

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

**RF EXPOSURE EVALUATION REPORT
(Part 1 : Test in Static Transmission Condition)
FOR**

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

MODEL NUMBER: SC-57G, SCG41

FCC ID: A3LSMF971JPN

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TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	2026-05-26	Initial Issue	--
V2	2026-05-28	Revised typo in all Secs. Revised data referencing test plan summary in Sec. 1.1. Revised Highest SAR Results Sec. 1.3. Revised Plimit Table in Sec. 6.3.1. Revised Power table in Sec. 6.4. Revised Sec. 6.5. Added Test Results in Sec. 6.7. Revised Test Configuration table and added Notes in Sec. 7.1. and 7.2. Added System Check Results in Sec. 8.1. and 8.2. Revised Power Results table in Sec. 9.3. Revised SAR Results in Sec. 10.1.2. Revised Sec. 10.2. Revised Sec. 10.2.1. Revised SPLSR Calculation Results in Sec. 14.2.1.	Hakchul Lee
V3	2026-06-01	Revised Sec. 1. Revised Sec. 1.3. Revised Plimit Table in Sec. 6.3.1. Revised WLAN Pmax table in Sec. 6.4. Revised Sec. 10.2.8. Revised Sec. 12.1.2. Revised Sec. 12.2.2. Revised Sec. 14. Revised Appendix B Folder Close	Hakchul Lee
V4	2026-06-04	Revised duty plot in Sec.9.2. Revised test plot No. in table of page.104. Revised test plot in Appendix G.	Sunghoon Kim
V5	2026-06-15	Revised Sec. 1. Revised test plan summary in Sec. 1.1. Revised SAR data in Sec. 1.3. Revised Plimit Results in Sec. 6.3.1. Revised Head table in Sec. 7.2. Added System Check Results in Sec. 8.1. and 8.2. Revised Reference Target SAR Value table in Sec. 8.2. Revised Results table in Sec. 10.1.1. and 10.2.1. Added SAR Results in Sec. 10.1. Revised Plot No. in Sec. 10, 11 and 12 Revised Simultaneous Tx Analysis in Sec. 14. Revised Appendix B Revised Sec. 10.2. Revised Appendix A	Hakchul Lee

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1. Attestation of test results

Applicant Name		SAMSUNG ELECTRONICS CO.,LTD.			
FCC ID		A3LSMF971JPN			
Model Number		SC-57G, SCG41			
Applicable Standards		FCC 47 CFR Sec 2.1093, IEEE Std 1528: 2013 & Published RF exposure KDB procedures			
Exposure Category		SAR Limits (W/kg)		Power Density Limits (mW/cm ²)	
		1g-SAR	10g-SAR	Incident PD(IPD)	Absorbed PD(APD)
General population / Uncontrolled exposure		1.6	4.0	1.0	-
RF Exposure Conditions		Equipment Class - The Highest Reported SAR/IPD/APD			
		SAR (W/kg)		IPD (mW/cm ²)	APD (mW/cm ²)
Phablet	Head	1.23		0.74	0.25
	Body-worn	1.05			0.29
	Hotspot	1.05			0.29
	Product Specific 10g	1.17			1.10
RF Exposure Conditions		Simultaneous Tx SAR results (W/kg)			
Phablet	Head	1.59			
	Body-worn	1.58			
	Hotspot	1.58			
	Product Specific 10g	1.97			
RF Exposure Conditions (SAR)		Body-worn / Body Exposure	Hotspot Exposure	Product Specific 10g Exposure	
SAR Test distance(mm)		5	10	0	
Date Tested		2026-03-16 to 2026-06-10			
Test Results		Pass			
UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.					
Approved & Released By:			Prepared By:		
					
Justin Park Operations Leader UL Korea, Ltd. Suwon Laboratory			Hakchul Lee Laboratory Engineer Associate UL Korea, Ltd. Suwon Laboratory		

1.1. Data Referencing

This report references test data from **parent model [FCC ID : A3LSMF971U]**.

This data reuse has been conducted in accordance with KDB 484596 D01 Referencing Test Data v03 criteria, and RF performance equivalence between both parent model and **variant model [FCC ID : A3LSMF971JPN]** has been verified through spot-check measurements.

The applicant takes full responsibility that the test data referenced in this report represent compliance for this FCC application.

Please check below Data referencing test plan summary;

Reference Device			Variant Device							
FCC ID: A3LSMF971U			FCC ID: A3LSMF971JPN							
Equipment Class	Band	Antenna	Folder Close				Folder Open			
			Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific 10-g Exposure	Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific 10-g Exposure
PCE	GSM 850	Ant.A	Y ¹	N ³	N ³	Y ¹	N/A	N/A	N/A	N/A
	GSM 850	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	GSM 1900	Ant.B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	WCDMA Band V	Ant.A	N ³	Y ¹	Y ¹	Y ¹	N/A	N/A	N/A	N/A
	WCDMA Band V	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 12	Ant.A	Y ¹	Y ¹	Y ¹	Y ¹	N/A	N/A	N/A	N/A
	LTE Band 12	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 13	Ant.A	Y ¹	Y ¹	Y ¹	Y ¹	N/A	N/A	N/A	N/A
	LTE Band 13	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 5	Ant.A	Y ¹	Y ¹	Y ¹	Y ¹	N/A	N/A	N/A	N/A
	LTE Band 5	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 66 (4)	Ant.B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 66	Ant.F	Y ²	Y ²	Y ²	Y ²	N ³	Y ²	Y ²	Y ²
	LTE Band 25 (2)	Ant.B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 25	Ant.F	N ³	N ³	N ³	Y ²	N ³	N ³	N ³	Y ²
	LTE Band 41 PC3	Ant.B	Y ²	N ³	N ³	N ³	N ³	N ³	N ³	N ³
	LTE Band 41 PC3	Ant.F	N ³	N ³	N ³	Y ²	N ³	N ³	N ³	Y ²
	NR Band n5	Ant.A	Y ²	N ³	N ³	N ³	N/A	N/A	N/A	N/A
	NR Band n5	Ant.A+B	Y ²	Y ²	Y ²	N ³	Y ²	Y ²	Y ²	Y ²
	NR Band n66	Ant.B	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
	NR Band n66	Ant.F	N ³	Y ¹	Y ¹	Y ¹	N ³	N ³	N ³	Y ¹
	NR Band n41 PC2	Ant.F	N ³	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
DTS	2.4 GHz WLAN	Ant.D	Y ¹	Y ¹	Y ¹	Y ¹	N ³	Y ¹	Y ¹	Y ¹
	2.4 GHz WLAN	Ant.G	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	2.4 GHz WLAN	Ant.D+G	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴
NII	5.3 GHz WLAN	Ant.E	N ³	N ³	N ³	Y ¹	N ³	Y ¹	Y ¹	Y ¹
	5.3 GHz WLAN	Ant.D	N ³	N ³	N ³	Y ¹	Y ¹	N ³	N ³	Y ¹
	5.3 GHz WLAN	Ant.D+E	N ³	Y ¹	Y ¹	Y ¹	Y ¹	N ³	N ³	Y ¹
	5.6 GHz WLAN	Ant.E	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	5.6 GHz WLAN	Ant.D	N ³	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	N ³
	5.6 GHz WLAN	Ant.D+E	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	5.8 GHz WLAN	Ant.E	Y ¹	Y ¹	Y ¹	N ³	Y ¹	Y ¹	Y ¹	Y ¹
	5.8 GHz WLAN	Ant.D	Y ¹	Y ¹	Y ¹	N ³	Y ¹	Y ¹	Y ¹	Y ¹
	5.8 GHz WLAN	Ant.D+E	Y ¹	Y ¹	Y ¹	N ³	Y ¹	Y ¹	Y ¹	Y ¹
	5.9 GHz WLAN	Ant.E	Y ¹	Y ¹	Y ¹	N ³	Y ¹	Y ¹	Y ¹	Y ¹
6CD/6VL	6GHz WLAN	Ant.E	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}
	6GHz WLAN	Ant.D	Y ^{1.5}	N ³	N ³	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}
	6GHz WLAN	Ant.D+E	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}	Y ^{1.5}
DSS	Bluetooth	Ant.D	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴
	Bluetooth	Ant.G	N ⁴	N ⁴	N/A	N ⁴	N ⁴	N ⁴	N/A	N ⁴
	Bluetooth	Ant.D+G	N ⁴	N ⁴	N/A	N ⁴	N ⁴	N ⁴	N/A	N ⁴
DDX	NFC		N/A	N/A	N/A	Y ¹	N/A	N/A	N/A	Y ¹
UWB	UWB		N ³	N ³	N/A	N ³	N ³	N ³	N/A	N ³

Note(s):

- Spot-check procedure was applied to the worst case.
- Spot-check procedure was applied to all test positions.
- Full test procedure was applied because Spot-check criteria were not satisfied.
- Full test procedure was applied because Tune-up & Mode are different from parent model.
- Data Referencing was applied only to SAR evaluation, not to IPD.

1.2. Spot-check deviation criteria

RF Exposure (SAR) spot-check justification based on worst-case configuration per KDB 484596 D01 Referencing Test Data v03 Section 3.2

- Spot-check measurements shall be made in correspondence to the worst-case scenario reported in the reference device filing, i.e., for those conditions that are the closest to non-compliance.

- the relative difference (expressed as a percentage) between the TER of the variant (TER_V) and that of the parent model used as a reference (TER_R) is defined as

$$d_{TER} = | TER_V - TER_R | / TER_R$$

and the acceptance criterion for the spot-check on the variant will be:

$$d_{TER} \leq d_{TERmax}$$

where d_{TERmax} , to be defined further below, is the maximum acceptable d_{TER} , and all the quantities are expressed in linear units.

The value of d_{TERmax} , the maximum d_{TER} allowed for the spot-check to be deemed acceptable, is established based on the compliance margin M corresponding to the worst-case test scenario (i.e., the most challenging from the compliance perspective) for the parent model. The margin M is defined as

$$M = TER_T - TER_R = 1 - TER_R$$

where TER_T is the TER corresponding to the compliance threshold, which is always $TER_T = 1$.

The threshold d_{TERmax} is defined as function of the margin M to provide values between 25% and 50%, linearly increasing between $M = 0.5$ (50% of the compliance limit) and $M = 0.75$ (75% of the compliance limit), in accordance with the following expression:

$$d_{TERmax}(M) = \begin{cases} 0.25, & \text{for } 0 \leq M < 0.5 \\ M - 0.25, & \text{for } 0.5 \leq M < 0.75 \\ 0.5, & \text{for } 0.75 \leq M \end{cases}$$

If the Spot check criteria are not met, full test is required for the RF exposure.

1.3. The Highest Reported SAR/APD/IPD Results

Equipment Class	Band	Antenna	The Highest Reported SAR (W/kg) of RF Exposure Conditions							
			Folder Close				Folder Open			
			Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific 10-g Exposure	Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific 10-g Exposure
PCE	GSM 850	AntLA	0.196	0.319	0.319	N/A	N/A			N/A
	GSM 850	AntLA+B	0.282	0.506	0.506	N/A	0.919	0.676	0.676	N/A
	GSM 1900	AntLB	0.218	0.886	0.886	N/A	0.673	1.047	1.047	N/A
	WCDMA Band V	AntLA	0.364	0.809	0.809	N/A	N/A			N/A
	WCDMA Band V	AntLA+B	0.330	0.811	0.811	N/A	0.906	0.834	0.834	N/A
	LTE Band 12	AntLA	0.129	0.446	0.446	N/A	N/A			N/A
	LTE Band 12	AntLA+B	0.198	0.558	0.558	N/A	0.371	0.705	0.705	N/A
	LTE Band 13	AntLA	0.237	0.515	0.515	N/A	N/A			N/A
	LTE Band 13	AntLA+B	0.261	0.739	0.739	N/A	0.557	0.703	0.703	N/A
	LTE Band 5	AntLA	0.339	0.766	0.766	N/A	N/A			N/A
	LTE Band 5	AntLA+B	0.324	0.820	0.820	N/A	0.755	0.823	0.823	N/A
	LTE Band 66 (4)	AntLB	0.335	0.695	0.695	N/A	0.728	0.728	0.728	N/A
	LTE Band 66	AntLF	1.036	0.730	0.730	N/A	0.509	1.002	1.002	N/A
	LTE Band 25 (2)	AntLB	0.410	0.706	0.706	N/A	0.651	0.651	0.651	N/A
	LTE Band 25	AntLF	1.036	1.031	1.031	N/A	0.439	0.777	0.777	N/A
	LTE Band 41	AntLB	0.088	0.501	0.501	N/A	0.553	0.553	0.553	N/A
	LTE Band 41	AntLF	0.570	0.718	0.718	N/A	0.774	0.580	0.580	N/A
	NR Band n5	AntLA	0.269	0.412	0.412	N/A	N/A			N/A
	NR Band n5	AntLA+B	0.325	0.893	0.893	N/A	0.900	0.821	0.821	N/A
	NR Band n66	AntLB	0.364	0.686	0.686	N/A	0.550	0.550	0.550	N/A
	NR Band n66	AntLF	0.858	0.778	0.778	N/A	0.386	0.714	0.714	N/A
	NR Band n41	AntLF	0.559	0.790	0.790	N/A	0.909	0.638	0.638	N/A
DTS	2.4 GHz WLAN		0.927	0.937	0.937	N/A	1.230	0.912	0.912	N/A
NII	5.9 GHz WLAN		1.042	0.668	0.668	1.170	0.426	0.717	0.717	0.914
6CD/6VL	6 GHz WLAN		0.187	0.409	0.409	0.464	0.492	0.447	0.447	0.463
DSS	Bluetooth		0.369	0.249	0.190	0.488	0.529	0.355	0.156	0.469
DXX	NFC		N/A	N/A	N/A	0.014	N/A	N/A	N/A	0.015
UWB	UWB		0.002	0.008	N/A	0.003	0.006	0.006	N/A	0.002
Equipment Class	Band	The Highest Reported APD/IPD (mW/cm ²) of RF Exposure Conditions								
		Folder Close					Folder Open			
		APD				IPD	APD			IPD
		Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific 10-g Exposure		Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific 10-g Exposure
6CD/6VL	6 GHz WLAN	0.1147	0.2629	0.2629	1.0954	0.7414	0.2543	0.2931	0.2931	1.0145
UWB	UWB	N/A	N/A	N/A	0.0062	0.0054	N/A	N/A	N/A	0.0051

Note(s):

- The highest Reported SAR applied the higher value between Reference model test data and Variant Spot-check test data, and Also simultaneous transmission analysis was re-evaluated using that value.
- For variant model, If Full SAR test is applied to some Techs/RF exposure conditions, then Data referencing is not apply to the Techs/RF exposure conditions.

2. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with:

- FCC 47 CFR Sec 2.1093
- IEEE Std 1528: 2013
- IEC/IEEE 63195-1: 2022
- IEC 62479: 2010
- ANSI C63.26: 2015

And the following FCC Published RF exposure [KDB](#) procedures:

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 388624 D02 Pre-Approval Guidace List v18r08 (APPENDIX OVER6G)
- 447498 D04 Interim General RF Exposure Guidance v01
- 484596 D01 Referencing Test Data v03
- 616217 D04 SAR for laptop and tables v01r02
- 648474 D04 Handset SAR v01r03
- 690783 D01 SAR Listings on Grants v01r03
- 865664 D01 SAR measurement 100 MHz to 6GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D01 3G SAR Procedures v03r01
- 941225 D05 SAR for LTE Devices v02r05
- 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
- 941225 D06 Hotspot Mode v02r01
- 941225 D07 UMPC Mini Tablet v01r02
- 971168 D01 Power Meas License Digital System v03r01

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

- [TCB workshop](#) October, 2014; RF Exposure Procedures Update (Overlapping LTE Bands)
- [TCB workshop](#) October, 2014; RF Exposure Procedures Update (Other LTE Considerations)
- [TCB workshop](#) October, 2016; RF Exposure Procedures (DUT Holder Perturbations)
- [TCB workshop](#) May, 2017; RF Exposure Procedures (LTE Test Conditions)
- [TCB workshop](#) November, 2017; RF Exposure Procedures (LTE UL Carrier Aggregation SAR)
- [TCB workshop](#) April, 2019; RF Exposure Procedures (Tissue Simulating Liquids (TSL))
- [TCB workshop](#) November, 2019; RF Exposure Procedures (Hall Effect Sensor Guidance)
- [TCB workshop](#) October, 2020; 5G RFX Policies (Intra-band and Inter-band NSA-EN-DC evaluation)
- [TCB workshop](#) April, 2022; RF Exposure Procedures (5G NR FR1 Measurement)
- [TCB workshop](#) April, 2022; RF Exposure Procedures (SUM-Peak Location Separation Ratio)
- [TCB workshop](#) October, 2022; RF Exposure Policies & Procedures (SAR test frequencies in multi-rule)
- [TCB workshop](#) October, 2024; CA and Simultaneous Transmissions (CA-DL Test Reductions)
- [TCB workshop](#) October, 2024; RF Exposure Updates (RF Exposure Testing Near Complex Surfaces)
- [TCB workshop](#) April, 2025; RF Exposure PAG Updates (Interim RF Exposure Testing Guidance)
- SPEAG DASY6 Application Note: Interim Procedures (Version 9.0) for Devices Operating 6-10GHz

3. Facilities and Accreditation

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

Suwon				
SAR 1 Room	SAR 2 Room	SAR 3 Room	SAR 4 Room	SAR 5 Room
SAR 6 Room	SAR 9 Room	SAR 10 Room	SAR 11 Room	

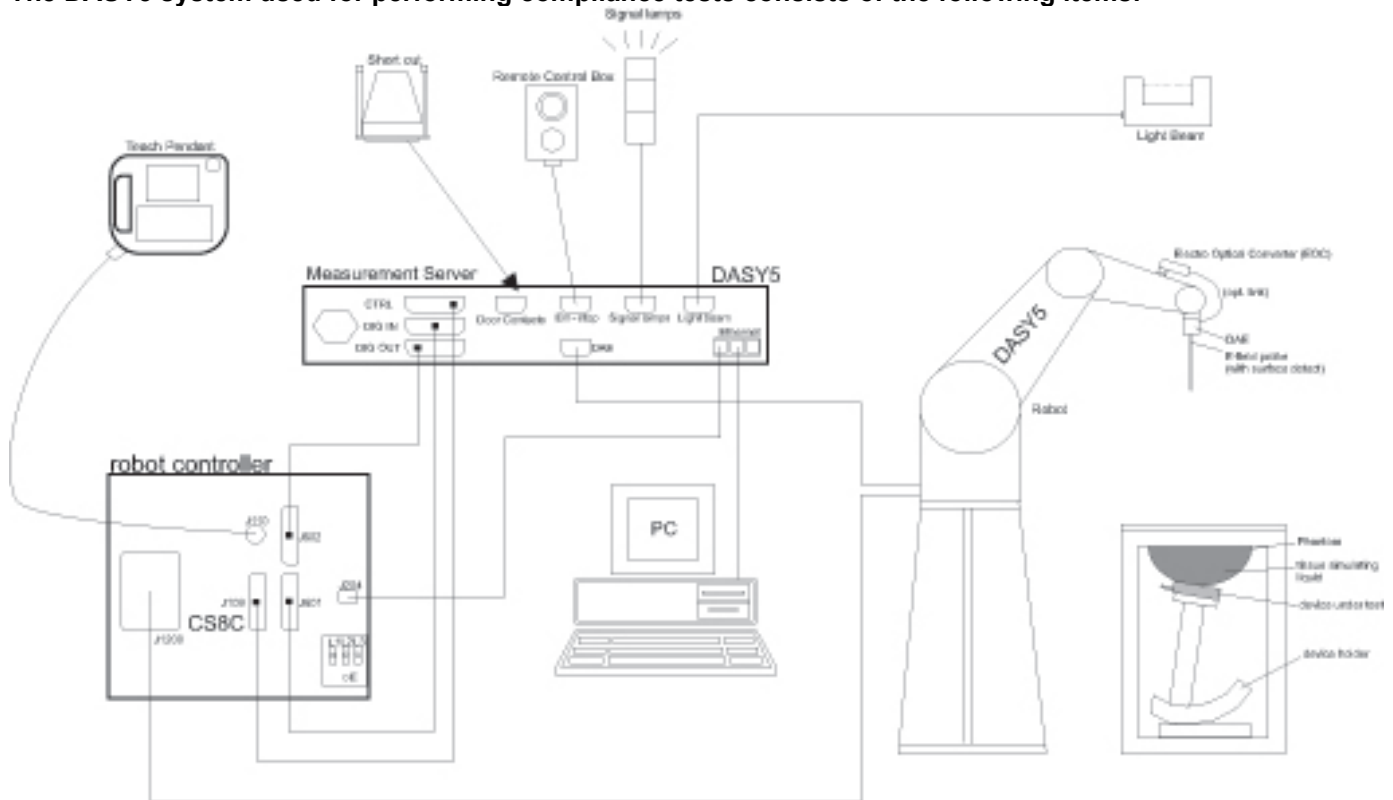
UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at

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

4. Measurement System & Test Equipment

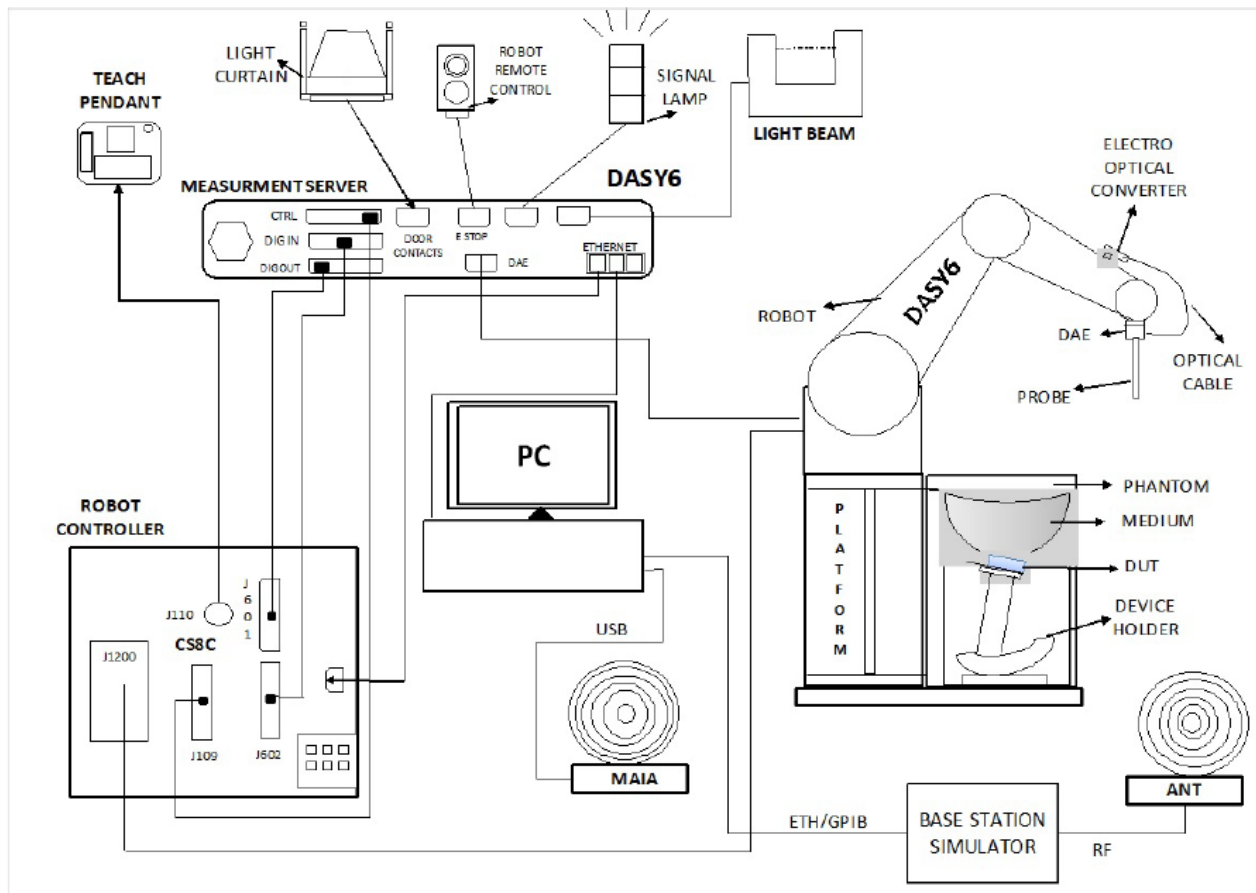
4.1. SAR Measurement System

The DASY5 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win11 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

The DASY6/8 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win11 and the DASY6/8 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

4.1.1. 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 1.4 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	≤ 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.	

Area Scan Parameters extracted from IEC/IEEE 62209-1528 (below 100 MHz, above 6 GHz)

Parameter	DUT transmit frequency being tested	
	$f \leq 3$ GHz	$3 \text{ GHz} < f \leq 10 \text{ GHz}$
Maximum distance between the measured points (geometric centre of the sensors) and the inner phantom surface (z_{M1} in Figure 20 in mm)	5 ± 1	$\delta \ln(2)/2 \pm 0,5^a$
Maximum spacing between adjacent measured points in mm (see O.8.3.1) ^b	20, or half of the corresponding zoom scan length, whichever is smaller	$60/f$, or half of the corresponding zoom scan length, whichever is smaller
Maximum angle between the probe axis and the phantom surface normal (α in Figure 20) ^c	5° (flat phantom only) 30° (other phantoms)	5° (flat phantom only) 20° (other phantoms)
Tolerance in the probe angle	1°	1°

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

Zoom Scan Parameters extracted from IEC/IEEE 62209-1528 (below 100 MHz, above 6 GHz)

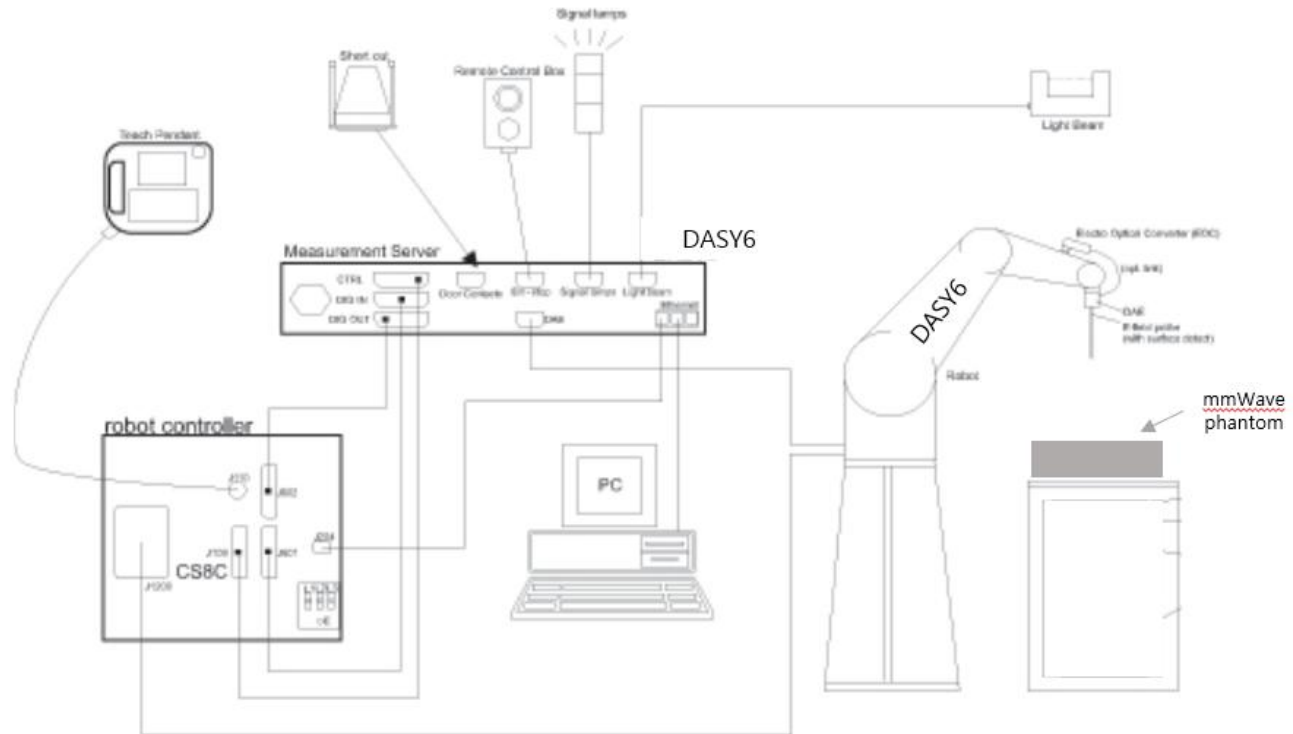
Parameter	DUT transmit frequency being tested	
	$f \leq 3$ GHz	$3 \text{ GHz} < f \leq 10 \text{ GHz}$
Maximum distance between the closest measured points and the phantom surface (z_{M1} in Figure 20 and Table 3, in mm)	5	$\delta \ln(2)/2^a$
Maximum angle between the probe axis and the phantom surface normal (α in Figure 20)	5° (flat phantom only) 30° (other phantoms)	5° (flat phantom only) 20° (other phantoms)
Maximum spacing between measured points in the x- and y-directions (Δx and Δy , in mm)	8	$24/f^b$
For uniform grids: Maximum spacing between measured points in the direction normal to the phantom shell (Δz_1 in Figure 20, in mm)	5	$10/(f - 1)$
For graded grids: Maximum spacing between the two closest measured points in the direction normal to the phantom shell (Δz_1 in Figure 20, in mm)	4	$12/f$
For graded grids: Maximum incremental increase in the spacing between measured points in the direction normal to the phantom shell ($R_z = \Delta z_2/\Delta z_1$ in Figure 20)	1,5	1,5
Minimum edge length of the zoom scan volume in the x- and y-directions (L_z in O.8.3.2, in mm)	30	22
Minimum edge length of the zoom scan volume in the direction normal to the phantom shell (L_h in O.8.3.2 in mm)	30	22
Tolerance in the probe angle	1°	1°
^a δ is the penetration depth for a plane-wave incident normally on a planar half-space.		
^b This is the maximum spacing allowed, which might not work for all circumstances.		

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.

4.2. Incident Power Density (IPD) Measurement System

The DASY6 & 8 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- The EUmmWVx probe is based on the pseudo-vector probe design, which not only measures the field magnitude but also derives its polarization ellipse.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win11 and the DASY6 or 8 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom which is specialized for 5G other accessories according to the targeted measurement.

4.2.1. Power Density 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 device under test.

Step 2: 5G Scan

The steps in the X, Y, and Z directions are specified in terms of fractions of the signal wavelength, λ . Area Scan Parameters extracted from DASY6/8 Module mmWave Manual.

Recommended settings for measurement of verification sources

Frequency [GHz]	Grid step	Grid extent X/Y [mm]	Measurement points
10	$0.125 (\frac{\lambda}{8})$	60/60	18×18
30	$0.25 (\frac{\lambda}{4})$	60/60	26×26
45	$0.25 (\frac{\lambda}{4})$	42/42	28×28
60	$0.25 (\frac{\lambda}{4})$	32.5/32.5	28×28
90	$0.25 (\frac{\lambda}{4})$	30/30	38×38

The minimum distance of probe sensors to verification source surface, horn antenna, is 10 mm.

Per equipment manufacturer guidance for 6 – 10 GHz, DUT's Power density was measured at $d=2$ mm.

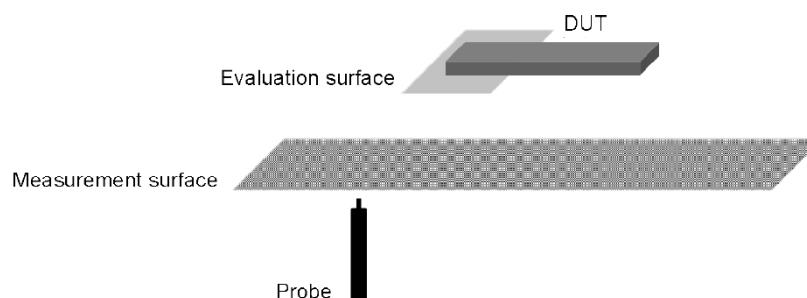
Step 3: Power drift measurement

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. When the drift is larger than ± 5 %, test is repeated from step1.

4.2.2. Total Field and Power Flux Density Reconstruction (measurement distance)

Reconstruction algorithms are used to project or transform the measured fields from the measurement surface to the evaluation surface (below fig) in order to determine power density or to compute spatial-average and/or local power density with known uncertainty.

Manufacture has developed a reconstruction approach based on the Gerchberg-Saxton algorithm, which benefits from the availability of the E-field polarization ellipse information obtained with the EUmWVx probe. This reconstruction algorithm, together with the ability of the probe to measure extremely close to the source without perturbing the field, permits reconstruction of the E- and H-fields, as well as of the power density, on measurement planes.



4.3. Test Equipment

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

Dielectric Property Measurements

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	Agilent	E5071C	MY46522054	2026-07-22
Network Analyzer	ROHDE & SCHWARZ	ZNB 20	102256	2026-08-11
Dielectric Assessment Kit	SPEAG	DAK-12	1158	2026-09-16
Dielectric Assessment Kit	SPEAG	DAK-3.5	1133	2027-03-11
Dielectric Assessment Kit	SPEAG	DAK-3.5	1196	2026-05-26
Vector Network Analyzer	SPEAG	DAKS_VNA R140	0060221	2027-03-16
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Shorting block	SPEAG	DAK-12 Short	SM DAK 220 AD	N/A
Thermometer	LKM	DTM3000	3851	2026-07-22
Thermometer	LKM	DTM3000	3862	2026-07-22

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Signal Generator	Keysight	N5181B	MY59100587	2026-07-22
Signal Generator	Keysight	N5173B	MY59101083	2026-07-22
Signal Generator	Keysight	E8257D	MY53400994	2026-07-21
Power Sensor	KEYSIGHT	U2000A	MY54260007	2026-07-23
Power Sensor	KEYSIGHT	U2000A	MY60180020	2026-07-23
Power Sensor	KEYSIGHT	U2000A	MY61060004	2026-07-23
Power Sensor	KEYSIGHT	U2000A	MY61010006	2026-07-23
Power Sensor	KEYSIGHT	U2000A	MY61010010	2026-07-23
Power Sensor	KEYSIGHT	U2000A	MY51240012	2026-12-30
Power Sensor	KEYSIGHT	U2000A	MY54430009	2026-12-30
Power Sensor	KEYSIGHT	U2004A USB Sensor	MY61200006	2026-12-30
Power Sensor	KEYSIGHT	U2004A USB Sensor	MY61280010	2026-12-30
Power Amplifier	EXODUS	AMP2027	10003	2026-12-30
Power Amplifier	EXODUS	AMP2027	10002	2026-07-24
Power Amplifier	Sambo	BA00T60W2D	S3010-0001	2026-12-30
Directional Coupler	Aglient	772D	MY52180193	2026-07-22
Directional Coupler	H.P	778D	16133	2026-07-22
Directional Coupler	KRYTAR	100318010	215541	2026-12-29
Directional Coupler	MINI-CIRCUITS	ZMDC-30-1+	SF569102123	2026-07-22
Low Pass Filter	FILTRON	L14012FL	1410003S	2026-07-22
Low Pass Filter	MICROLAB	LA-60N	3942	2026-07-22
Low Pass Filter	MINI-CIRCUITS	NLP-1200	VUU19301915	2026-07-22
Low Pass Filter	MINI-CIRCUITS	VLF-1500+	32241	2026-12-29
Low Pass Filter	MINI-CIRCUITS	VLF-3000+	32226	2026-12-29
Low Pass Filter	KRYTAR	WLKX10-11000-13640-21000-60TS	1	2026-07-23
Attenuator	KEYSIGHT	BW-N10W5+	N/A	2026-07-21
Attenuator	KEYSIGHT	BW-N20W5+	N/A	2026-07-21
Attenuator	KEYSIGHT	BW-S3W10+	N/A	2026-12-30
Attenuator	KEYSIGHT	BW-S3W10+	N/A	2026-12-30
Attenuator	KEYSIGHT	8491B003	MY39272275	2026-07-23
Attenuator	KEYSIGHT	8491B010	MY39272293	2026-07-23
Attenuator	KEYSIGHT	8491B010	MY39272306	2026-07-23
Attenuator	KEYSIGHT	8491B020	MY39272300	2026-07-23
Attenuator	KEYSIGHT	8491B/020	MY39272302	2026-07-23
Attenuator	KEYSIGHT	8491B/020	MY39271973	2026-07-23

Note(s):

1. For System Validation Dipole, Calibration interval applied every 2 years.
2. All equipments were used until Cal. Due data.

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
E-Field Probe	SPEAG	EX3DV4	7645	2026-10-20
E-Field Probe	SPEAG	EX3DV4	7646	2027-01-22
E-Field Probe	SPEAG	EX3DV4	7651	2027-01-19
E-Field Probe	SPEAG	EX3DV4	7314	2026-06-03
E-Field Probe	SPEAG	EX3DV4	7652	2026-04-22
E-Field Probe	SPEAG	EX3DV4	7330	2027-01-22
E-Field Probe	SPEAG	EX3DV4	7545	2026-09-23
E-Field Probe	SPEAG	EX3DV4	7313	2026-10-29
E-Field Probe	SPEAG	EX3DV4	3871	2026-08-22
E-Field Probe	SPEAG	EX3DV4	7376	2026-07-29
Data Acquisition Electronics	SPEAG	DAE4	1468	2027-02-03
Data Acquisition Electronics	SPEAG	DAE4	1494	2026-07-09
Data Acquisition Electronics	SPEAG	DAE4	1668	2026-09-17
Data Acquisition Electronics	SPEAG	DAE4	1540	2027-01-08
Data Acquisition Electronics	SPEAG	DAE4	1671	2026-08-13
Data Acquisition Electronics	SPEAG	DAE4	1591	2027-02-13
Data Acquisition Electronics	SPEAG	DAE4	1447	2027-03-13
Data Acquisition Electronics	SPEAG	DAE4	1343	2026-07-09
Data Acquisition Electronics	SPEAG	DAE4	1917	2026-09-10
Data Acquisition Electronics	SPEAG	DAE4	1670	2026-08-13
Data Acquisition Electronics	SPEAG	DAE4	1667	2026-09-16
System Validation Dipole	SPEAG	CLA-13	1015	2026-08-13
System Validation Dipole	SPEAG	D750V3	1205	2027-04-14
System Validation Dipole	SPEAG	D750V3	1122	2027-02-17
System Validation Dipole	SPEAG	D835V3	4d174	2026-09-16
System Validation Dipole	SPEAG	D835V3	4d194	2027-03-02
System Validation Dipole	SPEAG	D1750V2	1180	2026-10-15
System Validation Dipole	SPEAG	D1750V2	1125	2026-11-18
System Validation Dipole	SPEAG	D1900V2	5d190	2027-04-08
System Validation Dipole	SPEAG	D1900V2	5d199	2027-03-12
System Validation Dipole	SPEAG	D2450V2	939	2026-07-10
System Validation Dipole	SPEAG	D2450V2	960	2027-03-10
System Validation Dipole	SPEAG	D2600V2	1178	2027-04-15
System Validation Dipole	SPEAG	D5GHzV2	1325	2027-04-16
System Validation Dipole	SPEAG	D5GHzV2	1184	2026-11-21
System Validation Dipole	SPEAG	D6.5GHzV2	1010	2026-06-11
System Validation Dipole	SPEAG	D8GHzV2	1012	2026-11-13
Verification kit	SPEAG	5G Verification source_10GHz	1022	2027-03-12
Thermometer	Lutron	MHB-382SD	AH.50215	2026-12-29
Thermometer	Lutron	MHB-382SD	AH.50213	2026-12-30
Thermometer	Lutron	MHB-382SD	AH.91463	2026-12-30
Thermometer	Lutron	MHB-382SD	AJ.45903	2026-12-29
Thermometer	Lutron	MHB-382SD	AJ.42446	2026-07-21
Thermometer	Lutron	MHB-382SD	AK.12102	2026-07-21
Thermometer	Lutron	MHB-382SD	AK.12103	2026-07-21
Thermometer	Lutron	MHB-382SD	AK.12121	2026-07-21
Thermometer	Lutron	MHB-382SD	AK.12123	2026-12-29
Thermometer	Lutron	MHB-382SD	AK.18789	2026-07-21
Thermometer	Lutron	MHB-382SD	AM.59335	2027-02-11

Note(s):

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

Others

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	150313	2026-07-22
Base Station Simulator	R & S	CMW500	150314	2026-07-22
Base Station Simulator	R & S	CMW500	162790	2026-07-22
Base Station Simulator	R & S	CMW500	169803	2026-12-29
Base Station Simulator	R & S	CMW500	169801	2026-12-29
Base Station Simulator	R & S	CMW500	169798	2026-07-22
Base Station Simulator	R & S	CMW500	169799	2026-07-22
Base Station Simulator	R & S	CMW500	169800	2026-07-22
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY57510596	2026-07-22
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59150850	2026-12-29
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY58120110	2026-12-29
Radio Communication Test Station	Anritsu	MT8000A	6272466165	2026-07-21
Radio Communication Test Station	Anritsu	MT8000A	6272511034	2026-10-28
Radio Communication Analyzer	Anritsu	MT8821C	6161094351	2026-07-21
Radio Communication Analyzer	Anritsu	MT8821C	6272669647	2026-10-27

Note(s):

1. For System Validation Dipole, Calibration interval applied every 2 years.
2. All equipments were used until Cal. Due data.

