



SAR EVALUATION REPORT

IEEE Std 1528-2013

For

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

FCC ID: A3LSMX626B

Model Name: SM-X626B

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Prepared for

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Revision History

Rev.	Date	Revisions	Revised By
V1	2/7/2025	Initial Issue	--
V2	2/14/2025	Section 8: Updated the heading information Appendix A: Updated setup photos	Truc Tran
V3	3/5/2025	1. Section 1: Updated the Highest Report SAR and Date Tested 2. Section 4.3: Added power sensors, power meters, DAES, and E-field probes 3. Section 7.1: Updated Tune-up Limit for Wi-Fi 2.4GHz and Wi-Fi 5GHz 4. Section 8: Added liquid checks and system checks 5. Section 9.6: Updated Tune-up Limit and Conducted Output Power Measurement for Wi-Fi 2.4GHz 6. Section 9.7: Updated Tune-up Limit and Conducted Output Power Measurement for Wi-Fi 5GHz 7. Section 10.21: Updated Measured and Reported SAR results for Wi-Fi 2.4GHz 8. Section 10.22: Updated Measured and Reported SAR results for Wi-Fi 5GHz 9. Section 12.2: Updated Tune-up Limit for Wi-Fi 2.4GHz and Wi-Fi 5GHz 10. Section 12.3, 12.4, 12.5, 12.6: Updated Reported SAR results for 2.4GHz and Wi-Fi 5GHz 11. Updated Appendix B, C, E, F, and G	Truc Tran

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1. Attestation of Test Results

Applicant Name	SAMSUNG ELECTRONICS CO., LTD.			
FCC ID	A3LSMX626B			
Model Name	SM-X626B			
Applicable Standards	Published RF exposure KDB procedures. IEEE Std 1528-2013			
Exposure Category	SAR Limits (W/Kg)			
	Peak spatial-average (1g of tissue)		Extremities (hands, wrists, ankles, etc.) (10g of tissue)	
General population / Uncontrolled exposure	1.6		4	
RF Exposure Conditions	Equipment Class - Highest Reported SAR (W/kg)			
	PCB	DTS	NII	DSS
Standalone	1.047	0.360	0.623	0.182
Simultaneous TX	1.552	1.460	1.552	1.464
Date Tested	12/23/2024 to 3/3/2025			
Test Results	Pass			
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested can demonstrate compliance with the requirements as documented in this report. This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to ensure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not considered unless noted otherwise. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the U.S. Government, or any agency of the U.S. government.				
Approved & Released By:		Prepared By:		
				
Devin Chang Senior Laboratory Engineer UL Verification Services Inc.		Truc Tran Laboratory Engineer UL Verification Services Inc.		

2. Test Specification, Methods and Procedures

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

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 447498 D03 Supplement C Cross-Reference v01
- 616217 D04 SAR for laptop and tablets v01r02
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D01 3G SAR Procedures v03r01
- 941225 D05 SAR for LTE Devices v02r05
- 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
- 941225 D06 Hotspot Mode v02r01

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

- [TCB Workshop](#) October 2014; RF Exposure Procedures (Other LTE Considerations)
- [TCB Workshop](#) April 2015; RF Exposure Procedures (Overlapping LTE Bands)
- [TCB Workshop](#) October 2015; RF Exposure Procedures (KDB 941225 D05A)
- [TCB Workshop](#) October 2016; RF Exposure Procedures (Bluetooth Duty Factor)
- [TCB Workshop](#) October 2016; RF Exposure Procedures (DUT Holder Perturbations)
- [TCB Workshop](#) May 2017; RF Exposure Procedures (Broadband Liquid Above 3 GHz)
- [TCB Workshop](#) April 2019; RF Exposure Procedures (Tissue Simulating Liquids (TSL))
- [TCB Workshop](#) April 2019; RF Exposure Procedures (802.11ax SAR Testing)
- [TCB Workshop](#) November 2019; RF Exposure Policy Updates (5G NR FR1 NSA EN-DCUE SAR Evaluations)
- [TCB Workshop](#) April 2022; RF Exposure Procedures (Sum-Peak Location Separation Ratio)
- [TCB Workshop](#) October 2024; Carrier Aggregation and Simultaneous Transmission (CA-DL Test Reductions)

3. Facilities and Accreditation

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

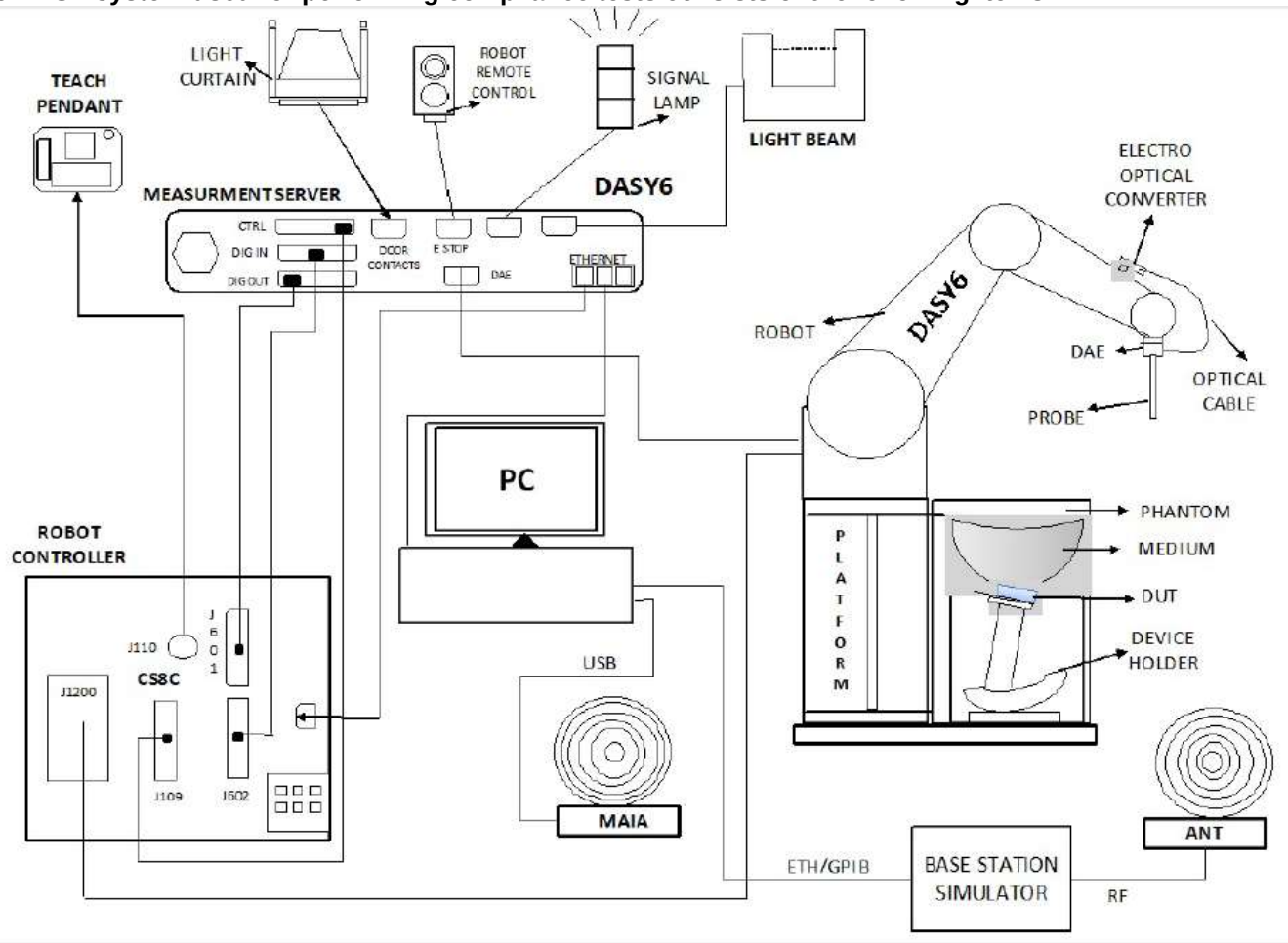
47173 Benicia Street
SAR Labs A, E, F, G, H, I

UL Verification Services Inc. is accredited by A2LA, Certificate Number 0751.05

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win10 and the DASY6/8¹ 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.

¹ DASY6/8 software used: DASY6.16.2 or DASY8.16.2 and older generations.

4.2. SAR Scan Procedures

Step 1: Power Reference Measurement

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

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEC/IEEE 62209-1528, 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: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 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: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <u>reported</u> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

Step 4: Power drift measurement

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

4.3. Test Equipment

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

Dielectric Property Measurements

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Vector Network Analyzer	Rohde & Schward	ZNLE6	101273-VA	3/5/2025
Dielectric Probe kit	SPEAG	DAK-3.5	1087	9/9/2025
Shorting Block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	9/9/2025
Thermometer	Fisher Scientific	Traceable	240466055	6/30/2025

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Signal Generator	R&S	SMB 100A	180968-gX	2/16/2025
Signal Generator	R&S	SMB 100A	180970-zC	2/28/2026
Power Meter	Keysight	N1912A	MY55196009	1/31/2025
Power Meter	Keysight	N1911A	MY55196014	1/31/2025
Power Meter	Keysight	N1912A	MY55196009	1/31/2025
Power Meter	Keysight	N1912A	MY50001018	2/28/2025
Power Meter	Keysight	N1912A	MY55196004	1/31/2026
Power Sensor	Agilent	N1921A	MY53260010	2/28/2025
Power Sensor	Agilent	N1921A	MY52200012	1/31/2026
Power Sensor	Agilent	N1921A	MY53020038	1/31/2026
Power Sensor	Agilent	N1921A	MY53260001	1/31/2026
Power Sensor	R&S	NRP18A	100992-iu	2/28/2026
Bi-directional coupler	Mini-Circuits	ZUDC10-83-S+	2026	N/A
Bi-directional coupler	Mini-Circuits	ZUDC10-83-S+	2224	N/A

Note(s):

Equipment not used past calibration due date.

Lab Equipment

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Thermometer	Fisher Scientific	Traceable	170251204	6/30/2025
Thermometer	Fisher Scientific	Traceable	181163663	5/31/2025
Thermometer	Fisher Scientific	Traceable	240466058	6/30/2025
Thermometer	Fisher Scientific	Traceable	181163660	5/31/2025
Data Acquisition Electronics (SAR Lab A)	SPEAG	DAE4	1258	3/12/2025
Data Acquisition Electronics (SAR Lab E)	SPEAG	DAE4	1259	4/10/2025
Data Acquisition Electronics (SAR Lab E)	SPEAG	DAE4	1545	2/6/2026
Data Acquisition Electronics (SAR Lab F)	SPEAG	DAE4	1239	3/6/2025
Data Acquisition Electronics (SAR Lab F)	SPEAG	DAE4	1548	2/7/2026
Data Acquisition Electronics (SAR Lab G)	SPEAG	DAE4	1546	3/11/2025
Data Acquisition Electronics (SAR Lab G)	SPEAG	DAE4	1433	2/5/2026
Data Acquisition Electronics (SAR Lab H)	SPEAG	DAE4	1799	5/2/2025
Data Acquisition Electronics (SAR Lab I)	SPEAG	DAE4	1619	4/11/2025
E-Field Probe (SAR Lab A)	SPEAG	EX3DV4	7501	3/14/2025
E-Field Probe (SAR Lab E)	SPEAG	EX3DV4	7569	4/15/2025
E-Field Probe (SAR Lab E)	SPEAG	EX3DV4	3772	2/11/2026
E-Field Probe (SAR Lab F)	SPEAG	EX3DV4	7808	5/8/2025
E-Field Probe (SAR Lab F)	SPEAG	EX3DV4	3773	2/11/2026
E-Field Probe (SAR Lab G)	SPEAG	EX3DV4	7356	3/14/2025
E-Field Probe (SAR Lab G)	SPEAG	EX3DV4	7779	5/10/2025
E-Field Probe (SAR Lab H)	SPEAG	EX3DV4	7808	5/8/2025
E-Field Probe (SAR Lab I)	SPEAG	EX3DV4	7656	5/14/2025
System Validation Dipole*	SPEAG	D750V3	1019	4/13/2025
System Validation Dipole*	SPEAG	D835V2	4d002	11/7/2025
System Validation Dipole*	SPEAG	D1750V2	1050	4/19/2025
System Validation Dipole*	SPEAG	D1900V2	5d140	4/14/2025
System Validation Dipole*	SPEAG	D2450V2	706	1/20/2026
System Validation Dipole*	SPEAG	D2450V2	748	2/8/2025
System Validation Dipole*	SPEAG	D2600V2	1036	4/11/2025
System Validation Dipole*	SPEAG	D3500V2	1060	2/7/2025
System Validation Dipole*	SPEAG	D3900V2	1102	10/24/2025
System Validation Dipole*	SPEAG	D5GHzV2	1003	2/22/2025
System Validation Dipole*	SPEAG	D5GHzV2	1138	2/3/2026
System Validation Dipole*	SPEAG	D5GHzV2	1168	2/6/2026

Note(s):

*Calibration has been extended via impedance measurement. Refer to Appendix F for details.
Equipment not used past calibration due date.

Other

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Wideband Radio Communication Tester	R&S	CMW500	147543-Bg	2/28/2025
Wideband Radio Communication Tester	R&S	CMW500	137873-WG	2/28/2025
Wideband Radio Communication Tester	R&S	CMW500	164514-Ci	2/28/2025
Wideband Radio Communication Tester	R&S	CMW500	135393-VQ	2/28/2025
Wideband Radio Communication Tester	R&S	CMW500	171873-pw	2/28/2025
Wideband Radio Communication Tester	R&S	CMW500	171872-XJ	2/28/2025
Wideband Radio Communication Tester	R&S	CMW500	171875-WG	2/28/2025
Wideband Radio Communication Tester	R&S	CMW500	162799	7/25/2025
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY60102066	1/31/2025
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59320272	2/28/2025

Note(s):

Equipment not used past calibration due date.

5. Measurement Uncertainty

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

Therefore, the measurement uncertainty is not required.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Overall (Length x Width): 300.56 mm x 194.74 mm Overall Diagonal: 348.5 mm Display Diagonal: 332.7 mm This is a Tablet and/or laptop device (overall diagonal dimension of the keyboard and/or display section of a laptop or tablet is > 20 cm)		
Back Cover	The Back Cover is not removable		
Battery Options	The rechargeable battery is not user accessible.		
Accessory	Keyboard and S-Pen		
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its cellular data connection with other Wi-Fi-enabled devices. ☒ Mobile Hotspot (Wi-Fi 2.4 GHz) ☒ Mobile Hotspot (UNII-3)		
Bluetooth Tethering (Hotspot)	BT Tethering mode permits the device to share its cellular data connection with other devices. ☒ BT Tethering (Bluetooth 2.4 GHz)		
Test sample information	S/N	IMEI	Notes
	R32XC0016FL	351973960061524 354974210061527	Licensed Conducted
	R32XC0005EV	N/A	Licensed Conducted
	R32X0017DT	N/A	Licensed Conducted
	R32XC00063W	N/A	Licensed Conducted
	R32XC0017DT	N/A	Licensed Conducted
	R32XC00155X	351973960086026 354974210086029	Licensed Conducted
	R32XC00054T	351973960050196 354974210050199	WLAN/BT Conducted
	R32XC001J1N	351973960065343 354974210065346	Licensed Radiated
	R32XC000TEM	351973960057555 354974210057558	Licensed Radiated
	R32XC000TGD	351973960057571 354974210057574	Licensed Radiated
	R32XC000P9P	351973960056185 354974210056188	Licensed Radiated
	R32XC001J7Y	351973960065400 354974210065403	Licensed Radiated
	R32XC003EPF	351973960086026 354974210086029	Licensed Radiated
	R32XC000TFF	N/A	Licensed Radiated
	R32XC0004QZ	351973960050063 354974210050066	WLAN/BT Radiated
	R32XC0005GN	351973960050311 354974210050314	WLAN/BT Radiated
	R32XC00058Z	351973960050238 354974210050231	WLAN/BT Radiated
Hardware Version	REV1.0		
Software Version	X626B.001		

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode	
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EDGE (8PSK)	GSM Class : B Multi-Slot Class: Class 33 - 4 Up, 5 Down
		Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No	
W-CDMA (UMTS)	Band 2 Band 4 Band 5	UMTS Rel. 99 (Voice & Data) HSDPA (Rel. 5) HSUPA (Rel. 6) DC-HSDPA (Rel. 8) HSPA+ (Rel. 7) DL only	
LTE	FDD Bands 2/4/5/12/13/17/25/26/66 TDD Bands 41	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (1 Uplink and 4 Downlinks)	
5G NR (FR1)	FDD Bands n5/n66 TDD Bands n41/n77	DFT-s-OFDM: Pi/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM	
Wi-Fi	2.4 GHz	802.11b/g/n/ax (20 MHz BW)	
	5 GHz UNII-1/2A/2C/3/4	802.11a/n/ac/ax (20/40/80 MHz BW)	
		Does this device support Bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No	
		Does this device support Band gap channel(s)? ☒ Yes ☐ No	
Bluetooth	2.4 GHz	BR, EDR, LE	

Notes:

1. Duty cycle for Wi-Fi is referenced from the DTS and U-NII reports. Refer to Section 10 for Duty Cycle values used for testing.
2. 5G NR, n77 supports Power Class 2 (PC2).
3. Manufacturer/OEM declares operating duty cycle to be 100% for 5G NR (FR1) TDD Power Class 3 and Power Class 2.
4. LTE Uplink 2CA is the total combined power of the UL CA.

6.3. General LTE SAR Test and Reporting Considerations

Frequency range, Channel Bandwidth, Channel Numbers/Frequencies						
Band 2	Frequency range: 1850 - 1910 MHz (BW = 60 MHz)					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	18700 / 1860 MHz	18675 / 1857.5 MHz	18650 / 1855 MHz	18625 / 1852.5 MHz	18615 / 1851.5 MHz	18607 / 1850.7 MHz
Mid	18900 / 1880 MHz	18900 / 1880 MHz	18900 / 1880 MHz	18900 / 1880 MHz	18900 / 1880 MHz	18900 / 1880 MHz
High	19100 / 1900 MHz	19125 / 1902.5 MHz	19150 / 1905 MHz	19175 / 1907.5 MHz	19185 / 1908.5 MHz	19193 / 1909.3 MHz
Band 4	Frequency range: 1710 - 1755 MHz (BW = 45 MHz)					
	Channel Bandwidth					
	20 MHz ¹	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	20050 / 1720 MHz	20025 / 1717.5 MHz	20000 / 1715 MHz	19975 / 1712.5 MHz	19965 / 1711.5 MHz	19957 / 1710.7 MHz
Mid	20175 / 1732.5 MHz	20175 / 1732.5 MHz	20175 / 1732.5 MHz	20175 / 1732.5 MHz	20175 / 1732.5 MHz	20175 / 1732.5 MHz
High	20300 / 1745 MHz	20325 / 1747.5 MHz	20350 / 1750 MHz	20375 / 1752.5 MHz	20385 / 1753.5 MHz	20393 / 1754.3 MHz
Band 5	Frequency range: 824 - 849 MHz (BW = 25 MHz)					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz ¹	5 MHz	3 MHz	1.4 MHz
Low			20450 / 829 MHz	20425 / 826.5 MHz	20415 / 825.5 MHz	20407 / 824.7 MHz
Mid			20525 / 836.5 MHz	20525 / 836.5 MHz	20525 / 836.5 MHz	20525 / 836.5 MHz
High			20600 / 844 MHz	20625 / 846.5 MHz	20635 / 847.5 MHz	20643 / 848.3 MHz
Band 12	Frequency range: 699 - 716 MHz (BW = 17 MHz)					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz ¹	5 MHz	3 MHz	1.4 MHz
Low			23060 / 704 MHz	23035 / 701.5 MHz	23025 / 700.5 MHz	23017 / 699.7 MHz
Mid			23095 / 707.5 MHz	23095 / 707.5 MHz	23095 / 707.5 MHz	23095 / 707.5 MHz
High			23130 / 711 MHz	23155 / 713.5 MHz	23165 / 714.5 MHz	23173 / 715.3 MHz
Band 13	Frequency range: 777 - 787 MHz (BW = 10 MHz)					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz ¹	5 MHz ¹	3 MHz	1.4 MHz
Low				23205 / 779.5 MHz		
Mid			23230 / 782 MHz	23230 / 782 MHz		
High				23255 / 784.5 MHz		
Band 17	Frequency range: 704 - 716 MHz (BW = 12 MHz)					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz ¹	5 MHz ¹	3 MHz	1.4 MHz
Low			23780 / 709 MHz	23755 / 706.5 MHz		
Mid			23790 / 710 MHz	23790 / 710 MHz		
High			23800 / 711 MHz	23825 / 713.5 MHz		
Band 25	Frequency range: 1850 - 1915 MHz (BW = 65 MHz)					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	26140 / 1860 MHz	26115 / 1857.5 MHz	26090 / 1855 MHz	26065 / 1852.5 MHz	26055 / 1851.5 MHz	26047 / 1850.7 MHz
Mid	26365 / 1882.5 MHz	26365 / 1882.5 MHz	26365 / 1882.5 MHz	26365 / 1882.5 MHz	26365 / 1882.5 MHz	26365 / 1882.5 MHz
High	26590 / 1905 MHz	26615 / 1907.5 MHz	26640 / 1910 MHz	26665 / 1912.5 MHz	26675 / 1913.5 MHz	26683 / 1914.3 MHz
Band 26	Frequency range: 814 - 849 MHz (BW = 35 MHz)					
	Channel Bandwidth					
	20 MHz	15 MHz ¹	10 MHz	5 MHz	3 MHz	1.4 MHz
Low		26765 / 821.5 MHz	26740 / 819 MHz	26715 / 816.5 MHz	26705 / 815.5 MHz	26697 / 814.7 MHz
Mid		26865 / 831.5 MHz	26865 / 831.5 MHz	26865 / 831.5 MHz	26865 / 831.5 MHz	26865 / 831.5 MHz
High		26965 / 841.5 MHz	26990 / 844 MHz	27015 / 846.5 MHz	27025 / 847.5 MHz	27033 / 848.3 MHz
Band 41 ²	Frequency range: 2496 - 2690 MHz (BW = 194 MHz)					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	39750 / 2506.0 MHz					
Mid-Low	40185 / 2549.5 MHz					
Mid	40620 / 2593.0 MHz					
Mid-High	41055 / 2636.5 MHz					
High	41490 / 2680.0 MHz					
Band 66	Frequency range: 1710 - 1780 MHz (BW = 70 MHz)					
	Channel Bandwidth					

	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	132072 / 1720 MHz	132047 / 1717.5 MHz	132022 / 1715 MHz	131997 / 1712.5 MHz	131987 / 1711.5 MHz	131979 / 1710.7 MHz
Mid	132322 / 1745 MHz	132322 / 1745 MHz	132322 / 1745 MHz	132322 / 1745 MHz	132322 / 1745 MHz	132322 / 1745 MHz
High	132572 / 1770 MHz	132597 / 1772.5 MHz	132622 / 1775 MHz	132647 / 1777.5 MHz	132657 / 1778.5 MHz	132665 / 1779.3 MHz

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 <table><tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr><tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr><tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr><tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr></table> 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	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
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																																																								
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).

6.4. LTE (TDD) Considerations

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

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

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

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

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

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

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

Note(s):

This device supports uplink-downlink configurations 0-6. SAR testing/analysis was performed with the configuration with highest duty cycle for the following power classes: configuration 0 at 63.3% for Power Class 3 and configuration 1 at 43.3% for Power Class 2.

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

Frequency range, Channel Bandwidth, Channel Numbers / Frequencies														
n5	Frequency range: 824 - 849 MHz (BW = 25 MHz), SCS = 15 kHz													
	Channel Bandwidth (MHz)													
	100	90	80	70	60	50	40	35	30	25	20 ¹	15 ¹	10 ¹	5
Low											166800 /834	166300 /831.5	165800 /829	165300 /826.5
Mid											167300 /836.5	167300 /836.5	167300 /836.5	167300 /836.5
High											167800 /839	168300 /841.5	168800 /844	169300 /846.5
n41	Frequency range: 2496 - 2690 MHz (BW = 194 MHz), SCS = 30 kHz													
	Channel Bandwidth (MHz)													
	100 ¹	90 ¹	80 ¹	70 ¹	60	50	40	35	30	25	20	15	10	5
1	509202 /2546.01	508200 /2541	507204 /2536.02	506202 /2531.01	505200 /2526	504204 /2521.02	503202 /2516.01		502200 /2511		501204 /2506.02	500700 /2503.5	500202 /2501.01	
2	510000 /2550	509004 /2545.02	508002 /2540.01	507000 /2535	506004 /2530.02	505002 /2525.01	504000 /2520		503004 /2515.02		502002 /2510.01	501504 /2507.52	501000 /2505	
3	513900 /2569.5	513402 /2567.01	512904 /2564.52	512400 /2562	511902 /2559.51	511404 /2557.02	510900 /2554.5		510402 /2552.01		509904 /2549.52	509652 /2548.26	509400 /2547	
4	518598 /2592.99	518598 /2592.99	518598 /2592.99	518598 /2592.99	518598 /2592.99	518598 /2592.99	518598 /2592.99		518598 /2592.99		518598 /2592.99	518598 /2592.99	518598 /2592.99	
5	523302 /2616.51	523800 /2619	524298 /2621.49	524802 /2624.01	525300 /2626.5	525798 /2628.99	526302 /2631.51		526800 /2634		527298 /2636.49	527550 /2637.75	527802 /2639.01	
6	527994 /2639.97	528996 /2644.98	529992 /2649.96	530994 /2654.97	531996 /2659.98	532992 /2664.96	533994 /2669.97		534996 /2674.98		535992 /2679.96	536496 /2682.48	536994 /2684.97	
n66	Frequency range: 1710 - 1780 MHz (BW = 70 MHz), SCS = 15 kHz													
	Channel Bandwidth (MHz)													
	100	90	80	70	60	50	40 ¹	35 ¹	30 ¹	25 ¹	20	15	10	5
Low							346000 /1730		345000 /1725	344500 /1722.5	344000 /1720	343500 /1717.5	343000 /1715	342500 /1712.5
Mid							349000 /1745		349000 /1745	349000 /1745	349000 /1745	349000 /1745	349000 /1745	349000 /1745
High							352000 /1760		353000 /1765	353500 /1767.5	354000 /1770	354500 /1772.5	355000 /1775	355500 /1777.5
n77 Block A	Frequency range: 3450 - 3550 MHz (BW = 100 MHz), SCS = 30 kHz													
	Channel Bandwidth (MHz)													
	100 ¹	90 ¹	80 ¹	70 ¹	60 ¹	50 ¹	40 ¹	35 ¹	30	25	20	15	10	5
Low	633334 /3500.01	633000 /3495	632668 /3490.02	632334 /3485.01	632000 /3480	631668 /3475.02	631334 /3470.01		631000 /3465	630834 /3462.51	630668 /3460.02	630500 /3457.5	630334 /3455.01	
Mid- Low	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01		633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	633334 /3500.01	
Mid	633332 /3499.98	633666 /3504.99	633998 /3509.97	634332 /3514.98	634666 /3519.99	634998 /3524.97	635332 /3529.98		635666 /3534.99	635832 /3537.48	635998 /3539.97	636166 /3542.49	636332 /3544.98	
n77 Block C	Frequency range: 3700 - 3980 MHz (BW = 280 MHz), SCS = 30 kHz													
	Channel Bandwidth (MHz)													
	100 ¹	90 ¹	80 ¹	70 ¹	60 ¹	50 ¹	40	35	30	25	20	15	10	5
1	650002 /3750.03	649668 /3745.02	649336 /3740.04	649002 /3735.03	648668 /3730.02	648336 /3725.04	648002 /3720.03		647668 /3715.02	647502 /3712.53	647336 /3710.04	647168 /3707.52	647002 /3705.03	
2	652402 /3786.03	652202 /3783.03	652002 /3780.03	651802 /3777.03	651602 /3774.03	651402 /3771.03	651202 /3768.03		651002 /3765.03	650902 /3763.53	650802 /3762.03	650702 /3760.53	650602 /3759.03	
3	654802 /3822.03	654734 /3821.01	654668 /3820.02	654602 /3819.03	654534 /3818.01	654468 /3817.02	654402 /3816.03		654334 /3815.01	654302 /3814.53	654268 /3814.02	654234 /3813.51	654202 /3813.03	
4	657200 /3858	657268 /3859.02	657334 /3860.01	657400 /3861	657468 /3862.02	657534 /3863.01	657600 /3864		657668 /3865.02	657700 /3865.5	657734 /3866.01	657768 /3866.52	657800 /3867	
5	659600 /3894	659800 /3897	660000 /3900	660200 /3903	660400 /3906	660600 /3909	660800 /3912		661000 /3915	661100 /3916.5	661200 /3918	661300 /3919.5	661400 /3921	
6	661998 /3929.97	662332 /3934.98	662664 /3939.96	662998 /3944.97	663332 /3949.98	663664 /3954.96	663998 /3959.97		664332 /3964.98	664498 /3967.47	664664 /3969.96	664832 /3972.48	664998 /3974.97	

SCS	15 kHz (n5, n66) 30 kHz (n41, n77)
NR(FR1) transmitter and antenna implementation	Refer to section 7 and Appendix A.
A-MPR(Additional MPR) disabled for SAR testing?	Yes
EN-DC Carrier Aggregation Possible Combinations	
LTE Anchor Bands for NR band n5	LTE Band 2/66
LTE Anchor Bands for NR band n41	LTE Band 4/12/66
LTE Anchor Bands for NR band n66	LTE Band 2/5/12/13
LTE Anchor Bands for NR band n77	LTE Band 2/5/12/13/25/66

Notes:

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

6.6. Time-Average Feature

This device uses Samsung's TAS algorithm to control output power of the cellular (WWAN) transmitters. The version used allows for spatial grouping of antennas such that output power across all antennas within the same spatial group is controlled to ensure aggregate SAR under simultaneous conditions for those antennas remains below the target SAR value. To verify that the aggregate SAR from antennas within different spatial groups does not exceed limits the simultaneous conditions are verified using the aggregate SAR and where the aggregate SAR exceeds the limit either the SPLSR analysis or volume scan methods are used to verify that SAR distributions from the different spatial groupings do not overlap to the extent that localized SAR values would exceed the limit.

Please refer to the Operational Description for detailed information regarding the TAS algorithm and chipset utilized in the DUT.

SAR Characterization

Please refer to UL TAS Report 15605535-S5 Part 0 for full details regarding SAR Characterizations.

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.

7.1. Standalone SAR Test Exclusion Considerations

Since the *Dedicated Host Approach* is applied, the standalone SAR test exclusion procedure in KDB 447498 § 4.3.1 is applied in conjunction with KDB 616217 § 4.3 to determine the minimum test separation distance:

- When the separation distance from the antenna to an adjacent edge is ≤ 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.
- When the separation distance from the antenna to an adjacent edge is > 5 mm, the actual antenna-to-edge separation distance is applied to determine SAR test exclusion.

SAR Test Exclusion Calculations for WWAN**Antennas < 50mm to adjacent edges**

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Main 1	RSI 0													
	GSM 850 GPRS 4 Slots	848.8	27.50	351	5	5	64.4	297.5	64.4	-MEASURE- 64.7	-MEASURE- 64.7	> 50 mm	> 50 mm	> 50 mm
	GSM 1900 GPRS 4 Slots	1909.8	24.50	317	5	5	64.4	297.5	64.4	-MEASURE- 87.6	-MEASURE- 87.6	> 50 mm	> 50 mm	> 50 mm
	W-CDMA 2	1907.6	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 87.3	-MEASURE- 87.3	> 50 mm	> 50 mm	> 50 mm
	W-CDMA 4	1752.6	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 83.7	-MEASURE- 83.7	> 50 mm	> 50 mm	> 50 mm
	W-CDMA 5	846.6	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 58.2	-MEASURE- 58.2	> 50 mm	> 50 mm	> 50 mm
	LTE Band 2	1900	26.00	398	5	5	64.4	297.5	64.4	-MEASURE- 109.7	-MEASURE- 109.7	> 50 mm	> 50 mm	> 50 mm
	LTE Band 4	1754.3	26.00	398	5	5	64.4	297.5	64.4	-MEASURE- 105.4	-MEASURE- 105.4	> 50 mm	> 50 mm	> 50 mm
	LTE Band 5	844	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 58.1	-MEASURE- 58.1	> 50 mm	> 50 mm	> 50 mm
	LTE Band 12	711	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 53.3	-MEASURE- 53.3	> 50 mm	> 50 mm	> 50 mm
	LTE Band 13	782	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 55.9	-MEASURE- 55.9	> 50 mm	> 50 mm	> 50 mm
	LTE Band 17	710	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 53.3	-MEASURE- 53.3	> 50 mm	> 50 mm	> 50 mm
	LTE Band 25	1905	26.00	398	5	5	64.4	297.5	64.4	-MEASURE- 109.9	-MEASURE- 109.9	> 50 mm	> 50 mm	> 50 mm
	LTE Band 26	841.4	25.50	355	5	5	64.4	297.5	64.4	-MEASURE- 65.1	-MEASURE- 65.1	> 50 mm	> 50 mm	> 50 mm
	LTE Band 41	2680	26.00	398	5	5	64.4	297.5	64.4	-MEASURE- 130.3	-MEASURE- 130.3	> 50 mm	> 50 mm	> 50 mm
	LTE Band 66	1770	26.00	398	5	5	64.4	297.5	64.4	-MEASURE- 105.9	-MEASURE- 105.9	> 50 mm	> 50 mm	> 50 mm
	NR Band n5	839	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 57.9	-MEASURE- 57.9	> 50 mm	> 50 mm	> 50 mm
	NR Band n41 SRS 1	2639.97	19.00	79	5	5	64.4	297.5	64.4	-MEASURE- 25.7	-MEASURE- 25.7	> 50 mm	> 50 mm	> 50 mm
	NR Band n66	1760	25.00	316	5	5	64.4	297.5	64.4	-MEASURE- 83.8	-MEASURE- 83.8	> 50 mm	> 50 mm	> 50 mm
	Grip													
	GSM 850 GPRS 4 Slots	848.8	18.00	39	5	5	64.4	297.5	64.4	-MEASURE- 7.2	-MEASURE- 7.2	> 50 mm	> 50 mm	> 50 mm
	GSM 1900 GPRS 4 Slots	1909.8	16.00	45	5	5	64.4	297.5	64.4	-MEASURE- 12.4	-MEASURE- 12.4	> 50 mm	> 50 mm	> 50 mm
	W-CDMA 2	1907.6	15.00	32	5	5	64.4	297.5	64.4	-MEASURE- 8.8	-MEASURE- 8.8	> 50 mm	> 50 mm	> 50 mm
	W-CDMA 4	1752.6	15.00	32	5	5	64.4	297.5	64.4	-MEASURE- 8.5	-MEASURE- 8.5	> 50 mm	> 50 mm	> 50 mm
	W-CDMA 5	846.6	15.00	32	5	5	64.4	297.5	64.4	-MEASURE- 5.9	-MEASURE- 5.9	> 50 mm	> 50 mm	> 50 mm
	LTE Band 2	1900	17.00	50	5	5	64.4	297.5	64.4	-MEASURE- 13.8	-MEASURE- 13.8	> 50 mm	> 50 mm	> 50 mm
	LTE Band 4	1754.3	15.50	35	5	5	64.4	297.5	64.4	-MEASURE- 9.3	-MEASURE- 9.3	> 50 mm	> 50 mm	> 50 mm
	LTE Band 5	844	18.00	63	5	5	64.4	297.5	64.4	-MEASURE- 11.6	-MEASURE- 11.6	> 50 mm	> 50 mm	> 50 mm
	LTE Band 12	711	20.00	100	5	5	64.4	297.5	64.4	-MEASURE- 16.9	-MEASURE- 16.9	> 50 mm	> 50 mm	> 50 mm
	LTE Band 13	782	20.00	100	5	5	64.4	297.5	64.4	-MEASURE- 17.7	-MEASURE- 17.7	> 50 mm	> 50 mm	> 50 mm
	LTE Band 17	710	20.00	100	5	5	64.4	297.5	64.4	-MEASURE- 16.9	-MEASURE- 16.9	> 50 mm	> 50 mm	> 50 mm
	LTE Band 25	1905	17.00	50	5	5	64.4	297.5	64.4	-MEASURE- 13.8	-MEASURE- 13.8	> 50 mm	> 50 mm	> 50 mm
	LTE Band 26	841.4	17.50	56	5	5	64.4	297.5	64.4	-MEASURE- 10.3	-MEASURE- 10.3	> 50 mm	> 50 mm	> 50 mm
	LTE Band 41	2680	16.00	40	5	5	64.4	297.5	64.4	-MEASURE- 13.1	-MEASURE- 13.1	> 50 mm	> 50 mm	> 50 mm
	LTE Band 66	1770	17.00	50	5	5	64.4	297.5	64.4	-MEASURE- 13.3	-MEASURE- 13.3	> 50 mm	> 50 mm	> 50 mm
	NR Band n5	839	15.00	32	5	5	64.4	297.5	64.4	-MEASURE- 5.9	-MEASURE- 5.9	> 50 mm	> 50 mm	> 50 mm
	NR Band n41 SRS 1	2639.97	11.00	13	5	5	64.4	297.5	64.4	-MEASURE- 4.2	-MEASURE- 4.2	> 50 mm	> 50 mm	> 50 mm
	NR Band n66	1760	14.00	25	5	5	64.4	297.5	64.4	-MEASURE- 6.6	-MEASURE- 6.6	> 50 mm	> 50 mm	> 50 mm
Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Main 2	RSI 0													
	NR Band n77 (Block A) PC3	3499.98	19.50	89	5	287.4	128.82	5	5	-MEASURE- 33.3	> 50 mm	> 50 mm	-MEASURE- 33.3	-MEASURE- 33.3
	NR Band n77 (Block C) PC3	3929.97	19.50	89	5	287.4	128.82	5	5	-MEASURE- 35.3	> 50 mm	> 50 mm	-MEASURE- 35.3	-MEASURE- 35.3
	NR Band n77 (Block A) PC2	3499.98	21.50	141	5	287.4	128.82	5	5	-MEASURE- 52.8	> 50 mm	> 50 mm	-MEASURE- 52.8	-MEASURE- 52.8
	NR Band n77 (Block C) PC2	3929.97	21.50	141	5	287.4	128.82	5	5	-MEASURE- 55.9	> 50 mm	> 50 mm	-MEASURE- 55.9	-MEASURE- 55.9
	Grip													
	NR Band n77 (Block A) PC3	3499.98	10.00	10	5	287.4	128.82	5	5	-MEASURE- 3.7	> 50 mm	> 50 mm	-MEASURE- 3.7	-MEASURE- 3.7
	NR Band n77 (Block C) PC3	3929.97	10.00	10	5	287.4	128.82	5	5	-MEASURE- 4	> 50 mm	> 50 mm	-MEASURE- 4	-MEASURE- 4
	NR Band n77 (Block A) PC2	3499.98	10.00	10	5	287.4	128.82	5	5	-MEASURE- 3.7	> 50 mm	> 50 mm	-MEASURE- 3.7	-MEASURE- 3.7
	NR Band n77 (Block C) PC2	3929.97	10.00	10	5	287.4	128.82	5	5	-MEASURE- 4	> 50 mm	> 50 mm	-MEASURE- 4	-MEASURE- 4

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 1	Max Power													
	LTE Band 2	1900	24.50	282	5	287.4	5	5	128.82	77.7 -MEASURE-	> 50 mm	77.7 -MEASURE-	77.7 -MEASURE-	> 50 mm
	LTE Band 4	1754.3	24.50	282	5	287.4	5	5	128.82	74.7 -MEASURE-	> 50 mm	74.7 -MEASURE-	74.7 -MEASURE-	> 50 mm
	LTE Band 66	1770	24.50	282	5	287.4	5	5	128.82	75 -MEASURE-	> 50 mm	75 -MEASURE-	75 -MEASURE-	> 50 mm
	NR Band n41 SRS 2	2639.97	12.00	16	5	287.4	5	5	128.82	5.2 -MEASURE-	> 50 mm	5.2 -MEASURE-	5.2 -MEASURE-	> 50 mm
	Reduced Power													
	LTE Band 2	1900	13.00	20	5	287.4	5	5	128.82	5.5 -MEASURE-	> 50 mm	5.5 -MEASURE-	5.5 -MEASURE-	> 50 mm
	LTE Band 4	1754.3	14.00	25	5	287.4	5	5	128.82	6.6 -MEASURE-	> 50 mm	6.6 -MEASURE-	6.6 -MEASURE-	> 50 mm
	LTE Band 66	1770	14.00	25	5	287.4	5	5	128.82	6.7 -MEASURE-	> 50 mm	6.7 -MEASURE-	6.7 -MEASURE-	> 50 mm
Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 2	RSI 0													
	NR Band n41 SRS 4	2639.97	9.00	8	5	297.5	64.4	5	64.4	2.6 -EXEMPT-	> 50 mm	> 50 mm	2.6 -EXEMPT-	> 50 mm
Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 3	RSI 0													
	NR Band n41 SRS 3	2639.97	11.00	13	5	297.5	64.4	5	64.4	4.2 -MEASURE-	> 50 mm	> 50 mm	4.2 -MEASURE-	> 50 mm

Note(s):

