

**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/NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be, NFC, UWB and WPT

MODEL NUMBER: SM-F971B

FCC ID: A3LSMF971B

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TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	2026-05-14	Initial Issue	--
V2	2026-05-18	Corrected highest reported SAR values in Sec.1 and Sec.1.3. Corrected Test Equipments in Sec.4.3. Corrected Plimit result table in Sec.6.3.1. Corrected Plimit of DSI=2&3 of Wi-Fi 2.4GHz MIMO in Sec.6.4. Added Dielectric Property & System check in Sec.8.1 and Sec.8.2. Corrected Spot-check SAR test results in Sec.10.1.1. Corrected WCDMA5 measured power in Sec.10.1.2.1. Added UWB Head test data for Simultaneous Transmission evaluation in Sec.10.1.2.9. Corrected UWB APD value typo in Sec.11.2.2. Corrected Wi-Fi 6GHz measured power in Sec.12.2.1. Corrected WiFi 2.4GHz MIMO Head-Flat SAR data in Sec.14.2.1. Updated Appendix B and G.	Eunji Choi
V3	2026-05-21	Corrected Folder Open condition - Head (DSI=2) Exposure Analysis in Sec.14.2.1.	Eunji Choi
V4	2026-05-27	Added validation data for DAT across other air interfaces (LTE and NR) in Sec.6.7.	Eunji Choi
V5	2026-06-01	Corrected Bluetooth MIMO Head Reported SAR values in Sec.10.2.2.5. Updated Bluetooth MIMO Head Adjusted SAR values in Simultaneous Transmission SAR Analysis Sec.14.2.1.	Eunji Choi
V6	2026-06-15	Updated Data Referencing table in Sec.1.1. Updated n41 Ant.F Highest Reported SAR values in Sec.1.3. Updated Dielectric Property & System check in Sec.8.1 and Sec.8.2. Updated n41 Ant.F spot-check SAR test results in Sec.10.1.1.3 and Sec.10.1.1.4. Added NR Band n41 Ant.F Head SAR test results in Sec.10.1.2.5. Updated n41 Ant.F spot-check SAR test results in Sec.10.2.1.3 and Sec.10.2.1.4. Updated Simultaneous Transmission SAR Analysis in Sec.14. Updated Appendix B both FC and FO. Updated Folder Open Head SAR plots in Sec.10.2. Added Folder Open Head SAR plots to Appendix A.	Eunji Choi

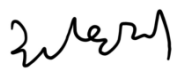
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1. Attestation of test results

Applicant Name		SAMSUNG ELECTRONICS CO.,LTD.			
FCC ID		A3LSMF971B			
Model Number		SM-F971B			
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/cm²)	
		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/cm²)	APD (mW/cm²)
Phablet	Head	1.23	0.80	0.38	
	Body-worn	1.10		0.20	
	Hotspot	1.10		0.20	
	Product Specific 10g	1.47		1.02	
RF Exposure Conditions		Simultaneous Tx SAR results (W/kg)			
Phablet	Head	1.59			
	Body-worn	1.59			
	Hotspot	1.59			
	Product Specific 10g	2.10			
RF Exposure Conditions (SAR)		Body-worn / Body Exposure	Hotspot Exposure	Product Specific 10g Exposure	
SAR Test distance(mm)		5	10	0	
Date Tested		2026-04-06 to 2026-05-18, 2026-05-27 and 2026-06-08 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			Eunji Choi Senior Laboratory Engineer 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 : A3LSMF971B]** 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: A3LSMF971B							
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	Y ¹	Y ¹	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 850	Ant.D	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
	WCDMA Band V	Ant.D	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	WCDMA Band II	Ant.F	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	WCDMA Band IV	Ant.F	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 12 (17)	Ant.A	Y ¹	Y ¹	Y ¹	Y ¹	N/A	N/A	N/A	N/A
	LTE Band 12 (17)	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 12 (17)	Ant.D	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 13	Ant.D	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 26	Ant.A	Y ¹	Y ¹	Y ¹	Y ¹	N/A	N/A	N/A	N/A
	LTE Band 26	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 26	Ant.D	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 5	Ant.D	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 (4)	Ant.F	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	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 (2)	Ant.F	N ³	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	LTE Band 41 PC3	Ant.B	Y ¹	N ³	N ³	N ³	N ³	N ³	N ³	Y ¹
	LTE Band 41 PC3	Ant.F	N ^{2,3}	N ^{2,3}	N ^{2,3}	Y ²	Y ²	Y ²	Y ²	Y ²
	LTE Band 41 PC2	Ant.B	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴
	LTE Band 41 PC2	Ant.F	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴
	NR Band n71	Ant.A	Y ¹	Y ¹	Y ¹	Y ¹	N/A	N/A	N/A	N/A
	NR Band n71	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n71	Ant.D	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n5	Ant.A	Y ¹	Y ¹	Y ¹	Y ¹	N/A	N/A	N/A	N/A
	NR Band n5	Ant.A+B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n5	Ant.D	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n66	Ant.B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n66	Ant.F	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n25 (2)	Ant.B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n25 (2)	Ant.F	N ³	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹

Note(s):

1. Spot-check procedure was applied to the worst case.
2. Spot-check procedure was applied to all test positions.
3. Full test procedure was applied because Spot-check criteria were not satisfied.
4. HPUE Linearity Evaluation was performed.

Data Referencing (Continued)

Reference Device			Variant Device							
FCC ID: A3LSMF971U			FCC ID: A3LSMF971B							
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	NR Band n41 PC3 SRS1	Ant.F	N ^{2,3}	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
	NR Band n41 PC3 SRS2	Ant.B	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n41 PC3 SRS3	Ant.E	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
	NR Band n41 PC3 SRS4	Ant.C	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	NR Band n77 PC2 SRS1	Ant.E	Y ²	N ^{2,3}	N ^{2,3}	N ^{2,3}	N ^{2,3}	N ^{2,3}	N ^{2,3}	Y ²
	NR Band n77 PC2 SRS2	Ant.A	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	N ³
	NR Band n77 PC2 SRS3	Ant.F	Y ²	N ^{2,3}	N ^{2,3}	Y ²	Y ²	N ^{2,3}	N ^{2,3}	Y ²
	NR Band n77 PC2 SRS4	Ant.C	Y ¹	N ³	N ³	N ³	Y ¹	Y ¹	Y ¹	N ³
DTS	2.4 GHz WLAN	Ant.D	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	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	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	5.3 GHz WLAN	Ant.D	Y ¹	N ³	N ³	N ³	Y ¹	Y ¹	Y ¹	Y ¹
	5.3 GHz WLAN	Ant.D+E	Y ¹	Y ¹	Y ¹	N ³	Y ¹	Y ¹	Y ¹	Y ¹
	5.5 GHz WLAN	Ant.E	Y ¹	Y ¹	N/A	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
	5.5 GHz WLAN	Ant.D	Y ¹	N ³	N/A	N ³	Y ¹	Y ¹	Y ¹	Y ¹
	5.5 GHz WLAN	Ant.D+E	Y ¹	Y ¹	N/A	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	Y ¹	Y ¹	Y ¹	Y ¹	N ³
	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	N/A	N ³	Y ¹	Y ¹	Y ¹	Y ¹
	5.9 GHz WLAN	Ant.D	Y ¹	Y ¹	N/A	N ³	Y ¹	Y ¹	Y ¹	N ³
	5.9 GHz WLAN	Ant.D+E	Y ¹	Y ¹	N/A	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
6CD/6VL	6 GHz 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}
	6 GHz WLAN	Ant.D	Y ^{1,5}	Y ^{1,5}	Y ^{1,5}	Y ^{1,5}	Y ^{1,5}	Y ^{1,5}	Y ^{1,5}	Y ^{1,5}
	6 GHz 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 ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴
	Bluetooth	Ant.D+G	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴	N ⁴
DXX	NFC		N/A	N/A	N/A	Y ¹	N/A	N/A	N/A	Y ¹
UWB	UWB		N ^{3,5}	N ^{3,5}	N/A	N ^{3,5}	N ^{3,5}	N ^{3,5}	N/A	N ^{3,5}

Note(s):

1. Spot-check procedure was applied to the worst case.
2. Spot-check procedure was applied to all test positions.
3. Full test procedure was applied because Spot-check criteria were not satisfied.
4. Full test procedure was applied because Tune-up is different from parent model.
5. 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	Ant.A	0.196	0.722	0.722	N/A	N/A			N/A
	GSM 850	Ant.A+B	0.308	0.619	0.619	N/A	0.919	0.656	0.656	N/A
	GSM 850	Ant.D	0.578	0.713	0.713	N/A	0.672	0.774	0.774	N/A
	GSM 1900	Ant.B	0.229	0.937	0.937	N/A	0.510	0.963	0.963	N/A
	WCDMA Band V	Ant.A	0.295	0.853	0.853	N/A	N/A			N/A
	WCDMA Band V	Ant.A+B	0.340	0.811	0.811	N/A	0.907	0.936	0.936	N/A
	WCDMA Band V	Ant.D	0.589	0.942	0.942	N/A	0.342	1.095	1.095	N/A
	WCDMA Band II	Ant.F	1.009	0.771	0.771	N/A	1.029	0.770	0.770	N/A
	WCDMA Band IV	Ant.F	0.758	0.765	0.765	N/A	1.015	0.645	0.645	N/A
	LTE Band 12 (17)	Ant.A	0.087	0.485	0.485	N/A	N/A			N/A
	LTE Band 12 (17)	Ant.A+B	0.235	0.572	0.572	N/A	0.413	0.738	0.738	N/A
	LTE Band 12 (17)	Ant.D	0.196	0.787	0.787	N/A	0.206	0.612	0.612	N/A
	LTE Band 13	Ant.A	0.206	0.655	0.655	N/A	N/A			N/A
	LTE Band 13	Ant.A+B	0.261	0.739	0.739	N/A	0.572	0.703	0.703	N/A
	LTE Band 13	Ant.D	0.534	1.068	1.068	N/A	0.289	0.964	0.964	N/A
	LTE Band 26	Ant.A	0.290	0.804	0.804	N/A	N/A			N/A
	LTE Band 26	Ant.A+B	0.330	0.778	0.778	N/A	0.642	0.773	0.773	N/A
	LTE Band 26	Ant.D	0.488	0.684	0.684	N/A	0.527	0.897	0.897	N/A
	LTE Band 5	Ant.A	0.305	0.830	0.830	N/A	N/A			N/A
	LTE Band 5	Ant.A+B	0.325	0.820	0.820	N/A	0.746	0.842	0.842	N/A
	LTE Band 5	Ant.D	0.436	0.726	0.726	N/A	0.454	0.963	0.963	N/A
	LTE Band 66 (4)	Ant.B	0.376	0.618	0.618	N/A	0.635	0.635	0.635	N/A
	LTE Band 66 (4)	Ant.F	1.040	0.790	0.790	N/A	0.645	0.896	0.896	N/A
	LTE Band 25 (2)	Ant.B	0.426	0.810	0.810	N/A	0.651	0.651	0.651	N/A
	LTE Band 25 (2)	Ant.F	1.010	0.780	0.780	N/A	0.357	0.742	0.742	N/A
	LTE Band 41 PC3	Ant.B	0.077	0.490	0.490	N/A	0.541	0.541	0.541	N/A
	LTE Band 41 PC3	Ant.F	0.441	0.475	0.475	N/A	1.192	0.927	0.927	N/A
	LTE Band 41 PC2	Ant.B	0.074	0.518	0.518	N/A	0.403	0.403	0.403	N/A
	LTE Band 41 PC2	Ant.F	0.462	0.481	0.481	N/A	0.900	0.639	0.639	N/A
	NR Band n71	Ant.A	0.110	0.556	0.556	N/A	N/A			N/A
	NR Band n71	Ant.A+B	0.201	0.493	0.493	N/A	0.377	0.575	0.575	N/A
	NR Band n71	Ant.D	0.223	0.726	0.726	N/A	0.219	0.633	0.633	N/A
	NR Band n5	Ant.A	0.269	0.832	0.832	N/A	N/A			N/A
	NR Band n5	Ant.A+B	0.325	0.893	0.893	N/A	0.900	0.821	0.821	N/A
	NR Band n5	Ant.D	0.616	0.730	0.730	N/A	0.649	0.798	0.798	N/A
	NR Band n66	Ant.B	0.389	0.878	0.878	N/A	0.715	0.715	0.715	N/A
	NR Band n66	Ant.F	1.076	0.920	0.920	N/A	0.625	1.079	1.079	N/A
	NR Band n25 (2)	Ant.B	0.423	0.772	0.772	N/A	0.657	0.657	0.657	N/A
	NR Band n25 (2)	Ant.F	1.024	0.912	0.912	N/A	0.415	0.834	0.834	N/A

Note(s):

1. 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.
2. 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.

The Highest Reported SAR/APD/IPD Results (Continued)

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	NR Band n41 PC3 SRS1	Ant.F	0.710	0.917	0.917	N/A	0.909	0.984	0.984	N/A
	NR Band n41 PC3 SRS2	Ant.B	0.154	0.672	0.672	N/A	0.665	0.665	0.665	N/A
	NR Band n41 PC3 SRS3	Ant.E	0.020	0.105	0.105	N/A	0.076	0.111	0.111	N/A
	NR Band n41 PC3 SRS4	Ant.C	0.003	0.152	0.152	N/A	0.161	0.161	0.161	N/A
	NR Band n77 PC2 SRS1	Ant.E	0.398	0.558	0.558	N/A	0.538	0.565	0.565	N/A
	NR Band n77 PC2 SRS2	Ant.A	0.008	0.214	0.214	N/A	0.243	0.243	0.243	N/A
	NR Band n77 PC2 SRS3	Ant.F	0.053	0.263	0.263	N/A	0.070	0.690	0.690	N/A
	NR Band n77 PC2 SRS4	Ant.C	0.001	0.167	0.167	N/A	0.147	0.147	0.147	N/A
DTS	2.4 GHz WLAN		0.927	1.039	1.039	N/A	1.230	1.034	1.034	N/A
NII	5 GHz WLAN		0.943	0.592	0.592	1.034	0.487	0.657	0.657	0.774
6CD/6VL	6 GHz WLAN		0.199	0.335	0.335	0.452	0.615	0.442	0.442	0.463
DSS	Bluetooth		0.532	0.495	0.495	1.097	0.908	0.633	0.633	1.472
DXX	NFC		N/A	N/A	N/A	0.014	N/A	N/A	N/A	0.015
UWB	UWB		0.007	0.007	N/A	0.002	0.001	0.001	N/A	0.001

Equipment Class	Band	The Highest Reported APD/IPD (mW/cm ²) of RF Exposure Conditions									
		Folder Close					Folder Open				
		APD					APD				
		Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific 10-g Exposure	IPD	Head Exposure	Body-worn Exposure	Hotspot Exposure	Product Specific 10-g Exposure	IPD
6CD/6VL	6 GHz WLAN	0.143	0.196	0.196	1.016	0.473	0.380	0.176	0.176	0.999	0.795
UWB	UWB	N/A	N/A	N/A	0.005	0.007	N/A	N/A	N/A	0.002	0.003

Note(s):

1. 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.
2. 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 Guidance 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](#) May, 2017; RF Exposure Procedures (LTE Band 41 Power Class 2)
- [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 DASY8 Module mmWave Manual
- 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

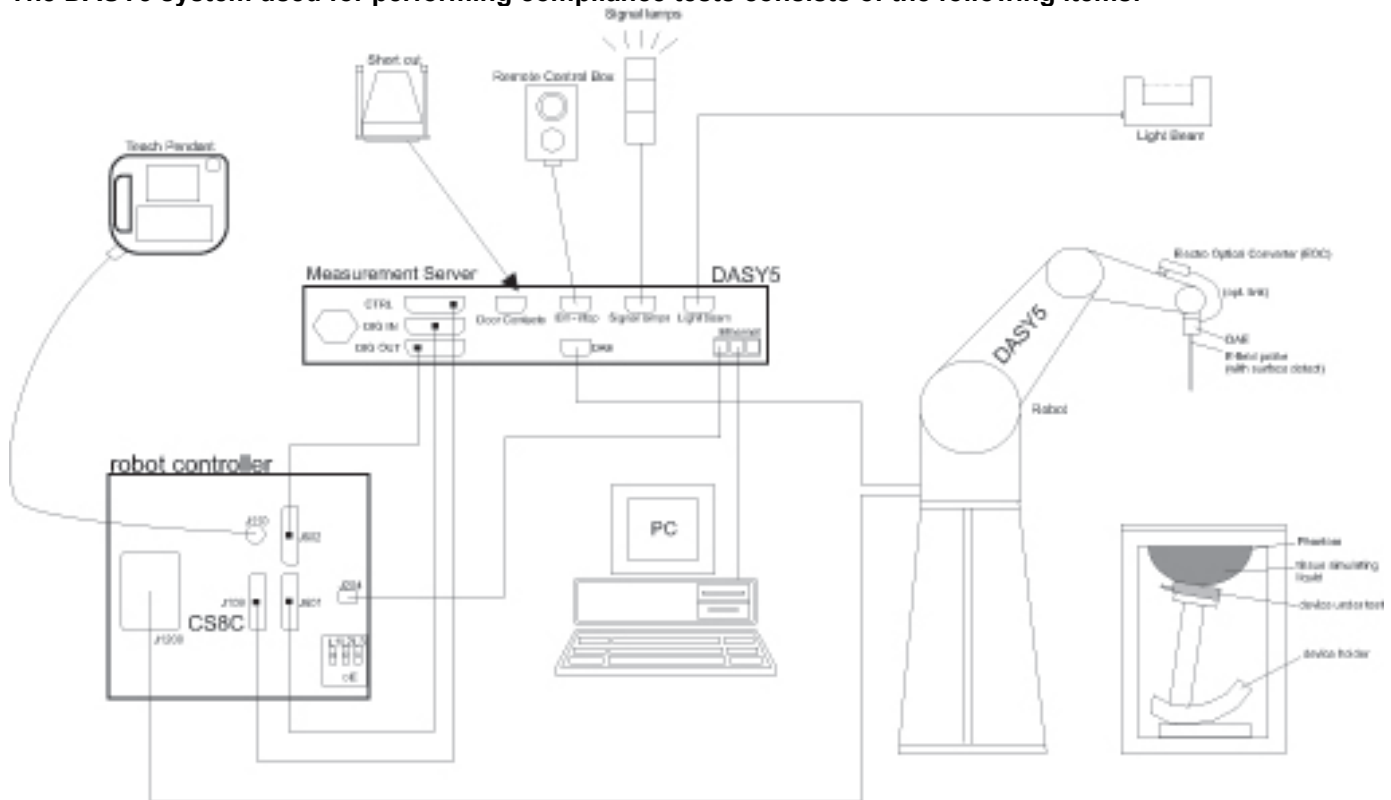
Suwon			
SAR 1 Room	SAR 2 Room	SAR 3 Room	SAR 4 Room
SAR 5 Room	SAR 6 Room	SAR 7 Room	SAR 8 Room
SAR 9 Room	SAR 10 Room	SAR 11 Room	

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

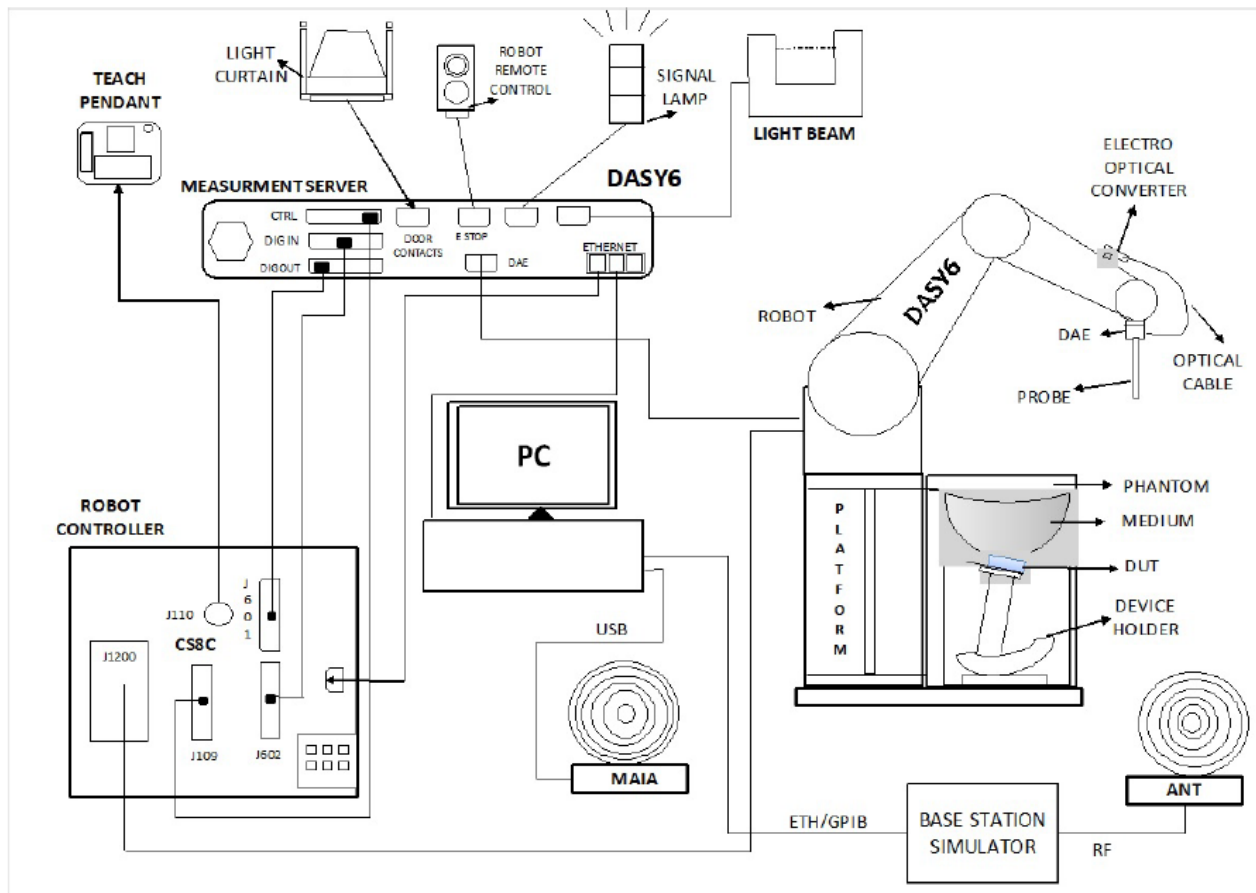
4.1. SAR Measurement System

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 100MHz, above 6GHz)

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 100MHz, above 6GHz)

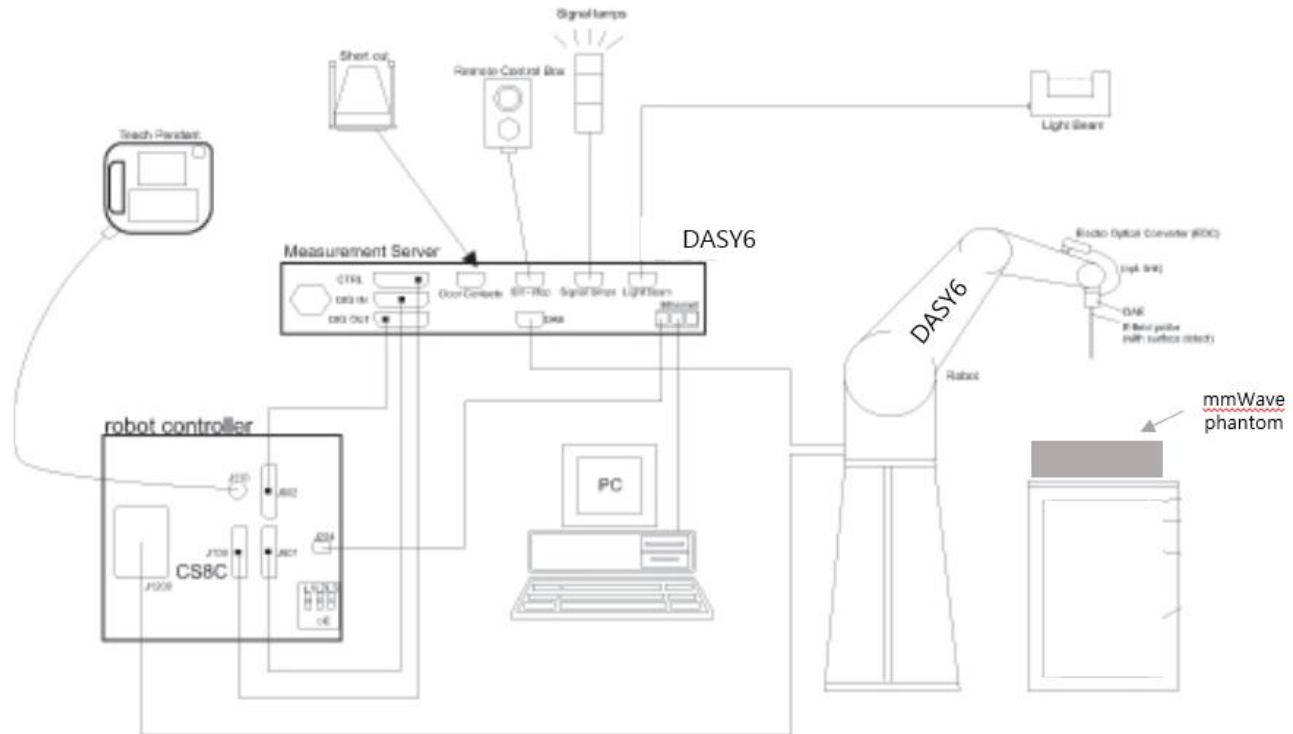
Parameter	DUT transmit frequency being tested	
	$f \leq 3$ GHz	3 GHz $< f \leq 10$ GHz
Maximum distance between the closest measured points and the phantom surface (z_{M1} in Figure 20 and Table 3, in mm)	5	$\delta \ln(2)/2^a$
Maximum angle between the probe axis and the phantom surface normal (α in 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 – 10GHz, DUT's Power density was measured at $d=2\text{mm}$.

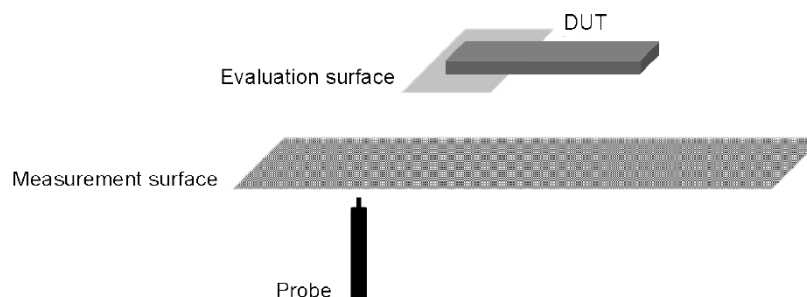
Step 3: Power drift measurement

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 $\pm 5\%$, 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 EUmmWVx 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 Equipments

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. 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	2027-04-22
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
E-Field Probe	SPEAG	EumnlWv4	9536	2027-02-16
Data Acquisition Electronics	SPEAG	DAE4	474	2026-11-20
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	D1640V2	334	2027-03-12
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	D3500V2	1075	2026-05-21
System Validation Dipole	SPEAG	D3700V2	1036	2026-05-21
System Validation Dipole	SPEAG	D3900V2	1069	2026-05-21
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

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. All equipments were used until Cal. Due data.

5. Measurement Uncertainty

SAR Measurement Uncertainty of 100MHz to 6GHz

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

SAR Measurement Uncertainty of 9MHz to 19MHz

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.	c/ (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 6GHz to 10GHz

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 6GHz to 10GHz

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% ±1.2dB	±32.2% ±1.2dB

IPD Measurement Uncertainty of 6GHz to 10GHz**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 =< 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 5/6/7/8-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	9badcaa96f4f7ece	Main Conduction	12	R37L200GH0M	Main Radiation
	2	9badcaa8b04f7ece	Main Conduction	13	a33aed81d44d7ece	Main Radiation
	3	a33aed81a34d7ece	Main Conduction	14	R37L200G6SB	WLAN/BT Radiation
	4	a33af0591e4d7ece	Main Conduction	15	R37L200G7GW	WLAN/BT Radiation
	5	R37L200GJBW	WLAN/BT Conduction	16	R37L20G6WL	WLAN/BT Radiation
	6	R3GL200GJKV	WLAN/BT Conduction	17	R3CL40013AX	WLAN/BT Radiation
	7	R37L200G6TH	Main Radiation	18	R3CL200FLMA	WLAN/BT Radiation
	8	R37L200G6HD	Main Radiation	19	R3CL40013JE	WLAN/BT Radiation
	9	R37L200G76E	Main Radiation	20	R3CL200FLEW	WLAN/BT Radiation
	10	R37L200G6EN	Main Radiation	21	R3CL40013HA	WLAN/BT Radiation
	11	R37L200G7BH	Main Radiation	22	R37L200GF1Y	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 II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA & DC-HSDPA (Category 24) HSUPA (Category 6) & HSPA+ (DL only)		100%
LTE	FDD Bands 12/13/17/26/5/66/4/25/2 TDD Bands 41	QPSK/ 16QAM/ 64QAM/ 256QAM Rel. 17 Carrier Aggregation (2 Uplink and 6 Downlinks)		100% (FDD) 63.3% (TDD) Power Class 3 43.3% (TDD) Power Class 2
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
5G NR (Sub6)	FDD Bands n71/n5/n66/n25/n2 TDD Bands n41/n77 ²	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		85.0% (BT-LE_1M) 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 LTE Band 41 and NR Band n77.
3. NR TDD Band n41/n77 has support SRS (1, 2, 3, 4) modes.
4. In addition to EN-DC modes 5GNR 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.
5. 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. This device supports Bluetooth tethering in only Ant.1(Ant.D).

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 Plimit Determination

Table 6.3.1: Plimit 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	Pmax (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	Plimit corresponding to 1.0 W/kg (SAR_design_target) (1g) / 2.5 W/kg (SAR_design_target) (10g)						
GSM 850	A, A+B	AG 0	21.3		21.3		26.3	27.3	25.3
GSM 850	D	AG 1	20.3		20.3		26.1	28.4	25.1
GSM 1900	B	AG 0	16.3		18.3		16.3	24.3	22.3
WCDMA 2	F	AG 1	15.5		16.5		15.5	20.5	24.0
WCDMA 4	F	AG 1	15.5		15.5		15.5	19.0	23.5
WCDMA 5	A, A+B	AG 0	22.0		22.0		25.3	25.3	24.3
WCDMA 5	D	AG 1	21.0		21.0		29.4	27.5	24.3
LTE Band 12 (17)	A, A+B	AG 0	22.0		22.0		29.0	28.4	24.2
LTE Band 12 (17)	D	AG 1	22.0		23.0		29.7	31.0	24.0
LTE Band 13	A, A+B	AG 0	22.0		22.0		27.1	27.6	24.5
LTE Band 13	D	AG 1	22.0		23.0		27.3	27.7	24.0
LTE Band 26	A, A+B	AG 0	22.0		22.0		26.2	26.1	24.5
LTE Band 26	D	AG 1	21.0		21.0		25.7	27.7	24.0
LTE Band 5	A, A+B	AG 0	22.0		22.0		26.4	25.7	24.5
LTE Band 5	D	AG 1	21.0		21.0		26.5	28.2	24.0
LTE Band 66(4)	B	AG 0	15.0		16.0		15.0	25.0	24.0
LTE Band 66(4)	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	25.0	24.0
LTE Band 25(2)	F	AG 1	15.5		16.5		19.0	21.0	24.2
LTE Band 41 PC3	B	AG 0	14.5		16.0		14.5	28.4	22.0
LTE Band 41 PC3	F	AG 1	14.0		16.0		14.0	15.5	22.0
LTE Band 41 PC2	B	AG 0	14.5		16.0		14.5	28.4	22.0
LTE Band 41 PC2	F	AG 1	14.0		16.0		14.0	15.5	22.0
NR Band n71	A, A+B	AG 0	22.0		22.0		29.3	29.8	24.5
NR Band n71	D	AG 1	22.0		23.0		29.0	32.0	24.5
NR Band n5	A, A+B	AG 0	22.0		22.0		25.5	25.7	24.5
NR Band n5	D	AG 1	21.0		21.0		25.5	27.6	24.5
NR Band n66	B	AG 0	15.0		16.0		15.0	25.7	24.0
NR Band n66	F	AG 1	15.5		15.5		19.0	20.0	24.2
NR Band n25(2)	B	AG 0	15.5		17.0		15.5	26.4	24.0
NR Band n25(2)	F	AG 1	15.5		16.5		19.0	21.0	24.2
NR Band n41 SRS1 (PC3)	F	AG 1	14.0		16.0		14.0	15.5	24.0
NR Band n41 SRS2 (PC3)	B	AG 0	14.5		16.0		14.5	19.0	23.0
NR Band n41 SRS3 (PC3)	E	AG 1	12.0		12.0		12.0	12.0	23.0
NR Band n41 SRS4 (PC3)	C	AG 0	12.0		12.0		12.0	12.0	22.5
NR Band n41 Switching SRS1 (PC3)	B	AG 0	14.5		16.0		14.5	23.0	24.0
NR Band n41 Switching SRS2 (PC3)	F	AG 1	14.0		16.0		14.0	15.5	23.5
NR Band n41 Switching SRS3 (PC3)	C	AG 0	12.0		12.0		12.0	12.0	23.5
NR Band n41 Switching SRS4 (PC3)	E	AG 1	12.0		12.0		12.0	12.0	22.0
NR Band n77(78) SRS1 (PC2)	E	AG 1	15.0		16.0		16.0	18.0	26.0
NR Band n77(78) SRS2 (PC2)	A	AG 0	12.0		12.0		12.0	12.0	23.0
NR Band n77(78) SRS3 (PC2)	F	AG 1	12.0		12.0		12.0	12.0	24.0
NR Band n77(78) SRS4 (PC2)	C	AG 0	12.0		12.0		12.0	12.0	23.0
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	17.0
UNII-2A SISO Ant. 1	E	AG 1	13.0		13.0		15.0	15.0	17.0
UNII-2A SISO Ant. 2	D	AG 1	13.0		13.0		15.0	15.0	17.0
UNII-2A MIMO	E+D	AG 1	13.0		13.0		15.0	15.0	17.0
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	17.0
UNII-4 SISO Ant. 2	D	AG 1	13.0		13.0		15.0	15.0	17.0
UNII-4 MIMO	E+D	AG 1	13.0		13.0		15.0	15.0	17.0
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	15.0		15.0		12.5	12.5	19.0
Bluetooth Ant. 2	G	AG 1	15.0		15.0		12.5	12.5	19.0
Bluetooth MIMO	D+G	AG 1	19.9		26.4		12.5	12.5	14.0

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 $P_{\text{limit}} + 1\text{dB}$ 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	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
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
GSM850	Ant.D	Voice	1	33.50	24.30	30.50	21.30	30.50	21.30	33.50	24.30	33.50	24.30
		GPRS	1	33.50	24.30	30.50	21.30	30.50	21.30	33.50	24.30	33.50	24.30
		GPRS	2	31.50	25.30	26.50	20.30	26.50	20.30	31.50	25.30	31.50	25.30
		GPRS	3	30.50	26.10	25.50	21.10	25.50	21.10	30.50	26.10	30.50	26.10
		GPRS	4	28.50	25.30	24.00	20.80	24.00	20.80	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
GSM850	Ant.D	EGPRS	4	23.00	19.80	23.00	19.80	23.00	19.80	23.00	19.80	23.00	19.80

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
W-CDMA Band IV	Ant.F	R99	24.50	16.50	16.50	16.50	20.00
		HSDPA	23.50	15.50	15.50	15.50	19.00
		HSUPA	23.50	15.50	15.50	15.50	19.00
		DC-HSDPA	23.50	15.50	15.50	15.50	19.00
W-CDMA Band II	Ant.F	R99	25.00	16.50	17.50	16.50	21.50
		HSDPA	24.00	15.50	16.50	15.50	20.50
		HSUPA	24.00	15.50	16.50	15.50	20.50
		DC-HSDPA	24.00	15.50	16.50	15.50	20.50
W-CDMA Band V	Ant.D	R99	25.30	22.00	22.00	25.30	25.30
		HSDPA	24.30	21.00	21.00	24.30	24.30
		HSUPA	24.30	21.00	21.00	24.30	24.30
		DC-HSDPA	24.30	21.00	21.00	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 12	Ant.D	QPSK	25.00	23.00	24.00	25.00	25.00
LTE Band 17	Ant.A & Ant.A+B	QPSK	25.20	22.00	23.00	25.20	25.20
LTE Band 17	Ant.D	QPSK	25.00	22.00	24.00	25.00	25.00
LTE Band 13	Ant.A & Ant.A+B	QPSK	25.50	23.00	23.00	25.50	25.50
LTE Band 13	Ant.D	QPSK	25.00	23.00	24.00	25.00	25.00
LTE Band 26	Ant.A & Ant.A+B	QPSK	25.50	23.00	23.00	25.50	25.50
LTE Band 26	Ant.D	QPSK	25.00	22.00	22.00	25.00	25.00
LTE Band 5	Ant.A & Ant.A+B	QPSK	25.50	23.00	23.00	25.50	25.50
LTE Band 5	Ant.D	QPSK	25.00	22.00	22.00	25.00	25.00
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 4	Ant. F	QPSK	25.00	16.50	16.50	20.00	21.00
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 2	Ant. F	QPSK	25.20	16.50	17.50	20.00	22.00
LTE Band 41 PC3	Ant.B	QPSK	25.00	17.50	19.00	17.50	25.00
LTE Band 41 PC3	Ant.F	QPSK	25.00	17.00	19.00	17.00	18.50
LTE Band 41 PC2	Ant.B	QPSK	26.50	19.10	20.60	19.10	26.50
LTE Band 41 PC2	Ant.F	QPSK	26.50	18.60	20.60	18.60	20.10

NR-Sub6 FDD 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 n71	Ant.A & Ant.A+B	DFT-s-OFDM QPSK	25.50	23.00	23.00	25.50	25.50
NR Band n71	Ant.D	DFT-s-OFDM QPSK	25.50	23.00	24.00	25.50	25.50
NR Band n5	Ant.A & Ant.A+B	DFT-s-OFDM QPSK	25.50	23.00	23.00	25.50	25.50
NR Band n5	Ant.D	DFT-s-OFDM QPSK	25.50	22.00	22.00	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 n25	Ant.B	DFT-s-OFDM QPSK	25.00	16.50	18.00	16.50	25.00
NR Band n25	Ant.F	DFT-s-OFDM QPSK	25.20	16.50	17.50	20.00	22.00
NR Band n2	Ant.B	DFT-s-OFDM QPSK	25.00	16.50	18.00	16.50	25.00
NR Band n2	Ant.F	DFT-s-OFDM QPSK	25.20	16.50	17.50	20.00	22.00

NR-Sub6 TDD 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 n41 - PC3 (Voice/Data/SRS1)	Ant.F	DFT-s-OFDM QPSK	25.00	15.00	17.00	15.00	16.50
NR Band n41 (SRS2)	Ant.B	SRS CW	24.00	15.50	17.00	15.50	20.00
NR Band n41 (SRS3)	Ant.E	SRS CW	24.00	13.00	13.00	13.00	13.00
NR Band n41 (SRS4)	Ant.C	SRS CW	23.50	13.00	13.00	13.00	13.00
NR Band n41 switching - PC3 (Voice/Data/SRS1)	Ant.B	DFT-s-OFDM QPSK	25.00	15.50	17.00	15.50	24.00
NR Band n41 switching (SRS2)	Ant.F	SRS CW	24.50	15.00	17.00	15.00	16.50
NR Band n41 switching (SRS3)	Ant.C	SRS CW	24.50	13.00	13.00	13.00	13.00
NR Band n41 switching (SRS4)	Ant.E	SRS CW	23.00	13.00	13.00	13.00	13.00
NR Band n77 - PC2 (Voice/Data/SRS1)	Ant.E	DFT-s-OFDM QPSK	27.00	16.00	17.00	17.00	19.00
NR Band n77 (SRS2)	Ant.A	SRS CW	24.00	13.00	13.00	13.00	13.00
NR Band n77 (SRS3)	Ant.F	SRS CW	25.00	13.00	13.00	13.00	13.00
NR Band n77 (SRS4)	Ant.C	SRS CW	24.00	13.00	13.00	13.00	13.00

NR Bands n41 Configuration's test case determination

Band	SRS	Ant.	Plimit (dBm)			
			DSI 0	DSI 1	DSI 2	DSI 3
NR Band n41 (PC3)	1	F	15.00	17.00	15.00	16.50
	2	B	15.50	17.00	15.50	20.00
	3	E	13.00	13.00	13.00	13.00
	4	C	13.00	13.00	13.00	13.00
Band	SRS	Ant.	Plimit (dBm)			
			DSI 0	DSI 1	DSI 2	DSI 3
NR Band n41 switching (PC3)	1	B	15.50	17.00	15.50	24.00
	2	F	15.00	17.00	15.00	16.50
	3	C	13.00	13.00	13.00	13.00
	4	E	13.00	13.00	13.00	13.00

Notes:

For NR band n41 (including SRS1/2/3/4), the number of SAR test cases was reduced as the same or lower Plimits were applied to SA switching and SA/NSA.

Therefore, full SAR testing was performed in the orange box section of the table above. SAR testing was performed for the worst-case scenario in the purple box section. For details on the test results, please refer to Section 10 of the report.