5. Measurement Uncertainty

SAR Measurement Uncertainty of 100 MHz to 6 GHz

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

SAR Measurement Uncertainty of 9 MHz to 19 MHz

a	b	c		d	e f(d,k)	f	g	h = c×f/e 1 g ui (± %)	i = c×g/e 10 g ui (± %)	k	Contributions (%)	
Uncertainty component	Reference	Tol. 1 g (±%)	Tol. 10 g (±%)	Prob. Dist.	Div.	ci (1 g)	ci (10 g)			vi	1 g	10 g
Measurement System Errors												
Probe Calibration	8.4.1.1	13.3		Normal	2	1	1	6.65	6.65	∞	29.31	25.01
Probe Calibration Drift	8.4.1.2	1.7		Rectangular	1.732	1	1	1.0	1.0	∞	0.64	0.54
Probe Linearity	8.4.1.3	4.7		Rectangular	1.732	1	1	2.7	2.7	∞	4.88	4.16
Broadband Signal	8.4.1.4	0.8		Rectangular	1.732	1	1	0.5	0.5	∞	0.14	0.12
Probe Isotropy	8.4.1.5	7.6		Rectangular	1.732	1	1	4.4	4.4	∞	12.76	10.89
Data Acquisition	8.4.1.6	0.3		Normal	1	1	1	0.3	0.3	∞	0.04	0.04
RF Ambient	8.4.1.7	1.8		Normal	1	1	1	1.8	1.8	∞	2.15	1.83
Probe Positioning	8.4.1.8	0.006		Normal	1	0.14	0.14	0.10	0.10	∞	0.01	0.01
Data Processing	8.4.1.9	1.2		Normal	1	1	1	1.2	1.2	∞	0.95	0.81
Phantom and Device Errors												
Conductivity (meas.)DAK	8.4.2.1	2.5		Normal	1	0.78	0.71	2.0	1.8	∞	2.52	1.78
Conductivity (temp.)BB	8.4.2.2	5.4		Rectangular	1.732	0.78	0.71	2.4	2.2	∞	3.92	2.77
Phantom Permittivity	8.4.2.3	14.0		Rectangular	1.732	0	0	0.0	0.0	∞	0.00	0.00
Distance DUT -TSL	8.4.2.4	2.0		Normal	1	2	2	4.0	4.0	∞	10.61	9.05
Device Positioning	8.4.2.5	2.0	5.7	Normal	1	1	1	2.0	5.7	40	2.60	18.44
Device Holder	8.4.2.6	3.6		Normal	1	1	1	3.6	3.6	∞	8.59	7.33
DUT Modulation	8.4.2.7	2.4		Rectangular	1.732	1	1	1.4	1.4	∞	1.27	1.09
Time-average SAR	8.4.2.8	1.7		Rectangular	1.732	1	1	1.0	1.0	∞	0.64	0.54
DUT drift	8.4.2.9	5.0		Normal	1	1	1	5.0	5.0	∞	16.57	14.14
Correction to the SAR results												
Deviation to Target	8.4.3.1	1.9		Normal	1	1	0.84	1.9	1.6	∞	2.39	1.44
Combined Standard Uncertainty Uc(y) =								RSS	12.28	13.30		
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =								24.56	26.59			

SAR Measurement Uncertainty of 6 GHz to 10 GHz

a	b	c		d	e f(d,k)	f	g	h = c×f/e	i = c×g/e	k	Contributions (%)	
Uncertainty component	Reference	Tol. 1 g (±%)	Tol. 10 g (±%)	Prob. Dist.	Div.	ci (1 g)	ci (10 g)	1 g ui (± %)	10 g ui (± %)	vi	1 g	10 g
Measurement System Errors												
Probe Calibration	8.4.1.1	18.6		Normal	2	1	1	9.3	9.3	∞	40.48	40.06
Probe Calibration Drift	8.4.1.2	1.7		Rectangular	1.732	1	1	1.0	1.0	∞	0.45	0.45
Probe Linearity	8.4.1.3	4.7		Rectangular	1.732	1	1	2.7	2.7	∞	3.45	3.41
Broadband Signal	8.4.1.4	2.8		Rectangular	1.732	1	1	1.6	1.6	∞	1.22	1.21
Probe Isotropy	8.4.1.5	7.6		Rectangular	1.732	1	1	4.4	4.4	∞	9.01	8.92
Data Acquisition	8.4.1.6	0.3		Normal	1	1	1	0.3	0.3	∞	0.03	0.03
RF Ambient	8.4.1.7	1.8		Normal	1	1	1	1.8	1.8	∞	1.52	1.50
Probe Positioning	8.4.1.8	0.005		Normal	1	0.50	0.50	0.25	0.25	∞	0.03	0.03
Data Processing	8.4.1.9	3.5		Normal	1	1	1	3.5	3.5	∞	5.73	5.67
Phantom and Device Errors												
Conductivity (meas.)DAK	8.4.2.1	2.5		Normal	1	0.78	0.71	2.0	1.8	∞	1.78	1.46
Conductivity (temp.)BB	8.4.2.2	2.4		Rectangular	1.732	0.78	0.71	1.1	1.0	∞	0.55	0.45
Phantom Permittivity	8.4.2.3	14.0		Rectangular	1.732	0	0	0.0	0.0	∞	0.00	0.00
Distance DUT -TSL	8.4.2.4	2.0		Normal	1	2	2	4.0	4.0	∞	7.49	7.41
Device Positioning	8.4.2.5	4.0	4.5	Normal	1	1	1	4.0	4.5	50	7.45	9.30
Device Holder	8.4.2.6	3.6		Normal	1	1	1	3.6	3.6	∞	6.07	6.00
DUT Modulation	8.4.2.7	2.4		Rectangular	1.732	1	1	1.4	1.4	∞	0.90	0.89
Time-average SAR	8.4.2.8	1.7		Rectangular	1.732	1	1	1.0	1.0	∞	0.45	0.45
DUT drift	8.4.2.9	5.0		Normal	1	1	1	5.0	5.0	∞	11.70	11.58
Correction to the SAR results												
Deviation to Target	8.4.3.1	1.9		Normal	1	1	0.84	1.9	1.6	∞	1.69	1.18
Combined Standard Uncertainty Uc(y) =								RSS	14.62	14.69		
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =								29.23	29.39			

APD Measurement Uncertainty of 6 GHz to 10 GHz**Uncertainty Budget for psSAR / psAPD Assessments**

(Frequency band : 6 - 10GHz range)

Symbol	Error Description	Uncert.	Prob. Dist	Div.	ci (1g) / (1 cm2)	ci (8g/10g) (4 cm2)	Std. Unc. (1 g) / (1 cm2)	Std. Unc. (8g/10g) (4 cm2)
psSAR	Module SAR V16.2 (Table 6.3.3)	±14.2/14.1%	N	1	1	1	±14.2%	±14.1%
PDC	Power Density Conversion	±13.5%	R	1.732	1	1	±7.8%	±7.8%
u(ΔSAR)	Combined Uncertainty						±16.2%	±16.9%
U	Expanded Uncertainty in dB						±32.4%	±32.2%
							±1.2dB	±1.2dB

IPD Measurement Uncertainty of 6 GHz to 10 GHz**Measurement Uncertainty for IPD**

Error Description	Uncertainty value ($\pm$ dB)	Probe Dist.	Divisor	(Ci)	Std. Unc. ($\pm$ dB)	(Vi)
Uncertainty terms dependent on the measurement system						
Calibration	0.49	Normal	1.00	1.00	0.49	Infinity
Probe correction	0.00	Rectangular	1.73	1.00	0.00	Infinity
Frequency response (BW $\leq$ 1 GHz)	0.20	Rectangular	1.73	1.00	0.12	Infinity
Sensor cross coupling	0.00	Rectangular	1.73	1.00	0.00	Infinity
Isotropy	0.50	Rectangular	1.73	1.00	0.29	Infinity
Linearity	0.20	Rectangular	1.73	1.00	0.12	Infinity
Probe scattering	0.00	Rectangular	1.73	1.00	0.00	Infinity
Probe positioning offset	0.30	Rectangular	1.73	1.00	0.17	Infinity
Probe positioning repeatability	0.04	Rectangular	1.73	1.00	0.02	Infinity
Sensor mechanical offset	0.00	Rectangular	1.73	1.00	0.00	Infinity
Probe spatial resolution	0.00	Rectangular	1.73	1.00	0.00	Infinity
Field impedance dependance	0.00	Rectangular	1.73	1.00	0.00	Infinity
Measurement drift	0.05	Rectangular	1.73	1.00	0.03	Infinity
Amplitude and phase noise	0.04	Rectangular	1.73	1.00	0.02	Infinity
Measurement area truncation	0.10	Rectangular	1.73	1.00	0.06	Infinity
Data acquisition	0.03	Normal	1.00	1.00	0.03	Infinity
Sampling	0.00	Rectangular	1.73	1.00	0.00	Infinity
Field reconstruction	0.60	Rectangular	1.73	1.00	0.35	Infinity
Signal-to-Noise Ratio	0.00	Rectangular	1.73	1.00	0.00	Infinity
FTE/MEO	0.00	Rectangular	1.73	1.00	0.00	Infinity
Power density scaling	0.00	Rectangular	1.73	1.00	0.00	Infinity
Spatial averaging	0.10	Rectangular	1.73	1.00	0.06	Infinity
Uncertainty terms dependent on the DUT and environmental factors						
Probe coupling with DUT	0.00	Rectangular	1.73	1.00	0.00	Infinity
Modulation response	0.40	Rectangular	1.73	1.00	0.23	Infinity
Integration time	0.00	Rectangular	1.73	1.00	0.00	Infinity
Response time	0.00	Rectangular	1.73	1.00	0.00	Infinity
Device holder influence	0.10	Rectangular	1.73	1.00	0.06	Infinity
DUT alignment	0.00	Rectangular	1.73	1.00	0.00	Infinity
RF ambient conditions	0.04	Rectangular	1.73	1.00	0.02	Infinity
Laboratory Temperature	0.05	Rectangular	1.73	1.00	0.03	Infinity
Laboratory Reflections	0.04	Rectangular	1.73	1.00	0.02	Infinity
Immunity / secondary reception	0.00	Rectangular	1.73	1.00	0.00	Infinity
Drift of the DUT	0.20	Rectangular	1.73	1.00	0.12	Infinity
Combined Std. Uncertainty					0.76	

5.1. Decision Rule

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

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Refer to Appendix A.					
Back Cover	☒ The Back Cover is not removable.					
Battery Options	☒ The rechargeable battery is not user accessible					
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its cellular data connection with other Wi-Fi-enabled devices. ☒ Mobile Hotspot (Wi-Fi 2.4 GHz) ☒ Mobile Hotspot (Wi-Fi 5.2 GHz_U-NII 1, Wi-Fi 5.8 GHz_U-NII 3) ☒ Mobile Hotspot (Wi-Fi 6 GHz_U-NII 5-8_VLP)					
Wi-Fi Direct	Wi-Fi Direct enabled devices transfer data directly between each other ☒ Wi-Fi Direct (Wi-Fi 2.4 GHz) ☒ Wi-Fi Direct (Wi-Fi 5.2 GHz_U-NII 1, Wi-Fi 5.8 GHz_U-NII 3)					
Test Sample Information	No.	S/N	Notes	No.	S/N	Notes
	1	R3GL30803GL	Main Conduction	8	R3GL3080DGE	WLAN/BT Radiation
	2	R3GL30803HV	Main Conduction	9	R3GL3080D4Z	WLAN/BT Radiation
	3	R3GL3081M2H	WLAN/BT Conduction	10	R3GL3080D6B	WLAN/BT Radiation
	4	R3GL3080DNY	WLAN/BT Conduction	11	R3GL3080E7Z	WLAN/BT Radiation
	5	R3GL3080DDH	Main Radiation	12	R3GL3080EJF	WLAN/BT Radiation
	6	R3GL3080DST	Main Radiation	13	R3GL3080CVJ	WLAN/BT Radiation
	7	R3GL3080DER	Main Radiation	14	R3GL3080DKD	UWB Radiation

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: ☐ Class 8 - 1 Up, 4 Down ☐ Class 10 - 2 Up, 4 Down ☐ Class 12 - 4 Up, 4 Down ☒ Class 33 - 4 Up, 5 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
	Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No			
W-CDMA (UMTS)	Band V	UMTS Rel. 99 (Voice & Data) HSDPA & DC-HSDPA (Category 24) HSUPA (Category 6) & HSPA+ (DL only)		100%
LTE	FDD Bands 12/13/5/66/4/25/2 TDD Bands 41	QPSK/ 16QAM/ 64QAM Rel. 17 Carrier Aggregation (2 Uplink and 2 Downlinks)		100% (FDD) 63.3% (TDD) Power Class 3
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
5G NR (Sub6)	FDD Bands n5/n66 TDD Bands n41	DFT-s-OFDM: ■ $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: ■ QPSK, 16QAM, 64QAM, 256QAM		100 %
Wi-Fi	2.4 GHz	802.11b/802.11g/802.11n (HT20)/802.11ac (VHT20)/ 802.11ax (HE20)/802.11be (EHT20)		97.3% (802.11b) 89.3% (802.11g)
	5 GHz	802.11a/802.11n (HT20/HT40) 802.11ac (VHT20/VHT40/VHT80/VHT160) 802.11ax (HE20/HE40/HE80/HE160) 802.11be (EHT20/EHT40/EHT80/EHT160)		94.3% (802.11ac(VHT80))
	6GHz (LPI/SP/VLP)	802.11a, 802.11ax (HE20/HE40/HE80/HE160) 802.11be (EHT20/EHT40/EHT80/EHT160/EHT320)		99.2% (802.11be (EHT320))
	Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No			
	Does this device support Band gap channel(s)? ☒ Yes ☐ No			
Bluetooth	2.4 GHz	Version 6.0+LE		76.6% (BT-BDR)
NFC	13.56 MHz	Type A/B/F/V		100%
UWB	6489.6 MHz, 7987.2 MHz	Signal Configurations (0/1/3), PRF modes (BPRF/HPRF)		100%

Notes:

1. Wi-Fi & Bluetooth were tested SAR using highest duty cycle. Measured duty cycle plots are in Section.9.
2. This device supports Power Class 2 (HPUE) for NR Band n41
3. In addition to EN-DC modes 5G NR also supports inter-band uplink carrier aggregation. As this is not intra-band CA simultaneous transmission assessment is evaluated using the TAS, sum-SAR and SPLSR methods to combine the stand-alone SAR values for each individual band.
4. This device has support to DLCA (Downlink carrier aggregation) in LTE and NR techs. But Uplink output power is not affected even if DLCA configurations are added. So DLCA cases do not need to be considered separately.

6.3. Time-Averaging Feature

The equipment under test (EUT) contains the Qualcomm modems supporting WWAN/WLAN/BT. these modems are enabled with Qualcomm Smart Transmit feature to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with the FCC requirement.

But UWB/NFC does not support Qualcomm Smart Transmit feature. This technologies defines ER (External Ratio).

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

Smart Transmit allows the device to transmit at higher power instantaneously as high as $P_{\max}$, when needed, but enforces power limiting to maintain time-averaged transmit power to P_{limit} .

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

Table 6.3.1 shows P_{limit} NV settings and maximum tune up output power $P_{\max}$ configured for this EUT for various transmit conditions (DSI=Device State Index) in Sec.6.3.1

Demonstrating compliance of EUT enabled with Qualcomm Smart Transmit is completed in three parts:

Part.0: The SAR Characterization, denoted as SAR Char, determines the power limit that meets FCC exposure requirement after accounting for device design related uncertainties for each supported radio configuration and RF exposure usage scenario. The determined power limits will be loaded and stored in the EUT via the Embedded File System (EFS), and then used as inputs for Smart Transmit to operate.

Part.1: Part 1 test is to demonstrate that EUT meets FCC SAR when the Tx power is at pre-determined maximum time-averaged power level for Radios of Supported TAS bands. The SAR measurement in Part 1 is under static transmission condition. The compliance for ER (External Ratio: Non Supported TAS bands) radio is demonstrated at a fixed power level (fixed = maximum RF tune-up level or power-back off level). The exposure from the simultaneous transmission of ER is evaluated in Part 1 report.

Part.2: In Part 2 test, the compliance is assessed in Tx varying transmission condition to validate the Qualcomm Smart Transmit algorithm. The test results reported in Part 2 demonstrates that EUT complies with FCC RF exposure requirement under Tx varying transmission scenarios, thereby validity of Qualcomm Smart Transmit algorithm for FCC equipment authorization of EUT.

6.3.1. DSI and P_{limit} Determination

Table 6.3.1: P_{limit} Result According to Technologies and Bands in Each DSIs

Exposure condition			Folder Open Body-worn & Hotspot	Folder Open Product Specific 10-g	Folder Closed Body-worn & Hotspot	Folder Closed Product Specific 10-g	Folder Open Head	Folder Closed Head	P_{max} (Maximum tune-up Power) (dBm)
Spatial-average			1g	10g	1g	10g	1g	1g	
Test distance (mm)			5/10	0	5/10	0	0	0	
Configuration			Folder Open	Folder Open	Folder Closed	Folder Closed	Folder Open	Folder Closed	
DSI:			0			1	2	3	
RF Air Interface	Antenna	Antenna Group	P_{limit} corresponding to 1.0 W/kg (SAR_design_target) (1g) / 2.5 W/kg (SAR_design_target) (10g)						
GSM 850	A, A+B	AG 0	21.3			21.3	26.3	27.2	25.3
GSM 1900	B	AG 0	16.3			18.3	16.3	26.2	22.3
WCDMA 5	A, A+B	AG 0	22.0			22.0	25.3	25.7	24.3
LTE Band 12	A, A+B	AG 0	22.0			22.0	28.6	28.4	24.2
LTE Band 13	A, A+B	AG 0	22.0			22.0	27.1	26.9	24.5
LTE Band 5	A, A+B	AG 0	22.0			22.0	26.4	25.6	24.5
LTE Band 66(4)	B	AG 0	15.0			16.0	15.0	26.0	24.0
LTE Band 66	F	AG 1	15.5			15.5	19.0	20.0	24.2
LTE Band 25(2)	B	AG 0	15.5			17.0	15.5	25.1	24.0
LTE Band 25	F	AG 1	15.5			16.5	19.0	21.0	24.2
LTE Band 41	B	AG 0	14.5			16.0	14.5	29.0	22.0
LTE Band 41	F	AG 1	14.0			16.0	14.0	15.5	22.0
NR Band n5	A, A+B	AG 0	22.0			22.0	25.5	25.7	24.5
NR Band n66	B	AG 0	15.0			16.0	15.0	25.6	24.0
NR Band n66	F	AG 1	15.5			15.5	19.0	20.0	24.2
NR Band n41 (PC2 NSA)	F	AG 1	14.0			16.0	14.0	15.5	25.0
DTS SISO Ant. 1	D	AG 1	17.0			17.0	14.5	14.5	19.0
DTS SISO Ant. 2	G	AG 1	17.0			17.0	14.5	14.5	19.0
DTS MIMO	D+G	AG 1	16.0			17.0	14.5	14.5	20.0
UNII-2A SISO Ant. 1	E	AG 1	13.0			13.0	15.0	15.0	15.0
UNII-2A SISO Ant. 2	D	AG 1	13.0			13.0	15.0	15.0	15.0
UNII-2A MIMO	E+D	AG 1	13.0			13.0	15.0	15.0	15.0
UNII-2C SISO Ant. 1	E	AG 1	13.0			13.0	15.0	15.0	17.0
UNII-2C SISO Ant. 2	D	AG 1	13.0			13.0	15.0	15.0	17.0
UNII-2C MIMO	E+D	AG 1	13.0			13.0	15.0	15.0	17.0
UNII-3 SISO Ant. 1	E	AG 1	13.0			13.0	15.0	15.0	17.0
UNII-3 SISO Ant. 2	D	AG 1	13.0			13.0	15.0	15.0	17.0
UNII-3 MIMO	E+D	AG 1	13.0			13.0	15.0	15.0	17.0
UNII-4 SISO Ant. 1	E	AG 1	13.0			13.0	15.0	15.0	16.0
UNII-4 SISO Ant. 2	D	AG 1	13.0			13.0	15.0	15.0	16.0
UNII-4 MIMO	E+D	AG 1	13.0			13.0	15.0	15.0	16.0
WiFi 6E SISO Ant. 1	E	AG 1	11.5			11.5	11.5	11.5	16.0
WiFi 6E SISO Ant. 2	D	AG 1	11.5			11.5	11.5	11.5	16.0
WiFi 6E MIMO	E+D	AG 1	11.5			11.5	11.5	11.5	16.0
Bluetooth Ant. 1	D	AG 1	13.0			13.0	12.0	12.0	17.0
Bluetooth Ant. 2	G	AG 1	13.0			13.0	12.0	12.0	17.0
Bluetooth MIMO	D	AG 1	17.0			17.0	11.5	11.5	13.0
Bluetooth MIMO	G	AG 1	17.0			17.0	11.0	11.0	12.5

Notes:

1. If P_{limit} is higher than P_{max} for some modes / bands, The modes/bands will operate at a power level up to P_{max} .
2. P_{max} and P_{limit} mentioned in the table did not include tolerance.
3. All P_{limit} EFS and maximum tune up output P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (e.g GSM and LTE TDD).
4. P_{limit} value listed above table is referenced from Sec.10. Some bands (inc. Orange & Blue boxes) were determined more conservative P_{limit} instead of calculation P_{limit} Sec.10.
5. P_{limit} (DSI=1) was determined to be the lower of "Body-worn & Hotspot" and Product Specific 10-g" in each bands.
6. In MIMO mode, P_{limit} and P_{max} are based on output power of each antennas.

6.4. Maximum Allowed Output power

Maximum allowed output power means that P_{max} or $P_{limit} + 1\text{dB}$ device uncertainty for each DSI.
Detail of DSI (Device State Index) conditions, please refer to Part.0 Report.

WWAN Bands Maximum Allowed Output Power

GSM Bands

RF Air interface	Antenna	Mode	Time Slots	Maximum allowed output power (dBm)									
				Pmax		Plimit							
						DSI = 0 (Folder Open-Body)		DSI = 1 (Folder Close-Body)		DSI = 2 (Folder Open-Head)		DSI = 3 (Folder Close-Head)	
						Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GSM850	Ant.A & Ant.A+B	Voice	1	33.50	24.30	31.50	22.30	31.50	22.30	33.50	24.30	33.50	24.30
		GPRS	1	33.50	24.30	31.50	22.30	31.50	22.30	33.50	24.30	33.50	24.30
		GPRS	2	32.50	26.30	28.50	22.30	28.50	22.30	32.50	26.30	32.50	26.30
		GPRS	3	30.50	26.10	26.70	22.30	26.70	22.30	30.50	26.10	30.50	26.10
		GPRS	4	28.50	25.30	25.50	22.30	25.50	22.30	28.50	25.30	28.50	25.30
		EGPRS	1	28.00	18.80	28.00	18.80	28.00	18.80	28.00	18.80	28.00	18.80
		EGPRS	2	26.00	19.80	26.00	19.80	26.00	19.80	26.00	19.80	26.00	19.80
		EGPRS	3	24.00	19.60	24.00	19.60	24.00	19.60	24.00	19.60	24.00	19.60
		EGPRS	4	23.00	19.80	23.00	19.80	23.00	19.80	23.00	19.80	23.00	19.80
GSM1900	Ant.B	Voice	1	31.50	22.30	26.50	17.30	28.50	19.30	26.50	17.30	31.50	22.30
		GPRS	1	31.50	22.30	26.50	17.30	28.50	19.30	26.50	17.30	31.50	22.30
		GPRS	2	29.50	23.30	23.50	17.30	25.50	19.30	23.50	17.30	29.50	23.30
		GPRS	3	27.50	23.10	21.70	17.30	23.70	19.30	21.70	17.30	27.50	23.10
		GPRS	4	26.00	22.80	20.50	17.30	22.50	19.30	20.50	17.30	26.00	22.80
		EGPRS	1	27.00	17.80	26.50	17.30	27.00	17.80	26.50	17.30	27.00	17.80
		EGPRS	2	25.00	18.80	23.50	17.30	25.00	18.80	23.50	17.30	25.00	18.80
		EGPRS	3	23.00	18.60	21.70	17.30	23.00	18.60	21.70	17.30	23.00	18.60
		EGPRS	4	21.50	18.30	20.50	17.30	21.50	18.30	20.50	17.30	21.50	18.30

WCDMA Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	Plimit			
				DSI = 0 (Folder Open-Body)	DSI = 1 (Folder Close-Body)	DSI = 2 (Folder Open-Head)	DSI = 3 (Folder Close-Head)
W-CDMA Band V	Ant.A & Ant.A+B	R99	25.30	23.00	23.00	25.30	25.30
		HSDPA	24.30	22.00	22.00	24.30	24.30
		HSUPA	24.30	22.00	22.00	24.30	24.30
		DC-HSDPA	24.30	22.00	22.00	24.30	24.30

LTE Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	Plimit			
				DSI = 0 (Folder Open-Body)	DSI = 1 (Folder Close-Body)	DSI = 2 (Folder Open-Head)	DSI = 3 (Folder Close-Head)
LTE Band 12	Ant.A & Ant.A+B	QPSK	25.20	23.00	23.00	25.20	25.20
LTE Band 13	Ant.A & Ant.A+B	QPSK	25.50	23.00	23.00	25.50	25.50
LTE Band 5	Ant.A & Ant.A+B	QPSK	25.50	23.00	23.00	25.50	25.50
LTE Band 66	Ant. B	QPSK	25.00	16.00	17.00	16.00	25.00
LTE Band 66	Ant. F	QPSK	25.20	16.50	16.50	20.00	21.00
LTE Band 4	Ant. B	QPSK	25.00	16.00	17.00	16.00	25.00
LTE Band 25	Ant. B	QPSK	25.00	16.50	18.00	16.50	25.00
LTE Band 25	Ant. F	QPSK	25.20	16.50	17.50	20.00	22.00
LTE Band 2	Ant. B	QPSK	25.00	16.50	18.00	16.50	25.00
LTE Band 41	Ant.B	QPSK	25.00	17.50	19.00	17.50	25.00
LTE Band 41	Ant.F	QPSK	25.00	17.00	19.00	17.00	18.50
ULCA LTE Band 41	Ant.B	QPSK	25.00	17.50	19.00	17.50	25.00
ULCA LTE Band 41	Ant.F	QPSK	25.00	17.00	19.00	17.00	18.50

NR-Sub6 Bands

RF Air interface	Antenna	Mode	Maximum allowed output power (dBm)				
			Pmax	Plimit			
				DSI = 0 (Folder Open-Body)	DSI = 1 (Folder Close-Body)	DSI = 2 (Folder Open-Head)	DSI = 3 (Folder Close-Head)
NR Band n5	Ant.A & Ant.A+B	DFT-s-OFDM QPSK	25.50	23.00	23.00	25.50	25.50
NR Band n66	Ant.B	DFT-s-OFDM QPSK	25.00	16.00	17.00	16.00	25.00
NR Band n66	Ant.F	DFT-s-OFDM QPSK	25.20	16.50	16.50	20.00	21.00
NR Band n41	Ant.F	DFT-s-OFDM QPSK	26.00	15.00	17.00	15.00	16.50

WLAN Bands Maximum Allowed Output Power

1. DTS and UNII supports SISO & MIMO mode
2. WLAN has support to RSDB operation. Detail of RSDB scenarios refer to Sec.14.
3. Each Antennas has same target power during MIMO mode (MIMO target power = SISO target power +3 dB)

P_{max}

RF Air interface	Band	Maximum allowed output power (dBm) - P _{max}																			
		DTS : SISO 1(Ant.D) & UNII : SISO 1 (Ant.E)										802.11 mode									
		a	b	g	n	ac	ax(SU)	ax(SU)				a	b	g	n	ac	ax(SU)	ax(SU)			
WiFi 2.4 GHz	DTS		20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0		20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WiFi 5 GHz (BW : 20MHz)	UNII-1	18.0			18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0			18.0	18.0	18.0	18.0	21.0	21.0	21.0
	UNII-2A	18.0			18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0			18.0	18.0	18.0	18.0	21.0	21.0	21.0
	UNII-2C	18.0			18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0			18.0	18.0	18.0	18.0	21.0	21.0	21.0
	UNII-3	18.0			18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0			18.0	18.0	18.0	18.0	21.0	21.0	21.0
WiFi 5 GHz (BW : 40MHz)	UNII-4	18.0			18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0			18.0	18.0	18.0	18.0	21.0	21.0	21.0
	UNII-1				ch.38: 15.0	ch.38: 15.0	ch.38: 15.0	ch.38: 15.0	ch.38: 15.0	ch.38: 15.0	ch.38: 15.0				ch.38: 15.0	ch.38: 15.0	ch.38: 15.0	ch.38: 15.0	ch.38: 18.0	ch.38: 18.0	ch.38: 18.0
	UNII-2A				ch.62: 15.0	ch.62: 15.0	ch.62: 15.0	ch.62: 15.0	ch.62: 15.0	ch.62: 15.0	ch.62: 15.0				ch.62: 15.0	ch.62: 15.0	ch.62: 15.0	ch.62: 15.0	ch.62: 18.0	ch.62: 18.0	ch.62: 18.0
	UNII-2C				ch.102: 15.0	ch.102: 15.0	ch.102: 15.0	ch.102: 15.0	ch.102: 15.0	ch.102: 15.0	ch.102: 15.0				ch.102: 15.0	ch.102: 15.0	ch.102: 15.0	ch.102: 15.0	ch.102: 18.0	ch.102: 18.0	ch.102: 18.0
WiFi 5 GHz (BW : 80MHz)	UNII-3				ch.134: 15.0	ch.134: 15.0	ch.134: 15.0	ch.134: 15.0	ch.134: 15.0	ch.134: 15.0	ch.134: 15.0				ch.134: 15.0	ch.134: 15.0	ch.134: 15.0	ch.134: 15.0	ch.134: 18.0	ch.134: 18.0	ch.134: 18.0
	UNII-1				ch.151: 17	ch.151: 17	ch.151: 17	ch.151: 17	ch.151: 17	ch.151: 17	ch.151: 17				ch.151: 17	ch.151: 17	ch.151: 17	ch.151: 17	ch.151: 20	ch.151: 20	ch.151: 20
	UNII-2A				ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0				ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 20	ch.175: 20	ch.175: 20
	UNII-2C				ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0				ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 17.0	ch.175: 20	ch.175: 20	ch.175: 20
WiFi 5 GHz (BW : 160MHz)	UNII-3, 4				18.0	18.0	18.0	18.0	18.0	18.0	18.0				18.0	18.0	18.0	18.0	21.0	21.0	21.0
	UNII-5	11.0	ch.2: 8.5				11.0	11.0	11.0	11.0	11.0				11.0	11.0	11.0	11.0	14.0	14.0	14.0
	UNII-6	11.0					11.0	11.0	11.0	11.0	11.0				11.0	11.0	11.0	11.0	14.0	14.0	14.0
	UNII-7	11.0					11.0	11.0	11.0	11.0	11.0				11.0	11.0	11.0	11.0	14.0	14.0	14.0
WiFi 6 GHz_LR (BW : 20MHz)	UNII-8	11.0	ch.233: 5.5				ch.233: 8.0	ch.233: 8.0	ch.233: 8.0	ch.233: 8.0	ch.233: 8.0				ch.233: 8.0	ch.233: 8.0	ch.233: 8.0	ch.233: 8.5	14.0	14.0	14.0
	UNII-5						13.0	13.0	13.0	13.0	13.0				13.0	13.0	13.0	13.0	16.0	16.0	16.0
	UNII-6						13.0	13.0	13.0	13.0	13.0				13.0	13.0	13.0	13.0	16.0	16.0	16.0
	UNII-7						13.0	13.0	13.0	13.0	13.0				13.0	13.0	13.0	13.0	16.0	16.0	16.0
WiFi 6 GHz_LR (BW : 40MHz)	UNII-8						16.0	16.0	16.0	16.0	16.0				16.0	16.0	16.0	16.0	19.0	19.0	19.0
	UNII-5						16.0	16.0	16.0	16.0	16.0				16.0	16.0	16.0	16.0	19.0	19.0	19.0
	UNII-6						16.0	16.0	16.0	16.0	16.0				16.0	16.0	16.0	16.0	19.0	19.0	19.0
	UNII-7						16.0	16.0	16.0	16.0	16.0				16.0	16.0	16.0	16.0	19.0	19.0	19.0
WiFi 6 GHz_LR (BW : 80MHz)	UNII-8						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-5						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-6						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-7						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
WiFi 6 GHz_LR (BW : 160MHz)	UNII-8						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-5						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-6						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-7						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
WiFi 6 GHz_SP (BW : 20MHz)	UNII-8	17.0	ch.2: 8.5				17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-5	17.0					17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-6	17.0					17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-7	17.0					17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
WiFi 6 GHz_SP (BW : 40MHz)	UNII-8						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-5						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-6						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-7						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
WiFi 6 GHz_SP (BW : 80MHz)	UNII-8						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-5						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-6						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-7						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
WiFi 6 GHz_SP (BW : 160MHz)	UNII-8						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-5						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-6						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
	UNII-7						17.0	17.0	17.0	17.0	17.0				17.0	17.0	17.0	17.0	20.0	20.0	20.0
WiFi 6 GHz_VLP (BW : 20MHz)	UNII-8	6.0	ch.233: 5.5				6.0	6.0	6.0	6.0	6.0				6.0	6.0	6.0	6.0	9.0	9.0	9.0
	UNII-5	6.0					6.0	6.0	6.0	6.0	6.0				6.0	6.0	6.0	6.0	9.0	9.0	9.0
	UNII-6	6.0					6.0	6.0	6.0	6.0	6.0				6.0	6.0	6.0	6.0	9.0	9.0	9.0
	UNII-7	6.0					6.0	6.0	6.0	6.0	6.0				6.0	6.0	6.0	6.0	9.0	9.0	9.0
WiFi 6 GHz_VLP (BW : 40MHz)	UNII-8	6.0					6.0	6.0	6.0	6.0	6.0				6.0	6.0	6.0	6.0	9.0	9.0	9.0
	UNII-5	6.0					6.0	6.0	6.0	6.0	6.0				6.0	6.0	6.0	6.0	9.0	9.0	9.0
	UNII-6	6.0					6.0	6.0	6.0	6.0	6.0				6.0	6.0	6.0	6.0	9.0	9.0	9.0
	UNII-7	6.0					6.0	6.0	6.0	6.0	6.0				6.0	6.0	6.0	6.0	9.0	9.0	9.0
WiFi 6 GHz_VLP (BW : 80MHz)	UNII-8						9.0	9.0	9.0	9.0	9.0				9.0	9.0	9.0	9.0	12.0	12.0	12.0
	UNII-5						9.0	9.0	9.0	9.0	9.0				9.0	9.0	9.0	9.0	12.0	12.0	12.0
	UNII-6						9.0	9.0	9.0	9.0	9.0				9.0	9.0	9.0	9.0	12.0	12.0	12.0
	UNII-7						9.0	9.0	9.0	9.0	9.0				9.0	9.0	9.0	9.0	12.0	12.0	12.0
WiFi 6 GHz_VLP (BW : 160MHz)	UNII-8						12.0	12.0	12.0	12.0	12.0				12.0	12.0	12.0	12.0	15.0	15.0	15.0
	UNII-5						12.0	12.0	12.0	12.0	12.0				12.0	12.0	12.0	12.0	15.0	15.0	15.0

P_{limit} of DSI=0

RF Air interface	Band	Maximum allowed output power (dBm) - DSI=0																													
		802.11 mode																													
		DTS : SISO 1(Ant.D) & UIR: SISO 1 (Ant.E)										DTS : SISO 2(Ant.G) & UIR: SISO 2 (Ant.D)										DTS : MIMO (Ant.D + Ant.G) & UIR: MIMO (Ant.E + Ant.D)									
		a	b	g	n	ac	ax(SU)	be(SU)	a	b	g	n	ac	ax(SU)	be(SU)	a	b	g	n	ac	ax(SU)	be(SU)									
WiFi 2.4 GHz	DTS		18.0	18.0	18.0	18.0	18.0	18.0	ch.11: 16.5	ch.11: 16.5		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	ch.11: 16.5	ch.11: 16.5		20.0	20.0	20.0	20.0	20.0	ch.11: 19.5	ch.11: 19.5		
WiFi 5 GHz (BW : 20MHz)	UNB-1	14.0			14.0	14.0	14.0	14.0	14.0			14.0	14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-2A	14.0				14.0	14.0	14.0	14.0	14.0			14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-2C	14.0				14.0	14.0	14.0	14.0	14.0			14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-3	14.0				14.0	14.0	14.0	14.0	14.0			14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
WiFi 5 GHz (BW : 40MHz)	UNB-4	14.0				14.0	14.0	14.0	14.0	14.0			14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-1					14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0				17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-2A					14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0				17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-2C					14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0				17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
WiFi 5 GHz (BW : 80MHz)	UNB-3					14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0				17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-4					14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0				17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-5, 2A					14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0				17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-2C					14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0				17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
WiFi 5 GHz (BW : 160MHz)	UNB-3, 4					14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0				17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
	UNB-5	11.0	ch.2: 8.5				11.0	11.0	11.0	ch.2: 8.5			11.0	11.0	11.0	11.0	ch.2: 11.5			14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	
	UNB-6	11.0					11.0	11.0	11.0			11.0	11.0	11.0	11.0	14.0			14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	
	UNB-8	ch.233: 5.5					ch.233: 8.0	ch.233: 8.0	ch.233: 5.5			ch.233: 8.0	ch.233: 8.0	ch.233: 8.5		ch.233: 11.0			ch.233: 11.0	ch.233: 11.0	ch.233: 11.0	ch.233: 11.0	ch.233: 11.0	ch.233: 11.0	ch.233: 11.0	ch.233: 11.0	ch.233: 11.0	ch.233: 11.0	ch.233: 11.0		
WiFi 6 GHz_LR (BW : 40MHz)	UNB-5						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-6						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-8						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
WiFi 6 GHz_LR (BW : 80MHz)	UNB-5						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-6						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-8						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
WiFi 6 GHz_LR (BW : 160MHz)	UNB-5						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-6						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-8						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
WiFi 6 GHz_LR (BW : 320MHz)	UNB-5						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-6						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-8						12.5	12.5				12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
WiFi 6 GHz_SP (BW : 20MHz)	UNB-5	12.5	ch.2: 8.5				12.5	ch.2: 11.5	ch.2: 11.5	ch.2: 8.5			12.5	ch.2: 11.5	ch.2: 11.5	15.5			15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7	12.5					12.5	12.5	12.5			12.5	12.5	12.5	15.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-5						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
WiFi 6 GHz_SP (BW : 40MHz)	UNB-5						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-5						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
WiFi 6 GHz_SP (BW : 80MHz)	UNB-5						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-5						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
WiFi 6 GHz_SP (BW : 160MHz)	UNB-5						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-5						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
WiFi 6 GHz_SP (BW : 320MHz)	UNB-5						12.5	12.5	12.5			12.5	12.5	12.5	12.5				15.5	15.5			15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	
	UNB-7						12.5	12.5	12.5			12.5	12.5	12.																	

RF Air interface	Band	Maximum allowed output power (dBm) - DSI-1																				
		SSB TX mode											SSB TX mode									
		DTS: SSB1 (Avt.D) & UHF: SSB1 (Avt.E)											DTS: SSB2 (Avt.G) & UHF: SSB2 (Avt.D)									
		a	b	g	n	ac	ax(SU)	bx(SU)		a	b	g	n	ac	ax(SU)	bx(SU)		a	b	g	n	ac
WIR 2.4 GHz	DTS		18.0	18.0	18.0	18.0	18.0 ch.11: 16.5	18.0 ch.11: 16.5		18.0	18.0	18.0	18.0	18.0	18.0 ch.11: 16.5	18.0 ch.11: 16.5		21.0	21.0	21.0	21 ch.11: 19.5	21 ch.11: 19.5
	UHF-1	14.0			14.0	14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0
	UHF-2A	14.0			14.0	14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0
	UHF-2C	14.0			14.0	14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0
WIR 5 GHz (BW: 20MHz)	UHF-3	14.0			14.0	14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0
	UHF-4	14.0			14.0	14.0	14.0	14.0	14.0				14.0	14.0	14.0	14.0	17.0			17.0	17.0	17.0
	UHF-1				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-2A				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
WIR 5 GHz (BW: 40MHz)	UHF-2C				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-3				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-1				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-2A				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
WIR 5 GHz (BW: 80MHz)	UHF-2C				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-3				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-1				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-2A				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
WIR 5 GHz (BW: 160MHz)	UHF-1, 2A				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-2C				14.0	14.0	14.0	14.0					14.0	14.0	14.0	14.0				17.0	17.0	17.0
	UHF-3, 4				14.0																	

P_{limit} of DSI=2&3

RF Air interface	Band	Maximum allowed output power (dBm) - DSI=2&3																			
		802.11 mode																			
		DTS : SISO 1(Ant.D) & UMR : SISO 1 (Ant.E)										DTS : SISO 2(Ant.G) & UMR : SISO 2 (Ant.D)									
		a	b	g	n	ac	ax(SU)	be(SU)	a	b	g	n	ac	ax(SU)	be(SU)	a	b	g	n	ac	ax(SU)
WiFi 2.4 GHz	2.45 GHz		15.5	15.5	15.5	15.5	15.5		15.5	15.5	15.5	15.5	15.5			18.5	18.5	18.5	18.5		
WiFi 5 GHz (BW : 20MHz)	UNB-1	16.0			16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0	19.0		19.0	19.0	19.0	19.0	
	UNB-2A	16.0			16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0	19.0		19.0	19.0	19.0	19.0	
	UNB-2C	16.0			16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0	19.0		19.0	19.0	19.0	19.0	
	UNB-3	16.0			16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0	19.0		19.0	19.0	19.0	19.0	
WiFi 5 GHz (BW : 40MHz)	UNB-4	16.0			16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0	19.0		19.0	19.0	19.0	19.0	
	UNB-1				16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0			19.0	19.0	19.0	19.0	
	UNB-2A				16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0			19.0	19.0	19.0	19.0	
	UNB-2C				16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0			19.0	19.0	19.0	19.0	
WiFi 5 GHz (BW : 80MHz)	UNB-3				16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0			19.0	19.0	19.0	19.0	
	UNB-4				16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0			19.0	19.0	19.0	19.0	
	UNB-1, 2A				16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0			19.0	19.0	19.0	19.0	
	UNB-2C				16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0			19.0	19.0	19.0	19.0	
WiFi 5 GHz (BW : 160MHz)	UNB-3, 4				16.0	16.0	16.0	16.0			16.0	16.0	16.0	16.0			19.0	19.0	19.0	19.0	
	UNB-5	11.0 ch.2: 8.5					11.0	11.0	11.0	11.0			11.0	11.0	14.0 ch.2: 11.5					14.0	14.0
	UNB-6	11.0					11.0	11.0	11.0	11.0			11.0	11.0	14.0					14.0	14.0
	UNB-7	11.0					11.0	11.0	11.0	11.0			11.0	11.0	14.0					14.0	14.0
WiFi 6 GHz_LR (BW : 40MHz)	UNB-8	11.0 ch.233: 5.5					11.0	11.0	11.0	11.0			11.0	11.0	14.0 ch.233: 8.0					14.0	14.0
	UNB-5						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_LR (BW : 80MHz)	UNB-8						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-5						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_LR (BW : 160MHz)	UNB-8						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-5						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_LR (BW : 320MHz)	UNB-8						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-5						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_SP (BW : 20MHz)	UNB-5	12.5 ch.2: 8.5					12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7	12.5					12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-8						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_SP (BW : 40MHz)	UNB-5						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-8						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_SP (BW : 80MHz)	UNB-5						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-8						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_SP (BW : 160MHz)	UNB-5						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-8						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_SP (BW : 320MHz)	UNB-5						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-7						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-6						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
	UNB-8						12.5	12.5	12.5	12.5			12.5	12.5	15.5					15.5	15.5
WiFi 6 GHz_VLP (BW : 20MHz)	UNB-5	6.0					6.0	6.0	6.0	6.0			6.0	6.0	9.0					9.0	9.0
	UNB-6	6.0					6.0	6.0	6.0	6.0			6.0	6.0	9.0					9.0	9.0
	UNB-7	6.0					6.0	6.0	6.0	6.0			6.0	6.0	9.0					9.0	9.0
	UNB-8	6.0 ch.233: 5.5					6.0	6.0	6.0	6.0			6.0	6.0	9.0 ch.233: 8.5					9.0	9.0
WiFi 6 GHz_VLP (BW : 40MHz)	UNB-5						9.0	9.0	9.0	9.0			9.0	9.0	12.0					12.0	12.0
	UNB-6						9.0	9.0	9.0	9.0			9.0	9.0	12.0					12.0	12.0
	UNB-7						9.0	9.0	9.0	9.0			9.0	9.0	12.0					12.0	12.0
	UNB-8						9.0	9.0	9.0	9.0			9.0	9.0	12.0					12.0	12.0
WiFi 6 GHz_VLP (BW : 80MHz)	UNB-5						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-6						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-7						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-8						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
WiFi 6 GHz_VLP (BW : 160MHz)	UNB-5						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-6						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-7						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-8						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
WiFi 6 GHz_VLP (BW : 320MHz)	UNB-5						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-6						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-7						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0
	UNB-8						12.0	12.0	12.0	12.0			12.0	12.0	15.0					15.0	15.0

Bluetooth & Bluetooth LE maximum Allowed Output Power

1. BT/BLE supports MIMO (dual) mode.
2. Each Antennas has different target power during MIMO (dual) mode.

P_{max}

RF Air interface	DATA RATE	CH	Maximum allowed output power (dBm) - P _{max}				
			SISO mode		MIMO mode		
			BT SISO 1(Ant.D)	BT SISO 2(Ant.G)	BT SISO 1(Ant.D)	BT SISO 2(Ant.G)	BT dual (Ant.D+Ant.G)
Bluetooth (BDR)	1Mbps	0	18.0	18.0	14.0	13.5	16.5
		39	18.0	18.0	13.0	13.5	16.5
		78	18.0	18.0	14.0	11.5	16.0
Bluetooth (EDR)	2Mbps	0	14.5	14.5	11.5	10.5	14.0
		39	14.5	14.5	10.5	11.5	14.0
		78	14.5	14.5	11.5	9.5	13.5
	3Mbps	0	14.5	14.5	11.5	10.5	14.0
		39	14.5	14.5	10.5	11.5	14.0
		78	14.5	14.5	11.5	9.5	13.5
Bluetooth (LE)	1Mbps	37	10.0	9.5	6.5	6.5	9.5
		17	10.0	9.5	6.5	6.5	9.5
		39	10.0	9.5	6.5	6.5	9.5
	2Mbps	37	10.0	9.5	6.5	6.5	9.5
		17	10.0	9.5	6.5	6.5	9.5
		39	10.0	9.5	6.5	6.5	9.5
	125kbps	37	10.0	9.5	n/a	n/a	n/a
		17	10.0	9.5			
		39	10.0	9.5			
	500kbps	37	10.0	9.5	n/a	n/a	n/a
		17	10.0	9.5			
		39	10.0	9.5			

P_{limit} of DSI=0 & 1

RF Air interface	DATA RATE	CH	Maximum allowed output power (dBm) - DSI=0&1				
			SISO mode		MIMO mode		
			BT SISO 1(Ant.D)	BT SISO 2(Ant.G)	BT SISO 1(Ant.D)	BT SISO 2(Ant.G)	BT dual (Ant.D+Ant.G)
Bluetooth (BDR)	1Mbps	0	14.0	14.0	14.0	13.5	16.5
		39	14.0	14.0	13.0	13.5	16.5
		78	14.0	14.0	14.0	11.5	16.0
Bluetooth (EDR)	2Mbps	0	13.0	13.0	11.5	10.5	14.0
		39	13.0	13.0	10.5	11.5	14.0
		78	13.0	13.0	11.5	9.5	13.5
	3Mbps	0	13.0	13.0	11.5	10.5	14.0
		39	13.0	13.0	10.5	11.5	14.0
		78	13.0	13.0	11.5	9.5	13.5
Bluetooth (LE)	1Mbps	37	10.0	9.5	6.5	6.5	9.5
		17	10.0	9.5	6.5	6.5	9.5
		39	10.0	9.5	6.5	6.5	9.5
	2Mbps	37	10.0	9.5	6.5	6.5	9.5
		17	10.0	9.5	6.5	6.5	9.5
		39	10.0	9.5	6.5	6.5	9.5
	125kbps	37	10.0	9.5	n/a	n/a	n/a
		17	10.0	9.5			
		39	10.0	9.5			
	500kbps	37	10.0	9.5	n/a	n/a	n/a
		17	10.0	9.5			
		39	10.0	9.5			

P_{limit} of DSI=2 & 3

RF Air interface	DATA RATE	CH	Maximum allowed output power (dBm) - DSI=2&3				
			SISO mode		MIMO mode		
			BT SISO 1(Ant.D)	BT SISO 2(Ant.G)	BT SISO 1(Ant.D)	BT SISO 2(Ant.G)	BT dual (Ant.D+Ant.G)
Bluetooth (BDR)	1Mbps	0	13.0	13.0	12.5	12.0	15.0
		39	13.0	13.0	11.0	12.0	14.5
		78	13.0	13.0	12.5	10.0	14.5
Bluetooth (EDR)	2Mbps	0	11.5	11.0	11.5	10.0	13.5
		39	11.5	11.0	9.5	11.0	13.5
		78	11.5	11.0	10.5	8.0	12.5
	3Mbps	0	11.5	11.0	11.5	10.0	13.5
		39	11.5	11.0	9.5	11.0	13.5
		78	11.5	11.0	10.5	8.0	12.5
Bluetooth (LE)	1Mbps	37	10.0	9.5	6.5	6.5	9.5
		17	10.0	9.5	6.5	6.5	9.5
		39	10.0	9.5	6.5	6.5	9.5
	2Mbps	37	10.0	9.5	6.5	6.5	9.5
		17	10.0	9.5	6.5	6.5	9.5
		39	10.0	9.5	6.5	6.5	9.5
	125kbps	37	10.0	9.5	n/a	n/a	n/a
		17	10.0	9.5			
		39	10.0	9.5			
	500kbps	37	10.0	9.5	n/a	n/a	n/a
		17	10.0	9.5			
		39	10.0	9.5			

6.5. General LTE SAR Test and Reporting Considerations

Item	Description					
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 2	Frequency range: 1850 - 1910 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low	18700/ 1860	18675/ 1857.5	18650/ 1855	18625/ 1852.5	18615/ 1851.5
	Mid	18900/ 1880	18900/ 1880	18900/ 1880	18900/ 1880	18900/ 1880
	High	19100/ 1900	19125/ 1902.5	19150/ 1905	19175/ 1907.5	19185/ 1908.5
	Band 4	Frequency range: 1710 - 1755 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low	20050/ 1720	20025/ 1717.5	20000/ 1715	19975/ 1712.5	19965/ 1711.5
	Mid	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5
	High	20300/ 1745	20325/ 1747.5	20350/ 1750	20375/ 1752.5	20385/ 1753.5
	Band 5	Frequency range: 824 - 849 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low			20450/ 829	20425/ 826.5	20415/ 825.5
	Mid			20525/ 836.5	20525/ 836.5	20525/ 836.5
	High			20600/ 844	20625/ 846.5	20635/ 847.5
	Band 12	Frequency range: 699 - 716 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low			23060/ 704	23035/ 701.5	23025/ 700.5
	Mid			23095/ 707.5	23095/ 707.5	23095/ 707.5
	High			23130/ 711	23155/ 713.5	23165/ 714.5
	Band 13	Frequency range: 777 - 787 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low				23205/ 779.5	
	Mid			23230/ 782	23230/ 782	
	High				23255/ 784.5	
	Band 25	Frequency range: 1850 - 1915 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low	26140/ 1860	26115/ 1857.5	26090/ 1855	26065/ 1852.5	26055/ 1851.5
	Mid	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5
	High	26590/ 1905	26615/ 1907.5	26640/ 1910	26665/ 1912.5	26675/ 1913.5
	Band 41	Frequency range: 2496 - 2690 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low	39750 / 2506.0				
	Low-Mid	40185 / 2549.5				
	Mid	40620 / 2593.0				
	Mid-High	41055 / 2636.5				
	High	41490 / 2680.0				
	Band 66	Frequency range: 1710 - 1780 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low	132072/ 1720	132047/ 1717.5	132022/ 1715	131997/ 1712.5	131987/ 1711.5
	Mid	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745
	High	132572/ 1770	132597/ 1772.5	132622/ 1775	132647/ 1777.5	132657/ 1778.5

General LTE SAR Test and Reporting Considerations (Continued)

Item	Description																																																														
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).