According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

Antennas > 50mm to adjacent edges

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Main 1	RSI 0													
	GSM 850 GPRS 4 Slots	848.8	27.50	351	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -MEASURE-	1563.3 mW -EXEMPT-	244.3 mW -MEASURE-
	GSM 1900 GPRS 4 Slots	1909.8	24.50	317	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	252.5 mW -MEASURE-	2583.5 mW -EXEMPT-	252.5 mW -MEASURE-
	W-CDMA 2	1907.6	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	252.6 mW -MEASURE-	2583.6 mW -EXEMPT-	252.6 mW -MEASURE-
	W-CDMA 4	1752.6	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	257.3 mW -MEASURE-	2588.3 mW -EXEMPT-	257.3 mW -MEASURE-
	W-CDMA 5	846.6	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -MEASURE-	1559.9 mW -EXEMPT-	244.3 mW -MEASURE-
	LTE Band 2	1900	26.00	398	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	252.8 mW -MEASURE-	2583.8 mW -EXEMPT-	252.8 mW -MEASURE-
	LTE Band 4	1754.3	26.00	398	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	257.3 mW -MEASURE-	2588.3 mW -EXEMPT-	257.3 mW -MEASURE-
	LTE Band 5	844	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -MEASURE-	1555.9 mW -EXEMPT-	244.3 mW -MEASURE-
	LTE Band 12	711	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	246.1 mW -MEASURE-	1351 mW -EXEMPT-	246.1 mW -MEASURE-
	LTE Band 13	782	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.7 mW -MEASURE-	1459.9 mW -EXEMPT-	244.7 mW -MEASURE-
	LTE Band 17	710	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	246.2 mW -MEASURE-	1349.5 mW -EXEMPT-	246.2 mW -MEASURE-
	LTE Band 25	1905	26.00	398	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	252.7 mW -MEASURE-	2583.7 mW -EXEMPT-	252.7 mW -MEASURE-
	LTE Band 26	841.4	25.50	355	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -MEASURE-	1551.8 mW -EXEMPT-	244.3 mW -MEASURE-
	LTE Band 41	2680	26.00	398	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	235.6 mW -MEASURE-	2566.6 mW -EXEMPT-	235.6 mW -MEASURE-
	LTE Band 66	1770	26.00	398	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	256.7 mW -MEASURE-	2587.7 mW -EXEMPT-	256.7 mW -MEASURE-
	NR Band n5	839	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -MEASURE-	1548.1 mW -EXEMPT-	244.3 mW -MEASURE-
	NR Band n41 SRS 1	2639.97	19.00	79	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	236.3 mW -EXEMPT-	2567.3 mW -EXEMPT-	236.3 mW -EXEMPT-
	NR Band n66	1760	25.00	316	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	257.1 mW -EXEMPT-	2588.1 mW -EXEMPT-	257.1 mW -EXEMPT-
	Grip													
	GSM 850 GPRS 4 Slots	848.8	18.00	39	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -EXEMPT-	1563.3 mW -EXEMPT-	244.3 mW -EXEMPT-
	GSM 1900 GPRS 4 Slots	1909.8	16.00	45	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	252.5 mW -EXEMPT-	2583.5 mW -EXEMPT-	252.5 mW -EXEMPT-
	W-CDMA 2	1907.6	15.00	32	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	252.6 mW -EXEMPT-	2583.6 mW -EXEMPT-	252.6 mW -EXEMPT-
	W-CDMA 4	1752.6	15.00	32	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	257.3 mW -EXEMPT-	2588.3 mW -EXEMPT-	257.3 mW -EXEMPT-
	W-CDMA 5	846.6	15.00	32	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -EXEMPT-	1559.9 mW -EXEMPT-	244.3 mW -EXEMPT-
	LTE Band 2	1900	17.00	50	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	252.8 mW -EXEMPT-	2583.8 mW -EXEMPT-	252.8 mW -EXEMPT-
	LTE Band 4	1754.3	15.50	35	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	257.3 mW -EXEMPT-	2588.3 mW -EXEMPT-	257.3 mW -EXEMPT-
	LTE Band 5	844	18.00	63	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -EXEMPT-	1555.9 mW -EXEMPT-	244.3 mW -EXEMPT-
	LTE Band 12	711	20.00	100	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	246.1 mW -EXEMPT-	1351 mW -EXEMPT-	246.1 mW -EXEMPT-
	LTE Band 13	782	20.00	100	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.7 mW -EXEMPT-	1459.9 mW -EXEMPT-	244.7 mW -EXEMPT-
	LTE Band 17	710	20.00	100	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	246.2 mW -EXEMPT-	1349.5 mW -EXEMPT-	246.2 mW -EXEMPT-
	LTE Band 25	1905	17.00	50	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	252.7 mW -EXEMPT-	2583.7 mW -EXEMPT-	252.7 mW -EXEMPT-
	LTE Band 26	841.4	17.50	56	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -EXEMPT-	1551.8 mW -EXEMPT-	244.3 mW -EXEMPT-
	LTE Band 41	2680	16.00	40	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	235.6 mW -EXEMPT-	2566.6 mW -EXEMPT-	235.6 mW -EXEMPT-
	LTE Band 66	1770	17.00	50	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	256.7 mW -EXEMPT-	2587.7 mW -EXEMPT-	256.7 mW -EXEMPT-
	NR Band n5	839	15.00	32	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	244.3 mW -EXEMPT-	1548.1 mW -EXEMPT-	244.3 mW -EXEMPT-
	NR Band n41 SRS 1	2639.97	11.00	13	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	236.3 mW -EXEMPT-	2567.3 mW -EXEMPT-	236.3 mW -EXEMPT-
	NR Band n66	1760	14.00	25	5	5	64.4	297.5	64.4	< 50 mm	< 50 mm	257.1 mW -EXEMPT-	2588.1 mW -EXEMPT-	257.1 mW -EXEMPT-
Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Main 2	RSI 0													
	NR Band n77 (Block A) PC3	3499.98	19.50	89	5	287.4	128.82	5	5	< 50 mm	2454.2 mW -EXEMPT-	868.4 mW -EXEMPT-	< 50 mm	< 50 mm
	NR Band n77 (Block C) PC3	3929.97	19.50	89	5	287.4	128.82	5	5	< 50 mm	2449.7 mW -EXEMPT-	863.9 mW -EXEMPT-	< 50 mm	< 50 mm
	NR Band n77 (Block A) PC2	3499.98	21.50	141	5	287.4	128.82	5	5	< 50 mm	2454.2 mW -EXEMPT-	868.4 mW -EXEMPT-	< 50 mm	< 50 mm
	NR Band n77 (Block C) PC2	3929.97	21.50	141	5	287.4	128.82	5	5	< 50 mm	2449.7 mW -EXEMPT-	863.9 mW -EXEMPT-	< 50 mm	< 50 mm
	Grip													
	NR Band n77 (Block A) PC3	3499.98	10.00	10	5	287.4	128.82	5	5	< 50 mm	2454.2 mW -EXEMPT-	868.4 mW -EXEMPT-	< 50 mm	< 50 mm
	NR Band n77 (Block C) PC3	3929.97	10.00	10	5	287.4	128.82	5	5	< 50 mm	2449.7 mW -EXEMPT-	863.9 mW -EXEMPT-	< 50 mm	< 50 mm
	NR Band n77 (Block A) PC2	3499.98	10.00	10	5	287.4	128.82	5	5	< 50 mm	2454.2 mW -EXEMPT-	868.4 mW -EXEMPT-	< 50 mm	< 50 mm
	NR Band n77 (Block C) PC2	3929.97	10.00	10	5	287.4	128.82	5	5	< 50 mm	2449.7 mW -EXEMPT-	863.9 mW -EXEMPT-	< 50 mm	< 50 mm

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 1	Max Power													
	LTE Band 2	1900	24.50	282	5	287.4	5	5	128.82	< 50 mm	2482.8 mW -EXEMPT-	< 50 mm	< 50 mm	897 mW -EXEMPT-
	LTE Band 4	1754.3	24.50	282	5	287.4	5	5	128.82	< 50 mm	2487.3 mW -EXEMPT-	< 50 mm	< 50 mm	901.5 mW -EXEMPT-
	LTE Band 66	1770	24.50	282	5	287.4	5	5	128.82	< 50 mm	2486.7 mW -EXEMPT-	< 50 mm	< 50 mm	900.9 mW -EXEMPT-
	NR Band n41 SRS 2	2639.97	12.00	16	5	287.4	5	5	128.82	< 50 mm	2466.3 mW -EXEMPT-	< 50 mm	< 50 mm	880.5 mW -EXEMPT-
	Reduced Power													
	LTE Band 2	1900	13.00	20	5	287.4	5	5	128.82	< 50 mm	2482.8 mW -EXEMPT-	< 50 mm	< 50 mm	897 mW -EXEMPT-
	LTE Band 4	1754.3	14.00	25	5	287.4	5	5	128.82	< 50 mm	2487.3 mW -EXEMPT-	< 50 mm	< 50 mm	901.5 mW -EXEMPT-
	LTE Band 66	1770	14.00	25	5	287.4	5	5	128.82	< 50 mm	2486.7 mW -EXEMPT-	< 50 mm	< 50 mm	900.9 mW -EXEMPT-
Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 2	RSI 0													
	NR Band n41 SRS 4	2639.97	9.00	9	5	297.5	64.4	5	64.4	< 50 mm	2567.3 mW -EXEMPT-	236.3 mW -EXEMPT-	< 50 mm	236.3 mW -EXEMPT-
Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 3	RSI 0													
	NR Band n41 SRS 3	2639.97	11.00	9	5	297.5	64.4	5	64.4	< 50 mm	2567.3 mW -EXEMPT-	236.3 mW -EXEMPT-	< 50 mm	236.3 mW -EXEMPT-

Note(s):

According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

SAR Test Exclusion Calculations for WLAN**Antennas < 50mm to adjacent edges**

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Wi-Fi 1	Max Power													
	Wi-Fi 2.4 GHz	2462	18.0	63	5	5	5	287.4	128.82	19.8 -MEASURE- 22.9	19.8 -MEASURE- 22.9	19.8 -MEASURE- 22.9	> 50 mm	> 50 mm
	Wi-Fi 5.2 GHz	5240	17.0	50	5	5	5	287.4	128.82	-MEASURE- 23.1	-MEASURE- 23.1	-MEASURE- 23.1	> 50 mm	> 50 mm
	Wi-Fi 5.3 GHz	5320	17.0	50	5	5	5	287.4	128.82	-MEASURE- 23.9	-MEASURE- 23.9	-MEASURE- 23.9	> 50 mm	> 50 mm
	Wi-Fi 5.5 GHz	5700	17.0	50	5	5	5	287.4	128.82	-MEASURE- 24.1	-MEASURE- 24.1	-MEASURE- 24.1	> 50 mm	> 50 mm
	Wi-Fi 5.8 GHz	5825	17.0	50	5	5	5	287.4	128.82	-MEASURE- 24.3	-MEASURE- 24.3	-MEASURE- 24.3	> 50 mm	> 50 mm
	Wi-Fi 5.9 GHz	5905	17.0	50	5	5	5	287.4	128.82	-MEASURE- 12.6	-MEASURE- 12.6	-MEASURE- 12.6	> 50 mm	> 50 mm
	Bluetooth	2480	16.0	40	5	5	5	287.4	128.82	-MEASURE- 12.6	-MEASURE- 12.6	-MEASURE- 12.6	> 50 mm	> 50 mm
	Reduced Power													
	Wi-Fi 2.4 GHz	2462	10.0	10	5	5	5	287.4	128.82	3.1 -MEASURE- 3.2	3.1 -MEASURE- 3.2	3.1 -MEASURE- 3.2	> 50 mm	> 50 mm
	Wi-Fi 5.2 GHz	5240	8.50	7	5	5	5	287.4	128.82	-MEASURE- 3.2	-MEASURE- 3.2	-MEASURE- 3.2	> 50 mm	> 50 mm
	Wi-Fi 5.3 GHz	5320	8.50	7	5	5	5	287.4	128.82	-MEASURE- 3.2	-MEASURE- 3.2	-MEASURE- 3.2	> 50 mm	> 50 mm
	Wi-Fi 5.5 GHz	5700	8.50	7	5	5	5	287.4	128.82	-MEASURE- 3.3	-MEASURE- 3.3	-MEASURE- 3.3	> 50 mm	> 50 mm
	Wi-Fi 5.8 GHz	5825	9.50	9	5	5	5	287.4	128.82	-MEASURE- 4.3	-MEASURE- 4.3	-MEASURE- 4.3	> 50 mm	> 50 mm
	Wi-Fi 5.9 GHz	5905	9.50	9	5	5	5	287.4	128.82	-MEASURE- 4.4	-MEASURE- 4.4	-MEASURE- 4.4	> 50 mm	> 50 mm
	Bluetooth	2480	12.0	16	5	5	5	287.4	128.82	-MEASURE- 5	-MEASURE- 5	-MEASURE- 5	> 50 mm	> 50 mm
Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Wi-Fi 2	Max Power													
	Wi-Fi 2.4 GHz	2462	18.0	63	5	5	128.82	287.4	5	19.8 -MEASURE- 22.9	19.8 -MEASURE- 22.9	> 50 mm	> 50 mm	19.8 -MEASURE- 22.9
	Wi-Fi 5.2 GHz	5240	17.0	50	5	5	128.82	287.4	5	-MEASURE- 23.1	-MEASURE- 23.1	> 50 mm	> 50 mm	-MEASURE- 23.1
	Wi-Fi 5.3 GHz	5320	17.0	50	5	5	128.82	287.4	5	-MEASURE- 23.9	-MEASURE- 23.9	> 50 mm	> 50 mm	-MEASURE- 23.9
	Wi-Fi 5.5 GHz	5700	17.0	50	5	5	128.82	287.4	5	-MEASURE- 24.1	-MEASURE- 24.1	> 50 mm	> 50 mm	-MEASURE- 24.1
	Wi-Fi 5.8 GHz	5825	17.0	50	5	5	128.82	287.4	5	-MEASURE- 24.3	-MEASURE- 24.3	> 50 mm	> 50 mm	-MEASURE- 24.3
	Wi-Fi 5.9 GHz	5905	17.0	50	5	5	128.82	287.4	5	-MEASURE- 12.6	-MEASURE- 12.6	> 50 mm	> 50 mm	-MEASURE- 12.6
	Reduced Power													
	Wi-Fi 2.4 GHz	2462	10.0	10	5	5	128.82	287.4	5	3.1 -MEASURE- 3.2	3.1 -MEASURE- 3.2	> 50 mm	> 50 mm	3.1 -MEASURE- 3.2
	Wi-Fi 5.2 GHz	5240	8.50	7	5	5	128.82	287.4	5	-MEASURE- 3.2	-MEASURE- 3.2	> 50 mm	> 50 mm	-MEASURE- 3.2
	Wi-Fi 5.3 GHz	5320	8.50	7	5	5	128.82	287.4	5	-MEASURE- 3.2	-MEASURE- 3.2	> 50 mm	> 50 mm	-MEASURE- 3.2
	Wi-Fi 5.5 GHz	5700	8.50	7	5	5	128.82	287.4	5	-MEASURE- 3.3	-MEASURE- 3.3	> 50 mm	> 50 mm	-MEASURE- 3.3
	Wi-Fi 5.8 GHz	5825	9.50	9	5	5	128.82	287.4	5	-MEASURE- 4.3	-MEASURE- 4.3	> 50 mm	> 50 mm	-MEASURE- 4.3
	Wi-Fi 5.9 GHz	5905	9.50	9	5	5	128.82	287.4	5	-MEASURE- 4.4	-MEASURE- 4.4	> 50 mm	> 50 mm	-MEASURE- 4.4
	Bluetooth	2480	12.0	16	5	5	128.82	287.4	5	-MEASURE- 5	-MEASURE- 5	> 50 mm	> 50 mm	-MEASURE- 5

Note(s):

According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

Antennas > 50mm to adjacent edges

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Wi-Fi 1	Max Power													
	Wi-Fi 2.4 GHz	2462	18.0	63	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2469.6 mW -EXEMPT-	883.8 mW -EXEMPT-
	Wi-Fi 5.2 GHz	5240	17.0	50	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2439.5 mW -EXEMPT-	853.7 mW -EXEMPT-
	Wi-Fi 5.3 GHz	5320	17.0	50	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2439 mW -EXEMPT-	853.2 mW -EXEMPT-
	Wi-Fi 5.5 GHz	5700	17.0	50	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2436.8 mW -EXEMPT-	851 mW -EXEMPT-
	Wi-Fi 5.8 GHz	5825	17.0	50	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2436.2 mW -EXEMPT-	850.4 mW -EXEMPT-
	Wi-Fi 5.9 GHz	5905	17.0	50	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2435.7 mW -EXEMPT-	849.9 mW -EXEMPT-
	Bluetooth	2480	16.0	40	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2469.3 mW -EXEMPT-	883.5 mW -EXEMPT-
	Reduced Power													
	Wi-Fi 2.4 GHz	2462	10.0	10	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2469.6 mW -EXEMPT-	883.8 mW -EXEMPT-
	Wi-Fi 5.2 GHz	5240	8.50	7	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2439.5 mW -EXEMPT-	853.7 mW -EXEMPT-
	Wi-Fi 5.3 GHz	5320	8.50	7	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2439 mW -EXEMPT-	853.2 mW -EXEMPT-
	Wi-Fi 5.5 GHz	5700	8.50	7	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2436.8 mW -EXEMPT-	851 mW -EXEMPT-
	Wi-Fi 5.8 GHz	5825	9.50	9	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2436.2 mW -EXEMPT-	850.4 mW -EXEMPT-
	Wi-Fi 5.9 GHz	5905	9.50	9	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2435.7 mW -EXEMPT-	849.9 mW -EXEMPT-
	Bluetooth	2480	12.0	16	5	5	5	287.4	128.82	< 50 mm	< 50 mm	< 50 mm	2469.3 mW -EXEMPT-	883.5 mW -EXEMPT-
Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Calculated Threshold Value				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Wi-Fi 2	Max Power													
	Wi-Fi 2.4 GHz	2462	18.0	63	5	5	128.82	287.4	5	< 50 mm	< 50 mm	883.8 mW -EXEMPT-	2469.6 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.2 GHz	5240	17.0	50	5	5	128.82	287.4	5	< 50 mm	< 50 mm	853.7 mW -EXEMPT-	2439.5 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.3 GHz	5320	17.0	50	5	5	128.82	287.4	5	< 50 mm	< 50 mm	853.2 mW -EXEMPT-	2439 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.5 GHz	5700	17.0	50	5	5	128.82	287.4	5	< 50 mm	< 50 mm	851 mW -EXEMPT-	2436.8 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.8 GHz	5825	17.0	50	5	5	128.82	287.4	5	< 50 mm	< 50 mm	850.4 mW -EXEMPT-	2436.2 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.9 GHz	5905	17.0	50	5	5	128.82	287.4	5	< 50 mm	< 50 mm	849.9 mW -EXEMPT-	2435.7 mW -EXEMPT-	< 50 mm
	Reduced Power													
	Wi-Fi 2.4 GHz	2462	10.0	10	5	5	128.82	287.4	5	< 50 mm	< 50 mm	883.8 mW -EXEMPT-	2469.6 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.2 GHz	5240	8.50	7	5	5	128.82	287.4	5	< 50 mm	< 50 mm	853.7 mW -EXEMPT-	2439.5 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.3 GHz	5320	8.50	7	5	5	128.82	287.4	5	< 50 mm	< 50 mm	853.2 mW -EXEMPT-	2439 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.5 GHz	5700	8.50	7	5	5	128.82	287.4	5	< 50 mm	< 50 mm	851 mW -EXEMPT-	2436.8 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.8 GHz	5825	9.50	9	5	5	128.82	287.4	5	< 50 mm	< 50 mm	850.4 mW -EXEMPT-	2436.2 mW -EXEMPT-	< 50 mm
	Wi-Fi 5.9 GHz	5905	9.50	9	5	5	128.82	287.4	5	< 50 mm	< 50 mm	849.9 mW -EXEMPT-	2435.7 mW -EXEMPT-	< 50 mm

Note(s):

According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

7.2. Required Test Configurations

The table below identifies the standalone test configurations required for this device according to the findings in Section 7.1:

Antenna	Band	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Main 1 RSI 0	GSM 850/1900 WCDMA B2/4/5 LTE B2/4/5/12/13/17/25/26/41/66 5G(FR1) n5/n66	Yes	Yes	Yes	No	Yes
	5G(FR1) n41 SRS 1	Yes	Yes	No	No	No
Main 1 Grip	GSM 850/1900 WCDMA B2/4/5 LTE B2/4/5/12/13/17/25/26/41/66 5G(FR1) n5/n66	Yes	Yes	No	No	No
	5G(FR1) n41 SRS 1	Yes	Yes	No	No	No
Main 2 RSI 0	5G(FR1) n77	Yes	No	No	Yes	Yes
Main 2 Grip	5G(FR1) n77	Yes	No	No	Yes	Yes
Sub 1 Max Power	LTE B2/4/66 5G(FR1) n41 SRS 2	Yes	No	Yes	Yes	No
Sub 1 Reduced Power	LTE B2/4/66	Yes	No	Yes	Yes	No
Sub 2 RSI 0	5G(FR1) n41 SRS 4	No	No	No	No	No
Sub 3 RSI 0	5G(FR1) n41 SRS 3	Yes	No	No	Yes	No
ANT 1 Max Power	Wi-Fi 2.4GHz Wi-Fi 5GHz Bluetooth	Yes	Yes	Yes	No	No
ANT 1 Reduced Power	Wi-Fi 2.4GHz Wi-Fi 5GHz Bluetooth	Yes	Yes	Yes	No	No
ANT 2 Max Power	Wi-Fi 2.4GHz Wi-Fi 5GHz	Yes	Yes	No	No	Yes
ANT 2 Reduced Power	Wi-Fi 2.4GHz Wi-Fi 5GHz	Yes	Yes	No	No	Yes

Note(s):

Yes = SAR testing is required.

No = SAR testing is not required.

8. Dielectric Property Measurements & System Check

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

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

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

The methodology used to determine the SAR correction is described in IEEE Std 1528-2013. The methodology was conducted over a frequency range of 30 MHz to 6000 MHz, but it is implemented over the 300 MHz to 6000 MHz frequency range. The methodology was also studied for permittivity (ϵ_r) and conductivity (σ) ranges of $\pm 20\%$, but ranges of $\pm 10\%$ have been chosen. Given that the change in dielectric parameters influences the conversion factor of the probe, this influence will be small if a $\pm 10\%$ range is used.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

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

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

System Performance Check Measurement Conditions:

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

Liquid Check										System Check													
SAR Lab	Date	Tissue Type	Band (MHz)	Freq. (MHz)	Relative Permittivity (ε _r)			Conductivity (σ)			Date	Dipole Type & Serial Number	Dipole Cal. Due Date	Input Power (dBm)	Measured results for 1-g SAR				Measured results for 10-g SAR				Plot No.
					Measured	Target	Delta	Measured	Target	Delta					Meas. Zoom Scan	Normalize to 1 W	Target (Ref. Value)	Delta ±10%	Meas. Zoom Scan	Normalize to 1 W	Target (Ref. Value)	Delta ±10%	
SAR A	12/26/2024	Head	2450	2450	41.60	39.20	6.12%	1.90	1.80	5.72%	12/26/2024	D2450V2 SN: 748	2/8/2025	20.0	5.620	56.200	51.700	8.70%	2.620	26.200	24.200	8.26%	
				2400	41.70	39.30	6.12%	1.86	1.75	6.01%													
				2500	41.53	39.14	6.11%	1.94	1.85	4.80%													
SAR A	12/30/2024	Head	2450	2450	41.11	39.20	4.87%	1.86	1.80	3.22%	12/30/2024	D2450V2 SN: 748	2/8/2025	20.0	5.660	56.600	51.700	9.48%	2.650	26.500	24.200	9.50%	1
				2400	41.20	39.30	4.84%	1.81	1.75	3.56%													
				2500	41.03	39.14	4.84%	1.90	1.85	2.37%													
SAR E	12/30/2024	Head	750	750	41.10	41.96	-2.05%	0.86	0.89	-4.22%	12/30/2024	D750V3 SN: 1019	4/13/2025	20.0	0.833	8.330	8.510	-2.12%	0.553	5.530	5.590	-1.07%	
				660	41.42	42.42	-2.36%	0.83	0.89	-6.90%													
				800	40.95	41.71	-1.81%	0.87	0.90	-3.05%													
SAR E	12/30/2024	Head	835	835	42.14	41.50	1.54%	0.88	0.90	-2.51%	12/30/2024	D835V2 SN: 40002	11/7/2025	20.0	0.917	9.170	9.690	-5.37%	0.602	6.020	6.330	-4.90%	2
				805	42.16	41.68	1.15%	0.86	0.90	-3.68%													
				850	42.09	41.50	1.42%	0.88	0.92	-3.46%													
SAR E	1/7/2025	Head	835	835	40.62	41.50	-2.12%	0.88	0.90	-2.70%	1/7/2025	D835V2 SN: 40002	11/7/2025	20.0	0.952	9.520	9.690	-1.75%	0.623	6.230	6.330	-1.58%	
				805	40.66	41.68	-2.45%	0.86	0.90	-3.70%													
				850	40.58	41.50	-2.22%	0.88	0.92	-3.78%													
SAR E	1/21/2025	Head	750	750	40.43	41.96	-3.65%	0.87	0.89	-2.56%	1/21/2025	D750V3 SN: 1019	4/13/2025	20.0	0.854	8.540	8.510	0.35%	0.568	5.680	5.590	1.61%	
				660	40.76	42.42	-3.92%	0.84	0.89	-5.24%													
				800	40.22	41.71	-3.56%	0.89	0.90	-0.97%													
SAR E	1/7/2025	Head	835	835	40.62	41.50	-2.12%	0.88	0.90	-2.70%	1/7/2025	D835V2 SN: 40002	11/7/2025	20.0	0.952	9.520	9.690	-1.75%	0.623	6.230	6.330	-1.58%	
				805	40.66	41.68	-2.45%	0.86	0.90	-3.70%													
				850	40.58	41.50	-2.22%	0.88	0.92	-3.78%													
SAR E	1/21/2025	Head	835	835	40.14	41.50	-3.28%	0.90	0.90	0.24%	1/21/2025	D835V2 SN: 40002	11/7/2025	20.0	0.945	9.450	9.690	-2.48%	0.622	6.220	6.330	-1.74%	
				805	40.20	41.68	-3.55%	0.89	0.90	-0.78%													
				850	40.09	41.50	-3.40%	0.91	0.92	-0.85%													
SAR E	1/27/2025	Head	750	750	42.21	41.96	0.59%	0.85	0.89	-4.30%	1/27/2025	D750V3 SN: 1019	4/13/2025	20.0	0.882	8.820	8.510	3.64%	0.586	5.860	5.590	4.83%	
				660	42.58	42.42	0.37%	0.82	0.89	-7.09%													
				800	41.99	41.71	0.68%	0.87	0.90	-2.71%													
SAR E	1/27/2025	Head	835	835	41.94	41.50	1.06%	0.89	0.90	-1.49%	1/27/2025	D835V2 SN: 40002	11/7/2025	20.0	0.938	9.380	9.690	-3.20%	0.618	6.180	6.330	-2.37%	
				805	41.98	41.68	0.72%	0.87	0.90	-2.52%													
				850	41.89	41.50	0.94%	0.89	0.92	-2.55%													
SAR E	2/26/2025	Head	5750	5750	36.23	35.36	2.45%	5.02	5.21	-3.72%	2/27/2025	D5GHzV2 SN: 1138 (5.75 GHz)	2/6/2026	20.0	7.730	77.300	78.300	-1.28%	2.220	22.200	22.200	0.00%	
				5700	36.36	35.42	2.65%	4.95	5.16	-4.18%													
				5850	36.04	35.30	2.10%	5.22	5.32	-1.82%													
SAR E	3/3/2025	Head	5750	5750	35.16	35.36	-0.57%	5.03	5.21	-3.49%	3/3/2025	D5GHzV2 SN: 1138 (5.75 GHz)	2/6/2026	20.0	8.420	84.200	78.300	7.54%	2.380	23.800	22.200	7.21%	3
				5700	35.26	35.42	-0.45%	4.94	5.16	-4.23%													
				5850	35.00	35.30	-0.85%	5.22	5.32	-1.86%													

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Liquid Check										System Check													
SAR Lab	Date	Tissue Type	Band (MHz)	Freq. (MHz)	Relative Permittivity (εr)			Conductivity (σ)			Date	Dipole Type & Serial Number	Dipole Cal. Due Date	Input Power (dBm)	Measured results for 1-g SAR				Measured results for 10-g SAR				Plot No.
					Measured	Target	Delta	Measured	Target	Delta					Meas. Zoom Scan	Normalize to 1 W	Target (Ref. Value)	Delta ±10%	Meas. Zoom Scan	Normalize to 1 W	Target (Ref. Value)	Delta ±10%	
SAR I	1/9/2025	Head	1750	1750	40.48	40.08	0.99%	1.34	1.37	-2.04%	1/9/2025	D1750V2 SN: 1050	4/19/2025	20.0	3.460	34.600	36.100	-4.16%	1.830	18.300	18.900	-3.17%	
				1695	40.53	40.17	0.90%	1.31	1.34	-2.31%													
				1780	40.43	40.04	0.98%	1.36	1.39	-2.01%													
				1750	43.13	40.08	7.60%	1.29	1.37	-6.13%													
SAR I	1/13/2025	Head	1750	1695	43.19	40.17	7.52%	1.26	1.34	-6.20%	1/13/2025	D1750V2 SN: 1050	4/19/2025	20.0	3.400	34.000	36.100	-5.82%	1.790	17.900	18.900	-5.29%	
				1780	43.10	40.04	7.65%	1.30	1.39	-5.91%													
				1750	42.25	40.08	5.40%	1.27	1.37	-6.94%													
				1695	42.35	40.17	5.43%	1.24	1.34	-7.17%													
SAR I	1/16/2025	Head	1750	1780	42.21	40.04	5.42%	1.29	1.39	-6.70%	1/16/2025	D1750V2 SN: 1050	4/19/2025	20.0	3.330	33.300	36.100	-7.76%	1.790	17.900	18.900	-5.29%	17
				1750	41.90	40.08	4.53%	1.32	1.37	-3.58%													
				1695	41.95	40.17	4.43%	1.29	1.34	-3.58%													
				1780	41.85	40.04	4.52%	1.35	1.39	-2.95%													
SAR I	1/21/2025	Head	1750	2600	40.60	39.01	4.07%	1.93	1.96	-1.59%	1/21/2025	D1750V2 SN: 1050	4/19/2025	20.0	3.360	33.600	36.100	-6.93%	1.800	18.000	18.900	-4.76%	
				2495	40.76	39.14	4.13%	1.84	1.85	-0.36%													
				2690	40.46	38.90	4.02%	2.00	2.06	-2.79%													
				1750	40.15	40.08	0.16%	1.30	1.37	-4.89%													
SAR I	1/21/2025	Head	2600	2495	40.76	39.14	4.13%	1.84	1.85	-0.36%	1/21/2025	D2600V2 SN: 1036	4/11/2025	20.0	5.440	54.400	55.400	-1.81%	2.450	24.500	24.900	-1.61%	18
				2690	40.46	38.90	4.02%	2.00	2.06	-2.79%													
				1750	40.15	40.08	0.16%	1.30	1.37	-4.89%													
				1695	40.19	40.17	0.05%	1.27	1.34	-5.08%													
SAR I	1/27/2025	Head	1750	1780	40.12	40.04	0.20%	1.32	1.39	-4.61%	1/27/2025	D1750V2 SN: 1050	4/19/2025	20.0	3.450	34.500	36.100	-4.43%	1.850	18.500	18.900	-2.12%	
				1750	40.28	40.08	0.49%	1.30	1.37	-5.04%													
				1695	40.38	40.17	0.52%	1.26	1.34	-5.83%													
				1780	40.27	40.04	0.58%	1.30	1.39	-6.20%													
SAR I	1/31/2025	Head	1750	1695	40.38	40.17	0.52%	1.26	1.34	-5.83%	1/31/2025	D1750V2 SN: 1050	4/19/2025	20.0	3.410	34.100	36.100	-5.54%	1.820	18.200	18.900	-3.70%	
				1780	40.27	40.04	0.58%	1.30	1.39	-6.20%													

9. Conducted Output Power Measurements

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

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

Maximum Output Power (Tune-up Power Limit) provided by the manufacturer are used to scale measured SAR values.

9.1. GSM

Per KDB 941225 D01 3G SAR Procedures:

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

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

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

Per October 2013 TCB Workshop:

When the maximum frame-averaged powers levels are within 0.25 dB of each other, test the configuration with the greatest number of time slots.

Maximum Output Power (Tune-up Limit) for GSM

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

RF Air interface	Antenna	Mode	Tune-up Limit (dBm)		
			P _{max}	RSI 0	Grip
GSM850	Main 1	Voice/GPRS (1 slot)	33.5	33.5	24.0
		GPRS 2 slots	30.5	30.5	20.0
		GPRS 3 slots	28.0	28.0	18.5
		GPRS 4 slots	27.5	27.5	18.0
		EGPRS 1 slot	27.5	27.5	24.0
		EGPRS 2 slot	25.5	25.5	20.0
		EGPRS 3 slot	24.3	24.3	18.5
		EGPRS 4 slots	23.0	23.0	17.5
GSM1900	Main 1	Voice/GPRS (1 slot)	30.5	30.5	22.0
		GPRS 2 slots	27.5	27.5	18.5
		GPRS 3 slots	25.5	25.5	16.5
		GPRS 4 slots	24.5	24.5	16.0
		EGPRS 1 slot	26.5	26.5	22.0
		EGPRS 2 slot	25.0	25.0	18.5
		EGPRS 3 slot	23.3	23.3	16.5
		EGPRS 4 slots	22.0	22.0	15.5

GSM850 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	RSI 0 (dBm)				Grip (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	128	824.2	31.5	22.5	33.5	24.5	22.6	13.6	24.0	15.0
			190	836.6	31.8	22.8			22.6	13.6		
			251	848.8	32.0	23.0			22.8	13.8		
		2	128	824.2	29.5	23.5	30.5	24.5	19.3	13.3	20.0	14.0
			190	836.6	29.6	23.6			19.7	13.7		
			251	848.8	29.7	23.7			19.8	13.8		
		3	128	824.2	27.0	18.0	28.0	23.7	17.4	8.4	18.5	14.2
			190	836.6	27.1	18.1			17.8	8.8		
			251	848.8	27.2	18.2			17.9	8.9		
		4	128	824.2	25.9	19.9	27.5	24.5	16.9	10.9	18.0	15.0
			190	836.6	26.4	20.4			16.8	10.8		
			251	848.8	26.5	20.5			17.0	11.0		

Notes:

Based on the Maximum Output Power (Tune-up Power Procedure), GPRS/EDGE (GMSK) mode with 4 time slots for Max power and reduced power have maximum frame-averaged power.

GSM1900 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	RSI 0 (dBm)				Grip (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	512	1850.2	28.8	19.8	30.5	21.5	20.6	11.6	22.0	13.0
			661	1880.0	28.8	19.8			20.6	11.6		
			810	1909.8	28.9	19.9			21.1	12.1		
		2	512	1850.2	26.2	20.2	27.5	21.5	17.5	11.5	18.5	12.5
			661	1880.0	26.3	20.3			17.4	11.4		
			810	1909.8	26.5	20.5			17.8	11.8		
		3	512	1850.2	24.5	15.5	25.5	21.2	15.7	6.7	16.5	12.2
			661	1880.0	24.6	15.6			15.6	6.6		
			810	1909.8	24.7	15.7			15.8	6.8		
		4	512	1850.2	23.8	17.8	24.5	21.5	14.9	8.9	16.0	13.0
			661	1880.0	23.7	17.7			14.5	8.5		
			810	1909.8	23.8	17.8			14.3	8.3		
EDGE (8PSK)	MCS5	1	512	1850.2	25.2	16.2	26.5	17.5	20.7	11.7	22.0	13.0
			661	1880.0	25.3	16.3			20.5	11.5		
			810	1909.8	25.3	16.3			20.8	11.8		
		2	512	1850.2	24.6	18.6	25.0	19.0	18.1	12.1	18.5	12.5
			661	1880.0	24.4	18.4			17.7	11.7		
			810	1909.8	24.6	18.6			18.2	12.2		
		3	512	1850.2	22.9	13.9	23.3	19.0	15.5	6.5	16.5	12.2
			661	1880.0	23.0	14.0			15.8	6.8		
			810	1909.8	23.2	14.2			16.1	7.1		
		4	512	1850.2	21.9	15.9	22.0	19.0	14.5	8.5	15.5	12.5
			661	1880.0	21.6	15.6			14.7	8.7		
			810	1909.8	21.8	15.8			14.9	8.9		

Notes:

Based on the Maximum Output Power (Tune-up Power Procedure), GPRS/EDGE (GMSK) mode with 4 time slots for Max power and reduced power have maximum frame-averaged power.

9.2. W-CDMA

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

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

Release 99 Setup Procedures used to establish the test signals

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

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 procedures in table C.10.1.4 of 3GPP TS 34.121-1. A summary of these settings is illustrated below:

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

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

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$.

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

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

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

HSUPA Setup Procedures used to establish the test signals

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{EC}	β_{ES} (Note 4) (Note 5)	β_{ES} (SF)	β_{ES} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E- TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	8/15	15/15	64	8/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ES1}: 47/15$ $\beta_{ES2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{HS} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPCCH and E-DPCCH the MPR is based on the relative CM difference.

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

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

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

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

DC-HSDPA Setup Procedures used to establish the test signals

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

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

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	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.		

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

SAR measurement is not required for the HSDPA, HSUPA, DC-HSDPA. When primary mode and the adjusted SAR is ≤ 1.2 W/kg and secondary mode is $\leq 1/4$ dB higher than the primary mode

RF Air interface	Antenna	Mode	Tune-up Limit (dBm)		
			P_{max}	RSI 0	Grip
W-CDMA Band 2	Main 1	R99	25.0	25.0	15.0
		HSDPA	23.5	23.5	13.0
		HSUPA	23.5	23.5	12.0
		DC-HSDPA	23.5	23.5	13.0
W-CDMA Band 4	Main 1	R99	25.0	25.0	15.0
		HSDPA	23.5	23.5	14.0
		HSUPA	23.5	23.5	12.5
		DC-HSDPA	23.5	23.5	14.0
W-CDMA Band 5	Main 1	R99	25.0	25.0	15.0
		HSDPA	24.0	24.0	14.0
		HSUPA	24.0	24.0	13.0
		DC-HSDPA	24.0	24.0	14.0

W-CDMA Band II Measured Results

Mode		UL Ch No.	Freq. (MHz)	RSI 0 (dBm)			Grip (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	23.9	N/A	25.0	13.3	N/A	15.0
		9400	1880.0	23.9			13.7		
		9538	1907.6	24.3			13.8		
HSDPA	Subtest 1	9262	1852.4	22.8	0	23.5	11.6	0	13.0
		9400	1880.0	22.8			11.4		
		9538	1907.6	23.1			11.4		
	Subtest 2	9262	1852.4	22.3	0	23.5	12.9	0	13.0
		9400	1880.0	22.3			11.8		
		9538	1907.6	22.5			11.8		
	Subtest 3	9262	1852.4	21.3	0.5	23.0	12.0	0.5	12.5
		9400	1880.0	21.2			11.8		
		9538	1907.6	21.6			11.8		
	Subtest 4	9262	1852.4	21.5	0.5	23.0	13.0	0.0	13.0
		9400	1880.0	21.3			11.9		
		9538	1907.6	21.5			11.8		
HSPA	Subtest 1	9262	1852.4	21.9	0	23.5	10.3	0	12.0
		9400	1880.0	21.7			10.0		
		9538	1907.6	22.1			10.1		
	Subtest 2	9262	1852.4	19.4	3	20.5	9.4	2	10.0
		9400	1880.0	19.2			9.3		
		9538	1907.6	19.5			9.4		
	Subtest 3	9262	1852.4	19.9	2	21.5	8.9	2	10.0
		9400	1880.0	19.7			8.7		
		9538	1907.6	20.1			8.7		
	Subtest 4	9262	1852.4	20.1	2	21.5	10.6	1	11.0
		9400	1880.0	19.9			10.3		
		9538	1907.6	20.3			10.3		
	Subtest 5	9262	1852.4	23.2	0	23.5	11.8	0	12.0
		9400	1880.0	23.0			11.7		
		9538	1907.6	23.2			11.7		
DC-HSDPA	Subtest 1	9262	1852.4	23.2	0	23.5	12.5	0	13.0
		9400	1880.0	23.0			11.4		
		9538	1907.6	23.0			11.4		
	Subtest 2	9262	1852.4	22.9	0	23.5	12.2	0	13.0
		9400	1880.0	22.8			12.1		
		9538	1907.6	23.0			12.3		
	Subtest 3	9262	1852.4	21.8	0.5	23.0	13.0	0.0	13.0
		9400	1880.0	21.7			12.0		
		9538	1907.6	22.0			12.0		
	Subtest 4	9262	1852.4	21.4	0.5	23.0	12.2	0.5	12.5
		9400	1880.0	21.4			12.1		
		9538	1907.6	21.8			12.0		

Notes:

It is expected by the manufacturer that MPR for some HSPA subtests may be up to 3dB more than specified by 3GPP, but also as low as 0dB according to the chipset implementation in this model.

W-CDMA Band IV Measured Results

Mode		UL Ch No.	Freq. (MHz)	RSI 0 (dBm)			Grip (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	24.0	N/A	25.0	13.6	N/A	15.0
		1413	1732.6	24.1			13.7		
		1513	1752.6	24.1			13.7		
HSDPA	Subtest 1	1312	1712.4	22.8	0	23.5	12.0	0	14.0
		1413	1732.6	22.9			12.2		
		1513	1752.6	22.8			12.0		
	Subtest 2	1312	1712.4	22.2	0	23.5	12.7	0	14.0
		1413	1732.6	22.3			12.7		
		1513	1752.6	22.3			12.7		
	Subtest 3	1312	1712.4	21.7	0.5	23.0	13.2	0.5	13.5
		1413	1732.6	21.7			13.2		
		1513	1752.6	21.8			13.2		
	Subtest 4	1312	1712.4	22.2	0.5	23.0	13.6	0.0	14.0
		1413	1732.6	22.3			13.7		
		1513	1752.6	22.3			13.6		
HSPA	Subtest 1	1312	1712.4	22.2	0	23.5	11.6	0	12.5
		1413	1732.6	22.2			11.7		
		1513	1752.6	21.7			10.3		
	Subtest 2	1312	1712.4	19.7	2	21.5	10.4	1	11.5
		1413	1732.6	19.7			10.8		
		1513	1752.6	19.7			10.3		
	Subtest 3	1312	1712.4	20.3	1	22.5	10.2	1	11.5
		1413	1732.6	20.2			10.3		
		1513	1752.6	20.2			10.1		
	Subtest 4	1312	1712.4	20.0	2	21.5	11.4	0	12.5
		1413	1732.6	20.0			11.5		
		1513	1752.6	19.3			11.3		
	Subtest 5	1312	1712.4	22.3	0	23.5	11.6	0	12.5
		1413	1732.6	22.3			11.9		
		1513	1752.6	22.3			11.6		
DC-HSDPA	Subtest 1	1312	1712.4	22.6	0	23.5	12.0	0	14.0
		1413	1732.6	22.9			12.2		
		1513	1752.6	23.0			12.0		
	Subtest 2	1312	1712.4	22.2	0	23.5	12.7	0	14.0
		1413	1732.6	22.3			12.7		
		1513	1752.6	22.4			12.8		
	Subtest 3	1312	1712.4	21.7	0.5	23.0	13.2	0.5	13.5
		1413	1732.6	21.8			13.2		
		1513	1752.6	21.9			13.3		
	Subtest 4	1312	1712.4	22.2	0.5	23.0	13.6	0.0	14.0
		1413	1732.6	22.3			13.7		
		1513	1752.6	22.4			13.7		

Notes:

It is expected by the manufacturer that MPR for some HSPA subtests may be up to 3dB more than specified by 3GPP, but also as low as 0dB according to the chipset implementation in this model.