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) - Pmax																						
		802.11 mode																						
		DTS : SISO 1(Ant.D) & UNII : SISO 1 (Ant.E)								DTS : SISO 2(Ant.G) & UNII : SISO 2 (Ant.D)								DTS : MIMO (Ant.D + Ant.G) & UNII : 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		20.0		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	21.0	21.0	21.0
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	21.0			21.0	21.0	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	21.0			21.0	21.0	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	21.0			21.0	21.0	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	21.0			21.0	21.0	21.0	21.0	21.0
	UNII-4	18.0					18.0	18.0	18.0	18.0			18.0	18.0	18.0	18.0	21.0			21.0	21.0	21.0	21.0	21.0
WiFi 5 GHz (BW : 40MHz)	UNII-1					18.0	18.0	ch.38: 17.0	ch.38: 17.0				18.0	18.0	ch.38: 17.0	ch.38: 17.0				21.0	21.0	ch.38: 20.0	ch.38: 20.0	21.0
	UNII-2A					18.0	18.0	18.0	18.0				18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0	21.0
	UNII-2C					18.0	18.0	18.0	18.0				18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0	21.0
	UNII-3					18.0	18.0	18.0	18.0				18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0	21.0
	UNII-4					18.0	18.0	18.0	18.0				18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0	21.0
WiFi 5 GHz (BW : 80MHz)	UNII-1					18.0	18.0	ch.42: 17.0	ch.42: 17.0					18.0	18.0	ch.42: 17.0	ch.42: 17.0				21.0	21.0	ch.42: 20.0	ch.42: 20.0
	UNII-2A					18.0	18.0	18.0	18.0					18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0
	UNII-2C					18.0	18.0	18.0	18.0					18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0
	UNII-3					18.0	18.0	18.0	18.0					18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0
	UNII-4					18.0	18.0	18.0	18.0					18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0
WiFi 5 GHz (BW : 160MHz)	UNII-1, 2A					18.0	18.0	ch.50: 17.0	ch.50: 17.0					18.0	18.0	ch.50: 17.0	ch.50: 17.0				21.0	21.0	ch.50: 20.0	ch.50: 20.0
	UNII-2C					18.0	18.0	ch.114: 17.0	ch.114: 17.0					18.0	18.0	ch.114: 17.0	ch.114: 17.0				21.0	21.0	ch.114: 21.0	ch.114: 21.0
	UNII-3, 4					18.0	18.0	18.0	18.0					18.0	18.0	18.0	18.0				21.0	21.0	21.0	21.0
	UNII-5	11.0 ch.2: 8.5					11.0	11.0	11.0	ch.2: 8.5					11.0	11.0	14.0 ch.2: 11.5					14.0	14.0	
WiFi 6 GHz_LPI (BW : 20MHz)	UNII-6	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	14.0					14.0	14.0	
	UNII-8	11.0					11.0	11.0	11.0						11.0	11.0	14.0					14.0	14.0	
	UNII-5	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: 14.0	ch.233: 14.0		
WiFi 6 GHz_LPI (BW : 40MHz)	UNII-5						13.0	13.0							13.0	13.0					16.0	16.0		
	UNII-6						13.0	13.0							13.0	13.0					16.0	16.0		
	UNII-7						13.0	13.0							13.0	13.0					16.0	16.0		
	UNII-8						13.0	13.0							13.0	13.0					16.0	16.0		
WiFi 6 GHz_LPI (BW : 80MHz)	UNII-5						16.0	16.0							16.0	16.0					19.0	19.0		
	UNII-6						16.0	16.0							16.0	16.0					19.0	19.0		
	UNII-7						16.0	16.0							16.0	16.0					19.0	19.0		
	UNII-8						16.0	16.0							16.0	16.0					19.0	19.0		
WiFi 6 GHz_LPI (BW : 160MHz)	UNII-5						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-6						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-7						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-8						17.0	17.0							17.0	17.0					20.0	20.0		
WiFi 6 GHz_LPI (BW : 320MHz)	UNII-5						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-6						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-7						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-8						17.0	17.0							17.0	17.0					20.0	20.0		
WiFi 6 GHz_SP (BW : 20MHz)	UNII-5	17.0	ch.2: 8.5				17.0	17.0	17.0	ch.2: 11.5					17.0	17.0	20.0	ch.2: 11.5				20.0	20.0	
	UNII-7	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-5						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-7						17.0	17.0							17.0	17.0					20.0	20.0		
WiFi 6 GHz_SP (BW : 80MHz)	UNII-5						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-7						17.0	17.0							17.0	17.0					20.0	20.0		
WiFi 6 GHz_SP (BW : 160MHz)	UNII-5						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-7						17.0	17.0							17.0	17.0					20.0	20.0		
WiFi 6 GHz_SP (BW : 320MHz)	UNII-5						17.0	17.0							17.0	17.0					20.0	20.0		
	UNII-7						17.0	17.0							17.0	17.0					20.0	20.0		
WiFi 6 GHz_VLP (BW : 20MHz)	UNII-5	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	9.0				9.0	9.0		
	UNII-7	6.0					6.0	6.0	6.0						6.0	6.0	9.0				9.0	9.0		
	UNII-8	6.0 ch.233: 5.5					6.0	6.0	6.0	ch.2: 5.5					6.0	6.0	9.0 ch.233: 8.5					9.0	9.0	
WiFi 6 GHz_VLP (BW : 40MHz)	UNII-5						9.0	9.0							9.0	9.0					12.0	12.0		
	UNII-6						9.0	9.0							9.0	9.0					12.0	12.0		
	UNII-7						9.0	9.0							9.0	9.0					12.0	12.0		
	UNII-8						9.0	9.0							9.0	9.0					12.0	12.0		
WiFi 6 GHz_VLP (BW : 80MHz)	UNII-5						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-6						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-7						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-8						12.0	12.0							12.0	12.0					15.0	15.0		
WiFi 6 GHz_VLP (BW : 160MHz)	UNII-5						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-6						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-7						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-8						12.0	12.0							12.0	12.0					15.0	15.0		
WiFi 6 GHz_VLP (BW : 320MHz)	UNII-5						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-6						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-7						12.0	12.0							12.0	12.0					15.0	15.0		
	UNII-8						12.0	12.0							12.0	12.0					15.0	15.0		

WLAN Bands Maximum Allowed Output Power (Continued) **P_{limit} of DSI=0**

RF Air interface	Band	Maximum allowed output power (dBm) - DSI=0																			
		802.11 mode										802.11ax mode									
		DTS : SISO 1(Ant.D) & UNI : SISO 1 (Ant.E)					DTS : SISO 2(Ant.G) & UNI : SISO 2 (Ant.D)					DTS : MIMO (Ant.D + Ant.G) & UNI : MIMO (Ant.E + Ant.D)									
a	b	g	n	ac	ax(SU)	ax(SU)	a	b	g	n	ac	ax(SU)	ax(SU)	a	b	g	n	ac	ax(SU)	ax(SU)	
WiFi 2.4 GHz	DTS		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	20.0	20.0	20.0	20.0	20.0	20.0	
WiFi 5 GHz (BW : 20MHz)	UNI-1	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	
	UNI-2A	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	
	UNI-2C	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	
	UNI-3	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	
	UNI-4	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	
WiFi 5 GHz (BW : 40MHz)	UNI-1	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	
	UNI-2A	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	
	UNI-2C	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	
	UNI-3	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	
	UNI-4	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	
WiFi 5 GHz (BW : 80MHz)	UNI-1, 2A				14.0	14.0	14.0	14.0			14.0	14.0	14.0	14.0					17.0	17.0	
	UNI-2C				14.0	14.0	14.0	14.0			14.0	14.0	14.0	14.0					17.0	17.0	
	UNI-3, 4				14.0	14.0	14.0	14.0			14.0	14.0	14.0	14.0					17.0	17.0	
	UNI-5	11.0 ch 2: 8.5				11.0	11.0	11.0	11.0 ch 2: 8.5				11.0	11.0	14.0 ch 2: 11.5					14.0	
	UNI-6	11.0				11.0	11.0	11.0	11.0				11.0	11.0	14.0					14.0	
WiFi 6 GHz_VLP (BW : 20MHz)	UNI-7	11.0				11.0	11.0	11.0	11.0				11.0	11.0	14.0					14.0	
	UNI-8	11.0 ch 233: 5.5				11.0	11.0	11.0	11.0				11.0	11.0	14.0					14.0	
	UNI-5					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-6					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-7					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
WiFi 6 GHz_VLP (BW : 40MHz)	UNI-8					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-5					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-6					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-7					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-8					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
WiFi 6 GHz_VLP (BW : 80MHz)	UNI-5					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-6					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-7					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-8					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-5					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
WiFi 6 GHz_VLP (BW : 160MHz)	UNI-6					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-7					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-8					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-5					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-6					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
WiFi 6 GHz_VLP (BW : 320MHz)	UNI-7					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-8					12.5	12.5	12.5	12.5				12.5	12.5	15.5					15.5	
	UNI-5	6.0				6.0	6.0	6.0	6.0				6.0	6.0	9.0					9.0	
	UNI-6	6.0				6.0	6.0	6.0	6.0				6.0	6.0	9.0					9.0	
	UNI-7	6.0				6.0	6.0	6.0	6.0				6.0	6.0	9.0					9.0	
WiFi 6 GHz_VLP (BW : 40MHz)	UNI-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	
	UNI-5					9.0	9.0	9.0	9.0				9.0	9.0	12.0					12.0	
	UNI-6					9.0	9.0	9.0	9.0				9.0	9.0	12.0					12.0	
	UNI-7					9.0	9.0	9.0	9.0				9.0	9.0	12.0					12.0	
	UNI-8					9.0	9.0	9.0	9.0				9.0	9.0	12.0					12.0	
WiFi 6 GHz_VLP (BW : 80MHz)	UNI-5					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-6					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-7					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-8					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-5					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
WiFi 6 GHz_VLP (BW : 160MHz)	UNI-6					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-7					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-8					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-5					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-6					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
WiFi 6 GHz_VLP (BW : 320MHz)	UNI-7					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-8					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-5					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-6					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	
	UNI-7					12.0	12.0	12.0	12.0				12.0	12.0	15.0					15.0	

P_{limit} of DSI=1

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WLAN Bands Maximum Allowed Output Power (Continued)**P_{limit} of DSI=2&3**

RF Air interface	Band	Maximum allowed output power (dBm) - DSI=2&3																				
		B02.11 mode																				
		DTS : SISO 1(Ant.D) & UNI : SISO 1 (Ant.E)										DTS : SISO 2(Ant.G) & UNI : SISO 2 (Ant.D)										
		a	b	g	n	ac	ax(SU)	bw(SU)	a	b	g	n	ac	ax(SU)	bw(SU)	a	b	g	n	ac	ax(SU)	bw(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	15.5	15.5			17.0	17.0	17.0	17.0	17.0
WiFi 5 GHz (BW : 20MHz)	UNI-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
	UNI-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
	UNI-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
	UNI-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
	UNI-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
WiFi 5 GHz (BW : 40MHz)	UNI-1					16.0	16.0	16.0	16.0			16.0	16.0	16.0				19.0	19.0	19.0	19.0	19.0
	UNI-2A					16.0	16.0	16.0	16.0			16.0	16.0	16.0				19.0	19.0	19.0	19.0	19.0
	UNI-2C					16.0	16.0	16.0	16.0			16.0	16.0	16.0				19.0	19.0	19.0	19.0	19.0
	UNI-3					16.0	16.0	16.0	16.0			16.0	16.0	16.0				19.0	19.0	19.0	19.0	19.0
	UNI-4					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 : 80MHz)	UNI-1, 2A					16.0	16.0	16.0	16.0			16.0	16.0	16.0				19.0	19.0	19.0	19.0	19.0
	UNI-2C					16.0	16.0	16.0	16.0			16.0	16.0	16.0				19.0	19.0	19.0	19.0	19.0
	UNI-3, 4					16.0	16.0	16.0	16.0			16.0	16.0	16.0				19.0	19.0	19.0	19.0	19.0
	UNI-5	11.0 ch.2: 8.5					11.0	11.0	11.0 ch.2: 8.5					11.0	11.0	14.0 ch.2: 11.5				14.0	14.0	14.0
	UNI-6	11.0					11.0	11.0	11.0					11.0	11.0	14.0				14.0	14.0	14.0
WiFi 6 GHz_LPI (BW : 20MHz)	UNI-7	11.0					11.0	11.0	11.0					11.0	11.0	14.0				14.0	14.0	14.0
	UNI-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	11.0
	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_LPI (BW : 40MHz)	UNI-8					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-8					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_LPI (BW : 80MHz)	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-8					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-9					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_LPI (BW : 160MHz)	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-8					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-9					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_LPI (BW : 320MHz)	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-8					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-9					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_SP (BW : 20MHz)	UNI-5	12.5 ch.2: 8.5					12.5 ch.2: 11.5	12.5 ch.2: 11.5	12.5 ch.2: 8.5				12.5 ch.2: 11.5	12.5 ch.2: 11.5	15.5 ch.2: 11.5					15.5 ch.2: 14.5	15.5 ch.2: 14.5	15.5 ch.2: 14.5
	UNI-7	12.5					12.5	12.5	12.5				12.5	12.5	15.5					15.5	15.5	15.5
	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_SP (BW : 40MHz)	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-8					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-9					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_SP (BW : 80MHz)	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-8					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-9					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_SP (BW : 160MHz)	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-7					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-8					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-9					12.5	12.5						12.5	12.5						15.5	15.5	15.5
WiFi 6 GHz_SP (BW : 320MHz)	UNI-5					12.5	12.5						12.5	12.5						15.5	15.5	15.5
	UNI-6	6.0					6.0	6.0	6.0				6.0	6.0	9.0					9.0	9.0	9.0
	UNI-7	6.0					6.0	6.0	6.0				6.0	6.0	9.0					9.0	9.0	9.0
	UNI-8	6.0					6.0	6.0	6.0				6.0	6.0	9.0					9.0	9.0	9.0
	UNI-9	ch.233: 5.5					6.0	6.0	ch.233: 5.5				6.0	6.0	ch.233: 8.5					9.0	9.0	9.0
WiFi 6 GHz_VLP (BW : 20MHz)	UNI-5					9.0	9.0						9.0	9.0						12.0	12.0	12.0
	UNI-6					9.0	9.0						9.0	9.0						12.0	12.0	12.0
	UNI-7					9.0	9.0						9.0	9.0						12.0	12.0	12.0
	UNI-8					9.0	9.0						9.0	9.0						12.0	12.0	12.0
	UNI-9					12.0	12.0						12.0	12.0						15.0	15.0	15.0
WiFi 6 GHz_VLP (BW : 40MHz)	UNI-5					12.0	12.0						12.0	12.0						15.0	15.0	15.0
	UNI-6					12.0	12.0						12.0	12.0						15.0	15.0	15.0
	UNI-7					12.0	12.0						12.0	12.0						15.0	15.0	15.0
	UNI-8					12.0	12.0						12.0	12.0						15.0	15.0	15.0
	UNI-9					12.0	12.0						12.0	12.0						15.0	15.0	15.0
WiFi 6 GHz_VLP (BW : 80MHz)	UNI-5					12.0	12.0						12.0	12.0						15.0	15.0	15.0
	UNI-6					12.0	12.0						12.0	12.0						15.0	15.0	15.0
	UNI-7					12.0	12.0						12.0	12.0						15.0	15.0	15.0
	UNI-8					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	20.0	20.0	15.0	15.0	18.0
		39	20.0	20.0	15.0	15.0	18.0
		78	20.0	20.0	14.0	14.0	17.0
Bluetooth (EDR)	2Mbps	0	15.5	15.0	12.0	11.0	14.5
		39	15.5	15.0	12.0	11.0	14.5
		78	15.5	15.0	11.5	10.0	14.0
	3Mbps	0	15.5	15.0	12.0	11.0	14.5
		39	15.5	15.0	12.0	11.0	14.5
		78	15.5	15.0	11.5	10.0	14.0
Bluetooth (LE)	1Mbps	37	20.0	20.0	14.0	15.0	17.5
		17	20.0	20.0	14.0	15.0	17.5
		39	20.0	20.0	13.0	14.0	16.5
	2Mbps	37	19.5	19.0	13.5	15.0	17.5
		17	19.5	19.0	13.5	15.0	17.5
		39	19.5	19.0	12.5	14.0	16.5
	125kbps	37	9.5	10.0	n/a	n/a	n/a
		17	9.5	10.0			
		39	8.5	9.0			
	500kbps	37	9.5	10.0	n/a	n/a	n/a
		17	9.5	10.0			
		39	8.5	9.0			

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	16.0	16.0	15.0	15.0	18.0
		39	16.0	16.0	15.0	15.0	18.0
		78	16.0	16.0	15.0	15.0	18.0
Bluetooth (EDR)	2Mbps	0	15.5	15.0	12.0	11.0	14.5
		39	15.5	15.0	12.0	11.0	14.5
		78	15.5	15.0	11.5	10.0	14.0
	3Mbps	0	15.5	15.0	12.0	11.0	14.5
		39	15.5	15.0	12.0	11.0	14.5
		78	15.5	15.0	11.5	10.0	14.0
Bluetooth (LE)	1Mbps	37	16.0	16.0	13.0	13.0	16.0
		17	16.0	16.0	13.0	13.0	16.0
		39	16.0	16.0	12.0	12.0	15.0
	2Mbps	37	16.0	16.0	13.0	13.0	16.0
		17	16.0	16.0	13.0	13.0	16.0
		39	16.0	16.0	12.0	12.0	15.0
	125kbps	37	9.5	10.0	n/a	n/a	n/a
		17	9.5	10.0			
		39	8.5	9.0			
	500kbps	37	9.5	10.0	n/a	n/a	n/a
		17	9.5	10.0			
		39	8.5	9.0			

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	13.5	13.5	13.5	13.5	16.5
		39	13.5	13.5	13.5	13.5	16.5
		78	13.5	13.5	13.5	13.5	16.5
Bluetooth (EDR)	2Mbps	0	13.0	13.0	12.0	11.0	14.5
		39	13.0	13.0	12.0	11.0	14.5
		78	13.0	13.0	11.5	10.0	14.0
	3Mbps	0	13.0	13.0	12.0	11.0	14.5
		39	13.0	13.0	12.0	11.0	14.5
		78	13.0	13.0	11.5	10.0	14.0
Bluetooth (LE)	1Mbps	37	13.5	13.5	13.0	13.0	16.0
		17	13.5	13.5	13.0	13.0	16.0
		39	13.5	13.5	12.0	12.0	15.0
	2Mbps	37	13.5	13.5	13.0	13.0	16.0
		17	13.5	13.5	13.0	13.0	16.0
		39	13.5	13.5	12.0	12.0	15.0
	125kbps	37	9.5	10.0	n/a	n/a	n/a
		17	9.5	10.0			
		39	8.5	9.0			
	500kbps	37	9.5	10.0	n/a	n/a	n/a
		17	9.5	10.0			
		39	8.5	9.0			

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 17	Frequency range: 704 - 716 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low				23755/ 706.5	
	Mid			23790/ 710	23790/ 710	
	High				23825/ 713.5	
	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 26	Frequency range: 814 - 849 MHz				
		Channel Bandwidth				
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz
	Low		26765/ 821.5	26740/ 819	26715/ 816.5	26705/ 815.5
	Mid		26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5
	High		26965/ 841.5	26990/ 844	27015/ 846.5	27025/ 847.5

General LTE SAR Test and Reporting Considerations (Continued)

Item	Description																																																																				
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 41	Frequency range: 2496 - 2690 MHz																																																																			
		Channel Bandwidth																																																																			
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz																																																														
	Low	39750 / 2506.0																																																																			
	Low-Mid	40185 / 2549.5																																																																			
	Mid	40620 / 2593.0																																																																			
	Mid-High	41055 / 2636.5																																																																			
	High	41490 / 2680.0																																																																			
	Band 66	Frequency range: 1710 - 1780 MHz																																																																			
		Channel Bandwidth																																																																			
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz																																																														
	Low	132072/ 1720	132047/ 1717.5	132022/ 1715	131997/ 1712.5	131987/ 1711.5	131979/ 1710.7																																																														
	Mid	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745																																																														
	High	132572/ 1770	132597/ 1772.5	132622/ 1775	132647/ 1777.5	132657/ 1778.5	132665/ 1779.3																																																														
LTE transmitter and antenna implementation	Refer to Appendix A.																																																																				
Maximum power reduction (MPR)	Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3 <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 configuration	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 & configuration 1 at 43.3% duty cycle in power class 2.

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

Item	Description															
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band n2	Frequency range: 1850 - 1910 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								374000/1870	373500/1867.5	373000/1865	372500/1862.5	372000/1860	371500/1857.5	371000/1855	370500/1852.5
	Mid								376000/1880	376000/1880	376000/1880	376000/1880	376000/1880	376000/1880	376000/1880	376000/1880
	High								378000/1890	378500/1892.5	379000/1895	379500/1897.5	380000/1900	380500/1902.5	381000/1905	381500/1907.5
	Band n5	Frequency range: 824 - 849 MHz														
		Channel Bandwidth														
	100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	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 n25	Frequency range: 1850 - 1915 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								374000/1870	373500/1867.5	373000/1865	372500/1862.5	372000/1860	371500/1857.5	371000/1855	370500/1852.5
	Mid								376500/1882.5	376500/1882.5	376500/1882.5	376500/1882.5	376500/1882.5	376500/1882.5	376500/1882.5	376500/1882.5
	High								379000/1895	379500/1897.5	380000/1900	380500/1902.5	381000/1905	381500/1907.5	382000/1910	382500/1912.5
	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	
Band n71	Frequency range: 663 - 698 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												134600/673	134100/670.5	133600/668	133147/665.5	
Mid										136100/680.5	136100/680.5	136100/680.5	136100/680.5	136100/680.5	136100/680.5	
High												137600/688	138100/690.5	138600/693	139147/695.5	
Band n77 -DoD-	Frequency range: 3450 - 3550 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						631668/3475.02		631334/3470.01		631000/3465	630866/3462.99	630668/3460.02	630500/3457.5	630334/3455.01		
Mid	633334/3500.01	633334/3500.01	633334/3500.01	633334/3500.01	633334/3500.01					633334/3500.01	633334/3500.01	633334/3500.01	633334/3500.01	633334/3500.01		
High						635000/3525		635332/3529.98		635666/3534.99	635800/3537	636000/3540	636166/3542.49	636332/3544.98		
Band n77	Frequency range: 3700 - 3980 MHz															
	Channel Bandwidth															
100 MHz	90 MHz	80 MHz	70 MHz	60 MHz	50 MHz	45 MHz	40 MHz	35 MHz	30 MHz	25 MHz	20 MHz	15 MHz	10 MHz	5 MHz		
Low	650000/3750	649668/3745.02	649334/3740.01	649000/3735	648668/3730.02	648334/3725.01	648000/3720		647668/3715.02	647500/3712.5	647334/3710.01	647168/3707.52	647000/3705			
Low-Mid									651200/3768	651000/3765	650900/3763.5	650800/3762	650700/3760.5	650600/3759		
Mid-A									654400/3816	654334/3815.01	654300/3814.5	654266/3813.99	654234/3813.51	654200/3813		
Mid-B		656000/3840	656000/3840				656000/3840		657600/3864	657666/3864.99	657700/3864.5	657734/3866.01	657766/3866.49	657800/3867		
Mid-High									660800/3912	661000/3915	661100/3916.5	661200/3918	661300/3919.5	661400/3921		
High	662000/3930	662332/3934.98	662666/3939.99	663000/3945	663332/3949.98	663666/3954.99		664000/3960		664332/3964.98	664500/3967.5	664666/3969.99	664832/3972.48	665000/3975		
SCS	NR FDD Bands : 15 kHz, NR TDD Bands : 30kHz															
Modulations Supported in UL	* DFT-s-OFDM: $\pi/2$ 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 n2	LTE Band 4/5/12/13/66															
NR Band n5	LTE Band 2/4/66															
NR Band n25	LTE Band 12															
NR Band n41	LTE Band 2/4/5/12/66															
NR Band n66	LTE Band 2/5/12/13															
NR Band n71	N/A															

Notes:

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

6.7. 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/B26/B71
- NR Bn5/n71

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.		AntA+B		Ant.		AntA	
Band		WCDMA Band 5		Band		WCDMA Band 5	
RF ExposureCondition		Head		RF ExposureCondition		Body-worn & Hotspot	
Mode		QPSK		Mode		Rel.99	
DSI		3		DSI		1	
Dist. (mm)		0		Dist. (mm)		5	
Test Position		Right Touch		Test Position		Rear	
Ch. #		4183		Ch. #		4183	
Freq. (MHz)		836.6		Freq. (MHz)		836.6	
RB Allocation		-		RB Allocation		-	
RB Offset		-		RB Offset		-	
Meas. SAR (W/kg)		0.285		Meas. SAR (W/kg)		0.714	
Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune	Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	20F0	0.245	N/A	Auto Tune	20C3	0.685	N/A
143	0F	0.018	-93%	26	0D2	0.029	-96%
0	20F0	0.168	-31%	27	20C3	0.687	0%
1	1FF0	0.134	-45%	28	1FC3	0.673	-2%
Turned Auto tune back on				Turned Auto tune back on			
Auto Tune	20F0	0.222	-9%	Auto Tune	20C3	0.681	-1%

Ant.		AntA+B		Ant.		AntA+B	
Band		LTE Band 26		Band		LTE Band 5	
RF ExposureCondition		Head		RF ExposureCondition		Body-worn & Hotspot	
Mode		QPSK		Mode		QPSK	
DSI		3		DSI		1	
Dist. (mm)		0		Dist. (mm)		5	
Test Position		Right Touch		Test Position		Rear	
Ch. #		26865		Ch. #		20525	
Freq. (MHz)		831.5		Freq. (MHz)		836.5	
RB Allocation		1		RB Allocation		25	
RB Offset		0		RB Offset		0	
Meas. SAR (W/kg)		0.275		Meas. SAR (W/kg)		0.705	
Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune	Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	20F0	0.247	N/A	Auto Tune	20F0	0.650	N/A
143	0F	0.003	-36%	143	0F	0.024	-91%
0	20F0	0.229	-3%	0	20F0	0.644	-1%
1	1FF0	0.222	-4%	1	1FF0	0.588	-9%
Turned Auto tune back on				Turned Auto tune back on			
Auto Tune	20F0	0.253	1%	Auto Tune	1FF0	0.626	-4%

Ant.		AntA+B		Ant.		AntA+B	
Band		NR Band n5		Band		NR Band n5	
RF ExposureCondition		Head		RF ExposureCondition		Body-worn & Hotspot	
Mode		DFT-s- OFDM QPSK		Mode		DFT-s- OFDM QPSK	
DSI		3		DSI		1	
Dist. (mm)		0		Dist. (mm)		5	
Test Position		Right Touch		Test Position		Rear	
Ch. #		167300		Ch. #		167300	
Freq. (MHz)		836.5		Freq. (MHz)		836.5	
RB Allocation		1		RB Allocation		50	
RB Offset		1		RB Offset		28	
Meas. SAR (W/kg)		0.220		Meas. SAR (W/kg)		0.632	
Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune	Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	20F0	0.208	N/A	Auto Tune	20F0	0.685	N/A
143	0F	0.006	-29%	143	0F	0.035	-95%
0	20F0	0.201	-1%	0	20F0	0.601	-12%
1	1FF0	0.179	-4%	1	1FF0	0.543	-21%
Turned Auto tune back on				Turned Auto tune back on			
Auto Tune	20F0	0.229	3%	Auto Tune	20F0	0.661	-4%

Notes:

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

Folder Open

Ant.		AntA+B		Ant.		AntA+B	
Band		WCDMA Band 5		Band		WCDMA Band 5	
RF ExposureCondition		Head		RF ExposureCondition		Body-worn & Hotspot	
Mode		Rel.99		Mode		Rel.99	
DSI		2		DSI		0	
Dist. (mm)		0		Dist. (mm)		5	
Test Position		Left Touch		Test Position		Rear	
Ch. #		4233		Ch. #		4233	
Freq. (MHz)		846.6		Freq. (MHz)		846.6	
RB Allocation		-		RB Allocation		-	
RB Offset		-		RB Offset		-	
Meas. SAR (W/kg)		0.760		Meas. SAR (W/kg)		0.784	
Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune	Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	20B4	0.671	N/A	Auto Tune	20F0	0.742	N/A
35	0C3	0.047	-93%	143	0F	0.014	-98%
36	20B4	0.649	-3%	0	20F0	0.655	-12%
37	1FB4	0.583	-13%	1	1FF0	0.639	-14%
Turned Auto tune back on				Turned Auto tune back on			
Auto Tune	20B4	0.675	1%	Auto Tune	20F0	0.713	-4%

Ant.		AntA+B		Ant.		AntA+B	
Band		LTE Band 5		Band		LTE Band 5	
RF ExposureCondition		Head		RF ExposureCondition		Body-worn & Hotspot	
Mode		QPSK		Mode		QPSK	
DSI		2		DSI		0	
Dist. (mm)		0		Dist. (mm)		0	
Test Position		Left Touch		Test Position		Rear	
Ch. #		20525		Ch. #		20525	
Freq. (MHz)		836.5		Freq. (MHz)		836.5	
RB Allocation		1		RB Allocation		25	
RB Offset		0		RB Offset		0	
Meas. SAR (W/kg)		0.635		Meas. SAR (W/kg)		0.715	
Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune	Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	20F0	0.580	N/A	Auto Tune	20F0	0.700	N/A
143	0F	0.015	-97%	143	0F	0.023	-97%
0	20F0	0.543	-6%	0	20F0	0.690	-1%
1	1FF0	0.526	-9%	1	1FF0	0.616	-12%
Turned Auto tune back on				Turned Auto tune back on			
Auto Tune	20F0	0.545	-6%	Auto Tune	20F0	0.697	0%

Ant.		AntA+B		Ant.		AntA+B	
Band		NR Band n5		Band		NR Band n5	
RF ExposureCondition		Head		RF ExposureCondition		Body-worn & Hotspot	
Mode		DFT-s- OFDM QPSK		Mode		DFT-s- OFDM QPSK	
DSI		2		DSI		0	
Dist. (mm)		5		Dist. (mm)		5	
Test Position		Left Touch		Test Position		Rear	
Ch. #		167300		Ch. #		167300	
Freq. (MHz)		836.5		Freq. (MHz)		836.5	
RB Allocation		50		RB Allocation		50	
RB Offset		28		RB Offset		28	
Meas. SAR (W/kg)		0.483		Meas. SAR (W/kg)		0.634	
Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune	Scen#	Code	Avg. Value of Time Sweep (W/kg)	Deviation with auto tune
Auto Tune	20F0	0.479	N/A	Auto Tune	20F0	0.739	N/A
143	0F	0.014	-97%	143	0F	0.021	-97%
0	20F0	0.412	-14%	0	20F0	0.738	0%
1	1FF0	0.404	-16%	1	1FF0	0.686	-7%
Turned Auto tune back on				Turned Auto tune back on			
Auto Tune	20F0	0.468	-2%	Auto Tune	20F0	0.772	4%

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 II	Ant.F	21.5	21.16	17.5	16.93

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 II	Ant.F	17.5	16.99	21.5	21.32

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	21.61	21.56	21.56	22.19	21.99	21.51	22.07	19.87	19.76	19.39	19.04	19.34	19.75	19.35
WCDMA 2	Ant.F	16.22	16.35	17.19	16.36	17.17	16.57	16.51	15.15	15.55	16.05	15.87	15.41	15.11	15.13
LTE Band 12	Ant.D	23.28	23.43	22.75	22.98	23.64	22.76	23.26	22.09	22.06	22.65	21.87	22.65	22.69	22.00
LTE Band 13	Ant.D	22.53	23.68	23.20	22.76	23.48	22.75	23.62	22.26	21.73	22.51	22.55	22.23	22.44	22.19
LTE Band 66(4)	Ant.B	16.49	15.54	15.51	15.59	15.87	16.39	15.58	14.63	14.98	15.48	15.22	15.23	14.91	15.09
LTE Band 25(2)	Ant.B	17.15	16.86	17.54	17.23	16.54	17.38	17.50	15.16	15.62	15.05	16.05	16.05	16.04	15.56
LTE Band 25(2)	Ant.F	17.11	16.27	16.28	17.04	16.86	16.49	16.91	15.98	15.02	15.26	15.47	15.74	15.72	16.18
LTE Band 41	Ant.B	18.56	18.17	17.60	18.66	17.71	18.13	18.44	16.95	16.52	16.92	16.45	17.12	17.02	16.21
LTE Band 41	Ant.F	18.48	18.23	17.69	18.20	18.00	17.60	18.58	16.18	16.44	16.55	15.99	16.09	16.64	16.03
NR Band n71	Ant.D	23.12	23.52	22.93	23.32	23.23	23.19	23.36	21.91	21.81	22.17	22.04	21.90	22.03	22.33
NR Band n66	Ant.B	16.55	15.75	15.78	16.16	16.54	16.36	16.26	15.55	15.59	15.16	14.57	15.39	15.35	14.85
NR Band n25(2)	Ant.B	16.60	17.65	17.41	17.62	17.16	16.81	17.68	15.17	15.06	15.03	16.16	15.28	16.20	15.83
NR Band n25(2)	Ant.F	16.68	16.60	16.37	16.76	16.82	16.77	16.75	15.53	15.87	15.32	15.19	15.67	15.42	15.41
NR Band n41	Ant.F	16.19	15.97	15.64	16.22	16.51	16.40	15.79	13.86	13.63	13.62	14.26	13.87	14.04	14.59
NR Band n41	Ant.B	15.59	15.91	16.54	15.63	16.02	16.33	16.11	14.96	15.03	14.02	14.33	14.36	14.28	14.06
NR Band n77	Ant.E	15.93	16.41	15.95	16.05	16.65	16.67	15.57	14.53	15.59	14.86	14.76	15.04	14.76	14.85

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	19.68	19.61	19.41	19.81	19.85	19.81	19.31	19.78	21.38	22.00	21.36	21.99	22.04	21.12
WCDMA 2	Ant.F	15.72	16.09	15.42	16.16	15.90	15.82	15.95	15.82	17.10	16.83	17.00	16.28	16.58	16.99
LTE Band 71	Ant.D	21.50	22.16	21.76	22.09	21.95	21.97	22.53	21.63	22.64	22.89	23.18	22.87	23.60	22.67
LTE Band 12	Ant.D	22.54	22.12	21.77	21.80	22.61	22.06	21.61	22.23	23.19	23.26	22.91	23.35	22.92	23.69
LTE Band 13	Ant.D	21.84	22.43	21.51	22.47	21.62	22.20	21.73	21.86	22.67	23.24	23.06	22.83	23.16	23.64
LTE Band 66(4)	Ant.B	15.15	14.86	15.17	15.02	15.13	14.86	15.15	14.91	16.56	16.50	16.65	16.38	15.67	15.99
LTE Band 25(2)	Ant.B	15.84	16.15	15.86	15.53	15.78	15.86	15.94	16.08	17.47	16.83	17.05	17.27	16.63	16.55
LTE Band 25(2)	Ant.F	15.70	16.05	15.96	15.53	15.68	15.02	15.25	15.10	16.42	16.88	16.06	16.29	16.83	16.24
LTE Band 41	Ant.B	16.17	16.63	16.78	16.40	17.12	17.10	16.54	16.57	18.28	17.64	18.02	17.52	17.63	17.62
LTE Band 41	Ant.F	16.48	16.44	16.69	16.42	16.38	15.57	15.61	15.80	17.53	17.89	17.82	18.36	17.58	18.59
NR Band n71	Ant.D	21.95	22.33	21.54	21.64	22.24	21.84	22.23	21.56	22.74	23.19	23.20	22.55	23.59	22.79
NR Band n66	Ant.B	14.97	14.58	15.02	14.95	15.23	15.04	14.82	15.02	16.12	16.42	16.25	16.38	16.07	16.13
NR Band n25(2)	Ant.B	15.95	15.62	15.21	15.39	15.84	15.13	15.85	15.15	16.73	17.09	17.41	17.48	16.58	17.68
NR Band n25(2)	Ant.F	16.13	15.29	15.82	15.86	15.12	15.74	16.07	15.76	16.93	16.56	16.06	16.21	16.19	17.17
NR Band n41	Ant.F	13.53	14.60	13.98	14.51	14.05	14.00	14.09	14.38	15.96	16.16	15.98	16.39	16.17	16.00
NR Band n41	Ant.B	14.95	14.29	14.27	14.00	14.28	14.56	14.25	14.04	16.42	16.11	15.94	16.42	15.60	16.53
NR Band n77	Ant.E	14.73	14.65	15.27	14.69	14.88	15.69	14.76	15.26	16.16	15.77	16.50	16.61	15.97	15.76

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, C, D, E, F, G, D+G, D+E)	0 mm	Yes	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.C		Yes	Yes			Yes	Yes	
		Ant.D		Yes	Yes		Yes			Yes
		Ant.E		Yes	Yes		Yes	Yes		
		Ant.F		Yes	Yes		Yes			
	Product Specific 10-g	All WWAN antennas (Ant.A+B, A, B, C, 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		Yes			
		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.
- 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, A, B, C, 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.C		Yes	Yes				Yes	
		Ant.D		Yes	Yes		Yes			Yes
		Ant.E		Yes	Yes		Yes			
		Ant.F		Yes	Yes		Yes			
	Product Specific 10-g	All WWAN antennas (Ant.A+B, B, C, 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		Yes			
		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 ±(%)	
2026-04-15	Head 5200	e'	36.0900	Relative Permittivity (ε _r):	36.09	35.99	0.28	5
		e"	15.7500	Conductivity (σ):	4.55	4.65	-2.09	5
	Head 5250	e'	36.0100	Relative Permittivity (ε _r):	36.01	35.93	0.21	5
		e"	15.7900	Conductivity (σ):	4.61	4.70	-1.97	5
	Head 5600	e'	35.3700	Relative Permittivity (ε _r):	35.37	35.53	-0.46	5
		e"	16.0700	Conductivity (σ):	5.00	5.06	-1.11	5
	Head 5750	e'	35.0800	Relative Permittivity (ε _r):	35.08	35.36	-0.80	5
		e"	16.1900	Conductivity (σ):	5.18	5.21	-0.72	5
	Head 5800	e'	34.9800	Relative Permittivity (ε _r):	34.98	35.30	-0.91	5
		e"	16.2300	Conductivity (σ):	5.23	5.27	-0.68	5
	Head 5825	e'	34.9300	Relative Permittivity (ε _r):	34.93	35.30	-1.05	5
		e"	16.2400	Conductivity (σ):	5.26	5.27	-0.19	5
2026-04-15	Head 2450	e'	38.5700	Relative Permittivity (ε _r):	38.57	39.20	-1.61	5
		e"	13.1200	Conductivity (σ):	1.79	1.80	-0.71	5
	Head 2400	e'	38.6600	Relative Permittivity (ε _r):	38.66	39.30	-1.62	5
		e"	13.1500	Conductivity (σ):	1.75	1.75	0.18	5
	Head 2500	e'	38.5100	Relative Permittivity (ε _r):	38.51	39.14	-1.60	5
		e"	13.0900	Conductivity (σ):	1.82	1.85	-1.86	5
2026-04-20	Head 5200	e'	35.8500	Relative Permittivity (ε _r):	35.85	35.99	-0.39	5
		e"	16.1500	Conductivity (σ):	4.67	4.65	0.40	5
	Head 5250	e'	35.7500	Relative Permittivity (ε _r):	35.75	35.93	-0.51	5
		e"	16.2000	Conductivity (σ):	4.73	4.70	0.57	5
	Head 5600	e'	35.0500	Relative Permittivity (ε _r):	35.05	35.53	-1.36	5
		e"	16.4700	Conductivity (σ):	5.13	5.06	1.35	5
2026-04-20	Head 2450	e'	38.8000	Relative Permittivity (ε _r):	38.80	39.20	-1.02	5
		e"	13.4600	Conductivity (σ):	1.83	1.80	1.87	5
	Head 2400	e'	38.8600	Relative Permittivity (ε _r):	38.86	39.30	-1.11	5
		e"	13.4500	Conductivity (σ):	1.79	1.75	2.47	5
	Head 2500	e'	38.7400	Relative Permittivity (ε _r):	38.74	39.14	-1.01	5
		e"	13.4700	Conductivity (σ):	1.87	1.85	0.99	5
2026-04-28	Head 1600	e'	40.4900	Relative Permittivity (ε _r):	40.49	40.32	0.43	5
		e"	13.8900	Conductivity (σ):	1.24	1.28	-3.60	5
	Head 1640	e'	40.4600	Relative Permittivity (ε _r):	40.46	40.25	0.51	5
		e"	13.7600	Conductivity (σ):	1.25	1.31	-3.99	5
	Head 1700	e'	40.2500	Relative Permittivity (ε _r):	40.25	40.16	0.22	5
		e"	13.6300	Conductivity (σ):	1.29	1.34	-3.91	5
2026-04-28	Head 1750	e'	40.0900	Relative Permittivity (ε _r):	40.09	40.08	0.01	5
		e"	13.5100	Conductivity (σ):	1.31	1.37	-3.97	5
	Head 1680	e'	40.3300	Relative Permittivity (ε _r):	40.33	40.19	0.34	5
		e"	13.6400	Conductivity (σ):	1.27	1.33	-4.16	5
	Head 1780	e'	40.0300	Relative Permittivity (ε _r):	40.03	40.04	-0.02	5
		e"	13.3900	Conductivity (σ):	1.33	1.39	-4.38	5
2026-04-28	Head 1900	e'	40.1000	Relative Permittivity (ε _r):	40.10	40.00	0.25	5
		e"	13.2500	Conductivity (σ):	1.40	1.40	-0.01	5
	Head 1850	e'	40.1100	Relative Permittivity (ε _r):	40.11	40.00	0.27	5
		e"	13.3000	Conductivity (σ):	1.37	1.40	-2.28	5
	Head 1915	e'	40.1000	Relative Permittivity (ε _r):	40.10	40.00	0.25	5
		e"	13.2500	Conductivity (σ):	1.41	1.40	0.78	5
2026-04-29	Head 5200	e'	36.3900	Relative Permittivity (ε _r):	36.39	35.99	1.11	5
		e"	15.7200	Conductivity (σ):	4.55	4.65	-2.27	5
	Head 5250	e'	36.2600	Relative Permittivity (ε _r):	36.26	35.93	0.91	5
		e"	15.7700	Conductivity (σ):	4.60	4.70	-2.10	5
	Head 5600	e'	35.5700	Relative Permittivity (ε _r):	35.57	35.53	0.10	5
		e"	16.1100	Conductivity (σ):	5.02	5.06	-0.87	5
	Head 5750	e'	35.3000	Relative Permittivity (ε _r):	35.30	35.36	-0.18	5
		e"	16.2600	Conductivity (σ):	5.20	5.21	-0.29	5
	Head 5800	e'	35.2100	Relative Permittivity (ε _r):	35.21	35.30	-0.25	5
		e"	16.2800	Conductivity (σ):	5.25	5.27	-0.37	5
	Head 5825	e'	35.1600	Relative Permittivity (ε _r):	35.16	35.30	-0.40	5
		e"	16.3100	Conductivity (σ):	5.28	5.27	0.24	5

SAR 1 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-05-03	Head 2450	e'	39.7000	Relative Permittivity (ϵ_r):	39.70	39.20	1.28	5
		e''	13.1200	Conductivity (σ):	1.79	1.80	-0.71	5
	Head 2400	e'	39.8200	Relative Permittivity (ϵ_r):	39.82	39.30	1.33	5
		e''	13.2200	Conductivity (σ):	1.76	1.75	0.72	5
	Head 2500	e'	39.7000	Relative Permittivity (ϵ_r):	39.70	39.14	1.44	5
		e''	13.0800	Conductivity (σ):	1.82	1.85	-1.93	5
2026-05-06	Head 5200	e'	36.8100	Relative Permittivity (ϵ_r):	36.81	35.99	2.28	5
		e''	15.5700	Conductivity (σ):	4.50	4.65	-3.21	5
	Head 5250	e'	36.7200	Relative Permittivity (ϵ_r):	36.72	35.93	2.19	5
		e''	15.6100	Conductivity (σ):	4.56	4.70	-3.09	5
	Head 5600	e'	36.0800	Relative Permittivity (ϵ_r):	36.08	35.53	1.54	5
		e''	15.9100	Conductivity (σ):	4.95	5.06	-2.10	5
	Head 5750	e'	35.8100	Relative Permittivity (ϵ_r):	35.81	35.36	1.26	5
		e''	16.0400	Conductivity (σ):	5.13	5.21	-1.64	5
	Head 5800	e'	35.7300	Relative Permittivity (ϵ_r):	35.73	35.30	1.22	5
		e''	16.0900	Conductivity (σ):	5.19	5.27	-1.54	5
	Head 5925	e'	35.5100	Relative Permittivity (ϵ_r):	35.51	35.20	0.88	5
		e''	16.1800	Conductivity (σ):	5.33	5.40	-1.29	5
2026-05-06	Head 2450	e'	39.1300	Relative Permittivity (ϵ_r):	39.13	39.20	-0.18	5
		e''	13.1000	Conductivity (σ):	1.78	1.80	-0.86	5
	Head 2400	e'	39.1800	Relative Permittivity (ϵ_r):	39.18	39.30	-0.30	5
		e''	13.1200	Conductivity (σ):	1.75	1.75	-0.05	5
	Head 2500	e'	39.1000	Relative Permittivity (ϵ_r):	39.10	39.14	-0.09	5
		e''	13.1000	Conductivity (σ):	1.82	1.85	-1.78	5
2026-05-11	Head 2450	e'	38.3200	Relative Permittivity (ϵ_r):	38.32	39.20	-2.24	5
		e''	13.2400	Conductivity (σ):	1.80	1.80	0.20	5
	Head 2400	e'	38.4000	Relative Permittivity (ϵ_r):	38.40	39.30	-2.28	5
		e''	13.2200	Conductivity (σ):	1.76	1.75	0.72	5
	Head 2500	e'	38.2200	Relative Permittivity (ϵ_r):	38.22	39.14	-2.34	5
		e''	13.2300	Conductivity (σ):	1.84	1.85	-0.81	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 Lab 2

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2026-04-20	Head 1750	e'	39.8000	Relative Permittivity (ϵ_r):	39.80	40.08	-0.71	5
		e"	13.5900	Conductivity (σ):	1.32	1.37	-3.40	5
	Head 1680	e'	39.9400	Relative Permittivity (ϵ_r):	39.94	40.19	-0.63	5
		e"	13.7500	Conductivity (σ):	1.28	1.33	-3.39	5
	Head 1780	e'	39.7300	Relative Permittivity (ϵ_r):	39.73	40.04	-0.77	5
		e"	13.5300	Conductivity (σ):	1.34	1.39	-3.38	5
2026-04-20	Head 1900	e'	39.6100	Relative Permittivity (ϵ_r):	39.61	40.00	-0.98	5
		e"	13.2400	Conductivity (σ):	1.40	1.40	-0.09	5
	Head 1850	e'	39.6100	Relative Permittivity (ϵ_r):	39.61	40.00	-0.98	5
		e"	13.3400	Conductivity (σ):	1.37	1.40	-1.98	5
	Head 1915	e'	39.6100	Relative Permittivity (ϵ_r):	39.61	40.00	-0.98	5
		e"	13.2400	Conductivity (σ):	1.41	1.40	0.70	5
2026-04-21	Head 2450	e'	37.3500	Relative Permittivity (ϵ_r):	37.35	39.20	-4.72	5
		e"	13.5100	Conductivity (σ):	1.84	1.80	2.25	5
	Head 2400	e'	37.4700	Relative Permittivity (ϵ_r):	37.47	39.30	-4.65	5
		e"	13.4800	Conductivity (σ):	1.80	1.75	2.70	5
	Head 2500	e'	37.2400	Relative Permittivity (ϵ_r):	37.24	39.14	-4.85	5
		e"	13.5200	Conductivity (σ):	1.88	1.85	1.37	5
2026-04-27	Head 2450	e'	37.5600	Relative Permittivity (ϵ_r):	37.56	39.20	-4.18	5
		e"	13.5400	Conductivity (σ):	1.84	1.80	2.47	5
	Head 2400	e'	37.6300	Relative Permittivity (ϵ_r):	37.63	39.30	-4.24	5
		e"	13.5300	Conductivity (σ):	1.81	1.75	3.08	5
	Head 2500	e'	37.4800	Relative Permittivity (ϵ_r):	37.48	39.14	-4.23	5
		e"	13.5400	Conductivity (σ):	1.88	1.85	1.52	5
2026-05-04	Head 1900	e'	39.4700	Relative Permittivity (ϵ_r):	39.47	40.00	-1.33	5
		e"	13.6700	Conductivity (σ):	1.44	1.40	3.16	5
	Head 1850	e'	39.5100	Relative Permittivity (ϵ_r):	39.51	40.00	-1.23	5
		e"	13.7800	Conductivity (σ):	1.42	1.40	1.25	5
	Head 1915	e'	39.4600	Relative Permittivity (ϵ_r):	39.46	40.00	-1.35	5
		e"	13.6500	Conductivity (σ):	1.45	1.40	3.82	5
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