6.5.1. LTE (TDD) Considerations

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

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

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

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$	-	-
8	$24144 \cdot T_s$			-		
9	$13168 \cdot T_s$			-	-	-

Calculated Duty Cycle

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

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

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

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

where

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

Note(s):

This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used for SAR Testing: configuration 0 at 63.3% duty cycle in power class 3.

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

Item	Description															
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band n5	Frequency range: 824 - 849 MHz														
		Channel Bandwidth														
	100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	45 MHz	40 MHz	35 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz	
	Low												166800/ 834	166300/ 831.5	165800/ 829	165300/ 826.5
	Mid												167300/ 836.5	167300/ 836.5	167300/ 836.5	167300/ 836.5
	High												167800/ 839	168300/ 841.5	168800/ 844	169300/ 846.5
	Band n41	Frequency range: 2496 - 2690 MHz														
		Channel Bandwidth														
	100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	45 MHz	40 MHz	35 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz	
	Low	509202/ 2546.01	508200/ 2541	507204/ 2536.02	506202/ 2531.01	505200/ 2526	504204/ 2521.02	503700/ 2518.5	503202/ 2516.01	502704/ 2513.52	502200/ 2511	501702/ 2508.51	501204/ 2506.02	500700/ 2503.5	500202/ 2501.01	
	Low-Mid							513636/ 2568.18	513468/ 2567.34	510648/ 2553.24	510402/ 2552.01	510150/ 2550.75	509898/ 2549.49	509652/ 2548.26	509400/ 2547	
	Mid	518598/ 2592.99				518598/ 2592.99	518598/ 2592.99			518598/ 2592.99	518598/ 2592.99	518598/ 2592.99	518598/ 2592.99	518598/ 2592.99	518598/ 2592.99	518598/ 2592.99
	Mid-High	528000/ 2640	528996/ 2644.98	529998/ 2649.99	531000/ 2655	531996/ 2659.99	532998/ 2664.99	523566/ 2617.83	523734/ 2618.67	526548/ 2632.74	526800/ 2634	527052/ 2635.26	527298/ 2636.49	527550/ 2637.75	527802/ 2639.01	
	High							533496/ 2667.48	534000/ 2670	534498/ 2672.49	534996/ 2674.98	534996/ 2677.5	535998/ 2679.99	536496/ 2682.48	537000/ 2685	
	Band n66	Frequency range: 1710 - 1780 MHz														
		Channel Bandwidth														
	100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	45 MHz	40 MHz	35 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz	
	Low							346500/ 1732.5	346000/ 1730	345500/ 1727.5	345000/ 1725	344500/ 1722.5	344000/ 1720	343500/ 1717.5	343000/ 1715	342500/ 1712.5
	Mid							349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745	349000/ 1745
	High							351500/ 1757.5	352000/ 1760	352500/ 1762.5	353000/ 1765	353500/ 1767.5	354000/ 1770	354500/ 1772.5	355000/ 1775	355500/ 1777.5
SCS	NR FDD Bands : 15 kHz, NR TDD Bands : 30kHz															
Modulations Supported in UL	* DFT-s-OFDM: $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM * CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM															
A-MPR (Additional MPR) disabled for SAR Testing?	Yes															
EN-DC Carrier Aggregation Possible Combinations																
NR Band n5	LTE Band 2/4/66															
NR Band n41	LTE Band 2/4/5/66															
NR Band n66	LTE Band 2/5/12/13															

Notes:

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

6.7. Dynamic Antenna Tuner Testing

This Device applies Qualcomm chipset solution's Dynamic Antenna tuning technology to some 3G/4G/5G sub6 bands at AG0.

- WCDMA B5
- LTE B5/B12/B13

Dynamic Antenna tuning was tested in accordance with KDB 388624 D02 Pre-Approval Guidance V18r08 and the April 2025 TCBC Workshop notes.

Dynamic Antenna tuning was tested in accordance with KDB 388624 D02 Pre-Approval Guidance V18r08 and APPENDIX ANTTUN April 2025 TCBC Workshop notes. The ANTUN procedure requires evaluating both Head and Body exposure conditions with its respective worst-case air interface and antenna combination.

Checklist Items

- The tuner state shall be controlled remotely such that the DUT position is not moved during the series of single-point SAR measurements.
- For each air interface, exposure condition, and antenna that supports DAT, the following procedure shall be followed:
 - Step 1. An area scan is performed with the DUT positioned for the exposure condition with the auto-tuner enabled to determine the peak SAR location.
 - Step 2. A single-point SAR measurement (i.e., time sweep) is performed at the peak SAR location of step 1. (that is, with auto-tuner enabled). The auto-tuner state shall be recorded after verifying that it is stable.
 - Step 3. Without moving the probe or introducing any other perturbation, the auto-tuner shall be disabled, and two other adjacent tune states shall be chosen by increasing and decreasing the state identification number by 1.
 - Step 4. A single point SAR measurement is then performed on both chosen adjacent states and compared with the value of step 2. If the measured SAR is higher than the value of step 2. but within tolerance, the next adjacent state(s) shall be chosen, and the measurement shall be repeated until a lower SAR value can be shown;
 - Step 5. Repeat step 2. with auto-tuning enabled as a test for variability within tolerance: the previous measured value in step 2. shall be recovered.
- If any single point SAR measurement result is >1.4 W/kg, then all tune states for that particular combination of air interface, exposure condition, and antenna selection shall be evaluated with single point SAR measurements.

Dynamic Antenna Tuner Test Results**Folder Close**

Ant.	Ant.A	
Band	WCDMA Band 5	
RF ExposureCondition	Head	
Mode	Rel.99	
DSI	3	
Dist. (mm)	0	
Test Position	Right Touch	
Ch. #	4183	
Freq. (MHz)	836.6	
RB Allocation	-	
RB Offset	-	
Meas. SAR (W/kg)	0.307	
Scen#	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	0.247	N/A
143	0.008	-97%
0	0.207	-16%
1	0.188	-24%
Turned Auto tune back on		
Auto Tune	0.245	-1%

Ant.	Ant.A+B	
Band	WCDMA Band 5	
RF ExposureCondition	Body-worn & Hotspot	
Mode	Rel.99	
DSI	1	
Dist. (mm)	5	
Test Position	Rear	
Ch. #	4233	
Freq. (MHz)	846.6	
RB Allocation	-	
RB Offset	-	
Meas. SAR (W/kg)	0.602	
Scen#	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	0.530	N/A
107	0.032	-94%
108	0.529	0%
109	0.440	-17%
Turned Auto tune back on		
Auto Tune	0.558	5%

Folder Open

Ant.	Ant.A+B	
Band	WCDMA Band 5	
RF ExposureCondition	Head	
Mode	Rel.99	
DSI	2	
Dist. (mm)	0	
Test Position	Left Touch	
Ch. #	4233	
Freq. (MHz)	846.6	
RB Allocation	-	
RB Offset	-	
Meas. SAR (W/kg)	0.699	
Scen#	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	0.551	N/A
109	0.469	-15%
110	0.474	-14%
111	0.442	-20%
Turned Auto tune back on		
Auto Tune	0.567	3%

Ant.	Ant.A+B	
Band	WCDMA Band 5	
RF ExposureCondition	Body-worn & Hotspot	
Mode	Rel.99	
DSI	0	
Dist. (mm)	5	
Test Position	Rear	
Ch. #	4233	
Freq. (MHz)	846.6	
RB Allocation	-	
RB Offset	-	
Meas. SAR (W/kg)	0.587	
Scen#	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	0.694	N/A
0	0.646	-7%
1	0.682	-2%
2	0.668	-4%
Turned Auto tune back on		
Auto Tune	0.693	0%

Notes:

All test results are within tolerance compared to Auto tune state of Step.2.

Dynamic Antenna Tuner Test Results (Continued)**Folder Close**

Ant.	Ant.A	
Band	LTE Band 5	
RF ExposureCondition	Head	
Mode	QPSK	
DSI	3	
Dist. (mm)	0	
Test Position	Right Touch	
Ch. #	20525	
Freq. (MHz)	836.5	
RB Allocation	1	
RB Offset	0	
Meas. SAR (W/kg)	0.273	
Scen#	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	0.243	N/A
143	0.003	-99%
0	0.210	-14%
1	0.189	-22%
Turned Auto tune back on		
Auto Tune	0.215	-12%

Ant.	Ant.A+B	
Band	LTE Band 5	
RF ExposureCondition	Body	
Mode	QPSK	
DSI	1	
Dist. (mm)	5	
Test Position	Rear	
Ch. #	20525	
Freq. (MHz)	836.5	
RB Allocation	25	
RB Offset	0	
Meas. SAR (W/kg)	0.514	
Scen#	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	0.570	N/A
35	0.031	-95%
36	0.515	-10%
37	0.493	-14%
Turned Auto tune back on		
Auto Tune	0.505	-11%

Folder Open

Ant.	Ant.A+B	
Band	LTE Band 5	
RF ExposureCondition	Head	
Mode	QPSK	
DSI	2	
Dist. (mm)	0	
Test Position	Left Touch	
Ch. #	20525	
Freq. (MHz)	836.5	
RB Allocation	1	
RB Offset	0	
Meas. SAR (W/kg)	0.565	
Scen#	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	0.641	N/A
143	0.018	-97%
0	0.582	-9%
1	0.571	-11%
Turned Auto tune back on		
Auto Tune	0.606	-5%

Ant.	Ant.A+B	
Band	LTE Band 5	
RF ExposureCondition	Body	
Mode	QPSK	
DSI	0	
Dist. (mm)	5	
Test Position	Rear	
Ch. #	20525	
Freq. (MHz)	836.5	
RB Allocation	25	
RB Offset	0	
Meas. SAR (W/kg)	0.549	
Scen#	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	0.514	N/A
143	0.013	-97%
0	0.486	-5%
1	0.434	-16%
Turned Auto tune back on		
Auto Tune	0.458	-11%

Notes:

All test results are within tolerance compared to Auto tune state of Step.2.

6.8. DSI verification

A. DSI (Head to Body) verification

The following procedures shall be employed to verify the differences in device output power during different DSI states.

Step 1. Configure the device to be in a call such that voice is routed to the earpiece.

Step 2. Record the output power and ensure that it is within the specific tune-up tolerance for this operating mode.

Step 3. Repeat steps 1 – 2 for any additional configurations involving voice routing to other speakers such as the speakerphone or headsets.

Test result

Case.1 (Change DSI=3 to DSI=1)

Tech	Antenna	DSI=3 (RCV)		DSI=1 (Speakerphone)	
		Maximum allowed Power (dBm)	Measured output power (dBm)	Maximum allowed Power (dBm)	Measured output power (dBm)
WCDMA Band V	Ant.A	25.3	24.47	23.0	22.11

Case.2 (Change DSI=1 to DSI=3)

Tech	Antenna	DSI=1 (Speakerphone)		DSI=3 (RCV)	
		Maximum allowed Power (dBm)	Measured output power (dBm)	Maximum allowed Power (dBm)	Measured output power (dBm)
WCDMA Band V	Ant.A	23.0	22.11	25.3	24.51

B. DSI(F/C Body to F/O Body) verification with Hall effect sensor

This device has implemented 2 different power operation using Hall effect sensor. So Hall effect sensor was verified according to guide of APPENDIX TXSENS in KDB 388624 D02. This process must be followed to determine the lid angle where a power reduction occurs, by taking power measurements at each step, as indicated in the step listed here below:

Step1. From the lid in closed mode (0 degrees), open the screen in 10 degree steps until open mode is obtained.

Step2. Lower the screen by 5 degrees increments to verify that the “closed mode” is triggered.

Step3. From the position of the previous step, open the screen in 1 degree increments until open mode is triggered again.

Step4. Continue opening the screen in 1 degree increments until at least 5 degrees past where “open mode” was obtained, then continue opening the screen in 10 degree steps until the device switches to open mode.

Step5. Reverse the previous procedure to go from open mode back down to closed mode.

Test results (Close mode to Open mode)

Techs	Ant.	DUT Angles(degree)														
		Folder Close(0 degree) to Folder Open (180 degree)														
		0 - 4	5	6	7	8	9	10	11	12	13	14	15	16	17	
		Measured output power (dBm)														
GSM 1900	Ant.B	21.69	21.69	21.64	21.76	21.70	21.66	21.74	19.40	19.33	19.39	19.37	19.47	19.33	19.46	
LTE Band 66(4)	Ant.B	16.52	16.51	16.49	16.57	16.44	16.50	16.50	15.34	15.33	15.44	15.45	15.43	15.44	15.37	
LTE Band 25(2)	Ant.B	17.40	17.41	17.33	17.39	17.37	17.40	17.41	16.15	16.10	16.06	16.16	16.06	16.09	16.03	
LTE Band 25	Ant.F	16.43	16.35	16.41	16.33	16.34	16.47	16.40	15.68	15.75	15.77	15.66	15.67	15.72	15.77	
LTE Band 41	Ant.B	18.04	18.00	17.98	17.99	17.97	17.99	18.05	16.62	16.61	16.54	16.55	16.61	16.59	16.55	
LTE Band 41	Ant.F	17.79	17.77	17.85	17.80	17.84	17.77	17.77	15.73	15.74	15.73	15.72	15.72	15.73	15.77	
NR Band n66	Ant.B	16.26	16.32	16.23	16.35	16.30	16.25	16.30	15.38	15.46	15.39	15.44	15.44	15.33	15.38	
NR Band n41	Ant.F	16.33	16.46	16.47	16.36	16.36	16.44	16.41	14.35	14.40	14.45	14.45	14.42	14.41	14.36	

Test results (Open mode to Close mode)

Techs	Ant.	DUT Angles(degree)														
		Folder Open(180 degree) to Folder Close (0 degree)														
		13-180	12	11	10	9	8	7	6	5	4	3	2	1	0	
		Measured output power (dBm)														
GSM 1900	Ant.B	19.37	19.38	19.43	19.47	19.40	19.33	19.36	19.35	21.58	21.62	21.66	21.57	21.59	21.57	
LTE Band 66(4)	Ant.B	15.28	15.34	15.25	15.25	15.27	15.34	15.29	15.23	16.56	16.57	16.49	16.50	16.49	16.44	
LTE Band 25(2)	Ant.B	16.07	16.14	16.07	16.12	16.12	16.05	16.09	16.05	17.42	17.40	17.42	17.36	17.34	17.46	
LTE Band 25	Ant.F	15.72	15.65	15.64	15.74	15.71	15.77	15.68	15.77	16.40	16.36	16.35	16.33	16.46	16.46	
LTE Band 41	Ant.B	16.62	16.60	16.53	16.66	16.54	16.57	16.65	16.55	18.03	18.00	18.01	18.01	17.94	17.93	
LTE Band 41	Ant.F	15.76	15.63	15.76	15.72	15.72	15.72	15.68	15.63	17.70	17.66	17.64	17.67	17.70	17.68	
NR Band n66	Ant.B	15.40	15.39	15.36	15.41	15.45	15.40	15.39	15.44	16.33	16.27	16.23	16.35	16.28	16.29	
NR Band n41	Ant.F	14.34	14.38	14.38	14.37	14.34	14.42	14.46	14.46	16.42	16.34	16.40	16.40	16.42	16.46	

Conclusion

DUT Configuration	SAR Test Condition	Operate Power Mode (DSI)
Folder Close	Body SAR	DSI 1
Folder Open	Body SAR	DSI 0

Notes:

According to Hall effect sensor verification results, Body SAR test were performed by applying DSI 1 power to Folder Close and DSI 0 power to Folder Open.

7. RF Exposure Conditions (Test Configurations)

7.1. Folder Close condition

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

Wireless technologies		RF Exposure Conditions	Antennaa	Test Positions / distance						
				Test distance	Right Touch	Right Tilt	Left Touch	Left Tilt		
WWAN & WLAN/BT & UWB		Head	All WWAN/WLAN/BT Antennas (Ant.A+B, A, B, D, E, F, G, D+G, D+E)	0 mm	Yes	Yes	Yes	Yes		
Wireless technologies	RF Exposure Conditions	Antennaa	Test Positions / distance			Test Positions / distance				
			Test distance	Rear	Front	Test distance	Top	Left	Bottom	Right
WWAN	Body-worn & Hotspot	Ant.A+B	5 mm	Yes	Yes	10 mm			Yes	Yes
		Ant.A		Yes	Yes				Yes	Yes
		Ant.B		Yes	Yes				Yes	
		Ant.F		Yes	Yes		Yes			
	Product Specific 10-g	All WWAN antennas (Ant.A+B, A, B, F)	0 mm	Refer to note 2 and 3		0 mm	Refer to note 2 and 3			
WLAN/BT	Body-worn & Hotspot	Ant.D (WiFi 2.4G & BT)	5 mm	Yes	Yes	10 mm	Yes			Yes
		Ant.G (WiFi 2.4G & BT)		Yes	Yes		N/A			
		Ant.D (WiFi 5.2G & 5.8G & 6G)		Yes	Yes		Yes			Yes
		Ant.E (WiFi 5.2G & 5.8G & 6G)		Yes	Yes		Yes	Yes		
		Ant.D (WiFi 5.5G & 5.9G & 6G)		Yes	Yes		N/A			
		Ant.E (WiFi 5.5G & 5.9G & 6G)		Yes	Yes		N/A			
	Product Specific 10-g	All WLAN/BT antennas (Ant.D, G, E)	0 mm	Refer to note 2 and 4		0 mm	Refer to note 2 and 4			
UWB	Product Specific 10-g	Ant.F	0 mm	Yes	Yes	0 mm	Yes			
NFC	Product Specific 10-g	NFC Ant.	0 mm	Yes	Yes	0 mm	Yes	Yes		

Notes:

- For Hotspot exposure condition, SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.
- For Phablet devices: When hotspot mode applies, Product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.
- For Phablet devices: When hotspot mode applies and power reduction applies to hotspot mode, Product specific 10-g SAR is required for each test position that has and adjusted SAR to maximum power that is > 1.2 W/kg.
- For Phablet devices: When hotspot mode is not supported, Product specific 10-g SAR is required for all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.
- NFC SAR was considered about only hand held condition (Product Specific 10-g).
- For Body-worn exposure condition, SAR test is considered for Rear and Front test positions.
- For Head exposure condition, All WWAN/WLAN/BT/UWB Antennas are required Head SAR test.
- The Body-worn's minimum separation distance is 5mm. So to cover both body-worn and hotspot RF exposure conditions testing was performed at a separation distance of 5mm at Rear and Front test positions. And other edges are tested at 10mm test distance in Hotspot condition.
- For each antennas of Rear position, SAR/APD/IPD test was applied "RFX Testing for Complex Shapes" guide due to camera bumper according to TCBC workshop notes. Detail of test positions refer to Appendix A. But in the case of F/C, one test position was evaluated because F/O had already tested all additional positions related to the camera bumper.
- This device supports Bluetooth tethering in only Ant.1 (Ant.D)

7.2. Folder Open condition

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

Wireless technologies	RF Exposure Conditions	Antennas	Test Positions / distance				
			Test distance	Right Touch	Right Tilt	Left Touch	Left Tilt
WWAN & WLAN/BT & UWB	Head	All WWAN/WLAN/BT Antennas (Ant.A+B, B, D, E, F, G, D+G, D+E)	0 mm	Yes	Yes	Yes	Yes

Wireless technologies	RF Exposure Conditions	Antennas	Test Positions / distance			Test Positions / distance				
			Test distance	Rear	Front	Test distance	Top	Left	Bottom	Right
WWAN	Body-worn & Hotspot	Ant.A+B	5 mm	Yes	Yes	10 mm			Yes	Yes
		Ant.B		Yes	Yes				Yes	
		Ant.F		Yes	Yes		Yes			
	Product Specific 10-g	All WWAN antennas (Ant.A+B, B, D, E, F)	0 mm	Refer to note 2 and 3		0 mm	Refer to note 2 and 3			
WLAN/BT	Body-worn & Hotspot	Ant.D (WiFi 2.4G & BT)	5 mm	Yes	Yes	10 mm	Yes			Yes
		Ant.G (WiFi 2.4G & BT)		Yes	Yes		N/A			
		Ant.D (WiFi 5.2G & 5.8G & 6G)		Yes	Yes		Yes			Yes
		Ant.E (WiFi 5.2G & 5.8G & 6G)		Yes	Yes		Yes			
		Ant.D (WiFi 5.5G & 5.9G & 6G)		Yes	Yes		N/A			
		Ant.E (WiFi 5.5G & 5.9G & 6G)		Yes	Yes		N/A			
	Product Specific 10-g	All WLAN/BT antennas (Ant.D, G, E)	0 mm	Refer to note 2 and 4		0 mm	Refer to note 2 and 4			
UWB	Product Specific 10-g	Ant.F	0 mm	Yes	Yes	0 mm	Yes			
NFC	Product Specific 10-g	NFC Ant.	0 mm	Yes	Yes	0 mm	Yes			

Notes:

- For Hotspot exposure condition, SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.
- For Phablet devices: When hotspot mode applies, Product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.
- For Phablet devices: When hotspot mode applies and power reduction applies to hotspot mode, Product specific 10-g SAR is required for each test position that has and adjusted SAR to maximum power that is > 1.2 W/kg.
- For Phablet devices: When hotspot mode is not supported, Product specific 10-g SAR is required for all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.
- NFC SAR was considered about only hand held condition (Product Specific 10-g).
- For Body-worn exposure condition, SAR test is considered for Rear and Front test positions.
- For Head exposure condition, All WWAN/WLAN/BT/UWB Antennas are required Head SAR test.
- The Body-worn's minimum separation distance is 5mm. So to cover both body-worn and hotspot RF exposure conditions testing was performed at a separation distance of 5mm at Rear and Front test positions. And other edges are tested at 10mm test distance in Hotspot condition.
- For each antennas of Rear position, SAR/APD/IPD test was applied "RFX Testing for Complex Shapes" guide due to camera bumper according to TCBC workshop notes. Detail of test positions refer to Appendix A.
- This device supports Bluetooth tethering in only Ant.1 (Ant.D)

8. Dielectric Property Measurements & System Check

8.1. Dielectric Property Measurements

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

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The Tissue Dielectric parameters 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.

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

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

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

Refer to Table 3 within the IEEE Std 1528 : 2013.

2. Tissue Dielectric Parameters (4MHz to 30MHz & 6GHz to 10GHz)

Target Frequency (MHz)	Head	
	ϵ_r	σ (S/m)
4	55.0	0.75
13	55.0	0.75
30	55.0	0.75
6000	35.1	5.48
6500	34.5	6.07
7000	33.9	6.65
7500	33.3	7.24
8000	32.7	7.84
8500	32.1	8.46
9000	31.6	9.08
9500	31.0	9.71
10000	30.4	10.40

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

Notes:

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

Dielectric Property Measurements Results:**SAR 1 Room**

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-05-15	Head 2450	e'	38.5700	Relative Permittivity (ϵ_r):	38.57	39.20	-1.61	5
		e"	13.5500	Conductivity (σ):	1.85	1.80	2.55	5
	Head 2400	e'	38.6300	Relative Permittivity (ϵ_r):	38.63	39.30	-1.70	5
		e"	13.5300	Conductivity (σ):	1.81	1.75	3.08	5
	Head 2500	e'	38.4800	Relative Permittivity (ϵ_r):	38.48	39.14	-1.68	5
		e"	13.5600	Conductivity (σ):	1.88	1.85	1.67	5
2026-05-20	Head 2450	e'	39.6900	Relative Permittivity (ϵ_r):	39.69	39.20	1.25	5
		e"	13.1600	Conductivity (σ):	1.79	1.80	-0.40	5
	Head 2400	e'	39.8000	Relative Permittivity (ϵ_r):	39.80	39.30	1.28	5
		e"	13.2700	Conductivity (σ):	1.77	1.75	1.10	5
	Head 2500	e'	39.6900	Relative Permittivity (ϵ_r):	39.69	39.14	1.41	5
		e"	13.1300	Conductivity (σ):	1.83	1.85	-1.56	5
2026-06-08	Head 2600	e'	39.1400	Relative Permittivity (ϵ_r):	39.14	39.01	0.33	5
		e"	13.1700	Conductivity (σ):	1.90	1.96	-2.97	5
	Head 2495	e'	39.2200	Relative Permittivity (ϵ_r):	39.22	39.14	0.20	5
		e"	13.1200	Conductivity (σ):	1.82	1.85	-1.54	5
	Head 2700	e'	38.9600	Relative Permittivity (ϵ_r):	38.96	38.88	0.19	5
		e"	13.2600	Conductivity (σ):	1.99	2.07	-3.84	5

SAR 2 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-05-08	Head 1900	e'	40.7500	Relative Permittivity (ϵ_r):	40.75	40.00	1.88	5
		e"	12.9700	Conductivity (σ):	1.37	1.40	-2.13	5
	Head 1850	e'	40.7300	Relative Permittivity (ϵ_r):	40.73	40.00	1.82	5
		e"	13.0500	Conductivity (σ):	1.34	1.40	-4.11	5
	Head 1915	e'	40.7500	Relative Permittivity (ϵ_r):	40.75	40.00	1.88	5
		e"	12.9700	Conductivity (σ):	1.38	1.40	-1.35	5
2026-05-11	Head 750	e'	41.9400	Relative Permittivity (ϵ_r):	41.94	41.96	-0.05	5
		e"	21.4100	Conductivity (σ):	0.89	0.89	-0.03	5
	Head 660	e'	42.2900	Relative Permittivity (ϵ_r):	42.29	42.42	-0.31	5
		e"	23.4500	Conductivity (σ):	0.86	0.89	-2.89	5
	Head 800	e'	41.7600	Relative Permittivity (ϵ_r):	41.76	41.71	0.13	5
		e"	20.4700	Conductivity (σ):	0.91	0.90	1.52	5
2026-05-11	Head 835	e'	41.6400	Relative Permittivity (ϵ_r):	41.64	41.50	0.34	5
		e"	19.8900	Conductivity (σ):	0.92	0.90	2.61	5
	Head 810	e'	41.7200	Relative Permittivity (ϵ_r):	41.72	41.65	0.16	5
		e"	20.2900	Conductivity (σ):	0.91	0.90	1.80	5
	Head 850	e'	41.6100	Relative Permittivity (ϵ_r):	41.61	41.50	0.27	5
		e"	19.6600	Conductivity (σ):	0.93	0.92	1.55	5
2026-05-15	Head 1750	e'	39.7600	Relative Permittivity (ϵ_r):	39.76	40.08	-0.81	5
		e"	14.1000	Conductivity (σ):	1.37	1.37	0.22	5
	Head 1680	e'	39.9700	Relative Permittivity (ϵ_r):	39.97	40.19	-0.55	5
		e"	14.2400	Conductivity (σ):	1.33	1.33	0.05	5
	Head 1780	e'	39.6800	Relative Permittivity (ϵ_r):	39.68	40.04	-0.90	5
		e"	14.0000	Conductivity (σ):	1.39	1.39	-0.02	5
2026-05-19	Head 1750	e'	40.0100	Relative Permittivity (ϵ_r):	40.01	40.08	-0.19	5
		e"	13.6800	Conductivity (σ):	1.33	1.37	-2.76	5
	Head 1680	e'	40.1600	Relative Permittivity (ϵ_r):	40.16	40.19	-0.08	5
		e"	13.8900	Conductivity (σ):	1.30	1.33	-2.41	5
	Head 1780	e'	39.9600	Relative Permittivity (ϵ_r):	39.96	40.04	-0.20	5
		e"	13.6000	Conductivity (σ):	1.35	1.39	-2.88	5
2026-05-19	Head 1900	e'	39.8400	Relative Permittivity (ϵ_r):	39.84	40.00	-0.40	5
		e"	13.2900	Conductivity (σ):	1.40	1.40	0.29	5
	Head 1850	e'	39.8500	Relative Permittivity (ϵ_r):	39.85	40.00	-0.37	5
		e"	13.4100	Conductivity (σ):	1.38	1.40	-1.47	5
	Head 1915	e'	39.8400	Relative Permittivity (ϵ_r):	39.84	40.00	-0.40	5
		e"	13.2700	Conductivity (σ):	1.41	1.40	0.93	5

SAR 3 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-05-11	Head 2450	e'	37.9700	Relative Permittivity (ϵ_r):	37.97	39.20	-3.14	5
		e"	13.0800	Conductivity (σ):	1.78	1.80	-1.01	5
	Head 2400	e'	38.0500	Relative Permittivity (ϵ_r):	38.05	39.30	-3.17	5
		e"	13.1300	Conductivity (σ):	1.75	1.75	0.03	5
	Head 2480	e'	37.9400	Relative Permittivity (ϵ_r):	37.94	39.16	-3.12	5
		e"	13.0500	Conductivity (σ):	1.80	1.83	-1.80	5
2026-05-18	Head 2450	e'	38.5600	Relative Permittivity (ϵ_r):	38.56	39.20	-1.63	5
		e"	13.3900	Conductivity (σ):	1.82	1.80	1.34	5
	Head 2400	e'	38.6600	Relative Permittivity (ϵ_r):	38.66	39.30	-1.62	5
		e"	13.3700	Conductivity (σ):	1.78	1.75	1.86	5
	Head 2480	e'	38.5000	Relative Permittivity (ϵ_r):	38.50	39.16	-1.69	5
		e"	13.3900	Conductivity (σ):	1.85	1.83	0.76	5

SAR 4 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-04-24	Head 750	e'	42.7900	Relative Permittivity (ϵ_r):	42.79	41.96	1.97	5
		e"	21.0800	Conductivity (σ):	0.88	0.89	-1.57	5
	Head 660	e'	43.0900	Relative Permittivity (ϵ_r):	43.09	42.42	1.57	5
		e"	23.2300	Conductivity (σ):	0.85	0.89	-3.80	5
	Head 800	e'	42.6800	Relative Permittivity (ϵ_r):	42.68	41.71	2.34	5
		e"	20.1000	Conductivity (σ):	0.89	0.90	-0.31	5
2026-04-24	Head 835	e'	42.5800	Relative Permittivity (ϵ_r):	42.58	41.50	2.60	5
		e"	19.5200	Conductivity (σ):	0.91	0.90	0.70	5
	Head 810	e'	42.6500	Relative Permittivity (ϵ_r):	42.65	41.65	2.39	5
		e"	19.9300	Conductivity (σ):	0.90	0.90	-0.01	5
	Head 850	e'	42.5400	Relative Permittivity (ϵ_r):	42.54	41.50	2.51	5
		e"	19.2900	Conductivity (σ):	0.91	0.92	-0.36	5
2026-04-28	Head 750	e'	41.8600	Relative Permittivity (ϵ_r):	41.86	41.96	-0.24	5
		e"	21.2500	Conductivity (σ):	0.89	0.89	-0.77	5
	Head 660	e'	42.2300	Relative Permittivity (ϵ_r):	42.23	42.42	-0.46	5
		e"	23.3000	Conductivity (σ):	0.86	0.89	-3.51	5
	Head 800	e'	41.6800	Relative Permittivity (ϵ_r):	41.68	41.71	-0.06	5
		e"	20.3200	Conductivity (σ):	0.90	0.90	0.78	5
2026-04-28	Head 835	e'	41.5900	Relative Permittivity (ϵ_r):	41.59	41.50	0.22	5
		e"	19.7600	Conductivity (σ):	0.92	0.90	1.94	5
	Head 810	e'	41.6500	Relative Permittivity (ϵ_r):	41.65	41.65	-0.01	5
		e"	20.1500	Conductivity (σ):	0.91	0.90	1.10	5
	Head 850	e'	41.5700	Relative Permittivity (ϵ_r):	41.57	41.50	0.17	5
		e"	19.5300	Conductivity (σ):	0.92	0.92	0.88	5
2026-04-29	Head 13	e'	56.10	Relative Permittivity (ϵ_r):	56.10	55.00	2.00	5
		e"	1044.00	Conductivity (σ):	0.75	0.75	0.62	5
	Head 12	e'	56.06	Relative Permittivity (ϵ_r):	56.06	55.00	1.93	5
		e"	1132.00	Conductivity (σ):	0.76	0.75	0.71	5
	Head 14	e'	56.08	Relative Permittivity (ϵ_r):	56.08	55.00	1.96	5
		e"	969.70	Conductivity (σ):	0.75	0.75	0.65	5
2026-04-30	Head 1750	e'	38.7500	Relative Permittivity (ϵ_r):	38.75	40.08	-3.33	5
		e"	13.6400	Conductivity (σ):	1.33	1.37	-3.05	5
	Head 1695	e'	38.8400	Relative Permittivity (ϵ_r):	38.84	40.17	-3.31	5
		e"	13.7600	Conductivity (σ):	1.30	1.34	-3.07	5
	Head 1780	e'	38.7000	Relative Permittivity (ϵ_r):	38.70	40.04	-3.34	5
		e"	13.5800	Conductivity (σ):	1.34	1.39	-3.02	5
2026-04-30	Head 1900	e'	38.6100	Relative Permittivity (ϵ_r):	38.61	40.00	-3.48	5
		e"	13.3400	Conductivity (σ):	1.41	1.40	0.67	5
	Head 1850	e'	38.6100	Relative Permittivity (ϵ_r):	38.61	40.00	-3.48	5
		e"	13.4100	Conductivity (σ):	1.38	1.40	-1.47	5
	Head 1915	e'	38.6000	Relative Permittivity (ϵ_r):	38.60	40.00	-3.50	5
		e"	13.3400	Conductivity (σ):	1.42	1.40	1.46	5
2026-05-04	Head 1750	e'	40.4000	Relative Permittivity (ϵ_r):	40.40	40.08	0.79	5
		e"	13.5100	Conductivity (σ):	1.31	1.37	-3.97	5
	Head 1695	e'	40.5000	Relative Permittivity (ϵ_r):	40.50	40.17	0.82	5
		e"	13.6400	Conductivity (σ):	1.29	1.34	-3.92	5
	Head 1780	e'	40.3300	Relative Permittivity (ϵ_r):	40.33	40.04	0.73	5
		e"	13.4300	Conductivity (σ):	1.33	1.39	-4.09	5
2026-05-04	Head 1900	e'	40.1900	Relative Permittivity (ϵ_r):	40.19	40.00	0.47	5
		e"	13.0900	Conductivity (σ):	1.38	1.40	-1.22	5
	Head 1850	e'	40.2100	Relative Permittivity (ϵ_r):	40.21	40.00	0.53	5
		e"	13.2100	Conductivity (σ):	1.36	1.40	-2.94	5
	Head 1915	e'	40.1800	Relative Permittivity (ϵ_r):	40.18	40.00	0.45	5
		e"	13.0700	Conductivity (σ):	1.39	1.40	-0.59	5
2026-05-08	Head 750	e'	41.2600	Relative Permittivity (ϵ_r):	41.26	41.96	-1.67	5
		e"	21.9200	Conductivity (σ):	0.91	0.89	2.36	5
	Head 660	e'	41.5400	Relative Permittivity (ϵ_r):	41.54	42.42	-2.08	5
		e"	24.1400	Conductivity (σ):	0.89	0.89	-0.03	5
	Head 800	e'	41.1200	Relative Permittivity (ϵ_r):	41.12	41.71	-1.40	5
		e"	20.9000	Conductivity (σ):	0.93	0.90	3.65	5
2026-05-08	Head 1750	e'	39.6500	Relative Permittivity (ϵ_r):	39.65	40.08	-1.08	5
		e"	13.5600	Conductivity (σ):	1.32	1.37	-3.62	5
	Head 1695	e'	39.7300	Relative Permittivity (ϵ_r):	39.73	40.17	-1.09	5
		e"	13.7600	Conductivity (σ):	1.30	1.34	-3.07	5
	Head 1780	e'	39.6200	Relative Permittivity (ϵ_r):	39.62	40.04	-1.05	5
		e"	13.4500	Conductivity (σ):	1.33	1.39	-3.95	5

SAR 4 Room (Continued)

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2026-05-20	Head 750	e'	41.4500	Relative Permittivity (ϵ_r):	41.45	41.96	-1.22	5
		e''	21.6100	Conductivity (σ):	0.90	0.89	0.91	5
	Head 660	e'	41.7200	Relative Permittivity (ϵ_r):	41.72	42.42	-1.66	5
		e''	23.2700	Conductivity (σ):	0.85	0.89	-3.63	5
	Head 800	e'	41.2700	Relative Permittivity (ϵ_r):	41.27	41.71	-1.04	5
		e''	20.6000	Conductivity (σ):	0.92	0.90	2.16	5
2026-05-20	Head 1750	e'	39.3800	Relative Permittivity (ϵ_r):	39.38	40.08	-1.76	5
		e''	13.6800	Conductivity (σ):	1.33	1.37	-2.76	5
	Head 1695	e'	39.5000	Relative Permittivity (ϵ_r):	39.50	40.17	-1.67	5
		e''	13.8200	Conductivity (σ):	1.30	1.34	-2.65	5
	Head 1780	e'	39.3000	Relative Permittivity (ϵ_r):	39.30	40.04	-1.84	5
		e''	13.5800	Conductivity (σ):	1.34	1.39	-3.02	5
2026-05-20	Head 2450	e'	39.7300	Relative Permittivity (ϵ_r):	39.73	39.20	1.35	5
		e''	13.2400	Conductivity (σ):	1.80	1.80	0.20	5
	Head 2400	e'	39.8000	Relative Permittivity (ϵ_r):	39.80	39.30	1.28	5
		e''	13.3000	Conductivity (σ):	1.77	1.75	1.32	5
	Head 2500	e'	39.7000	Relative Permittivity (ϵ_r):	39.70	39.14	1.44	5
		e''	13.1900	Conductivity (σ):	1.83	1.85	-1.11	5
2026-05-20	Head 2600	e'	39.6000	Relative Permittivity (ϵ_r):	39.60	39.01	1.51	5
		e''	13.2100	Conductivity (σ):	1.91	1.96	-2.67	5
	Head 2495	e'	39.7000	Relative Permittivity (ϵ_r):	39.70	39.14	1.42	5
		e''	13.1900	Conductivity (σ):	1.83	1.85	-1.02	5
	Head 2700	e'	39.4200	Relative Permittivity (ϵ_r):	39.42	38.88	1.38	5
		e''	13.2300	Conductivity (σ):	1.99	2.07	-4.06	5
2026-05-26	Head 2600	e'	38.2800	Relative Permittivity (ϵ_r):	38.28	39.01	-1.87	5
		e''	13.2200	Conductivity (σ):	1.91	1.96	-2.60	5
	Head 2495	e'	38.4000	Relative Permittivity (ϵ_r):	38.40	39.14	-1.90	5
		e''	13.1600	Conductivity (σ):	1.83	1.85	-1.24	5
	Head 2700	e'	38.1100	Relative Permittivity (ϵ_r):	38.11	38.88	-1.99	5
		e''	13.3000	Conductivity (σ):	2.00	2.07	-3.55	5
2026-05-27	Head 835	e'	42.5200	Relative Permittivity (ϵ_r):	42.52	41.50	2.46	5
		e''	20.1700	Conductivity (σ):	0.94	0.90	4.05	5
	Head 810	e'	42.6100	Relative Permittivity (ϵ_r):	42.61	41.65	2.30	5
		e''	20.6500	Conductivity (σ):	0.93	0.90	3.60	5
	Head 850	e'	42.4500	Relative Permittivity (ϵ_r):	42.45	41.50	2.29	5
		e''	20.0700	Conductivity (σ):	0.95	0.92	3.67	5

SAR 5 Room

Date	Freq. (MHz)		Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)
2026-04-14	Head 2600	e'	38.2100	Relative Permittivity (ϵ_r):	38.21	39.01	-2.05	5
		e"	13.3500	Conductivity (σ):	1.93	1.96	-1.64	5
	Head 2495	e'	38.4000	Relative Permittivity (ϵ_r):	38.40	39.14	-1.90	5
		e"	13.3600	Conductivity (σ):	1.85	1.85	0.26	5
	Head 2700	e'	38.1200	Relative Permittivity (ϵ_r):	38.12	38.88	-1.97	5
		e"	13.4000	Conductivity (σ):	2.01	2.07	-2.83	5
2026-05-13	Head 5200	e'	36.3800	Relative Permittivity (ϵ_r):	36.38	35.99	1.08	5
		e"	15.7600	Conductivity (σ):	4.56	4.65	-2.03	5
	Head 5250	e'	36.3000	Relative Permittivity (ϵ_r):	36.30	35.93	1.02	5
		e"	15.7800	Conductivity (σ):	4.61	4.70	-2.04	5
	Head 5600	e'	35.6700	Relative Permittivity (ϵ_r):	35.67	35.53	0.38	5
		e"	15.9400	Conductivity (σ):	4.96	5.06	-1.91	5
	Head 5750	e'	35.3200	Relative Permittivity (ϵ_r):	35.32	35.36	-0.12	5
		e"	16.0400	Conductivity (σ):	5.13	5.21	-1.64	5
	Head 5800	e'	35.2000	Relative Permittivity (ϵ_r):	35.20	35.30	-0.28	5
		e"	16.0600	Conductivity (σ):	5.18	5.27	-1.72	5
	Head 5925	e'	34.8900	Relative Permittivity (ϵ_r):	34.89	35.20	-0.88	5
		e"	16.1400	Conductivity (σ):	5.32	5.40	-1.53	5
2026-05-18	Head 5200	e'	37.1800	Relative Permittivity (ϵ_r):	37.18	35.99	3.31	5
		e"	15.6800	Conductivity (σ):	4.53	4.65	-2.52	5
	Head 5250	e'	37.0900	Relative Permittivity (ϵ_r):	37.09	35.93	3.22	5
		e"	15.7300	Conductivity (σ):	4.59	4.70	-2.35	5
	Head 5600	e'	36.4800	Relative Permittivity (ϵ_r):	36.48	35.53	2.66	5
		e"	15.9800	Conductivity (σ):	4.98	5.06	-1.67	5
	Head 5750	e'	36.2100	Relative Permittivity (ϵ_r):	36.21	35.36	2.40	5
		e"	16.1100	Conductivity (σ):	5.15	5.21	-1.21	5
	Head 5800	e'	36.1200	Relative Permittivity (ϵ_r):	36.12	35.30	2.32	5
		e"	16.1500	Conductivity (σ):	5.21	5.27	-1.17	5
	Head 5925	e'	35.9000	Relative Permittivity (ϵ_r):	35.90	35.20	1.99	5
		e"	16.2400	Conductivity (σ):	5.35	5.40	-0.92	5