W-CDMA Band V Measured Results

Mode		UL Ch No.	Freq. (MHz)	RSI 0 (dBm)			Grip (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	24.1	N/A	25.0	13.6	N/A	15.0
		4183	836.6	24.2			13.7		
		4233	846.6	24.3			13.8		
HSDPA	Subtest 1	4132	826.4	23.1	0	24.0	12.5	0	14.0
		4183	836.6	23.2			12.6		
		4233	846.6	23.4			12.8		
	Subtest 2	4132	826.4	22.2	0	24.0	12.7	0	14.0
		4183	836.6	22.4			12.8		
		4233	846.6	22.4			12.8		
	Subtest 3	4132	826.4	20.7	2.0	22.0	12.1	0.5	13.5
		4183	836.6	20.6			12.1		
		4233	846.6	20.8			12.2		
	Subtest 4	4132	826.4	21.0	1.0	23.0	12.6	0.5	13.5
		4183	836.6	21.2			12.7		
		4233	846.6	21.2			12.6		
HSPA	Subtest 1	4132	826.4	22.7	0	24.0	12.0	0	13.0
		4183	836.6	22.5			12.0		
		4233	846.6	22.4			12.0		
	Subtest 2	4132	826.4	20.6	2	22.0	12.0	0	13.0
		4183	836.6	20.5			12.0		
		4233	846.6	20.4			11.9		
	Subtest 3	4132	826.4	21.6	1	23.0	12.1	0	13.0
		4183	836.6	21.5			12.0		
		4233	846.6	21.4			11.8		
	Subtest 4	4132	826.4	22.6	0	24.0	12.0	0	13.0
		4183	836.6	22.5			11.9		
		4233	846.6	22.4			11.9		
	Subtest 5	4132	826.4	22.9	0	24.0	12.4	0	13.0
		4183	836.6	22.8			12.3		
		4233	846.6	22.7			12.2		
DC-HSDPA	Subtest 1	4132	826.4	23.7	0	24.0	13.0	0	14.0
		4183	836.6	23.6			13.0		
		4233	846.6	23.5			12.9		
	Subtest 2	4132	826.4	23.1	0	24.0	13.6	0	14.0
		4183	836.6	23.1			13.5		
		4233	846.6	23.0			13.4		
	Subtest 3	4132	826.4	21.6	1.0	23.0	13.1	0.5	13.5
		4183	836.6	21.5			12.9		
		4233	846.6	21.4			12.9		
	Subtest 4	4132	826.4	22.2	0.5	23.5	13.6	0.0	14.0
		4183	836.6	22.0			13.5		
		4233	846.6	21.9			13.4		

Notes:

It is expected by the manufacturer that MPR for some HSPA subtests may be up to 3dB more than specified by 3GPP, but also as low as 0dB according to the chipset implementation in this model.

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 $\leq$ the larger band to qualify for the SAR test exclusion.
- b) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.
 - LTE Band 2 (1850-1910 MHz) is covered by LTE Band 25 (1850-1915 MHz) for Main 1 antenna
 - LTE Band 4 (1710-1755 MHz) is covered by LTE Band 66 (1710-1780 MHz) for both Main 1 and Sub 1 antenna
 - LTE Band 17 (704-716 MHz) is covered by LTE Band 12 (699-716 MHz) for Main 1 antenna

For some LTE Bands, certain channel bandwidths do not support at least three non-overlapping channels. When a device supports overlapping channel assignments 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. Please refer to section 6.3. for a detailed list of LTE test channels.

- LTE Band 4 (1710-1755 MHz)
- LTE Band 5 (824-849 MHz)
- LTE Band 12 (699-716 MHz)
- LTE Band 13 (777-787 MHz)

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

SAR measurement is not required for the 16QAM, 64QAM, and 256QAM when the highest maximum output power for 16QAM, 64QAM, and 256QAM is $\leq \frac{1}{2}$ dB higher than the QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg.

RF Air interface	Antenna	Mode	Tune-up Limit (dBm)		
			P _{max}	RSI 0	Grip
LTE Band 2	Main 1	QPSK	26.0	26.0	17.0
LTE Band 4	Main 1	QPSK	26.0	26.0	15.5
LTE Band 5	Main 1	QPSK	25.0	25.0	18.0
LTE Band 12	Main 1	QPSK	25.0	25.0	20.0
LTE Band 13	Main 1	QPSK	25.0	25.0	20.0
LTE Band 17	Main 1	QPSK	25.0	25.0	20.0
LTE Band 25	Main 1	QPSK	26.0	26.0	17.0
LTE Band 26	Main 1	QPSK	25.5	25.5	17.5
LTE Band 41	Main 1	QPSK	26.0	26.0	16.0
LTE Band 66	Main 1	QPSK	26.0	26.0	17.0
RF Air interface	Antenna	Mode	Max Power		Reduce Power Grip
LTE Band 2	Sub 1	QPSK	24.5		13.0
LTE Band 4	Sub 1	QPSK	24.5		14.0
LTE Band 66	Sub 1	QPSK	24.5		14.0

Notes:

TAS function is not supported to Sub.1 Ant

LTE Band 2 Measured Results (Sub 1)

BW (MHz)	Mode	RB Allocation	RB Offset	Max Power (dBm)					Reduced Power (dBm)				
				18700	18900	19100	MPR	Tune-up Limit	18700	18900	19100	MPR	Tune-up Limit
				1860 MHz	1880 MHz	1900 MHz			1860 MHz	1880 MHz	1900 MHz		
20	QPSK	1	0	24.0	24.0	23.9	0	24.5	12.5	12.6	12.3	0	13.0
		1	49	24.0	24.0	23.8	0	24.5	12.5	12.5	12.3	0	13.0
		1	99	24.0	24.0	23.9	0	24.5	12.6	12.4	12.4	0	13.0
		50	0	23.0	23.0	22.9	1	23.5	12.5	12.5	12.3	0	13.0
		50	24	23.0	23.0	22.9	1	23.5	12.6	12.4	12.4	0	13.0
		50	50	23.0	22.9	22.9	1	23.5	12.6	12.4	12.4	0	13.0
		100	0	23.1	23.0	22.9	1	23.5	12.6	12.4	12.4	0	13.0
	16QAM	1	0	23.4	23.5	23.4	1	23.5	12.9	13.0	12.8	0	13.0
		1	49	23.3	23.4	23.4	1	23.5	12.9	12.9	12.8	0	13.0
		1	99	23.4	23.4	23.3	1	23.5	12.9	12.9	12.8	0	13.0
		50	0	22.0	22.0	21.9	2	22.5	12.5	12.5	12.3	0	13.0
		50	24	22.0	22.0	21.9	2	22.5	12.5	12.4	12.4	0	13.0
		50	50	22.0	21.9	21.9	2	22.5	12.5	12.4	12.4	0	13.0
		100	0	22.0	21.9	21.9	2	22.5	12.6	12.5	12.4	0	13.0
	64QAM	1	0	22.1	22.2	22.4	2	22.5	12.7	12.8	12.9	0	13.0
		1	49	22.0	22.2	22.3	2	22.5	12.6	12.7	12.9	0	13.0
		1	99	22.2	22.1	22.4	2	22.5	12.8	12.6	13.0	0	13.0
		50	0	20.9	21.0	20.8	3	21.5	12.5	12.5	12.4	0	13.0
		50	24	21.0	20.9	20.8	3	21.5	12.6	12.5	12.4	0	13.0
		50	50	21.0	20.9	20.8	3	21.5	12.6	12.4	12.4	0	13.0
		100	0	21.0	20.8	20.8	3	21.5	12.6	12.4	12.3	0	13.0
	256QAM	1	0	18.8	19.1	18.9	5	19.5	12.5	12.7	12.5	0	13.0
		1	49	18.8	18.9	18.9	5	19.5	12.4	12.5	12.4	0	13.0
		1	99	18.9	18.9	18.9	5	19.5	12.5	12.5	12.5	0	13.0
		50	0	18.9	18.8	18.8	5	19.5	12.5	12.5	12.3	0	13.0
		50	24	18.9	18.8	18.8	5	19.5	12.6	12.4	12.4	0	13.0
		50	50	18.9	18.8	18.8	5	19.5	12.6	12.4	12.4	0	13.0
		100	0	18.9	18.8	18.7	5	19.5	12.6	12.4	12.3	0	13.0
BW (MHz)	Mode	RB Allocation	RB offset	Max Power (dBm)					Reduced Power (dBm)				
				18675	18900	19125	MPR	Tune-up Limit	18675	18900	19125	MPR	Tune-up Limit
				1857.5 MHz	1880 MHz	1902.5 MHz			1857.5 MHz	1880 MHz	1902.5 MHz		
15	QPSK	1	0	24.0	23.9	23.9	0	24.5	12.5	12.5	12.4	0	13.0
		1	37	24.0	23.7	23.8	0	24.5	12.5	12.3	12.4	0	13.0
		1	74	24.1	23.8	23.9	0	24.5	12.6	12.3	12.4	0	13.0
		36	0	23.1	23.0	22.9	1	23.5	12.6	12.5	12.4	0	13.0
		36	20	23.1	22.9	22.9	1	23.5	12.6	12.5	12.4	0	13.0
		36	39	23.1	22.9	22.9	1	23.5	12.6	12.5	12.5	0	13.0
		75	0	23.1	22.9	22.9	1	23.5	12.6	12.5	12.4	0	13.0
	16QAM	1	0	23.4	22.9	23.2	1	23.5	12.9	12.4	12.6	0	13.0
		1	37	23.3	22.7	22.9	1	23.5	12.8	12.2	12.5	0	13.0
		1	74	23.5	22.8	23.2	1	23.5	13.0	12.3	12.7	0	13.0
		36	0	22.0	21.9	21.9	2	22.5	12.5	12.5	12.4	0	13.0
		36	20	22.0	21.9	21.9	2	22.5	12.5	12.4	12.4	0	13.0
		36	39	22.0	21.8	21.9	2	22.5	12.6	12.4	12.4	0	13.0
		75	0	22.0	21.9	21.8	2	22.5	12.5	12.5	12.4	0	13.0
	64QAM	1	0	22.4	22.1	21.9	2	22.5	12.8	12.6	12.9	0	13.0
		1	37	22.4	21.9	21.7	2	22.5	12.6	12.4	12.8	0	13.0
		1	74	22.5	22.0	21.9	2	22.5	12.9	12.4	12.9	0	13.0
		36	0	21.0	20.9	20.9	3	21.5	12.6	12.6	12.4	0	13.0
		36	20	21.0	20.9	20.9	3	21.5	12.6	12.5	12.4	0	13.0
		36	39	21.0	20.8	20.9	3	21.5	12.6	12.5	12.4	0	13.0
		75	0	21.0	20.8	20.8	3	21.5	12.6	12.5	12.4	0	13.0
	256QAM	1	0	19.1	19.3	18.6	5	19.5	12.9	12.3	12.6	0	13.0
		1	37	19.0	19.1	18.5	5	19.5	12.9	12.2	12.4	0	13.0
		1	74	19.2	19.1	18.5	5	19.5	13.0	12.2	12.6	0	13.0
		36	0	18.9	18.8	18.8	5	19.5	12.6	12.5	12.4	0	13.0
		36	20	18.9	18.8	18.8	5	19.5	12.6	12.5	12.4	0	13.0
		36	39	18.9	18.8	18.8	5	19.5	12.7	12.4	12.4	0	13.0
		75	0	18.9	18.8	18.7	5	19.5	12.6	12.4	12.4	0	13.0

LTE Band 2 Measured Results (Sub 1) continued

BW (MHz)	Mode	RB Allocation	RB offset	Max Power (dBm)					Reduced Power (dBm)				
				18650	18900	19150	MPR	Tune-up Limit	18650	18900	19150	MPR	Tune-up Limit
				1855 MHz	1880 MHz	1905 MHz			1855 MHz	1880 MHz	1905 MHz		
10	QPSK	1	0	24.0	23.9	23.9	0	24.5	12.5	12.4	12.4	0	13.0
		1	25	23.9	23.9	23.8	0	24.5	12.4	12.4	12.3	0	13.0
		1	49	24.0	23.9	23.9	0	24.5	12.5	12.4	12.4	0	13.0
		25	0	23.0	23.0	22.9	1	23.5	12.5	12.5	12.3	0	13.0
		25	12	23.1	22.9	22.8	1	23.5	12.5	12.4	12.3	0	13.0
		25	25	23.1	22.9	22.8	1	23.5	12.5	12.4	12.3	0	13.0
		50	0	23.0	22.9	22.9	1	23.5	12.5	12.4	12.3	0	13.0
	16QAM	1	0	23.1	22.9	23.2	1	23.5	12.5	12.3	12.7	0	13.0
		1	25	23.0	22.9	23.1	1	23.5	12.4	12.3	12.7	0	13.0
		1	49	23.0	22.8	23.2	1	23.5	12.6	12.3	12.7	0	13.0
		25	0	22.1	22.0	21.9	2	22.5	12.6	12.4	12.3	0	13.0
		25	12	22.1	21.9	21.9	2	22.5	12.6	12.4	12.4	0	13.0
		25	25	22.1	21.9	21.9	2	22.5	12.6	12.3	12.4	0	13.0
		50	0	22.0	21.9	21.8	2	22.5	12.5	12.4	12.3	0	13.0
	64QAM	1	0	22.1	22.2	21.9	2	22.5	12.7	12.8	12.5	0	13.0
		1	25	21.9	22.0	21.8	2	22.5	12.5	12.6	12.4	0	13.0
		1	49	22.1	22.1	21.9	2	22.5	12.7	12.6	12.5	0	13.0
		25	0	21.0	20.9	20.8	3	21.5	12.6	12.5	12.4	0	13.0
		25	12	21.0	20.9	20.8	3	21.5	12.6	12.5	12.4	0	13.0
		25	25	21.0	20.9	20.8	3	21.5	12.6	12.4	12.4	0	13.0
		50	0	21.0	20.9	20.8	3	21.5	12.5	12.4	12.4	0	13.0
	256QAM	1	0	18.9	19.3	18.6	5	19.5	12.5	12.9	12.2	0	13.0
		1	25	18.9	19.1	18.6	5	19.5	12.4	12.7	12.2	0	13.0
		1	49	19.0	19.2	18.6	5	19.5	12.6	12.8	12.2	0	13.0
		25	0	19.0	18.9	18.8	5	19.5	12.6	12.5	12.4	0	13.0
		25	12	19.0	18.9	18.8	5	19.5	12.6	12.5	12.4	0	13.0
		25	25	19.0	18.8	18.8	5	19.5	12.6	12.5	12.4	0	13.0
		50	0	18.9	18.9	18.7	5	19.5	12.5	12.5	12.4	0	13.0
BW (MHz)	Mode	RB Allocation	RB offset	Max Power (dBm)					Reduced Power (dBm)				
				18625	18900	19175	MPR	Tune-up Limit	18625	18900	19175	MPR	Tune-up Limit
				1852.5 MHz	1880 MHz	1907.5 MHz			1852.5 MHz	1880 MHz	1907.5 MHz		
5	QPSK	1	0	24.2	24.0	23.9	0	24.5	12.6	12.6	12.5	0	13.0
		1	12	24.1	23.9	23.9	0	24.5	12.5	12.4	12.4	0	13.0
		1	24	24.2	24.0	23.9	0	24.5	12.6	12.4	12.4	0	13.0
		12	0	23.1	22.9	22.9	1	23.5	12.5	12.5	12.3	0	13.0
		12	7	23.1	22.9	22.8	1	23.5	12.5	12.4	12.3	0	13.0
		12	13	23.0	22.9	22.8	1	23.5	12.5	12.4	12.3	0	13.0
		25	0	23.1	22.9	22.9	1	23.5	12.5	12.4	12.3	0	13.0
	16QAM	1	0	23.2	23.5	22.9	1	23.5	13.0	12.5	12.5	0	13.0
		1	12	23.0	23.3	22.7	1	23.5	12.9	12.2	12.5	0	13.0
		1	24	23.2	23.4	23.0	1	23.5	13.0	12.5	12.5	0	13.0
		12	0	22.1	22.1	21.9	2	22.5	12.6	12.5	12.4	0	13.0
		12	7	22.0	22.0	21.9	2	22.5	12.6	12.4	12.3	0	13.0
		12	13	22.1	22.0	21.9	2	22.5	12.6	12.4	12.4	0	13.0
		25	0	22.0	21.9	21.8	2	22.5	12.5	12.4	12.3	0	13.0
	64QAM	1	0	21.9	22.3	22.1	2	22.5	12.7	12.8	12.3	0	13.0
		1	12	21.8	22.1	22.1	2	22.5	12.6	12.6	12.3	0	13.0
		1	24	21.9	22.1	22.1	2	22.5	12.7	12.6	12.3	0	13.0
		12	0	21.0	20.9	20.9	3	21.5	12.5	12.5	12.4	0	13.0
		12	7	21.0	20.9	20.9	3	21.5	12.5	12.5	12.4	0	13.0
		12	13	21.0	20.9	20.9	3	21.5	12.5	12.5	12.4	0	13.0
		25	0	20.9	20.9	20.8	3	21.5	12.4	12.4	12.3	0	13.0
	256QAM	1	0	18.7	19.1	18.9	5	19.5	12.6	12.6	12.1	0	13.0
		1	12	18.7	19.0	18.8	5	19.5	12.4	12.5	12.1	0	13.0
		1	24	18.8	19.0	18.8	5	19.5	12.6	12.4	12.1	0	13.0
		12	0	19.0	18.9	18.8	5	19.5	12.5	12.4	12.3	0	13.0
		12	7	19.0	18.9	18.7	5	19.5	12.5	12.4	12.3	0	13.0
		12	13	18.9	18.9	18.7	5	19.5	12.6	12.4	12.3	0	13.0
		25	0	19.0	18.9	18.8	5	19.5	12.5	12.4	12.4	0	13.0

LTE Band 2 Measured Results (Sub 1) continued

BW (MHz)	Mode	RB Allocation	RB offset	Max Power (dBm)					Reduced Power (dBm)				
				18615	18900	19185	MPR	Tune-up Limit	18615	18900	19185	MPR	Tune-up Limit
				1851.5 MHz	1880 MHz	1908.5 MHz			1851.5 MHz	1880 MHz	1908.5 MHz		
3	QPSK	1	0	24.1	24.1	23.9	0	24.5	12.5	12.4	12.3	0	13.0
		1	8	24.0	24.0	23.8	0	24.5	12.6	12.3	12.2	0	13.0
		1	14	24.2	24.0	23.8	0	24.5	12.5	12.3	12.4	0	13.0
		8	0	23.2	23.1	22.9	1	23.5	12.6	12.5	12.4	0	13.0
		8	4	23.1	23.1	22.9	1	23.5	12.5	12.4	12.4	0	13.0
		8	7	23.2	23.1	23.0	1	23.5	12.6	12.4	12.4	0	13.0
	16QAM	15	0	23.2	23.1	23.0	1	23.5	12.5	12.4	12.4	0	13.0
		1	0	23.1	23.4	23.0	1	23.5	12.8	12.5	12.3	0	13.0
		1	8	23.0	23.0	22.7	1	23.5	12.7	12.3	12.2	0	13.0
		1	14	23.1	23.3	22.9	1	23.5	12.8	12.3	12.3	0	13.0
		8	0	22.2	22.1	21.9	2	22.5	12.6	12.5	12.5	0	13.0
		8	4	22.2	22.1	21.9	2	22.5	12.6	12.4	12.4	0	13.0
	64QAM	8	7	22.2	22.0	21.9	2	22.5	12.6	12.4	12.5	0	13.0
		15	0	22.1	22.0	21.8	2	22.5	12.6	12.3	12.4	0	13.0
		1	0	22.2	21.9	21.7	2	22.5	12.9	12.5	12.6	0	13.0
		1	8	22.1	21.8	21.6	2	22.5	12.6	12.3	12.5	0	13.0
		1	14	22.2	21.8	21.7	2	22.5	12.7	12.4	12.6	0	13.0
		8	0	21.0	21.0	20.8	3	21.5	12.6	12.5	12.3	0	13.0
	256QAM	8	4	21.0	20.9	20.7	3	21.5	12.5	12.5	12.3	0	13.0
		8	7	21.0	20.8	20.7	3	21.5	12.6	12.4	12.3	0	13.0
		15	0	21.0	20.9	20.7	3	21.5	12.5	12.5	12.3	0	13.0
		1	0	19.4	18.7	18.5	5	19.5	12.9	12.3	12.3	0	13.0
		1	8	19.3	18.6	18.4	5	19.5	12.8	12.2	12.2	0	13.0
		1	14	19.3	18.7	19.1	5	19.5	12.9	12.8	12.4	0	13.0
		8	0	19.0	18.9	18.8	5	19.5	12.7	12.4	12.5	0	13.0
		8	4	19.0	18.8	18.8	5	19.5	12.6	12.4	12.4	0	13.0
		8	7	19.1	18.9	18.8	5	19.5	12.7	12.4	12.4	0	13.0
		15	0	18.9	18.7	18.7	5	19.5	12.5	12.5	12.4	0	13.0
BW (MHz)	Mode	RB Allocation	RB offset	Max Power (dBm)					Reduced Power (dBm)				
				18607	18900	19193	MPR	Tune-up Limit	18607	18900	19193	MPR	Tune-up Limit
				1850.7 MHz	1880 MHz	1909.3 MHz			1850.7 MHz	1880 MHz	1909.3 MHz		
1.4	QPSK	1	0	24.0	24.0	23.8	0	24.5	12.5	12.4	12.2	0	13.0
		1	3	24.0	24.0	23.8	0	24.5	12.4	12.3	12.1	0	13.0
		1	5	24.0	24.0	23.9	0	24.5	12.5	12.4	12.3	0	13.0
		3	0	24.0	23.9	23.9	0	24.5	12.3	12.3	12.3	0	13.0
		3	1	24.0	24.0	23.9	0	24.5	12.3	12.3	12.2	0	13.0
		3	3	24.0	23.9	23.9	0	24.5	12.5	12.4	12.3	0	13.0
	16QAM	6	0	23.0	23.0	22.9	1	23.5	12.5	12.4	12.3	0	13.0
		1	0	23.1	23.3	22.9	1	23.5	12.5	12.7	12.3	0	13.0
		1	3	23.1	23.1	23.1	1	23.5	12.6	12.7	12.2	0	13.0
		1	5	23.1	23.3	23.0	1	23.5	12.5	12.7	12.3	0	13.0
		3	0	23.1	23.2	23.1	1	23.5	12.5	12.5	12.4	0	13.0
		3	1	23.1	23.1	23.1	1	23.5	12.4	12.6	12.4	0	13.0
	64QAM	3	3	23.0	23.0	23.1	1	23.5	12.4	12.5	12.4	0	13.0
		6	0	22.2	21.8	22.1	2	22.5	12.6	12.3	12.5	0	13.0
		1	0	22.2	21.9	22.1	2	22.5	12.7	12.4	12.5	0	13.0
		1	3	22.3	21.9	22.3	2	22.5	12.7	12.5	12.3	0	13.0
		1	5	22.3	21.9	22.2	2	22.5	12.8	12.4	12.5	0	13.0
		3	0	22.2	22.0	22.1	2	22.5	12.7	12.4	12.2	0	13.0
	256QAM	3	1	22.2	21.9	22.1	2	22.5	12.7	12.4	12.2	0	13.0
		3	3	22.2	22.0	22.1	2	22.5	12.7	12.4	12.2	0	13.0
		6	0	21.0	21.1	20.9	3	21.5	12.5	12.6	12.4	0	13.0
		1	0	19.0	18.9	18.9	5	19.5	12.5	12.2	12.3	0	13.0
		1	3	19.1	18.8	18.9	5	19.5	12.5	12.2	12.3	0	13.0
		1	5	19.0	18.8	18.9	5	19.5	12.5	12.2	12.3	0	13.0
		3	0	18.9	18.9	18.8	5	19.5	12.4	12.2	12.3	0	13.0
		3	1	18.8	18.9	18.6	5	19.5	12.4	12.1	12.4	0	13.0
		3	3	18.8	18.9	18.6	5	19.5	12.3	12.2	12.3	0	13.0
		6	0	18.9	18.8	18.8	5	19.5	12.5	12.5	12.3	0	13.0

LTE Band 5 Measured Results (Main 1)

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
					20525		MPR	Tune-up Limit		20525		MPR	Tune-up Limit
					836.5 MHz					836.5 MHz			
10	QPSK	1	0		24.5		0	25.0		17.0		0	18.0
		1	25		24.3		0	25.0		16.8		0	18.0
		1	49		24.3		0	25.0		16.8		0	18.0
		25	0		23.5		1	24.0		17.0		0	18.0
		25	12		23.5		1	24.0		16.9		0	18.0
		25	25		23.4		1	24.0		16.9		0	18.0
		50	0		23.5		1	24.0		16.9		0	18.0
	16QAM	1	0		23.6		1	24.0		17.0		0	18.0
		1	25		23.5		1	24.0		17.0		0	18.0
		1	49		23.4		1	24.0		16.8		0	18.0
		25	0		22.6		2	23.0		17.0		0	18.0
		25	12		22.5		2	23.0		17.0		0	18.0
		25	25		22.5		2	23.0		16.9		0	18.0
		50	0		22.5		2	23.0		16.9		0	18.0
	64QAM	1	0		22.7		2	23.0		17.1		0	18.0
		1	25		22.4		2	23.0		16.8		0	18.0
		1	49		22.5		2	23.0		16.9		0	18.0
		25	0		21.6		3	22.0		17.0		0	18.0
		25	12		21.6		3	22.0		16.9		0	18.0
		25	25		21.5		3	22.0		16.9		0	18.0
		50	0		21.5		3	22.0		16.9		0	18.0
	256QAM	1	0		19.6		5	20.0		17.0		0	18.0
		1	25		19.4		5	20.0		16.8		0	18.0
		1	49		19.4		5	20.0		16.8		0	18.0
		25	0		19.6		5	20.0		17.0		0	18.0
		25	12		19.5		5	20.0		16.9		0	18.0
		25	25		19.5		5	20.0		16.9		0	18.0
		50	0		19.5		5	20.0		16.9		0	18.0
BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				20425	20525	20625	MPR	Tune-up Limit	20425	20525	20625	MPR	Tune-up Limit
				826.5 MHz	836.5 MHz	846.5 MHz			826.5 MHz	836.5 MHz	846.5 MHz		
5	QPSK	1	0	24.6	24.5	24.4	0	25.0	17.1	17.0	16.9	0	18.0
		1	12	24.6	24.4	24.3	0	25.0	17.1	16.9	16.7	0	18.0
		1	24	24.6	24.4	24.3	0	25.0	17.1	16.9	16.7	0	18.0
		12	0	23.5	23.5	23.3	1	24.0	17.0	16.9	16.7	0	18.0
		12	7	23.5	23.5	23.3	1	24.0	17.0	16.9	16.7	0	18.0
		12	13	23.5	23.4	23.2	1	24.0	17.0	16.8	16.6	0	18.0
		25	0	23.6	23.5	23.3	1	24.0	17.0	16.9	16.7	0	18.0
	16QAM	1	0	23.5	23.8	23.3	1	24.0	17.2	17.0	16.8	0	18.0
		1	12	23.3	23.7	23.1	1	24.0	17.0	16.7	16.5	0	18.0
		1	24	23.5	23.7	23.3	1	24.0	17.2	16.9	16.8	0	18.0
		12	0	22.5	22.5	22.3	2	23.0	17.0	16.9	16.8	0	18.0
		12	7	22.6	22.5	22.2	2	23.0	17.0	16.9	16.7	0	18.0
		12	13	22.6	22.5	22.2	2	23.0	17.1	16.9	16.7	0	18.0
		25	0	22.6	22.4	22.3	2	23.0	17.0	16.8	16.6	0	18.0
	64QAM	1	0	22.5	22.8	22.5	2	23.0	16.9	17.2	16.8	0	18.0
		1	12	22.4	22.6	22.5	2	23.0	16.9	17.1	16.6	0	18.0
		1	24	22.5	22.7	22.5	2	23.0	16.9	17.2	16.7	0	18.0
		12	0	21.6	21.4	21.4	3	22.0	17.0	16.9	16.8	0	18.0
		12	7	21.6	21.4	21.3	3	22.0	17.0	16.8	16.7	0	18.0
		12	13	21.6	21.4	21.3	3	22.0	17.0	16.8	16.7	0	18.0
		25	0	21.5	21.4	21.3	3	22.0	16.9	16.9	16.7	0	18.0
	256QAM	1	0	19.3	19.6	19.4	5	20.0	16.6	17.1	16.5	0	18.0
		1	12	19.2	19.5	19.3	5	20.0	16.5	17.0	16.4	0	18.0
		1	24	19.3	19.5	19.3	5	20.0	16.6	17.0	16.5	0	18.0
		12	0	19.5	19.5	19.3	5	20.0	16.9	17.0	16.7	0	18.0
		12	7	19.5	19.4	19.2	5	20.0	17.0	16.9	16.7	0	18.0
		12	13	19.5	19.5	19.2	5	20.0	16.9	16.9	16.7	0	18.0
		25	0	19.6	19.4	19.3	5	20.0	17.0	16.9	16.6	0	18.0

LTE Band 5 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				20415	20525	20635	MPR	Tune-up Limit	20415	20525	20635	MPR	Tune-up Limit
				825.5 MHz	836.5 MHz	847.5 MHz			825.5 MHz	836.5 MHz	847.5 MHz		
3	QPSK	1	0	24.5	24.5	24.3	0	25.0	16.9	16.9	16.6	0	18.0
		1	8	24.4	24.2	24.2	0	25.0	16.9	16.8	16.5	0	18.0
		1	14	24.5	24.5	24.2	0	25.0	17.0	16.8	16.6	0	18.0
		8	0	23.5	23.5	23.3	1	24.0	17.0	16.9	16.7	0	18.0
		8	4	23.5	23.5	23.3	1	24.0	17.0	16.9	16.6	0	18.0
		8	7	23.6	23.5	23.3	1	24.0	16.9	16.8	16.7	0	18.0
	16QAM	15	0	23.6	23.5	23.3	1	24.0	17.0	16.9	16.6	0	18.0
		1	0	23.6	24.0	23.3	1	24.0	16.9	17.2	16.7	0	18.0
		1	8	23.4	23.8	23.2	1	24.0	16.8	17.1	16.5	0	18.0
		1	14	23.5	24.0	23.3	1	24.0	17.0	17.1	16.6	0	18.0
		8	0	22.6	22.6	22.2	2	23.0	17.1	17.0	16.7	0	18.0
		8	4	22.6	22.6	22.2	2	23.0	17.0	16.9	16.7	0	18.0
	64QAM	8	7	22.6	22.7	22.3	2	23.0	17.1	16.9	16.7	0	18.0
		15	0	22.6	22.5	22.3	2	23.0	17.0	16.9	16.6	0	18.0
		1	0	22.7	22.7	22.4	2	23.0	17.2	16.9	16.9	0	18.0
		1	8	22.6	22.6	22.1	2	23.0	17.1	16.8	16.7	0	18.0
		1	14	22.8	22.6	22.2	2	23.0	17.1	16.8	16.9	0	18.0
		8	0	21.5	21.5	21.3	3	22.0	17.0	17.0	16.6	0	18.0
	256QAM	8	4	21.5	21.5	21.3	3	22.0	17.0	16.9	16.6	0	18.0
		8	7	21.5	21.5	21.2	3	22.0	17.0	16.9	16.6	0	18.0
		15	0	21.6	21.4	21.3	3	22.0	16.9	16.9	16.6	0	18.0
		1	0	19.5	19.9	19.1	5	20.0	17.5	16.8	16.6	0	18.0
		1	8	19.5	19.8	19.0	5	20.0	17.4	16.7	16.4	0	18.0
		1	14	19.6	19.8	19.6	5	20.0	17.5	17.5	16.5	0	18.0
1.4	QPSK	8	0	19.7	19.6	19.3	5	20.0	17.0	16.8	16.7	0	18.0
		8	4	19.6	19.5	19.3	5	20.0	17.0	16.8	16.6	0	18.0
		8	7	19.6	19.6	19.3	5	20.0	17.0	16.8	16.7	0	18.0
		15	0	19.6	19.4	19.2	5	20.0	17.0	16.9	16.6	0	18.0
	16QAM	1	0	24.4	24.4	24.1	0	25.0	16.8	16.8	16.5	0	18.0
		1	3	24.4	24.4	24.0	0	25.0	16.7	16.7	16.5	0	18.0
		1	5	24.5	24.4	24.2	0	25.0	16.9	16.8	16.6	0	18.0
		3	0	24.4	24.5	24.2	0	25.0	16.8	16.8	16.5	0	18.0
		3	1	24.4	24.5	24.1	0	25.0	16.8	16.8	16.5	0	18.0
		3	3	24.5	24.4	24.2	0	25.0	16.9	16.7	16.4	0	18.0
	64QAM	6	0	23.5	23.5	23.2	1	24.0	16.9	16.9	16.6	0	18.0
		1	0	23.5	23.5	23.2	1	24.0	16.9	17.1	16.9	0	18.0
		1	3	23.5	23.4	23.2	1	24.0	16.9	17.0	16.7	0	18.0
		1	5	23.5	23.5	23.2	1	24.0	16.9	17.1	16.9	0	18.0
		3	0	23.6	23.4	23.3	1	24.0	17.0	17.0	16.7	0	18.0
		3	1	23.7	23.4	23.3	1	24.0	17.1	17.0	16.7	0	18.0
	256QAM	3	3	23.6	23.4	23.2	1	24.0	17.0	16.9	16.6	0	18.0
		6	0	22.5	22.5	22.2	2	23.0	17.0	16.6	16.4	0	18.0
		1	0	22.8	22.5	22.3	2	23.0	16.9	17.0	16.7	0	18.0
		1	3	22.9	22.5	22.2	2	23.0	16.9	16.7	16.4	0	18.0
		1	5	22.8	22.5	22.2	2	23.0	16.9	17.0	16.8	0	18.0
		3	0	22.8	22.5	22.3	2	23.0	17.0	16.7	16.4	0	18.0
1.4	64QAM	3	1	22.8	22.5	22.2	2	23.0	16.9	16.6	16.4	0	18.0
		3	3	22.8	22.5	22.3	2	23.0	16.9	16.7	16.4	0	18.0
		6	0	21.6	21.6	21.4	3	22.0	17.1	16.8	16.6	0	18.0
	256QAM	1	0	19.6	19.5	19.3	5	20.0	17.0	16.8	16.6	0	18.0
		1	3	19.6	19.6	19.4	5	20.0	17.1	16.8	16.5	0	18.0
		1	5	19.6	19.5	19.3	5	20.0	17.0	16.8	16.5	0	18.0
	256QAM	3	0	19.4	19.4	19.1	5	20.0	16.9	16.8	16.6	0	18.0
		3	1	19.3	19.3	19.0	5	20.0	16.8	16.9	16.6	0	18.0
		3	3	19.3	19.3	19.0	5	20.0	16.8	16.8	16.6	0	18.0
		6	0	19.5	19.4	19.2	5	20.0	16.9	16.8	16.5	0	18.0

LTE Band 12 Measured Results (Main 1)

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)						
					23095		MPR	Tune-up Limit		23095		MPR	Tune-up Limit		
					707.5 MHz					707.5 MHz					
10	QPSK	1	0		24.4		0	25.0		18.8		0	20.0		
		1	25		24.4		0	25.0		18.8		0	20.0		
		1	49		24.3		0	25.0		18.7		0	20.0		
		25	0		23.4		1	24.0		18.8		0	20.0		
		25	12		23.4		1	24.0		18.8		0	20.0		
		25	25		23.3		1	24.0		18.9		0	20.0		
		50	0		23.4		1	24.0		18.8		0	20.0		
	16QAM	1	0		23.9		1	24.0		18.8		0	20.0		
		1	25		23.9		1	24.0		18.8		0	20.0		
		1	49		23.8		1	24.0		18.7		0	20.0		
		25	0		22.4		2	23.0		18.9		0	20.0		
		25	12		22.4		2	23.0		18.8		0	20.0		
		25	25		22.3		2	23.0		18.8		0	20.0		
		50	0		22.4		2	23.0		18.8		0	20.0		
	64QAM	1	0		22.5		2	23.0		18.5		0	20.0		
		1	25		22.3		2	23.0		18.3		0	20.0		
		1	49		22.4		2	23.0		18.3		0	20.0		
		25	0		21.4		3	22.0		18.4		0	20.0		
		25	12		21.4		3	22.0		18.4		0	20.0		
		25	25		21.4		3	22.0		18.3		0	20.0		
		50	0		21.3		3	22.0		18.3		0	20.0		
	256QAM	1	0		19.4		5	20.0		18.1		0	20.0		
		1	25		19.3		5	20.0		18.1		0	20.0		
		1	49		19.3		5	20.0		18.1		0	20.0		
		25	0		19.4		5	20.0		18.4		0	20.0		
		25	12		19.4		5	20.0		18.3		0	20.0		
		25	25		19.3		5	20.0		18.3		0	20.0		
		50	0		19.3		5	20.0		18.3		0	20.0		
BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)						
					23035	23095	23155	MPR	Tune-up Limit		23035	23095	23155	MPR	Tune-up Limit
					701.5 MHz	707.5 MHz	713.5 MHz				701.5 MHz	707.5 MHz	713.5 MHz		
5	QPSK	1	0		24.5	24.5	24.4	0	25.0		18.9	18.9	18.9	0	20.0
		1	12		24.5	24.4	24.3	0	25.0		18.9	18.7	18.8	0	20.0
		1	24		24.5	24.4	24.3	0	25.0		18.9	18.8	18.8	0	20.0
		12	0		23.4	23.4	23.3	1	24.0		18.8	18.8	18.8	0	20.0
		12	7		23.4	23.4	23.3	1	24.0		18.8	18.8	18.7	0	20.0
		12	13		23.4	23.3	23.3	1	24.0		18.8	18.8	18.7	0	20.0
		25	0		23.4	23.4	23.3	1	24.0		18.8	18.8	18.7	0	20.0
	16QAM	1	0		23.4	23.3	23.6	1	24.0		19.1	19.4	18.8	0	20.0
		1	12		23.3	23.1	23.5	1	24.0		18.8	19.2	18.5	0	20.0
		1	24		23.4	23.2	23.5	1	24.0		19.0	19.3	18.8	0	20.0
		12	0		22.4	22.4	22.3	2	23.0		18.9	18.9	18.8	0	20.0
		12	7		22.4	22.3	22.3	2	23.0		18.9	18.9	18.8	0	20.0
		12	13		22.3	22.3	22.3	2	23.0		18.9	18.9	18.8	0	20.0
		25	0		22.4	22.4	22.2	2	23.0		18.8	18.9	18.7	0	20.0
	64QAM	1	0		22.4	22.7	22.4	2	23.0		18.3	18.6	18.5	0	20.0
		1	12		22.2	22.5	22.5	2	23.0		18.2	18.4	18.4	0	20.0
		1	24		22.3	22.5	22.5	2	23.0		18.3	18.5	18.4	0	20.0
		12	0		21.4	21.3	21.3	3	22.0		18.4	18.3	18.3	0	20.0
		12	7		21.4	21.3	21.3	3	22.0		18.4	18.3	18.3	0	20.0
		12	13		21.4	21.3	21.3	3	22.0		18.4	18.3	18.3	0	20.0
		25	0		21.3	21.3	21.3	3	22.0		18.3	18.2	18.2	0	20.0
	256QAM	1	0		19.1	19.5	19.4	5	20.0		18.1	18.5	18.3	0	20.0
		1	12		19.1	19.4	19.3	5	20.0		18.0	18.4	18.2	0	20.0
		1	24		19.1	19.4	19.3	5	20.0		18.1	18.4	18.2	0	20.0
		12	0		19.3	19.3	19.2	5	20.0		18.3	18.3	18.2	0	20.0
		12	7		19.3	19.3	19.2	5	20.0		18.3	18.3	18.2	0	20.0
		12	13		19.3	19.3	19.2	5	20.0		18.3	18.3	18.2	0	20.0
		25	0		19.4	19.3	19.3	5	20.0		18.4	18.3	18.2	0	20.0

LTE Band 12 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				23025	23095	23165	MPR	Tune-up Limit	23025	23095	23165	MPR	Tune-up Limit
				700.5 MHz	707.5 MHz	714.5 MHz			700.5 MHz	707.5 MHz	714.5 MHz		
3	QPSK	1	0	24.4	24.4	24.3	0	25.0	18.9	18.9	18.7	0	20.0
		1	8	24.2	24.3	24.1	0	25.0	18.6	18.8	18.5	0	20.0
		1	14	24.5	24.3	24.2	0	25.0	18.9	18.8	18.6	0	20.0
		8	0	23.5	23.5	23.3	1	24.0	18.9	18.9	18.7	0	20.0
		8	4	23.5	23.4	23.2	1	24.0	18.9	18.8	18.7	0	20.0
		8	7	23.5	23.4	23.3	1	24.0	18.9	18.9	18.8	0	20.0
	16QAM	15	0	23.5	23.4	23.3	1	24.0	18.9	18.8	18.7	0	20.0
		1	0	23.9	23.5	23.3	1	24.0	18.8	19.2	18.8	0	20.0
		1	8	23.7	23.3	23.1	1	24.0	18.7	18.9	18.6	0	20.0
		1	14	24.0	23.4	23.2	1	24.0	18.9	19.1	18.6	0	20.0
		8	0	22.6	22.3	22.4	2	23.0	19.0	18.9	18.8	0	20.0
		8	4	22.6	22.3	22.3	2	23.0	19.0	18.9	18.7	0	20.0
	64QAM	8	7	22.6	22.4	22.3	2	23.0	19.0	18.9	18.8	0	20.0
		15	0	22.4	22.4	22.3	2	23.0	18.9	18.9	18.6	0	20.0
		1	0	22.5	22.6	22.3	2	23.0	19.0	19.1	18.7	0	20.0
		1	8	22.4	22.4	22.1	2	23.0	18.9	18.9	18.6	0	20.0
		1	14	22.6	22.5	22.2	2	23.0	19.1	19.0	18.7	0	20.0
		8	0	21.4	21.4	21.3	3	22.0	18.8	18.9	18.8	0	20.0
	256QAM	8	4	21.4	21.4	21.3	3	22.0	18.8	18.8	18.8	0	20.0
		8	7	21.3	21.4	21.2	3	22.0	18.8	18.8	18.7	0	20.0
		15	0	21.4	21.3	21.3	3	22.0	18.8	18.8	18.7	0	20.0
		1	0	19.4	19.8	19.1	5	20.0	18.8	19.2	18.6	0	20.0
		1	8	19.3	19.7	19.0	5	20.0	18.8	19.1	18.4	0	20.0
		1	14	19.4	19.7	19.6	5	20.0	18.9	19.2	19.1	0	20.0
1.4	QPSK	8	0	19.6	19.5	19.3	5	20.0	19.0	18.9	18.8	0	20.0
		8	4	19.5	19.4	19.3	5	20.0	18.9	18.9	18.8	0	20.0
		8	7	19.5	19.4	19.3	5	20.0	19.0	18.9	18.8	0	20.0
		15	0	19.4	19.3	19.2	5	20.0	18.9	18.8	18.7	0	20.0
	16QAM	1	0	24.3	24.3	24.2	0	25.0	18.7	18.8	18.7	0	20.0
		1	3	24.3	24.3	24.1	0	25.0	18.6	18.7	18.6	0	20.0
		1	5	24.4	24.3	24.2	0	25.0	18.8	18.8	18.7	0	20.0
		3	0	24.3	24.4	24.2	0	25.0	18.8	18.7	18.7	0	20.0
		3	1	24.3	24.4	24.2	0	25.0	18.7	18.7	18.7	0	20.0
		3	3	24.3	24.3	24.3	0	25.0	18.8	18.8	18.6	0	20.0
	64QAM	6	0	23.4	23.4	23.3	1	24.0	18.9	18.8	18.7	0	20.0
		1	0	23.3	23.4	23.2	1	24.0	18.8	18.8	19.0	0	20.0
		1	3	23.4	23.3	23.3	1	24.0	18.8	18.9	18.9	0	20.0
		1	5	23.3	23.4	23.2	1	24.0	18.8	18.9	19.0	0	20.0
		3	0	23.5	23.3	23.2	1	24.0	19.0	18.9	18.8	0	20.0
		3	1	23.5	23.2	23.3	1	24.0	19.0	18.8	18.9	0	20.0
	256QAM	3	3	23.4	23.2	23.2	1	24.0	18.9	18.7	18.8	0	20.0
		6	0	22.4	22.4	22.2	2	23.0	19.0	19.0	18.5	0	20.0
		1	0	22.6	22.4	22.4	2	23.0	19.1	18.8	18.9	0	20.0
		1	3	22.7	22.4	22.1	2	23.0	19.1	18.8	18.5	0	20.0
		1	5	22.7	22.4	22.4	2	23.0	19.1	18.8	18.9	0	20.0
		3	0	22.6	22.4	22.1	2	23.0	19.0	18.9	18.6	0	20.0
1.4	64QAM	3	1	22.6	22.3	22.0	2	23.0	19.0	18.8	18.5	0	20.0
		3	3	22.6	22.4	22.1	2	23.0	19.0	18.8	18.5	0	20.0
		6	0	21.4	21.5	21.2	3	22.0	18.8	18.9	18.7	0	20.0
	256QAM	1	0	19.4	18.1	19.2	5	20.0	18.8	18.6	18.7	0	20.0
		1	3	19.5	19.1	19.2	5	20.0	18.9	18.6	18.6	0	20.0
		1	5	19.4	19.1	19.2	5	20.0	18.8	18.6	18.6	0	20.0
		3	0	19.3	19.2	19.2	5	20.0	18.7	18.7	18.7	0	20.0
		3	1	19.2	19.1	19.2	5	20.0	18.6	18.6	18.7	0	20.0
		3	3	19.2	19.1	19.2	5	20.0	18.6	18.6	18.7	0	20.0
		6	0	19.3	19.4	19.1	5	20.0	18.8	18.8	18.6	0	20.0

