		12	0	19.03	18.74	18.81	19.08	18.92	5.0	20.0	19.22	18.87	19.05	19.14	18.96	2.0	20.0
12		7	18.88	18.77	18.97	19.16	19.02	5.0	20.0	19.11	18.90	19.15	19.19	18.98	2.0	20.0	
12		13	18.92	18.70	18.94	19.22	18.97	5.0	20.0	19.10	18.93	19.02	19.26	19.09	2.0	20.0	
25	0	18.92	18.62	18.94	19.06	18.94	5.0	20.0	19.03	18.92	19.06	19.17	18.99	2.0	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	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
	$\leq 0.5^2$		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	
<p>NOTE 1: Applicable for UE operating in TDD mode with PI/2 BPSK modulation and UE indicates support for UE capability <i>powerBoosting-pi2BPSK</i> and if the IE <i>powerBoostPi2BPSK</i> 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.</p> <p>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 <i>powerBoostPi2BPSK</i> 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.</p>			

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

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

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

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

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

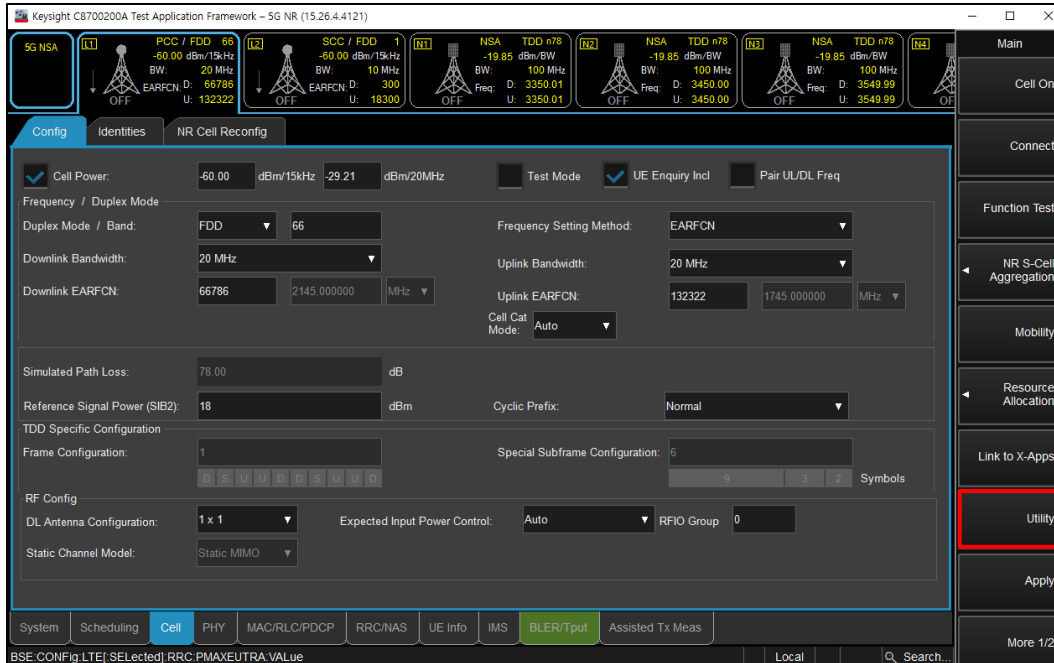
SAR test exclusion can be applied for testing overlapping NR bands as follows:

- 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.

Procedures used to establish power measurement for NR Bands

Switching to NSA mode or SA mode

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



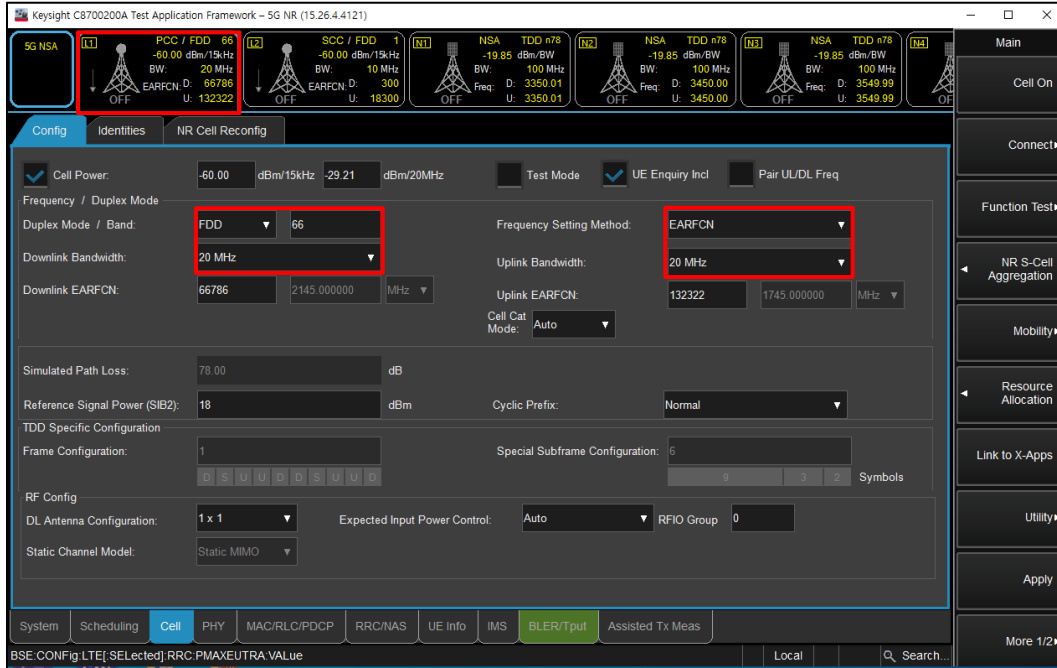
(Figure 1-1)



(Figure 1-2)

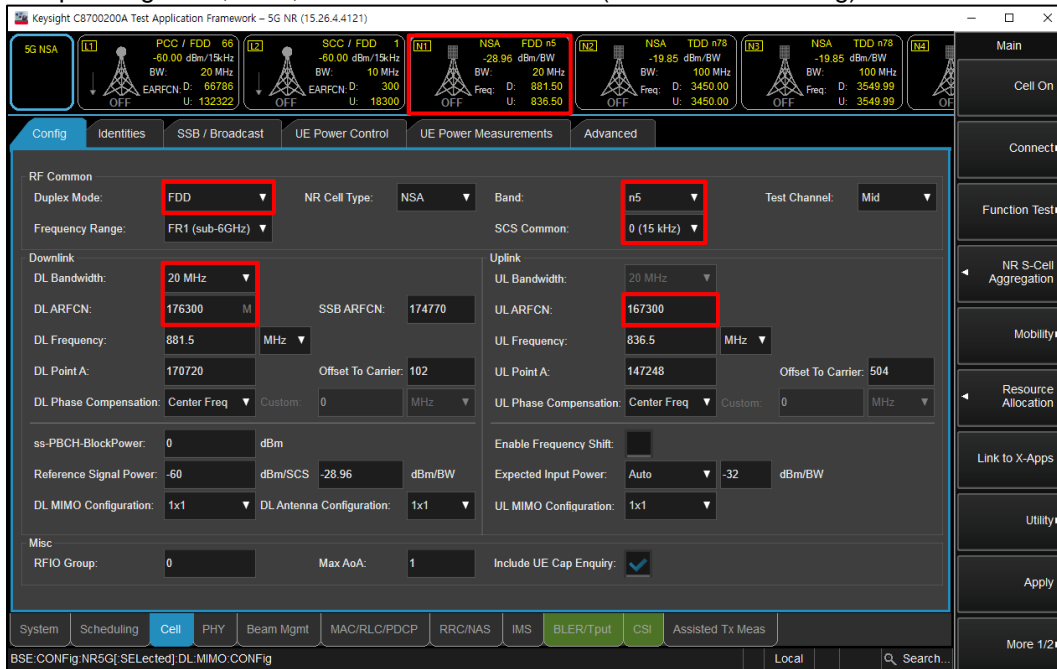
NSA Mode

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



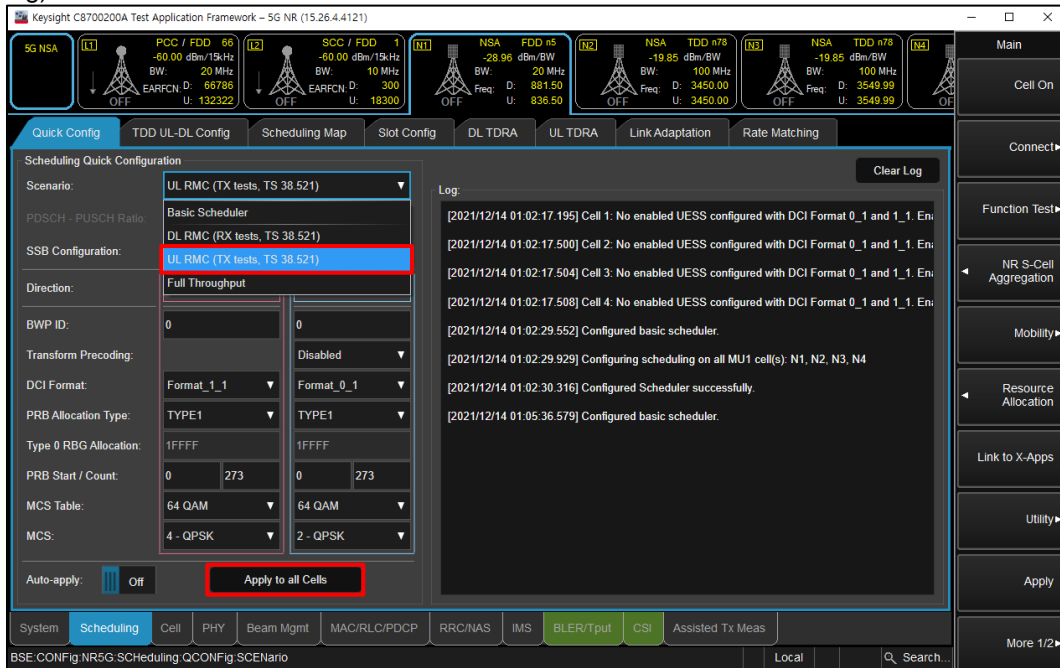
(Figure 2-1)

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



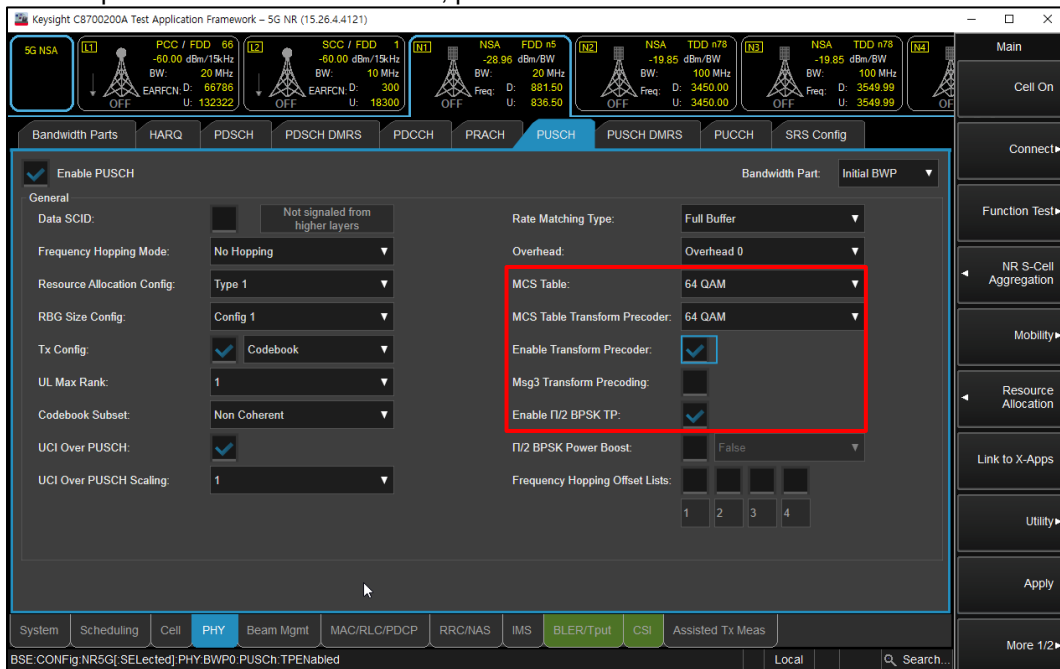
(Figure 2-2)

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



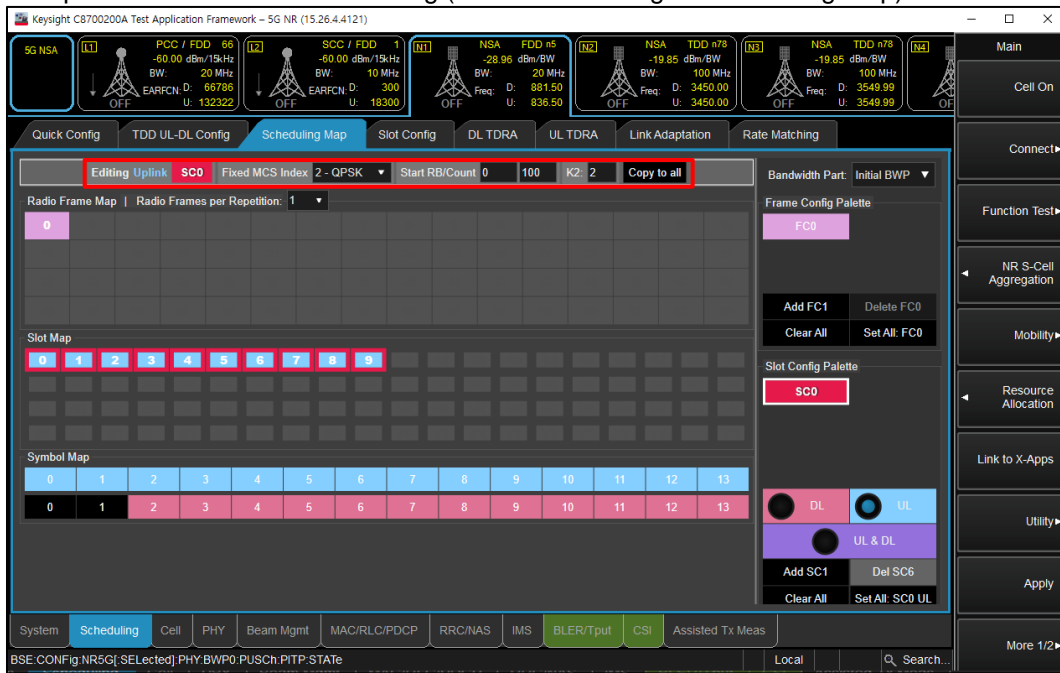
(Figure 2-3)

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



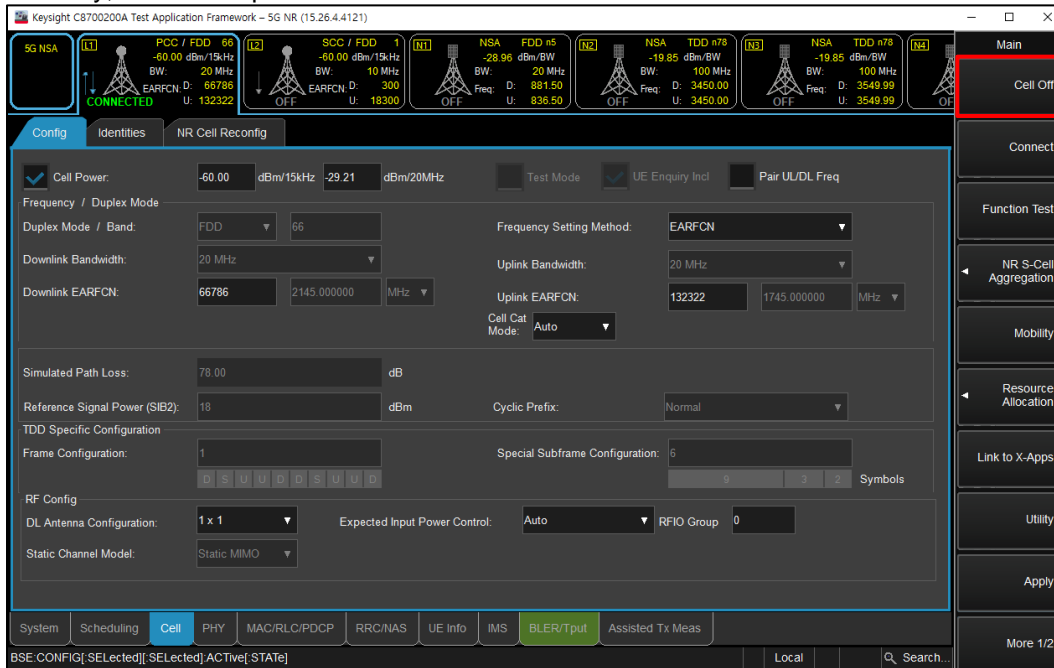
(Figure 2-4)

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



(Figure 2-5)

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



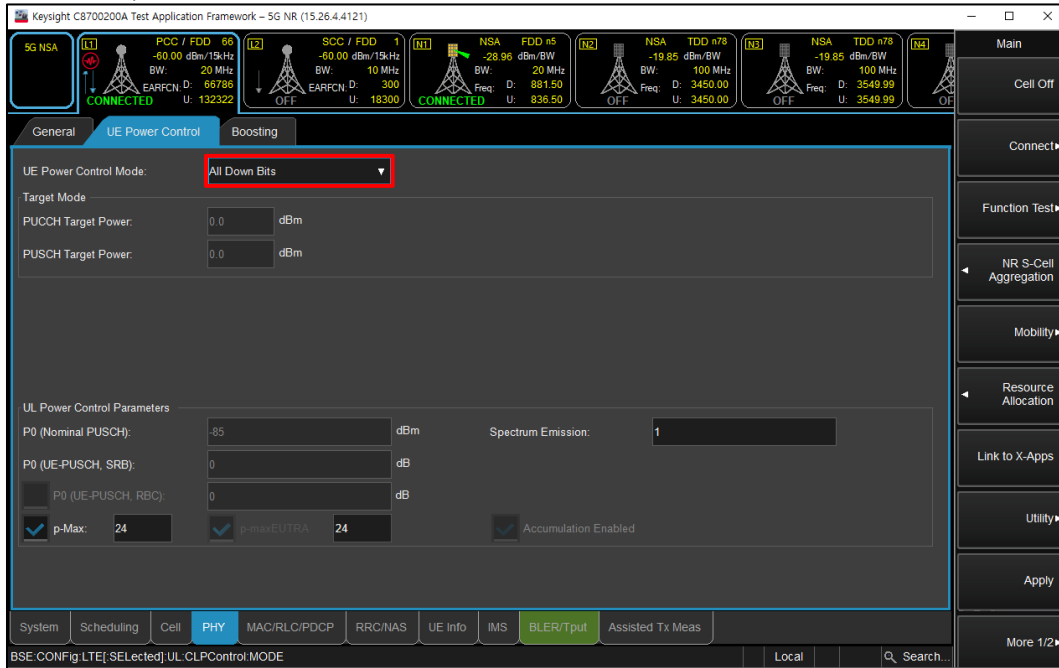
(Figure 2-6)

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



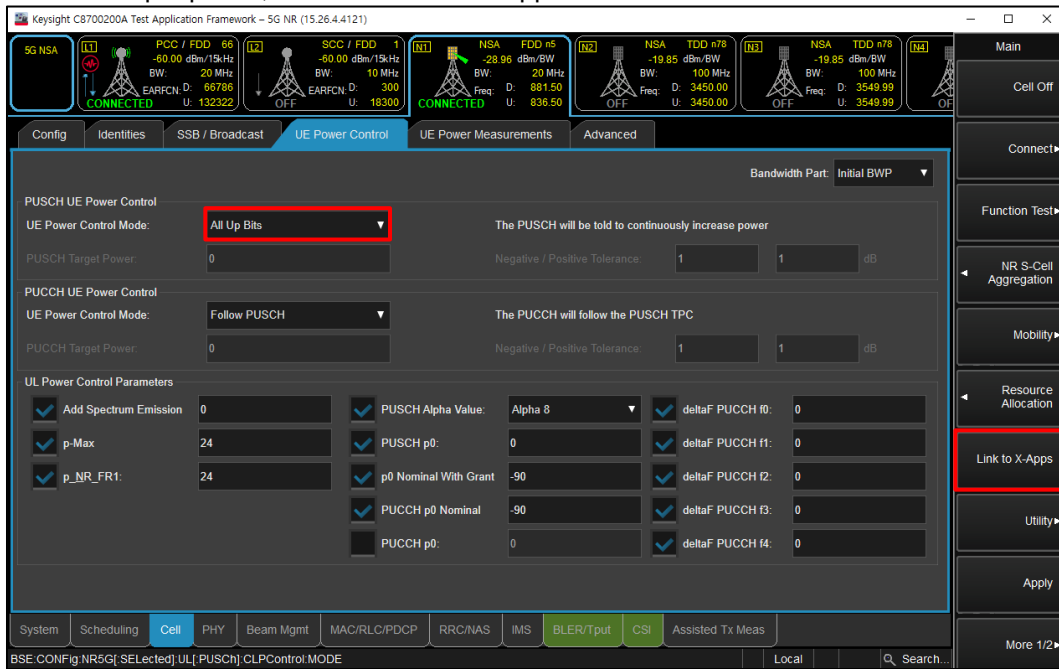
(Figure 2-7)

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



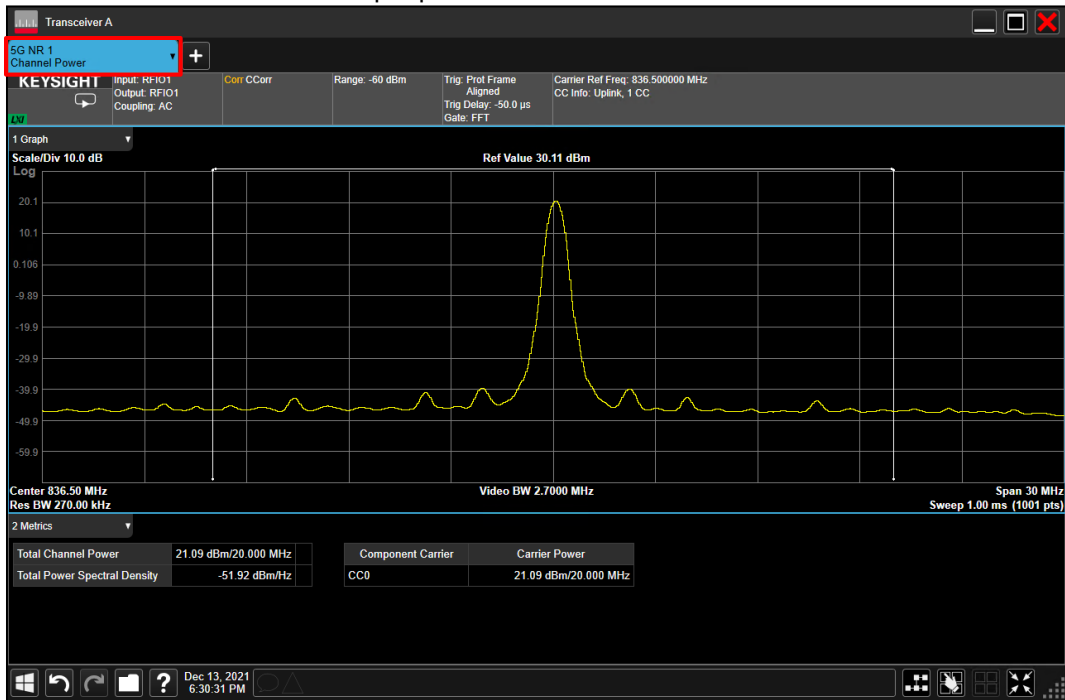
(Figure 2-8)

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



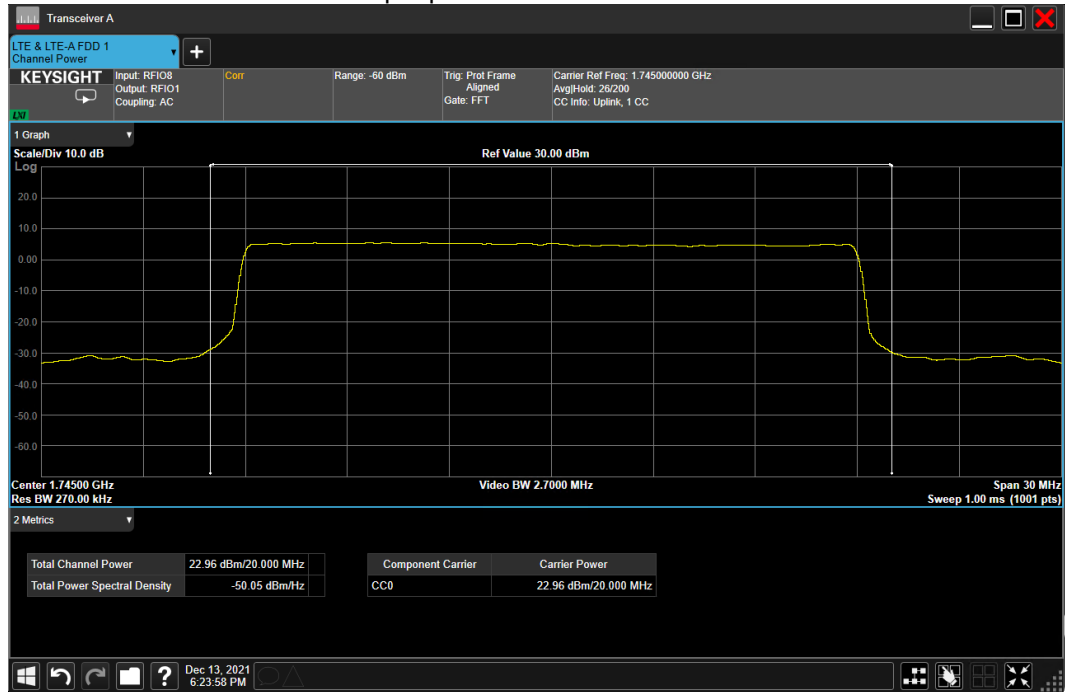
(Figure 2-9)

- Select "Channel Power" for NR output power



(Figure 2-10)

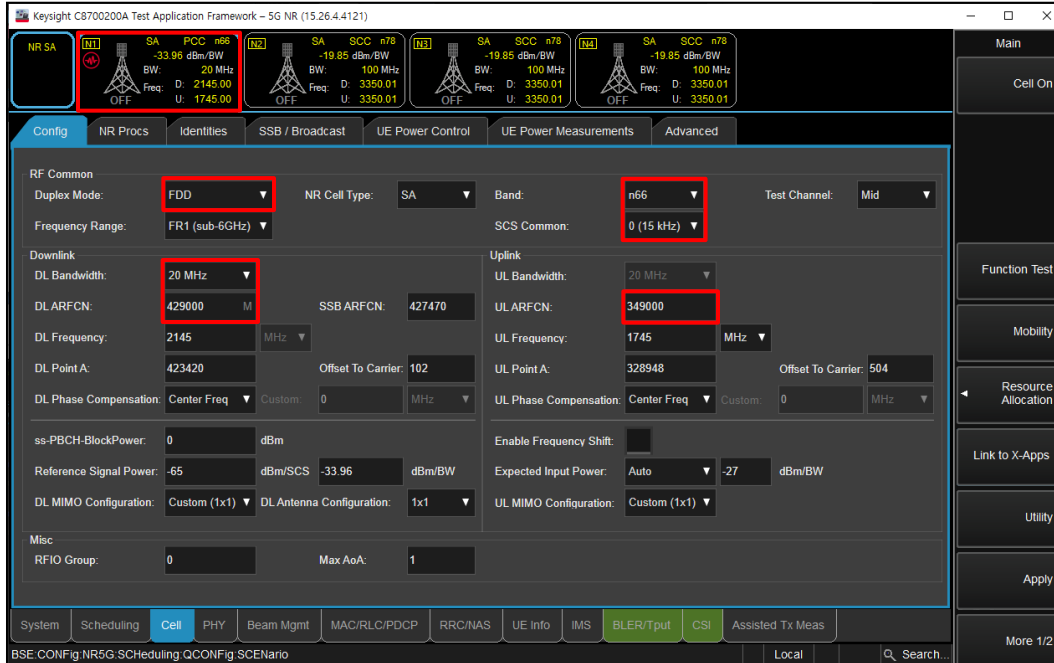
- Select "Channel Power" for LTE output power



(Figure 2-11)

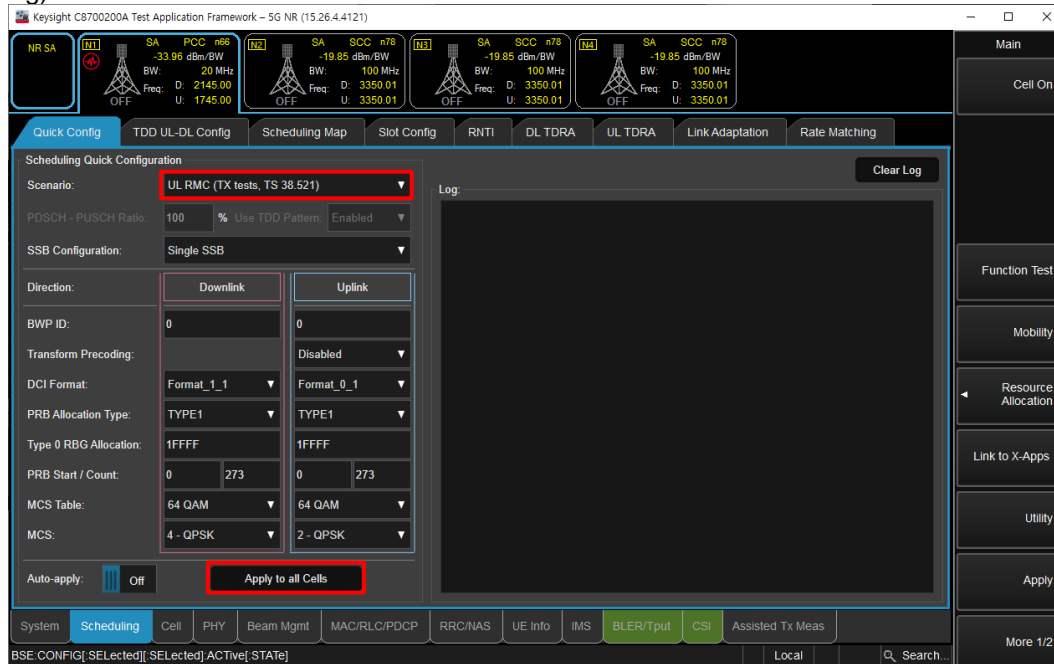
SA Mode

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



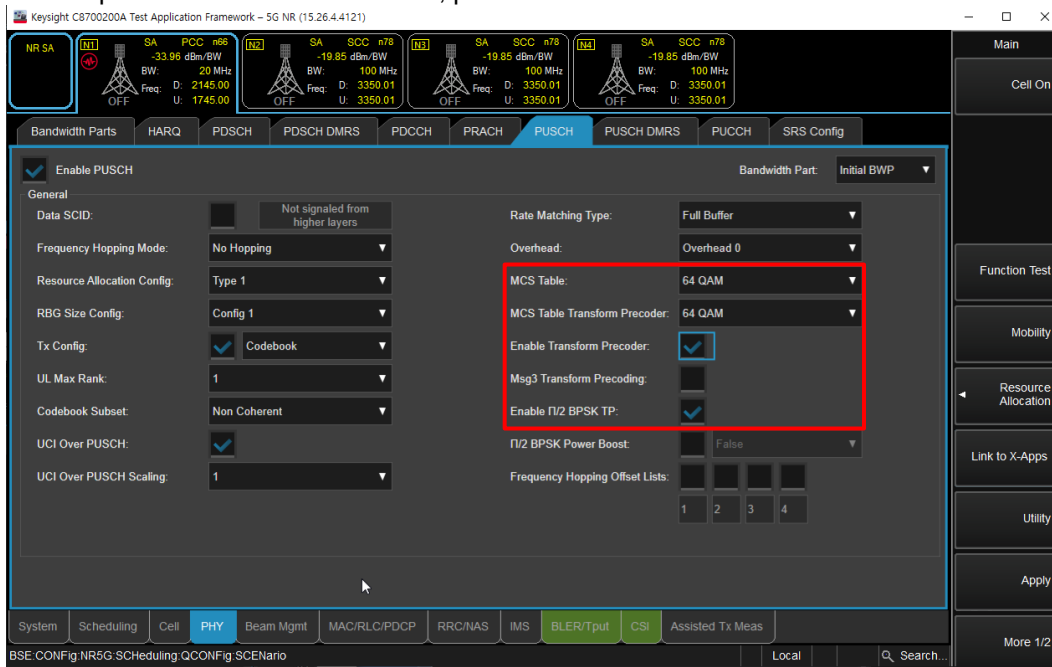
(Figure 3-1)

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



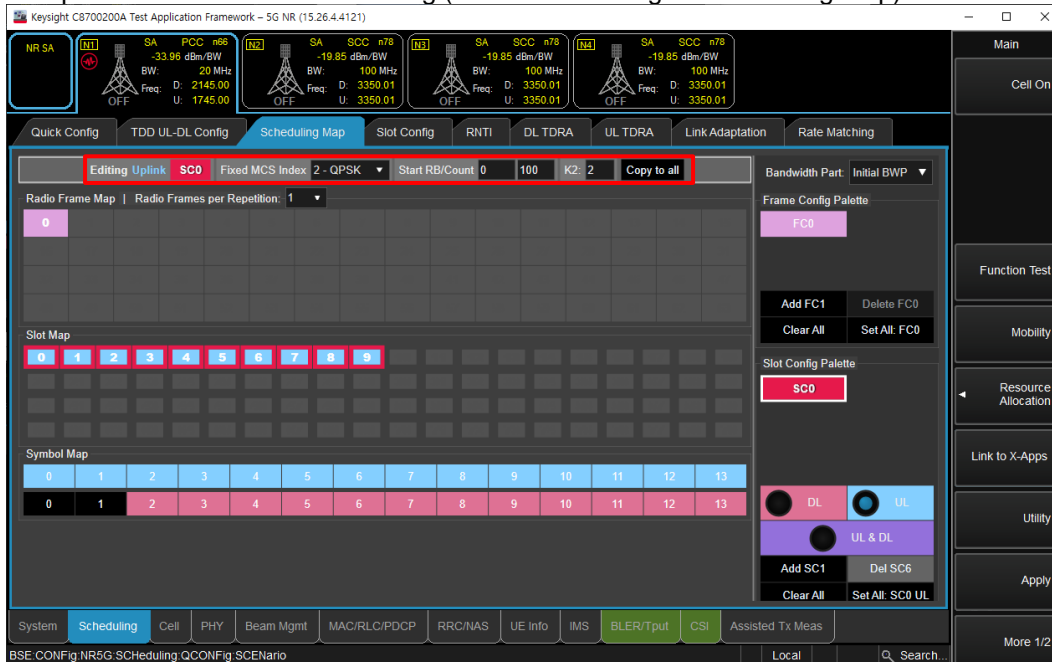
(Figure 3-2)

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



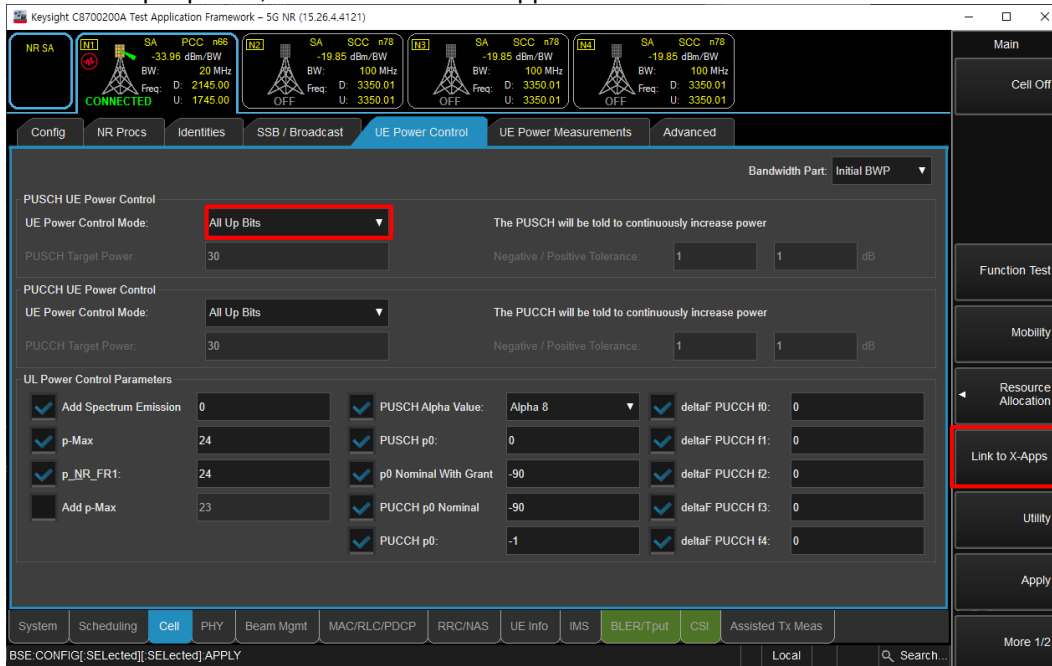
(Figure 3-3)

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



(Figure 3-4)

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



(Figure 3-5)

- Select “Channel Power”



(Figure 3-6)

NR Band n5 (Ant A & Ant.A+B) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)				
					DSI=0,1,2,3				
					Measured Pwr (dBm)			MPR	Tune-up Limit
					166800	167300	167800		
834.00 MHz	836.50 MHz	839.00 MHz							
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.23		0.0	25.0
			1	52		24.06		0.0	25.0
			1	104		24.00		0.0	25.0
			50	0		23.04		1.0	24.0
			50	28		24.03		0.0	25.0
			50	56		23.02		0.0	25.0
			100	0		23.12		1.0	24.0
		QPSK	1	1		24.25		0.0	25.0
			1	52		24.07		0.0	25.0
			1	104		23.94		0.0	25.0
			50	0		23.04		1.0	24.0
			50	28		24.05		0.0	25.0
			50	56		22.95		0.0	25.0
			100	0		23.10		1.0	24.0
	16QAM	1	1		23.00		1.0	24.0	
1		52		22.94		1.0	24.0		
1		104		22.85		1.0	24.0		
64QAM	1	1		21.81		2.5	22.5		
256QAM	1	1		19.11		4.5	20.5		
	CP-OFDM	QPSK	1	1		22.71		1.5	23.5
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					166300	167300	168300		
					831.50 MHz	836.50 MHz	841.50 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1		24.45		0.0	25.0
			1	39		24.29		0.0	25.0
			1	77		24.26		0.0	25.0
			36	0		23.36		1.0	24.0
			36	21		24.24		0.0	25.0
			36	43		24.24		0.0	25.0
			75	0		23.33		1.0	24.0
			QPSK	1	1		24.43		0.0
		1		39		24.21		0.0	25.0
		1		77		24.27		0.0	25.0
		36		0		23.37		1.0	24.0
		36		21		24.26		0.0	25.0
		36		43		23.19		0.0	25.0
		75		0		23.30		1.0	24.0
		16QAM		1	1		23.32		1.0
			1	39		23.17		1.0	24.0
			1	77		23.19		1.0	24.0
		64QAM	1	1		22.10		2.5	22.5
	256QAM	1	1		19.36		4.5	20.5	
	CP-OFDM	QPSK	1	1		23.00		1.5	23.5

NR Band n5 (Ant A & Ant.A+B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					165800	167300	168800		
					829.00 MHz	836.50 MHz	844.00 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.42		24.44	0.0	25.0
			1	25	24.48		24.50	0.0	25.0
			1	50	24.21		24.18	0.0	25.0
			25	0	23.35		23.25	1.0	24.0
			25	13	23.40		24.36	0.0	25.0
			25	27	24.26		24.31	0.0	25.0
		QPSK	50	0	23.23		23.28	1.0	24.0
			1	1	24.50		24.37	0.0	25.0
			1	25	24.40		24.36	0.0	25.0
			1	50	24.22		24.26	0.0	25.0
			25	0	23.37		23.41	1.0	24.0
			25	13	24.26		24.35	0.0	25.0
		16QAM	25	27	24.26		24.23	0.0	25.0
			50	0	23.33		23.27	1.0	24.0
			1	1	23.24		23.21	1.0	24.0
		64QAM	1	25	23.29		23.28	1.0	24.0
	1		50	23.09		23.10	1.0	24.0	
256QAM	1	1	22.14		22.07	2.5	22.5		
256QAM	1	1	19.36		19.31	4.5	20.5		
CP-OFDM	QPSK	1	1	23.01		23.03	1.5	23.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit
					165300	167300	169300		
					826.50 MHz	836.50 MHz	846.50 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.47	24.27	24.15	0.0	25.0
			1	12	24.37	24.27	24.15	0.0	25.0
			1	23	24.28	24.23	24.23	0.0	25.0
			12	0	23.34	23.27	23.19	1.0	24.0
			12	6	24.32	24.21	24.19	0.0	25.0
			12	13	23.32	23.18	23.17	0.0	25.0
		QPSK	25	0	23.34	23.23	23.27	1.0	24.0
			1	1	24.40	24.28	24.19	0.0	25.0
			1	12	24.40	24.24	24.27	0.0	25.0
			1	23	24.32	24.21	24.20	0.0	25.0
			12	0	23.33	23.25	23.13	1.0	24.0
			12	6	24.34	24.23	24.24	0.0	25.0
		16QAM	12	13	23.29	23.18	23.23	0.0	25.0
			25	0	23.31	23.24	23.23	1.0	24.0
			1	1	23.28	23.22	23.12	1.0	24.0
		64QAM	1	12	23.21	23.08	23.08	1.0	24.0
	1		23	23.23	23.08	23.11	1.0	24.0	
256QAM	1	1	22.08	21.94	21.85	2.5	22.5		
256QAM	1	1	19.42	19.30	19.21	4.5	20.5		
CP-OFDM	QPSK	1	1	23.03	22.83	22.85	1.5	23.5	