SAR 6 Room

Date	Freq. (MHz)		Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)
2026-04-27	Head 750	e'	41.9700	Relative Permittivity (ϵ_r):	41.97	41.96	0.02	5
		e''	21.2400	Conductivity (σ):	0.89	0.89	-0.82	5
	Head 660	e'	42.2800	Relative Permittivity (ϵ_r):	42.28	42.42	-0.34	5
		e''	23.1100	Conductivity (σ):	0.85	0.89	-4.30	5
	Head 800	e'	41.8200	Relative Permittivity (ϵ_r):	41.82	41.71	0.28	5
		e''	20.3900	Conductivity (σ):	0.91	0.90	1.12	5
2026-04-27	Head 835	e'	41.7300	Relative Permittivity (ϵ_r):	41.73	41.50	0.55	5
		e''	19.8600	Conductivity (σ):	0.92	0.90	2.45	5
	Head 810	e'	41.7900	Relative Permittivity (ϵ_r):	41.79	41.65	0.33	5
		e''	20.3900	Conductivity (σ):	0.92	0.90	2.30	5
	Head 850	e'	41.6900	Relative Permittivity (ϵ_r):	41.69	41.50	0.46	5
		e''	19.6500	Conductivity (σ):	0.93	0.92	1.50	5
2026-04-29	Head 835	e'	42.9900	Relative Permittivity (ϵ_r):	42.99	41.50	3.59	5
		e''	19.8900	Conductivity (σ):	0.92	0.90	2.61	5
	Head 810	e'	43.0700	Relative Permittivity (ϵ_r):	43.07	41.65	3.40	5
		e''	20.3100	Conductivity (σ):	0.91	0.90	1.90	5
	Head 850	e'	42.9500	Relative Permittivity (ϵ_r):	42.95	41.50	3.49	5
		e''	19.6400	Conductivity (σ):	0.93	0.92	1.45	5
2026-05-04	Head 1750	e'	39.6900	Relative Permittivity (ϵ_r):	39.69	40.08	-0.98	5
		e''	13.7000	Conductivity (σ):	1.33	1.37	-2.62	5
	Head 1710	e'	39.7400	Relative Permittivity (ϵ_r):	39.74	40.15	-1.01	5
		e''	13.8000	Conductivity (σ):	1.31	1.35	-2.55	5
	Head 1780	e'	39.6400	Relative Permittivity (ϵ_r):	39.64	40.04	-1.00	5
		e''	13.6500	Conductivity (σ):	1.35	1.39	-2.52	5
2026-05-04	Head 1900	e'	39.5000	Relative Permittivity (ϵ_r):	39.50	40.00	-1.25	5
		e''	13.5900	Conductivity (σ):	1.44	1.40	2.55	5
	Head 1850	e'	39.5200	Relative Permittivity (ϵ_r):	39.52	40.00	-1.20	5
		e''	13.5800	Conductivity (σ):	1.40	1.40	-0.22	5
	Head 1915	e'	39.5000	Relative Permittivity (ϵ_r):	39.50	40.00	-1.25	5
		e''	13.5800	Conductivity (σ):	1.45	1.40	3.29	5
2026-05-08	Head 835	e'	41.3700	Relative Permittivity (ϵ_r):	41.37	41.50	-0.31	5
		e''	18.9100	Conductivity (σ):	0.88	0.90	-2.45	5
	Head 810	e'	41.4400	Relative Permittivity (ϵ_r):	41.44	41.65	-0.51	5
		e''	19.2900	Conductivity (σ):	0.87	0.90	-3.22	5
	Head 850	e'	41.3300	Relative Permittivity (ϵ_r):	41.33	41.50	-0.41	5
		e''	18.7000	Conductivity (σ):	0.88	0.92	-3.41	5
2026-05-08	Head 1750	e'	39.7700	Relative Permittivity (ϵ_r):	39.77	40.08	-0.78	5
		e''	13.9900	Conductivity (σ):	1.36	1.37	-0.56	5
	Head 1710	e'	39.8500	Relative Permittivity (ϵ_r):	39.85	40.15	-0.74	5
		e''	14.0100	Conductivity (σ):	1.33	1.35	-1.06	5
	Head 1780	e'	39.6900	Relative Permittivity (ϵ_r):	39.69	40.04	-0.87	5
		e''	13.9400	Conductivity (σ):	1.38	1.39	-0.45	5
2026-05-08	Head 1900	e'	39.5100	Relative Permittivity (ϵ_r):	39.51	40.00	-1.23	5
		e''	13.6900	Conductivity (σ):	1.45	1.40	3.31	5
	Head 1850	e'	39.5600	Relative Permittivity (ϵ_r):	39.56	40.00	-1.10	5
		e''	13.7900	Conductivity (σ):	1.42	1.40	1.32	5
	Head 1915	e'	39.5100	Relative Permittivity (ϵ_r):	39.51	40.00	-1.23	5
		e''	13.6700	Conductivity (σ):	1.46	1.40	3.97	5
2026-05-12	Head 835	e'	42.5900	Relative Permittivity (ϵ_r):	42.59	41.50	2.63	5
		e''	19.5100	Conductivity (σ):	0.91	0.90	0.65	5
	Head 810	e'	42.6400	Relative Permittivity (ϵ_r):	42.64	41.65	2.37	5
		e''	19.9900	Conductivity (σ):	0.90	0.90	0.29	5
	Head 850	e'	42.4700	Relative Permittivity (ϵ_r):	42.47	41.50	2.34	5
		e''	19.3500	Conductivity (σ):	0.91	0.92	-0.05	5
2026-05-12	Head 1750	e'	41.1900	Relative Permittivity (ϵ_r):	41.19	40.08	2.76	5
		e''	13.4900	Conductivity (σ):	1.31	1.37	-4.11	5
	Head 1710	e'	41.3200	Relative Permittivity (ϵ_r):	41.32	40.15	2.92	5
		e''	13.5900	Conductivity (σ):	1.29	1.35	-4.03	5
	Head 1780	e'	41.1100	Relative Permittivity (ϵ_r):	41.11	40.04	2.68	5
		e''	13.4000	Conductivity (σ):	1.33	1.39	-4.30	5
2026-05-12	Head 1900	e'	40.9300	Relative Permittivity (ϵ_r):	40.93	40.00	2.33	5
		e''	13.1700	Conductivity (σ):	1.39	1.40	-0.62	5
	Head 1850	e'	41.0200	Relative Permittivity (ϵ_r):	41.02	40.00	2.55	5
		e''	13.2600	Conductivity (σ):	1.36	1.40	-2.57	5
	Head 1915	e'	40.8900	Relative Permittivity (ϵ_r):	40.89	40.00	2.23	5
		e''	13.1700	Conductivity (σ):	1.40	1.40	0.17	5
2026-05-18	Head 1900	e'	40.0600	Relative Permittivity (ϵ_r):	40.06	40.00	0.15	5
		e''	13.5500	Conductivity (σ):	1.43	1.40	2.25	5
	Head 1850	e'	40.2300	Relative Permittivity (ϵ_r):	40.23	40.00	0.57	5
		e''	13.6700	Conductivity (σ):	1.41	1.40	0.44	5
	Head 1915	e'	40.0100	Relative Permittivity (ϵ_r):	40.01	40.00	0.02	5
		e''	13.5100	Conductivity (σ):	1.44	1.40	2.75	5
2026-06-08	Head 2600	e'	37.9400	Relative Permittivity (ϵ_r):	37.94	39.01	-2.74	5
		e''	13.4000	Conductivity (σ):	1.94	1.96	-1.27	5
	Head 2495	e'	38.2000	Relative Permittivity (ϵ_r):	38.20	39.14	-2.41	5
		e''	13.4000	Conductivity (σ):	1.86	1.85	0.56	5
	Head 2700	e'	37.6600	Relative Permittivity (ϵ_r):	37.66	38.88	-3.15	5
		e''	13.3400	Conductivity (σ):	2.00	2.07	-3.26	5

SAR 9 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-05-14	Head 6000	e'	35.1900	Relative Permittivity (ϵ_r)	35.19	35.10	0.26	5
		e''	15.9800	Conductivity (σ)	5.33	5.48	-2.71	5
	Head 6200	e'	35.2000	Relative Permittivity (ϵ_r)	35.20	34.86	0.98	5
		e''	16.2600	Conductivity (σ)	5.61	5.72	-1.93	5
	Head 6500	e'	34.6900	Relative Permittivity (ϵ_r)	34.69	34.50	0.55	5
		e''	16.7400	Conductivity (σ)	6.05	6.07	-0.33	5
	Head 6600	e'	34.3700	Relative Permittivity (ϵ_r)	34.37	34.38	-0.03	5
		e''	16.6800	Conductivity (σ)	6.12	6.19	-1.05	5
	Head 6800	e'	34.0800	Relative Permittivity (ϵ_r)	34.08	34.14	-0.18	5
		e''	16.9900	Conductivity (σ)	6.42	6.42	0.09	5
	Head 7000	e'	33.4900	Relative Permittivity (ϵ_r)	33.49	33.90	-1.21	5
		e''	16.6600	Conductivity (σ)	6.48	6.65	-2.49	5
2026-05-15	Head 6000	e'	34.3500	Relative Permittivity (ϵ_r)	34.35	35.10	-2.14	5
		e''	16.4700	Conductivity (σ)	5.49	5.48	0.27	5
	Head 6200	e'	33.9000	Relative Permittivity (ϵ_r)	33.90	34.86	-2.75	5
		e''	16.7900	Conductivity (σ)	5.79	5.72	1.26	5
	Head 6500	e'	33.4700	Relative Permittivity (ϵ_r)	33.47	34.50	-2.99	5
		e''	17.2000	Conductivity (σ)	6.22	6.07	2.41	5
	Head 6600	e'	33.0600	Relative Permittivity (ϵ_r)	33.06	34.38	-3.84	5
		e''	17.3500	Conductivity (σ)	6.37	6.19	2.93	5
	Head 6800	e'	32.9500	Relative Permittivity (ϵ_r)	32.95	34.14	-3.49	5
		e''	17.5400	Conductivity (σ)	6.63	6.42	3.33	5
	Head 7000	e'	32.4000	Relative Permittivity (ϵ_r)	32.40	33.90	-4.42	5
		e''	17.2800	Conductivity (σ)	6.73	6.65	1.14	5
2026-05-18	Head 6000	e'	35.4700	Relative Permittivity (ϵ_r)	35.47	35.10	1.05	5
		e''	16.1500	Conductivity (σ)	5.39	5.48	-1.68	5
	Head 6200	e'	35.4200	Relative Permittivity (ϵ_r)	35.42	34.86	1.61	5
		e''	16.2100	Conductivity (σ)	5.59	5.72	-2.24	5
	Head 6500	e'	34.9100	Relative Permittivity (ϵ_r)	34.91	34.50	1.19	5
		e''	16.7600	Conductivity (σ)	6.06	6.07	-0.21	5
	Head 6600	e'	34.6100	Relative Permittivity (ϵ_r)	34.61	34.38	0.67	5
		e''	16.8600	Conductivity (σ)	6.19	6.19	0.02	5
	Head 6800	e'	34.3500	Relative Permittivity (ϵ_r)	34.35	34.14	0.62	5
		e''	17.0800	Conductivity (σ)	6.46	6.42	0.62	5
	Head 7000	e'	33.7600	Relative Permittivity (ϵ_r)	33.76	33.90	-0.41	5
		e''	16.7900	Conductivity (σ)	6.54	6.65	-1.73	5
2026-05-18	Head 7000	e'	33.1800	Relative Permittivity (ϵ_r)	33.18	33.90	-2.12	5
		e''	17.1900	Conductivity (σ)	6.69	6.65	0.61	5
	Head 7250	e'	33.0800	Relative Permittivity (ϵ_r)	33.08	33.60	-1.55	5
		e''	17.3900	Conductivity (σ)	7.01	6.95	0.94	5
	Head 7500	e'	32.5100	Relative Permittivity (ϵ_r)	32.51	33.30	-2.37	5
		e''	17.4900	Conductivity (σ)	7.29	7.24	0.74	5
	Head 7800	e'	31.9800	Relative Permittivity (ϵ_r)	31.98	32.94	-2.91	5
		e''	18.0700	Conductivity (σ)	7.84	7.60	3.12	5
	Head 8000	e'	31.8400	Relative Permittivity (ϵ_r)	31.84	32.70	-2.63	5
		e''	17.4200	Conductivity (σ)	7.75	7.84	-1.16	5
	Head 8100	e'	31.3600	Relative Permittivity (ϵ_r)	31.36	32.58	-3.74	5
		e''	18.3800	Conductivity (σ)	8.28	7.96	3.94	5
2026-05-19	Head 6000	e'	35.1900	Relative Permittivity (ϵ_r)	35.19	35.10	0.26	5
		e''	15.9800	Conductivity (σ)	5.33	5.48	-2.71	5
	Head 6200	e'	35.2000	Relative Permittivity (ϵ_r)	35.20	34.86	0.98	5
		e''	16.2600	Conductivity (σ)	5.61	5.72	-1.93	5
	Head 6500	e'	34.6900	Relative Permittivity (ϵ_r)	34.69	34.50	0.55	5
		e''	16.7400	Conductivity (σ)	6.05	6.07	-0.33	5
	Head 6600	e'	34.3700	Relative Permittivity (ϵ_r)	34.37	34.38	-0.03	5
		e''	16.6800	Conductivity (σ)	6.12	6.19	-1.05	5
	Head 6800	e'	34.0800	Relative Permittivity (ϵ_r)	34.08	34.14	-0.18	5
		e''	16.9900	Conductivity (σ)	6.42	6.42	0.09	5
	Head 7000	e'	33.4900	Relative Permittivity (ϵ_r)	33.49	33.90	-1.21	5
		e''	16.6600	Conductivity (σ)	6.48	6.65	-2.49	5

SAR 10 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-05-06	Head 2600	e'	38.6700	Relative Permittivity (ϵ_r):	38.67	39.01	-0.87	5
		e"	13.5600	Conductivity (σ):	1.96	1.96	-0.09	5
	Head 2495	e'	38.8800	Relative Permittivity (ϵ_r):	38.88	39.14	-0.67	5
		e"	13.4300	Conductivity (σ):	1.86	1.85	0.78	5
	Head 2700	e'	38.4600	Relative Permittivity (ϵ_r):	38.46	38.88	-1.09	5
		e"	13.6500	Conductivity (σ):	2.05	2.07	-1.02	5
2026-05-11	Head 2600	e'	39.6200	Relative Permittivity (ϵ_r):	39.62	39.01	1.56	5
		e"	13.0900	Conductivity (σ):	1.89	1.96	-3.56	5
	Head 2495	e'	39.8100	Relative Permittivity (ϵ_r):	39.81	39.14	1.70	5
		e"	13.0200	Conductivity (σ):	1.81	1.85	-2.29	5
	Head 2700	e'	39.4400	Relative Permittivity (ϵ_r):	39.44	38.88	1.43	5
		e"	13.1400	Conductivity (σ):	1.97	2.07	-4.71	5
2026-05-14	Head 5200	e'	36.8100	Relative Permittivity (ϵ_r):	36.81	35.99	2.28	5
		e"	15.6100	Conductivity (σ):	4.51	4.65	-2.96	5
	Head 5250	e'	36.8100	Relative Permittivity (ϵ_r):	36.81	35.93	2.44	5
		e"	15.7400	Conductivity (σ):	4.59	4.70	-2.28	5
	Head 5600	e'	36.2000	Relative Permittivity (ϵ_r):	36.20	35.53	1.87	5
		e"	15.9700	Conductivity (σ):	4.97	5.06	-1.73	5
	Head 5750	e'	36.0900	Relative Permittivity (ϵ_r):	36.09	35.36	2.06	5
		e"	16.2200	Conductivity (σ):	5.19	5.21	-0.54	5
	Head 5800	e'	36.3000	Relative Permittivity (ϵ_r):	36.30	35.30	2.83	5
		e"	16.0200	Conductivity (σ):	5.17	5.27	-1.97	5
	Head 5925	e'	35.6300	Relative Permittivity (ϵ_r):	35.63	35.20	1.22	5
		e"	15.6500	Conductivity (σ):	5.16	5.40	-4.52	5
2026-05-18	Head 5200	e'	35.3700	Relative Permittivity (ϵ_r):	35.37	35.99	-1.72	5
		e"	15.7200	Conductivity (σ):	4.55	4.65	-2.27	5
	Head 5250	e'	35.2500	Relative Permittivity (ϵ_r):	35.25	35.93	-1.90	5
		e"	15.9300	Conductivity (σ):	4.65	4.70	-1.10	5
	Head 5600	e'	34.6000	Relative Permittivity (ϵ_r):	34.60	35.53	-2.63	5
		e"	16.1300	Conductivity (σ):	5.02	5.06	-0.75	5
	Head 5750	e'	34.3000	Relative Permittivity (ϵ_r):	34.30	35.36	-3.01	5
		e"	16.5700	Conductivity (σ):	5.30	5.21	1.61	5
	Head 5800	e'	34.4300	Relative Permittivity (ϵ_r):	34.43	35.30	-2.46	5
		e"	16.4000	Conductivity (σ):	5.29	5.27	0.36	5
	Head 5925	e'	34.0500	Relative Permittivity (ϵ_r):	34.05	35.20	-3.27	5
		e"	16.0500	Conductivity (σ):	5.29	5.40	-2.08	5
2026-05-20	Head 2450	e'	39.5600	Relative Permittivity (ϵ_r):	39.56	39.20	0.92	5
		e"	13.5300	Conductivity (σ):	1.84	1.80	2.40	5
	Head 2400	e'	38.7200	Relative Permittivity (ϵ_r):	38.72	39.30	-1.47	5
		e"	13.4700	Conductivity (σ):	1.80	1.75	2.62	5
	Head 2500	e'	39.4300	Relative Permittivity (ϵ_r):	39.43	39.14	0.75	5
		e"	13.5800	Conductivity (σ):	1.89	1.85	1.82	5

SAR 11 Room

Date		Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)
2026-04-20	Head 2600	e'	38.1800	Relative Permittivity (ϵ_r):	38.18	39.01	-2.13	5
		e"	13.5600	Conductivity (σ):	1.96	1.96	-0.09	5
	Head 2495	e'	38.3000	Relative Permittivity (ϵ_r):	38.30	39.14	-2.15	5
		e"	13.9100	Conductivity (σ):	1.93	1.85	4.39	5
	Head 2700	e'	38.2200	Relative Permittivity (ϵ_r):	38.22	38.88	-1.71	5
		e"	13.2600	Conductivity (σ):	1.99	2.07	-3.84	5

8.2. SAR System Check

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

For The System verification of below 100MHz, above 6GHz frequency range, The System verification performed within 24 hours prior to DUT test.

System Performance Check Measurement Conditions (100 MHz to 8 GHz):

- 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 15 mm (below 1 GHz), 10mm (between 1GHz to 6GHz) and 5mm (above 6GHz) from dipole center to the simulating liquid surface.
- Distance between probe sensors and phantom surface was set to 1.4 mm.
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

System Performance Check Measurement Conditions (13 MHz):

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

Reference Target SAR Values

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

System Dipole	Serial No.	Cal. Date	Cal.due date	Target SAR Values (W/kg)	
				1g/10g	Head
CLA-13	1015	2025-08-13	2026-08-13	1g	0.524
				10g	0.329
D750V3	1205	2025-04-14	2026-04-14	1g	8.64
				10g	5.61
D750V3	1122	2026-02-17	2027-02-17	1g	8.60
				10g	5.61
D835V2	4d174	2024-09-16	2026-09-16	1g	9.44
				10g	6.09
D835V2	4d194	2026-03-02	2027-03-02	1g	9.59
				10g	6.25
D1750V2	1125	2024-11-18	2026-11-18	1g	36.60
				10g	19.50
D1750V2	1180	2024-10-15	2026-10-15	1g	37.00
				10g	19.70
D1900V2	5d190	2025-04-08	2026-04-08	1g	39.00
				10g	20.50
D1900V2	5d199	2026-03-12	2027-03-12	1g	39.70
				10g	20.70
D2450V2	939	2024-07-10	2026-07-10	1g	52.20
				10g	24.40
D2450V2	960	2026-03-10	2027-03-10	1g	51.80
				10g	24.40
D2600V2	1097	2024-09-13	2026-09-13	1g	57.30
				10g	25.60
D2600V2	1178	2025-04-15	2027-04-15	1g	55.70
				10g	25.00
D5GHzV2 (5.25 GHz)	1325	2025-04-16	2026-04-16	1g	78.0
				10g	22.3
D5GHzV2 (5.6 GHz)	1325	2025-04-16	2026-04-16	1g	81.3
				10g	23.3
D5GHzV2 (5.75 GHz)	1325	2025-04-16	2026-04-16	1g	77.8
				10g	22.1
D5GHzV2 (5.8 GHz)	1325	2025-04-16	2026-04-16	1g	81.0
				10g	22.9
D5GHzV2 (5.25 GHz)	1184	2024-11-21	2026-11-21	1g	81.20
				10g	23.20
D5GHzV2 (5.6 GHz)	1184	2024-11-21	2026-11-21	1g	84.00
				10g	24.00
D5GHzV2 (5.75 GHz)	1184	2024-11-21	2026-11-21	1g	79.90
				10g	22.90
D5GHzV2 (5.8 GHz)	1184	2024-11-21	2026-11-21	1g	77.50
				10g	22.20
D6.5GHzV2	1010	2024-06-11	2026-06-11	1g	293.00
				8g	66.00
				10g	54.00
				APD	1320.00
D8GHzV2	1012	2024-11-13	2026-11-13	1g	27.30
				8g	56.10
				10g	45.80
				APD	1130.00

System Check Results

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within 10% of the manufacturer calibrated dipole SAR target.

SAR 1 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
2026-05-15	D2450V2	960	Head	1g	5.33	53.3	51.80	2.90	1
				10g	2.55	25.5	24.40	4.51	
2026-05-20	D2450V2	960	Head	1g	5.23	52.3	51.80	0.97	
				10g	2.48	24.8	24.40	1.64	
2026-06-08	D2600V2	1178	Head	1g	5.35	53.5	55.70	-3.95	
				10g	2.49	24.9	25.00	-0.40	

SAR 2 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
2026-05-08	D1900V2	5d199	Head	1g	4.14	41.4	40.20	2.99	
				10g	2.21	22.1	21.20	4.25	
2026-05-11	D750V3	1122	Head	1g	0.84	8.4	8.60	-2.56	
				10g	0.56	5.6	5.61	-0.53	
2026-05-11	D835V3	4d194	Head	1g	0.94	9.4	9.59	-1.67	
				10g	0.63	6.3	6.25	0.16	
2026-05-15	D1750V2	1180	Head	1g	3.43	34.3	37.00	-7.30	2
				10g	1.83	18.3	19.70	-7.11	
2026-05-19	D1750V2	1125	Head	1g	3.43	34.3	36.60	-6.28	
				10g	1.83	18.3	19.50	-6.15	
2026-05-19	D1900V2	5d199	Head	1g	4.12	41.2	40.20	2.49	
				10g	2.14	21.4	21.20	0.94	

SAR 3 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
2026-05-11	D2450V2	960	Head	1g	5.35	53.5	51.80	3.28	
				10g	2.56	25.6	24.10	6.22	
2026-05-13	D2450V2	960	Head	1g	4.74	47.4	51.80	-8.49	3
				10g	2.27	22.7	24.10	-5.81	
2026-05-18	D2450V2	960	Head	1g	5.42	54.2	51.80	4.63	
				10g	2.61	26.1	24.10	8.30	

SAR 4 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W			
2026-04-24	D750V3	1205	Head	1g	0.85	8.5	8.64	-1.16
				10g	0.59	5.9	5.61	4.81
2026-04-24	D835V3	4d194	Head	1g	0.96	9.6	9.59	-0.10
				10g	0.66	6.6	6.25	4.96
2026-04-28	D750V3	1205	Head	1g	0.85	8.5	8.64	-2.08
				10g	0.58	5.8	5.61	3.39
2026-04-28	D835V3	4d194	Head	1g	0.96	9.6	9.59	-0.31
				10g	0.65	6.5	6.25	4.32
2026-04-29	D750V3	1205	Head	1g	0.88	8.8	8.64	1.97
				10g	0.58	5.8	5.61	4.10
2026-04-29	D835V3	4d194	Head	1g	0.97	9.7	9.59	0.73
				10g	0.64	6.4	6.25	1.92
2026-04-29	CLA-13	1015	Head	1g	0.05	0.5	0.524	-0.76
				10g	0.03	0.3	0.329	0.30
2026-04-30	D1750V2	1180	Head	1g	3.71	37.1	37.00	0.27
				10g	2.04	20.4	19.70	3.55
2026-04-30	D1900V2	5d199	Head	1g	4.28	42.8	40.20	6.47
				10g	2.30	23.0	21.20	8.49
2026-05-04	D1750V2	1125	Head	1g	3.70	37.0	36.60	1.09
				10g	2.09	20.9	19.50	7.18
2026-05-04	D1900V2	5d199	Head	1g	3.87	38.7	39.00	-0.77
				10g	2.13	21.3	20.50	3.90
2026-05-08	D750V3	1205	Head	1g	0.88	8.8	8.64	2.31
				10g	0.61	6.1	5.61	8.38
2026-05-08	D1750V2	1125	Head	1g	3.58	35.8	36.60	-2.19
				10g	2.03	20.3	19.50	4.10
2026-05-21	D750V3	1205	Head	1g	0.91	9.1	8.64	5.09
				10g	0.61	6.1	5.61	8.02
2026-05-21	D1750V2	1180	Head	1g	3.73	37.3	36.60	1.91
				10g	2.06	20.6	19.50	5.64
2026-05-21	D2450V2	960	Head	1g	5.32	53.2	51.80	2.70
				10g	2.53	25.3	24.40	3.69
2026-05-21	D2600V2	1178	Head	1g	5.43	54.3	55.70	-2.51
				10g	2.48	24.8	25.00	-0.80
2026-05-26	D2600V2	1178	Head	1g	5.46	54.6	55.70	-1.97
				10g	2.62	26.2	25.00	4.80
2026-05-27	D835V3	4d194	Head	1g	1.00	10.0	9.59	3.96
				10g	0.66	6.8	6.25	8.64

SAR 5 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W			
2026-04-14	D2600V2	1178	Head	1g	5.72	57.2	55.70	2.69
				10g	2.62	26.2	25.00	4.80
2026-05-14	D5GHzV2 (5250)	1325	Head	1g	7.46	74.6	78.00	-4.36
				10g	2.14	21.4	22.30	-4.04
2026-05-14	D5GHzV2 (5600)	1325	Head	1g	7.93	79.3	81.30	-2.46
				10g	2.24	22.4	23.30	-3.86
2026-05-18	D5GHzV2 (5250)	1325	Head	1g	8.00	80.0	78.00	2.56
				10g	2.30	23.0	22.30	3.14
2026-05-18	D5GHzV2 (5600)	1325	Head	1g	8.09	80.9	81.30	-0.49
				10g	2.29	22.9	23.30	-1.72

SAR 6 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W			
2026-04-27	D835V3	4d174	Head	1g	0.89	8.9	9.44	-5.72
				10g	0.61	6.1	6.09	-0.66
2026-04-28	D750V3	1122	Head	1g	0.88	8.8	8.60	2.09
				10g	0.58	5.8	5.61	3.57
2026-04-30	D835V3	4d174	Head	1g	0.96	9.6	9.44	1.91
				10g	0.63	6.3	6.09	4.11
2026-05-04	D1750V2	1125	Head	1g	3.55	35.5	36.60	-3.01
				10g	2.01	20.1	19.50	3.08
2026-05-04	D1900V2	5d190	Head	1g	3.91	39.1	39.00	0.26
				10g	2.22	22.2	20.50	8.29
2026-05-08	D835V3	4d174	Head	1g	0.96	9.6	9.44	1.91
				10g	0.64	6.4	6.09	4.43
2026-05-08	D1750V2	1125	Head	1g	3.62	36.2	36.60	-1.09
				10g	1.98	19.8	19.50	1.54
2026-05-08	D1900V2	5d190	Head	1g	3.95	39.5	39.00	1.28
				10g	2.16	21.6	20.50	5.37
2026-05-12	D835V3	4d174	Head	1g	0.92	9.2	9.44	-2.86
				10g	0.61	6.1	6.09	0.82
2026-05-12	D1750V2	1125	Head	1g	3.45	34.5	36.60	-5.74
				10g	1.85	18.5	19.50	-5.13
2026-05-12	D1900V2	5d190	Head	1g	3.75	37.5	39.00	-3.85
				10g	2.01	20.1	20.50	-1.95
2026-05-18	D1900V2	5d190	Head	1g	3.58	35.8	39.00	-8.21
				10g	1.90	19.0	20.50	-7.32
2026-06-08	D2600V2	1178	Head	1g	5.57	55.7	55.70	0.00
				10g	2.50	25.0	25.00	0.00

SAR 9 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W			
2026-05-14	D6.5GHzV2	1010	Head	1g	28.90	289.0	293.00	-1.37
				8g	6.70	67.0	66.00	1.52
				10g	5.55	55.5	54.00	2.78
				APD(4cm²2)	134.00	1340.0	1320.00	1.52
2026-05-15	D6.5GHzV2	1010	Head	1g	28.10	281.0	293.00	-4.10
				8g	6.57	65.7	66.00	-0.45
				10g	5.45	54.5	54.00	0.93
				APD(4cm²2)	131.00	1310.0	1320.00	-0.76
2026-05-18	D6.5GHzV2	1010	Head	1g	27.80	278.0	293.00	-5.12
				8g	6.60	66.0	66.00	0.00
				10g	5.48	54.8	54.00	1.48
				APD(4cm²2)	132.00	1320.0	1320.00	0.00
2026-05-18	D8GHzV2	1012	Head	1g	26.70	267.0	273.00	-2.20
				8g	5.79	57.9	56.10	3.21
				10g	4.80	48.0	45.80	4.80
				APD(4cm²2)	116.00	1160.0	1130.00	2.65
2026-05-19	D6.5GHzV2	1010	Head	1g	28.40	284.0	293.00	-3.07
				8g	6.74	67.4	66.00	2.12
				10g	5.60	56.0	54.00	3.70
				APD(4cm²2)	135.00	1350.0	1320.00	2.27

SAR 10 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
2026-05-06	D2600V2	1097	Head	1g	5.86	58.60	57.30	2.27	
				10g	2.72	27.20	25.60	6.25	
2026-05-07	D2600V2	1097	Head	1g	5.63	56.30	57.30	-1.75	
				10g	2.63	26.30	25.60	2.73	
2026-05-08	D2600V2	1097	Head	1g	5.73	57.30	57.30	0.00	
				10g	2.67	26.70	25.60	4.30	
2026-05-11	D2600V2	1097	Head	1g	5.49	54.90	57.30	-4.19	12
				10g	2.57	25.70	25.60	0.39	
2026-05-14	D5GHzV2 (5750)	1184	Head	1g	7.90	79.0	79.90	-1.13	
				10g	2.33	23.3	22.90	1.75	
2026-05-14	D5GHzV2 (5800)	1184	Head	1g	7.34	73.4	77.50	-5.29	13
				10g	2.15	21.5	22.20	-3.15	
2026-05-18	D5GHzV2 (5250)	1184	Head	1g	8.27	82.7	81.20	1.85	
				10g	2.42	24.2	23.20	4.31	
2026-05-18	D5GHzV2 (5600)	1184	Head	1g	8.74	87.4	84.00	4.05	
				10g	2.53	25.3	24.00	5.42	
2026-05-18	D5GHzV2 (5750)	1184	Head	1g	7.84	78.4	79.90	-1.88	
				10g	2.30	23.0	22.90	0.44	
2026-05-18	D5GHzV2 (5800)	1184	Head	1g	8.06	80.6	77.50	4.00	
				10g	2.35	23.5	22.20	5.86	
2026-05-20	D2450V2	939	Head	1g	5.09	50.90	52.20	-2.49	14
				10g	2.47	24.70	24.40	1.23	

SAR 11 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
2026-04-20	D2600V2	1097	Head	1g	5.61	56.1	57.30	-2.09	15
				10g	2.73	27.3	25.60	6.64	

8.3. IPD System Check

Per Nov 2017, TCB Workshop

System validation is required before a system is deployed for measurement

System check is also required before each series of continuous measurement and, as applicable, repeated at least weekly

Peak and spatially averaged power density at the peak location(s) must be compared to calibrated results according to the defined test conditions

- the same spatial resolution and measurement region used in the waveguide calibration should be applied to system validation and system check
- 4 cm² spatial averaging have been used according to FCC requirement.
- power density distribution should also be verified, both spatially (shape) and numerically (level) through visual inspection for noticeable differences
- The Horn antenna input power (forward power) was 100 mW.
- The measured psPDn+, psPDtot+, and psPDmod+ values over 1 cm² or 4 cm² for the desired averaging geometry are compared to the calibrated value and expected to be within $\pm 10\%$.

Reference Target PD Values

Per the manufacturer's guide, the target value of the calibration report was converted to a value of 100 mW input power.

5G verification Source	Serial No.	Cal. Due Date	Freq. (MHz)	Averaging area	Prad (mW)	Input power (mW)	Target PD Values (W/m ²)		Note
							1 cm ²	4 cm ²	
10GHz	1022	2027-03-12	10000	Circular	93.3		57.10	53.40	Cal.report target
10GHz	1022	2027-03-12	10000	Circular		100	61.20	57.23	Convert target from Cal.report

SAR 9 Room

Date	Sorce SN	Sorce Cal. Due Data	Input Power (mW)	Measured Results for 1cm ² (W/m ²)	Target (Ref. Value) (W/m ²)	Delta $\pm 10\%$	Measured Total psPD for 4cm ² (W/m ²)	Target (Ref. Value) (W/m ²)	Delta $\pm 10\%$	visual inspection	Plot No.
2026-05-12	1022	2027-03-12	100.0	60.0	61.20	-1.96%	55.3	57.23	-3.38%	confirmed	
2026-05-13	1022	2027-03-12	100.0	61.9	61.20	1.14%	57.7	57.23	0.81%	confirmed	
2026-05-19	1022	2027-03-12	100.0	59.5	61.20	-2.78%	54.6	57.23	-4.60%	confirmed	16
2026-05-20	1022	2027-03-12	100.0	62.2	61.20	1.63%	56.8	57.23	-0.76%	confirmed	
2026-05-21	1022	2027-03-12	100.0	59.9	61.20	-2.12%	54.8	57.23	-4.25%	confirmed	

Note(s):

psPD value used the ps_{tot} avg value of test result plot.

9. Conducted Output Power Measurements

9.1. 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:

- The maximum output power, including tolerance, for the smaller band must be ≤ the larger band to qualify for the SAR test exclusion.
- The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.
 - LTE Band 2 (1850 – 1910 MHz) is covered by LTE Band 25 (1850 – 1915 MHz)
 - LTE Band 4 (1710 – 1755 MHz) is covered by LTE Band 66 (1710 – 1780 MHz)

Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths.

When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices.

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

SAR measurement is not required for Higher order modulations. When the highest maximum output power for Higher order modulations are ≤ 0.5 dB higher than the QPSK or when the reported SAR for QPSK configuration is ≤ 1.45 W/kg.

Maximum Output Power (Tune-up Limit) for LTE UL Carrier Aggregation

UL CA shall be tested based on the worst-case SAR configuration determined from non-CA SAR testing result. The channel BW, channel number, RB Allocation, etc. would be selected to allow contiguous CA of PCC and SCC. Uplink output power for UL CA is the total power measured across the PCC and SCC.

UL CA power measurements were performed with QPSK modulation based on the worst-case standalone SAR. The tune-up limits are provided in table below. The UL CA mode power measurements represent the total power across both carriers. Measurements were made for all supported PCC bandwidths using the channel/RB combination resulting in the highest standalone output power at the least MPR (0 dB). SCCs were set to use configurations similar to the PCC to establish conservative or worst case equivalent SAR test conditions (highest maximum power with MPR of 0 dB).

The standalone power measurement is the power for the PCC in the non-CA mode (i.e. single carrier power). In all cases the UL CA power is less than or equal to the standalone power, which is in accordance with the tune-up limits in table below.

According to November 2017 TCB workshop, Uplink CA SAR Test Guidance as follows;

- a) When the maximum output for UL CA is $\leq$ standalone LTE mode (without CA)
 - PCC is configured according to the highest standalone SAR configuration tested
 - SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC.
- b) When the Reported SAR for UL CA configuration, described above, is > 1.2 W/kg, UL CA SAR is also required for all required test channels (PCC based).
- c) UL CA SAR is also required for standalone SAR configurations > 1.2 W/kg when they are scaled to the UL CA power level.

SAR measurement is not required for the 16QAM and 64QAM. When the highest maximum output power for 16QAM and 64QAM is ≤ 0.25 dB higher than the QPSK or when the reported SAR for the QPSK configuration is ≤ 1.45 W/kg.

Folder Close

E-UTRA CA configuration (BCS)	Antenna	DSI	UL																			PCC + SCC				
			PCC							SCC							MPR	Standalone		PCC + SCC						
			Modulation	RB	Offset	BW	Freq	ch	Modulation	RB	Offset	BW	Freq	ch	LTE Rel.8	Aggregated BW		MPR	Tune-Up Limit	CA power (total PCC+SCC)	Delta	3GPP Rel.				
CA_41C(0)(1)(2)(3)	Ant. B	1	QPSK	1	0	20	2636.5	41055	QPSK	1	99	20	2616.7	40857	0	24.12	40	0	25.0	24.04	-0.08	17				
CA_41C(0)(1)(2)(3)	Ant. B	3	QPSK	1	0	20	2636.5	41055	QPSK	1	99	20	2616.7	40857	0	18.44	40	0	19.0	18.30	-0.14	17				
CA_41C(0)(1)(2)(3)	Ant. F	1	QPSK	1	0	20	2549.5	40185	QPSK	1	99	20	2529.7	39987	0	17.66	40	0	18.5	17.33	-0.33	17				
CA_41C(0)(1)(2)(3)	Ant. F	3	QPSK	1	0	20	2549.5	40185	QPSK	1	99	20	2529.7	39987	0	18.12	40	0	19.0	18.06	-0.06	17				

Folder Open

E-UTRA CA configuration (BCS)	Antenna	DSI	UL																			
			PCC						SCC						MPR	Standalone	PCC + SCC					
			Modulation	RB	Offset	BW	Freq	ch	Modulation	RB	Offset	BW	Freq	ch			LTE Rel.8	Aggregated BW	MPR	Tune-Up Limit	CA power (total PCC+SCC)	Delta
CA_41C(0)(1)(2)(3)	Ant. B	0, 2	QPSK	1	0	20	2636.5	41055	QPSK	1	99	20	2616.7	40857	0	17.12	40	0	17.5	17.10	-0.02	17
CA_41C(0)(1)(2)(3)	Ant. F	0, 2	QPSK	1	0	20	2549.5	40185	QPSK	1	99	20	2529.7	39987	0	16.54	40	0	17.0	16.44	-0.10	17

9.2. Wi-Fi 2.4 GHz (DTS Band)

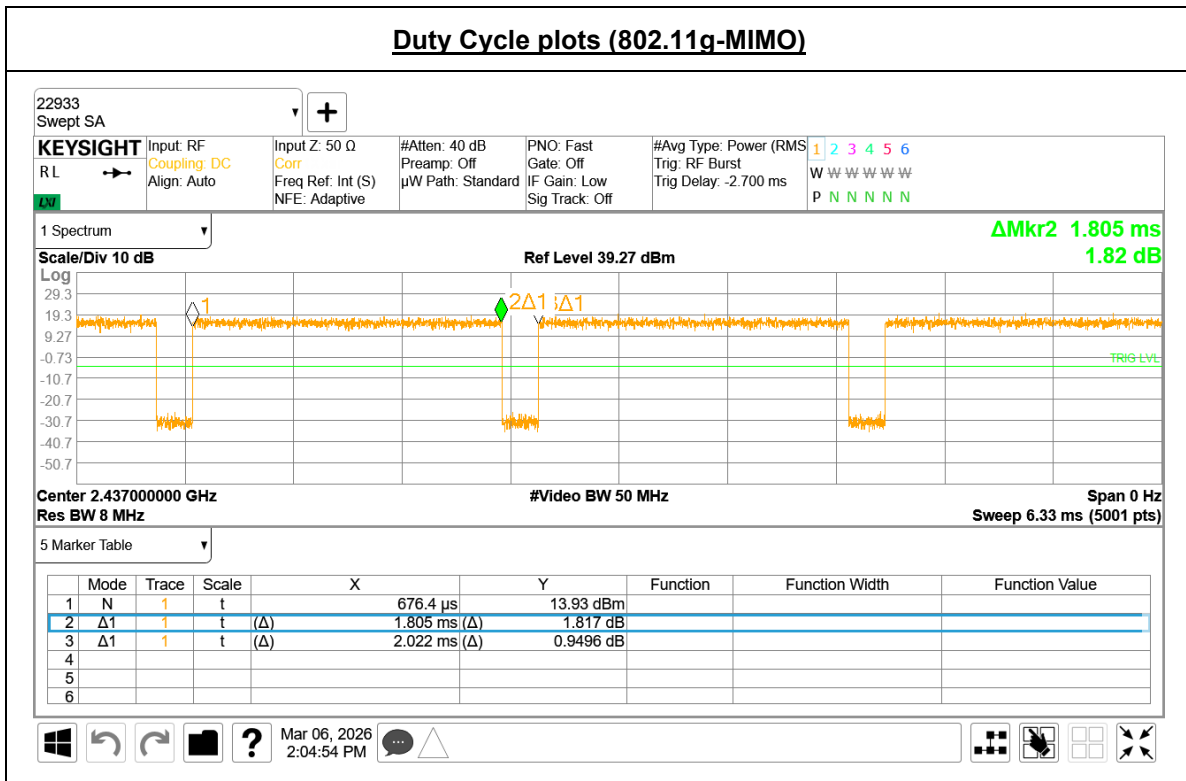
WLAN MIMO Measured Output Power Results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	WLAN mode power								
					Maximum Allowed Average power (dBm)								
					DSI = 0			DSI = 1			DSI = 2 & 3		
					Meas. Avg Pw r (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Meas. Avg Pw r (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Meas. Avg Pw r (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 2.4 GHz MIMO 1 (Ant.D)	802.11g	6 Mbps	1	2412.0	15.82	17.0	Yes	17.19	18.0	Yes	14.75	15.5	Yes
			6	2437.0	16.25			17.26			14.87		
			11	2462.0	16.12			17.37			14.79		
	802.11n	MCS 0	Not Required	Not Required	17.0	No	Not Required	18.0	No	Not Required	15.5	No	
	802.11ac	MCS 0											
	802.11ax	MCS 0											
	802.11be	MCS 0											
WiFi 2.4 GHz MIMO 2 (Ant.G)	802.11g	6 Mbps	1	2412.0	15.46	17.0	Yes	16.87	18.0	Yes	14.55	15.5	Yes
			6	2437.0	15.20			16.22			13.90		
			11	2462.0	15.14			16.56			13.79		
	802.11n	MCS 0	Not Required	Not Required	17.0	No	Not Required	18.0	No	Not Required	15.5	No	
	802.11ac	MCS 0											
	802.11ax	MCS 0											
	802.11be	MCS 0											

Duty Factor Measured Result

Mode	T on (ms)	Period (ms)	Maximum Duty Cycle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
802.11g	1.805	2.022	100.00%	89.27%	1.12

Duty Cycle plots (802.11g-MIMO)



9.3. Bluetooth

Bluetooth(Bluetooth Low Energy) SISO Output Power Results

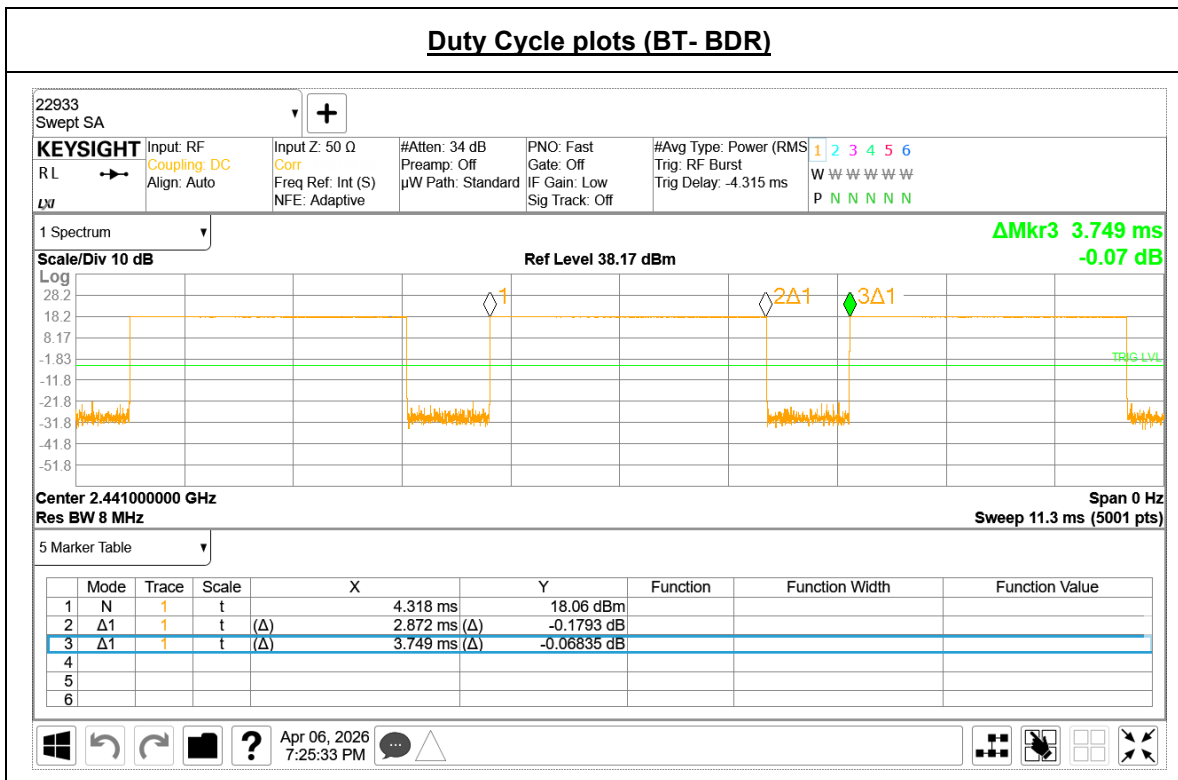
Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Maximum Allowed Average power (dBm)					
					DSI = 0 & 1		SAR test	DSI = 2 & 3		SAR test
					Meas Pwr	Tune-up Limit		Meas Pwr	Tune-up Limit	
BT SISO 1 (Ant.D)	Bluetooth(BDR)	1Mbps	0	2402	12.47	14.00	Yes	11.44	13.00	Yes
			39	2441	13.32			12.30		
			78	2480	13.39			11.97		
	Bluetooth(EDR)	2Mbps	0	2402	Not required	13.00	No	Not required	11.50	No
			39	2441						
			78	2480						
		3Mbps	0	2402		13.00	No		11.50	No
			39	2441						
			78	2480						
	Bluetooth(LE)	1Mbps (37pkt)	37	2402	Not required	10.00	No	Not required	10.00	No
			17	2440						
			39	2480						
		1Mbps (255pkt)	37	2402		10.00	No		10.00	No
			17	2440						
			39	2480						
		2Mbps (37pkt)	37	2402		10.00	No		10.00	No
			17	2440						
			39	2480						
		2Mbps (255pkt)	37	2402		10.00	No		10.00	No
			17	2440						
			39	2480						
		125kbps	37	2402		10.00	No		10.00	No
			17	2440						
			39	2480						
		500kbps	37	2402		10.00	No		10.00	No
			17	2440						
			39	2480						
BT SISO 2 (Ant.G)	Bluetooth(BDR)	1Mbps	0	2402	13.24	14.00	Yes	11.78	13.00	Yes
			39	2441	12.73			11.53		
			78	2480	12.22			11.26		
	Bluetooth(EDR)	2Mbps	0	2402	Not required	13.00	No	Not required	11.00	No
			39	2441						
			78	2480						
		3Mbps	0	2402		13.00	No		11.00	No
			39	2441						
			78	2480						
	Bluetooth(LE)	1Mbps (37pkt)	37	2402	Not required	9.50	No	Not required	9.50	No
			17	2440						
			39	2480						
		1Mbps (255pkt)	37	2402		9.50	No		9.50	No
			17	2440						
			39	2480						
		2Mbps (37pkt)	37	2402		9.50	No		9.50	No
			17	2440						
			39	2480						
		2Mbps (255pkt)	37	2402		9.50	No		9.50	No
			17	2440						
			39	2480						
		125kbps	37	2402		9.00	No		9.50	No
			17	2440						
			39	2480						
		500kbps	37	2402		9.00	No		9.50	No
			17	2440						
			39	2480						

Bluetooth(Bluetooth Low Energy) MIMO Output Power Results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Maximum Allowed Average power (dBm)			Maximum Allowed Average power (dBm)				
					DSI = 0 & 1		SAR test	DSI = 2 & 3		SAR test		
					Meas Pw r	Tune-up Limit		Meas Pw r	Tune-up Limit			
BT MIMO 1 (Ant.D)	Bluetooth(BDR)	1Mbps	0	2402	13.03	14.00	Yes	11.89	12.50	Yes		
			39	2441	11.27	13.00		9.90	11.00			
			78	2480	12.85	14.00		11.19	12.50			
	Bluetooth(EDR)	2Mbps	0	2402	Not required	11.50	No	Not required	11.50	No		
			39	2441		10.50			9.50			
			78	2480		11.50			10.50			
		3Mbps	0	2402		No	11.50		No			
			39	2441			10.50			9.50		
			78	2480			11.50			10.50		
	Bluetooth(LE)	1Mbps (37pkt)	37	2402	Not required	6.50	No	Not required	6.50	No		
			17	2440								
			39	2480								
		1Mbps (255pkt)	37	2402		6.50	No		6.50	No		
			17	2440								
			39	2480								
		2Mbps (37pkt)	37	2402		6.50	No		6.50	No		
			17	2440								
			39	2480								
		2Mbps (255pkt)	37	2402		6.50	No		6.50	No		
			17	2440								
			39	2480								
		125kbps	37	2402		N/A	No		N/A	No		
			17	2440								
			39	2480								
		500kbps	37	2402		N/A	No		N/A	No		
			17	2440								
			39	2480								
BT MIMO 2 (Ant.G)	Bluetooth(BDR)	1Mbps	0	2402	12.47	13.50	Yes	10.76	12.00	Yes		
			39	2441	12.57	13.50		11.52	12.00			
			78	2480	9.69	11.50		8.84	10.00			
	Bluetooth(EDR)	2Mbps	0	2402	Not required	10.50	No	Not required	10.00	No		
			39	2441		11.50			11.00			
			78	2480		9.50			8.00			
		3Mbps	0	2402		No	10.50		No			
			39	2441			11.50			11.00		
			78	2480			9.50			8.00		
	Bluetooth(LE)	1Mbps (37pkt)	37	2402	Not required	6.50	No	Not required	6.50	No		
			17	2440								
			39	2480								
		1Mbps (255pkt)	37	2402		6.50	No		6.50	No		
			17	2440								
			39	2480								
		2Mbps (37pkt)	37	2402		6.50	No		6.50	No		
			17	2440								
			39	2480								
		2Mbps (255pkt)	37	2402		6.50	No		6.50	No		
			17	2440								
			39	2480								
		125kbps	37	2402		N/A	No		N/A	No		
			17	2440								
			39	2480								
		500kbps	37	2402		N/A	No		N/A	No		
			17	2440								
			39	2480								

Bluetooth (Continued)**Duty Factor Measured Results**

Mode	T on (ms)	Period (ms)	Maximum Duty Cycle	Measured Duty Cycle	Crest Factor (maximum duty/ measured duty cycle)
BT - BDR	2.872	3.749	79.00%	76.61%	1.03

**Note(s):**

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

10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction Criteria are as Follows:

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

KDB 447498 D01 General RF Exposure Guidance:

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

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

KDB 648474 D04 Handset SAR:

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

KDB 648474 D04 Handset SAR (Phablet Only):

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

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

Additional 1-g SAR testing at 5 mm is not required when hotspot mode 10-g extremity SAR is not required for the surfaces and edges;

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:

The SAR measurement and test reduction procedures are structured according to either the DSSS or OFDM transmission mode configurations used in each standalone frequency band and aggregated band. SAR is measured using the highest measured maximum output power channel for the initial test configuration. SAR measurement and test reduction for the remaining 802.11 modes and test channels are determined according to measured or specified maximum output power and reported SAR of the initial measurements. The general test reduction and SAR measurement approaches are summarized in the following:

- 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.
- For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, an “initial test configuration” is first determined for each standalone and aggregated frequency band according to the maximum output power and tune-up tolerance specified for production units.
- The Initial test configuration does not apply to DSSS. The 2.4 GHz band SAR test requirements and 802.11b DSSS procedures are used to establish the transmission configurations required for SAR measurement.
- An “initial test position” is applied to further reduce the number of SAR tests for devices operating in next to the ear, UMPC mini-tablet or hotspot mode exposure configurations that require multiple test positions.
 - SAR is measured for 802.11b according to the 2.4 GHz DSSS procedure using the exposure condition established by the initial test position.
 - SAR is measured for 2.4 GHz and 5 GHz OFDM configurations using the initial test configuration.
- The Initial test position does not apply to devices that require a fixed exposure test position.
- The “subsequent test configuration” procedures are applied to determine if additional SAR measurements are required for the remaining OFDM transmission modes that have not been tested in the initial test configuration.
- 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.