SAR Lab 3

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-04-28	Head 2450	e'	38.2800	Relative Permittivity (ϵ_r):	38.28	39.20	-2.35	5
		e"	13.5600	Conductivity (σ):	1.85	1.80	2.62	5
	Head 2400	e'	38.3400	Relative Permittivity (ϵ_r):	38.34	39.30	-2.43	5
		e"	13.5600	Conductivity (σ):	1.81	1.75	3.31	5
	Head 2480	e'	38.2400	Relative Permittivity (ϵ_r):	38.24	39.16	-2.35	5
		e"	13.5600	Conductivity (σ):	1.87	1.83	2.04	5
2026-05-03	Head 2450	e'	38.2600	Relative Permittivity (ϵ_r):	38.26	39.20	-2.40	5
		e"	13.4800	Conductivity (σ):	1.84	1.80	2.02	5
	Head 2400	e'	38.3900	Relative Permittivity (ϵ_r):	38.39	39.30	-2.31	5
		e"	13.4500	Conductivity (σ):	1.79	1.75	2.47	5
	Head 2480	e'	38.1800	Relative Permittivity (ϵ_r):	38.18	39.16	-2.51	5
		e"	13.4800	Conductivity (σ):	1.86	1.83	1.44	5
2026-05-07	Head 2450	e'	38.9300	Relative Permittivity (ϵ_r):	38.93	39.20	-0.69	5
		e"	12.9900	Conductivity (σ):	1.77	1.80	-1.69	5
	Head 2400	e'	39.0000	Relative Permittivity (ϵ_r):	39.00	39.30	-0.76	5
		e"	13.0000	Conductivity (σ):	1.73	1.75	-0.96	5
	Head 2480	e'	38.8900	Relative Permittivity (ϵ_r):	38.89	39.16	-0.69	5
		e"	12.9900	Conductivity (σ):	1.79	1.83	-2.25	5
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

SAR Lab 4

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2026-04-15	Head 750	e'	41.1700	Relative Permittivity (ϵ_r):	41.17	41.96	-1.89	5
		e"	21.4100	Conductivity (σ):	0.89	0.89	-0.03	5
	Head 660	e'	41.5700	Relative Permittivity (ϵ_r):	41.57	42.42	-2.01	5
		e"	23.7000	Conductivity (σ):	0.87	0.89	-1.85	5
	Head 800	e'	40.9700	Relative Permittivity (ϵ_r):	40.97	41.71	-1.76	5
		e"	20.3300	Conductivity (σ):	0.90	0.90	0.83	5
2026-04-15	Head 835	e'	40.9000	Relative Permittivity (ϵ_r):	40.90	41.50	-1.45	5
		e"	19.6800	Conductivity (σ):	0.91	0.90	1.52	5
	Head 810	e'	40.9500	Relative Permittivity (ϵ_r):	40.95	41.65	-1.69	5
		e"	20.1300	Conductivity (σ):	0.91	0.90	1.00	5
	Head 850	e'	40.8500	Relative Permittivity (ϵ_r):	40.85	41.50	-1.57	5
		e"	19.4400	Conductivity (σ):	0.92	0.92	0.41	5
2026-04-16	Head 750	e'	40.5900	Relative Permittivity (ϵ_r):	40.59	41.96	-3.27	5
		e"	21.6800	Conductivity (σ):	0.90	0.89	1.24	5
	Head 660	e'	40.8900	Relative Permittivity (ϵ_r):	40.89	42.42	-3.61	5
		e"	23.9500	Conductivity (σ):	0.88	0.89	-0.82	5
	Head 800	e'	40.4200	Relative Permittivity (ϵ_r):	40.42	41.71	-3.08	5
		e"	20.6400	Conductivity (σ):	0.92	0.90	2.36	5
2026-04-16	Head 835	e'	40.3500	Relative Permittivity (ϵ_r):	40.35	41.50	-2.77	5
		e"	19.9800	Conductivity (σ):	0.93	0.90	3.07	5
	Head 810	e'	40.3900	Relative Permittivity (ϵ_r):	40.39	41.65	-3.03	5
		e"	20.4500	Conductivity (σ):	0.92	0.90	2.60	5
	Head 850	e'	40.3100	Relative Permittivity (ϵ_r):	40.31	41.50	-2.87	5
		e"	19.7200	Conductivity (σ):	0.93	0.92	1.86	5
2026-04-20	Head 835	e'	41.3000	Relative Permittivity (ϵ_r):	41.30	41.50	-0.48	5
		e"	19.7300	Conductivity (σ):	0.92	0.90	1.78	5
	Head 810	e'	41.3400	Relative Permittivity (ϵ_r):	41.34	41.65	-0.75	5
		e"	20.1900	Conductivity (σ):	0.91	0.90	1.30	5
	Head 850	e'	41.2900	Relative Permittivity (ϵ_r):	41.29	41.50	-0.51	5
		e"	19.4800	Conductivity (σ):	0.92	0.92	0.62	5
2026-04-23	Head 2450	e'	38.9800	Relative Permittivity (ϵ_r):	38.98	39.20	-0.56	5
		e"	13.6500	Conductivity (σ):	1.86	1.80	3.31	5
	Head 2400	e'	39.0000	Relative Permittivity (ϵ_r):	39.00	39.30	-0.76	5
		e"	13.7000	Conductivity (σ):	1.83	1.75	4.37	5
	Head 2500	e'	38.9200	Relative Permittivity (ϵ_r):	38.92	39.14	-0.55	5
		e"	13.6200	Conductivity (σ):	1.89	1.85	2.12	5
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

SAR Lab 4

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
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
2026-05-06	Head 2450	e'	39.8600	Relative Permittivity (ϵ_r):	39.86	39.20	1.68	5
		e"	12.8300	Conductivity (σ):	1.75	1.80	-2.90	5
	Head 2400	e'	39.9400	Relative Permittivity (ϵ_r):	39.94	39.30	1.64	5
		e"	12.8100	Conductivity (σ):	1.71	1.75	-2.41	5
	Head 2500	e'	39.8000	Relative Permittivity (ϵ_r):	39.80	39.14	1.69	5
		e"	12.8300	Conductivity (σ):	1.78	1.85	-3.81	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
2026-05-11	Head 2450	e'	38.7000	Relative Permittivity (ϵ_r):	38.70	39.20	-1.28	5
		e"	12.7100	Conductivity (σ):	1.73	1.80	-3.81	5
	Head 2400	e'	38.7700	Relative Permittivity (ϵ_r):	38.77	39.30	-1.34	5
		e"	12.7300	Conductivity (σ):	1.70	1.75	-3.02	5
	Head 2500	e'	38.6800	Relative Permittivity (ϵ_r):	38.68	39.14	-1.17	5
		e"	12.6900	Conductivity (σ):	1.76	1.85	-4.86	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
2026-04-20	Head 2600	e'	38.3000	Relative Permittivity (ϵ_r):	38.30	39.01	-1.82	5
		e''	13.2300	Conductivity (σ):	1.91	1.96	-2.52	5
	Head 2495	e'	38.4200	Relative Permittivity (ϵ_r):	38.42	39.14	-1.85	5
		e''	13.1700	Conductivity (σ):	1.83	1.85	-1.17	5
	Head 2700	e'	38.1000	Relative Permittivity (ϵ_r):	38.10	38.88	-2.02	5
		e''	13.3100	Conductivity (σ):	2.00	2.07	-3.48	5
2026-04-24	Head 2600	e'	38.2100	Relative Permittivity (ϵ_r):	38.21	39.01	-2.05	5
		e''	13.4100	Conductivity (σ):	1.94	1.96	-1.20	5
	Head 2495	e'	38.4100	Relative Permittivity (ϵ_r):	38.41	39.14	-1.87	5
		e''	13.3900	Conductivity (σ):	1.86	1.85	0.48	5
	Head 2700	e'	37.9000	Relative Permittivity (ϵ_r):	37.90	38.88	-2.53	5
		e''	13.3500	Conductivity (σ):	2.00	2.07	-3.19	5
2026-04-28	Head 2600	e'	37.5700	Relative Permittivity (ϵ_r):	37.57	39.01	-3.69	5
		e''	13.4900	Conductivity (σ):	1.95	1.96	-0.61	5
	Head 2495	e'	37.7500	Relative Permittivity (ϵ_r):	37.75	39.14	-3.56	5
		e''	13.4600	Conductivity (σ):	1.87	1.85	1.01	5
	Head 2700	e'	37.3600	Relative Permittivity (ϵ_r):	37.36	38.88	-3.92	5
		e''	13.5400	Conductivity (σ):	2.03	2.07	-1.81	5
2026-05-04	Head 2600	e'	38.3000	Relative Permittivity (ϵ_r):	38.30	39.01	-1.82	5
		e''	13.2900	Conductivity (σ):	1.92	1.96	-2.08	5
	Head 2495	e'	38.4300	Relative Permittivity (ϵ_r):	38.43	39.14	-1.82	5
		e''	13.2900	Conductivity (σ):	1.84	1.85	-0.27	5
	Head 2700	e'	38.1300	Relative Permittivity (ϵ_r):	38.13	38.88	-1.94	5
		e''	13.3500	Conductivity (σ):	2.00	2.07	-3.19	5
2026-05-11	Head 2450	e'	38.4400	Relative Permittivity (ϵ_r):	38.44	39.20	-1.94	5
		e''	12.9200	Conductivity (σ):	1.76	1.80	-2.22	5
	Head 2400	e'	38.5200	Relative Permittivity (ϵ_r):	38.52	39.30	-1.98	5
		e''	12.9600	Conductivity (σ):	1.73	1.75	-1.27	5
	Head 2500	e'	38.4000	Relative Permittivity (ϵ_r):	38.40	39.14	-1.88	5
		e''	12.8900	Conductivity (σ):	1.79	1.85	-3.36	5

SAR 6 Room

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2026-04-21	Head 1750	e'	40.2200	Relative Permittivity (ϵ_r):	40.22	40.08	0.34	5
		e"	13.5500	Conductivity (σ):	1.32	1.37	-3.69	5
	Head 1710	e'	40.2800	Relative Permittivity (ϵ_r):	40.28	40.15	0.33	5
		e"	13.5900	Conductivity (σ):	1.29	1.35	-4.03	5
	Head 1780	e'	40.1500	Relative Permittivity (ϵ_r):	40.15	40.04	0.28	5
		e"	13.5400	Conductivity (σ):	1.34	1.39	-3.30	5
2026-04-21	Head 1900	e'	39.9700	Relative Permittivity (ϵ_r):	39.97	40.00	-0.08	5
		e"	13.7000	Conductivity (σ):	1.45	1.40	3.38	5
	Head 1850	e'	40.0300	Relative Permittivity (ϵ_r):	40.03	40.00	0.08	5
		e"	13.5700	Conductivity (σ):	1.40	1.40	-0.29	5
	Head 1915	e'	39.9500	Relative Permittivity (ϵ_r):	39.95	40.00	-0.12	5
		e"	13.7300	Conductivity (σ):	1.46	1.40	4.43	5
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 2450	e'	39.5200	Relative Permittivity (ϵ_r):	39.52	39.20	0.82	5
		e"	13.5800	Conductivity (σ):	1.85	1.80	2.78	5
	Head 2400	e'	39.6200	Relative Permittivity (ϵ_r):	39.62	39.30	0.82	5
		e"	13.5800	Conductivity (σ):	1.81	1.75	3.46	5
	Head 2500	e'	39.4300	Relative Permittivity (ϵ_r):	39.43	39.14	0.75	5
		e"	13.5700	Conductivity (σ):	1.89	1.85	1.74	5
2026-04-30	Head 5200	e'	35.4000	Relative Permittivity (ϵ_r):	35.40	35.99	-1.64	5
		e"	15.9300	Conductivity (σ):	4.61	4.65	-0.97	5
	Head 5250	e'	35.3100	Relative Permittivity (ϵ_r):	35.31	35.93	-1.73	5
		e"	15.9800	Conductivity (σ):	4.66	4.70	-0.79	5
	Head 5600	e'	34.6100	Relative Permittivity (ϵ_r):	34.61	35.53	-2.60	5
		e"	16.2400	Conductivity (σ):	5.06	5.06	-0.07	5
	Head 5750	e'	34.3500	Relative Permittivity (ϵ_r):	34.35	35.36	-2.86	5
		e"	16.3600	Conductivity (σ):	5.23	5.21	0.32	5
	Head 5800	e'	34.2600	Relative Permittivity (ϵ_r):	34.26	35.30	-2.95	5
		e"	16.3900	Conductivity (σ):	5.29	5.27	0.30	5
	Head 5925	e'	34.0400	Relative Permittivity (ϵ_r):	34.04	35.20	-3.30	5
		e"	16.4700	Conductivity (σ):	5.43	5.40	0.48	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
2026-06-08	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 7 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-04-07	Head 13	e'	54.75	Relative Permittivity (ϵ_r):	54.75	55.00	-0.45	5
		e"	1016.00	Conductivity (σ):	0.73	0.75	-2.08	5
	Head 12	e'	54.64	Relative Permittivity (ϵ_r):	54.64	55.00	-0.65	5
		e"	1101.00	Conductivity (σ):	0.73	0.75	-2.05	5
	Head 14	e'	54.72	Relative Permittivity (ϵ_r):	54.72	55.00	-0.51	5
		e"	943.60	Conductivity (σ):	0.73	0.75	-2.06	5
2026-04-10	Head 750	e'	42.0300	Relative Permittivity (ϵ_r):	42.03	41.96	0.16	5
		e"	20.8200	Conductivity (σ):	0.87	0.89	-2.78	5
	Head 660	e'	42.3200	Relative Permittivity (ϵ_r):	42.32	42.42	-0.24	5
		e"	23.0600	Conductivity (σ):	0.85	0.89	-4.50	5
	Head 800	e'	41.8900	Relative Permittivity (ϵ_r):	41.89	41.71	0.44	5
		e"	20.1000	Conductivity (σ):	0.89	0.90	-0.31	5
2026-04-10	Head 835	e'	41.8000	Relative Permittivity (ϵ_r):	41.80	41.50	0.72	5
		e"	19.6500	Conductivity (σ):	0.91	0.90	1.37	5
	Head 810	e'	41.8600	Relative Permittivity (ϵ_r):	41.86	41.65	0.49	5
		e"	19.9600	Conductivity (σ):	0.90	0.90	0.14	5
	Head 850	e'	41.7500	Relative Permittivity (ϵ_r):	41.75	41.50	0.60	5
		e"	19.4700	Conductivity (σ):	0.92	0.92	0.57	5
2026-04-14	Head 750	e'	41.2400	Relative Permittivity (ϵ_r):	41.24	41.96	-1.72	5
		e"	21.4300	Conductivity (σ):	0.89	0.89	0.07	5
	Head 660	e'	41.5300	Relative Permittivity (ϵ_r):	41.53	42.42	-2.11	5
		e"	23.1000	Conductivity (σ):	0.85	0.89	-4.34	5
	Head 800	e'	41.1200	Relative Permittivity (ϵ_r):	41.12	41.71	-1.40	5
		e"	20.4500	Conductivity (σ):	0.91	0.90	1.42	5
2026-04-18	Head 750	e'	41.3700	Relative Permittivity (ϵ_r):	41.37	41.96	-1.41	5
		e"	20.9700	Conductivity (σ):	0.87	0.89	-2.08	5
	Head 660	e'	41.7000	Relative Permittivity (ϵ_r):	41.70	42.42	-1.70	5
		e"	23.1900	Conductivity (σ):	0.85	0.89	-3.96	5
	Head 800	e'	41.2900	Relative Permittivity (ϵ_r):	41.29	41.71	-1.00	5
		e"	20.0600	Conductivity (σ):	0.89	0.90	-0.51	5
2026-04-18	Head 835	e'	41.2000	Relative Permittivity (ϵ_r):	41.20	41.50	-0.72	5
		e"	19.3700	Conductivity (σ):	0.90	0.90	-0.08	5
	Head 810	e'	41.2800	Relative Permittivity (ϵ_r):	41.28	41.65	-0.90	5
		e"	19.8600	Conductivity (σ):	0.89	0.90	-0.36	5
	Head 850	e'	41.1600	Relative Permittivity (ϵ_r):	41.16	41.50	-0.82	5
		e"	19.1300	Conductivity (σ):	0.90	0.92	-1.19	5
2026-04-22	Head 750	e'	41.6100	Relative Permittivity (ϵ_r):	41.61	41.96	-0.84	5
		e"	21.3100	Conductivity (σ):	0.89	0.89	-0.49	5
	Head 660	e'	42.0000	Relative Permittivity (ϵ_r):	42.00	42.42	-1.00	5
		e"	23.0000	Conductivity (σ):	0.84	0.89	-4.75	5
	Head 800	e'	41.4100	Relative Permittivity (ϵ_r):	41.41	41.71	-0.71	5
		e"	20.6000	Conductivity (σ):	0.92	0.90	2.16	5
2026-04-22	Head 835	e'	41.2800	Relative Permittivity (ϵ_r):	41.28	41.50	-0.53	5
		e"	20.1600	Conductivity (σ):	0.94	0.90	4.00	5
	Head 810	e'	41.3700	Relative Permittivity (ϵ_r):	41.37	41.65	-0.68	5
		e"	19.9700	Conductivity (σ):	0.90	0.90	0.19	5
	Head 850	e'	41.2200	Relative Permittivity (ϵ_r):	41.22	41.50	-0.67	5
		e"	19.9800	Conductivity (σ):	0.94	0.92	3.20	5

SAR 8 Room

Date	Freq. (MHz)		Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)
2026-04-21	Head 6000	e'	34.3600	Relative Permittivity (ϵ_r):	34.36	35.10	-2.11	5
		e"	16.4500	Conductivity (σ):	5.49	5.48	0.15	5
	Head 6200	e'	34.3100	Relative Permittivity (ϵ_r):	34.31	34.86	-1.58	5
		e"	16.6900	Conductivity (σ):	5.75	5.72	0.66	5
	Head 6500	e'	33.8100	Relative Permittivity (ϵ_r):	33.81	34.50	-2.00	5
		e"	17.2200	Conductivity (σ):	6.22	6.07	2.53	5
	Head 6600	e'	33.4600	Relative Permittivity (ϵ_r):	33.46	34.38	-2.68	5
		e"	17.1800	Conductivity (σ):	6.30	6.19	1.92	5
	Head 6800	e'	33.1300	Relative Permittivity (ϵ_r):	33.13	34.14	-2.96	5
		e"	17.4900	Conductivity (σ):	6.61	6.42	3.04	5
	Head 7000	e'	32.7300	Relative Permittivity (ϵ_r):	32.73	33.90	-3.45	5
		e"	17.3700	Conductivity (σ):	6.76	6.65	1.67	5
2026-04-22	Head 6000	e'	34.4500	Relative Permittivity (ϵ_r):	34.45	35.10	-1.85	5
		e"	15.8900	Conductivity (σ):	5.30	5.48	-3.26	5
	Head 6200	e'	34.4000	Relative Permittivity (ϵ_r):	34.40	34.86	-1.32	5
		e"	16.1600	Conductivity (σ):	5.57	5.72	-2.54	5
	Head 6500	e'	33.8900	Relative Permittivity (ϵ_r):	33.89	34.50	-1.77	5
		e"	16.6300	Conductivity (σ):	6.01	6.07	-0.98	5
	Head 6600	e'	33.6500	Relative Permittivity (ϵ_r):	33.65	34.38	-2.12	5
		e"	16.5800	Conductivity (σ):	6.08	6.19	-1.64	5
	Head 6800	e'	33.3900	Relative Permittivity (ϵ_r):	33.39	34.14	-2.20	5
		e"	16.9500	Conductivity (σ):	6.41	6.42	-0.14	5
	Head 7000	e'	33.1900	Relative Permittivity (ϵ_r):	33.19	33.90	-2.09	5
		e"	16.8500	Conductivity (σ):	6.56	6.65	-1.38	5
2026-04-23	Head 6000	e'	34.4700	Relative Permittivity (ϵ_r):	34.47	35.10	-1.79	5
		e"	15.9200	Conductivity (σ):	5.31	5.48	-3.08	5
	Head 6200	e'	34.4100	Relative Permittivity (ϵ_r):	34.41	34.86	-1.29	5
		e"	16.1900	Conductivity (σ):	5.58	5.72	-2.36	5
	Head 6500	e'	33.9000	Relative Permittivity (ϵ_r):	33.90	34.50	-1.74	5
		e"	16.6600	Conductivity (σ):	6.02	6.07	-0.80	5
	Head 6600	e'	33.6600	Relative Permittivity (ϵ_r):	33.66	34.38	-2.09	5
		e"	16.6100	Conductivity (σ):	6.10	6.19	-1.46	5
	Head 6800	e'	33.4100	Relative Permittivity (ϵ_r):	33.41	34.14	-2.14	5
		e"	16.9800	Conductivity (σ):	6.42	6.42	0.03	5
	Head 7000	e'	33.2100	Relative Permittivity (ϵ_r):	33.21	33.90	-2.04	5
		e"	16.8800	Conductivity (σ):	6.57	6.65	-1.20	5

SAR 9 Room

Date	Freq. (MHz)		Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)
2026-04-20	Head 6000	e'	35.1500	Relative Permittivity (ϵ_r):	35.15	35.10	0.14	5
		e"	16.2000	Conductivity (σ):	5.40	5.48	-1.38	5
	Head 6200	e'	34.8800	Relative Permittivity (ϵ_r):	34.88	34.86	0.06	5
		e"	16.6500	Conductivity (σ):	5.74	5.72	0.42	5
	Head 6500	e'	34.3700	Relative Permittivity (ϵ_r):	34.37	34.50	-0.38	5
		e"	17.2100	Conductivity (σ):	6.22	6.07	2.47	5
	Head 6600	e'	33.9600	Relative Permittivity (ϵ_r):	33.96	34.38	-1.22	5
		e"	16.9600	Conductivity (σ):	6.22	6.19	0.61	5
	Head 6800	e'	33.6400	Relative Permittivity (ϵ_r):	33.64	34.14	-1.46	5
		e"	17.6100	Conductivity (σ):	6.66	6.42	3.75	5
	Head 7000	e'	33.4400	Relative Permittivity (ϵ_r):	33.44	33.90	-1.36	5
		e"	17.2700	Conductivity (σ):	6.72	6.65	1.08	5
2026-04-20	Head 7000	e'	33.4400	Relative Permittivity (ϵ_r):	33.44	33.90	-1.36	5
		e"	17.2700	Conductivity (σ):	6.72	6.65	1.08	5
	Head 7250	e'	32.8900	Relative Permittivity (ϵ_r):	32.89	33.60	-2.11	5
		e"	17.3700	Conductivity (σ):	7.00	6.95	0.82	5
	Head 7500	e'	32.5500	Relative Permittivity (ϵ_r):	32.55	33.30	-2.25	5
		e"	17.3300	Conductivity (σ):	7.23	7.24	-0.18	5
	Head 7800	e'	31.8700	Relative Permittivity (ϵ_r):	31.87	32.94	-3.25	5
		e"	17.7900	Conductivity (σ):	7.72	7.60	1.52	5
	Head 8000	e'	31.7500	Relative Permittivity (ϵ_r):	31.75	32.70	-2.91	5
		e"	17.8300	Conductivity (σ):	7.93	7.84	1.16	5
	Head 8100	e'	31.7200	Relative Permittivity (ϵ_r):	31.72	32.58	-2.64	5
		e"	18.1200	Conductivity (σ):	8.16	7.96	2.47	5
2026-04-22	Head 5750	e'	34.0400	Relative Permittivity (ϵ_r):	34.04	35.36	-3.74	5
		e"	16.5900	Conductivity (σ):	5.30	5.21	1.73	5
	Head 5800	e'	34.1700	Relative Permittivity (ϵ_r):	34.17	35.30	-3.20	5
		e"	16.4900	Conductivity (σ):	5.32	5.27	0.91	5
	Head 5925	e'	33.7200	Relative Permittivity (ϵ_r):	33.72	35.20	-4.20	5
		e"	16.3100	Conductivity (σ):	5.37	5.40	-0.49	5
2026-04-27	Head 5200	e'	35.4300	Relative Permittivity (ϵ_r):	35.43	35.99	-1.56	5
		e"	15.8700	Conductivity (σ):	4.59	4.65	-1.34	5
	Head 5250	e'	35.1000	Relative Permittivity (ϵ_r):	35.10	35.93	-2.32	5
		e"	15.8300	Conductivity (σ):	4.62	4.70	-1.72	5
	Head 5600	e'	34.7300	Relative Permittivity (ϵ_r):	34.73	35.53	-2.26	5
		e"	16.1200	Conductivity (σ):	5.02	5.06	-0.81	5
	Head 5750	e'	34.3400	Relative Permittivity (ϵ_r):	34.34	35.36	-2.89	5
		e"	16.7400	Conductivity (σ):	5.35	5.21	2.65	5
	Head 5800	e'	34.2600	Relative Permittivity (ϵ_r):	34.26	35.30	-2.95	5
		e"	16.3900	Conductivity (σ):	5.29	5.27	0.30	5
	Head 5925	e'	33.9800	Relative Permittivity (ϵ_r):	33.98	35.20	-3.47	5
		e"	16.2500	Conductivity (σ):	5.35	5.40	-0.86	5
2026-04-27	Head 6000	e'	35.4000	Relative Permittivity (ϵ_r):	35.40	35.10	0.85	5
		e"	16.1000	Conductivity (σ):	5.37	5.48	-1.98	5
	Head 6200	e'	35.3800	Relative Permittivity (ϵ_r):	35.38	34.86	1.49	5
		e"	16.4800	Conductivity (σ):	5.68	5.72	-0.61	5
	Head 6500	e'	34.9500	Relative Permittivity (ϵ_r):	34.95	34.50	1.30	5
		e"	16.2000	Conductivity (σ):	5.86	6.07	-3.54	5
	Head 6600	e'	34.5000	Relative Permittivity (ϵ_r):	34.50	34.38	0.35	5
		e"	16.7100	Conductivity (σ):	6.13	6.19	-0.87	5
	Head 6800	e'	34.2900	Relative Permittivity (ϵ_r):	34.29	34.14	0.44	5
		e"	17.0700	Conductivity (σ):	6.45	6.42	0.56	5
	Head 7000	e'	33.9300	Relative Permittivity (ϵ_r):	33.93	33.90	0.09	5
		e"	16.7700	Conductivity (σ):	6.53	6.65	-1.85	5

SAR 9 Room

Date	Freq. (MHz)			Liquid Parameters	Measured	Target	Delta (%)	Limit ±(%)
2026-04-29	Head 6000	e'	35.4300	Relative Permittivity (ϵ_r):	35.43	35.10	0.94	5
		e''	16.4200	Conductivity (σ):	5.48	5.48	-0.04	5
	Head 6200	e'	35.3100	Relative Permittivity (ϵ_r):	35.31	34.86	1.29	5
		e''	16.6500	Conductivity (σ):	5.74	5.72	0.42	5
	Head 6500	e'	34.7600	Relative Permittivity (ϵ_r):	34.76	34.50	0.75	5
		e''	17.2500	Conductivity (σ):	6.23	6.07	2.71	5
	Head 6600	e'	34.4400	Relative Permittivity (ϵ_r):	34.44	34.38	0.17	5
		e''	17.1500	Conductivity (σ):	6.29	6.19	1.74	5
	Head 6800	e'	34.0000	Relative Permittivity (ϵ_r):	34.00	34.14	-0.41	5
		e''	17.5700	Conductivity (σ):	6.64	6.42	3.51	5
	Head 7000	e'	33.6500	Relative Permittivity (ϵ_r):	33.65	33.90	-0.74	5
		e''	17.4400	Conductivity (σ):	6.79	6.65	2.08	5
2026-05-03	Head 2450	e'	39.9600	Relative Permittivity (ϵ_r):	39.96	39.20	1.94	5
		e''	13.6600	Conductivity (σ):	1.86	1.80	3.38	5
	Head 2400	e'	40.0600	Relative Permittivity (ϵ_r):	40.06	39.30	1.94	5
		e''	13.6300	Conductivity (σ):	1.82	1.75	3.84	5
	Head 2500	e'	39.8800	Relative Permittivity (ϵ_r):	39.88	39.14	1.90	5
		e''	13.7000	Conductivity (σ):	1.90	1.85	2.72	5
2026-05-03	Head 5200	e'	34.9700	Relative Permittivity (ϵ_r):	34.97	35.99	-2.83	5
		e''	15.8500	Conductivity (σ):	4.58	4.65	-1.47	5
	Head 5250	e'	34.8300	Relative Permittivity (ϵ_r):	34.83	35.93	-3.07	5
		e''	15.9300	Conductivity (σ):	4.65	4.70	-1.10	5
	Head 5600	e'	34.4000	Relative Permittivity (ϵ_r):	34.40	35.53	-3.19	5
		e''	16.1900	Conductivity (σ):	5.04	5.06	-0.38	5
	Head 5750	e'	34.0400	Relative Permittivity (ϵ_r):	34.04	35.36	-3.74	5
		e''	16.5900	Conductivity (σ):	5.30	5.21	1.73	5
	Head 5800	e'	34.1700	Relative Permittivity (ϵ_r):	34.17	35.30	-3.20	5
		e''	16.4900	Conductivity (σ):	5.32	5.27	0.91	5
	Head 5925	e'	33.7200	Relative Permittivity (ϵ_r):	33.72	35.20	-4.20	5
		e''	16.3100	Conductivity (σ):	5.37	5.40	-0.49	5
2026-05-04	Head 6000	e'	35.8300	Relative Permittivity (ϵ_r):	35.83	35.10	2.08	5
		e''	16.2400	Conductivity (σ):	5.42	5.48	-1.13	5
	Head 6200	e'	35.6500	Relative Permittivity (ϵ_r):	35.65	34.86	2.27	5
		e''	16.3200	Conductivity (σ):	5.63	5.72	-1.57	5
	Head 6500	e'	35.2800	Relative Permittivity (ϵ_r):	35.28	34.50	2.26	5
		e''	16.9000	Conductivity (σ):	6.11	6.07	0.63	5
	Head 6600	e'	34.8500	Relative Permittivity (ϵ_r):	34.85	34.38	1.37	5
		e''	16.8200	Conductivity (σ):	6.17	6.19	-0.22	5
	Head 6800	e'	34.5400	Relative Permittivity (ϵ_r):	34.54	34.14	1.17	5
		e''	17.0500	Conductivity (σ):	6.45	6.42	0.45	5
	Head 7000	e'	34.1000	Relative Permittivity (ϵ_r):	34.10	33.90	0.59	5
		e''	16.8900	Conductivity (σ):	6.57	6.65	-1.14	5
2026-05-11	Head 6000	e'	35.4300	Relative Permittivity (ϵ_r):	35.43	35.10	0.94	5
		e''	16.4200	Conductivity (σ):	5.48	5.48	-0.04	5
	Head 6200	e'	35.3100	Relative Permittivity (ϵ_r):	35.31	34.86	1.29	5
		e''	16.6500	Conductivity (σ):	5.74	5.72	0.42	5
	Head 6500	e'	34.7600	Relative Permittivity (ϵ_r):	34.76	34.50	0.75	5
		e''	17.2500	Conductivity (σ):	6.23	6.07	2.71	5
	Head 6600	e'	34.4400	Relative Permittivity (ϵ_r):	34.44	34.38	0.17	5
		e''	17.1500	Conductivity (σ):	6.29	6.19	1.74	5
	Head 6800	e'	34.0000	Relative Permittivity (ϵ_r):	34.00	34.14	-0.41	5
		e''	17.5700	Conductivity (σ):	6.64	6.42	3.51	5
	Head 7000	e'	32.6500	Relative Permittivity (ϵ_r):	32.65	33.90	-3.69	5
		e''	17.3400	Conductivity (σ):	6.75	6.65	1.49	5

SAR 9 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-05-11	Head 7000	e'	32.6500	Relative Permittivity (ϵ_r):	32.65	33.90	-3.69	5
		e"	17.3400	Conductivity (σ):	6.75	6.65	1.49	5
	Head 7250	e'	33.3900	Relative Permittivity (ϵ_r):	33.39	33.60	-0.62	5
		e"	17.6300	Conductivity (σ):	7.11	6.95	2.33	5
	Head 7500	e'	32.8300	Relative Permittivity (ϵ_r):	32.83	33.30	-1.41	5
		e"	17.9200	Conductivity (σ):	7.47	7.24	3.22	5
	Head 7800	e'	32.2100	Relative Permittivity (ϵ_r):	32.21	32.94	-2.22	5
		e"	18.1700	Conductivity (σ):	7.88	7.60	3.69	5
	Head 8000	e'	32.3600	Relative Permittivity (ϵ_r):	32.36	32.70	-1.04	5
		e"	18.2100	Conductivity (σ):	8.10	7.84	3.32	5
	Head 8100	e'	31.5200	Relative Permittivity (ϵ_r):	31.52	32.58	-3.25	5
		e"	18.3500	Conductivity (σ):	8.26	7.96	3.77	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

SAR 10 Room

Date	Freq. (MHz)		Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
2026-04-06	Head 3400	e'	37.6100	Relative Permittivity (ϵ_r):	37.61	38.04	-1.14	5	
		e"	14.5400	Conductivity (σ):	2.75	2.81	-2.15	5	
	Head 3500	e'	37.3600	Relative Permittivity (ϵ_r):	37.36	37.93	-1.50	5	
		e"	14.6500	Conductivity (σ):	2.85	2.91	-2.08	5	
	Head 3600	e'	37.1200	Relative Permittivity (ϵ_r):	37.12	37.82	-1.84	5	
		e"	14.7500	Conductivity (σ):	2.95	3.01	-2.04	5	
	Head 3700	e'	36.9000	Relative Permittivity (ϵ_r):	36.90	37.70	-2.13	5	
		e"	14.8400	Conductivity (σ):	3.05	3.12	-2.03	5	
	Head 3800	e'	36.6900	Relative Permittivity (ϵ_r):	36.69	37.59	-2.39	5	
		e"	14.9400	Conductivity (σ):	3.16	3.22	-1.92	5	
	Head 3900	e'	36.4900	Relative Permittivity (ϵ_r):	36.49	37.47	-2.62	5	
		e"	15.0500	Conductivity (σ):	3.26	3.32	-1.72	5	
	Head 3980	e'	36.3400	Relative Permittivity (ϵ_r):	36.34	37.38	-2.79	5	
		e"	15.1400	Conductivity (σ):	3.35	3.40	-1.53	5	
	2026-04-14	Head 2600	e'	39.4600	Relative Permittivity (ϵ_r):	39.46	39.01	1.15	5
			e"	13.5800	Conductivity (σ):	1.96	1.96	0.05	5
Head 2495		e'	39.6800	Relative Permittivity (ϵ_r):	39.68	39.14	1.37	5	
		e"	13.5300	Conductivity (σ):	1.88	1.85	1.53	5	
Head 2700		e'	39.3500	Relative Permittivity (ϵ_r):	39.35	38.88	1.20	5	
		e"	13.6800	Conductivity (σ):	2.05	2.07	-0.80	5	
2026-04-24	Head 3400	e'	37.6800	Relative Permittivity (ϵ_r):	37.68	38.04	-0.96	5	
		e"	14.7400	Conductivity (σ):	2.79	2.81	-0.81	5	
	Head 3500	e'	37.4900	Relative Permittivity (ϵ_r):	37.49	37.93	-1.16	5	
		e"	14.8300	Conductivity (σ):	2.89	2.91	-0.88	5	
	Head 3600	e'	37.3100	Relative Permittivity (ϵ_r):	37.31	37.82	-1.34	5	
		e"	14.9200	Conductivity (σ):	2.99	3.01	-0.91	5	
	Head 3700	e'	37.0800	Relative Permittivity (ϵ_r):	37.08	37.70	-1.65	5	
		e"	15.0300	Conductivity (σ):	3.09	3.12	-0.77	5	
	Head 3800	e'	36.8900	Relative Permittivity (ϵ_r):	36.89	37.59	-1.86	5	
		e"	15.1500	Conductivity (σ):	3.20	3.22	-0.54	5	
	Head 3900	e'	36.7200	Relative Permittivity (ϵ_r):	36.72	37.47	-2.01	5	
		e"	15.2700	Conductivity (σ):	3.31	3.32	-0.29	5	
2026-04-28	Head 3400	e'	36.5100	Relative Permittivity (ϵ_r):	36.51	37.38	-2.33	5	
		e"	15.3500	Conductivity (σ):	3.40	3.40	-0.17	5	
	Head 3500	e'	38.0000	Relative Permittivity (ϵ_r):	38.00	38.04	-0.11	5	
		e"	14.8700	Conductivity (σ):	2.81	2.81	0.07	5	
	Head 3600	e'	37.7900	Relative Permittivity (ϵ_r):	37.79	37.93	-0.37	5	
		e"	14.9800	Conductivity (σ):	2.92	2.91	0.13	5	
	Head 3700	e'	37.6100	Relative Permittivity (ϵ_r):	37.61	37.82	-0.54	5	
		e"	15.0900	Conductivity (σ):	3.02	3.01	0.22	5	
	Head 3800	e'	37.4200	Relative Permittivity (ϵ_r):	37.42	37.70	-0.75	5	
		e"	15.2100	Conductivity (σ):	3.13	3.12	0.42	5	
	Head 3900	e'	37.2200	Relative Permittivity (ϵ_r):	37.22	37.59	-0.98	5	
		e"	15.3400	Conductivity (σ):	3.24	3.22	0.70	5	
Head 3980	e'	37.0300	Relative Permittivity (ϵ_r):	37.03	37.47	-1.18	5		
	e"	15.4800	Conductivity (σ):	3.36	3.32	1.08	5		
Head 3980	e'	36.8400	Relative Permittivity (ϵ_r):	36.84	37.38	-1.45	5		
	e"	15.6000	Conductivity (σ):	3.45	3.40	1.46	5		

SAR 11 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
2026-03-31	Head 3500	e'	37.2500	Relative Permittivity (ϵ_r):	37.25	37.93	-1.79	5
		e"	15.2200	Conductivity (σ):	2.96	2.91	1.73	5
	Head 3600	e'	37.0500	Relative Permittivity (ϵ_r):	37.05	37.82	-2.02	5
		e"	15.3600	Conductivity (σ):	3.07	3.01	2.01	5
	Head 3700	e'	36.8400	Relative Permittivity (ϵ_r):	36.84	37.70	-2.28	5
		e"	15.5200	Conductivity (σ):	3.19	3.12	2.46	5
	Head 3800	e'	36.6300	Relative Permittivity (ϵ_r):	36.63	37.59	-2.55	5
		e"	15.6800	Conductivity (σ):	3.31	3.22	2.94	5
	Head 3900	e'	36.4200	Relative Permittivity (ϵ_r):	36.42	37.47	-2.81	5
		e"	15.8400	Conductivity (σ):	3.43	3.32	3.44	5
	Head 3980	e'	36.2500	Relative Permittivity (ϵ_r):	36.25	37.38	-3.03	5
		e"	15.9700	Conductivity (σ):	3.53	3.40	3.86	5
2026-04-06	Head 3500	e'	37.3800	Relative Permittivity (ϵ_r):	37.38	37.93	-1.45	5
		e"	14.4100	Conductivity (σ):	2.80	2.91	-3.68	5
	Head 3600	e'	37.1500	Relative Permittivity (ϵ_r):	37.15	37.82	-1.76	5
		e"	14.5200	Conductivity (σ):	2.91	3.01	-3.56	5
	Head 3700	e'	36.9100	Relative Permittivity (ϵ_r):	36.91	37.70	-2.10	5
		e"	14.6300	Conductivity (σ):	3.01	3.12	-3.41	5
	Head 3800	e'	36.6900	Relative Permittivity (ϵ_r):	36.69	37.59	-2.39	5
		e"	14.7200	Conductivity (σ):	3.11	3.22	-3.37	5
	Head 3900	e'	36.4800	Relative Permittivity (ϵ_r):	36.48	37.47	-2.65	5
		e"	14.8200	Conductivity (σ):	3.21	3.32	-3.23	5
	Head 3980	e'	36.3300	Relative Permittivity (ϵ_r):	36.33	37.38	-2.81	5
		e"	14.9000	Conductivity (σ):	3.30	3.40	-3.10	5
2026-04-15	Head 3500	e'	37.5800	Relative Permittivity (ϵ_r):	37.58	37.93	-0.92	5
		e"	14.5100	Conductivity (σ):	2.82	2.91	-3.01	5
	Head 3600	e'	37.4500	Relative Permittivity (ϵ_r):	37.45	37.82	-0.97	5
		e"	14.5800	Conductivity (σ):	2.92	3.01	-3.17	5
	Head 3700	e'	37.3400	Relative Permittivity (ϵ_r):	37.34	37.70	-0.96	5
		e"	14.6500	Conductivity (σ):	3.01	3.12	-3.28	5
	Head 3800	e'	37.2100	Relative Permittivity (ϵ_r):	37.21	37.59	-1.00	5
		e"	14.7500	Conductivity (σ):	3.12	3.22	-3.17	5
	Head 3900	e'	37.0700	Relative Permittivity (ϵ_r):	37.07	37.47	-1.08	5
		e"	14.8500	Conductivity (σ):	3.22	3.32	-3.03	5
	Head 3980	e'	36.9600	Relative Permittivity (ϵ_r):	36.96	37.38	-1.13	5
		e"	14.9500	Conductivity (σ):	3.31	3.40	-2.77	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 (100MHz to 8GHz):

- 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 (13MHz):

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

Reference Target SAR Values

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

System Dipole	Serial No.	Cal. Date	Cal.due date	Target SAR Values (W/kg)	
				1g/10g	Head
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
D1640V2	334	2026-03-12	2027-03-12	1g	34.40
				10g	18.80
D1750V2	1180	2024-10-15	2026-10-15	1g	37.00
				10g	19.70
D1750V2	1125	2024-11-18	2026-11-18	1g	36.60
				10g	19.50
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	1178	2025-04-15	2027-04-15	1g	55.70
				10g	25.00
D3500V2	1075	2025-05-21	2026-05-21	1g	65.60
				10g	25.00
D3700V2	1036	2025-05-21	2026-05-21	1g	69.40
				10g	25.60
D3900V2	1069	2025-05-21	2026-05-21	1g	69.90
				10g	24.60

Note(s):

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

Reference Target SAR Values (Continued)

System Dipole	Serial No.	Cal. Date	Cal.due date	Target SAR Values (W/kg)	
				1g/10g	Head
D5GHzV2 (5.25 GHz)	1325	2025-04-16	2026-04-16	1g	78.00
				10g	22.30
D5GHzV2 (5.6 GHz)	1325	2025-04-16	2026-04-16	1g	81.30
				10g	23.30
D5GHzV2 (5.75 GHz)	1325	2025-04-16	2026-04-16	1g	77.80
				10g	22.10
D5GHzV2 (5.8 GHz)	1325	2025-04-16	2026-04-16	1g	81.00
				10g	22.90
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

Note(s):

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

System Check Results

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

SAR 1 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W			
2026-04-15	D5GHzV2 (5600)	1325	Head	1g	8.18	81.8	81.30	0.62
				10g	2.37	23.7	23.30	1.72
2026-04-15	D2450V2	939	Head	1g	5.07	50.7	52.20	-2.87
				10g	2.42	24.2	24.40	-0.82
2026-04-16	D5GHzV2 (5750)	1325	Head	1g	7.93	79.3	77.80	1.93
				10g	2.31	23.1	22.10	4.52
2026-04-16	D5GHzV2 (5800)	1325	Head	1g	7.81	78.1	81.00	-3.58
				10g	2.27	22.7	22.90	-0.87
2026-04-17	D2450V2	939	Head	1g	5.05	50.5	52.20	-3.26
				10g	2.41	24.1	24.40	-1.23
2026-04-20	D5GHzV2 (5250)	1325	Head	1g	7.68	76.8	78.00	-1.54
				10g	2.26	22.6	22.30	1.35
2026-04-20	D2450V2	960	Head	1g	4.90	49.0	51.80	-5.41
				10g	2.34	23.4	24.40	-4.10
2026-04-21	D2450V2	960	Head	1g	4.97	49.7	51.80	-4.05
				10g	2.38	23.8	24.40	-2.46
2026-04-22	D2450V2	960	Head	1g	5.14	51.4	51.80	-0.77
				10g	2.46	24.6	24.40	0.82
2026-04-23	D2450V2	960	Head	1g	4.95	49.5	51.80	-4.44
				10g	2.38	23.8	24.40	-2.46
2026-04-24	D2450V2	960	Head	1g	5.26	52.6	51.80	1.54
				10g	2.52	25.2	24.40	3.28
2026-04-28	D1750V2	1180	Head	1g	3.57	35.7	37.00	-3.51
				10g	1.89	18.9	19.70	-4.06
2026-04-28	D1900V2	5d190	Head	1g	3.75	37.5	39.00	-3.85
				10g	1.92	19.2	20.50	-6.34
2026-04-28	D1640V2	334	Head	1g	3.37	33.7	34.40	-2.03
				10g	1.81	18.1	18.80	-3.72
2026-04-28	D2450V2	960	Head	1g	5.31	53.1	51.80	2.51
				10g	2.48	24.8	24.40	1.64
2026-04-29	D5GHzV2 (5250)	1325	Head	1g	7.27	72.7	78.00	-6.79
				10g	2.11	21.1	22.30	-5.38
2026-04-29	D5GHzV2 (5600)	1325	Head	1g	8.48	84.8	81.30	4.31
				10g	2.43	24.3	23.30	4.29
2026-04-29	D5GHzV2 (5750)	1325	Head	1g	7.72	77.2	77.80	-0.77
				10g	2.22	22.2	22.10	0.45
2026-04-29	D5GHzV2 (5800)	1325	Head	1g	8.15	81.5	81.00	0.62
				10g	2.33	23.3	22.90	1.75
2026-04-30	D2450V2	960	Head	1g	4.93	49.3	51.80	-4.83
				10g	2.31	23.1	24.40	-5.33
2026-05-03	D2450V2	960	Head	1g	5.01	50.1	51.80	-3.28
				10g	2.33	23.3	24.40	-4.51
2026-05-04	D2450V2	960	Head	1g	5.29	52.9	51.80	2.12
				10g	2.53	25.3	24.40	3.69
2026-05-06	D5GHzV2 (5250)	1325	Head	1g	7.73	77.3	78.00	-0.90
				10g	2.26	22.6	22.30	1.35
2026-05-06	D5GHzV2 (5600)	1325	Head	1g	8.39	83.9	81.30	3.20
				10g	2.41	24.1	23.30	3.43
2026-05-06	D5GHzV2 (5750)	1325	Head	1g	8.06	80.6	77.80	3.60
				10g	2.35	23.5	22.10	6.33
2026-05-06	D5GHzV2 (5800)	1325	Head	1g	8.54	85.4	81.00	5.43
				10g	2.49	24.9	22.90	8.73
2026-05-06	D2450V2	960	Head	1g	5.38	53.8	51.80	3.86
				10g	2.56	25.6	24.40	4.92
2026-05-11	D2450V2	960	Head	1g	5.19	51.9	51.80	0.19
				10g	2.41	24.1	24.40	-1.23
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			
2026-04-20	D1750V2	1125	Head	1g	3.51	35.1	36.60	-4.10	
				10g	1.91	19.1	19.50	-2.05	
2026-04-20	D1900V2	5d190	Head	1g	4.02	40.2	39.00	3.08	
				10g	2.16	21.6	20.50	5.37	
2026-04-21	D2450V2	960	Head	1g	5.29	52.9	51.80	2.12	
				10g	2.55	25.5	24.40	4.51	
2026-04-22	D2450V2	960	Head	1g	5.46	54.6	51.80	5.41	2
				10g	2.61	26.1	24.40	6.97	
2026-04-23	D2450V2	960	Head	1g	5.27	52.7	51.80	1.74	
				10g	2.55	25.5	24.40	4.51	
2026-04-24	D2450V2	960	Head	1g	5.14	51.4	51.80	-0.77	
				10g	2.50	25.0	24.40	2.46	
2026-04-27	D2450V2	960	Head	1g	5.33	53.3	51.80	2.90	
				10g	2.63	26.3	24.40	7.79	
2026-04-28	D1750V2	1180	Head	1g	3.51	35.1	37.00	-5.14	
				10g	1.96	19.6	19.70	-0.51	
2026-04-28	D1900V2	5d199	Head	1g	4.15	41.5	40.20	3.23	
				10g	2.21	22.1	21.20	4.25	
2026-04-29	D1900V2	5d199	Head	1g	4.04	40.4	40.20	0.50	
				10g	2.16	21.6	21.20	1.89	
2026-05-04	D1900V2	5d199	Head	1g	4.02	40.2	40.20	0.00	
				10g	2.15	21.5	21.20	1.42	
2026-05-08	D1900V2	5d199	Head	1g	4.14	41.4	40.20	2.99	
				10g	2.21	22.1	21.20	4.25	