NR Band n66 (Ant B) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)				
					DSI=0,1					DSI=2,3				
					Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					346000	349000	352000			346000	349000	352000		
	1730.00 MHz	1745.00 MHz	1760.00 MHz		1730.00 MHz	1745.00 MHz	1760.00 MHz							
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1		19.34		0.0	20.0		24.25		0.0	25.0
			1	107		19.26		0.0	20.0		24.42		0.0	25.0
			1	214		19.16		0.0	20.0		24.09		0.0	25.0
			108	0		19.34		0.0	20.0		23.37		1.0	24.0
			108	54		19.27		0.0	20.0		24.37		0.0	25.0
			108	108		19.14		0.0	20.0		23.26		1.0	24.0
		216	0		19.26		0.0	20.0		23.37		1.0	24.0	
		QPSK	1	1		19.29		0.0	20.0		24.42		0.0	25.0
			1	107		19.13		0.0	20.0		24.31		0.0	25.0
			1	214		19.14		0.0	20.0		24.26		0.0	25.0
			108	0		19.20		0.0	20.0		23.35		1.0	24.0
			108	54		19.32		0.0	20.0		24.43		0.0	25.0
	108		108		19.11		0.0	20.0		23.25		1.0	24.0	
	16QAM	216	0		19.28		0.0	20.0		23.36		1.0	24.0	
		1	1		19.25		0.0	20.0		23.24		1.0	24.0	
		1	107		19.23		0.0	20.0		23.22		1.0	24.0	
64QAM	1	214		19.11		0.0	20.0		23.18		1.0	24.0		
	1	1		19.42		0.0	20.0		21.88		2.5	22.5		
256QAM	1	1		18.76		0.0	20.0		19.30		4.5	20.5		
CP-OFDM	QPSK	1	1		19.53		0.0	20.0		22.78		1.5	23.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					Measured Pwr (dBm)				
					345500	349000	352500	MPR	Tune-up Limit	345500	349000	352500	MPR	Tune-up Limit
					1727.50 MHz	1745.00 MHz	1762.50 MHz			1727.50 MHz	1745.00 MHz	1762.50 MHz		
35 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.33		19.37	0.0	20.0	24.43		24.44	0.0	25.0
			1	93	19.23		19.27	0.0	20.0	24.37		24.37	0.0	25.0
			1	186	19.18		19.17	0.0	20.0	24.29		24.25	0.0	25.0
			90	0	19.31		19.32	0.0	20.0	23.35		23.36	1.0	24.0
			90	49	19.32		19.27	0.0	20.0	24.39		24.39	0.0	25.0
			90	98	19.21		19.19	0.0	20.0	23.21		23.32	1.0	24.0
		180	0	19.35		19.31	0.0	20.0	23.40		23.42	1.0	24.0	
		QPSK	1	1	19.33		19.29	0.0	20.0	24.35		24.31	0.0	25.0
			1	93	19.32		19.20	0.0	20.0	24.30		24.29	0.0	25.0
			1	186	19.20		19.08	0.0	20.0	24.27		24.21	0.0	25.0
			90	0	19.25		19.25	0.0	20.0	23.40		23.39	1.0	24.0
			90	49	19.25		19.31	0.0	20.0	24.31		24.31	0.0	25.0
	90		98	19.23		19.14	0.0	20.0	23.32		23.28	1.0	24.0	
	180	0	19.31		19.29	0.0	20.0	23.42		23.43	1.0	24.0		
	16QAM	1	1	19.23		19.30	0.0	20.0	23.32		23.32	1.0	24.0	
		1	93	19.17		19.22	0.0	20.0	23.25		23.25	1.0	24.0	
1		186	19.16		19.17	0.0	20.0	23.22		23.23	1.0	24.0		
64QAM	1	1	19.34		19.41	0.0	20.0	21.97		21.89	2.5	22.5		
256QAM	1	1	18.69		18.74	0.0	20.0	19.38		19.37	4.5	20.5		
CP-OFDM	QPSK	1	1	19.55		19.53	0.0	20.0	22.81		22.81	1.5	23.5	

NR Band n66 (Ant B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					345000	349000	353000			345000	349000	353000		
					1725.00 MHz	1745.00 MHz	1765.00 MHz			1725.00 MHz	1745.00 MHz	1765.00 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.38		19.23	0.0	20.0	23.43		23.53	0.0	25.0
			1	79	19.46		19.24	0.0	20.0	23.33		24.41	0.0	25.0
			1	158	19.40		19.19	0.0	20.0	24.36		24.38	0.0	25.0
			80	0	19.37		19.23	0.0	20.0	23.43		23.37	1.0	24.0
			80	40	19.38		19.30	0.0	20.0	24.38		24.37	0.0	25.0
			80	80	19.28		19.25	0.0	20.0	23.34		23.39	1.0	24.0
		QPSK	160	0	19.30		19.29	0.0	20.0	23.48		23.44	1.0	24.0
			1	1	19.53		19.30	0.0	20.0	24.49		24.45	0.0	25.0
			1	79	19.44		19.31	0.0	20.0	24.43		24.33	0.0	25.0
			1	158	19.36		19.27	0.0	20.0	24.38		24.33	0.0	25.0
			80	0	19.36		19.30	0.0	20.0	23.43		23.43	1.0	24.0
			80	40	19.43		19.35	0.0	20.0	23.51		24.46	0.0	25.0
		16QAM	80	80	19.25		19.32	0.0	20.0	23.45		23.41	1.0	24.0
			160	0	19.30		19.36	0.0	20.0	23.41		23.47	1.0	24.0
1	1		19.41		19.26	0.0	20.0	23.39		23.32	1.0	24.0		
64QAM	1	79	19.39		19.23	0.0	20.0	23.35		23.29	1.0	24.0		
	1	158	19.33		19.26	0.0	20.0	23.36		23.32	1.0	24.0		
256QAM	1	1	18.90		18.77	0.0	20.0	19.30		19.38	4.5	20.5		
CP-OFDM	QPSK	1	1	19.58		19.49	0.0	20.0	22.95		22.82	1.5	23.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					344500	349000	353500			344500	349000	353500		
					1722.50 MHz	1745.00 MHz	1767.50 MHz			1722.50 MHz	1745.00 MHz	1767.50 MHz		
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.26		19.08	0.0	20.0	24.20		23.35	0.0	25.0
			1	66	19.21		18.96	0.0	20.0	23.95		24.42	0.0	25.0
			1	131	19.16		18.94	0.0	20.0	24.23		24.37	0.0	25.0
			64	0	19.14		18.85	0.0	20.0	22.99		23.30	1.0	24.0
			64	34	19.24		18.82	0.0	20.0	23.89		24.33	0.0	25.0
			64	69	19.12		18.82	0.0	20.0	23.05		23.18	1.0	24.0
		QPSK	128	0	19.10		18.87	0.0	20.0	23.02		23.41	1.0	24.0
			1	1	19.32		19.08	0.0	20.0	24.16		24.50	0.0	25.0
			1	66	19.29		18.97	0.0	20.0	23.89		24.43	0.0	25.0
			1	131	19.09		18.91	0.0	20.0	24.18		24.35	0.0	25.0
			64	0	19.11		18.93	0.0	20.0	22.96		23.34	1.0	24.0
			64	34	19.21		18.85	0.0	20.0	23.86		24.43	0.0	25.0
		16QAM	64	69	19.15		18.83	0.0	20.0	23.17		23.32	1.0	24.0
			128	0	19.05		18.89	0.0	20.0	22.92		23.38	1.0	24.0
1	1		19.21		19.03	0.0	20.0	23.07		23.33	1.0	24.0		
64QAM	1	66	19.12		18.92	0.0	20.0	22.86		23.28	1.0	24.0		
	1	131	19.08		18.80	0.0	20.0	23.02		23.25	1.0	24.0		
256QAM	1	1	18.83		19.11	0.0	20.0	19.24		19.24	4.5	20.5		
CP-OFDM	QPSK	1	1	19.45		19.23	0.0	20.0	22.78		22.87	1.5	23.5	

NR Band n66 (Ant B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					344000	349000	354000			344000	349000	354000		
					1720.00 MHz	1745.00 MHz	1770.00 MHz			1720.00 MHz	1745.00 MHz	1770.00 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.03	19.02	18.90	0.0	20.0	24.43	24.10	23.97	0.0	25.0
			1	52	19.15	18.93	18.89	0.0	20.0	24.46	24.10	24.01	0.0	25.0
			1	104	19.05	19.03	18.79	0.0	20.0	24.30	24.02	23.88	0.0	25.0
			50	0	19.06	18.93	18.78	0.0	20.0	23.11	23.05	22.91	1.0	24.0
			50	28	19.09	18.91	18.76	0.0	20.0	23.35	24.11	24.00	0.0	25.0
			50	56	19.02	18.88	18.76	0.0	20.0	23.01	22.96	22.87	1.0	24.0
		QPSK	100	0	19.11	18.92	18.86	0.0	20.0	23.35	23.12	23.02	1.0	24.0
			1	1	19.05	18.95	18.87	0.0	20.0	24.43	24.14	24.01	0.0	25.0
			1	52	19.14	18.92	18.90	0.0	20.0	24.34	24.12	23.98	0.0	25.0
			1	104	19.05	18.92	18.79	0.0	20.0	24.35	24.06	23.89	0.0	25.0
			50	0	19.01	18.97	18.80	0.0	20.0	23.34	23.11	22.94	1.0	24.0
			50	28	19.12	18.88	18.76	0.0	20.0	24.36	24.10	23.98	0.0	25.0
		16QAM	50	56	19.03	18.89	18.77	0.0	20.0	23.02	23.04	22.89	1.0	24.0
			100	0	19.13	18.96	18.86	0.0	20.0	23.37	23.14	23.02	1.0	24.0
			1	1	19.01	18.92	18.81	0.0	20.0	23.32	22.96	22.84	1.0	24.0
		64QAM	1	52	19.03	18.92	18.76	0.0	20.0	23.36	22.97	22.82	1.0	24.0
1	104		18.94	18.87	18.67	0.0	20.0	23.28	22.88	22.76	1.0	24.0		
256QAM	1	1	18.53	18.40	18.30	0.0	20.0	19.29	18.99	18.86	4.5	20.5		
CP-OFDM	QPSK	1	1	19.29	19.19	18.96	0.0	20.0	22.80	22.73	22.54	1.5	23.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					343500	349000	354500			343500	349000	354500		
					1717.50 MHz	1745.00 MHz	1772.50 MHz			1717.50 MHz	1745.00 MHz	1772.50 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.25	19.43	19.29	0.0	20.0	24.35	24.23	24.20	0.0	25.0
			1	39	19.28	19.08	19.30	0.0	20.0	24.08	24.02	24.13	0.0	25.0
			1	77	19.17	19.21	19.23	0.0	20.0	24.36	24.11	24.06	0.0	25.0
			36	0	19.19	19.12	19.25	0.0	20.0	23.01	23.07	23.04	1.0	24.0
			36	21	19.27	19.17	19.30	0.0	20.0	23.97	23.99	24.14	0.0	25.0
			36	43	19.17	19.09	19.29	0.0	20.0	23.14	23.09	23.03	1.0	24.0
		QPSK	75	0	19.21	19.15	19.26	0.0	20.0	22.95	23.03	23.04	1.0	24.0
			1	1	19.42	19.36	19.37	0.0	20.0	24.26	24.18	24.23	0.0	25.0
			1	39	19.31	19.19	19.26	0.0	20.0	24.01	24.03	24.10	0.0	25.0
			1	77	19.25	19.22	19.22	0.0	20.0	24.17	24.14	24.07	0.0	25.0
			36	0	19.28	19.17	19.24	0.0	20.0	22.99	23.02	23.06	1.0	24.0
			36	21	19.40	19.23	19.29	0.0	20.0	23.94	24.04	24.12	0.0	25.0
		16QAM	36	43	19.20	19.08	19.28	0.0	20.0	23.11	23.08	23.03	1.0	24.0
			75	0	19.24	19.14	19.27	0.0	20.0	23.11	23.13	23.03	1.0	24.0
			1	1	19.32	19.19	19.26	0.0	20.0	23.33	23.22	23.08	1.0	24.0
		64QAM	1	39	19.24	19.22	19.30	0.0	20.0	23.02	23.15	23.06	1.0	24.0
1	77		19.28	19.10	19.31	0.0	20.0	23.25	23.21	22.95	1.0	24.0		
256QAM	1	1	18.69	18.71	18.78	0.0	20.0	19.35	19.32	19.12	4.5	20.5		
CP-OFDM	QPSK	1	1	19.48	19.50	19.51	0.0	20.0	22.97	22.96	22.86	1.5	23.5	

NR Band n66 (Ant B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					343000	349000	355000			343000	349000	355000		
					1715.00 MHz	1745.00 MHz	1775.00 MHz			1715.00 MHz	1745.00 MHz	1775.00 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.03	19.05	18.98	0.0	20.0	24.15	24.16	24.02	0.0	25.0
			1	25	19.18	19.05	18.92	0.0	20.0	23.97	24.21	24.04	0.0	25.0
			1	50	19.12	19.00	18.85	0.0	20.0	23.94	24.12	23.97	0.0	25.0
			25	0	19.05	18.95	18.82	0.0	20.0	23.02	23.09	22.93	1.0	24.0
			25	13	19.18	19.06	18.94	0.0	20.0	24.04	24.12	24.01	0.0	25.0
			25	27	19.10	18.91	18.77	0.0	20.0	22.91	23.07	22.92	1.0	24.0
		QPSK	1	1	19.21	19.04	18.90	0.0	20.0	24.10	24.16	24.05	0.0	25.0
			1	25	19.22	19.04	18.91	0.0	20.0	24.14	24.16	24.06	0.0	25.0
			1	50	19.10	19.00	18.84	0.0	20.0	24.00	24.12	23.98	0.0	25.0
			25	0	19.08	18.94	18.83	0.0	20.0	23.02	23.09	22.99	1.0	24.0
			25	13	19.20	19.07	18.93	0.0	20.0	24.00	24.13	24.05	0.0	25.0
			25	27	19.07	18.93	18.80	0.0	20.0	23.01	23.06	22.91	1.0	24.0
		16QAM	1	1	19.10	18.92	18.85	0.0	20.0	23.00	22.98	22.88	1.0	24.0
			1	25	19.12	18.97	18.79	0.0	20.0	23.02	22.95	22.82	1.0	24.0
1	50		19.09	18.91	18.76	0.0	20.0	22.86	22.97	22.79	1.0	24.0		
64QAM	1	1	19.24	19.07	18.94	0.0	20.0	21.72	21.71	21.58	2.5	22.5		
256QAM	1	1	18.54	18.42	18.29	0.0	20.0	19.18	19.05	18.87	4.5	20.5		
CP-OFDM	QPSK	1	1	19.28	19.18	18.98	0.0	20.0	22.67	22.71	22.51	1.5	23.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					342500	349000	355500			342500	349000	355500		
					1712.50 MHz	1745.00 MHz	1777.50 MHz			1712.50 MHz	1745.00 MHz	1777.50 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.23	19.20	19.01	0.0	20.0	24.46	24.49	24.08	0.0	25.0
			1	12	19.20	19.32	19.08	0.0	20.0	24.44	24.49	24.21	0.0	25.0
			1	23	19.20	19.13	18.92	0.0	20.0	24.38	24.37	24.07	0.0	25.0
			12	0	19.23	19.19	18.99	0.0	20.0	23.35	23.41	23.08	1.0	24.0
			12	6	19.40	19.32	19.14	0.0	20.0	24.44	24.42	24.16	0.0	25.0
			12	13	19.29	19.18	19.02	0.0	20.0	23.21	23.19	23.06	1.0	24.0
		QPSK	25	0	19.29	19.22	18.95	0.0	20.0	23.37	23.34	23.06	1.0	24.0
			1	1	19.31	19.22	19.02	0.0	20.0	24.23	24.38	24.11	0.0	25.0
			1	12	19.32	19.31	19.09	0.0	20.0	24.46	24.40	24.17	0.0	25.0
			1	23	19.21	19.15	18.92	0.0	20.0	24.45	24.36	24.04	0.0	25.0
			12	0	19.25	19.20	19.01	0.0	20.0	23.19	23.33	23.05	1.0	24.0
			12	6	19.37	19.33	19.11	0.0	20.0	24.30	24.36	24.14	0.0	25.0
		16QAM	12	13	19.24	19.19	19.00	0.0	20.0	23.30	23.27	23.05	1.0	24.0
			25	0	19.27	19.22	18.97	0.0	20.0	23.18	23.42	23.08	1.0	24.0
			1	1	19.24	19.20	19.05	0.0	20.0	23.27	23.23	23.02	1.0	24.0
		64QAM	1	12	19.27	19.20	19.02	0.0	20.0	23.27	23.22	22.98	1.0	24.0
			1	23	19.24	19.17	18.94	0.0	20.0	23.25	23.32	22.95	1.0	24.0
		256QAM	1	1	19.38	19.28	19.12	0.0	20.0	21.94	21.97	21.69	2.5	22.5
CP-OFDM	QPSK	1	1	18.78	18.63	18.45	0.0	20.0	19.37	19.32	19.03	4.5	20.5	
CP-OFDM	QPSK	1	1	19.45	19.44	19.24	0.0	20.0	22.88	22.79	22.74	1.5	23.5	

NR Band n66 (Ant E) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)				
					DSI = 0, 1					DSI = 2, 3				
					Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					346000	349000	352000			346000	349000	352000		
1730.00 MHz	1745.00 MHz	1760.00 MHz	1730.00 MHz	1745.00 MHz	1760.00 MHz									
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1		19.87		0.0	21.0		21.40		0.0	22.5
			1	107		19.68		0.0	21.0		21.19		0.0	22.5
			1	214		19.66		0.0	21.0		21.29		0.0	22.5
			108	0		19.76		0.0	21.0		21.28		0.0	22.5
			108	54		19.73		0.0	21.0		21.35		0.0	22.5
			108	108		19.81		0.0	21.0		21.29		0.0	22.5
		216	0		19.83		0.0	21.0		21.31		0.0	22.5	
		QPSK	1	1		19.89		0.0	21.0		21.38		0.0	22.5
			1	107		19.63		0.0	21.0		21.23		0.0	22.5
			1	214		19.63		0.0	21.0		21.23		0.0	22.5
			108	0		19.83		0.0	21.0		21.34		0.0	22.5
			108	54		19.86		0.0	21.0		21.40		0.0	22.5
			108	108		19.74		0.0	21.0		21.28		0.0	22.5
		216	0		19.81		0.0	21.0		21.39		0.0	22.5	
		16QAM	1	1		20.02		0.0	21.0		21.31		0.0	22.5
			1	107		19.77		0.0	21.0		21.35		0.0	22.5
			1	214		19.80		0.0	21.0		21.31		0.0	22.5
		64QAM	1	1		19.78		0.0	21.0		21.21		0.0	22.5
256QAM	1	1		19.12		1.0	20.0		19.11		2.5	20.0		
CP-OFDM	QPSK	1	1		19.98		0.0	21.0		21.35		0.0	22.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)				
					DSI = 0, 1					DSI = 2, 3				
					Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					345500	349000	352500			345500	349000	352500		
1727.50 MHz	1745.00 MHz	1762.50 MHz	1727.50 MHz	1745.00 MHz	1762.50 MHz									
35 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.79		19.66	0.0	21.0	21.23		21.25	0.0	22.5
			1	93	19.90		19.66	0.0	21.0	21.41		21.35	0.0	22.5
			1	186	19.73		19.63	0.0	21.0	21.22		21.22	0.0	22.5
			90	0	19.86		19.65	0.0	21.0	21.47		21.28	0.0	22.5
			90	49	19.93		19.77	0.0	21.0	21.41		21.34	0.0	22.5
			90	98	19.77		19.83	0.0	21.0	21.25		21.25	0.0	22.5
		180	0	19.84		19.79	0.0	21.0	21.34		21.34	0.0	22.5	
		QPSK	1	1	19.77		19.69	0.0	21.0	21.27		21.14	0.0	22.5
			1	93	19.90		19.68	0.0	21.0	21.39		21.35	0.0	22.5
			1	186	19.69		19.66	0.0	21.0	21.25		21.16	0.0	22.5
			90	0	19.91		19.66	0.0	21.0	21.42		21.24	0.0	22.5
			90	49	19.96		19.76	0.0	21.0	21.44		21.39	0.0	22.5
			90	98	19.81		19.80	0.0	21.0	21.30		21.22	0.0	22.5
		180	0	19.81		19.78	0.0	21.0	21.37		21.31	0.0	22.5	
		16QAM	1	1	19.93		19.83	0.0	21.0	21.41		21.26	0.0	22.5
			1	93	19.95		19.77	0.0	21.0	21.41		21.35	0.0	22.5
			1	186	19.80		19.72	0.0	21.0	21.43		21.33	0.0	22.5
		64QAM	1	1	19.73		19.64	0.0	21.0	21.23		21.17	0.0	22.5
256QAM	1	1	19.16		19.11	1.0	20.0	19.17		19.00	2.5	20.0		
CP-OFDM	QPSK	1	1	19.98		19.97	0.0	21.0	21.45		21.26	0.0	22.5	

NR Band n66 (Ant E) 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
					345000	349000	353000			345000	349000	353000		
					1725.00 MHz	1745.00 MHz	1765.00 MHz			1725.00 MHz	1745.00 MHz	1765.00 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	20.00		19.83	0.0	21.0	21.49		21.29	0.0	22.5
			1	79	19.90		19.86	0.0	21.0	21.47		21.41	0.0	22.5
			1	158	19.80		19.79	0.0	21.0	21.33		21.35	0.0	22.5
			80	0	19.96		19.78	0.0	21.0	21.44		21.35	0.5	22.0
			80	40	19.96		19.84	0.0	21.0	21.49		21.39	0.0	22.5
			80	80	19.92		19.84	0.0	21.0	21.35		21.35	0.5	22.0
			160	0	19.80		19.78	0.0	21.0	21.38		21.25	0.5	22.0
		QPSK	1	1	19.91		19.71	0.0	21.0	21.47		21.31	0.0	22.5
			1	79	19.93		19.87	0.0	21.0	21.45		21.43	0.0	22.5
			1	158	19.85		19.83	0.0	21.0	21.36		21.40	0.0	22.5
			80	0	19.92		19.83	0.0	21.0	21.47		21.33	1.0	21.5
			80	40	19.99		19.94	0.0	21.0	21.54		21.35	0.0	22.5
			80	80	19.89		19.87	0.0	21.0	21.31		21.32	1.0	21.5
			160	0	19.89		19.86	0.0	21.0	21.43		21.31	1.0	21.5
		16QAM	1	1	19.96		19.85	0.0	21.0	21.49		21.39	1.0	21.5
			1	79	20.01		19.88	0.0	21.0	21.49		21.31	1.0	21.5
			1	158	19.95		19.95	0.0	21.0	21.38		21.45	1.0	21.5
64QAM	1	1	19.80		19.69	0.0	21.0	21.35		21.41	0.0	22.5		
256QAM	1	1	19.22		19.13	1.0	20.0	19.33		19.22	2.5	20.0		
CP-OFDM	QPSK	1	1	20.12		19.84	0.0	21.0	21.49		21.36	0.0	22.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					344500	349000	353500			344500	349000	353500		
					1722.50 MHz	1745.00 MHz	1767.50 MHz			1722.50 MHz	1745.00 MHz	1767.50 MHz		
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.98		19.88	0.0	21.0	21.51		21.31	0.0	22.5
			1	66	19.91		19.86	0.0	21.0	21.49		21.40	0.0	22.5
			1	131	19.89		19.76	0.0	21.0	21.41		21.29	0.0	22.5
			64	0	19.87		19.76	0.0	21.0	21.43		21.37	0.0	22.5
			64	34	19.90		19.94	0.0	21.0	21.43		21.45	0.0	22.5
			64	69	19.85		19.74	0.0	21.0	21.25		21.30	0.0	22.5
			128	0	19.80		19.89	0.0	21.0	21.41		21.37	0.0	22.5
		QPSK	1	1	19.89		19.83	0.0	21.0	21.54		21.32	0.0	22.5
			1	66	19.94		19.83	0.0	21.0	21.42		21.40	0.0	22.5
			1	131	19.84		19.81	0.0	21.0	21.32		21.31	0.0	22.5
			64	0	19.84		19.80	0.0	21.0	21.34		21.29	0.0	22.5
			64	34	19.88		19.91	0.0	21.0	21.50		21.41	0.0	22.5
			64	69	19.83		19.72	0.0	21.0	21.32		21.25	0.0	22.5
			128	0	19.82		19.86	0.0	21.0	21.34		21.24	0.0	22.5
		16QAM	1	1	19.96		19.95	0.0	21.0	21.46		21.41	0.0	22.5
			1	66	19.94		19.93	0.0	21.0	21.37		21.30	0.0	22.5
			1	131	19.97		19.78	0.0	21.0	21.36		21.39	0.0	22.5
64QAM	1	1	19.81		19.79	0.0	21.0	21.32		21.31	0.0	22.5		
256QAM	1	1	19.20		19.13	1.0	20.0	19.22		19.18	2.5	20.0		
CP-OFDM	QPSK	1	1	20.10		19.91	0.0	21.0	21.47		21.52	0.0	22.5	

NR Band n66 (Ant E) 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
					344000	349000	354000			344000	349000	354000		
					1720.00 MHz	1745.00 MHz	1770.00 MHz			1720.00 MHz	1745.00 MHz	1770.00 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.67	19.74	19.67	0.0	21.0	21.15	21.23	21.21	0.0	22.5
			1	52	19.66	19.71	19.71	0.0	21.0	21.28	21.32	21.28	0.0	22.5
			1	104	19.70	19.67	19.52	0.0	21.0	21.23	21.16	21.16	0.0	22.5
			50	0	19.74	19.70	19.68	0.0	21.0	21.26	21.26	21.28	0.0	22.5
			50	28	19.76	19.76	19.82	0.0	21.0	21.29	21.42	21.43	0.0	22.5
			50	56	19.64	19.77	19.67	0.0	21.0	21.24	21.35	21.23	0.0	22.5
			100	0	19.76	19.79	19.76	0.0	21.0	21.37	21.46	21.32	0.0	22.5
		QPSK	1	1	19.66	19.77	19.68	0.0	21.0	21.14	21.22	21.06	0.0	22.5
			1	52	19.73	19.67	19.72	0.0	21.0	21.27	21.32	21.21	0.0	22.5
			1	104	19.72	19.72	19.53	0.0	21.0	21.25	21.09	21.20	0.0	22.5
			50	0	19.67	19.74	19.74	0.0	21.0	21.20	21.32	21.22	0.0	22.5
			50	28	19.74	19.73	19.80	0.0	21.0	21.32	21.38	21.28	0.0	22.5
			50	56	19.68	19.73	19.65	0.0	21.0	21.31	21.20	21.17	0.0	22.5
			100	0	19.74	19.76	19.72	0.0	21.0	21.36	21.41	21.28	0.0	22.5
16QAM	1	1	19.72	19.79	19.65	0.0	21.0	21.17	21.26	21.27	0.0	22.5		
	1	52	19.79	19.80	19.74	0.0	21.0	21.33	21.34	21.19	0.0	22.5		
	1	104	19.75	19.69	19.65	0.0	21.0	21.26	21.27	21.28	0.0	22.5		
64QAM	1	1	19.59	19.66	19.51	0.0	21.0	21.06	21.17	21.16	0.0	22.5		
256QAM	1	1	19.04	19.11	18.98	1.0	20.0	18.94	19.04	19.01	2.5	20.0		
CP-OFDM	QPSK	1	1	19.76	19.96	19.69	0.0	21.0	21.16	21.28	21.23	0.0	22.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					343500	349000	354500			343500	349000	354500		
					1717.50 MHz	1745.00 MHz	1772.50 MHz			1717.50 MHz	1745.00 MHz	1772.50 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.88	19.82	19.77	0.0	21.0	21.44	21.38	21.27	0.0	22.5
			1	39	19.66	19.65	19.73	0.0	21.0	21.29	21.34	21.13	0.0	22.5
			1	77	19.72	19.79	19.70	0.0	21.0	21.35	21.18	21.21	0.0	22.5
			36	0	19.67	19.77	19.77	0.0	21.0	21.24	21.29	21.18	0.0	22.5
			36	21	19.78	19.86	19.84	0.0	21.0	21.41	21.47	21.34	0.0	22.5
			36	43	19.70	19.78	19.64	0.0	21.0	21.36	21.36	21.19	0.0	22.5
			75	0	19.72	19.80	19.73	0.0	21.0	21.24	21.31	21.21	0.0	22.5
		QPSK	1	1	19.86	19.85	19.65	0.0	21.0	21.33	21.35	21.35	0.0	22.5
			1	39	19.61	19.81	19.76	0.0	21.0	21.30	21.30	21.17	0.0	22.5
			1	77	19.67	19.75	19.65	0.0	21.0	21.38	21.30	21.25	0.0	22.5
			36	0	19.67	19.83	19.72	0.0	21.0	21.30	21.34	21.21	0.0	22.5
			36	21	19.84	19.82	19.82	0.0	21.0	21.45	21.53	21.39	0.0	22.5
			36	43	19.72	19.84	19.68	0.0	21.0	21.33	21.34	21.15	0.0	22.5
			75	0	19.71	19.78	19.74	0.0	21.0	21.30	21.29	21.16	0.0	22.5
16QAM	1	1	19.86	19.95	19.77	0.0	21.0	21.36	21.39	21.37	0.0	22.5		
	1	39	19.82	19.92	19.79	0.0	21.0	21.35	21.42	21.24	0.0	22.5		
	1	77	19.81	19.91	19.68	0.0	21.0	21.40	21.33	21.25	0.0	22.5		
64QAM	1	1	19.74	19.75	19.64	0.0	21.0	21.26	21.30	21.24	0.0	22.5		
256QAM	1	1	19.21	19.19	19.10	1.0	20.0	19.15	19.25	19.18	2.5	20.0		
CP-OFDM	QPSK	1	1	20.02	20.04	19.85	0.0	21.0	21.35	21.50	21.37	0.0	22.5	

NR Band n66 (Ant E) 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
					343000	349000	355000			343000	349000	355000		
					1715.00 MHz	1745.00 MHz	1775.00 MHz			1715.00 MHz	1745.00 MHz	1775.00 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.95	19.86	19.73	0.0	21.0	21.43	21.47	21.25	0.0	22.5
			1	25	19.94	19.81	19.84	0.0	21.0	21.55	21.41	21.34	0.0	22.5
			1	50	19.93	19.84	19.68	0.0	21.0	21.31	21.40	21.25	0.0	22.5
			25	0	19.90	19.88	19.82	0.0	21.0	21.43	21.38	21.27	0.0	22.5
			25	13	20.02	19.94	19.91	0.0	21.0	21.56	21.49	21.42	0.0	22.5
			25	27	19.97	19.89	19.69	0.0	21.0	21.55	21.41	21.32	0.0	22.5
			50	0	19.89	19.90	19.84	0.0	21.0	21.54	21.42	21.38	0.0	22.5
		QPSK	1	1	19.98	19.86	19.79	0.0	21.0	21.48	21.51	21.43	0.0	22.5
			1	25	19.96	19.84	19.87	0.0	21.0	21.55	21.46	21.41	0.0	22.5
			1	50	19.98	19.78	19.72	0.0	21.0	21.45	21.39	21.18	0.0	22.5
			25	0	19.94	19.85	19.79	0.0	21.0	21.50	21.36	21.43	0.0	22.5
			25	13	19.96	19.99	19.87	0.0	21.0	21.63	21.50	21.41	0.0	22.5
			25	27	19.93	19.93	19.77	0.0	21.0	21.48	21.43	21.41	0.0	22.5
			50	0	19.95	19.96	19.72	0.0	21.0	21.43	21.40	21.34	0.0	22.5
		16QAM	1	1	19.99	19.90	19.81	0.0	21.0	21.41	21.44	21.37	0.0	22.5
			1	25	20.15	20.06	19.89	0.0	21.0	21.27	21.30	21.28	0.0	22.5
			1	50	20.00	19.87	19.85	0.0	21.0	21.38	21.48	21.25	0.0	22.5
		64QAM	1	1	19.77	19.76	19.71	0.0	21.0	21.21	21.28	21.16	0.0	22.5
256QAM	1	1	19.23	19.22	19.10	1.0	20.0	19.21	19.25	19.14	2.5	20.0		
CP-OFDM	QPSK	1	1	20.13	19.98	19.94	0.0	21.0	21.34	21.57	21.32	0.0	22.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit
					342500	349000	355500			342500	349000	355500		
					1712.50 MHz	1745.00 MHz	1777.50 MHz			1712.50 MHz	1745.00 MHz	1777.50 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	20.05	19.77	19.80	0.0	21.0	21.48	21.52	21.31	0.0	22.5
			1	12	20.05	19.89	19.91	0.0	21.0	21.60	21.49	21.32	0.0	22.5
			1	23	20.00	19.75	19.73	0.0	21.0	21.36	21.40	21.24	0.0	22.5
			12	0	20.13	19.83	19.90	0.0	21.0	21.47	21.41	21.38	0.0	22.5
			12	6	20.17	20.00	19.99	0.0	21.0	21.61	21.43	21.45	0.0	22.5
			12	13	20.10	19.91	19.86	0.0	21.0	21.58	21.33	21.40	0.0	22.5
			25	0	20.08	19.84	19.82	0.0	21.0	21.57	21.49	21.31	0.0	22.5
		QPSK	1	1	20.04	19.73	19.78	0.0	21.0	21.37	21.60	21.28	0.0	22.5
			1	12	20.08	19.92	19.94	0.0	21.0	21.59	21.56	21.34	0.0	22.5
			1	23	19.89	19.81	19.77	0.0	21.0	21.47	21.49	21.27	0.0	22.5
			12	0	20.09	19.88	19.88	0.0	21.0	21.55	21.31	21.31	0.0	22.5
			12	6	20.11	19.99	19.97	0.0	21.0	21.66	21.36	21.47	0.0	22.5
			12	13	20.08	19.89	19.88	0.0	21.0	21.58	21.27	21.34	0.0	22.5
			25	0	20.10	19.83	19.91	0.0	21.0	21.60	21.28	21.34	0.0	22.5
		16QAM	1	1	20.24	19.89	19.92	0.0	21.0	21.63	21.37	21.39	0.0	22.5
			1	12	20.08	19.91	19.97	0.0	21.0	21.61	21.41	21.30	0.0	22.5
			1	23	20.11	19.99	19.89	0.0	21.0	21.65	21.36	21.24	0.0	22.5
		64QAM	1	1	19.93	19.73	19.72	0.0	21.0	21.48	21.27	21.18	0.0	22.5
256QAM	1	1	19.41	19.21	19.22	1.0	20.0	19.37	19.19	19.16	2.5	20.0		
CP-OFDM	QPSK	1	1	20.24	19.96	19.98	0.0	21.0	21.63	21.49	21.28	0.0	22.5	

NR Band n41 (Ant E) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)					Maximum Allowed Average Power (dBm)						
					DSI=0,1					DSI=2,3						
					Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit
					2592.99 MHz						2592.99 MHz					
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.63			0.0	20.0			22.75			0.0	23.0
			1	136	19.45			0.0	20.0			22.56			0.0	23.0
			1	271	19.71			0.0	20.0			22.79			0.0	23.0
			135	0	19.51			0.0	20.0			22.56			0.0	23.0
			135	69	19.55			0.0	20.0			22.59			0.0	23.0
			135	138	19.54			0.0	20.0			22.61			0.0	23.0
		270	0	19.57			0.0	20.0			22.57			0.0	23.0	
		QPSK	1	1	19.75			0.0	20.0			22.79			0.0	23.0
			1	136	19.40			0.0	20.0			22.58			0.0	23.0
			1	271	19.68			0.0	20.0			22.78			0.0	23.0
			135	0	19.53			0.0	20.0			22.58			0.0	23.0
			135	69	19.59			0.0	20.0			22.67			0.0	23.0
			135	138	19.57			0.0	20.0			22.66			0.0	23.0
		270	0	19.62			0.0	20.0			22.64			0.0	23.0	
		16QAM	1	1	19.82			0.0	20.0			22.80			0.0	23.0
			1	136	19.52			0.0	20.0			22.55			0.0	23.0
1	271		19.71			0.0	20.0			22.77			0.0	23.0		
64QAM	1	1	19.78			0.0	20.0			22.32			0.5	22.5		
256QAM	1	1	19.75			0.0	20.0			20.35			2.5	20.5		
CP-OFDM	QPSK	1	1	19.85			0.0	20.0			22.94			0.0	23.0	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					Measured Pwr (dBm)						
					518598				MPR	Tune-up Limit	518598				MPR	Tune-up Limit
					2541.00 MHz						2644.98 MHz					
					508200				MPR	Tune-up Limit	508200				MPR	Tune-up Limit
2541.00 MHz				2644.98 MHz												
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.78			19.54	0.0	20.0	22.69			22.74	0.0	23.0
			1	122	19.58			19.52	0.0	20.0	22.48			22.41	0.0	23.0
			1	243	19.51			19.69	0.0	20.0	22.49			22.39	0.0	23.0
			120	0	19.52			19.39	0.0	20.0	22.38			22.48	0.0	23.0
			120	62	19.55			19.54	0.0	20.0	22.44			22.52	0.0	23.0
			120	125	19.44			19.47	0.0	20.0	22.30			22.34	0.0	23.0
		243	0	19.49			19.60	0.0	20.0	22.38			22.47	0.0	23.0	
		QPSK	1	1	19.81			19.59	0.0	20.0	22.82			22.68	0.0	23.0
			1	122	19.59			19.57	0.0	20.0	22.61			22.64	0.0	23.0
			1	243	19.54			19.72	0.0	20.0	22.57			22.51	0.0	23.0
			120	0	19.57			19.41	0.0	20.0	22.67			22.55	0.0	23.0
			120	62	19.57			19.54	0.0	20.0	22.57			22.57	0.0	23.0
			120	125	19.43			19.47	0.0	20.0	22.63			22.59	0.0	23.0
		243	0	19.61			19.57	0.0	20.0	22.59			22.71	0.0	23.0	
		16QAM	1	1	19.62			19.57	0.0	20.0	22.73			22.68	0.0	23.0
			1	122	19.48			19.47	0.0	20.0	22.34			22.65	0.0	23.0
1	243		19.44			19.66	0.0	20.0	22.37			22.64	0.0	23.0		
64QAM	1	1	19.71			19.52	0.0	20.0	22.08			22.07	0.5	22.5		
256QAM	1	1	19.67			19.51	0.0	20.0	20.37			20.14	2.5	20.5		
CP-OFDM	QPSK	1	1	19.70			19.52	0.0	20.0	22.62			22.66	0.0	23.0	

Notes:

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

NR Band n41 (Ant E) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)				MPR	Tune-up Limit	Measured Pwr (dBm)				MPR	Tune-up Limit		
					507204			529998			507204			529998				
					2536.02 MHz			2649.99 MHz			2536.02 MHz			2649.99 MHz				
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.74				19.52	0.0	20.0	22.76				22.60	0.0	23.0
			1	108	19.49				19.51	0.0	20.0	22.55				22.40	0.0	23.0
			1	215	19.41				19.61	0.0	20.0	22.43				22.39	0.0	23.0
			108	0	19.57				19.41	0.0	20.0	22.49				22.43	0.0	23.0
			108	54	19.51				19.55	0.0	20.0	22.47				22.37	0.0	23.0
			108	109	19.49				19.46	0.0	20.0	22.33				22.26	0.0	23.0
		QPSK	216	0	19.53				19.58	0.0	20.0	22.31				22.38	0.0	23.0
			1	1	19.67				19.61	0.0	20.0	22.83				22.65	0.0	23.0
			1	108	19.53				19.41	0.0	20.0	22.62				22.51	0.0	23.0
			1	215	19.56				19.67	0.0	20.0	22.64				22.51	0.0	23.0
			108	0	19.62				19.45	0.0	20.0	22.62				22.58	0.0	23.0
			108	54	19.51				19.51	0.0	20.0	22.61				22.60	0.0	23.0
		16QAM	108	109	19.47				19.46	0.0	20.0	22.62				22.59	0.0	23.0
			216	0	19.61				19.56	0.0	20.0	22.69				22.68	0.0	23.0
			1	1	19.63				19.55	0.0	20.0	22.57				22.48	0.0	23.0
			1	108	19.53				19.45	0.0	20.0	22.51				22.46	0.0	23.0
		64QAM	1	215	19.47				19.54	0.0	20.0	22.49				22.41	0.0	23.0
1	1		19.59				19.48	0.0	20.0	21.82				21.98	0.5	22.5		
256QAM	1	1	19.62				19.47	0.0	20.0	20.23				20.09	2.5	20.5		
	CP-OFDM	QPSK	1	1	19.64				19.48	0.0	20.0	22.58				22.42	0.0	23.0
70 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.63				19.48	0.0	20.0	22.72				22.73	0.0	23.0
			1	94	19.53				19.47	0.0	20.0	22.58				22.59	0.0	23.0
			1	187	19.41				19.53	0.0	20.0	22.44				22.54	0.0	23.0
			90	0	19.58				19.44	0.0	20.0	22.36				22.43	0.0	23.0
			90	49	19.63				19.64	0.0	20.0	22.51				22.38	0.0	23.0
			90	99	19.51				19.58	0.0	20.0	22.35				22.33	0.0	23.0
		QPSK	180	0	19.54				19.47	0.0	20.0	22.43				22.47	0.0	23.0
			1	1	19.54				19.41	0.0	20.0	22.63				22.47	0.0	23.0
			1	94	19.57				19.54	0.0	20.0	22.58				22.58	0.0	23.0
			1	187	19.46				19.51	0.0	20.0	22.51				22.37	0.0	23.0
			90	0	19.61				19.43	0.0	20.0	22.67				22.54	0.0	23.0
			90	49	19.67				19.52	0.0	20.0	22.71				22.61	0.0	23.0
		16QAM	90	99	19.55				19.52	0.0	20.0	22.59				22.44	0.0	23.0
			180	0	19.62				19.53	0.0	20.0	22.67				22.59	0.0	23.0
			1	1	19.52				19.44	0.0	20.0	22.55				22.46	0.0	23.0
		64QAM	1	94	19.64				19.45	0.0	20.0	22.54				22.52	0.0	23.0
			1	187	19.47				19.46	0.0	20.0	22.47				22.56	0.0	23.0
256QAM	1	1	19.58				19.49	0.0	20.0	21.83				21.89	0.5	22.5		
	1	1	19.56				19.41	0.0	20.0	20.11				19.93	2.5	20.5		
CP-OFDM	QPSK	1	1	19.58				19.62	0.0	20.0	22.72				22.43	0.0	23.0	

Notes:

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

NR Band n41 (Ant E) 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			
					505200		518598				531996		505200				518598		531996
					2526.00 MHz		2592.99 MHz				2659.98 MHz		2526.00 MHz				2592.99 MHz		2659.98 MHz
60 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.64		19.38		19.46	0.0	20.0	22.69		22.68		22.67	0.0	23.0	
			1	80	19.42		19.31		19.35	0.0	20.0	22.43		22.40		22.54	0.0	23.0	
			1	160	19.39		19.52		19.45	0.0	20.0	22.35		22.51		22.38	0.0	23.0	
			81	0	19.51		19.35		19.41	0.0	20.0	22.49		22.53		22.39	0.0	23.0	
			81	40	19.53		19.39		19.47	0.0	20.0	22.37		22.48		22.41	0.0	23.0	
			81	81	19.45		19.27		19.37	0.0	20.0	22.39		22.27		22.26	0.0	23.0	
		162	0	19.54		19.41		19.44	0.0	20.0	22.44		22.33		22.35	0.0	23.0		
		QPSK	1	1	19.64		19.42		19.46	0.0	20.0	22.73		22.56		22.51	0.0	23.0	
			1	80	19.47		19.28		19.32	0.0	20.0	22.68		22.35		22.39	0.0	23.0	
			1	160	19.41		19.56		19.28	0.0	20.0	22.66		22.56		22.28	0.0	23.0	
			81	0	19.49		19.39		19.31	0.0	20.0	22.74		22.43		22.40	0.0	23.0	
			81	40	19.57		19.42		19.35	0.0	20.0	22.79		22.47		22.56	0.0	23.0	
			81	81	19.42		19.29		19.43	0.0	20.0	22.64		22.43		22.28	0.0	23.0	
		162	0	19.57		19.34		19.46	0.0	20.0	22.68		22.51		22.51	0.0	23.0		
		16QAM	1	1	19.53		19.33		19.34	0.0	20.0	22.37		22.42		22.33	0.0	23.0	
			1	80	19.44		19.28		19.47	0.0	20.0	22.39		22.45		22.35	0.0	23.0	
1	160		19.41		19.45		19.31	0.0	20.0	22.45		22.48		22.34	0.0	23.0			
64QAM	1	1	19.53		19.34		19.37	0.0	20.0	21.13		21.96		21.82	0.5	22.5			
256QAM	1	1	19.56		19.28		19.38	0.0	20.0	19.82		19.92		19.92	2.5	20.5			
CP-OFDM	QPSK	1	1	19.60		19.43		19.58	0.0	20.0	21.88		22.41		22.52	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			
					504204		518598				532998		504204				518598		532998
					2521.02 MHz		2592.99 MHz				2664.99 MHz		2521.02 MHz				2592.99 MHz		2664.99 MHz
50 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.81		19.89		19.80	0.0	20.0	22.75		22.64		22.68	0.0	23.0	
			1	66	19.67		19.65		19.63	0.0	20.0	22.50		22.49		22.48	0.0	23.0	
			1	131	19.64		19.62		19.56	0.0	20.0	22.43		22.43		22.35	0.0	23.0	
			64	0	19.73		19.76		19.66	0.0	20.0	22.37		22.38		22.46	0.0	23.0	
			64	34	19.79		19.81		19.73	0.0	20.0	22.40		22.46		22.37	0.0	23.0	
			64	69	19.72		19.67		19.69	0.0	20.0	22.27		22.28		22.29	0.0	23.0	
		128	0	19.73		19.76		19.66	0.0	20.0	22.45		22.34		22.42	0.0	23.0		
		QPSK	1	1	19.84		19.47		19.61	0.0	20.0	22.88		22.65		22.73	0.0	23.0	
			1	66	19.70		19.37		19.46	0.0	20.0	22.74		22.61		22.61	0.0	23.0	
			1	131	19.78		19.65		19.58	0.0	20.0	22.85		22.77		22.34	0.0	23.0	
			64	0	19.79		19.48		19.47	0.0	20.0	22.81		22.64		22.74	0.0	23.0	
			64	34	19.88		19.57		19.55	0.0	20.0	22.87		22.69		22.75	0.0	23.0	
			64	69	19.72		19.43		19.51	0.0	20.0	22.76		22.62		22.28	0.0	23.0	
		128	0	19.71		19.48		19.47	0.0	20.0	22.81		22.61		22.64	0.0	23.0		
		16QAM	1	1	19.86		19.82		19.78	0.0	20.0	22.57		22.38		22.46	0.0	23.0	
			1	66	19.71		19.71		19.60	0.0	20.0	22.46		22.34		22.35	0.0	23.0	
1	131		19.67		19.71		19.56	0.0	20.0	22.41		22.39		22.36	0.0	23.0			
64QAM	1	1	19.75		19.73		19.66	0.0	20.0	21.61		22.16		22.05	0.5	22.5			
256QAM	1	1	19.76		19.77		19.82	0.0	20.0	20.14		20.15		20.19	2.5	20.5			
CP-OFDM	QPSK	1	1	19.76		19.44		19.37	0.0	20.0	22.39		22.78		22.70	0.0	23.0		