Initial Test Position Test Requirements

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.

802.11b DSSS SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure.

- When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel.

OFDM Transmission Mode SAR Test Configuration and Channel Selection Requirements

The initial test configuration for 2.4 GHz and 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance, in each standalone and aggregated frequency band. When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined by applying the following steps sequentially.

- The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same specified maximum output power.
- If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
- If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.
- When multiple transmission modes (802.11a/g/n/ac/ax/be) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected.

After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following.

- The channel closest to mid-band frequency is selected for SAR measurement.
- For channels with equal separation from mid-band frequency the higher frequency (number) channel is selected for SAR measurement.

Initial Test Configuration Procedures

An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. For configurations with the same specified or measured maximum output power, additional transmission mode and test channel selection procedures are required. SAR test reduction for subsequent highest output test channels is determined according to reported SAR of the initial test configuration.

- When the reported SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for subsequent next highest measured output power channel(s) in the initial test configuration until reported SAR is ≤ 1.2 W/kg or all required channels are tested.

Subsequent Test Configuration Procedures

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration.

- When SAR test exclusion provisions of KDB Publication 447498 D01 are applicable and SAR measurement is not required for the initial test configuration, SAR is also not required for the next highest maximum output power transmission mode subsequent test configuration(s) in that frequency band or aggregated band and exposure configuration.
- When the highest reported SAR for the initial test configuration (when applicable, include subsequent highest output channels), according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.
- When SAR measurement is required for a subsequent test configuration and the channel bandwidth is smaller than that in the initial test configuration, all channels in the subsequent test configuration that overlap with the larger bandwidth channel tested in the initial test configuration should be used to determine the highest maximum output power channel.

- SAR should first be measured for the channel with highest measured output power in the subsequent test configuration.
- SAR for subsequent highest measured maximum output power channels in the subsequent test configuration is required only when the reported SAR of the preceding higher maximum output power channel(s) in the subsequent test configuration is $> 1.2 \text{ W/kg}$ or until all required channels are tested. For channels with the same measured maximum output power, SAR should be measured using the channel closest to the center frequency of the larger channel bandwidth channel in the initial test configuration.
- SAR measurements for the remaining highest specified maximum output power OFDM transmission mode configurations that have not been tested in the initial test configuration or subsequent test configuration is determined by recursively applying the subsequent test configuration procedures in this subclause to the remaining configurations according to the following:
 - replace “subsequent test configuration” with “next subsequent test configuration”
 - replace “initial test configuration” with “all tested higher output power configurations”

WWAN Bands SAR test additional considerations

1. GSM(Voice/GPRS/EGPRS) follows the following conditions to determine the worst configuration and exclude from testing ;
 - GPRS(GMSK) mode test is performed in the highest slot among frame averaged power in Sec.6.4. If slots are same frame power, then SAR test is performed in the highest number slot.
 - SAR is not required for EGPRS (8PSK) mode, when the maximum output power and tune-up limit is $\leq 1/4\text{dB}$ higher than GPRS(GMSK) or the adjusted SAR of the highest reported SAR of GPRS(GMSK) is $\leq 1.2\text{W/kg}$.
2. NR follows the following conditions;
 - NR TDD bands(including SRS) performs test using test mode software.
 - CP-OFDM mode were evaluated at worst configuration of DFT-s-OFDM in each exposure conditions.
 - NR TDD Band 77-DoD are tested at worst configuration of NR Band n77 band based on TCB workshop guide.

WLAN/BT Bands SAR test additional considerations

1. U-NII 1 Hotspot mode SAR was covered by U-NII 2A Body SAR results.
2. Reported SAR of MIMO mode conservatively scaled up from the lower measured output power between both antennas.
3. For some test positions exclude from testing under Initial test position procedure, additional Zoom scans were measured to satisfy simultaneous transmission analysis.
4. UNII 6GHz Bands tested 5 channels at the worst configuration of each RF exposure in accordance with FCC guide.
5. BT/BLE SAR test performed at worst frame averaged power mode.

UWB SAR test additional considerations

1. Measured 1g SAR of Rear/Front with 0 mm test distance is more conservative than measured 1g SAR with 5mm test distance for Body-worn exposure condition.
2. 1g SAR at Front side with 0mm test distance between the DUT and flat phantom is more conservative than a head SAR.

Spot-check SAR test considerations

1. Spot-check test plan and criteria performed according to Sec.3.2.2 ‘The Spot-check plan for RF exposure Test data’ in KDB 484596 D01v03.
2. Worst case spot check refers to the evaluation in the configuration that has the highest SAR value under each exposure conditions.
3. All test positions spot check refers to the evaluation in the configuration that has the highest SAR value under each test positions of exposure conditions.

10.1. Folder Close SAR Results

10.1.1. Spot-check Results

Worst case Spot-check Results

Band	Antenna Group	Antenna	RF Exposure Condition	Mode / Modulation / Waveform	Bandwidth (MHz)	DSI	Distance (cm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Loss (dBm)	Reference Worst-Case					Variant Test (Spot-check)					Relative Difference (dB)	Spot-check Parameter		Y/N	Pass Criterion	
														Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TSLN	Port PWR	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TSLN	Port PWR		Port No.	Margn (M)			Φ_{10g} (M)
GSM850	AG0	AntA+B	Head	GPRS 2 slots	0	3	0	Right Touch	190	836.6			32.50	31.42	0.220	0.282	0.176	31.8	31.59	0.127	0.157	0.098	34.3	0.445	0.824	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)	
			Body-worn & Helmet	GPRS 4 slots	0	1	5	Rear	190	836.6			25.50	24.63	0.414	0.506	0.316	25.2	24.30	0.297	0.392	0.245	26.4	1	0.225	0.684	0.434	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	GPRS 4 slots	0	1	0	Bottom	190	836.6			25.50	24.63	0.639	0.781	0.195	27.3	24.30	0.711	0.937	0.234	26.5		0.201	0.805	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
GSM850	AG0	AntA	Head	GPRS 2 slots	0	3	0	Right Touch	190	836.6			32.50	31.42	0.153	0.196	0.123	33.3	31.59	0.100	0.185	0.116	33.6	2	0.057	0.677	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	GPRS 4 slots	0	1	5	Rear	190	836.6			25.50	24.63	0.591	0.722	0.451	23.7	24.30	0.242	0.319	0.199	27.2		0.558	0.549	0.299	N	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	GPRS 4 slots	0	1	0	Bottom	190	836.6			25.50	24.63	0.890	1.087	0.272	25.9	24.30	0.577	0.761	0.190	27.4		0.301	0.728	0.478	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
GSM1900	AG0	AntB	Head	GPRS 2 slots	0	3	0	Right Touch	661	1880.0			29.50	27.96	0.153	0.218	0.136	29.9	27.35	0.075	0.123	0.077	32.4	3	0.436	0.964	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	GPRS 4 slots	0	1	5	Rear	661	1880.0			22.50	21.70	0.604	0.726	0.454	20.7	20.80	0.599	0.886	0.554	19.8	4	0.220	0.546	0.296	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	GPRS 4 slots	0	1	0	Bottom	661	1880.0			22.50	21.70	1.270	1.527	0.382	21.4	20.80	1.010	1.494	0.373	21.5		0.022	0.618	0.368	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
WCDMA5	AG0	AntA+B	Head	Rel 99 RMC	0	3	0	Right Touch	4183	836.6			25.50	24.48	0.273	0.336	0.206	30.1	24.93	0.250	0.272	0.170	30.9	5	0.174	0.794	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	Rel 99 RMC	0	1	5	Rear	4233	846.6			23.00	22.25	0.682	0.811	0.507	23.9	22.26	0.602	0.714	0.446	24.4	6	0.119	0.483	0.250	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	Rel 99 RMC	0	1	0	Bottom	4183	836.6			23.00	22.22	1.500	1.795	0.449	24.4	22.40	1.240	1.424	0.356	25.4		0.207	0.551	0.301	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
WCDMA5	AG0	AntA	Head	Rel 99 RMC	0	3	0	Right Touch	4183	836.6			25.50	24.48	0.134	0.162	0.101	33.2	24.56	0.307	0.364	0.228	29.6		1.249	0.899	0.500	N	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	Rel 99 RMC	0	1	5	Rear	4183	836.6			23.00	22.22	0.676	0.809	0.506	23.9	22.26	0.572	0.678	0.424	24.6		0.162	0.484	0.250	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	Rel 99 RMC	0	1	0	Bottom	4183	836.6			23.00	22.22	1.490	1.783	0.446	24.4	22.40	1.380	1.584	0.396	24.9		0.111	0.554	0.304	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
LTEB5	AG0	AntA	Head	QPSK	10	3	0	Right Touch	20525	836.6	1	0	25.50	24.62	0.243	0.305	0.190	30.6	24.56	0.273	0.339	0.212	30.1	7	0.113	0.810	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QPSK	10	1	5	Rear	20525	836.6	25	0	23.00	22.22	0.640	0.766	0.479	24.1	22.34	0.603	0.702	0.439	24.5	8	0.083	0.521	0.271	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QPSK	10	1	0	Bottom	20525	836.6	1	0	23.00	22.35	1.310	1.521	0.380	25.1	22.34	1.290	1.502	0.375	25.2		0.013	0.620	0.370	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
LTEB5	AG0	AntA+B	Head	QPSK	10	3	0	Right Touch	20525	836.6	1	0	25.50	24.62	0.245	0.307	0.192	30.6	24.49	0.257	0.324	0.203	30.3		0.056	0.806	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QPSK	10	1	5	Rear	20525	836.6	25	0	23.00	22.22	0.685	0.820	0.512	23.8	22.18	0.514	0.621	0.388	25.0		0.243	0.488	0.250	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QPSK	10	1	0	Right	20525	836.6	1	0	23.00	22.35	1.320	1.533	0.383	25.1	21.54	1.200	1.680	0.420	24.7		0.085	0.617	0.367	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
LTEB12	AG0	AntA	Head	QPSK	10	3	0	Right Touch	23095	707.5	1	25	25.50	24.72	0.078	0.087	0.055	35.7	24.31	0.105	0.129	0.081	34.0	9	0.478	0.945	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QPSK	10	1	5	Rear	23095	707.5	25	12	23.00	22.27	0.309	0.366	0.228	27.3	21.98	0.353	0.446	0.279	26.5	10	0.221	0.772	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QPSK	10	1	0	Bottom	23095	707.5	1	25	23.00	22.37	0.889	1.028	0.257	26.8	21.91	0.790	0.977	0.244	27.0		0.090	0.743	0.493	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
LTEB12	AG0	AntA+B	Head	QPSK	10	3	0	Right Touch	23095	707.5	1	25	25.50	24.72	0.177	0.198	0.124	32.2	24.31	0.102	0.125	0.078	34.2		0.367	0.876	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QPSK	10	1	5	Rear	23095	707.5	25	12	23.00	22.27	0.472	0.558	0.349	25.5	21.98	0.304	0.384	0.240	27.1		0.311	0.551	0.401	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QPSK	10	1	0	Right	23095	707.5	1	25	23.00	22.37	0.901	1.042	0.260	26.8	21.91	0.925	1.189	0.297	26.2		0.141	0.740	0.490	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
LTEB13	AG0	AntA	Head	QPSK	10	3	0	Right Touch	23230	782.0	1	0	25.50	24.91	0.166	0.190	0.119	32.7	24.76	0.200	0.237	0.148	31.7		0.247	0.881	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QPSK	10	1	5	Rear	23230	782.0	25	0	23.00	22.29	0.431	0.508	0.317	25.9	22.04	0.413	0.515	0.322	25.8		0.015	0.683	0.433	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QPSK	10	1	0	Bottom	23230	782.0	1	0	23.00	22.34	0.842	0.980	0.245	27.0	22.04	0.926	1.155	0.289	26.3		0.334	0.724	0.474	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
LTEB13	AG0	AntA+B	Head	QPSK	10	3	0	Right Touch	23230	782.0	1	0	25.50	24.91	0.228	0.261	0.163	31.3	24.76	0.201	0.238	0.149	31.7	11	0.087	0.837	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QPSK	10	1	5	Rear	23230	782.0	1	0	23.00	22.34	0.635	0.739	0.462	24.3	22.04	0.430	0.536	0.335	25.7	12	0.274	0.538	0.288	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QPSK	10	1	0	Right	23230	782.0	1	0	23.00	22.34	0.948	1.104	0.276	26.5	22.04	1.180	1.472	0.368	25.3		0.334	0.724	0.474	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
NR15	AG0	AntA	Head	QFT-s OFDM QPSK	20	3	0	Right Touch	167300	836.6	50	28	25.50	24.19	0.199	0.269	0.168	31.2	24.09	0.101	0.140	0.087	34.0		0.481	0.832	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QFT-s OFDM QPSK	20	1	5	Rear	167300	836.6	50	28	23.00	22.20	0.657	0.790	0.494	24.0	22.02	0.329	0.412	0.256	26.8		0.478	0.936	0.256	N	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QFT-s OFDM QPSK	20	1	0	Right	167300	836.6	1	1	23.00	22.17	1.440	1.743	0.436	24.5	22.10	0.627	0.771	0.193	28.1		0.558	0.564	0.314	N	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
NR15	AG0	AntA+B	Head	QFT-s OFDM QPSK	20	3	0	Right Touch	167300	836.6	1	1	25.50	24.18	0.240	0.325	0.203	30.3	24.09	0.190	0.263	0.164	31.3	13	0.192	0.797	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QFT-s OFDM QPSK	20	1	5	Rear	167300	836.6	50	28	23.00	22.20	0.743	0.893	0.558	23.4	22.02	0.599	0.701	0.438	24.5	14	0.216	0.442	0.250	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QFT-s OFDM QPSK	20	1	0	Bottom	167300	836.6	1	1	23.00	22.17	1.400	1.695	0.424	24.6	22.10	0.889	1.094	0.273	26.5		0.355	0.576	0.326	N	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
LTEB25	AG0	AntB	Head	QPSK	20	3	0	Right Touch	26365	1882.5	1	0	25.50	24.75	0.351	0.372	0.232	29.2	24.35	0.353	0.410	0.256	28.8	15	0.103	0.768	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QPSK	20	1	5	Rear	26365	1882.5	1	0	18.00	17.53	0.571	0.636	0.398	19.9	17.05	0.507	0.706	0.441	19.6	16	0.109	0.682	0.352	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Product Specific 10-g	QPSK	20	1	0	Bottom	26365	1882.5	1	0	18.00	17.53	0.878	0.978	0.245	22.0	17.05	1.100	1.369	0.342	20.6		0.399	0.795	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
LTEB66	AG0	AntB	Head	QPSK	20	3	0	Right Touch	132322	1745.0	1	0	25.50	24.45	0.231	0.262	0.164	30.8	24.17	0.277	0.335	0.210	29.7	17	0.279	0.836	0.500	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)
			Body-worn & Helmet	QPSK	20	1	5	Rear	132322	1745.0	50	0	17.00	16.57	0.560	0.618	0.366	19.0	15.83	0.531	0.695	0.434	18.5	18	0.124	0.614	0.364	Y	$\Phi_{10g} \leq \Phi_{10gref}$ (f)

Worst case Spot-check Results (Continued)

Band	Antenna Group	Antenna	RF Exposure Conditions	Mode	DS	Distance (mm)	Test Position	Channel	Frequency (MHz)	Max Duty Cycle (%)	Tested Duty Cycle (%)	Time-up Limit (dBm)	Reference Worst-Case				Variant Test (Spot-check)				Relative Difference (d _{TER})	Spot-check Parameter		Y/N	Pass Criterion			
													Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER _R	Port1 Power	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TER _V	Port1 Power			Port No.	Margin (M)	d _{TERmax} (M)
WLAN 2.4GHz	AG.1	Ant.D	Head	802.11b Mbps	3	0	Left Touch	6	2437.0	100.00%	97.27%	15.50	14.62	0.080	0.101	0.063	25.4	14.31	0.049	0.066	0.041	27.20	22	0.342	0.937	0.500	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11b Mbps	1	5	Rear	1	2412.0	100.00%	97.27%	18.00	17.63	0.784	0.889	0.556	18.5	17.07	0.545	0.694	0.434	19.50	22	0.219	0.444	0.250	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11b Mbps	1	0	Right	1	2412.0	100.00%	97.27%	18.00	17.63	0.775	0.868	0.517	22.5	17.07	0.655	0.834	0.209	22.70	22	0.039	0.783	0.500	Y	10 ≤ d _{TERmax} (f)
WLAN 2.4GHz	AG.1	Ant.G	Head	802.11b Mbps	3	0	Left Tilt	1	2412.0	100.00%	97.27%	15.50	14.25	0.676	0.927	0.579	15.8	14.70	0.692	0.855	0.535	16.10	23	0.077	0.421	0.250	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11b Mbps	1	5	Front	1	2412.0	100.00%	97.27%	18.00	17.21	0.657	0.810	0.506	18.9	17.10	0.529	0.689	0.418	19.70	22	0.174	0.494	0.250	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11b Mbps	1	0	Top	6	2437.0	100.00%	97.27%	18.00	17.37	1.410	1.676	0.419	19.7	16.89	0.920	1.221	0.305	21.10	22	0.271	0.581	0.331	Y	10 ≤ d _{TERmax} (f)
UNB 2A	AG.1	Ant.D+E	Head	802.11a VHT80 MCS9	3	0	Left Tilt	58	5290.0	100.00%	94.26%	16.00	15.42	0.195	0.236	0.148	22.2	14.88	0.373	0.512	0.330	18.90	22	1.165	0.852	0.500	N	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.75	0.281	0.398	0.248	18.0	12.93	0.420	0.570	0.356	16.40	24	0.434	0.732	0.500	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	58	5290.0	100.00%	94.26%	14.00	12.75	0.827	1.170	0.293	17.2	12.93	0.644	0.874	0.219	18.50	22	0.253	0.707	0.457	Y	10 ≤ d _{TERmax} (f)
UNB 2A	AG.1	Ant.E	Head	802.11a VHT80 MCS9	3	0	Left Tilt	58	5290.0	100.00%	94.26%	16.00	15.57	0.200	0.234	0.146	22.3	14.99	0.350	0.489	0.293	19.20	22	1.000	0.854	0.500	N	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.94	0.194	0.263	0.164	19.8	13.07	0.351	0.461	0.288	17.30	22	0.756	0.836	0.500	N	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	58	5290.0	100.00%	94.26%	14.00	12.94	0.707	0.957	0.239	18.1	13.07	0.554	0.728	0.182	19.30	22	0.240	0.761	0.500	Y	10 ≤ d _{TERmax} (f)
UNB 2A	AG.1	Ant.D	Head	802.11a VHT80 MCS9	3	0	Right Tilt	58	5290.0	100.00%	94.26%	16.00	15.61	0.178	0.207	0.129	22.8	15.20	0.285	0.364	0.227	20.30	22	0.760	0.871	0.500	N	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.68	0.210	0.302	0.189	19.2	13.00	0.500	0.668	0.417	15.70	22	1.212	0.811	0.500	N	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	58	5290.0	100.00%	94.26%	14.00	12.68	0.737	1.060	0.265	17.7	13.00	0.684	0.914	0.228	18.30	22	0.138	0.735	0.485	Y	10 ≤ d _{TERmax} (f)
UNB 2C	AG.1	Ant.D+E	Head	802.11a VHT80 MCS9	3	0	Right Tilt	106	5530.0	100.00%	94.26%	16.00	15.42	0.444	0.538	0.336	18.6	15.64	0.641	0.739	0.462	17.30	22	0.372	0.654	0.414	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	122	5610.0	100.00%	94.26%	14.00	12.76	0.235	0.332	0.207	18.7	13.21	0.346	0.440	0.275	17.50	22	0.327	0.793	0.500	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	122	5610.0	100.00%	94.26%	14.00	12.76	0.566	0.799	0.200	18.9	13.21	0.584	0.743	0.186	19.20	22	0.070	0.800	0.500	Y	10 ≤ d _{TERmax} (f)
UNB 2C	AG.1	Ant.E	Head	802.11a VHT80 MCS9	3	0	Right Tilt	106	5530.0	100.00%	94.26%	16.00	15.68	0.393	0.449	0.281	19.4	15.27	0.494	0.620	0.388	18.00	22	0.381	0.719	0.469	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	106	5530.0	100.00%	94.26%	14.00	13.23	0.274	0.347	0.217	18.5	13.01	0.356	0.474	0.296	17.20	22	0.367	0.783	0.500	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	106	5530.0	100.00%	94.26%	14.00	13.23	0.487	0.617	0.154	20.0	13.01	0.646	0.861	0.215	18.60	22	0.395	0.846	0.500	Y	10 ≤ d _{TERmax} (f)
UNB 2C	AG.1	Ant.D	Head	802.11a VHT80 MCS9	3	0	Left Tilt	138	5690.0	100.00%	94.26%	16.00	15.58	0.174	0.203	0.127	22.9	15.03	0.291	0.386	0.241	20.10	22	0.888	0.873	0.500	N	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	122	5610.0	100.00%	94.26%	14.00	12.93	0.124	0.168	0.105	21.7	13.03	0.185	0.245	0.153	20.10	22	0.458	0.895	0.500	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	122	5610.0	100.00%	94.26%	14.00	12.93	0.832	1.129	0.282	17.4	13.03	0.526	0.698	0.174	19.50	22	0.382	0.718	0.468	Y	10 ≤ d _{TERmax} (f)
UNB 3	AG.1	Ant.D+E	Head	802.11a VHT80 MCS9	3	0	Right Tilt	155	5775.0	100.00%	94.26%	16.00	14.83	0.669	0.929	0.381	18.3	14.70	0.632	0.904	0.565	16.40	22	0.027	0.419	0.250	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	155	5775.0	100.00%	94.26%	14.00	12.82	0.271	0.377	0.236	18.2	12.77	0.333	0.469	0.293	17.20	22	0.243	0.764	0.500	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	155	5775.0	100.00%	94.26%	14.00	12.82	1.250	1.740	0.435	15.5	12.77	0.743	1.046	0.262	17.70	22	0.399	0.965	0.315	N	10 ≤ d _{TERmax} (f)
UNB 3	AG.1	Ant.E	Head	802.11a VHT80 MCS9	3	0	Right Tilt	155	5775.0	100.00%	94.26%	16.00	15.70	0.637	0.724	0.453	17.4	14.82	0.591	0.823	0.514	16.80	22	0.136	0.547	0.297	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	155	5775.0	100.00%	94.26%	14.00	12.86	0.343	0.473	0.296	17.2	12.89	0.318	0.436	0.272	17.60	22	0.079	0.704	0.454	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	155	5775.0	100.00%	94.26%	14.00	12.86	1.250	1.724	0.431	15.6	12.89	0.665	0.911	0.228	18.30	22	0.472	0.969	0.319	N	10 ≤ d _{TERmax} (f)
UNB 3	AG.1	Ant.D	Head	802.11a VHT80 MCS9	3	0	Left Tilt	155	5775.0	100.00%	94.26%	16.00	15.54	0.284	0.335	0.209	20.7	15.04	0.214	0.283	0.177	21.40	22	0.155	0.791	0.500	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	155	5775.0	100.00%	94.26%	14.00	13.08	0.174	0.228	0.143	20.4	13.07	0.231	0.304	0.190	19.10	22	0.331	0.857	0.500	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	155	5775.0	100.00%	94.26%	14.00	13.08	0.677	0.888	0.222	18.4	13.07	0.330	0.434	0.108	21.60	22	0.511	0.778	0.500	N	10 ≤ d _{TERmax} (f)
UNB 4	AG.1	Ant.D+E	Head	802.11a VHT80 MCS9	3	0	Right Tilt	171	5855.0	100.00%	94.26%	16.00	15.21	0.715	0.910	0.569	16.4	14.80	0.745	1.042	0.651	15.80	25	0.145	0.431	0.250	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	171	5855.0	100.00%	94.26%	14.00	12.62	0.337	0.491	0.307	17.0	12.86	0.314	0.433	0.271	17.60	22	0.118	0.693	0.443	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	171	5855.0	100.00%	94.26%	14.00	12.62	0.709	1.034	0.258	17.8	12.86	0.673	0.928	0.232	18.30	26	0.102	0.742	0.492	Y	10 ≤ d _{TERmax} (f)
UNB 4	AG.1	Ant.E	Head	802.11a VHT80 MCS9	3	0	Right Tilt	171	5855.0	100.00%	94.26%	16.00	15.21	0.638	0.812	0.507	16.9	14.93	0.656	0.890	0.557	16.50	22	0.097	0.493	0.250	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	171	5855.0	100.00%	94.26%	14.00	12.83	0.331	0.460	0.287	17.3	13.00	0.327	0.437	0.273	17.50	22	0.050	0.713	0.463	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	171	5855.0	100.00%	94.26%	14.00	12.83	1.080	1.500	0.375	16.2	13.00	0.633	0.845	0.211	18.70	22	0.435	0.825	0.375	N	10 ≤ d _{TERmax} (f)
UNB 4	AG.1	Ant.D	Head	802.11a VHT80 MCS9	3	0	Left Tilt	171	5855.0	100.00%	94.26%	16.00	15.44	0.188	0.191	0.119	23.1	14.95	0.197	0.286	0.196	21.70	22	0.396	0.881	0.500	Y	10 ≤ d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	1	5	Rear	171	5855.0	100.00%	94.26%	14.00	12.94	0.188	0.255	0.159	19.9	13.11	0.239	0.311	0.195	19.00	22	0.222	0.841	0.500	Y	10 ≤ d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	1	0	Top	171	5855.0	100.00%	94.26%	14.00	12.94	0.709	0.960	0.240	18.1	13.11	0.276	0.359	0.090	22.40	22	0.626	0.760	0.500	N	10 ≤ d _{TERmax} (f)

All Test position Spot-check Results

Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Reference Worst-Case					Variant Test (Spot-check)					Plot No.	Relative Difference (dBS)	Spot-check Parameter		Y/N	Pass Criteria	
														Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	T25%	Part0 Peak	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	T25%	Part0 Peak			Margin (dB)	$\Delta_{100\%}$ (dB)			
LTE B25	AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	26590	1905.0	50	0	22.00	21.34	0.385	0.448	0.280	25.4	21.19	0.604	0.728	0.455	23.3		0.624	0.720	0.470	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	20	3	0	Left Tilt	26590	1905.0	1	0	22.00	21.31	0.526	0.617	0.385	24.1	21.23	0.817	0.975	0.610	22.1		0.582	0.615	0.365	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	20	3	0	Right Touch	26590	1905.0	1	0	22.00	21.31	0.369	0.433	0.270	25.6	21.23	0.608	0.726	0.454	23.3		0.678	0.730	0.480	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	20	3	0	Right Tilt	26590	1905.0	1	0	22.00	21.31	0.448	0.525	0.326	24.7	21.23	0.735	0.876	0.546	22.5		0.671	0.672	0.422	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
			Body-worn & Hotspot	QPSK	20	1	5	Rear	26590	1905.0	1	0	17.50	16.70	0.464	0.558	0.349	20.0	16.67	0.852	1.031	0.645	17.3		0.849	0.651	0.401	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
		QPSK		20	1	5	Front	26590	1905.0	1	0	17.50	16.70	0.105	0.126	0.079	26.4	16.67	0.179	0.217	0.135	24.1		0.717	0.921	0.500	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
		Product Specific 10-g	QPSK	20	1	10	Top	26590	1905.0	1	0	17.50	16.70	0.196	0.226	0.147	23.7	16.67	0.338	0.409	0.256	21.3		0.736	0.853	0.500	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			QPSK	20	1	0	Top	26590	1905.0	1	0	17.50	16.70	0.763	0.917	0.229	21.8	16.67	1.080	1.3	0.327	20.3		0.425	0.771	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			QPSK	20	3	0	Left Touch	132322	1745.0	1	0	21.00	20.05	0.605	0.753	0.471	22.2	20.13	0.509	0.622	0.389	23.0		0.174	0.529	0.279	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			QPSK	20	3	0	Left Tilt	132072	1720.0	1	0	21.00	19.98	0.819	1.036	0.647	20.8	19.25	0.534	0.799	0.469	21.9	31	0.229	0.353	0.250	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
QPSK	20		3	0	Right Touch	132322	1745.0	1	0	21.00	20.05	0.510	0.635	0.397	22.9	20.13	0.446	0.545	0.341	23.6		0.141	0.603	0.353	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)				
LTE B66	AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	132322	1745.0	1	0	21.00	20.05	0.616	0.767	0.475	22.1	20.13	0.523	0.639	0.399	22.9		0.166	0.521	0.271	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	20	1	5	Rear	132072	1720.0	50	50	16.50	15.58	0.591	0.730	0.457	17.8	14.70	0.458	0.693	0.433	18.0	32	0.051	0.543	0.293	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	20	1	5	Front	132072	1720.0	50	50	16.50	15.58	0.204	0.252	0.158	22.4	14.70	0.099	0.150	0.094	24.7		0.403	0.842	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	20	1	10	Top	132072	1720.0	50	50	16.50	15.58	0.290	0.358	0.224	20.9	14.70	0.181	0.274	0.171	22.1		0.236	0.777	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
			Product Specific 10-g	QPSK	20	1	0	Top	132072	1720.0	1	99	16.50	15.62	0.724	0.987	0.222	21.0	14.72	0.533	0.803	0.201	21.4		0.094	0.778	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
		Head	QPSK	45	3	0	Left Touch	349000	1745.0	1	1	21.00	20.30	0.670	0.787	0.482	22.0	20.27	0.672	0.795	0.497	21.9		0.010	0.508	0.298	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			QPSK	45	3	0	Left Tilt	349000	1745.0	1	1	21.00	20.30	0.916	1.076	0.673	20.6	20.27	0.551	0.652	0.407	22.8		0.394	0.327	0.250	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			QPSK	45	3	0	Right Touch	349000	1745.0	1	1	21.00	20.30	0.572	0.672	0.420	22.7	20.27	0.402	0.478	0.297	24.2		0.292	0.580	0.330	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			QPSK	45	3	0	Right Tilt	349000	1745.0	1	1	21.00	20.30	0.787	0.925	0.578	21.3	20.27	0.485	0.574	0.359	23.4		0.379	0.422	0.250	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			Body-worn & Hotspot	QPSK	45	1	5	Rear	349000	1745.0	1	1	16.50	15.69	0.646	0.778	0.487	17.5	15.55	0.492	0.612	0.383	18.6	33	0.213	0.513	0.263	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
NR n66	AG.1	Ant.F	Head	QPSK	45	1	5	Front	349000	1745.0	1	1	16.50	15.69	0.201	0.242	0.151	22.6	15.55	0.123	0.153	0.096	24.6		0.368	0.849	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	45	1	10	Top	349000	1745.0	1	1	16.50	15.69	0.252	0.304	0.190	21.6	15.55	0.231	0.287	0.180	21.9		0.053	0.810	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				Product Specific 10-g	QPSK	45	1	0	Top	349000	1745.0	1	1	16.50	15.69	0.748	0.901	0.225	20.9	15.55	0.549	0.683	0.171	22.1		0.242	0.775	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)
				QPSK	20	3	0	Left Touch	40185	2549.5	50	0	18.50	17.55	0.450	0.560	0.350	21.0	17.54	0.386	0.481	0.301	21.6		0.140	0.650	0.400	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
			QPSK	20	3	0	Left Tilt	40185	2549.5	100	0	18.50	17.53	0.749	0.936	0.585	18.7	17.43	0.472	0.694	0.377	20.6		0.355	0.415	0.250	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
		Head	QPSK	20	3	0	Right Touch	40185	2549.5	1	0	18.50	17.53	0.404	0.505	0.316	21.4	17.66	0.330	0.430	0.250	22.4		0.297	0.884	0.434	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			QPSK	20	3	0	Right Tilt	40185	2549.5	1	0	18.50	17.53	0.436	0.545	0.341	21.1	17.66	0.387	0.470	0.293	21.7		0.139	0.659	0.409	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			Body-worn & Hotspot	QPSK	20	1	5	Rear	39750	2506.0	1	0	19.00	17.84	0.742	0.969	0.606	19.1	18.10	0.371	0.456	0.285	22.4		0.529	0.394	0.250	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
			QPSK	20	1	5	Front	40185	2549.5	50	0	19.00	17.92	0.214	0.274	0.172	24.8	18.02	0.221	0.277	0.173	24.5		0.009	0.828	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
			Product Specific 10-g	QPSK	20	1	10	Top	40185	2549.5	1	0	19.00	17.83	0.280	0.358	0.224	23.4	18.12	0.433	0.530	0.331	21.7		0.480	0.776	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
NR n41	AG.1	Ant.F	Head	QPSK	20	1	0	Top	40185	2549.5	1	0	19.00	17.83	0.957	1.224	0.306	22.1	18.12	1.150	1.4	0.352	21.4		0.150	0.694	0.444	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	100	3	0	Left Touch	156598	2592.99	135	0	16.50	15.80	0.604	0.710	0.444	17.9	15.70	0.368	0.442	0.277	20.0		0.377	0.556	0.306	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	100	3	0	Left Tilt	156598	2592.99	135	0	16.50	15.80	0.706	0.829	0.518	17.3	15.70	0.465	0.559	0.349	19.0		0.326	0.482	0.250	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
				QPSK	100	3	0	Right Touch	156598	2592.99	135	0	16.50	15.80	0.559	0.657	0.410	18.3	15.70	0.360	0.433	0.271	20.1		0.341	0.590	0.340	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
			Body-worn & Hotspot	QPSK	100	3	0	Right Tilt	156598	2592.99	135	0	16.50	15.80	0.686	0.806	0.504	17.4	15.70	0.410	0.493	0.308	19.5		0.388	0.496	0.250	N	$\Delta_{100} \leq \Delta_{100max}$ (dB)	
		QPSK	100	1	5	Rear	156598	2592.99	1	1	17.00	16.51	0.671	0.751	0.469	18.2	16.84	0.761	0.790	0.463	18.0	34	0.051	0.531	0.281	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)			
		QPSK	100	1	5	Front	156598	2592.99	135	0	17.00	16.17	0.296	0.310	0.194	22.0	16.84	0.320	0.332	0.208	21.7		0.071	0.806	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)			
		Product Specific 10-g	QPSK	100	1	10	Top	156598	2592.99	1	1	17.00	16.51	0.354	0.396	0.248	21.0	16.84	0.445	0.482	0.289	20.3		0.165	0.752	0.500	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)		
		QPSK	100	1	0	Top	156598	2592.99	1	1	17.00	16.51	1.560	1.746	0.437	18.5	16.84	1.200	1.245	0.351	20.0		0.287	0.563	0.313	Y	$\Delta_{100} \leq \Delta_{100max}$ (dB)			

10.1.4. LTE Band 25 (20 MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSF	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Limit
AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	26590	1905.0	1	0	22.00	21.23	0.604	0.721		23.4
AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	26590	1905.0	50	0	22.00	21.19	0.604	0.728		23.3
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26140	1860.0	1	0	22.00	21.20	0.853	1.026		21.8
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26140	1860.0	50	0	22.00	21.18	0.856	1.034		21.8
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26365	1882.5	1	0	22.00	21.19	0.840	1.012		21.9
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26365	1882.5	50	0	22.00	21.18	0.858	1.036	37	21.8
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26365	1882.5	100	0	22.00	21.20	0.857	1.030		21.8
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26590	1905.0	1	0	22.00	21.23	0.817	0.975		22.1
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26590	1905.0	50	0	22.00	21.19	0.807	0.972		22.1
AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	26590	1905.0	1	0	22.00	21.23	0.608	0.726		23.3
AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	26590	1905.0	50	0	22.00	21.19	0.598	0.721		23.4
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26140	1860.0	1	0	22.00	21.20	0.748	0.899		22.4
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26140	1860.0	50	0	22.00	21.18	0.698	0.843		22.7
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26140	1860.0	100	0	22.00	21.17	0.704	0.852		22.6
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26365	1882.5	1	0	22.00	21.19	0.726	0.875		22.5
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26365	1882.5	50	0	22.00	21.18	0.725	0.876		22.5
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26590	1905.0	1	0	22.00	21.23	0.735	0.878		22.5
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26590	1905.0	50	0	22.00	21.19	0.725	0.874		22.5
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26140	1860.0	1	0	17.50	16.56	0.813	1.009		17.4
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26140	1860.0	50	0	17.50	16.58	0.809	1.000		17.5
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26365	1882.5	1	0	17.50	16.60	0.803	0.988		17.5
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26365	1882.5	50	0	17.50	16.61	0.800	0.982		17.5
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26590	1905.0	1	0	17.50	16.67	0.852	1.031	38	17.3
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26590	1905.0	50	0	17.50	16.63	0.795	0.971		17.6
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26590	1905.0	100	0	17.50	16.55	0.797	0.992		17.5
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Front	26590	1905.0	1	0	17.50	16.67	0.179	0.217		24.1
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Front	26590	1905.0	50	0	17.50	16.63	0.175	0.214		24.1
AG.1	Ant.F	Hotspot	QPSK	20	0	10	Top	26590	1905.0	1	0	17.50	16.67	0.338	0.409		21.3
AG.1	Ant.F	Hotspot	QPSK	20	0	10	Top	26590	1905.0	50	0	17.50	16.63	0.333	0.407		21.4

10.1.5. LTE Band 41 (20 MHz Bandwidth)

LTE Band 41 (20MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.0	Ant.B	Head ULCA	QPSK	20	3	0	Right Touch	41055	2636.5	1	0	25.00	24.04	0.060	0.075		34.2
				20				40857	2616.7	1	99						
AG.0	Ant.B	Body-w orn & Hotspot	QPSK	20	1	5	Rear	41055	2636.5	1	0	19.00	18.44	0.440	0.501	39	<u>20.0</u>
AG.0	Ant.B	Body-w orn & Hotspot	QPSK	20	1	5	Rear	41055	2636.5	50	0	19.00	18.54	0.439	0.488		20.1
AG.0	Ant.B	Body-w orn & Hotspot	QPSK	20	1	5	Front	41055	2636.5	1	0	19.00	18.44	0.071	0.081		27.9
AG.0	Ant.B	Body-w orn & Hotspot	QPSK	20	1	5	Front	41055	2636.5	50	0	19.00	18.54	0.071	0.079		28.0
AG.0	Ant.B	Hotspot	QPSK	20	1	10	Bottom	41055	2636.5	1	0	19.00	18.44	0.178	0.202		23.9
AG.0	Ant.B	Hotspot	QPSK	20	1	10	Bottom	41055	2636.5	50	0	19.00	18.54	0.180	0.200		24.0
AG.0	Ant.B	Body-w orn & Hotspot ULCA	QPSK	20	1	5	Rear	41055	2636.5	1	0	19.00	18.30	0.418	0.491		20.1
				20				40857	2616.7	1	99						
Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.0	Ant.B	Product Specific 10-g 0 mm	QPSK	20	1	0	Bottom	41055	2636.5	1	0	19.00	18.44	1.010	1.149		<u>20.3</u>
Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	40185	2549.5	1	0	18.50	17.66	0.385	0.467		19.8
AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	40185	2549.5	50	0	18.50	17.54	0.386	0.481		19.6
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	40185	2549.5	1	0	18.50	17.66	0.439	0.533		19.2
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	40185	2549.5	50	0	18.50	17.54	0.457	0.570	40	<u>18.9</u>
AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	40185	2549.5	1	0	18.50	17.66	0.330	0.400		20.4
AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	40185	2549.5	50	0	18.50	17.54	0.346	0.432		20.1
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	40185	2549.5	1	0	18.50	17.66	0.387	0.470		19.7
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	40185	2549.5	50	0	18.50	17.54	0.394	0.491		19.5
AG.1	Ant.F	Head ULCA	QPSK	20	3	0	Left Tilt	40185	2549.5	50	0	18.50	17.33	0.376	0.492		19.5
				20				39987	2529.7	50	50						
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	39750	2506.0	1	0	19.00	18.10	0.371	0.456		20.4
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	39750	2506.0	50	0	19.00	18.27	0.444	0.525		19.8
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	40185	2549.5	1	0	19.00	18.12	0.586	0.718	41	<u>18.4</u>
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	40185	2549.5	50	0	19.00	18.02	0.549	0.688		18.6
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	40620	2593.0	1	0	19.00	17.99	0.532	0.671		18.7
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	40620	2593.0	50	0	19.00	17.92	0.530	0.680		18.6
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	41055	2636.5	1	0	19.00	18.05	0.430	0.535		19.7
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	41055	2636.5	50	0	19.00	18.01	0.436	0.548		19.6
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	41490	2680.0	1	0	19.00	18.07	0.440	0.545		19.6
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Rear	41490	2680.0	50	0	19.00	18.00	0.433	0.545		19.6
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Front	40185	2549.5	1	0	19.00	18.12	0.208	0.255		22.9
AG.1	Ant.F	Body-w orn & Hotspot	QPSK	20	1	5	Front	40185	2549.5	50	0	19.00	18.02	0.221	0.277		22.5
AG.1	Ant.F	Hotspot	QPSK	20	1	10	Top	40185	2549.5	1	0	19.00	18.12	0.433	0.530		19.7
AG.1	Ant.F	Hotspot	QPSK	20	1	10	Top	40185	2549.5	50	0	19.00	18.02	0.303	0.380		21.2
AG.1	Ant.F	Body-w orn & Hotspot ULCA	QPSK	20	1	5	Rear	40185	2549.5	1	0	19.00	18.06	0.509	0.632		19.0
				20				39987	2529.7	1	99						