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				
2026-04-28	D2450V2	960	Head	1g	5.01	50.1	51.80	-3.28	
				10g	2.37	23.7	24.10	-1.66	
2026-04-29	D2450V2	960	Head	1g	5.54	55.4	51.80	6.95	
				10g	2.64	26.4	24.10	9.54	
2026-05-03	D2450V2	960	Head	1g	5.48	54.8	51.80	5.79	
				10g	2.60	26.0	24.10	7.88	
2026-05-07	D2450V2	960	Head	1g	5.29	52.9	51.80	2.12	
				10g	2.53	25.3	24.10	4.98	
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	

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			
2026-04-15	D750V3	1205	Head	1g	0.85	8.5	8.64	-2.08
				10g	0.58	5.8	5.61	2.85
2026-04-15	D835V3	4d194	Head	1g	1.00	10.0	9.59	4.28
				10g	0.68	6.8	6.25	8.80
2026-04-17	D835V3	4d194	Head	1g	0.99	9.9	9.59	2.82
				10g	0.67	6.7	6.25	7.52
2026-04-18	D835V3	4d194	Head	1g	0.97	9.7	9.59	0.63
				10g	0.66	6.6	6.25	5.60
2026-04-19	D835V3	4d194	Head	1g	0.95	9.5	9.59	-1.36
				10g	0.65	6.5	6.25	3.52
2026-04-20	D750V3	1205	Head	1g	0.88	8.8	8.64	1.27
				10g	0.59	5.9	5.61	5.17
2026-04-20	D835V3	4d194	Head	1g	0.96	9.6	9.59	-0.31
				10g	0.64	6.4	6.25	2.88
2026-04-23	D2450V2	960	Head	1g	5.20	52.0	51.80	0.39
				10g	2.60	26.0	24.40	6.56
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
2026-05-06	D2450V2	960	Head	1g	5.33	53.3	51.80	2.90
				10g	2.68	26.8	24.40	9.84
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
2026-05-11	D2450V2	960	Head	1g	5.35	53.5	51.80	3.28
				10g	2.67	26.7	24.40	9.43
2026-05-27	D835V3	4d194	Head	1g	1.00	10.0	9.59	3.96
				10g	0.68	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	
2026-04-20	D2600V2	1178	Head	1g	5.84	58.4	55.70	4.85	5
				10g	2.69	26.9	25.00	7.60	
2026-04-24	D2600V2	1178	Head	1g	5.61	56.1	55.70	0.72	
				10g	2.56	25.6	25.00	2.40	
2026-04-28	D2600V2	1178	Head	1g	5.55	55.5	55.70	-0.36	
				10g	2.55	25.5	25.00	2.00	
2026-04-29	D2600V2	1178	Head	1g	5.70	57.0	55.70	2.33	
				10g	2.62	26.2	25.00	4.80	
2026-05-04	D2600V2	1178	Head	1g	5.77	57.7	55.70	3.59	
				10g	2.63	26.3	25.00	5.20	
2026-05-11	D2450V2	960	Head	1g	5.36	53.6	51.80	3.47	
				10g	2.52	25.2	24.40	3.28	

SAR 6 Room

Chart 1 Result:

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				
2026-04-22	D1750V2	1125	Head	1g	3.65	36.5	36.60	-8.20	6
				10g	1.94	19.4	19.50	-7.69	
2026-04-22	D1900V2	5d190	Head	1g	4.05	40.5	39.00	0.00	
				10g	2.10	21.0	20.50	-1.95	
2026-04-27	D835V3	4d174	Head	1g	0.89	8.9	9.44	-5.72	7
				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	
2026-04-30	D2450V2	939	Head	1g	5.04	50.4	52.20	-3.45	
				10g	2.34	23.4	24.40	-4.10	
2026-04-30	D5GHzV2 (5600)	1184	Head	1g	8.00	80.0	84.00	-4.76	
				10g	2.27	22.7	24.00	-5.42	
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	
2026-06-08	D2600V2	1178	Head	1g	5.57	55.7	55.70	0.00	
				10g	2.50	25.0	25.00	0.00	

SAR 7 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
2026-04-07	CLA-13	1015	Head	1g	0.05	0.5	0.524	-2.67	8
				10g	0.03	0.3	0.329	-2.74	
2026-04-10	D750V3	1122	Head	1g	0.87	8.7	8.60	0.81	
				10g	0.60	6.0	5.61	7.13	
2026-04-10	D835V3	4d174	Head	1g	0.92	9.2	9.44	-2.33	
				10g	0.63	6.3	6.09	3.78	
2026-04-11	D750V3	1122	Head	1g	0.82	8.2	8.60	-5.00	
				10g	0.55	5.5	5.61	-2.32	
2026-04-11	D835V3	4d174	Head	1g	0.90	9.0	9.44	-5.08	
				10g	0.59	5.9	6.09	-2.63	
2026-04-13	D750V3	1122	Head	1g	0.82	8.2	8.60	-4.53	
				10g	0.55	5.5	5.61	-1.96	
2026-04-13	D835V3	4d174	Head	1g	0.92	9.2	9.44	-3.07	
				10g	0.61	6.1	6.09	-0.49	
2026-04-14	D750V3	1122	Head	1g	0.83	8.3	8.60	-3.37	
				10g	0.57	5.7	5.61	0.89	
2026-04-14	D835V3	4d174	Head	1g	0.97	9.7	9.44	2.65	
				10g	0.66	6.6	6.09	7.55	
2026-04-15	D750V3	1122	Head	1g	0.83	8.3	8.60	-3.14	
				10g	0.55	5.5	5.61	-1.60	
2026-04-15	D835V3	4d174	Head	1g	0.97	9.7	9.44	3.07	
				10g	0.65	6.5	6.09	5.91	
2026-04-17	D750V3	1122	Head	1g	0.85	8.5	8.60	-0.81	
				10g	0.57	5.7	5.61	1.25	
2026-04-18	D750V3	1122	Head	1g	0.84	8.4	8.60	-2.44	
				10g	0.56	5.6	5.61	0.36	
2026-04-19	D750V3	1122	Head	1g	0.80	8.0	8.60	-6.86	9
				10g	0.54	5.4	5.61	-4.28	
2026-04-19	D835V3	4d174	Head	1g	0.90	9.0	9.44	-5.19	
				10g	0.59	5.9	6.09	-2.63	
2026-04-22	D750V3	1122	Head	1g	0.87	8.7	8.60	1.40	
				10g	0.60	6.0	5.61	7.31	
2026-04-22	D835V3	4d174	Head	1g	0.96	9.6	9.44	2.01	
				10g	0.66	6.6	6.09	7.55	

SAR 8 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
2026-04-21	D6.5GHzV2	1010	Head	1g	29.00	290.0	293.00	-1.02	
				8g	6.76	67.6	66.00	2.42	
				10g	5.60	56.0	54.00	3.70	
				APD(4cm^2)	135.00	1350.0	1320.00	2.27	
2026-04-22	D6.5GHzV2	1010	Head	1g	27.80	278.0	293.00	-5.12	10
				8g	6.48	64.8	66.00	-1.82	
				10g	5.37	53.7	54.00	-0.56	
				APD(4cm^2)	130.00	1300.0	1320.00	-1.52	
2026-04-23	D6.5GHzV2	1010	Head	1g	29.10	291.0	293.00	-0.68	
				8g	6.89	68.9	66.00	4.39	
				10g	5.71	57.1	54.00	5.74	
				APD(4cm^2)	138.00	1380.0	1320.00	4.55	

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			
2026-04-20	D6.5GHzV2	1010	Head	1g	28.30	283.0	293.00	-3.41
				8g	6.71	67.1	66.00	1.67
				10g	5.56	55.6	54.00	2.96
				APD(4cm^2)	134.00	1340.0	1320.00	1.52
2026-04-20	D8GHzV2	1012	Head	1g	28.20	282.0	273.00	3.30
				8g	6.07	60.7	56.10	8.20
				10g	5.02	50.2	45.80	9.61
				APD(4cm^2)	121.00	1210.0	1130.00	7.08
2026-04-22	D5GHzV2 (5250)	1184	Head	1g	8.19	81.9	81.20	0.86
				10g	2.44	24.4	23.20	5.17
2026-04-22	D5GHzV2 (5600)	1184	Head	1g	8.24	82.4	84.00	-1.90
				10g	2.43	24.3	24.00	1.25
2026-04-22	D5GHzV2 (5750)	1184	Head	1g	8.08	80.8	79.90	1.13
				10g	2.39	23.9	22.90	4.37
2026-04-22	D5GHzV2 (5800)	1184	Head	1g	7.98	79.8	77.50	2.97
				10g	2.34	23.4	22.20	5.41
2026-04-27	D5GHzV2 (5250)	1184	Head	1g	7.94	79.4	81.20	-2.22
				10g	2.35	23.5	23.20	1.29
2026-04-27	D5GHzV2 (5600)	1184	Head	1g	8.45	84.5	84.00	0.60
				10g	2.49	24.9	24.00	3.75
2026-04-27	D5GHzV2 (5750)	1184	Head	1g	8.20	82.0	79.90	2.63
				10g	2.41	24.1	22.90	5.24
2026-04-27	D5GHzV2 (5800)	1184	Head	1g	7.99	79.9	77.50	3.10
				10g	2.34	23.4	22.20	5.41
2026-04-27	D6.5GHzV2	1010	Head	1g	28.60	286.0	293.00	-2.39
				8g	6.80	68.0	66.00	3.03
				10g	5.64	56.4	54.00	4.44
				APD(4cm^2)	136.00	1360.0	1320.00	3.03
2026-04-28	D5GHzV2 (5250)	1184	Head	1g	7.73	77.3	81.20	-4.80
				10g	2.29	22.9	23.20	-1.29
2026-04-28	D5GHzV2 (5600)	1184	Head	1g	8.77	87.7	84.00	4.40
				10g	2.57	25.7	24.00	7.08
2026-04-28	D5GHzV2 (5750)	1184	Head	1g	8.15	81.5	79.90	2.00
				10g	2.40	24.0	22.90	4.80
2026-04-28	D5GHzV2 (5800)	1184	Head	1g	8.29	82.9	77.50	6.97
				10g	2.41	24.1	22.20	8.56
2026-04-29	D6.5GHzV2	1010	Head	1g	28.10	281.0	293.00	-4.10
				8g	6.87	68.7	66.00	4.09
				10g	5.71	57.1	54.00	5.74
				APD(4cm^2)	137.00	1370.0	1320.00	3.79
2026-04-29	D8GHzV2	1012	Head	1g	25.20	252.0	273.00	-7.69
				8g	5.51	55.1	56.10	-1.78
				10g	4.56	45.6	45.80	-0.44
				APD(4cm^2)	110.00	1100.0	1130.00	-2.65
2026-04-30	D5GHzV2 (5250)	1184	Head	1g	7.76	77.6	81.20	-4.43
				10g	2.29	22.9	23.20	-1.29
2026-04-30	D5GHzV2 (5600)	1184	Head	1g	8.35	83.5	84.00	-0.60
				10g	2.45	24.5	24.00	2.08
2026-04-30	D5GHzV2 (5750)	1184	Head	1g	8.13	81.3	79.90	1.75
				10g	2.39	23.9	22.90	4.37
2026-04-30	D5GHzV2 (5800)	1184	Head	1g	7.75	77.5	77.50	0.00
				10g	2.27	22.7	22.20	2.25
2026-05-03	D2450V2	939	Head	1g	5.23	52.3	52.20	0.19
				10g	2.52	25.2	24.40	3.28

SAR 9 Room (Continued)

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			
2026-05-03	D5GHzV2 (5250)	1184	Head	1g	8.06	80.6	81.20	-0.74
				10g	2.37	23.7	23.20	2.16
2026-05-03	D5GHzV2 (5600)	1184	Head	1g	8.31	83.1	84.00	-1.07
				10g	2.44	24.4	24.00	1.67
2026-05-03	D5GHzV2 (5750)	1184	Head	1g	8.14	81.4	79.90	1.88
				10g	2.38	23.8	22.90	3.93
2026-05-03	D5GHzV2 (5800)	1184	Head	1g	8.13	81.3	77.50	4.90
				10g	2.37	23.7	22.20	6.76
2026-05-04	D6.5GHzV2	1010	Head	1g	28.20	282.0	293.00	-3.75
				8g	6.76	67.6	66.00	2.42
				10g	5.62	56.2	54.00	4.07
				APD(4cm ²)	135.00	1350.0	1320.00	2.27
2026-05-05	D2450V2	939	Head	1g	5.36	53.6	52.20	2.68
				10g	2.58	25.8	24.40	5.74
2026-05-11	D6.5GHzV2	1010	Head	1g	29.60	296.0	293.00	1.02
				8g	6.95	69.5	66.00	5.30
				10g	5.76	57.6	54.00	6.67
				APD(4cm ²)	139.00	1390.0	1320.00	5.30
2026-05-11	D8GHzV2	1012	Head	1g	26.50	265.0	273.00	-2.93
				8g	5.64	56.4	56.10	0.53
				10g	4.67	46.7	45.80	1.97
				APD(4cm ²)	113.00	1130.0	1130.00	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(4cm ²)	116.00	1160.0	1130.00	2.65

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			
2026-04-07	D3700V2	1036	Head	1g	7.04	70.40	69.40	1.44
				10g	2.72	27.20	25.60	6.25
2026-04-07	D3900V2	1069	Head	1g	7.18	71.80	69.90	2.72
				10g	2.64	26.40	24.60	7.32
2026-04-14	D2600V2	1097	Head	1g	5.64	56.40	57.30	-1.57
				10g	2.64	26.40	25.60	3.13
2026-04-24	D3500V2	1075	Head	1g	6.12	61.20	65.60	-6.71
				10g	2.44	24.40	25.00	-2.40
2026-04-24	D3700V2	1036	Head	1g	6.76	67.60	69.40	-2.59
				10g	2.61	26.10	25.60	1.95
2026-04-24	D3900V2	1069	Head	1g	6.66	66.60	69.90	-4.72
				10g	2.43	24.30	24.60	-1.22
2026-04-28	D3500V2	1075	Head	1g	6.29	62.90	65.60	-4.12
				10g	2.50	25.00	25.00	0.00
2026-04-28	D3700V2	1036	Head	1g	7.15	71.50	69.40	3.03
				10g	2.75	27.50	25.60	7.42
2026-04-28	D3900V2	1069	Head	1g	6.85	68.50	69.90	-2.00
				10g	2.51	25.10	24.60	2.03

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			
2026-03-31	D3500V2	1075	Head	1g	6.54	65.4	65.60	-0.30	
				10g	2.65	26.5	25.00	6.00	
2026-03-31	D3700V2	1036	Head	1g	7.08	70.8	69.40	2.02	
				10g	2.78	27.8	25.60	8.59	
2026-03-31	D3900V2	1069	Head	1g	6.65	66.5	69.90	-4.86	14
				10g	2.48	24.8	24.60	0.81	
2026-04-06	D3500V2	1075	Head	1g	6.64	66.4	65.60	1.22	
				10g	2.57	25.7	25.00	2.80	
2026-04-06	D3700V2	1036	Head	1g	7.13	71.3	69.40	2.74	15
				10g	2.66	26.6	25.60	3.91	
2026-04-06	D3900V2	1069	Head	1g	6.93	69.3	69.90	-0.86	
				10g	2.51	25.1	24.60	2.03	
2026-04-07	D3500V2	1075	Head	1g	6.45	64.5	65.60	-1.68	
				10g	2.48	24.8	25.00	-0.80	
2026-04-07	D3700V2	1036	Head	1g	6.94	69.4	69.40	0.00	
				10g	2.58	25.8	25.60	0.78	
2026-04-07	D3900V2	1069	Head	1g	6.95	69.5	69.90	-0.57	
				10g	2.46	24.6	24.60	0.00	
2026-04-15	D3500V2	1075	Head	1g	6.36	63.6	65.60	-3.05	
				10g	2.63	26.3	25.00	5.20	
2026-04-15	D3700V2	1036	Head	1g	6.81	68.1	69.40	-1.87	
				10g	2.75	27.5	25.60	7.42	
2026-04-15	D3900V2	1069	Head	1g	6.77	67.7	69.90	-3.15	
				10g	2.57	25.7	24.60	4.47	

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 100mW.
- 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 100mW 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.
2026-04-21	1022	2027-03-12	100.0	61.4	61.20	0.33	57	57.23	-0.41	confirmed	
2026-05-07	1022	2027-03-12	100.0	58.3	61.20	-4.74	53.8	57.23	-6.00	confirmed	
2026-05-08	1022	2027-03-12	100.0	64.5	61.20	5.39	60	57.23	4.83	confirmed	

Note(s):

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

9. Conducted Output Power Measurements

Measured power data refers to the SAR Report and appendix G of the parent project (A3LSMF971U).

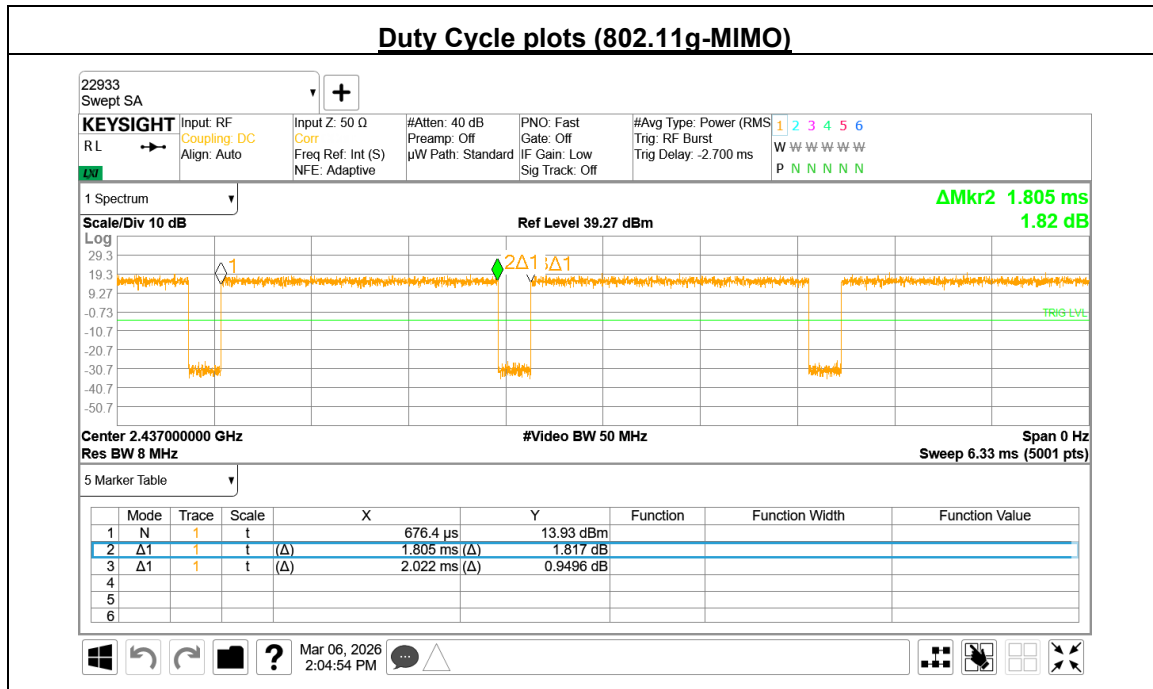
9.1. Wi-Fi 2.4 GHz (DTS Band)

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 Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	SAR Test (Yes/No)
WiFi 2.4 GHz MIMO 1 (Ant.D)	802.11g	6 Mbps	1	2412.0	16.62	17.0	Yes	17.02	18.0	Yes	13.33	14.0	Yes
			6	2437.0	16.37			16.98			13.38		
			11	2462.0	16.45			17.01			13.43		
	802.11n	MCS 0	Not Required		Not Required	17.0	No	Not Required	18.0	No	Not Required	14.0	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	15.20	17.0	Yes	16.38	18.0	Yes	12.50	14.0	Yes
			6	2437.0	15.39			16.31			12.65		
			11	2462.0	15.18			16.43			12.53		
	802.11n	MCS 0	Not Required		Not Required	17.0	No	Not Required	18.0	No	Not Required	14.0	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



9.2. Bluetooth

Bluetooth(Bluetooth Low Energy) SISO Output Power Results

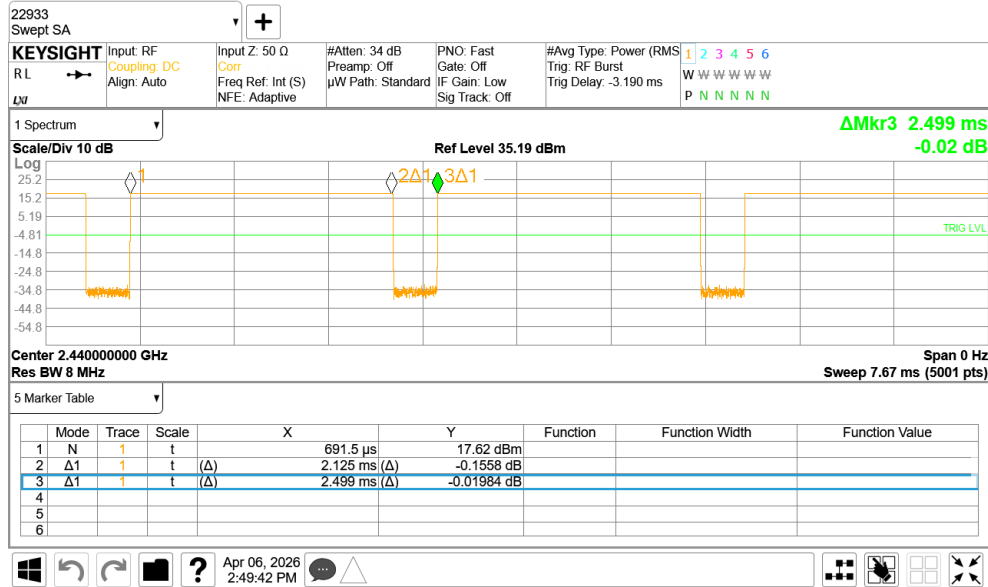
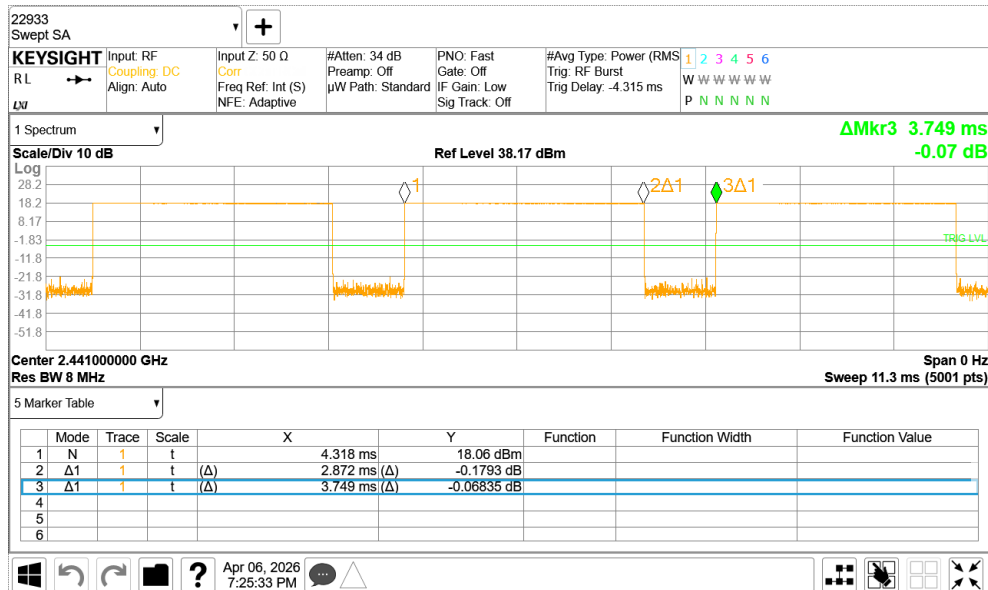
Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Maximum Allowed Average power (dBm)						
					DSI = 0 & 1		SAR test	DSI = 2 & 3		SAR test	
					Meas Pwr	Tune-up Limit		Meas Pwr	Tune-up Limit		
BT SISO 1 (Ant.D)	Bluetooth(BDR)	1Mbps	0	2402	Not required	16.00	No	Not required	13.50	No	
			39	2441							
			78	2480							
	Bluetooth(EDR)	2Mbps	0	2402	Not required	15.50	No	Not required	13.00	No	
			39	2441							
			78	2480							
		3Mbps	0	2402		15.50	No		13.00	No	
			39	2441							
			78	2480							
	Bluetooth(LE)	1Mbps (37pkt)	37	2402	Not required	16.00	No	Not required	13.50	No	
			17	2440							
			39	2480							
		1Mbps (255pkt)	37	2402	15.29	16.00	Yes	11.45	13.50	Yes	
			17	2440	14.73			11.66			
			39	2480	14.86			9.97			
		2Mbps (37pkt)	37	2402	Not required	16.00	No	Not required	13.50	No	
			17	2440							
			39	2480							
		2Mbps (255pkt)	37	2402		16.00	No		13.50	No	
			17	2440							
			39	2480							
		125kbps	37	2402		9.50	No		9.50	No	
			17	2440		9.50			9.50		
			39	2480		8.50			8.50		
		500kbps	37	2402		9.50	No		9.50	No	
			17	2440		9.50			9.50		
			39	2480		8.50			8.50		
BT SISO 2 (Ant.G)	Bluetooth(BDR)	1Mbps	0	2402	Not required	16.00	No	Not required	13.50	No	
			39	2441							
			78	2480							
	Bluetooth(EDR)	2Mbps	0	2402	Not required	15.00	No	Not required	13.00	No	
			39	2441							
			78	2480							
		3Mbps	0	2402		15.00	No		13.00	No	
			39	2441							
			78	2480							
	Bluetooth(LE)	1Mbps (37pkt)	37	2402	Not required	16.00	No	Not required	13.50	No	
			17	2440							
			39	2480							
		1Mbps (255pkt)	37	2402	15.25	16.00	Yes	13.23	13.50	Yes	
			17	2440	15.32			13.01			
			39	2480	15.16			11.36			
		2Mbps (37pkt)	37	2402	Not required	16.00	No	Not required	13.50	No	
			17	2440							
			39	2480							
		2Mbps (255pkt)	37	2402		16.00	No		13.50	No	
			17	2440							
			39	2480							
		125kbps	37	2402		10.00	No		10.00	No	
			17	2440		10.00			10.00		
			39	2480		9.00			9.00		
		500kbps	37	2402		10.00	No		10.00	No	
			17	2440		10.00			10.00		
			39	2480		9.00			9.00		

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 Pwr	Tune-up Limit		Meas Pwr	Tune-up Limit		
BT MIMO 1 (Ant.D)	Bluetooth(BDR)	1Mbps	0	2402	13.15	15.00	Yes	11.83	13.50	Yes	
			39	2441	13.06			11.62			
			78	2480	11.56			10.40			
	Bluetooth(EDR)	2Mbps	0	2402	Not required	12.00	No	Not required	12.00	No	
			39	2441		12.00			11.50		
			78	2480		11.50			11.50		
		3Mbps	0	2402		12.00	No		12.00	No	
			39	2441		12.00			11.50		
			78	2480		11.50			11.50		
	Bluetooth(LE)	1Mbps (37pkt)	37	2402	Not required	13.00	No	Not required	13.00	No	
			17	2440		13.00			12.00		
			39	2480		12.00			12.00		
		1Mbps (255pkt)	37	2402		13.00	No		13.00	No	
			17	2440		13.00			13.00		
			39	2480		12.00			12.00		
		2Mbps (37pkt)	37	2402	Not required	13.00	No	Not required	13.00	No	
			17	2440		13.00			13.00		
			39	2480		12.00			12.00		
		2Mbps (255pkt)	37	2402		13.00	No		Not required	13.00	No
			17	2440		13.00				13.00	
			39	2480		12.00				12.00	
		125kbps	37	2402		N/A	No		N/A	N/A	No
			17	2440							
			39	2480							
		500kbps	37	2402		N/A	No		N/A	N/A	No
			17	2440							
			39	2480							
BT MIMO 2 (Ant.G)	Bluetooth(BDR)	1Mbps	0	2402	14.91	15.00	Yes	13.44	13.50	Yes	
			39	2441	14.84			13.43			
			78	2480	12.09			11.32			
	Bluetooth(EDR)	2Mbps	0	2402	Not required	11.00	No	Not required	11.00	No	
			39	2441		11.00			10.00		
			78	2480		10.00			10.00		
		3Mbps	0	2402		11.00	No		11.00	No	
			39	2441		11.00			10.00		
			78	2480		10.00			10.00		
	Bluetooth(LE)	1Mbps (37pkt)	37	2402	Not required	13.00	No	Not required	13.00	No	
			17	2440		13.00			13.00		
			39	2480		12.00			12.00		
		1Mbps (255pkt)	37	2402	Not required	13.00	No	Not required	13.00	No	
			17	2440		13.00			13.00		
			39	2480		12.00			12.00		
		2Mbps (37pkt)	37	2402	Not required	13.00	No	Not required	13.00	No	
			17	2440		13.00			13.00		
			39	2480		12.00			12.00		
		2Mbps (255pkt)	37	2402		13.00	No		Not required	13.00	No
			17	2440		13.00				13.00	
			39	2480		12.00				12.00	
		125kbps	37	2402		N/A	No		N/A	N/A	No
			17	2440							
			39	2480							
		500kbps	37	2402		N/A	No		N/A	N/A	No
			17	2440							
			39	2480							

Duty Factor Measured Results

Mode	T on (ms)	Period (ms)	Maximum Duty Cycle	Measured Duty Cycle	Crest Factor (maximum duty/measured duty cycle)
BLE - 1M 255pkt	2.125	2.499	87.00%	85.03%	1.02
BT - BDR	2.872	3.749	79.00%	76.61%	1.03

Duty Cycle plots (BLE- 1M 255pkt)**Duty Cycle plots (BT- BDR)****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 closest/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 configuration

10.1.1. Spot-check SAR test results and criteria

10.1.1.1. Worst-case Spot-check SAR test results and criteria – 1g SAR

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	BW (MHz)	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB offset	Turn-up Limit (dBm)	Reference Worst-Case					Variant Test (Spot-check)					Relative Difference (d100)	Spot-check Parameter		V/N	Pass Criterion						
															Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER1	Pa/R1 (mW)	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER2	Pa/R2 (mW)		Pa0 No.	Margin (M)			d100max (M)					
PCE	GSM850	AG.0	Ant.A	Head	GPRS 2 slots	10	3	0	Right Touch	190	836.6			32.50	31.42	0.153	0.196	0.123	33.3	31.34	0.144	0.188	0.118	33.5	0.041	0.877	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	GPRS 4 slots	25.50									24.63	0.091	0.722	0.451	23.7	24.55	0.012	0.637	0.398	24.2	0.118	0.549	0.299	Y	d100≤d100max (M)							
PCE	GSM850	AG.0	Ant.A+B	Head	GPRS 2 slots									32.50	31.42	0.220	0.282	0.176	31.8	31.34	0.236	0.308	0.193	31.4	0.093	0.824	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	GPRS 4 slots	1									5	Rear	190	836.6	25.50	24.63	0.414	0.506	0.316	25.2	24.55	0.497	0.619	0.387	24.4	0.223	0.684	0.434	Y	d100≤d100max (M)		
PCE	GSM850	AG.1	Ant.D	Head	GPRS 3 slots									30.50	28.61	0.301	0.465	0.291	29.4	28.55	0.369	0.578	0.361	28.4	1	0.243	0.709	0.459	Y	d100≤d100max (M)					
			Body-worn & Hotspot	GPRS 1 slot	1									5	Rear	190	836.6	30.50	28.87	0.490	0.713	0.446	22.7	29.25	0.494	0.659	0.412	23.1	2	0.076	0.554	0.304	Y	d100≤d100max (M)	
PCE	GSM1900	AG.0	Ant.B	Head	GPRS 2 slots									3	0	Right Touch	661	1880.0	29.50	27.96	0.153	0.218	0.136	29.9	27.55	0.146	0.229	0.143	29.7	3	0.049	0.864	0.500	Y	d100≤d100max (M)
			Body-worn & Hotspot	GPRS 4 slots	1									5	Rear	661	1880.0	22.50	21.70	0.604	0.726	0.454	20.7	21.17	0.690	0.937	0.586	19.6	4	0.291	0.546	0.296	Y	d100≤d100max (M)	
PCE	WCDMA5	AG.0	Ant.A	Head	Rel 99 RMC									3	0	Right Touch	4183	836.6	25.30	24.48	0.134	0.162	0.101	33.2	24.83	0.265	0.295	0.185	30.5	0.824	0.899	0.500	N	d100≤d100max (M)	
			Body-worn & Hotspot	Rel 99 RMC	1									5	Rear	4183	836.6	23.00	22.22	0.676	0.809	0.506	23.9	22.23	0.714	0.853	0.533	23.6	0.054	0.494	0.250	Y	d100≤d100max (M)		
PCE	WCDMA5	AG.0	Ant.A+B	Head	Rel 99 RMC									3	0	Right Touch	4183	836.6	25.30	24.48	0.273	0.330	0.206	30.1	24.53	0.285	0.340	0.213	29.9	0.032	0.794	0.500	Y	d100≤d100max (M)	
			Body-worn & Hotspot	Rel 99 RMC	1									5	Rear	4233	836.6	23.00	22.25	0.682	0.811	0.507	23.9	22.23	0.639	0.763	0.477	24.1	0.059	0.483	0.250	Y	d100≤d100max (M)		
PCE	WCDMA5	AG.1	Ant.D	Head	Rel 99 RMC									3	0	Left Touch	4183	836.6	25.30	23.67	0.405	0.589	0.368	27.5	23.87	0.391	0.543	0.340	27.9	5	0.078	0.632	0.382	Y	d100≤d100max (M)
			Body-worn & Hotspot	Rel 99 RMC	1									5	Rear	4183	836.6	22.00	20.12	0.513	0.791	0.494	23.0	20.28	0.634	0.942	0.589	22.2	6	0.191	0.506	0.256	Y	d100≤d100max (M)	
PCE	WCDMA4	AG.1	Ant.F	Head	Rel 99 RMC									3	0	Left Tilt	1413	1732.6	20.00	18.96	0.545	0.692	0.433	21.5	19.25	0.638	0.758	0.474	21.2	7	0.095	0.567	0.317	Y	d100≤d100max (M)
			Body-worn & Hotspot	Rel 99 RMC	1									5	Rear	1413	1732.6	16.50	15.44	0.563	0.719	0.449	17.9	15.78	0.648	0.765	0.478	17.6	8	0.064	0.551	0.301	Y	d100≤d100max (M)	
PCE	WCDMA2	AG.1	Ant.F	Head	Rel 99 RMC									3	0	Left Tilt	9400	1880.0	21.50	21.11	0.918	1.004	0.628	21.4	21.25	0.953	1.009	0.631	21.4	9	0.005	0.372	0.250	Y	d100≤d100max (M)
			Body-worn & Hotspot	Rel 99 RMC	1									5	Rear	9400	1880.0	17.50	16.70	0.560	0.673	0.421	19.2	16.85	0.664	0.771	0.482	18.6	10	0.145	0.579	0.329	Y	d100≤d100max (M)	
PCE	LTEB12	AG.0	Ant.A	Head	QPSK	10	3	0	Right Touch	23095	707.5	1	25	25.20	24.72	0.078	0.987	0.055	35.7	24.52	0.072	0.094	0.053	35.9	0.035	0.945	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	10	1	5	Rear	23095	707.5	25	12	23.00	22.27	0.309	0.366	0.228	27.3	22.16	0.400	0.485	0.303	26.1	0.328	0.772	0.500	Y	d100≤d100max (M)							
PCE	LTEB12	AG.0	Ant.A+B	Head	QPSK	10	3	0	Right Touch	23095	707.5	1	25	25.20	24.72	0.177	0.198	0.134	32.2	24.52	0.201	0.235	0.147	31.4	11	0.189	0.876	0.500	Y	d100≤d100max (M)					
			Body-worn & Hotspot	QPSK	10	1	5	Rear	23095	707.5	25	12	23.00	22.27	0.472	0.558	0.349	25.5	22.16	0.471	0.572	0.357	25.4	0.023	0.651	0.401	Y	d100≤d100max (M)							
PCE	LTEB12	AG.1	Ant.D	Head	QPSK	10	3	0	Left Tilt	23095	707.5	25	12	24.00	23.87	0.186	0.192	0.120	31.1	22.42	0.136	0.196	0.122	31.0	0.021	0.880	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	10	1	5	Rear	23095	707.5	25	12	24.00	23.29	0.481	0.586	0.354	26.4	22.31	0.533	0.787	0.492	25.0	12	0.389	0.646	0.396	Y	d100≤d100max (M)						
PCE	LTEB13	AG.0	Ant.A	Head	QPSK	10	3	0	Right Touch	23230	762.0	1	0	25.50	24.91	0.166	0.190	0.119	32.7	24.43	0.161	0.206	0.129	32.3	0.083	0.881	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	10	1	5	Rear	23230	762.0	25	0	23.00	22.29	0.431	0.558	0.317	25.9	21.94	0.513	0.655	0.409	24.8	0.290	0.683	0.433	Y	d100≤d100max (M)							
PCE	LTEB13	AG.0	Ant.A+B	Head	QPSK	10	3	0	Right Touch	23230	762.0	1	0	25.50	24.91	0.228	0.261	0.163	31.3	24.43	0.178	0.228	0.142	31.9	0.128	0.837	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	10	1	5	Rear	23230	762.0	1	0	23.00	22.34	0.635	0.739	0.462	24.3	21.94	0.454	0.580	0.362	25.3	0.216	0.538	0.288	Y	d100≤d100max (M)							
PCE	LTEB13	AG.1	Ant.D	Head	QPSK	10	3	0	Left Tilt	23230	762.0	1	25	25.50	23.73	0.283	0.379	0.237	29.2	24.02	0.426	0.534	0.334	27.7	13	0.408	0.763	0.500	Y	d100≤d100max (M)					
			Body-worn & Hotspot	QPSK	10	1	5	Rear	23230	762.0	50	0	24.00	22.07	0.660	1.029	0.643	23.8	22.14	0.696	1.068	0.668	23.7	14	0.038	0.357	0.250	Y	d100≤d100max (M)						
PCE	LTEB26	AG.0	Ant.A	Head	QPSK	15	3	0	Right Touch	26865	831.5	1	0	25.50	24.73	0.243	0.260	0.181	30.8	24.71	0.230	0.276	0.172	31.0	0.049	0.819	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	15	1	5	Rear	26865	831.5	36	0	23.00	22.34	0.643	0.749	0.468	24.2	22.46	0.710	0.804	0.503	23.9	15	0.074	0.532	0.282	Y	d100≤d100max (M)						
PCE	LTEB26	AG.0	Ant.A+B	Head	QPSK	15	3	0	Right Touch	26865	831.5	1	0	25.50	24.73	0.270	0.322	0.201	30.4	24.71	0.275	0.330	0.206	30.3	0.023	0.799	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	15	1	5	Rear	26865	831.5	36	0	23.00	22.34	0.668	0.778	0.486	24.0	22.46	0.638	0.722	0.452	24.4	0.071	0.514	0.264	Y	d100≤d100max (M)							
PCE	LTEB26	AG.1	Ant.D	Head	QPSK	15	3	0	Left Touch	26865	831.5	1	37	25.50	24.14	0.385	0.469	0.293	28.2	24.15	0.401	0.488	0.305	28.1	16	0.039	0.707	0.457	Y	d100≤d100max (M)					
			Body-worn & Hotspot	QPSK	15	1	5	Rear	26865	831.5	36	20	22.00	20.44	0.473	0.677	0.423	23.6	20.55	0.490	0.684	0.428	23.6	0.010	0.577	0.327	Y	d100≤d100max (M)							
PCE	LTEB6	AG.0	Ant.A	Head	QPSK	10	3	0	Right Touch	20525	836.5	1	0	25.50	24.52	0.243	0.305	0.190	30.6	24.80	0.238	0.280	0.175	31.0	0.062	0.810	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	10	1	5	Rear	20525	836.5	25	0	23.00	22.22	0.640	0.766	0.479	24.1	22.29	0.705	0.830	0.519	23.8	17	0.084	0.521	0.271	Y	d100≤d100max (M)						
PCE	LTEB6	AG.0	Ant.A+B	Head	QPSK	10	3	0	Right Touch	20525	836.5	1	0	25.50	24.52	0.245	0.307	0.192	30.6	24.80	0.277	0.325	0.203	30.3	0.060	0.808	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	10	1	5	Rear	20525	836.5	25	0	23.00	22.22	0.685	0.820	0.512	23.8	22.29	0.643	0.757	0.473	24.2	0.076	0.488	0.250	Y	d100≤d100max (M)							
PCE	LTEB6	AG.1	Ant.D	Head	QPSK	10	3	0	Left Touch	20525	836.5	1	0	25.50	24.28	0.341	0.402	0.252	28.9	24.12	0.356	0.436	0.272	28.6	18	0.083	0.748	0.498	Y	d100≤d100max (M)					
			Body-worn & Hotspot	QPSK	10	1	5	Rear	20525	836.5	1	0	22.00	20.60	0.482	0.665	0.416	23.7	20.16	0.475	0.726	0.453	23.3	0.091	0.584	0.334	Y	d100≤d100max (M)							
PCE	LTEB66	AG.0	Ant.B	Head	QPSK	20	3	0	Right Touch	132322	1745.0	1	0	25.00	24.45	0.231	0.262	0.164	30.8	23.83	0.287	0.336	0.235	29.2	0.433	0.836	0.500	Y	d100≤d100max (M)						
			Body-worn & Hotspot	QPSK	20	1	5	Rear	132322	1745.0	50	0	17.00	16.57	0.560	0.618	0.386	19.0	15.90	0.441	0.568	0.355	19.4	0.081	0.614	0.364	Y	d100≤d100max (M)							
PCE	LTEB66	AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	132072	1720.0	1	0	21.00	19.98	0.819	1.036	0.647	20.8	20.45	0.916	1.040	0.650	20.8	19	0.004	0.353	0.250	Y	d100≤d100max (M)					
			Body-worn & Hotspot	QPSK	20	1	5	Rear	132072	1720.0	50	50	16.50	15.58	0.591	0.730	0.457	17.8	15.45	0.687	0.790	0.484	17.5	20	0.081	0.543	0.293	Y	d100≤d100max (M)						
PCE	LTEB25	AG.0	Ant.B	Head	QPSK	20	3	0	Right Touch	26385	1882.5	1	0	25.00	24.75	0.351	0.372	0.232	29.2	24.55	0.384	0.426	0.286	28.7	0.146	0.78									

Worst-case Spot-check SAR test results and criteria – 1g SAR (Continued)