LTE Band 13 Measured Results (Main 1)

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)				Grip Average Power (dBm)			
				23230	MPR	Tune-up Limit		23230	MPR	Tune-up Limit	
				782 MHz				782 MHz			
10	QPSK	1	0	24.2	0	25.0		18.8	0	20.0	
		1	25	24.2	0	25.0		18.8	0	20.0	
		1	49	24.3	0	25.0		18.9	0	20.0	
		25	0	23.3	1	24.0		18.8	0	20.0	
		25	12	23.3	1	24.0		18.8	0	20.0	
		25	25	23.4	1	24.0		18.9	0	20.0	
	16QAM	50	0	23.3	1	24.0		18.9	0	20.0	
		1	0	23.3	1	24.0		19.1	0	20.0	
		1	25	23.3	1	24.0		19.1	0	20.0	
		1	49	23.3	1	24.0		19.2	0	20.0	
		25	0	22.3	2	23.0		18.9	0	20.0	
		25	12	22.4	2	23.0		18.9	0	20.0	
	64QAM	25	25	22.4	2	23.0		18.9	0	20.0	
		50	0	22.4	2	23.0		18.9	0	20.0	
		1	0	22.4	2	23.0		18.8	0	20.0	
		1	25	22.4	2	23.0		18.9	0	20.0	
		1	49	22.6	2	23.0		19.0	0	20.0	
		25	0	21.3	3	22.0		18.9	0	20.0	
	256QAM	25	12	21.4	3	22.0		18.9	0	20.0	
		25	25	21.4	3	22.0		19.0	0	20.0	
		50	0	21.3	3	22.0		18.9	0	20.0	
		1	0	19.7	5	20.0		18.6	0	20.0	
		1	25	19.7	5	20.0		18.7	0	20.0	
		1	49	19.8	5	20.0		18.7	0	20.0	
		25	0	19.3	5	20.0		18.9	0	20.0	
		25	12	19.4	5	20.0		18.9	0	20.0	
		25	25	19.4	5	20.0		19.0	0	20.0	
		50	0	19.4	5	20.0		18.9	0	20.0	
BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)				Grip Average Power (dBm)			
				23230	MPR	Tune-up Limit		23230	MPR	Tune-up Limit	
				782 MHz				782 MHz			
5	QPSK	1	0	24.3	0	25.0		18.8	0	20.0	
		1	12	24.3	0	25.0		18.8	0	20.0	
		1	24	24.4	0	25.0		18.9	0	20.0	
		12	0	23.3	1	24.0		18.8	0	20.0	
		12	7	23.3	1	24.0		18.8	0	20.0	
		12	13	23.3	1	24.0		18.8	0	20.0	
	16QAM	25	0	23.3	1	24.0		18.8	0	20.0	
		1	0	23.2	1	24.0		19.0	0	20.0	
		1	12	23.0	1	24.0		18.8	0	20.0	
		1	24	23.2	1	24.0		19.1	0	20.0	
		12	0	22.3	2	23.0		18.8	0	20.0	
		12	7	22.3	2	23.0		18.8	0	20.0	
	64QAM	12	13	22.3	2	23.0		18.9	0	20.0	
		25	0	22.3	2	23.0		18.8	0	20.0	
		1	0	22.2	2	23.0		19.1	0	20.0	
		1	12	22.2	2	23.0		19.0	0	20.0	
		1	24	22.3	2	23.0		19.1	0	20.0	
		12	0	21.4	3	22.0		18.9	0	20.0	
	256QAM	12	7	21.4	3	22.0		18.9	0	20.0	
		12	13	21.4	3	22.0		18.9	0	20.0	
		25	0	21.3	3	22.0		18.9	0	20.0	
		1	0	19.1	5	20.0		18.9	0	20.0	
		1	12	19.1	5	20.0		18.9	0	20.0	
		1	24	19.2	5	20.0		19.0	0	20.0	
		12	0	19.3	5	20.0		18.8	0	20.0	
		12	7	19.3	5	20.0		18.8	0	20.0	
		12	13	19.3	5	20.0		18.9	0	20.0	
		25	0	19.4	5	20.0		18.9	0	20.0	

LTE Band 25 Measured Results (Main 1)

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				26140	26365	26590	MPR	Tune-up Limit	26140	26365	26590	MPR	Tune-up Limit
				1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20	QPSK	1	0	24.9	24.8	24.8	0	26.0	16.0	16.0	15.9	0	17.0
		1	49	24.9	24.8	24.8	0	26.0	16.0	15.9	15.8	0	17.0
		1	99	24.9	24.9	24.9	0	26.0	16.0	15.8	16.0	0	17.0
		50	0	24.0	23.9	24.0	1	25.0	16.0	15.9	16.0	0	17.0
		50	24	24.0	23.8	23.9	1	25.0	16.0	15.8	15.9	0	17.0
		50	50	24.0	23.8	23.9	1	25.0	16.0	15.7	15.9	0	17.0
	16QAM	100	0	24.0	23.8	23.9	1	25.0	16.0	15.8	15.9	0	17.0
		1	0	24.5	24.2	24.1	1	25.0	16.3	16.4	16.4	0	17.0
		1	49	24.5	24.1	24.1	1	25.0	16.3	16.2	16.3	0	17.0
		1	99	24.5	24.1	24.1	1	25.0	16.3	16.3	16.4	0	17.0
		50	0	22.9	22.9	22.9	2	24.0	15.9	15.9	15.9	0	17.0
		50	24	23.0	22.8	22.9	2	24.0	16.0	15.8	15.9	0	17.0
	64QAM	50	50	23.0	22.7	22.9	2	24.0	16.0	15.7	15.9	0	17.0
		100	0	23.0	22.8	22.9	2	24.0	16.0	15.8	15.9	0	17.0
		1	0	23.3	23.0	23.0	2	24.0	16.1	16.2	16.4	0	17.0
		1	49	23.3	22.7	23.0	2	24.0	16.0	16.1	16.4	0	17.0
		1	99	23.5	22.8	23.1	2	24.0	16.2	16.0	16.5	0	17.0
		50	0	21.8	21.8	21.9	3	23.0	16.0	15.9	15.9	0	17.0
	256QAM	50	24	21.9	21.6	21.8	3	23.0	16.0	15.8	15.9	0	17.0
		50	50	21.9	21.6	21.8	3	23.0	16.0	15.8	15.9	0	17.0
		100	0	21.8	21.7	21.8	3	23.0	16.0	15.8	15.8	0	17.0
		1	0	19.9	19.7	19.9	5	21.0	15.9	16.1	16.0	0	17.0
		1	49	19.9	19.5	19.8	5	21.0	15.8	15.9	16.0	0	17.0
		1	99	20.0	19.5	19.9	5	21.0	15.9	15.9	16.1	0	17.0
15	QPSK	50	0	19.8	19.7	19.8	5	21.0	16.0	15.9	16.0	0	17.0
		50	24	19.8	19.6	19.7	5	21.0	16.0	15.8	15.9	0	17.0
		50	50	19.8	19.5	19.7	5	21.0	16.0	15.7	15.9	0	17.0
		100	0	19.8	19.6	19.7	5	21.0	16.0	15.8	15.9	0	17.0
	16QAM	1	0	24.9	24.9	24.9	0	26.0	16.0	16.0	16.0	0	17.0
		1	37	24.9	24.5	24.9	0	26.0	16.0	15.6	15.9	0	17.0
		1	74	25.0	24.7	25.0	0	26.0	16.0	15.7	16.0	0	17.0
		36	0	24.0	23.9	23.9	1	25.0	16.0	16.0	15.9	0	17.0
		36	20	24.0	23.8	23.9	1	25.0	16.0	15.9	15.9	0	17.0
		36	39	24.0	23.8	24.0	1	25.0	16.0	15.8	16.0	0	17.0
	64QAM	75	0	24.0	23.8	23.9	1	25.0	16.0	15.8	15.9	0	17.0
		1	0	24.3	24.5	24.1	1	25.0	16.4	15.9	16.2	0	17.0
		1	37	24.1	24.1	23.9	1	25.0	16.2	15.6	16.0	0	17.0
		1	74	24.3	24.3	24.1	1	25.0	16.4	15.6	16.3	0	17.0
		36	0	22.9	22.9	22.9	2	24.0	16.0	15.9	16.0	0	17.0
		36	20	22.9	22.8	22.9	2	24.0	16.0	15.8	15.9	0	17.0
	256QAM	36	39	23.0	22.7	22.9	2	24.0	16.0	15.7	16.0	0	17.0
		75	0	22.9	22.8	22.9	2	24.0	16.0	15.8	15.9	0	17.0
		1	0	23.3	23.0	22.9	2	24.0	16.5	16.2	16.0	0	17.0
		1	37	23.2	22.7	22.7	2	24.0	16.4	15.9	15.8	0	17.0
		1	74	23.4	22.9	22.9	2	24.0	16.5	16.0	16.0	0	17.0
		36	0	21.8	21.8	21.8	3	23.0	16.0	16.0	16.0	0	17.0
15	64QAM	36	20	21.8	21.7	21.8	3	23.0	16.0	15.8	16.0	0	17.0
		36	39	21.9	21.6	21.8	3	23.0	16.0	15.8	16.0	0	17.0
		75	0	21.9	21.7	21.8	3	23.0	16.0	15.8	15.9	0	17.0
	256QAM	1	0	20.0	20.2	19.6	5	21.0	16.2	16.3	15.8	0	17.0
		1	37	19.9	19.9	19.4	5	21.0	16.1	16.1	15.6	0	17.0
		1	74	20.0	20.0	19.6	5	21.0	16.2	16.2	15.8	0	17.0
	256QAM	36	0	19.8	19.7	19.7	5	21.0	16.0	16.0	15.9	0	17.0
		36	20	19.8	19.6	19.7	5	21.0	16.0	15.9	15.9	0	17.0
		36	39	19.8	19.6	19.7	5	21.0	16.0	15.8	15.9	0	17.0
		75	0	19.8	19.6	19.7	5	21.0	16.0	15.8	15.9	0	17.0

LTE Band 25 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				26090	26365	26640	MPR	Tune-up Limit	26090	26365	26640	MPR	Tune-up Limit
				1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
10	QPSK	1	0	24.9	24.8	24.9	0	26.0	16.0	15.9	15.9	0	17.0
		1	25	24.8	24.8	24.8	0	26.0	15.8	15.7	15.8	0	17.0
		1	49	24.9	24.7	24.9	0	26.0	16.0	15.7	16.0	0	17.0
		25	0	24.0	23.9	23.9	1	25.0	16.0	15.9	15.9	0	17.0
		25	12	24.0	23.8	23.9	1	25.0	16.0	15.8	15.9	0	17.0
		25	25	24.0	23.7	23.9	1	25.0	16.0	15.7	15.9	0	17.0
	16QAM	50	0	23.9	23.8	23.9	1	25.0	16.0	15.8	15.9	0	17.0
		1	0	24.0	24.4	24.0	1	25.0	16.0	15.8	16.2	0	17.0
		1	25	23.9	24.4	23.9	1	25.0	15.9	15.7	16.2	0	17.0
		1	49	23.9	24.2	24.0	1	25.0	16.0	15.6	16.2	0	17.0
		25	0	23.0	22.9	22.9	2	24.0	16.0	15.9	15.9	0	17.0
		25	12	22.9	22.8	22.9	2	24.0	16.0	15.8	15.9	0	17.0
	64QAM	25	25	23.0	22.7	22.9	2	24.0	16.0	15.7	15.9	0	17.0
		50	0	22.9	22.8	22.8	2	24.0	16.0	15.8	15.8	0	17.0
		1	0	22.9	23.1	22.8	2	24.0	16.1	16.2	15.9	0	17.0
		1	25	22.8	22.8	22.7	2	24.0	16.0	15.9	15.9	0	17.0
		1	49	23.0	22.8	22.9	2	24.0	16.1	16.0	16.0	0	17.0
		25	0	21.9	21.7	21.8	3	23.0	16.0	15.9	15.9	0	17.0
	256QAM	25	12	21.9	21.7	21.8	3	23.0	16.0	15.8	15.9	0	17.0
		25	25	21.9	21.6	21.8	3	23.0	16.0	15.7	15.9	0	17.0
		50	0	21.8	21.6	21.7	3	23.0	15.9	15.7	15.9	0	17.0
		1	0	19.8	20.2	19.5	5	21.0	16.0	16.3	15.7	0	17.0
		1	25	19.7	19.9	19.5	5	21.0	15.9	16.0	15.7	0	17.0
		1	49	19.9	19.9	19.5	5	21.0	16.0	16.1	15.7	0	17.0
5	QPSK	25	0	19.9	19.7	19.7	5	21.0	16.0	15.9	15.9	0	17.0
		25	12	19.9	19.6	19.7	5	21.0	16.0	15.8	15.9	0	17.0
		25	25	19.9	19.6	19.7	5	21.0	16.0	15.8	16.0	0	17.0
		50	0	19.8	19.6	19.7	5	21.0	16.0	15.8	15.9	0	17.0
	16QAM	1	0	25.1	24.9	24.9	0	26.0	16.1	16.0	16.0	0	17.0
		1	12	25.0	24.8	24.9	0	26.0	16.0	15.8	15.9	0	17.0
		1	24	25.0	24.8	25.0	0	26.0	16.1	15.8	16.0	0	17.0
		12	0	24.0	23.8	23.9	1	25.0	16.0	15.8	15.9	0	17.0
		12	7	24.0	23.8	23.9	1	25.0	16.0	15.8	15.9	0	17.0
		12	13	23.9	23.7	23.9	1	25.0	16.0	15.8	15.9	0	17.0
	64QAM	25	0	24.0	23.8	24.0	1	25.0	16.0	15.8	15.9	0	17.0
		1	0	24.0	23.8	24.2	1	25.0	16.2	16.4	16.0	0	17.0
		1	12	23.8	23.5	24.1	1	25.0	16.1	16.2	15.7	0	17.0
		1	24	24.0	23.7	24.2	1	25.0	16.1	16.2	16.0	0	17.0
		12	0	22.9	22.8	22.9	2	24.0	16.0	15.9	15.9	0	17.0
		12	7	22.9	22.7	22.9	2	24.0	16.0	15.9	15.9	0	17.0
	256QAM	12	13	22.9	22.7	22.9	2	24.0	16.0	15.9	15.9	0	17.0
		25	0	22.9	22.8	22.8	2	24.0	16.0	15.8	15.9	0	17.0
		1	0	22.8	22.9	22.9	2	24.0	16.0	16.1	16.1	0	17.0
		1	12	22.7	22.7	22.9	2	24.0	15.8	15.8	16.1	0	17.0
		1	24	22.7	22.8	23.0	2	24.0	15.9	15.9	16.1	0	17.0
		12	0	21.9	21.6	21.8	3	23.0	16.0	15.8	15.9	0	17.0
5	64QAM	12	7	21.8	21.6	21.8	3	23.0	16.0	15.7	15.9	0	17.0
		12	13	21.8	21.6	21.8	3	23.0	16.0	15.7	15.9	0	17.0
		25	0	21.8	21.6	21.8	3	23.0	15.9	15.7	15.9	0	17.0
	256QAM	1	0	19.5	19.8	19.8	5	21.0	15.8	16.0	16.0	0	17.0
		1	12	19.5	19.5	19.7	5	21.0	15.7	15.7	15.9	0	17.0
		1	24	19.5	19.7	19.8	5	21.0	15.8	15.9	16.0	0	17.0
		12	0	19.8	19.6	19.7	5	21.0	16.0	15.8	15.9	0	17.0
		12	7	19.8	19.6	19.7	5	21.0	16.0	15.8	15.9	0	17.0
		12	13	19.7	19.6	19.7	5	21.0	15.9	15.8	15.9	0	17.0
		25	0	19.8	19.5	19.7	5	21.0	16.0	15.8	15.9	0	17.0

LTE Band 25 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				26055	26365	26675	MPR	Tune-up Limit	26055	26365	26675	MPR	Tune-up Limit
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3	QPSK	1	0	24.9	24.8	24.9	0	26.0	16.0	15.8	15.9	0	17.0
		1	8	24.8	24.5	24.9	0	26.0	15.9	15.6	15.9	0	17.0
		1	14	24.9	24.8	24.9	0	26.0	15.9	15.8	15.9	0	17.0
		8	0	24.0	23.8	24.0	1	25.0	16.0	15.8	16.0	0	17.0
		8	4	23.9	23.8	23.9	1	25.0	16.0	15.8	15.9	0	17.0
		8	7	24.0	23.8	24.0	1	25.0	16.0	15.8	16.0	0	17.0
	16QAM	15	0	24.0	23.8	24.0	1	25.0	16.0	15.8	15.9	0	17.0
		1	0	24.0	24.4	24.0	1	25.0	16.0	15.8	16.2	0	17.0
		1	8	23.7	24.0	23.9	1	25.0	15.8	15.6	16.0	0	17.0
		1	14	23.9	24.3	24.0	1	25.0	15.9	15.7	16.2	0	17.0
		8	0	23.0	22.9	22.9	2	24.0	16.0	15.9	16.0	0	17.0
		8	4	23.0	22.9	22.9	2	24.0	16.0	15.9	16.0	0	17.0
	64QAM	8	7	23.0	22.9	23.0	2	24.0	16.0	15.9	16.0	0	17.0
		15	0	22.9	22.7	22.9	2	24.0	15.9	15.8	15.9	0	17.0
		1	0	23.0	23.0	22.7	2	24.0	16.2	16.0	16.0	0	17.0
		1	8	22.9	22.7	22.6	2	24.0	16.1	15.9	15.8	0	17.0
		1	14	23.1	22.8	22.7	2	24.0	16.2	15.9	15.9	0	17.0
		8	0	21.8	21.7	21.9	3	23.0	15.9	15.9	16.0	0	17.0
	256QAM	8	4	21.8	21.6	21.8	3	23.0	16.0	15.8	15.9	0	17.0
		8	7	21.8	21.6	21.8	3	23.0	16.0	15.8	15.9	0	17.0
		15	0	21.8	21.6	21.8	3	23.0	16.0	15.8	15.9	0	17.0
		1	0	19.8	20.1	19.6	5	21.0	16.0	16.2	15.7	0	17.0
		1	8	19.7	19.9	19.5	5	21.0	15.8	16.1	15.6	0	17.0
		1	14	19.8	20.0	19.6	5	21.0	16.0	16.2	16.3	0	17.0
1.4	QPSK	8	0	20.0	19.7	19.8	5	21.0	16.2	15.9	16.0	0	17.0
		8	4	19.9	19.7	19.7	5	21.0	16.1	15.9	16.0	0	17.0
		8	7	19.9	19.7	19.8	5	21.0	16.1	15.9	16.0	0	17.0
		15	0	19.9	19.6	19.9	5	21.0	16.1	15.8	15.9	0	17.0
	16QAM	1	0	24.9	24.7	24.8	0	26.0	15.8	15.8	15.9	0	17.0
		1	3	24.8	24.7	24.7	0	26.0	15.7	15.7	15.8	0	17.0
		1	5	24.9	24.7	24.9	0	26.0	15.9	15.8	15.9	0	17.0
		3	0	24.8	24.7	24.8	0	26.0	15.8	15.7	15.9	0	17.0
		3	1	24.8	24.7	24.8	0	26.0	15.8	15.6	15.8	0	17.0
		3	3	24.9	24.7	24.9	0	26.0	15.9	15.7	15.8	0	17.0
	64QAM	6	0	23.9	23.8	23.9	1	25.0	15.9	15.8	15.9	0	17.0
		1	0	23.9	23.8	23.8	1	25.0	15.9	15.8	16.2	0	17.0
		1	3	23.9	23.7	23.9	1	25.0	15.8	15.9	16.1	0	17.0
		1	5	23.9	23.8	23.9	1	25.0	15.9	15.8	16.2	0	17.0
		3	0	24.0	23.7	23.9	1	25.0	16.0	15.8	16.0	0	17.0
		3	1	24.1	23.7	24.0	1	25.0	16.0	15.7	16.0	0	17.0
	256QAM	3	3	24.1	23.7	23.9	1	25.0	16.0	15.7	16.0	0	17.0
		6	0	22.9	22.8	22.9	2	24.0	16.1	15.9	15.7	0	17.0
		1	0	22.8	22.6	22.7	2	24.0	16.2	15.8	16.0	0	17.0
		1	3	22.8	22.6	22.8	2	24.0	16.2	15.8	15.9	0	17.0
		1	5	22.8	22.6	22.8	2	24.0	16.2	15.8	16.1	0	17.0
		3	0	22.8	22.7	22.8	2	24.0	16.1	15.8	15.8	0	17.0
1.4	64QAM	3	1	22.8	22.6	22.8	2	24.0	16.1	15.8	15.8	0	17.0
		3	3	22.8	22.6	22.8	2	24.0	16.1	15.8	15.8	0	17.0
		6	0	22.0	21.8	21.9	3	23.0	16.0	16.0	16.0	0	17.0
	256QAM	1	0	19.8	19.7	19.8	5	21.0	16.0	15.6	15.9	0	17.0
		1	3	19.8	19.7	19.8	5	21.0	16.0	15.6	15.8	0	17.0
		1	5	19.8	19.6	19.8	5	21.0	16.0	15.6	15.9	0	17.0
		3	0	19.7	19.5	19.7	5	21.0	15.8	15.6	15.9	0	17.0
		3	1	19.6	19.5	19.6	5	21.0	15.9	15.5	16.0	0	17.0
		3	3	19.6	19.4	19.6	5	21.0	15.8	15.6	15.9	0	17.0
	256QAM	6	0	19.7	19.6	19.7	5	21.0	15.9	15.8	15.9	0	17.0

LTE Band 26 Measured Results (Main 1)

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				26865 831.5 MHz		MPR	Tune-up Limit		26865 831.5 MHz		MPR	Tune-up Limit	
15	QPSK	1	0	24.7		0	25.5		17.1		0	17.5	
		1	37	24.4		0	25.5		17.0		0	17.5	
		1	74	24.6		0	25.5		17.0		0	17.5	
		36	0	23.8		1	24.5		17.1		0	17.5	
		36	20	23.8		1	24.5		17.1		0	17.5	
		36	39	23.7		1	24.5		17.1		0	17.5	
		75	0	23.8		1	24.5		17.1		0	17.5	
	16QAM	1	0	24.2		1	24.5		17.5		0	17.5	
		1	37	24.0		1	24.5		17.3		0	17.5	
		1	74	24.1		1	24.5		17.4		0	17.5	
		36	0	22.7		2	23.5		17.1		0	17.5	
		36	20	22.7		2	23.5		17.1		0	17.5	
		36	39	22.7		2	23.5		17.0		0	17.5	
		75	0	22.7		2	23.5		17.1		0	17.5	
	64QAM	1	0	23.2		2	23.5		17.2		0	17.5	
		1	37	23.1		2	23.5		17.0		0	17.5	
		1	74	23.1		2	23.5		17.1		0	17.5	
		36	0	21.7		3	22.5		17.2		0	17.5	
		36	20	21.7		3	22.5		17.2		0	17.5	
		36	39	21.6		3	22.5		17.2		0	17.5	
		75	0	21.7		3	22.5		17.1		0	17.5	
	256QAM	1	0	19.9		5	20.5		17.0		0	17.5	
		1	37	19.8		5	20.5		16.8		0	17.5	
		1	74	19.8		5	20.5		16.8		0	17.5	
		36	0	19.7		5	20.5		17.1		0	17.5	
		36	20	19.6		5	20.5		17.1		0	17.5	
		36	39	19.6		5	20.5		17.1		0	17.5	
		75	0	19.6		5	20.5		17.1		0	17.5	
BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				26740 819 MHz	26865 831.5 MHz	26990 844 MHz	MPR	Tune-up Limit	26740 819 MHz	26865 831.5 MHz	26990 844 MHz	MPR	Tune-up Limit
10	QPSK	1	0	24.5	24.6	24.6	0	25.5	16.9	17.0	17.0	0	17.5
		1	25	24.5	24.7	24.4	0	25.5	16.8	17.0	16.8	0	17.5
		1	49	24.7	24.6	24.4	0	25.5	17.0	17.0	16.8	0	17.5
		25	0	23.6	23.7	23.6	1	24.5	17.0	17.1	16.9	0	17.5
		25	12	23.7	23.7	23.5	1	24.5	17.0	17.0	16.8	0	17.5
		25	25	23.7	23.7	23.4	1	24.5	17.1	17.0	16.8	0	17.5
		50	0	23.7	23.7	23.5	1	24.5	17.0	17.0	16.8	0	17.5
	16QAM	1	0	23.6	24.2	23.7	1	24.5	17.0	17.0	17.3	0	17.5
		1	25	23.7	24.3	23.5	1	24.5	17.0	17.1	17.1	0	17.5
		1	49	23.7	24.1	23.5	1	24.5	17.1	16.9	17.1	0	17.5
		25	0	22.7	22.7	22.6	2	23.5	17.1	17.1	16.9	0	17.5
		25	12	22.7	22.7	22.6	2	23.5	17.1	17.0	16.9	0	17.5
		25	25	22.7	22.7	22.5	2	23.5	17.1	17.0	16.8	0	17.5
		50	0	22.7	22.7	22.5	2	23.5	17.1	17.0	16.8	0	17.5
	64QAM	1	0	22.7	23.0	22.7	2	23.5	17.1	17.4	17.1	0	17.5
		1	25	22.6	22.9	22.5	2	23.5	17.1	17.3	16.8	0	17.5
		1	49	22.8	22.9	22.5	2	23.5	17.2	17.3	16.9	0	17.5
		25	0	21.7	21.7	21.6	3	22.5	17.1	17.1	17.0	0	17.5
		25	12	21.7	21.7	21.6	3	22.5	17.1	17.1	16.9	0	17.5
		25	25	21.8	21.7	21.5	3	22.5	17.2	17.1	16.9	0	17.5
		50	0	21.7	21.7	21.5	3	22.5	17.1	17.1	16.9	0	17.5
	256QAM	1	0	19.6	20.1	19.4	5	20.5	16.8	17.5	17.0	0	17.5
		1	25	19.6	20.0	19.3	5	20.5	16.9	17.4	16.9	0	17.5
		1	49	19.8	20.0	19.2	5	20.5	17.0	17.4	16.9	0	17.5
		25	0	19.6	19.7	19.6	5	20.5	17.1	17.2	17.0	0	17.5
		25	12	19.7	19.7	19.5	5	20.5	17.1	17.1	16.9	0	17.5
		25	25	19.7	19.7	19.5	5	20.5	17.2	17.1	16.9	0	17.5
		50	0	19.7	19.7	19.5	5	20.5	17.1	17.1	16.9	0	17.5

LTE Band 26 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				26715	26865	27015	MPR	Tune-up Limit	26715	26865	27015	MPR	Tune-up Limit
				816.5 MHz	831.5 MHz	846.5 MHz			816.5 MHz	831.5 MHz	846.5 MHz		
5	QPSK	1	0	24.6	24.7	24.5	0	25.5	17.0	17.2	16.9	0	17.5
		1	12	24.6	24.6	24.4	0	25.5	17.0	17.0	16.8	0	17.5
		1	24	24.7	24.7	24.5	0	25.5	17.1	17.1	16.8	0	17.5
		12	0	23.5	23.7	23.5	1	24.5	16.9	17.1	16.8	0	17.5
		12	7	23.6	23.7	23.4	1	24.5	17.0	17.0	16.8	0	17.5
		12	13	23.6	23.6	23.4	1	24.5	16.9	17.0	16.7	0	17.5
		25	0	23.6	23.7	23.4	1	24.5	17.0	17.0	16.8	0	17.5
	16QAM	1	0	23.4	24.0	23.5	1	24.5	17.1	17.5	16.9	0	17.5
		1	12	23.3	23.9	23.3	1	24.5	16.9	17.4	16.6	0	17.5
		1	24	23.5	23.9	23.4	1	24.5	17.2	17.5	16.9	0	17.5
		12	0	22.6	22.7	22.4	2	23.5	17.0	17.2	16.8	0	17.5
		12	7	22.6	22.7	22.4	2	23.5	17.0	17.2	16.8	0	17.5
		12	13	22.6	22.7	22.4	2	23.5	17.1	17.2	16.8	0	17.5
		25	0	22.6	22.6	22.4	2	23.5	17.0	17.1	16.7	0	17.5
	64QAM	1	0	22.5	23.0	22.7	2	23.5	17.2	17.1	17.1	0	17.5
		1	12	22.5	22.8	22.6	2	23.5	17.2	17.0	17.0	0	17.5
		1	24	22.6	22.9	22.6	2	23.5	17.3	17.0	17.1	0	17.5
		12	0	21.6	21.6	21.5	3	22.5	17.0	17.1	16.9	0	17.5
		12	7	21.6	21.6	21.5	3	22.5	17.0	17.1	16.9	0	17.5
		12	13	21.6	21.6	21.5	3	22.5	17.0	17.1	16.9	0	17.5
		25	0	21.6	21.6	21.4	3	22.5	17.0	17.1	16.8	0	17.5
	256QAM	1	0	19.3	19.8	19.5	5	20.5	17.1	16.9	17.0	0	17.5
		1	12	19.3	19.7	19.4	5	20.5	17.1	16.8	16.8	0	17.5
		1	24	19.4	19.7	19.4	5	20.5	17.2	16.8	16.9	0	17.5
		12	0	19.5	19.7	19.4	5	20.5	17.0	17.1	16.8	0	17.5
		12	7	19.6	19.6	19.4	5	20.5	17.0	17.1	16.8	0	17.5
		12	13	19.6	19.7	19.4	5	20.5	17.1	17.0	16.8	0	17.5
		25	0	19.6	19.6	19.4	5	20.5	17.0	17.1	16.8	0	17.5
3	QPSK	1	0	24.5	24.6	24.4	0	25.5	16.9	17.1	16.8	0	17.5
		1	8	24.6	24.5	24.2	0	25.5	16.8	16.8	16.8	0	17.5
		1	14	24.6	24.6	24.5	0	25.5	16.9	17.1	16.7	0	17.5
		8	0	23.6	23.7	23.5	1	24.5	16.9	17.1	16.8	0	17.5
		8	4	23.6	23.6	23.4	1	24.5	16.9	17.1	16.8	0	17.5
		8	7	23.6	23.7	23.4	1	24.5	17.0	17.1	16.8	0	17.5
		15	0	23.6	23.7	23.5	1	24.5	17.0	17.1	16.8	0	17.5
	16QAM	1	0	23.6	23.7	24.0	1	24.5	16.9	17.0	17.1	0	17.5
		1	8	23.5	23.5	23.7	1	24.5	16.8	16.9	16.8	0	17.5
		1	14	23.6	23.6	24.0	1	24.5	16.9	17.0	17.0	0	17.5
		8	0	22.5	22.8	22.6	2	23.5	17.0	17.2	16.8	0	17.5
		8	4	22.6	22.7	22.6	2	23.5	17.0	17.1	16.9	0	17.5
		8	7	22.6	22.7	22.6	2	23.5	17.0	17.2	16.8	0	17.5
		15	0	22.6	22.7	22.4	2	23.5	16.9	17.1	16.8	0	17.5
	64QAM	1	0	22.6	22.7	22.5	2	23.5	17.1	17.2	16.8	0	17.5
		1	8	22.4	22.6	22.3	2	23.5	17.2	17.3	16.9	0	17.5
		1	14	22.6	22.6	22.4	2	23.5	17.2	17.3	16.9	0	17.5
		8	0	21.6	21.7	21.5	3	22.5	17.0	17.1	16.9	0	17.5
		8	4	21.6	21.7	21.5	3	22.5	17.0	17.1	16.9	0	17.5
		8	7	21.5	21.6	21.4	3	22.5	17.0	17.1	16.9	0	17.5
		15	0	21.6	21.7	21.4	3	22.5	16.9	17.1	16.9	0	17.5
	256QAM	1	0	19.4	19.5	19.3	5	20.5	17.3	17.1	16.7	0	17.5
		1	8	19.3	19.4	19.1	5	20.5	17.3	17.2	16.7	0	17.5
		1	14	20.0	20.0	19.8	5	20.5	17.4	17.2	16.7	0	17.5
		8	0	19.6	19.7	19.5	5	20.5	17.0	17.3	16.9	0	17.5
		8	4	19.6	19.7	19.4	5	20.5	17.0	17.2	16.9	0	17.5
		8	7	19.7	19.7	19.5	5	20.5	17.0	17.3	16.9	0	17.5
		15	0	19.5	19.6	19.4	5	20.5	16.9	17.2	17.0	0	17.5

LTE Band 26 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				26697	26865	27033	MPR	Tune-up Limit	26697	26865	27033	MPR	Tune-up Limit
				814.7 MHz	831.5 MHz	848.3 MHz			814.7 MHz	831.5 MHz	848.3 MHz		
1.4	QPSK	1	0	24.4	24.6	24.4	0	25.5	16.8	17.0	16.7	0	17.5
		1	3	24.4	24.5	24.4	0	25.5	16.8	16.9	16.6	0	17.5
		1	5	24.5	24.6	24.4	0	25.5	16.9	17.0	16.7	0	17.5
		3	0	24.5	24.6	24.4	0	25.5	16.8	17.0	16.7	0	17.5
		3	1	24.5	24.6	24.3	0	25.5	16.8	17.0	16.6	0	17.5
		3	3	24.4	24.6	24.3	0	25.5	16.8	16.9	16.7	0	17.5
	16QAM	6	0	23.6	23.6	23.4	1	24.5	16.8	17.1	16.7	0	17.5
		1	0	23.5	23.6	23.3	1	24.5	16.9	17.3	16.7	0	17.5
		1	3	23.4	23.7	23.4	1	24.5	17.0	17.2	16.7	0	17.5
		1	5	23.6	23.7	23.4	1	24.5	17.0	17.3	16.8	0	17.5
		3	0	23.5	23.7	23.5	1	24.5	16.9	17.1	16.9	0	17.5
		3	1	23.4	23.7	23.5	1	24.5	16.9	17.2	16.9	0	17.5
	64QAM	3	3	23.4	23.7	23.5	1	24.5	16.8	17.1	16.8	0	17.5
		6	0	22.6	22.6	22.4	2	23.5	17.1	16.8	16.9	0	17.5
		1	0	22.5	22.7	22.4	2	23.5	17.2	17.2	17.1	0	17.5
		1	3	22.5	22.7	22.4	2	23.5	16.8	17.1	17.2	0	17.5
		1	5	22.5	22.7	22.4	2	23.5	17.2	17.1	17.1	0	17.5
		3	0	22.6	22.7	22.5	2	23.5	16.8	17.2	17.0	0	17.5
	256QAM	3	1	22.5	22.7	22.4	2	23.5	16.8	17.1	17.0	0	17.5
		3	3	22.6	22.7	22.4	2	23.5	16.8	17.1	17.0	0	17.5
		6	0	21.7	21.8	21.5	3	22.5	17.0	17.2	16.8	0	17.5
		1	0	19.6	19.7	19.4	5	20.5	17.0	16.9	16.8	0	17.5
		1	3	19.6	19.8	19.5	5	20.5	16.9	16.9	16.9	0	17.5
		1	5	19.6	19.7	19.4	5	20.5	17.0	16.9	16.9	0	17.5
		3	0	19.5	19.6	19.3	5	20.5	16.9	17.0	16.8	0	17.5
		3	1	19.3	19.5	19.2	5	20.5	17.0	16.9	16.6	0	17.5
		3	3	19.3	19.5	19.2	5	20.5	17.0	16.9	16.6	0	17.5
		6	0	19.5	19.6	19.3	5	20.5	16.9	17.2	16.8	0	17.5

LTE Band 41 Measured Results (Main 1)

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)							Grip Average Power (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20	QPSK	1	0	25.3	25.3	25.0	24.7	24.9	0	26.0	15.3	14.9	14.6	14.4	14.6	0	16.0
		1	49	25.5	25.4	24.7	24.7	25.1	0	26.0	15.2	15.0	14.5	14.3	14.7	0	16.0
		1	99	25.6	25.4	24.9	24.8	24.1	0	26.0	15.2	15.1	14.6	14.5	14.8	0	16.0
		50	0	24.6	24.2	24.0	23.7	23.9	1	25.0	15.3	14.9	14.6	14.4	14.6	0	16.0
		50	24	24.6	24.3	23.9	23.8	24.0	1	25.0	15.2	15.0	14.6	14.4	14.6	0	16.0
		50	50	24.6	24.3	23.9	23.8	23.9	1	25.0	15.2	15.0	14.5	14.4	14.7	0	16.0
		100	0	24.6	24.3	24.0	23.8	24.0	1	25.0	15.3	15.0	14.6	14.4	14.6	0	16.0
	16QAM	1	0	24.3	24.4	23.9	23.5	24.0	1	25.0	15.1	15.0	14.5	14.2	14.7	0	16.0
		1	49	24.5	24.6	24.1	23.6	24.2	1	25.0	15.0	15.0	14.6	14.2	14.7	0	16.0
		1	99	24.4	24.5	23.9	23.6	23.5	1	25.0	15.0	15.1	14.5	14.3	14.8	0	16.0
		50	0	23.7	23.3	23.0	22.8	23.0	2	24.0	15.3	14.9	14.6	14.4	14.6	0	16.0
		50	24	23.7	23.3	22.9	22.8	23.0	2	24.0	15.3	15.0	14.5	14.4	14.6	0	16.0
		50	50	23.7	23.3	22.9	22.8	23.1	2	24.0	15.3	15.0	14.5	14.5	14.7	0	16.0
		100	0	23.6	23.3	22.9	22.8	23.0	2	24.0	15.2	14.9	14.6	14.4	14.6	0	16.0
	64QAM	1	0	23.7	23.7	22.9	22.8	23.3	2	24.0	15.3	15.3	14.5	14.4	14.9	0	16.0
		1	49	23.6	23.6	23.0	22.7	23.3	2	24.0	15.2	15.3	14.5	14.4	15.0	0	16.0
		1	99	23.6	23.7	22.8	22.9	23.1	2	24.0	15.3	15.4	14.5	14.6	15.1	0	16.0
		50	0	22.6	22.2	22.0	21.8	21.9	3	23.0	15.3	14.9	14.6	14.4	14.6	0	16.0
		50	24	22.6	22.3	21.9	21.8	22.0	3	23.0	15.3	15.0	14.6	14.4	14.7	0	16.0
		50	50	22.6	22.3	21.9	21.8	22.1	3	23.0	15.3	15.0	14.6	14.5	14.7	0	16.0
		100	0	22.6	22.3	21.9	21.8	22.0	3	23.0	15.3	14.9	14.6	14.5	14.7	0	16.0
	256QAM	1	0	20.9	20.2	19.9	20.0	19.9	5	21.0	15.5	14.9	14.6	14.7	14.6	0	16.0
		1	49	20.8	20.3	19.9	19.9	19.9	5	21.0	15.4	14.9	14.6	14.6	14.6	0	16.0
		1	99	20.8	20.3	19.8	20.1	20.1	5	21.0	15.5	15.0	14.5	14.8	14.8	0	16.0
		50	0	20.6	20.2	19.9	19.7	19.9	5	21.0	15.3	14.9	14.6	14.4	14.6	0	16.0
		50	24	20.6	20.2	19.9	19.7	20.0	5	21.0	15.3	14.9	14.5	14.4	14.7	0	16.0
		50	50	20.6	20.2	19.9	19.7	20.0	5	21.0	15.3	14.9	14.5	14.4	14.7	0	16.0
		100	0	20.6	20.2	19.9	19.7	20.0	5	21.0	15.3	15.0	14.6	14.4	14.7	0	16.0
BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)							Grip Average Power (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
15	QPSK	1	0	25.4	25.2	24.9	24.7	24.8	0	26.0	15.3	14.9	14.6	14.4	14.5	0	16.0
		1	37	25.6	25.3	24.8	24.8	24.9	0	26.0	15.3	15.0	14.6	14.5	14.7	0	16.0
		1	74	25.6	25.3	24.9	24.8	24.1	0	26.0	15.3	15.0	14.5	14.5	14.7	0	16.0
		36	0	24.6	24.3	24.0	23.7	23.9	1	25.0	15.2	14.9	14.6	14.4	14.6	0	16.0
		36	20	24.6	24.3	23.9	23.7	24.0	1	25.0	15.2	15.0	14.6	14.4	14.7	0	16.0
		36	39	24.6	24.3	23.9	23.8	24.0	1	25.0	15.3	15.0	14.6	14.5	14.7	0	16.0
		75	0	24.6	24.3	23.9	23.7	24.0	1	25.0	15.2	15.0	14.6	14.4	14.7	0	16.0
	16QAM	1	0	24.3	24.3	23.9	23.5	24.0	1	25.0	15.0	14.9	14.6	14.2	14.6	0	16.0
		1	37	24.2	24.5	23.7	23.4	24.1	1	25.0	15.0	15.0	14.4	14.2	14.7	0	16.0
		1	74	24.4	24.4	23.9	23.5	23.5	1	25.0	15.0	15.1	14.6	14.2	14.8	0	16.0
		36	0	23.6	23.3	23.0	22.7	23.0	2	24.0	15.2	15.0	14.6	14.3	14.7	0	16.0
		36	20	23.6	23.3	22.9	22.7	23.0	2	24.0	15.2	15.0	14.5	14.4	14.7	0	16.0
		36	39	23.6	23.3	22.9	22.7	23.1	2	24.0	15.2	15.0	14.6	14.4	14.8	0	16.0
		75	0	23.6	23.3	22.9	22.7	22.9	2	24.0	15.2	14.9	14.6	14.4	14.7	0	16.0
	64QAM	1	0	23.5	22.7	23.2	22.5	22.4	2	24.0	15.2	14.5	14.8	14.3	14.1	0	16.0
		1	37	23.2	23.0	23.0	22.3	22.6	2	24.0	15.1	14.7	14.7	14.2	14.4	0	16.0
		1	74	23.3	22.8	23.1	22.5	22.4	2	24.0	15.0	14.6	14.8	14.3	14.3	0	16.0
		36	0	22.5	22.3	22.0	21.6	21.9	3	23.0	15.2	15.0	14.7	14.4	14.7	0	16.0
		36	20	22.5	22.3	21.9	21.7	22.0	3	23.0	15.2	15.0	14.7	14.4	14.7	0	16.0
		36	39	22.5	22.3	21.9	21.7	22.1	3	23.0	15.2	15.0	14.6	14.4	14.8	0	16.0
		75	0	22.6	22.2	21.9	21.7	21.9	3	23.0	15.3	14.9	14.6	14.4	14.6	0	16.0
	256QAM	1	0	20.7	20.2	19.7	19.8	19.9	5	21.0	15.4	15.0	14.4	14.5	14.7	0	16.0
		1	37	20.5	19.7	19.5	19.7	19.4	5	21.0	15.3	14.8	14.4	14.5	14.5	0	16.0
		1	74	20.6	20.3	19.6	19.8	20.1	5	21.0	15.3	15.0	14.3	14.5	14.8	0	16.0
		36	0	20.5	20.2	19.9	19.6	19.9	5	21.0	15.2	14.9	14.7	14.4	14.6	0	16.0
		36	20	20.5	20.2	19.9	19.7	19.9	5	21.0	15.2	15.0	14.6	14.4	14.7	0	16.0
		36	39	20.5	20.2	19.9	19.7	20.0	5	21.0	15.2	15.0	14.6	14.4	14.7	0	16.0
		75	0	20.6	20.2	19.8	19.7	19.9	5	21.0	15.3	15.0	14.6	14.4	14.7	0	16.0