10.1.6. NR Band n5 (20 MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.0	Ant.A	Body-worn & Hotspot	DFT-s OFDM QPSK	20	1	5	Rear	167300	836.5	1	1	23.00	22.10	0.284	0.349		27.5
AG.0	Ant.A	Body-worn & Hotspot	DFT-s OFDM QPSK	20	1	5	Rear	167300	836.5	50	28	23.00	22.02	0.329	0.412	42	26.8
AG.0	Ant.A	Body-worn & Hotspot	DFT-s OFDM QPSK	20	1	5	Front	167300	836.5	1	1	23.00	22.10	0.067	0.082		33.8
AG.0	Ant.A	Body-worn & Hotspot	DFT-s OFDM QPSK	20	1	5	Front	167300	836.5	50	28	23.00	22.02	0.081	0.102		32.9
AG.0	Ant.A	Hotspot	DFT-s OFDM QPSK	20	1	10	Bottom	167300	836.5	1	1	23.00	22.10	0.051	0.063		35.0
AG.0	Ant.A	Hotspot	DFT-s OFDM QPSK	20	1	10	Bottom	167300	836.5	50	28	23.00	22.02	0.062	0.078		34.0
AG.0	Ant.A	Hotspot	DFT-s OFDM QPSK	20	1	10	Right	167300	836.5	1	1	23.00	22.10	0.094	0.116		32.3
AG.0	Ant.A	Hotspot	DFT-s OFDM QPSK	20	1	10	Right	167300	836.5	50	28	23.00	22.02	0.110	0.138		31.6
AG.0	Ant.A	Body-worn & Hotspot	CP OFDM QPSK	20	1	5	Rear	167300	836.5	1	1	23.00	22.25	0.275	0.327		27.8

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.0	Ant.A	Product Specific 10-g 0 mm	DFT-s OFDM QPSK	20	1	0	Bottom	167300	836.5	1	1	23.00	22.10	0.640	0.787		28.0
AG.0	Ant.A	Product Specific 10-g 0 mm	DFT-s OFDM QPSK	20	1	0	Right	167300	836.5	1	1	23.00	22.10	0.627	0.771		28.1
Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.0	Ant.A+B	Product Specific 10-g 0 mm	DFT-s OFDM QPSK	20	1	0	Bottom	167300	836.5	1	1	23.00	22.10	0.889	1.094		26.5
AG.0	Ant.A+B	Product Specific 10-g 0 mm	DFT-s OFDM QPSK	20	1	0	Right	167300	836.5	1	1	23.00	22.10	0.624	0.768		28.1

10.1.7. NR Band n66 (45 MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	3	0	Left Touch	349000	1745.0	1	1	21.00	20.27	0.672	0.795		21.9
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	3	0	Left Touch	349000	1745.0	120	60	21.00	20.19	0.712	0.858	43	21.6
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	3	0	Left Tilt	349000	1745.0	1	1	21.00	20.27	0.551	0.652		22.8
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	3	0	Left Tilt	349000	1745.0	120	60	21.00	20.19	0.565	0.681		22.6
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	3	0	Right Touch	349000	1745.0	1	1	21.00	20.27	0.402	0.476		24.2
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	3	0	Right Touch	349000	1745.0	120	60	21.00	20.19	0.426	0.513		23.8
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	3	0	Right Tilt	349000	1745.0	1	1	21.00	20.27	0.485	0.574		23.4
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	3	0	Right Tilt	349000	1745.0	120	60	21.00	20.19	0.485	0.584		23.3
AG.1	Ant.F	Head	CP OFDM QPSK	45	3	0	Left Touch	349000	1745.0	1	1	21.00	20.46	0.646	0.732		22.3

10.1.8. NR Band n41 (100 MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	0	Left Touch	518598	2592.99	1	1	16.50	15.76	0.338	0.401		20.4
AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	0	Left Touch	518598	2592.99	135	0	16.50	15.70	0.368	0.442		20.0
AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	0	Left Tilt	518598	2592.99	1	1	16.50	15.76	0.462	0.548		19.1
AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	0	Left Tilt	518598	2592.99	135	0	16.50	15.70	0.465	0.559	44	19.0
AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	0	Right Touch	518598	2592.99	1	1	16.50	15.76	0.331	0.392		20.5
AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	0	Right Touch	518598	2592.99	135	0	16.50	15.70	0.360	0.433		20.1
AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	0	Right Tilt	518598	2592.99	1	1	16.50	15.76	0.397	0.471		19.7
AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	0	Right Tilt	518598	2592.99	135	0	16.50	15.70	0.410	0.493		19.5
AG.1	Ant.F	Head	CP OFDM QPSK	100	1	0	Left Tilt	518598	2592.99	1	1	16.50	15.75	0.450	0.535		19.2

10.1.9. Wi-Fi (DTS Band)**DTS MIMO**

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Limit
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Left Touch	6	2437.0	0.624	89.27%	15.50	14.87	13.92	0.408	0.658		17.3
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Left Tilt	6	2437.0	0.740	89.27%	15.50	14.87	13.92	0.515	0.830		16.3
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Left Tilt	11	2462.0	0.767	89.27%	15.50	14.79	13.79	0.557	0.925	45	15.8
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Right Touch	6	2437.0	0.574	89.27%	15.50	14.87	13.92				
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Right Tilt	6	2437.0	0.624	89.27%	15.50	14.87	13.92	0.461	0.743		16.7
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	1	5	Rear	6	2437.0	0.792	89.27%	18.00	17.26	16.22	0.555	0.937	46	18.2
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	1	5	Rear	11	2462.0	0.842	89.27%	18.00	17.37	16.56	0.530	0.827		18.8
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	1	5	Front	11	2462.0	0.759	89.27%	18.00	17.37	16.56	0.473	0.738		19.3
AG.1	Ant.D+G	Hotspot	802.11g 6Mbps	1	10	Top	11	2462.0	0.387	89.27%	18.00	17.37	16.56				
AG.1	Ant.D+G	Hotspot	802.11g 6Mbps	1	10	Right	11	2462.0	0.206	89.27%	18.00	17.37	16.56				
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)		Part0 Limit
AG.1	Ant.D+G	Product Specific 10-g 0 mm	802.11g 6Mbps	1	0	Top	11	2462.0	2.862	89.27%	18.00	17.37	16.56	1.070	1.670		19.7
AG.1	Ant.D+G	Product Specific 10-g 0 mm	802.11g 6Mbps	1	0	Right	11	2462.0	1.610	89.27%	18.00	17.37	16.56	0.539	0.841		22.7

10.1.10. Wi-Fi (U-NII 5 GHz Band)

U-NII 2A SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.E	Head	802.11ac VHT80 MCS0	1	0	Left Touch	58	5290.0	0.575	94.26%	16.00	14.99	0.229	0.307		21.1
AG.1	Ant.E	Head	802.11ac VHT80 MCS0	1	0	Left Tilt	58	5290.0	0.674	94.26%	16.00	14.99	0.350	0.469		19.2
AG.1	Ant.E	Head	802.11ac VHT80 MCS0	1	0	Right Touch	58	5290.0	0.555	94.26%	16.00	14.99				
AG.1	Ant.E	Head	802.11ac VHT80 MCS0	1	0	Right Tilt	58	5290.0	0.451	94.26%	16.00	14.99				
AG.1	Ant.E	Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	58	5290.0	0.692	94.26%	14.00	13.07	0.351	0.461		17.3
AG.1	Ant.E	Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Front	58	5290.0	0.148	94.26%	14.00	13.07				
AG.1	Ant.E	Hotspot	802.11ac VHT80 MCS0	0	10	Top	58	5290.0	0.318	94.26%	14.00	13.07	0.133	0.175		21.5
AG.1	Ant.E	Hotspot	802.11ac VHT80 MCS0	0	10	Left	58	5290.0	0.047	94.26%	14.00	13.07				
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Head	802.11ac VHT80 MCS0	1	0	Left Touch	58	5290.0	0.472	94.26%	16.00	15.20				
AG.1	Ant.D	Head	802.11ac VHT80 MCS0	1	0	Left Tilt	58	5290.0	0.378	94.26%	16.00	15.20				
AG.1	Ant.D	Head	802.11ac VHT80 MCS0	1	0	Right Touch	58	5290.0	0.391	94.26%	16.00	15.20				
AG.1	Ant.D	Head	802.11ac VHT80 MCS0	1	0	Right Tilt	58	5290.0	0.614	94.26%	16.00	15.20	0.285	0.364		20.3
AG.1	Ant.D	Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	58	5290.0	1.324	94.26%	14.00	13.00	0.500	0.668	47	16.7
AG.1	Ant.D	Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Front	58	5290.0	0.168	94.26%	14.00	13.00				
AG.1	Ant.D	Hotspot	802.11ac VHT80 MCS0	0	10	Top	58	5290.0	0.649	98.00%	14.00	13.00	0.265	0.340		18.6
AG.1	Ant.D	Hotspot	802.11ac VHT80 MCS0	0	10	Right	58	5290.0	0.075	98.00%	14.00	13.00				

U-NII 2A MIMO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D+E	Head	802.11ac VHT80 MCS0	1	0	Left Touch	58	5290.0	0.698	94.26%	16.00	14.88	15.05				
AG.1	Ant.D+E	Head	802.11ac VHT80 MCS0	1	0	Left Tilt	58	5290.0	0.796	94.26%	16.00	14.88	15.05	0.373	0.512	48	18.9
AG.1	Ant.D+E	Head	802.11ac VHT80 MCS0	1	0	Right Touch	58	5290.0	0.662	94.26%	16.00	14.88	15.05				
AG.1	Ant.D+E	Head	802.11ac VHT80 MCS0	1	0	Right Tilt	58	5290.0	0.824	94.26%	16.00	14.88	15.05	0.343	0.471		19.2

U-NII 2C SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Head	802.11ac VHT80 MCS0	1	0	Left Touch	138	5690.0	0.520	94.26%	16.00	15.03				
AG.1	Ant.D	Head	802.11ac VHT80 MCS0	1	0	Left Tilt	138	5690.0	0.592	94.26%	16.00	15.03	0.291	0.386		20.1
AG.1	Ant.D	Head	802.11ac VHT80 MCS0	1	0	Right Touch	138	5690.0	0.456	94.26%	16.00	15.03				
AG.1	Ant.D	Head	802.11ac VHT80 MCS0	1	0	Right Tilt	138	5690.0	0.542	94.26%	16.00	15.03				

U-NII 3 SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	0	1	0	Top	155	5775.0	2.890	94.26%	14.00	12.89	0.665	0.911	18.3
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	0	1	0	Left	155	5775.0	0.088	94.26%	14.00	12.89			
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	0	1	0	Top	155	5775.0	1.970	94.26%	14.00	13.07	0.330	0.434	21.6
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	0	1	0	Right	155	5775.0	0.707	94.26%	14.00	13.07			

U-NII 3 MIMO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Part0 Plimit
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Top	155	5775.0	3.510	94.26%	14.00	12.77	13.43	0.743	1.046	17.7
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Left	155	5775.0	0.099	94.26%	14.00	12.77	13.43			
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Right	155	5775.0	0.753	94.26%	14.00	12.77	13.43	0.171	0.241	24.1

Wi-Fi (U-NII 5 GHz Band) (Continued)**U-NII 4 SISO**

Antenna Group	Antenna	RF Exposure Conditions	Mode	0	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	0	1	0	Top	171	5855.0	2.850	94.26%	14.00	13.00	0.633	0.845	49	18.7
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	0	1	0	Left	171	5855.0	0.071	94.26%	14.00	13.00				
Antenna Group	Antenna	RF Exposure Conditions	Mode	0	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	0	1	0	Top	171	5855.0	1.620	94.26%	14.00	13.11	0.276	0.359		22.4
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	0	1	0	Right	171	5855.0	0.628	94.26%	14.00	13.11				

10.1.11. Wi-Fi (U-NII 6 GHz Band)**U-NII 5/6/7/8 SISO**

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	31	6105.0	0.303	99.18%	12.50	11.62	0.198	0.244		18.6
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	63	6265.0	0.248	99.18%	12.50	11.36	0.154	0.202		19.4
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	127	6585.0	0.354	99.18%	12.50	11.68	0.232	0.283		17.9
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	159	6745.0	0.306	99.18%	12.50	11.56	0.240	0.300		17.7
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	191	6905.0	0.383	99.18%	12.50	11.56	0.327	0.409	50	16.3
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Front	127	6585.0	0.077	99.18%	12.50	11.68	0.053	0.065		24.4
AG.1	Ant.D	Hotspot	802.11be EHT320 MCS0	1	10	Top	127	6585.0	0.066	99.18%	12.50	11.68				
AG.1	Ant.D	Hotspot	802.11be EHT320 MCS0	1	10	Right	127	6585.0	0.051	99.18%	12.50	11.68				

10.1.12. Bluetooth**Bluetooth SISO**

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Head	BDR	3	0	Left Touch	39	2441.0	76.61%	13.00	12.30	0.015	0.018		30.4
AG.1	Ant.D	Head	BDR	3	0	Left Tilt	39	2441.0	76.61%	13.00	12.30	0.008	0.010		33.1
AG.1	Ant.D	Head	BDR	3	0	Right Touch	39	2441.0	76.61%	13.00	12.30	0.004	0.005		36.1
AG.1	Ant.D	Head	BDR	3	0	Right Tilt	39	2441.0	76.61%	13.00	12.30	0.000	0.000		
AG.1	Ant.D	Body-worn & Hotspot	BDR	1	5	Rear	78	2480.0	76.61%	14.00	13.39	0.160	0.190		21.2
AG.1	Ant.D	Body-worn & Hotspot	BDR	1	5	Front	78	2480.0	76.61%	14.00	13.39	0.011	0.013		32.8
AG.1	Ant.D	Hotspot	BDR	1	10	Top	78	2480.0	76.61%	14.00	13.39	0.002	0.002		40.2
AG.1	Ant.D	Hotspot	BDR	1	10	Right	78	2480.0	76.61%	14.00	13.39	0.047	0.056		26.5
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Product Specific 10-g 0 mm	BDR	1	0	Top	78	2480.0	76.61%	14.00	13.39	0.031	0.037		32.3
AG.1	Ant.D	Product Specific 10-g 0 mm	BDR	1	0	Right	78	2480.0	76.61%	14.00	13.39	0.178	0.211		24.7
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.G	Head	BDR	3	0	Left Touch	0	2402.0	76.61%	13.00	11.78	0.232	0.317		17.9
AG.1	Ant.G	Head	BDR	3	0	Left Tilt	0	2402.0	76.61%	13.00	11.78	0.270	0.369	51	17.3
AG.1	Ant.G	Head	BDR	3	0	Right Touch	0	2402.0	76.61%	13.00	11.78	0.249	0.340		17.6
AG.1	Ant.G	Head	BDR	3	0	Right Tilt	0	2402.0	76.61%	13.00	11.78	0.263	0.359		17.4
AG.1	Ant.G	Body-worn	BDR	1	5	Rear	0	2402.0	76.61%	14.00	13.24	0.038	0.047		27.3
AG.1	Ant.G	Body-worn	BDR	1	5	Front	0	2402.0	76.61%	14.00	13.24	0.203	0.249	52	20.0
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.G	Product Specific 10-g 0 mm	BDR	1	0	Top	0	2402.0	76.61%	14.00	13.24	0.380	0.467		21.2
AG.1	Ant.G	Product Specific 10-g 0 mm	BDR	1	0	Right	0	2402.0	76.61%	14.00	13.24	0.004	0.005		41.0

Bluetooth (Continued)**Bluetooth Dual**

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D+G	Head	BDR	3	0	Left Touch	0	2402.0	76.61%	12.50	11.89	10.76	0.168	0.259		18.3
AG.1	Ant.D+G	Head	BDR	3	0	Left Tilt	0	2402.0	76.61%	12.50	11.89	10.76	0.180	0.277		<u>18.0</u>
AG.1	Ant.D+G	Head	BDR	3	0	Right Touch	0	2402.0	76.61%	12.50	11.89	10.76	0.179	0.276		<u>18.0</u>
AG.1	Ant.D+G	Head	BDR	3	0	Right Tilt	0	2402.0	76.61%	12.50	11.89	10.76	0.164	0.253		18.4
AG.1	Ant.D+G	Body-worn	BDR	1	5	Rear	0	2402.0	76.61%	14.00	13.03	12.47	0.042	0.062		26.1
AG.1	Ant.D+G	Body-worn	BDR	1	5	Front	0	2402.0	76.61%	14.00	13.03	12.47	0.156	0.229		<u>20.4</u>
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D+G	Product Specific 10-g 0 mm	BDR	1	0	Top	0	2402.0	76.61%	14.00	13.03	12.47	0.333	0.488	53	<u>21.0</u>
AG.1	Ant.D+G	Product Specific 10-g 0 mm	BDR	1	0	Right	0	2402.0	76.61%	14.00	13.03	12.47	0.157	0.230		24.3

10.1.13. UWB

Antenna Group	Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Measured SAR 1-g (W/kg)	Measured SAR 10-g (W/kg)	Plot No.
ER	UWB	Head	CW	0	Left Touch	5	6489.6	0.002	0.000	
ER	UWB	Head	CW	0	Right Touch	5	6489.6	0.001	0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	5	6489.6	0.002	0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	9	7987.2	0.005	0.002	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	5	6489.6	0.008	0.003	54
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	9	7987.2	0.008	0.002	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	5	6489.6	0.002	0.001	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	9	7987.2	0.003	0.000	

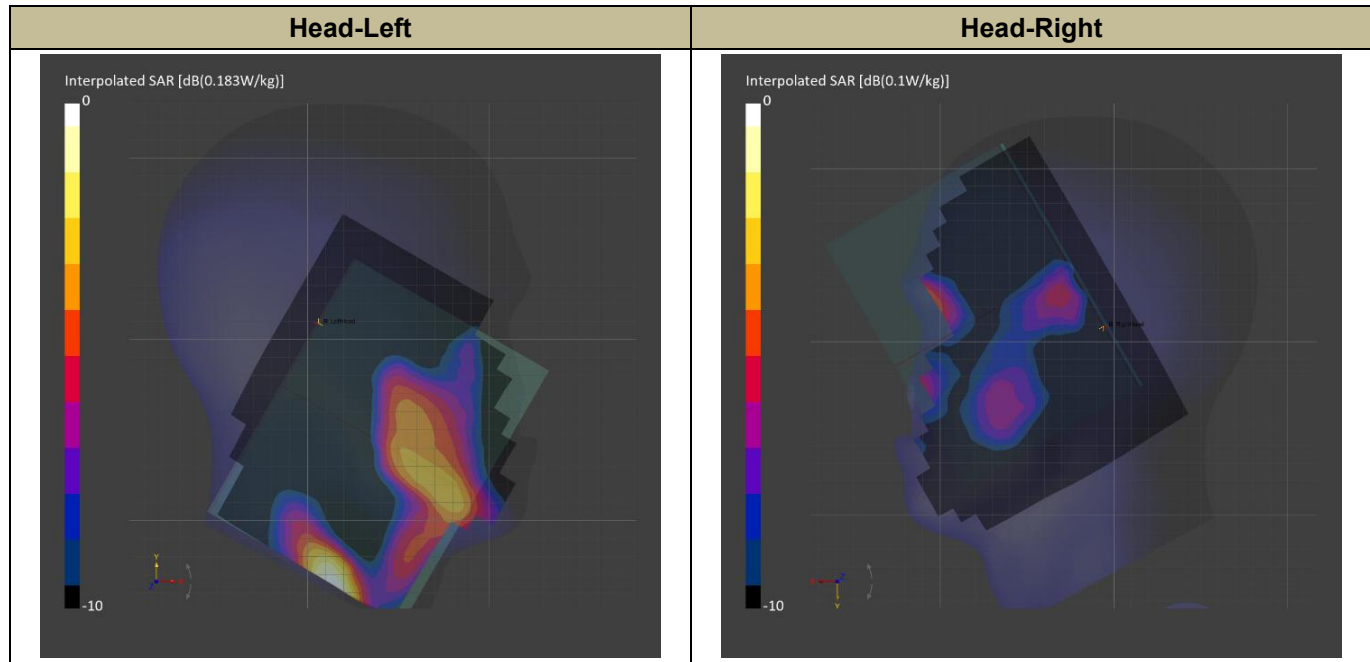
Note(s):

- Head exposure evaluated a more conservative SAR results of Front 0mm instead of Head test position. However, Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
- Body worn exposure evaluated a more conservative SAR results of 0mm instead of 5mm.

10.2. Folder Open SAR Results

Justification for using Flat Phantom Measuring Folder Open Head SAR

Due to the EUT with antenna located near the bottom and lower side edges near the mouth and jaw regions. The following head SAR plot is provided to show the measurements with truncated SAR distributions in the head measured with the SAM Phantom.



The following procedure was applied (KDB 648474 D04 Handset SAR):

- The phone was positioned with a separation distance of ≤ 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell.
- While maintaining this distance at the ERP location of the phone, the low (bottom) edge of the phone is lowered from the phantom to establish the same separation distance at the peak SAR location identified by the truncated partial SAR distribution measured with the SAM phantom.
- The distance from the peak SAR location to the phone should be determined by the straight line passing perpendicularly through the phantom surface.

Antenna Group	Antenna	Techs	Left Touch/Tilt Peak SAR location (x,y-axis) (mm)	Peak location (Z-axis) (mm)	Head SAR test distance of DUT's Bottom in Flat phantom (mm)	Right Touch/Tilt Peak SAR location (x,y-axis) (mm)	Peak location (Z-axis) (mm)	Head SAR test distance of DUT's Bottom in Flat phantom (mm)	Minimum Head SAR test distance of DUT's Bottom in Flat phantom (mm)
AG0	Ant.B	GSM 1900	84.9	6.1	7.1				7
		LTE Band 66 (4)	76.7	6.5	8.0				8.0
		LTE Band 25 (2)	74.0	5.8	7.0				7.0
		LTE Band 41	79.2	5.6	6.5				6.5
		NR Band n66	76.7	6.5	8.0				8.0
AG1	Ant.D	Bluetooth Ant.1	24.9	13.8	52.7	-15.9	22.8	87.7	25
	Ant.F	LTE Band 41	24.5	20.5	87.4				85
		NR Bn41	24.9	20.3	85.0				25

Note:

1. Since the measurement results from the Head phantom could not be measured, the peak SAR location of the measurement results from the Head phantom was checked to determine the separation distance from the final Flat phantom.
2. In the case of the AG0, since the distance measured at the Body Rear 5 mm SAR is more conservative than the distance verified in Justification, the Head measurement was replaced with Rear 5 m SAR data. (However, as an exception, for the GSM 1900, SAR measurements were taken at a Flat Phantom using the distance verified in Justification.)
3. In the case of the AG1, SAR measurements were taken at a Flat Phantom at a distance equal to or more conservative than the distance verified in Justification. (However, as an exception, for the 6 GHz WLAN Ant.2, since the distance measured at the Body Rear 0mm SAR is more conservative than the distance verified in Justification, the Head measurement was replaced with Rear SAR data.)

10.2.1. Spot-check Results

Worst case Spot-check Results

Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	Bandwidth (MHz)	DBI	Distance (m)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Reference Worst Case					Variant Test (Spot-check)					Pilot No.	Relative Difference (%)	Spot-check Parameter		Y/N	Pass Criterion
														Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TIS _{10g}	Port1 Power	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TIS _{10g}	Port1 Power			Margin (dB)	Δ _{SAR10g} (dB)		
GSM850	AG0	Ant.A+B	Head	GPRS 2 slots	0	2	0	Left Touch	128	824.2			32.80	31.83	0.788	0.919	0.975	26.6	31.79	0.990	0.695	0.434	27.9	1	0.244	0.426	0.250	Y	0.144 < 0.144 _{max} (dB)
			Body-worn & Holster	GPRS 4 slots	0	0	5	Rear	190	836.6			25.50	24.63	0.637	0.656	0.410	24.1	24.30	0.513	0.676	0.423	24.0	2	0.031	0.590	0.340	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	GPRS 4 slots	0	0	0	Right	190	836.6			25.50	24.63	1.230	0.644	0.161	24.5	24.30	0.631	0.832	0.208	27.1		0.292	0.830	0.500	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	GPRS 4 slots	0	2	4/7	Left Touch	661	1880.0			20.50	19.28	0.385	0.510	0.319	20.2	18.98	0.474	0.673	0.420	19.0	3	0.319	0.681	0.431	Y	0.144 < 0.144 _{max} (dB)
GSM1900	AG0	Ant.B	Body-worn & Holster	GPRS 4 slots	0	0	5	Rear	810	1908.8			20.50	19.22	0.643	0.863	0.540	17.9	19.12	0.762	1.047	0.654	17.1	4	0.213	0.460	0.250	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	GPRS 4 slots	0	0	0	Bottom	661	1880.0			20.50	19.28	1.230	1.629	0.407	19.1	16.98	1.170	1.660	0.415	19.1		0.019	0.593	0.343	Y	0.144 < 0.144 _{max} (dB)
			Head	Rel 99 RMC	0	2	0	Left Touch	4233	846.6			25.30	24.51	0.755	0.906	0.996	25.7	24.21	0.699	0.898	0.962	25.7	5	0.008	0.434	0.250	Y	0.144 < 0.144 _{max} (dB)
			Body-worn & Holster	Rel 99 RMC	0	0	5	Rear	4233	846.6			23.00	22.25	0.702	0.834	0.521	23.7	22.08	0.587	0.726	0.453	24.3	6	0.130	0.479	0.250	Y	0.144 < 0.144 _{max} (dB)
WCDMA5	AG0	Ant.A+B	Product Specific 10-g	Rel 99 RMC	0	0	0	Right	4183	836.6			23.00	22.22	1.030	1.233	0.308	26.0	22.40	0.902	1.036	0.259	26.8		0.160	0.692	0.442	Y	0.144 < 0.144 _{max} (dB)
			Head	QPSK	10	2	0	Left Touch	20525	836.6	1	0	29.50	24.52	0.607	0.635	0.397	27.4	24.24	0.965	0.755	0.472	26.7	7	0.189	0.603	0.353	Y	0.144 < 0.144 _{max} (dB)
			Body-worn & Holster	QPSK	10	0	5	Rear	20525	836.6	25	0	23.00	22.22	0.688	0.823	0.515	23.8	21.81	0.549	0.722	0.451	24.4	8	0.123	0.485	0.250	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	QPSK	10	0	0	Right	20525	836.6	1	0	23.00	22.22	1.100	1.278	0.319	25.9	21.81	0.849	1.117	0.279	26.5		0.126	0.681	0.431	Y	0.144 < 0.144 _{max} (dB)
LTEB12	AG0	Ant.A+B	Head	QPSK	10	2	0	Left Touch	23095	707.5	1	25	25.20	24.72	0.248	0.277	0.173	30.7	24.31	0.302	0.371	0.232	29.5	9	0.338	0.827	0.500	Y	0.144 < 0.144 _{max} (dB)
			Body-worn & Holster	QPSK	10	0	5	Rear	23095	707.5	25	12	23.00	22.27	0.596	0.705	0.441	24.5	21.89	0.497	0.642	0.401	24.9	10	0.090	0.559	0.309	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	QPSK	10	0	0	Right	23095	707.5	1	25	23.00	22.37	0.794	0.906	0.227	27.4	21.91	0.702	0.902	0.235	27.4		0.005	0.773	0.500	Y	0.144 < 0.144 _{max} (dB)
			Head	QPSK	10	2	0	Left Touch	23230	782.0	1	0	25.50	24.91	0.484	0.554	0.347	28.0	24.76	0.470	0.557	0.348	28.0	11	0.005	0.653	0.403	Y	0.144 < 0.144 _{max} (dB)
LTEB13	AG0	Ant.A+B	Body-worn & Holster	QPSK	10	0	5	Rear	23230	782.0	25	0	23.00	22.29	0.597	0.703	0.439	24.5	22.05	0.510	0.635	0.397	24.9	12	0.097	0.561	0.311	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	QPSK	10	0	0	Bottom	23230	782.0	1	0	23.00	22.34	0.764	0.889	0.222	27.4	22.04	0.866	1.080	0.270	26.6		0.215	0.778	0.500	Y	0.144 < 0.144 _{max} (dB)
			Head	QPSK	20	2	0	Left Touch	167300	836.6	50	28	29.50	24.19	0.666	0.900	0.963	29.9	24.23	0.692	0.873	0.946	26.0	13	0.030	0.437	0.250	Y	0.144 < 0.144 _{max} (dB)
			Body-worn & Holster	QPSK	20	0	5	Rear	167300	836.6	50	28	23.00	22.20	0.683	0.821	0.513	23.8	22.02	0.567	0.711	0.444	24.4	14	0.135	0.487	0.250	Y	0.144 < 0.144 _{max} (dB)
NRn5	AG0	Ant.A+B	Product Specific 10-g	QPSK	20	0	0	Right	167300	836.6	1	1	23.00	22.17	0.917	1.110	0.278	26.5	22.10	0.501	0.616	0.154	29.0		0.445	0.722	0.472	Y	0.144 < 0.144 _{max} (dB)
			Head	QPSK	20	2	5	Left Touch	26365	1882.5	1	0	16.50	16.27	0.617	0.651	0.407	18.3	15.61	0.468	0.574	0.359	18.9	15	0.117	0.593	0.343	Y	0.144 < 0.144 _{max} (dB)
			Body-worn & Holster	QPSK	20	0	5	Rear	26365	1882.5	1	0	16.50	16.27	0.617	0.651	0.407	18.3	15.61	0.468	0.574	0.359	18.9	15	0.117	0.593	0.343	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	QPSK	20	0	0	Bottom	26365	1882.5	1	0	16.50	16.27	0.956	1.008	0.252	20.4	15.61	0.827	1.015	0.254	20.4		0.007	0.748	0.498	Y	0.144 < 0.144 _{max} (dB)
LTEB66	AG0	Ant.B	Head	QPSK	20	2	5	Left Touch	132322	1745.0	1	0	16.00	15.46	0.561	0.635	0.397	17.9	15.03	0.582	0.728	0.455	17.3	16	0.145	0.603	0.353	Y	0.144 < 0.144 _{max} (dB)
			Body-worn & Holster	QPSK	20	0	5	Rear	132322	1745.0	1	0	16.00	15.46	0.561	0.635	0.397	17.9	15.03	0.582	0.728	0.455	17.3		0.145	0.603	0.353	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	QPSK	20	0	0	Bottom	132322	1745.0	1	0	16.00	15.46	0.795	0.900	0.225	20.4	15.03	0.783	0.979	0.245	20.0		0.087	0.775	0.500	Y	0.144 < 0.144 _{max} (dB)
			Head	QPSK	45	2	5	Left Touch	349000	1745.0	1	1	16.00	15.55	0.496	0.550	0.344	18.5	15.15	0.407	0.495	0.309	19.0	17	0.100	0.696	0.406	Y	0.144 < 0.144 _{max} (dB)
NRH66	AG0	Ant.B	Body-worn & Holster	QPSK	45	0	5	Rear	349000	1745.0	1	1	16.00	15.55	0.496	0.550	0.344	18.5	15.15	0.407	0.495	0.309	19.0	17	0.100	0.696	0.406	Y	0.144 < 0.144 _{max} (dB)
			Product Specific 10-g	QPSK	45	0	0	Bottom	349000	1745.0	1	1	16.00	15.55	0.887	0.984	0.246	20.0	15.15	0.498	0.606	0.151	22.1		0.384	0.754	0.500	Y	0.144 < 0.144 _{max} (dB)
			Head	QPSK	20	2	5	Left Touch	41055	2636.5	50	0	17.50	16.85	0.230	0.267	0.167	23.2	17.22	0.428	0.457	0.285	20.9		0.709	0.833	0.500	N	0.144 < 0.144 _{max} (dB)
			Body-worn & Holster	QPSK	20	0	5	Rear	41055	2636.5	50	0	17.50	16.85	0.230	0.267	0.167	23.2	17.22	0.428	0.457	0.285	20.9		0.709	0.833	0.500	N	0.144 < 0.144 _{max} (dB)
LTEB41	AG0	Ant.B	Product Specific 10-g	QPSK	20	0	0	Bottom	41055	2636.5	1	0	17.50	16.82	0.533	0.623	0.196	23.5	17.12	0.970	1.059	0.265	21.2		0.698	0.844	0.500	N	0.144 < 0.144 _{max} (dB)

Note(s):

- Product-specific 10-g was evaluated based on 10-g SAR data, whereas the others were evaluated using 1-g SAR.
- If the criteria are not met, Full SAR test applied

Worst case Spot-check Results (Continued)

Band	Antenna Group	Antenna	RF Exposure Conditions	Mode	DSB	Distance (mm)	Test Position	Channel	Frequency (MHz)	Max Duty Cycle (%)	Tested Duty Cycle (%)	Time-up Limit (dBm)	Reference Worst-Case				Variant Test (Spot-check)				Relative Difference (d _{TER})	Spot-check Parameter		Y/N	Pass Criterion			
													Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER _R	Port Power	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TER _V	Port Power			Port No.	Margin (M)	d _{TERmax} (M)
WLAN 2.4GHz	AG.1	Ant.D	Head	802.11b 1Mbps	2	0	Left Touch	6	2437.0	100.00%	97.27%	15.50	14.62	0.022	0.028	0.017	31.0	14.31	0.223	0.302	0.188	20.7		9.886	0.983	0.500	N	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11b 1Mbps	0	5	Rear	1	2412.0	100.00%	97.27%	18.00	14.62	0.098	0.781	0.488	19.0	17.07	0.619	0.788	0.493	19.0		0.009	0.512	0.262	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11b 1Mbps	0	0	Right	1	2412.0	100.00%	97.27%	18.00	14.62	0.029	1.040	0.260	21.8	17.07	0.865	1.102	0.275	21.5		0.059	0.740	0.490	Y	≤ 5 d _{TERmax} (f)
WLAN 2.4GHz	AG.1	Ant.G	Head	802.11b 1Mbps	2	0	Right Tilt	1	2412.0	100.00%	97.27%	15.50	14.25	0.897	1.230	0.769	14.6	14.70	0.881	1.089	0.681	15.1	18	0.115	0.231	0.250	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11b 1Mbps	0	5	Rear	6	2437.0	100.00%	97.27%	18.00	14.25	0.767	0.912	0.570	18.4	16.89	0.627	0.832	0.520	18.7	19	0.087	0.430	0.250	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11b 1Mbps	0	0	Top	6	2437.0	100.00%	97.27%	18.00	14.25	1.440	1.711	0.428	19.6	16.89	1.130	1.500	0.375	20.2		0.124	0.572	0.322	Y	≤ 5 d _{TERmax} (f)
U-NB 2A	AG.1	Ant.D+E	Head	802.11a VHT80 MCS9	2	0	Right Tilt	58	5290.0	100.00%	94.20%	16.00	15.42	0.275	0.333	0.208	20.7	14.88	0.308	0.423	0.264	19.7		0.268	0.792	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	58	5290.0	100.00%	94.20%	14.00	12.75	0.331	0.468	0.293	17.2	12.93	0.528	0.717	0.446	15.4		0.530	0.707	0.457	N	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	58	5290.0	100.00%	94.20%	14.00	12.75	0.381	0.539	0.135	20.6	12.93	0.503	0.683	0.171	19.6		0.267	0.865	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 2A	AG.1	Ant.E	Head	802.11a VHT80 MCS9	2	0	Right Tilt	58	5290.0	100.00%	94.20%	16.00	15.57	0.206	0.241	0.151	22.1	14.99	0.281	0.376	0.235	20.2		0.559	0.849	0.500	N	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	58	5290.0	100.00%	94.20%	14.00	15.57	0.208	0.282	0.176	19.5	13.07	0.269	0.354	0.221	18.5		0.255	0.824	0.500	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	58	5290.0	100.00%	94.20%	14.00	15.57	0.333	0.451	0.113	21.4	13.07	0.421	0.553	0.138	20.5		0.227	0.887	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 2A	AG.1	Ant.D	Head	802.11a VHT80 MCS9	2	0	Left Tilt	58	5290.0	100.00%	94.20%	16.00	15.61	0.074	0.085	0.053	26.6	15.20	0.098	0.125	0.078	25.0		0.465	0.947	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	58	5290.0	100.00%	94.20%	14.00	15.61	0.209	0.300	0.188	19.2	13.00	0.466	0.622	0.389	16.0		1.071	0.812	0.500	N	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	58	5290.0	100.00%	94.20%	14.00	15.61	0.240	0.345	0.086	22.6	13.00	0.379	0.506	0.127	20.9		0.467	0.914	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 2C	AG.1	Ant.D+E	Head	802.11a VHT80 MCS9	2	0	Right Tilt	106	5530.0	100.00%	94.20%	16.00	15.42	0.329	0.399	0.249	19.9	15.64	0.336	0.387	0.242	20.1		0.029	0.751	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	122	5610.0	100.00%	94.20%	14.00	12.76	0.344	0.486	0.303	17.1	13.21	0.441	0.561	0.351	16.5	20	0.156	0.697	0.447	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	122	5610.0	100.00%	94.20%	14.00	12.76	0.526	0.742	0.186	19.2	13.21	0.718	0.914	0.228	18.3	21	0.231	0.814	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 2C	AG.1	Ant.E	Head	802.11a VHT80 MCS9	2	0	Right Touch	106	5530.0	100.00%	94.20%	16.00	15.68	0.291	0.332	0.208	20.7	15.27	0.312	0.392	0.245	20.0		0.178	0.792	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	106	5530.0	100.00%	94.20%	14.00	15.68	0.408	0.517	0.323	16.8	13.01	0.251	0.334	0.209	18.7		0.353	0.677	0.427	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	106	5530.0	100.00%	94.20%	14.00	15.68	0.400	0.507	0.127	20.9	13.01	0.510	0.680	0.170	19.6		0.341	0.873	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 2C	AG.1	Ant.D	Head	802.11a VHT80 MCS9	2	0	Left Touch	138	5690.0	100.00%	94.20%	16.00	15.58	0.027	0.032	0.020	31.0	15.03	0.028	0.037	0.023	30.3		0.177	0.980	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Front	122	5610.0	100.00%	94.20%	14.00	15.58	0.234	0.318	0.199	18.9	13.03	0.276	0.366	0.229	18.3		0.153	0.801	0.500	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	122	5610.0	100.00%	94.20%	14.00	15.58	0.149	0.202	0.051	24.9	13.03	0.246	0.326	0.082	22.8		0.613	0.949	0.500	N	≤ 5 d _{TERmax} (f)
U-NB 3	AG.1	Ant.D+E	Head	802.11a VHT80 MCS9	2	0	Right Tilt	155	5775.0	100.00%	94.20%	16.00	14.83	0.220	0.306	0.191	21.1	14.70	0.298	0.426	0.287	19.7	22	0.395	0.809	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	155	5775.0	100.00%	94.20%	14.00	12.82	0.283	0.394	0.246	18.0	12.77	0.378	0.532	0.333	16.7		0.351	0.754	0.500	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	155	5775.0	100.00%	94.20%	14.00	12.82	0.481	0.670	0.167	19.7	12.77	0.635	0.894	0.234	18.4		0.335	0.833	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 3	AG.1	Ant.E	Head	802.11a VHT80 MCS9	2	0	Right Tilt	155	5775.0	100.00%	94.20%	16.00	15.70	0.260	0.296	0.185	21.2	14.82	0.277	0.386	0.241	20.1		0.305	0.815	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Front	155	5775.0	100.00%	94.20%	14.00	15.70	0.317	0.437	0.273	17.5	12.89	0.325	0.445	0.278	17.5		0.018	0.727	0.477	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	155	5775.0	100.00%	94.20%	14.00	15.70	0.423	0.563	0.146	20.3	12.89	0.548	0.751	0.188	19.2		0.287	0.854	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 3	AG.1	Ant.D	Head	802.11a VHT80 MCS9	2	0	Left Touch	155	5775.0	100.00%	94.20%	16.00	15.54	0.092	0.109	0.068	25.6	15.04	0.104	0.138	0.086	24.6		0.268	0.932	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Front	155	5775.0	100.00%	94.20%	14.00	15.54	0.175	0.229	0.143	20.3	13.07	0.227	0.298	0.198	19.2		0.300	0.857	0.500	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	155	5775.0	100.00%	94.20%	14.00	15.54	0.119	0.156	0.039	26.0	13.07	0.161	0.212	0.053	24.7		0.356	0.961	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 4	AG.1	Ant.D+E	Head	802.11a VHT80 MCS9	2	0	Right Tilt	171	5850.0	100.00%	94.20%	16.00	15.21	0.254	0.323	0.202	20.9	14.80	0.296	0.414	0.259	19.8		0.281	0.798	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	171	5850.0	100.00%	94.20%	14.00	12.62	0.274	0.399	0.250	17.9	12.86	0.379	0.523	0.327	16.8		0.309	0.750	0.500	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	171	5850.0	100.00%	94.20%	14.00	12.62	0.418	0.609	0.152	20.1	12.86	0.617	0.851	0.213	18.6		0.397	0.848	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 4	AG.1	Ant.E	Head	802.11a VHT80 MCS9	2	0	Right Tilt	171	5850.0	100.00%	94.20%	16.00	15.21	0.266	0.339	0.212	20.7	14.93	0.231	0.314	0.196	21.0		0.074	0.788	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	171	5850.0	100.00%	94.20%	14.00	15.21	0.350	0.496	0.304	17.1	13.00	0.340	0.454	0.284	17.4		0.066	0.696	0.446	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	171	5850.0	100.00%	94.20%	14.00	15.21	0.403	0.560	0.140	20.4	13.00	0.543	0.725	0.181	19.3		0.296	0.860	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 4	AG.1	Ant.D	Head	802.11a VHT80 MCS9	2	0	Right Tilt	171	5850.0	100.00%	94.20%	16.00	15.44	0.076	0.092	0.057	26.3	14.95	0.098	0.132	0.083	24.7		0.443	0.943	0.500	Y	≤ 5 d _{TERmax} (f)
			Body-worn & Hotspot	802.11a VHT80 MCS9	0	5	Rear	171	5850.0	100.00%	94.20%	14.00	15.44	0.196	0.265	0.166	19.7	13.11	0.199	0.259	0.162	19.8		0.024	0.834	0.500	Y	≤ 5 d _{TERmax} (f)
			Product Specific 10-g	802.11a VHT80 MCS9	0	0	Top	171	5850.0	100.00%	94.20%	14.00	15.44	0.113	0.153	0.038	26.1	13.11	0.147	0.191	0.048	25.1		0.251	0.962	0.500	Y	≤ 5 d _{TERmax} (f)
U-NB 5-B	AG.1	Ant.D+E	Head	EHF320 VHT108 MCS9	2	0	Right Touch	31	6105.0	100.00%	99.18%	12.50	11.53	0.088	0.111	0.069	22.0	10.85	0.086	0.127	0.079	21.4		0.143	0.931	0.500	Y	≤ 5 d _{TERmax} (f)