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	BW (MHz)	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB offset	Tune-up Limit (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)	TEFL	Part ID	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TEFL	Part ID			Ref. No.	Margin (M)	d _{12mm} (M)	
PCE	NR-n6	AG-0	Ant.B	Head	DTT-s OFDM QRSK	45	3	0	Right Touch	349000	1745.0	1	1	25.00	24.62	0.332	0.362	0.226	29.4	24.42	0.340	0.389	0.243	29.1		0.072	0.774	0.500	Y	d _{12mm} ≤d _{12mm} (M)	
				Body-worn & Hotspot	DTT-s OFDM QRSK	45	1	5	Rear	349000	1745.0	1	1	17.00	16.45	0.604	0.686	0.428	18.6	16.34	0.754	0.878	0.549	17.5		0.280	0.572	0.322	Y	d _{12mm} ≤d _{12mm} (M)	
PCE	NR-n6	AG-1	Ant.F	Head	DTT-s OFDM QRSK	45	3	0	Left Tilt	349000	1745.0	1	1	21.00	20.30	0.916	1.076	0.673	20.6	20.85	0.984	1.019	0.637	20.9	29	0.054	0.327	0.250	Y	d _{12mm} ≤d _{12mm} (M)	
				Body-worn & Hotspot	DTT-s OFDM QRSK	45	1	5	Rear	349000	1745.0	1	1	16.50	15.69	0.646	0.778	0.487	17.5	15.90	0.801	0.920	0.575	16.8	30	0.181	0.513	0.263	Y	d _{12mm} ≤d _{12mm} (M)	
PCE	NR-n25	AG-0	Ant.B	Head	DTT-s OFDM QRSK	40	3	0	Right Touch	376500	1882.5	1	1	25.00	24.35	0.266	0.309	0.193	30.1	24.45	0.373	0.423	0.265	28.7		0.370	0.607	0.500	Y	d _{12mm} ≤d _{12mm} (M)	
				Body-worn & Hotspot	DTT-s OFDM QRSK	40	1	5	Rear	376500	1882.5	1	1	18.00	17.59	0.622	0.684	0.427	19.6	16.92	0.602	0.772	0.482	19.1		0.129	0.573	0.323	Y	d _{12mm} ≤d _{12mm} (M)	
PCE	NR-n25	AG-1	Ant.F	Head	DTT-s OFDM QRSK	40	3	0	Left Tilt	376500	1882.5	1	1	22.00	21.45	0.674	0.765	0.478	23.1	21.61	0.936	1.024	0.640	21.8	31	0.338	0.522	0.272	N	d _{12mm} ≤d _{12mm} (M)	
				Body-worn & Hotspot	DTT-s OFDM QRSK	40	1	5	Rear	376500	1882.5	1	1	17.50	16.73	0.584	0.697	0.436	19.0	16.85	0.785	0.912	0.570	17.9	32	0.308	0.584	0.314	Y	d _{12mm} ≤d _{12mm} (M)	
PCE	NR-n41	AG-0	Ant.B	Head	DTT-s OFDM QRSK	100	3	0	Right Touch	518598	2592.99	1	1	24.00	23.67	0.143	0.154	0.096	32.1	23.77	0.111	0.117	0.073	33.3	33	0.241	0.904	0.500	Y	d _{12mm} ≤d _{12mm} (M)	
				Body-worn & Hotspot	DTT-s OFDM QRSK	100	1	5	Rear	518598	2592.99	1	1	17.00	16.47	0.538	0.608	0.380	19.1	16.66	0.621	0.672	0.420	18.7	34	0.105	0.620	0.370	Y	d _{12mm} ≤d _{12mm} (M)	
PCE	NR-n41	AG-0	Ant.C	Head	SRS OW	100	3	0	Right Touch	518598	2592.99	0	0	13.00	12.54	0.003	0.003	0.002	37.7	12.81	0.000	0.000	0.000	0.000	N/A	1.000	0.998	0.500	NA	d _{12mm} ≤d _{12mm} (M)	
				Body-worn & Hotspot	SRS OW	100	1	5	Rear	518598	2592.99	0	0	13.00	12.54	0.137	0.152	0.095	21.1	12.81	0.139	0.145	0.091	21.3		0.047	0.905	0.500	Y	d _{12mm} ≤d _{12mm} (M)	
PCE	NR-n77	AG-0	Ant.A	Head	SRS OW	100	3	0	Right Touch	662000	3930.00	0	0	13.00	11.69	0.006	0.008	0.005	33.9	11.03	0.000	0.000	0.000	0.000	N/A	1.000	0.995	0.500	NA	d _{12mm} ≤d _{12mm} (M)	
				Body-worn & Hotspot	SRS OW	100	1	5	Rear	662000	3930.00	0	0	13.00	11.69	0.158	0.214	0.134	19.7	11.03	0.075	0.118	0.074	22.2		0.447	0.896	0.500	Y	d _{12mm} ≤d _{12mm} (M)	
PCE	NR-n77	AG-0	Ant.C	Head	SRS OW	100	3	0	Left Tilt	650000	3750.00	0	0	13.00	11.89	0.001	0.001	0.001	41.8	11.56	0.000	0.000	0.000	0.000	N/A	35	1.000	0.999	0.500	NA	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	SRS OW	100	1	5	Rear	650000	3750.00	0	0	13.00	11.89	0.129	0.167	0.104	20.7	11.56	0.052	0.072	0.045	24.3	36	0.365	0.896	0.500	N	d _{12mm} ≤d _{12mm} (M)	

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	Max Duty Cycle (%)	Tested Duty Cycle (%)	Tune-up Limit (dBm)	Reference Worst-Case				Variant Test (Spot-check)				Relative Difference (dBs)	Spot-check Parameter		Y/N	Pass Criterion			
														Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TEFL	Part ID	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TEFL	Part ID			Ref. No.	Margin (M)	d _{12mm} (M)
DTS	WLAN 2.4GHz	AG-1	Ant.D	Head	802.11b 1Mbps	3	0	Left Touch	6	2437.0	100.00%	97.27%	15.50	14.62	0.080	0.101	0.063	25.4	14.35	0.054	0.072	0.045	26.9		0.282	0.937	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11b 1Mbps	1	5	Rear	1	2412.0	100.00%	97.27%	18.00	17.63	0.074	0.889	0.556	18.5	17.46	0.710	0.827	0.517	18.8	37	0.070	0.444	0.250	Y	d _{12mm} ≤d _{12mm} (M)
DTS	WLAN 2.4GHz	AG-1	Ant.G	Head	802.11b 1Mbps	3	0	Left Tilt	1	2412.0	100.00%	97.27%	15.50	14.25	0.676	0.927	0.579	15.8	14.12	0.607	0.857	0.536	16.1	38	0.075	0.421	0.250	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11b 1Mbps	1	5	Front	1	2412.0	100.00%	97.27%	18.00	17.21	0.657	0.810	0.506	18.9	16.97	0.562	0.732	0.458	19.3		0.096	0.494	0.250	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 2A	AG-1	Ant.DHE	Head	802.11ac VHT80 MCS30	3	0	Left Tilt	58	5290.0	100.00%	94.26%	16.00	15.42	0.195	0.236	0.148	22.2	15.39	0.286	0.349	0.218	20.5	39	0.477	0.852	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS30	1	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.75	0.281	0.398	0.248	18.0	12.65	0.409	0.592	0.370	16.2	40	0.489	0.752	0.500	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 2A	AG-1	Ant.E	Head	802.11ac VHT80 MCS30	3	0	Left Tilt	58	5290.0	100.00%	94.26%	16.00	15.57	0.200	0.234	0.146	22.3	15.62	0.279	0.323	0.202	20.9		0.379	0.854	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS30	1	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.94	0.194	0.263	0.164	19.8	13.50	0.215	0.256	0.160	19.9		0.026	0.836	0.500	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 2A	AG-1	Ant.D	Head	802.11ac VHT80 MCS30	3	0	Right Tilt	58	5290.0	100.00%	94.26%	16.00	15.61	0.178	0.207	0.129	22.8	15.05	0.112	0.148	0.092	24.3		0.284	0.871	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS30	1	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.68	0.210	0.302	0.189	19.2	12.93	0.417	0.566	0.354	16.4		0.875	0.811	0.500	N	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 2C	AG-1	Ant.DHE	Head	802.11ac VHT80 MCS30	3	0	Right Tilt	106	5530.0	100.00%	94.26%	16.00	15.42	0.444	0.538	0.336	18.6	14.82	0.449	0.625	0.391	18.0	41	0.161	0.664	0.414	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn	802.11ac VHT80 MCS30	1	5	Rear	122	5610.0	100.00%	94.26%	14.00	12.76	0.235	0.332	0.207	18.7	12.42	0.310	0.473	0.296	17.2	42	0.427	0.793	0.500	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 2C	AG-1	Ant.E	Head	802.11ac VHT80 MCS30	3	0	Right Tilt	106	5530.0	100.00%	94.26%	16.00	15.68	0.393	0.449	0.281	19.4	15.37	0.420	0.515	0.322	18.8		0.148	0.719	0.469	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn	802.11ac VHT80 MCS30	1	5	Rear	106	5530.0	100.00%	94.26%	14.00	13.23	0.274	0.347	0.217	18.5	13.39	0.266	0.325	0.203	18.8		0.064	0.783	0.500	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 2C	AG-1	Ant.D	Head	802.11ac VHT80 MCS30	3	0	Left Tilt	138	5690.0	100.00%	94.26%	16.00	15.58	0.174	0.203	0.127	22.9	15.35	0.232	0.286	0.179	21.4		0.406	0.873	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn	802.11ac VHT80 MCS30	1	5	Rear	122	5610.0	100.00%	94.26%	14.00	12.93	0.124	0.168	0.105	21.7	13.73	0.270	0.305	0.191	19.1		0.811	0.895	0.500	N	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 3	AG-1	Ant.DHE	Head	802.11ac VHT80 MCS30	3	0	Right Tilt	155	5775.0	100.00%	94.26%	16.00	14.83	0.669	0.929	0.581	16.3	14.93	0.654	0.888	0.555	16.5		0.045	0.419	0.250	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS30	1	5	Rear	155	5775.0	100.00%	94.26%	14.00	12.82	0.271	0.377	0.236	18.2	12.44	0.306	0.465	0.291	17.3	43	0.252	0.764	0.500	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 3	AG-1	Ant.E	Head	802.11ac VHT80 MCS30	3	0	Right Tilt	155	5775.0	100.00%	94.26%	16.00	15.70	0.637	0.724	0.453	17.4	15.11	0.694	0.904	0.565	16.4	44	0.248	0.547	0.297	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS30	1	5	Rear	155	5775.0	100.00%	94.26%	14.00	12.86	0.343	0.473	0.266	17.2	13.66	0.287	0.329	0.206	18.8		0.304	0.704	0.454	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 3	AG-1	Ant.D	Head	802.11ac VHT80 MCS30	3	0	Left Tilt	155	5775.0	100.00%	94.26%	16.00	15.54	0.284	0.333	0.209	20.7	15.45	0.306	0.368	0.230	20.3		0.100	0.791	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS30	1	5	Rear	155	5775.0	100.00%	94.26%	14.00	13.08	0.174	0.228	0.143	20.4	13.46	0.250	0.300	0.186	19.2		0.316	0.857	0.500	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 4	AG-1	Ant.DHE	Head	802.11ac VHT80 MCS30	3	0	Right Tilt	171	5855.0	100.00%	94.26%	16.00	15.21	0.715	0.910	0.569	16.4	14.93	0.643	0.873	0.545	16.5		0.041	0.431	0.250	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn	802.11ac VHT80 MCS30	1	5	Rear	171	5855.0	100.00%	94.26%	14.00	12.62	0.337	0.491	0.307	17.0	12.33	0.300	0.468	0.292	17.3	45	0.048	0.693	0.443	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 4	AG-1	Ant.E	Head	802.11ac VHT80 MCS30	3	0	Right Tilt	171	5855.0	100.00%	94.26%	16.00	15.21	0.638	0.812	0.507	16.9	14.51	0.631	0.943	0.590	16.2	46	0.162	0.453	0.250	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn	802.11ac VHT80 MCS30	1	5	Rear	171	5855.0	100.00%	94.26%	14.00	12.83	0.331	0.460	0.287	17.3	13.69	0.288	0.328	0.205	18.8		0.286	0.713	0.463	Y	d _{12mm} ≤d _{12mm} (M)
NI	U-NI 4	AG-1	Ant.D	Head	802.11ac VHT80 MCS30	3	0	Left Tilt	171	5855.0	100.00%	94.26%	16.00	15.44	0.158	0.191	0.119	23.1	15.25	0.219	0.276	0.173	21.5		0.448	0.881	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn	802.11ac VHT80 MCS30	1	5	Rear	171	5855.0	100.00%	94.26%	14.00	12.94	0.188	0.255	0.159	19.9	13.42	0.242	0.286	0.179	19.4		0.124	0.841	0.500	Y	d _{12mm} ≤d _{12mm} (M)
8CDENVL	U-NI 5-8	AG-1	Ant.DHE	Head	802.11be EHT320 MCS30	3	0	Left Tilt	31	6105.0	100.00%	99.18%	12.50	11.53	0.108	0.136	0.085	21.1	11.77	0.167	0.199	0.125	19.5	47	0.463	0.915	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11be EHT320 MCS30	1	5	Rear	63	6265.0	100.00%	99.18%	12.50	11.69	0.240	0.292	0.162	17.8	11.74	0.182	0.219	0.137	19.1		0.250	0.816	0.500	Y	d _{12mm} ≤d _{12mm} (M)
8CDENVL	U-NI 5-8	AG-1	Ant.E	Head	802.11be EHT320 MCS30	3	0	Left Tilt	159	6745.0	100.00%	99.18%	12.50	11.56	0.086	0.108	0.067	22.1	11.46	0.090	0.077	0.048	23.6		0.286	0.933	0.500	Y	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11be EHT320 MCS30	1	5	Rear	191	6905.0	100.00%	99.18%	12.50	11.37	0.210	0.275	0.172	18.1	11.40	0.258	0.335	0.209	17.2	48	0.220	0.826	0.500	Y	d _{12mm} ≤d _{12mm} (M)
8CDENVL	U-NI 5-8	AG-1	Ant.D	Head	802.11be EHT320 MCS30	3	0	Right Touch	159	6745.0	100.00%	99.18%	12.50	11.35	0.018	0.024	0.015	28.7	11.76	0.037	0.044	0.028	20.6		0.870	0.985	0.500	NA	d _{12mm} ≤d _{12mm} (M)
				Body-worn & Hotspot	802.11be EHT320 MCS30	1	5	Rear	191	6905.0	100.00%	99.18%	12.50	11.66	0.184	0.225	0.141	18.9	11.94	0.291	0.334	0.209	17.2		0.483	0.859	0.500	Y	d _{12mm} ≤d _{12mm} (M)

10.1.1.2. Worst-case Spot-check SAR test results and criteria – 10g SAR

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	BW (MHz)	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB offset	Turn-up Limit (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)	TER _h	Part0 P _{EMF}	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER _h	Part0 P _{EMF}	Plot No.	Margin (M)	d _{TERmax} (M)		
PCE	GSM850	AG.0	Ant.A	Product Specific 10-g	Product Specific 10-g	1	0	Bottom	190	836.6				25.50	24.63	0.890	1.087	0.272	25.9	24.55	0.927	1.154	0.230	26.6	0.153	0.728	0.478	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	GSM850	AG.0	Ant.A+B	Product Specific 10-g	Product Specific 10-g	1	0	Bottom	190	836.6				25.50	24.63	0.839	0.781	0.195	27.3	24.55	0.927	1.154	0.288	25.6	0.478	0.805	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	GSM850	AG.1	Ant.D	Product Specific 10-g	Product Specific 10-g	1	0	Top	190	836.6				30.50	28.87	0.751	1.003	0.273	24.9	29.25	0.461	0.615	0.154	27.4	0.438	0.727	0.477	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	GSM1900	AG.0	Ant.B	Product Specific 10-g	Product Specific 10-g	1	0	Bottom	661	1880.0				22.50	21.70	1.270	1.527	0.382	21.4	21.17	1.340	1.820	0.455	20.7	0.192	0.618	0.368	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA5	AG.0	Ant.A	Product Specific 10-g	Product Specific 10-g	1	0	Bottom	4183	836.6				23.00	22.22	1.490	1.783	0.446	24.4	22.23	1.530	1.827	0.457	24.3	0.024	0.554	0.304	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA5	AG.0	Ant.A+B	Product Specific 10-g	Product Specific 10-g	1	0	Bottom	4183	836.6				23.00	22.22	1.500	1.795	0.449	24.4	22.23	1.400	1.672	0.418	24.7	0.069	0.551	0.301	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA5	AG.1	Ant.D	Product Specific 10-g	Product Specific 10-g	1	0	Right	4132	826.4				22.00	20.17	0.967	1.504	0.376	24.2	20.28	0.952	1.415	0.354	24.4	0.050	0.624	0.374	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA4	AG.1	Ant.F	Product Specific 10-g	Product Specific 10-g	1	0	Right	1413	1732.6				16.50	15.44	0.656	0.837	0.209	21.2	15.78	0.668	0.788	0.197	21.5	0.058	0.791	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA2	AG.1	Ant.F	Product Specific 10-g	Product Specific 10-g	1	0	Top	9400	1880.0				17.50	16.70	0.838	1.007	0.252	21.4	16.85	1.180	1.371	0.343	20.1	0.360	0.748	0.498	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B12	AG.0	Ant.A	Product Specific 10-g	Product Specific 10-g	10	1	0	Bottom	23095	707.5	1	25	23.00	22.37	0.889	1.028	0.257	26.8	22.41	1.110	1.272	0.318	25.9	0.237	0.743	0.493	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B12	AG.0	Ant.A+B	Product Specific 10-g	Product Specific 10-g	10	1	0	Right	23095	707.5	1	25	23.00	22.37	0.901	1.042	0.260	26.8	22.41	0.886	1.015	0.254	26.9	0.026	0.740	0.490	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B12	AG.1	Ant.D	Product Specific 10-g	Product Specific 10-g	10	1	0	Right	23095	707.5	1	0	24.00	23.46	1.050	1.189	0.297	27.2	23.46	1.080	1.200	0.300	27.1	0.010	0.703	0.453	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B13	AG.0	Ant.A	Product Specific 10-g	Product Specific 10-g	10	1	0	Bottom	23230	782.0	1	0	23.00	22.34	0.842	0.980	0.245	27.0	22.01	1.160	1.457	0.364	25.3	0.486	0.755	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B13	AG.0	Ant.A+B	Product Specific 10-g	Product Specific 10-g	10	1	0	Right	23230	782.0	1	0	23.00	22.34	0.948	1.104	0.276	26.5	21.82	0.858	1.126	0.281	26.4	0.020	0.724	0.474	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B13	AG.1	Ant.D	Product Specific 10-g	Product Specific 10-g	10	1	0	Right	23230	782.0	1	49	24.00	22.15	1.210	1.853	0.463	25.3	22.18	1.290	1.962	0.490	25.0	0.059	0.537	0.292	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B26	AG.0	Ant.A	Product Specific 10-g	Product Specific 10-g	15	1	0	Bottom	26865	831.5	1	0	23.00	22.78	1.360	1.431	0.358	25.4	22.31	1.440	1.688	0.422	24.7	0.180	0.642	0.382	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B26	AG.0	Ant.A+B	Product Specific 10-g	Product Specific 10-g	15	1	0	Right	26865	831.5	1	0	23.00	22.78	1.230	1.294	0.323	25.8	22.31	1.130	1.325	0.331	25.7	0.024	0.677	0.427	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B26	AG.1	Ant.D	Product Specific 10-g	Product Specific 10-g	15	1	0	Right	26865	831.5	1	0	22.00	20.65	0.880	1.201	0.300	25.1	20.30	1.010	1.494	0.373	24.2	0.244	0.700	0.450	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B5	AG.0	Ant.A	Product Specific 10-g	Product Specific 10-g	10	1	0	Bottom	20525	836.5	1	0	23.00	22.35	1.310	1.521	0.380	25.1	22.46	1.340	1.517	0.379	25.1	0.003	0.620	0.370	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B5	AG.0	Ant.A+B	Product Specific 10-g	Product Specific 10-g	10	1	0	Right	20525	836.5	1	0	23.00	22.35	1.320	1.533	0.383	25.1	22.46	1.220	1.362	0.345	25.5	0.099	0.617	0.367	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B5	AG.1	Ant.D	Product Specific 10-g	Product Specific 10-g	10	1	0	Right	20525	836.5	1	0	22.00	20.60	0.824	1.137	0.284	25.4	20.16	0.905	1.382	0.346	24.5	0.215	0.716	0.466	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B66	AG.0	Ant.B	Product Specific 10-g	Product Specific 10-g	20	1	0	Bottom	132322	1745.0	1	0	17.00	16.84	0.800	0.852	0.163	22.8	15.97	0.771	0.977	0.244	21.0	0.495	0.637	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B66	AG.1	Ant.D	Product Specific 10-g	Product Specific 10-g	20	1	0	Top	132072	1720.0	1	99	16.50	15.62	0.724	0.887	0.222	21.0	15.65	0.770	0.936	0.234	20.7	0.056	0.778	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B25	AG.0	Ant.B	Product Specific 10-g	Product Specific 10-g	20	1	0	Bottom	26365	1882.5	1	0	18.00	17.53	0.878	0.978	0.245	22.0	17.06	1.100	1.366	0.341	20.6	0.396	0.755	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B25	AG.1	Ant.F	Product Specific 10-g	Product Specific 10-g	20	1	0	Top	26590	1905.0	1	0	17.50	16.70	0.763	0.917	0.229	21.8	16.82	0.950	1.111	0.278	21.0	0.211	0.771	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B41	AG.0	Ant.A	Product Specific 10-g	Product Specific 10-g	20	1	0	Bottom	41055	2636.5	1	0	19.00	18.28	0.503	0.594	0.148	23.2	18.52	0.811	0.906	0.226	21.4	0.526	0.852	0.500	N	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n71	AG.0	Ant.B	Product Specific 10-g	DFT-s OFDM QPSK	35	1	0	Right	136100	680.5	1	93	23.00	22.27	0.921	0.990	0.272	26.6	22.38	1.150	1.326	0.332	25.7	0.217	0.728	0.478	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n71	AG.0	Ant.A+B	Product Specific 10-g	DFT-s OFDM QPSK	35	1	0	Right	136100	680.5	1	93	23.00	22.27	1.470	1.739	0.435	24.5	22.21	1.020	1.223	0.306	26.1	0.296	0.565	0.315	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n71	AG.1	Ant.D	Product Specific 10-g	DFT-s OFDM QPSK	35	1	0	Right	136100	680.5	1	93	24.00	22.45	1.030	1.472	0.368	26.3	22.76	1.260	1.676	0.419	25.7	0.139	0.632	0.382	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n5	AG.0	Ant.A	Product Specific 10-g	DFT-s OFDM QPSK	20	1	0	Bottom	167300	836.5	1	1	23.00	22.17	1.440	1.743	0.436	24.5	22.34	1.140	1.327	0.332	25.7	0.239	0.564	0.314	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n5	AG.0	Ant.A+B	Product Specific 10-g	DFT-s OFDM QPSK	20	1	0	Bottom	167300	836.5	1	1	23.00	22.17	1.400	1.695	0.424	24.6	22.34	1.310	1.525	0.381	25.1	0.100	0.576	0.326	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n5	AG.1	Ant.D	Product Specific 10-g	DFT-s OFDM QPSK	20	1	0	Right	167300	836.5	1	1	22.00	20.49	0.782	1.107	0.277	25.5	20.13	0.878	1.043	0.261	25.7	0.058	0.723	0.473	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n6	AG.0	Ant.B	Product Specific 10-g	DFT-s OFDM QPSK	45	1	0	Bottom	349000	1745.0	1	1	17.00	16.45	0.748	0.849	0.212	21.6	16.34	0.698	0.813	0.203	21.8	0.043	0.788	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n6	AG.1	Ant.F	Product Specific 10-g	DFT-s OFDM QPSK	45	1	0	Top	349000	1745.0	1	1	16.50	15.69	0.748	0.901	0.225	20.9	15.90	0.828	0.951	0.238	20.6	0.055	0.775	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n25	AG.0	Ant.B	Product Specific 10-g	DFT-s OFDM QPSK	40	1	0	Bottom	378500	1882.5	1	1	18.00	17.59	1.050	1.154	0.288	21.3	16.92	1.040	1.334	0.333	20.7	0.156	0.712	0.462	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n25	AG.1	Ant.F	Product Specific 10-g	DFT-s OFDM QPSK	40	1	0	Top	378500	1882.5	1	1	17.50	16.73	0.778	0.929	0.232	21.7	16.85	1.020	1.185	0.296	20.7	0.275	0.768	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n41	AG.0	Ant.A	Product Specific 10-g	DFT-s OFDM QPSK	100	1	0	Bottom	518598	2592.99	1	1	17.00	16.47	1.320	1.491	0.373	19.2	16.66	1.320	1.427	0.357	19.4	0.043	0.627	0.377	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n41	AG.0	Ant.C	Product Specific 10-g	SRS OW	100	1	0	Bottom	518598	2592.99			13.00	12.54	0.414	0.460	0.115	20.3	12.81	0.313	0.327	0.082	21.8	0.290	0.885	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n77	AG.0	Ant.A	Product Specific 10-g	SRS OW	100	1	0	Bottom	682000	3630.00			13.00	11.69	0.125	0.169	0.042	24.7	11.03	0.058	0.091	0.023	27.3	0.460	0.958	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n77	AG.0	Ant.C	Product Specific 10-g	SRS OW	100	1	0	Bottom	650000	3750.00			13.00	11.89	0.098	0.127	0.032	25.9	11.56	0.022	0.031	0.008	32.1	0.758	0.968	0.500	N	d _{TER} ≤ d _{TERmax} (M)

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	Max Duty Cycle (%)	Tested Duty Cycle (%)	Turn-up Limit (dBm)	Reference Worst-Case				
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10.1.1.3. All test position Spot-check SAR test results and criteria – 1g SAR

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	BW (MHz)	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Reference Worst-Case				Variant Test (Spot-check)				Relative Difference (dB ₁₀₀)	Spot-check Parameter		Y/N	Pass Criterion						
															Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER _L	Per0 Pass	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TER _L	Per0 Pass			Plot No.	Margn (M)	ϕ _{100ms} (M)			
PCE	LTE B41	AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	40185	2549.5	50	0	18.50	17.55	0.450	0.560	0.350	19.0	18.01	0.320	0.358	0.224	20.9	0.360	0.650	0.400	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
					QPSK	20	3	0	Left Tilt	40185	2549.5	100	0	18.50	17.53	0.749	0.936	0.585	16.7	18.19	0.364	0.391	0.244	20.5	55	0.583	0.415	0.250	N	ϕ _{100ms} <ϕ _{120ms} (M)			
					QPSK	20	3	0	Right Touch	40185	2549.5	1	0	18.50	17.53	0.404	0.505	0.316	19.4	17.97	0.329	0.372	0.232	20.8	0.264	0.684	0.434	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
				Body-worn & Hotspot	QPSK	20	3	0	Right Tilt	40185	2549.5	1	0	18.50	17.53	0.436	0.545	0.341	19.1	17.97	0.318	0.359	0.225	20.9	0.341	0.659	0.409	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
					QPSK	20	1	5	Rear	39750	2506.0	1	0	19.00	17.84	0.742	0.969	0.606	17.1	18.45	0.403	0.457	0.286	20.4	56	0.528	0.394	0.250	N	ϕ _{100ms} <ϕ _{120ms} (M)			
					QPSK	20	1	5	Front	40185	2549.5	50	0	19.00	17.92	0.214	0.274	0.172	22.6	18.54	0.252	0.280	0.175	22.5	0.021	0.828	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
PCE	NR-n41	AG.1	Ant.F	Head	QPSK	20	1	10	Top	40185	2549.5	1	0	19.00	17.93	0.280	0.358	0.224	21.4	18.45	0.181	0.205	0.128	23.8	0.427	0.776	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
					Body-worn & Hotspot	SRS OW	100	3	0	Left Touch	518598	2592.99			16.50	15.88	0.756	0.872	0.545	17.0	15.97	0.470	0.531	0.332	19.2	0.391	0.455	0.250	N	ϕ _{100ms} <ϕ _{120ms} (M)			
						SRS OW	100	3	0	Left Tilt	518598	2592.99			16.50	15.88	0.854	0.985	0.616	16.5	15.97	0.628	0.710	0.443	17.9	57	0.280	0.384	0.250	N	ϕ _{100ms} <ϕ _{120ms} (M)		
				SRS OW		100	3	0	Right Touch	518598	2592.99			16.50	15.88	0.713	0.822	0.514	17.3	15.97	0.371	0.419	0.262	20.2	0.490	0.486	0.250	N	ϕ _{100ms} <ϕ _{120ms} (M)				
				SRS OW	100	3	0	Right Tilt	518598	2592.99			16.50	15.88	0.840	0.969	0.606	16.6	15.97	0.500	0.565	0.353	18.9	0.417	0.394	0.250	N	ϕ _{100ms} <ϕ _{120ms} (M)					
				SRS OW	100	1	5	Rear	518598	2592.99			17.00	16.93	0.748	0.760	0.475	18.1	16.74	0.864	0.917	0.573	17.3	58	0.207	0.525	0.275	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
				SRS OW	100	1	5	Front	518598	2592.99			17.00	16.93	0.506	0.514	0.321	19.8	16.74	0.329	0.349	0.218	21.5	0.321	0.679	0.429	Y	ϕ _{100ms} <ϕ _{120ms} (M)					
				Hotspot	SRS OW	100	1	10	Top	518598	2592.99			17.00	16.93	0.460	0.467	0.292	20.3	16.74	0.429	0.455	0.285	20.4	0.026	0.708	0.458	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
				PCE	NR-n41	AG.1	Ant.E	Head	SRS OW	100	3	0	Left Touch	518598	2592.99			13.00	11.98	0.005	0.006	0.004	34.9	11.54	0.004	0.006	0.003	35.5	0.115	0.996	0.500	NA	ϕ _{100ms} <ϕ _{120ms} (M)
									SRS OW	100	3	0	Left Tilt	518598	2592.99			13.00	11.98	0.009	0.011	0.007	32.4	11.54	0.007	0.010	0.006	33.0	0.139	0.993	0.500	NA	ϕ _{100ms} <ϕ _{120ms} (M)
									SRS OW	100	3	0	Right Touch	518598	2592.99			13.00	11.98	0.010	0.013	0.008	31.9	11.54	0.008	0.011	0.007	32.5	0.115	0.992	0.500	NA	ϕ _{100ms} <ϕ _{120ms} (M)
Body-worn & Hotspot	SRS OW	100	3					0	Right Tilt	518598	2592.99			13.00	11.98	0.016	0.020	0.013	29.9	11.54	0.009	0.013	0.008	31.9	59	0.378	0.987	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)			
	SRS OW	100	1					5	Rear	518598	2592.99			13.00	11.98	0.060	0.076	0.047	24.1	11.54	0.075	0.105	0.066	22.7	60	0.363	0.953	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)			
	SRS OW	100	1					5	Front	518598	2592.99			13.00	11.98	0.005	0.006	0.004	34.9	11.54	0.006	0.008	0.005	33.7	0.328	0.996	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
Hotspot	SRS OW	100	1					10	Top	518598	2592.99			13.00	11.98	0.018	0.023	0.014	29.4	11.54	0.011	0.015	0.010	31.1	0.324	0.988	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
PCE	NR-n77	AG.1	Ant.E					Head	SRS OW	100	1	10	Left	518598	2592.99			13.00	11.98	0.000	0.000	0.000	N/A	11.54	0.000	0.000	0.000	N/A	N/A	N/A	N/A	NA	ϕ _{100ms} <ϕ _{120ms} (M)
									DFT-s OFDM QPSK	100	3	0	Left Touch	682000	3930.00	1	271	19.00	18.54	0.137	0.152	0.095	27.1	18.78	0.130	0.137	0.085	27.6	0.102	0.905	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)
									DFT-s OFDM QPSK	100	3	0	Left Tilt	682000	3930.00	1	271	19.00	18.54	0.134	0.149	0.093	27.2	18.78	0.149	0.157	0.098	27.0	0.052	0.907	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)
								Body-worn & Hotspot	DFT-s OFDM QPSK	100	3	0	Right Touch	682000	3930.00	1	271	19.00	18.54	0.230	0.256	0.160	24.9	18.78	0.180	0.189	0.118	26.2	0.259	0.840	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)
				DFT-s OFDM QPSK	100	3	0		Right Tilt	633334	3500.01	135	138	19.00	18.44	0.350	0.398	0.249	22.9	18.67	0.191	0.206	0.129	25.8	61	0.482	0.751	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)			
				DFT-s OFDM QPSK	100	1	5		Rear	633334	3500.01	1	271	17.00	16.24	0.765	0.911	0.570	17.4	16.66	0.507	0.548	0.343	19.6	62	0.398	0.430	0.250	N	ϕ _{100ms} <ϕ _{120ms} (M)			
				Hotspot	DFT-s OFDM QPSK	100	1	5	Front	682000	3930.00	135	138	17.00	16.19	0.066	0.080	0.050	27.9	16.76	0.075	0.079	0.050	28.0	0.003	0.950	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)				
				PCE	NR-n77	AG.1	Ant.F	Head	DFT-s OFDM QPSK	100	1	10	Top	682000	3930.00	135	138	17.00	16.19	0.251	0.302	0.189	22.1	16.76	0.185	0.174	0.109	24.5	0.423	0.811	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)
									DFT-s OFDM QPSK	100	1	10	Left	682000	3930.00	1	271	17.00	16.53	0.050	0.056	0.035	29.5	16.66	0.020	0.022	0.014	33.6	0.612	0.965	0.500	NA	ϕ _{100ms} <ϕ _{120ms} (M)
								Body-worn & Hotspot	SRS OW	100	3	0	Left Touch	682000	3930.00			13.00	12.72	0.047	0.050	0.031	25.9	12.46	0.020	0.023	0.014	29.4	0.548	0.969	0.500	NA	ϕ _{100ms} <ϕ _{120ms} (M)
									SRS OW	100	3	0	Left Tilt	682000	3930.00			13.00	12.72	0.040	0.043	0.027	26.6	12.46	0.020	0.023	0.014	29.4	63	0.489	0.973	0.500	NA
SRS OW	100	3	0						Right Touch	633334	3500.01			13.00	11.16	0.035	0.053	0.033	25.7	11.65	0.010	0.014	0.009	31.6	0.745	0.967	0.500	NA	ϕ _{100ms} <ϕ _{120ms} (M)				
Hotspot	SRS OW	100	3					0	Right Tilt	682000	3930.00			13.00	12.72	0.040	0.043	0.027	26.6	12.46	0.010	0.011	0.007	32.4	0.735	0.973	0.500	NA	ϕ _{100ms} <ϕ _{120ms} (M)				
	SRS OW	100	1					5	Rear	650000	3750.00			13.00	11.96	0.441	0.560	0.350	15.5	11.96	0.207	0.263	0.164	18.8	64	0.531	0.650	0.400	N	ϕ _{100ms} <ϕ _{120ms} (M)			
	SRS OW	100	1					5	Front	682000	3930.00			13.00	12.72	0.028	0.030	0.019	28.2	12.46	0.003	0.003	0.002	37.6	0.886	0.981	0.500	NA	ϕ _{100ms} <ϕ _{120ms} (M)				
	SRS OW	100	1					10	Top	682000	3930.00			13.00	12.72	0.096	0.102	0.064	22.8	12.46	0.058	0.066	0.041	24.8	0.359	0.936	0.500	Y	ϕ _{100ms} <ϕ _{120ms} (M)				

10.1.1.4. All test position Spot-check SAR test results and criteria – 10g SAR

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	BW (MHz)	DSX	Distance (cm)	Test Position	Channel	Freq (MHz)	RB Allocation	RB offset	Tune-up Line (dBm)	Reference Worst-Case				Variant Test (Spot-check)		
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10.1.2. Full SAR test results**10.1.2.1. WCDMA Band 5**

Antenna Group	Antenna	RF Exposure Conditions	Mode	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	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	Head	Rel 99 RMC	1	0	Left Touch	4183	836.6	25.30	24.83	0.214	0.238		31.5
AG.0	Ant.A	Head	Rel 99 RMC	1	0	Left Tilt	4183	836.6	25.30	24.83	0.200	0.223		31.8
AG.0	Ant.A	Head	Rel 99 RMC	1	0	Right Touch	4183	836.6	25.30	24.83	0.265	0.295	65	<u>30.5</u>
AG.0	Ant.A	Head	Rel 99 RMC	1	0	Right Tilt	4183	836.6	25.30	24.83	0.205	0.228		31.7

10.1.2.2. LTE Band 25 (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.1	Ant.F	Head	QPSK	20	3	0	Left Touch	26140	1860.0	1	0	22.00	21.55	0.826	0.916		22.3
AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	26365	1882.5	1	0	22.00	21.42	0.823	0.941		22.2
AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	26590	1905.0	1	0	22.00	21.60	0.640	0.702		23.5
AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	26590	1905.0	50	0	22.00	21.62	0.619	0.676		23.7
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26140	1860.0	1	0	22.00	21.55	0.908	1.007		<u>21.9</u>
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26140	1860.0	50	0	22.00	21.50	0.877	0.984		22.0
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26140	1860.0	100	0	22.00	21.62	0.857	0.935		22.2
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26365	1882.5	1	0	22.00	21.42	0.884	1.010	66	<u>21.9</u>
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26365	1882.5	50	0	22.00	21.46	0.862	0.976		22.1
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26590	1905.0	1	0	22.00	21.60	0.834	0.914		22.3
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	26590	1905.0	50	0	22.00	21.62	0.795	0.868		22.6
AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	26590	1905.0	1	0	22.00	21.60	0.618	0.678		23.6
AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	26590	1905.0	50	0	22.00	21.62	0.614	0.670		23.7
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26140	1860.0	1	0	22.00	21.55	0.907	1.006		<u>21.9</u>
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26140	1860.0	50	0	22.00	21.50	0.880	0.987		22.0
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26140	1860.0	100	0	22.00	21.62	0.865	0.944		22.2
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26365	1882.5	1	0	22.00	21.42	0.777	0.888		22.5
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26365	1882.5	50	0	22.00	21.46	0.754	0.854		22.6
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26590	1905.0	1	0	22.00	21.60	0.777	0.852		22.6
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	26590	1905.0	50	0	22.00	21.62	0.779	0.850		22.7

10.1.2.3. 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	QPSK	20	3	0	Left Touch	41055	2636.5	0	0	25.00	24.23	0.067	0.079		34.0
AG.0	Ant.B	Head PC2	QPSK	20	3	0	Left Touch	41055	2636.5	1	0	26.50	24.87	0.051	0.074		35.8
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	1	5	Rear	41055	2636.5	1	0	19.00	18.52	0.428	0.478		20.2
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	1	5	Rear	41055	2636.5	50	0	19.00	18.43	0.430	0.490		20.1
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	1	5	Front	41055	2636.5	1	0	19.00	18.52	0.071	0.080		28.0
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	1	5	Front	41055	2636.5	50	0	19.00	18.43	0.072	0.082		27.9
AG.0	Ant.B	Hotspot	QPSK	20	1	10	Bottom	41055	2636.5	1	0	19.00	18.52	0.207	0.231		23.3
AG.0	Ant.B	Hotspot	QPSK	20	1	10	Bottom	41055	2636.5	50	0	19.00	18.43	0.202	0.230		23.3
AG.0	Ant.B	Body-worn & Hotspot PC2	QPSK	20	1	5	Rear	41055	2636.5	50	0	20.60	20.12	0.464	0.518	67	21.4

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	18.52	0.811	0.906		21.4

LTE Band 41 Power Class 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.0	Ant.B	Head PC2	QPSK	20	3	0	Left Touch	41055	2636.5	1	0	26.50	24.87	0.051	0.074		34.1
AG.0	Ant.B	Body-worn & Hotspot PC2	QPSK	20	1	5	Rear	41055	2636.5	50	0	20.60	20.12	0.464	0.518		19.8

Note(s):

From May 2017 TCB workshop, SAR tested were performed using Power Class 3. SAR test for Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination. According to the highest time averaged power for UL-DL configurations, configuration # 1 with duty cycle 43.3% is used for Power Class 2 SAR test.

Reported SAR vs. Output power linearly scaled

Antenna	RF Exposure Conditions	Power Class 2				Power Class 3				PC2 linearly scaled Reported SAR (W/kg)	Linearly scaled (<10%)
		Duty Cycle (%)	Tune-up Limit (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)		
Ant.B	Head	43.3	26.50	193.41	0.074	63.3	25.00	200.17	0.079	0.077	-3.25
Ant.B	Body-worn & Hotspot	43.3	20.60	49.72	0.518	63.3	19.00	50.28	0.490	0.485	6.90

Note(s):

Additional SAR testing for Power Class 2 is not required when:

The reported SAR vs. output power can be linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 or 3.5 W/kg (1-g or 10-g respectively)

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	17.97	0.329	0.372		20.8
AG.1	Ant.F	Head	QPSK	20	3	0	Left Touch	40185	2549.5	50	0	18.50	18.01	0.320	0.358		20.9
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	40185	2549.5	1	0	18.50	17.97	0.390	0.441		20.0
AG.1	Ant.F	Head	QPSK	20	3	0	Left Tilt	40185	2549.5	50	0	18.50	18.01	0.372	0.416		20.3
AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	40185	2549.5	1	0	18.50	17.97	0.329	0.372		20.8
AG.1	Ant.F	Head	QPSK	20	3	0	Right Touch	40185	2549.5	50	0	18.50	18.01	0.311	0.348		21.0
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	40185	2549.5	1	0	18.50	17.97	0.318	0.359		20.9
AG.1	Ant.F	Head	QPSK	20	3	0	Right Tilt	40185	2549.5	50	0	18.50	18.01	0.300	0.336		21.2
AG.1	Ant.F	Head PC2	QPSK	20	3	0	Left Tilt	40185	2549.5	100	0	20.10	19.10	0.367	0.462	68	21.4
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	1	5	Rear	40185	2549.5	1	0	19.00	18.45	0.403	0.457		20.4
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	1	5	Rear	40185	2549.5	50	0	19.00	18.54	0.427	0.475		20.2
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	1	5	Front	40185	2549.5	1	0	19.00	18.45	0.265	0.301		22.2
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	1	5	Front	40185	2549.5	50	0	19.00	18.54	0.252	0.280		22.5
AG.1	Ant.F	Hotspot	QPSK	20	1	10	Top	40185	2549.5	1	0	19.00	18.45	0.181	0.205		23.8
AG.1	Ant.F	Hotspot	QPSK	20	1	10	Top	40185	2549.5	50	0	19.00	18.54	0.180	0.200		24.0
AG.1	Ant.F	Body-worn & Hotspot PC2	QPSK	20	1	5	Rear	40185	2549.5	50	0	20.60	19.78	0.398	0.481		21.7

LTE Band 41 Power Class 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 PC2	QPSK	20	3	0	Left Tilt	40185	2549.5	100	0	20.10	19.10	0.367	0.462		19.8
AG.1	Ant.F	Body-worn & Hotspot PC2	QPSK	20	1	5	Rear	40185	2549.5	50	0	20.60	19.78	0.398	0.481		20.1

Note(s):

From May 2017 TCB workshop, SAR tested were performed using Power Class 3. SAR test for Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination. According to the highest time averaged power for UL-DL configurations, configuration # 1 with duty cycle 43.3% is used for Power Class 2 SAR test.