Notes:

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

NR Band n41 (Ant E) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
					503202	513468		523734	534000			503202	513468		523734	534000		
					2516.01 MHz	2567.34 MHz		2618.67 MHz	2670.00 MHz			2516.01 MHz	2567.34 MHz		2618.67 MHz	2670.00 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.79	19.59		19.56	19.54	0.0	20.0	22.66	22.66		22.68	22.65	0.0	23.0
			1	52	19.58	19.34		19.23	19.31	0.0	20.0	22.53	22.52		22.44	22.40	0.0	23.0
			1	104	19.55	19.29		19.15	19.25	0.0	20.0	22.51	22.39		22.47	22.38	0.0	23.0
			50	0	19.67	19.49		19.35	19.44	0.0	20.0	22.52	22.58		22.58	22.62	0.0	23.0
			50	28	19.75	19.61		19.48	19.50	0.0	20.0	22.74	22.74		22.74	22.73	0.0	23.0
			50	56	19.72	19.44		19.26	19.32	0.0	20.0	22.70	22.68		22.71	22.68	0.0	23.0
		QPSK	100	0	19.74	19.57		19.49	19.38	0.0	20.0	22.62	22.70		22.73	22.65	0.0	23.0
			1	1	19.57	19.44		19.26	19.45	0.0	20.0	22.68	22.51		22.53	22.54	0.0	23.0
			1	52	19.51	19.35		19.41	19.42	0.0	20.0	22.63	22.47		22.54	22.47	0.0	23.0
			1	104	19.54	19.37		19.52	19.48	0.0	20.0	22.65	22.51		22.61	22.25	0.0	23.0
			50	0	19.57	19.38		19.35	19.40	0.0	20.0	22.63	22.52		22.49	22.55	0.0	23.0
			50	28	19.65	19.47		19.44	19.43	0.0	20.0	22.71	22.63		22.65	22.57	0.0	23.0
		16QAM	50	56	19.54	19.35		19.51	19.39	0.0	20.0	22.62	22.51		22.52	22.02	0.0	23.0
			100	0	19.65	19.47		19.53	19.43	0.0	20.0	22.75	22.63		22.57	21.96	0.0	23.0
			1	1	19.68	19.61		19.55	19.52	0.0	20.0	22.54	22.57		22.39	22.47	0.0	23.0
		64QAM	1	52	19.63	19.31		19.20	19.25	0.0	20.0	22.59	22.56		22.43	22.45	0.0	23.0
			1	104	19.59	19.38		19.27	19.18	0.0	20.0	22.49	22.53		22.42	22.51	0.0	23.0
		256QAM	1	1	19.53	19.46		19.42	19.32	0.0	20.0	21.64	21.95		21.89	21.99	0.5	22.5
CP-OFDM	QPSK	1	1	19.51	19.37		19.48	19.37	0.0	20.0	22.65	22.53		22.56	22.51	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
					502200	510402	518598	526800	534996			502200	510402	518598	526800	534996		
					2511.00 MHz	2552.01 MHz	2592.99 MHz	2634.00 MHz	2674.98 MHz			2511.00 MHz	2552.01 MHz	2592.99 MHz	2634.00 MHz	2674.98 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.75	19.60	19.67	19.64	19.65	0.0	20.0	22.61	22.68	22.73	22.72	22.64	0.0	23.0
			1	39	19.68	19.65	19.66	19.62	19.63	0.0	20.0	22.47	22.57	22.49	22.57	22.40	0.0	23.0
			1	76	19.71	19.57	19.57	19.58	19.65	0.0	20.0	22.50	22.46	22.43	22.50	22.45	0.0	23.0
			36	0	19.66	19.51	19.57	19.52	19.60	0.0	20.0	22.63	22.60	22.52	22.65	22.65	0.0	23.0
			36	21	19.58	19.43	19.56	19.52	19.48	0.0	20.0	22.74	22.60	22.71	22.69	22.60	0.0	23.0
			36	42	19.56	19.46	19.42	19.53	19.54	0.0	20.0	22.60	22.58	22.55	22.69	22.69	0.0	23.0
		QPSK	75	0	19.62	19.57	19.56	19.51	19.53	0.0	20.0	22.68	22.64	22.64	22.56	22.66	0.0	23.0
			1	1	19.78	19.68	19.52	19.53	19.53	0.0	20.0	22.75	22.72	22.67	22.74	22.68	0.0	23.0
			1	39	19.67	19.59	19.45	19.54	19.48	0.0	20.0	22.76	22.62	22.58	22.65	22.67	0.0	23.0
			1	76	19.71	19.51	19.58	19.52	19.47	0.0	20.0	22.73	22.71	22.69	22.72	22.27	0.0	23.0
			36	0	19.57	19.56	19.32	19.41	19.35	0.0	20.0	22.65	22.55	22.53	22.51	22.51	0.0	23.0
			36	21	19.52	19.57	19.37	19.53	19.41	0.0	20.0	22.75	22.62	22.58	22.67	22.55	0.0	23.0
		16QAM	36	42	19.63	19.52	19.33	19.44	19.40	0.0	20.0	22.58	22.53	22.49	22.57	21.81	0.0	23.0
			75	0	19.54	19.51	19.34	19.48	19.42	0.0	20.0	22.65	22.54	22.48	22.66	22.41	0.0	23.0
			1	1	19.48	19.46	19.51	19.45	19.52	0.0	20.0	22.48	22.47	22.39	22.47	22.43	0.0	23.0
		64QAM	1	39	19.61	19.57	19.66	19.53	19.53	0.0	20.0	22.51	22.49	22.49	22.55	22.51	0.0	23.0
			1	76	19.55	19.69	19.62	19.63	19.59	0.0	20.0	22.56	22.50	22.43	22.49	22.47	0.0	23.0
		256QAM	1	1	19.48	19.52	19.58	19.56	19.59	0.0	20.0	22.24	22.08	22.06	21.67	22.18	0.5	22.5
CP-OFDM	QPSK	1	1	19.45	19.56	19.51	19.43	19.56	0.0	20.0	20.11	20.19	20.07	20.15	20.14	2.5	20.5	
CP-OFDM	QPSK	1	1	19.51	19.59	19.49	19.61	19.51	0.0	20.0	22.54	22.65	22.59	22.43	22.65	0.0	23.0	

Notes:

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

NR Band n41 (Ant E) 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
					501702	510150	518598	527052	535500			501702	510150	518598	527052	535500		
					2508.51 MHz	2550.75 MHz	2592.99 MHz	2635.26 MHz	2677.50 MHz			2508.51 MHz	2550.75 MHz	2592.99 MHz	2635.26 MHz	2677.50 MHz		
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.71	19.77	19.68	19.71	19.59	0.0	20.0	22.67	22.63	22.64	22.61	22.76	0.0	23.0
			1	32	19.59	19.66	19.67	19.57	19.57	0.0	20.0	22.50	22.50	22.51	22.40	22.55	0.0	23.0
			1	63	19.62	19.57	19.68	19.64	19.42	0.0	20.0	22.52	22.38	22.38	22.49	22.43	0.0	23.0
			32	0	19.65	19.64	19.58	19.68	19.49	0.0	20.0	22.60	22.62	22.53	22.58	22.53	0.0	23.0
			32	16	19.63	19.62	19.62	19.67	19.41	0.0	20.0	22.64	22.60	22.68	22.65	22.54	0.0	23.0
			32	33	19.67	19.70	19.73	19.63	19.45	0.0	20.0	22.62	22.69	22.61	22.62	22.56	0.0	23.0
		QPSK	64	0	19.61	19.69	19.57	19.62	19.38	0.0	20.0	22.66	22.72	22.58	22.57	22.61	0.0	23.0
			1	1	19.57	19.61	19.52	19.56	19.39	0.0	20.0	22.85	22.73	22.65	22.74	22.64	0.0	23.0
			1	32	19.59	19.57	19.42	19.57	19.53	0.0	20.0	22.73	22.64	22.59	22.64	22.65	0.0	23.0
			1	63	19.75	19.45	19.52	19.64	19.59	0.0	20.0	22.77	22.72	22.70	22.61	22.21	0.0	23.0
			32	0	19.56	19.45	19.35	19.48	19.31	0.0	20.0	22.67	22.56	22.49	22.49	22.37	0.0	23.0
			32	16	19.59	19.52	19.41	19.51	19.47	0.0	20.0	22.71	22.64	22.57	22.66	22.14	0.0	23.0
		16QAM	32	33	19.54	19.44	19.42	19.45	19.41	0.0	20.0	22.68	22.56	22.46	22.55	21.61	0.0	23.0
			64	0	19.57	19.49	19.33	19.45	19.38	0.0	20.0	22.68	22.53	22.48	22.59	22.23	0.0	23.0
			1	1	19.55	19.58	19.63	19.59	19.60	0.0	20.0	22.47	22.41	22.47	22.43	22.43	0.0	23.0
		256QAM	1	32	19.53	19.56	19.66	19.52	19.70	0.0	20.0	22.56	22.56	22.53	22.48	22.54	0.0	23.0
1	63		19.66	19.66	19.62	19.59	19.64	0.0	20.0	22.44	22.47	22.46	22.53	22.56	0.0	23.0		
64QAM	1	1	19.71	19.59	19.61	19.66	19.67	0.0	20.0	21.57	22.17	22.03	21.55	21.96	0.5	22.5		
256QAM	1	1	19.59	19.62	19.72	19.60	19.70	0.0	20.0	20.11	20.19	20.04	20.07	20.16	2.5	20.5		
CP-OFDM	QPSK	1	1	19.73	19.52	19.43	19.53	19.43	0.0	20.0	22.37	22.65	22.63	22.34	22.58	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
					501204	509904	518598	527298	535998			501204	509904	518598	527298	535998		
					2506.02 MHz	2549.52 MHz	2592.99 MHz	2636.49 MHz	2679.99 MHz			2506.02 MHz	2549.52 MHz	2592.99 MHz	2636.49 MHz	2679.99 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.82	19.67	19.66	19.68	19.79	0.0	20.0	22.62	22.73	22.65	22.75	22.77	0.0	23.0
			1	25	19.75	19.65	19.61	19.59	19.59	0.0	20.0	22.47	22.45	22.53	22.46	22.44	0.0	23.0
			1	49	19.72	19.70	19.61	19.58	19.66	0.0	20.0	22.40	22.53	22.37	22.52	22.51	0.0	23.0
			25	0	19.69	19.66	19.65	19.61	19.55	0.0	20.0	22.51	22.56	22.62	22.57	22.52	0.0	23.0
			25	13	19.73	19.63	19.64	19.66	19.71	0.0	20.0	22.64	22.59	22.64	22.74	22.60	0.0	23.0
			25	26	19.75	19.71	19.69	19.73	19.70	0.0	20.0	22.56	22.63	22.58	22.55	22.61	0.0	23.0
		QPSK	50	0	19.66	19.51	19.58	19.52	19.51	0.0	20.0	22.62	22.69	22.61	22.68	22.56	0.0	23.0
			1	1	19.63	19.55	19.21	19.38	19.44	0.0	20.0	22.95	22.77	22.51	22.47	22.57	0.0	23.0
			1	25	19.65	19.53	19.43	19.43	19.48	0.0	20.0	22.81	22.66	22.57	22.53	22.59	0.0	23.0
			1	49	19.65	19.45	19.44	19.28	19.41	0.0	20.0	22.86	22.70	22.47	22.52	22.24	0.0	23.0
			25	0	19.58	19.47	19.27	19.30	19.33	0.0	20.0	22.63	22.59	22.37	22.41	22.42	0.0	23.0
			25	13	19.63	19.50	19.41	19.37	19.43	0.0	20.0	22.76	22.62	22.49	22.48	22.55	0.0	23.0
		16QAM	25	26	19.57	19.45	19.28	19.37	19.28	0.0	20.0	22.81	22.66	22.47	22.38	21.62	0.0	23.0
			50	0	19.54	19.57	19.35	19.39	19.42	0.0	20.0	22.67	22.56	22.51	22.49	22.56	0.0	23.0
			1	1	19.53	19.63	19.66	19.71	19.65	0.0	20.0	22.44	22.47	22.47	22.44	22.36	0.0	23.0
		64QAM	1	25	19.54	19.64	19.68	19.58	19.63	0.0	20.0	22.55	22.53	22.49	22.54	22.57	0.0	23.0
1	49		19.62	19.55	19.55	19.58	19.59	0.0	20.0	22.47	22.45	22.55	22.43	22.43	0.0	23.0		
256QAM	1	1	19.57	19.58	19.35	19.46	19.42	0.0	20.0	21.64	22.19	21.92	21.94	21.71	0.5	22.5		
256QAM	1	1	19.52	19.57	19.43	19.44	19.36	0.0	20.0	20.32	20.21	19.91	19.85	19.89	2.5	20.5		
CP-OFDM	QPSK	1	1	19.55	19.52	19.22	19.42	19.39	0.0	20.0	22.27	22.78	22.54	22.44	22.43	0.0	23.0	

Notes:

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

NR Band n41 (Ant E) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
					500700	509652	518598	527550	536496			500700	509652	518598	527550	536496		
					2503.50 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz			2503.50 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.67	19.63	19.64	19.60	19.57	0.0	20.0	22.71	22.68	22.76	22.70	22.61	0.0	23.0
			1	18	19.63	19.53	19.57	19.56	19.53	0.0	20.0	22.48	22.56	22.44	22.51	22.52	0.0	23.0
			1	36	19.66	19.64	19.50	19.51	19.58	0.0	20.0	22.56	22.48	22.47	22.55	22.47	0.0	23.0
			18	0	19.57	19.42	19.49	19.42	19.50	0.0	20.0	22.53	22.58	22.62	22.63	22.50	0.0	23.0
			18	10	19.53	19.37	19.40	19.40	19.37	0.0	20.0	22.57	22.74	22.66	22.59	22.67	0.0	23.0
			18	20	19.56	19.50	19.54	19.45	19.40	0.0	20.0	22.56	22.56	22.65	22.59	22.69	0.0	23.0
		QPSK	36	0	19.59	19.55	19.57	19.56	19.57	0.0	20.0	22.70	22.57	22.57	22.62	22.73	0.0	23.0
			1	1	19.63	19.61	19.40	19.41	19.42	0.0	20.0	22.77	22.67	22.54	22.53	22.60	0.0	23.0
			1	18	19.65	19.55	19.43	19.39	19.56	0.0	20.0	22.76	22.75	22.55	22.54	22.55	0.0	23.0
			1	36	19.61	19.56	19.55	19.36	19.51	0.0	20.0	22.81	22.71	22.55	22.62	22.18	0.0	23.0
			18	0	19.52	19.44	19.27	19.28	19.36	0.0	20.0	22.63	22.61	22.44	22.47	22.21	0.0	23.0
			18	10	19.71	19.53	19.49	19.38	19.51	0.0	20.0	22.82	22.63	22.64	22.58	22.44	0.0	23.0
		16QAM	18	20	19.52	19.43	19.33	19.31	19.31	0.0	20.0	22.64	22.63	22.43	22.39	21.49	0.0	23.0
			36	0	19.52	19.41	19.29	19.26	19.34	0.0	20.0	22.63	22.57	22.42	22.42	22.47	0.0	23.0
			1	1	19.57	19.66	19.64	19.65	19.58	0.0	20.0	22.42	22.41	22.47	22.43	22.51	0.0	23.0
		64QAM	1	18	19.49	19.58	19.48	19.56	19.49	0.0	20.0	22.48	22.51	22.58	22.52	22.56	0.0	23.0
			1	36	19.45	19.50	19.59	19.57	19.60	0.0	20.0	22.43	22.47	22.53	22.46	22.49	0.0	23.0
		256QAM	1	1	19.55	19.51	19.42	19.45	19.45	0.0	20.0	21.64	22.11	21.99	21.69	21.68	0.5	22.5
256QAM	1	1	19.54	19.46	19.38	19.45	19.43	0.0	20.0	20.13	20.21	20.04	20.01	20.03	2.5	20.5		
CP-OFDM	QPSK	1	1	19.59	19.58	19.45	19.37	19.48	0.0	20.0	22.71	22.78	22.58	22.47	22.31	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
					500202	509400	518598	527802	537000			500202	509400	518598	527802	537000		
					2501.01 MHz	2547.00 MHz	2592.99 MHz	2639.01 MHz	2685.00 MHz			2501.01 MHz	2547.00 MHz	2592.99 MHz	2639.01 MHz	2685.00 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	19.75	19.72	19.68	19.90	19.86	0.0	20.0	22.86	22.77	22.83	22.81	22.67	0.0	23.0
			1	12	19.72	19.72	19.79	19.85	19.81	0.0	20.0	22.87	22.73	22.76	22.75	22.09	0.0	23.0
			1	22	19.77	19.81	19.81	19.87	19.83	0.0	20.0	22.88	22.64	22.83	22.78	21.71	0.0	23.0
			12	0	19.66	19.67	19.60	19.77	19.75	0.0	20.0	22.70	22.59	22.66	22.68	21.93	0.0	23.0
			12	6	19.74	19.73	19.67	19.81	19.79	0.0	20.0	22.87	22.63	22.77	22.75	22.10	0.0	23.0
			12	12	19.66	19.64	19.68	19.75	19.71	0.0	20.0	22.77	22.58	22.69	22.68	21.46	0.0	23.0
		QPSK	24	0	19.64	19.58	19.53	19.73	19.67	0.0	20.0	22.68	22.46	22.65	22.62	21.64	0.0	23.0
			1	1	19.87	19.64	19.72	19.87	19.71	0.0	20.0	22.90	22.81	22.72	22.87	21.73	0.0	23.0
			1	12	19.71	19.77	19.68	19.84	19.73	0.0	20.0	22.86	22.79	22.70	22.79	21.32	0.0	23.0
			1	22	19.77	19.76	19.71	19.88	19.78	0.0	20.0	22.94	22.82	22.83	22.81	20.96	0.0	23.0
			12	0	19.60	19.61	19.62	19.74	19.64	0.0	20.0	22.50	22.63	22.66	22.36	20.76	0.0	23.0
			12	6	19.59	19.81	19.56	19.81	19.77	0.0	20.0	22.86	22.77	22.74	22.75	21.40	0.0	23.0
		16QAM	12	12	19.65	19.62	19.62	19.69	19.72	0.0	20.0	22.74	22.74	22.45	22.47	20.53	0.0	23.0
			24	0	19.64	19.62	19.59	19.70	19.66	0.0	20.0	22.43	22.68	22.45	22.38	20.58	0.0	23.0
			1	1	19.70	19.68	19.65	19.77	19.74	0.0	20.0	22.55	22.65	22.66	22.31	21.26	0.0	23.0
		64QAM	1	12	19.76	19.63	19.60	19.70	19.67	0.0	20.0	22.73	22.68	22.64	22.43	20.80	0.0	23.0
			1	22	19.68	19.71	19.67	19.78	19.67	0.0	20.0	22.76	22.76	22.56	22.44	20.53	0.0	23.0
		256QAM	1	1	19.72	19.76	19.69	19.79	19.71	0.0	20.0	21.36	22.15	21.81	21.08	20.04	0.5	22.5
256QAM	1	1	19.71	19.65	19.65	19.65	18.89	0.0	20.0	19.83	20.12	20.22	19.78	18.58	2.5	20.5		
CP-OFDM	QPSK	1	1	19.75	19.89	19.77	19.88	19.85	0.0	20.0	22.11	22.73	22.45	21.89	20.69	0.0	23.0	

Notes:

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

NR Band n41 (Ant B) Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Maximum Allowed Average Power (dBm)						Maximum Allowed Average Power (dBm)						Maximum Allowed Average Power (dBm)								
					DSI=0						DSI=1						DSI=2,3								
					Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit	Measured Pwr (dBm)			MPR	Tune-up Limit						
					518598	2592.99 MHz				518598	2592.99 MHz				518598	2592.99 MHz									
100 MHz	DFT-s-OFDM	π/2 BPSK	1	1			17.31			0.0	17.5			18.79			0.0	19.0			24.74			0.0	25.0
			1	136			16.99			0.0	17.5			18.56			0.0	19.0			24.54			0.0	25.0
			1	271			17.14			0.0	17.5			18.72			0.0	19.0			24.78			0.0	25.0
			136	0			17.12			0.0	17.5			18.70			0.0	19.0			24.20			0.5	24.5
			136	69			17.04			0.0	17.5			18.54			0.0	19.0			24.55			0.0	25.0
			136	138			17.05			0.0	17.5			18.61			0.0	19.0			24.10			0.5	24.5
			270	0			17.05			0.0	17.5			18.55			0.0	19.0			24.14			0.5	24.5
		1	1			17.26			0.0	17.5			18.78			0.0	19.0			24.76			0.0	25.0	
		1	136			17.02			0.0	17.5			18.52			0.0	19.0			24.57			0.0	25.0	
		1	271			17.19			0.0	17.5			18.67			0.0	19.0			24.21			0.0	25.0	
		135	0			17.06			0.0	17.5			18.47			0.0	19.0			23.75			1.0	24.0	
		135	69			17.07			0.0	17.5			18.51			0.0	19.0			24.56			0.0	25.0	
		135	138			17.05			0.0	17.5			18.49			0.0	19.0			23.64			1.0	24.0	
		270	0			17.09			0.0	17.5			18.61			0.0	19.0			23.61			1.0	24.0	
		16QAM	1	1			17.29			0.0	17.5			18.78			0.0	19.0			23.75			1.0	24.0
		16QAM	1	136			16.99			0.0	17.5			18.56			0.0	19.0			23.61			1.0	24.0
		16QAM	1	271			17.18			0.0	17.5			18.70			0.0	19.0			23.49			1.0	24.0
		64QAM	1	1			17.26			0.0	17.5			18.76			0.0	19.0			22.34			2.5	22.5
		256QAM	1	1			17.32			0.0	17.5			18.79			0.0	19.0			20.31			4.5	20.5
		CP-OFDM	QPSK	1	1			17.43			0.0	17.5			18.90			0.0	19.0			23.35			1.5
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)						Measured Pwr (dBm)						Measured Pwr (dBm)								
					508200			MPR	Tune-up Limit	508200			MPR	Tune-up Limit	508200			MPR	Tune-up Limit						
					2541.00 MHz		528996			2541.00 MHz		528996			2541.00 MHz		528996								
					2541.00 MHz		2644.98 MHz	2541.00 MHz		2644.98 MHz	2541.00 MHz		2644.98 MHz												
90 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.31			17.17	0.0	17.5	18.87			18.58	0.0	19.0	24.59			24.54	0.0	25.0			
			1	122	17.21			17.12	0.0	17.5	18.59			18.62	0.0	19.0	24.48			24.14	0.0	25.0			
			1	243	17.24			17.35	0.0	17.5	18.73			18.72	0.0	19.0	24.71			24.64	0.0	25.0			
			120	0	17.15			17.02	0.0	17.5	18.65			18.53	0.0	19.0	24.10			23.93	0.5	24.5			
			120	62	17.16			17.16	0.0	17.5	18.68			18.65	0.0	19.0	24.46			24.31	0.0	25.0			
			120	125	17.08			17.08	0.0	17.5	18.52			18.54	0.0	19.0	24.09			23.87	0.5	24.5			
			243	0	17.18			17.16	0.0	17.5	18.67			18.57	0.0	19.0	24.12			23.89	0.5	24.5			
		1	1	17.35			17.14	0.0	17.5	18.78			18.57	0.0	19.0	24.69			24.48	0.0	25.0				
		1	122	17.21			17.15	0.0	17.5	18.74			18.56	0.0	19.0	24.46			24.38	0.0	25.0				
		1	243	17.19			17.32	0.0	17.5	18.68			18.65	0.0	19.0	24.10			24.10	0.0	25.0				
		120	0	17.09			16.99	0.0	17.5	18.69			18.55	0.0	19.0	23.72			23.47	1.0	24.0				
		120	62	17.15			17.16	0.0	17.5	18.64			18.67	0.0	19.0	24.38			24.30	0.0	25.0				
		120	125	17.06			17.03	0.0	17.5	18.60			18.60	0.0	19.0	23.55			23.43	1.0	24.0				
		243	0	17.17			17.06	0.0	17.5	18.65			18.68	0.0	19.0	23.42			23.36	1.0	24.0				
		16QAM	1	1			17.33			16.86	0.0	17.5	18.79			18.33	0.0	19.0	23.63			23.47	1.0	24.0	
		16QAM	1	122			17.16			17.05	0.0	17.5	18.69			18.49	0.0	19.0	23.46			23.42	1.0	24.0	
		16QAM	1	243			17.07			17.25	0.0	17.5	18.63			18.69	0.0	19.0	23.29			23.33	1.0	24.0	
		64QAM	1	1			17.16			16.98	0.0	17.5	18.74			18.61	0.0	19.0	22.16			22.20	2.5	22.5	
		256QAM	1	1			17.36			17.08	0.0	17.5	18.75			18.62	0.0	19.0	20.16			20.06	4.5	20.5	
		CP-OFDM	QPSK	1	1			17.17			17.16	0.0	17.5	18.75			18.61	0.0	19.0	23.17			23.21	1.5	23.5

Notes:

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

NR Band n41 (Ant B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit								
					507204		529998		MPR			507204		529998		MPR			507204		529998					
					2536.02 MHz	2649.99 MHz	2536.02 MHz	2649.99 MHz				2536.02 MHz	2649.99 MHz	2536.02 MHz	2649.99 MHz				2536.02 MHz	2649.99 MHz						
80 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.23				17.15	0.0	17.5	18.69				18.64	0.0	19.0	24.43				24.26	0.0	25.0	
			1	108	17.11				17.05	0.0	17.5	18.62				18.54	0.0	19.0	24.28				24.21	0.0	25.0	
			1	215	17.21				17.21	0.0	17.5	18.68				18.57	0.0	19.0	24.65				23.61	0.0	25.0	
			108	0	17.13				17.07	0.0	17.5	18.55				18.51	0.0	19.0	24.05				23.29	0.5	24.5	
			108	54	17.14				17.06	0.0	17.5	18.68				18.62	0.0	19.0	24.48				22.72	0.0	25.0	
			108	109	17.08				17.13	0.0	17.5	18.64				18.51	0.0	19.0	24.04				23.35	0.5	24.5	
		216	0	17.23				17.19	0.0	17.5	18.71				18.49	0.0	19.0	23.98				22.50	0.5	24.5		
		QPSK	1	1	17.04				17.15	0.0	17.5	18.74				18.61	0.0	19.0	24.61				23.50	0.0	25.0	
			1	108	17.10				17.05	0.0	17.5	18.62				18.47	0.0	19.0	24.53				23.56	0.0	25.0	
			1	215	17.04				17.22	0.0	17.5	18.59				18.60	0.0	19.0	24.04				23.90	0.0	25.0	
			108	0	17.16				17.03	0.0	17.5	18.61				18.51	0.0	19.0	23.63				22.68	1.0	24.0	
			108	54	17.28				17.09	0.0	17.5	18.71				18.56	0.0	19.0	24.36				22.92	0.0	25.0	
			108	109	17.12				17.08	0.0	17.5	18.61				18.51	0.0	19.0	23.56				22.91	1.0	24.0	
		16QAM	1	1	17.21				17.03	0.0	17.5	18.76				18.53	0.0	19.0	23.72				23.31	1.0	24.0	
			1	108	17.19				17.09	0.0	17.5	18.63				18.47	0.0	19.0	23.46				23.37	1.0	24.0	
			1	215	17.11				17.22	0.0	17.5	18.56				18.65	0.0	19.0	23.37				23.12	1.0	24.0	
		64QAM	1	1	17.26				17.17	0.0	17.5	18.63				18.47	0.0	19.0	22.31				21.97	2.5	22.5	
		256QAM	1	1	17.22				17.10	0.0	17.5	18.72				18.32	0.0	19.0	20.16				20.21	4.5	20.5	
		CP-OFDM	QPSK	1	1	17.33				17.10	0.0	17.5	18.67				18.55	0.0	19.0	23.22				23.13	1.5	23.5
		70 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.06				17.03	0.0	17.5	18.63				18.46	0.0	19.0	24.56				24.41	0.0
1	94				17.14				17.05	0.0	17.5	18.58				18.57	0.0	19.0	24.48				24.38	0.0	25.0	
1	187				17.05				17.17	0.0	17.5	18.52				18.57	0.0	19.0	24.64				24.41	0.0	25.0	
90	0				17.11				17.02	0.0	17.5	18.66				18.58	0.0	19.0	23.97				23.82	0.5	24.5	
90	49				17.28				17.17	0.0	17.5	18.65				18.59	0.0	19.0	24.45				24.34	0.0	25.0	
90	99				17.16				17.11	0.0	17.5	18.64				18.56	0.0	19.0	23.83				23.73	0.5	24.5	
180	0			17.15				17.09	0.0	17.5	18.74				18.54	0.0	19.0	24.04				23.91	0.5	24.5		
QPSK	1			1	17.14				17.02	0.0	17.5	18.62				18.51	0.0	19.0	24.56				24.45	0.0	25.0	
	1			94	17.15				17.06	0.0	17.5	18.59				18.53	0.0	19.0	24.35				24.26	0.0	25.0	
	1			187	17.13				17.12	0.0	17.5	18.60				18.59	0.0	19.0	24.06				23.91	0.0	25.0	
	90			0	17.10				17.05	0.0	17.5	18.68				18.52	0.0	19.0	23.63				23.52	1.0	24.0	
	90			49	17.26				17.13	0.0	17.5	18.61				18.58	0.0	19.0	24.32				24.21	0.0	25.0	
	90			99	17.18				17.11	0.0	17.5	18.65				18.52	0.0	19.0	23.36				23.25	1.0	24.0	
180	0			17.20				17.09	0.0	17.5	18.59				18.53	0.0	19.0	23.42				23.27	1.0	24.0		
16QAM	1			1	17.17				17.11	0.0	17.5	18.42				18.52	0.0	19.0	23.49				23.37	1.0	24.0	
	1			94	17.11				17.10	0.0	17.5	18.58				18.61	0.0	19.0	23.52				23.40	1.0	24.0	
	1			187	17.08				17.19	0.0	17.5	18.58				18.62	0.0	19.0	23.27				23.15	1.0	24.0	
64QAM	1			1	17.20				17.03	0.0	17.5	18.63				18.55	0.0	19.0	22.07				21.95	2.5	22.5	
256QAM	1			1	17.12				17.11	0.0	17.5	18.61				18.51	0.0	19.0	20.06				19.94	4.5	20.5	
CP-OFDM	QPSK			1	1	17.06				17.02	0.0	17.5	18.72				18.54	0.0	19.0	23.21				23.06	1.5	23.5

Notes:

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

NR Band n41 (Ant B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	
					505200		518598		531996			505200		518598		531996			
					2526.00 MHz	2592.99 MHz	2659.98 MHz	2526.00 MHz	2592.99 MHz			2659.98 MHz	2526.00 MHz	2592.99 MHz	2659.98 MHz				
60 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.25	17.03	17.05	0.0	17.5	18.62	18.42	18.43	0.0	19.0	24.22	24.02	24.03	0.0	25.0
			1	80	17.22	16.81	16.91	0.0	17.5	18.53	18.36	18.45	0.0	19.0	24.13	23.96	24.05	0.0	25.0
			1	160	17.31	17.04	17.14	0.0	17.5	18.52	18.44	18.57	0.0	19.0	24.12	24.04	24.17	0.0	25.0
			81	0	17.24	16.91	16.98	0.0	17.5	18.46	18.32	18.42	0.0	19.0	24.06	23.92	24.02	0.5	24.5
			81	40	17.31	16.97	16.90	0.0	17.5	18.53	18.35	18.52	0.0	19.0	24.13	23.95	24.12	0.0	25.0
			81	81	17.14	16.90	16.99	0.0	17.5	18.51	18.34	18.47	0.0	19.0	24.11	23.94	24.07	0.5	24.5
		162	0	17.15	16.98	17.05	0.0	17.5	18.66	18.46	18.59	0.0	19.0	24.26	24.06	24.19	0.5	24.5	
		QPSK	1	1	17.24	16.95	17.07	0.0	17.5	18.64	18.51	18.53	0.0	19.0	24.24	24.11	24.13	0.0	25.0
			1	80	17.23	16.82	16.88	0.0	17.5	18.53	18.27	18.47	0.0	19.0	24.13	23.87	24.07	0.0	25.0
			1	160	17.22	17.05	17.18	0.0	17.5	18.57	18.53	18.62	0.0	19.0	24.17	24.13	24.22	0.0	25.0
			81	0	17.24	16.88	16.87	0.0	17.5	18.52	18.42	18.44	0.0	19.0	23.12	23.02	23.01	1.0	24.0
			81	40	17.17	16.91	16.90	0.0	17.5	18.62	18.46	18.43	0.0	19.0	24.22	24.06	24.03	0.0	25.0
			81	81	17.20	16.92	16.99	0.0	17.5	18.52	18.34	18.47	0.0	19.0	23.12	23.09	23.07	1.0	24.0
		162	0	17.17	16.95	17.04	0.0	17.5	18.63	18.41	18.62	0.0	19.0	23.23	23.01	22.98	1.0	24.0	
		16QAM	1	1	17.24	16.86	16.98	0.0	17.5	18.54	18.31	18.41	0.0	19.0	23.15	23.02	22.97	1.0	24.0
			1	80	17.20	16.82	16.85	0.0	17.5	18.53	18.33	18.43	0.0	19.0	23.12	23.08	22.99	1.0	24.0
			1	160	17.24	17.02	17.12	0.0	17.5	18.52	18.45	18.51	0.0	19.0	23.07	23.14	23.11	1.0	24.0
		64QAM	1	1	17.25	16.84	16.94	0.0	17.5	18.42	18.42	18.26	0.0	19.0	22.12	22.08	22.01	2.5	22.5
		256QAM	1	1	17.19	16.86	17.01	0.0	17.5	18.55	18.38	18.34	0.0	19.0	20.10	20.01	20.03	4.5	20.5
		CP-OFDM	QPSK	1	1	17.28	16.92	17.13	0.0	17.5	18.54	18.48	18.37	0.0	19.0	23.18	23.12	23.08	1.5
50 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.32	17.23	17.21	0.0	17.5	18.85	18.72	18.68	0.0	19.0	24.01	24.12	23.80	0.0	25.0
			1	66	17.24	17.05	17.13	0.0	17.5	18.79	18.57	18.62	0.0	19.0	23.93	23.84	23.72	0.0	25.0
			1	131	17.26	17.27	17.37	0.0	17.5	18.81	18.65	18.89	0.0	19.0	24.01	23.88	23.80	0.0	25.0
			64	0	17.35	17.18	17.24	0.0	17.5	18.77	18.67	18.71	0.0	19.0	24.04	23.74	23.83	0.5	24.5
			64	34	17.33	17.21	17.19	0.0	17.5	18.85	18.75	18.70	0.0	19.0	24.03	23.78	23.82	0.0	25.0
			64	69	17.29	17.11	17.25	0.0	17.5	18.77	18.59	18.67	0.0	19.0	24.09	23.83	23.88	0.5	24.5
			128	0	17.31	17.12	17.20	0.0	17.5	18.75	18.61	18.69	0.0	19.0	24.16	23.92	23.95	0.5	24.5
			1	1	17.35	17.21	17.02	0.0	17.5	18.85	18.78	18.75	0.0	19.0	24.05	23.90	23.84	0.0	25.0
		QPSK	1	66	17.25	17.14	17.13	0.0	17.5	18.77	18.54	18.61	0.0	19.0	23.83	23.82	23.62	0.0	25.0
			1	131	17.33	17.29	17.07	0.0	17.5	18.84	18.77	18.78	0.0	19.0	24.08	23.86	23.87	0.0	25.0
			64	0	17.26	17.08	17.27	0.0	17.5	18.75	18.63	18.68	0.0	19.0	22.86	22.51	22.65	1.0	24.0
			64	34	17.38	17.16	17.19	0.0	17.5	18.85	18.75	18.71	0.0	19.0	24.07	24.00	23.86	0.0	25.0
			64	69	17.28	17.16	17.23	0.0	17.5	18.80	18.62	18.70	0.0	19.0	22.97	23.01	22.76	1.0	24.0
			128	0	17.23	17.11	17.18	0.0	17.5	18.79	18.64	18.67	0.0	19.0	22.98	22.77	22.77	1.0	24.0
		16QAM	1	1	17.27	17.08	17.15	0.0	17.5	18.74	18.67	18.65	0.0	19.0	22.79	22.88	22.58	1.0	24.0
			1	66	17.31	17.06	17.12	0.0	17.5	18.73	18.56	18.72	0.0	19.0	22.77	22.88	22.57	1.0	24.0
			1	131	17.32	17.11	17.21	0.0	17.5	18.77	18.73	18.81	0.0	19.0	22.99	22.86	22.56	1.0	24.0
		64QAM	1	1	17.26	17.17	17.06	0.0	17.5	18.78	18.66	18.71	0.0	19.0	21.70	21.58	21.35	2.5	22.5
		256QAM	1	1	17.31	17.08	17.05	0.0	17.5	18.82	18.64	18.61	0.0	19.0	19.76	19.59	19.61	4.5	20.5
		CP-OFDM	QPSK	1	1	17.39	17.23	17.18	0.0	17.5	18.81	18.66	18.72	0.0	19.0	22.91	22.85	22.78	1.5

Notes:

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

NR Band n41 (Ant B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit							
					503202	513468	523734	534000				503202	513468	523734	534000										
					2516.01 MHz	2567.34 MHz	2618.67 MHz	2670.00 MHz				2516.01 MHz	2567.34 MHz	2618.67 MHz	2670.00 MHz										
40 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.21	17.03		16.99	17.02	0.0	17.5	18.71	18.62		18.52	18.57	0.0	19.0	24.07	24.16		24.10	23.94	0.0	25.0
			1	52	17.15	17.01		16.97	17.14	0.0	17.5	18.68	18.61		18.59	18.59	0.0	19.0	23.99	23.97		24.03	23.62	0.0	25.0
			1	104	17.17	17.06		17.06	17.18	0.0	17.5	18.71	18.52		18.71	18.75	0.0	19.0	24.07	24.06		24.14	23.79	0.0	25.0
			50	0	17.16	17.03		17.02	17.07	0.0	17.5	18.68	18.59		18.53	18.51	0.0	19.0	24.10	24.08		24.11	23.76	0.5	24.5
			50	28	17.25	17.08		17.07	17.19	0.0	17.5	18.78	18.68		18.61	18.65	0.0	19.0	24.09	24.17		23.97	23.77	0.0	25.0
			50	56	17.19	17.00		17.00	17.07	0.0	17.5	18.66	18.57		18.59	18.59	0.0	19.0	24.15	24.03		24.18	23.82	0.5	24.5
		100	0	17.33	17.14		17.18	17.13	0.0	17.5	18.81	18.65		18.55	18.74	0.0	19.0	24.22	23.91		24.18	23.88	0.5	24.5	
		QPSK	1	1	17.17	17.09		16.93	17.05	0.0	17.5	18.67	18.53		18.44	18.56	0.0	19.0	24.11	24.28		24.18	23.82	0.0	25.0
			1	52	17.18	17.01		17.06	17.04	0.0	17.5	18.67	18.56		18.58	18.52	0.0	19.0	23.89	23.98		24.02	23.78	0.0	25.0
			1	104	17.26	17.07		17.04	17.01	0.0	17.5	18.66	18.54		18.60	18.69	0.0	19.0	24.14	24.13		24.07	23.77	0.0	25.0
			50	0	17.11	17.03		16.99	16.99	0.0	17.5	18.65	18.61		18.53	18.47	0.0	19.0	22.92	22.90		22.70	22.76	1.0	24.0
			50	28	17.21	17.06		17.11	17.08	0.0	17.5	18.73	18.64		18.57	18.64	0.0	19.0	24.13	24.02		24.24	23.70	0.0	25.0
			50	56	17.22	16.95		17.04	17.04	0.0	17.5	18.67	18.53		18.60	18.53	0.0	19.0	23.03	23.02		23.01	22.83	1.0	24.0
		100	0	17.21	17.13		17.17	17.11	0.0	17.5	18.74	18.71		18.62	18.67	0.0	19.0	23.04	22.92		23.02	22.67	1.0	24.0	
		16QAM	1	1	17.08	17.03		16.98	16.97	0.0	17.5	18.65	18.53		18.44	18.49	0.0	19.0	22.85	23.12		23.04	22.86	1.0	24.0
			1	52	17.05	17.07		17.06	17.07	0.0	17.5	18.61	18.57		18.61	18.56	0.0	19.0	22.83	23.13		22.99	22.63	1.0	24.0
			1	104	17.03	16.98		17.04	17.11	0.0	17.5	18.62	18.49		18.52	18.55	0.0	19.0	23.05	23.13		23.11	22.72	1.0	24.0
		64QAM	1	1	17.08	17.05		16.87	16.95	0.0	17.5	18.61	18.47		18.46	18.44	0.0	19.0	21.76	22.00		21.66	21.51	2.5	22.5
256QAM	1	1	17.06	17.04		16.96	16.98	0.0	17.5	18.58	18.48		18.39	18.47	0.0	19.0	19.82	19.96		19.70	19.60	4.5	20.5		
CP-OFDM	QPSK	1	1	17.23	17.02		17.03	17.03	0.0	17.5	18.66	18.47		18.52	18.47	0.0	19.0	22.97	23.07		22.97	22.73	1.5	23.5	
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit							
					502200	510402	518598	526800	534996			502200	510402	518598	526800	534996									
					2511.00 MHz	2552.01 MHz	2592.99 MHz	2634.00 MHz	2674.98 MHz			2511.00 MHz	2552.01 MHz	2592.99 MHz	2634.00 MHz	2674.98 MHz									
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.33	17.22	17.48	17.15	17.22	0.0	17.5	18.83	18.52	18.66	18.54	18.77	0.0	19.0	24.22	24.25	24.18	24.23	24.17	0.0	25.0
			1	39	17.25	17.08	17.04	17.19	17.16	0.0	17.5	18.69	18.59	18.61	18.59	18.69	0.0	19.0	24.14	24.06	23.90	24.16	23.85	0.0	25.0
			1	76	17.39	17.16	16.68	17.19	17.22	0.0	17.5	18.75	18.68	18.63	18.61	18.75	0.0	19.0	24.22	24.15	23.94	24.27	24.02	0.0	25.0
			36	0	17.15	17.09	17.06	17.04	17.06	0.0	17.5	18.67	18.57	18.65	18.57	18.65	0.0	19.0	24.25	24.17	23.80	24.24	23.99	0.5	24.5
			36	21	17.16	17.18	16.86	17.03	17.12	0.0	17.5	18.76	18.61	18.73	18.61	18.63	0.0	19.0	24.24	24.26	23.84	24.10	24.00	0.0	25.0
			36	42	17.16	17.07	16.54	17.11	17.14	0.0	17.5	18.71	18.53	18.67	18.53	18.71	0.0	19.0	24.30	24.12	23.89	24.31	24.05	0.5	24.5
		75	0	17.17	17.09	16.76	17.05	17.04	0.0	17.5	18.65	18.56	18.74	18.53	18.62	0.0	19.0	24.37	24.00	23.98	24.31	24.11	0.5	24.5	
		QPSK	1	1	17.24	17.23	17.49	17.23	17.21	0.0	17.5	18.85	18.67	18.62	18.67	18.74	0.0	19.0	24.26	24.37	23.96	24.31	24.05	0.0	25.0
			1	39	17.27	17.24	16.76	17.16	17.22	0.0	17.5	18.77	18.61	18.52	18.58	18.71	0.0	19.0	24.04	24.07	23.88	24.15	24.01	0.0	25.0
			1	76	17.34	17.12	16.39	17.17	17.24	0.0	17.5	18.74	18.60	18.64	18.60	18.76	0.0	19.0	24.29	24.22	23.92	24.20	24.00	0.0	25.0
			36	0	17.12	17.08	16.80	17.05	17.07	0.0	17.5	18.62	18.53	18.47	18.53	18.61	0.0	19.0	23.07	22.99	22.57	22.83	22.99	1.0	24.0
			36	21	17.11	17.17	16.60	16.99	17.02	0.0	17.5	18.67	18.57	18.64	18.57	18.67	0.0	19.0	24.28	24.11	24.06	24.37	23.93	0.0	25.0
			36	42	17.23	17.05	16.22	17.07	17.16	0.0	17.5	18.71	18.60	18.55	18.60	18.73	0.0	19.0	23.18	23.11	23.07	23.14	23.06	1.0	24.0
		75	0	17.17	17.11	16.41	17.11	17.11	0.0	17.5	18.69	18.62	18.67	18.55	18.69	0.0	19.0	23.19	23.01	22.83	23.15	22.90	1.0	24.0	
		16QAM	1	1	17.23	17.12	17.46	17.09	17.15	0.0	17.5	18.71	18.64	18.49	18.64	18.71	0.0	19.0	23.00	23.21	22.94	23.17	23.09	1.0	24.0
			1	39	17.08	17.08	16.59	17.05	17.08	0.0	17.5	18.66	18.61	18.56	18.61	18.68	0.0	19.0	22.98	23.22	22.94	23.12	22.86	1.0	24.0
			1	76	17.15	17.11	16.01	17.17	17.13	0.0	17.5	18.71	18.52	18.55	18.52	18.71	0.0	19.0	23.20	23.22	22.92	23.24	22.95	1.0	24.0
		64QAM	1	1	17.26	17.13	17.28	17.07	17.15	0.0	17.5	18.74	18.55	18.44	18.55	18.72	0.0	19.0	21.91	22.09	21.64	21.79	21.74	2.5	22.5
256QAM	1	1	17.30	17.09	16.94	17.09	17.08	0.0	17.5	18.67	18.63	18.48	18.61	18.67	0.0	19.0	19.97	20.05	19.65	19.83	19.83	4.5	20.5		
CP-OFDM	QPSK	1	1	17.22	17.24	17.14	17.14	17.03	0.0	17.5	18.78	18.47	18.47	18.47	18.66	0.0	19.0	23.12	23.16	22.86	23.10	22.96	1.5	23.5	