All Test position Spot-check Results

Band	Antenna Group	Antenna	RF Exposure Condition	Modulation / Waveform	Bandwidth (MHz)	DEI	Distance (m)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Time-up Limit (dBm)	Reference Worst Case					Variant Test (Spot-check)					Psd No.	Relative Difference (%)	Spot-check Parameter		Y/N	Pass Criterion
														Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	125%	Parti Part	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	125%	Parti Part			Margin (M)	ϕ_{max} (M)		
LTE B25	AG.1	Ant.F	Head	QPSK	20	2	0	Left Touch	26590	1905.0	50	0	20.00	19.44	0.064	0.073	0.046	31.3	19.30	0.105	0.123	0.077	29.0		0.694	0.954	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	2	0	Left Tilt	26590	1905.0	50	0	20.00	19.44	0.090	0.102	0.064	29.8	19.30	0.149	0.175	0.109	27.5		0.710	0.936	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	2	0	Right Touch	26590	1905.0	50	0	20.00	19.44	0.256	0.291	0.182	25.3	19.30	0.373	0.438	0.274	23.5		0.505	0.918	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	2	0	Right Tilt	26590	1905.0	50	0	20.00	19.44	0.206	0.234	0.146	26.3	19.30	0.322	0.378	0.236	24.2		0.614	0.854	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	5	Rear	26590	1905.0	50	0	16.50	15.73	0.439	0.524	0.328	19.3	15.74	0.652	0.777	0.485	17.5		0.482	0.672	0.422	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
		Body-worn & Hotspot	QPSK	20	0	5	Front	26590	1905.0	50	0	16.50	15.73	0.257	0.307	0.192	21.6	15.74	0.458	0.546	0.341	19.1		0.778	0.808	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			Hotspot	QPSK	20	0	10	Top	26590	1905.0	50	0	16.50	15.73	0.233	0.278	0.174	22.0	15.74	0.330	0.393	0.246	20.5		0.413	0.626	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	0	Top	26590	1905.0	1	0	16.50	16.01	0.908	1.016	0.254	20.4	15.71	1.050	1.3	0.315	19.4		0.239	0.746	0.496	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	2	0	Left Touch	132322	1745.0	1	0	20.00	19.09	0.148	0.182	0.114	27.3	19.06	0.061	0.075	0.047	31.2		0.588	0.886	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	2	0	Left Tilt	132322	1745.0	50	0	20.00	19.13	0.253	0.309	0.193	26.0	19.00	0.113	0.142	0.089	28.4		0.540	0.807	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
LTE B66	AG.1	Ant.F	Head	QPSK	20	2	0	Right Touch	132322	1745.0	1	0	20.00	19.09	0.011	0.030	0.394	22.0	19.06	0.410	0.509	0.318	22.9		0.192	0.606	0.356	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	2	0	Right Tilt	132322	1745.0	50	0	20.00	19.13	0.445	0.544	0.340	22.6	19.00	0.403	0.507	0.317	22.9		0.067	0.660	0.410	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	5	Rear	132072	1720.0	1	99	16.50	15.62	0.697	0.854	0.533	17.1	14.72	0.865	1.062	0.626	16.4	27	0.174	0.467	0.250	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	5	Front	132072	1720.0	50	50	16.50	15.58	0.980	0.717	0.448	17.9	14.70	0.488	0.739	0.462	17.8		0.030	0.552	0.302	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	10	Top	132072	1720.0	1	99	16.50	15.62	0.311	0.381	0.238	20.6	14.72	0.259	0.390	0.244	20.5		0.025	0.762	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
		Body-worn & Hotspot	QPSK	20	0	0	Top	132072	1720.0	1	99	16.50	15.62	0.809	0.991	0.248	20.5	14.72	0.763	1.150	0.287	19.8		0.160	0.732	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			Hotspot	QPSK	20	0	5	Rear	132072	1720.0	1	99	16.50	15.62	0.809	0.991	0.248	20.5	14.72	0.763	1.150	0.287	19.8		0.160	0.732	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	5	Front	132072	1720.0	50	50	16.50	15.58	0.980	0.717	0.448	17.9	14.70	0.488	0.739	0.462	17.8		0.030	0.552	0.302	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	10	Top	132072	1720.0	1	99	16.50	15.62	0.311	0.381	0.238	20.6	14.72	0.259	0.390	0.244	20.5		0.025	0.762	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	0	Top	132072	1720.0	1	99	16.50	15.62	0.809	0.991	0.248	20.5	14.72	0.763	1.150	0.287	19.8		0.160	0.732	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
NR n66	AG.1	Ant.F	Head	QPSK	45	2	0	Left Touch	346000	1745.0	1	1	20.00	19.24	0.149	0.177	0.111	27.5	19.27	0.059	0.070	0.044	31.5		0.607	0.889	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	45	2	0	Left Tilt	346000	1745.0	120	60	20.00	19.16	0.180	0.218	0.137	26.6	19.21	0.117	0.140	0.088	28.5		0.357	0.863	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	45	2	0	Right Touch	346000	1745.0	1	1	20.00	19.24	0.525	0.625	0.391	22.0	19.27	0.313	0.370	0.231	24.3		0.408	0.608	0.359	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	45	2	0	Right Tilt	346000	1745.0	1	1	20.00	19.24	0.522	0.622	0.389	22.0	19.27	0.272	0.322	0.201	24.9		0.483	0.611	0.361	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	45	0	5	Rear	346000	1745.0	1	1	16.50	15.69	0.895	1.079	0.674	16.1	15.68	0.519	0.627	0.392	18.5		0.419	0.326	0.250	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
		Body-worn & Hotspot	QPSK	45	0	5	Front	346000	1745.0	1	1	16.50	15.69	0.474	0.571	0.357	18.9	15.68	0.512	0.618	0.387	18.5		0.083	0.643	0.393	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			QPSK	45	0	10	Top	346000	1745.0	1	1	16.50	15.69	0.327	0.394	0.246	20.5	15.68	0.231	0.279	0.174	22.0		0.292	0.734	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			QPSK	45	0	0	Top	346000	1745.0	1	1	16.50	15.69	0.933	1.124	0.281	19.9	15.68	0.600	0.7	0.181	21.8		0.355	0.719	0.469	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			QPSK	20	2	4/95	Left Touch/Tilt	49520	2593.0	50	0	17.00	15.74	0.892	1.192	0.745	16.2	16.61	0.641	0.701	0.438	19.5		0.412	0.255	0.250	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			QPSK	20	2	0	Right Touch	40185	2549.5	1	0	17.00	15.92	0.186	0.239	0.149	23.2	16.54	0.087	0.087	0.060	27.1		0.594	0.851	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
LTE B41	AG.1	Ant.F	Head	QPSK	20	2	0	Right Touch	40185	2549.5	1	0	17.00	15.92	0.215	0.276	0.172	22.5	16.54	0.096	0.107	0.067	26.7		0.613	0.828	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	2	0	Right Tilt	40185	2549.5	1	0	17.00	15.92	0.215	0.276	0.172	22.5	16.54	0.096	0.107	0.067	26.7		0.613	0.828	0.500	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	5	Rear	40185	2549.5	50	0	17.00	15.92	0.723	0.927	0.579	17.3	16.66	0.502	0.543	0.339	19.6		0.414	0.427	0.250	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	5	Front	40185	2549.5	50	0	17.00	15.92	0.531	0.681	0.426	18.6	16.66	0.348	0.376	0.235	21.2		0.447	0.574	0.324	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
				QPSK	20	0	10	Top	40185	2549.5	50	0	17.00	15.92	0.448	0.574	0.359	19.4	16.66	0.288	0.311	0.195	22.0		0.458	0.641	0.391	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$
		Body-worn & Hotspot	QPSK	20	0	10	Top	40185	2549.5	50	0	17.00	15.92	0.448	0.574	0.359	19.4	16.66	0.288	0.311	0.195	22.0		0.458	0.641	0.391	N	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			QPSK	100	2	4/95	Left Touch/Tilt	518998	2592.99	135	0	15.00	14.13	0.744	0.909	0.568	15.4	14.52	0.721	0.805	0.503	15.9	28	0.114	0.432	0.250	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			QPSK	100	2	0	Right Touch	518998	2592.99	1	1	15.00	14.48	0.119	0.134	0.094	23.7	14.65	0.079	0.086	0.054	25.6		0.362	0.916	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			QPSK	100	2	0	Right Tilt	518998	2592.99	135	0	15.00	14.13	0.186	0.227	0.142	21.4	14.52	0.108	0.121	0.075	24.1		0.469	0.856	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
			QPSK	100	0	5	Rear	518998	2592.99	1	1	15.00	14.48	0.566	0.638	0.359	16.9	14.65	0.589	0.638	0.359	16.9	29	0.001	0.601	0.351	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$	
Hotspot	QPSK	100	0	5	Front	518998	2592.99	135	0	15.00	14.13	0.294	0.359	0.225	19.4	14.52	0.377	0.421	0.263	19.7		0.172	0.775	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$			
	QPSK	100	0	10	Top	518998	2592.99	1	1	15.00	14.48	0.265	0.299	0.187	20.2	14.65	0.342	0.371	0.232	19.3		0.241	0.813	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$			
	QPSK	100	0	0	Top	518998	2592.99	1	1	15.00	14.48	0.878	0.990	0.247	19.0	14.65	0.923	1.000	0.250	18.9		0.011	0.753	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$			
	QPSK	100	0	0	Top	518998	2592.99	1	1	15.00	14.48	0.878	0.990	0.247	19.0	14.65	0.923	1.000	0.250	18.9		0.011	0.753	0.500	Y	$\phi_{\text{max}} \leq \phi_{\text{reference}} (M)$			

10.2.2. LTE Band 66 (20 MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.F	Head	QPSK	20	1	0	Left Touch	132322	1745.0	1	0	20.00	19.06	0.061	0.075		31.2
AG.1	Ant.F	Head	QPSK	20	1	0	Left Touch	132322	1745.0	50	0	20.00	19.00	0.066	0.083		30.8
AG.1	Ant.F	Head	QPSK	20	1	0	Left Tilt	132322	1745.0	1	0	20.00	19.06	0.108	0.134		28.7
AG.1	Ant.F	Head	QPSK	20	1	0	Left Tilt	132322	1745.0	50	0	20.00	19.00	0.113	0.142		28.4
AG.1	Ant.F	Head	QPSK	20	1	0	Right Touch	132322	1745.0	1	0	20.00	19.06	0.410	0.509	30	22.9
AG.1	Ant.F	Head	QPSK	20	1	0	Right Touch	132322	1745.0	50	0	20.00	19.00	0.390	0.491		23.0
AG.1	Ant.F	Head	QPSK	20	1	0	Right Tilt	132322	1745.0	1	0	20.00	19.06	0.389	0.483		23.1
AG.1	Ant.F	Head	QPSK	20	1	0	Right Tilt	132322	1745.0	50	0	20.00	19.00	0.403	0.507		22.9

10.2.3. LTE Band 25 (20 MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.F	Head	QPSK	20	1	0	Left Touch	26590	1905.0	1	0	20.00	19.34	0.107	0.125		29.0
AG.1	Ant.F	Head	QPSK	20	1	0	Left Touch	26590	1905.0	50	0	20.00	19.30	0.105	0.123		29.0
AG.1	Ant.F	Head	QPSK	20	1	0	Left Tilt	26590	1905.0	1	0	20.00	19.34	0.150	0.175		27.5
AG.1	Ant.F	Head	QPSK	20	1	0	Left Tilt	26590	1905.0	50	0	20.00	19.30	0.149	0.175		27.5
AG.1	Ant.F	Head	QPSK	20	1	0	Right Touch	26590	1905.0	1	0	20.00	19.34	0.377	0.439	31	23.5
AG.1	Ant.F	Head	QPSK	20	1	0	Right Touch	26590	1905.0	50	0	20.00	19.30	0.373	0.438		23.5
AG.1	Ant.F	Head	QPSK	20	1	0	Right Tilt	26590	1905.0	1	0	20.00	19.34	0.321	0.374		24.2
AG.1	Ant.F	Head	QPSK	20	1	0	Right Tilt	26590	1905.0	50	0	20.00	19.30	0.322	0.378		24.2
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26590	1905.0	1	0	16.50	15.71	0.594	0.713		17.9
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	26590	1905.0	50	0	16.50	15.74	0.652	0.777	32	17.5
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Front	26590	1905.0	1	0	16.50	15.71	0.464	0.557		19.0
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Front	26590	1905.0	50	0	16.50	15.74	0.458	0.546		19.1
AG.1	Ant.F	Hotspot	QPSK	20	0	10	Top	26590	1905.0	1	0	16.50	15.71	0.337	0.404		20.4
AG.1	Ant.F	Hotspot	QPSK	20	0	10	Top	26590	1905.0	50	0	16.50	15.74	0.330	0.393		20.5

10.2.4. LTE Band 41 (20 MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.0	Ant.B	Head-Flat	QPSK	20	2	0	Left Touch/Tilt	41055	2636.5	1	0	17.50	17.12	0.507	0.553		18.0
AG.0	Ant.B	Head-Flat	QPSK	20	2	0	Left Touch/Tilt	41055	2636.5	50	0	17.50	17.22	0.428	0.457		18.9
AG.0	Ant.B	Head	QPSK	20	2	0	Right Touch	41055	2636.5	1	0	17.50	17.12	0.006	0.007		37.3
AG.0	Ant.B	Head	QPSK	20	2	0	Right Touch	41055	2636.5	50	0	17.50	17.22	0.004	0.004		39.2
AG.0	Ant.B	Head	QPSK	20	2	0	Right Tilt	41055	2636.5	1	0	17.50	17.12	0.005	0.005		38.1
AG.0	Ant.B	Head	QPSK	20	2	0	Right Tilt	41055	2636.5	50	0	17.50	17.22	0.004	0.004		39.2
AG.0	Ant.B	Head - Flat ULCA	QPSK	20	2	0	Left Touch/Tilt	41055	2636.5	1	0	17.50	17.10	0.444	0.487		18.6
				20				40857	2616.7	1	99						
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	0	5	Rear	41055	2636.5	1	0	17.50	17.12	0.507	0.553		18.0
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	0	5	Rear	41055	2636.5	50	0	17.50	17.22	0.428	0.457		18.9
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	0	5	Front	41055	2636.5	1	0	17.50	17.12	0.255	0.278		21.0
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	0	5	Front	41055	2636.5	50	0	17.50	17.22	0.249	0.266		21.2
AG.0	Ant.B	Hotspot	QPSK	20	0	10	Bottom	41055	2636.5	1	0	17.50	17.12	0.292	0.319		20.4
AG.0	Ant.B	Hotspot	QPSK	20	0	10	Bottom	41055	2636.5	50	0	17.50	17.22	0.292	0.311		20.5
AG.0	Ant.B	Body-worn & Hotspot ULCA	QPSK	20	0	5	Rear	41055	2636.5	1	0	17.50	17.10	0.444	0.487		18.6
				20				40857	2616.7	1	99						

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.0	Ant.B	Product Specific 10-g 0 mm	QPSK	20	0	0	Bottom	41055	2636.5	1	0	17.50	17.12	0.970	1.059		19.2

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	39750	2506.0	1	0	17.00	16.44	0.537	0.611		17.1
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	39750	2506.0	50	0	17.00	16.43	0.530	0.604		17.2
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	40185	2549.5	1	0	17.00	16.54	0.696	0.774	33	16.1
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	40185	2549.5	50	0	17.00	16.66	0.662	0.716		16.4
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	40620	2593.0	1	0	17.00	16.61	0.639	0.699		16.5
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	40620	2593.0	50	0	17.00	16.46	0.641	0.726		16.4
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	41055	2636.5	1	0	17.00	16.53	0.691	0.770		16.1
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	41055	2636.5	50	0	17.00	16.63	0.706	0.769		16.1
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	41490	2680.0	1	0	17.00	16.49	0.657	0.739		16.3
AG.1	Ant.F	Head - Flat	QPSK	20	2	4/85	Left Touch/Tilt	41490	2680.0	50	0	17.00	16.56	0.659	0.729		16.3
AG.1	Ant.F	Head	QPSK	20	2	0	Right Touch	40185	2549.5	1	0	17.00	16.54	0.087	0.097		25.1
AG.1	Ant.F	Head	QPSK	20	2	0	Right Touch	40185	2549.5	50	0	17.00	16.66	0.084	0.091		25.4
AG.1	Ant.F	Head	QPSK	20	2	0	Right Tilt	40185	2549.5	1	0	17.00	16.54	0.096	0.107		24.7
AG.1	Ant.F	Head	QPSK	20	2	0	Right Tilt	40185	2549.5	50	0	17.00	16.66	0.089	0.096		25.1
AG.1	Ant.F	Head - Flat ULCA	QPSK	20	2	0	Left Touch/Tilt	40185	2549.5	1	0	17.00	16.44	0.590	0.671		16.7
				20				39987	2529.7	1	99						
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	40185	2549.5	1	0	17.00	16.54	0.522	0.580	34	17.3
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	40185	2549.5	50	0	17.00	16.66	0.502	0.543		17.6
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Front	40185	2549.5	1	0	17.00	16.54	0.343	0.381		19.2
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Front	40185	2549.5	50	0	17.00	16.66	0.348	0.376		19.2
AG.1	Ant.F	Hotspot	QPSK	20	0	10	Top	40185	2549.5	1	0	17.00	16.54	0.264	0.293		20.3
AG.1	Ant.F	Hotspot	QPSK	20	0	10	Top	40185	2549.5	50	0	17.00	16.66	0.288	0.311		20.0
AG.1	Ant.F	Body-worn & Hotspot ULCA	QPSK	20	0	5	Rear	40185	2549.5	1	0	17.00	16.44	0.500	0.569		17.4
				20				39987	2529.7	1	99						

10.2.5. NR Band n66 (45 MHz Bandwidth)

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	1	0	Left Touch	349000	1745.0	1	1	20.00	19.27	0.059	0.070		31.5
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	1	0	Left Touch	349000	1745.0	120	60	20.00	19.21	0.073	0.088		30.5
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	1	0	Left Tilt	349000	1745.0	1	1	20.00	19.27	0.094	0.111		29.5
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	1	0	Left Tilt	349000	1745.0	120	60	20.00	19.21	0.117	0.140		28.5
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	1	0	Right Touch	349000	1745.0	1	1	20.00	19.27	0.313	0.370		24.3
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	1	0	Right Touch	349000	1745.0	120	60	20.00	19.21	0.322	0.386	35	<u>24.1</u>
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	1	0	Right Tilt	349000	1745.0	1	1	20.00	19.27	0.272	0.322		24.9
AG.1	Ant.F	Head	DFT-s OFDM QPSK	45	1	0	Right Tilt	349000	1745.0	120	60	20.00	19.21	0.312	0.374		24.2
AG.1	Ant.F	Head	CP OFDM QPSK	45	1	0	Right Touch	349000	1745.0	1	1	20.00	19.22	0.285	0.341		24.6
AG.1	Ant.F	Body-worn & Hotspot	DFT-s OFDM QPSK	45	0	5	Rear	349000	1745.0	1	1	16.50	15.68	0.519	0.627		18.5
AG.1	Ant.F	Body-worn & Hotspot	DFT-s OFDM QPSK	45	0	5	Rear	349000	1745.0	120	60	16.50	15.65	0.587	0.714	36	<u>17.9</u>
AG.1	Ant.F	Body-worn & Hotspot	DFT-s OFDM QPSK	45	0	5	Front	349000	1745.0	1	1	16.50	15.68	0.512	0.618		18.5
AG.1	Ant.F	Body-worn & Hotspot	DFT-s OFDM QPSK	45	0	5	Front	349000	1745.0	120	60	16.50	15.65	0.403	0.490		19.5
AG.1	Ant.F	Hotspot	DFT-s OFDM QPSK	45	0	10	Top	349000	1745.0	1	1	16.50	15.68	0.231	0.279		22.0
AG.1	Ant.F	Hotspot	DFT-s OFDM QPSK	45	0	10	Top	349000	1745.0	120	60	16.50	15.65	0.294	0.358		20.9
AG.1	Ant.F	Body-worn & Hotspot	CP OFDM QPSK	45	0	5	Rear	349000	1745.0	1	1	16.50	15.62	0.516	0.632		18.4

10.2.6. Wi-Fi (DTS Band)

DTS SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Head	802.11b 1Mbps	2	0	Left Touch	6	2437.0	0.313	97.27%	15.50	14.31	0.223	0.302		<u>20.7</u>
AG.1	Ant.D	Head	802.11b 1Mbps	2	0	Left Tilt	6	2437.0	0.018	97.27%	15.50	14.31				
AG.1	Ant.D	Head	802.11b 1Mbps	2	0	Right Touch	6	2437.0	0.013	97.27%	15.50	14.31				
AG.1	Ant.D	Head	802.11b 1Mbps	2	0	Right Tilt	6	2437.0	0.073	97.27%	15.50	14.31				

DTS MIMO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Left Touch	6	2437.0	0.880	89.27%	15.50	14.87	13.92	0.503	0.811		16.4
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Left Touch	11	2462.0	1.106	89.27%	15.50	14.79	13.79	0.631	1.048		15.2
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Left Tilt	6	2437.0	1.095	89.27%	15.50	14.87	13.92	0.651	1.049		15.2
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Left Tilt	11	2462.0	1.305	89.27%	15.50	14.79	13.79	0.714	1.186	37	<u>14.7</u>
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Right Touch	6	2437.0	0.798	89.27%	15.50	14.87	13.92				
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Right Tilt	6	2437.0	0.829	89.27%	15.50	14.87	13.92	0.494	0.796		16.4
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	0	5	Rear	6	2437.0	0.721	89.27%	17.00	16.25	15.20	0.403	0.683	38	<u>18.6</u>
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	0	5	Front	6	2437.0	0.531	89.27%	17.00	16.25	15.20	0.343	0.582		19.3
AG.1	Ant.D+G	Hotspot	802.11g 6Mbps	0	10	Top	6	2437.0	0.242	89.27%	17.00	16.25	15.20				
AG.1	Ant.D+G	Hotspot	802.11g 6Mbps	0	10	Right	6	2437.0	0.223	89.27%	17.00	16.25	15.20				
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D+G	Product Specific 10-g 0 mm	802.11g 6Mbps	0	0	Top	6	2437.0	2.592	89.27%	17.00	16.25	15.20	0.665	1.128		<u>20.4</u>
AG.1	Ant.D+G	Product Specific 10-g 0 mm	802.11g 6Mbps	0	0	Right	6	2437.0	3.214	89.27%	17.00	16.25	15.20	0.549	0.931		21.2

10.2.7. Wi-Fi (U-NII 5 GHz Band)

U-NII 2A SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.E	Head	802.11ac VHT80 MCS0	2	0	Left Touch	58	5290.0	0.082	94.26%	16.00	14.99				
AG.1	Ant.E	Head	802.11ac VHT80 MCS0	2	0	Left Tilt	58	5290.0	0.088	94.26%	16.00	14.99				
AG.1	Ant.E	Head	802.11ac VHT80 MCS0	2	0	Right Touch	58	5290.0	0.375	94.26%	16.00	14.99				
AG.1	Ant.E	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	58	5290.0	0.386	94.26%	16.00	14.99	0.281	0.376	39	20.2
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	58	5290.0	0.621	94.26%	14.00	13.00	0.466	0.622		16.0
AG.1	Ant.D	Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Front	58	5290.0	0.563	94.26%	14.00	13.00	0.381	0.509		16.9
AG.1	Ant.D	Hotspot	802.11ac VHT80 MCS0	0	10	Top	58	5290.0	0.231	94.26%	14.00	13.00				
AG.1	Ant.D	Hotspot	802.11ac VHT80 MCS0	0	10	Right	58	5290.0	0.035	94.26%	14.00	13.00				

U-NII 2A MIMO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D+E	Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	58	5290.0	0.753	94.26%	14.00	12.94	12.93	0.528	0.717	40	15.4
AG.1	Ant.D+E	Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Front	58	5290.0	0.605	94.26%	14.00	12.94	12.93	0.422	0.573		16.4
AG.1	Ant.D+E	Hotspot	802.11ac VHT80 MCS0	0	10	Top	58	5290.0	0.355	94.26%	14.00	12.94	12.93				
AG.1	Ant.D+E	Hotspot	802.11ac VHT80 MCS0	0	10	Right	58	5290.0	0.053	94.26%	14.00	12.94	12.93				

U-NII 2C SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Plimit
AG.1	Ant.D	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	122	5610.0	1.250	94.26%	14.00	13.03	0.246	0.326	41	22.8
AG.1	Ant.D	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Right	122	5610.0	0.461	94.26%	14.00	13.03				

10.2.8. Bluetooth

Bluetooth SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Limit
AG.1	Ant.D	Head - flat	BDR	2	4/5	Left Touch/Tilt Right Touch/Tilt	39	2441.0	76.61%	13.00	12.30	0.033	0.040		26.9
AG.1	Ant.D	Body-worn & Hotspot	BDR	0	5	Rear	78	2480.0	76.61%	14.00	13.39	0.131	0.156		22.0
AG.1	Ant.D	Body-worn & Hotspot	BDR	0	5	Front	78	2480.0	76.61%	14.00	13.39	0.065	0.077		25.1
AG.1	Ant.D	Hotspot	BDR	0	10	Top	78	2480.0	76.61%	14.00	13.39	0.000	0.000		
AG.1	Ant.D	Hotspot	BDR	0	10	Right	78	2480.0	76.61%	14.00	13.39	0.039	0.046		27.3
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Limit
AG.1	Ant.D	Product Specific 10-g 0 mm	BDR	0	0	Top	78	2480.0	76.61%	14.00	13.39	0.015	0.018		35.4
AG.1	Ant.D	Product Specific 10-g 0 mm	BDR	0	0	Right	78	2480.0	76.61%	14.00	13.39	0.167	0.198		25.0
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Limit
AG.1	Ant.G	Head	BDR	2	0	Left Touch	0	2402.0	76.61%	13.00	11.78	0.285	0.389		17.0
AG.1	Ant.G	Head	BDR	2	0	Left Tilt	0	2402.0	76.61%	13.00	11.78	0.387	0.529	42	15.7
AG.1	Ant.G	Head	BDR	2	0	Right Touch	0	2402.0	76.61%	13.00	11.78	0.262	0.358		17.4
AG.1	Ant.G	Head	BDR	2	0	Right Tilt	0	2402.0	76.61%	13.00	11.78	0.351	0.479		16.1
AG.1	Ant.G	Body-worn	BDR	0	5	Rear	0	2402.0	76.61%	14.00	13.24	0.289	0.355	43	18.4
AG.1	Ant.G	Body-worn	BDR	0	5	Front	0	2402.0	76.61%	14.00	13.24	0.152	0.187		21.2
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Limit
AG.1	Ant.G	Product Specific 10-g 0 mm	BDR	0	0	Top	0	2402.0	76.61%	14.00	13.24	0.371	0.456		21.3

Bluetooth Dual

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 1-g (W/kg)	Reported SAR 1-g (W/kg)	Plot No.	Part0 Limit
AG.1	Ant.D+G	Head	BDR	2	0	Left Touch	0	2402.0	76.61%	12.50	11.89	10.76	0.207	0.319		17.4
AG.1	Ant.D+G	Head	BDR	2	0	Left Tilt	0	2402.0	76.61%	12.50	11.89	10.76	0.254	0.391		16.5
AG.1	Ant.D+G	Head	BDR	2	0	Right Touch	0	2402.0	76.61%	12.50	11.89	10.76	0.254	0.391		16.5
AG.1	Ant.D+G	Head	BDR	2	0	Right Tilt	0	2402.0	76.61%	12.50	11.89	10.76	0.286	0.441		16.0
AG.1	Ant.D+G	Body-worn	BDR	0	5	Rear	0	2402.0	76.61%	14.00	13.03	12.47	0.201	0.295		19.3
AG.1	Ant.D+G	Body-worn	BDR	0	5	Front	0	2402.0	76.61%	14.00	13.03	12.47	0.188	0.276		19.5
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured SAR 10-g (W/kg)	Reported SAR 10-g (W/kg)	Plot No.	Part0 Limit
AG.1	Ant.D+G	Product Specific 10-g 0 mm	BDR	0	0	Top	0	2402.0	76.61%	14.00	13.03	12.47	0.320	0.469	44	21.2
AG.1	Ant.D+G	Product Specific 10-g 0 mm	BDR	0	0	Right	0	2402.0	76.61%	14.00	13.03	12.47	0.172	0.252		23.9

10.2.9. UWB

Antenna Group	Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Measured SAR 1-g (W/kg)	Measured SAR 10-g (W/kg)	Plot No.
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	5	6489.6	0.003	0.001	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	9	7987.2	0.006	0.002	45
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	5	6489.6	0.005	0.001	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	9	7987.2	0.005	0.002	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	5	6489.6	0.002	0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	9	7987.2	0.004	0.002	

11. Measured and Reported (Scaled) APD Results

APD test considerations

1. APD (Absorbed Power Density) over 4cm² averaging area is reported based on SAR measurements. So test configuration is same as SAR test plan.
2. 10.0 W/m² = 1.0 mW/cm²

11.1. Folder Close APD Results

11.1.1. Wi-Fi (U-NII 6GHz Bands)

U-NII 5/6/7/8 SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Limit
AG.1	Ant.E	Head	802.11be EHT320 MCS0	3	0	Left Tilt	159	6745.0	0.167	99.18%	12.50	11.48	0.0672	0.0857		24.1
AG.1	Ant.E	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	191	6905.0	0.186	99.18%	12.50	11.15	0.0942	0.1296		22.3
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	1	0	Top	159	6745.0	1.590	99.18%	12.50	11.48	0.8590	1.0954	55	13.1
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Limit
AG.1	Ant.D	Head	802.11be EHT320 MCS0	3	0	Right Touch	159	6745.0	0.111	99.18%	12.50	11.56	0.0505	0.0632		25.4
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	31	6105.0	0.303	99.18%	12.50	11.62	0.1220	0.1506		21.7
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	63	6265.0	0.248	99.18%	12.50	11.36	0.0924	0.1211		22.6
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	127	6585.0	0.354	99.18%	12.50	11.68	0.1520	0.1851		20.8
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	159	6745.0	0.306	99.18%	12.50	11.56	0.1590	0.1991		20.5
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	191	6905.0	0.383	99.18%	12.50	11.56	0.2100	0.2629	50	19.3
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Front	127	6585.0	0.077	99.18%	12.50	11.68	0.0394	0.0480		26.6
AG.1	Ant.D	Hotspot	802.11be EHT320 MCS0	1	10	Top	127	6585.0	0.066	99.18%	12.50	11.68				
AG.1	Ant.D	Hotspot	802.11be EHT320 MCS0	1	10	Right	127	6585.0	0.051	99.18%	12.50	11.68				
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	1	0	Top	159	6745.0	1.600	99.18%	12.50	11.56	0.7190	0.9002		13.9

U-NII 5/6/7/8 MIMO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Limit
AG.1	Ant.D+E	Head	802.11be EHT320 MCS0	3	0	Left Tilt	31	6105.0	0.277	99.18%	12.50	10.85	11.74	0.0778	0.1147	27	22.9
AG.1	Ant.D+E	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	63	6265.0	0.148	99.18%	12.50	11.31	11.50	0.0946	0.1255		22.5
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	1	0	Top	191	6905.0	1.120	99.18%	12.50	10.53	11.98	0.5710	0.9062		13.9

11.1.2. UWB

Antenna Group	Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Measured APD (mW/cm ²)	Plot No.
ER	UWB	Head	CW	0	Left Touch	5	6489.6	0.0018	
ER	UWB	Head	CW	0	Right Touch	5	6489.6	0.0007	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	5	6489.6	0.0009	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	9	7987.2	0.0036	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	5	6489.6	0.0062	54
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	9	7987.2	0.0051	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	5	6489.6	0.0024	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	9	7987.2	0.0020	

11.2. Folder Open APD Results

11.2.1. Wi-Fi (U-NII 6GHz Bands)

U-NII 5/6/7/8 SISO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Plimit
AG.1	Ant.E	Head	802.11be EHT320 MCS0	2	0	Right Touch	159	6745.0	0.164	99.18%	12.50	11.48	0.0617	0.0787		24.5
AG.1	Ant.E	Body-worn & Hotspot	802.11be EHT320 MCS0	0	5	Front	191	6905.0	0.417	99.18%	12.50	11.15	0.2130	0.2931	24	18.8
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	0	0	Front	191	6905.0	1.530	99.18%	12.50	11.15	0.6820	0.9384		13.7
Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Plimit
AG.1	Ant.D	Head	802.11be EHT320 MCS0	2	0	Left Tilt	63	6265.0	0.362	99.18%	12.50	11.36	0.1940	0.2543	25	19.4
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	0	5	Front	191	6905.0	0.413	99.18%	12.50	11.56	0.1770	0.2216		20.0
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	0	0	Front	159	6745.0	1.160	99.18%	12.50	11.56	0.6730	0.8426		14.2

U-NII 5/6/7/8 MIMO

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	Area Scan Max SAR	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Plimit
AG.1	Ant.D+E	Head	802.11be EHT320 MCS0	2	0	Right Touch	31	6105.0	0.204	99.18%	12.50	10.85	11.74	0.0446	0.0658		25.3
AG.1	Ant.D+E	Body-worn & Hotspot	802.11be EHT320 MCS0	0	5	Front	191	6905.0	0.305	99.18%	12.50	10.53	11.98	0.1700	0.2698		19.1
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	0	0	Top	63	6265.0	2.100	99.18%	12.50	11.31	11.50	0.7650	1.0145	23	13.4

11.2.2. UWB

Antenna Group	Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Measured APD (mW/cm ²)	Plot No.
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	5	6489.6	0.0030	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	9	7987.2	0.0051	45
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	5	6489.6	0.0031	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	9	7987.2	0.0039	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	5	6489.6	0.0010	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	9	7987.2	0.0037	

12. Measured and Reported (Scaled) IPD Results

IPD test considerations

1. $10.0 \text{ W/m}^2 = 1.0 \text{ mW/cm}^2$.
2. Incident Power density results were scaled according to IEC 62479 : 2020 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 1.53 dB (42.3%) was used to determine the psPD measurement scaling factor.
3. Power density test data were scaled to tune-up limit using measurement system tool.
4. Incident power density (IPD) was measured/calculated at d=2 mm with ESR Algorithm.
5. IPD tested at highest SAR configuration based on U-NII 6GHz Band/UWB SAR test results in Sec.10.

12.1. Folder Close IPD Results

12.1.1. Wi-Fi (U-NII 6GHz Bands)

U-NII 5/6/7/8 SISO Results

Antenna	RF Exposure Condition	Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Duty Cycle (%)	Grid Step (Lamda)	Meas. Normal psPD (mW/cm ²)	Scaled. Normal psPD (mW/cm ²)	Meas. Total psPD (mW/cm ²)	scaled. Total psPD (mW/cm ²)	Scaling factor for Measurement Uncertainty per IEC 62479	Scaled Normal psPD (mW/cm ²)	Scaled Total psPD (mW/cm ²)	Plot No.
Ant.E	IPD (Incident PD)	802.11be EHT320	2.00	Top	159	6745.0	12.50	11.48	99.18%	0.05	0.1900	0.2420	0.3880	0.4950	1.123	0.2721	0.5556	
Ant.D	IPD (Incident PD)	802.11be EHT320	2.00	Top	159	6745.0	12.50	11.56	99.18%	0.05	0.1560	0.1950	0.3860	0.4830	1.123	0.2193	0.5427	

U-NII 5/6/7/8 MIMO Results

Antenna	RF Exposure Condition	Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Ant.1 Meas. (dBm)	Ant.2 Meas. (dBm)	Duty Cycle (%)	Grid Step (Lamda)	Meas. Normal psPD (mW/cm ²)	Scaled. Normal psPD (mW/cm ²)	Meas. Total psPD (mW/cm ²)	scaled. Total psPD (mW/cm ²)	Scaling factor for Measurement Uncertainty per IEC 62479	Scaled Normal psPD (mW/cm ²)	Scaled Total psPD (mW/cm ²)	Plot No.
Ant.D+E	IPD (Incident PD)	802.11be EHT320	2.00	Top	191	6905.0	12.50	10.53	11.98	99.18%	0.05	0.1840	0.2920	0.4160	0.6600	1.123	0.3279	0.7414	56

12.1.2. UWB

Antenna	RF Exposure Condition	Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Grid Step (Lamda)	Meas. Normal psPD (mW/cm ²)	Meas. Total psPD (mW/cm ²)	Scaling factor for Measurement Uncertainty per IEC 62479	Scaled Normal psPD (mW/cm ²)	Scaled Total psPD (mW/cm ²)	Plot No.
UWB	IPD (Incident PD)	CW	2.00	Front	5	6489.6	0.05	0.0018	0.0048	1.123	0.0020	0.0054	57

12.2. Folder Open IPD Results

12.2.1. Wi-Fi (U-NII 6GHz Bands)

U-NII 5/6/7/8 SISO IPD Results

Antenna	RF Exposure Condition	Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Meas. (dBm)	Duty Cycle (%)	Grid Step (Lamda)	Meas. Normal psPD (mW/cm ²)	Scaled. Normal psPD (mW/cm ²)	Meas. Total psPD (mW/cm ²)	scaled. Total psPD (mW/cm ²)	Scaling factor for Measurement Uncertainty per IEC 62479	Scaled Normal psPD (mW/cm ²)	Scaled Total psPD (mW/cm ²)	Plot No.
Ant.E	IPD (Incident PD)	802.11be EHT320	2.00	Front	191	6905.0	12.50	11.15	99.18%	0.05	0.2490	0.2946	0.5400	0.6390	1.123	0.3309	0.7176	46
Ant.D	IPD (Incident PD)	802.11be EHT320	2.00	Front	159	6745.0	12.50	11.56	99.18%	0.05	0.2090	0.2250	0.4100	0.4414	1.123	0.2527	0.4957	

U-NII 5/6/7/8 MIMO Results

Antenna	RF Exposure Condition	Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Tune-up Limit (dBm)	Ant.1 Meas. (dBm)	Ant.2 Meas. (dBm)	Duty Cycle (%)	Grid Step (Lamda)	Meas. Normal psPD (mW/cm ²)	Scaled. Normal psPD (mW/cm ²)	Meas. Total psPD (mW/cm ²)	scaled. Total psPD (mW/cm ²)	Scaling factor for Measurement Uncertainty per IEC 62479	Scaled Normal psPD (mW/cm ²)	Scaled Total psPD (mW/cm ²)	Plot No.
Ant.D+E	IPD (Incident PD)	802.11be EHT320	2.00	Top	63	6265.0	12.50	11.31	11.50	99.18%	0.05	0.2160	0.2864	0.4540	0.6021	1.123	0.3217	0.6761	

12.2.2. UWB

Antenna	RF Exposure Condition	Mode	Dist (mm)	Test Position	Channel	Freq. (MHz)	Grid Step (Lamda)	Meas. Normal psPD (mW/cm ²)	Meas. Total psPD (mW/cm ²)	Scaling factor for Measurement Uncertainty per IEC 62479	Scaled Normal psPD (mW/cm ²)	Scaled Total psPD (mW/cm ²)	Plot No.
UWB	IPD (Incident PD)	CW	2.00	Rear	9	7987.2	0.05	0.0021	0.0051	1.123	0.0024	0.0057	47

13. 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 ($\sim 10\%$ from the 1-g or 10-g respective SAR limit).
- 4) Perform a third repeated measurement only if the original, first, or second repeated measurement is ≥ 1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

Peak spatial-average (1g of tissue)

Frequency Band (MHz)	Air Interface	Antenna	DUT Configuration	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
1900	LTE Band 25	Ant.F	Folder Closed	Head	Left Tilt	Yes	0.858	0.851	1.01

Note(s):

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

14. Simultaneous Transmission SAR Analysis

Simultaneous Transmission Condition

RF Exposure Condition	Item	Capable Transmit Configurations						
Head & Body-worn/Hotspot & Product Specific 10-g	1	WWAN (2G/3G/LTE/NR)	+	DTS Ant.1	(and/or)	DTS Ant.2	Non RSDB Scenarios	
	2	WWAN (2G/3G/LTE/NR)	+	UNII (5/6GHz) Ant.1	(and/or)	UNII (5/6GHz) Ant.2		
	3	WWAN (2G/3G/LTE/NR)	+	BT Ant.1	(and/or)	BT Ant.2		
	4	WWAN (2G/3G/LTE/NR)	+	BT Ant.1	+	DTS Ant.2		
	5	WWAN (2G/3G/LTE/NR)	+	UNII (5/6GHz) Ant.1	+	BT Ant.1 (and/or) BT Ant.2		
	6	WWAN (2G/3G/LTE/NR)	+	UNII (5/6GHz) Ant.2	+	BT Ant.1 (and/or) BT Ant.2		
	7	WWAN (2G/3G/LTE/NR)	+	UNII (5/6GHz) MIMO	+	BT Ant.1 (and/or) BT Ant.2		
	8	WWAN (ENDC/ULCA)	+	DTS Ant.1	(and/or)	DTS Ant.2		
	9	WWAN (ENDC/ULCA)	+	UNII (5/6GHz) Ant.1	(and/or)	UNII (5/6GHz) Ant.1		
	10	WWAN (ENDC/ULCA)	+	BT Ant.1	(and/or)	BT Ant.2		
	11	WWAN (ENDC/ULCA)	+	BT Ant.1	+	DTS Ant.2		
	12	WWAN (ENDC/ULCA)	+	UNII (5/6GHz) Ant.1	+	BT Ant.1 (and/or) BT Ant.2		
	13	WWAN (ENDC/ULCA)	+	UNII (5/6GHz) Ant.2	+	BT Ant.1 (and/or) BT Ant.2		
	14	WWAN (ENDC/ULCA)	+	UNII (5/6GHz) MIMO	+	BT Ant.1 (and/or) BT Ant.2		
	15	WWAN (2G/3G/LTE/NR)	+	DTS Ant.1	+	UNII (5/6GHz) Ant.1 (and/or) UNII (5/6GHz) Ant.2	RSDB Scenarios	
	16	WWAN (2G/3G/LTE/NR)	+	DTS Ant.2	+	UNII (5/6GHz) Ant.1 (and/or) UNII (5/6GHz) Ant.2		
	17	WWAN (2G/3G/LTE/NR)	+	DTS MIMO	+	UNII (5/6GHz) Ant.1 (and/or) UNII (5/6GHz) Ant.2		
	18	WWAN (2G/3G/LTE/NR)	+	DTS Ant.2	+	UNII (5/6GHz) Ant.1 + BT Ant.1		
	19	WWAN (2G/3G/LTE/NR)	+	DTS Ant.2	+	UNII (5/6GHz) Ant.2 + BT Ant.1		
	20	WWAN (2G/3G/LTE/NR)	+	DTS Ant.2	+	UNII (5/6GHz) MIMO + BT Ant.1		
	21	WWAN (ENDC/ULCA)	+	DTS Ant.1	+	UNII (5/6GHz) Ant.1 (and/or) UNII (5/6GHz) Ant.2		
	22	WWAN (ENDC/ULCA)	+	DTS Ant.2	+	UNII (5/6GHz) Ant.1 (and/or) UNII (5/6GHz) Ant.2		
	23	WWAN (ENDC/ULCA)	+	DTS MIMO	+	UNII (5/6GHz) Ant.1 (and/or) UNII (5/6GHz) Ant.2		
	24	WWAN (ENDC/ULCA)	+	DTS Ant.2	+	UNII (5/6GHz) Ant.1 + BT Ant.1		
	25	WWAN (ENDC/ULCA)	+	DTS Ant.2	+	UNII (5/6GHz) Ant.2 + BT Ant.1		
	26	WWAN (ENDC/ULCA)	+	DTS Ant.2	+	UNII (5/6GHz) MIMO + BT Ant.1		
	27	Item (1-26) + NFC in Product Specific 10-g.						
	28	Item (1-27) + UWB in All RF Exposure Conditions.						

Note(s):

1. DTS supports Wi-Fi Direct, Hotspot and VoIP.
2. U-NII (5GHz) supports Wi-Fi Direct, Hotspot and VoIP.
3. U-NII (6GHz) supports Wi-Fi Hotspot and VoIP.
4. GPRS, W-CDMA, LTE, NR supports Hotspot and VoIP.
5. U-NII Radio can transmit simultaneously with Bluetooth Radio.
6. DTS Radio (Only Ant.2) can transmit simultaneously with Bluetooth Radio (Only Ant.1).
7. NR Radio support to both SA and NSA(ENDC) Radio.
8. BT tethering is considered about each RF exposure conditions.
9. LTE/NR supports UL CA configurations
10. DTS/UNII/BT supports SISO/MIMO mode.
11. NFC only considered in Product Specific 10-g according to User condition.
12. Qualcomm Smart Transmit algorithm support to WWAN/WLAN/BT except NFC/UWB. And This device has support two Antenna groups. Each antenna group has controlled the total RF exposure from all transmitters to not exceed FCC limit. Therefore, in Part.1 report, it is evaluated whether the sum of the groups of each antenna does not exceed FCC limit or spatial separation is applied. In addition, each antenna group need to satisfy simultaneous transmission analysis with External radios (NFC/UWB) in Part.1 report.
For Qualcomm Smart Transmit algorithm verification of within same antenna group, please refer to the Part.2 test report.

Simultaneous Transmission SAR Test Exclusion Considerations

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:

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

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:

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

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.

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

Sum to Peak Location Separation Ratio

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

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

Peak SAR location determination

According to KDB 447498 D04, When SAR is estimated for both antennas considered in a pairwise SPLSR analysis, the peak location separation shall be determined by the closet physical separation of the antennas, according to the feed-point or geometric center of the antennas, whichever is more conservative. And in the case where the DUT was tilted and measured due to camera bumper, Peak SAR location was determined by taking the above into consideration. The distance between antennas based on feed-point is added to Appendix A.

Antenna Grouping Consideration with ER (External Radio)

The 2nd Generation of Smart Transmit with Gen_Sub6 operates based on pre-defined antenna groups of Sub6 antennas. And Sub6 antennas in UE are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from the other AG. This is accomplished by demonstrating below conditions for all RF exposure scenarios (This procedures are follow according to Qualcomm's document (80-W2112-4));

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

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

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

Adjusted SAR:

Adjusted SAR followed below procedures.

Exposure scaling for su6 antennas/radios (referred to as 'adjusted SAR' values):

If EFS $P_{limit} \leq NV$ setting P_{max} , then SAR exposure should be scaled to EFS P_{limit} + device uncertainty(=Reported SAR), else SAR exposure should be scaled to maximum {EFS P_{limit} , NV setting P_{max} + device uncertainty}.

Multi Tx factor consideration

Multi_Tx_factor is an additional compensation factor for simultaneous transmission operation supported by Qualcomm TAS algorithm, which only applies to simultaneous transmission operation and is not apply to standalone operation.

If multi_Tx_factor value was set to > 1.0, then Qualcomm TAS algorithm ensures time-averaged RF exposure is $\leq (SAR_{design_target} * multi_Tx_factor * Uncertainty) < FCC$ RF exposure limit when multiple radios managed by Qualcomm TAS algorithm. Therefore, the factor is compensated for in all standalone Reported SAR results of Sec.10 and the simultaneous transmission analysis is taken into account.

But If Adjusted SAR is considered to some bands due to EFS P_{limit} (or $P_{limit} + U_c > P_{max}$, Multi_Tx_factor is not considered additionally.

This device supports antenna groups like below table.