Reported SAR vs. Output power linearly scaled

Antenna	RF Exposure Conditions	Power Class 2				Power Class 3				PC2 linearly scaled Reported SAR (W/kg)	Linearly scaled (<10%)
		Duty Cycle (%)	Tune-up Limit (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)		
Ant.F	Head	43.3	20.10	44.31	0.462	63.3	18.50	44.81	0.441	0.436	6.05
Ant.F	Body-worn & Hotspot	43.3	20.60	49.72	0.481	63.3	19.00	50.28	0.475	0.469	2.42

Note(s):

Additional SAR testing for Power Class 2 is not required when:

The reported SAR vs. output power can be linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 or 3.5 W/kg (1-g or 10-g respectively)

10.1.2.4. NR Band n25 (40MHz 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 Limit
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Left Touch	376500	1882.5	1	1	22.00	21.61	0.682	0.746		23.2
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Left Touch	376500	1882.5	108	54	22.00	21.56	0.602	0.666		23.7
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Left Tilt	376500	1882.5	1	1	22.00	21.61	0.936	1.024	69	21.8
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Left Tilt	376500	1882.5	108	54	22.00	21.56	0.846	0.936		22.2
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Left Tilt	376500	1882.5	216	0	22.00	21.49	0.861	0.968		22.1
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Right Touch	376500	1882.5	1	1	22.00	21.61	0.828	0.906		22.4
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Right Touch	376500	1882.5	108	54	22.00	21.56	0.652	0.722		23.4
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Right Touch	376500	1882.5	216	0	22.00	21.49	0.565	0.635		23.9
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Right Tilt	376500	1882.5	1	1	22.00	21.61	0.873	0.955		22.1
AG.1	Ant.F	Head	DFT-s OFDM QPSK	40	3	0	Right Tilt	376500	1882.5	108	54	22.00	21.56	0.782	0.865		22.6
AG.1	Ant.F	Head	CP OFDM QPSK	40	3	0	Left Tilt	376500	1882.5	1	1	22.00	21.53	0.917	1.022		21.9

10.1.2.5. NR Band n41 (100MHz Bandwidth)**SRS1**

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	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	SRS CW	100	3	0	Left Touch	518598	2592.99	16.50	15.97	0.470	0.531		19.2
AG.1	Ant.F	Head	SRS CW	100	3	0	Left Tilt	518598	2592.99	16.50	15.97	0.628	0.710	57	17.9
AG.1	Ant.F	Head	SRS CW	100	3	0	Right Touch	518598	2592.99	16.50	15.97	0.371	0.419		20.2
AG.1	Ant.F	Head	SRS CW	100	3	0	Right Tilt	518598	2592.99	16.50	15.97	0.500	0.565		18.9

10.1.2.6. NR Band n77 (100MHz Bandwidth)**SRS1**

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 Limit
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	1	5	Rear	633334	3500.01	1	271	17.00	16.66	0.507	0.548		19.6
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	1	5	Rear	633334	3500.01	135	138	17.00	16.64	0.514	0.558	70	19.5
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	1	5	Rear	650000	3750.00	1	271	17.00	16.68	0.392	0.422		20.7
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	1	5	Rear	650000	3750.00	135	138	17.00	16.62	0.384	0.419		20.7
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	1	5	Rear	662000	3930.00	1	271	17.00	16.66	0.484	0.523		19.8
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	1	5	Rear	662000	3930.00	135	138	17.00	16.76	0.456	0.482		20.1
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	1	5	Front	662000	3930.00	1	271	17.00	16.66	0.075	0.081		27.9
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	1	5	Front	662000	3930.00	135	138	17.00	16.76	0.071	0.075		28.2
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	100	1	10	Top	662000	3930.00	1	271	17.00	16.66	0.165	0.178		24.4
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	100	1	10	Top	662000	3930.00	135	138	17.00	16.76	0.198	0.209		23.7
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	100	1	10	Left	662000	3930.00	1	271	17.00	16.66	0.020	0.022		33.6
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	100	1	10	Left	662000	3930.00	135	138	17.00	16.76	0.025	0.026		32.7

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 Limit
AG.1	Ant.E	Product Specific 10-g	DFT-s OFDM QPSK	100	1	0	Top	662000	3930.00	1	271	17.00	16.66	0.446	0.482		24.1
AG.1	Ant.E	Product Specific 10-g	DFT-s OFDM QPSK	100	1	0	Left	662000	3930.00	1	271	17.00	16.66	0.043	0.047		34.3

SRS3

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	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	Body-worn & Hotspot	SRS CW	100	1	5	Rear	633334	3500.01	13.00	11.65	0.189	0.258		18.8
AG.1	Ant.F	Body-worn & Hotspot	SRS CW	100	1	5	Rear	650000	3750.00	13.00	11.96	0.207	0.263	71	18.8
AG.1	Ant.F	Body-worn & Hotspot	SRS CW	100	1	5	Rear	662000	3930.00	13.00	12.46	0.221	0.250		19.0
AG.1	Ant.F	Body-worn & Hotspot	SRS CW	100	1	5	Front	662000	3930.00	13.00	12.46	0.003	0.003		37.6
AG.1	Ant.F	Hotspot	SRS CW	100	1	10	Top	662000	3930.00	13.00	12.46	0.058	0.066		24.8

SRS4

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	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.C	Body-worn & Hotspot	SRS CW	100	1	5	Rear	650000	3750.00	13.00	11.56	0.052	0.072		24.3
AG.0	Ant.C	Body-worn & Hotspot	SRS CW	100	1	5	Front	650000	3750.00	13.00	11.56	0.000	0.000		N/A
AG.0	Ant.C	Hotspot	SRS CW	100	1	10	Left	650000	3750.00	13.00	11.56	0.000	0.000		N/A
AG.0	Ant.C	Hotspot	SRS CW	100	1	10	Bottom	650000	3750.00	13.00	11.56	0.011	0.015		31.1

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	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.C	Product Specific 10-g 0 mm	SRS CW	100	1	0	Left	650000	3750.00	13.00	11.56	0.000	0.000		N/A
AG.0	Ant.C	Product Specific 10-g 0 mm	SRS CW	100	1	0	Bottom	650000	3750.00	13.00	11.56	0.022	0.031		32.1

10.1.2.7. Wi-Fi 2.4GHz**MIMO (Ant.D+G)**

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	Head	802.11g 6Mbps	3	0	Left Touch	11	2462.0	0.920	89.27%	14.00	13.43	12.53	0.477	0.750		15.2
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Left Tilt	6	2437.0	0.768	89.27%	14.00	13.38	12.65	0.415	0.634		15.9
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Left Tilt	11	2462.0	1.020	89.27%	14.00	13.43	12.53	0.541	0.850		14.7
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Right Touch	11	2462.0	0.641	89.27%	14.00	13.43	12.53	0.394	0.619		16.0
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Right Tilt	6	2437.0	0.914	89.27%	14.00	13.38	12.65	0.491	0.751		15.2
AG.1	Ant.D+G	Head	802.11g 6Mbps	3	0	Right Tilt	11	2462.0	1.026	89.27%	14.00	13.43	12.53	0.559	0.878	72	14.5
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	1	5	Rear	1	2412.0	1.235	89.27%	18.00	17.02	16.38	0.639	1.039	73	17.8
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	1	5	Rear	11	2462.0	1.001	89.27%	18.00	17.01	16.43	0.543	0.873		18.5
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	1	5	Front	1	2412.0	0.744	89.27%	18.00	17.02	16.38	0.483	0.786		19.0
AG.1	Ant.D+G	Hotspot	802.11g 6Mbps	1	10	Top	1	2412.0	0.422	89.27%	18.00	17.02	16.38	0.315	0.512		20.9
AG.1	Ant.D+G	Hotspot	802.11g 6Mbps	1	10	Right	1	2412.0	0.349	89.27%	18.00	17.02	16.38	0.290	0.472		21.2

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 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	1	0	Top	1	2412.0	5.505	89.27%	18.00	17.02	16.38	1.280	2.082		18.7
AG.1	Ant.D+G	Product Specific 10-g 0 mm	802.11g 6Mbps	1	0	Right	1	2412.0	2.974	89.27%	18.00	17.02	16.38	0.963	1.566		20.0

10.1.2.8. Wi-Fi 5GHz**U-NII 2A – SISO Ant.2 (Ant.D)**

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	1	5	Rear	58	5290.0	0.536	94.26%	14.00	12.93	0.417	0.566	74	16.4
AG.1	Ant.D	Body-worn & Hotspot	802.11ac VHT80 MCS0	1	5	Front	58	5290.0	0.065	94.26%	14.00	12.93	0.040	0.054		26.6
AG.1	Ant.D	Hotspot	802.11ac VHT80 MCS0	1	10	Top	58	5290.0	0.124	94.26%	14.00	12.93	0.089	0.121		23.1
AG.1	Ant.D	Hotspot	802.11ac VHT80 MCS0	1	10	Right	58	5290.0	0.044	94.26%	14.00	12.93	0.000			

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	1	0	Top	58	5290.0	1.400	94.26%	14.00	12.93	0.280	0.380		22.1
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Right	58	5290.0	0.353	94.26%	14.00	12.93				

U-NII 2A – MIMO (Ant.E+D)

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+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Top	58	5290.0	1.340	94.26%	14.00	12.65	12.68	0.419	0.607	75	20.1
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Left	58	5290.0	0.060	94.26%	14.00	12.65	12.68				
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Right	58	5290.0	0.416	94.26%	14.00	12.65	12.68				

U-NII 2C – SISO Ant.2 (Ant.D)

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 Limit
AG.1	Ant.D	Body-worn	802.11ac VHT80 MCS0	1	5	Rear	122	5610.0	0.391	94.26%	14.00	13.73	0.270	0.305	76	19.1
AG.1	Ant.D	Body-worn	802.11ac VHT80 MCS0	1	5	Front	122	5610.0	0.103	94.26%	14.00	13.73	0.062	0.070		25.5

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 Limit
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Top	122	5610.0	2.260	94.26%	14.00	13.73	0.393	0.444	77	21.5
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Right	122	5610.0	0.554	94.26%	14.00	13.73				

U-NII 3 – SISO Ant.1 (Ant.E)

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 Limit
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Top	155	5775.0	2.560	94.26%	14.00	13.66	0.541	0.621		20.0
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Left	155	5775.0	0.067	94.26%	14.00	13.66				

U-NII 3 – MIMO (Ant.E+D)

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 Limit
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Top	155	5775.0	2.790	94.26%	14.00	12.70	12.44	0.619	0.941	78	18.2
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Left	155	5775.0	0.110	94.26%	14.00	12.70	12.44				
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Right	155	5775.0	0.874	94.26%	14.00	12.70	12.44				

U-NII 4 – SISO Ant.1 (Ant.E)

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 Limit
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Top	171	5855.0	2.280	94.26%	14.00	12.83	0.469	0.651	79	19.8
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Left	171	5855.0	0.057	94.26%	14.00	12.83				

U-NII 4 – SISO Ant.2 (Ant.D)

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 Limit
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Top	171	5855.0	1.860	94.26%	14.00	13.42	0.298	0.361		22.4
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Right	171	5855.0	0.729	94.26%	14.00	13.42				

10.1.2.9. Bluetooth

This device supports Bluetooth tethering in only Ant.1(Ant.D).

Bluetooth SISO Ant.1 (Ant.D)

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	BLE	3	0	Left Touch	17	2440.0	85.03%	13.50	11.66	0.055	0.086		24.1
AG.1	Ant.D	Head	BLE	3	0	Left Tilt	17	2440.0	85.03%	13.50	11.66	0.032	0.050		26.5
AG.1	Ant.D	Head	BLE	3	0	Right Touch	17	2440.0	85.03%	13.50	11.66	0.020	0.031		28.5
AG.1	Ant.D	Head	BLE	3	0	Right Tilt	17	2440.0	85.03%	13.50	11.66	0.015	0.023		29.7
AG.1	Ant.D	Body-worn & Hotspot	BLE	1	5	Rear	37	2402.0	85.03%	16.00	15.29	0.411	0.495	80	19.0
AG.1	Ant.D	Body-worn & Hotspot	BLE	1	5	Front	37	2402.0	85.03%	16.00	15.29	0.050	0.060		28.2
AG.1	Ant.D	Hotspot	BLE	1	10	Top	37	2402.0	85.03%	16.00	15.29	0.015	0.018		33.4
AG.1	Ant.D	Hotspot	BLE	1	10	Right	37	2402.0	85.03%	16.00	15.29	0.217	0.261		21.8

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	BLE	1	0	Top	37	2402.0	85.03%	16.00	15.29	0.131	0.158		27.9
AG.1	Ant.D	Product Specific 10-g 0 mm	BLE	1	0	Right	37	2402.0	85.03%	16.00	15.29	0.597	0.719		21.4

Bluetooth SISO Ant.2 (Ant.G)

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	BLE	3	0	Left Touch	37	2402.0	85.03%	13.50	13.23	0.451	0.491		16.5
AG.1	Ant.G	Head	BLE	3	0	Left Tilt	37	2402.0	85.03%	13.50	13.23	0.468	0.510		16.4
AG.1	Ant.G	Head	BLE	3	0	Right Touch	37	2402.0	85.03%	13.50	13.23	0.395	0.430		17.1
AG.1	Ant.G	Head	BLE	3	0	Right Tilt	37	2402.0	85.03%	13.50	13.23	0.489	0.532	81	16.2
AG.1	Ant.G	Body-worn & Hotspot	BLE	1	5	Rear	17	2440.0	85.03%	16.00	15.32	0.067	0.080		26.9
AG.1	Ant.G	Body-worn & Hotspot	BLE	1	5	Front	17	2440.0	85.03%	16.00	15.32	0.236	0.282		21.4

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	BLE	1	0	Top	17	2440.0	85.03%	16.00	15.32	0.547	0.655		21.8

Bluetooth MIMO (Ant.D+G)

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%	13.50	11.83	13.44	0.158	0.239		19.7
AG.1	Ant.D+G	Head	BDR	3	0	Left Tilt	0	2402.0	76.61%	13.50	11.83	13.44	0.165	0.250		19.5
AG.1	Ant.D+G	Head	BDR	3	0	Right Touch	0	2402.0	76.61%	13.50	11.83	13.44	0.211	0.320		18.4
AG.1	Ant.D+G	Head	BDR	3	0	Right Tilt	0	2402.0	76.61%	13.50	11.83	13.44	0.216	0.327		18.3
AG.1	Ant.D+G	Body-worn & Hotspot	BDR	1	5	Rear	0	2402.0	76.61%	15.00	13.15	14.91	0.045	0.071		26.4
AG.1	Ant.D+G	Body-worn & Hotspot	BDR	1	5	Front	0	2402.0	76.61%	15.00	13.15	14.91	0.013	0.021		31.8

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%	15.00	13.15	14.91	0.499	0.788		20.0
AG.1	Ant.D+G	Product Specific 10-g 0 mm	BDR	1	0	Right	0	2402.0	76.61%	15.00	13.15	14.91	0.695	1.097		18.5

10.1.2.10. 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	0.004	0.001	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	5	6489.6	0.000	0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	9	7987.2	0.007	0.002	82
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	5	6489.6		0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	9	7987.2		0.000	
ER	UWB	Head	CW	0	Left Tilt	9	7987.2	0.000	0.000	

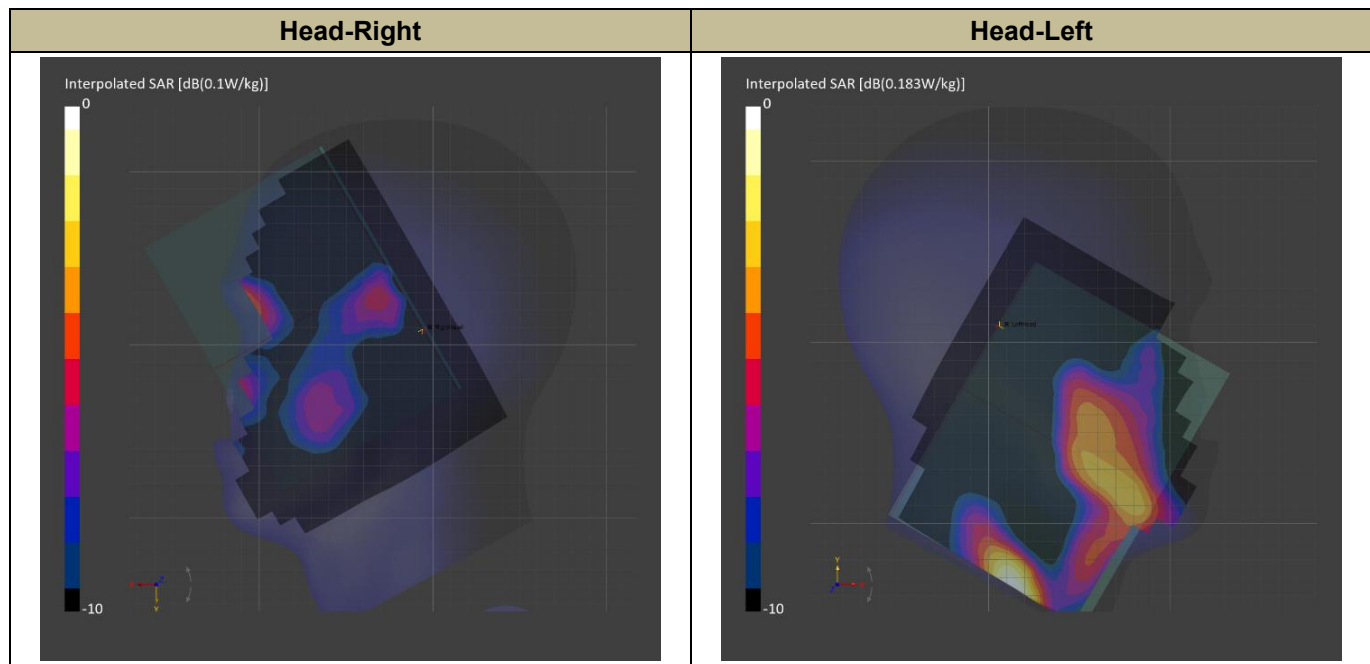
Note:

Head Left Tilt position SAR test was additionally performed for Simultaneous Transmission Evaluation.

10.2. Folder Open configuration

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.



Please refer to the Appendix A for detailed information on Folder Open configuration - Head SAR plots.

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.A	NR Band n77 SRS2	91.9	10.7	13.0	19.3	5.3	12.3	12.3
	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
		NR Band n25 (2)	74.3	6.0	7.3				7.3
		NR Bn41 SRS2	75.3	6.5	8.1				8.1
	Ant.C	NR Bn41 SRS4	75.3	6.5	8.9				8.9
		NR Band n77 SRS4	112.2	21.1	22.9	19.8	6.6	20.3	20.3
AG1	Ant.D	Bluetooth Ant.1	24.9	13.8	52.7				25
	Ant.F	LTE Band 41	24.5	20.5	87.4				85
		WCDMA Band 4	12.3	4.9	13.0				13
		WCDMA Band 2	39.1	7.8	16.0				15
		NR Bn41 SRS1	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 5mm SAR is more conservative than the distance verified in Justification, the Head measurement was replaced with Rear 5mm 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 6GHz 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 SAR test results and criteria

10.2.1.1. Worst-case Spot-check SAR test results and criteria – 1g SAR

Equipment Cases	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	BW (MHz)	DS	Distance (m)	Test Position	Channel	Freq (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Reference Worst-Case				Variant Test (Spot-check)				Relative Difference (d _{rel})	Spot-check Parameter		Y/N	Pass Criterion			
															Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER ₁	Ref'd Power (dBm)	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TER ₂	Ref'd Power (dBm)			Ref'd SAR	Ref'd SAR	
PCE	GSM850	AG.0	Ant.A+B	Head	GPRS 2 slots	0	2	0	Left Touch	128	824.2	0	0	32.50	31.83	0.798	0.919	0.575	26.6	31.34	0.614	0.802	0.901	27.2	1	0.128	0.425	0.250	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	GPRS 4 slots	0	0	5	Rear	190	836.6	0	0	25.50	24.63	0.537	0.656	0.410	24.1	24.55	0.515	0.641	0.401	24.2		0.023	0.590	0.340	Y	d _{15dB} d _{15dB} (M)
PCE	GSM850	AG.1	Ant.D	Head	GPRS 3 slots	0	2	0	Left Touch	190	836.6	0	0	30.50	28.61	0.435	0.672	0.420	27.8	28.55	0.323	0.506	0.316	29.0		0.247	0.580	0.330	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	GPRS 1 slot	0	0	5	Rear	190	836.6	0	0	30.50	28.87	0.532	0.774	0.484	22.4	29.25	0.518	0.691	0.432	22.9	2	0.108	0.516	0.286	Y	d _{15dB} d _{15dB} (M)
PCE	GSM1900	AG.0	Ant.B	Head	GPRS 4 slots	0	2	4/7	Left Touch	661	1880.0	0	0	20.50	19.28	0.385	0.510	0.319	20.2	18.91	0.330	0.476	0.297	20.5	3	0.067	0.681	0.431	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	GPRS 4 slots	0	0	5	Rear	810	1909.8	0	0	20.50	19.22	0.643	0.863	0.540	17.9	18.70	0.636	0.963	0.602	17.4	4	0.115	0.480	0.250	Y	d _{15dB} d _{15dB} (M)
PCE	WCDMA5	AG.0	Ant.A+B	Head	Rel 99 RMC	0	2	0	Left Touch	4233	846.6	0	0	25.30	24.51	0.755	0.906	0.566	25.7	24.53	0.760	0.907	0.567	25.7	5	0.002	0.434	0.250	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	Rel 99 RMC	0	0	5	Rear	4233	846.6	0	0	23.00	22.25	0.702	0.834	0.521	23.7	22.23	0.784	0.936	0.585	23.2		0.122	0.479	0.250	Y	d _{15dB} d _{15dB} (M)
PCE	WCDMA5	AG.1	Ant.D	Head	Rel 99 RMC	0	2	0	Right Touch	4183	836.6	0	0	25.30	23.67	0.235	0.342	0.214	29.9	23.87	0.176	0.245	0.153	31.4		0.285	0.786	0.500	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	Rel 99 RMC	0	0	5	Rear	4233	846.6	0	0	22.00	20.02	0.694	0.995	0.684	21.6	20.28	0.662	0.984	0.615	22.0	6	0.102	0.316	0.250	Y	d _{15dB} d _{15dB} (M)
PCE	WCDMA2	AG.1	Ant.F	Head	Rel 99 RMC	0	2	4/15	Left Touch	9262	1852.4	0	0	16.50	15.76	0.868	1.029	0.643	16.3	15.98	0.898	1.012	0.633	16.4	7	0.017	0.357	0.250	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	Rel 99 RMC	0	0	5	Rear	9400	1880.0	0	0	16.50	15.68	0.500	0.804	0.377	18.6	15.83	0.660	0.770	0.481	17.6	8	0.275	0.623	0.373	Y	d _{15dB} d _{15dB} (M)
PCE	WCDMA4	AG.1	Ant.F	Head	Rel 99 RMC	0	2	4/13	Left Touch	1312	1712.4	0	0	16.50	15.49	0.739	0.932	0.583	16.8	15.93	0.890	1.015	0.634	16.4	9	0.088	0.417	0.250	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	Rel 99 RMC	0	0	5	Rear	1413	1732.8	0	0	16.50	15.44	0.483	0.817	0.385	18.6	15.71	0.538	0.845	0.403	18.4	10	0.047	0.615	0.385	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B12	AG.0	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	24.52	0.353	0.413	0.258	29.0	11	0.490	0.827	0.500	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	10	0	5	Rear	23095	707.5	25	12	23.00	22.27	0.596	0.705	0.441	24.5	22.16	0.608	0.738	0.461	24.3	12	0.048	0.559	0.309	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B12	AG.1	Ant.D	Head	QPSK	10	2	0	Left Touch	23095	707.5	25	12	24.00	23.87	0.160	0.165	0.103	31.8	22.42	0.143	0.206	0.129	30.8		0.248	0.897	0.500	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	10	0	5	Rear	23095	707.5	25	12	23.00	22.52	0.524	0.585	0.306	25.3	21.13	0.398	0.612	0.383	25.1		0.045	0.634	0.384	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B13	AG.0	Ant.A+B	Head	QPSK	10	2	0	Left Touch	23230	782.0	1	0	25.50	24.91	0.484	0.554	0.347	28.0	24.43	0.447	0.572	0.357	27.9	13	0.031	0.653	0.403	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	10	0	5	Rear	23230	782.0	25	0	23.00	22.29	0.597	0.703	0.439	24.5	21.94	0.526	0.671	0.420	24.7		0.045	0.561	0.311	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B13	AG.1	Ant.D	Head	QPSK	10	2	0	Left Touch	23230	782.0	25	25	24.00	22.82	0.220	0.289	0.180	29.3	24.02	0.231	0.290	0.144	30.3		0.203	0.820	0.500	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	10	0	5	Rear	23230	782.0	50	0	23.00	21.09	0.621	0.964	0.603	23.1	21.09	0.618	0.959	0.600	23.1	14	0.005	0.397	0.250	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B26	AG.0	Ant.A+B	Head	QPSK	15	2	0	Left Touch	26865	831.5	1	0	25.50	24.73	0.452	0.540	0.337	28.1	24.71	0.535	0.642	0.401	27.4	15	0.189	0.663	0.413	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	15	0	5	Rear	26865	831.5	36	0	23.00	22.34	0.653	0.760	0.475	24.1	22.46	0.683	0.773	0.483	24.1	16	0.017	0.525	0.275	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B26	AG.1	Ant.D	Head	QPSK	15	2	0	Left Touch	26865	831.5	1	37	25.00	24.14	0.343	0.418	0.261	28.7	24.15	0.433	0.527	0.329	27.7		0.259	0.739	0.489	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	15	0	5	Rear	26865	831.5	75	0	22.00	20.29	0.605	0.897	0.561	22.4	20.55	0.551	0.769	0.481	23.1		0.142	0.439	0.250	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B5	AG.0	Ant.A+B	Head	QPSK	10	2	0	Left Touch	20525	836.5	1	0	25.50	24.52	0.507	0.635	0.397	27.4	24.80	0.635	0.746	0.496	26.7	17	0.174	0.603	0.353	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	10	0	5	Rear	20525	836.5	25	0	23.00	22.22	0.688	0.823	0.515	23.8	22.29	0.715	0.842	0.526	23.7		0.023	0.485	0.250	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B5	AG.1	Ant.D	Head	QPSK	10	2	0	Left Touch	20525	836.5	1	0	25.00	24.28	0.297	0.351	0.219	29.5	24.12	0.371	0.454	0.284	28.4		0.296	0.781	0.500	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	10	0	5	Rear	20525	836.5	50	0	22.00	20.47	0.677	0.963	0.602	22.1	20.18	0.553	0.845	0.526	22.7	18	0.123	0.398	0.250	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B66	AG.0	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	15.23	0.486	0.580	0.363	18.3		0.087	0.603	0.353	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	20	0	5	Rear	132322	1745.0	1	0	16.00	15.46	0.561	0.635	0.397	17.9	15.15	0.486	0.591	0.369	18.2		0.070	0.603	0.353	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B66	AG.1	Ant.F	Head	QPSK	20	2	0	Right Touch	132322	1745.0	1	0	20.00	19.09	0.511	0.630	0.394	22.0	18.90	0.501	0.645	0.403	21.9	19	0.004	0.606	0.366	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	20	0	5	Rear	132072	1720.9	1	99	16.50	15.62	0.697	0.854	0.530	17.1	15.27	0.675	0.896	0.580	16.9	20	0.050	0.467	0.250	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B25	AG.0	Ant.B	Head	QPSK	20	2	5	Left Touch	26365	1882.5	1	0	16.50	16.27	0.617	0.651	0.407	18.3	15.65	0.528	0.642	0.401	18.4		0.013	0.593	0.343	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	20	0	5	Rear	26365	1882.5	1	9	16.50	16.27	0.617	0.651	0.407	18.3	15.65	0.528	0.642	0.401	18.4	21	0.013	0.593	0.343	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B25	AG.1	Ant.F	Head	QPSK	20	2	0	Right Touch	26590	1905.0	50	0	20.00	19.44	0.256	0.291	0.182	25.3	18.75	0.268	0.357	0.223	24.4		0.227	0.818	0.500	Y	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	20	0	5	Rear	26590	1905.0	50	0	16.50	15.73	0.439	0.524	0.338	19.3	15.48	0.587	0.742	0.464	17.7	22	0.418	0.672	0.422	Y	d _{15dB} d _{15dB} (M)
PCE	LTE B41	AG.0	Ant.B	Head	QPSK	20	2	5	Left Touch	41055	2636.5	50	0	17.50	16.85	0.230	0.267	0.167	21.2	16.85	0.461	0.535	0.335	18.2		1.004	0.833	0.500	N	d _{15dB} d _{15dB} (M)
				Body-worn & Helmet	QPSK	20	0	5	Rear	41055	2636.5	50	0	17.50	16.85	0.230	0.267	0.167	21.2	16.85	0.461	0.535	0.335	18.2	23	1.004	0.833	0.500	N	d _{15dB} d _{15dB} (M)
PCE	Nr n71	AG.0	Ant.A+B	Head	DFT-s OFDM QPSK	35	2	0	Left Touch	136100	680.5	90	49	25.50	24.35	0.289	0.377	0.235	29.7	24.47	0.252	0.319	0.200	30.4	24	0.152	0			

Worst-case Spot-check SAR test results and criteria – 1g SAR (Continued)

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	Max Duty Cycle (%)	Tested Duty Cycle (%)	Tune-up Limit (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)	TER ₁	Part 0	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TER ₂	Part 0			Part 1	Margin (M)	d _{100MHz} (M)
DTS	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	14.35	0.041	0.055	0.034	28.1		0.963	0.963	0.500	NA	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11b 1Mbps	0	5	Rear	1	2412.0	100.00%	97.27%	18.00	17.63	0.068	0.781	0.488	19.0	17.46	0.708	0.824	0.515	18.8		0.055	0.512	0.262	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
DTS	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	14.12	0.781	1.103	0.689	15.0	34	0.103	0.231	0.250	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11b 1Mbps	0	5	Rear	6	2437.0	100.00%	97.27%	18.00	17.37	0.767	0.912	0.570	18.4	17.06	0.810	1.034	0.646	17.8	35	0.134	0.430	0.250	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB2A	AG.1	Ant.D+E	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	58	5290.0	100.00%	94.26%	16.00	15.42	0.275	0.333	0.208	20.7	15.39	0.343	0.419	0.262	19.7	36	0.256	0.792	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.75	0.331	0.468	0.293	17.2	12.65	0.454	0.657	0.411	15.8	37	0.404	0.707	0.457	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB2A	AG.1	Ant.E	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	58	5290.0	100.00%	94.26%	16.00	15.57	0.206	0.241	0.151	22.1	15.62	0.291	0.337	0.211	20.7		0.396	0.849	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.94	0.208	0.282	0.176	19.5	13.50	0.258	0.307	0.192	19.1		0.090	0.824	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB2A	AG.1	Ant.D	Head	802.11ac VHT80 MCS0	2	0	Left Tilt	58	5290.0	100.00%	94.26%	16.00	15.61	0.074	0.085	0.053	26.6	15.05	0.082	0.108	0.068	25.6		0.269	0.947	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	58	5290.0	100.00%	94.26%	14.00	12.68	0.209	0.300	0.188	19.2	12.93	0.204	0.277	0.173	19.5		0.079	0.812	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB2C	AG.1	Ant.D+E	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	106	5530.0	100.00%	94.26%	16.00	15.42	0.329	0.399	0.249	19.9	14.62	0.350	0.487	0.305	19.1	38	0.221	0.751	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	122	5610.0	100.00%	94.26%	14.00	12.76	0.344	0.486	0.303	17.1	12.42	0.330	0.504	0.315	16.9	39	0.037	0.697	0.447	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB2C	AG.1	Ant.E	Head	802.11ac VHT80 MCS0	2	0	Right Touch	106	5530.0	100.00%	94.26%	16.00	15.68	0.291	0.332	0.208	20.7	15.37	0.323	0.396	0.248	20.0		0.192	0.792	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	106	5530.0	100.00%	94.26%	14.00	13.23	0.408	0.517	0.323	16.8	13.39	0.263	0.321	0.201	18.9		0.379	0.677	0.427	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB2C	AG.1	Ant.D	Head	802.11ac VHT80 MCS0	2	0	Left Touch	138	5690.0	100.00%	94.26%	16.00	15.58	0.027	0.032	0.020	31.0	15.35	0.066	0.081	0.051	26.8		1.577	0.980	0.500	NA	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Front	122	5610.0	100.00%	94.26%	14.00	12.93	0.234	0.318	0.199	18.9	13.73	0.329	0.371	0.232	18.3		0.169	0.801	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB3	AG.1	Ant.D+E	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	155	5775.0	100.00%	94.26%	16.00	14.83	0.220	0.306	0.191	21.1	14.93	0.236	0.320	0.200	20.9		0.048	0.809	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	155	5775.0	100.00%	94.26%	14.00	12.82	0.283	0.394	0.246	18.0	12.44	0.316	0.480	0.300	17.1	40	0.219	0.754	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB3	AG.1	Ant.E	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	155	5775.0	100.00%	94.26%	16.00	15.70	0.260	0.296	0.185	21.2	15.11	0.270	0.352	0.220	20.5	41	0.190	0.815	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Front	155	5775.0	100.00%	94.26%	14.00	12.86	0.317	0.437	0.273	17.5	13.66	0.238	0.273	0.171	19.6		0.376	0.727	0.477	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB3	AG.1	Ant.D	Head	802.11ac VHT80 MCS0	2	0	Left Touch	155	5775.0	100.00%	94.26%	16.00	15.54	0.092	0.109	0.068	25.6	15.45	0.118	0.142	0.089	24.4		0.309	0.932	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Front	155	5775.0	100.00%	94.26%	14.00	13.08	0.175	0.229	0.143	20.3	13.46	0.276	0.332	0.207	18.7		0.445	0.857	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB4	AG.1	Ant.D+E	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	171	5855.0	100.00%	94.26%	16.00	15.21	0.254	0.323	0.202	20.9	14.93	0.240	0.326	0.204	20.8		0.008	0.798	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	171	5855.0	100.00%	94.26%	14.00	12.62	0.274	0.399	0.250	17.9	12.33	0.309	0.482	0.301	17.1	42	0.206	0.750	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB4	AG.1	Ant.E	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	171	5855.0	100.00%	94.26%	16.00	15.21	0.266	0.339	0.212	20.7	14.51	0.232	0.347	0.217	20.5	43	0.025	0.788	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Rear	171	5855.0	100.00%	94.26%	14.00	12.83	0.350	0.486	0.304	17.1	13.69	0.345	0.393	0.246	18.0		0.191	0.696	0.446	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
NI	U-NB4	AG.1	Ant.D	Head	802.11ac VHT80 MCS0	2	0	Right Tilt	171	5855.0	100.00%	94.26%	16.00	15.44	0.076	0.092	0.057	26.3	15.25	0.085	0.107	0.067	25.6		0.168	0.943	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11ac VHT80 MCS0	0	5	Front	171	5855.0	100.00%	94.26%	14.00	12.94	0.196	0.265	0.166	19.7	13.42	0.257	0.312	0.195	19.0		0.174	0.834	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
8CDNVL	U-NB 5-8	AG.1	Ant.D+E	Head	802.11be BHT320 MCS0	2	0	Right Touch	31	6105.0	100.00%	99.18%	12.50	11.53	0.088	0.111	0.069	22.0	11.77	0.107	0.128	0.080	21.4		0.151	0.931	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11be BHT320 MCS0	0	5	Front	191	6905.0	100.00%	99.18%	12.50	11.02	0.312	0.442	0.276	16.0	11.36	0.205	0.269	0.168	18.2	44	0.392	0.724	0.474	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
8CDNVL	U-NB 5-8	AG.1	Ant.E	Head	802.11be BHT320 MCS0	2	0	Right Touch	159	6745.0	100.00%	99.18%	12.50	11.56	0.124	0.155	0.097	20.5	11.46	0.092	0.118	0.074	21.7		0.241	0.903	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11be BHT320 MCS0	0	5	Front	191	6905.0	100.00%	99.18%	12.50	11.37	0.295	0.386	0.241	16.6	11.40	0.169	0.220	0.137	19.0		0.431	0.759	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
8CDNVL	U-NB 5-8	AG.1	Ant.D	Head	802.11be BHT320 MCS0	2	0	Left Tilt	63	6265.0	100.00%	99.18%	12.50	11.18	0.360	0.492	0.307	15.5	11.57	0.492	0.615	0.384	14.6	45	0.249	0.693	0.443	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)
				Body-worn & Hotspot	802.11be BHT320 MCS0	0	5	Front	191	6905.0	100.00%	99.18%	12.50	11.66	0.261	0.319	0.200	17.4	11.94	0.211	0.242	0.151	18.6		0.242	0.800	0.500	Y	F ₁₅₈₅ d ₁₂₈₀₀₀ (M)

Note(s):

- If the criteria are not met, Full SAR test applied.

10.2.1.2. Worst-case Spot-check SAR test results and criteria – 10g SAR

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode / Modulation / Waveform	BW (MHz)	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	PB Allocation	PB offset	Turn-up Limit (dBm)	Reference Worst-Case				Variant Test (Spot-check)				Relative Difference (d _{rel})	Spot-check Parameter		Y/N	Pass Criterion		
															Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER _s	PartID	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TER _s	PartID			Plot No.	Margin (M)
PCE	GSM850	AG.0	Ant.A+B	Product Specific 10-g	GPRS 4 slots	0	0	0	Right	190	836.6	0	0	25.50	24.63	0.527	0.644	0.161	28.2	24.55	0.706	0.879	0.220	26.8	0.365	0.839	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	GSM850	AG.1	Ant.D	Product Specific 10-g	GPRS 1 slot	0	0	0	Right	190	836.6	0	0	30.50	28.87	0.732	1.065	0.266	25.0	29.25	0.851	1.135	0.284	24.7	0.065	0.734	0.484	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	GSM1900	AG.0	Ant.B	Product Specific 10-g	GPRS 4 slots	0	0	0	Bottom	661	1880.0	0	0	20.50	19.28	1.230	1.629	0.407	19.1	18.94	1.010	1.447	0.362	19.7	0.112	0.593	0.343	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA5	AG.0	Ant.A+B	Product Specific 10-g	Rel 99 RMC	0	0	0	Right	4183	836.6	0	0	23.00	22.22	1.030	1.233	0.308	26.0	22.23	0.974	1.163	0.291	26.3	0.057	0.692	0.442	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA5	AG.1	Ant.D	Product Specific 10-g	Rel 99 RMC	0	0	0	Right	4183	836.6	0	0	22.00	20.12	1.030	1.588	0.397	23.9	20.28	0.872	1.296	0.324	24.8	0.184	0.603	0.353	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA2	AG.1	Ant.F	Product Specific 10-g	Rel 99 RMC	0	0	0	Top	9400	1880.0	0	0	16.50	15.68	1.120	1.353	0.338	19.1	15.83	1.230	1.435	0.359	18.9	0.061	0.662	0.412	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	WCDMA4	AG.1	Ant.F	Product Specific 10-g	Rel 99 RMC	0	0	0	Top	1413	1732.6	0	0	16.50	15.44	1.010	1.269	0.322	19.3	15.71	0.722	0.866	0.217	21.1	0.328	0.676	0.428	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B12	AG.0	Ant.A+B	Product Specific 10-g	QPSK	10	0	0	Right	23095	707.5	1	25	23.00	22.37	0.784	0.906	0.227	27.4	22.41	0.870	0.997	0.249	26.9	0.100	0.773	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B12	AG.1	Ant.D	Product Specific 10-g	QPSK	10	0	0	Right	23095	707.5	1	25	23.00	22.45	0.945	1.073	0.268	26.6	21.08	0.856	1.332	0.333	25.7	0.242	0.732	0.482	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B13	AG.0	Ant.A+B	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	21.82	0.454	0.596	0.149	29.2	0.330	0.778	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B13	AG.1	Ant.D	Product Specific 10-g	QPSK	10	0	0	Right	23230	782.0	1	25	23.00	21.11	1.020	1.576	0.394	25.0	20.98	1.250	1.990	0.498	23.9	0.263	0.606	0.356	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B26	AG.0	Ant.A+B	Product Specific 10-g	QPSK	15	0	0	Right	26865	831.5	1	0	23.00	22.78	1.200	1.262	0.316	25.9	22.31	1.030	1.207	0.302	26.1	0.044	0.684	0.434	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B26	AG.1	Ant.D	Product Specific 10-g	QPSK	15	0	0	Right	26865	831.5	1	0	22.00	20.65	0.905	1.235	0.309	25.0	20.30	1.070	1.583	0.396	23.9	0.282	0.691	0.441	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B5	AG.0	Ant.A+B	Product Specific 10-g	QPSK	10	0	0	Right	20525	936.5	1	0	23.00	22.35	1.100	1.278	0.319	25.9	22.46	1.050	1.189	0.297	26.2	0.095	0.681	0.431	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B5	AG.1	Ant.D	Product Specific 10-g	QPSK	10	0	0	Right	20525	936.5	1	0	22.00	20.60	0.958	1.322	0.331	24.7	20.16	0.906	1.384	0.346	24.5	0.047	0.669	0.419	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B66	AG.0	Ant.B	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	15.15	0.780	0.949	0.237	20.2	0.054	0.775	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B66	AG.1	Ant.F	Product Specific 10-g	QPSK	20	0	0	Top	132072	1720.0	1	99	16.50	15.62	0.809	0.991	0.248	20.5	15.27	0.851	1.130	0.282	19.9	0.140	0.752	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B25	AG.0	Ant.B	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	15.65	0.964	1.172	0.293	19.7	0.163	0.748	0.498	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B25	AG.1	Ant.F	Product Specific 10-g	QPSK	20	0	0	Top	26590	1905.0	1	0	16.50	16.01	0.908	1.016	0.254	20.4	15.16	1.040	1.416	0.354	18.9	0.393	0.746	0.496	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	LTE B41	AG.0	Ant.B	Product Specific 10-g	QPSK	20	0	0	Bottom	41055	2636.5	1	0	17.50	16.82	0.533	0.623	0.156	21.5	16.84	0.794	0.913	0.228	19.8	0.464	0.844	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n71	AG.0	Ant.A+B	Product Specific 10-g	DFI-s OFDM QPSK	35	0	0	Bottom	136100	680.5	1	93	23.00	22.27	0.574	0.679	0.170	28.6	22.45	0.653	0.741	0.185	26.2	0.091	0.830	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n71	AG.1	Ant.D	Product Specific 10-g	DFI-s OFDM QPSK	35	0	0	Right	136100	680.5	1	93	23.00	21.50	0.840	1.167	0.297	26.2	21.80	0.992	1.308	0.327	25.8	0.102	0.703	0.453	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n5	AG.0	Ant.A+B	Product Specific 10-g	DFI-s OFDM QPSK	20	0	0	Right	167300	936.5	1	1	23.00	22.17	0.917	1.110	0.278	26.5	22.21	0.899	1.078	0.270	26.6	0.029	0.722	0.472	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n5	AG.1	Ant.D	Product Specific 10-g	DFI-s OFDM QPSK	20	0	0	Right	167300	936.5	1	1	22.00	20.49	0.680	0.963	0.241	26.1	20.17	0.844	1.286	0.322	24.8	0.336	0.759	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n6	AG.0	Ant.B	Product Specific 10-g	DFI-s OFDM QPSK	45	0	0	Bottom	349000	1745.0	1	1	16.00	15.55	0.867	0.984	0.246	20.0	15.70	0.822	0.881	0.220	20.5	0.105	0.754	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n6	AG.1	Ant.F	Product Specific 10-g	DFI-s OFDM QPSK	45	0	0	Top	349000	1745.0	1	1	16.50	15.69	0.933	1.124	0.281	19.9	15.85	0.755	0.877	0.219	21.0	0.220	0.719	0.469	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n25	AG.0	Ant.B	Product Specific 10-g	DFI-s OFDM QPSK	40	0	0	Bottom	378500	1882.5	1	1	16.50	15.79	0.979	1.153	0.288	19.8	16.20	1.000	1.072	0.268	20.1	0.071	0.712	0.462	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n25	AG.1	Ant.F	Product Specific 10-g	DFI-s OFDM QPSK	40	0	0	Top	378500	1882.5	1	1	16.50	15.81	0.869	1.019	0.255	20.3	15.37	0.842	1.092	0.273	20.0	0.072	0.745	0.495	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n41	AG.0	Ant.A+B	Product Specific 10-g	DFI-s OFDM QPSK	100	0	0	Bottom	518598	2992.99	1	1	15.50	15.12	1.140	1.244	0.311	18.5	15.30	1.130	1.183	0.296	18.7	0.046	0.689	0.439	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n41	AG.0	Ant.C	Product Specific 10-g	SRS GW	100	0	0	Bottom	518598	2992.99	0	0	13.00	12.54	0.340	0.378	0.094	21.2	12.81	0.275	0.287	0.072	22.3	0.240	0.906	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n77	AG.0	Ant.A	Product Specific 10-g	SRS GW	100	0	0	Bottom	652000	3500.00	0	0	13.00	11.69	0.189	0.256	0.064	22.9	12.00	0.092	0.116	0.029	26.3	0.547	0.936	0.500	N	d _{TER} ≤ d _{TERmax} (M)
PCE	NR n77	AG.0	Ant.C	Product Specific 10-g	SRS GW	100	0	0	Bottom	650000	3750.00	0	0	13.00	11.89	0.112	0.145	0.036	25.3	11.51	0.043	0.061	0.015	29.1	0.581	0.964	0.500	N	d _{TER} ≤ d _{TERmax} (M)

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Mode	DS	Distance (mm)	Test Position	Channel	Freq. (MHz)	Max Duty Cycle (%)	Tested Duty Cycle (%)	Turn-up Lim. (dBm)	Reference Worst-Case				Variant Test (Spot-check)				Relative Difference (d _{rel})	Spot-check Parameter		Y/N	Pass Criterion			
														Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER _s	PartID	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TER _s	PartID			Plot No.	Margin (M)	d _{TERmax} (M)
DTS	WLAN 2.4GHz	AG.1	Ant.D	Product Specific 10-g	802.11b 1Mbps	0	0	Right	1	2412.0	100.00%	97.27%	18.00	17.63	0.929	1.040	0.280	21.8	17.46	1.140	1.327	0.332	20.7	0.276	0.740	0.490	Y	d _{TER} ≤ d _{TERmax} (M)	
DTS	WLAN 2.4GHz	AG.1	Ant.G	Product Specific 10-g	802.11b 1Mbps	0	0	Top	6	2437.0	100.00%	97.27%	18.00	17.37	1.440	1.711	0.428	19.6	17.06	1.740	2.221	0.555	18.5	0.298	0.572	0.322	Y	d _{TER} ≤ d _{TERmax} (M)	
NI	UN-N2A	AG.1	Ant.D+E	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	58	5290.0	100.00%	94.26%	14.00	12.75	0.381	0.539	0.135	20.8	12.65	0.425	0.615	0.154	20.0	46	0.141	0.865	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
NI	UN-N2A	AG.1	Ant.E	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	58	5290.0	100.00%	94.26%	14.00	12.94	0.333	0.451	0.113	21.4	13.50	0.413	0.492	0.123	21.0	0.090	0.887	0.500	Y	d _{TER} ≤ d _{TERmax} (M)	
NI	UN-N2A	AG.1	Ant.D	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	58	5290.0	100.00%	94.26%	14.00	12.68	0.240	0.345	0.086	22.8	12.93	0.245	0.333	0.083	22.7	0.036	0.914	0.500	Y	d _{TER} ≤ d _{TERmax} (M)	
NI	UN-N2C	AG.1	Ant.D+E	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	122	5610.0	100.00%	94.26%	14.00	12.76	0.506	0.742	0.186	19.2	12.42	0.507	0.774	0.193	19.0	47	0.042	0.814	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
NI	UN-N2C	AG.1	Ant.E	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	106	5530.0	100.00%	94.26%	14.00	13.23	0.400	0.507	0.127	20.9	13.39	0.442	0.540	0.135	20.6	0.065	0.873	0.500	Y	d _{TER} ≤ d _{TERmax} (M)	
NI	UN-N2C	AG.1	Ant.D	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	122	5610.0	100.00%	94.26%	14.00	12.93	0.149	0.202	0.051	24.9	13.73	0.258	0.293	0.073	23.3	44	0.440	0.849	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
NI	UN-N3	AG.1	Ant.E	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	155	5775.0	100.00%	94.26%	14.00	12.82	0.481	0.670	0.167	19.7	12.44	0.469	0.713	0.178	19.4	48	0.064	0.833	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
NI	UN-N3	AG.1	Ant.E	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	155	5775.0	100.00%	94.26%	14.00	12.86	0.423	0.583	0.146	20.3	13.66	0.405	0.465	0.116	21.3	0.204	0.854	0.500	Y	d _{TER} ≤ d _{TERmax} (M)	
NI	UN-N3	AG.1	Ant.D	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	155	5775.0	100.00%	94.26%	14.00	13.08	0.119	0.156	0.039	26.0	13.46	0.259	0.311	0.078	23.0	0.994	0.961	0.500	N	d _{TER} ≤ d _{TERmax} (M)	
NI	UN-N4	AG.1	Ant.D+E	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	171	5855.0	100.00%	94.26%	14.00	12.62	0.418	0.609	0.152	20.1	12.33	0.432	0.673	0.168	19.6	49	0.105	0.848	0.500	Y	d _{TER} ≤ d _{TERmax} (M)
NI	UN-N4	AG.1	Ant.E	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	171	5855.0	100.00%	94.26%	14.00	12.83	0.403	0.560	0.140	20.4	13.69	0.375	0.427	0.107	21.6	0.237	0.860	0.500	Y	d _{TER} ≤ d _{TERmax} (M)	
NI	UN-N4	AG.1	Ant.D	Product Specific 10-g	802.11ac VHT80 MCS0	0	0	Top	171	5855.0	100.00%	94.26%	14.00	12.94	0.113	0.153	0.038	26.1	13.42	0.263	0.319	0.080	22.9	1.084	0.962	0.500	N	d _{TER} ≤ d _{TERmax} (M)	
ICD6VL	UN-N5-B	AG.1	Ant.D+E	Product Specific 10-g	802.11be BHT350 MCS0	0	0	Top	63	6265.0	100.00%	99.18%	12.50	11.69	0.259	0.315	0.079	21.5	11.74	0.269	0.323	0.081	21.3	0.027	0.921	0.500	Y	d _{TER} ≤ d _{TERmax} (M)	
ICD6VL	UN-N5-B	AG.1	Ant.E	Product Specific 10-g	802.11be BHT350 MCS0	0	0	Front	191	6805.0	100.00%	99.18%	12.50	11.37	0.288	0.377	0.094	20.7	11.40	0.261	0.339	0.085	21.1	0.100	0.906	0.500	Y	d _{TER} ≤ d _{TERmax} (M)	
ICD6VL	UN-N5-B	AG.1	Ant.D	Product Specific 10-g	802.11be BHT350 MCS0	0	0	Front	159	6495.0	100.00%	99.18%	12.50	11.35	0.352	0.463	0.116	19.8	11.76	0.349	0.417	0.104	20.2	50	0.098	0.884	0.500	Y	d _{TER} ≤ d _{TERmax} (M)