LTE Band 41 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB offset	RSI 0 Average Power (dBm)							Grip Average Power (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
10	QPSK	1	0	25.7	25.2	24.9	24.6	24.8	0	26.0	15.3	14.8	14.6	14.3	14.5	0	16.0
		1	25	25.6	25.3	24.9	24.7	24.8	0	26.0	15.2	14.8	14.5	14.3	14.5	0	16.0
		1	49	25.6	25.3	24.9	24.7	24.5	0	26.0	15.2	14.9	14.5	14.4	14.6	0	16.0
		25	0	24.6	24.3	24.0	23.8	23.9	1	25.0	15.2	14.9	14.6	14.4	14.6	0	16.0
		25	12	24.6	24.3	24.0	23.8	24.0	1	25.0	15.2	14.9	14.6	14.4	14.6	0	16.0
		25	25	24.6	24.3	23.9	23.8	24.0	1	25.0	15.2	14.9	14.6	14.4	14.6	0	16.0
		50	0	24.6	24.3	23.9	23.7	24.0	1	25.0	15.2	14.9	14.6	14.4	14.6	0	16.0
	16QAM	1	0	24.4	24.1	23.9	23.6	23.9	1	25.0	15.0	14.8	14.5	14.2	14.6	0	16.0
		1	25	24.5	24.1	23.7	23.5	23.9	1	25.0	15.0	14.7	14.3	14.2	14.5	0	16.0
		1	49	24.4	24.2	23.8	23.6	23.9	1	25.0	15.0	14.8	14.4	14.3	14.7	0	16.0
		25	0	23.5	23.3	23.0	22.7	22.9	2	24.0	15.1	14.9	14.6	14.4	14.6	0	16.0
		25	12	23.5	23.3	22.9	22.8	23.0	2	24.0	15.1	14.9	14.6	14.4	14.6	0	16.0
		25	25	23.6	23.3	22.9	22.8	23.0	2	24.0	15.2	15.0	14.6	14.4	14.6	0	16.0
		50	0	23.6	23.3	23.0	22.8	23.0	2	24.0	15.2	14.9	14.6	14.4	14.6	0	16.0
	64QAM	1	0	23.7	23.2	23.0	22.3	23.2	2	24.0	15.3	15.0	14.3	14.7	14.7	0	16.0
		1	25	23.6	23.3	23.0	22.3	23.1	2	24.0	15.2	15.0	14.1	14.6	14.7	0	16.0
		1	49	23.6	23.3	22.9	22.3	23.2	2	24.0	15.2	15.0	14.2	14.6	14.7	0	16.0
		25	0	22.4	22.1	21.8	21.7	21.9	3	23.0	15.1	14.8	14.6	14.4	14.5	0	16.0
		25	12	22.5	22.2	21.8	21.7	21.9	3	23.0	15.1	14.9	14.6	14.4	14.5	0	16.0
		25	25	22.5	22.2	21.8	21.8	21.9	3	23.0	15.2	14.9	14.6	14.4	14.6	0	16.0
		50	0	22.5	22.2	21.9	21.7	21.9	3	23.0	15.2	14.9	14.6	14.4	14.6	0	16.0
	256QAM	1	0	20.6	20.2	20.0	19.8	19.6	5	21.0	15.3	14.9	14.7	14.1	14.6	0	16.0
		1	25	20.6	20.3	19.9	19.7	19.6	5	21.0	15.2	14.9	14.6	14.1	14.6	0	16.0
		1	49	20.5	20.2	19.8	19.8	19.7	5	21.0	15.2	14.9	14.7	14.2	14.7	0	16.0
		25	0	20.5	20.2	19.9	19.7	19.9	5	21.0	15.2	14.9	14.6	14.4	14.6	0	16.0
		25	12	20.5	20.2	19.9	19.7	19.9	5	21.0	15.2	14.9	14.6	14.4	14.6	0	16.0
		25	25	20.5	20.2	19.8	19.7	20.0	5	21.0	15.2	14.9	14.6	14.5	14.7	0	16.0
		50	0	20.5	20.2	19.9	19.8	19.9	5	21.0	15.2	15.0	14.6	14.4	14.6	0	16.0
5	QPSK	1	0	25.4	25.3	24.9	24.7	25.0	0	26.0	15.1	14.9	14.6	14.3	14.6	0	16.0
		1	12	25.1	25.4	24.8	24.4	25.1	0	26.0	15.1	14.9	14.6	14.4	14.6	0	16.0
		1	24	25.4	25.4	25.0	24.7	24.9	0	26.0	15.2	14.9	14.6	14.4	14.5	0	16.0
		12	0	24.5	24.3	23.9	23.7	24.0	1	25.0	15.1	14.9	14.6	14.3	14.5	0	16.0
		12	7	24.5	24.3	23.9	23.7	23.9	1	25.0	15.1	14.9	14.5	14.4	14.5	0	16.0
		12	13	24.5	24.2	23.9	23.7	23.9	1	25.0	15.1	14.9	14.5	14.4	14.6	0	16.0
		25	0	24.5	24.3	23.9	23.8	23.9	1	25.0	15.1	14.9	14.5	14.3	14.6	0	16.0
	16QAM	1	0	24.6	24.2	24.0	23.8	23.9	1	25.0	15.2	14.9	14.5	14.4	14.6	0	16.0
		1	12	24.5	24.2	24.0	23.7	23.8	1	25.0	15.5	15.1	14.7	14.7	14.8	0	16.0
		1	24	24.5	24.3	24.0	23.7	24.0	1	25.0	15.2	14.9	14.5	14.5	14.6	0	16.0
		12	0	23.5	23.3	23.0	22.7	23.0	2	24.0	15.2	14.8	14.5	14.4	14.5	0	16.0
		12	7	23.5	23.3	23.0	22.7	23.0	2	24.0	15.2	14.8	14.5	14.4	14.5	0	16.0
		12	13	23.5	23.3	23.0	22.7	23.0	2	24.0	15.2	14.9	14.5	14.4	14.6	0	16.0
		25	0	23.6	23.3	23.0	22.7	23.0	2	24.0	15.2	14.9	14.5	14.3	14.5	0	16.0
	64QAM	1	0	23.1	23.6	23.1	22.4	23.3	2	24.0	15.6	14.7	14.8	14.8	14.3	0	16.0
		1	12	23.3	23.8	23.2	22.6	23.5	2	24.0	15.8	15.0	15.0	14.9	14.6	0	16.0
		1	24	23.2	23.6	23.0	22.5	23.4	2	24.0	15.6	14.7	14.7	14.8	14.4	0	16.0
		12	0	22.4	22.3	21.8	21.7	22.0	3	23.0	15.3	14.9	14.5	14.5	14.6	0	16.0
		12	7	22.5	22.3	21.8	21.7	22.0	3	23.0	15.3	14.9	14.5	14.5	14.6	0	16.0
		12	13	22.4	22.3	21.8	21.7	22.0	3	23.0	15.3	14.9	14.5	14.5	14.6	0	16.0
		25	0	22.5	22.2	21.8	21.7	21.9	3	23.0	15.2	15.0	14.5	14.4	14.7	0	16.0
	256QAM	1	0	20.7	20.3	20.0	19.9	19.9	5	21.0	15.3	15.1	14.8	14.4	14.8	0	16.0
		1	12	20.7	20.3	20.1	19.9	20.0	5	21.0	15.3	15.2	14.9	14.5	14.9	0	16.0
		1	24	20.7	20.3	19.9	20.0	20.0	5	21.0	15.3	15.2	14.7	14.5	14.9	0	16.0
		12	0	20.4	20.2	19.8	19.6	19.9	5	21.0	15.2	14.9	14.6	14.4	14.6	0	16.0
		12	7	20.4	20.2	19.8	19.6	19.9	5	21.0	15.2	14.9	14.5	14.4	14.6	0	16.0
		12	13	20.4	20.2	19.8	19.7	19.9	5	21.0	15.2	14.9	14.5	14.4	14.6	0	16.0
		25	0	20.4	20.2	19.8	19.6	19.9	5	21.0	15.2	14.9	14.5	14.4	14.6	0	16.0

LTE Band 66 Measured Results (Main 1)

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				132072	132322	132572	MPR	Tune-up Limit	132072	132322	132572	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20	QPSK	1	0	25.0	25.0	25.0	0	26.0	15.7	15.7	15.5	0	17.0
		1	49	24.8	25.0	25.3	0	26.0	15.5	15.7	15.7	0	17.0
		1	99	25.0	25.1	25.2	0	26.0	15.6	15.5	15.6	0	17.0
		50	0	24.0	24.0	24.1	1	25.0	15.6	15.7	15.6	0	17.0
		50	24	23.9	24.0	24.2	1	25.0	15.5	15.7	15.8	0	17.0
		50	50	23.9	24.1	24.2	1	25.0	15.5	15.6	15.7	0	17.0
	16QAM	100	0	23.9	24.1	24.2	1	25.0	15.5	15.7	15.8	0	17.0
		1	0	24.3	24.7	24.2	1	25.0	16.2	16.0	15.7	0	17.0
		1	49	24.1	24.6	24.5	1	25.0	16.0	15.9	15.9	0	17.0
		1	99	24.2	24.4	24.4	1	25.0	16.1	15.8	15.8	0	17.0
		50	0	22.9	23.1	23.0	2	24.0	15.5	15.7	15.5	0	17.0
		50	24	22.9	23.1	23.2	2	24.0	15.5	15.6	15.7	0	17.0
	64QAM	50	50	22.9	23.0	23.2	2	24.0	15.5	15.6	15.7	0	17.0
		100	0	22.9	23.1	23.2	2	24.0	15.5	15.6	15.7	0	17.0
		1	0	23.1	23.4	23.5	2	24.0	16.0	15.9	16.0	0	17.0
		1	49	23.0	23.4	23.4	2	24.0	15.8	15.7	16.2	0	17.0
		1	99	23.1	23.2	23.6	2	24.0	15.9	15.7	16.2	0	17.0
		50	0	22.0	22.1	22.1	3	23.0	15.6	15.7	15.6	0	17.0
	256QAM	50	24	21.9	22.1	22.2	3	23.0	15.5	15.7	15.7	0	17.0
		50	50	22.0	22.0	22.2	3	23.0	15.6	15.6	15.7	0	17.0
		100	0	21.9	22.1	22.2	3	23.0	15.5	15.7	15.7	0	17.0
		1	0	20.1	20.2	19.7	5	21.0	15.8	15.6	15.6	0	17.0
		1	49	20.0	20.1	19.9	5	21.0	15.6	15.5	15.8	0	17.0
		1	99	20.1	20.0	19.9	5	21.0	15.8	15.4	15.8	0	17.0
15	QPSK	50	0	19.9	20.0	19.9	5	21.0	15.5	15.7	15.6	0	17.0
		50	24	19.8	20.0	20.1	5	21.0	15.5	15.7	15.7	0	17.0
		50	50	19.9	19.9	20.1	5	21.0	15.5	15.6	15.7	0	17.0
		100	0	19.8	20.0	20.1	5	21.0	15.5	15.7	15.7	0	17.0
	16QAM	1	0	25.1	25.1	25.1	0	26.0	15.7	15.7	15.6	0	17.0
		1	37	24.7	25.1	25.2	0	26.0	15.5	15.6	15.5	0	17.0
		1	74	25.0	25.1	25.2	0	26.0	15.6	15.5	15.6	0	17.0
		36	0	24.0	24.2	24.3	1	25.0	15.6	15.7	15.7	0	17.0
		36	20	24.0	24.1	24.3	1	25.0	15.5	15.7	15.8	0	17.0
		36	39	24.0	24.1	24.3	1	25.0	15.5	15.6	15.8	0	17.0
		75	0	24.0	24.1	24.3	1	25.0	15.5	15.7	15.8	0	17.0
		1	0	24.6	24.2	24.4	1	25.0	15.8	16.0	16.1	0	17.0
		1	37	24.2	24.1	24.4	1	25.0	15.5	15.8	16.0	0	17.0
		1	74	24.5	24.1	24.4	1	25.0	15.6	15.9	16.2	0	17.0
		36	0	23.0	23.2	23.2	2	24.0	15.6	15.7	15.7	0	17.0
		36	20	23.0	23.1	23.2	2	24.0	15.6	15.7	15.7	0	17.0
	64QAM	36	39	23.0	23.1	23.2	2	24.0	15.5	15.6	15.8	0	17.0
		75	0	23.0	23.1	23.2	2	24.0	15.5	15.6	15.7	0	17.0
		1	0	23.3	23.3	23.0	2	24.0	15.7	15.9	16.2	0	17.0
		1	37	23.1	23.0	23.0	2	24.0	15.4	15.7	16.2	0	17.0
		1	74	23.2	23.2	23.1	2	24.0	15.6	15.8	16.2	0	17.0
		36	0	22.0	22.2	22.3	3	23.0	15.7	15.7	15.7	0	17.0
15	256QAM	36	20	21.9	22.1	22.3	3	23.0	15.6	15.7	15.7	0	17.0
		36	39	21.9	22.1	22.3	3	23.0	15.6	15.6	15.8	0	17.0
		75	0	21.9	22.1	22.2	3	23.0	15.5	15.6	15.7	0	17.0
		1	0	19.8	20.4	20.2	5	21.0	15.5	16.1	15.8	0	17.0
		1	37	19.6	20.3	20.2	5	21.0	15.2	15.9	15.8	0	17.0
		1	74	19.7	20.3	20.2	5	21.0	15.3	15.9	15.9	0	17.0
	256QAM	36	0	19.9	20.1	20.1	5	21.0	15.6	15.7	15.7	0	17.0
		36	20	19.8	20.0	20.1	5	21.0	15.5	15.7	15.7	0	17.0
		36	39	19.8	20.0	20.1	5	21.0	15.5	15.7	15.8	0	17.0
		75	0	19.8	20.0	20.1	5	21.0	15.5	15.7	15.7	0	17.0

LTE Band 66 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				132022	132322	132622	MPR	Tune-up Limit	132022	132322	132622	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10	QPSK	1	0	25.1	25.1	25.3	0	26.0	15.7	15.6	15.8	0	17.0
		1	25	24.8	25.1	25.2	0	26.0	15.4	15.6	15.7	0	17.0
		1	49	24.9	25.1	25.2	0	26.0	15.5	15.6	15.7	0	17.0
		25	0	24.0	24.1	24.2	1	25.0	15.6	15.7	15.7	0	17.0
		25	12	24.0	24.1	24.2	1	25.0	15.6	15.6	15.7	0	17.0
		25	25	24.0	24.1	24.2	1	25.0	15.5	15.6	15.7	0	17.0
	16QAM	50	0	24.0	24.1	24.2	1	25.0	15.6	15.7	15.8	0	17.0
		1	0	24.1	24.6	24.4	1	25.0	15.7	16.2	15.9	0	17.0
		1	25	24.0	24.7	24.2	1	25.0	15.5	16.2	15.8	0	17.0
		1	49	23.9	24.5	24.2	1	25.0	15.5	16.1	15.8	0	17.0
		25	0	23.0	23.1	23.3	2	24.0	15.6	15.7	15.8	0	17.0
		25	12	23.0	23.1	23.3	2	24.0	15.6	15.6	15.8	0	17.0
	64QAM	25	25	23.0	23.1	23.2	2	24.0	15.6	15.6	15.7	0	17.0
		50	0	23.0	23.1	23.2	2	24.0	15.6	15.6	15.7	0	17.0
		1	0	22.8	23.3	23.2	2	24.0	15.8	16.0	15.8	0	17.0
		1	25	22.7	23.3	23.2	2	24.0	15.6	15.8	15.7	0	17.0
		1	49	22.7	23.2	23.1	2	24.0	15.6	15.8	15.8	0	17.0
		25	0	22.1	22.1	22.3	3	23.0	15.7	15.7	15.8	0	17.0
	256QAM	25	12	22.0	22.1	22.3	3	23.0	15.6	15.7	15.8	0	17.0
		25	25	22.0	22.1	22.2	3	23.0	15.6	15.6	15.8	0	17.0
		50	0	22.0	22.1	22.2	3	23.0	15.6	15.6	15.7	0	17.0
		1	0	19.8	20.4	20.1	5	21.0	15.5	16.1	15.8	0	17.0
		1	25	19.7	20.3	20.1	5	21.0	15.4	15.9	15.7	0	17.0
		1	49	19.6	20.3	20.1	5	21.0	15.3	16.0	15.7	0	17.0
5	QPSK	25	0	20.0	20.1	20.2	5	21.0	15.7	15.7	15.8	0	17.0
		25	12	19.9	20.0	20.2	5	21.0	15.6	15.7	15.8	0	17.0
		25	25	19.9	20.0	20.1	5	21.0	15.6	15.7	15.7	0	17.0
		50	0	19.9	20.0	20.1	5	21.0	15.5	15.7	15.7	0	17.0
	16QAM	1	0	25.2	25.2	25.3	0	26.0	15.8	15.8	15.9	0	17.0
		1	12	25.0	25.1	25.2	0	26.0	15.6	15.7	15.7	0	17.0
		1	24	25.1	25.2	25.2	0	26.0	15.6	15.7	15.7	0	17.0
		12	0	24.1	24.1	24.2	1	25.0	15.6	15.7	15.7	0	17.0
		12	7	24.1	24.1	24.2	1	25.0	15.6	15.6	15.7	0	17.0
		12	13	24.0	24.1	24.1	1	25.0	15.6	15.6	15.6	0	17.0
	64QAM	25	0	24.1	24.1	24.2	1	25.0	15.6	15.6	15.7	0	17.0
		1	0	24.4	24.1	24.2	1	25.0	16.0	15.7	15.7	0	17.0
		1	12	24.2	23.9	23.9	1	25.0	15.8	15.4	15.3	0	17.0
		1	24	24.3	24.1	24.0	1	25.0	15.8	15.7	15.6	0	17.0
		12	0	23.1	23.1	23.2	2	24.0	15.6	15.6	15.7	0	17.0
		12	7	23.0	23.0	23.1	2	24.0	15.6	15.6	15.7	0	17.0
	256QAM	12	13	23.0	23.0	23.1	2	24.0	15.6	15.6	15.7	0	17.0
		25	0	23.0	23.1	23.1	2	24.0	15.5	15.7	15.7	0	17.0
		1	0	23.2	23.4	23.4	2	24.0	15.6	15.8	16.0	0	17.0
		1	12	23.0	23.2	23.3	2	24.0	15.5	15.8	15.7	0	17.0
		1	24	23.0	23.3	23.4	2	24.0	15.5	15.8	15.9	0	17.0
		12	0	22.2	22.0	22.1	3	23.0	15.7	15.7	15.6	0	17.0
5	64QAM	12	7	22.1	22.0	22.1	3	23.0	15.6	15.7	15.6	0	17.0
		12	13	22.1	22.0	22.1	3	23.0	15.6	15.6	15.6	0	17.0
		25	0	22.0	22.0	22.1	3	23.0	15.6	15.6	15.6	0	17.0
	256QAM	1	0	19.7	20.1	20.2	5	21.0	15.4	15.7	15.8	0	17.0
		1	12	19.6	20.0	20.0	5	21.0	15.3	15.6	15.5	0	17.0
		1	24	19.6	20.0	20.1	5	21.0	15.3	15.6	15.8	0	17.0
	256QAM	12	0	20.0	20.0	20.1	5	21.0	15.6	15.6	15.7	0	17.0
		12	7	19.9	20.0	20.0	5	21.0	15.6	15.6	15.7	0	17.0
		12	13	19.9	20.0	20.1	5	21.0	15.5	15.6	15.7	0	17.0
		25	0	20.0	20.0	20.0	5	21.0	15.6	15.6	15.6	0	17.0

LTE Band 66 Measured Results (Main 1) continued

BW (MHz)	Mode	RB Allocation	RB Offset	RSI 0 Average Power (dBm)					Grip Average Power (dBm)				
				131987	132322	132657	MPR	Tune-up Limit	131987	132322	132657	MPR	Tune-up Limit
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3	QPSK	1	0	25.1	25.1	25.2	0	26.0	15.6	15.7	15.7	0	17.0
		1	8	25.0	25.0	24.9	0	26.0	15.5	15.5	15.7	0	17.0
		1	14	25.0	25.0	25.2	0	26.0	15.5	15.7	15.7	0	17.0
		8	0	24.1	24.1	24.2	1	25.0	15.7	15.7	15.7	0	17.0
		8	4	24.1	24.0	24.1	1	25.0	15.6	15.6	15.7	0	17.0
		8	7	24.1	24.1	24.2	1	25.0	15.7	15.6	15.7	0	17.0
		15	0	24.1	24.1	24.2	1	25.0	15.6	15.7	15.7	0	17.0
	16QAM	1	0	24.2	24.1	24.7	1	25.0	15.7	16.2	15.7	0	17.0
		1	8	24.0	23.9	24.4	1	25.0	15.4	15.9	15.7	0	17.0
		1	14	24.0	24.0	24.7	1	25.0	15.5	16.2	15.7	0	17.0
		8	0	23.0	23.2	23.3	2	24.0	15.7	15.8	15.7	0	17.0
		8	4	23.1	23.1	23.3	2	24.0	15.7	15.8	15.7	0	17.0
		8	7	23.1	23.1	23.3	2	24.0	15.7	15.9	15.7	0	17.0
		15	0	23.1	23.1	23.1	2	24.0	15.6	15.6	15.7	0	17.0
	64QAM	1	0	22.9	23.3	23.1	2	24.0	15.7	15.9	15.9	0	17.0
		1	8	22.8	23.0	22.9	2	24.0	15.5	15.7	15.8	0	17.0
		1	14	22.9	23.2	23.0	2	24.0	15.6	15.8	15.9	0	17.0
		8	0	22.1	22.2	22.1	3	23.0	15.8	15.7	15.6	0	17.0
		8	4	22.1	22.2	22.2	3	23.0	15.7	15.6	15.7	0	17.0
		8	7	22.1	22.2	22.1	3	23.0	15.6	15.6	15.6	0	17.0
		15	0	22.0	22.1	22.1	3	23.0	15.7	15.6	15.7	0	17.0
	256QAM	1	0	20.5	20.4	20.5	5	21.0	15.5	16.1	15.7	0	17.0
		1	8	20.4	20.4	20.4	5	21.0	15.4	15.9	15.5	0	17.0
		1	14	20.4	20.4	20.5	5	21.0	16.0	16.0	15.7	0	17.0
		8	0	19.8	20.0	20.2	5	21.0	15.8	15.8	15.9	0	17.0
		8	4	19.8	20.0	20.1	5	21.0	15.7	15.7	15.7	0	17.0
		8	7	19.8	19.9	20.2	5	21.0	15.7	15.8	15.8	0	17.0
		15	0	19.9	19.9	20.0	5	21.0	15.6	15.6	15.7	0	17.0
1.4	QPSK	1	0	24.9	25.1	25.0	0	26.0	15.6	15.5	15.6	0	17.0
		1	3	24.9	25.0	24.9	0	26.0	15.5	15.4	15.6	0	17.0
		1	5	24.9	25.1	25.1	0	26.0	15.6	15.6	15.6	0	17.0
		3	0	24.9	25.0	25.0	0	26.0	15.6	15.5	15.6	0	17.0
		3	1	24.9	25.0	25.0	0	26.0	15.6	15.5	15.6	0	17.0
		3	3	24.9	25.0	25.1	0	26.0	15.6	15.6	15.6	0	17.0
		6	0	24.0	24.1	24.1	1	25.0	15.6	15.6	15.7	0	17.0
	16QAM	1	0	24.0	24.1	24.0	1	25.0	15.7	15.6	15.7	0	17.0
		1	3	24.0	24.0	24.1	1	25.0	15.6	15.6	15.6	0	17.0
		1	5	24.0	24.1	24.1	1	25.0	15.7	15.6	15.7	0	17.0
		3	0	24.1	24.0	24.1	1	25.0	15.6	15.6	15.6	0	17.0
		3	1	24.2	24.0	24.1	1	25.0	15.6	15.6	15.6	0	17.0
		3	3	24.1	24.0	24.1	1	25.0	15.6	15.6	15.6	0	17.0
		6	0	23.0	23.1	23.0	2	24.0	15.7	15.5	15.7	0	17.0
	64QAM	1	0	22.8	23.3	23.0	2	24.0	15.7	15.6	15.6	0	17.0
		1	3	22.7	23.3	23.1	2	24.0	15.7	15.6	15.6	0	17.0
		1	5	22.8	23.2	23.0	2	24.0	15.6	15.6	15.6	0	17.0
		3	0	22.8	23.1	23.2	2	24.0	15.7	15.6	15.6	0	17.0
		3	1	22.8	23.0	23.2	2	24.0	15.6	15.6	15.6	0	17.0
		3	3	22.8	23.0	23.1	2	24.0	15.6	15.6	15.6	0	17.0
		6	0	22.0	22.1	22.1	3	23.0	15.8	15.8	15.8	0	17.0
	256QAM	1	0	19.8	20.0	19.9	5	21.0	15.7	15.4	15.4	0	17.0
		1	3	19.8	20.1	19.9	5	21.0	15.7	15.4	15.4	0	17.0
		1	5	19.8	20.1	19.9	5	21.0	15.7	15.4	15.4	0	17.0
		3	0	19.9	19.9	20.0	5	21.0	15.5	15.4	15.4	0	17.0
		3	1	19.8	19.8	20.0	5	21.0	15.5	15.3	15.3	0	17.0
		3	3	19.8	19.8	20.0	5	21.0	15.4	15.4	15.4	0	17.0
		6	0	20.1	20.0	19.9	5	21.0	15.6	15.7	15.7	0	17.0

LTE Band 66 Measured Results (Sub 1)

BW (MHz)	Mode	RB Allocation	RB Offset	Max Power (dBm)					Reduced Power (dBm)				
				132072	132322	132572	MPR	Tune-up Limit	132072	132322	132572	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20	QPSK	1	0	24.2	24.2	24.0	0	24.5	13.6	13.5	13.3	0	14.0
		1	49	24.1	24.1	23.9	0	24.5	13.5	13.5	13.3	0	14.0
		1	99	24.1	24.0	23.9	0	24.5	13.5	13.4	13.3	0	14.0
		50	0	23.2	23.1	23.0	1	23.5	13.6	13.5	13.3	0	14.0
		50	24	23.1	23.0	23.0	1	23.5	13.5	13.5	13.3	0	14.0
		50	50	23.2	23.0	22.9	1	23.5	13.5	13.4	13.3	0	14.0
		100	0	23.2	23.1	23.0	1	23.5	13.6	13.5	13.4	0	14.0
	16QAM	1	0	23.5	23.5	23.4	1	23.5	14.0	14.0	13.8	0	14.0
		1	49	23.2	23.5	23.4	1	23.5	13.8	13.9	13.8	0	14.0
		1	99	23.5	23.5	23.2	1	23.5	13.9	13.8	13.8	0	14.0
		50	0	22.2	22.1	22.0	2	22.5	13.6	13.5	13.3	0	14.0
		50	24	22.1	22.1	22.0	2	22.5	13.5	13.5	13.4	0	14.0
		50	50	22.1	22.0	21.9	2	22.5	13.5	13.4	13.3	0	14.0
		100	0	22.1	22.1	21.9	2	22.5	13.5	13.5	13.3	0	14.0
	64QAM	1	0	22.4	22.4	22.5	2	22.5	13.8	13.8	13.9	0	14.0
		1	49	22.2	22.3	22.4	2	22.5	13.6	13.7	13.9	0	14.0
		1	99	22.3	22.2	22.4	2	22.5	13.7	13.6	13.9	0	14.0
		50	0	21.2	21.1	21.0	3	21.5	13.6	13.5	13.4	0	14.0
		50	24	21.1	21.1	21.0	3	21.5	13.6	13.5	13.4	0	14.0
		50	50	21.2	21.0	20.9	3	21.5	13.5	13.5	13.3	0	14.0
		100	0	21.1	21.0	20.9	3	21.5	13.6	13.5	13.3	0	14.0
	256QAM	1	0	19.2	19.3	19.1	5	19.5	13.6	13.7	13.5	0	14.0
		1	49	19.0	19.1	19.1	5	19.5	13.4	13.5	13.4	0	14.0
		1	99	19.1	19.2	19.1	5	19.5	13.5	13.5	13.5	0	14.0
		50	0	19.3	19.1	19.0	5	19.5	13.6	13.5	13.3	0	14.0
		50	24	19.2	19.0	18.9	5	19.5	13.5	13.5	13.4	0	14.0
		50	50	19.2	19.0	18.9	5	19.5	13.5	13.4	13.3	0	14.0
		100	0	19.2	19.0	18.9	5	19.5	13.6	13.4	13.4	0	14.0
BW (MHz)	Mode	RB Allocation	RB Offset	Max Power (dBm)					Reduced Power (dBm)				
				132047	132322	132597	MPR	Tune-up Limit	132047	132322	132597	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15	QPSK	1	0	24.1	24.1	24.0	0	24.5	13.6	13.5	13.4	0	14.0
		1	37	23.8	24.0	23.8	0	24.5	13.4	13.5	13.3	0	14.0
		1	74	24.0	24.0	24.0	0	24.5	13.5	13.4	13.4	0	14.0
		36	0	23.2	23.1	23.0	1	23.5	13.6	13.5	13.4	0	14.0
		36	20	23.1	23.1	23.0	1	23.5	13.6	13.5	13.4	0	14.0
		36	39	23.1	23.1	23.0	1	23.5	13.6	13.5	13.4	0	14.0
		75	0	23.1	23.1	23.0	1	23.5	13.6	13.5	13.3	0	14.0
	16QAM	1	0	23.0	23.4	23.4	1	23.5	13.5	13.8	13.8	0	14.0
		1	37	22.8	23.1	23.2	1	23.5	13.4	13.6	13.6	0	14.0
		1	74	22.9	23.3	23.2	1	23.5	13.4	13.7	13.8	0	14.0
		36	0	22.1	22.1	21.9	2	22.5	13.6	13.6	13.3	0	14.0
		36	20	22.1	22.1	21.9	2	22.5	13.6	13.5	13.3	0	14.0
		36	39	22.0	22.1	21.9	2	22.5	13.6	13.5	13.3	0	14.0
		75	0	22.1	22.1	22.0	2	22.5	13.6	13.5	13.3	0	14.0
	64QAM	1	0	22.5	22.2	22.5	2	22.5	14.0	13.8	13.4	0	14.0
		1	37	22.3	22.0	22.4	2	22.5	14.0	13.6	13.2	0	14.0
		1	74	22.4	22.0	22.4	2	22.5	14.0	13.6	13.4	0	14.0
		36	0	21.3	21.2	21.0	3	21.5	13.6	13.6	13.4	0	14.0
		36	20	21.2	21.1	20.9	3	21.5	13.6	13.5	13.4	0	14.0
		36	39	21.2	21.1	20.9	3	21.5	13.6	13.5	13.4	0	14.0
		75	0	21.2	21.1	21.0	3	21.5	13.6	13.5	13.4	0	14.0
	256QAM	1	0	19.5	19.0	19.2	5	19.5	13.9	13.9	13.2	0	14.0
		1	37	19.5	18.8	19.1	5	19.5	13.6	13.8	13.0	0	14.0
		1	74	19.5	18.8	19.2	5	19.5	13.7	13.8	13.1	0	14.0
		36	0	19.3	19.1	19.0	5	19.5	13.6	13.5	13.3	0	14.0
		36	20	19.3	19.1	18.9	5	19.5	13.6	13.5	13.3	0	14.0
		36	39	19.2	19.0	18.9	5	19.5	13.6	13.5	13.4	0	14.0
		75	0	19.2	19.0	18.9	5	19.5	13.6	13.5	13.3	0	14.0

LTE Band 66 Measured Results (Sub 1) continued

BW (MHz)	Mode	RB Allocation	RB Offset	Max Power (dBm)					Reduced Power (dBm)				
				132022	132322	132622	MPR	Tune-up Limit	132022	132322	132622	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10	QPSK	1	0	24.0	24.1	24.0	0	24.5	13.6	13.6	13.4	0	14.0
		1	25	24.0	24.0	23.8	0	24.5	13.5	13.4	13.2	0	14.0
		1	49	24.0	24.0	23.9	0	24.5	13.5	13.5	13.3	0	14.0
		25	0	23.1	23.1	22.9	1	23.5	13.6	13.5	13.3	0	14.0
		25	12	23.0	23.0	22.9	1	23.5	13.6	13.4	13.3	0	14.0
		25	25	23.0	23.0	22.9	1	23.5	13.5	13.4	13.3	0	14.0
		50	0	23.1	23.0	22.9	1	23.5	13.6	13.4	13.3	0	14.0
	16QAM	1	0	22.9	23.4	23.0	1	23.5	13.5	13.8	13.4	0	14.0
		1	25	23.0	23.2	22.9	1	23.5	13.5	13.7	13.3	0	14.0
		1	49	22.9	23.3	22.8	1	23.5	13.4	13.7	13.3	0	14.0
		25	0	22.1	22.1	22.0	2	22.5	13.6	13.5	13.4	0	14.0
		25	12	22.0	22.0	22.0	2	22.5	13.6	13.5	13.4	0	14.0
		25	25	22.0	22.0	21.9	2	22.5	13.5	13.5	13.4	0	14.0
		50	0	22.0	22.0	21.9	2	22.5	13.5	13.4	13.4	0	14.0
	64QAM	1	0	22.3	22.4	22.1	2	22.5	13.7	13.8	13.5	0	14.0
		1	25	22.1	22.2	21.9	2	22.5	13.6	13.6	13.4	0	14.0
		1	49	22.2	22.2	22.0	2	22.5	13.7	13.7	13.4	0	14.0
		25	0	21.2	21.1	21.0	3	21.5	13.6	13.5	13.4	0	14.0
		25	12	21.2	21.0	21.0	3	21.5	13.6	13.5	13.4	0	14.0
		25	25	21.2	21.0	20.9	3	21.5	13.6	13.5	13.4	0	14.0
		50	0	21.2	21.0	20.9	3	21.5	13.6	13.4	13.3	0	14.0
	256QAM	1	0	19.3	19.5	18.8	5	19.5	13.6	13.9	13.2	0	14.0
		1	25	19.2	19.4	18.7	5	19.5	13.5	13.7	13.2	0	14.0
		1	49	19.2	19.4	18.7	5	19.5	13.6	13.8	13.2	0	14.0
		25	0	19.3	19.1	19.0	5	19.5	13.6	13.5	13.4	0	14.0
		25	12	19.3	19.1	19.0	5	19.5	13.6	13.5	13.4	0	14.0
		25	25	19.3	19.1	19.0	5	19.5	13.6	13.5	13.4	0	14.0
		50	0	19.3	19.1	18.9	5	19.5	13.6	13.5	13.3	0	14.0
BW (MHz)	Mode	RB Allocation	RB Offset	Max Power (dBm)					Reduced Power (dBm)				
				131997	132322	132647	MPR	Tune-up Limit	131997	132322	132647	MPR	Tune-up Limit
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5	QPSK	1	0	24.2	24.1	24.0	0	24.5	13.7	13.5	13.4	0	14.0
		1	12	24.1	24.0	24.0	0	24.5	13.6	13.4	13.3	0	14.0
		1	24	24.2	24.1	24.0	0	24.5	13.6	13.5	13.4	0	14.0
		12	0	23.2	23.0	22.9	1	23.5	13.6	13.4	13.3	0	14.0
		12	7	23.1	23.0	22.9	1	23.5	13.6	13.4	13.3	0	14.0
		12	13	23.1	23.0	22.9	1	23.5	13.6	13.4	13.3	0	14.0
		25	0	23.1	23.0	22.9	1	23.5	13.6	13.4	13.3	0	14.0
	16QAM	1	0	23.5	23.1	23.1	1	23.5	13.8	14.0	13.4	0	14.0
		1	12	23.5	22.8	22.8	1	23.5	13.7	13.8	13.1	0	14.0
		1	24	23.5	23.0	23.0	1	23.5	13.8	13.9	13.5	0	14.0
		12	0	22.3	22.0	21.9	2	22.5	13.7	13.6	13.4	0	14.0
		12	7	22.3	22.0	21.9	2	22.5	13.6	13.5	13.3	0	14.0
		12	13	22.2	22.0	21.9	2	22.5	13.7	13.5	13.4	0	14.0
		25	0	22.2	21.9	21.9	2	22.5	13.6	13.5	13.3	0	14.0
	64QAM	1	0	22.2	22.3	22.2	2	22.5	13.9	13.7	13.3	0	14.0
		1	12	22.1	22.1	22.1	2	22.5	13.7	13.6	13.2	0	14.0
		1	24	22.1	22.2	22.1	2	22.5	13.8	13.7	13.3	0	14.0
		12	0	21.2	21.0	20.9	3	21.5	13.6	13.5	13.4	0	14.0
		12	7	21.2	21.0	20.9	3	21.5	13.5	13.5	13.4	0	14.0
		12	13	21.2	21.0	20.9	3	21.5	13.6	13.5	13.4	0	14.0
		25	0	21.1	20.9	20.9	3	21.5	13.5	13.4	13.3	0	14.0
	256QAM	1	0	19.0	19.2	19.0	5	19.5	13.8	13.5	13.1	0	14.0
		1	12	18.9	19.1	18.9	5	19.5	13.5	13.5	13.0	0	14.0
		1	24	19.0	19.2	18.9	5	19.5	13.7	13.5	13.1	0	14.0
		12	0	19.2	19.1	18.9	5	19.5	13.6	13.4	13.3	0	14.0
		12	7	19.2	19.1	18.9	5	19.5	13.6	13.4	13.3	0	14.0
		12	13	19.2	19.1	18.9	5	19.5	13.6	13.4	13.3	0	14.0
		25	0	19.3	19.0	18.9	5	19.5	13.6	13.5	13.4	0	14.0

LTE Band 66 Measured Results (Sub 1) continued

BW (MHz)	Mode	RB Allocation	RB Offset	Max Power (dBm)					Reduced Power (dBm)				
				131987	132322	132657	MPR	Tune-up Limit	131987	132322	132657	MPR	Tune-up Limit
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3	QPSK	1	0	24.1	24.0	23.9	0	24.5	13.7	13.5	13.3	0	14.0
		1	8	24.0	23.7	23.8	0	24.5	13.5	13.5	13.2	0	14.0
		1	14	24.0	24.0	23.8	0	24.5	13.7	13.4	13.3	0	14.0
		8	0	23.2	23.0	22.9	1	23.5	13.7	13.5	13.4	0	14.0
		8	4	23.1	23.0	22.9	1	23.5	13.6	13.5	13.3	0	14.0
		8	7	23.2	23.0	22.9	1	23.5	13.6	13.5	13.4	0	14.0
	16QAM	15	0	23.2	23.0	22.9	1	23.5	13.7	13.5	13.4	0	14.0
		1	0	23.1	22.9	23.2	1	23.5	13.6	13.8	13.4	0	14.0
		1	8	23.0	22.7	22.9	1	23.5	13.5	13.6	13.3	0	14.0
		1	14	23.0	22.9	23.1	1	23.5	13.6	13.7	13.3	0	14.0
		8	0	22.2	22.1	21.9	2	22.5	13.8	13.6	13.4	0	14.0
		8	4	22.1	22.0	21.9	2	22.5	13.7	13.6	13.4	0	14.0
	64QAM	8	7	22.1	22.1	21.9	2	22.5	13.8	13.5	13.4	0	14.0
		15	0	22.1	22.0	21.9	2	22.5	13.7	13.5	13.3	0	14.0
		1	0	22.4	22.3	21.9	2	22.5	13.8	13.7	13.3	0	14.0
		1	8	22.2	22.1	21.8	2	22.5	13.7	13.5	13.3	0	14.0
		1	14	22.4	22.2	21.9	2	22.5	13.8	13.6	13.3	0	14.0
		8	0	21.1	21.1	21.0	3	21.5	13.6	13.5	13.4	0	14.0
	256QAM	8	4	21.2	21.0	21.0	3	21.5	13.6	13.5	13.4	0	14.0
		8	7	21.1	21.1	20.9	3	21.5	13.6	13.5	13.3	0	14.0
		15	0	21.2	21.0	20.9	3	21.5	13.6	13.4	13.4	0	14.0
		1	0	19.2	19.5	18.8	5	19.5	13.6	13.9	13.2	0	14.0
		1	8	19.2	19.4	18.7	5	19.5	13.5	13.7	13.1	0	14.0
		1	14	19.3	19.5	19.4	5	19.5	13.6	13.8	13.7	0	14.0
1.4	QPSK	8	0	19.4	19.2	19.1	5	19.5	13.8	13.6	13.5	0	14.0
		8	4	19.3	19.1	19.0	5	19.5	13.7	13.5	13.4	0	14.0
		8	7	19.4	19.2	19.1	5	19.5	13.7	13.6	13.5	0	14.0
		15	0	19.3	19.1	19.0	5	19.5	13.7	13.4	13.3	0	14.0
	16QAM	1	0	24.1	23.9	23.7	0	24.5	13.6	13.5	13.4	0	14.0
		1	3	24.0	23.9	23.6	0	24.5	13.4	13.4	13.3	0	14.0
		1	5	24.1	23.9	23.8	0	24.5	13.6	13.4	13.4	0	14.0
		3	0	24.0	23.9	23.7	0	24.5	13.5	13.4	13.3	0	14.0
		3	1	24.0	23.9	23.7	0	24.5	13.5	13.4	13.3	0	14.0
		3	3	24.0	23.9	23.8	0	24.5	13.6	13.4	13.3	0	14.0
	64QAM	6	0	23.0	23.0	22.8	1	23.5	13.6	13.4	13.4	0	14.0
		1	0	23.1	23.2	22.7	1	23.5	13.6	13.5	13.7	0	14.0
		1	3	23.2	23.1	22.7	1	23.5	13.5	13.6	13.6	0	14.0
		1	5	23.1	23.2	22.8	1	23.5	13.6	13.5	13.7	0	14.0
		3	0	23.1	23.1	22.9	1	23.5	13.7	13.5	13.5	0	14.0
		3	1	23.1	23.1	22.9	1	23.5	13.7	13.5	13.5	0	14.0
	256QAM	3	3	23.0	23.0	22.9	1	23.5	13.7	13.4	13.5	0	14.0
		6	0	22.2	21.7	21.9	2	22.5	13.8	13.6	13.2	0	14.0
		1	0	22.3	22.3	22.0	2	22.5	13.8	13.7	13.3	0	14.0
		1	3	22.0	22.4	21.9	2	22.5	13.5	13.7	13.4	0	14.0
		1	5	22.3	22.3	21.9	2	22.5	13.8	13.7	13.3	0	14.0
		3	0	22.0	22.2	22.0	2	22.5	13.5	13.6	13.3	0	14.0
1.4	64QAM	3	1	22.0	22.2	21.9	2	22.5	13.4	13.6	13.3	0	14.0
		3	3	22.0	22.2	21.9	2	22.5	13.5	13.6	13.3	0	14.0
		6	0	21.2	21.0	21.0	3	21.5	13.7	13.4	13.5	0	14.0
	256QAM	1	0	19.2	19.1	19.0	5	19.5	13.6	13.4	13.3	0	14.0
		1	3	19.2	19.2	18.9	5	19.5	13.5	13.5	13.4	0	14.0
		1	5	19.2	19.1	18.9	5	19.5	13.5	13.5	13.4	0	14.0
	256QAM	3	0	19.2	19.0	18.9	5	19.5	13.6	13.3	13.2	0	14.0
		3	1	19.2	18.9	19.0	5	19.5	13.6	13.3	13.2	0	14.0
		3	3	19.2	18.9	18.9	5	19.5	13.5	13.2	13.2	0	14.0
		6	0	19.1	19.0	18.9	5	19.5	13.5	13.4	13.3	0	14.0

9.4. LTE Down-Link Carrier Aggregation

This device supports LTE downlink carrier aggregation

9.5. 5G NR (FR1)

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

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

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

Modulation	MPR (dB)		
	Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM PI/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
	$\leq 0.5^2$		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		
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.			
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.			