Notes:

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NR Band n41 (Ant B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
					501702	510150	518598	527052	535500			501702	510150	518598	527052	535500			501702	510150	518598	527052	535500		
					2508.51 MHz	2550.75 MHz	2592.99 MHz	2635.26 MHz	2677.50 MHz			2508.51 MHz	2550.75 MHz	2592.99 MHz	2635.26 MHz	2677.50 MHz			2508.51 MHz	2550.75 MHz	2592.99 MHz	2635.26 MHz	2677.50 MHz		
25 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.25	17.23	17.06	17.05	17.12	0.0	17.5	18.88	18.76	18.54	18.68	18.68	0.0	19.0	24.27	24.16	24.36	24.24	24.25	0.0	25.0
			1	32	17.24	17.06	17.03	17.15	17.21	0.0	17.5	18.74	18.67	18.49	18.66	18.71	0.0	19.0	24.19	23.97	24.08	24.17	23.93	0.0	25.0
			1	63	17.31	17.12	17.15	17.05	17.29	0.0	17.5	18.78	18.58	18.58	18.69	18.73	0.0	19.0	24.27	24.06	24.12	24.28	24.10	0.0	25.0
			32	0	17.21	17.05	16.97	17.01	17.10	0.0	17.5	18.69	18.62	18.51	18.52	18.57	0.0	19.0	24.30	24.08	23.98	24.25	24.07	0.5	24.5
			32	16	17.24	17.10	17.03	17.06	17.03	0.0	17.5	18.71	18.61	18.52	18.67	18.59	0.0	19.0	24.29	24.17	24.02	24.11	24.08	0.0	25.0
			32	33	17.18	17.09	16.92	17.05	17.08	0.0	17.5	18.72	18.66	18.46	18.62	18.55	0.0	19.0	24.35	24.03	24.07	24.32	24.13	0.5	24.5
			64	0	17.16	17.08	16.98	17.08	17.11	0.0	17.5	18.70	18.66	18.55	18.55	18.51	0.0	19.0	24.42	23.91	24.16	24.32	24.19	0.5	24.5
		QPSK	1	1	17.26	17.27	17.05	17.15	17.21	0.0	17.5	18.81	18.82	18.60	18.73	18.72	0.0	19.0	24.31	24.28	24.14	24.32	24.13	0.0	25.0
			1	32	17.26	17.24	17.01	17.01	17.14	0.0	17.5	18.81	18.71	18.45	18.71	18.71	0.0	19.0	24.09	23.98	24.06	24.16	24.09	0.0	25.0
			1	63	17.34	17.13	17.06	17.12	17.29	0.0	17.5	18.77	18.72	18.64	18.63	18.65	0.0	19.0	24.34	24.13	24.10	24.21	24.08	0.0	25.0
			32	0	17.17	17.07	16.94	17.09	17.08	0.0	17.5	18.63	18.67	18.42	18.53	18.53	0.0	19.0	23.12	22.90	22.75	22.84	23.07	1.0	24.0
			32	16	17.13	17.09	16.98	17.11	17.02	0.0	17.5	18.75	18.61	18.48	18.55	18.56	0.0	19.0	24.33	24.02	24.24	24.38	24.01	0.0	25.0
			32	33	17.17	17.15	17.04	17.06	17.04	0.0	17.5	18.72	18.66	18.51	18.66	18.57	0.0	19.0	23.23	23.02	23.25	23.15	23.14	1.0	24.0
			64	0	17.16	17.15	16.94	17.07	17.10	0.0	17.5	18.68	18.70	18.44	18.56	18.58	0.0	19.0	23.24	22.92	23.01	23.16	22.98	1.0	24.0
		16QAM	1	1	16.89	17.14	17.08	17.12	17.03	0.0	17.5	18.73	18.61	18.52	18.54	18.54	0.0	19.0	23.05	23.12	23.12	23.18	23.17	1.0	24.0
			1	32	17.17	17.09	17.01	17.08	17.12	0.0	17.5	18.62	18.64	18.43	18.56	18.60	0.0	19.0	23.03	23.13	23.12	23.13	22.94	1.0	24.0
			1	63	17.24	17.11	17.04	17.14	17.10	0.0	17.5	18.74	18.69	18.52	18.64	18.62	0.0	19.0	23.25	23.13	23.10	23.25	23.03	1.0	24.0
		64QAM	1	1	17.34	17.13	17.01	17.02	17.07	0.0	17.5	18.71	18.64	18.55	18.64	18.64	0.0	19.0	21.96	22.00	21.82	21.80	21.82	2.5	22.5
		256QAM	1	1	17.27	17.18	17.08	17.09	17.12	0.0	17.5	18.76	18.73	18.51	18.61	18.63	0.0	19.0	20.02	19.96	19.83	19.84	19.91	4.5	20.5
		CP-OFDM	QPSK	1	1	17.41	17.23	17.12	17.13	17.13	0.0	17.5	18.72	18.65	18.57	18.68	18.66	0.0	19.0	23.17	23.07	23.04	23.11	23.04	1.5
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
					501204	509904	518598	527298	535998			501204	509904	518598	527298	535998			501204	509904	518598	527298	535998		
					2506.02 MHz	2549.52 MHz	2592.99 MHz	2636.49 MHz	2679.99 MHz			2506.02 MHz	2549.52 MHz	2592.99 MHz	2636.49 MHz	2679.99 MHz			2506.02 MHz	2549.52 MHz	2592.99 MHz	2636.49 MHz	2679.99 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.23	17.05	16.91	16.94	16.92	0.0	17.5	18.62	18.54	18.77	18.79	18.57	0.0	19.0	24.35	24.33	24.57	24.41	24.32	0.0	25.0
			1	25	17.18	17.10	17.02	16.99	17.05	0.0	17.5	18.61	18.59	18.61	18.74	18.49	0.0	19.0	24.27	24.14	24.29	24.34	24.00	0.0	25.0
			1	49	17.16	17.08	17.01	17.10	16.95	0.0	17.5	18.63	18.63	18.75	18.78	18.58	0.0	19.0	24.35	24.23	24.33	24.45	24.17	0.0	25.0
			25	0	17.06	16.97	16.88	16.98	16.95	0.0	17.5	18.67	18.57	18.65	18.69	18.51	0.0	19.0	24.38	24.25	24.19	24.42	24.14	0.5	24.5
			25	13	17.21	17.09	16.98	17.13	17.06	0.0	17.5	18.69	18.61	18.61	18.71	18.55	0.0	19.0	24.37	24.34	24.23	24.28	24.15	0.0	25.0
			25	26	17.15	17.02	16.88	16.95	16.99	0.0	17.5	18.67	18.53	18.71	18.72	18.46	0.0	19.0	24.43	24.20	24.28	24.49	24.20	0.5	24.5
			50	0	17.22	17.11	17.05	17.04	17.10	0.0	17.5	18.74	18.52	18.62	18.70	18.51	0.0	19.0	24.50	24.08	24.37	24.49	24.26	0.5	24.5
		QPSK	1	1	17.15	17.09	17.35	16.97	16.99	0.0	17.5	18.62	18.67	18.74	18.81	18.60	0.0	19.0	24.39	24.45	24.35	24.49	24.20	0.0	25.0
			1	25	17.16	17.10	17.18	17.17	17.09	0.0	17.5	18.52	18.60	18.71	18.74	18.45	0.0	19.0	24.17	24.15	24.27	24.33	24.16	0.0	25.0
			1	49	17.21	17.09	17.15	17.10	17.05	0.0	17.5	18.64	18.60	18.76	18.77	18.53	0.0	19.0	24.42	24.30	24.31	24.38	24.15	0.0	25.0
			25	0	17.10	17.05	17.18	16.95	17.03	0.0	17.5	18.47	18.53	18.61	18.63	18.49	0.0	19.0	23.20	23.07	22.96	23.01	23.14	1.0	24.0
			25	13	17.20	17.11	17.11	17.16	17.08	0.0	17.5	18.64	18.59	18.67	18.75	18.48	0.0	19.0	24.41	24.19	24.45	24.55	24.08	0.0	25.0
			25	26	17.10	17.02	17.02	17.00	17.01	0.0	17.5	18.55	18.60	18.73	18.72	18.51	0.0	19.0	23.31	23.19	23.46	23.32	23.21	1.0	24.0
			50	0	17.24	17.15	17.11	17.08	17.04	0.0	17.5	18.67	18.55	18.69	18.68	18.44	0.0	19.0	23.32	23.09	23.22	23.33	23.05	1.0	24.0
		16QAM	1	1	17.15	17.02	17.39	16.99	16.84	0.0	17.5	18.49	18.64	18.71	18.73	18.52	0.0	19.0	23.13	23.29	23.33	23.35	23.24	1.0	24.0
			1	25	17.19	17.01	17.26	17.05	16.95	0.0	17.5	18.56	18.59	18.68	18.62	18.43	0.0	19.0	23.11	23.30	23.33	23.30	23.01	1.0	24.0
			1	49	17.13	16.96	17.12	16.97	16.95	0.0	17.5	18.55	18.52	18.71	18.74	18.52	0.0	19.0	23.33	23.30	23.31	23.42	23.10	1.0	24.0
		64QAM	1	1	17.04	16.97	17.40	16.97	16.78	0.0	17.5	18.44	18.55	18.72	18.71	18.55	0.0	19.0	22.04	22.17	22.03	21.97	21.89	2.5	22.5
		256QAM	1	1	17.11	17.01	17.39	16.94	16.91	0.0	17.5	18.48	18.61	18.67	18.76	18.51	0.0	19.0	20.10	20.13	20.04	20.01	19.98	4.5	20.5
		CP-OFDM	QPSK	1	1	17.22	17.07	17.32	17.04	16.93	0.0	17.5	18.47	18.51	18.66	18.72	18.57	0.0	19.0	23.25	23.24	23.25	23.28	23.11	1.5

Notes:

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

NR Band n41 (Ant B) Measured Results (Continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
					500700	509652	518598	527550	536496			500700	509652	518598	527550	536496			500700	509652	518598	527550	536496		
					2503.50 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz			2503.50 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz			2503.50 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.15	17.12	16.98	17.12	16.97	0.0	17.5	18.63	18.74	18.54	18.69	18.64	0.0	19.0	24.62	24.41	24.35	24.36	24.24	0.0	25.0
			1	18	17.26	17.20	17.03	17.08	16.96	0.0	17.5	18.61	18.69	18.49	18.66	18.70	0.0	19.0	24.34	24.49	24.43	24.12	24.17	0.0	25.0
			1	36	17.29	17.14	17.03	17.13	17.07	0.0	17.5	18.52	18.58	18.58	18.69	18.73	0.0	19.0	24.70	24.56	24.45	24.12	23.93	0.0	25.0
			18	0	17.15	16.97	16.87	16.96	16.93	0.0	17.5	18.59	18.63	18.51	18.52	18.57	0.0	19.0	23.78	23.93	23.99	23.65	23.68	0.5	24.5
			18	10	17.34	17.11	16.98	17.24	17.10	0.0	17.5	18.68	18.61	18.52	18.67	18.59	0.0	19.0	24.38	24.60	24.44	23.86	24.12	0.0	25.0
			18	20	17.12	17.04	16.86	17.09	16.94	0.0	17.5	18.59	18.66	18.46	18.62	18.55	0.0	19.0	24.22	24.03	23.85	23.49	23.67	0.5	24.5
		36	0	17.13	16.95	16.84	16.97	16.95	0.0	17.5	18.65	18.66	18.55	18.55	18.53	0.0	19.0	23.81	23.96	24.04	23.32	23.05	0.5	24.5	
		QPSK	1	1	17.23	17.13	16.99	17.03	17.03	0.0	17.5	18.53	18.67	18.51	18.57	18.72	0.0	19.0	23.33	24.69	24.72	23.20	23.10	0.0	25.0
			1	18	17.16	17.25	17.02	17.13	17.06	0.0	17.5	18.56	18.74	18.45	18.66	18.71	0.0	19.0	23.76	24.75	24.41	23.21	22.76	0.0	25.0
			1	36	17.26	17.07	17.10	17.12	17.07	0.0	17.5	18.54	18.72	18.64	18.59	18.65	0.0	19.0	23.92	24.75	24.72	23.09	23.07	0.0	25.0
			18	0	17.11	17.06	16.92	16.96	16.98	0.0	17.5	18.61	18.67	18.42	18.53	18.53	0.0	19.0	22.59	23.45	23.45	22.22	22.13	1.0	24.0
			18	10	17.31	17.10	17.03	17.15	17.06	0.0	17.5	18.64	18.63	18.48	18.55	18.56	0.0	19.0	23.56	24.57	24.52	23.10	22.86	0.0	25.0
			18	20	17.15	17.02	16.95	16.96	16.96	0.0	17.5	18.57	18.66	18.51	18.54	18.57	0.0	19.0	23.12	23.54	23.47	22.36	21.83	1.0	24.0
		36	0	17.17	17.03	17.00	16.95	17.02	0.0	17.5	18.66	18.70	18.44	18.55	18.58	0.0	19.0	22.94	23.46	23.53	22.41	22.04	1.0	24.0	
		16QAM	1	1	17.16	17.14	16.96	16.97	16.92	0.0	17.5	18.53	18.61	18.52	18.54	18.54	0.0	19.0	22.41	23.68	23.36	22.30	22.67	1.0	24.0
			1	18	17.05	17.11	16.98	17.11	16.97	0.0	17.5	18.57	18.61	18.43	18.56	18.60	0.0	19.0	23.14	23.58	23.36	22.22	22.11	1.0	24.0
			1	36	17.09	17.12	16.94	17.01	16.93	0.0	17.5	18.51	18.61	18.52	18.63	18.62	0.0	19.0	23.32	23.48	23.57	22.32	21.62	1.0	24.0
		64QAM	1	1	17.15	16.97	16.88	16.99	17.02	0.0	17.5	18.49	18.64	18.55	18.64	18.64	0.0	19.0	21.52	22.14	21.84	21.24	21.62	2.5	22.5
		256QAM	1	1	17.25	17.03	16.91	16.99	17.01	0.0	17.5	18.48	18.73	18.51	18.61	18.63	0.0	19.0	20.00	20.00	19.85	19.80	20.06	4.5	20.5
		CP-OFDM	QPSK	1	1	17.23	17.13	17.03	17.08	17.11	0.0	17.5	18.47	18.61	18.47	18.62	18.66	0.0	19.0	22.22	23.10	23.10	21.96	22.24	1.5
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit	Measured Pwr (dBm)					MPR	Tune-up Limit
					500202	509400	518598	527802	537000			500202	509400	518598	527802	537000			500202	509400	518598	527802	537000		
					2501.01 MHz	2547.00 MHz	2592.99 MHz	2639.01 MHz	2685.00 MHz			2501.01 MHz	2547.00 MHz	2592.99 MHz	2639.01 MHz	2685.00 MHz			2501.01 MHz	2547.00 MHz	2592.99 MHz	2639.01 MHz	2685.00 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	17.28	17.22	17.09	17.34	17.22	0.0	17.5	18.88	18.74	18.52	18.88	18.74	0.0	19.0	24.66	24.69	24.61	24.64	24.32	0.0	25.0
			1	12	17.23	17.04	17.05	17.28	17.17	0.0	17.5	18.69	18.71	18.44	18.78	18.79	0.0	19.0	24.63	24.67	24.63	24.32	23.75	0.0	25.0
			1	22	17.27	17.23	17.08	17.30	17.21	0.0	17.5	18.72	18.74	18.57	18.81	18.78	0.0	19.0	24.85	24.78	24.69	24.16	23.12	0.0	25.0
			12	0	17.14	17.03	16.95	17.10	17.07	0.0	17.5	18.61	18.60	18.42	18.68	18.66	0.0	19.0	23.91	24.13	24.10	23.71	23.57	0.5	24.5
			12	6	17.17	17.03	17.04	17.20	17.18	0.0	17.5	18.59	18.67	18.47	18.78	18.74	0.0	19.0	24.56	24.75	24.65	24.04	23.67	0.0	25.0
			12	12	17.10	17.11	17.02	17.11	17.10	0.0	17.5	18.71	18.61	18.46	18.68	18.63	0.0	19.0	24.36	24.22	24.08	23.61	22.93	0.5	24.5
		24	0	17.03	17.05	16.82	17.05	17.12	0.0	17.5	18.68	18.57	18.39	18.64	18.59	0.0	19.0	24.08	24.17	24.05	23.53	23.19	0.5	24.5	
		QPSK	1	1	17.25	17.21	17.04	17.28	17.25	0.0	17.5	18.76	18.77	18.46	18.81	18.65	0.0	19.0	23.35	24.83	24.72	23.24	23.33	0.0	25.0
			1	12	17.09	17.07	16.99	17.19	17.19	0.0	17.5	18.63	18.74	18.45	18.79	18.74	0.0	19.0	23.88	24.81	24.69	23.23	22.91	0.0	25.0
			1	22	17.21	17.22	17.04	17.28	17.19	0.0	17.5	18.74	18.76	18.57	18.79	18.79	0.0	19.0	24.10	24.85	24.76	23.22	22.53	0.0	25.0
			12	0	17.07	17.04	16.88	17.12	17.12	0.0	17.5	18.57	18.58	18.47	18.65	18.61	0.0	19.0	22.76	23.74	23.63	22.48	22.37	1.0	24.0
			12	6	17.19	17.14	16.97	17.25	17.16	0.0	17.5	18.59	18.68	18.40	18.77	18.70	0.0	19.0	23.85	24.79	24.67	23.20	22.89	0.0	25.0
			12	12	17.14	17.06	16.92	17.10	17.10	0.0	17.5	18.59	18.62	18.43	18.65	18.64	0.0	19.0	23.23	23.76	23.62	22.43	21.83	1.0	24.0
		24	0	17.14	17.05	16.88	17.09	17.11	0.0	17.5	18.64	18.55	18.46	18.64	18.62	0.0	19.0	23.02	23.74	23.58	22.45	22.14	1.0	24.0	
		16QAM	1	1	17.18	17.14	16.99	17.23	17.07	0.0	17.5	18.74	18.58	18.49	18.72	18.69	0.0	19.0	22.62	23.76	23.55	22.51	22.92	1.0	24.0
			1	12	17.16	17.07	16.93	17.14	17.09	0.0	17.5	18.69	18.55	18.41	18.68	18.66	0.0	19.0	23.14	23.72	23.64	22.49	22.33	1.0	24.0
			1	22	17.15	17.12	16.97	17.18	17.10	0.0	17.5	18.66	18.67	18.48	18.68	18.67	0.0	19.0	23.34	23.71	23.66	22.48	21.82	1.0	24.0
		64QAM	1	1	17.16	17.13	16.98	17.20	17.08	0.0	17.5	18.75	18.74	18.51	18.75	18.68	0.0	19.0	21.53	22.23	22.12	21.34	21.76	2.5	22.5
		256QAM	1	1	17.18	17.04	16.94	17.19	17.06	0.0	17.5	18.75	18.69	18.41	18.73	18.67	0.0	19.0	20.18	20.22	20.11	20.02	20.23	4.5	20.5
		CP-OFDM	QPSK	1	1	17.23	17.16	17.06	17.26	17.09	0.0	17.5	18.74	18.78	18.47	18.92	18.80	0.0	19.0	22.31	23.26	23.21	22.17	22.51	1.5

Notes:

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

9.5. Wi-Fi 2.4 GHz (DTS Band)

WLAN SISO output power results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power		
					Maximum Allowed Average power (dBm)		
					DSI = 0, 1, 3		
					Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 2.4G SISO Ant.G	802.11b	1 Mbps	1	2412.0	17.21	18.0	Yes
			6	2437.0	17.00		
			11	2462.0	16.99		
			12	2467.0	4.90		
			13	2472.0	-1.14		
	802.11g	6 Mbps	Not Required	Not Required	18.0	No	
	802.11n	6.5 Mbps			18.0		
	802.11ac	6.5 Mbps			18.0		
802.11ax	7.3 Mbps	18.0					
WiFi 2.4G SISO Ant.F	802.11b	1 Mbps	1	2412.0	17.96	18.0	Yes
			6	2437.0	17.92		
			11	2462.0	17.84		
			12	2467.0	5.52		
			13	2472.0	-0.26		
	802.11g	6 Mbps	Not Required	Not Required	18.0	No	
	802.11n	6.5 Mbps			18.0		
	802.11ac	6.5 Mbps			18.0		
802.11ax	7.3 Mbps	18.0					

WLAN MIMO output power results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power		
					Maximum Allowed Average power (dBm)		
					DSI = 0, 1, 3		
					Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 2.4G MIMO Ant.G	802.11b	1 Mbps	1	2412.0	17.11	18.0	Yes
			6	2437.0	16.95		
			11	2462.0	16.96		
			12	2467.0	4.48		
			13	2472.0	-1.52		
	802.11g	6 Mbps	Not Required	Not Required	18.0	No	
	802.11n	6.5 Mbps			18.0		
	802.11ac	6.5 Mbps			18.0		
802.11ax	7.3 Mbps	18.0					
WiFi 2.4G MIMO Ant.F	802.11b	1 Mbps	1	2412.0	17.93	18.0	Yes
			6	2437.0	17.97		
			11	2462.0	17.88		
			12	2467.0	5.12		
			13	2472.0	-0.74		
	802.11g	6 Mbps	Not Required	Not Required	18.0	No	
	802.11n	6.5 Mbps			18.0		
	802.11ac	6.5 Mbps			18.0		
802.11ax	7.3 Mbps	18.0					

Note(s):

- SAR is not required for 802.11g/n modes when the adjusted SAR for 802.11b is < 1.2 W/kg.
- For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11n/g/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

Duty Factor Measured Results

Mode	T on (ms)	Period (ms)	Maximum Duty Cycle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
802.11b	8.816	8.917	100.00%	98.87%	1.01

Duty Cycle plots (802.11b-SISO)

51078 Swept SA

KEYSIGHT Input: RF Coupling: DC Align: Auto

RL \rightarrow LW

Input Z: 50 Ω Freq Ref: Int (S) NFE: Adaptive

Atten: 30 dB Preamp: Off μ W Path: Standard

PNO: Fast Gate: Off IF Gain: Low Sig Track: Off

#Avg Type: Power (RMS) Trig: RF Burst

1 2 3 4 5 6
W WWWWWW
P N N N N N

1 Spectrum

Scale/Div 10 dB Ref Level 20.00 dBm

Center 2.437000000 GHz Res BW 8 MHz Span 0 Hz Sweep 50.7 ms (20001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	t	17.83 ms	6.511 dBm		
2	Δ 1	1	t (Δ)	8.816 ms (Δ)	-0.1602 dB		
3	Δ 1	1	t (Δ)	8.917 ms (Δ)	-3.573 dB		
4							
5							
6							

Frequency

Center Frequency: 2.437000000 GHz

Span: 0.00000000 Hz

Start Freq: 2.437000000 GHz

Stop Freq: 2.437000000 GHz

CF Step: 8.000000 MHz

Freq Offset: 0 Hz

X Axis Scale: Log

Signal Track (Span Zoom)

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

WLAN SISO Ant.G output power Results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Maximum Allowed Averag power (dBm)		
						DSI = 0, 1, 3		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
5GHz SISO Ant.G	5.3 (UNII 2A)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	54	5270.0	16.68	18.0	Yes
				62	5310.0	14.45	15.5	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	Not Required		16.0	No	
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
	802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No		
	802.11ax (HE80)	36.0 Mbps	Not Required		16.0	No		
	UNII 1 & UNII 2A	802.11ac (VHT160)	58.5 Mbps	Not Required		16.0	No	
		802.11ax (HE160)	72.0 Mbps	Not Required		16.0	No	
	5.5 (U-NII 2C)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	15.56	16.0	Yes
				122	5610.0	17.08	18.0	
				138	5690.0	17.05	18.0	
		802.11ac (VHT160)	58.5 Mbps	Not Required		14.0	No	
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
	802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No		
	802.11ax (HE80)	36.0 Mbps	Not Required		18.0	No		
	802.11ax (HE160)	72.0 Mbps	Not Required		14.0	No		
	5.8 (UNII 3)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	17.05	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
		802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No	
	802.11ax (HE80)	36.0 Mbps	Not Required		18.0	No		
	5.9 (U-NII 4)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	171	5855.0	17.04	18.0	Yes
802.11ax (HE20)		7.3 Mbps	Not Required		18.0	No		
802.11ax (HE40)		14.6 Mbps	Not Required		18.0	No		
802.11ax (HE80)	30.6 Mbps	Not Required		18.0	No			
UNII 3 & UNII 4	802.11ac (VHT160)	58.5 Mbps	Not Required		16.0	No		
	802.11ax (HE160)	72.0 Mbps	Not Required		16.0	No		

Note(s):

- For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.
- When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.
- When the specified maximum output power is the same for both UNII band I and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest reported SAR for UNII band 2A is
 - ≤ 1.2 W/kg, SAR is not required for UNII band I
 - > 1.2 W/kg, both bands should be tested independently for SAR.

WLAN SISO Ant.D output power Results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Maximum Allowed Averag power (dBm)		
						DSI = 0, 1, 3		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
5GHz SISO Ant.D	5.3 (UNII 2A)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	54	5270.0	17.30	18.0	Yes
				62	5310.0	14.95	15.5	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	Not Required		16.0	No	
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
	802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No		
	802.11ax (HE80)	36.0 Mbps	Not Required		16.0	No		
	UNII 1 & UNII 2A	802.11ac (VHT160)	58.5 Mbps	Not Required		16.0	No	
		802.11ax (HE160)	72.0 Mbps	Not Required		16.0	No	
	5.5 (U-NII 2C)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	15.70	18.0	Yes
				122	5610.0	17.59		
				138	5690.0	17.58		
		802.11ac (VHT160)	58.5 Mbps	Not Required		14.0	No	
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
	802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No		
	802.11ax (HE80)	36.0 Mbps	Not Required		18.0	No		
	802.11ax (HE160)	72.0 Mbps	Not Required		14.0	No		
	5.8 (UNII 3)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	17.51	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
		802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No	
	802.11ax (HE80)	36.0 Mbps	Not Required		18.0	No		
	5.9 (U-NII 4)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	171	5855.0	17.33	18.0	Yes
802.11ax (HE20)		7.3 Mbps	Not Required		18.0	No		
802.11ax (HE40)		14.6 Mbps	Not Required		18.0	No		
802.11ax (HE80)	30.6 Mbps	Not Required		18.0	No			
UNII 3 & UNII 4	802.11ac (VHT160)	58.5 Mbps	Not Required		16.0	No		
	802.11ax (HE160)	72.0 Mbps	Not Required		16.0	No		

Note(s):

- For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.
- When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.
- When the specified maximum output power is the same for both UNII band I and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest reported SAR for UNII band 2A is
 - ≤ 1.2 W/kg, SAR is not required for UNII band I
 - > 1.2 W/kg, both bands should be tested independently for SAR.

WLAN MIMO Ant.G output power Results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Maximum Allowed Averag power (dBm)		
						DSI = 0, 1, 3		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
5GHz MIMO Ant.G	5.3 (UNII 2A)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	54	5270.0	16.70	18.0	Yes
				62	5310.0	14.50	15.5	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	Not Required		16.0	No	
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
	802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No		
	802.11ax (HE80)	36.0 Mbps	Not Required		16.0	No		
	UNII 1 & UNII 2A	802.11ac (VHT160)	58.5 Mbps	Not Required		16.0	No	
		802.11ax (HE160)	72.0 Mbps	Not Required		16.0	No	
	5.5 (U-NII 2C)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	15.47	18.0	Yes
				122	5610.0	17.02		
				138	5690.0	17.01		
		802.11ac (VHT160)	58.5 Mbps	Not Required		14.0	No	
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
		802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No	
		802.11ax (HE80)	36.0 Mbps	Not Required		18.0	No	
	802.11ax (HE160)	72.0 Mbps	Not Required		14.0	No		
	5.8 (UNII 3)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	16.98	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
		802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No	
	802.11ax (HE80)	36.0 Mbps	Not Required		18.0	No		
	5.9 (U-NII 4)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	171	5855.0	16.91	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
		802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No	
802.11ax (HE80)	30.6 Mbps	Not Required		18.0	No			
UNII 3 & UNII 4	802.11ac (VHT160)	58.5 Mbps	Not Required		16.0	No		
	802.11ax (HE160)	72.0 Mbps	Not Required		16.0	No		

Note(s):

- For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.
- When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.
- When the specified maximum output power is the same for both UNII band I and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest reported SAR for UNII band 2A is
 - ≤ 1.2 W/kg, SAR is not required for UNII band I
 - > 1.2 W/kg, both bands should be tested independently for SAR.

WLAN MIMO Ant.D output power Results

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Maximum Allowed Averag power (dBm)		
						DSI = 0, 1, 3		
						Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
5GHz MIMO Ant.D	5.3 (UNII 2A)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	54	5270.0	17.34	18.0	Yes
				62	5310.0	14.96	15.5	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	Not Required		16.0	No	
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
	802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No		
	802.11ax (HE80)	36.0 Mbps	Not Required		16.0	No		
	UNII 1 & UNII 2A	802.11ac (VHT160)	58.5 Mbps	Not Required		16.0	No	
		802.11ax (HE160)	72.0 Mbps	Not Required		16.0	No	
	5.5 (U-NII 2C)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	15.62	18.0	Yes
				122	5610.0	17.50		
				138	5690.0	17.49		
		802.11ac (VHT160)	58.5 Mbps	Not Required		14.0	No	
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
		802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No	
	802.11ax (HE80)	36.0 Mbps	Not Required		18.0	No		
	802.11ax (HE160)	72.0 Mbps	Not Required		14.0	No		
	5.8 (UNII 3)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	17.42	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
		802.11ax (HE40)	14.6 Mbps	Not Required		18.0	No	
	802.11ax (HE80)	36.0 Mbps	Not Required		18.0	No		
	5.9 (U-NII 4)	802.11a	6 Mbps	Not Required		18.0	No	
		802.11n (HT20)	6.5 Mbps	Not Required		18.0	No	
		802.11n (HT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT20)	6.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT40)	13.5 Mbps	Not Required		18.0	No	
		802.11ac (VHT80)	29.3 Mbps	171	5855.0	17.24	18.0	Yes
		802.11ax (HE20)	7.3 Mbps	Not Required		18.0	No	
802.11ax (HE40)		14.6 Mbps	Not Required		18.0	No		
802.11ax (HE80)	30.6 Mbps	Not Required		18.0	No			
UNII 3 & UNII 4	802.11ac (VHT160)	58.5 Mbps	Not Required		16.0	No		
	802.11ax (HE160)	72.0 Mbps	Not Required		16.0	No		

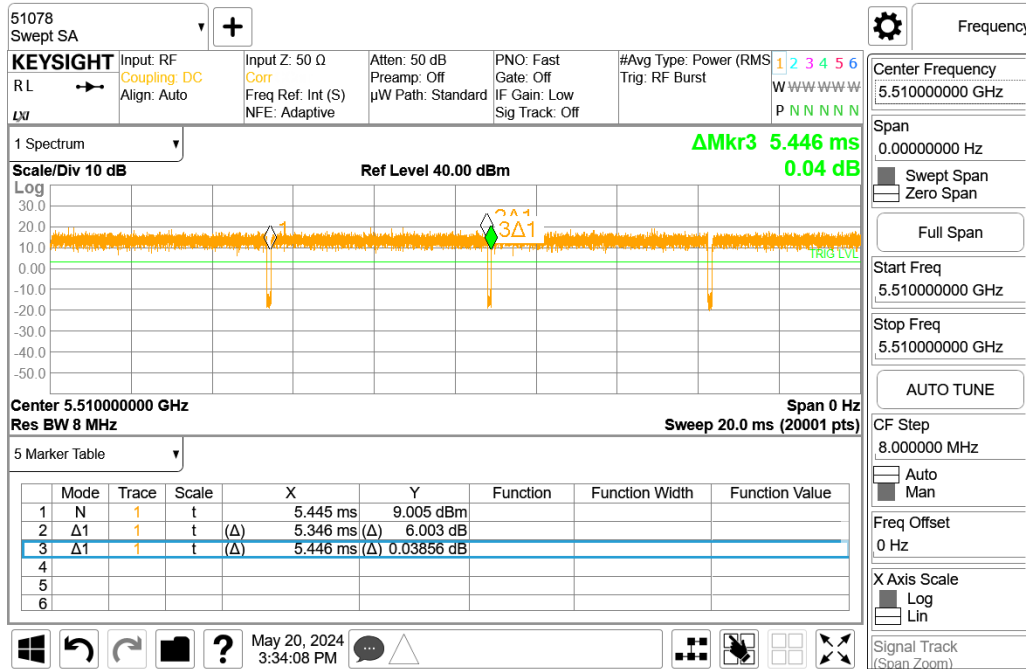
Note(s):

- For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.
- When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.
- When the specified maximum output power is the same for both UNII band 1 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 1
 - > 1.2 W/kg, both bands should be tested independently for SAR.

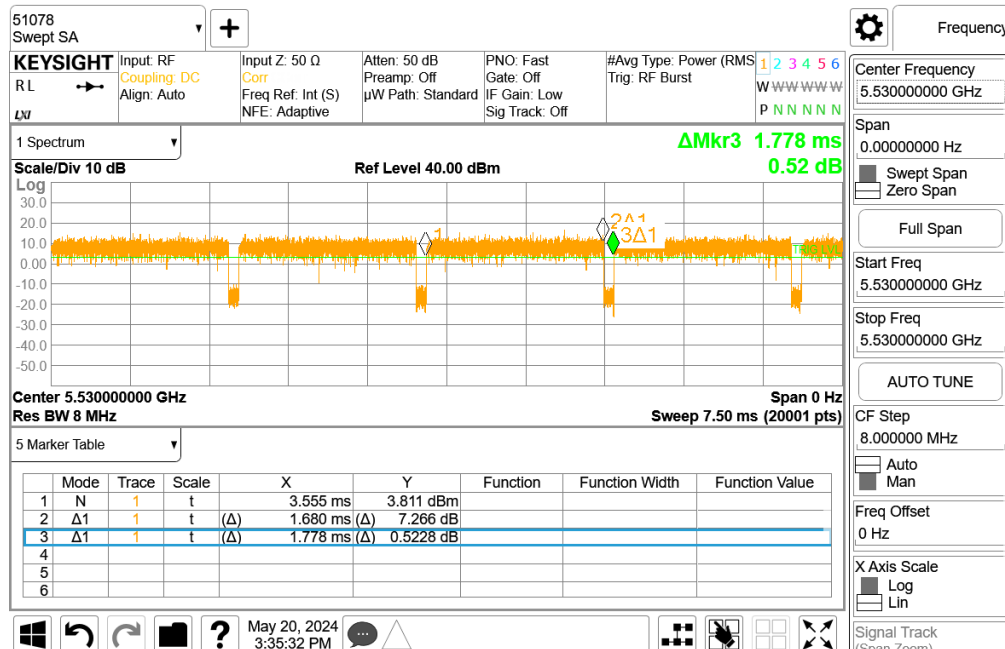
Duty Factor Measured Results

Mode	T on (ms)	Period (ms)	Maximum Duty Cycle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
802.11n HT40	5.346	5.446	100.00%	98.16%	1.02
802.11ac VHT80	1.680	1.778	100.00%	94.49%	1.06

Duty Cycle plots (802.11n HT40)



Duty Cycle plots (802.11ac VHT80)



9.7. Bluetooth

Bluetooth SISO output power Results

Band (GHz)	Antenna	Mode	Ch #	Freq. (MHz)	Maximum Allowed Average power (dBm)		SAR test	
					DSI = 0, 1, 2, 3			
					Meas Pwr	Tune-up Limit		
2.4	BT SISO Ant.G (PL11)	Bluetooth(BDR) (1Mbps)	0	2402	18.23	19.5	Yes	
			39	2441	18.25			
			78	2480	16.29			
		Bluetooth(EDR) (2/3Mbps)	0	2402	Not required	16.5		No
			39	2441				
			78	2480				
	BT SISO Ant.F (PL11)	Bluetooth(BDR) (1Mbps)	0	2402	17.65	19.5	Yes	
			39	2441	17.93			
			78	2480	15.79			
		Bluetooth(EDR) (2/3Mbps)	0	2402	Not required	16.5		No
			39	2441				
			78	2480				

Note(s):

For BT/BLE SISO SAR test, BT(BDR-1Mbps) has highest time-based averaged power in all modes. So SAR test performed at BT(BDR-1Mbps).

Bluetooth Dual(MIMO) output power Results

Band (GHz)	Antenna	Mode	Ch #	Freq. (MHz)	Maximum Allowed Average power (dBm)		SAR test	
					DSI = 0, 1, 2, 3			
					Meas Pwr	Tune-up Limit		
2.4	BT MIMO Ant.G (PL10)	Bluetooth(BDR) (1Mbps)	0	2402	15.51	16.0	Yes	
			39	2441	14.46			
			78	2480	11.23			
		Bluetooth(EDR) (2/3Mbps)	0	2402	Not required	14.0		No
			39	2441				
			78	2480				
	BT MIMO Ant.F (PL10)	Bluetooth(BDR) (1Mbps)	0	2402	14.98	16.0	Yes	
			39	2441	14.26			
			78	2480	12.52			
		Bluetooth(EDR) (2/3Mbps)	0	2402	Not required	14.0		No
			39	2441				
			78	2480				

Note(s):

For BT/BLE Dual(MIMO) SAR test, BT(BDR-1Mbps) has highest time-based averaged power in all modes. So SAR test performed at BT(BDR-1Mbps).