Antenna Groups	Grouped antenna list	
AG0	Ant.A	Ant.B
AG1	Ant.D	Ant.E
	Ant.F	Ant.G
ER(s)	NFC	UWB
ER = External radios/antennas supported outside of Smart Transmit		

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

14.1. Folder Close condition

14.1.1. Head (DSI=3) Exposure Analysis

Condition#1 (Sum of SAR)

AG0's worst configuration

Antenna Group		AG0	AG0	AG0	AG0
Antenna		Ant.A	Ant.(A+B)	Ant.B	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Head	Left Touch	0.300	0.299	0.264	0.300
	Left Tilt	0.199	0.218	0.219	0.219
	Right Touch	0.399	0.414	0.423	0.423
	Right Tilt	0.260	0.238	0.151	0.260

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.F	Ant.G	Ant.D+G	Ant.D+E	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Head	Left Touch	0.425	1.045	1.090	1.177	0.836	1.180	1.180
	Left Tilt	0.425	1.045	1.316	1.177	1.175	1.042	1.316
	Right Touch	0.425	0.803	0.922	0.870	0.894	1.161	1.161
	Right Tilt	0.425	1.045	1.142	1.177	0.944	1.180	1.180

ER's worst configuration

Antenna Group		ER	ER
Antenna		UWB	Highest Measured SAR
RF exposure	Test position	Measured SAR	
Head	Left Touch	0.008	0.008
	Left Tilt	0.008	0.008
	Right Touch	0.008	0.008
	Right Tilt	0.008	0.008

AG0, AG1 and ER summation results

Antenna Group		AG0	AG1	ER	AG0 + AG1 + ER	FCC SAR Limit
Antenna		All	All	UWB		
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR	Highest Measured SAR		
Head	Left Touch	0.300	1.180	0.002	1.482	1.6
	Left Tilt	0.219	1.316	0.002	1.537	
	Right Touch	0.423	1.161	0.001	1.585	
	Right Tilt	0.260	1.180	0.001	1.440	

Note(s):

Additional evaluation is not required due to below SAR Limit

14.1.2. Body-worn & Hotspot (DSI=1) Exposure Analysis

Condition#1 (Sum of SAR)

AG0's worst configuration

Antenna Group		AG0	AG0	AG0	AG0
Antenna		Ant.A	Ant.(A+B)	Ant.B	Highest
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR
Body-worn & Hotspot	Rear	1.027	1.134	1.125	1.134
	Front	0.279	0.471	0.655	0.655
	Top	0.000	0.000	0.000	0.000
	Left	0.000	0.000	0.000	0.000
	Bottom	0.202	0.250	0.768	0.768
	Right	0.594	0.541	0.000	0.594

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.F	Ant.G	Ant.D+G	Ant.D+E	Highest
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR
Body-worn & Hotspot	Rear	1.129	0.602	1.310	0.151	0.767	0.724	1.310
	Front	0.395	0.602	0.422	0.955	0.953	0.724	0.955
	Top	1.129	0.519	0.587	0.494	0.404	0.371	1.129
	Left	0.000	0.601	0.000	0.000	0.000	0.724	0.724
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.386	0.000	0.000	0.011	0.222	0.724	0.724

ER's worst configuration

Antenna Group		ER	ER
Antenna		UWB	Highest
RF exposure	Test position	Measured SAR	Measured SAR
Body-worn & Hotspot	Rear	0.005	0.005
	Front	0.008	0.008
	Top	0.003	0.003
	Left	0.000	0.000
	Bottom	0.000	0.000
	Right	0.000	0.000

AG0, AG1 and ER summation results

Antenna Group		AG0	AG1	ER	AG0 + AG1	FCC SAR Limit
Antenna		All	All	UWB		
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR	Highest Measured SAR		
Body-worn & Hotspot	Rear	1.134	1.310	0.005	2.449	1.6
	Front	0.655	0.955	0.008	1.618	
	Top	0.000	1.129	0.003	1.132	
	Left	0.000	0.724	0.000	0.724	
	Bottom	0.768	0.000	0.000	0.768	
	Right	0.594	0.724	0.000	1.318	

Note(s):

For Rear and Front positions, additional SUM SAR is required for each Bands/Antennas.

Summation of Each Antennas of AG0, Each Antennas of AG1 in Condition#1 (Sum of SAR)

Test Position	AG0		AG1		UWB	AG0+AG1+ER (SAR (W/kg))	Note.
	Antenna	SAR (W/kg)	Antenna	SAR (W/kg)			
Rear 5mm	AntA	1.027	Ant.D	1.129	0.005	2.161	1
		1.027	Ant.E	0.602		1.635	1
		1.027	Ant.F	1.310		2.342	1
		1.027	Ant.G	0.151		1.184	2
		1.027	Ant.D+G	0.767		1.799	1
		1.027	Ant.D+E	0.724		1.756	1
	Ant(A+B)	1.134	Ant.D	1.129		2.268	1
		1.134	Ant.E	0.602		1.742	1
		1.134	Ant.F	1.310		2.449	1
		1.134	Ant.G	0.151		1.290	2
		1.134	Ant.D+G	0.767		1.906	1
		1.134	Ant.D+E	0.724		1.863	1
	AntB	1.125	Ant.D	1.129		2.259	1
		1.125	Ant.E	0.602		1.733	1
		1.125	Ant.F	1.310		2.440	1
		1.125	Ant.G	0.151		1.281	2
		1.125	Ant.D+G	0.767		1.897	1
		1.125	Ant.D+E	0.724		1.854	1
Note.1 = SUM SAR of sub-bands, Note.2 = No need.							

Test Position	AG0		AG1		UWB	AG0+AG1+ER (SAR (W/kg))	Note.
	Antenna	SAR (W/kg)	Antenna	SAR (W/kg)			
Front 5mm	AntA	0.279	Ant.D	0.395	0.008	0.683	2
		0.279	Ant.E	0.602		0.890	2
		0.279	Ant.F	0.422		0.709	2
		0.279	Ant.G	0.955		1.242	2
		0.279	Ant.D+G	0.953		1.240	2
		0.279	Ant.D+E	0.724		1.011	2
	Ant(A+B)	0.471	Ant.D	0.395		0.874	2
		0.471	Ant.E	0.602		1.082	2
		0.471	Ant.F	0.422		0.901	2
		0.471	Ant.G	0.955		1.434	2
		0.471	Ant.D+G	0.953		1.432	2
		0.471	Ant.D+E	0.724		1.203	2
	AntB	0.655	Ant.D	0.395		1.059	2
		0.655	Ant.E	0.602		1.266	2
		0.655	Ant.F	0.422		1.085	2
		0.655	Ant.G	0.955		1.618	1
		0.655	Ant.D+G	0.953		1.616	1
		0.655	Ant.D+E	0.724		1.387	2
Note.1 = SUM SAR of sub-bands, Note.2 = No need.							

Note(s):

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

1. Need to SPLSR criteria according to Condition#2
2. Additional evaluation is not required.

Condition#2 AG0(Sub6) & AG1(Sub6) & ER(UWB) : SPLSR/Sum SPSPSR calculation results**Rear**

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

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)		
Rear -5mm	AG0	Ant.A	GSM 850	0.405	57.5	Y	AG1	Ant.D	Bluetooth Ant.1	0.241		N		
			WCDMA Band 5	1.027	54.8	Y			WIFI 2.4GHz Ant.1	1.129	-40.0	Y		
			LTE Band 12	0.567	50.3	Y			WIFI 5.3GHz Ant.2	0.384		N		
			LTE Band 13	0.654	53.9	Y			WIFI 5.5GHz Ant.2	0.312		N		
			LTE Band 5	0.973	57.1	Y			WIFI 5.8GHz Ant.2	0.386		N		
			NR Band n5	0.523	60.6	Y			WIFI 5.9GHz Ant.2	0.395		N		
			Worst configuration	1.027	50.3				WIFI 6GHz Ant.2	0.286		N		
		Ant.A+B	GSM 850	0.643	50.1	Y		Ant.E	Worst configuration	1.129	-40.0			
			WCDMA Band 5	1.030	42.9	Y			WIFI 5.3GHz Ant.1	0.334		N		
			LTE Band 12	0.709	54.6	Y			WIFI 5.5GHz Ant.1	0.602	-55.3	Y		
			LTE Band 13	0.939	59.3	Y			WIFI 5.8GHz Ant.1	0.601	-57.0	Y		
			LTE Band 5	1.041	52.3	Y			WIFI 5.9GHz Ant.1	0.584	-54.8	Y		
			NR Band n5	1.134	46.1	Y			WIFI 6GHz Ant.1	0.519	-58.3	Y		
			Worst configuration	1.134	46.1				Worst configuration	0.602	-54.8			
		Ant.B	GSM 1900	1.125	58.9	Y		Ant.F	LTE Band 25(2)	1.310	-62.5	Y		
			LTE Band 25(2)	0.896	67.5	Y			LTE Band 66(4)	0.927	-63.5	Y		
			LTE Band 66(4)	0.883	66.0	Y			LTE Band 41(38)	0.912	-61.4	Y		
			LTE Band 41(38)	0.636	58.5	Y			NR Band n66	0.988	-60.0	Y		
			NR Band n66	0.871	69.0	Y			NR Band n41	1.003	-61.5	Y		
			Worst configuration	1.125	58.5				Worst configuration	1.310	-60.0			
										Ant.D+G	Bluetooth MIMO	0.124		N
									WIFI 2.4GHz MIMO		0.767	-42.0	Y	
									Worst configuration		0.767	-42.0		
									Ant.D+E	WIFI 5.3GHz MIMO	0.724	-56.8	Y	
										WIFI 5.5GHz MIMO	0.559	-54.5	Y	
										WIFI 5.8GHz MIMO	0.596	-54.8	Y	
										WIFI 5.9GHz MIMO	0.624	-55.8	Y	
										WIFI 6GHz MIMO	0.371		N	
										Worst configuration	0.724	-54.5		
Positions	Antenna Group	Antenna	Bands	Measured SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)								
Rear	ER	UWB	UWB	0.01	-111.0	Y								

Front

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

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)
Front -5mm	AG0	Ant.B	GSM 1900	0.655	65.7	Y	AG1	Ant.G	Bluetooth Ant.2	0.316		N
			LTE Band 25(2)	0.500		N			WIFI 2.4GHz Ant.2	0.955	-65.0	Y
			LTE Band 66 (4)	0.260		N			Worst configuration	0.955	-65.0	
			LTE Band 41(38)	0.103		N		Ant.D+G	Bluetooth MIMO	0.457		N
			NR Band n66	0.321		N			WIFI 2.4GHz MIMO	0.953	-66.8	Y
			Worst configuration	0.655	65.7				Worst configuration	0.953	-66.8	

Antenna Group	Antenna	Bands	Measured SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)
ER	UWB	UWB	0.01	-109.3	Y

AG0 & AG1 / ER Sum-SPLSR Calculation Results

Position	AG0	AG1	UWB	Closest distance (mm)	AG0 + (AG1+ER) (W/kg)	SPLSR Results
Rear 5mm	Ant.A	Ant.D	0.005	90.3 mm	2.161	0.04
	Ant.A+B		0.005	86.1 mm	2.268	0.04
	Ant.B		0.005	98.5 mm	2.259	0.03
	Ant.A	Ant.E	0.005	105.1 mm	1.635	0.02
	Ant.A+B		0.005	100.9 mm	1.742	0.02
	Ant.B		0.005	113.3 mm	1.733	0.02
	Ant.A	Ant.F	0.005	110.3 mm	2.342	0.03
	Ant.A+B		0.005	106.1 mm	2.449	0.04
	Ant.B		0.005	118.5 mm	2.440	0.03
	Ant.A	Ant.D+G	0.005	92.3 mm	1.799	0.03
	Ant.A+B		0.005	88.1 mm	1.906	0.03
	Ant.B		0.005	100.5 mm	1.897	0.03
	Ant.A	Ant.D+E	0.005	104.8 mm	1.756	0.02
	Ant.A+B		0.005	100.6 mm	1.863	0.03
	Ant.B		0.005	113.0 mm	1.854	0.02

Position	AG0	AG1	UWB	Closest distance (mm)	AG0 + (AG1 + ER) (W/kg)	SPLSR Results
Front 5mm	Ant.B	Ant.G	0.008	130.7 mm	1.618	0.02
		Ant.D+G	0.008	132.5 mm	1.616	0.02

Note(s):

1. For AG1+ER(UWB) combinations in Rear and Front, Y-axis location was chosen to be the closet distance from each antenna.
2. Worst combination SPLSR/Sum SPLSR criteria results in not over 0.04 (1-g SAR). So additional test is not required.

14.1.3. Product Specific 10-g (DSI=1) Exposure Analysis

Condition#1 (Sum of SAR)

Antenna Group		ER		ER	
Antenna		NFC		UWB	
RF exposure	Test positions	NFC		UWB	
		Measured SAR	Measured ER	Measured SAR	Measured ER
Product Specific 10-g Reported SAR	Rear	0.014	0.004	0.002	0.001
	Front	0.000	0.000	0.003	0.001
	Top	0.000	0.000	0.002	0.001
	Left	0.000	0.000		
	Bottom				
	Right				

RF exposure	Test position	AG1's Highest Adjusted ER				
		Ant.D	Ant.E	Ant.G	Ant.D+E	Ant.D+G
Bodyworn 1g's ER	Rear	0.247	0.377	0.037	0.452	0.059
	Front	0.247	0.377	0.198	0.452	0.311
Product Specific 10-g's ER	Top	0.358	0.476	0.148	0.371	0.233
	Left		0.304		0.371	
	Bottom					
	Right	0.305		0.001	0.254	0.002

Final Summation

AG1 and ER summation results

Antenna Group	AG1	ER		AG1+ER	FCC TER Limit
Antenna	All	NFC	UWB		
RF exposure	Highest Adjusted ER	Measured ER	Measured ER		
Bodyworn 1g's ER	0.476	0.013	0.003	0.492	1.0
Product Specific 10-g's ER					

Converted to 10-g	FCC SAR Limit
1.969	4.0

Note(s):

For Phablet 10-g simultaneous transmission, the 1-g 5mm value for the Rear/Front was used. After confirming that the TER did not exceed 1.0, the TER value was converted to the 10-g SAR standard to match the final 10-g unit.

Additional evaluation is not required due to below SAR limit.

14.2. Folder Open condition

14.2.1. Head (DSI=2) Exposure Analysis

Condition#1 (Sum of SAR)

AG0's worst configuration

Antenna Group		AG0	AG0	AG0	AG0
Antenna		Ant.A	Ant.(A+B)	Ant.B	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Head	Left Touch	0.000	0.929	0.854	0.929
	Left Tilt	0.000	0.302	0.703	0.703
	Right Touch	0.000	0.291	0.252	0.291
	Right Tilt	0.000	0.290	0.107	0.290

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.F	Ant.G	Ant.D+G	Ant.D+E	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Head	Left Touch	0.625	0.497	1.154	1.562	1.331	0.542	1.562
	Left Tilt	0.625	0.497	1.154	1.294	1.506	0.542	1.506
	Right Touch	0.625	0.497	0.646	0.972	1.506	0.542	1.506
	Right Tilt	0.625	0.497	0.644	0.972	1.011	0.542	1.011

ER worst configuration

Antenna Group		ER	ER
Antenna		UWB	Highest Measured SAR
RF exposure	Test position	Mesaured SAR	
Head	Left Touch	0.006	0.006
	Left Tilt	0.006	0.006
	Right Touch	0.006	0.006
	Right Tilt	0.006	0.006

AG0 and AG1 and ER summation results

Antenna Group		AG0	AG1	ER	AG0 + AG1 + ER	FCC SAR Limit
Antenna		All	All	UWB		
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR	Highest Measured SAR		
Head	Left Touch	0.929	1.562	0.006	2.497	1.6
	Left Tilt	0.703	1.506	0.006	2.215	
	Right Touch	0.291	1.506	0.006	1.803	
	Right Tilt	0.290	1.011	0.006	1.307	

Note(s):

For Left Touch, Tilt and Right Touch positions, additional SUM SAR is required for each Bands/Antennas.

Summation of Each Antennas of AG0, Each Antennas of AG1/ER in Condition#1 (Sum of SAR)

Test Position	AG0		AG1		UWB	AG0+AG1+ER (SAR (W/kg))		Note		Test Position	AG0		AG1		UWB	AG0+AG1+ER (SAR (W/kg))		Note		Test Position	AG0		AG1		UWB	AG0+AG1+ER (SAR (W/kg))		Note	
	Antenna	SAR (W/kg)	Antenna	SAR (W/kg)	SAR (W/kg)	Antenna	SAR (W/kg)				Antenna	SAR (W/kg)	SAR (W/kg)	Antenna	SAR (W/kg)	Antenna	SAR (W/kg)				SAR (W/kg)	Antenna	SAR (W/kg)	Antenna	SAR (W/kg)	SAR (W/kg)	Antenna		
Left Touch	AntA	0.000		AntD	0.625		0.631	2		Left Tilt	AntA	0.000		AntD	0.625		0.631	2		Right Touch	AntA	0.000		AntD	0.625		0.631	2	
		0.000		AntE	0.497		0.503	2				0.000		AntE	0.497		0.503	2											
		0.000		AntF	1.154		1.160	2				0.000		AntF	1.154		1.160	2											
		0.000		AntG	1.562		1.568	2				0.000		AntG	1.294		1.300	2											
		0.000		AntD + G	1.331		1.337	2				0.000		AntD + G	1.506		1.512	2											
		0.000		AntD + E	0.542		0.548	2				0.000		AntD + E	0.542		0.548	2											
	AntA+B	0.929		AntD	0.625		1.560	2		AntA+B	0.302		AntD	0.625		0.933	2		AntA+B	0.291		AntD	0.625		0.922	2			
		0.929		AntE	0.497		1.432	2			0.302		AntE	0.497		0.805	2			0.291		AntE	0.497		0.794	2			
		0.929		AntF	1.154		2.090	1			0.302		AntF	1.154		1.463	2			0.291		AntF	0.646		0.943	2			
		0.929		AntG	1.562		2.497	1			0.302		AntG	1.294		1.602	1			0.291		AntG	0.972		1.268	2			
		0.929		AntD + G	1.331		2.266	1			0.302		AntD + G	1.506		1.814	1			0.291		AntD + G	1.506		1.803	1			
		0.929		AntD + E	0.542		1.477	2			0.302		AntD + E	0.542		0.850	2			0.291		AntD + E	0.542		0.838	2			
	Ant B	0.854		AntD	0.625		1.485	2		Ant B	0.703		AntD	0.625		1.334	2		Ant B	0.252		AntD	0.625		0.883	2			
		0.854		AntE	0.497		1.358	2			0.703		AntE	0.497		1.206	2			0.252		AntE	0.497		0.755	2			
		0.854		AntF	1.154		2.015	1			0.703		AntF	1.154		1.863	1			0.252		AntF	0.646		0.904	2			
		0.854		AntG	1.562		2.422	1			0.703		AntG	1.294		2.003	1			0.252		AntG	0.972		1.229	2			
		0.854		AntD + G	1.331		2.191	1			0.703		AntD + G	1.506		2.215	1			0.252		AntD + G	1.506		1.764	1			
		0.854		AntD + E	0.542		1.402	2			0.703		AntD + E	0.542		1.250	2			0.252		AntD + E	0.542		0.799	2			

Summation of Each Antennas of AG0-Ant.A+B, Ant.B, Each Antennas of AG1-Ant.D/ER in Condition#1 (Sum of SAR)

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

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Distance from ERP (mm)	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Distance from ERP (mm)	SPLSR (Y/N)
Left Touch	AG0	Ant.A+B	GSM850	0.919	-72.7	Y	AG1	Ant.F	LTE B66(4)	0.105		N
			WCDMA B5	0.906	-72.2	Y			LTE B25(2)	0.159		N
			LTE B12	0.811	-70.5	Y			LTE B41(38)	0.983	-13.4	Y
			LTE B13	0.806	-74.8	Y			NR Bn66(4)	0.112		N
			LTE B5	0.929	-69.6	Y			NR Bn41	1.154	-14.5	Y
			NR Bn5	0.900	-73.4	Y			Worst configuration	1.154	-14.5	
			Worst configuration	0.929	-69.6				2.4G Ant.2	1.562	9.4	Y
		Ant.B	GSM1900	0.854	-84.7	Y		Ant.G	BT Ant.2	0.494		N
			LTE B66(4)	0.702	-76.4	Y			Worst configuration	1.562	9.4	
			LTE B25(2)	0.826	-73.8	Y			2.4G MIMO	1.331	8.4	Y
			LTE B41(38)	0.703	-79.0	Y		Ant.D+G	BT MIMO	0.405		N
			NR Bn66(4)	0.699	-76.4	Y			Worst configuration	1.331	8.4	
			Worst configuration	0.854	-73.8							

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

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Distance from ERP (mm)	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Distance from ERP (mm)	SPLSR (Y/N)
Left Tilt	AG0	Ant.A+B	GSM850	0.208	-3.8	Y	AG1	Ant.F	LTE B66(4)	0.180		N
			WCDMA B5	0.213	-22.3	Y			LTE B25(2)	0.222		N
			LTE B12	0.272	-25.5	Y			LTE B41	0.983	-12.5	Y
			LTE B13	0.272	-30.0	Y			NR Bn66(4)	0.178		N
			LTE B5	0.302	-55.0	Y			NR Bn41	1.154	-14.5	Y
			NR Bn5	0.211	-55.0	Y			Worst configuration	1.154	-14.5	
			Worst configuration	0.302	-3.8				Ant.G	2.4G Ant.2	1.294	5.8
		Ant.B	GSM1900	0.041		N		BT Ant.2		0.672		N
			LTE B66(4)	0.702	-4.5	Y		Worst configuration		1.294	5.8	
			LTE B25(2)	0.126	-3.0	Y		Ant.D+G	2.4G MIMO	1.506	4.3	Y
			LTE B41	0.703	-86.5	Y			BT MIMO	0.497		N
			NR Bn66(4)	0.186	-5.9	Y			Worst configuration	1.506	4.3	
			Worst configuration	0.703	-3.0			Antenna Group	Antenna	Bands	Measured SAR (W/kg)	SPLSR (Y/N)
			ER	Ant.F	UWB	0.002		Y				

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

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Distance from ERP (mm)	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Distance from ERP (mm)	SPLSR (Y/N)
Right Touch	AG0	Ant.A+B	GSM850	0.244	-16.3	Y	AG1	Ant.F	LTE B66(4)	0.646		N
			WCDMA B5	0.227	-35.1	Y			LTE B25(2)	0.558		N
			LTE B12	0.291	-24.5	Y			LTE B41(38)	0.123		N
			LTE B13	0.238	-25.7	Y			NR Bn66(4)	0.490		N
			LTE B5	0.262	-18.2	Y			NR Bn41	0.170		N
			NR Bn5	0.208	-25.6	Y			Worst configuration	0.646	0.0	
		Ant.B	Worst configuration	0.291	-16.3			Ant.G	2.4G Ant.2	0.972		N
			GSM1900	0.130	-68.9	Y			BT Ant.2	0.455		N
			LTE B66(4)	0.009	-149.3	N			Worst configuration	0.972	0.0	
			LTE B25(2)	0.252	-71.8	Y		Ant.D+G	2.4G MIMO	1.506	5.7	Y
			LTE B41	0.008	-149.3	N			BT MIMO	0.497		N
			NR Bn66(4)	0.249	-65.9	Y			Worst configuration	1.506	5.7	
			Worst configuration	0.252	-65.9							

AG0 & (AG1/ER) SPLSR Calculation Results

Position	AG0	AG1	ER (W/kg)	Closest distance (mm)	AG0 + (AG1+ER) (W/kg)	SPLSR Results
Left Touch	Ant.A+B	Ant.F	0.006	6.7 mm	2.090	0.45
	Ant.B		0.006	32.7 mm	2.015	0.09
	Ant.A+B	Ant.G	0.006	50.1 mm	2.497	0.08
	Ant.B		0.006	76.1 mm	2.422	0.05
	Ant.A+B	Ant.D+G	0.006	46.5 mm	2.266	0.07
	Ant.B		0.006	72.5 mm	2.191	0.04

Position	AG0	AG1	ER	Closest distance (mm)	AG0 + (AG1+ER)	SPLSR
Left Tilt	Ant.B	Ant.F	0.006	32.7 mm	1.863	0.08
	Ant.A+B	Ant.G	0.006	50.1 mm	1.596	0.04
	Ant.B		0.006	76.1 mm	2.003	0.04
	Ant.A+B	Ant.D+G	0.006	46.5 mm	1.814	0.05
	Ant.B		0.006	72.5 mm	2.215	0.05

Position	AG0	AG1	ER	Closest distance (mm)	AG0 + (AG1+ER)	SPLSR
Right Touch	Ant.A+B	Ant.D+G	0.006	46.5 mm	1.803	0.05
	Ant.B		0.006	72.5 mm	1.764	0.03

Note(s):

SUM-SPLSR criteria is not satisfied in Head phantom (SAM twin). So additional simultaneous analysis evaluated at flat phantom according to KDB 648474 D04 Sec.10.

Minimum distance condition in a Flat phantom for Simultaneous Transmission SAR Test

Antenna Group	Antenna	Techs	Left Touch/Tilt			Right Touch/Tilt			Minimum Head SAR test distance of DUT's Bottom in Flat phantom (mm)
			Peak SAR location (x,y-axis from ERP) (mm)	Peak location (Z-axis) (mm)	Head SAR test distance of DUT's Bottom in Flat phantom (mm)	Peak SAR location (x,y-axis from ERP) (mm)	Peak location (Z-axis) (mm)	Head SAR test distance of DUT's Bottom in Flat phantom (mm)	
AG0	Ant.A+B	GSM 850	73.0	6.5	8.2				8.2
		WCDMA Band V	72.6	6.8	8.8				8.8
		LTE Band 12	71.0	8.3	11.5				11.5
		LTE Band 13	75.3	9.1	12.4				12.4
		LTE Band 5	69.8	4.7	5.2				5.2
	Ant.B	NR Band n5	73.9	8.1	10.9				10.9
		GSM 1900	84.9	6.1	7.1				7.1
		LTE Band 66 (4)	76.7	6.5	8.0				8.0
		LTE Band 25 (2)	74.0	5.8	7.0				7.0
		LTE Band 41 (38)	79.2	5.6	6.5				6.5
AG1	Ant.F	NR Band n66	76.7	6.5	8.0				8.0
		LTE Band 41 (38)	24.5	20.5	87.4				87.4
	Ant.G	NR Bn41	24.9	20.3	85.0				85.0
		2.4GHz WLAN Ant.2	10.9	5.6	22.2		6.5	6.5	6.5
	Ant.D+G	Bluetooth Ant.2		6.1	6.1		6.5	6.5	6.1
		2.4GHz WLAN MIMO		6.5	6.5		6.3	6.3	6.3
		Bluetooth MIMO	5.0	4.8	23.6	4.6	4.6	20.1	20.1

Note(s):

1. Excluding the band (green box) for measuring Open Head SAR in the flat phantom identified in Sec 10.2, the remaining bands are additional to verify the Simultaneous Transmission SAR Test.
2. For Black box, the Peak SAR location was located above Ear piece of DUT, and the bottom separation distance was determined by adding 4mm of ERP thickness to the Peak SAR location.

Test Band	Antenna	RF Exposure Conditions	Mode	DSI	Dist. (mm)	Test Position	Ch #	Freq. (MHz)	RB Allocation /Target duty	RB offset /Duty	Power (dBm)		1-g SAR (W/kg)		Rot No.	Adjusted SAR	Worst SAR (W/kg)	X-axis
											Tune-up Limit	Meas.	Meas.	Scaled				
LTE Band 12	Ant.A+B	Head-Flat	DFT-s OFDM QPSK	2	4/5	Rear	23095	707.5	1	25	25.2	24.31	1.020	1.252	1	0.811	1.252	54.0
LTE Band 13																		
GSM 850																		
WCDMA Band V																		
LTE Band 5	Ant.A+B	Head-Flat	GPRS 2 slots	2	4/5	Rear	128	824.2			32.5	31.40	0.824	1.062		0.919	1.062	55.1
LTE Band n5																		
NR Band n5																		
LTE Band 66 (4)	Ant.B	Head-Flat	QPSK	2	4/5	Rear	132322	1745.0	1	0	16.0	15.03	0.621	0.776	2	0.702	0.776	60.0
NR Band n66																		
GSM 1900	Ant.B	Head-Flat	GPRS 4 slots	2	4/5	Rear	810	1909.8			20.5	19.22	0.628	0.843		0.854	0.854	68.5
LTE Band 25 (2)																		
LTE Band 41	Ant.B	Head-Flat	QPSK	2	4/5	Rear	41055	2636.5	50	0	17.5	17.22	0.473	0.504	3	0.703	0.703	61.0
LTE Band 41	Ant.F	Head-Flat	DFT-s OFDM QPSK	2	4/85	Rear	518598	2592.99	270	0	15.0	14.60	0.643	0.705	4	1.154	1.154	-63.0
NR Band n41																		
2.4GHz Ant.2	Ant.G	Head-Flat	802.11b 1Mbps	2	4/5	Rear	1	2412.0	100%	97.27%	15.5	14.25	1.020	1.398		1.562	1.562	-60.6
Bluetooth Ant.2																		
2.4GHz MIMO	Ant.D+G	Head-Flat	802.11g 6Mbps	2	4/5	Rear	11	2462.0	100%	89.27%	15.5	13.79	0.573	0.952	5	1.331	1.331	-64.0
Bluetooth MIMO																		

Note(s):

- SAR measurements were taken at a Flat Phantom at a distance more conservative than the distance verified in Above Table.
- SAR measurements were performed using the band with the worst SAR value from each antenna as a representative band, depending on the frequency.
- Detail of test plot refer to Appendix G

AG0 & (AG1/ER) SPLSR Calculation Results

Position	AG0	AG1	ER (W/kg)	Closest distance (mm)	AG0 + (AG1+ER) (W/kg)	SPLSR Results
Head Flat	Ant.A+B	Ant.F	0.002	117.0 mm	2.408	0.03
	Ant.B		0.002	123.0 mm	2.010	0.02
	Ant.A+B	Ant.G	0.002	114.6 mm	2.816	0.04
	Ant.B		0.002	120.6 mm	2.418	0.03
	Ant.A+B	Ant.D+G	0.002	118.0 mm	2.585	0.04
	Ant.B		0.002	124.0 mm	2.187	0.03

Note(s):

Worst combination SUM SPLSR criteria results in not over 0.04 (1-g SAR). So additional evaluation is not required.

14.2.2. Body-worn & Hotspot (DSI=0) Exposure Analysis

Condition#1 (Sum of SAR)

AG0's worst configuration

Antenna Group		AG0	AG0	AG0	AG0	AG0
Antenna		Ant.A	Ant.(A+B)	Ant.B	Ant.C	Highest
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR
Body-worn & Hotspot	Rear	0.000	1.060	1.330	0.000	1.330
	Front	0.000	1.024	0.816	0.000	1.024
	Top	0.000	0.000	0.000	0.000	0.000
	Left	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.283	0.595	0.000	0.595
	Right	0.000	0.540	0.000	0.000	0.540

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.F	Ant.G	Ant.D+G	Ant.D+E	Highest
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR
Body-worn & Hotspot	Rear	0.867	0.656	1.272	1.158	1.294	0.910	1.294
	Front	0.790	0.648	0.938	0.762	0.804	0.664	0.938
	Top	0.867	0.568	0.513	1.158	0.715	0.910	1.158
	Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.867	0.000	0.000	0.000	0.539	0.910	0.910

ER worst configuration

Antenna Group		ER	ER
Antenna		UWB	Highest
RF exposure	Test position	Measured SAR	Measured SAR
Body-worn & Hotspot	Rear	0.006	0.006
	Front	0.005	0.005
	Top	0.004	0.004
	Left	0.000	0.000
	Bottom	0.000	0.000
	Right	0.000	0.000

AG0 and AG1 and ER summation results

Antenna Group		AG0	AG1	ER	AG0 + AG1	FCC SAR Limit
Antenna		All	All	UWB		
RF exposure	Test position	Highest Adjusted SAR	Highest Adjusted SAR	Highest Measured SAR		
Body-worn & Hotspot	Rear	1.330	1.294	0.006	2.630	1.6
	Front	1.024	0.938	0.005	1.967	
	Top	0.000	1.158	0.004	1.162	
	Left	0.000	0.000	0.000	0.000	
	Bottom	0.595	0.000	0.000	0.595	
	Right	0.540	0.910	0.000	1.450	

Note(s):

For Rear and Front positions, additional SUM SAR is required for each Bands/Antennas.

Summation of Each Antennas of AG0, Each Antennas of AG1 in Condition#1 (Sum of SAR)

Test Position	AG0		AG1		UWB	AG0+AG1+ER (SAR (W/kg))	Note.
	Antenna	SAR (W/kg)	Antenna	SAR (W/kg)			
Rear 5mm	Ant.A	0.000	Ant.D	0.867	0.006	0.873	2
		0.000	Ant.E	0.656		0.662	2
		0.000	Ant.F	1.272		1.278	2
		0.000	Ant.G	1.158		1.164	2
		0.000	Ant.D + G	1.294		1.300	2
		0.000	Ant.D + E	0.910		0.916	2
	Ant.(A+B)	1.060	Ant.D	0.867		1.933	1
		1.060	Ant.E	0.656		1.722	1
		1.060	Ant.F	1.272		2.338	1
		1.060	Ant.G	1.158		2.224	1
		1.060	Ant.D + G	1.294		2.360	1
		1.060	Ant.D + E	0.910		1.976	1
	Ant.B	1.330	Ant.D	0.867		2.203	1
		1.330	Ant.E	0.656		1.992	1
		1.330	Ant.F	1.272		2.608	1
		1.330	Ant.G	1.158		2.494	1
		1.330	Ant.D + G	1.294		2.630	1
		1.330	Ant.D + E	0.910		2.246	1
	Ant.C	0.000	Ant.D	0.867		0.873	2
		0.000	Ant.E	0.656		0.662	2
		0.000	Ant.F	1.272		1.278	2
		0.000	Ant.G	1.158		1.164	2
		0.000	Ant.D + G	1.294		1.300	2
		0.000	Ant.D + E	0.910		0.916	2
Note.1 = SUM SAR of sub-bands, Note.2 = No need.							

Test Position	AG0		AG1		UWB	AG0+AG1+ER (SAR (W/kg))	Note.
	Antenna	SAR (W/kg)	Antenna	SAR (W/kg)			
Front 5mm	Ant.A	0.000	Ant.D	0.790	0.005	0.795	2
		0.000	Ant.E	0.648		0.653	2
		0.000	Ant.F	0.938		0.943	2
		0.000	Ant.G	0.762		0.767	2
		0.000	Ant.D + G	0.804		0.809	2
		0.000	Ant.D + E	0.664		0.669	2
	Ant.(A+B)	1.024	Ant.D	0.790		1.820	1
		1.024	Ant.E	0.648		1.678	1
		1.024	Ant.F	0.938		1.967	1
		1.024	Ant.G	0.762		1.791	1
		1.024	Ant.D + G	0.804		1.833	1
		1.024	Ant.D + E	0.664		1.693	1
	Ant.B	0.816	Ant.D	0.790		1.611	1
		0.816	Ant.E	0.648		1.469	2
		0.816	Ant.F	0.938		1.759	1
		0.816	Ant.G	0.762		1.583	2
		0.816	Ant.D + G	0.804		1.625	1
		0.816	Ant.D + E	0.664		1.485	2
	Ant.C	0.000	Ant.D	0.790		0.795	2
		0.000	Ant.E	0.648		0.653	2
		0.000	Ant.F	0.938		0.943	2
		0.000	Ant.G	0.762		0.767	2
		0.000	Ant.D + G	0.804		0.809	2
		0.000	Ant.D + E	0.664		0.669	2
Note.1 = SUM SAR of sub-bands, Note.2 = No need.							

Note(s):

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

1. Need to SPLSR criteria according to Condition#2
2. Additional evaluation is not required.

Condition#2 AG0(Sub6) & AG1(Sub6) & ER(UWB) : SPLSR/Sum SPLSR calculation results**Rear**

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

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	X-axis (mm)	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	X-axis (mm)	SPLSR (Y/N)	
Rear -5mm	AG0	Ant.A+B	GSM850	0.859	51.6	Y	AG1	Ant.D	2.4G Ant.1	0.867	-59.6	Y	
			WCDMA B5	1.060	51.6	Y			BT Ant.1	0.198		N	
			LTE B12	0.895	59.9	Y			5.2G Ant.2	0.790	-59.2	Y	
			LTE B13	0.893	50.4	Y			5.5G Ant.2	0.465	-58.0	Y	
			LTE B5	1.046	50.4	Y			5.8G Ant.2	0.291	-58.2	Y	
			NR Bn5	1.043	48.4	Y			5.9G Ant.2	0.337	-58.0	Y	
			Worst configuration	1.060	48.4				6G Ant.2	0.458	-52.8	Y	
		Ant.B	GSM1900	1.330	60.1	Y			Ant.E	Worst configuration	0.867	-52.8	
			LTE B66(4)	0.924	63.5	Y		5.2G Ant.1		0.449	-57.9	Y	
			LTE B25(2)	0.826	65.5	Y		5.5G Ant.1		0.656	-57.7	Y	
			LTE B41(38)	0.702	66.0	Y		5.8G Ant.1		0.526	-61.0	Y	
			NR Bn66	0.699	62.5	Y		5.9G Ant.1		0.617	-55.7	Y	
			Worst configuration	1.330	60.1			6G Ant.1		0.568	-56.9	Y	
									Worst configuration	0.656	-55.7		
								Ant.F	LTE B66	1.272	-65.1	Y	
									LTE B25	0.987	-67.2	Y	
									LTE B41	0.737	-69.1	Y	
									NR Bn66	0.907	-59.0	Y	
									NR Bn41	0.811	-64.0	Y	
									Worst configuration	1.272	-59.0		
								Ant.G	2.4G Ant.2	1.158	-67.1	Y	
									BT Ant.2	0.451	-64.0	Y	
									Worst configuration	1.158	-64.0		
								Ant.D+G	2.4G MIMO	1.294	-66.5	Y	
									BT MIMO	0.589	-60.7	Y	
									Worst configuration	1.294	-60.7		
								Ant.D+E	5.2G MIMO	0.910	-61.6	Y	
									5.5G MIMO	0.713	-58.8	Y	
									5.8G MIMO	0.480	-60.7	Y	
									5.9G MIMO	0.507	-56.7	Y	
									6G MIMO	0.342	-56.6	Y	
									Worst configuration	0.910	-56.6		

Positions	Antenna Group	Antenna	Bands	Measured SAR (W/kg)	X-axis (mm)	SPLSR (Y/N)
Rear	ER	Ant.F	UWB	0.002	42.0	Y

Note(s):

1. UWB antenna and Ant.E share the same physical antenna.
2. For AG1+ER(UWB) combinations in Rear, Y-axis location was chosen to be the closet distance from AG0.
3. When evaluating Rear Position SAR test, the DUT was tilted Rear portion to Antennas of AG1 according to TCBC workshop guide due to camera bumper, and SAR test performed. Therefore, since Peak SAR location based on the Zoom SAR measurement results were not appropriate for SPLSR calculation, the distance was considered based on the closest distance between the antennas provided by manufacturer.
Some bands does not required SPLSR criteria. Because SUM SAR result with other antenna group is not SAR limit.
4. Worst combination SPLSR/Sum SPLSR criteria results in not over 0.04 (1-g SAR). So additional test is not required.

Condition#2 AG0(Sub6) & AG1(Sub6) & ER(UWB) : SPLSR/Sum SPLSR calculation results (Continued)**Front**

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

Positions	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	X-axis (mm)	SPLSR (Y/N)	Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	X-axis (mm)	SPLSR (Y/N)
Front -5mm	AG0	Ant.A+B	GSM850	0.703	50.8	Y	AG1	Ant.D	2.4G Ant.1	0.739	-51.6	Y
			WCDMA B5	1.000	51.6	Y			BT Ant.1	0.098		N
			LTE B12	0.750	56.8	Y			5.2G Ant.2	0.790	-58.7	Y
			LTE B13	0.836	53.5	Y			5.5G Ant.2	0.465		N
			LTE B5	1.024	51.8	Y			5.8G Ant.2	0.291		N
			NR Bn5	0.850	52.8	Y			5.9G Ant.2	0.337		N
			Worst configuration	1.024	50.8				6G Ant.2	0.458		N
		Ant.B	GSM1900	0.816	58.0	Y		Ant.E	Worst configuration	0.790	-51.6	
			LTE B66(4)	0.641		N			5.2G Ant.1	0.449		N
			LTE B25(2)	0.453		N			5.5G Ant.1	0.648	-58.5	Y
			LTE B41(38)	0.353		N			5.8G Ant.1	0.565		N
			NR Bn66(4)	0.541		N			5.9G Ant.1	0.418		N
			Worst configuration	0.816	58.0				6G Ant.1	0.568	-58.5	Y
									Worst configuration	0.648	-58.5	
		Ant.F						Ant.F	LTE B66(4)	0.938	-70.6	Y
									LTE B25(2)	0.707	-63.0	Y
									LTE B41(38)	0.484		N
									NR Bn66(4)	0.785	-62.0	Y
									NR Bn41 SRS1	0.535		N
									Worst configuration	0.938	-62.0	
								Ant.G	2.4G Ant.2	0.762	-66.1	Y
									BT Ant.2	0.237		N
									Worst configuration	0.762	-66.1	
							Ant.D+G		2.4G MIMO	0.804	-65.0	Y
									BT MIMO	0.551		N
									Worst configuration	0.804	-65.0	
							Ant.D+E		5.2G MIMO	0.435	-61.6	Y
									5.5G MIMO	0.529	-58.8	Y
									5.8G MIMO	0.480	-57.1	Y
									5.9G MIMO	0.507	-56.7	Y
									6G MIMO	0.664	-56.1	Y
									Worst configuration	0.664	-56.1	

Note(s):

1. UWB antenna and Ant.E share the same physical antenna.
2. For AG1+ER(UWB) combinations in Rear, Y-axis location was chosen to be the closet distance from AG0.
3. When evaluating Rear Position SAR test, the DUT was tilted Rear portion to Antennas of AG1 according to TCBC workshop guide due to camera bumper, and SAR test performed. Therefore, since Peak SAR location based on the Zoom SAR measurement results were not appropriate for SPLSR calculation, the distance was considered based on the closest distance between the antennas provided by manufacturer.
Some bands does not required SPLSR criteria. Because SUM SAR result with other antenna group is not SAR limit.
4. Worst combination SPLSR/Sum SPLSR criteria results in not over 0.04 (1-g SAR). So additional test is not required.

AG0 & (AG1/ER) SPLSR Calculation Results

Position	AG0	AG1	UWB	Closest distance (mm)	AG0 + (AG1+ER) (W/kg)	SPLSR Results
Rear 5mm	Ant.A+B	Ant.D	0.006	101.1 mm	1.933	0.03
	Ant.B		0.006	112.8 mm	2.203	0.03
	Ant.A+B	Ant.E	0.006	54.6 mm	1.722	0.04
	Ant.B		0.006	115.7 mm	1.992	0.02
	Ant.A+B	Ant.F	0.006	107.3 mm	2.338	0.03
	Ant.B		0.006	119.0 mm	2.608	0.04
	Ant.A+B	Ant.G	0.006	112.3 mm	2.224	0.03
	Ant.B		0.006	124.0 mm	2.494	0.03
	Ant.A+B	Ant.D+G	0.006	109.0 mm	2.360	0.03
	Ant.B		0.006	120.7 mm	2.630	0.04
	Ant.A+B	Ant.D+E	0.006	104.9 mm	1.976	0.03
	Ant.B		0.003	116.6 mm	2.246	0.03

Position	AG0	AG1	UWB	Closest distance (mm)	AG0 + AG1 + ER (W/kg)	SPLSR Results
Front 5mm	Ant.A+B	Ant.D	0.005	102.3 mm	1.820	0.02
	Ant.B		0.005	109.5 mm	1.611	0.02
	Ant.A+B	Ant.E	0.005	109.2 mm	1.678	0.02
	Ant.A+B	Ant.F	0.005	112.7 mm	1.967	0.02
	Ant.B		0.005	119.9 mm	1.759	0.02
	Ant.A+B	Ant.G	0.005	116.8 mm	1.791	0.02
	Ant.A+B	Ant.D+G	0.005	115.7 mm	1.833	0.02
	Ant.B		0.005	122.9 mm	1.625	0.02
	Ant.A+B	Ant.D+E	0.005	106.8 mm	1.611	0.02

Note(s):

1. For AG1+ER(UWB) combinations in Rear and Front, Y-axis location was chosen to be the closet distance from each antenna.
2. Worst combination SPLSR/Sum SPLSR criteria results in not over 0.04 (1-g SAR). So additional test is not required.

14.2.3. Product Specific 10-g (DSI=0) Exposure Analysis

Condition#1 (Sum of SAR)

AG1's worst configuration

Antenna Group		AG1	AG1	AG1	AG1	AG1	AG1
Antenna		Ant.D	Ant.E	Ant.G	Ant.D+E	Ant.D+G	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Body-worn	Rear	0.403	0.656	0.451	0.617	0.589	0.656
	Front	0.588	0.648	0.237	0.529	0.551	0.648
Product Specific 10-g	Top	0.643	0.921	0.579	1.160	0.936	1.160
	Left	0.000	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.643	0.000	0.000	1.160	0.503	1.160

ER summation results

ER techs		NFC	UWB
RF exposure	Test position	Measured SAR	Measured SAR
Product Specific 10-g	Rear	0.015	0.002
	Front	0.000	0.002
	Top	0.000	0.002
	Left	0.000	0.000
	Bottom	0.000	0.000
	Right	0.000	0.000

AG1 and ER summation results

Antenna Group		AG1		ER (External Ratio)				AG1+ER TER	TER Limit	Convert TER to 10g SAR	FCC SAR Limit
Antenna		All		NFC		UWB					
RF exposure	Test position	Highest Adjusted SAR	ER (Exposure Ratio)	Measured SAR	ER (Exposure Ratio)	Measured SAR	ER (Exposure Ratio)				
Body-worn 1-g & Product Specific 10-g	Rear	0.656	0.410	0.015	0.004	0.002	0.001	0.414	1.0	1.658	4.0
	Front	0.648	0.405	0.000	0.000	0.002	0.001	0.406		1.623	
	Top	1.160	0.290	0.000	0.000	0.002	0.001	0.291		1.162	
	Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	
	Right	1.160	0.290	0.000	0.000	0.000	0.000	0.290		1.160	

Note(s):

Additional evaluation is not required due to below SAR Limit

Conclusion:

Simultaneous Transmission SAR analysis results is satisfied the FCC Limit requirement according to follow procedures with "Sum of SAR" or "SPLSR" or "SUM-SPLSR" and "TER calculation".

Appendixes

Refer to separated files for the following appendixes.

S-4792147635-S1 FCC Report RFx App A Photos

S-4792147635-S1 FCC Report RFx App B Test Plots

S-4792147635-S1 FCC Report RFx App C System Plots

S-4792147635-S1 FCC Report RFx App D Tissue

S-4792147635-S1 FCC Report RFx App E Probe Certi

S-4792147635-S1 FCC Report RFx App F Dipole Certi

S-4792147635-S1 FCC Report RFx App G Flat Head SAR for STx

END OF REPORT