10.2.1.3. All test position Spot-check SAR test results and criteria – 1g SAR

Equipment Class	Band	Antenna Group	Antenna	RF Exposure Conditions	Modulation / Waveform	BW (MHz)	DS	Distance (mm)	Test Position	Channel	Freq (MHz)	RB Allocation	RB offset	Tune-up Limit (dBm)	Reference Worst-Case				Variant Test (Spot-check)				Relative Difference (P ₁₀₀)	Spot-check Parameter		Y/N	Pass Criterion						
															Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	TER ₁	Part0 Result	Measured Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)		TER ₂	Part0 Result			Plot No.	Margen (dB)	d _{100dB} (M)			
PCE	LTE B41	AG.1	Ant.F	Head	QPSK	20	2	485	Left Touch/Tilt	40620	2593.0	50	0	17.00	15.74	0.892	1.192	0.745	14.2	16.45	0.795	0.902	0.564	15.4	52	0.243	0.255	0.250	Y	d _{100dB} (M)			
					QPSK	20	2	0	Right Touch	40185	2549.5	1	0	17.00	15.92	0.186	0.239	0.149	21.2	16.43	0.129	0.147	0.092	23.3	0.383	0.851	0.500	Y	d _{100dB} (M)				
					QPSK	20	2	0	Right Tilt	40185	2549.5	1	0	17.00	15.92	0.215	0.276	0.172	20.6	16.43	0.138	0.157	0.098	23.0	0.429	0.828	0.500	Y	d _{100dB} (M)				
				Body-worn & Hotspot	QPSK	20	0	5	Rear	40185	2549.5	50	0	17.00	15.92	0.723	0.927	0.579	15.3	16.47	0.744	0.841	0.525	15.7	53	0.093	0.421	0.250	Y	d _{100dB} (M)			
					QPSK	20	0	5	Front	40185	2549.5	50	0	17.00	15.92	0.531	0.681	0.426	16.6	16.47	0.449	0.507	0.317	17.9	0.255	0.574	0.324	Y	d _{100dB} (M)				
PCE	NR n41	AG.1	Ant.F	Head	QPSK	20	0	10	Top	40185	2549.5	50	0	17.00	15.92	0.448	0.574	0.359	17.4	16.47	0.417	0.471	0.294	18.2	0.180	0.641	0.391	Y	d _{100dB} (M)				
					DFT-s OFDM QPSK	100	2	485	Left Touch/Tilt	518598	2593	135	0	15.00	14.13	0.744	0.909	0.568	15.4	13.68	0.625	0.847	0.529	15.7	54	0.068	0.432	0.250	Y	d _{100dB} (M)			
					DFT-s OFDM QPSK	100	2	0	Right Touch	518598	2593	1	1	15.00	14.48	0.119	0.134	0.084	23.7	13.97	0.098	0.124	0.078	24.0	0.074	0.916	0.500	Y	d _{100dB} (M)				
				Body-worn & Hotspot	DFT-s OFDM QPSK	100	2	0	Right tilt	518598	2593	135	0	15.00	14.13	0.186	0.227	0.142	21.4	13.68	0.112	0.152	0.095	23.1	0.332	0.858	0.500	Y	d _{100dB} (M)				
					DFT-s OFDM QPSK	100	0	5	Rear	518598	2592.99	1	1	15.00	14.48	0.566	0.638	0.399	16.9	13.97	0.609	0.772	0.482	16.1	0.210	0.601	0.351	Y	d _{100dB} (M)				
PCE	NR n41	AG.1	Ant.F	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Front	518598	2592.99	135	0	15.00	14.13	0.294	0.359	0.225	19.4	13.68	0.335	0.454	0.284	18.4	0.264	0.775	0.500	Y	d _{100dB} (M)				
					DFT-s OFDM QPSK	100	0	10	Top	518598	2592.99	1	1	15.00	14.48	0.265	0.299	0.187	20.2	13.97	0.291	0.369	0.231	19.3	0.235	0.813	0.500	Y	d _{100dB} (M)				
					SRS CW	100	0	5	Rear	518598	2593			15.00	14.11	0.802	0.984	0.615	15.0	14.22	0.759	0.908	0.568	15.4	55	0.077	0.385	0.250	Y	d _{100dB} (M)			
				Hotspot	SRS CW	100	0	5	Front	518598	2593			15.00	14.11	0.688	0.844	0.528	15.7	14.22	0.671	0.803	0.502	15.9	0.049	0.472	0.250	Y	d _{100dB} (M)				
					SRS CW	100	0	10	Top	518598	2593			15.00	14.11	0.448	0.550	0.344	17.5	14.22	0.423	0.506	0.316	17.9	0.079	0.656	0.406	Y	d _{100dB} (M)				
PCE	NR n41	AG.1	Ant.E	Head	SRS CW	100	2	0	Left Touch	518598	2592.99			13.00	11.98	0.003	0.004	0.002	37.2	11.54	0.004	0.006	0.003	35.5	0.475	0.998	0.500	NA	d _{100dB} (M)				
					SRS CW	100	2	0	Left Tilt	518598	2592.99			13.00	11.98	0.000	0.000	N/A	N/A	11.54	0.004	0.006	0.003	35.5	N/A	N/A	N/A	NA	d _{100dB} (M)				
					SRS CW	100	2	0	Right Touch	518598	2592.99			13.00	11.98	0.059	0.075	0.047	24.2	11.54	0.042	0.059	0.037	25.3	0.212	0.953	0.500	NA	d _{100dB} (M)				
				Body-worn & Hotspot	SRS CW	100	2	0	Right Tilt	518598	2592.99			13.00	11.98	0.060	0.076	0.047	24.1	11.54	0.036	0.050	0.031	25.9	0.336	0.953	0.500	NA	d _{100dB} (M)				
					SRS CW	100	0	5	Rear	518598	2592.99			13.00	11.98	0.088	0.111	0.070	22.5	11.54	0.079	0.111	0.069	22.5	0.007	0.930	0.500	Y	d _{100dB} (M)				
					SRS CW	100	0	5	Front	518598	2592.99			13.00	11.98	0.047	0.059	0.037	25.2	11.54	0.033	0.046	0.029	26.3	0.223	0.963	0.500	NA	d _{100dB} (M)				
					Hotspot	SRS CW	100	0	10	Top	518598	2592.99			13.00	11.98	0.015	0.019	0.012	30.2	11.54	0.012	0.017	0.010	30.7	0.115	0.988	0.500	NA	d _{100dB} (M)			
				PCE	NR n77	AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	1	0	Left Touch	662000	3930.00	135	138	17.00	16.19	0.115	0.139	0.087	25.5	16.76	0.114	0.120	0.075	26.1	0.131	0.913	0.500	Y	d _{100dB} (M)
									DFT-s OFDM QPSK	100	1	0	Left Tilt	662000	3930.00	135	138	17.00	16.19	0.124	0.149	0.093	25.2	16.76	0.132	0.139	0.087	25.5	0.066	0.907	0.500	Y	d _{100dB} (M)
									DFT-s OFDM QPSK	100	1	0	Right Touch	662000	3930.00	135	138	17.00	16.19	0.643	0.775	0.484	18.1	16.76	0.479	0.506	0.316	19.9	56	0.347	0.516	0.266	N
Body-worn & Hotspot	DFT-s OFDM QPSK	100	0					5	Rear	662000	3930.00	270	0	16.00	15.07	0.788	0.976	0.610	16.1	14.95	0.348	0.443	0.277	19.5	57	0.546	0.390	0.250	N	d _{100dB} (M)			
	DFT-s OFDM QPSK	100	0					5	Front	662000	3930.00	1	271	16.00	15.22	0.240	0.287	0.180	21.4	14.72	0.163	0.219	0.137	22.5	0.238	0.620	0.500	Y	d _{100dB} (M)				
PCE	NR n77	AG.1	Ant.F	Hotspot	DFT-s OFDM QPSK	100	0	10	Top	662000	3930.00	1	271	16.00	15.22	0.202	0.242	0.151	22.1	14.72	0.202	0.271	0.170	21.6	0.122	0.849	0.500	Y	d _{100dB} (M)				
					Head	SRS CW	100	1	0	Left Touch	662000	3930.00			13.00	12.72	0.023	0.025	0.015	29.1	12.46	0.000	0.000	0.000	N/A	1.000	0.985	0.500	NA	d _{100dB} (M)			
						SRS CW	100	1	0	Left Tilt	662000	3930.00			13.00	12.72	0.000	0.000	N/A	N/A	12.46	0.004	0.005	0.003	36.4	N/A	N/A	N/A	NA	d _{100dB} (M)			
				SRS CW		100	1	0	Right Touch	662000	3930.00			13.00	12.72	0.065	0.089	0.043	24.5	12.46	0.000	0.000	0.000	N/A	1.000	0.957	0.500	NA	d _{100dB} (M)				
				Body-worn & Hotspot		SRS CW	100	1	0	Right Tilt	662000	3930.00			13.00	12.72	0.066	0.070	0.044	24.5	12.46	0.000	0.000	0.000	N/A	1.000	0.956	0.500	NA	d _{100dB} (M)			
SRS CW	100	0	5		Rear	633334	3500.01			13.00	11.16	0.853	0.998	0.623	13.0	11.65	0.506	0.690	0.432	14.6	0.308	0.377	0.250	N	d _{100dB} (M)								
PCE	NR n77	AG.1	Ant.F	Hotspot	SRS CW	100	0	5	Front	662000	3930.00			13.00	12.72	0.149	0.159	0.099	20.9	12.46	0.158	0.179	0.112	20.4	0.126	0.901	0.500	Y	d _{100dB} (M)				
					Head	SRS CW	100	0	10	Top	662000	3930.00			13.00	12.72	0.218	0.233	0.145	19.3	12.46	0.153	0.173	0.108	20.6	0.255	0.855	0.500	Y	d _{100dB} (M)			
						SRS CW	100	0	10	Top	662000	3930.00			13.00	12.72	0.218	0.233	0.145	19.3	12.46	0.153	0.173	0.108	20.6	0.255	0.855	0.500	Y	d _{100dB} (M)			
				SRS CW		100	0	10	Top	662000	3930.00			13.00	12.72	0.218	0.233	0.145	19.3	12.46	0.153	0.173	0.108	20.6	0.255	0.855	0.500	Y	d _{100dB} (M)				
				SRS CW		100	0	10	Top	662000	3930.00			13.00	12.72	0.218	0.233	0.145	19.3	12.46	0.153	0.173	0.108	20.6	0.255	0.855	0.500	Y	d _{100dB} (M)				

10.2.2. Full SAR test results

10.2.2.1. 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 Limit
AG.0	Ant.B	Head	QPSK	20	2	5	Left Touch	41055	2636.5	1	0	17.50	16.84	0.465	0.541		18.1
AG.0	Ant.B	Head	QPSK	20	2	5	Left Touch	41055	2636.5	50	0	17.50	16.85	0.461	0.535		18.2
AG.0	Ant.B	Head	QPSK	20	2	5	Left Tilt	41055	2636.5	1	0	17.50	16.84	0.465	0.541		18.1
AG.0	Ant.B	Head	QPSK	20	2	5	Left Tilt	41055	2636.5	50	0	17.50	16.85	0.461	0.535		18.2
AG.0	Ant.B	Head	QPSK	20	2	0	Right Touch	41055	2636.5	1	0	17.50	16.84	0.009	0.011		35.1
AG.0	Ant.B	Head	QPSK	20	2	0	Right Touch	41055	2636.5	50	0	17.50	16.85	0.009	0.010		35.4
AG.0	Ant.B	Head	QPSK	20	2	0	Right Tilt	41055	2636.5	1	0	17.50	16.84	0.005	0.006		37.8
AG.0	Ant.B	Head	QPSK	20	2	0	Right Tilt	41055	2636.5	50	0	17.50	16.85	0.002	0.003		41.2
AG.0	Ant.B	Head PC2	QPSK	20	2	5	Left Touch	41055	2636.5	1	0	19.10	18.63	0.362	0.403		19.4
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	0	5	Rear	41055	2636.5	1	0	17.50	16.84	0.465	0.541	58	18.1
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	0	5	Rear	41055	2636.5	50	0	17.50	16.85	0.461	0.535		18.2
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	0	5	Front	41055	2636.5	1	0	17.50	16.84	0.222	0.258		21.3
AG.0	Ant.B	Body-worn & Hotspot	QPSK	20	0	5	Front	41055	2636.5	50	0	17.50	16.85	0.222	0.258		21.4
AG.0	Ant.B	Hotspot	QPSK	20	0	10	Bottom	41055	2636.5	1	0	17.50	16.84	0.237	0.276		21.1
AG.0	Ant.B	Hotspot	QPSK	20	0	10	Bottom	41055	2636.5	50	0	17.50	16.85	0.235	0.273		21.1
AG.0	Ant.B	Body-worn & Hotspot PC2	QPSK	20	0	5	Rear	41055	2636.5	1	0	19.10	18.63	0.362	0.403		19.4

LTE Band 41 Power Class 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 Limit
AG.0	Ant.B	Head PC2	QPSK	20	2	5	Left Touch	41055	2636.5	1	0	19.10	18.63	0.362	0.403		19.4
AG.0	Ant.B	Body-worn & Hotspot PC2	QPSK	20	0	5	Rear	41055	2636.5	1	0	19.10	18.63	0.362	0.403		19.4

Note(s):

From May 2017 TCB workshop, SAR tested were performed using Power Class 3. SAR test for Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination. According to the highest time averaged power for UL-DL configurations, configuration # 1 with duty cycle 43.3% is used for Power Class 2 SAR test.

Reported SAR vs. Output power linearly scaled

Antenna	RF Exposure Conditions	Power Class 2				Power Class 3				PC2 linearly scaled Reported SAR (W/kg)	Linearly scaled (<10%)
		Duty Cycle (%)	Tune-up Limit (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)		
Ant.B	Head	43.3	19.10	35.20	0.403	63.3	17.50	35.60	0.541	0.535	-24.63
Ant.B	Body-worn & Hotspot	43.3	19.10	35.20	0.403	63.3	17.50	35.60	0.541	0.535	-24.63

Note(s):

Additional SAR testing for Power Class 2 is not required when:

The reported SAR vs. output power can be linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 or 3.5 W/kg (1-g or 10-g respectively)

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	2	4/85	Left Touch/Tilt	40620	2593.0	50	0	17.00	16.45	0.795	0.902	59	15.4
AG.1	Ant.F	Head	QPSK	20	2	0	Right Touch	40185	2549.5	1	0	17.00	16.43	0.129	0.147		23.3
AG.1	Ant.F	Head	QPSK	20	2	0	Right Tilt	40185	2549.5	1	0	17.00	16.43	0.138	0.157		23.0
AG.1	Ant.F	Head PC2	QPSK	20	2	0	Left Touch/Tilt	40620	2593.0	50	0	18.60	17.59	0.713	0.900		15.4
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Rear	40185	2549.5	50	0	17.00	16.47	0.744	0.841	60	15.7
AG.1	Ant.F	Body-worn & Hotspot	QPSK	20	0	5	Front	40185	2549.5	50	0	17.00	16.47	0.449	0.507		17.9
AG.1	Ant.F	Hotspot	QPSK	20	0	10	Top	40185	2549.5	50	0	17.00	16.47	0.417	0.471		18.2
AG.1	Ant.F	Body-worn & Hotspot PC2	QPSK	20	0	5	Rear	40185	2549.5	50	0	18.60	17.71	0.521	0.639		16.9

LTE Band 41 Power Class 2

Antenna	RF Exposure Conditions	Power Class 2				Power Class 3				PC2 linearly scaled Reported SAR (W/kg)	Linearly scaled (<10%)
		Duty Cycle (%)	Tune-up Limit (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)	Duty Cycle (%)	Tune-up Limit (dBm)	Fram Avg. Power (dBm)	Reported SAR (W/kg)		
Ant.F	Head	43.3	18.60	31.37	0.900	63.3	17.00	31.73	0.902	0.892	0.84
Ant.F	Bodyworn & Hotspot	43.3	18.60	31.37	0.639	63.3	17.00	31.73	0.841	0.831	-23.05

Note(s):

From May 2017 TCB workshop, SAR tested were performed using Power Class 3. SAR test for Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination. According to the highest time averaged power for UL-DL configurations, configuration # 1 with duty cycle 43.3% is used for Power Class 2 SAR test.

Reported SAR vs. Output power linearly scaled

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 PC2	QPSK	20	2	0	Left Touch	40620	2593.0	50	0	18.60	17.59	0.713	0.900		15.4
AG.1	Ant.F	Body-worn & Hotspot PC2	QPSK	20	0	5	Rear	40185	2549.5	50	0	18.60	17.71	0.521	0.639		16.9

Note(s):

Additional SAR testing for Power Class 2 is not required when:

The reported SAR vs. output power can be linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 or 3.5 W/kg (1-g or 10-g respectively)

10.2.2.2. NR Band n77 (100MHz Bandwidth)**SRS1**

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.E	Head	DFT-s OFDM QPSK	100	2	0	Left Touch	662000	3930.00	1	271	17.00	16.76	0.093	0.098		27.0
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Left Touch	662000	3930.00	135	138	17.00	16.66	0.114	0.123		26.0
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Left Tilt	662000	3930.00	1	271	17.00	16.76	0.108	0.114		26.4
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Left Tilt	662000	3930.00	135	138	17.00	16.66	0.132	0.143		25.4
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Touch	633334	3500.01	1	271	17.00	16.76	0.429	0.453		20.4
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Touch	633334	3500.01	135	138	17.00	16.64	0.408	0.443		20.5
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Touch	650000	3750.00	1	271	17.00	16.68	0.385	0.414		20.8
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Touch	650000	3750.00	135	138	17.00	16.62	0.389	0.425		20.7
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Touch	662000	3930.00	1	271	17.00	16.76	0.509	0.538	61	19.6
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Touch	662000	3930.00	135	138	17.00	16.66	0.479	0.518		19.8
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Tilt	633334	3500.01	1	271	17.00	16.76	0.437	0.462		20.3
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Tilt	633334	3500.01	135	138	17.00	16.64	0.424	0.461		20.3
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Tilt	650000	3750.00	1	271	17.00	16.68	0.378	0.407		20.9
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Tilt	650000	3750.00	135	138	17.00	16.62	0.391	0.427		20.6
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Tilt	662000	3930.00	1	271	17.00	16.76	0.491	0.519		19.8
AG.1	Ant.E	Head	DFT-s OFDM QPSK	100	2	0	Right Tilt	662000	3930.00	135	138	17.00	16.66	0.299	0.323		21.9
AG.1	Ant.E	Head	CP OFDM QPSK	100	2	0	Right Touch	662000	3930.00	1	1	17.00	16.96	0.531	0.536		19.7
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Rear	633334	3500.01	1	271	16.00	14.77	0.412	0.547		18.6
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Rear	633334	3500.01	135	138	16.00	14.78	0.427	0.565	62	18.4
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Rear	650000	3750.00	1	271	16.00	14.54	0.388	0.543		18.6
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Rear	650000	3750.00	135	138	16.00	14.67	0.390	0.530		18.7
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Rear	662000	3930.00	1	271	16.00	14.72	0.410	0.551		18.5
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Rear	662000	3930.00	135	138	16.00	14.88	0.415	0.537		18.6
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Front	662000	3930.00	1	271	16.00	14.72	0.163	0.219		22.5
AG.1	Ant.E	Body-worn & Hotspot	DFT-s OFDM QPSK	100	0	5	Front	662000	3930.00	135	138	16.00	14.88	0.182	0.236		22.2
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	100	0	10	Top	662000	3930.00	1	271	16.00	14.72	0.202	0.271		21.6
AG.1	Ant.E	Hotspot	DFT-s OFDM QPSK	100	0	10	Top	662000	3930.00	135	138	16.00	14.88	0.206	0.267		21.7
AG.1	Ant.E	Body-worn & Hotspot	CP OFDM QPSK	100	0	5	Rear	633334	3500.01	1	1	16.00	15.00	0.392	0.493		19.0

SRS2

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	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	SRS CW	100	0	0	Bottom	662000	3930.00	13.00	12.00	0.092	0.116		26.3
AG.0	Ant.A	Product Specific 10-g 0 mm	SRS CW	100	0	0	Right	662000	3930.00	13.00	12.00	0.037	0.047		30.2

SRS3

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	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	Body-worn & Hotspot	SRS CW	100	0	5	Rear	633334	3500.01	13.00	11.65	0.506	0.690	63	14.6
AG.1	Ant.F	Body-worn & Hotspot	SRS CW	100	0	5	Rear	650000	3750.00	13.00	11.96	0.415	0.527		15.7
AG.1	Ant.F	Body-worn & Hotspot	SRS CW	100	0	5	Rear	662000	3930.00	13.00	12.46	0.282	0.319		17.9
AG.1	Ant.F	Body-worn & Hotspot	SRS CW	100	0	5	Front	662000	3930.00	13.00	12.46	0.158	0.179		20.4
AG.1	Ant.F	Hotspot	SRS CW	100	0	10	Top	662000	3930.00	13.00	12.46	0.153	0.173		20.6

SRS4

Antenna Group	Antenna	RF Exposure Conditions	Waveform/Modulation	Bandwidth (MHz)	DSI	Distance (mm)	Test Position	Channel	Frequency (MHz)	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.C	Product Specific 10-g 0 mm	SRS CW	100	0	0	Bottom	650000	3750.00	13.00	11.51	0.043	0.061		29.1

10.2.2.3. Wi-Fi 2.4GHz**MIMO (Ant.D+G)**

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	Head	802.11g 6Mbps	2	0	Left Touch	6	2437.0	0.489	89.27%	14.00	13.38	12.65	0.433	0.662		15.7
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Left Touch	11	2462.0	0.592	89.27%	14.00	13.43	12.53	0.515	0.809		14.9
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Left Tilt	6	2437.0	0.554	89.27%	14.00	13.38	12.65	0.476	0.728		15.3
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Left Tilt	11	2462.0	0.678	89.27%	14.00	13.43	12.53	0.571	0.897		14.4
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Right Touch	11	2462.0	0.566	89.27%	14.00	13.43	12.53				
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Right Tilt	6	2437.0	0.539	89.27%	14.00	13.38	12.65	0.404	0.618		16.0
AG.1	Ant.D+G	Head	802.11g 6Mbps	2	0	Right Tilt	11	2462.0	0.775	89.27%	14.00	13.43	12.53	0.576	0.905	64	14.4
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	0	5	Rear	1	2412.0	0.715	89.27%	17.00	16.62	15.20	0.528	0.895	65	17.4
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	0	5	Rear	11	2462.0	0.626	89.27%	17.00	16.45	15.18	0.512	0.872		17.5
AG.1	Ant.D+G	Body-worn & Hotspot	802.11g 6Mbps	0	5	Front	1	2412.0	0.527	89.27%	17.00	16.62	15.20	0.444	0.753		18.2
AG.1	Ant.D+G	Hotspot	802.11g 6Mbps	0	10	Top	1	2412.0	0.436	89.27%	17.00	16.62	15.20	0.320	0.543		19.6
AG.1	Ant.D+G	Hotspot	802.11g 6Mbps	0	10	Right	1	2412.0	0.481	89.27%	17.00	16.62	15.20	0.354	0.600		19.2

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 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	1	2412.0	6.770	89.27%	17.00	16.62	15.20	1.500	2.543		16.9
AG.1	Ant.D+G	Product Specific 10-g 0 mm	802.11g 6Mbps	0	0	Right	1	2412.0	5.330	89.27%	17.00	16.62	15.20	1.210	2.052		17.8

10.2.2.4. Wi-Fi 5GHz**U-NII 3 – SISO Ant.2 (Ant.D)**

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	1	0	Top	155	5775.0	1.090	94.26%	14.00	13.46	0.259	0.311	66	23.0
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Right	155	5775.0	0.621	94.26%	14.00	13.46				

U-NII 4 – SISO Ant.2 (Ant.D)

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	1	0	Top	171	5855.0	1.570	94.26%	14.00	13.42	0.263	0.319	67	22.9
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11ac VHT80 MCS0	1	0	Right	171	5855.0	0.698	94.26%	14.00	13.42				

10.2.2.5. Bluetooth

This device supports Bluetooth tethering in only Ant.1(Ant.D).

Bluetooth SISO Ant.1 (Ant.D)

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 Flat	BLE	2	4/25	Left Touch/Tilt	17	2440.0	85.03%	13.50	11.66	0.487	0.761	68	14.6
AG.1	Ant.D	Head	BLE	2	0	Right Touch	17	2440.0	85.03%	13.50	11.66	0.277	0.433		17.1
AG.1	Ant.D	Head	BLE	2	0	Right Tilt	17	2440.0	85.03%	13.50	11.66	0.229	0.358		17.9
AG.1	Ant.D	Body-worn & Hotspot	BLE	0	5	Rear	37	2402.0	85.03%	16.00	15.29	0.492	0.593	69	18.2
AG.1	Ant.D	Body-worn & Hotspot	BLE	0	5	Front	37	2402.0	85.03%	16.00	15.29	0.341	0.411		19.8
AG.1	Ant.D	Hotspot	BLE	0	10	Top	37	2402.0	85.03%	16.00	15.29	0.019	0.023		32.4
AG.1	Ant.D	Hotspot	BLE	0	10	Right	37	2402.0	85.03%	16.00	15.29	0.272	0.328		20.8

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	BLE	0	0	Top	37	2402.0	85.03%	16.00	15.29	1.230	1.482		18.2
AG.1	Ant.D	Product Specific 10-g 0 mm	BLE	0	0	Right	37	2402.0	85.03%	16.00	15.29	0.827	0.996		19.9

Bluetooth SISO Ant.2 (Ant.G)

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	BLE	2	0	Left Touch	37	2402.0	85.03%	13.50	13.23	0.707	0.770		14.6
AG.1	Ant.G	Head	BLE	2	0	Left Tilt	37	2402.0	85.03%	13.50	13.23	0.816	0.888		14.0
AG.1	Ant.G	Head	BLE	2	0	Left Tilt	17	2440.0	85.03%	13.50	13.01	0.732	0.838		14.2
AG.1	Ant.G	Head	BLE	2	0	Left Tilt	39	2480.0	85.03%	13.50	11.56	0.568	0.908	70	13.9
AG.1	Ant.G	Head	BLE	2	0	Right Touch	37	2402.0	85.03%	13.50	13.23	0.280	0.305		18.6
AG.1	Ant.G	Head	BLE	2	0	Right Tilt	37	2402.0	85.03%	13.50	13.23	0.291	0.317		18.4
AG.1	Ant.G	Body-worn & Hotspot	BLE	0	5	Rear	17	2440.0	85.03%	16.00	15.32	0.529	0.633	71	17.9
AG.1	Ant.G	Body-worn & Hotspot	BLE	0	5	Front	17	2440.0	85.03%	16.00	15.32	0.470	0.562		18.4

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	BLE	0	0	Top	17	2440.0	85.03%	16.00	15.32	1.230	1.472		18.3

Bluetooth MIMO (Ant.D+G)

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	Head	BDR	2	0	Left Touch	0	2402.0	76.61%	13.50	11.83	13.44	0.386	0.585		15.8
AG.1	Ant.D+G	Head	BDR	2	0	Left Tilt	0	2402.0	76.61%	13.50	11.83	13.44	0.433	0.656		15.3
AG.1	Ant.D+G	Head	BDR	2	0	Right Touch	0	2402.0	76.61%	13.50	11.83	13.44	0.355	0.538		16.1
AG.1	Ant.D+G	Head	BDR	2	0	Right Tilt	0	2402.0	76.61%	13.50	11.83	13.44	0.499	0.756	72	14.7
AG.1	Ant.D+G	Body-worn & Hotspot	BDR	0	5	Rear	0	2402.0	76.61%	15.00	13.15	14.91	0.201	0.317	73	19.9
AG.1	Ant.D+G	Body-worn & Hotspot	BDR	0	5	Front	0	2402.0	76.61%	15.00	13.15	14.91	0.199	0.314		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 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	0	0	Top	0	2402.0	76.61%	15.00	13.15	14.91	0.410	0.647		20.8
AG.1	Ant.D+G	Product Specific 10-g 0 mm	BDR	0	0	Right	0	2402.0	76.61%	15.00	13.15	14.91	0.126	0.199		25.9

10.2.2.6. 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	0.001	0.001	74
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	9	7987.2	0.000	0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	5	6489.6	0.000	0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	9	7987.2	0.000	0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	5	6489.6		0.000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	9	7987.2		0.000	

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 Ant.1 (Ant.E)

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 APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Plimit
AG.1	Ant.E	Head	802.11be EHT320 MCS0	3	0	Left Tilt	159	6745.0	99.18%	12.50	11.46	0.030	0.038		27.7
AG.1	Ant.E	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	191	6905.0	99.18%	12.50	11.40	0.137	0.178		21.0
AG.1	Ant.E	Product Specific 10-g	802.11be EHT320 MCS0	1	0	Top	159	6745.0	99.18%	12.50	11.46	0.747	0.957		13.6

U-NII 5/6/7/8 SISO Ant.2 (Ant.D)

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 APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Plimit
AG.1	Ant.D	Head	802.11be EHT320 MCS0	3	0	Right Tilt	159	6745.0	99.18%	12.50	11.76	0.025	0.029		28.8
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	191	6905.0	99.18%	12.50	11.94	0.171	0.196	83	20.5
AG.1	Ant.D	Product Specific 10-g	802.11be EHT320 MCS0	1	0	Top	159	6745.0	99.18%	12.50	11.76	0.639	0.764		14.6

U-NII 5/6/7/8 MIMO (Ant.E+D)

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 APD (mW/cm ²)	Reported APD (mW/cm ²)	Plot No.	APD Part0 Plimit
AG.1	Ant.D+E	Head	802.11be EHT320 MCS0	3	0	Left Tilt	31	6105.0	99.18%	12.50	11.77	0.120	0.143	47	21.9
AG.1	Ant.D+E	Body-worn & Hotspot	802.11be EHT320 MCS0	1	5	Rear	63	6265.0	99.18%	12.50	11.74	0.125	0.150		21.7
AG.1	Ant.D+E	Product Specific 10-g	802.11be EHT320 MCS0	1	0	Top	191	6905.0	99.18%	12.50	11.36	0.775	1.016	53	13.4

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	Product Specific 10-g 0 mm	CW	0	Rear	5	6489.6	0.0023	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	9	7987.2	0.0032	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	5	6489.6	0.0009	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	9	7987.2	0.0045	82
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	5	6489.6	0.0014	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	9	7987.2	0.0006	

11.2. Folder Open APD Results

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

U-NII 5/6/7/8 SISO Ant.1 (Ant.E)

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 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	99.18%	12.50	11.46	0.054	0.069		25.1
AG.1	Ant.E	Body-worn & Hotspot	802.11be EHT320 MCS0	0	5	Front	191	6905.0	99.18%	12.50	11.40	0.110	0.143		21.9
AG.1	Ant.E	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	0	0	Front	191	6905.0	99.18%	12.50	11.40	0.607	0.788		14.5

U-NII 5/6/7/8 SISO Ant.2 (Ant.D)

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 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	99.18%	12.50	11.57	0.304	0.380	45	17.7
AG.1	Ant.D	Body-worn & Hotspot	802.11be EHT320 MCS0	0	5	Front	191	6905.0	99.18%	12.50	11.94	0.122	0.140		22.0
AG.1	Ant.D	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	0	0	Front	159	6745.0	99.18%	12.50	11.76	0.836	0.999	50	13.5

U-NII 5/6/7/8 MIMO (Ant.E+D)

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 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	99.18%	12.50	11.77	0.063	0.075		24.7
AG.1	Ant.D+E	Body-worn & Hotspot	802.11be EHT320 MCS0	0	5	Front	191	6905.0	99.18%	12.50	11.36	0.134	0.176	44	21.0
AG.1	Ant.D+E	Product Specific 10-g 0 mm	802.11be EHT320 MCS0	0	0	Top	63	6265.0	99.18%	12.50	11.74	0.632	0.759		14.7

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	0.0024	74
ER	UWB	Product Specific 10-g 0 mm	CW	0	Rear	9	7987.2	0.0000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	5	6489.6	0.0000	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Front	9	7987.2	0.0018	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	5	6489.6	0.0002	
ER	UWB	Product Specific 10-g 0 mm	CW	0	Top	9	7987.2	0.0015	

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=2mm 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 IPD Results

Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured Normal psPD (mW/cm ²)	Reported Normal psPD (mW/cm ²)	Measured Total psPD (mW/cm ²)	Reported 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 MCS0	2	Top	159	6745.0	99.18%	12.50	11.46	0.127	0.163	0.301	0.386	1.123	0.183	0.433	

Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured Normal psPD (mW/cm ²)	Reported Normal psPD (mW/cm ²)	Measured Total psPD (mW/cm ²)	Reported 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	IPD (Incident PD)	802.11be EHT320 MCS0	2	Top	159	6745.0	99.18%	12.50	11.76	0.120	0.143	0.279	0.334	1.123	0.161	0.375	

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

Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured Normal psPD (mW/cm ²)	Reported Normal psPD (mW/cm ²)	Measured Total psPD (mW/cm ²)	Reported 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 MCS0	2	Top	191	6905.0	99.18%	12.50	11.36	12.00	0.153	0.201	0.321	0.421	1.123	0.225	0.473	84

12.1.2. UWB

Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Measured Normal psPD (mW/cm ²)	Measured 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	Front	9	7987.2	0.0028	0.0063	1.123	0.0031	0.0071	85

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 Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured Normal psPD (mW/cm ²)	Reported Normal psPD (mW/cm ²)	Measured Total psPD (mW/cm ²)	Reported 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 MCS0	2	Front	191	6905.0	99.18%	12.50	11.40	0.252	0.327	0.545	0.708	1.123	0.368	0.795	75

Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power (dBm)	Measured Normal psPD (mW/cm ²)	Reported Normal psPD (mW/cm ²)	Measured Total psPD (mW/cm ²)	Reported 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	IPD (Incident PD)	802.11be EHT320 MCS0	2	Front	159	6745.0	99.18%	12.50	11.76	0.106	0.127	0.205	0.245	1.123	0.142	0.275	

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

Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Duty Cycle	Tune-up Limit (dBm)	Measured Power Ant.1 (dBm)	Measured Power Ant.2 (dBm)	Measured Normal psPD (mW/cm ²)	Reported Normal psPD (mW/cm ²)	Measured Total psPD (mW/cm ²)	Reported 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 MCS0	2	Top	63	6265.0	99.18%	12.50	11.82	11.74	0.182	0.219	0.398	0.478	1.123	0.245	0.537	

12.2.2. UWB

Antenna	RF Exposure Conditions	Mode	Distance (mm)	Test Position	Channel	Frequency (MHz)	Measured Normal psPD (mW/cm ²)	Measured 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	Rear	5	6489.6	0.0015	0.0027	1.123	0.0017	0.0030	76

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	NR Band n25	Ant.F	Folder Closed	Head	Left Tilt	Yes	0.936	0.884	1.06

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 Plimit (or Plimit + Uc > Pmax, 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
	Ant.C	
AG1	Ant.D	Ant.E
	Ant.F	Ant.G
ER(s)	NFC	UWB
ER = Exteral radios/antennas supported ourtside 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	AG0
Antenna		Ant.A	Ant.(A+B)	Ant.B	Ant.C	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Head	Left Touch	0.238	0.302	0.257	0.000	0.302
	Left Tilt	0.223	0.222	0.192	0.002	0.223
	Right Touch	0.334	0.388	0.426	0.004	0.426
	Right Tilt	0.305	0.244	0.132	0.000	0.305

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	1.204	1.148	1.195	1.177	0.953	1.180	1.204
	Left Tilt	0.999	1.198	1.367	1.177	1.080	1.156	1.367
	Right Touch	0.776	0.989	1.150	0.870	1.080	1.161	1.161
	Right Tilt	0.689	1.198	1.278	1.177	1.115	1.180	1.278

ER's worst configuration

Antenna Group		ER	ER
Antenna		UWB	Highest Measured SAR
RF exposure	Test position	Measured SAR	
Head	Left Touch	0.007	0.007
	Left Tilt	0.007	0.007
	Right Touch	0.007	0.007
	Right Tilt	0.007	0.007

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	0.302	1.204	0.007	1.512	1.6
	Left Tilt	0.223	1.367	0.000	1.589	
	Right Touch	0.426	1.161	0.007	1.594	
	Right Tilt	0.305	1.278	0.007	1.589	

Note(s):

1. Additional evaluation is not required due to below SAR Limit.
2. UWB Head Left Tilt position test was additionally performed for Simultaneous Transmission Evaluation.