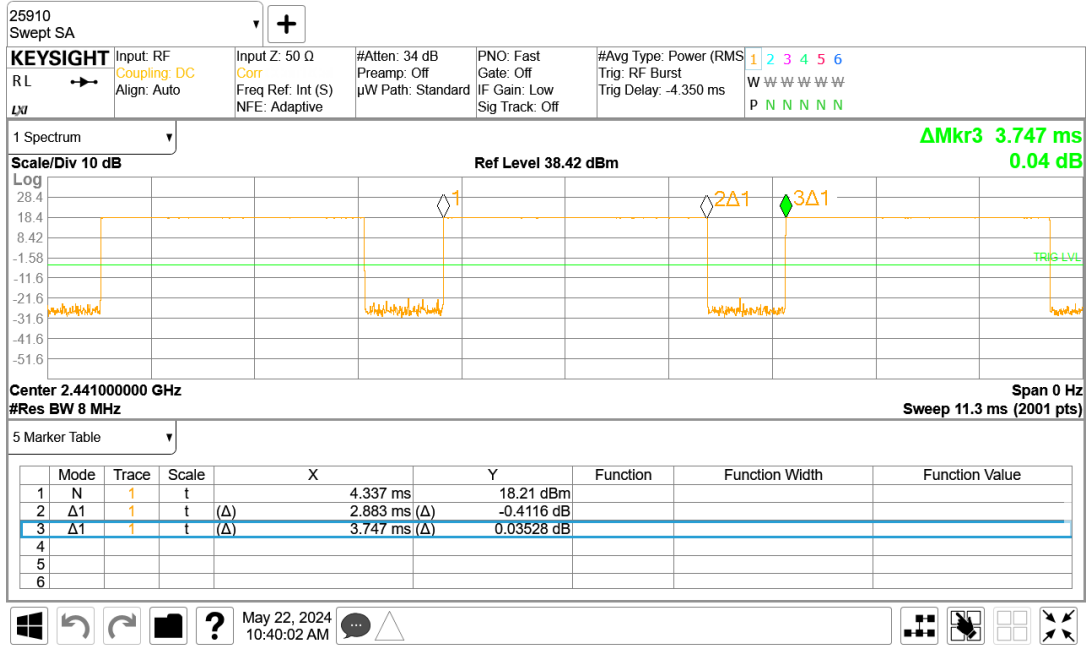
Duty Factor Measured Results

Mode	T on (ms)	Period (ms)	Maximum Duty Cycle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
BT-BDR	2.883	3.747	79.00%	76.94%	1.03

Note(s):

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

Duty Cycle plots (BT-BDR)



10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

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

KDB 447498 D01 General RF Exposure Guidance:

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

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

KDB 648474 D04 Handset SAR:

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

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

KDB 648474 D04 Handset SAR (Phablet Only):

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

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

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

KDB 941225 D01 SAR test for 3G devices:

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

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

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

KDB 248227 D01 SAR meas for 802.11:

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

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

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

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

10.1. Folder Closed (Phablet) SAR Results

10.1.1. GSM 850

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A	Head	GPRS2 Slots	DSI3	0	Left Touch	190	836.6	32.50	31.18	0.042	0.057	
AG.0	Ant.A	Head	GPRS2 Slots	DSI3	0	Left Tilt	190	836.6	32.50	31.18	0.057	0.077	
AG.0	Ant.A	Head	GPRS2 Slots	DSI3	0	Right Touch	190	836.6	32.50	31.18	0.093	0.126	
AG.0	Ant.A	Head	GPRS2 Slots	DSI3	0	Right Tilt	190	836.6	32.50	31.18	0.036	0.049	
AG.0	Ant.A	Bodyworn & Hotspot	GPRS2 Slots	DSI1	10	Rear	190	836.6	32.50	31.18	0.225	0.305	
AG.0	Ant.A	Bodyworn & Hotspot	GPRS2 Slots	DSI1	10	Front	190	836.6	32.50	31.18	0.054	0.073	
AG.0	Ant.A	Hotspot	GPRS2 Slots	DSI1	10	Bottom	190	836.6	32.50	31.18	0.063	0.085	
AG.0	Ant.A	Hotspot	GPRS2 Slots	DSI1	10	Right	190	836.6	32.50	31.18	0.148	0.201	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A+B	Head	GPRS2 Slots	DSI3	0	Left Touch	190	836.6	32.50	31.18	0.096	0.130	
AG.0	Ant.A+B	Head	GPRS2 Slots	DSI3	0	Left Tilt	190	836.6	32.50	31.18	0.074	0.100	
AG.0	Ant.A+B	Head	GPRS2 Slots	DSI3	0	Right Touch	190	836.6	32.50	31.18	0.123	0.167	1
AG.0	Ant.A+B	Head	GPRS2 Slots	DSI3	0	Right Tilt	190	836.6	32.50	31.18	0.088	0.119	
AG.0	Ant.A+B	Bodyworn & Hotspot	GPRS2 Slots	DSI1	10	Rear	190	836.6	32.50	31.18	0.428	0.580	2
AG.0	Ant.A+B	Bodyworn & Hotspot	GPRS2 Slots	DSI1	10	Front	190	836.6	32.50	31.18	0.137	0.186	
AG.0	Ant.A+B	Hotspot	GPRS2 Slots	DSI1	10	Left	190	836.6	32.50	31.18	0.130	0.176	
AG.0	Ant.A+B	Hotspot	GPRS2 Slots	DSI1	10	Bottom	190	836.6	32.50	31.18	0.127	0.172	
AG.0	Ant.A+B	Hotspot	GPRS2 Slots	DSI1	10	Right	190	836.6	32.50	31.18	0.325	0.440	

10.1.2. GSM 1900

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.B	Head	GPRS2 Slots	DSI3	0	Left Touch	661	1880	29.00	27.66	0.043	0.059	
AG.0	Ant.B	Head	GPRS2 Slots	DSI3	0	Left Tilt	661	1880	29.00	27.66	0.019	0.026	
AG.0	Ant.B	Head	GPRS2 Slots	DSI3	0	Right Touch	661	1880	29.00	27.66	0.048	0.065	3
AG.0	Ant.B	Head	GPRS2 Slots	DSI3	0	Right Tilt	661	1880	29.00	27.66	0.028	0.038	
AG.0	Ant.B	Bodyworn & Hotspot	GPRS4 Slots	DSI1	10	Rear	661	1880	22.50	21.60	0.532	0.655	4
AG.0	Ant.B	Bodyworn & Hotspot	GPRS4 Slots	DSI1	10	Front	661	1880	22.50	21.60	0.120	0.148	
AG.0	Ant.B	Hotspot	GPRS4 Slots	DSI1	10	Left	661	1880	22.50	21.60	0.066	0.081	
AG.0	Ant.B	Hotspot	GPRS4 Slots	DSI1	10	Bottom	661	1880	22.50	21.60	0.607	0.747	5
AG.0	Ant.B	Hotspot	GPRS4 Slots	DSI1	10	Right	661	1880	22.50	21.60	0.140	0.172	

10.1.3. WCDMA Band V

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A	Head	Rel 99RMC 12.2 kbps	DSI3	0	Left Touch	4183	836.6	25.30	24.43	0.119	0.145	
AG.0	Ant.A	Head	Rel 99RMC 12.2 kbps	DSI3	0	Left Tilt	4183	836.6	25.30	24.43	0.076	0.093	
AG.0	Ant.A	Head	Rel 99RMC 12.2 kbps	DSI3	0	Right Touch	4183	836.6	25.30	24.43	0.144	0.176	
AG.0	Ant.A	Head	Rel 99RMC 12.2 kbps	DSI3	0	Right Tilt	4183	836.6	25.30	24.43	0.085	0.104	
AG.0	Ant.A	Bodyworn & Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Rear	4183	836.6	25.30	24.43	0.380	0.464	
AG.0	Ant.A	Bodyworn & Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Front	4183	836.6	25.30	24.43	0.143	0.175	
AG.0	Ant.A	Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Bottom	4183	836.6	25.30	24.43	0.163	0.199	
AG.0	Ant.A	Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Right	4183	836.6	25.30	24.43	0.354	0.433	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	AntA+B	Head	Rel 99RMC 12.2 kbps	DSI3	0	Left Touch	4183	836.6	25.30	24.43	0.167	0.204	6
AG.0	AntA+B	Head	Rel 99RMC 12.2 kbps	DSI3	0	Left Tilt	4183	836.6	25.30	24.43	0.095	0.116	
AG.0	AntA+B	Head	Rel 99RMC 12.2 kbps	DSI3	0	Right Touch	4183	836.6	25.30	24.43	0.164	0.200	
AG.0	AntA+B	Head	Rel 99RMC 12.2 kbps	DSI3	0	Right Tilt	4183	836.6	25.30	24.43	0.102	0.125	
AG.0	AntA+B	Bodyworn & Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Rear	4183	836.6	25.30	24.43	0.444	0.542	7
AG.0	AntA+B	Bodyworn & Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Front	4183	836.6	25.30	24.43	0.166	0.203	
AG.0	AntA+B	Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Left	4183	836.6	25.30	24.43	0.145	0.177	
AG.0	AntA+B	Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Bottom	4183	836.6	25.30	24.43	0.153	0.187	
AG.0	AntA+B	Hotspot	Rel 99RMC 12.2 kbps	DSI1	10	Right	4183	836.6	25.30	24.43	0.444	0.542	

10.1.4. LTE Band 5 (10MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Touch	20525	836.5	1	0	25.50	24.31	0.135	0.178	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Touch	20525	836.5	25	12	24.50	23.34	0.108	0.141	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Tilt	20525	836.5	1	0	25.50	24.31	0.083	0.109	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Tilt	20525	836.5	25	12	24.50	23.34	0.067	0.088	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Touch	20525	836.5	1	0	25.50	24.31	0.159	0.209	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Touch	20525	836.5	25	12	24.50	23.34	0.128	0.167	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Tilt	20525	836.5	1	0	25.50	24.31	0.121	0.159	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Tilt	20525	836.5	25	12	24.50	23.34	0.103	0.135	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	20525	836.5	1	0	25.50	24.31	0.402	0.529	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	20525	836.5	25	12	24.50	23.34	0.308	0.402	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Front	20525	836.5	1	0	25.50	24.31	0.177	0.233	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Front	20525	836.5	25	12	24.50	23.34	0.138	0.180	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Bottom	20525	836.5	1	0	25.50	24.31	0.125	0.164	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Bottom	20525	836.5	25	12	24.50	23.34	0.112	0.146	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Right	20525	836.5	1	0	25.50	24.31	0.304	0.400	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Right	20525	836.5	25	12	24.50	23.34	0.246	0.321	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Touch	20525	836.5	1	0	25.50	24.31	0.162	0.213	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Touch	20525	836.5	25	12	24.50	23.34	0.139	0.182	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Tilt	20525	836.5	1	0	25.50	24.31	0.094	0.124	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Tilt	20525	836.5	25	12	24.50	23.34	0.081	0.106	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Touch	20525	836.5	1	0	25.50	24.31	0.196	0.258	8
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Touch	20525	836.5	25	12	24.50	23.34	0.170	0.222	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Tilt	20525	836.5	1	0	25.50	24.31	0.118	0.155	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Tilt	20525	836.5	25	12	24.50	23.34	0.098	0.128	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	20525	836.5	1	0	25.50	24.31	0.433	0.569	9
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	20525	836.5	25	12	24.50	23.34	0.345	0.451	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Front	20525	836.5	1	0	25.50	24.31	0.180	0.237	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Front	20525	836.5	25	12	24.50	23.34	0.148	0.193	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Left	20525	836.5	1	0	25.50	24.31	0.207	0.272	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Left	20525	836.5	25	12	24.50	23.34	0.152	0.199	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Bottom	20525	836.5	1	0	25.50	24.31	0.209	0.275	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Bottom	20525	836.5	25	12	24.50	23.34	0.164	0.214	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Right	20525	836.5	1	0	25.50	24.31	0.334	0.439	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Right	20525	836.5	25	12	24.50	23.34	0.272	0.355	

10.1.5. LTE Band 12 (10MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Touch	23095	707.5	1	49	25.20	23.76	0.100	0.139	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Touch	23095	707.5	25	25	24.20	22.69	0.074	0.105	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Tilt	23095	707.5	1	49	25.20	23.76	0.058	0.081	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Tilt	23095	707.5	25	25	24.20	22.69	0.040	0.057	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Touch	23095	707.5	1	49	25.20	23.76	0.127	0.177	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Touch	23095	707.5	25	25	24.20	22.69	0.094	0.133	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Tilt	23095	707.5	1	49	25.20	23.76	0.054	0.075	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Tilt	23095	707.5	25	25	24.20	22.69	0.058	0.082	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	23095	707.5	1	49	25.20	23.76	0.242	0.337	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	23095	707.5	25	25	24.20	22.69	0.192	0.272	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Front	23095	707.5	1	49	25.20	23.76	0.113	0.157	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Front	23095	707.5	25	25	24.20	22.69	0.085	0.120	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Bottom	23095	707.5	1	49	25.20	23.76	0.117	0.163	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Bottom	23095	707.5	25	25	24.20	22.69	0.099	0.140	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Right	23095	707.5	1	49	25.20	23.76	0.280	0.390	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Right	23095	707.5	25	25	24.20	22.69	0.210	0.297	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Touch	23095	707.5	1	49	25.20	23.76	0.122	0.170	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Touch	23095	707.5	25	25	24.20	22.69	0.098	0.139	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Tilt	23095	707.5	1	49	25.20	23.76	0.077	0.107	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Tilt	23095	707.5	25	25	24.20	22.69	0.063	0.089	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Touch	23095	707.5	1	49	25.20	23.76	0.181	0.252	10
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Touch	23095	707.5	25	25	24.20	22.69	0.141	0.200	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Tilt	23095	707.5	1	49	25.20	23.76	0.089	0.124	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Tilt	23095	707.5	25	25	24.20	22.69	0.071	0.101	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	23095	707.5	1	49	25.20	23.76	0.310	0.432	11
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	23095	707.5	25	25	24.20	22.69	0.247	0.350	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Front	23095	707.5	1	49	25.20	23.76	0.140	0.195	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Front	23095	707.5	25	25	24.20	22.69	0.114	0.161	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Left	23095	707.5	1	49	25.20	23.76	0.124	0.173	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Left	23095	707.5	25	25	24.20	22.69	0.091	0.129	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Bottom	23095	707.5	1	49	25.20	23.76	0.195	0.272	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Bottom	23095	707.5	25	25	24.20	22.69	0.159	0.225	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Right	23095	707.5	1	49	25.20	23.76	0.374	0.521	12
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Right	23095	707.5	25	25	24.20	22.69	0.306	0.433	

10.1.6. LTE Band 13 (10MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Touch	23230	782	1	25	25.50	24.78	0.091	0.107	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Touch	23230	782	25	25	24.50	23.86	0.079	0.092	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Tilt	23230	782	1	25	25.50	24.78	0.043	0.051	
AG.0	Ant.A	Head	QPSK	DSI3	0	Left Tilt	23230	782	25	25	24.50	23.86	0.039	0.045	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Touch	23230	782	1	25	25.50	24.78	0.130	0.153	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Touch	23230	782	25	25	24.50	23.86	0.106	0.123	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Tilt	23230	782	1	25	25.50	24.78	0.060	0.071	
AG.0	Ant.A	Head	QPSK	DSI3	0	Right Tilt	23230	782	25	25	24.50	23.86	0.049	0.057	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	23230	782	1	25	25.50	24.78	0.337	0.398	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	23230	782	25	25	24.50	23.86	0.267	0.309	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Front	23230	782	1	25	25.50	24.78	0.137	0.162	
AG.0	Ant.A	Bodyworn & Hotspot	QPSK	DSI1	10	Front	23230	782	25	25	24.50	23.86	0.113	0.131	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Bottom	23230	782	1	25	25.50	24.78	0.117	0.138	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Bottom	23230	782	25	25	24.50	23.86	0.096	0.111	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Right	23230	782	1	25	25.50	24.78	0.339	0.400	
AG.0	Ant.A	Hotspot	QPSK	DSI1	10	Right	23230	782	25	25	24.50	23.86	0.274	0.318	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Touch	23230	782	1	25	25.50	24.78	0.120	0.142	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Touch	23230	782	25	25	24.50	23.86	0.093	0.108	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Tilt	23230	782	1	25	25.50	24.78	0.071	0.084	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Left Tilt	23230	782	25	25	24.50	23.86	0.057	0.066	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Touch	23230	782	1	25	25.50	24.78	0.196	0.231	13
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Touch	23230	782	25	25	24.50	23.86	0.157	0.182	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Tilt	23230	782	1	25	25.50	24.78	0.091	0.107	
AG.0	Ant.A+B	Head	QPSK	DSI3	0	Right Tilt	23230	782	25	25	24.50	23.86	0.075	0.087	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	23230	782	1	25	25.50	24.78	0.354	0.418	14
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	23230	782	25	25	24.50	23.86	0.280	0.324	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Front	23230	782	1	25	25.50	24.78	0.192	0.227	
AG.0	Ant.A+B	Bodyworn & Hotspot	QPSK	DSI1	10	Front	23230	782	25	25	24.50	23.86	0.155	0.180	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Left	23230	782	1	25	25.50	24.78	0.143	0.169	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Left	23230	782	25	25	24.50	23.86	0.118	0.137	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Bottom	23230	782	1	25	25.50	24.78	0.180	0.212	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Bottom	23230	782	25	25	24.50	23.86	0.146	0.169	
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Right	23230	782	1	25	25.50	24.78	0.454	0.536	15
AG.0	Ant.A+B	Hotspot	QPSK	DSI1	10	Right	23230	782	25	25	24.50	23.86	0.363	0.421	

10.1.7. LTE Band 2 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.B	Head	QPSK	DS13	0	Left Touch	18700	1860	1	0	25.00	23.98	0.132	0.167	16
AG.0	Ant.B	Head	QPSK	DS13	0	Left Touch	18700	1860	50	24	24.00	23.04	0.097	0.121	
AG.0	Ant.B	Head	QPSK	DS13	0	Left Tilt	18700	1860	1	0	25.00	23.98	0.085	0.108	
AG.0	Ant.B	Head	QPSK	DS13	0	Left Tilt	18700	1860	50	24	24.00	23.04	0.063	0.079	
AG.0	Ant.B	Head	QPSK	DS13	0	Right Touch	18700	1860	1	0	25.00	23.98	0.127	0.161	
AG.0	Ant.B	Head	QPSK	DS13	0	Right Touch	18700	1860	50	24	24.00	23.04	0.097	0.121	
AG.0	Ant.B	Head	QPSK	DS13	0	Right Tilt	18700	1860	1	0	25.00	23.98	0.086	0.109	
AG.0	Ant.B	Head	QPSK	DS13	0	Right Tilt	18700	1860	50	24	24.00	23.04	0.063	0.079	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	18700	1860	1	0	20.00	19.01	0.838	1.053	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	18700	1860	50	24	20.00	19.03	0.840	1.050	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	18700	1860	100	0	20.00	18.84	0.833	1.088	17
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	18900	1880	1	0	20.00	18.97	0.797	1.010	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	18900	1880	50	50	20.00	18.95	0.810	1.032	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	19100	1900	1	0	20.00	18.96	0.696	0.884	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	19100	1900	50	50	20.00	18.99	0.692	0.873	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Front	18700	1860	1	0	20.00	19.01	0.198	0.249	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Front	18700	1860	50	24	20.00	19.03	0.201	0.251	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Left	18700	1860	1	0	20.00	19.01	0.088	0.111	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Left	18700	1860	50	24	20.00	19.03	0.085	0.106	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	18700	1860	1	0	20.00	19.01	0.955	1.200	18
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	18700	1860	50	24	20.00	19.03	0.918	1.148	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	18700	1860	100	0	20.00	18.84	0.918	1.199	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	18900	1880	1	0	20.00	18.97	0.904	1.146	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	18900	1880	50	50	20.00	18.95	0.884	1.126	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	19100	1900	1	0	20.00	18.96	0.747	0.949	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	19100	1900	50	50	20.00	18.99	0.757	0.955	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Right	18700	1860	1	0	20.00	19.01	0.155	0.195	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Right	18700	1860	50	24	20.00	19.03	0.152	0.190	

10.1.8. LTE Band 66 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.B	Head	QPSK	DS13	0	Left Touch	132072	1720	1	0	25.00	24.31	0.075	0.088	
AG.0	Ant.B	Head	QPSK	DS13	0	Left Touch	132072	1720	50	0	24.00	23.33	0.056	0.065	
AG.0	Ant.B	Head	QPSK	DS13	0	Left Tilt	132072	1720	1	0	25.00	24.31	0.048	0.056	
AG.0	Ant.B	Head	QPSK	DS13	0	Left Tilt	132072	1720	50	0	24.00	23.33	0.035	0.041	
AG.0	Ant.B	Head	QPSK	DS13	0	Right Touch	132072	1720	1	0	25.00	24.31	0.099	0.116	26
AG.0	Ant.B	Head	QPSK	DS13	0	Right Touch	132072	1720	50	0	24.00	23.33	0.031	0.036	
AG.0	Ant.B	Head	QPSK	DS13	0	Right Tilt	132072	1720	1	0	25.00	24.31	0.036	0.042	
AG.0	Ant.B	Head	QPSK	DS13	0	Right Tilt	132072	1720	50	0	24.00	23.33	0.029	0.034	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	132072	1720	1	0	20.00	19.09	0.510	0.629	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Rear	132072	1720	50	0	20.00	19.12	0.516	0.632	27
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Front	132072	1720	1	0	20.00	19.09	0.045	0.055	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DS11	10	Front	132072	1720	50	0	20.00	19.12	0.087	0.107	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Left	132072	1720	1	0	20.00	19.09	0.043	0.053	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Left	132072	1720	50	0	20.00	19.12	0.060	0.073	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	132072	1720	1	0	20.00	19.09	0.516	0.636	28
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Bottom	132072	1720	50	0	20.00	19.12	0.515	0.631	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Right	132072	1720	1	0	20.00	19.09	0.111	0.137	
AG.0	Ant.B	Hotspot	QPSK	DS11	10	Right	132072	1720	50	0	20.00	19.12	0.138	0.169	

10.1.9. LTE Band 41 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.B	Head	QPSK	DSI3	0	Left Touch	41055	2636.5	1	0	25.00	24.40	0.074	0.085	
AG.0	Ant.B	Head	QPSK	DSI3	0	Left Touch	41055	2636.5	50	0	24.00	23.46	0.058	0.066	
AG.0	Ant.B	Head	QPSK	DSI3	0	Left Tilt	41055	2636.5	1	0	25.00	24.40	0.062	0.071	
AG.0	Ant.B	Head	QPSK	DSI3	0	Left Tilt	41055	2636.5	50	0	24.00	23.46	0.042	0.048	
AG.0	Ant.B	Head	QPSK	DSI3	0	Right Touch	41055	2636.5	1	0	25.00	24.40	0.069	0.079	
AG.0	Ant.B	Head	QPSK	DSI3	0	Right Touch	41055	2636.5	50	0	24.00	23.46	0.054	0.061	
AG.0	Ant.B	Head	QPSK	DSI3	0	Right Tilt	41055	2636.5	1	0	25.00	24.40	0.017	0.020	
AG.0	Ant.B	Head	QPSK	DSI3	0	Right Tilt	41055	2636.5	50	0	24.00	23.46	0.014	0.016	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	39750	2506	1	0	21.00	20.56	0.415	0.459	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DSI1	10	Rear	39750	2506	50	0	21.00	20.53	0.415	0.462	20
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DSI1	10	Front	39750	2506	1	0	21.00	20.56	0.086	0.095	
AG.0	Ant.B	Bodyworn & Hotspot	QPSK	DSI1	10	Front	39750	2506	50	0	21.00	20.53	0.084	0.094	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Left	39750	2506	1	0	21.00	20.56	0.038	0.042	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Left	39750	2506	50	0	21.00	20.53	0.036	0.040	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	39750	2506	1	0	21.00	20.56	0.660	0.730	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	39750	2506	50	0	21.00	20.53	0.655	0.730	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	39750	2506	100	0	21.00	20.47	0.557	0.629	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	40185	2549.5	1	0	21.00	20.25	0.653	0.776	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	40185	2549.5	50	0	21.00	20.28	0.645	0.761	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	40620	2593	1	0	21.00	20.13	0.712	0.870	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	40620	2593	50	0	21.00	20.21	0.749	0.898	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	41055	2636.5	1	0	21.00	20.46	1.090	1.234	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	41055	2636.5	50	0	21.00	20.41	1.080	1.237	21
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	41490	2680	1	0	21.00	20.26	0.952	1.129	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Bottom	41490	2680	50	0	21.00	20.32	0.941	1.100	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Right	39750	2506	1	0	21.00	20.56	0.073	0.081	
AG.0	Ant.B	Hotspot	QPSK	DSI1	10	Right	39750	2506	50	0	21.00	20.53	0.072	0.080	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	39750	2506	1	0	21.00	20.56	1.930	2.136	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	39750	2506	50	0	21.00	20.53	1.980	2.206	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	39750	2506	100	0	21.00	20.47	1.890	2.135	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	40185	2549.5	1	0	21.00	20.25	1.930	2.294	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	40185	2549.5	50	0	21.00	20.28	1.880	2.219	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	40620	2593	1	0	21.00	20.13	2.330	2.847	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	40620	2593	50	0	21.00	20.21	2.460	2.951	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	41055	2636.5	1	0	21.00	20.46	2.620	2.967	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	41055	2636.5	50	0	21.00	20.41	2.690	3.081	22
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	41490	2680	1	0	21.00	20.26	2.330	2.763	
AG.0	Ant.B	Product specific 10-g SAR	QPSK	DSI1	0	Bottom	41490	2680	50	0	21.00	20.32	2.350	2.748	

Note(s):

Product specific 10-g SAR was measured when the Hotspot Reported SAR is > 1.2W/kg

UL CA (Intraband-contiguous) 41C test results

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		Plot No.
					Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	
Ant.B	Head	QPSK	0	Left touch	41055	2636.5	1	0	40857	2616.7	1	99	25.00	24.39	0.082	0.094	19
	Hotspot	QPSK	10	Bottom	41055	2636.5	50	0	40857	2616.7	50	50	21.00	20.36	0.918	1.064	
Ant.B	Product specific 10-g SAR	QPSK	0	Bottom	41055	2636.5	50	0	40857	2616.7	50	50	21.00	20.36	2.560	2.966	

LTE Band 41 (20MHz Bandwidth) (continued)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported 1g (W/kg)	Plot No.
AG.1	Ant.E	Head	QPSK	DS13	0	Left Touch	39750	2506	1	49	25.00	24.02	0.328	0.411	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Touch	40185	2549.5	1	49	25.00	23.53	0.479	0.672	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Touch	40620	2593	1	49	25.00	23.99	0.536	0.676	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Touch	41055	2636.5	1	49	25.00	24.06	0.571	0.709	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Touch	41055	2636.5	50	50	24.00	23.02	0.466	0.584	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	41490	2680	1	49	25.00	23.66	0.607	0.826	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	39750	2506	1	49	25.00	24.02	0.393	0.492	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	39750	2506	50	50	24.00	22.97	0.323	0.409	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	40185	2549.5	1	49	25.00	23.53	0.582	0.816	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	40185	2549.5	50	50	24.00	22.66	0.475	0.647	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	40620	2593	1	49	25.00	23.99	0.639	0.806	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	40620	2593	50	50	24.00	22.96	0.542	0.689	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	41055	2636.5	1	49	25.00	24.06	0.726	0.901	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	41055	2636.5	50	50	24.00	23.02	0.569	0.713	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	41055	2636.5	100	0	24.00	23.01	0.573	0.720	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	41490	2680	1	49	25.00	23.66	0.781	1.063	
AG.1	Ant.E	Head	QPSK	DS13	0	Left Tilt	41490	2680	50	50	24.00	22.75	0.609	0.812	
AG.1	Ant.E	Head	QPSK	DS13	0	Right Touch	41055	2636.5	1	49	25.00	24.06	0.406	0.504	
AG.1	Ant.E	Head	QPSK	DS13	0	Right Touch	41055	2636.5	50	50	24.00	23.02	0.329	0.412	
AG.1	Ant.E	Head	QPSK	DS13	0	Right Tilt	39750	2506	1	49	25.00	24.02	0.334	0.419	
AG.1	Ant.E	Head	QPSK	DS13	0	Right Tilt	40185	2549.5	1	49	25.00	23.53	0.448	0.628	
AG.1	Ant.E	Head	QPSK	DS13	0	Right Tilt	40620	2593	1	49	25.00	23.99	0.502	0.633	
AG.1	Ant.E	Head	QPSK	DS13	0	Right Tilt	41055	2636.5	1	49	25.00	24.06	0.515	0.639	
AG.1	Ant.E	Head	QPSK	DS13	0	Right Tilt	41055	2636.5	50	50	24.00	23.02	0.411	0.515	
AG.1	Ant.E	Head	QPSK	DS13	0	Right Tilt	41490	2680	1	49	25.00	23.66	0.554	0.754	
AG.1	Ant.E	Bodyworn & Hotspot	QPSK	DS11	10	Rear	41055	2636.5	1	49	22.00	21.03	0.380	0.475	24
AG.1	Ant.E	Bodyworn & Hotspot	QPSK	DS11	10	Rear	41055	2636.5	50	50	22.00	21.05	0.366	0.455	
AG.1	Ant.E	Bodyworn & Hotspot	QPSK	DS11	10	Front	41055	2636.5	1	49	22.00	21.03	0.084	0.105	
AG.1	Ant.E	Bodyworn & Hotspot	QPSK	DS11	10	Front	41055	2636.5	50	50	22.00	21.05	0.084	0.105	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	39750	2506	1	49	22.00	20.96	0.337	0.428	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	39750	2506	50	50	22.00	20.91	0.353	0.454	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	40185	2549.5	1	49	22.00	20.70	0.474	0.639	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	40185	2549.5	50	50	22.00	20.90	0.473	0.609	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	40620	2593	1	49	22.00	20.88	0.493	0.638	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	40620	2593	50	50	22.00	20.93	0.493	0.631	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	41055	2636.5	1	49	22.00	21.03	0.512	0.640	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	41055	2636.5	50	50	22.00	21.05	0.502	0.625	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	41490	2680	1	49	22.00	20.93	0.518	0.663	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Top	41490	2680	50	50	22.00	20.85	0.510	0.665	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Left	41055	2636.5	1	49	22.00	21.03	0.057	0.071	
AG.1	Ant.E	Hotspot	QPSK	DS11	10	Left	41055	2636.5	50	50	22.00	21.05	0.058	0.072	

UL CA (Intraband-contiguous) 41C test results

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		Plot No.
					Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	
Ant.E	Head	QPSK	0	Left Tilt	41490	2680.0	1	0	41292	2660.2	1	99	25.00	23.71	0.815	1.097	23
	Hotspot	QPSK	10	Top	41490	2680.0	50	0	41292	2660.2	50	50	22.00	20.85	0.532	0.693	25

10.1.10. NR Band n5 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	167300	836.5	1	1	25.00	24.25	0.124	0.147	
AG.0	Ant.A	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	167300	836.5	50	28	25.00	24.05	0.119	0.148	
AG.0	Ant.A	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	167300	836.5	1	1	25.00	24.25	0.077	0.092	
AG.0	Ant.A	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	167300	836.5	50	28	25.00	24.05	0.070	0.087	
AG.0	Ant.A	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	167300	836.5	1	1	25.00	24.25	0.124	0.147	
AG.0	Ant.A	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	167300	836.5	50	28	25.00	24.05	0.115	0.143	
AG.0	Ant.A	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	167300	836.5	1	1	25.00	24.25	0.078	0.093	
AG.0	Ant.A	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	167300	836.5	50	28	25.00	24.05	0.072	0.090	
AG.0	Ant.A	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	167300	836.5	1	1	25.00	24.25	0.404	0.480	
AG.0	Ant.A	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	167300	836.5	50	28	25.00	24.05	0.389	0.484	30
AG.0	Ant.A	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	167300	836.5	1	1	25.00	24.25	0.147	0.175	
AG.0	Ant.A	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	167300	836.5	50	28	25.00	24.05	0.123	0.153	
AG.0	Ant.A	Hotspot	DFT-s OFDM QPSK	DSI1	10	Bottom	167300	836.5	1	1	25.00	24.25	0.129	0.153	
AG.0	Ant.A	Hotspot	DFT-s OFDM QPSK	DSI1	10	Bottom	167300	836.5	50	28	25.00	24.05	0.129	0.161	
AG.0	Ant.A	Hotspot	DFT-s OFDM QPSK	DSI1	10	Right	167300	836.5	1	1	25.00	24.25	0.290	0.345	
AG.0	Ant.A	Hotspot	DFT-s OFDM QPSK	DSI1	10	Right	167300	836.5	50	28	25.00	24.05	0.234	0.291	
AG.0	Ant.A	Head	CP OFDM QPSK	DSI3	0	Left Touch	167300	836.5	1	1	23.50	22.71	0.073	0.088	
AG.0	Ant.A	Bodyworn & Hotspot	CP OFDM QPSK	DSI1	10	Rear	167300	836.5	1	1	23.50	22.71	0.277	0.332	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	167300	836.5	1	1	25.00	24.25	0.116	0.138	
AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	167300	836.5	50	28	25.00	24.05	0.123	0.153	
AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	167300	836.5	1	1	25.00	24.25	0.073	0.087	
AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	167300	836.5	50	28	25.00	24.05	0.081	0.101	
AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	167300	836.5	1	1	25.00	24.25	0.137	0.163	
AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	167300	836.5	50	28	25.00	24.05	0.155	0.193	29
AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	167300	836.5	1	1	25.00	24.25	0.066	0.078	
AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	167300	836.5	50	28	25.00	24.05	0.047	0.058	
AG.0	Ant.A+B	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	167300	836.5	1	1	25.00	24.25	0.313	0.372	
AG.0	Ant.A+B	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	167300	836.5	50	28	25.00	24.05	0.339	0.422	
AG.0	Ant.A+B	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	167300	836.5	1	1	25.00	24.25	0.163	0.194	
AG.0	Ant.A+B	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	167300	836.5	50	28	25.00	24.05	0.163	0.203	
AG.0	Ant.A+B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	167300	836.5	1	1	25.00	24.25	0.187	0.222	
AG.0	Ant.A+B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	167300	836.5	50	28	25.00	24.05	0.174	0.217	
AG.0	Ant.A+B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Bottom	167300	836.5	1	1	25.00	24.25	0.129	0.153	
AG.0	Ant.A+B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Bottom	167300	836.5	50	28	25.00	24.05	0.135	0.168	
AG.0	Ant.A+B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Right	167300	836.5	1	1	25.00	24.25	0.349	0.415	
AG.0	Ant.A+B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Right	167300	836.5	50	28	25.00	24.05	0.327	0.407	
AG.0	Ant.A+B	Head	CP OFDM QPSK	DSI3	0	RightTouch	167300	836.5	1	1	23.50	22.71	0.108	0.130	
AG.0	Ant.A+B	Bodyworn & Hotspot	CP OFDM QPSK	DSI1	10	Rear	167300	836.5	1	1	23.50	22.71	0.294	0.353	

Note(s):

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

10.1.11. NR Band n66 (40MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	349000	1745	1	1	25.00	24.42	0.101	0.115	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	349000	1745	108	54	25.00	24.43	0.114	0.130	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	349000	1745	1	1	25.00	24.42	0.046	0.053	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	349000	1745	108	54	25.00	24.43	0.060	0.068	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	349000	1745	1	1	25.00	24.42	0.085	0.097	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	349000	1745	108	54	25.00	24.43	0.150	0.171	31
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	349000	1745	1	1	25.00	24.42	0.101	0.115	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	349000	1745	108	54	25.00	24.43	0.149	0.170	
AG.0	Ant.B	Bodyworm & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	349000	1745	1	1	20.00	19.29	0.641	0.755	
AG.0	Ant.B	Bodyworm & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	349000	1745	108	54	20.00	19.32	0.736	0.861	32
AG.0	Ant.B	Bodyworm & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	349000	1745	1	1	20.00	19.29	0.186	0.219	
AG.0	Ant.B	Bodyworm & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	349000	1745	108	54	20.00	19.32	0.213	0.249	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Top	349000	1745	1	1	20.00	19.29	0.134	0.158	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Top	349000	1745	108	54	20.00	19.32	0.149	0.174	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	349000	1745	1	1	20.00	19.29	0.076	0.089	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	349000	1745	108	54	20.00	19.32	0.086	0.101	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Bottom	349000	1745	1	1	20.00	19.29	0.520	0.612	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Bottom	349000	1745	108	54	20.00	19.32	0.608	0.711	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Right	349000	1745	1	1	20.00	19.29	0.134	0.158	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Right	349000	1745	108	54	20.00	19.32	0.149	0.174	
AG.0	Ant.B	Head	CP OFDM QPSK	DSI3	0	Right Touch	349000	1745	1	1	23.50	22.78	0.067	0.079	
AG.0	Ant.B	Bodyworm & Hotspot	CP OFDM QPSK	DSI1	10	Rear	349000	1745	1	1	20.00	19.53	0.389	0.433	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	349000	1745	1	1	22.50	21.38	0.360	0.466	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	349000	1745	108	54	22.50	21.40	0.381	0.491	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	349000	1745	1	1	22.50	21.38	0.487	0.630	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	349000	1745	108	54	22.50	21.40	0.508	0.654	91
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	349000	1745	1	1	22.50	21.38	0.378	0.489	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	349000	1745	108	54	22.50	21.40	0.406	0.523	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	349000	1745	1	1	22.50	21.38	0.398	0.515	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	349000	1745	108	54	22.50	21.40	0.479	0.617	
AG.1	Ant.E	Bodyworm & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	349000	1745	1	1	21.00	19.89	0.533	0.688	
AG.1	Ant.E	Bodyworm & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	349000	1745	108	54	21.00	19.86	0.556	0.723	
AG.1	Ant.E	Bodyworm & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	349000	1745	1	1	21.00	19.89	0.117	0.151	
AG.1	Ant.E	Bodyworm & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	349000	1745	108	54	21.00	19.86	0.123	0.160	
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	DSI1	10	Top	349000	1745	1	1	21.00	19.89	0.529	0.683	
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	DSI1	10	Top	349000	1745	108	54	21.00	19.86	0.559	0.727	92
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	349000	1745	1	1	21.00	19.89	0.102	0.132	
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	349000	1745	108	54	21.00	19.86	0.103	0.134	
AG.1	Ant.E	Head	CP OFDM QPSK	DSI3	0	Left Tilt	349000	1745	1	1	22.50	21.35	0.400	0.521	
AG.1	Ant.E	Bodyworm & Hotspot	CP OFDM QPSK	DSI1	10	Top	349000	1745	1	1	21.00	19.98	0.502	0.635	

Note(s):

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

10.1.12. NR Band n41 (100MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	518598	2592.99	1	1	23.00	22.79	0.408	0.428	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	518598	2592.99	135	69	23.00	22.67	0.494	0.533	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	518598	2592.99	1	1	23.00	22.79	0.546	0.573	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	518598	2592.99	135	69	23.00	22.67	0.719	0.776	33
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	518598	2592.99	1	1	23.00	22.79	0.460	0.483	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	518598	2592.99	135	69	23.00	22.67	0.453	0.489	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	518598	2592.99	1	1	23.00	22.79	0.623	0.654	
AG.1	Ant.E	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	518598	2592.99	135	69	23.00	22.67	0.607	0.655	
AG.1	Ant.E	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	518598	2592.99	1	1	20.00	19.75	0.389	0.412	
AG.1	Ant.E	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	518598	2592.99	135	69	20.00	19.59	0.384	0.422	34
AG.1	Ant.E	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	518598	2592.99	1	1	20.00	19.75	0.056	0.059	
AG.1	Ant.E	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	518598	2592.99	135	69	20.00	19.59	0.078	0.086	
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	DSI1	10	Top	518598	2592.99	1	1	20.00	19.75	0.464	0.491	35
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	DSI1	10	Top	518598	2592.99	135	69	20.00	19.59	0.386	0.424	
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	518598	2592.99	1	1	20.00	19.75	0.079	0.083	
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	518598	2592.99	135	69	20.00	19.59	0.060	0.066	
AG.1	Ant.E	Head	CP OFDM QPSK	DSI3	0	Left Tilt	518598	2592.99	1	1	23.00	22.94	0.516	0.523	
AG.1	Ant.E	Hotspot	CP OFDM QPSK	DSI1	10	Top	518598	2592.99	1	1	20.00	19.85	0.428	0.443	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	518598	2592.99	1	1	25.00	24.76	0.077	0.081	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Left Touch	518598	2592.99	135	69	25.00	24.56	0.067	0.074	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	518598	2592.99	1	1	25.00	24.76	0.036	0.038	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Left Tilt	518598	2592.99	135	69	25.00	24.56	0.027	0.030	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	518598	2592.99	1	1	25.00	24.76	0.089	0.094	36
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Right Touch	518598	2592.99	135	69	25.00	24.56	0.051	0.056	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	518598	2592.99	1	1	25.00	24.76	0.029	0.030	
AG.0	Ant.B	Head	DFT-s OFDM QPSK	DSI3	0	Right Tilt	518598	2592.99	135	69	25.00	24.56	0.015	0.016	
AG.0	Ant.B	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	518598	2592.99	1	1	19.00	18.78	0.445	0.468	
AG.0	Ant.B	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Rear	518598	2592.99	135	69	19.00	18.51	0.496	0.555	37
AG.0	Ant.B	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	518598	2592.99	1	1	19.00	18.78	0.082	0.086	
AG.0	Ant.B	Bodyworn & Hotspot	DFT-s OFDM QPSK	DSI1	10	Front	518598	2592.99	135	69	19.00	18.51	0.083	0.093	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	518598	2592.99	1	1	19.00	18.78	0.043	0.045	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Left	518598	2592.99	135	69	19.00	18.51	0.039	0.044	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Bottom	518598	2592.99	1	1	19.00	18.78	0.735	0.773	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Bottom	518598	2592.99	135	69	19.00	18.51	0.775	0.868	38
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Right	518598	2592.99	1	1	19.00	18.78	0.064	0.067	
AG.0	Ant.B	Hotspot	DFT-s OFDM QPSK	DSI1	10	Right	518598	2592.99	135	69	19.00	18.51	0.091	0.102	
AG.0	Ant.B	Head	CP OFDM QPSK	DSI3	0	Right Touch	518598	2592.99	1	1	23.50	23.35	0.036	0.037	
AG.0	Ant.B	Hotspot	CP OFDM QPSK	DSI1	10	Bottom	518598	2592.99	1	1	19.00	18.90	0.709	0.726	

Note(s):

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

10.1.13. Wi-Fi (DTS Band)

DTS SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11b 1Mbps	DSI 3	0	Left Touch	1	2412	0.134	98.9	18.00	17.21	0.104	0.126	1	39
AG.1	Ant.G	Head	802.11b 1Mbps	DSI 3	0	Left Tilt	1	2412	0.046	98.9	18.00	17.21				
AG.1	Ant.G	Head	802.11b 1Mbps	DSI 3	0	Right Touch	1	2412	0.055	98.9	18.00	17.21				
AG.1	Ant.G	Head	802.11b 1Mbps	DSI 3	0	Right Tilt	1	2412	0.021	98.9	18.00	17.21				
AG.1	Ant.G	Bodyworm & Hotspot	802.11b 1Mbps	DSI 1	10	Rear	1	2412	0.153	98.9	18.00	17.21	0.139	0.169	1	40
AG.1	Ant.G	Bodyworm & Hotspot	802.11b 1Mbps	DSI 1	10	Front	1	2412	0.028	98.9	18.00	17.21				
AG.1	Ant.G	Hotspot	802.11b 1Mbps	DSI 1	10	Right	1	2412	0.141	98.9	18.00	17.21	0.119	0.144	1	

DTS SISO Ant.F SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported 1g (W/kg)	Note	Plot No.
AG.1	Ant.F	Head	802.11b 1Mbps	DSI 3	0	Left Touch	6	2437	0.290	98.9	18.00	17.96				
AG.1	Ant.F	Head	802.11b 1Mbps	DSI 3	0	Left Tilt	6	2437	0.414	98.9	18.00	17.96	0.317	0.324	2	41
AG.1	Ant.F	Head	802.11b 1Mbps	DSI 3	0	Right Touch	6	2437	0.204	98.9	18.00	17.96				
AG.1	Ant.F	Head	802.11b 1Mbps	DSI 3	0	Right Tilt	6	2437	0.327	98.9	18.00	17.96	0.262	0.267		
AG.1	Ant.F	Bodyworm & Hotspot	802.11b 1Mbps	DSI 1	10	Rear	6	2437	0.364	98.9	18.00	17.96	0.288	0.294	1	
AG.1	Ant.F	Bodyworm & Hotspot	802.11b 1Mbps	DSI 1	10	Front	6	2437	0.086	98.9	18.00	17.96				
AG.1	Ant.F	Hotspot	802.11b 1Mbps	DSI 1	10	Top	6	2437	0.445	98.9	18.00	17.96	0.363	0.371	2	42
AG.1	Ant.F	Hotspot	802.11b 1Mbps	DSI 1	10	Left	6	2437	0.025	98.9	18.00	17.96				
AG.1	Ant.F	Hotspot	802.11b 1Mbps	DSI 1	10	Right	6	2437	0.065	98.9	18.00	17.96	0.052	0.053		

DTS MIMO Ant.G+F SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11b 1Mbps	DSI 3	0	Left Touch	1	2412	0.385	98.9	18.00	17.11				
AG.1	Ant.G	Head	802.11b 1Mbps	DSI 3	0	Left Tilt	1	2412	0.498	98.9	18.00	17.11				
AG.1	Ant.G	Head	802.11b 1Mbps	DSI 3	0	Right Touch	1	2412	0.261	98.9	18.00	17.11				
AG.1	Ant.G	Head	802.11b 1Mbps	DSI 3	0	Right Tilt	1	2412	0.385	98.9	18.00	17.11				
AG.1	Ant.G	Bodyworm & Hotspot	802.11b 1Mbps	DSI 1	10	Rear	1	2412	0.409	98.9	18.00	17.11				
AG.1	Ant.G	Bodyworm & Hotspot	802.11b 1Mbps	DSI 1	10	Front	1	2412	0.066	98.9	18.00	17.11				
AG.1	Ant.G	Hotspot	802.11b 1Mbps	DSI 1	10	Top	1	2412	0.447	98.9	18.00	17.11				
AG.1	Ant.G	Hotspot	802.11b 1Mbps	DSI 1	10	Left	1	2412	0.033	98.9	18.00	17.11				
AG.1	Ant.G	Hotspot	802.11b 1Mbps	DSI 1	10	Right	1	2412	0.171	98.9	18.00	17.11	0.070	0.087		
AG.1	Ant.F	Head	802.11b 1Mbps	DSI 3	0	Left Touch	1	2412	0.385	98.9	18.00	17.93	0.291	0.299		
AG.1	Ant.F	Head	802.11b 1Mbps	DSI 3	0	Left Tilt	1	2412	0.498	98.9	18.00	17.93	0.361	0.371	2	43
AG.1	Ant.F	Head	802.11b 1Mbps	DSI 3	0	Right Touch	1	2412	0.261	98.9	18.00	17.93	0.199	0.205		
AG.1	Ant.F	Head	802.11b 1Mbps	DSI 3	0	Right Tilt	1	2412	0.385	98.9	18.00	17.93				
AG.1	Ant.F	Bodyworm & Hotspot	802.11b 1Mbps	DSI 1	10	Rear	1	2412	0.409	98.9	18.00	17.93	0.350	0.360	2	44
AG.1	Ant.F	Bodyworm & Hotspot	802.11b 1Mbps	DSI 1	10	Front	1	2412	0.066	98.9	18.00	17.93				
AG.1	Ant.F	Hotspot	802.11b 1Mbps	DSI 1	10	Top	1	2412	0.447	98.9	18.00	17.93	0.348	0.358	2	
AG.1	Ant.F	Hotspot	802.11b 1Mbps	DSI 1	10	Left	1	2412	0.033	98.9	18.00	17.93				
AG.1	Ant.F	Hotspot	802.11b 1Mbps	DSI 1	10	Right	1	2412	0.171	98.9	18.00	17.93				

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.