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 (Note 2)	Edge_Full_Right (Note 2)	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 @ 21	1 @ 1	1 @ 9
		CP	2 @ 0	2 @ 9	1 @ 0	1 @ 10	11 @ 0	5 @ 21	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 @ 21	1 @ 1	1 @ 9
		CP	2 @ 0	2 @ 9	1 @ 0	1 @ 10	11 @ 0	5 @ 21	1 @ 1	1 @ 9
15MHz	15	DFT-s	2 @ 0	2 @ 77	1 @ 0	1 @ 78	75 @ 0	36 @ 181	1 @ 1	1 @ 77
		CP	2 @ 0	2 @ 77	1 @ 0	1 @ 78	79 @ 0	39 @ 191	1 @ 1	1 @ 77
	30	DFT-s	2 @ 0	2 @ 36	1 @ 0	1 @ 37	36 @ 0	18 @ 9	1 @ 1	1 @ 36
		CP	2 @ 0	2 @ 36	1 @ 0	1 @ 37	38 @ 0	19 @ 9	1 @ 1	1 @ 36
	60	DFT-s	2 @ 0	2 @ 16	1 @ 0	1 @ 17	18 @ 0	9 @ 4	1 @ 1	1 @ 16
		CP	2 @ 0	2 @ 16	1 @ 0	1 @ 17	18 @ 0	9 @ 4	1 @ 1	1 @ 16
20MHz	15	DFT-s	2 @ 0	2 @ 104	1 @ 0	1 @ 105	100 @ 0	50 @ 25	1 @ 1	1 @ 104
		CP	2 @ 0	2 @ 104	1 @ 0	1 @ 105	106 @ 0	53 @ 26	1 @ 1	1 @ 104
	30	DFT-s	2 @ 0	2 @ 49	1 @ 0	1 @ 50	50 @ 0	25 @ 12	1 @ 1	1 @ 49
		CP	2 @ 0	2 @ 49	1 @ 0	1 @ 50	51 @ 0	25 @ 121	1 @ 1	1 @ 49
	60	DFT-s	2 @ 0	2 @ 22	1 @ 0	1 @ 23	24 @ 0	12 @ 6	1 @ 1	1 @ 22
		CP	2 @ 0	2 @ 22	1 @ 0	1 @ 23	24 @ 0	12 @ 6	1 @ 1	1 @ 22
25MHz	15	DFT-s	2 @ 0	2 @ 131	1 @ 0	1 @ 132	128 @ 0	64 @ 32	1 @ 1	1 @ 131
		CP	2 @ 0	2 @ 131	1 @ 0	1 @ 132	133 @ 0	67 @ 33	1 @ 1	1 @ 131
	30	DFT-s	2 @ 0	2 @ 63	1 @ 0	1 @ 64	64 @ 0	32 @ 16	1 @ 1	1 @ 63
		CP	2 @ 0	2 @ 63	1 @ 0	1 @ 64	65 @ 0	33 @ 16	1 @ 1	1 @ 63
	60	DFT-s	2 @ 0	2 @ 29	1 @ 0	1 @ 30	30 @ 0	15 @ 71	1 @ 1	1 @ 29
		CP	2 @ 0	2 @ 29	1 @ 0	1 @ 30	31 @ 0	15 @ 71	1 @ 1	1 @ 29
30MHz	15	DFT-s	2 @ 0	2 @ 158	1 @ 0	1 @ 159	160 @ 0	80 @ 40	1 @ 1	1 @ 158
		CP	2 @ 0	2 @ 158	1 @ 0	1 @ 159	160 @ 0	80 @ 40	1 @ 1	1 @ 158
	30	DFT-s	2 @ 0	2 @ 76	1 @ 0	1 @ 77	75 @ 0	36 @ 18	1 @ 1	1 @ 76
		CP	2 @ 0	2 @ 76	1 @ 0	1 @ 77	78 @ 0	39 @ 19	1 @ 1	1 @ 76
	60	DFT-s	2 @ 0	2 @ 36	1 @ 0	1 @ 37	36 @ 0	18 @ 9	1 @ 1	1 @ 36
		CP	2 @ 0	2 @ 36	1 @ 0	1 @ 37	38 @ 0	19 @ 9	1 @ 1	1 @ 36
35MHz	15	DFT-s	2 @ 0	2 @ 186	1 @ 0	1 @ 187	180 @ 0	90 @ 45	1 @ 1	1 @ 186
		CP	2 @ 0	2 @ 186	1 @ 0	1 @ 187	188 @ 0	94 @ 47	1 @ 1	1 @ 186
	30	DFT-s	2 @ 0	2 @ 90	1 @ 0	1 @ 91	90 @ 0	45 @ 22	1 @ 1	1 @ 90
		CP	2 @ 0	2 @ 90	1 @ 0	1 @ 91	92 @ 0	46 @ 23	1 @ 1	1 @ 90
	60	DFT-s	2 @ 0	2 @ 42	1 @ 0	1 @ 43	40 @ 0	20 @ 10	1 @ 1	1 @ 42
		CP	2 @ 0	2 @ 42	1 @ 0	1 @ 43	44 @ 0	22 @ 11	1 @ 1	1 @ 42
40MHz	15	DFT-s	2 @ 0	2 @ 214	1 @ 0	1 @ 215	216 @ 0	108 @ 54	1 @ 1	1 @ 214
		CP	2 @ 0	2 @ 214	1 @ 0	1 @ 215	216 @ 0	108 @ 54	1 @ 1	1 @ 214
	30	DFT-s	2 @ 0	2 @ 104	1 @ 0	1 @ 105	100 @ 0	50 @ 25	1 @ 1	1 @ 104
		CP	2 @ 0	2 @ 104	1 @ 0	1 @ 105	106 @ 0	53 @ 26	1 @ 1	1 @ 104
	60	DFT-s	2 @ 0	2 @ 49	1 @ 0	1 @ 50	50 @ 0	25 @ 12	1 @ 1	1 @ 49
		CP	2 @ 0	2 @ 49	1 @ 0	1 @ 50	51 @ 0	25 @ 121	1 @ 1	1 @ 49
45MHz	15	DFT-s	2 @ 0	2 @ 240	1 @ 0	1 @ 241	240 @ 0	120 @ 60	1 @ 1	1 @ 240
		CP	2 @ 0	2 @ 240	1 @ 0	1 @ 241	242 @ 0	121 @ 60	1 @ 1	1 @ 240
	30	DFT-s	2 @ 0	2 @ 117	1 @ 0	1 @ 118	108 @ 0	54 @ 271	1 @ 1	1 @ 117
		CP	2 @ 0	2 @ 117	1 @ 0	1 @ 118	119 @ 0	59 @ 291	1 @ 1	1 @ 117
	60	DFT-s	2 @ 0	2 @ 56	1 @ 0	1 @ 57	54 @ 0	27 @ 13	1 @ 1	1 @ 56
		CP	2 @ 0	2 @ 56	1 @ 0	1 @ 57	58 @ 0	29 @ 14	1 @ 1	1 @ 56

50MHz	15	DFT-s	2 @ 0	2 @ 268	1 @ 0	1 @ 269	270 @ 0	135 @ 67	1 @ 1	1 @ 268
		CP	2 @ 0	2 @ 268	1 @ 0	1 @ 269	270 @ 0	135 @ 67	1 @ 1	1 @ 268
	30	DFT-s	2 @ 0	2 @ 131	1 @ 0	1 @ 132	128 @ 0	64 @ 32	1 @ 1	1 @ 131
		CP	2 @ 0	2 @ 131	1 @ 0	1 @ 132	133 @ 0	67 @ 33	1 @ 1	1 @ 131
	60	DFT-s	2 @ 0	2 @ 63	1 @ 0	1 @ 64	64 @ 0	32 @ 16	1 @ 1	1 @ 63
		CP	2 @ 0	2 @ 63	1 @ 0	1 @ 64	65 @ 0	33 @ 16	1 @ 1	1 @ 63
60MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2 @ 0	2 @ 160	1 @ 0	1 @ 161	162 @ 0	81 @ 40	1 @ 1	1 @ 160
		CP	2 @ 0	2 @ 160	1 @ 0	1 @ 161	162 @ 0	81 @ 40	1 @ 1	1 @ 160
	60	DFT-s	2 @ 0	2 @ 77	1 @ 0	1 @ 78	75 @ 0	36 @ 181	1 @ 1	1 @ 77
		CP	2 @ 0	2 @ 77	1 @ 0	1 @ 78	79 @ 0	39 @ 191	1 @ 1	1 @ 77
70MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2 @ 0	2 @ 187	1 @ 0	1 @ 188	180 @ 0	90 @ 45	1 @ 1	1 @ 187
		CP	2 @ 0	2 @ 187	1 @ 0	1 @ 188	189 @ 0	95 @ 47	1 @ 1	1 @ 187
	60	DFT-s	2 @ 0	2 @ 91	1 @ 0	1 @ 92	90 @ 0	45 @ 22	1 @ 1	1 @ 91
		CP	2 @ 0	2 @ 91	1 @ 0	1 @ 92	93 @ 0	47 @ 23	1 @ 1	1 @ 91
80MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2 @ 0	2 @ 215	1 @ 0	1 @ 216	216 @ 0	108 @ 54	1 @ 1	1 @ 215
		CP	2 @ 0	2 @ 215	1 @ 0	1 @ 216	217 @ 0	109 @ 54	1 @ 1	1 @ 215
	60	DFT-s	2 @ 0	2 @ 105	1 @ 0	1 @ 106	100 @ 0	50 @ 251	1 @ 1	1 @ 105
		CP	2 @ 0	2 @ 105	1 @ 0	1 @ 106	107 @ 0	53 @ 261	1 @ 1	1 @ 105
90MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2 @ 0	2 @ 243	1 @ 0	1 @ 244	243 @ 0	120 @ 60	1 @ 1	1 @ 243
		CP	2 @ 0	2 @ 243	1 @ 0	1 @ 244	245 @ 0	123 @ 61	1 @ 1	1 @ 243
	60	DFT-s	2 @ 0	2 @ 119	1 @ 0	1 @ 120	120 @ 0	60 @ 30	1 @ 1	1 @ 119
		CP	2 @ 0	2 @ 119	1 @ 0	1 @ 120	121 @ 0	61 @ 30	1 @ 1	1 @ 119
100MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2 @ 0	2 @ 271	1 @ 0	1 @ 272	270 @ 0	135 @ 67	1 @ 1	1 @ 271
		CP	2 @ 0	2 @ 271	1 @ 0	1 @ 272	273 @ 0	137 @ 68	1 @ 1	1 @ 271
	60	DFT-s	2 @ 0	2 @ 133	1 @ 0	1 @ 134	135 @ 0	64 @ 32	1 @ 1	1 @ 133
		CP	2 @ 0	2 @ 133	1 @ 0	1 @ 134	135 @ 0	67 @ 331	1 @ 1	1 @ 133

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

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

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

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

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

SAR measurement is not required for the $\pi/2$ BPSK, 16QAM, 64QAM and 256QAM. When the highest maximum output power for $\pi/2$ BPSK, 16QAM, 64QAM and 256QAM is $\leq \frac{1}{2}$ dB higher than the QPSK or when the reported SAR for the QPSK configuration is ≤ 1.45 W/kg.

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

RF Air interface	Antenna	Mode	Tune-up Limit (dBm)		
			$P_{\max}$	RSI 0	Grip
NR Band n5	Main 1	$\pi/2$ BPSK / QPSK	25.0	25.0	15.0
NR Band n41 SRS 1	Main 1	$\pi/2$ BPSK / QPSK	19.0	19.0	11.0
NR Band n66	Main 1	$\pi/2$ BPSK / QPSK	25.0	25.0	14.0
NR Band n41 SRS 2	Sub 1	$\pi/2$ BPSK / QPSK	18.0	12.0	-
NR Band n41 SRS 3	Sub 3	$\pi/2$ BPSK / QPSK	22.0	11.0	-
NR Band n41 SRS 4	Sub 2	$\pi/2$ BPSK / QPSK	15.0	9.0	-
NR Band n77 (PC3)	Main 2	$\pi/2$ BPSK / QPSK	25.5	19.5	10.0
NR Band n77 (PC2)	Main 2	$\pi/2$ BPSK / QPSK	27.5	21.5	10.0

Note(s):

SRS (Sounding Reference Signal) refers to antenna swithing for Downlink channel status information (CSI) aquisition. The purpose is to enhance Downlink MIMO allocation and improve Rx performance. It is tranmitted bl the UE as a reference signal for eNodeB to find the best channel quality. SRS can transmit in NSA and SA modes.

NR Band 5 Measured Results (Main 1)

BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				166800	167300	167800	MPR	Tune-up Limit			166800	167300	167800	MPR	Tune-up Limit
				834 MHz	836.5 MHz	839 MHz					834 MHz	836.5 MHz	839 MHz		
20	π/2 BPSK	1	1		24.5		0	25	1	1		14.4		0	15
		1	104		24.2		0	25	1	104		14.1		0	15
		50	28		24.2		0	25	50	28		14.3		0	15
	QPSK	1	1		24.5		0	25	1	1		14.3		0	15
		1	104		24.2		0	25	1	104		14.1		0	15
		50	28		24.4		0	25	50	28		14.3		0	15
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				166300	167300	168300	MPR	Tune-up Limit			166300	167300	168300	MPR	Tune-up Limit
				831.5 MHz	836.5 MHz	841.5 MHz					831.5 MHz	836.5 MHz	841.5 MHz		
15	π/2 BPSK	1	1		24.5		0	25	1	1		14.4		0	15
		1	77		24.2		0	25	1	77		14.2		0	15
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				165800	167300	168800	MPR	Tune-up Limit			165800	167300	168800	MPR	Tune-up Limit
				829 MHz	836.5 MHz	844 MHz					829 MHz	836.5 MHz	844 MHz		
10	π/2 BPSK	1	1		24.4		0	25	1	1		14.4		0	15
		1	50		24.3		0	25	1	50		14.3		0	15
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				165300	167300	169300	MPR	Tune-up Limit			165300	167300	169300	MPR	Tune-up Limit
				826.5 MHz	836.5 MHz	846.5 MHz					826.5 MHz	836.5 MHz	846.5 MHz		
5	π/2 BPSK	1	1	24.4	24.4	24.2	0	25	1	1	14.4	14.4	14.2	0	15
		1	23	24.4	24.3	24.2	0	25	1	23	14.4	14.1	14.1	0	15

NR Band 41 SRS 1 Measured Results (Main 1)

BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				509202 2546.01 MHz	510000 2550 MHz	513900 2569.5 MHz	518598 2592.99 MHz	523302 2616.51 MHz	527994 2639.97 MHz	MPR	Tune-up Limit			509202 2546.01 MHz	510000 2550 MHz	513900 2569.5 MHz	518598 2592.99 MHz	523302 2616.51 MHz	527994 2639.97 MHz	MPR	Tune-up Limit
100	π/2 BPSK	1	1				18.9			0	19	1	1				10.7			0	11
		1	271				17.7			0	19	1	271				10.6			0	11
		135	69				18.8			0	19	135	69				10.6			0	11
	QPSK	1	1				19.0			0	19	1	1				10.7			0	11
		1	271				17.8			0	19	1	271				10.6			0	11
		135	69				18.8			0	19	135	69				10.4			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				508200 2541 MHz	509004 2545.02 MHz	513402 2567.01 MHz	518598 2592.99 MHz	523800 2619 MHz	528996 2644.98 MHz	MPR	Tune-up Limit			508200 2541 MHz	509004 2545.02 MHz	513402 2567.01 MHz	518598 2592.99 MHz	523800 2619 MHz	528996 2644.98 MHz	MPR	Tune-up Limit
90	π/2 BPSK	1	1				18.9			0	19	1	1				10.7			0	11
		1	243				18.0			0	19	1	243				10.7			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				507204 2536.02 MHz	508002 2540.01 MHz	512904 2564.52 MHz	518598 2592.99 MHz	524298 2621.49 MHz	529992 2649.96 MHz	MPR	Tune-up Limit			507204 2536.02 MHz	508002 2540.01 MHz	512904 2564.52 MHz	518598 2592.99 MHz	524298 2621.49 MHz	529992 2649.96 MHz	MPR	Tune-up Limit
80	π/2 BPSK	1	1				18.9			0	19	1	1				10.6			0	11
		1	215				18.0			0	19	1	215				10.6			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				506202 2531.01 MHz	507000 2535 MHz	512400 2562 MHz	518598 2592.99 MHz	524802 2624.01 MHz	530994 2654.97 MHz	MPR	Tune-up Limit			506202 2531.01 MHz	507000 2535 MHz	512400 2562 MHz	518598 2592.99 MHz	524802 2624.01 MHz	530994 2654.97 MHz	MPR	Tune-up Limit
70	π/2 BPSK	1	1				18.9			0	19	1	1				10.6			0	11
		1	187				18.1			0	19	1	187				11.0			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				505200 2526 MHz	506004 2530.02 MHz	511902 2559.51 MHz	518598 2592.99 MHz	525300 2626.5 MHz	531996 2659.98 MHz	MPR	Tune-up Limit			505200 2526 MHz	506004 2530.02 MHz	511902 2559.51 MHz	518598 2592.99 MHz	525300 2626.5 MHz	531996 2659.98 MHz	MPR	Tune-up Limit
60	π/2 BPSK	1	1				19.0			0	19	1	1				10.5			0	11
		1	160				18.4			0	19	1	160				11.0			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				504204 2521.02 MHz	505002 2525.01 MHz	511404 2567.02 MHz	518598 2592.99 MHz	525798 2628.99 MHz	532992 2664.96 MHz	MPR	Tune-up Limit			504204 2521.02 MHz	505002 2525.01 MHz	511404 2567.02 MHz	518598 2592.99 MHz	525798 2628.99 MHz	532992 2664.96 MHz	MPR	Tune-up Limit
50	π/2 BPSK	1	1				18.9			0	19	1	1				10.7			0	11
		1	131				18.5			0	19	1	131				11.0			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				503202 2516.01 MHz	504000 2520 MHz	510900 2554.5 MHz	518598 2592.99 MHz	526302 2631.51 MHz	533994 2669.97 MHz	MPR	Tune-up Limit			503202 2516.01 MHz	504000 2520 MHz	510900 2554.5 MHz	518598 2592.99 MHz	526302 2631.51 MHz	533994 2669.97 MHz	MPR	Tune-up Limit
40	π/2 BPSK	1	1	17.7	17.8	19.0	18.7	19.0	19.0	0	19	1	1	10.1	10.4	10.5	10.4	10.7	11.0	0	11
		1	104	19.0	19.0	19.0	18.7	18.2	17.8	0	19	1	104	11.0	11.0	10.6	10.9	10.5	10.1	0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				502200 2511 MHz	503004 2515.02 MHz	510402 2552.01 MHz	518598 2592.99 MHz	526800 2634 MHz	534996 2674.98 MHz	MPR	Tune-up Limit			502200 2511 MHz	503004 2515.02 MHz	510402 2552.01 MHz	518598 2592.99 MHz	526800 2634 MHz	534996 2674.98 MHz	MPR	Tune-up Limit
30	π/2 BPSK	1	1	17.7	17.8	19.0	18.7	18.8	18.0	0	19	1	1	10.5	10.5	10.4	10.4	10.4	10.7	0	11
		1	76	18.9	19.0	19.0	18.6	18.1	17.9	0	19	1	76	11.0	11.0	11.0	11.0	10.7	10.1	0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				501204 2506.02 MHz	502002 2510.01 MHz	509904 2549.52 MHz	518598 2592.99 MHz	527298 2636.49 MHz	535992 2679.96 MHz	MPR	Tune-up Limit			501204 2506.02 MHz	502002 2510.01 MHz	509904 2549.52 MHz	518598 2592.99 MHz	527298 2636.49 MHz	535992 2679.96 MHz	MPR	Tune-up Limit
20	π/2 BPSK	1	1	17.5	17.6	18.9	18.5	18.6	19.0	0	19	1	1	10.0	10.2	11.0	11.0	11.0	11.0	0	11
		1	49	18.4	18.4	18.9	18.4	18.0	17.9	0	19	1	49	10.9	11.0	11.0	10.9	10.7	10.0	0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				500700 2503.5 MHz	501504 2507.52 MHz	509652 2548.26 MHz	518598 2592.99 MHz	527550 2637.75 MHz	536496 2682.48 MHz	MPR	Tune-up Limit			500700 2503.5 MHz	501504 2507.52 MHz	509652 2548.26 MHz	518598 2592.99 MHz	527550 2637.75 MHz	536496 2682.48 MHz	MPR	Tune-up Limit
15	π/2 BPSK	1	1	17.3	17.5	18.7	18.3	18.3	18.9	0	19	1	1	9.9	10.1	11.0	10.9	11.0	11.0	0	11
		1	36	17.9	18.0	18.7	18.2	17.8	17.8	0	19	1	36	10.4	10.6	11.0	10.7	10.5	9.9	0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				500202 2501.01 MHz	501000 2505 MHz	509400 2547.98 MHz	518598 2592.99 MHz	527802 2639.01 MHz	539994 2684.97 MHz	MPR	Tune-up Limit			500202 2501.01 MHz	501000 2505 MHz	509400 2547.98 MHz	518598 2592.99 MHz	527802 2639.01 MHz	539994 2684.97 MHz	MPR	Tune-up Limit
10	π/2 BPSK	1	1	17.7	17.8	19.0	18.6	18.6	19.0	0	19	1	1	10.3	10.4	11.0	11.0	11.0	11.0	0	11
		1	22	18.1	18.1	19.0	18.5	18.2	18.2	0	19	1	22	10.7	10.8	11.0	11.0	10.8	10.3	0	11

NR Band 41 SRS 2 Measured Results (Sub 1)

BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				509202	510000	513900	518598	523302	527994	MPR	Tune-up Limit
				2546.01 MHz	2550 MHz	2569.5 MHz	2592.99 MHz	2616.51 MHz	2639.97 MHz		
100	π/2 BPSK	1	1				11.4			0	12
		1	271				11.1			0	12
		135	69				11.3			0	12
	QPSK	1	1				11.4			0	12
		1	271				11.0			0	12
		135	69				11.3			0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				508200	509004	513402	518598	523800	528996	MPR	Tune-up Limit
				2541 MHz	2545.02 MHz	2567.01 MHz	2592.99 MHz	2619 MHz	2644.98 MHz		
90	π/2 BPSK	1	1				11.5			0	12
		1	243				11.1			0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				507204	508002	512904	518598	524298	529992	MPR	Tune-up Limit
				2536.02 MHz	2540.01 MHz	2564.52 MHz	2592.99 MHz	2621.49 MHz	2649.96 MHz		
80	π/2 BPSK	1	1				11.5			0	12
		1	215				11.0			0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				506202	507000	512400	518598	524802	530994	MPR	Tune-up Limit
				2531.01 MHz	2535 MHz	2562 MHz	2592.99 MHz	2624.01 MHz	2654.97 MHz		
70	π/2 BPSK	1	1				11.5			0	12
		1	187				10.9			0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				505200	506004	511902	518598	525300	531996	MPR	Tune-up Limit
				2526 MHz	2530.02 MHz	2559.51 MHz	2592.99 MHz	2626.5 MHz	2659.98 MHz		
60	π/2 BPSK	1	1				11.5			0	12
		1	160				10.9			0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				504204	505002	511404	518598	525798	532992	MPR	Tune-up Limit
				2521.02 MHz	2525.01 MHz	2557.02 MHz	2592.99 MHz	2628.99 MHz	2664.96 MHz		
50	π/2 BPSK	1	1				11.5			0	12
		1	131				11.1			0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				503202	504000	510900	518598	526302	533994	MPR	Tune-up Limit
				2516.01 MHz	2520 MHz	2554.5 MHz	2592.99 MHz	2631.51 MHz	2669.97 MHz		
40	π/2 BPSK	1	1	10.9	10.4	11.1	12.0	10.9	10.6	0	12
		1	104	10.6	10.5	12.0	10.9	10.7	10.5	0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				502200	503004	510402	518598	526800	534996	MPR	Tune-up Limit
				2511 MHz	2515.02 MHz	2552.01 MHz	2592.99 MHz	2634 MHz	2674.98 MHz		
30	π/2 BPSK	1	1	10.0	10.5	11.1	11.9	11.0	10.5	0	12
		1	76	10.9	10.7	12.0	10.9	10.8	10.5	0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				501204	502002	509904	518598	527298	535992	MPR	Tune-up Limit
				2506.02 MHz	2510.01 MHz	2549.52 MHz	2592.99 MHz	2636.49 MHz	2679.96 MHz		
20	π/2 BPSK	1	1	10.0	10.4	10.6	11.0	11.0	10.5	0	12
		1	49	10.9	11.0	11.2	10.4	10.8	10.4	0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				500700	501504	509652	518598	527550	536496	MPR	Tune-up Limit
				2503.5 MHz	2507.52 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz		
15	π/2 BPSK	1	1	10.0	10.2	10.7	11.1	10.6	10.1	0	12
		1	36	10.6	10.9	11.1	10.5	10.4	10.1	0	12
BW (MHz)	Modulation	RB Allocation	RB offset	Max TuP Power (dBm)							
				500202	501000	509400	518598	527802	536994	MPR	Tune-up Limit
				2501.01 MHz	2505 MHz	2547 MHz	2592.99 MHz	2639.01 MHz	2684.97 MHz		
10	π/2 BPSK	1	1	10.7	11.1	10.7	11.0	10.5	10.2	0	12
		1	22	11.6	10.0	10.8	10.6	10.5	10.2	0	12

NR Band 41 SRS 3 Measured Results (Sub 3)

BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				509202	510000	513900	518598	523302	527994	MPR	Tune-up Limit
				2546.01 MHz	2550 MHz	2569.5 MHz	2592.99 MHz	2616.51 MHz	2639.97 MHz		
100	π/2 BPSK	1	1				10.1			0	11
		1	271				10.0			0	11
		135	69				9.7			0	11
	QPSK	1	1				10.0			0	11
		1	271				9.9			0	11
		135	69				9.7			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				508200	509004	513402	518598	523800	528996	MPR	Tune-up Limit
				2541 MHz	2545.02 MHz	2567.01 MHz	2592.99 MHz	2619 MHz	2644.98 MHz		
90	π/2 BPSK	1	1				10.1			0	11
		1	243				10.0			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				507204	508002	512904	518598	524298	529992	MPR	Tune-up Limit
				2536.02 MHz	2540.01 MHz	2564.52 MHz	2592.99 MHz	2621.49 MHz	2649.96 MHz		
80	π/2 BPSK	1	1				10.2			0	11
		1	215				10.2			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				506202	507000	512400	518598	524802	530994	MPR	Tune-up Limit
				2531.01 MHz	2535 MHz	2562 MHz	2592.99 MHz	2624.01 MHz	2654.97 MHz		
70	π/2 BPSK	1	1				10.0			0	11
		1	187				10.2			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				505200	506004	511902	518598	525300	531996	MPR	Tune-up Limit
				2526 MHz	2530.02 MHz	2559.51 MHz	2592.99 MHz	2626.5 MHz	2659.98 MHz		
60	π/2 BPSK	1	1				9.8			0	11
		1	160				10.2			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				504204	505002	511404	518598	525798	532992	MPR	Tune-up Limit
				2521.02 MHz	2525.01 MHz	2557.02 MHz	2592.99 MHz	2628.99 MHz	2664.96 MHz		
50	π/2 BPSK	1	1				9.6			0	11
		1	131				10.0			0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				503202	504000	510900	518598	526302	533994	MPR	Tune-up Limit
				2516.01 MHz	2520 MHz	2554.5 MHz	2592.99 MHz	2631.51 MHz	2669.97 MHz		
40	π/2 BPSK	1	1	10.1	10.1	10.3	10.0	10.1	10.0	0	11
		1	104	10.5	10.0	10.3	10.2	10.0	10.5	0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				502200	503004	510402	518598	526800	534996	MPR	Tune-up Limit
				2511 MHz	2515.02 MHz	2552.01 MHz	2592.99 MHz	2634 MHz	2674.98 MHz		
30	π/2 BPSK	1	1	10.1	10.0	10.5	10.2	10.2	10.0	0	11
		1	76	10.2	10.5	10.0	10.0	10.2	10.5	0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				501204	502002	509904	518598	527298	535992	MPR	Tune-up Limit
				2506.02 MHz	2510.01 MHz	2549.52 MHz	2592.99 MHz	2636.49 MHz	2679.96 MHz		
20	π/2 BPSK	1	1	10.0	10.0	10.4	10.0	10.3	10.0	0	11
		1	49	10.4	10.5	10.0	10.1	10.3	10.1	0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				500700	501504	509652	518598	527550	536496	MPR	Tune-up Limit
				2503.5 MHz	2507.52 MHz	2548.26 MHz	2592.99 MHz	2637.75 MHz	2682.48 MHz		
15	π/2 BPSK	1	1	10.0	10.4	10.2	10.2	10.0	10.0	0	11
		1	36	10.1	10.1	10.5	10.2	10.2	10.2	0	11
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)							
				500202	501000	509400	518598	527802	536994	MPR	Tune-up Limit
				2501.01 MHz	2505 MHz	2547 MHz	2592.99 MHz	2639.01 MHz	2684.97 MHz		
10	π/2 BPSK	1	1	10.2	10.2	10.5	10.0	10.3	10.2	0	11
		1	22	10.4	10.5	10.5	10.0	10.0	10.5	0	11

NR Band 66 Measured Results (Main 1)

BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				346000	349000	352000	MPR	Tune-up Limit			346000	349000	352000	MPR	Tune-up Limit
				1730 MHz	1745 MHz	1760 MHz					1730 MHz	1745 MHz	1760 MHz		
40	π/2 BPSK	1	1		24.2		0	25	1	1		12.9		0	14
		1	214		24.2		0	25	1	214		12.9		0	14
		108	54		24.5		0	25	108	54		13.1		0	14
	QPSK	1	1		24.3		0	25	1	1		12.9		0	14
		1	214		24.2		0	25	1	214		12.9		0	14
		108	54		24.4		0	25	108	54		13.1		0	14
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				345000	349000	353000	MPR	Tune-up Limit			345000	349000	353000	MPR	Tune-up Limit
				1725 MHz	1745 MHz	1765 MHz					1725 MHz	1745 MHz	1765 MHz		
30	π/2 BPSK	1	1		24.4		0	25	1	1		13.0		0	14
		1	158		24.1		0	25	1	158		12.9		0	14
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				344500	349000	353500	MPR	Tune-up Limit			344500	349000	353500	MPR	Tune-up Limit
				1722.5 MHz	1745 MHz	1767.5 MHz					1722.5 MHz	1745 MHz	1767.5 MHz		
25	π/2 BPSK	1	1		24.5		0	25	1	1		13.1		0	14
		1	131		24.2		0	25	1	131		12.9		0	14
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				344000	349000	354000	MPR	Tune-up Limit			344000	349000	354000	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz					1720 MHz	1745 MHz	1770 MHz		
20	π/2 BPSK	1	1	24.5	24.5	24.1	0	25	1	1	13.0	13.2	12.8	0	14
		1	104	24.4	24.1	24.4	0	25	1	104	13.1	12.9	13.0	0	14
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				343500	349000	354500	MPR	Tune-up Limit			343500	349000	354500	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz					1717.5 MHz	1745 MHz	1772.5 MHz		
15	π/2 BPSK	1	1	24.4	24.3	24.2	0	25	1	1	13.2	13.1	13.1	0	14
		1	77	24.3	24.3	24.4	0	25	1	77	13.0	13.1	13.1	0	14
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				343000	349000	355000	MPR	Tune-up Limit			343000	349000	355000	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz					1715 MHz	1745 MHz	1775 MHz		
10	π/2 BPSK	1	1	24.5	24.5	24.4	0	25	1	1	13.1	13.1	13.1	0	14
		1	50	24.3	24.4	24.3	0	25	1	50	13.6	13.1	13.1	0	14
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				342500	349000	355500	MPR	Tune-up Limit			342500	349000	355500	MPR	Tune-up Limit
				1712.5 MHz	1745 MHz	1777.5 MHz					1712.5 MHz	1745 MHz	1777.5 MHz		
5	π/2 BPSK	1	1	24.5	24.5	24.5	0	25	1	1	13.1	13.1	13.2	0	14
		1	23	24.4	24.5	24.5	0	25	1	23	13.1	13.1	13.1	0	14

NR Band 77 (Block A) PC3 Measured Results (Main 2)

BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				633334	633334	633332	MPR	Tune-up Limit			633334	633334	633332	MPR	Tune-up Limit
				3500.01 MHz	3500.01 MHz	3499.98 MHz					3500.01 MHz	3500.01 MHz	3499.98 MHz		
100	π/2 BPSK	1	1		18.0		0	19.5	1	1		9.2		0	10
		1	271		18.7		0	19.5	1	271		9.2		0	10
		135	69		18.7		0	19.5	135	69		9.4		0	10
	QPSK	1	1		18.0		0	19.5	1	1		9.2		0	10
		1	271		18.8		0	19.5	1	271		9.2		0	10
		135	69		18.7		0	19.5	135	69		9.4		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				633000	633334	633666	MPR	Tune-up Limit			633000	633334	633666	MPR	Tune-up Limit
				3495 MHz	3500.01 MHz	3504.99 MHz					3495 MHz	3500.01 MHz	3504.99 MHz		
90	π/2 BPSK	1	1		18.0		0	19.5	1	1		9.2		0	10
		1	243		18.8		0	19.5	1	243		9.0		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				632668	633334	633998	MPR	Tune-up Limit			632668	633334	633998	MPR	Tune-up Limit
				3490.02 MHz	3500.01 MHz	3509.97 MHz					3490.02 MHz	3500.01 MHz	3509.97 MHz		
80	π/2 BPSK	1	1		17.9		0	19.5	1	1		9.1		0	10
		1	215		18.7		0	19.5	1	215		9.1		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				632334	633334	634332	MPR	Tune-up Limit			632334	633334	634332	MPR	Tune-up Limit
				3485.01 MHz	3500.01 MHz	3514.98 MHz					3485.01 MHz	3500.01 MHz	3514.98 MHz		
70	π/2 BPSK	1	1		17.9		0	19.5	1	1		9.1		0	10
		1	187		18.7		0	19.5	1	187		9.1		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				632000	633334	634666	MPR	Tune-up Limit			632000	633334	634666	MPR	Tune-up Limit
				3480 MHz	3500.01 MHz	3519.99 MHz					3480 MHz	3500.01 MHz	3519.99 MHz		
60	π/2 BPSK	1	1		17.9		0	19.5	1	1		9.0		0	10
		1	160		18.6		0	19.5	1	160		9.2		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				631668	633334	634998	MPR	Tune-up Limit			631668	633334	634998	MPR	Tune-up Limit
				3475.02 MHz	3500.01 MHz	3524.97 MHz					3475.02 MHz	3500.01 MHz	3524.97 MHz		
50	π/2 BPSK	1	1		17.9		0	19.5	1	1		9.1		0	10
		1	131		18.6		0	19.5	1	131		9.2		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				631334	633334	635332	MPR	Tune-up Limit			631334	633334	635332	MPR	Tune-up Limit
				3470.01 MHz	3500.01 MHz	3529.98 MHz					3470.01 MHz	3500.01 MHz	3529.98 MHz		
40	π/2 BPSK	1	1		18.7		0	19.5	1	1		9.9		0	10
		1	104		19.1		0	19.5	1	104		9.8		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				631000	633334	635666	MPR	Tune-up Limit			631000	633334	635666	MPR	Tune-up Limit
				3465 MHz	3500.01 MHz	3534.99 MHz					3465 MHz	3500.01 MHz	3534.99 MHz		
30	π/2 BPSK	1	1	18.3	18.8	18.9	0	19.5	1	1	9.5	10.0	9.6	0	10
		1	76	18.4	18.7	18.5	0	19.5	1	76	9.6	9.9	9.8	0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				630834	633334	635832	MPR	Tune-up Limit			630834	633334	635832	MPR	Tune-up Limit
				3462.51 MHz	3500.01 MHz	3537.48 MHz					3462.51 MHz	3500.01 MHz	3537.48 MHz		
25	π/2 BPSK	1	1	18.7	18.8	18.8	0	19.5	1	1	10.0	10.0	10.0	0	10
		1	63	18.6	18.5	18.3	0	19.5	1	63	9.9	9.8	9.5	0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				630668	633334	635998	MPR	Tune-up Limit			630668	633334	635998	MPR	Tune-up Limit
				3460.02 MHz	3500.01 MHz	3539.97 MHz					3460.02 MHz	3500.01 MHz	3539.97 MHz		
20	π/2 BPSK	1	1	18.2	18.4	18.3	0	19.5	1	1	9.5	9.6	9.5	0	10
		1	49	18.6	18.6	18.3	0	19.5	1	49	9.9	9.8	9.5	0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				630500	633334	636166	MPR	Tune-up Limit			630500	633334	636166	MPR	Tune-up Limit
				3457.5 MHz	3500.01 MHz	3542.49 MHz					3457.5 MHz	3500.01 MHz	3542.49 MHz		
15	π/2 BPSK	1	1	18.5	18.4	18.2	0	19.5	1	1	9.7	9.6	9.4	0	10
		1	36	19.2	18.7	18.4	0	19.5	1	36	10.0	10.0	9.6	0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				630334	633334	636332	MPR	Tune-up Limit			630334	633334	636332	MPR	Tune-up Limit
				3455.01 MHz	3500.01 MHz	3544.98 MHz					3455.01 MHz	3500.01 MHz	3544.98 MHz		
10	π/2 BPSK	1	1	18.2	18.3	18.2	0	19.5	1	1	9.4	9.5	9.4	0	10
		1	22	18.6	18.5	18.3	0	19.5	1	22	9.8	9.8	9.6	0	10

NR Band 77 (Block C) PC3 Measured Results (Main 2)

BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				650002	652402	654802	657200	659600	661998									650002	652402	654802	657200	659600	661998						
100	π/2 BPSK	1	1	3750.03 MHz	3786.03 MHz	3822.03 MHz	3858 MHz	3894 MHz	3929.97 MHz			0	19.5	1	1	3750.03 MHz	3786.03 MHz	3822.03 MHz	3858 MHz	3894 MHz	3929.97 MHz			0	10				
		1	271									0	19.5	1	271									0	10				
		135	69									0	19.5	135	69									0	10				
	QPSK	1	1									0	19.5	1	1									0	10				
		1	271									0	19.5	1	271									0	10				
		135	69									0	19.5	135	69									0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				649668	652202	654734	657268	659800	662332									649668	652202	654734	657268	659800	662332						
90	π/2 BPSK	1	1	3745.02 MHz	3783.03 MHz	3821.01 MHz	3859.02 MHz	3897 MHz	3934.98 MHz			0	19.5	1	1	3745.02 MHz	3783.03 MHz	3821.01 MHz	3859.02 MHz	3897 MHz	3934.98 MHz			0	10				
		1	243									0	19.5	1	243									0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				649336	652002	654668	657334	660000	662664									649336	652002	654668	657334	660000	662664						
80	π/2 BPSK	1	1	3740.04 MHz	3780.03 MHz	3820.02 MHz	3860.01 MHz	3900 MHz	3939.96 MHz			0	19.5	1	1	3740.04 MHz	3780.03 MHz	3820.02 MHz	3860.01 MHz	3900 MHz	3939.96 MHz			0	10				
		1	215									0	19.5	1	215									0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				649002	651802	654602	657400	660200	662998									649002	651802	654602	657400	660200	662998						
70	π/2 BPSK	1	1	3735.03 MHz	3777.03 MHz	3819.03 MHz	3861 MHz	3903 MHz	3944.97 MHz			0	19.5	1	1	3735.03 MHz	3777.03 MHz	3819.03 MHz	3861 MHz	3903 MHz	3944.97 MHz			0	10				
		1	187									0	19.5	1	187									0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				648668	651602	654534	657468	660400	663332									648668	651602	654534	657468	660400	663332						
60	π/2 BPSK	1	1	3730.02 MHz	3774.03 MHz	3818.01 MHz	3862.02 MHz	3906 MHz	3949.98 MHz			0	19.5	1	1	3730.02 MHz	3774.03 MHz	3818.01 MHz	3862.02 MHz	3906 MHz	3949.98 MHz			0	10				
		1	160									0	19.5	1	160									0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				648336	651402	654468	657534	660600	663664									648336	651402	654468	657534	660600	663664						
50	π/2 BPSK	1	1	3725.04 MHz	3771.03 MHz	3817.02 MHz	3863.01 MHz	3909 MHz	3954.96 MHz			0	19.5	1	1	3725.04 MHz	3771.03 MHz	3817.02 MHz	3863.01 MHz	3909 MHz	3954.96 MHz			0	10				
		1	131									0	19.5	1	131									0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				648002	651202	654402	657600	660800	663998									648002	651202	654402	657600	660800	663998						
40	π/2 BPSK	1	1	3720.03 MHz	3768.03 MHz	3816.03 MHz	3864 MHz	3912 MHz	3959.97 MHz			0	19.5	1	1	3720.03 MHz	3768.03 MHz	3816.03 MHz	3864 MHz	3912 MHz	3959.97 MHz			0	10				
		1	104	19.1	19.5	19.1	18.9	18.7	17.9	0	19.5	1	104	9.5	10.0	10.0	9.4	9.1	8.7	0	10			0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				647668	651002	654334	657668	661000	664332									647668	651002	654334	657668	661000	664332						
30	π/2 BPSK	1	1	3715.02 MHz	3765.03 MHz	3815.01 MHz	3865.02 MHz	3915 MHz	3964.98 MHz			0	19.5	1	1	3715.02 MHz	3765.03 MHz	3815.01 MHz	3865.02 MHz	3915 MHz	3964.98 MHz			0	10				
		1	76	19.5	19.5	18.0	19.1	18.5	17.8	0	19.5	1	76	9.6	10.0	9.8	9.5	9.2	8.6	0	10			0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				647502	650902	654302	657700	661100	664498									647502	650902	654302	657700	661100	664498						
25	π/2 BPSK	1	1	3712.53 MHz	3763.53 MHz	3814.53 MHz	3865.5 MHz	3916.5 MHz	3967.47 MHz			0	19.5	1	1	3712.53 MHz	3763.53 MHz	3814.53 MHz	3865.5 MHz	3916.5 MHz	3967.47 MHz			0	10				
		1	63	19.1	19.5	18.8	19.0	18.2	17.7	0	19.5	1	63	9.0	10.0	9.5	9.2	8.8	8.5	0	10			0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				647336	650802	654268	657734	661200	664664									647336	650802	654268	657734	661200	664664						
20	π/2 BPSK	1	1	3710.04 MHz	3762.03 MHz	3814.02 MHz	3866.01 MHz	3918 MHz	3969.96 MHz			0	19.5	1	1	3710.04 MHz	3762.03 MHz	3814.02 MHz	3866.01 MHz	3918 MHz	3969.96 MHz			0	10				
		1	49	19.5	19.5	18.8	19.1	19.2	18.4	17.9	0	19.5	1	49	9.5	10.0	9.8	9.6	9.0	8.8	0	10			0	10			
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				647168	650702	654234	657768	661300	664832									647168	650702	654234	657768	661300	664832						
15	π/2 BPSK	1	1	3707.52 MHz	3760.53 MHz	3813.51 MHz	3866.52 MHz	3919.5 MHz	3972.48 MHz			0	19.5	1	1	3707.52 MHz	3760.53 MHz	3813.51 MHz	3866.52 MHz	3919.5 MHz	3972.48 MHz			0	10				
		1	36	19.5	19.5	18.8	18.9	18.2	17.6	0	19.5	1	36	10.0	10.0	9.5	9.2	8.8	8.5	0	10			0	10				
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)										MPR	Tune-up Limit	RB Allocation	RB offset	Grip TuP Power (dBm)										MPR	Tune-up Limit
				647002	650602	654202	657800	661400	664998									647002	650602	654202	657800	661400	664998						
10	π/2 BPSK	1	1	3705.03 MHz	3759.03 MHz	3813.03 MHz	3867 MHz	3921 MHz	3974.97 MHz			0	19.5	1	1	3705.03 MHz	3759.03 MHz	3813.03 MHz	3867 MHz	3921 MHz	3974.97 MHz			0	10				
		1	22	19.5	19.5	18.7	19.0	18.1	17.6	0	19.5	1	22	10.0	10.0	9.5	9.1	8.7	8.4	0	10			0	10				