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	AG0
Antenna		Ant.A	Ant.(A+B)	Ant.B	Ant.C	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Body-worn & Hotspot	Rear	1.083	1.134	1.190	0.193	1.190
	Front	0.284	0.472	0.655	0.056	0.655
	Top	0.000	0.000	0.000	0.000	0.000
	Left	0.000	0.000	0.011	0.006	0.011
	Bottom	0.305	0.251	0.768	0.072	0.768
	Right	0.594	0.541	0.000	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.E+D	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Body-worn & Hotspot	Rear	1.196	0.709	1.168	0.255	1.039	0.752	1.196
	Front	0.424	0.470	0.653	0.955	0.786	0.752	0.955
	Top	1.129	0.503	0.593	0.494	0.512	0.371	1.129
	Left	0.000	0.601	0.000	0.000	0.000	0.752	0.752
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	0.719	0.000	0.037	0.011	0.472	0.752	0.752

ER worst configuration

Antenna Group		ER	ER
Antenna		UWB	Highest Measured SAR
RF exposure	Test position	Measured SAR	
Body-worn & Hotspot	Rear	0.004	0.004
	Front	0.007	0.007
	Top	0.000	0.000
	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	1.190	1.196	0.004	2.390	1.6
	Front	0.655	0.955	0.007	1.617	
	Top	0.000	1.129	0.000	1.129	
	Left	0.011	0.752	0.000	0.762	
	Bottom	0.768	0.000	0.000	0.768	
	Right	0.594	0.752	0.000	1.346	

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	1.083	AntD	1.196	0.004	2.284	1
		1.083	AntE	0.709		1.796	1
		1.083	AntF	1.168		2.256	1
		1.083	AntG	0.255		1.343	2
		1.083	AntD+G	1.039		2.126	1
		1.083	AntE+D	0.752		1.839	1
	AntL(A+B)	1.134	AntD	1.196		2.335	1
		1.134	AntE	0.709		1.847	1
		1.134	AntF	1.168		2.307	1
		1.134	AntG	0.255		1.394	2
		1.134	AntD+G	1.039		2.177	1
		1.134	AntE+D	0.752		1.890	1
	AntB	1.190	AntD	1.196		2.390	1
		1.190	AntE	0.709		1.903	1
		1.190	AntF	1.168		2.362	1
		1.190	AntG	0.255		1.449	2
		1.190	AntD+G	1.039		2.233	1
		1.190	AntE+D	0.752		1.946	1
	AntC	0.193	AntD	1.196		1.394	2
		0.193	AntE	0.709		0.906	2
		0.193	AntF	1.168		1.366	2
		0.193	AntG	0.255		0.453	2
		0.193	AntD+G	1.039		1.236	2
		0.193	AntE+D	0.752		0.949	2
Front 5mm	AntA	0.284	AntD	0.424	0.007	0.715	2
		0.284	AntE	0.470		0.761	2
		0.284	AntF	0.653		0.944	2
		0.284	AntG	0.955		1.246	2
		0.284	AntD+G	0.786		1.077	2
		0.284	AntE+D	0.752		1.043	2
	AntL(A+B)	0.472	AntD	0.424		0.903	2
		0.472	AntE	0.470		0.949	2
		0.472	AntF	0.653		1.131	2
		0.472	AntG	0.955		1.434	2
		0.472	AntD+G	0.786		1.265	2
		0.472	AntE+D	0.752		1.230	2
	AntB	0.655	AntD	0.424		1.086	2
		0.655	AntE	0.470		1.132	2
		0.655	AntF	0.653		1.315	2
		0.655	AntG	0.955		1.617	1
		0.655	AntD+G	0.786		1.448	2
		0.655	AntE+D	0.752		1.414	2
	AntC	0.056	AntD	0.424		0.488	2
		0.056	AntE	0.470		0.533	2
		0.056	AntF	0.653		0.716	2
		0.056	AntG	0.955		1.019	2
		0.056	AntD+G	0.786		0.849	2
		0.056	AntE+D	0.752		0.815	2

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 SPSSLR 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	GSM850	0.917	56.7	Y	AG1	Ant.D	GSM850	0.906	-56.3	Y
			WCDMA Band 5	1.083	54.8	Y			WCDMA Band 5	1.196	-57.4	Y
			LTE Band 12	0.616	50.3	Y			LTE Band 12	0.787	-61.5	Y
			LTE Band 13	0.832	53.9	Y			LTE Band 13	1.068	-61.2	Y
			LTE Band 26	1.021	58.3	Y			LTE Band 26	0.869	-60.1	Y
			LTE Band 5	1.054	57.1	Y			LTE Band 5	0.922	-52.0	Y
			NR Band n71	0.706	56.3	Y			NR Band n71	0.922	-61.5	Y
			NR Band n5	1.057	60.6	Y			NR Band n5	0.928	-55.0	Y
			NR Band N77 SRS2	0.271		N			Bluetooth Ant.1	0.629	-40.4	Y
		Ant.A+B	Worst configuration	1.083	50.3				WiFi 2.4GHz Ant.1	1.129	-42.5	Y
			GSM850	0.786	50.1	Y			WiFi 5.3GHz Ant.2	0.719	-61.4	Y
			WCDMA Band 5	1.029	42.9	Y			WiFi 5.5GHz Ant.2	0.387		N
			LTE Band 12	0.726	54.6	Y			WiFi 5.8GHz Ant.2	0.381		N
			LTE Band 13	0.939	59.3	Y			WiFi 5.9GHz Ant.2	0.363		N
			LTE Band 26	0.988	52.3	Y			WiFi 6GHz Ant.2	0.424	-58.6	Y
			LTE Band 5	1.041	52.3	Y			Worst configuration	1.196	-40.4	
			NR Band n71	0.627	62.3	Y		Ant.E	NR Band n41 SRS3 (SW SRS4)	0.133		N
			NR Band n5	1.134	46.1	Y			NR Band n77 SRS1	0.709	-57.0	Y
		Ant.B	Worst configuration	1.134	42.9				WiFi 5.3GHz Ant.1	0.334		N
			GSM1900	1.190	58.9	Y			WiFi 5.5GHz Ant.1	0.441	-55.3	Y
			LTE Band 66	0.785	66.0	Y			WiFi 5.8GHz Ant.1	0.601	-57.0	Y
			LTE Band 25	1.029	67.5	Y			WiFi 5.9GHz Ant.1	0.584	-54.8	Y
			LTE Band 41 PC3	0.622	59.5	Y			WiFi 6GHz Ant.1	0.470	-58.3	Y
			LTE Band 41 PC2	0.658	64.2	Y			Worst configuration	0.709	-54.8	
			NR Band n66	1.115	69.0	Y		Ant.F	WCDMA Band 4	0.972	-60.4	Y
			NR Band n25	0.980	63.9	Y			WCDMA Band 2	0.979	-62.5	Y
			NR Band n41 SRS2 (SW SRS1)	0.853	63.0	Y			LTE Band 66	1.003	-63.5	Y
			Worst configuration	1.190	58.9				LTE Band 25	0.991	-62.5	Y
	ER	Ant.F	UWB	0.004		Y			LTE Band 41 PC3	0.603	-64.0	Y
									LTE Band 41 PC2	0.611	-59.0	Y
									NR Band n66	1.168	-60.0	Y
									NR Band n25	1.158	-61.5	Y
									NR Band n41 SRS1 (SW SRS2)	1.165	-61.5	Y
									NR Band n77 SRS3	0.334		N
									Worst configuration	1.168	-59.0	
								Ant.D+G	WiFi 2.4GHz MIMO	1.039	-45.2	Y
									Bluetooth MIMO	0.980	-69.0	Y
									Worst configuration	1.039	-45.2	
								Ant.E+D	WiFi 5.3GHz MIMO	0.752	-56.8	Y
									WiFi 5.5GHz MIMO	0.601	-54.5	Y
									WiFi 5.8GHz MIMO	0.591	-54.8	Y
									WiFi 5.9GHz MIMO	0.624	-55.8	Y
									WiFi 6GHz MIMO	0.371		N
									Worst configuration	0.752	-54.5	

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)
Front -5mm	AG0	Ant.B	GSM1900	0.655	65.7	Y
			LTE Band 66	0.261		N
			LTE Band 25	0.501		N
			LTE Band 41 PC3	0.104		N
			NR Band n66	0.321		N
			NR Band n25	0.486		N
			NR Band n41 SRS2 (SW SRS1)	0.319		N
			Worst configuration	0.655	65.7	

Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)
AG1	Ant.G	Bluetooth Ant.2	0.900		N
		WiFi 2.4GHz Ant.2	0.955	-65.0	Y
		Worst configuration	0.955	-65.0	

Positions	Antenna Group	Antenna	Bands	Measured SAR (W/kg)	SPLSR (Y/N)
Front	ER	Ant.F	UWB	0.007	Y

AG0 & AG1 / ER Sum-SPLSR Calculation Results

Position	AG0	AG1	Closest distance (mm)		UWB	AG0 + AG1 + ER (W/kg)	SPLSR Results
Rear 5mm	Ant.A	Ant.D	90.7	mm	0.004	2.284	0.04
	Ant.A+B		83.3	mm	0.004	2.335	0.04
	Ant.B		99.3	mm	0.004	2.390	0.04
	Ant.A	Ant.E	105.1	mm	0.004	1.796	0.02
	Ant.A+B		97.7	mm	0.004	1.847	0.03
	Ant.B		113.7	mm	0.004	1.903	0.02
	Ant.A	Ant.F	109.3	mm	0.004	2.256	0.03
	Ant.A+B		101.9	mm	0.004	2.307	0.03
	Ant.B		117.9	mm	0.004	2.362	0.03
	Ant.A	Ant.D+G	95.5	mm	0.004	2.126	0.03
	Ant.A+B		88.1	mm	0.004	2.177	0.04
	Ant.B		104.1	mm	0.004	2.233	0.03
	Ant.A	Ant.E+D	104.8	mm	0.004	1.839	0.02
	Ant.A+B		97.4	mm	0.004	1.890	0.03
	Ant.B		113.4	mm	0.004	1.946	0.02

Position	AG0	AG1	Closest distance (mm)		UWB	AG0 + AG1 + ER (W/kg)	SPLSR Results
Front	Ant.B	Ant.G	130.7	mm	0.007	1.617	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		AG1				AG1				AG1				AG1			
Antenna		Ant.D				Ant.D				Ant.D				Ant.D			
RF exposure	Test positions	WIFI 5.3GHz Ant.2				WIFI 5.5GHz Ant.2				WIFI 5.9GHz Ant.2				6GHz WLAN Ant.2			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.566	0.566	0.719	0.449	0.305	0.305	0.387	0.242	0.286	0.286	0.363	0.227				0.000
	Front	0.054	0.054	0.069	0.043	0.070	0.070	0.089	0.056	0.286	0.286	0.363	0.227				0.000
	Rear													0.413	0.413	0.525	0.131
	Front													0.413	0.413	0.525	0.131
	Top	0.380	0.380	0.483	0.121	0.444	0.444	0.564	0.141	0.361	0.361	0.458	0.115	0.413	0.413	0.525	0.131
	Left																
	Bottom																
	Right	0.380	0.380	0.483	0.121	0.444	0.444	0.564	0.141	0.361	0.361	0.458	0.115	0.413	0.413	0.525	0.131

Antenna Group		AG1				AG1				AG1				AG1			
Antenna		Ant.E				Ant.E				Ant.E				Ant.E			
RF exposure	Test positions	WIFI 5.3GHz Ant.1				WIFI 5.5GHz Ant.1				WIFI 5.9GHz Ant.1				6GHz WLAN Ant.1			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.263	0.263	0.334	0.209	0.347	0.347	0.441	0.275	0.460	0.460	0.584	0.365				
	Front	0.263	0.263	0.334	0.209	0.347	0.347	0.441	0.275	0.200	0.200	0.254	0.159				
	Rear													0.405	0.405	0.514	0.129
	Front													0.405	0.405	0.514	0.129
	Top	0.957	0.957	1.215	0.304	0.745	0.745	0.946	0.237	0.651	0.651	0.827	0.207	0.405	0.405	0.514	0.129
	Left	0.957	0.957	1.215	0.304	0.745	0.745	0.946	0.237	0.651	0.651	0.827	0.207	0.405	0.405	0.514	0.129
	Bottom																
	Right																

Antenna Group		AG1			
Antenna		Ant.G			
RF exposure	Test positions	Bluetooth SISO2			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.080	0.080	0.102	0.064
	Front	0.282	0.282	0.358	0.224
Product Specific 10-g Reported SAR	Rear				
	Front				
	Top	0.655	0.655	0.832	0.208
	Left				
	Bottom				
	Right				

Antenna Group		AG1			
Antenna		Ant.D+G			
RF exposure	Test positions	Bluetooth MIMO			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.071	0.071	0.090	0.056
	Front	0.021	0.021	0.027	0.017
Product Specific 10-g Reported SAR	Rear				
	Front				
	Top	0.788	0.788	1.001	0.250
	Left		0.000	0.000	0.000
	Bottom				
	Right	1.097	1.097	1.393	0.348

Antenna Group		AG1				AG1				AG1				AG1			
Antenna		Ant.D+E				Ant.D+E				Ant.D+E				Ant.D+E			
RF exposure	Test positions	WIFI 5.3GHz MIMO				WIFI 5.5GHz MIMO				WIFI 5.9GHz MIMO				6GHz WLAN MIMO			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.592	0.592	0.752	0.470	0.473	0.473	0.601	0.375	0.491	0.491	0.624	0.390				
	Front	0.592	0.592	0.752	0.470	0.473	0.473	0.601	0.375	0.112	0.112	0.142	0.089				
Product Specific 10-g Reported SAR	Rear													0.452	0.452	0.574	0.144
	Front													0.452	0.452	0.574	0.144
	Top	0.607	0.607	0.771	0.193	0.985	0.985	1.251	0.313	1.034	1.034	1.313	0.328	0.452	0.452	0.574	0.144
	Left	0.607	0.607	0.771	0.193	0.985	0.985	1.251	0.313	1.034	1.034	1.313	0.328	0.452	0.452	0.574	0.144
	Bottom													0.000			
	Right	0.607	0.607	0.771	0.193	0.985	0.985	1.251	0.313	0.668	0.668	0.848	0.212	0.452	0.452	0.574	0.144

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+G	Ant.E+D
Bodyworn 1g's ER	Rear	0.449	0.365	0.064	0.056	0.470
	Front	0.227	0.275	0.224	0.017	0.470
Product Specific 10-g's ER	Top	0.141	0.304	0.208	0.250	0.328
	Left		0.304	0.000	0.000	0.328
	Bottom					
	Right	0.141			0.348	0.313

Final Summation**AG1 and ER summation results**

Antenna Group	AG1	ER		AG1+ER	FCC TER Limit	Converted to 10-g	FCC SAR Limit
Antenna	All	NFC	UWB				
RF exposure	Highest Adjusted SAR	Highest Measured SAR	Highest Measured SAR				
Product Specific 10-g	0.470	0.004	0.001	0.474	1.0	1.897	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	AG0
Antenna		Ant.A	Ant.(A+B)	Ant.B	Ant.C	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Head	Left Touch	0.309	0.919	0.908	0.205	0.919
	Left Tilt	0.309	0.351	0.844	0.205	0.844
	Right Touch	0.309	0.291	0.294	0.205	0.309
	Right Tilt	0.309	0.290	0.142	0.187	0.309

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	0.966	0.503	1.514	1.562	1.087	0.618	1.562
	Left Tilt	0.966	0.503	1.514	1.294	1.230	0.618	1.514
	Right Touch	0.879	0.643	0.838	0.972	1.255	0.618	1.255
	Right Tilt	0.672	0.601	0.790	0.972	1.255	0.618	1.255

ER worst configuration

Antenna Group		ER	ER
Antenna		UWB	Highest Measured SAR
RF exposure	Test position	Mesaured SAR	
Head	Left Touch	0.001	0.001
	Left Tilt	0.001	0.001
	Right Touch	0.001	0.001
	Right Tilt	0.001	0.001

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	0.919	1.562	0.001	2.482	1.6
	Left Tilt	0.844	1.514	0.001	2.359	
	Right Touch	0.309	1.255	0.001	1.564	
	Right Tilt	0.309	1.255	0.001	1.564	

Note(s):

Additional evaluation is not required due to below SAR Limit

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.
	Antenna	SAR (W/kg)	Antenna	SAR (W/kg)			
Left Touch	AntA	0.309	AntD	0.966	0.001	1.276	2
		0.309	AntE	0.503		0.813	2
		0.309	AntF	1.514		1.824	1
		0.309	AntG	1.562		1.872	1
		0.309	AntD+G	1.087		1.397	2
		0.309	AntE+D	0.618		0.928	2
	AntA+B	0.919	AntD	0.966		1.886	1
		0.919	AntE	0.503		1.423	2
		0.919	AntF	1.514		2.434	1
		0.919	AntG	1.562		2.482	1
		0.919	AntD+G	1.087		2.007	1
		0.919	AntE+D	0.618		1.538	2
	Ant B	0.908	AntD	0.966		1.876	1
		0.908	AntE	0.503		1.412	2
		0.908	AntF	1.514		2.423	1
		0.908	AntG	1.562		2.471	1
		0.908	AntD+G	1.087		1.997	1
		0.908	AntE+D	0.618		1.528	2
	AntC	0.205	AntD	0.966		1.172	2
		0.205	AntE	0.503		0.709	2
		0.205	AntF	1.514		1.720	1
		0.205	AntG	1.562		1.768	1
		0.205	AntD+G	1.087		1.293	2
		0.205	AntE+D	0.618		0.824	2
Left Tilt	AntA	0.309	AntD	0.966	0.001	1.276	2
		0.309	AntE	0.503		0.813	2
		0.309	AntF	1.514		1.824	1
		0.309	AntG	1.294		1.604	1
		0.309	AntD+G	1.230		1.540	2
		0.309	AntE+D	0.618		0.928	2
	AntA+B	0.351	AntD	0.966		1.319	2
		0.351	AntE	0.503		0.855	2
		0.351	AntF	1.514		1.866	1
		0.351	AntG	1.294		1.646	1
		0.351	AntD+G	1.230		1.582	2
		0.351	AntE+D	0.618		0.971	2
	Ant B	0.844	AntD	0.966		1.812	1
		0.844	AntE	0.503		1.348	2
		0.844	AntF	1.514		2.359	1
		0.844	AntG	1.294		2.139	1
		0.844	AntD+G	1.230		2.076	1
		0.844	AntE+D	0.618		1.464	2
	AntC	0.205	AntD	0.966		1.172	2
		0.205	AntE	0.503		0.709	2
		0.205	AntF	1.514		1.720	1
		0.205	AntG	1.294		1.500	2
		0.205	AntD+G	1.230		1.436	2
		0.205	AntE+D	0.618		0.824	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)

Test Position	AG0		AG1 (Ant.D)		UWB	AG0+AG1+ER (SAR (W/kg))	Note.
	Antenna	SAR (W/kg)	Bands	SAR (W/kg)			
Left Touch	AntA+B	0.919	GSM850	0.672	0.001	1.592	2
		0.919	WCDMA B5	0.490		1.410	2
		0.919	LTE B12	0.608		1.528	2
		0.919	LTE B13	0.490		1.410	2
		0.919	LTE B26	0.619		1.539	2
		0.919	LTE B5	0.641		1.561	2
		0.919	NR Bn71	0.491		1.411	2
		0.919	NR Bn5	0.649		1.569	2
		0.919	2.4G Ant1	0.070		0.990	2
		0.919	BT Ant1	0.966		1.886	1
		0.919	5.2G Ant2	0.137		1.057	2
		0.919	5.5G Ant2	0.093		1.013	2
	AntB	0.919	5.8G Ant2	0.180		1.100	2
		0.919	5.9G Ant2	0.136		1.056	2
		0.919	6G Ant2	0.672		1.592	2
		0.908	GSM850	0.672		1.581	2
		0.908	WCDMA B5	0.490		1.399	2
		0.908	LTE B12	0.608		1.517	2
		0.908	LTE B13	0.490		1.399	2
		0.908	LTE B26	0.619		1.528	2
		0.908	LTE B5	0.641		1.550	2
		0.908	NR Bn71	0.491		1.400	2
		0.908	NR Bn5	0.649		1.558	2
Left Tilt	AntB	0.844	GSM850	0.283	0.001	1.128	2
		0.844	WCDMA B5	0.105		0.950	2
		0.844	LTE B12	0.334		1.179	2
		0.844	LTE B13	0.264		1.109	2
		0.844	LTE B26	0.284		1.129	2
		0.844	LTE B5	0.197		1.042	2
		0.844	NR Bn71	0.346		1.191	2
		0.844	NR Bn5	0.287		1.132	2
		0.844	2.4G Ant1	0.070		0.915	2
		0.844	BT Ant1	0.966		1.811	1
		0.844	5.2G Ant2	0.137		0.982	2
		0.844	5.5G Ant2	0.093		0.938	2
	AntB	0.844	5.8G Ant2	0.180		1.025	2
		0.844	5.9G Ant2	0.136		0.981	2
		0.844	6G Ant2	0.370		1.215	2

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) : Sum SPLSR calculation results

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	WCDMA B2	1.307	-38.3	Y	
			WCDMA B5	0.907	-72.2	Y			WCDMA B4	1.289	-11.3	Y	
			LTE B12(17)	0.904	-70.5	Y			LTE B66(4)	0.232		N	
			LTE B13	0.827	-74.8	Y			LTE B25(2)	0.092		N	
			LTE B26	0.746	-45.0	Y			LTE B41	1.514	-13.4	Y	
			LTE B5	0.782	-69.6	Y			NR Bn66(4)	0.225		N	
			NR Bn71	0.903	-71.9	Y			NR Bn25(2)	0.089		N	
			NR Bn5	0.900	-73.4	Y			NR Bn41 SRS1	1.154	-14.5	Y	
			Worst configuration	0.919	-45.0				NR Bn77 SRS3	0.000		N	
		Ant.A	NR Bn77 SRS2	0.309	-111.3	Y		Ant.G	2.4G Ant.2	1.562	9.4	Y	
			Worst configuration	0.309	-111.3				BT Ant.2	0.978	2.1	Y	
		Ant.B	GSM1900	0.648	-84.7	Y			Worst configuration	1.562	2.1		
			LTE B66(4)	0.807	-76.4	Y		Ant.D+G		2.4G MIMO	1.087	8.4	Y
			LTE B25(2)	0.826	-73.8	Y				BT MIMO	0.743	3.7	Y
			LTE B41	0.535	-79.0	Y			Worst configuration	1.087	3.7		
			NR Bn66(4)	0.908	-76.4	Y		Ant.D		BT Ant.1	0.966	-20.8	Y
			NR Bn25(2)	0.834	-74.1	Y				Worst configuration	0.955	-20.8	
			NR Bn41 SRS2	0.844	-75.0	Y							
			Worst configuration	0.908	-73.8								
		Ant.C	NR Bn41 SRS4	0.205	-83.7	Y	Antenna Group	Antenna	Bands	Measured SAR (W/kg)	SPLSR (Y/N)		
			NR Bn77 SRS4	0.187	-110.2	Y		ER	Ant.F	UWB	0.001	Y	
			Worst configuration	0.205	-83.7								

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	WCDMA B2	0.118		N	
			WCDMA B5	0.213	-22.3	Y			WCDMA B4	0.436		N	
			LTE B12(17)	0.272	-25.5	Y			LTE B66(4)	0.393		N	
			LTE B13	0.272	-30.0	Y			LTE B25(2)	0.130		N	
			LTE B26	0.258	-55.0	Y			LTE B41(38)	1.514	-12.5	Y	
			LTE B5	0.302	-55.0	Y			NR Bn66(4)	0.277		N	
			NR Bn71	0.351	-30.0	Y			NR Bn25(2)	0.156		N	
			NR Bn5	0.211	-55.0	Y			NR Bn41 SRS1	1.154	-14.5	Y	
			Worst configuration	0.351	-3.8				NR Bn77 SRS3	0.006		N	
		Ant.A	NR Bn77 SRS2	0.309	-79.4	Y		Ant.G	2.4G Ant.2	1.294	5.8	Y	
			Worst configuration	0.309	-79.4				BT Ant.2	1.153	2.1	Y	
		Ant.B	GSM1900	0.052		N			Worst configuration	1.294	2.1		
			LTE B66(4)	0.178	-4.5	Y		Ant.D+G		2.4G MIMO	1.230	4.3	Y
			LTE B25(2)	0.126	-3.0	Y				BT MIMO	0.833	5.6	Y
			LTE B41	0.535	-86.5	Y			Worst configuration	1.230	4.3		
			NR Bn66(4)	0.186	-5.9	Y		Ant.D		BT Ant.1	0.966	-20.8	Y
			NR Bn25(2)	0.144	-16.2	Y				Worst configuration	0.955		
			NR Bn41 SRS2	0.844	-81.8	Y							
			Worst configuration	0.844	-3.0								
		Ant.C	NR Bn41 SRS4	0.205	7.7	Y	Antenna Group	Antenna	Bands	Measured SAR (W/kg)	SPLSR (Y/N)		
			NR Bn77 SRS4	0.187	-109.4	Y		ER	Ant.F	UWB	0.001	Y	
			Worst configuration	0.205	7.7								

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	Ant.F	0.001	73.0	mm	1.824	0.03
	Ant.A+B		0.001	6.7	mm	2.434	0.57
	Ant.B		0.001	35.5	mm	2.423	0.11
	Ant.C		0.001	45.4	mm	1.720	0.05
	Ant.A	Ant.G	0.001	113.4	mm	1.872	0.02
	Ant.A+B		0.001	47.1	mm	2.482	0.08
	Ant.B		0.001	75.9	mm	2.471	0.05
	Ant.C		0.001	85.8	mm	1.768	0.03
	Ant.A+B	Ant.D+G	0.001	48.7	mm	2.007	0.06
	Ant.B		0.001	77.5	mm	1.997	0.04
	Ant.A+B	Ant.D	0.001	24.2	mm	1.886	0.11
	Ant.B		0.001	53.0	mm	1.876	0.05

Position	AG0	AG1	ER (W/kg)	Closest distance (mm)		AG0 + (AG1+ER) (W/kg)	SPLSR Results
Left Tilt	Ant.A	Ant.F	0.001	64.9	mm	1.824	0.04
	Ant.A+B		0.001	10.7	mm	1.866	0.24
	Ant.B		0.001	11.5	mm	2.359	0.32
	Ant.C		0.001	22.2	mm	1.720	0.10
	Ant.A	Ant.G	0.001	80.1	mm	1.604	0.03
	Ant.A+B		0.001	4.5	mm	1.646	0.47
	Ant.B		0.001	3.7	mm	2.139	0.85
	Ant.B	Ant.D+G	0.001	7.3	mm	2.076	0.41
	Ant.B	Ant.D	0.001	17.8	mm	1.812	0.14

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		
			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	NR Band n77 SRS2	91.9	10.7	13.0
	Ant.A+B	GSM 850	73.0	6.5	8.2
		WCDMA Band V	72.6	6.8	8.8
		LTE Band 12	71.0	8.3	11.5
		LTE Band 13	75.3	9.1	12.4
		LTE Band 26	45.3	5.7	8.6
		LTE Band 5	69.8	4.7	5.2
		NR Band n71	72.4	8.3	11.4
		NR Band n5	73.9	8.1	10.9
	Ant.B	GSM 1900	84.9	6.1	7.1
		LTE Band 66 (4)	76.7	6.5	8.0
		LTE Band 25 (2)	74.0	5.8	7.0
		LTE Band 41 (38)	79.2	5.6	6.5
		NR Band n25 (2)	74.3	6	7.3
		NR Band n66	76.7	6.5	8.0
	Ant.C	NR Band n41 SRS2	75.3	6.5	8.1
		NR Bn41 SRS4	84.0	7.3	8.9
AG1	Ant.F	NR Band n77 SRS4	112.2	21.1	22.9
		WCDMA Band 4	12.3	4.9	13.0
		WCDMA Band 2	39.1	7.8	16.0
		LTE Band 41	24.5	20.5	87.4
	Ant.G	NR Bn41 SRS1	24.9	20.3	85.0
		2.4GHz WLAN Ant.2	10.9	5.6	22.2
	Ant.D+G	Bluetooth Ant.2		6.1	6.1
		2.4GHz WLAN MIMO		6.5	6.5
	Ant.D	Bluetooth MIMO	5.0	4.8	23.6
		Bluetooth Ant.1	24.9	13.8	52.7

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)		Plot No	Adjusted SAR	Worst SAR (W/kg)	X-axis
											Tune-up Limit	Meas.	Meas.	Scaled				
NR Band n77 SRS 2	Ant.A	Head-Flat	SRS CW	2	4/5	Rear	662000	3930.00			13.0	11.69	0.145	0.196		0.309	0.309	64.0
LTE Band 12	Ant.A+B	Head-Flat	OFDM	2	4/5	Rear	23095	707.5	1	25	25.2	24.52	0.933	1.091	1	0.904	1.091	54.0
LTE Band 13																		
NR Band n71																		
GSM 850																		
WCDMA Band V	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 26																		
LTE Band 5																		
NR Band n5																		
LTE Band 66 (4)	Ant.B	Head-Flat	DFT-s OFDM QPSK	2	4/5	Rear	132322	1745.0	1	0	16.0	15.23	0.558	0.666	2	0.908	0.908	61.5
NR Band n66																		
GSM 1900																		
LTE Band 25 (2)																		
NR Band n25 (2)	Ant.B	Head-Flat	GPRS 4 slots	2	4/5	Rear	810	1909.8			20.5	19.22	0.628	0.843		0.834	0.843	68.5
NR Band n41 SRS 2																		
LTE Band 41																		
NR Band n41 SRS 4																		
NR Band n77 SRS 4	Ant.C	Head-Flat	SRS CW	2	4/5	Rear	518598	2592.99			13.0	12.54	0.101	0.112		0.205	0.205	65.5
NR Band n77 SRS 4	Ant.C	Head-Flat	SRS CW	2	4/5	Rear	633334	3500.01			13.0	11.96	0.094	0.119		0.187	0.187	65.5
WCDMA Band IV	Ant.F	Head-Flat	Rel 99 RMC	2	4/5	Rear	1312	1712.4			16.5	15.49	0.647	0.816		1.289	1.289	-59.2
WCDMA Band II	Ant.F	Head-Flat	Rel 99 RMC	2	4/5	Rear	9262	1852.4			16.5	15.76	0.512	0.607		1.307	1.307	-60.0
LTE Band 41	Ant.F	Head-Flat	QPSK	2	4/5	Rear	40620	2593.0	50	0	17.0	15.74	0.624	0.834		1.514	1.514	-60.5
NR Band n41 SRS1	Ant.F	Head-Flat	QPSK	2	4/5	Rear	40620	2593.0	50	0	17.0	15.74	0.624	0.834		1.514	1.514	-60.5
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%	14.0	12.53	0.604	0.949	3	1.087	1.087	-67.0
Bluetooth MIMO																		
Bluetooth Ant.1	Ant.D	Head-Flat	BLE	2	4/5	Rear	17	2440.0	87%	85.03%	13.5	11.66	0.200	0.313	4	0.966	0.966	-59.0

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
Flat Head	Ant.A+B	Ant.F	0.001	113.2	mm	2.606	0.04
	Ant.B		0.001	120.7	mm	2.423	0.03
	Ant.C		0.001	124.7	mm	1.720	0.02
	Ant.A+B	Ant.G	0.001	114.6	mm	2.654	0.04
	Ant.B		0.001	122.1	mm	2.471	0.03
	Ant.A+B	Ant.D+G	0.001	121.0	mm	2.179	0.03
	Ant.B		0.001	128.5	mm	1.996	0.02
	Ant.A+B	Ant.D	0.001	113.0	mm	2.058	0.03
	Ant.B		0.001	120.5	mm	1.875	0.02

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 Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Body-worn & Hotspot	Rear	0.309	1.189	1.223	0.205	1.223
	Front	0.144	1.024	0.816	0.107	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	0.115	0.283	0.595	0.100	0.595
	Right	0.050	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.E+D	Highest Adjusted SAR
RF exposure	Test position	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	Adjusted SAR	
Body-worn & Hotspot	Rear	1.390	1.240	1.370	1.313	0.980	0.834	1.390
	Front	0.927	0.648	1.072	0.762	0.970	0.612	1.072
	Top	1.046	0.555	0.730	1.313	0.543	0.834	1.313
	Left	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Right	1.046	0.000	0.000	0.000	0.600	0.834	1.046

ER worst configuration

Antenna Group		ER	ER
Antenna		UWB	Highest Measured SAR
RF exposure	Test position	Measured SAR	
Body-worn & Hotspot	Rear	0.001	0.001
	Front	0.000	0.000
	Top	0.000	0.000
	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	1.223	1.390	0.001	2.614	1.6
	Front	1.024	1.072	0.000	2.096	
	Top	0.000	1.313	0.000	1.313	
	Left	0.000	0.000	0.000	0.000	
	Bottom	0.595	0.000	0.000	0.595	
	Right	0.540	1.046	0.000	1.586	

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	0.309	AntD	1.390	0.001	1.701	1
		0.309	AntE	1.240		1.550	2
		0.309	AntF	1.370		1.680	1
		0.309	AntG	1.313		1.623	1
		0.309	AntD+G	0.980		1.290	2
		0.309	AntE+D	0.834		1.144	2
	AntL(A+B)	1.189	AntD	1.390		2.580	1
		1.189	AntE	1.240		2.429	1
		1.189	AntF	1.370		2.559	1
		1.189	AntG	1.313		2.503	1
		1.189	AntD+G	0.980		2.169	1
		1.189	AntE+D	0.834		2.024	1
	AntB	1.223	AntD	1.390		2.614	1
		1.223	AntE	1.240		2.464	1
		1.223	AntF	1.370		2.594	1
		1.223	AntG	1.313		2.537	1
		1.223	AntD+G	0.980		2.204	1
		1.223	AntE+D	0.834		2.058	1
	AntC	0.205	AntD	1.390		1.596	1
		0.205	AntE	1.240		1.445	2
		0.205	AntF	1.370		1.575	2
		0.205	AntG	1.313		1.519	2
		0.205	AntD+G	0.980		1.185	2
		0.205	AntE+D	0.834		1.040	2
Front 5mm	AntA	0.144	AntD	0.927	0.000	1.071	2
		0.144	AntE	0.648		0.793	2
		0.144	AntF	1.072		1.216	2
		0.144	AntG	0.762		0.906	2
		0.144	AntD+G	0.970		1.115	2
		0.144	AntE+D	0.612		0.756	2
	AntL(A+B)	1.024	AntD	0.927		1.951	1
		1.024	AntE	0.648		1.673	1
		1.024	AntF	1.072		2.096	1
		1.024	AntG	0.762		1.786	1
		1.024	AntD+G	0.970		1.995	1
		1.024	AntE+D	0.612		1.637	1
	AntB	0.816	AntD	0.927		1.742	1
		0.816	AntE	0.648		1.464	2
		0.816	AntF	1.072		1.888	1
		0.816	AntG	0.762		1.578	2
		0.816	AntD+G	0.970		1.786	1
		0.816	AntE+D	0.612		1.428	2
	AntC	0.107	AntD	0.927		1.034	2
		0.107	AntE	0.648		0.756	2
		0.107	AntF	1.072		1.179	2
		0.107	AntG	0.762		0.869	2
		0.107	AntD+G	0.970		1.078	2
		0.107	AntE+D	0.612		0.719	2

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)
Rear -5mm	AG0	Ant.A	NR Band n77 SRS2	0.309	64.2	Y
			Worst configuration	0.309	64.2	
		Ant.A+B	GSM850	0.833	51.6	Y
			WCDMA Band 5	1.189	51.6	Y
			LTE Band 12	0.937	59.9	Y
			LTE Band 13	0.893	50.4	Y
			LTE Band 26	0.982	50.4	Y
			LTE Band 5	1.069	50.4	Y
			NR Band n71	0.730	54.7	Y
			NR Band n5	1.043	48.4	Y
			Worst configuration	1.189	48.4	
		Ant.B	GSM1900	1.223	60.1	Y
			LTE Band 66	0.807	63.5	Y
			LTE Band 25	0.826	65.5	Y
			LTE Band 41 PC3	0.687	66.0	Y
			LTE Band 41 PC2	0.512	61.8	Y
			NR Band n66	0.908	62.5	Y
			NR Band n25	0.834	62.0	Y
			NR Band n41 SRS2 (SW SRS1)	0.844	59.6	Y
			Worst configuration	1.223	59.6	
		Ant.C	NR Band n41 SRS4 (SW SRS3)	0.205	63.2	Y
			NR Band n77 SRS4	0.187		N
			Worst configuration	0.205	63.2	

Positions	Antenna Group	Antenna	Bands	Measured SAR (W/kg)	SPLSR (Y/N)
Rear	ER	Ant.F	UWB	0.001	Y

Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)
AG1	Ant.D	GSM850	0.983	-54.3	Y
		WCDMA Band 5	1.390	-58.8	Y
		LTE Band 12	0.777	-62.4	Y
		LTE Band 13	1.224	-55.5	Y
		LTE Band 26	1.139	-50.5	Y
		LTE Band 5	1.223	-52.0	Y
		NR Band n71	0.804	-51.0	Y
		NR Band n5	1.013	-53.8	Y
		Bluetooth Ant.1	0.753	-66.0	Y
		WiFi 2.4GHz Ant.1	1.046	-59.6	Y
		WiFi 5.3GHz Ant.2	0.381	-59.6	Y
		WiFi 5.5GHz Ant.2	0.471	-58.0	Y
		WiFi 5.8GHz Ant.2	0.422	-58.2	Y
		WiFi 5.9GHz Ant.2	0.396	-58.0	Y
		WiFi 6GHz Ant.2	0.405	-51.9	Y
		Worst configuration	1.390	-50.5	
	Ant.E	NR Band n41 SRS3 (SW SRS4)	0.141		N
		NR Band n77 SRS1	1.240	-68.5	Y
		WiFi 5.3GHz Ant.1	0.390	-58.9	Y
		WiFi 5.5GHz Ant.1	0.656	-57.7	Y
		WiFi 5.8GHz Ant.1	0.526	-61.0	Y
		WiFi 5.9GHz Ant.1	0.617	-55.7	Y
		WiFi 6GHz Ant.1	0.490	-82.5	Y
		Worst configuration	1.240	-55.7	
	Ant.F	WCDMA Band 4	0.819	-63.1	Y
		WCDMA Band 2	0.978	-62.5	Y
		LTE Band 66	1.138	-65.1	Y
		LTE Band 25	0.942	-67.2	Y
		LTE Band 41 PC3	1.177	-69.1	Y
		LTE Band 41 PC2	0.812	-66.8	Y
		NR Band n66	1.370	-59.0	Y
		NR Band n25	1.059	-63.5	Y
		NR Band n41 SRS1 (SW SRS2)	1.250	-64.0	Y
		NR Band n77 SRS3	1.267	-65.0	Y
		Worst configuration	1.370	-59.0	
	Ant.G	WiFi 2.4GHz Ant.2	1.313	-67.1	Y
		Bluetooth Ant.2	0.804	-63.5	Y
		Worst configuration	1.313	-63.5	
	Ant.D+G	WiFi 2.4GHz MIMO	0.895	-62.0	Y
		Bluetooth MIMO	0.980	-65.0	Y
		Worst configuration	0.980	-62.0	
	Ant.E+D	WiFi 5.3GHz MIMO	0.834	-61.6	Y
		WiFi 5.5GHz MIMO	0.640	-58.8	Y
		WiFi 5.8GHz MIMO	0.610	-59.8	Y
		WiFi 5.9GHz MIMO	0.612	-56.7	Y
		WiFi 6GHz MIMO	0.342		N
		Worst configuration	0.834	-56.7	

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)
Front -5mm	AG0	Ant.A+B	GSM850	0.703	50.8	Y
			WCDMA Band 5	1.000	51.6	Y
			LTE Band 12	0.750	56.8	Y
			LTE Band 13	0.836	53.5	Y
			LTE Band 26	0.962	51.8	Y
			LTE Band 5	1.024	51.8	Y
			NR Band n71	0.619	61.4	Y
			NR Band n5	0.850	52.8	Y
			Worst configuration	1.024	50.8	
		Ant.B	GSM1900	0.816	58.0	Y
			LTE Band 66	0.641	63.1	Y
			LTE Band 25	0.453		N
			LTE Band 41 PC3	0.328		N
			NR Band n66	0.541	67.0	Y
			NR Band n25	0.488		N
			NR Band n41 SRS2 (SW SRS1)	0.455		N
			Worst configuration	0.816	58.0	

Positions	Antenna Group	Antenna	Bands	Measured SAR (W/kg)	SPLSR (Y/N)
Front	ER	Ant.F	UWB	0.000	Y

Antenna Group	Antenna	Bands	Adjusted SAR (W/kg)	Y-axis (mm)	SPLSR (Y/N)
AG1	Ant.D	GSM850	0.610	-62.0	Y
		WCDMA Band 5	0.760	-64.6	Y
		LTE Band 12	0.600	-61.2	Y
		LTE Band 13	0.889	-61.5	Y
		LTE Band 26	0.873	-59.7	Y
		LTE Band 5	0.927	-58.8	Y
		NR Band n71	0.506		N
		NR Band n5	0.729	-59.0	Y
		Bluetooth Ant.1	0.522	-65.0	N
		WiFi 2.4GHz Ant.1	0.603	-51.6	Y
		WiFi 5.3GHz Ant.2	0.381		N
		WiFi 5.5GHz Ant.2	0.471		N
		WiFi 5.8GHz Ant.2	0.422		N
		WiFi 5.9GHz Ant.2	0.396		N
		WiFi 6GHz Ant.2	0.405		N
		Worst configuration	0.927	-51.6	
		Ant.E	NR Band n41 SRS3 (SW SRS4)	0.075	
	NR Band n77 SRS1		0.365		N
	WiFi 5.3GHz Ant.1		0.390		N
	WiFi 5.5GHz Ant.1		0.648	-58.5	Y
	WiFi 5.8GHz Ant.1		0.555		N
	WiFi 5.9GHz Ant.1		0.418		N
	WiFi 6GHz Ant.1		0.490		N
	Worst configuration	0.648	-58.5		
	Ant.F	WCDMA Band 4	0.553		N
		WCDMA Band 2	0.479		N
		LTE Band 66	0.910	-70.6	Y
		LTE Band 25	0.390		N
		LTE Band 41 PC3	0.865	-67.0	Y
		NR Band n66	0.725	-62.0	Y
		NR Band n25	0.466		N
		NR Band n41 SRS1 (SW SRS2)	1.072	-62.1	Y
		NR Band n77 SRS3	0.227		N
	Worst configuration	1.072	-62.0		
	Ant.G	Bluetooth Ant.2	0.714	-66.0	Y
		WiFi 2.4GHz Ant.2	0.762	-66.1	Y
		Worst configuration	0.762	-66.0	
	Ant.D+G	Bluetooth MIMO	0.970	-65.0	Y
		WiFi 2.4GHz MIMO	0.753	-63.0	Y
		Worst configuration	0.970	-63.0	
	Ant.E+D	WiFi 5.3GHz MIMO	0.435		N
		WiFi 5.5GHz MIMO	0.529		N
		WiFi 5.8GHz MIMO	0.610	-57.0	Y
		WiFi 5.9GHz MIMO	0.612	-56.7	Y
		WiFi 6GHz MIMO	0.561		N
		Worst configuration	0.612	-56.7	

AG0 & AG1 / ER Sum-SPLSR Calculation Results

Position	AG0	AG1	Closest distance (mm)		UWB	AG0 + AG1 + ER (W/kg)	SPLSR Results
Rear 5mm	Ant.A	Ant.D	98.9	mm	0.001	1.701	0.02
	Ant.A+B		98.9	mm	0.001	2.580	0.04
	Ant.B		98.9	mm	0.001	2.614	0.04
	Ant.C		98.9	mm	0.001	2.614	0.04
	Ant.A	Ant.E	98.9	mm	0.001	1.550	0.02
	Ant.A+B		98.9	mm	0.001	2.429	0.04
	Ant.B		98.9	mm	0.001	2.464	0.04
	Ant.C		98.9	mm	0.001	2.464	0.04
	Ant.A	Ant.F	98.9	mm	0.001	1.680	0.02
	Ant.A+B		98.9	mm	0.001	2.559	0.04
	Ant.B		98.9	mm	0.001	2.594	0.04
	Ant.C		98.9	mm	0.001	2.594	0.04
	Ant.A	Ant.G	98.9	mm	0.001	1.290	0.01
	Ant.A+B		98.9	mm	0.001	2.169	0.03
	Ant.B		98.9	mm	0.001	2.204	0.03
	Ant.C		98.9	mm	0.001	2.204	0.03
	Ant.A	Ant.D+G	98.9	mm	0.001	1.290	0.01
	Ant.A+B		98.9	mm	0.001	2.169	0.03
	Ant.B		98.9	mm	0.001	2.204	0.03
	Ant.C		98.9	mm	0.001	2.204	0.03
	Ant.A	Ant.E+D	98.9	mm	0.001	1.144	0.01
	Ant.A+B		98.9	mm	0.001	2.024	0.03
	Ant.B		98.9	mm	0.001	2.058	0.03
	Ant.C		98.9	mm	0.001	2.058	0.03

Position	AG0	AG1	Closest distance (mm)		UWB	AG0 + AG1 + ER (W/kg)	SPLSR Results
Front 5mm	Ant.A+B	Ant.D	102.4	mm	0	1.951	0.03
	Ant.B		102.4	mm	0	1.742	0.02
	Ant.A+B	Ant.E	102.4	mm	0	1.673	0.02
	Ant.B		102.4	mm	0	1.464	0.02
	Ant.A+B	Ant.F	102.4	mm	0	2.096	0.03
	Ant.B		102.4	mm	0	1.888	0.03
	Ant.A+B	Ant.G	102.4	mm	0	1.786	0.02
	Ant.B		102.4	mm	0	1.578	0.02
	Ant.A+B	Ant.D+G	102.4	mm	0	1.995	0.03
	Ant.B		102.4	mm	0	1.786	0.02
	Ant.A+B	Ant.E+D	102.4	mm	0	1.637	0.02
	Ant.B		102.4	mm	0	1.428	0.02

Note(s):

- For AG1+ER(UWB) combinations in Rear and Front, Y-axis location was chosen to be the closet distance from each antenna.
- 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)

Antenna Group		AG1				AG1				AG1				AG1			
Antenna		Ant.D				Ant.D				Ant.D				Ant.D			
RF exposure	Test positions	WIFI 5.3GHz Ant.2				WIFI 5.5GHz Ant.2				WIFI 5.9GHz Ant.2				6GHz WLAN Ant.2			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.300	0.300	0.381	0.238	0.371	0.371	0.471	0.294	0.312	0.312	0.396	0.248				0.000
	Front	0.300	0.300	0.381	0.238	0.371	0.371	0.471	0.294	0.312	0.312	0.396	0.248				0.000
Product Specific 10-g Reported SAR	Rear													0.413	0.413	0.525	0.131
	Front													0.413	0.413	0.525	0.131
	Top	0.380	0.380	0.483	0.121	0.444	0.444	0.564	0.141	0.361	0.361	0.458	0.115	0.413	0.413	0.525	0.131
	Left																
	Bottom																
	Right	0.380	0.380	0.483	0.121	0.444	0.444	0.564	0.141	0.361	0.361	0.458	0.115	0.413	0.413	0.525	0.131

Antenna Group		AG1				AG1				AG1				AG1			
Antenna		Ant.E				Ant.E				Ant.E				Ant.E			
RF exposure	Test positions	WIFI 5.3GHz Ant.1				WIFI 5.5GHz Ant.1				WIFI 5.9GHz Ant.1				6GHz WLAN Ant.1			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.307	0.307	0.390	0.244	0.517	0.517	0.656	0.410	0.486	0.486	0.617	0.386				
	Front	0.307	0.307	0.390	0.244	0.510	0.510	0.648	0.405	0.329	0.329	0.418	0.261				
Product Specific 10-g Reported SAR	Rear													0.405	0.405	0.514	0.129
	Front													0.405	0.405	0.514	0.129
	Top	0.957	0.957	1.215	0.304	0.745	0.745	0.946	0.237	0.651	0.651	0.827	0.207	0.405	0.405	0.514	0.129
	Left	0.957	0.957	1.215	0.304	0.745	0.745	0.946	0.237	0.651	0.651	0.827	0.207	0.405	0.405	0.514	0.129
	Bottom																
	Right																

Antenna Group		AG1			
Antenna		Ant.G			
RF exposure	Test positions	Bluetooth SISO2			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.633	0.633	0.804	0.502
	Front	0.562	0.562	0.714	0.446
Product Specific 10-g Reported SAR	Rear				
	Front				
	Top	1.472	1.472	1.869	0.467
	Left				
	Bottom				
	Right				

Antenna Group		AG1			
Antenna		Ant.D+G			
RF exposure	Test positions	Bluetooth MIMO			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.317	0.317	0.403	0.252
	Front	0.314	0.314	0.399	0.249
Product Specific 10-g Reported SAR	Rear				
	Front				
	Top	0.647	0.647	0.822	0.205
	Left				
	Bottom				
	Right	0.199	0.199	0.253	0.063

Antenna Group		AG1				AG1				AG1				AG1			
Antenna		Ant.D+E				Ant.D+E				Ant.D+E				Ant.D+E			
RF exposure	Test positions	WIFI 5.3GHz MIMO				WIFI 5.5GHz MIMO				WIFI 5.9GHz MIMO				6GHz WLAN MIMO			
		Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER	Reported SAR (W/kg)	Adjusted SAR (W/kg)	with Multi tx factor (W/kg)	Adjusted ER
Bodyworn 1g Reported SAR	Rear	0.657	0.657	0.834	0.521	0.504	0.504	0.640	0.400	0.482	0.482	0.612	0.383				
	Front	0.342	0.342	0.435	0.272	0.416	0.416	0.529	0.331	0.482	0.482	0.612	0.383				
Product Specific 10-g Reported SAR	Rear													0.452	0.452	0.574	0.144
	Front													0.452	0.452	0.574	0.144
	Top	0.607	0.607	0.771	0.193	0.985	0.985	1.251	0.313	1.034	1.034	1.313	0.328	0.452	0.452	0.574	0.144
	Left	0.607	0.607	0.771	0.193	0.985	0.985	1.251	0.313	1.034	1.034	1.313	0.328	0.452	0.452	0.574	0.144
	Bottom																
	Right	0.607	0.607	0.771	0.193	0.985	0.985	1.251	0.313	0.668	0.668	0.848	0.212	0.452	0.452	0.574	0.144

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	0.015	0.004	0.001	0.000
	Front	0.000	0.000	0.000	0.000
	Top	0.000	0.000	0.000	0.000
	Left	0.000	0.000		
	Bottom				
	Right				

RF exposure	Test position	AG1's Highest Adjusted ER				
		Ant.D	Ant.E	Ant.G	Ant.D+G	Ant.E+D
Bodyworn 1g's ER	Rear	0.294	0.410	0.502	0.252	0.521
	Front	0.294	0.405	0.446	0.249	0.383
Product Specific 10-g's ER	Top	0.141	0.304	0.467	0.205	0.328
	Left		0.304	0.000	0.000	0.328
	Bottom					
	Right	0.141			0.063	0.313

AG1 and ER summation results

Antenna Group	AG1	ER		AG1+ER	FCC TER Limit	Converted to 10-g	FCC SAR Limit
Antenna	All	NFC	UWB				
RF exposure	Highest Adjusted SAR	Highest Measured SAR	Highest Measured SAR				
Product Specific 10-g	0.521	0.004	0.000	0.525	1.0	2.102	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

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-4792147620-S1 FCC Report RFx App A Photos

S-4792147620-S1 FCC Report RFx App B Test Plots

S-4792147620-S1 FCC Report RFx App C System Plots

S-4792147620-S1 FCC Report RFx App D Tissue

S-4792147620-S1 FCC Report RFx App E Probe Certi

S-4792147620-S1 FCC Report RFx App F Dipole Certi

S-4792147620-S1 FCC Report RFx App G Flat Head SAR for STx

END OF REPORT