10.1.14. Wi-Fi (U-NII Bands)**U-NII 2A SISO Ant.G SAR results**

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11n (HT40)MCS 0	DSI 3	0	Left Touch	54	5270	0.569	98.2	18.00	16.68	0.496	0.685	2	45
AG.1	Ant.G	Head	802.11n (HT40)MCS 0	DSI 3	0	Left Tilt	54	5270	0.163	98.2	18.00	16.68				
AG.1	Ant.G	Head	802.11n (HT40)MCS 0	DSI 3	0	Right Touch	54	5270	0.359	98.2	18.00	16.68	0.305	0.421		
AG.1	Ant.G	Head	802.11n (HT40)MCS 0	DSI 3	0	Right Tilt	54	5270	0.140	98.2	18.00	16.68				
AG.1	Ant.G	Body worn	802.11n (HT40)MCS 0	DSI 1	10	Rear	54	5270	0.308	98.2	18.00	16.68	0.190	0.262	1	46
AG.1	Ant.G	Body worn	802.11n (HT40)MCS 0	DSI 1	10	Front	54	5270	0.161	98.2	18.00	16.68				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Product specific 10-g SAR	802.11n (HT40)MCS 0	DSI 1	0	Rear	54	5270	2.060	98.2	18.00	16.68	0.469	0.647		
AG.1	Ant.G	Product specific 10-g SAR	802.11n (HT40)MCS 0	DSI 1	0	Front	54	5270	1.310	98.2	18.00	16.68				
AG.1	Ant.G	Product specific 10-g SAR	802.11n (HT40)MCS 0	DSI 1	0	Right	54	5270	6.250	98.2	18.00	16.68	1.110	1.532	2	47

U-NII 2A SISO Ant.D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.D	Head	802.11n (HT40)	DSI 3	0	Left Touch	54	5270	0.220	98.2	18.00	17.30	0.145	0.174	1	48
AG.1	Ant.D	Head	802.11n (HT40)	DSI 3	0	Left Tilt	54	5270	0.169	98.2	18.00	17.30				
AG.1	Ant.D	Head	802.11n (HT40)	DSI 3	0	Right Touch	54	5270	0.176	98.2	18.00	17.30				
AG.1	Ant.D	Head	802.11n (HT40)	DSI 3	0	Right Tilt	54	5270	0.111	98.2	18.00	17.30				
AG.1	Ant.D	Body worn	802.11n (HT40)	DSI 1	10	Rear	54	5280	0.351	98.2	18.00	17.30	0.253	0.303	1	49
AG.1	Ant.D	Body worn	802.11n (HT40)	DSI 1	10	Front	54	5280	0.039	98.2	18.00	17.30				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.D	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Rear	54	5280	1.630	98.2	18.00	17.30	0.391	0.468		
AG.1	Ant.D	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Front	54	5280	0.409	98.2	18.00	17.30				
AG.1	Ant.D	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Top	54	5280	3.750	98.2	18.00	17.30	0.826	0.989	2	50
AG.1	Ant.D	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Right	54	5280	2.000	98.2	18.00	17.30				

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.

U-NII 2A MIMO Ant.G+D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11n (HT40)	DSI3	0	Left Touch	54	5270	0.712	98.2	18.00	16.70	0.544	0.748		51
AG.1	Ant.G	Head	802.11n (HT40)	DSI3	0	Left Tilt	54	5270	0.301	98.2	18.00	16.70				
AG.1	Ant.G	Head	802.11n (HT40)	DSI3	0	Right Touch	54	5270	0.819	98.2	18.00	16.70	0.455	0.625	2	
AG.1	Ant.G	Head	802.11n (HT40)	DSI3	0	Right Tilt	54	5270	0.245	98.2	18.00	16.70				
AG.1	Ant.G	Body worn	802.11n (HT40)	DSI 1	10	Rear	54	5280	1.210	98.2	18.00	16.70	0.371	0.510	2	52
AG.1	Ant.G	Body worn	802.11n (HT40)	DSI 1	10	Front	54	5280	0.210	98.2	18.00	16.70	0.154	0.212		
AG.1	Ant.D	Head	802.11n (HT40)	DSI3	0	Left Touch	54	5270	0.712	98.2	18.00	17.34				
AG.1	Ant.D	Head	802.11n (HT40)	DSI3	0	Left Tilt	54	5270	0.301	98.2	18.00	17.34				
AG.1	Ant.D	Head	802.11n (HT40)	DSI3	0	Right Touch	54	5270	0.819	98.2	18.00	17.34				
AG.1	Ant.D	Head	802.11n (HT40)	DSI3	0	Right Tilt	54	5270	0.245	98.2	18.00	17.34				
AG.1	Ant.D	Body worn	802.11n (HT40)	DSI 1	10	Rear	54	5280	1.210	98.2	18.00	17.34				
AG.1	Ant.D	Body worn	802.11n (HT40)	DSI 1	10	Front	54	5280	0.210	98.2	18.00	17.34				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Rear	54	5280	1.950	98.2	18.00	16.70	0.531	0.730		
AG.1	Ant.G	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Front	54	5280	1.410	98.2	18.00	16.70				
AG.1	Ant.G	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Top	54	5280	4.970	98.2	18.00	16.70				
AG.1	Ant.G	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Right	54	5280	8.010	98.2	18.00	16.70	1.320	1.814	2	53
AG.1	Ant.D	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Rear	54	5280	1.950	98.2	18.00	17.34				
AG.1	Ant.D	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Front	54	5280	1.410	98.2	18.00	17.34				
AG.1	Ant.D	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Top	54	5280	4.970	98.2	18.00	17.34	1.180	1.399		
AG.1	Ant.D	Product specific 10-g SAR	802.11n (HT40)	DSI 1	0	Right	54	5280	8.010	98.2	18.00	17.34				

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. Tested all positions of U-NII 2A Head exposure condition without applying initial SAR.

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

U-NII 2C SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	122	5610	0.340	94.5	18.00	17.08				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	122	5610	0.107	94.5	18.00	17.08				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	122	5610	0.360	94.5	18.00	17.08	0.262	0.343	1	54
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	122	5610	0.090	94.5	18.00	17.08				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	122	5610	0.306	94.5	18.00	17.08	0.217	0.284	1	55
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Front	122	5610	0.059	94.5	18.00	17.08				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	122	5610	1.720	94.5	18.00	17.08	0.308	0.403		
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	122	5610	1.110	94.5	18.00	17.08				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	122	5610	6.860	94.5	18.00	17.08	1.150	1.504	2	56

U-NII 2C SISO Ant.D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported 1g (W/kg)	Note	Plot No.
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	122	5610	0.215	94.5	18.00	17.59				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	122	5610	0.285	94.5	18.00	17.59	0.191	0.222		
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	122	5610	0.262	94.5	18.00	17.59				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	122	5610	0.320	94.5	18.00	17.59	0.197	0.229	1	57
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	122	5610	0.527	94.5	18.00	17.59	0.376	0.437	2	58
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Front	122	5610	0.049	94.5	18.00	17.59	0.016	0.019		

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported 10g (W/kg)	Note	Plot No.
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	122	5610	1.790	94.5	18.00	17.59	0.438	0.509		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	122	5610	0.357	94.5	18.00	17.59				
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	122	5610	6.260	94.5	18.00	17.59	1.160	1.349	2	59
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	122	5610	2.520	94.5	18.00	17.59	0.458	0.533		

U-NII 2C MIMO Ant.G+D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	122	5610	0.281	94.5	18.00	17.02				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	122	5610	0.577	94.5	18.00	17.02				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	122	5610	0.327	94.5	18.00	17.02				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	122	5610	0.367	94.5	18.00	17.02				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	122	5610	0.606	94.5	18.00	17.02				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Front	122	5610	0.078	94.5	18.00	17.02				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	122	5610	0.281	94.5	18.00	17.50				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	122	5610	0.577	94.5	18.00	17.50	0.337	0.400	2	60
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	122	5610	0.327	94.5	18.00	17.50				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	122	5610	0.367	94.5	18.00	17.50	0.252	0.299		
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	122	5610	0.606	94.5	18.00	17.50	0.462	0.549	2	61
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Front	122	5610	0.078	94.5	18.00	17.50	0.044	0.052		

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	122	5610	1.940	94.5	18.00	17.02				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	122	5610	0.851	94.5	18.00	17.02				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	122	5610	7.350	94.5	18.00	17.02				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	122	5610	7.060	94.5	18.00	17.02	1.270	1.684		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	122	5610	1.940	94.5	18.00	17.50	0.431	0.512		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	122	5610	0.851	94.5	18.00	17.50				
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	122	5610	7.350	94.5	18.00	17.50	1.420	1.686	2	62
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	122	5610	7.060	94.5	18.00	17.50				

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.

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

U-NII 3 SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	155	5775	0.381	94.5	18.00	17.05	0.265	0.349		
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	155	5775	0.137	94.5	18.00	17.05				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	155	5775	0.460	94.5	18.00	17.05	0.318	0.419	2	63
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	155	5775	0.122	94.5	18.00	17.05				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	155	5775	0.323	94.5	18.00	17.05	0.220	0.290	1	64
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Front	155	5775	0.099	94.5	18.00	17.05				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	155	5775	2.300	94.5	18.00	17.05	0.492	0.648		
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	155	5775	1.200	94.5	18.00	17.05				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	155	5775	5.290	94.5	18.00	17.05	0.973	1.282	2	65

U-NII 3 SISO Ant.D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	155	5775	0.621	94.5	18.00	17.51	0.364	0.431	2	
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	155	5775	0.541	94.5	18.00	17.51	0.429	0.508		66
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	155	5775	0.453	94.5	18.00	17.51				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	155	5775	0.539	94.5	18.00	17.51	0.374	0.443		
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	155	5775	0.420	94.5	18.00	17.51	0.276	0.327	2	67
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Front	155	5775	0.087	94.5	18.00	17.51				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	155	5775	1.750	94.5	18.00	17.51	0.424	0.502		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	155	5775	0.762	94.5	18.00	17.51				
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	155	5775	6.200	94.5	18.00	17.51	1.170	1.386	2	68
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	155	5775	2.040	94.5	18.00	17.51	0.457	0.541		

U-NII 3 MIMO Ant.G+D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	155	5775	0.601	94.5	18.00	16.98				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	155	5775	0.681	94.5	18.00	16.98				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	155	5775	0.443	94.5	18.00	16.98				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	155	5775	0.649	94.5	18.00	16.98				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	155	5775	0.612	94.5	18.00	16.98				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Front	155	5775	0.115	94.5	18.00	16.98	0.075	0.100		
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	155	5775	0.601	94.5	18.00	17.42				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	155	5775	0.681	94.5	18.00	17.42	0.457	0.553	2	69
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	155	5775	0.443	94.5	18.00	17.42				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	155	5775	0.649	94.5	18.00	17.42	0.455	0.550		
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	155	5775	0.612	94.5	18.00	17.42	0.450	0.544	2	70
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Front	155	5775	0.115	94.5	18.00	17.42				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	155	5775	2.230	94.5	18.00	16.98	0.525	0.703		
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	155	5775	1.050	94.5	18.00	16.98				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	155	5775	5.760	94.5	18.00	16.98				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	155	5775	7.780	94.5	18.00	16.98	1.210	1.620	2	71
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	155	5775	2.230	94.5	18.00	17.42	0.510	0.617		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	155	5775	1.050	94.5	18.00	17.42				
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	155	5775	5.760	94.5	18.00	17.42	1.230	1.488		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	155	5775	7.780	94.5	18.00	17.42				

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.

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

U-NII 4 SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	171	5855	0.407	94.5	18.00	17.04	0.264	0.349		
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	171	5855	0.129	94.5	18.00	17.04				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	171	5855	0.660	94.5	18.00	17.04	0.424	0.560	2	72
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	171	5855	0.122	94.5	18.00	17.04				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	171	5855	0.313	94.5	18.00	17.04	0.244	0.322	1	73
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Front	171	5855	0.110	94.5	18.00	17.04				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	171	5855	1.830	94.5	18.00	17.04	0.469	0.619		
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	171	5855	0.713	94.5	18.00	17.04				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	171	5855	4.570	94.5	18.00	17.04	0.816	1.077	2	74

U-NII 4 SISO Ant.D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	171	5855	0.634	94.5	18.00	17.33	0.362	0.447		
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	171	5855	0.700	94.5	18.00	17.33	0.408	0.504	2	75
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	171	5855	0.479	94.5	18.00	17.33				
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	171	5855	0.522	94.5	18.00	17.33				
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	171	5855	0.398	94.5	18.00	17.33	0.282	0.348	1	76
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Front	171	5855	0.083	94.5	18.00	17.33				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	171	5855	1.450	94.5	18.00	17.33	0.349	0.431		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	171	5855	0.840	94.5	18.00	17.33				
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	171	5855	4.940	94.5	18.00	17.33	0.908	1.121	2	77
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	171	5855	1.980	94.5	18.00	17.33	0.468	0.578		

U-NII 4 MIMO Ant.G+D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Note	Plot No.
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	171	5855	0.741	94.5	18.00	16.91	0.353	0.480		
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	171	5855	0.958	94.5	18.00	16.91				
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	171	5855	0.623	94.5	18.00	16.91	0.378	0.514		
AG.1	Ant.G	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	171	5855	0.572	94.5	18.00	16.91				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	171	5855	0.502	94.5	18.00	16.91				
AG.1	Ant.G	Body worn	802.11ac (VHT80)	DSI 1	10	Front	171	5855	0.133	94.5	18.00	16.91	0.101	0.137		
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Touch	171	5855	0.741	94.5	18.00	17.24	0.435	0.548		
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Left Tilt	171	5855	0.958	94.5	18.00	17.24	0.646	0.814	2	78
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Touch	171	5855	0.623	94.5	18.00	17.24	0.333	0.420		
AG.1	Ant.D	Head	802.11ac (VHT80)	DSI 3	0	Right Tilt	171	5855	0.572	94.5	18.00	17.24				
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Rear	171	5855	0.502	94.5	18.00	17.24	0.352	0.444	2	79
AG.1	Ant.D	Body worn	802.11ac (VHT80)	DSI 1	10	Front	171	5855	0.133	94.5	18.00	17.24				

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	171	5855	2.040	94.5	18.00	16.91	0.409	0.556		
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	171	5855	0.974	94.5	18.00	16.91				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	171	5855	6.020	94.5	18.00	16.91				
AG.1	Ant.G	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	171	5855	6.680	94.5	18.00	16.91	1.160	1.578	2	80
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Rear	171	5855	2.040	94.5	18.00	17.24	0.403	0.508		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Front	171	5855	0.974	94.5	18.00	17.24				
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Top	171	5855	6.020	94.5	18.00	17.24	1.100	1.387		
AG.1	Ant.D	Product specific 10-g SAR	802.11ac (VHT80)	DSI 1	0	Right	171	5855	6.680	94.5	18.00	17.24				

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.

10.1.15. Bluetooth

Bluetooth SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.1	Ant.G	Head	GFSK DHS	DS13	0	Left Touch	39	2441	76.9	19.50	18.25	0.048	0.065	81
AG.1	Ant.G	Head	GFSK DHS	DS13	0	Left Tilt	39	2441	76.9	19.50	18.25	0.018	0.024	
AG.1	Ant.G	Head	GFSK DHS	DS13	0	Right Touch	39	2441	76.9	19.50	18.25	0.022	0.031	
AG.1	Ant.G	Head	GFSK DHS	DS13	0	Right Tilt	39	2441	76.9	19.50	18.25	0.006	0.008	
AG.1	Ant.G	Bodyworn & Hotsopt	GFSK DHS	DS11	10	Rear	39	2441	76.9	19.50	18.25	0.093	0.128	82
AG.1	Ant.G	Bodyworn & Hotsopt	GFSK DHS	DS11	10	Front	39	2441	76.9	19.50	18.25	0.023	0.031	
AG.1	Ant.G	Hotsopt	GFSK DHS	DS11	10	Right	39	2441	76.9	19.50	18.25	0.105	0.144	83

Bluetooth SISO Ant.F SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.1	Ant.F	Head	GFSK DHS	DS13	0	Left Touch	39	2441	76.9	19.50	17.93	0.167	0.246	
AG.1	Ant.F	Head	GFSK DHS	DS13	0	Left Tilt	39	2441	76.9	19.50	17.93	0.230	0.339	84
AG.1	Ant.F	Head	GFSK DHS	DS13	0	Right Touch	39	2441	76.9	19.50	17.93	0.152	0.224	
AG.1	Ant.F	Head	GFSK DHS	DS13	0	Right Tilt	39	2441	76.9	19.50	17.93	0.215	0.317	
AG.1	Ant.F	Bodyworn & Hotsopt	GFSK DHS	DS11	10	Rear	39	2441	76.9	19.50	17.93	0.185	0.273	85
AG.1	Ant.F	Bodyworn & Hotsopt	GFSK DHS	DS11	10	Front	39	2441	76.9	19.50	17.93	0.054	0.080	
AG.1	Ant.F	Hotsopt	GFSK DHS	DS11	10	Top	39	2441	76.9	19.50	17.93	0.267	0.394	86
AG.1	Ant.F	Hotsopt	GFSK DHS	DS11	10	Left	39	2441	76.9	19.50	17.93	0.009	0.014	
AG.1	Ant.F	Hotsopt	GFSK DHS	DS11	10	Right	39	2441	76.9	19.50	17.93	0.031	0.045	

Bluetooth MIMO Ant.G+F SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Plot No.
AG.1	Ant.G	Head	GFSK DHS	DS13	0	Left Touch	0	2402	76.9	16.00	15.51	0.070	0.080	87
AG.1	Ant.G	Head	GFSK DHS	DS13	0	Left Tilt	0	2402	76.9	16.00	15.51			
AG.1	Ant.G	Head	GFSK DHS	DS13	0	Right Touch	0	2402	76.9	16.00	15.51	0.047	0.054	
AG.1	Ant.G	Head	GFSK DHS	DS13	0	Right Tilt	0	2402	76.9	16.00	15.51			
AG.1	Ant.G	Bodyworn & Hotsopt	GFSK DHS	DS11	10	Rear	0	2402	76.9	16.00	15.51	0.084	0.096	88
AG.1	Ant.G	Bodyworn & Hotsopt	GFSK DHS	DS11	10	Front	0	2402	76.9	16.00	15.51			
AG.1	Ant.G	Hotspot	GFSK DHS	DS11	10	Top	0	2402	76.9	16.00	15.51			
AG.1	Ant.G	Hotspot	GFSK DHS	DS11	10	Left	0	2402	76.9	16.00	15.51			
AG.1	Ant.G	Hotspot	GFSK DHS	DS11	10	Right	0	2402	76.9	16.00	15.51	0.086	0.099	89
AG.1	Ant.F	Head	GFSK DHS	DS13	0	Left Touch	0	2402	76.9	16.00	14.98			
AG.1	Ant.F	Head	GFSK DHS	DS13	0	Left Tilt	0	2402	76.9	16.00	14.98	0.052	0.067	
AG.1	Ant.F	Head	GFSK DHS	DS13	0	Right Touch	0	2402	76.9	16.00	14.98			
AG.1	Ant.F	Head	GFSK DHS	DS13	0	Right Tilt	0	2402	76.9	16.00	14.98	0.062	0.080	
AG.1	Ant.F	Bodyworn & Hotsopt	GFSK DHS	DS11	10	Rear	0	2402	76.9	16.00	14.98			
AG.1	Ant.F	Bodyworn & Hotsopt	GFSK DHS	DS11	10	Front	0	2402	76.9	16.00	14.98	0.029	0.038	
AG.1	Ant.F	Hotspot	GFSK DHS	DS11	10	Top	0	2402	76.9	16.00	14.98	0.056	0.073	
AG.1	Ant.F	Hotspot	GFSK DHS	DS11	10	Left	0	2402	76.9	16.00	14.98	0.002	0.003	
AG.1	Ant.F	Hotspot	GFSK DHS	DS11	10	Right	0	2402	76.9	16.00	14.98			

10.1.16. NFC

Antenna	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Test setup		Freq. (MHz)	10-g SAR (W/kg)	Plot No.
					Type	Bitrate		Meas.	
NFC	PBRS	Product specific 10-g SAR	0	Rear	A	106	13.6	0.011	90
NFC	PBRS	Product specific 10-g SAR	0	Front	A	106	13.6	0.000	
NFC	PBRS	Product specific 10-g SAR	0	Top	A	106	13.6	0.000	
NFC	PBRS	Product specific 10-g SAR	0	Left	A	106	13.6	0.000	

10.2. Folder Opened (UMPC-mini tablet) SAR Results

10.2.1. GSM 850

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.A+B	Body	GPRS2 Slots	DSIO	10	Rear	128	824.4	32.50	30.59	0.688	1.068			1
AG.0	Ant.A+B	Body	GPRS2 Slots	DSIO	10	Rear	190	836.6	32.50	31.18	0.568	0.770			
AG.0	Ant.A+B	Body	GPRS2 Slots	DSIO	10	Rear	251	848.8	32.50	30.92	0.702	1.010			
AG.0	Ant.A+B	Body	GPRS2 Slots	DSIO	10	Front	190	836.6	32.50	31.18	0.478	0.648			
AG.0	Ant.A+B	Body	GPRS2 Slots	DSIO	10	Bottom	190	836.6	32.50	31.18	0.187	0.253			
AG.0	Ant.A+B	Body	GPRS2 Slots	DSIO	10	Right	190	836.6	32.50	31.18	0.427	0.579			
AG.0	Ant.A+B	Extremity	GPRS2 Slots	DSIO	0	Rear	190	836.6	32.50	31.18			1.210	1.640	2
AG.0	Ant.A+B	Extremity	GPRS2 Slots	DSIO	0	Front	190	836.6	32.50	31.18			0.930	1.260	
AG.0	Ant.A+B	Extremity	GPRS2 Slots	DSIO	0	Bottom	190	836.6	32.50	31.18			0.694	0.941	
AG.0	Ant.A+B	Extremity	GPRS2 Slots	DSIO	0	Right	190	836.6	32.50	31.18			0.850	1.152	

10.2.2. GSM 1900

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.B	Body	GPRS4 Slots	DSIO	10	Rear	661	1880	22.50	21.60	0.542	0.667			3
AG.0	Ant.B	Body	GPRS4 Slots	DSIO	10	Front	661	1880	22.50	21.60	0.334	0.411			
AG.0	Ant.B	Body	GPRS4 Slots	DSIO	10	Bottom	661	1880	22.50	21.60	0.505	0.621			
AG.0	Ant.B	Body	GPRS4 Slots	DSIO	10	Right	661	1880	22.50	21.60	0.127	0.156			
AG.0	Ant.B	Extremity	GPRS4 Slots	DSIO	0	Rear	661	1880	22.50	21.60			0.960	1.181	
AG.0	Ant.B	Extremity	GPRS4 Slots	DSIO	0	Front	661	1880	22.50	21.60			0.826	1.016	
AG.0	Ant.B	Extremity	GPRS4 Slots	DSIO	0	Bottom	661	1880	22.50	21.60			1.550	1.907	4
AG.0	Ant.B	Extremity	GPRS4 Slots	DSIO	0	Right	661	1880	22.50	21.60			0.377	0.464	

10.2.3. WCDMA Band V

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.A+B	Body	Rel 99RMC 12.2 kbps	DSIO	10	Rear	4132	826.4	25.30	24.46	0.733	0.889			
AG.0	Ant.A+B	Body	Rel 99RMC 12.2 kbps	DSIO	10	Rear	4183	836.6	25.30	24.43	0.858	1.048			5
AG.0	Ant.A+B	Body	Rel 99RMC 12.2 kbps	DSIO	10	Rear	4233	846.6	25.30	24.46	0.728	0.883			
AG.0	Ant.A+B	Body	Rel 99RMC 12.2 kbps	DSIO	10	Front	4183	836.6	25.30	24.43	0.404	0.494			
AG.0	Ant.A+B	Body	Rel 99RMC 12.2 kbps	DSIO	10	Bottom	4183	836.6	25.30	24.43	0.208	0.254			
AG.0	Ant.A+B	Body	Rel 99RMC 12.2 kbps	DSIO	10	Right	4183	836.6	25.30	24.43	0.240	0.293			
AG.0	Ant.A+B	Extremity	Rel 99RMC 12.2 kbps	DSIO	0	Rear	4183	836.6	25.30	24.43			1.280	1.564	
AG.0	Ant.A+B	Extremity	Rel 99RMC 12.2 kbps	DSIO	0	Front	4183	836.6	25.30	24.43			0.970	1.185	
AG.0	Ant.A+B	Extremity	Rel 99RMC 12.2 kbps	DSIO	0	Bottom	4183	836.6	25.30	24.43			0.885	1.081	
AG.0	Ant.A+B	Extremity	Rel 99RMC 12.2 kbps	DSIO	0	Right	4183	836.6	25.30	24.43			1.310	1.601	6

10.2.4. LTE Band 5 (10MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Rear	20525	836.5	1	0	25.50	24.31	0.639	0.840			7
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Rear	20525	836.5	25	12	24.50	23.34	0.531	0.694			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Front	20525	836.5	1	0	25.50	24.31	0.402	0.529			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Front	20525	836.5	25	12	24.50	23.34	0.341	0.445			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Bottom	20525	836.5	1	0	25.50	24.31	0.249	0.327			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Bottom	20525	836.5	25	12	24.50	23.34	0.205	0.268			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Right	20525	836.5	1	0	25.50	24.31	0.255	0.335			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Right	20525	836.5	25	12	24.50	23.34	0.206	0.269			
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Rear	20525	836.5	1	0	25.50	24.31			1.160	1.526	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Rear	20525	836.5	25	12	24.50	23.34			0.952	1.243	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Front	20525	836.5	1	0	25.50	24.31			1.080	1.420	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Front	20525	836.5	25	12	24.50	23.34			0.879	1.148	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Bottom	20525	836.5	1	0	25.50	24.31			0.963	1.267	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Bottom	20525	836.5	25	12	24.50	23.34			0.751	0.981	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Right	20525	836.5	1	0	25.50	24.31			1.390	1.828	8
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Right	20525	836.5	25	12	24.50	23.34			1.110	1.450	

10.2.5. LTE Band 12 (10MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Rear	23095	707.5	1	49	25.20	23.76	0.519	0.723			9
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Rear	23095	707.5	25	25	24.20	22.69	0.399	0.565			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Front	23095	707.5	1	49	25.20	23.76	0.262	0.365			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Front	23095	707.5	25	25	24.20	22.69	0.210	0.297			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Bottom	23095	707.5	1	49	25.20	23.76	0.245	0.341			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Bottom	23095	707.5	25	25	24.20	22.69	0.186	0.263			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Right	23095	707.5	1	49	25.20	23.76	0.342	0.476			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Right	23095	707.5	25	25	24.20	22.69	0.269	0.381			
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Rear	23095	707.5	1	49	25.20	23.76			0.938	1.307	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Rear	23095	707.5	25	25	24.20	22.69			0.696	0.985	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Front	23095	707.5	1	49	25.20	23.76			1.100	1.532	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Front	23095	707.5	25	25	24.20	22.69			0.871	1.233	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Bottom	23095	707.5	1	49	25.20	23.76			0.626	0.872	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Bottom	23095	707.5	25	25	24.20	22.69			0.514	0.728	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Right	23095	707.5	1	49	25.20	23.76			1.420	1.978	10
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Right	23095	707.5	25	25	24.20	22.69			1.140	1.614	

10.2.6. LTE Band 13 (10MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Rear	23230	782	1	25	25.50	24.78	0.628	0.741			11
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Rear	23230	782	25	25	24.50	23.86	0.517	0.599			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Front	23230	782	1	25	25.50	24.78	0.409	0.483			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Front	23230	782	25	25	24.50	23.86	0.337	0.391			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Bottom	23230	782	1	25	25.50	24.78	0.265	0.313			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Bottom	23230	782	25	25	24.50	23.86	0.204	0.236			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Right	23230	782	1	25	25.50	24.78	0.304	0.359			
AG.0	Ant.A+B	Body	QPSK	DSIO	10	Right	23230	782	25	25	24.50	23.86	0.236	0.273			
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Rear	23230	782	1	25	25.50	24.78			0.914	1.079	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Rear	23230	782	25	25	24.50	23.86			0.749	0.868	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Front	23230	782	1	25	25.50	24.78			0.790	0.932	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Front	23230	782	25	25	24.50	23.86			0.646	0.749	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Bottom	23230	782	1	25	25.50	24.78			0.464	0.548	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Bottom	23230	782	25	25	24.50	23.86			0.376	0.436	
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Right	23230	782	1	25	25.50	24.78			1.180	1.393	12
AG.0	Ant.A+B	Extremity	QPSK	DSIO	0	Right	23230	782	25	25	24.50	23.86			1.020	1.182	

10.2.7. LTE Band 2 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.B	Body	QPSK	DSIO	10	Rear	18700	1860	1	0	19.00	17.98	0.523	0.661			
AG.0	Ant.B	Body	QPSK	DSIO	10	Rear	18700	1860	50	24	19.00	17.93	0.528	0.676			
AG.0	Ant.B	Body	QPSK	DSIO	10	Front	18700	1860	1	0	19.00	17.98	0.287	0.363			
AG.0	Ant.B	Body	QPSK	DSIO	10	Front	18700	1860	50	24	19.00	17.93	0.288	0.368			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	18700	1860	1	0	19.00	17.98	0.634	0.802			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	18700	1860	50	24	19.00	17.93	0.641	0.820			13
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	18700	1860	100	0	19.00	17.89	0.616	0.795			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	18900	1880	1	0	19.00	17.96	0.606	0.770			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	18900	1880	50	24	19.00	17.91	0.612	0.787			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	19100	1900	1	0	19.00	17.79	0.620	0.819			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	19100	1900	50	24	19.00	17.84	0.626	0.818			
AG.0	Ant.B	Body	QPSK	DSIO	10	Right	18700	1860	1	0	19.00	17.98	0.143	0.181			
AG.0	Ant.B	Body	QPSK	DSIO	10	Right	18700	1860	50	24	19.00	17.93	0.153	0.196			
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Rear	18700	1860	1	0	19.00	17.98			1.320	1.669	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Rear	18700	1860	50	24	19.00	17.93			1.350	1.727	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Front	18700	1860	1	0	19.00	17.98			0.974	1.232	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Front	18700	1860	50	24	19.00	17.93			0.981	1.255	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	18700	1860	1	0	19.00	17.98			2.000	2.529	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	18700	1860	50	24	19.00	17.93			2.040	2.610	14
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	18700	1860	100	0	19.00	17.89			2.010	2.595	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	18900	1880	1	0	19.00	17.96			1.920	2.440	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	18900	1880	50	24	19.00	17.91			1.970	2.532	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	19100	1900	1	0	19.00	17.79			1.880	2.484	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	19100	1900	50	24	19.00	17.84			1.870	2.443	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Right	18700	1860	1	0	19.00	17.98			0.402	0.508	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Right	18700	1860	50	24	19.00	17.93			0.434	0.555	

10.2.8. LTE Band 66 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.B	Body	QPSK	DSIO	10	Rear	132072	1720	1	0	20.00	19.09	0.519	0.640			
AG.0	Ant.B	Body	QPSK	DSIO	10	Rear	132072	1720	50	0	20.00	19.12	0.561	0.687			15
AG.0	Ant.B	Body	QPSK	DSIO	10	Front	132072	1720	1	0	20.00	19.09	0.281	0.347			
AG.0	Ant.B	Body	QPSK	DSIO	10	Front	132072	1720	50	0	20.00	19.12	0.305	0.374			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	132072	1720	1	0	20.00	19.09	0.493	0.608			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	132072	1720	50	0	20.00	19.12	0.524	0.642			
AG.0	Ant.B	Body	QPSK	DSIO	10	Right	132072	1720	1	0	20.00	19.09	0.141	0.174			
AG.0	Ant.B	Body	QPSK	DSIO	10	Right	132072	1720	50	0	20.00	19.12	0.150	0.184			
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Rear	132072	1720	1	0	20.00	19.09			0.975	1.202	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Rear	132072	1720	50	0	20.00	19.12			1.050	1.286	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Front	132072	1720	1	0	20.00	19.09			0.829	1.022	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Front	132072	1720	50	0	20.00	19.12			0.896	1.097	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	132072	1720	1	0	20.00	19.09			1.850	2.281	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	132072	1720	50	0	20.00	19.12			2.000	2.449	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	132072	1720	100	0	20.00	19.11			2.100	2.578	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	132322	1745	1	0	20.00	19.00			2.310	2.908	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	132322	1745	50	0	20.00	19.02			2.400	3.008	16
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	132572	1770	1	0	20.00	18.85			2.210	2.880	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	132572	1770	50	0	20.00	18.92			2.290	2.937	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Right	132072	1720	1	0	20.00	19.09			0.266	0.328	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Right	132072	1720	50	0	20.00	19.12			0.288	0.353	

10.2.9. LTE Band 41 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.B	Body	QPSK	DSIO	10	Rear	39750	2506	1	0	18.50	17.98	0.260	0.293			
AG.0	Ant.B	Body	QPSK	DSIO	10	Rear	39750	2506	50	0	18.50	18.01	0.265	0.297			
AG.0	Ant.B	Body	QPSK	DSIO	10	Front	39750	2506	1	0	18.50	17.98	0.151	0.170			
AG.0	Ant.B	Body	QPSK	DSIO	10	Front	39750	2506	50	0	18.50	18.01	0.161	0.180			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	39750	2506	1	0	18.50	17.98	0.410	0.462			
AG.0	Ant.B	Body	QPSK	DSIO	10	Bottom	39750	2506	50	0	18.50	18.01	0.414	0.463			
AG.0	Ant.B	Body	QPSK	DSIO	10	Right	39750	2506	1	0	18.50	17.98	0.054	0.061			
AG.0	Ant.B	Body	QPSK	DSIO	10	Right	39750	2506	50	0	18.50	18.01	0.055	0.062			
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Rear	39750	2506	1	0	18.50	17.98			0.630	0.710	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Rear	39750	2506	50	0	18.50	18.01			0.650	0.728	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Front	39750	2506	1	0	18.50	17.98			0.608	0.685	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Front	39750	2506	50	0	18.50	18.01			0.631	0.706	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	39750	2506	1	0	18.50	17.98			1.370	1.544	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	39750	2506	50	0	18.50	18.01			1.440	1.612	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	39750	2506	100	0	18.50	17.86			1.470	1.703	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	40185	2549.5	1	0	18.50	17.75			1.440	1.711	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	40185	2549.5	50	0	18.50	17.72			1.480	1.771	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	40620	2593	1	0	18.50	17.61			1.530	1.878	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	40620	2593	50	0	18.50	17.66			1.640	1.990	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	41055	2636.5	1	0	18.50	17.83			1.790	2.089	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	41055	2636.5	50	0	18.50	17.82			1.830	2.140	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	41490	2680	1	0	18.50	17.63			1.690	2.065	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Bottom	41490	2680	50	0	18.50	17.76			1.740	2.063	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Right	39750	2506	1	0	18.50	17.98			0.079	0.089	
AG.0	Ant.B	Extremity	QPSK	DSIO	0	Right	39750	2506	50	0	18.50	18.01			0.083	0.093	

UL CA (Intraband-contiguous)_41C test results

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Ant.(B)	Body	QPSK	10	Bottom	39750	2506.0	50	50	39948	2525.8	50	0	18.50	17.83	0.445	0.519			17
	Extremity	QPSK	0	Bottom	41055	2636.5	50	0	40857	2616.7	50	50	18.50	17.81			1.850	2.169	18

LTE Band 41 (20MHz Bandwidth) (continued)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.1	Ant.E	Body	QPSK	DSIO	10	Rear	41055	2636.5	1	49	22.00	21.03	0.451	0.564			
AG.1	Ant.E	Body	QPSK	DSIO	10	Rear	41055	2636.5	50	50	22.00	21.05	0.451	0.561			
AG.1	Ant.E	Body	QPSK	DSIO	10	Front	41055	2636.5	1	49	22.00	21.03	0.396	0.495			
AG.1	Ant.E	Body	QPSK	DSIO	10	Front	41055	2636.5	50	50	22.00	21.05	0.383	0.477			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	39750	2506	1	49	22.00	20.96	0.508	0.645			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	39750	2506	50	50	22.00	20.91	0.519	0.667			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	40185	2549.5	1	49	22.00	20.70	0.732	0.987			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	40185	2549.5	50	50	22.00	20.90	0.713	0.919			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	40620	2593	1	49	22.00	20.88	0.746	0.965			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	40620	2593	50	50	22.00	20.93	0.764	0.977			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	41055	2636.5	1	49	22.00	21.03	0.777	0.971			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	41055	2636.5	50	50	22.00	21.05	0.783	0.974			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	41055	2636.5	100	0	22.00	20.93	0.777	0.994			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	41490	2680	1	49	22.00	20.93	0.793	1.015			
AG.1	Ant.E	Body	QPSK	DSIO	10	Top	41490	2680	50	50	22.00	20.85	0.798	1.040			
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Rear	41055	2636.5	1	49	22.00	21.03			0.717	0.896	
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Rear	41055	2636.5	50	50	22.00	21.05			0.725	0.902	
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Front	41055	2636.5	1	49	22.00	21.03			0.962	1.203	
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Front	41055	2636.5	50	50	22.00	21.05			0.963	1.198	
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Top	39750	2506	1	49	22.00	20.96			2.050	2.605	
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Top	39750	2506	50	50	22.00	20.91			2.140	2.751	
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Top	40185	2549.5	1	49	22.00	20.70			2.300	3.103	
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Top	40185	2549.5	50	50	22.00	20.90			2.420	3.118	20
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Top	40620	2593	1	49	22.00	20.88			2.260	2.925	
AG.1	Ant.E	Extremity	QPSK	DSIO	0	Top	40620	2593	50	50	22.00	20.93			2.340	2.994	

UL CA (Intraband-contiguous)_41C test results

Antenna	RF Exposure Conditions	Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Ant.E	Body	QPSK	10	Top	41490	2680.0	50	0	41292	2660.2	50	50	22.00	20.83	0.853	1.117			19
	Extremity	QPSK	0	Top	40185	2549.5	50	50	40383	2569.3	50	0	22.00	21.01			2.370	2.977	

10.2.10. NR Band n5 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.A+B	Body	DFT-s OFDM QPSK	DSIO	10	Rear	167300	836.5	1	1	25.00	24.25	0.572	0.680			21
AG.0	Ant.A+B	Body	DFT-s OFDM QPSK	DSIO	10	Rear	167300	836.5	50	28	25.00	24.05	0.415	0.516			
AG.0	Ant.A+B	Body	DFT-s OFDM QPSK	DSIO	10	Front	167300	836.5	1	1	25.00	24.25	0.365	0.434			
AG.0	Ant.A+B	Body	DFT-s OFDM QPSK	DSIO	10	Front	167300	836.5	50	28	25.00	24.05	0.345	0.429			
AG.0	Ant.A+B	Body	DFT-s OFDM QPSK	DSIO	10	Bottom	167300	836.5	1	1	25.00	24.25	0.201	0.239			
AG.0	Ant.A+B	Body	DFT-s OFDM QPSK	DSIO	10	Bottom	167300	836.5	50	28	25.00	24.05	0.196	0.244			
AG.0	Ant.A+B	Body	DFT-s OFDM QPSK	DSIO	10	Right	167300	836.5	1	1	25.00	24.25	0.252	0.300			
AG.0	Ant.A+B	Body	DFT-s OFDM QPSK	DSIO	10	Right	167300	836.5	50	28	25.00	24.05	0.236	0.294			
AG.0	Ant.A+B	Extremity	DFT-s OFDM QPSK	DSIO	0	Rear	167300	836.5	1	1	25.00	24.25			1.120	1.331	
AG.0	Ant.A+B	Extremity	DFT-s OFDM QPSK	DSIO	0	Rear	167300	836.5	50	28	25.00	24.05			1.070	1.332	
AG.0	Ant.A+B	Extremity	DFT-s OFDM QPSK	DSIO	0	Front	167300	836.5	1	1	25.00	24.25			0.891	1.059	
AG.0	Ant.A+B	Extremity	DFT-s OFDM QPSK	DSIO	0	Front	167300	836.5	50	28	25.00	24.05			0.881	1.096	
AG.0	Ant.A+B	Extremity	DFT-s OFDM QPSK	DSIO	0	Bottom	167300	836.5	1	1	25.00	24.25			0.868	1.032	
AG.0	Ant.A+B	Extremity	DFT-s OFDM QPSK	DSIO	0	Bottom	167300	836.5	50	28	25.00	24.05			0.827	1.029	
AG.0	Ant.A+B	Extremity	DFT-s OFDM QPSK	DSIO	0	Right	167300	836.5	1	1	25.00	24.25			1.390	1.652	
AG.0	Ant.A+B	Extremity	DFT-s OFDM QPSK	DSIO	0	Right	167300	836.5	50	28	25.00	24.05			1.350	1.680	22
AG.0	Ant.A+B	Body	CP-OFDMQPSK	DSIO	10	Rear	167300	836.5	1	1	23.50	22.71	0.411	0.493			
AG.0	Ant.A+B	Extremity	CP-OFDMQPSK	DSIO	0	Rear	167300	836.5	1	1	23.50	22.71			0.820	0.984	

Note(s):