NR Band 77 (Block A) PC2 Measured Results (Main 2)

BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				633334 3500.01 MHz	633334 3500.01 MHz	633332 3499.98 MHz	MPR	Tune-up Limit			633334 3500.01 MHz	633334 3500.01 MHz	633332 3499.98 MHz	MPR	Tune-up Limit
100	$\pi/2$ BPSK	1	1		21.1		0	21.5	1	1		9.2		0	10
		1	271		20.5		0	21.5	1	271		9.2		0	10
		135	69		20.7		0	21.5	135	69		9.4		0	10
	QPSK	1	1		21.1		0	21.5	1	1		9.2		0	10
		1	271		20.5		0	21.5	1	271		9.2		0	10
		135	69		20.7		0	21.5	135	69		9.4		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				633000 3495 MHz	633334 3500.01 MHz	633666 3504.99 MHz	MPR	Tune-up Limit			633000 3495 MHz	633334 3500.01 MHz	633666 3504.99 MHz	MPR	Tune-up Limit
90	$\pi/2$ BPSK	1	1		21.1		0	21.5	1	1		9.2		0	10
		1	243		20.5		0	21.5	1	243		9.0		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				632668 3490.02 MHz	633334 3500.01 MHz	633998 3509.97 MHz	MPR	Tune-up Limit			632668 3490.02 MHz	633334 3500.01 MHz	633998 3509.97 MHz	MPR	Tune-up Limit
80	$\pi/2$ BPSK	1	1		20.7		0	21.5	1	1		9.1		0	10
		1	215		20.6		0	21.5	1	215		9.1		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				632334 3485.01 MHz	633334 3500.01 MHz	634332 3514.98 MHz	MPR	Tune-up Limit			632334 3485.01 MHz	633334 3500.01 MHz	634332 3514.98 MHz	MPR	Tune-up Limit
70	$\pi/2$ BPSK	1	1		20.6		0	21.5	1	1		9.1		0	10
		1	187		20.6		0	21.5	1	187		9.1		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				632000 3480 MHz	633334 3500.01 MHz	634666 3519.99 MHz	MPR	Tune-up Limit			632000 3480 MHz	633334 3500.01 MHz	634666 3519.99 MHz	MPR	Tune-up Limit
60	$\pi/2$ BPSK	1	1		20.4		0	21.5	1	1		9.0		0	10
		1	160		20.6		0	21.5	1	160		9.2		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				631668 3475.02 MHz	633334 3500.01 MHz	634998 3524.97 MHz	MPR	Tune-up Limit			631668 3475.02 MHz	633334 3500.01 MHz	634998 3524.97 MHz	MPR	Tune-up Limit
50	$\pi/2$ BPSK	1	1		20.5		0	21.5	1	1		9.1		0	10
		1	131		20.5		0	21.5	1	131		9.2		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				631334 3470.01 MHz	633334 3500.01 MHz	635332 3529.98 MHz	MPR	Tune-up Limit			631334 3470.01 MHz	633334 3500.01 MHz	635332 3529.98 MHz	MPR	Tune-up Limit
40	$\pi/2$ BPSK	1	1		20.5		0	21.5	1	1		9.9		0	10
		1	104		20.5		0	21.5	1	104		9.8		0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				631000 3465 MHz	633334 3500.01 MHz	635666 3534.99 MHz	MPR	Tune-up Limit			631000 3465 MHz	633334 3500.01 MHz	635666 3534.99 MHz	MPR	Tune-up Limit
30	$\pi/2$ BPSK	1	1	21.4	20.7	20.5	0	21.5	1	1	9.5	10.0	9.6	0	10
		1	76	20.6	20.5	20.5	0	21.5	1	76	9.6	9.9	9.8	0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				630834 3462.51 MHz	633334 3500.01 MHz	635832 3537.48 MHz	MPR	Tune-up Limit			630834 3462.51 MHz	633334 3500.01 MHz	635832 3537.48 MHz	MPR	Tune-up Limit
25	$\pi/2$ BPSK	1	1	21.5	20.8	20.6	0	21.5	1	1	10.0	10.0	10.0	0	10
		1	63	20.5	20.5	20.5	0	21.5	1	63	9.9	9.8	9.5	0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				630668 3460.02 MHz	633334 3500.01 MHz	635998 3539.97 MHz	MPR	Tune-up Limit			630668 3460.02 MHz	633334 3500.01 MHz	635998 3539.97 MHz	MPR	Tune-up Limit
20	$\pi/2$ BPSK	1	1	21.5	20.8	20.6	0	21.5	1	1	9.5	9.6	9.5	0	10
		1	49	20.5	20.5	20.4	0	21.5	1	49	9.9	9.8	9.5	0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				630500 3457.5 MHz	633334 3500.01 MHz	636166 3542.49 MHz	MPR	Tune-up Limit			630500 3457.5 MHz	633334 3500.01 MHz	636166 3542.49 MHz	MPR	Tune-up Limit
15	$\pi/2$ BPSK	1	1	21.5	20.8	20.6	0	21.5	1	1	9.7	9.6	9.4	0	10
		1	36	20.7	20.6	20.4	0	21.5	1	36	10.0	10.0	9.6	0	10
BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)					RB Allocation	RB offset	Grip TuP Power (dBm)				
				630334 3455.01 MHz	633334 3500.01 MHz	636332 3544.98 MHz	MPR	Tune-up Limit			630334 3455.01 MHz	633334 3500.01 MHz	636332 3544.98 MHz	MPR	Tune-up Limit
10	$\pi/2$ BPSK	1	1	21.5	20.8	20.5	0	21.5	1	1	9.4	9.5	9.4	0	10
		1	22	20.9	20.7	20.4	0	21.5	1	22	9.8	9.8	9.6	0	10

NR Band 77 (Block C) PC2 Measured Results (Main 2)

BW (MHz)	Modulation	RB Allocation	RB offset	RSI 0 TuP Power (dBm)								RB Allocation	RB offset	Grip TuP Power (dBm)							
				650002	652402	654802	657200	659600	661998	MPR	Tune-up Limit			650002	652402	654802	657200	659600	661998	MPR	Tune-up Limit
100	π/2 BPSK	1	1	3750.03 MHz	3786.03 MHz	3822.03 MHz	3858 MHz	3894 MHz	3929.97 MHz	0	21.5	1	1	3750.03 MHz	3786.03 MHz	3822.03 MHz	3858 MHz	3894 MHz	3929.97 MHz	0	10
		1	271				20.7			0	21.5	1	271				10.0			0	10
		135	69				20.8			0	21.5	135	69				9.6			0	10
	QPSK	1	1				20.5			0	21.5	1	1				9.6			0	10
		1	271				20.7			0	21.5	1	271				9.2			0	10
		135	69				20.7			0	21.5	135	69				9.8			0	10
90	π/2 BPSK	1	1	3745.02 MHz	3783.03 MHz	3821.01 MHz	3859.02 MHz	3897 MHz	3934.98 MHz	0	21.5	1	1	3745.02 MHz	3783.03 MHz	3821.01 MHz	3859.02 MHz	3897 MHz	3934.98 MHz	0	10
		1	243				21.0			0	21.5	1	243				9.4			0	10
																				0	10
	π/2 BPSK	1	1	3740.04 MHz	3780.03 MHz	3820.02 MHz	3860.01 MHz	3900 MHz	3939.96 MHz	0	21.5	1	1	3740.04 MHz	3780.03 MHz	3820.02 MHz	3860.01 MHz	3900 MHz	3939.96 MHz	0	10
		1	215				20.4			0	21.5	1	215				9.4			0	10
							21.2			0	21.5						9.4			0	10
80	π/2 BPSK	1	1	649002	651802	654602	657400	660200	662998	MPR	Tune-up Limit	649002	651802	654602	657400	660200	662998	MPR	Tune-up Limit		
		1	1	3735.03 MHz	3777.03 MHz	3819.03 MHz	3861 MHz	3903 MHz	3944.97 MHz	0	21.5	1	1	3735.03 MHz	3777.03 MHz	3819.03 MHz	3861 MHz	3903 MHz	3944.97 MHz	0	10
		1	187				20.5			0	21.5	1	187				9.4			0	10
	π/2 BPSK	1	1	648668	651602	654534	657468	660400	663332	MPR	Tune-up Limit	648668	651602	654534	657468	660400	663332	MPR	Tune-up Limit		
		1	1	3730.02 MHz	3774.03 MHz	3818.01 MHz	3862.02 MHz	3906 MHz	3949.98 MHz	0	21.5	1	1	3730.02 MHz	3774.03 MHz	3818.01 MHz	3862.02 MHz	3906 MHz	3949.98 MHz	0	10
		1	160				20.7			0	21.5	1	160				9.9			0	10
70	π/2 BPSK	1	1	648336	651402	654468	657534	660600	663664	MPR	Tune-up Limit	648336	651402	654468	657534	660600	663664	MPR	Tune-up Limit		
		1	1	3725.04 MHz	3771.03 MHz	3817.02 MHz	3863.01 MHz	3909 MHz	3954.96 MHz	0	21.5	1	1	3725.04 MHz	3771.03 MHz	3817.02 MHz	3863.01 MHz	3909 MHz	3954.96 MHz	0	10
		1	131				20.7			0	21.5	1	131				10.0			0	10
	π/2 BPSK	1	1	648002	651202	654334	657600	660800	663998	MPR	Tune-up Limit	648002	651202	654334	657600	660800	663998	MPR	Tune-up Limit		
		1	1	3720.03 MHz	3768.03 MHz	3816.03 MHz	3864 MHz	3912 MHz	3959.97 MHz	0	21.5	1	1	3720.03 MHz	3768.03 MHz	3816.03 MHz	3864 MHz	3912 MHz	3959.97 MHz	0	10
		1	104				21.3			0	21.5	1	104				9.5			0	10
60	π/2 BPSK	1	1	647668	651002	654334	657668	661000	664332	MPR	Tune-up Limit	647668	651002	654334	657668	661000	664332	MPR	Tune-up Limit		
		1	1	3715.02 MHz	3765.03 MHz	3815.01 MHz	3865.02 MHz	3915 MHz	3964.98 MHz	0	21.5	1	1	3715.02 MHz	3765.03 MHz	3815.01 MHz	3865.02 MHz	3915 MHz	3964.98 MHz	0	10
		1	76				21.5			0	21.5	1	76				9.6			0	10
	π/2 BPSK	1	1	647502	650902	654302	657700	661100	664498	MPR	Tune-up Limit	647502	650902	654302	657700	661100	664498	MPR	Tune-up Limit		
		1	1	3712.53 MHz	3763.53 MHz	3814.53 MHz	3865.5 MHz	3916.5 MHz	3967.47 MHz	0	21.5	1	1	3712.53 MHz	3763.53 MHz	3814.53 MHz	3865.5 MHz	3916.5 MHz	3967.47 MHz	0	10
		1	63				21.5			0	21.5	1	63				9.0			0	10
50	π/2 BPSK	1	1	647336	650802	654268	657734	661200	664664	MPR	Tune-up Limit	647336	650802	654268	657734	661200	664664	MPR	Tune-up Limit		
		1	1	3710.04 MHz	3762.03 MHz	3814.02 MHz	3866.01 MHz	3918 MHz	3969.96 MHz	0	21.5	1	1	3710.04 MHz	3762.03 MHz	3814.02 MHz	3866.01 MHz	3918 MHz	3969.96 MHz	0	10
		1	49				21.5			0	21.5	1	49				9.5			0	10
	π/2 BPSK	1	1	647168	650702	654234	657768	661300	664832	MPR	Tune-up Limit	647168	650702	654234	657768	661300	664832	MPR	Tune-up Limit		
		1	1	3707.52 MHz	3760.53 MHz	3813.51 MHz	3866.52 MHz	3919.5 MHz	3972.48 MHz	0	21.5	1	1	3707.52 MHz	3760.53 MHz	3813.51 MHz	3866.52 MHz	3919.5 MHz	3972.48 MHz	0	10
		1	36				21.5			0	21.5	1	36				10.0			0	10
40	π/2 BPSK	1	1	647002	650602	654202	657800	661400	664998	MPR	Tune-up Limit	647002	650602	654202	657800	661400	664998	MPR	Tune-up Limit		
		1	1	3705.03 MHz	3759.03 MHz	3813.03 MHz	3867 MHz	3921 MHz	3974.97 MHz	0	21.5	1	1	3705.03 MHz	3759.03 MHz	3813.03 MHz	3867 MHz	3921 MHz	3974.97 MHz	0	10
		1	22				21.5			0	21.5	1	22				10.0			0	10
	π/2 BPSK	1	1	646832	650432	654032	657632	661232	664832	MPR	Tune-up Limit	646832	650432	654032	657632	661232	664832	MPR	Tune-up Limit		
		1	1	3702.53 MHz	3756.53 MHz	3810.53 MHz	3864.54 MHz	3918.55 MHz	3972.56 MHz	0	21.5	1	1	3702.53 MHz	3756.53 MHz	3810.53 MHz	3864.54 MHz	3918.55 MHz	3972.56 MHz	0	10
		1	36				21.5			0	21.5	1	36				10.0			0	10
30	π/2 BPSK	1	1	646664	650264	653864	657464	661064	664664	MPR	Tune-up Limit	646664	650264	653864	657464	661064	664664	MPR	Tune-up Limit		
		1	1	3700.04 MHz	3754.04 MHz	3808.04 MHz	3862.05 MHz	3916.06 MHz	3970.07 MHz	0	21.5	1	1	3700.04 MHz	3754.04 MHz	3808.04 MHz	3862.05 MHz	3916.06 MHz	3970.07 MHz	0	10
		1	22				21.5			0	21.5	1	22				10.0			0	10
	π/2 BPSK	1	1	646500	650100	653700	657300	660900	664500	MPR	Tune-up Limit	646500	650100	653700	657300	660900	664500	MPR	Tune-up Limit		
		1	1	3697.54 MHz	3751.54 MHz	3805.54 MHz	3859.55 MHz	3913.56 MHz	3967.57 MHz	0	21.5	1	1	3697.54 MHz	3751.54 MHz	3805.54 MHz	3859.55 MHz	3913.56 MHz	3967.57 MHz	0	10
		1	22				21.5			0	21.5	1	22				10.0			0	10

9.6. Wi-Fi 2.4GHz (DTS Band)

Maximum Output Power (Tune-up Limit) for Wi-Fi 2.4 GHz

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

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

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

Mode	Bandwidth	Channel	Frequency (MHz)	Tune-up Limit (dBm)			
				SISO ANT 1		MIMO ANT 1 + ANT 2	
				Max	Reduced	Max	Reduced
802.11b DSSS	20 MHz	1	2412	18.0	10.0	21.0	13.0
		6	2437	18.0	10.0	21.0	13.0
		11	2462	18.0	10.0	21.0	13.0
		12	2467	6.0	6.0	9.0	9.0
		13	2472	2.0	2.0	5.0	5.0
802.11g/n/ax OFDM	20 MHz	1	2412	17.0	9.5	20.0	12.5
		6	2437	17.0	9.5	20.0	12.5
		11	2462	14.0	9.5	17.0	12.5
		12	2467	5.0	5.0	8.0	8.0
		13	2472	-2.0	-2.0	1.0	1.0

Wi-Fi 2.4GHz Measured Results

Mode	Antenna	Ch #	Freq. (MHz)	Max Power (dBm)			Reduced Power (dBm)		
				Meas Pwr	Tune-up Limit	SAR Test (Yes/No)	Meas Pwr	Tune-up Limit	SAR Test (Yes/No)
DSSS 802.11b	ANT 1	1	2412	17.7	18.0	Yes	8.7	10.0	Yes
		6	2437	17.8	18.0		9.6	10.0	
		11	2462	17.4	18.0		8.9	10.0	
	ANT 2	1	2412	17.5	18.0	Yes	8.9	10.0	Yes
		6	2437	17.8	18.0		8.6	10.0	
		11	2462	17.3	18.0		8.3	10.0	

Note(s):

- SAR is not required for channels 12 and 13 because the tune-up limit and the measured output power for these two channels are not greater than those for the default test channels. Refer to KDB 248227 D01 section 3.1
- Only ANT 1 supports Wi-Fi 2.4GHz SISO. To determine compliance for both antennas, MIMO was used for evaluations.

9.7. Wi-Fi 5GHz (U-NII 1-4 Bands)

Maximum Output Power (Tune-up Limit) for Wi-Fi 5 GHz

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/n/ac/ax modes, the channel in the lower order/sequence 802.11 transmission mode is selected.

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

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

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.

Mode	Bandwidth	Channel	Frequency (MHz)	Tune-up Limit (dBm)			
				SISO ANT 2		MIMO ANT 1+ ANT 2	
				Max	Reduced	Max	Reduced
U-NII-1 5.2 GHz	802.11a 20 MHz	36	5180	17.0	8.5	20.0	11.5
		40	5200	17.0	8.5	20.0	11.5
		44	5220	17.0	8.5	20.0	11.5
		48	5240	17.0	8.5	20.0	11.5
	802.11 n/ac/ax 20 MHz	36	5180	16.0	8.0	19.0	11.0
		40	5200	16.0	8.0	19.0	11.0
		44	5220	16.0	8.0	19.0	11.0
		48	5240	16.0	8.0	19.0	11.0
	802.11n/ac/ax 40 MHz	38	5190	11.0	8.0	14.0	11.0
		46	5230	14.0	8.0	17.0	11.0
	802.11ac/ax 80 MHz	42	5210	11.0	8.0	14.0	11.0
U-NII-2A 5.3 GHz	802.11a 20 MHz	52	5260	17.0	8.5	20.0	11.5
		56	5280	17.0	8.5	20.0	11.5
		60	5300	17.0	8.5	20.0	11.5
		64	5320	17.0	8.5	20.0	11.5
	802.11 n/ac/ax 20 MHz	52	5260	16.0	8.0	19.0	11.0
		56	5280	16.0	8.0	19.0	11.0
		60	5300	16.0	8.0	19.0	11.0
		64	5320	16.0	8.0	19.0	11.0
	802.11n/ac/ax 40 MHz	54	5270	14.0	8.0	17.0	11.0
		62	5310	14.0	8.0	17.0	11.0
	802.11ac/ax 80 MHz	58	5290	11.0	8.0	14.0	11.0
U-NII-2C 5.5 GHz	802.11a 20 MHz	100	5500	17.0	8.5	20.0	11.5
		116	5580	17.0	8.5	20.0	11.5
		124	5620	17.0	8.5	20.0	11.5
		144	5720	17.0	8.5	20.0	11.5
	802.11 n/ac/ax 20 MHz	100	5500	16.0	8.0	19.0	11.0
		116	5580	16.0	8.0	19.0	11.0
		124	5620	16.0	8.0	19.0	11.0
		144	5720	16.0	8.0	19.0	11.0
	802.11n/ac/ax 40 MHz	102	5510	14.0	8.0	17.0	11.0
		118	5590	14.0	8.0	17.0	11.0
		126	5630	14.0	8.0	17.0	11.0
		142	5710	14.0	8.0	17.0	11.0
	802.11ac/ax 80 MHz	106	5530	13.0	8.0	16.0	11.0
		122	5610	13.0	8.0	16.0	11.0
		138	5690	13.0	8.0	16.0	11.0

Mode	Bandwidth	Channel	Frequency (MHz)	Tune-up Limit (dBm)			
				SISO ANT 2		MIMO ANT 1+ ANT 2	
				Max	Reduced	Max	Reduced
U-NII-3 5.8 GHz	802.11a 20 MHz	149	5745	17.0	9.5	20.0	12.5
		157	5785	17.0	9.5	20.0	12.5
		165	5825	17.0	9.5	20.0	12.5
	802.11 n/ac/ax 20 MHz	149	5745	13.5	9.0	16.5	12.0
		157	5785	13.5	9.0	16.5	12.0
		165	5825	13.5	9.0	16.5	12.0
	802.11n/ac/ax 40 MHz	151	5755	13.5	9.0	17.5	12.0
		159	5795	13.5	9.0	17.5	12.0
	802.11ac/ax 80 MHz	155	5775	12.0	9.0	15.0	12.0
U-NII-4 5.9 GHz	802.11a 20 MHz	169	5845	17.0	9.5	20.0	12.5
		173	5865	17.0	9.5	20.0	12.5
		177	5885	17.0	9.5	20.0	12.5
	802.11 n/ac/ax 20 MHz	173	5865	16.0	9.0	19.0	12.0
		177	5885	16.0	9.0	19.0	12.0
		181	5905	16.0	9.0	19.0	12.0
	802.11n/ac/ax 40 MHz	175	5875	14.0	9.0	17.0	12.0
	802.11ac/ax 80 MHz	171	5855	13.0	9.0	16.0	12.0

Wi-Fi 5 GHz Measured Results

Band	Mode	Antenna	Ch #	Freq. (MHz)	Max Power (dBm)			Reduced Power (dBm)		
					Meas Pwr	Tune-up Limit	SAR Test (Yes/No)	Meas Pwr	Tune-up Limit	SAR Test (Yes/No)
UNII-2A 5.3 GHz	802.11a	ANT 1	52	5260	16.2	17.0	Yes	7.2	8.5	Yes
			56	5280	16.2	17.0		7.1	8.5	
			60	5300	16.0	17.0		7.1	8.5	
			64	5320	15.4	17.0		6.7	8.5	
		ANT 2	52	5260	15.0	17.0	Yes	7.8	8.5	Yes
			56	5280	15.4	17.0		7.3	8.5	
			60	5300	15.3	17.0		7.5	8.5	
			64	5320	15.3	17.0		7.4	8.5	
Band	Mode	Antenna	Ch #	Freq. (MHz)	Meas Pwr	Tune-up Limit	SAR Test (Yes/No)	Meas Pwr	Tune-up Limit	SAR Test (Yes/No)
UNII-2C 5.5 GHz	802.11a	ANT 1	100	5500	16.1	17.0	Yes	8.1	8.5	Yes
			116	5580	16.3	17.0		8.1	8.5	
			124	5620	16.1	17.0		7.8	8.5	
			144	5720	16.2	17.0		7.8	8.5	
		ANT 2	100	5500	15.4	17.0	Yes	7.3	8.5	Yes
			116	5580	15.5	17.0		6.5	8.5	
			124	5620	15.1	17.0		6.7	8.5	
			144	5720	15.7	17.0		7.1	8.5	
Band	Mode	Antenna	Ch #	Freq. (MHz)	Meas Pwr	Tune-up Limit	SAR Test (Yes/No)	Meas Pwr	Tune-up Limit	SAR Test (Yes/No)
UNII-3 5.8 GHz	802.11a	ANT 1	149	5745	16.2	17.0	Yes	7.7	9.5	Yes
			157	5785	16.1	17.0		7.9	9.5	
			165	5825	16.2	17.0		9.4	9.5	
		ANT 2	149	5745	15.8	17.0	Yes	8.2	9.5	Yes
			157	5785	16.0	17.0		9.4	9.5	
			165	5825	16.3	17.0		8.9	9.5	
Band	Mode	Antenna	Ch #	Freq. (MHz)	Meas Pwr	Tune-up Limit	SAR Test (Yes/No)	Meas Pwr	Tune-up Limit	SAR Test (Yes/No)
UNII-4 5.9 GHz	802.11a	ANT 1	169	5845	15.7	17.0	Yes	8.5	9.5	Yes
			173	5865	15.9	17.0		7.6	9.5	
			177	5885	15.6	17.0		7.6	9.5	
		ANT 2	169	5845	16.0	17.0	Yes	9.5	9.5	Yes
			173	5865	15.7	17.0		9.4	9.5	
			177	5885	15.6	17.0		9.2	9.5	

Note(s):

Only ANT 2 supports Wi-Fi 5GHz SISO. To determine compliance for both antennas, MIMO was used for evaluations.

9.8. Bluetooth

Maximum Output Power (Tune-up Limit) for Bluetooth

From October 2016 TCB workshop, Power and SAR were measured with the device connected to a call box with hopping disabled using DH5 modulation. The duty cycle value from the device is taken from the Duty Cycle plot below.

SAR measurement is not required for the EDR and LE. When the secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode.

Band	Mode	Channel	Frequency (MHz)	Tune-up Limit (dBm)	
				ANT 1	
				Max Power	Reduced Power
Bluetooth 2.4 GHz	BR	0	2402	16.0	12.0
		39	2441	16.0	12.0
		78	2480	16.0	12.0
	EDR	0	2402	12.0	12.0
		39	2441	12.0	12.0
		78	2480	12.0	12.0
	LE 125/500 Kbps	0	2402	13.0	12.0
		19	2440	13.0	12.0
		39	2480	13.0	12.0
	LE 1/2 Mbps	0	2402	16.0	12.0
		19	2440	16.0	12.0
		39	2480	16.0	12.0

Bluetooth Measured Results

Band	Mode	Ch #	Freq. (MHz)	ANT 1 Max Power (dBm)			ANT 1 Reduced Power (dBm)		
				Meas Pwr	Tune-up Limit	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
Bluetooth 2.4 GHz	BR GFSK	0	2402	14.4	16.0	Yes	10.6	12.0	Yes
		39	2441	14.3	16.0		10.7	12.0	
		78	2480	14.8	16.0		10.7	12.0	

Duty Factor Measured Results

Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
GFSK	DH5	2.875	3.753	77.61%	1.29

Note(s):

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

Duty Cycle plots

GFSK



10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

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

KDB 447498 D01 General RF Exposure Guidance:

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

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

KDB 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. GSM850

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	GPRS 4 Slots	RSI 0	20	Back	190	836.6	27.5	26.4	0.260	0.335	1
Main 1	Standalone	GPRS 4 Slots	RSI 0	26	Edge Top	190	836.6	27.5	26.4	0.194	0.250	
Main 1	Standalone	GPRS 4 Slots	RSI 0	0	Edge Right	190	836.6	27.5	26.4	0.098	0.126	
Main 1	Standalone	GPRS 4 Slots	RSI 0	0	Edge Left	190	836.6	27.5	26.4	0.084	0.108	
Main 1	Standalone	GPRS 4 Slots	Grip	0	Back	190	836.6	18.0	16.8	0.166	0.219	2
Main 1	Standalone	GPRS 4 Slots	Grip	0	Edge Top	190	836.6	18.0	16.8	0.139	0.183	

10.2. GSM1900

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	GPRS 4 Slots	RSI 0	20	Back	661	1880	24.5	23.7	0.122	0.147	
Main 1	Standalone	GPRS 4 Slots	RSI 0	26	Edge Top	661	1880	24.5	23.7	0.159	0.191	
Main 1	Standalone	GPRS 4 Slots	RSI 0	0	Edge Right	661	1880	24.5	23.7	0.189	0.227	3
Main 1	Standalone	GPRS 4 Slots	RSI 0	0	Edge Left	661	1880	24.5	23.7	0.025	0.030	
Main 1	Standalone	GPRS 4 Slots	Grip	0	Back	661	1880	16.0	14.5	0.247	0.349	4
Main 1	Standalone	GPRS 4 Slots	Grip	0	Edge Top	661	1880	16.0	14.5	0.240	0.339	

10.3. W-CDMA Band II

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	Rel. 99	RSI 0	20	Back	9400	1880	25.0	23.9	0.015	0.019	
Main 1	Standalone	Rel. 99	RSI 0	26	Edge Top	9400	1880	25.0	23.9	0.024	0.031	
Main 1	Standalone	Rel. 99	RSI 0	0	Edge Right	9400	1880	25.0	23.9	0.061	0.079	
Main 1	Standalone	Rel. 99	RSI 0	0	Edge Left	9400	1880	25.0	23.9	0.113	0.146	5
Main 1	Standalone	Rel. 99	Grip	0	Back	9400	1880	15.0	13.7	0.452	0.610	
Main 1	Standalone	Rel. 99	Grip	0	Edge Top	9400	1880	15.0	13.7	0.487	0.657	6

10.4. W-CDMA Band IV

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	Rel. 99	RSI 0	20	Back	1413	1732.6	25.0	24.1	0.184	0.227	
Main 1	Standalone	Rel. 99	RSI 0	26	Edge Top	1413	1732.6	25.0	24.1	0.181	0.224	
Main 1	Standalone	Rel. 99	RSI 0	0	Edge Right	1413	1732.6	25.0	24.1	0.294	0.363	7
Main 1	Standalone	Rel. 99	RSI 0	0	Edge Left	1413	1732.6	25.0	24.1	0.162	0.200	
Main 1	Standalone	Rel. 99	Grip	0	Back	1413	1732.6	15.0	13.7	0.388	0.528	
Main 1	Standalone	Rel. 99	Grip	0	Edge Top	1413	1732.6	15.0	13.7	0.556	0.750	8

10.5. W-CDMA Band V

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	Rel. 99	RSI 0	20	Back	4183	836.6	25.0	24.2	0.374	0.450	9
Main 1	Standalone	Rel. 99	RSI 0	26	Edge Top	4183	836.6	25.0	24.2	0.372	0.447	
Main 1	Standalone	Rel. 99	RSI 0	0	Edge Right	4183	836.6	25.0	24.2	0.131	0.157	
Main 1	Standalone	Rel. 99	RSI 0	0	Edge Left	4183	836.6	25.0	24.2	0.114	0.137	
Main 1	Standalone	Rel. 99	Grip	0	Back	4183	836.6	15.0	13.7	0.237	0.320	10
Main 1	Standalone	Rel. 99	Grip	0	Edge Top	4183	836.6	15.0	13.7	0.167	0.225	

10.6. LTE Band 2 (20MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Sub 1	Standalone	QPSK	Max Power	21	Back	18900	1880	1	0	24.5	24.0	0.166	0.186	
Sub 1	Standalone	QPSK	Max Power	21	Back	18900	1880	50	0	23.5	23.0	0.135	0.151	
Sub 1	Standalone	QPSK	Max Power	9	Edge Right	18900	1880	1	0	24.5	24.0	0.661	0.742	11
Sub 1	Standalone	QPSK	Max Power	9	Edge Right	18900	1880	50	0	23.5	23.0	0.533	0.598	
Sub 1	Standalone	QPSK	Max Power	27	Edge Bottom	18900	1880	1	0	24.5	24.0	0.151	0.169	
Sub 1	Standalone	QPSK	Max Power	27	Edge Bottom	18900	1880	50	0	23.5	23.0	0.122	0.137	
Sub 1	Standalone	QPSK	Reduced Power	0	Back	18900	1880	1	0	13.0	12.6	0.351	0.385	
Sub 1	Standalone	QPSK	Reduced Power	0	Back	18900	1880	50	0	13.0	12.5	0.347	0.389	
Sub 1	Standalone	QPSK	Reduced Power	0	Edge Right	18900	1880	1	0	13.0	12.6	0.359	0.394	
Sub 1	Standalone	QPSK	Reduced Power	0	Edge Right	18900	1880	50	0	13.0	12.5	0.363	0.407	12
Sub 1	Standalone	QPSK	Reduced Power	0	Edge Bottom	18900	1880	1	0	13.0	12.6	0.122	0.134	
Sub 1	Standalone	QPSK	Reduced Power	0	Edge Bottom	18900	1880	50	0	13.0	12.5	0.122	0.137	

10.7. LTE Band 5 (10MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	QPSK	RSI 0	20	Back	20525	836.5	1	0	25.0	24.5	0.362	0.406	13
Main 1	Standalone	QPSK	RSI 0	20	Back	20525	836.5	25	0	24.0	23.5	0.288	0.323	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	20525	836.5	1	0	25.0	24.5	0.285	0.320	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	20525	836.5	25	0	24.0	23.5	0.227	0.255	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	20525	836.5	1	0	25.0	24.5	0.171	0.192	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	20525	836.5	25	0	24.0	23.5	0.132	0.148	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	20525	836.5	1	0	25.0	24.5	0.099	0.111	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	20525	836.5	25	0	24.0	23.5	0.079	0.089	
Main 1	Standalone	QPSK	Grip	0	Back	20525	836.5	1	0	18.0	17.0	0.400	0.504	
Main 1	Standalone	QPSK	Grip	0	Back	20525	836.5	25	0	18.0	17.0	0.407	0.512	14
Main 1	Standalone	QPSK	Grip	0	Edge Top	20525	836.5	1	0	18.0	17.0	0.249	0.313	
Main 1	Standalone	QPSK	Grip	0	Edge Top	20525	836.5	25	0	18.0	17.0	0.278	0.350	

10.8. LTE Band 12 (10MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	QPSK	RSI 0	20	Back	23095	707.5	1	0	25.0	24.4	0.246	0.282	15
Main 1	Standalone	QPSK	RSI 0	20	Back	23095	707.5	25	0	24.0	23.4	0.194	0.223	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	23095	707.5	1	0	25.0	24.4	0.187	0.215	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	23095	707.5	25	0	24.0	23.4	0.148	0.170	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	23095	707.5	1	0	25.0	24.4	0.126	0.145	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	23095	707.5	25	0	24.0	23.4	0.098	0.113	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	23095	707.5	1	0	25.0	24.4	0.082	0.094	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	23095	707.5	25	0	24.0	23.4	0.064	0.073	
Main 1	Standalone	QPSK	Grip	0	Back	23095	707.5	1	49	20.0	18.8	0.419	0.552	
Main 1	Standalone	QPSK	Grip	0	Back	23095	707.5	25	25	20.0	18.9	0.436	0.562	16
Main 1	Standalone	QPSK	Grip	0	Edge Top	23095	707.5	1	49	20.0	18.8	0.319	0.421	
Main 1	Standalone	QPSK	Grip	0	Edge Top	23095	707.5	25	25	20.0	18.9	0.333	0.429	

10.9. LTE Band 13 (10MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	QPSK	RSI 0	20	Back	23230	782	1	49	25.0	24.3	0.330	0.388	17
Main 1	Standalone	QPSK	RSI 0	20	Back	23230	782	25	25	24.0	23.4	0.251	0.288	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	23230	782	1	49	25.0	24.3	0.231	0.271	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	23230	782	25	25	24.0	23.4	0.185	0.212	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	23230	782	1	49	25.0	24.3	0.100	0.117	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	23230	782	25	25	24.0	23.4	0.079	0.091	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	23230	782	1	49	25.0	24.3	0.069	0.081	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	23230	782	25	25	24.0	23.4	0.054	0.062	
Main 1	Standalone	QPSK	Grip	0	Back	23230	782	1	49	20.0	18.9	0.407	0.524	
Main 1	Standalone	QPSK	Grip	0	Back	23230	782	25	25	20.0	18.9	0.408	0.526	18
Main 1	Standalone	QPSK	Grip	0	Edge Top	23230	782	1	49	20.0	18.9	0.297	0.383	
Main 1	Standalone	QPSK	Grip	0	Edge Top	23230	782	25	25	20.0	18.9	0.301	0.388	

10.10. LTE Band 25 (20MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	QPSK	RSI 0	20	Back	26365	1882.5	1	99	26.0	24.9	0.280	0.361	
Main 1	Standalone	QPSK	RSI 0	20	Back	26365	1882.5	50	0	25.0	23.9	0.226	0.291	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	26365	1882.5	1	99	26.0	24.9	0.242	0.312	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	26365	1882.5	50	0	25.0	23.9	0.201	0.259	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	26365	1882.5	1	99	26.0	24.9	0.508	0.654	19
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	26365	1882.5	50	0	25.0	23.9	0.382	0.492	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	26365	1882.5	1	99	26.0	24.9	0.078	0.100	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	26365	1882.5	50	0	25.0	23.9	0.064	0.082	
Main 1	Standalone	QPSK	Grip	0	Back	26140	1860	1	0	17.0	16.0	0.664	0.836	
Main 1	Standalone	QPSK	Grip	0	Back	26140	1860	50	0	17.0	16.0	0.643	0.809	
Main 1	Standalone	QPSK	Grip	0	Back	26140	1860	100	0	17.0	16.0	0.628	0.791	
Main 1	Standalone	QPSK	Grip	0	Back	26365	1882.5	1	0	17.0	16.0	0.728	0.916	
Main 1	Standalone	QPSK	Grip	0	Back	26365	1882.5	50	0	17.0	15.9	0.714	0.920	
Main 1	Standalone	QPSK	Grip	0	Back	26590	1905	1	99	17.0	16.0	0.597	0.752	
Main 1	Standalone	QPSK	Grip	0	Back	26590	1905	50	0	17.0	16.0	0.606	0.763	
Main 1	Standalone	QPSK	Grip	0	Edge Top	26140	1860	1	0	17.0	16.0	0.790	0.995	20
Main 1	Standalone	QPSK	Grip	0	Edge Top	26140	1860	50	0	17.0	16.0	0.766	0.964	
Main 1	Standalone	QPSK	Grip	0	Edge Top	26140	1860	100	0	17.0	16.0	0.749	0.943	
Main 1	Standalone	QPSK	Grip	0	Edge Top	26365	1882.5	1	0	17.0	16.0	0.771	0.971	
Main 1	Standalone	QPSK	Grip	0	Edge Top	26365	1882.5	50	0	17.0	15.9	0.760	0.979	
Main 1	Standalone	QPSK	Grip	0	Edge Top	26590	1905	1	99	17.0	16.0	0.682	0.859	
Main 1	Standalone	QPSK	Grip	0	Edge Top	26590	1905	50	0	17.0	16.0	0.711	0.895	

10.11. LTE Band 26 (15MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	QPSK	RSI 0	20	Back	26865	831.5	1	0	25.5	24.7	0.306	0.368	21
Main 1	Standalone	QPSK	RSI 0	20	Back	26865	831.5	36	0	24.5	23.8	0.245	0.288	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	26865	831.5	1	0	25.5	24.7	0.230	0.277	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	26865	831.5	36	0	24.5	23.8	0.187	0.220	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	26865	831.5	1	0	24.5	24.7	0.131	0.125	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	26865	831.5	36	0	24.5	23.8	0.117	0.137	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	26865	831.5	1	0	25.5	24.7	0.083	0.100	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	26865	831.5	36	0	24.5	23.8	0.070	0.082	
Main 1	Standalone	QPSK	Grip	0	Back	26865	831.5	1	0	17.5	17.1	0.415	0.455	22
Main 1	Standalone	QPSK	Grip	0	Back	26865	831.5	36	0	17.5	17.1	0.407	0.446	
Main 1	Standalone	QPSK	Grip	0	Edge Top	26865	831.5	1	0	17.5	17.1	0.323	0.354	
Main 1	Standalone	QPSK	Grip	0	Edge Top	26865	831.5	36	0	17.5	17.1	0.318	0.349	

10.12. LTE Band 41 (20MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	QPSK	RSI 0	20	Back	40620	2593	1	0	26.0	25.0	0.155	0.195	
Main 1	Standalone	QPSK	RSI 0	20	Back	40620	2593	50	0	25.0	24.0	0.129	0.162	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	40620	2593	1	0	26.0	25.0	0.141	0.178	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	40620	2593	50	0	25.0	24.0	0.113	0.142	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	40620	2593	1	0	26.0	25.0	0.241	0.303	23
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	40620	2593	50	0	25.0	24.0	0.195	0.245	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	40620	2593	1	0	26.0	25.0	0.152	0.191	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	40620	2593	50	0	25.0	24.0	0.125	0.157	
Main 1	Standalone	QPSK	Grip	0	Back	39750	2506	1	0	16.0	15.3	0.661	0.777	
Main 1	Standalone	QPSK	Grip	0	Back	39750	2506	50	0	16.0	15.3	0.652	0.766	
Main 1	Standalone	QPSK	Grip	0	Back	39750	2506	100	0	16.0	15.3	0.538	0.632	
Main 1	Standalone	QPSK	Grip	0	Back	40185	2549.5	1	99	16.0	15.1	0.603	0.742	
Main 1	Standalone	QPSK	Grip	0	Back	40185	2549.5	50	24	16.0	15.0	0.737	0.928	24
Main 1	Standalone	QPSK	Grip	0	Back	40620	2593	1	0	16.0	14.6	0.620	0.856	
Main 1	Standalone	QPSK	Grip	0	Back	40620	2593	50	0	16.0	14.6	0.614	0.848	
Main 1	Standalone	QPSK	Grip	0	Back	41055	2636.5	1	99	16.0	14.5	0.523	0.739	
Main 1	Standalone	QPSK	Grip	0	Back	41055	2636.5	50	0	16.0	14.4	0.509	0.736	
Main 1	Standalone	QPSK	Grip	0	Back	41490	2680	1	99	16.0	14.8	0.551	0.726	
Main 1	Standalone	QPSK	Grip	0	Back	41490	2680	50	50	16.0	14.7	0.552	0.745	
Main 1	Standalone	QPSK	Grip	0	Edge Top	40620	2593	1	0	16.0	14.6	0.492	0.679	
Main 1	Standalone	QPSK	Grip	0	Edge Top	40620	2593	50	0	16.0	14.6	0.493	0.681	