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

10.2.11. NR Band n66 (40MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Rear	349000	1745	1	1	20.00	19.29	0.351	0.413			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Rear	349000	1745	108	54	20.00	19.32	0.371	0.434			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Front	349000	1745	1	1	20.00	19.29	0.365	0.430			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Front	349000	1745	108	54	20.00	19.32	0.430	0.503			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Bottom	349000	1745	1	1	20.00	19.29	0.552	0.650			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Bottom	349000	1745	108	54	20.00	19.32	0.577	0.675			23
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Right	349000	1745	1	1	20.00	19.29	0.091	0.107			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Right	349000	1745	108	54	20.00	19.32	0.097	0.113			
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Rear	349000	1745	1	1	20.00	19.29			0.840	0.989	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Rear	349000	1745	108	54	20.00	19.32			1.200	1.403	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Front	349000	1745	1	1	20.00	19.29			0.976	1.149	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Front	349000	1745	108	54	20.00	19.32			1.220	1.427	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Bottom	349000	1745	1	1	20.00	19.29			1.880	2.214	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Bottom	349000	1745	108	54	20.00	19.32			2.070	2.421	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Bottom	349000	1745	216	0	20.00	19.28			2.220	2.620	24
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Right	349000	1745	1	1	20.00	19.29			0.318	0.374	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Right	349000	1745	108	54	20.00	19.32			0.387	0.453	
AG.0	Ant.B	Body	CP-OFDMQPSK	DS10	10	Bottom	349000	1745	1	1	20.00	19.53	0.558	0.622			
AG.0	Ant.B	Extremity	CP-OFDMQPSK	DS10	0	Bottom	349000	1745	1	1	20.00	19.53			1.600	1.783	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Rear	349000	1745	1	1	21.00	19.89	0.747	0.965			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Rear	349000	1745	108	54	21.00	19.86	0.751	0.976			66
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Rear	349000	1745	216	0	21.00	19.98	0.725	0.917			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Front	349000	1745	1	1	21.00	19.89	0.335	0.433			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Front	349000	1745	108	54	21.00	19.86	0.334	0.434			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Top	349000	1745	1	1	21.00	19.89	0.613	0.792			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Top	349000	1745	108	54	21.00	19.86	0.611	0.794			
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Rear	349000	1745	1	1	21.00	19.89			1.270	1.640	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Rear	349000	1745	108	54	21.00	19.86			1.420	1.846	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Front	349000	1745	1	1	21.00	19.89			1.180	1.524	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Front	349000	1745	108	54	21.00	19.86			1.220	1.586	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Top	349000	1745	1	1	21.00	19.89			1.880	2.427	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Top	349000	1745	108	54	21.00	19.86			1.920	2.496	67
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Top	349000	1745	216	0	21.00	19.98			1.940	2.454	
AG.1	Ant.E	Body	CP-OFDMQPSK	DS10	10	Rear	349000	1745	1	1	21.00	19.98	0.622	0.787			
AG.1	Ant.E	Extremity	CP-OFDMQPSK	DS10	0	Top	349000	1745	1	1	21.00	19.98			1.870	2.365	

Note(s):

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

10.2.12. NR Band n41 (100MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Pilot No.
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Rear	518598	2592.99	1	1	20.00	19.75	0.526	0.557			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Rear	518598	2592.99	135	69	20.00	19.59	0.564	0.620			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Front	518598	2592.99	1	1	20.00	19.75	0.304	0.322			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Front	518598	2592.99	135	69	20.00	19.59	0.311	0.342			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Top	518598	2592.99	1	1	20.00	19.75	0.705	0.747			
AG.1	Ant.E	Body	DFT-s OFDM QPSK	DS10	10	Top	518598	2592.99	135	69	20.00	19.59	0.708	0.778			25
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Rear	518598	2592.99	1	1	20.00	19.75			0.859	0.910	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Rear	518598	2592.99	135	69	20.00	19.59			0.789	0.867	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Front	518598	2592.99	1	1	20.00	19.75			0.997	1.056	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Front	518598	2592.99	135	69	20.00	19.59			0.895	0.984	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Top	518598	2592.99	1	1	20.00	19.75			2.840	3.008	26
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Top	518598	2592.99	135	69	20.00	19.59			2.120	2.330	
AG.1	Ant.E	Extremity	DFT-s OFDM QPSK	DS10	0	Top	518598	2592.99	270	0	20.00	19.62			2.190	2.390	
AG.1	Ant.E	Body	CP-OFDMQPSK	DS10	10	Top	518598	2593	1	1	20.00	19.85	0.731	0.757			
AG.1	Ant.E	Extremity	CP-OFDMQPSK	DS10	0	Top	518598	2593	1	1	20.00	19.85			2.700	2.795	

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB Offset	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Pilot No.
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Rear	518598	2592.99	1	1	17.50	17.26	0.446	0.471			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Rear	518598	2592.99	135	69	17.50	17.07	0.444	0.490			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Front	518598	2592.99	1	1	17.50	17.26	0.339	0.358			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Front	518598	2592.99	135	69	17.50	17.07	0.322	0.356			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Bottom	518598	2592.99	1	1	17.50	17.26	0.661	0.699			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Bottom	518598	2592.99	135	69	17.50	17.07	0.641	0.708			27
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Right	518598	2592.99	1	1	17.50	17.26	0.067	0.071			
AG.0	Ant.B	Body	DFT-s OFDM QPSK	DS10	10	Right	518598	2592.99	135	69	17.50	17.07	0.067	0.074			
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Rear	518598	2592.99	1	1	17.50	17.26			1.130	1.194	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Rear	518598	2592.99	135	69	17.50	17.07			1.170	1.292	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Front	518598	2592.99	1	1	17.50	17.26			0.850	0.898	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Front	518598	2592.99	135	69	17.50	17.07			0.834	0.921	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Bottom	518598	2592.99	1	1	17.50	17.26			2.450	2.589	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Bottom	518598	2592.99	135	69	17.50	17.07			2.280	2.517	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Bottom	518598	2592.99	270	0	17.50	17.09			2.410	2.649	28
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Right	518598	2592.99	1	1	17.50	17.26			0.111	0.117	
AG.0	Ant.B	Extremity	DFT-s OFDM QPSK	DS10	0	Right	518598	2592.99	135	69	17.50	17.07			0.119	0.131	
AG.0	Ant.B	Body	CP-OFDMQPSK	DS10	10	Bottom	518598	2593	1	1	17.50	17.43	0.633	0.643			
AG.0	Ant.B	Extremity	CP-OFDMQPSK	DS10	0	Bottom	518598	2593	1	1	17.50	17.43			2.370	2.409	

Note(s):

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

10.2.13. Wi-Fi (DTS Band)

DTS SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Body	802.11b 1Mbps	DSHO	10	Rear	1	2412	0.292	98.9	18.00	17.21	0.172	0.209				
AG.1	Ant.G	Body	802.11b 1Mbps	DSHO	10	Front	1	2412	0.225	98.9	18.00	17.21	0.141	0.171				
AG.1	Ant.G	Body	802.11b 1Mbps	DSHO	10	Right	1	2412	0.411	98.9	18.00	17.21	0.228	0.277			2	29
AG.1	Ant.G	Extremity	802.11b 1Mbps	DSHO	0	Rear	1	2412	0.983	98.9	18.00	17.21			0.347	0.421		
AG.1	Ant.G	Extremity	802.11b 1Mbps	DSHO	0	Front	1	2412	2.990	98.9	18.00	17.21			0.638	0.774		
AG.1	Ant.G	Extremity	802.11b 1Mbps	DSHO	0	Right	1	2412	6.030	98.9	18.00	17.21			0.722	0.876	2	30

DTS SISO Ant.F SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.F	Body	802.11b 1Mbps	DSHO	10	Rear	6	2437	0.383	98.9	18.00	17.96	0.252	0.257				
AG.1	Ant.F	Body	802.11b 1Mbps	DSHO	10	Front	6	2437	0.126	98.9	18.00	17.96						
AG.1	Ant.F	Body	802.11b 1Mbps	DSHO	10	Top	6	2437	0.428	98.9	18.00	17.96	0.276	0.282			2	31
AG.1	Ant.F	Body	802.11b 1Mbps	DSHO	10	Right	6	2437	0.067	98.9	18.00	17.96						
AG.1	Ant.F	Extremity	802.11b 1Mbps	DSHO	0	Rear	6	2437	1.970	98.9	18.00	17.96			0.626	0.639		
AG.1	Ant.F	Extremity	802.11b 1Mbps	DSHO	0	Front	6	2437	1.340	98.9	18.00	17.96			0.433	0.442		
AG.1	Ant.F	Extremity	802.11b 1Mbps	DSHO	0	Top	6	2437	6.480	98.9	18.00	17.96			1.270	1.296	2	32
AG.1	Ant.F	Extremity	802.11b 1Mbps	DSHO	0	Right	6	2437	0.452	98.9	18.00	17.96						

DTS MIMO Ant.G+F SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Body	802.11b 1Mbps	DSHO	10	Rear	1	2412	0.590	98.9	18.00	17.11						
AG.1	Ant.G	Body	802.11b 1Mbps	DSHO	10	Front	1	2412	0.228	98.9	18.00	17.11						
AG.1	Ant.G	Body	802.11b 1Mbps	DSHO	10	Top	1	2412	0.484	98.9	18.00	17.11						
AG.1	Ant.G	Body	802.11b 1Mbps	DSHO	10	Right	1	2412	0.257	98.9	18.00	17.11						
AG.1	Ant.G	Extremity	802.11b 1Mbps	DSHO	0	Rear	1	2412	3.670	98.9	18.00	17.11						
AG.1	Ant.G	Extremity	802.11b 1Mbps	DSHO	0	Front	1	2412	2.165	98.9	18.00	17.11						
AG.1	Ant.G	Extremity	802.11b 1Mbps	DSHO	0	Top	1	2412	7.150	98.9	18.00	17.11						
AG.1	Ant.G	Extremity	802.11b 1Mbps	DSHO	0	Right	1	2412	5.960	98.9	18.00	17.11			0.542	0.673		
AG.1	Ant.F	Body	802.11b 1Mbps	DSHO	10	Rear	1	2412	0.590	98.9	18.00	17.93	0.378	0.389			2	33
AG.1	Ant.F	Body	802.11b 1Mbps	DSHO	10	Front	1	2412	0.228	98.9	18.00	17.93						
AG.1	Ant.F	Body	802.11b 1Mbps	DSHO	10	Top	1	2412	0.484	98.9	18.00	17.93						
AG.1	Ant.F	Body	802.11b 1Mbps	DSHO	10	Right	1	2412	0.257	98.9	18.00	17.93						
AG.1	Ant.F	Extremity	802.11b 1Mbps	DSHO	0	Rear	1	2412	3.670	98.9	18.00	17.93			0.778	0.800		
AG.1	Ant.F	Extremity	802.11b 1Mbps	DSHO	0	Front	1	2412	2.165	98.9	18.00	17.93						
AG.1	Ant.F	Extremity	802.11b 1Mbps	DSHO	0	Top	1	2412	7.150	98.9	18.00	17.93			1.610	1.655	2	34
AG.1	Ant.F	Extremity	802.11b 1Mbps	DSHO	0	Right	1	2412	5.960	98.9	18.00	17.93						

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.

10.2.14. Wi-Fi (U-NII Bands)

U-NII 2A SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG1	Ant.G	Body	802.11n (HT40)	DSISO	10	Rear	54	5270	0.700	98.2	18.00	16.68	0.303	0.418				
AG1	Ant.G	Body	802.11n (HT40)	DSISO	10	Front	54	5270	0.551	98.2	18.00	16.68	0.272	0.375				
AG1	Ant.G	Body	802.11n (HT40)	DSISO	10	Right	54	5270	0.792	98.2	18.00	16.68	0.355	0.490			2	35
AG1	Ant.G	Extremity	802.11n (HT40)	DSISO	0	Rear	54	5270	2.980	98.2	18.00	16.68			0.426	0.588		
AG1	Ant.G	Extremity	802.11n (HT40)	DSISO	0	Front	54	5270	7.992	98.2	18.00	16.68			0.772	1.066		
AG1	Ant.G	Extremity	802.11n (HT40)	DSISO	0	Right	54	5270	14.563	98.2	18.00	16.68			1.150	1.587	2	36

U-NII 2A SISO Ant.D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG1	Ant.D	Body	802.11n (HT40)	DSISO	10	Rear	54	5270	0.604	98.2	18.00	17.30	0.286	0.342			2	37
AG1	Ant.D	Body	802.11n (HT40)	DSISO	10	Front	54	5270	0.394	98.2	18.00	17.30	0.191	0.229				
AG1	Ant.D	Body	802.11n (HT40)	DSISO	10	Top	54	5270	0.339	98.2	18.00	17.30	0.170	0.203				
AG1	Ant.D	Body	802.11n (HT40)	DSISO	10	Right	54	5270	0.440	98.2	18.00	17.30	0.214	0.256				
AG1	Ant.D	Extremity	802.11n (HT40)	DSISO	0	Rear	54	5270	2.520	98.2	18.00	17.30			0.362	0.433		
AG1	Ant.D	Extremity	802.11n (HT40)	DSISO	0	Front	54	5270	5.217	98.2	18.00	17.30			0.843	1.009		38
AG1	Ant.D	Extremity	802.11n (HT40)	DSISO	0	Top	54	5270	7.110	98.2	18.00	17.30			0.816	0.976		2
AG1	Ant.D	Extremity	802.11n (HT40)	DSISO	0	Right	54	5270	5.406	98.2	18.00	17.30			0.449	0.537		

U-NII 2A MIMO Ant.G+D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG1	Ant.G	Body	802.11n (HT40)	DSISO	10	Rear	54	5270	1.230	98.2	18.00	16.70	0.441	0.606			2	
AG1	Ant.G	Body	802.11n (HT40)	DSISO	10	Front	54	5270	0.778	98.2	18.00	16.70	0.269	0.370				
AG1	Ant.G	Body	802.11n (HT40)	DSISO	10	Top	54	5270	0.551	98.2	18.00	16.70						
AG1	Ant.G	Body	802.11n (HT40)	DSISO	10	Right	54	5270	1.210	98.2	18.00	16.70	0.533	0.732				39
AG1	Ant.G	Extremity	802.11n (HT40)	DSISO	0	Rear	54	5270	4.650	98.2	18.00	16.70			0.496	0.681		
AG1	Ant.G	Extremity	802.11n (HT40)	DSISO	0	Front	54	5270	13.200	98.2	18.00	16.70			1.460	2.006	2	40
AG1	Ant.G	Extremity	802.11n (HT40)	DSISO	0	Top	54	5270	12.784	98.2	18.00	16.70						
AG1	Ant.G	Extremity	802.11n (HT40)	DSISO	0	Right	54	5270	17.910	98.2	18.00	16.70			1.210	1.662		
AG1	Ant.D	Body	802.11n (HT40)	DSISO	10	Rear	54	5270	1.230	98.2	18.00	17.34	0.567	0.672			2	
AG1	Ant.D	Body	802.11n (HT40)	DSISO	10	Front	54	5270	0.778	98.2	18.00	17.34	0.378	0.448				
AG1	Ant.D	Body	802.11n (HT40)	DSISO	10	Top	54	5270	0.551	98.2	18.00	17.34						
AG1	Ant.D	Body	802.11n (HT40)	DSISO	10	Right	54	5270	1.210	98.2	18.00	17.34						
AG1	Ant.D	Extremity	802.11n (HT40)	DSISO	0	Rear	54	5270	4.650	98.2	18.00	17.34			0.720	0.854		
AG1	Ant.D	Extremity	802.11n (HT40)	DSISO	0	Front	54	5270	13.200	98.2	18.00	17.34			1.290	1.530		2
AG1	Ant.D	Extremity	802.11n (HT40)	DSISO	0	Top	54	5270	12.784	98.2	18.00	17.34						
AG1	Ant.D	Extremity	802.11n (HT40)	DSISO	0	Right	54	5270	17.910	98.2	18.00	17.34						

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.

Wi-Fi (U-NII Bands) (Continued)
U-NII 2C SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Pict No.
AG.1	Ant.G	Body	802.11ac MCSO	DSIO	10	Rear	122	5610	0.646	94.4	18.00	17.08	0.230	0.301			2	
AG.1	Ant.G	Body	802.11ac MCSO	DSIO	10	Front	122	5610	0.356	94.4	18.00	17.08	0.148	0.194				
AG.1	Ant.G	Body	802.11ac MCSO	DSIO	10	Right	122	5610	0.562	94.4	18.00	17.08	0.264	0.346				41
AG.1	Ant.G	Extremity	802.11ac MCSO	DSIO	0	Rear	122	5610	2.482	94.4	18.00	17.08			0.364	0.476		
AG.1	Ant.G	Extremity	802.11ac MCSO	DSIO	0	Front	122	5610	9.527	94.4	18.00	17.08			0.895	1.171		42
AG.1	Ant.G	Extremity	802.11ac MCSO	DSIO	0	Right	122	5610	10.499	94.4	18.00	17.08			0.873	1.143	2	

U-NII 2C SISO Ant.D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Pict No.
AG.1	Ant.D	Body	802.11ac MCSO	DSIO	10	Rear	122	5610	0.683	94.4	18.00	17.59	0.330	0.384				43
AG.1	Ant.D	Body	802.11ac MCSO	DSIO	10	Front	122	5610	0.420	94.4	18.00	17.59	0.204	0.237				
AG.1	Ant.D	Body	802.11ac MCSO	DSIO	10	Top	122	5610	0.698	94.4	18.00	17.59	0.318	0.370			2	
AG.1	Ant.D	Body	802.11ac MCSO	DSIO	10	Right	122	5610	0.373	94.4	18.00	17.59	0.158	0.184				
AG.1	Ant.D	Extremity	802.11ac MCSO	DSIO	0	Rear	122	5610	2.872	94.4	18.00	17.59			0.447	0.520		
AG.1	Ant.D	Extremity	802.11ac MCSO	DSIO	0	Front	122	5610	5.749	94.4	18.00	17.59			0.771	0.897		
AG.1	Ant.D	Extremity	802.11ac MCSO	DSIO	0	Top	122	5610	9.440	94.4	18.00	17.59			0.998	1.162	2	44
AG.1	Ant.D	Extremity	802.11ac MCSO	DSIO	0	Right	122	5610	2.240	94.4	18.00	17.59			0.213	0.248		

U-NII 2C MIMO Ant.G+D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Pict No.
AG.1	Ant.G	Body	802.11ac MCSO	DSIO	10	Rear	122	5610	0.813	94.4	18.00	17.02	0.333	0.442				
AG.1	Ant.G	Body	802.11ac MCSO	DSIO	10	Front	122	5610	0.654	94.4	18.00	17.02	0.229	0.304				
AG.1	Ant.G	Body	802.11ac MCSO	DSIO	10	Top	122	5610	1.070	94.4	18.00	17.02						
AG.1	Ant.G	Body	802.11ac MCSO	DSIO	10	Right	122	5610	0.950	94.4	18.00	17.02	0.406	0.539				
AG.1	Ant.G	Extremity	802.11ac MCSO	DSIO	0	Rear	122	5610	3.290	94.4	18.00	17.02			0.435	0.577		
AG.1	Ant.G	Extremity	802.11ac MCSO	DSIO	0	Front	122	5610	16.100	94.4	18.00	17.02			1.410	1.871	2	46
AG.1	Ant.G	Extremity	802.11ac MCSO	DSIO	0	Top	122	5610	9.236	94.4	18.00	17.02						
AG.1	Ant.G	Extremity	802.11ac MCSO	DSIO	0	Right	122	5610	15.600	94.4	18.00	17.02			0.928	1.232		
AG.1	Ant.D	Body	802.11ac MCSO	DSIO	10	Rear	122	5610	0.813	94.4	18.00	17.50	0.439	0.522				
AG.1	Ant.D	Body	802.11ac MCSO	DSIO	10	Front	122	5610	0.654	94.4	18.00	17.50	0.328	0.390				
AG.1	Ant.D	Body	802.11ac MCSO	DSIO	10	Top	122	5610	1.070	94.4	18.00	17.50	0.548	0.651			2	45
AG.1	Ant.D	Body	802.11ac MCSO	DSIO	10	Right	122	5610	0.950	94.4	18.00	17.50						
AG.1	Ant.D	Extremity	802.11ac MCSO	DSIO	0	Rear	122	5610	3.290	94.4	18.00	17.50			0.539	0.640		
AG.1	Ant.D	Extremity	802.11ac MCSO	DSIO	0	Front	122	5610	16.100	94.4	18.00	17.50			1.280	1.521		
AG.1	Ant.D	Extremity	802.11ac MCSO	DSIO	0	Top	122	5610	9.236	94.4	18.00	17.50						
AG.1	Ant.D	Extremity	802.11ac MCSO	DSIO	0	Right	122	5610	15.600	94.4	18.00	17.50						

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.

Wi-Fi (U-NII Bands) (Continued)
U-NII 3 SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Rear	155	5775	0.330	94.4	18.00	17.05	0.155	0.204				
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Front	155	5775	0.440	94.4	18.00	17.05	0.203	0.268				
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Right	155	5775	0.819	94.4	18.00	17.05	0.417	0.550			2	47
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Rear	155	5775	2.840	94.4	18.00	17.05			0.400	0.527		
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Front	155	5775	15.013	94.4	18.00	17.05			1.310	1.726		48
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Right	155	5775	15.149	94.4	18.00	17.05			1.140	1.502	2	

U-NII 3 SISO Ant.D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Rear	155	5775	0.632	94.4	18.00	17.51	0.322	0.382				
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Front	155	5775	0.498	94.4	18.00	17.51	0.241	0.286				
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Top	155	5775	0.791	94.4	18.00	17.51	0.362	0.429			2	49
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Right	155	5775	0.350	94.4	18.00	17.51	0.174	0.206				
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Rear	155	5775	3.210	94.4	18.00	17.51			0.385	0.456		
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Front	155	5775	7.130	94.4	18.00	17.51			1.070	1.268		50
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Top	155	5775	8.500	94.4	18.00	17.51			0.963	1.142	2	
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Right	155	5775	2.577	94.4	18.00	17.51			0.249	0.295		

U-NII 3 MIMO Ant.G+D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Rear	155	5775	1.142	94.4	18.00	16.98						
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Front	155	5775	0.883	94.4	18.00	16.98	0.467	0.625				
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Top	155	5775	1.099	94.4	18.00	16.98						
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Right	155	5775	0.920	94.4	18.00	16.98	0.487	0.652				
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Rear	155	5775	3.405	94.4	18.00	16.98			0.446	0.597		
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Front	155	5775	13.748	94.4	18.00	16.98			1.470	1.969		52
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Top	155	5775	6.524	94.4	18.00	16.98						
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Right	155	5775	15.300	94.4	18.00	16.98			1.160	1.554	2	
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Rear	155	5775	1.142	94.4	18.00	17.42	0.581	0.703			2	51
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Front	155	5775	0.883	94.4	18.00	17.42	0.365	0.442				
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Top	155	5775	1.099	94.4	18.00	17.42	0.558	0.675				
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Right	155	5775	0.920	94.4	18.00	17.42						
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Rear	155	5775	3.405	94.4	18.00	17.42			0.503	0.609		
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Front	155	5775	13.748	94.4	18.00	17.42						
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Top	155	5775	6.524	94.4	18.00	17.42						
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Right	155	5775	15.300	94.4	18.00	17.42						

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.

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

U-NII 4 SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Rear	171	5855	0.244	94.4	18.00	17.04	0.095	0.125				
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Front	171	5855	0.966	94.4	18.00	17.04	0.445	0.588			2	53
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Right	171	5855	0.943	94.4	18.00	17.04	0.445	0.588				
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Rear	171	5855	2.005	94.4	18.00	17.04			0.337	0.445		
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Front	171	5855	11.815	94.4	18.00	17.04			1.490	1.968		54
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Right	171	5855	14.300	94.4	18.00	17.04			1.130	1.493		2

U-NII 4 SISO Ant.D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Rear	171	5855	0.722	94.4	18.00	17.33	0.320	0.395				
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Front	171	5855	0.508	94.4	18.00	17.33	0.206	0.255				
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Top	171	5855	0.933	94.4	18.00	17.33	0.392	0.484			2	55
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Right	171	5855	0.242	94.4	18.00	17.33	0.110	0.136				
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Rear	171	5855	3.940	94.4	18.00	17.33			0.482	0.596		
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Front	171	5855	9.080	94.4	18.00	17.33			1.140	1.409		2
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Top	171	5855	7.450	94.4	18.00	17.33			0.863	1.066		
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Right	171	5855	1.800	94.4	18.00	17.33			0.201	0.248		

U-NII 4 MIMO Ant.G+D SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Note	Plot No.
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Rear	171	5855	1.120	94.4	18.00	16.91						
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Front	171	5855	1.080	94.4	18.00	16.91						
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Top	171	5855	0.869	94.4	18.00	16.91						
AG.1	Ant.G	Body	802.11ac MCS0	DSISO	10	Right	171	5855	0.884	94.4	18.00	16.91	0.408	0.555				
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Rear	171	5855	3.130	94.4	18.00	16.91			0.419	0.570		
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Front	171	5855	14.120	94.4	18.00	16.91			1.470	2.001		2
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Top	171	5855	8.780	94.4	18.00	16.91						
AG.1	Ant.G	Extremity	802.11ac MCS0	DSISO	0	Right	171	5855	10.966	94.4	18.00	16.91			1.040	1.416		
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Rear	171	5855	1.120	94.4	18.00	17.24	0.567	0.715			2	57
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Front	171	5855	1.080	94.4	18.00	17.24	0.469	0.592				
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Top	171	5855	0.869	94.4	18.00	17.24	0.448	0.565				
AG.1	Ant.D	Body	802.11ac MCS0	DSISO	10	Right	171	5855	0.884	94.4	18.00	17.24						
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Rear	171	5855	3.130	94.4	18.00	17.24			0.551	0.695		
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Front	171	5855	14.120	94.4	18.00	17.24			0.898	1.133		2
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Top	171	5855	8.780	94.4	18.00	17.24			0.993	1.253		
AG.1	Ant.D	Extremity	802.11ac MCS0	DSISO	0	Right	171	5855	10.966	94.4	18.00	17.24						

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.

10.2.15. Bluetooth

Bluetooth SISO Ant.G SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.1	Ant.G	Body	GFSK DHS	DSIO	10	Rear	39	2441	76.9	19.50	18.25	0.140	0.192			
AG.1	Ant.G	Body	GFSK DHS	DSIO	10	Front	39	2441	76.9	19.50	18.25	0.131	0.180			
AG.1	Ant.G	Body	GFSK DHS	DSIO	10	Right	39	2441	76.9	19.50	18.25	0.153	0.210			59
AG.1	Ant.G	Extremity	GFSK DHS	DSIO	0	Rear	39	2441	76.9	19.50	18.25			0.210	0.288	
AG.1	Ant.G	Extremity	GFSK DHS	DSIO	0	Front	39	2441	76.9	19.50	18.25			0.403	0.552	60
AG.1	Ant.G	Extremity	GFSK DHS	DSIO	0	Right	39	2441	76.9	19.50	18.25			0.390	0.535	

Bluetooth SISO Ant.F SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.1	Ant.F	Body	GFSK DHS	DSIO	10	Rear	39	2441	76.9	19.50	17.93	0.168	0.248			
AG.1	Ant.F	Body	GFSK DHS	DSIO	10	Front	39	2441	76.9	19.50	17.93	0.069	0.102			
AG.1	Ant.F	Body	GFSK DHS	DSIO	10	Top	39	2441	76.9	19.50	17.93	0.175	0.258			61
AG.1	Ant.F	Body	GFSK DHS	DSIO	10	Right	39	2441	76.9	19.50	17.93	0.025	0.036			
AG.1	Ant.F	Extremity	GFSK DHS	DSIO	0	Rear	39	2441	76.9	19.50	17.93			0.315	0.464	
AG.1	Ant.F	Extremity	GFSK DHS	DSIO	0	Front	39	2441	76.9	19.50	17.93			0.312	0.460	
AG.1	Ant.F	Extremity	GFSK DHS	DSIO	0	Top	39	2441	76.9	19.50	17.93			0.917	1.352	62
AG.1	Ant.F	Extremity	GFSK DHS	DSIO	0	Right	39	2441	76.9	19.50	17.93			0.049	0.072	

Bluetooth MIMO Ant.G+F SAR results

Antenna Group	Antenna	RF Exposure Condition	Mode	Power Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Duty Cycle (%)	Tune-up Limit (dBm)	Meas. (dBm)	Meas. 1g (W/kg)	Reported. 1g (W/kg)	Meas. 10g (W/kg)	Reported. 10g (W/kg)	Plot No.
AG.1	Ant.G	Body	GFSK DHS	DSIO	10	Rear	0	2402	76.9	16.00	15.51	0.018	0.021			
AG.1	Ant.G	Body	GFSK DHS	DSIO	10	Front	0	2402	76.9	16.00	15.51					
AG.1	Ant.G	Body	GFSK DHS	DSIO	10	Top	0	2402	76.9	16.00	15.51					
AG.1	Ant.G	Body	GFSK DHS	DSIO	10	Right	0	2402	76.9	16.00	15.51	0.056	0.065			
AG.1	Ant.G	Extremity	GFSK DHS	DSIO	0	Rear	0	2402	76.9	16.00	15.51			0.311	0.357	
AG.1	Ant.G	Extremity	GFSK DHS	DSIO	0	Front	0	2402	76.9	16.00	15.51			0.266	0.305	
AG.1	Ant.G	Extremity	GFSK DHS	DSIO	0	Top	0	2402	76.9	16.00	15.51					
AG.1	Ant.G	Extremity	GFSK DHS	DSIO	0	Right	0	2402	76.9	16.00	15.51			0.243	0.279	
AG.1	Ant.F	Body	GFSK DHS	DSIO	10	Rear	0	2402	76.9	16.00	14.98					
AG.1	Ant.F	Body	GFSK DHS	DSIO	10	Front	0	2402	76.9	16.00	14.98	0.071	0.092			63
AG.1	Ant.F	Body	GFSK DHS	DSIO	10	Top	0	2402	76.9	16.00	14.98	0.051	0.066			
AG.1	Ant.F	Body	GFSK DHS	DSIO	10	Right	0	2402	76.9	16.00	14.98					
AG.1	Ant.F	Extremity	GFSK DHS	DSIO	0	Rear	0	2402	76.9	16.00	14.98					
AG.1	Ant.F	Extremity	GFSK DHS	DSIO	0	Front	0	2402	76.9	16.00	14.98					
AG.1	Ant.F	Extremity	GFSK DHS	DSIO	0	Top	0	2402	76.9	16.00	14.98			0.358	0.465	64
AG.1	Ant.F	Extremity	GFSK DHS	DSIO	0	Right	0	2402	76.9	16.00	14.98					

10.2.16. NFC

Antenna	Frequency Band	RF Exposure Conditions	Dist. (mm)	Test Position	Test setup		Freq. (MHz)	10-g SAR (W/kg)	Plot No.
					Type	Bitrate		Meas.	
NFC	PBRS	Extremity 10-g	0	Rear	A	106	13.6	0.011	65
NFC	PBRS	Extremity 10-g	0	Front	A	106	13.6	0.000	
NFC	PBRS	Extremity 10-g	0	Top	A	106	13.6	0.000	

11. SAR Measurement Variability

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

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

Peak spatial-average (1g of tissue)

Frequency Band (MHz)	Air Interface	Antenna	DUT Configuration	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
835	WCDMA Band 5	Ant.A+B	Folder Opened	Hotspot	Bottom	Yes	0.858	0.852	1.01
1900	LTE Band 2	Ant.B	Folder Closed	Hotspot	Bottom	Yes	0.959	0.914	1.05
2600	LTE Band 41	Ant.B	Folder Closed	Hotspot	Bottom	Yes	1.090	1.060	1.03

Peak spatial-average (10g of tissue)

Frequency Band (MHz)	Air Interface	Antenna	DUT Configuration	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
1700	LTE Band 66	Ant.B	Folder Opened	Extremity 10-g	Bottom	Yes	2.400	2.390	1.00
	NR Band n66	Ant.B	Folder Opened	Extremity 10-g	Bottom	Yes	2.220	2.170	1.02
1900	LTE Band 2	Ant.B	Folder Opened	Extremity 10-g	Bottom	Yes	2.040	2.020	1.01
2600	LTE Band 41	Ant.E	Folder Opened	Extremity 10-g	Bottom	Yes	2.420	2.220	1.09
	LTE Band 41	Ant.B	Folder Closed	Phablet specific 10-g SAR	Bottom	Yes	2.690	2.560	1.05
	NR Band n41	Ant.E	Folder Opened	Extremity 10-g	Top	Yes	2.840	2.780	1.02
	NR Band n41	Ant.B	Folder Opened	Extremity 10-g	Bottom	Yes	2.450	2.360	1.04

Note(s):

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

12. Simultaneous Transmission SAR Analysis

Simultaneous Transmission Condition

RF Exposure Condition	Item	Capable Transmit Configurations			
<p>Folder Closed Head & Body-worn/Hotspot & Pablet-10g</p> <p>Folder Opened Body & Extremity-10g</p>	1	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	BT Ant.1 (Ant.G) or BT Ant.2 (Ant.D)	
	2	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	BT MIMO (dual)	
	3	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS Ant.1 (Ant.G) or DTS Ant.2 (Ant.D)	
	4	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS MIMO	
	5	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII Ant.1 (Ant.G) or UNII Ant.2 (Ant.F)	
	6	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII MIMO	
	7	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	BT Ant.1 (Ant.G) + DTS Ant.2 (Ant.D)	
	8	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII Ant.1 (Ant.G) + BT Ant.1 (Ant.G) or BT Ant.2 (Ant.D)	
	9	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII Ant.1 (Ant.G) + BT MIMO (dual)	
	10	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII Ant.2 (Ant.F) + BT Ant.1 (Ant.G) or BT Ant.2 (Ant.D)	
	11	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII Ant.2 (Ant.F) + BT MIMO (dual)	
	12	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII MIMO + BT Ant.1 (Ant.G) or BT Ant.2 (Ant.D)	
	13	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII MIMO + BT MIMO (dual)	
	14	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS Ant.1 (Ant.G) + UNII Ant.1 (Ant.G) or UNII Ant.2 (Ant.F)	
	15	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS Ant.2 (Ant.D) + UNII Ant.1 (Ant.G) or UNII Ant.2 (Ant.F)	
	16	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS MIMO + UNII Ant.1 (Ant.G) or UNII Ant.2 (Ant.F)	
	17	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	UNII MIMO + DTS Ant.1 (Ant.G) or DTS Ant.2 (Ant.D)	
	18	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS MIMO + UNII MIMO	
	19	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS Ant.2 (Ant.D) + UNII Ant.1 (Ant.G) + BT Ant.1 (Ant.G)	
	20	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS Ant.2 (Ant.D) + UNII Ant.2 (Ant.F) + BT Ant.1 (Ant.G)	
	21	WWAN (2G/3G/LTE/NR) or (ENDC/ULCA)	+	DTS Ant.2 (Ant.D) + UNII MIMO + BT Ant.1 (Ant.G)	
22	Item (1-21) + UWB + NFC in Pablet-10g or Extremity 10-g conditions				

Notes:

1. DTS supports Wi-Fi Direct, Hotspot and VoIP.
2. U-NII supports Wi-Fi Direct and VoIP.
3. GPRS, W-CDMA, LTE, NR supports Hotspot and VoIP
4. U-NII Radio can transmit simultaneously with Bluetooth Radio.
5. DTS Radio can transmit simultaneously with Bluetooth Radio.
6. RSDB support to both DTS & UNII bands.
7. NR Radio support to both SA and NSA(ENDC) Radio.
8. BT tethering is considered about each RF exposure conditions.
9. LTE supports UL CA configuration.
10. BT operates with RSDB for certain scenarios.
11. DTS/UNII/BT supports MIMO mode.

Note(s):

Qualcomm Smart Transmit algorithm support to WWAN/WLAN/BT except NFC/UWB. And This device has support two Antenna groups. Each antenna group has controls the total RF exposure from all transmitter to not exceed FCC limit. Therefore, in Part.1 report, it is evaluated whether the sum of the groups of each antenna does not exceed FCC limit or spatial separation is applied. In addition, each antenna group need to satisfies simultaneous transmission analysis with External radios (NFC and UWB) in Part.1 report.

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

TER analysis for AG0/AG1/ERs

The 2nd Generation phase V of Smart Transmit (GEN2.5) operates based on pre-defined antenna groups of Sub6 antennas. Sub6 Tx antennas in UE are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from the other AG. This is accomplished by demonstrating below conditions for all RF exposure scenarios (This procedures are follow according to Qualcomm’s document (80-W2112-4));

1. **(Condition#1 Sum of AG0/AG1/ERs)** : Demonstrate that the sum of maximum *adjusted* SAR from each of the sub6 AGs and the *adjusted* SAR values from radios outside Smart Transmit should be less than the regulatory limit for each supported DSI.
2. **(Condition#2 SPLSR(or Sum-SPLSR) of each pairs(AG0/AG1/ERs))** : If the condition#1 is not met for only Sub6 antennas, then for a given antenna and module grouping scheme plus external radios/antennas (ERs), demonstrate all AG pairs, all ER pairs and all (AG, ER) pairs in the configuration meet SPLSR (SAR to Peak Location Ratio) criteria for each supported DSI (each RF exposure scenarios). For a conservative assessment of SPLSR, the separation distance between each AGs were determined using only the y-axis coordinates of the peak locations.

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

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

Note : Adjusted SAR;

- a. Adjusted SAR followed below procedures.
 Exposure scaling for su6 antennas/radios (referred to as ‘adjusted SAR’ values):
 If EFS Plimit =< NV setting Pax, then SAR exposure should be scaled to EFS Plimit + device uncertainty,
 else SAR exposure should be scaled to maximum {EFS Plimit, NV setting Pmax + device uncertainty}.

This device supports antenna groups like below table.

DSI No.	Antenna Groups	Grouped antenna list			
		DSI= 0,1,2,3	AG0	Ant.A(Sub6)	Ant.A+B(Sub6)
AG1	Ant.D(Sub6)		Ant.E(Sub6)	Ant.F(Sub6)	Ant.G(Sub6)
ER(s)		NFC Ant.	UWB Ant.		
ER = Exteral radios/antennas suppoed outside of Smart Transmit					

This section verifies that Simultaneous transmission analysis of AG0/AG1/ERs satisfies to FCC limit using Condition#1 or Condition#2 guide.

12.1. Folder Closed (Phablet) condition

12.1.1 Head(DSI=3) exposure SAR analysis

Condition#1 (Sum of SAR)

Antenna Group : AG0 Ant.A, Ant.A+B, Ant.B

AG0's Highest SAR results

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.A		Ant.A		Ant.A		Ant.A		Ant.A		Ant.A		Ant.A
RF exposure	Test positions	GSM 850		WCDMA B5		LTE B5		LTE B12		LTE B13		NR Bn5		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	26.3	31.3	25.3	29.5	25.5	28.7	25.2	28.5	25.5	29.1	25.0	29.4	
Head Reported SAR	Left Touch	0.057	0.180	0.145	0.381	0.178	0.372	0.139	0.297	0.107	0.245	0.148	0.408	0.408
	Left Tilt	0.077	0.243	0.093	0.245	0.109	0.228	0.081	0.173	0.051	0.117	0.092	0.253	0.253
	Right Touch	0.126	0.398	0.176	0.463	0.209	0.437	0.177	0.378	0.153	0.351	0.147	0.405	0.463
	Right Tilt	0.049	0.155	0.104	0.274	0.159	0.332	0.082	0.175	0.071	0.163	0.093	0.256	0.332

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B
RF exposure	Test positions	GSM 850		WCDMA B5		LTE B5		LTE B12		LTE B13		NR Bn5		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	26.3	31.3	25.3	29.5	25.5	28.7	25.2	28.5	25.5	29.1	25.0	29.4	
Head Reported SAR	Left Touch	0.130	0.411	0.204	0.537	0.213	0.445	0.170	0.363	0.142	0.325	0.153	0.421	0.537
	Left Tilt	0.100	0.316	0.116	0.305	0.124	0.259	0.107	0.229	0.084	0.192	0.101	0.278	0.316
	Right Touch	0.167	0.528	0.200	0.526	0.258	0.539	0.252	0.539	0.231	0.529	0.193	0.532	0.539
	Right Tilt	0.119	0.376	0.125	0.329	0.155	0.324	0.124	0.265	0.107	0.245	0.078	0.215	0.376

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B
RF exposure	Test positions	GSM 1900		LTE B2		LTE B41		LTE B66		NR Bn66		NR Bn41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	22.8	31.9	25.0	30.0	23.0	30.5	25.0	31.6	25.0	29.9	25.0	32.5	
Head Reported SAR	Left Touch	0.059	0.480	0.167	0.528	0.094	0.529	0.088	0.402	0.130	0.402	0.081	0.455	0.529
	Left Tilt	0.026	0.211	0.108	0.342	0.071	0.399	0.056	0.256	0.068	0.210	0.038	0.214	0.399
	Right Touch	0.065	0.528	0.161	0.509	0.079	0.444	0.116	0.530	0.171	0.528	0.094	0.529	0.530
	Right Tilt	0.038	0.309	0.109	0.345	0.020	0.112	0.042	0.192	0.170	0.525	0.030	0.169	0.525

Antenna Group : AG1 Ant.D, Ant.E, Ant.F, Ant.G, Ant.G+F, Ant.G+D

AG1's Highest SAR results

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D
RF exposure	Test positions	WiFi 5.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
		Plimit (dBm)	18.0	25.6	18.0	24.6	18.0	21.1	18.0	21.2	13.0	
Head Reported SAR	Left Touch	0.174	1.001	0.229	1.047	0.431	0.880	0.447	0.934	0.135	0.135	1.047
	Left Tilt	0.174	1.001	0.222	1.015	0.508	1.037	0.504	1.053	0.043	0.043	1.053
	Right Touch	0.174	1.001	0.229	1.047	0.508	1.037	0.504	1.053	0.005	0.005	1.053
	Right Tilt	0.174	1.001	0.229	1.047	0.443	0.904	0.504	1.053	0.002	0.002	1.053

Antenna Group		AG1		AG1		AG1		AG1
Antenna		Ant.E		Ant.E		Ant.E		Ant.E
RF exposure	Test positions	LTE B41		NR Bn66		NR Bn41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
		Plimit (dBm)	23.0	23.0	22.5	22.5	23.0	
Head Reported SAR	Left Touch	0.826	0.826	0.491	0.491	0.533	0.533	0.826
	Left Tilt	1.097	1.097	0.654	0.654	0.776	0.776	1.097
	Right Touch	0.504	0.504	0.523	0.523	0.489	0.489	0.523
	Right Tilt	0.754	0.754	0.617	0.617	0.655	0.655	0.754

Antenna Group		AG1		AG1		AG1
Antenna		Ant.F		Ant.F		Ant.F
RF exposure	Test positions	WiFi 2.4G SISO		BT SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
		Plimit (dBm)	18.0	18.0	19.5	
Head Reported SAR	Left Touch	0.324	0.324	0.246	0.743	0.743
	Left Tilt	0.324	0.324	0.339	1.024	1.024
	Right Touch	0.324	0.324	0.224	0.676	0.676
	Right Tilt	0.267	0.267	0.317	0.957	0.957

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G
RF exposure	Test positions	WiFi 2.4G SISO		WiFi 5.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		BT SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
		Plimit (dBm)	18.0	18.0	18.0	19.7	18.0	22.8	18.0	22.0	18.0	20.7	13.0	13.0	19.5	
Head Reported SAR	Left Touch	0.126	0.126	0.685	1.013	0.343	1.036	0.349	0.877	0.349	0.650	0.131	0.131	0.065	1.007	1.036
	Left Tilt	0.126	0.126	0.685	1.013	0.343	1.036	0.419	1.052	0.560	1.043	0.042	0.042	0.024	0.372	1.052
	Right Touch	0.126	0.126	0.421	0.623	0.343	1.036	0.419	1.052	0.560	1.043	0.267	0.267	0.031	0.480	1.052
	Right Tilt	0.126	0.126	0.685	1.013	0.343	1.036	0.419	1.052	0.560	1.043	0.020	0.020	0.008	0.124	1.052

Antenna Group		AG1		AG1		AG1
Antenna		Ant.G+F		Ant.G+F		Ant.G+F
RF exposure	Test positions	WiFi 2.4G MIMO		BT MIMO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
		Plimit (dBm)	18.0	18.0	16.0	
Head Reported SAR	Left Touch	0.299	0.299	0.080	1.007	1.007
	Left Tilt	0.371	0.371	0.067	0.843	0.843
	Right Touch	0.205	0.205	0.054	0.680	0.680
	Right Tilt	0.371	0.371	0.080	1.007	1.007

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G
RF exposure	Test positions	WiFi 5.3G MIMO		WiFi 5.5G MIMO		WiFi 5.8G MIMO		WiFi 5.9G MIMO		WiFi 6e MIMO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
		Plimit (dBm)	18.0	19.3	18.0	22.2	18.0	20.8	18.0	19.1	13.0	
Head Reported SAR	Left Touch	0.748	1.009	0.400	1.052	0.553	1.054	0.548	0.706	0.147	0.147	1.054
	Left Tilt	0.748	1.009	0.400	1.052	0.553	1.054	0.814	1.049	0.082	0.082	1.054
	Right Touch	0.625	0.843	0.400	1.052	0.553	1.054	0.514	0.662	0.064	0.064	1.054
	Right Tilt	0.748	1.009	0.299	0.786	0.550	1.048	0.814	1.049	0.034	0.034	1.049

Summation of AG0 and AG1

AG0's worst configuration

Antenna Group		AG0	AG0	AG0	AG0
Antenna		Ant.A	Ant.A+B	Ant.B	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Highest Adjusted SAR
Head	Left Touch	0.408	0.537	0.529	0.537
	Left Tilt	0.253	0.316	0.399	0.399
	Right Touch	0.463	0.539	0.530	0.539
	Right Tilt	0.332	0.376	0.525	0.525

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.F	Ant.G	Ant.G+F	Ant.D+G	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Highest Adjusted SAR
Head	Left Touch	1.047	0.826	0.743	1.036	1.007	1.054	1.054
	Left Tilt	1.053	1.097	1.024	1.052	0.843	1.054	1.097
	Right Touch	1.053	0.523	0.676	1.052	0.680	1.054	1.054
	Right Tilt	1.053	0.754	0.957	1.052	1.007	1.049	1.053

AG0 and AG1 summation results

Antenna Group		AG0	AG1	AG0 + AG1	FCC SAR Limit
Antenna		All	All		
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR		
Head	Left Touch	0.537	1.054	1.590	1.6
	Left Tilt	0.399	1.097	1.496	
	Right Touch	0.539	1.054	1.593	
	Right Tilt	0.525	1.053	1.578	

Note(s):

Additional evaluation is not required due to below FCC limit.