10.13. LTE Band 66 (20MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	QPSK	RSI 0	20	Back	132322	1745	1	99	26.0	25.1	0.181	0.223	
Main 1	Standalone	QPSK	RSI 0	20	Back	132322	1745	50	50	25.0	24.1	0.147	0.181	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	132322	1745	1	99	26.0	25.1	0.191	0.235	
Main 1	Standalone	QPSK	RSI 0	26	Edge Top	132322	1745	50	50	25.0	24.1	0.152	0.187	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	132322	1745	1	99	26.0	25.1	0.308	0.379	
Main 1	Standalone	QPSK	RSI 0	0	Edge Right	132322	1745	50	50	25.0	24.1	0.242	0.298	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	132322	1745	1	99	26.0	25.1	0.017	0.021	
Main 1	Standalone	QPSK	RSI 0	0	Edge Left	132322	1745	50	50	25.0	24.1	0.017	0.021	
Main 1	Standalone	QPSK	Grip	0	Back	132322	1745	1	0	17.0	15.7	0.564	0.761	
Main 1	Standalone	QPSK	Grip	0	Back	132322	1745	50	0	17.0	15.7	0.564	0.761	
Main 1	Standalone	QPSK	Grip	0	Edge Top	132072	1720	1	0	17.0	15.7	0.776	1.047	25
Main 1	Standalone	QPSK	Grip	0	Edge Top	132072	1720	50	0	17.0	15.6	0.755	1.042	
Main 1	Standalone	QPSK	Grip	0	Edge Top	132322	1745	1	0	17.0	15.7	0.732	0.987	
Main 1	Standalone	QPSK	Grip	0	Edge Top	132322	1745	50	0	17.0	15.7	0.748	1.009	
Main 1	Standalone	QPSK	Grip	0	Edge Top	132572	1770	1	49	17.0	15.7	0.716	0.966	
Main 1	Standalone	QPSK	Grip	0	Edge Top	132572	1770	50	24	17.0	15.8	0.724	0.954	
Main 1	Standalone	QPSK	Grip	0	Edge Top	132572	1770	100	0	17.0	15.8	0.727	0.958	
Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Sub 1	Standalone	QPSK	Max Power	21	Back	132322	1745	1	0	24.5	24.2	0.168	0.180	
Sub 1	Standalone	QPSK	Max Power	21	Back	132322	1745	50	0	23.5	23.1	0.131	0.144	
Sub 1	Standalone	QPSK	Max Power	9	Edge Right	132322	1745	1	0	24.5	24.2	0.471	0.505	26
Sub 1	Standalone	QPSK	Max Power	9	Edge Right	132322	1745	50	0	23.5	23.1	0.375	0.411	
Sub 1	Standalone	QPSK	Max Power	27	Edge Bottom	132322	1745	1	0	24.5	24.2	0.016	0.017	
Sub 1	Standalone	QPSK	Max Power	27	Edge Bottom	132322	1745	50	0	23.5	23.1	0.015	0.016	
Sub 1	Standalone	QPSK	Reduced Power	0	Back	132322	1745	1	0	14.0	13.5	0.186	0.209	
Sub 1	Standalone	QPSK	Reduced Power	0	Back	132322	1745	50	0	14.0	13.5	0.187	0.210	
Sub 1	Standalone	QPSK	Reduced Power	0	Edge Right	132322	1745	1	0	14.0	13.5	0.171	0.192	
Sub 1	Standalone	QPSK	Reduced Power	0	Edge Right	132322	1745	50	0	14.0	13.5	0.169	0.190	
Sub 1	Standalone	QPSK	Reduced Power	0	Edge Bottom	132322	1745	1	0	14.0	13.5	0.109	0.122	
Sub 1	Standalone	QPSK	Reduced Power	0	Edge Bottom	132322	1745	50	0	14.0	13.5	0.104	0.117	

10.14. NR Band n5 (20MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	20	Back	167300	836.5	1	1	25.0	24.5	0.207	0.232	27
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	20	Back	167300	836.5	50	28	25.0	24.2	0.192	0.231	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	26	Edge Top	167300	836.5	1	1	25.0	24.5	0.173	0.194	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	26	Edge Top	167300	836.5	50	28	25.0	24.2	0.193	0.232	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Right	167300	836.5	1	1	25.0	24.5	0.115	0.129	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Right	167300	836.5	50	28	25.0	24.2	0.109	0.131	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Left	167300	836.5	1	1	25.0	24.5	0.071	0.080	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Left	167300	836.5	50	28	25.0	24.2	0.065	0.078	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	167300	836.5	1	1	15.0	14.4	0.201	0.231	28
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	167300	836.5	50	28	15.0	14.3	0.169	0.199	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Top	167300	836.5	1	1	15.0	14.4	0.151	0.173	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Top	167300	836.5	50	28	15.0	14.3	0.136	0.160	

10.15. NR Band n41 (100MHz Bandwidth)

NR Band n41 SRS 1 Main 1

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	20	Back	518598	2592.99	1	1	19.0	18.9	0.039	0.040	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	20	Back	518598	2592.99	135	69	19.0	18.8	0.037	0.039	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	26	Edge Top	518598	2592.99	1	1	19.0	18.9	0.031	0.032	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	26	Edge Top	518598	2592.99	135	69	19.0	18.8	0.032	0.034	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	518598	2592.99	1	1	11.0	10.7	0.087	0.093	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	518598	2592.99	135	69	11.0	10.6	0.071	0.078	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Top	518598	2592.99	1	1	11.0	10.7	0.094	0.101	29
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Top	518598	2592.99	135	69	11.0	10.6	0.084	0.092	

NR Band n41 SRS 2 Sub 1

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Sub 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Max Power	21	Back	518598	2592.99	1	1	12.0	11.4	0.007	0.008	
Sub 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Max Power	21	Back	518598	2592.99	135	69	12.0	11.3	0.007	0.008	
Sub 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Max Power	9	Edge Right	518598	2592.99	1	1	12.0	11.4	0.031	0.036	
Sub 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Max Power	9	Edge Right	518598	2592.99	135	69	12.0	11.3	0.034	0.040	
Sub 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Max Power	27	Edge Bottom	518598	2592.99	1	1	12.0	11.4	0.005	0.006	
Sub 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Max Power	27	Edge Bottom	518598	2592.99	135	69	12.0	11.3	0.003	0.004	

NR Band n41 SRS 3 Sub 3

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Sub 3	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Back	518598	2592.99	1	1	11.0	10.1	0.451	0.555	
Sub 3	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Back	518598	2592.99	135	69	11.0	9.7	0.363	0.490	
Sub 3	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Bottom	518598	2592.99	1	1	11.0	10.1	0.567	0.698	
Sub 3	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Bottom	518598	2592.99	135	69	11.0	9.7	0.542	0.731	30

10.16. NR Band n66 (40MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	20	Back	349000	1745	1	1	25.0	24.2	0.163	0.196	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	20	Back	349000	1745	108	54	25.0	24.5	0.153	0.172	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	26	Edge Top	349000	1745	1	1	25.0	24.2	0.203	0.244	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	26	Edge Top	349000	1745	108	54	25.0	24.5	0.222	0.249	31
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Right	349000	1745	1	1	25.0	24.2	0.142	0.171	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Right	349000	1745	108	54	25.0	24.5	0.136	0.153	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Left	349000	1745	1	1	25.0	24.2	0.097	0.117	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	0	Edge Left	349000	1745	108	54	25.0	24.5	0.100	0.112	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	349000	1745	1	1	14.0	12.9	0.282	0.363	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	349000	1745	108	54	14.0	13.1	0.298	0.367	
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Top	349000	1745	1	1	14.0	12.9	0.352	0.453	32
Main 1	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Top	349000	1745	108	54	14.0	13.1	0.350	0.431	

10.17. NR Band n77 (Block A) PC3 (100MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	19	Back	633334	3500.01	1	271	19.5	18.7	0.004	0.005	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	19	Back	633334	3500.01	135	69	19.5	18.7	0.006	0.007	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	23	Edge Bottom	633334	3500.01	1	271	19.5	18.7	0.005	0.006	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	23	Edge Bottom	633334	3500.01	135	69	19.5	18.7	0.006	0.007	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	9	Edge Left	633334	3500.01	1	271	19.5	18.7	0.206	0.248	33
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	9	Edge Left	633334	3500.01	135	69	19.5	18.7	0.194	0.233	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	633334	3500.01	1	271	10.0	9.2	0.070	0.084	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	633334	3500.01	135	69	10.0	9.4	0.058	0.067	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Bottom	633334	3500.01	1	271	10.0	9.2	0.039	0.047	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Bottom	633334	3500.01	135	69	10.0	9.4	0.022	0.025	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Left	633334	3500.01	1	271	10.0	9.2	0.249	0.299	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Left	633334	3500.01	135	69	10.0	9.4	0.283	0.325	34

10.18. NR Band n77 (Block C) PC3 (100MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	19	Back	657200	3858	1	1	19.5	19.5	0.029	0.029	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	19	Back	657200	3858	135	69	19.5	19.3	0.068	0.071	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	23	Edge Bottom	657200	3858	1	1	19.5	19.5	0.018	0.018	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	23	Edge Bottom	657200	3858	135	69	19.5	19.3	0.002	0.002	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	9	Edge Left	657200	3858	1	1	19.5	19.5	0.180	0.180	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	9	Edge Left	657200	3858	135	69	19.5	19.3	0.203	0.213	35
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	657200	3858	1	1	10.0	10.0	0.312	0.312	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	657200	3858	135	69	10.0	9.6	0.377	0.413	36
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Bottom	657200	3858	1	1	10.0	10.0	0.120	0.120	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Bottom	657200	3858	135	69	10.0	9.6	0.105	0.115	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Left	657200	3858	1	1	10.0	10.0	0.171	0.171	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Left	657200	3858	135	69	10.0	9.6	0.191	0.209	

10.19. NR Band n77 (Block A) PC2 (100MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	19	Back	633334	3500.01	1	1	21.5	21.1	0.125	0.137	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	19	Back	633334	3500.01	135	69	21.5	20.7	0.096	0.115	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	23	Edge Bottom	633334	3500.01	1	1	21.5	21.1	0.032	0.035	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	23	Edge Bottom	633334	3500.01	135	69	21.5	20.7	0.039	0.047	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	9	Edge Left	633334	3500.01	1	1	21.5	21.1	0.639	0.701	37
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	9	Edge Left	633334	3500.01	135	69	21.5	20.7	0.561	0.674	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	633334	3500.01	1	271	10.0	9.2	0.070	0.084	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	633334	3500.01	135	69	10.0	9.4	0.058	0.067	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Bottom	633334	3500.01	1	271	10.0	9.2	0.039	0.047	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Bottom	633334	3500.01	135	69	10.0	9.4	0.022	0.025	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Left	633334	3500.01	1	271	10.0	9.2	0.249	0.299	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Left	633334	3500.01	135	69	10.0	9.4	0.283	0.325	38

10.20. NR Band n77 (Block C) PC2 (100MHz Bandwidth)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	RB Allocation	RB Offset	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	19	Back	657200	3858	1	271	21.5	20.7	0.109	0.131	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	19	Back	657200	3858	135	69	21.5	20.8	0.086	0.101	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	23	Edge Bottom	657200	3858	1	271	21.5	20.7	0.056	0.067	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	23	Edge Bottom	657200	3858	135	69	21.5	20.8	0.054	0.063	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	9	Edge Left	657200	3858	1	271	21.5	20.7	0.679	0.816	39
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	RSI 0	9	Edge Left	657200	3858	135	69	21.5	20.8	0.546	0.641	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	657200	3858	1	1	10.0	10.0	0.312	0.312	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Back	657200	3858	135	69	10.0	9.6	0.377	0.413	40
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Bottom	657200	3858	1	1	10.0	10.0	0.120	0.120	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Bottom	657200	3858	135	69	10.0	9.6	0.105	0.115	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Left	657200	3858	1	1	10.0	10.0	0.171	0.171	
Main 2	Standalone	DFT-s-OFDM $\pi/2$ BPSK	Grip	0	Edge Left	657200	3858	135	69	10.0	9.6	0.191	0.209	

10.21. Wi-Fi (DTS Band)

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 1	Standalone	802.11b	Max Power	19	Back	6	2437	98.29%	18.0	17.8	0.033	0.035	
ANT 1	Standalone	802.11b	Max Power	24	Edge Top	6	2437	98.29%	18.0	17.8	0.030	0.032	
ANT 1	Standalone	802.11b	Max Power	10	Edge Right	6	2437	98.29%	18.0	17.8	0.161	0.172	
ANT 1	Standalone	802.11b	Reduced Power	0	Back	6	2437	98.29%	10.0	9.6	0.133	0.148	
ANT 1	Standalone	802.11b	Reduced Power	0	Edge Top	6	2437	98.29%	10.0	9.6	0.127	0.142	
ANT 1	Standalone	802.11b	Reduced Power	0	Edge Right	6	2437	98.29%	10.0	9.6	0.265	0.296	
Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 2	Standalone	802.11b	Max Power	19	Back	6	2437	98.29%	18.0	17.8	0.048	0.051	
ANT 2	Standalone	802.11b	Max Power	24	Edge Top	6	2437	98.29%	18.0	17.8	0.027	0.029	
ANT 2	Standalone	802.11b	Max Power	9	Edge Left	6	2437	98.29%	18.0	17.8	0.208	0.222	41
ANT 2	Standalone	802.11b	Reduced Power	0	Back	6	2437	98.29%	10.0	8.6	0.204	0.286	
ANT 2	Standalone	802.11b	Reduced Power	0	Edge Top	6	2437	98.29%	10.0	8.6	0.121	0.170	
ANT 2	Standalone	802.11b	Reduced Power	0	Edge Left	6	2437	98.29%	10.0	8.6	0.256	0.360	42

Note(s):

Only ANT 1 supports Wi-Fi 2.4GHz SISO. To determine compliance for both antennas, MIMO was used for evaluations.

10.22. Wi-Fi (U-NII Band)

U-NII 1 & 2A

When the specified maximum output power is the same for both U-NII band 1 and U-NII band 2A, begin SAR measurement in U-NII band 2A; and if the highest reported SAR for U-NII band 2A is

- ≤ 1.2 W/kg, SAR is not required for U-NII band 1
- > 1.2 W/kg, both bands should be tested independently for SAR.

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 1	Standalone	802.11a	Max Power	19	Back	56	5280	93.32%	17.0	16.2	0.000	0.000	
ANT 1	Standalone	802.11a	Max Power	24	Edge Top	56	5280	93.32%	17.0	16.2	0.005	0.006	
ANT 1	Standalone	802.11a	Max Power	10	Edge Right	56	5280	93.32%	17.0	16.2	0.124	0.160	43
ANT 1	Standalone	802.11a	Reduced Power	0	Back	52	5260	93.32%	8.5	7.2	0.112	0.162	
ANT 1	Standalone	802.11a	Reduced Power	0	Edge Top	52	5260	93.32%	8.5	7.2	0.021	0.030	
ANT 1	Standalone	802.11a	Reduced Power	0	Edge Right	52	5260	93.32%	8.5	7.2	0.174	0.252	44
Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 2	Standalone	802.11a	Max Power	19	Back	56	5280	93.32%	17.0	15.4	0.015	0.023	
ANT 2	Standalone	802.11a	Max Power	24	Edge Top	56	5280	93.32%	17.0	15.4	0.007	0.011	
ANT 2	Standalone	802.11a	Max Power	9	Edge Left	56	5280	93.32%	17.0	15.4	0.096	0.149	
ANT 2	Standalone	802.11a	Reduced Power	0	Back	52	5260	93.32%	8.5	7.8	0.138	0.174	
ANT 2	Standalone	802.11a	Reduced Power	0	Edge Top	52	5260	93.32%	8.5	7.8	0.032	0.040	
ANT 2	Standalone	802.11a	Reduced Power	0	Edge Left	52	5260	93.32%	8.5	7.8	0.199	0.251	

U-NII 2C

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Area Scan Max. SAR (W/kg)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 1	Standalone	802.11a	Max Power	19	Back	116	5580	93.32%	0.027	17.0	16.3	0.022	0.028	
ANT 1	Standalone	802.11a	Max Power	24	Edge Top	116	5580	93.32%	0.030	17.0	16.3	0.026	0.033	
ANT 1	Standalone	802.11a	Max Power	10	Edge Right	116	5580	93.32%	0.244	17.0	16.3	0.244	0.307	45
ANT 1	Standalone	802.11a	Reduced Power	0	Back	100	5500	93.32%	0.545	8.5	8.1	0.310	0.364	
ANT 1	Standalone	802.11a	Reduced Power	0	Edge Top	100	5500	93.32%	0.090	8.5	8.1	0.044	0.052	
ANT 1	Standalone	802.11a	Reduced Power	0	Edge Right	100	5500	93.32%	0.467	8.5	8.1	0.314	0.369	
Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Area Scan Max. SAR (W/kg)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 2	Standalone	802.11a	Max Power	19	Back	116	5580	93.32%	0.027	17.0	15.5	0.027	0.041	
ANT 2	Standalone	802.11a	Max Power	24	Edge Top	116	5580	93.32%	0.030	17.0	15.5	0.007	0.011	
ANT 2	Standalone	802.11a	Max Power	9	Edge Left	116	5580	93.32%	0.074	17.0	15.5	0.077	0.117	
ANT 2	Standalone	802.11a	Reduced Power	0	Back	100	5500	93.32%	0.545	8.5	7.3	0.149	0.210	
ANT 2	Standalone	802.11a	Reduced Power	0	Edge Top	100	5500	93.32%	0.090	8.5	7.3	0.038	0.054	
ANT 2	Standalone	802.11a	Reduced Power	0	Edge Left	100	5500	93.32%	0.389	8.5	7.3	0.272	0.384	46

U-NII 3

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 1	Standalone	802.11a	Max Power	19	Back	165	5825	93.32%	17.0	16.2	0.009	0.012	
ANT 1	Standalone	802.11a	Max Power	24	Edge Top	165	5825	93.32%	17.0	16.2	0.004	0.005	
ANT 1	Standalone	802.11a	Max Power	10	Edge Right	165	5825	93.32%	17.0	16.2	0.065	0.084	
ANT 1	Standalone	802.11a	Reduced Power	0	Back	165	5825	93.32%	9.5	9.4	0.568	0.623	47
ANT 1	Standalone	802.11a	Reduced Power	0	Edge Top	165	5825	93.32%	9.5	9.4	0.058	0.064	
ANT 1	Standalone	802.11a	Reduced Power	0	Edge Right	165	5825	93.32%	9.5	9.4	0.248	0.272	
Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 2	Standalone	802.11a	Max Power	19	Back	165	5825	93.32%	17.0	16.3	0.013	0.016	
ANT 2	Standalone	802.11a	Max Power	24	Edge Top	165	5825	93.32%	17.0	16.3	0.004	0.005	
ANT 2	Standalone	802.11a	Max Power	9	Edge Left	165	5825	93.32%	17.0	16.3	0.115	0.145	48
ANT 2	Standalone	802.11a	Reduced Power	0	Back	165	5825	93.32%	9.5	8.9	0.216	0.266	
ANT 2	Standalone	802.11a	Reduced Power	0	Edge Top	165	5825	93.32%	9.5	8.9	0.027	0.033	
ANT 2	Standalone	802.11a	Reduced Power	0	Edge Left	165	5825	93.32%	9.5	8.9	0.221	0.272	

U-NII 4

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 1	Standalone	802.11a	Max Power	19	Back	169	5845	93.32%	17.0	15.7	0.019	0.027	
ANT 1	Standalone	802.11a	Max Power	24	Edge Top	169	5845	93.32%	17.0	15.7	0.009	0.013	
ANT 1	Standalone	802.11a	Max Power	10	Edge Right	169	5845	93.32%	17.0	15.7	0.082	0.119	49
ANT 1	Standalone	802.11a	Reduced Power	0	Back	169	5845	93.32%	9.5	8.5	0.312	0.421	50
ANT 1	Standalone	802.11a	Reduced Power	0	Edge Top	169	5845	93.32%	9.5	8.5	0.042	0.057	
ANT 1	Standalone	802.11a	Reduced Power	0	Edge Right	169	5845	93.32%	9.5	8.5	0.166	0.224	
Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Duty Cycle (%)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 2	Standalone	802.11a	Max Power	19	Back	169	5845	93.32%	17.0	16.0	0.013	0.018	
ANT 2	Standalone	802.11a	Max Power	24	Edge Top	169	5845	93.32%	17.0	16.0	0.007	0.009	
ANT 2	Standalone	802.11a	Max Power	9	Edge Left	169	5845	93.32%	17.0	16.0	0.085	0.115	
ANT 2	Standalone	802.11a	Reduced Power	0	Back	169	5845	93.32%	9.5	9.5	0.126	0.135	
ANT 2	Standalone	802.11a	Reduced Power	0	Edge Top	169	5845	93.32%	9.5	9.5	0.025	0.027	
ANT 2	Standalone	802.11a	Reduced Power	0	Edge Left	169	5845	93.32%	9.5	9.5	0.182	0.195	

Note(s):

Only ANT 2 supports Wi-Fi 5GHz SISO. To determine compliance for both antennas, MIMO was used for evaluations.

10.23. Bluetooth

Antenna(s)	RF Exposure Condition(s)	Mode(s)	Power Mode(s)	Dist. (mm)	Test Position(s)	Channel	Freq. (MHz)	Max Output Pwr (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
ANT 1	Standalone	GFSK (BDR)	Max Power	19	Back	39	2441	16.0	14.3	0.003	0.004	
ANT 1	Standalone	GFSK (BDR)	Max Power	24	Edge Top	39	2441	16.0	14.3	0.002	0.003	
ANT 1	Standalone	GFSK (BDR)	Max Power	10	Edge Right	39	2441	16.0	14.3	0.021	0.031	51
ANT 1	Standalone	GFSK (BDR)	Reduced Power	0	Back	39	2441	12.0	10.7	0.120	0.162	
ANT 1	Standalone	GFSK (BDR)	Reduced Power	0	Edge Top	39	2441	12.0	10.7	0.080	0.108	
ANT 1	Standalone	GFSK (BDR)	Reduced Power	0	Edge Right	39	2441	12.0	10.7	0.135	0.182	52

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.

Note(s):

Repeated measurement is not required since the original highest measured SAR is <0.8 W/kg (1-g) or 2 W/kg (10-g) .

12. Simultaneous Transmission Conditions

RF Exposure Condition	Item	Capable Transmit Configurations			
Standalone	1	WWAN	+	DTS Ant.1	
	2	WWAN	+	DTS MIMO	
	3	WWAN	+	U-NII Ant.2	
	4	WWAN	+	U-NII MIMO	
	5	WWAN	+	BT Ant.1	
	6	WWAN	+	U-NII Ant.2	+ BT Ant.1

Notes:

- Only DTS Ch. 1-11 & U-NII Ch. 149-165 support Hotspot.
- GPRS/EDGE, W-CDMA, LTE and FR1 support Hotspot.
- VoIP is supported in GPRS/EDGE, W-CDMA, LTE and FR1.
- DTS Radio cannot transmit simultaneously with Bluetooth Radio.
- U-NII Radio can transmit simultaneously with Bluetooth Radio.
- EN-DC supports simultaneous transmission
- Antenna grouping information:

Group	ANT		
Group 0	Main 1		
Group 1	Main 2	Sub 2	Sub 3

Group 0 and Group 1 can transmit simultaneously.

Group 0 LTE and Group 0 NR can transmit simultaneously

12.1. Simultaneous transmission SAR test exclusion considerations

KDB 447498 D01 General RF Exposure Guidance provides two procedures for determining simultaneous transmission SAR test exclusion: Sum of SAR and SAR to Peak Location Ratio (SPLSR)

Sum of SAR

To qualify for simultaneous transmission SAR test exclusion based upon Sum of SAR the sum of the reported standalone SARs for all simultaneously transmitting antennas shall be below the applicable standalone SAR limit. If the sum of the SARs is above the applicable limit then simultaneous transmission SAR test exclusion may still apply if the requirements of the SAR to Peak Location Ratio (SPLSR) evaluation are met.

SAR to Peak Location Ratio (SPLSR)

KDB 447498 D01 General RF Exposure Guidance explains how to calculate the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

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

Where:

SAR₁ is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR₂ is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

R_i is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of

$$[(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2]$$

In order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / Ri \leq 0.04$$

When an individual antenna transmits at on two bands simultaneously, the sum of the highest reported SAR for the frequency bands should be used to determine **SAR₁**.or **SAR₂**. When SPLSR is necessary, the smallest distance between the peak SAR locations for the antenna pair with respect to the peaks from each antenna should be used.

The antennas in all antenna pairs that do not qualify for simultaneous transmission SAR test exclusion must be tested for SAR compliance, according to the enlarged zoom scan and volume scan post-processing procedures in KDB Publication 865664 D01

Simultaneous transmission SAR measurement

When simultaneous transmission SAR measurements are required in different frequency bands not covered by a single probe calibration point then separate tests for each frequency band are performed. The tests are performed using enlarged zoom scans which are processed, by means of superposition, using the DASY5 volume scan post-processing procedures to determine the 1-g SAR for the aggregate SAR distribution.

The spatial resolution used for all enlarged zoom scans is the same as used for the most stringent zoom scans. I.E. the scan parameters required for the highest frequency assessed are used for all enlarged zoom scans. The scans cover the complete area of the device to ensure all transmitting antennas and radiating structures are assessed.

DASY5 provides the ability to perform Multiband Evaluations according to the latest standards using the Volume Scan job as well as appropriate routines for the post-processing.

In order to extract and process measurements within different frequency bands, the SEMCAD X Post-processor performs the combination and subsequent superposition of these measurement data via DASY5= Combined MultiBand Averaged SAR.

Combined Multi Band Averaged SAR allows - in addition to the data extraction - an evaluation of the 1 g, 10 g and/or arbitrary averaged mass SAR.

Power Scaling Factor is used to allow the volume scans to be scaled by a value other than "1", this is important when the results need to be scaled to different maximum power levels. The Power Scaling Factor is applied to each individual point of the scan. When power scaling is used in multi-band combinations the scaling factor is applied to each individual point of the first scan, the second factor is then applied to each individual point of the second scan and so on. The scans are then combined.

12.2. Estimated SAR for Simultaneous Transmission SAR Analysis

Considerations for SAR Estimation

1. When standalone SAR test exclusion applies, standalone SAR must also be estimated to determine simultaneous transmission SAR test exclusion.
2. Dedicated Host Approach criteria for SAR test exclusion is likewise applied to SAR estimation, with certain distinctions between test exclusion and SAR estimation:
 - When the separation distance from the antenna to an adjacent edge is ≤ 5 mm, a distance of 5 mm is applied for SAR estimation; this is the same between test exclusion and SAR estimation calculations.
 - When the separation distance from the antenna to an adjacent edge is > 5 mm but ≤ 50 mm, the actual antenna-to-edge separation distance is applied for SAR estimation.
 - When the minimum test separation distance is > 50 mm, the estimated SAR value is 0.4 W/kg
3. Please refer to Estimated SAR Tables to see which test positions are inherently compliant as they consist of only estimated SAR values for all applicable transmitters and consequently will always have sum of SAR values < 1.2 W/kg. Simultaneous transmission SAR analysis was therefore not performed for these test positions.

Estimated SAR for WWAN

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Estimated 1-g SAR Value (W/kg)				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Main 1	RSI 0													
	GSM 850 GPRS 4 Slots	848.8	27.50	351	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	GSM 1900 GPRS 4 Slots	1909.8	24.50	317	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	W-CDMA 2	1907.6	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	W-CDMA 4	1752.6	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	W-CDMA 5	846.6	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 2	1900	26.00	398	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 4	1754.3	26.00	398	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 5	844	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 12	711	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 13	782	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 17	710	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 25	1905	26.00	398	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 26	841.4	25.50	355	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 41	2680	26.00	398	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	LTE Band 66	1770	26.00	398	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	NR Band n5	839	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	NR Band n41 SRS 1	2639.97	19.00	79	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	NR Band n66	1760	25.00	316	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	-MEASURE-	0.400	-MEASURE-
	Grip													
	GSM 850 GPRS 4 Slots	848.8	18.00	39	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	GSM 1900 GPRS 4 Slots	1909.8	16.00	45	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	W-CDMA 2	1907.6	15.00	32	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	W-CDMA 4	1752.6	15.00	32	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	W-CDMA 5	846.6	15.00	32	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 2	1900	17.00	50	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 4	1754.3	15.50	35	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 5	844	18.00	63	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 12	711	20.00	100	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 13	782	20.00	100	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 17	710	20.00	100	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 25	1905	17.00	50	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 26	841.4	17.50	56	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 41	2680	16.00	40	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	LTE Band 66	1770	17.00	50	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	NR Band n5	839	15.00	32	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	NR Band n41 SRS 1	2639.97	11.00	13	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
	NR Band n66	1760	14.00	25	5	5	64.4	297.5	64.4	-MEASURE-	-MEASURE-	0.400	0.400	0.400
Main 2	RSI 0													
	NR Band n77 (Block A) PC3	3499.98	19.50	89	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block C) PC3	3929.97	19.50	89	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block A) PC2	3499.98	21.50	141	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block C) PC2	3929.97	21.50	141	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	Grip													
	NR Band n77 (Block A)	3499.98	10.00	10	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block C)	3929.97	10.00	10	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block A)	3499.98	10.00	10	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block C)	3929.97	10.00	10	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block A)	3499.98	10.00	10	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block C)	3929.97	10.00	10	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block A)	3499.98	10.00	10	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-
	NR Band n77 (Block C)	3929.97	10.00	10	5	287.4	128.82	5	5	-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Estimated 1-g SAR Value (W/kg)				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 1	Max Power													
	LTE Band 2	1900	24.50	282	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400
	LTE Band 4	1754.3	24.50	282	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400
	LTE Band 41	2680	24.50	282	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400
	LTE Band 66	1770	24.50	282	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400
	NR Band n41 SRS 2	2639.97	12.00	16	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400
	Reduced Power													
	LTE Band 2	1900	13.00	20	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400
	LTE Band 4	1754.3	14.00	25	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400
	LTE Band 41	2680	17.00	50	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400
	LTE Band 66	1770	14.00	25	5	287.4	5	5	128.82	-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Estimated 1-g SAR Value (W/kg)				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 2	RSI 0													
	NR Band n41 SRS 4	2639.97	9.00	8	5	297.5	64.4	5	64.4	0.347	0.400	0.400	0.347	0.400

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Estimated 1-g SAR Value (W/kg)				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Sub 3	RSI 0													
	NR Band n41 SRS 3	2639.97	11.00	13	5	297.5	64.4	5	64.4	-MEASURE-	0.400	0.400	-MEASURE-	0.400

Estimated SAR for WLAN

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Estimated 1-g SAR Value (W/kg)				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Wi-Fi 1	Max Power													
	Wi-Fi 2.4 GHz	2462	18.00	63	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.2 GHz	5240	17.00	50	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.3 GHz	5320	17.00	50	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.5 GHz	5700	17.00	50	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.8 GHz	5825	17.00	50	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.9 GHz	5905	17.00	50	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Bluetooth	2480	16.00	40	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Reduced Power													
	Wi-Fi 2.4 GHz	2462	10.00	10	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.2 GHz	5240	8.50	7	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.3 GHz	5320	8.50	7	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.5 GHz	5700	8.50	7	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.8 GHz	5825	9.50	9	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400
	Wi-Fi 5.9 GHz	5905	9.50	9	5	5	5	287.4	128.82	-MEASURE-	-MEASURE-	-MEASURE-	0.400	0.400

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)					Estimated 1-g SAR Value (W/kg)				
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Edge Top	Edge Right	Edge Bottom	Edge Left
Wi-Fi 2	Max Power													
	Wi-Fi 2.4 GHz	2462	18.00	63	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.2 GHz	5240	17.00	50	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.3 GHz	5320	17.00	50	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.5 GHz	5700	17.00	50	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.8 GHz	5825	17.00	50	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.9 GHz	5905	17.00	50	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Bluetooth	2480	16.00	40	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Reduced Power													
	Wi-Fi 2.4 GHz	2462	10.00	10	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.2 GHz	5240	8.50	7	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.3 GHz	5320	8.50	7	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.5 GHz	5700	8.50	7	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.8 GHz	5825	9.50	9	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-
	Wi-Fi 5.9 GHz	5905	9.50	9	5	5	128.82	287.4	5	-MEASURE-	-MEASURE-	0.400	0.400	-MEASURE-

12.3. Sum of the SAR for EN-DC NR n5 & Wi-Fi & BT

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	2	3	4	5	1+2	1+2+3	1+2+4	1+2+4+5
		WWAN LTE	WWAN NR	DTS	NII	DSS				
		B2/66	n5							
Standalone	Back	0.761	0.232	0.286	0.623	0.162	0.993	1.279	1.616	1.778
	Edge Top	1.047	0.232	0.170	0.064	0.108	1.279	1.449	1.343	1.451
	Edge Right	0.742	0.131	0.296	0.369	0.182	0.873	1.169	1.242	1.424
	Edge Bottom	0.169					0.169	0.169	0.169	0.169
	Edge Left	0.021	0.080	0.360	0.384		0.101	0.461	0.485	0.485

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
	1	2	3	4	5					
	WWAN LTE	WWAN NR	DTS	NII	DSS					
Back	0.761	0.232	0.286	0.623	0.162	1+3	1.047	115.0	0.01	No
						1+4	1.384	70.4	0.02	No
						1+5	0.923	307.9	0.00	No
						2+3	0.518	118.5	0.00	No
						2+4	0.855	66.9	0.01	No
						2+5	0.394	308.8	0.00	No

Conclusion:

1. Simultaneous transmission SAR measurement (Volume Scan) is not required because the SPLSR is ≤ 0.04 .
2. The most conservative distance between co-location group 1+2 and co-location group 4+5 was used for position Back of the SPLSR evaluation

RF Exposure Conditions	Test Position	Mode	Peak SAR	X	Y	Z	d: Calculated distance (mm)	
			W/kg	mm	mm	mm		
Standalone	Back	WWAN LTE	1.86	-21.2	153.7	-176.0	1+3	115.0
		DTS	0.559	93.0	144.7	-166.2		
		WWAN LTE	1.86	-21.2	153.7	-176.0	1+4	70.4
		NII	3.10	-88.9	137.0	-166.2		
		WWAN LTE	1.86	-21.2	153.7	-176.0	1+5	307.9
		DSS	0.345	-102.0	-143.4	-176.0		
		WWAN NR	0.300	-24.9	155.6	-172.0	2+3	118.5
		DTS	0.559	93.0	144.7	-166.2		
		WWAN NR	0.300	-24.9	155.6	-172.0	2+4	66.9
		NII	3.10	-88.9	137.0	-166.2		
		WWAN NR	0.300	-24.9	155.6	-172.0	2+5	308.8
		DSS	0.345	-102.0	-143.4	-176.0		

The Peak Location Separation Distance is computed by using the formula: $\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$

12.4. Sum of the SAR for EN-DC NR n41 & Wi-Fi & BT

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	2	3	4	5	1+2	1+2+3	1+2+4	1+2+4+5
		WWAN LTE	WWAN NR	DTS	NII	DSS				
		B12/66	n41							
Standalone	Back	0.761	0.555	0.286	0.623	0.162	1.316	1.602	1.939	2.101
	Edge Top	1.047	0.101	0.170	0.064	0.108	1.148	1.318	1.212	1.320
	Edge Right	0.505	0.040	0.296	0.369	0.182	0.545	0.841	0.914	1.096
	Edge Bottom	0.122	0.731				0.853	0.853	0.853	0.853
	Edge Left	0.094	0.117	0.360	0.384		0.211	0.571	0.595	0.595

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
	1	2	3	4	5					
	WWAN LTE	WWAN NR	DTS	NII	DSS					
Back	0.761	0.555	0.286	0.623	0.162	1+3	1.047	115.0	0.01	No
						1+4	1.384	70.4	0.02	No
						1+5	0.923	307.9	0.00	No
						2+3	0.841	312.5	0.00	No
						2+4	1.178	289.3	0.00	No
						2+5	0.717	77.8	0.01	No

Conclusion:

1. Simultaneous transmission SAR measurement (Volume Scan) is not required because the SPLSR is ≤ 0.04 .
2. The most conservative distance between co-location groups 1+2 and 3 was used for position Back of the SPLSR evaluation
3. The most conservative distance between co-location groups 1+2 and co-location group 4+5 was used for position Back of the SPLSR evaluation

RF Exposure Conditions	Test Position	Mode	Peak SAR	X	Y	Z	d: Calculated distance (mm)	
			W/kg	mm	mm	mm		
Standalone	Back	WWAN LTE	1.86	-21.2	153.7	-176.0	1+3	115.0
		DTS	0.559	93.0	144.7	-166.2		
		WWAN LTE	1.86	-21.2	153.7	-176.0	1+4	70.4
		NII	3.10	-88.9	137.0	-166.2		
		WWAN LTE	1.86	-21.2	153.7	-176.0	1+5	307.9
		DSS	0.345	-102.0	-143.4	-176.0		
		WWAN NR	1.43	-24.3	-144.9	-172.0	2+3	312.5
		DTS	0.559	93.0	144.7	-166.2		
		WWAN NR	1.43	-24.3	-144.9	-172.0	2+4	289.3
		NII	3.10	-88.9	137.0	-166.2		
		WWAN NR	1.43	-24.3	-144.9	-172.0	2+5	77.8
		DSS	0.345	-102.0	-143.4	-176.0		

The Peak Location Separation Distance is computed by using the formula: $\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$

12.5. Sum of the SAR for EN-DC NR n66 & Wi-Fi & BT

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	2	3	4	5	1+2	1+2+3	1+2+4	1+2+4+5
		WWAN LTE	WWAN NR	DTS	NII	DSS				
		B2/5/12/13	n66							
Standalone	Back	0.562	0.367	0.286	0.623	0.162	0.929	1.215	1.552	1.714
	Edge Top	0.429	0.453	0.170	0.064	0.108	0.882	1.052	0.946	1.054
	Edge Right	0.742	0.171	0.296	0.369	0.182	0.913	1.209	1.282	1.464
	Edge Bottom	0.169					0.169	0.169	0.169	0.169
	Edge Left	0.148	0.117	0.360	0.384		0.265	0.625	0.649	0.649

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
	1	2	3	4	5					
	WWAN LTE	WWAN NR	DTS	NII	DSS					
Back	0.562	0.367	0.286	0.623	0.162	1+3	0.848	84.7	0.01	No
						1+4	1.185	99.0	0.01	No
						1+5	0.724	315.7	0.00	No
						2+3	0.653	113.1	0.00	No
						2+4	0.990	72.7	0.01	No
						2+5	0.529	309.9	0.00	No

Conclusion:

1. Simultaneous transmission SAR measurement (Volume Scan) is not required because the SPLSR is ≤ 0.04 .
2. The most conservative distance between co-location groups 1+2 and co-location groups 4+5 was used for position Back of the SPLSR evaluation

RF Exposure Conditions	Test Position	Mode	Peak SAR	X	Y	Z	d: Calculated distance (mm)	
			W/kg	mm	mm	mm		
Standalone	Back	WWAN LTE	2.02	8.8	152.2	-172.0	1+3	84.7
		DTS	0.559	93.0	144.7	-166.2		
		WWAN LTE	2.02	8.8	152.2	-172.0	1+4	99.0
		NII	3.10	-88.9	137.0	-166.2		
		WWAN LTE	2.02	8.8	152.2	-172.0	1+5	315.7
		DSS	0.345	-102.0	-143.4	-176.0		
		WWAN NR	0.983	-19.2	155.2	-176.0	2+3	113.1
		DTS	0.559	93.0	144.7	-166.2		
		WWAN NR	0.983	-19.2	155.2	-176.0	2+4	72.7
		NII	3.10	-88.9	137.0	-166.2		
		WWAN NR	0.983	-19.2	155.2	-176.0	2+5	309.9
		DSS	0.345	-102.0	-143.4	-176.0		

The Peak Location Separation Distance is computed by using the formula: $\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$

12.6. Sum of the SAR for EN-DC NR n77 & Wi-Fi & BT

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	2	3	4	5	1+2	1+2+3	1+2+4	1+2+4+5
		WWAN LTE	WWAN NR	DTS	NII	DSS				
		B2/5/12/13/25/66	n77							
Standalone	Back	0.761	0.413	0.286	0.623	0.162	1.174	1.460	1.797	1.959
	Edge Top	1.047		0.170	0.064	0.108	1.047	1.217	1.111	1.219
	Edge Right	0.742		0.296	0.369	0.182	0.742	1.038	1.111	1.293
	Edge Bottom	0.169	0.120				0.289	0.289	0.289	0.289
	Edge Left	0.111	0.816	0.360	0.384		0.927	1.287	1.311	1.311

SAR to Peak Location Separation Ratio (SPLSR)

Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
	1	2	3	4	5					
	WWAN LTE	WWAN NR	DTS	NII	DSS					
Back	0.761	0.413	0.286	0.623	0.162	1+2	1.174	313.0	0.00	No
						1+3	1.047	115.0	0.01	No
						1+4	1.384	70.4	0.02	No
						1+5	0.923	307.9	0.00	No
						2+3	0.699	312.5	0.00	No
						2+4	1.036	328.9	0.00	No
						2+5	0.575	192.5	0.00	No

Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the SPLSR is ≤ 0.04 .

RF Exposure Conditions	Test Position	Mode	Peak SAR	X	Y	Z	d: Calculated distance (mm)	
			W/kg	mm	mm	mm		
Standalone	Back	WWAN LTE	1.86	-21.2	153.7	-176.0	1+2	313.0
		WWAN NR	1.40	90.4	-138.7	-172.0		
		WWAN LTE	1.86	-21.2	153.7	-176.0	1+3	115.0
		DTS	0.56	93.0	144.7	-166.2		
		WWAN LTE	1.86	-21.2	153.7	-176.0	1+4	70.4
		NII	3.10	-88.9	137.0	-166.2		
		WWAN LTE	1.86	-21.2	153.7	-176.0	1+5	307.9
		DSS	0.35	-102.0	-143.4	-176.0		
		WWAN NR	1.43	-24.3	-144.9	-172.0	2+3	312.5
		DTS	0.559	93.0	144.7	-166.2		
		WWAN NR	1.40	90.4	-138.7	-172.0	2+4	328.9
		NII	3.10	-88.9	137.0	-166.2		
		WWAN NR	1.40	90.4	-138.7	-172.0	2+5	192.5
		DSS	0.35	-102.0	-143.4	-176.0		

The Peak Location Separation Distance is computed by using the formula: $\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$

Appendixes

Refer to separated files for the following appendixes.

Appendix A: SAR Setup Photos

Appendix B: SAR System Check Plots

Appendix C: SAR Highest Test Plots

Appendix D: SAR Tissue Ingredients

Appendix E: SAR Probe Certificates

Appendix F: SAR Dipole Certificates

Appendix G: Sensor Triggering Validation

END OF REPORT