12.1.2 Body&Hotspot(DSI=1) exposure SAR analysis

Condition#1 (Sum of SAR)

Antenna Group : AG0 Ant.A, Ant.A+B, Ant.B

AG0's Highest SAR results

RF exposure	Test position	GSM 850		WCDMA B5		LTE B5		LTE B12		LTE B13		NR Bn5		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	26.3	26.7	25.3	25.3	25.5	25.5	25.2	25.2	25.5	25.7	25.0	25.0	
Body-worn & Hotspot Reported SAR	Rear	0.305	0.334	0.464	0.464	0.529	0.529	0.337	0.337	0.398	0.417	0.484	0.484	0.529
	Front	0.073	0.080	0.175	0.175	0.233	0.233	0.157	0.157	0.162	0.170	0.175	0.175	0.233
	Top													0.000
	Left													0.000
	Bottom	0.085	0.093	0.199	0.199	0.164	0.164	0.163	0.163	0.138	0.145	0.161	0.161	0.199
	Right	0.201	0.220	0.433	0.433	0.400	0.400	0.390	0.390	0.400	0.419	0.345	0.345	0.433

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B
RF exposure	Test position	GSM 850		WCDMA B5		LTE B5		LTE B12		LTE B13		NR Bn5		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	26.3	26.7	25.3	25.3	25.5	25.5	25.2	25.2	25.5	25.7	25.0	25.0	
Body-worn & Hotspot Reported SAR	Rear	0.580	0.636	0.542	0.542	0.569	0.569	0.432	0.432	0.418	0.438	0.422	0.422	0.636
	Front	0.186	0.204	0.203	0.203	0.237	0.237	0.195	0.195	0.227	0.238	0.203	0.203	0.238
	Top													0.000
	Left	0.176	0.193	0.177	0.177	0.272	0.272	0.173	0.173	0.169	0.177	0.222	0.222	0.272
	Bottom	0.172	0.189	0.187	0.187	0.275	0.275	0.272	0.272	0.212	0.222	0.168	0.168	0.275
	Right	0.440	0.482	0.542	0.542	0.439	0.439	0.521	0.521	0.536	0.561	0.415	0.415	0.561

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B
RF exposure	Test position	GSM 1900		LTE B2		LTE B41		LTE B66		NR Bn66		NR Bn41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	19.3	19.3	20.0	20.0	19.0	19.0	20.0	20.0	20.0	20.0	19.0	19.0	
Body-worn & Hotspot Reported SAR	Rear	0.655	0.655	1.088	1.088	0.462	0.462	0.632	0.632	0.861	0.861	0.555	0.555	1.088
	Front	0.148	0.148	0.251	0.251	0.095	0.095	0.107	0.107	0.249	0.249	0.093	0.093	0.251
	Top													0.000
	Left	0.081	0.081	0.111	0.111	0.042	0.042	0.073	0.073	0.101	0.101	0.045	0.045	0.111
	Bottom	0.747	0.747	1.200	1.200	1.237	1.237	0.636	0.636	0.711	0.711	0.868	0.868	1.237
	Right	0.172	0.172	0.195	0.195	0.081	0.081	0.169	0.169	0.174	0.174	0.102	0.102	0.195

Antenna Group : AG1 Ant.D, Ant.E, Ant.F, Ant.G, Ant.G+F, Ant.G+D
AG1's Highest SAR results

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D
RF exposure	Test position	WiFi 5.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	22.1	18.0	20.9	18.0	20.8	18.0	21.7	13.0	13.0	
Body-worn & Hotspot Reported SAR	Rear	0.303	0.779	0.437	0.852	0.327	0.623	0.348	0.816	0.214	0.214	0.852
	Front	0.303	0.779	0.019	0.037	0.327	0.623	0.348	0.816	0.000	0.000	0.816
	Top											0.000
	Left											0.000
	Bottom											0.000
	Right											0.000

Antenna Group		AG1		AG1		AG1		AG1
Antenna		Ant.E		Ant.E		Ant.E		Ant.E
RF exposure	Test position	LTE B41		NR Bn66		NR Bn41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	20.0	20.0	21.0	21.0	20.0	20.0	
Body-worn & Hotspot Reported SAR	Rear	0.475	0.475	0.723	0.723	0.422	0.422	0.723
	Front	0.105	0.105	0.160	0.160	0.086	0.086	0.160
	Top	0.693	0.693	0.727	0.727	0.491	0.491	0.727
	Left	0.072	0.072	0.134	0.134	0.083	0.083	0.134
	Bottom							0.000
	Right							0.000

Antenna Group		AG1		AG1		AG1
Antenna		Ant.F		Ant.F		Ant.F
RF exposure	Test position	WiFi 2.4G SISO		BT SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.0	19.5	20.9	
Body-worn & Hotspot Reported SAR	Rear	0.294	0.294	0.273	0.377	0.377
	Front	0.371	0.371	0.080	0.110	0.371
	Top	0.371	0.371	0.394	0.544	0.544
	Left	0.371	0.371	0.014	0.019	0.371
	Bottom					0.000
	Right	0.053	0.053	0.045	0.062	0.062

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G
RF exposure	Test position	WiFi 2.4G SISO		WiFi 5.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		BT SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.0	18.0	20.2	18.0	20.4	18.0	21.1	18.0	21.9	13.0	13.0	19.5	26.1	
Body-worn & Hotspot Reported SAR	Rear	0.169	0.169	0.262	0.435	0.284	0.494	0.290	0.592	0.322	0.790	0.036	0.036	0.128	0.585	0.790
	Front	0.169	0.169	0.262	0.435	0.284	0.494	0.290	0.592	0.322	0.790	0.035	0.035	0.031	0.142	0.790
	Top															0.000
	Left															0.000
	Bottom															0.000
	Right	0.144	0.144												0.144	0.658

Antenna Group		AG1		AG1		AG1
Antenna		Ant.G+F		Ant.G+F		Ant.G+F
RF exposure	Test position	WiFi 2.4G MIMO		BT MIMO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.0	16.0	23.6	
Body-worn & Hotspot Reported SAR	Rear	0.360	0.360	0.096	0.552	0.552
	Front	0.360	0.360	0.038	0.219	0.360
	Top	0.358	0.358	0.073	0.420	0.420
	Left	0.360	0.360	0.003	0.017	0.360
	Bottom					0.000
	Right	0.087	0.087	0.099	0.570	0.570

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G
RF exposure	Test position	WiFi 5.3G MIMO		WiFi 5.5G MIMO		WiFi 5.8G MIMO		WiFi 5.9G MIMO		WiFi 6e MIMO		Highest Adjusted SAR & ER
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	19.4	18.0	19.9	18.0	20.5	18.0	20.2	13.0	13.0	
Body-worn & Hotspot Reported SAR	Rear	0.510	0.704	0.549	0.850	0.544	0.967	0.444	0.737	0.245	0.245	0.967
	Front	0.212	0.293	0.052	0.081	0.100	0.178	0.137	0.227	0.000	0.000	0.293
	Top											0.000
	Left											0.000
	Bottom											0.000
	Right											0.000

Summation of AG0 and AG1

AG0's worst configuration

Antenna Group		AG0	AG0	AG0	AG0
Antenna		Ant.A	Ant.A+B	Ant.B	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Body-worn & Hotspot	Rear	0.529	0.636	1.088	1.088
	Front	0.233	0.238	0.251	0.251
	Top	0.000	0.000	0.000	0.000
	Left	0.000	0.272	0.111	0.272
	Bottom	0.199	0.275	1.237	1.237
	Right	0.433	0.561	0.195	0.561

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.F	Ant.G	Ant.G+F	Ant.D+G	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Body-worn & Hotspot	Rear	0.852	0.723	0.377	0.790	0.552	0.967	0.967
	Front	0.816	0.160	0.371	0.790	0.360	0.293	0.816
	Top	0.000	0.727	0.544	0.000	0.420	0.000	0.727
	Left	0.000	0.134	0.371	0.000	0.360	0.000	0.371
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.000	0.000	0.062	0.658	0.570	0.000	0.658

AG0 and AG1 summation results

Antenna Group		AG0	AG1	AG0 + AG1	FCC SAR Limit
Antenna		All	All		
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR		
Body-worn & Hotspot	Rear	1.088	0.967	2.055	1.600
	Front	0.251	0.816	1.067	
	Top	0.000	0.727	0.727	
	Left	0.272	0.371	0.643	
	Bottom	1.237	0.000	1.237	
	Right	0.561	0.658	1.219	

Note(s):

For Rear position, additional SAR calculation is required for each Bands/antennas.

Summation of each antennas of AG0 and each antennas of AG1

AG0(Each antennas) and AG1(Each antennas) summation results							
Positions	AG0		AG1		AG0+AG1	Note	
	Antenna	SAR	Antenna	SAR			
Rear 10mm	Ant.A	0.53	Ant.D	0.85	1.38		
		0.53	Ant.E	0.72	1.25		
		0.53	Ant.F	0.38	0.91		
		0.53	Ant.G	0.79	1.32		
		0.53	Ant.G+F	0.55	1.08		
		0.53	Ant.D+G	0.97	1.50		
	Ant.A+B	0.64	Ant.D	0.85	1.49		
		0.64	Ant.E	0.72	1.36		
		0.64	Ant.F	0.38	1.01		
		0.64	Ant.G	0.79	1.43		
		0.64	Ant.G+F	0.55	1.19		
		0.64	Ant.D+G	0.97	1.60	1	
	Ant.B	1.09	Ant.D	0.85	1.94	1	
		1.09	Ant.E	0.72	1.81	1	
		1.09	Ant.F	0.38	1.46		
		1.09	Ant.G	0.79	1.88	1	
		1.09	Ant.G+F	0.55	1.64	1	
		1.09	Ant.D+G	0.97	2.06	1	
	Note.1 = SPLSR criteria						

Note(s):

Additional evaluation is required due to over FCC limit. So please refer to Condition#2.

1. Need to SPLSR criteria

Condition#2 (SPLSR)

AG0(Sub6) & AG1(Sub6) SPLSR combinations

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis(mm) from ERP point	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis(mm) from ERP point	SPLSR (Y/N)
Rear -10mm	AG0	Ant.A+B	GSM 850	0.636	70.1	Y	AG1	Ant.D	WiFi 5.3G SISO	0.779	-71.6	Y
			WCDMA B5	0.542		N			WiFi 5.5G SISO	0.852	-72.6	Y
			LTE B5	0.569		N			WiFi 5.8G SISO	0.623	-74.2	Y
			LTE B12	0.432		N			WiFi 5.9G SISO	0.816	-74.8	Y
			LTE B13	0.438		N			WiFi 6e SISO	0.214		N
			NR Bn5	0.422		N			Worst configuration	0.852	-71.6	
		Worst configuration	0.636	70.1	Y	LTE B41		0.475		N		
		Ant.B	GSM 1900	0.655	78.6	Y		Ant.E	NR Bn66	0.723	-74.9	Y
			LTE B2	1.088	75.9	Y			NR Bn41	0.422		N
			LTE B41	0.462		N			Worst configuration	0.723	-74.9	
			LTE B66	0.632	76.9	Y		Ant.G	WiFi 2.4G SISO	0.169		N
			NR Bn66	0.861	76.9	Y			WiFi 5.3G SISO	0.435		N
	NR Bn41		0.555		N	WiFi 5.5G SISO			0.494		N	
	Worst configuration	1.088	75.9		WiFi 5.8G SISO	0.592			-30.0	Y		
					WiFi 5.9G SISO	0.790			-22.4	Y		
					WiFi 6e SISO	0.036				N		
					BT SISO	0.585			-20.6	Y		
					Worst configuration	0.790		-20.6				
						Ant.G+F		WiFi 2.4G MIMO	0.360		N	
								BT MIMO	0.552	-20.0	Y	
						Worst configuration		0.552	-20.0			
						Ant.D+G		WiFi 5.3G MIMO	0.704	-25.8	Y	
								WiFi 5.5G MIMO	0.850	-67.6	Y	
								WiFi 5.8G MIMO	0.967	-69.2	Y	
					WiFi 5.9G MIMO		0.737	-72.4	Y			
					WiFi 6e MIMO		0.245		N			
					Worst configuration	0.967	-25.8					

AG0(Sub6) & AG1(Sub6) SPLSR calculation results

Test Position	No.	Antenna pairs		AG0		AG1		AG0+AG1 SUM SAR (W/kg)	SPLSR Results
		AG0	AG1	SAR (W/kg)	Y-axis location (mm)	SAR (W/kg)	Y-axis location (mm)		
Rear -10mm	1	Ant.A+B	Ant.D	0.636	70.1	0.852	-71.6	1.488	0.01
	2	Ant.A+B	Ant.E	0.636	70.1	0.723	-74.9	1.359	0.01
	3	Ant.A+B	Ant.G	0.636	70.1	0.790	-20.6	1.426	0.02
	4	Ant.A+B	Ant.G+F	0.636	70.1	0.552	-20.0	1.188	0.01
	5	Ant.A+B	Ant.D+G	0.636	70.1	0.967	-25.8	1.603	0.02
	6	Ant.B	Ant.D	1.088	75.9	0.852	-71.6	1.940	0.02
	7	Ant.B	Ant.E	1.088	75.9	0.723	-74.9	1.811	0.02
	8	Ant.B	Ant.G	1.088	75.9	0.790	-20.6	1.878	0.03
	9	Ant.B	Ant.G+F	1.088	75.9	0.552	-20.0	1.640	0.02
	10	Ant.B	Ant.D+G	1.088	75.9	0.967	-25.8	2.055	0.03

Note(s):

1. Worst combinations SPLSR criteria results is not over 0.04 (1-g SAR) in Sub6 antenna configurations. So additional test is not required.

12.1.3 Product Specific 10g(DSI=1) exposure SAR analysis

Condition#1 (Sum of SAR)

Antenna Group : AG0 Ant.B

AG0's Highest SAR results

Antenna Group		AG0		AG0
Antenna		Ant.B		Ant.B
RF exposure	Test position	LTE B41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	
Product Specific 10-g	Plimit (dBm)	19.0	19.0	
	Rear		0.000	0.000
	Front		0.000	0.000
	Top		0.000	0.000
	Left		0.000	0.000
	Bottom	3.081	3.081	3.081
	Right		0.000	0.000

Antenna Group : AG1 Ant.D, Ant.G, Ant.G+D

AG1's Highest SAR results

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1	
Antenna		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D	
RF exposure	Test position	WiFi 5.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		Highest Adjusted SAR	
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)		
Product Specific 10-g	Plimit (dBm)	18.0	22.1	18.0	20.9	18.0	20.8	18.0	21.7	13.0	13.0		
	Rear	0.468	1.203	0.509	0.992	0.502	0.957	0.431	1.010	0.337	0.337	1.203	
	Front	0.989	2.542	1.349	2.630	1.386	2.641	1.121	2.628	0.021	0.021	2.641	
	Top	0.989	2.542	1.349	2.630	1.386	2.641	1.121	2.628	0.097	0.097	2.641	
	Left												0.000
	Bottom												0.000
	Right	0.989	2.542	0.533	1.039	0.541	1.031	0.578	1.355	0.093	0.093	2.542	

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1	
Antenna		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G	
RF exposure	Test position	WiFi 5.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		Highest Adjusted SAR	
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)		
Product Specific 10-g	Plimit (dBm)	18.0	20.2	18.0	20.4	18.0	21.1	18.0	21.9	13.0	13.0		
	Rear	0.647	1.074	0.403	0.700	0.648	1.323	0.619	1.519	0.086	0.086	1.519	
	Front	1.532	2.542	1.504	2.614	1.282	2.618	1.077	2.644	0.091	0.091	2.644	
	Top												0.000
	Left												0.000
	Bottom												0.000
	Right	1.532	2.542	1.504	2.614	1.282	2.618	1.077	2.644	0.445	0.445	2.644	

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1	
Antenna		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G	
RF exposure	Test position	WiFi 5.3G MIMO		WiFi 5.5G MIMO		WiFi 5.8G MIMO		WiFi 5.9G MIMO		WiFi 6e MIMO		Highest Adjusted SAR	
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)		
Product Specific 10-g	Plimit (dBm)	18.0	19.4	18.0	19.9	18.0	20.5	18.0	20.2	13.0	13.0		
	Rear	0.730	1.008	0.512	0.793	0.703	1.250	0.556	0.923	0.256	0.256	1.250	
	Front	1.814	2.504	1.686	2.611	1.620	2.881	1.578	2.619	0.018	0.018	2.881	
	Top	1.399	1.931	1.686	2.611	1.488	2.646	1.387	2.302	0.158	0.158	2.646	
	Left												0.000
	Bottom												0.000
	Right	1.814	2.504	1.684	2.608	1.620	2.881	1.578	2.619	0.251	0.251	2.881	

External Ratio(ER) Group : NFC, UWB

ER's Highest SAR results

Antenna		NFC	UWB	NFC, UWB
RF exposure	Test position	Reported SAR (W/kg)	Reported SAR (W/kg)	Highest Adjusted SAR
Product Specific 10-g	Rear	0.011	0.000	0.011
	Front	0.000	0.000	0.000
	Top	0.000	0.000	0.000
	Left	0.000	0.000	0.000
	Bottom			0.000
	Right			0.000

Summation of AG1 and ER

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.G	Ant.D+G	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Highest Adjusted SAR
Product Specific 10-g	Rear	1.203	1.519	1.250	1.519
	Front	2.641	2.644	2.881	2.881
	Top	2.641	0.000	2.646	2.646
	Left	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000
	Right	2.542	2.644	2.881	2.881

AG0 and AG1 summation results

Antenna Group		AG0	AG1	NFC, UWB	AG0 + AG1	FCC TER Limit
Antenna		All	All			
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR	Highest Adjusted SAR		
Product Specific 10-g	Rear	0.000	1.519	0.011	1.530	4.0
	Front	0.000	2.881	0.000	2.881	
	Top	0.000	2.646	0.000	2.646	
	Left	0.000	0.000	0.000	0.000	
	Bottom	3.081	0.000	0.000	3.081	
	Right	0.000	2.881	0.000	2.881	

Note(s):

Additional evaluation is not required due to below FCC limit.

12.2. Folder Opened (UMPC mini tablet) condition

12.2.1 Body(DSI=0) exposure SAR analysis

Condition#1 (Sum of SAR)

Antenna Group : AG0 Ant.A, Ant.A+B, Ant.B

AG0's Highest SAR results

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B
RF exposure	Test positions	GSM 850		WCDMA B5		LTE B5		LTE B12		LTE B13		NR Bn5		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	26.3	26.3	25.3	25.3	25.5	25.7	25.2	25.2	25.5	26.8	25.0	25.5	
Body Reported SAR	Rear	1.068	1.068	1.048	1.048	0.840	0.880	0.723	0.723	0.741	1.000	0.680	0.763	1.068
	Front	0.648	0.648	0.494	0.494	0.529	0.554	0.365	0.365	0.483	0.652	0.434	0.487	0.652
	Top													0.000
	Left													0.000
	Bottom	0.253	0.253	0.254	0.254	0.327	0.342	0.341	0.341	0.313	0.422	0.244	0.274	0.422
	Right	0.579	0.579	0.293	0.293	0.335	0.351	0.476	0.476	0.359	0.484	0.300	0.337	0.579

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B
RF exposure	Test positions	GSM 1900		LTE B2		LTE B41		LTE B66		NR Bn66		NR Bn41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	19.3	19.3	19.0	19.0	16.5	16.5	20.0	20.0	20.0	20.0	17.5	17.5	
Body Reported SAR	Rear	0.667	0.667	0.676	0.676	0.297	0.297	0.687	0.687	0.434	0.434	0.490	0.490	0.687
	Front	0.411	0.411	0.368	0.368	0.180	0.180	0.374	0.374	0.503	0.503	0.358	0.358	0.503
	Top													0.000
	Left													0.000
	Bottom	0.621	0.621	0.820	0.820	0.519	0.519	0.642	0.642	0.675	0.675	0.708	0.708	0.820
	Right	0.156	0.156	0.196	0.196	0.062	0.062	0.184	0.184	0.113	0.113	0.074	0.074	0.196

Antenna Group : AG1 Ant.D, Ant.E, Ant.F, Ant.G, Ant.G+F, Ant.G+D

AG1's Highest SAR results

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D
RF exposure	Test positions	WiFi 5.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	22.0	18.0	21.5	18.0	21.1	18.0	20.7	11.0	11.0	
Body Reported SAR	Rear	0.342	0.859	0.384	0.860	0.382	0.780	0.395	0.736	0.131	0.131	0.860
	Front	0.229	0.575	0.237	0.531	0.286	0.584	0.255	0.475	0.051	0.051	0.584
	Top	0.203	0.510	0.370	0.828	0.429	0.876	0.484	0.901	0.070	0.070	0.901
	Left											0.000
	Bottom											0.000
	Right	0.256	0.643	0.184	0.412	0.206	0.421	0.136	0.253	0.021	0.021	0.643

Antenna Group		AG1		AG1		AG1		AG1
Antenna		Ant.E		Ant.E		Ant.E		Ant.E
RF exposure	Test positions	LTE B41		NR Bn66		NR Bn41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	20.0	20.0	21.0	21.0	20.0	20.0	
Body Reported SAR	Rear	0.564	0.564	0.976	0.976	0.620	0.620	0.976
	Front	0.495	0.495	0.434	0.434	0.342	0.342	0.495
	Top	1.117	1.117	0.794	0.794	0.778	0.778	1.117
	Left							0.000
	Bottom							0.000
	Right							0.000

Antenna Group		AG1		AG1		AG1
Antenna		Ant.F		Ant.F		Ant.F
RF exposure	Test positions	WiFi 2.4G SISO		BT SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.0	19.5	22.2	
Body Reported SAR	Rear	0.257	0.257	0.248	0.462	0.462
	Front	0.282	0.282	0.102	0.190	0.282
	Top	0.282	0.282	0.258	0.480	0.480
	Left					0.000
	Bottom					0.000
	Right	0.282	0.282	0.036	0.067	0.282

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G
RF exposure	Test positions	WiFi 2.4G SISO		WiFi 3.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.0	18.0	18.5	18.0	20.0	18.0	19.0	18.0	18.7	11.0	11.0	19.5
Body Reported SAR	Rear	0.209	0.209	0.418	0.469	0.301	0.477	0.204	0.257	0.125	0.147	0.152	0.152	0.192
	Front	0.171	0.171	0.375	0.421	0.194	0.307	0.268	0.337	0.588	0.691	0.071	0.071	0.180
	Top													
	Left													
	Bottom													
	Right	0.277	0.277	0.490	0.550	0.346	0.548	0.550	0.692	0.588	0.691	0.004	0.004	0.210

Antenna Group		AG1		AG1		AG1
Antenna		Ant.G+F		Ant.G+F		Ant.G+F
RF exposure	Test positions	WiFi 2.4G MIMO		BT MIMO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.0	16.0	23.4	
Body Reported SAR	Rear	0.389	0.389	0.021	0.115	0.389
	Front	0.389	0.389	0.092	0.506	0.506
	Top	0.389	0.389	0.066	0.363	0.389
	Left					0.000
	Bottom					0.000
	Right	0.389	0.389	0.065	0.357	0.389

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G
RF exposure	Test positions	WiFi 5.3G MIMO		WiFi 5.5G MIMO		WiFi 5.8G MIMO		WiFi 5.9G MIMO		WiFi 6e MIMO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.5	18.0	18.5	18.0	18.7	18.0	18.5	11.0	11.0	
Body Reported SAR	Rear	0.672	0.754	0.522	0.586	0.703	0.826	0.715	0.802	0.132	0.132	0.826
	Front	0.448	0.503	0.390	0.438	0.625	0.734	0.592	0.664	0.105	0.105	0.734
	Top	0.732	0.821	0.651	0.730	0.675	0.793	0.565	0.634	0.084	0.084	0.821
	Left											0.000
	Bottom											0.000
	Right	0.732	0.821	0.539	0.605	0.652	0.766	0.555	0.623	0.057	0.057	0.821

Summation of AG0 and AG1

AG0's worst configuration				
Antenna Group		AG0	AG0	AG0
Antenna		Ant.A+B	Ant.B	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	
Body	Rear	1.068	0.687	1.068
	Front	0.652	0.503	0.652
	Top	0.000	0.000	0.000
	Left	0.000	0.000	0.000
	Bottom	0.422	0.820	0.820
	Right	0.579	0.196	0.579

AG1's worst configuration								
Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.F	Ant.G	Ant.G+F	Ant.D+G	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Body	Rear	0.860	0.976	0.462	0.651	0.389	0.826	0.976
	Front	0.584	0.495	0.282	0.691	0.506	0.734	0.734
	Top	0.901	1.117	0.480	0.000	0.389	0.821	1.117
	Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.643	0.000	0.282	0.712	0.389	0.821	0.821

AG0 and AG1 summation results

Antenna Group		AG0	AG1	AG0 + AG1	FCC SAR Limit
Antenna		All	All		
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR		
Body	Rear	1.068	0.976	2.044	1.6
	Front	0.652	0.734	1.386	
	Top	0.000	1.117	1.117	
	Left	0.000	0.000	0.000	
	Bottom	0.820	0.000	0.820	
	Right	0.579	0.821	1.400	

Conclusion:

For Rear position, additional SAR calculation is required for each Bands/antennas.

Summation of each antennas of AG0 and each antennas of AG1

AG0(Each antennas) and AG1(Each antennas) summation results						
Positions	AG0		AG1		AG0+AG1	Note
	Antenna	SAR	Antenna	SAR		
Rear 10mm	Ant.A+B	1.07	Ant.D	0.86	1.928	1
		1.07	Ant.E	0.98	2.048	1
		1.07	Ant.F	0.46	1.530	
		1.07	Ant.G	0.65	1.719	1
		1.07	Ant.G+F	0.39	1.457	
		1.07	Ant.D+G	0.83	1.894	1
	Ant.B	0.69	Ant.D	0.86	1.547	
		0.69	Ant.E	0.98	1.667	1
		0.69	Ant.F	0.46	1.149	
		0.69	Ant.G	0.65	1.338	
		0.69	Ant.G+F	0.39	1.076	
		0.69	Ant.D+G	0.83	1.513	
Note.1 = SPLSR criteria						

Note(s):

Additional evaluation is required due to over FCC limit. So please refer to Condition#2.

1. Need to SPLSR criteria

Condition#2 (SPLSR)

AG0(Sub6) & AG1(Sub6) SPLSR combinations

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis(mm) from ERP point	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis(mm) from ERP point	SPLSR (Y/N)
Rear -10mm	AG0	Ant.A+B	GSM 850	1.068	65.5	Y	AG1	Ant.D	WiFi 5.3G SISO	0.859	-72.0	Y
			WCDMA B5	1.048	65.5	Y			WiFi 5.5G SISO	0.860	-76.0	Y
			LTE B5	0.880	67.0	Y			WiFi 5.8G SISO	0.780	-73.0	Y
			LTE B12	0.723	68.5	Y			WiFi 5.9G SISO	0.736	-78.0	Y
			LTE B13	1.000	68.5	Y			WiFi 6e SISO	0.131		N
			NR Bn5	0.763	67.0	Y			Worst configuration	0.860	-72.0	
		Worst configuration	1.068	65.5		Ant.E		LTE B41	0.564	-74.8	Y	
		GSM 1900	0.667	80.5	Y			NR Bn41	0.620	-74.8	Y	
		LTE B2	0.676	80.5	Y			NR Bn66	0.976	-76.9	Y	
		LTE B41	0.297		N	Worst configuration		0.976	-74.8			
		LTE B66	0.687	75.0	Y	Ant.G		WiFi 2.4G SISO	0.209		N	
		NR Bn66	0.434		N			WiFi 5.3G SISO	0.469		N	
	NR Bn41	0.490		N	WiFi 5.5G SISO			0.477		N		
	Worst configuration	0.687	75.0		WiFi 5.8G SISO			0.257		N		
					WiFi 5.9G SISO			0.147		N		
					WiFi 6e SISO			0.152		N		
					BT SISO	0.651		-21.8	Y			
					Worst configuration	0.651		-21.8				
					Ant.D+G	WiFi 5.3G MIMO		0.754	-68.0	Y		
						WiFi 5.5G MIMO		0.586	-75.0	Y		
						WiFi 5.8G MIMO		0.826	-75.0	Y		
						WiFi 5.9G MIMO		0.802	-76.0	Y		
						WiFi 6e MIMO		0.132		N		
					Worst configuration	0.826		-68.0				

AG0(Sub6) & AG1(Sub6) SPLSR calculation results

No.	Antenna pairs		AG0		AG1		AG0+AG1 SUM SAR (W/kg)	SPLSR Results
	AG0	AG1	SAR (W/kg)	Y-axis location (mm)	SAR (W/kg)	Y-axis location (mm)		
1	Ant.A+B	Ant.D	1.068	65.5	0.860	-72.0	1.928	0.02
2	Ant.A+B	Ant.E	1.068	65.5	0.976	-74.8	2.044	0.02
3	Ant.A+B	Ant.G	1.068	65.5	0.651	-21.8	1.719	0.03
4	Ant.A+B	Ant.D+G	1.068	65.5	0.826	-68.0	1.894	0.02
5	Ant.B	Ant.E	0.687	75.0	0.976	-74.8	1.663	0.01

Note(s):

- Worst combinations SPLSR criteria results is not over 0.04 (1-g SAR) in Sub6 antenna configurations. So additional test is not required.

12.2.2 Extremity 10-g exposure (DSI = 0) SAR analysis

Condition#1 (Sum of SAR)

Antenna Group : AG0 Ant.A, Ant.A+B, Ant.B

AG0's Highest SAR results

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B		Ant.A+B
RF exposure	Test position	GSM 850		WCDMA B5		LTE B5		LTE B12		LTE B13		NR Bn5		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	26.3	26.3	25.3	25.3	25.5	25.7	25.2	25.2	25.5	26.8	25.0	25.5	
Extremity	Rear	1.640	1.640	1.564	1.564	1.526	1.598	1.307	1.307	1.079	1.456	1.332	1.495	1.640
	Front	1.260	1.260	1.185	1.185	1.420	1.487	1.532	1.532	0.932	1.257	1.096	1.230	1.532
	Top													0.000
	Left													0.000
	Bottom	0.941	0.941	1.081	1.081	1.267	1.327	0.872	0.872	0.548	0.739	1.032	1.158	1.327
	Right	1.152	1.152	1.601	1.601	1.828	1.914	1.978	1.978	1.393	1.879	1.680	1.885	1.978

Antenna Group		AG0		AG0		AG0		AG0		AG0		AG0		AG0
Antenna		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B		Ant.B
RF exposure	Test position	GSM 1900		LTE B2		LTE B41		LTE B66		NR Bn66		NR Bn41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	19.3	19.3	19.0	19.0	16.5	16.5	20.0	20.0	20.0	20.0	17.5	17.5	
Extremity	Rear	1.181	1.181	1.727	1.727	0.728	0.728	1.286	1.286	1.403	1.403	1.292	1.292	1.727
	Front	1.016	1.016	1.255	1.255	0.706	0.706	1.097	1.097	1.427	1.427	0.921	0.921	1.427
	Top													0.000
	Left													0.000
	Bottom	1.907	1.907	2.610	2.610	2.169	2.169	3.008	3.008	2.620	2.620	2.649	2.649	3.008
	Right	0.464	0.464	0.555	0.555	0.093	0.093	0.353	0.353	0.453	0.453	0.131	0.131	0.555

Antenna Group : AG1 Ant.D, Ant.E, Ant.F, Ant.G, Ant.G+F, Ant.G+D

AG1's Highest SAR results

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D		Ant.D
RF exposure	Test position	WiFi 5.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	22.0	18.0	21.5	18.0	21.1	18.0	20.7	11.0	11.0	
Body-worn & Hotspot Reported SAR	Rear	0.433	1.088	0.520	1.164	0.456	0.931	0.596	1.110	0.174	0.174	1.164
	Front	1.009	2.534	0.897	2.008	1.268	2.589	1.409	2.624	0.408	0.408	2.624
	Top	0.976	2.452	1.162	2.601	1.142	2.332	1.066	1.985	0.134	0.134	2.601
	Left											0.000
	Bottom											0.000
	Right	0.537	1.349	0.248	0.555	0.295	0.602	0.248	0.462	0.078	0.078	1.349

Antenna Group		AG1		AG1		AG1		AG1
Antenna		Ant.E		Ant.E		Ant.E		Ant.E
RF exposure	Test position	LTE B41		NR Bn66		NR Bn41		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	20.0	20.0	21.0	21.0	20.0	20.0	
Body-worn & Hotspot Reported SAR	Rear	0.902	0.902	1.846	1.846	0.910	0.910	1.846
	Front	1.203	1.203	1.586	1.586	1.056	1.056	1.586
	Top	3.118	3.118	2.496	2.496	3.008	3.008	3.118
	Left							0.000
	Bottom							0.000
	Right							0.000

Antenna Group		AG1		AG1		AG1
Antenna		Ant.F		Ant.F		Ant.F
RF exposure	Test position	WiFi 2.4G SISO		BT SISO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.0	19.5	22.2	
Body-worn & Hotspot Reported SAR	Rear	0.639	0.639	0.464	0.864	0.864
	Front	0.442	0.442	0.460	0.857	0.857
	Top	1.296	1.296	1.352	2.518	2.518
	Left					0.000
	Bottom					0.000
	Right	1.296	1.296	0.072	0.134	1.296

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1		AG1	
Antenna		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G		Ant.G	
RF exposure	Test position	WiFi 2.4G SISO		WiFi 3.3G SISO		WiFi 5.5G SISO		WiFi 5.8G SISO		WiFi 5.9G SISO		WiFi 6e SISO		BT SISO	Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)		
	Plimit (dBm)	18.0	18.0	18.0	18.5	18.0	20.0	18.0	19.0	18.0	18.7	11.0	11.0	19.5	24.8
Body-worn & Hotspot Reported SAR	Rear	0.421	0.421	0.588	0.660	0.476	0.754	0.527	0.663	0.445	0.523	0.139	0.139	0.288	0.976
	Front	0.774	0.774	1.066	1.196	1.171	1.856	1.726	2.173	1.968	2.312	0.631	0.631	0.552	1.870
	Top														0.000
	Left														0.000
	Bottom														0.000
	Right	0.876	0.876	1.587	1.781	1.143	1.812	1.502	1.891	1.493	1.754	0.180	0.180	0.535	1.813

Antenna Group		AG1		AG1		AG1
Antenna		Ant.G+F		Ant.G+F		Ant.G+F
RF exposure	Test position	WiFi 2.4G MIMO		BT MIMO		Highest Adjusted SAR
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.0	16.0	23.4	
Body-worn & Hotspot Reported SAR	Rear	0.800	0.800	0.357	1.962	1.962
	Front	1.655	1.655	0.305	1.676	1.676
	Top	1.655	1.655	0.465	2.555	2.555
	Left					0.000
	Bottom					0.000
	Right	0.673	0.673	0.279	1.533	1.533

Antenna Group		AG1		AG1		AG1		AG1		AG1		AG1
Antenna		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G		Ant.D+G
RF exposure	Test position	WiFi 5.3G MIMO		WiFi 5.5G MIMO		WiFi 5.8G MIMO		WiFi 5.9G MIMO		WiFi 6e MIMO		Highest Adjusted SAR & ER
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	Reported SAR (W/kg)	Adjusted SAR (W/kg)	
	Plimit (dBm)	18.0	18.5	18.0	18.5	18.0	18.7	18.0	18.5	11.0	11.0	
Body-worn & Hotspot Reported SAR	Rear	0.854	0.958	0.640	0.718	0.609	0.716	0.695	0.780	0.170	0.170	0.958
	Front	2.006	2.251	1.871	2.099	1.969	2.313	2.001	2.245	0.482	0.482	2.313
	Top	2.006	2.251	1.871	2.099	1.969	2.313	1.253	1.406	0.231	0.231	2.313
	Left											0.000
	Bottom											0.000
	Right	1.662	1.865	1.232	1.382	1.554	1.826	1.416	1.589	0.200	0.200	1.865

External Ratio(ER) Group : NFC, UWB

ER's Highest ER results

Antenna		NFC	UWB	NFC, UWB
RF exposure	Test position	Reported SAR (W/kg)	Reported SAR (W/kg)	Highest Adjusted SAR
Extremity	Rear	0.011	0.000	0.011
	Front	0.000	0.000	0.000
	Top	0.000	0.000	0.000
	Left			0.000
	Bottom			0.000
	Right		0.000	0.000

Summation of AG0 and AG1 and ERs

Antenna Group		AG0	AG0	AG0
Antenna		Ant.A+B	Ant.B	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Highest Adjusted SAR
Extremity	Rear	1.640	1.727	1.727
	Front	1.532	1.427	1.532
	Top	0.000	0.000	0.000
	Left	0.000	0.000	0.000
	Bottom	1.327	3.008	3.008
	Right	1.978	0.555	1.978

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.F	Ant.G	Ant.G+F	Ant.D+G	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Highest Adjusted SAR
Extremity	Rear	1.164	1.846	0.864	0.976	1.962	0.958	1.962
	Front	2.624	1.586	0.857	2.312	1.676	2.313	2.624
	Top	2.601	3.118	2.518	0.000	2.555	2.313	3.118
	Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	1.349	0.000	1.296	1.891	1.533	1.865	1.891

AG0 and AG1 summation results

Antenna Group		AG0	AG1	NFC, UWB	AG0 + AG1	FCC SAR Limit
Antenna		All	All			
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR	Highest Adjusted SAR		
Extremity	Rear	1.727	1.962	0.011	3.700	4.000
	Front	1.532	2.624	0.000	4.156	
	Top	0.000	3.118	0.000	3.118	
	Left	0.000	0.000	0.000	0.000	
	Bottom	3.008	0.000	0.000	3.008	
	Right	1.978	1.891	0.000	3.869	

Note(s):

For Front positions, additional SAR calculation is required for each Bands/antennas.

Summation of each antennas of AG0 and each antennas of AG1 and ERs

Positions	AG0		AG1		AG0+AG1	Note
	Antenna	SAR	Antenna	SAR		
Front Omm	Ant.A+B	1.53	Ant.D	2.62	4.156	1
		1.53	Ant.E	1.59	3.122	
		1.53	Ant.F	0.86	2.389	
		1.53	Ant.G	2.31	3.844	
		1.53	Ant.G+F	1.68	3.208	
		1.53	Ant.D+G	2.31	3.845	
	Ant.B	1.43	Ant.D	2.62	4.051	1
		1.43	Ant.E	1.59	3.017	
		1.43	Ant.F	0.86	2.284	
		1.43	Ant.G	2.31	3.739	
		1.43	Ant.G+F	1.68	3.103	
		1.43	Ant.D+G	2.31	3.740	
Note.1 = SPLSR criteria						

Note(s):

Additional evaluation is required due to over FCC limit. So please refer to Condition#2.

1. Need to SPLSR criteria

Condition#2 (SPLSR)

AG0(Sub6) & AG1(Sub6) SPLSR combinations

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis(mm) from ERP point	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis(mm) from ERP point	SPLSR (Y/N)
Front -0mm	AG0	Ant.A+B	GSM 850	1.260	43.0	Y	AG1	Ant.D	WiFi 5.3G SISO	2.534	-74.0	Y
			WCDMA B5	1.185	40.0	Y			WiFi 5.5G SISO	2.008		N
			LTE B5	1.487	40.0	Y			WiFi 5.8G SISO	2.589	-75.0	Y
			LTE B12	1.532	40.0	Y			WiFi 5.9G SISO	2.624	-78.0	Y
			LTE B13	1.257	43.0	Y			WiFi 6e SISO	0.408		N
			NR Bn5	1.230	40.0	Y			Worst configuration	2.624	-74.0	
			Worst configuration	1.532	40.0							
		Ant.B	GSM 1900	1.016	76.5	Y						
			LTE B2	1.255	77.5	Y						
			LTE B41	0.706		N						
			LTE B66	1.097	78.0	Y						
			NR Bn66	1.427	76.5	Y						
			NR Bn41	0.921	73.2	Y						
			Worst configuration	1.427	73.2							

AG0(Sub6) & AG1(Sub6) SPLSR calculation results

No.	Antenna pairs		AG0		AG1		AG0+AG1 SUM SAR (W/kg)	SPLSR Results
	AG0	AG1	SAR (W/kg)	Y-axis location (mm)	SAR (W/kg)	Y-axis location (mm)		
1	Ant.A+B	Ant.D	1.532	40.0	2.624	-74.0	4.156	0.07
2	Ant.B	Ant.D	1.427	73.2	2.624	-74.0	4.051	0.06

Note(s):

1. Worst combinations SPLSR criteria results is not over 0.10 (10-g SAR) in Sub6 antenna configurations. So additional test is not required.

Conclusion:

Simultaneous transmission analysis results is satisfied the FCC Limit requirement.

Appendixes

Refer to separated files for the following appendixes.

4791196642-S1 FCC Report SAR_App A_Photos & Ant. Locations

4791196642-S1 FCC Report SAR_App B_Highest SAR Test Plots

4791196642-S1 FCC Report SAR_App C_System Check Plots

4791196642-S1 FCC Report SAR_App D_SAR Tissue Ingredients

4791196642-S1 FCC Report SAR_App E_Probe Cal. Certificates

4791196642-S1 FCC Report SAR_App F_Dipole Cal. Certificates

4791196642-S1 FCC Report SAR_App G_LTE Carrier Aggregation

4791196642-S1 FCC Report SAR_App H_Dynamic Antenna tuner testing

4791196642-S1 FCC Report SAR_App I_Hall effect sensor verification

END OF REPORT