

FCC SAR Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2617-1, XT2617-2, XT2617-3, XT2617V
FCC ID : IHDT56AU5
STANDARD : FCC 47 CFR Part 2 (2.1093)

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.



Approved by: Si Zhang

Sporton International Inc. (Kunshan)

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China



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1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2617-1, XT2617-2, XT2617-3, XT2617V**, are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 5mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.56	1.23	1.23	1.59
		GSM1900	0.17	1.09	1.00	
	WCDMA	WCDMA II	0.21	1.16	0.99	
		WCDMA IV	0.13	1.02	0.81	
		WCDMA V	0.28	1.12	1.12	
	LTE	LTE Band 25/2	0.66	1.03	1.20	
		LTE Band 66/4	0.67	1.03	0.95	
		LTE Band 26/5	0.68	1.13	1.13	
		LTE Band 7	0.81	1.02	1.27	
		LTE Band 12/17	0.69	1.10	1.10	
		LTE Band 13	0.63	1.28	1.07	
		LTE Band 14	0.76	1.16	0.95	
		LTE Band 30	0.51	0.97	0.86	
		LTE Band 71	0.73	1.03	1.03	
		LTE Band 41/38	0.74	1.15	0.86	
		LTE Band 48	0.84	0.61	0.85	
	5G NR	FR1 n25/n2	0.86	1.26	1.20	
		FR1 n26/n5	0.86	0.81	0.81	
		FR1 n7	0.19	1.03	1.10	
		FR1 n12	0.85	0.62	0.64	
		FR1 n14	0.72	0.61	0.61	
		FR1 n30	0.12	1.09	0.92	
		FR1 n66	0.87	1.08	0.94	
FR1 n70		0.66	1.18	0.92		
FR1 n71		0.67	0.65	0.65		
FR1 n41		0.69	1.26	1.26		
FR1 n48		0.64	0.63	0.90		
FR1 n77/n78	0.80	0.63	1.24			
DTS	WLAN	2.4GHz WLAN	1.34	0.64	1.24	1.59
NII		5GHz WLAN	1.09	0.53	0.94	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.28	0.16	0.16	1.59



Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	GSM	GSM850	2.14	3.72
		GSM1900	2.01	
	WCDMA	WCDMA II	2.24	
		WCDMA IV	2.00	
		WCDMA V	1.63	
	LTE	LTE Band 25/2	2.70	
		LTE Band 66/4	2.54	
		LTE Band 26/5	1.74	
		LTE Band 7	2.66	
		LTE Band 12/17	1.68	
		LTE Band 13	1.56	
		LTE Band 14	1.80	
		LTE Band 30	2.85	
		LTE Band 41/38	2.88	
		LTE Band 48	1.17	
	5G NR	FR1 n25/n2	2.50	
		FR1 n7	2.30	
		FR1 n30	2.50	
		FR1 n66	2.42	
		FR1 n70	1.99	
FR1 n41		3.18		
FR1 n48		2.21		
	FR1 n77/n78	2.16		
DTS	WLAN	WLAN2.4GHz	3.45	3.72
NII		WLAN5GHz	1.68	3.72
Date of Testing:			2025/8/1 ~ 2025/8/12	

Remark:

- This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41.
- This device supports 5GNR n5 / n2 / n78 and n26 / n25 / n77. Since the supported frequency span for 5GNR n5 / n2 / n78 falls completely within the supports frequency span for n26 / n25 / n77, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for n26 / n25 / n77.
- This is a variant report for XT2617-1, XT2617-2, XT2617-3, XT2617V. The different between them refer to the XT2617-1, XT2617-2, XT2617-3, XT2617V_Operational Description of Product Equality Declaration which is exhibit separately. According to the difference, only the worst cases from original test report (Sporton Report Number FA483010) were verified for the differences.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.



2. Administration Data

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR02-KS	CN1257	314309

Applicant	
Company Name	Motorola Mobility LLC
Address	222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

Manufacturer	
Company Name	Motorola Mobility LLC
Address	222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

3. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01



4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2617-1, XT2617-2, XT2617-3, XT2617V
FCC ID	IHDT56AU5
IMEI Code	Sample 1 357811140018192/357811140018200, 357811140017699/357811140017707 357811140017657/357811140017665 Sample 2 350904270019077/350904270019085
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n14: 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n30: 2305 MHz ~ 2315 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70: 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA



	HSUPA DC-HSDPA HSPA+ (16QAM uplink is supported) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC: ASK
HW Version	DVT2
SW Version	W1WEO36.2
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype
Remark:	
<ol style="list-style-type: none"> 1. This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5G NR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation. 2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications. 3. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only). 4. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12. 5. This device supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). 6. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the MediaTek TA-SAR will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to original report. 7. For WLAN when transmit simultaneous with WWAN/BT, power reduction will be activated to head exposure condition. For WLAN when transmit simultaneous with WWAN and Proximity sensors trigger, power reduction will be activated to body-worn and extremity exposure conditions. 8. For some WWAN bands, sensor on power level is higher than hotspot power level, so front/back sensor on SAR can represent hotspot conservatively. 9. LTE Band41 supports HPUE with higher power. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR. 10. This device supports HPUE for 5G NR n41/77/78 with class 2 level, HPUE power has been measured separately. For 5G NR n41/77/78 performed full SAR testing with class 2 and HPUE SAR can represent power class 3 level SAR. 11. For 5G NR bands, using FTM to perform SAR with default 100% transmission. 12. This device has NFC function and the NFC SAR report will be separately submitted. 13. There are two samples, the different between them refer to the XT2617-1, XT2617-2, XT2617-3, XT2617V_ Product Equality Declaration which is exhibit separately. According to the differences, sample 1/2 verified the worst case of original sample. 14. The four model names are only for different market purpose, and all the others are the same. 15. This device supports 5G NR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately. 	



<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n2	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 50
	n12	FDD	15	5, 10, 15
	n25	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n66	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n71	FDD	15	5, 10, 15, 20, 25, 30, 35
	n41	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n48	TDD	30	10, 15, 20, 30, 40, 90, 100
	n77	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
SA	n78	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n2	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 50
	n12	FDD	15	5, 10, 15
	n14	FDD	15	5, 10
	n25	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n26	FDD	15	5, 10, 15, 20
	n30	FDD	15	5, 10
	n66	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n70	FDD	15	5, 10, 15
	n71	FDD	15	5, 10, 15, 20, 25, 30, 35
	n41	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n48	TDD	30	10, 15, 20, 30, 40, 90, 100
n77	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100	
n78	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100	



4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	IHDT56AU5																																																														
Equipment Name	Mobile Cellular Phone																																																														
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz																																																														
Channel Bandwidth	LTE Band 2: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz																																																														
uplink modulations used	QPSK / 16QAM / 64QAM / 256QAM																																																														
LTE Voice / Data requirements	Voice and Data																																																														
LTE Release Version	R15																																																														
CA Support	Supported, Uplink and Downlink																																																														
LTE MPR permanently built-in by design	<p align="center">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</p> <table border="1"> <thead> <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> </thead> <tbody> <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" style="text-align: center;">≥ 1</td> <td>≤ 5</td> </tr> </tbody> </table>	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)																																																								
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QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																																								
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256 QAM	≥ 1						≤ 5																																																								
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																														
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																														
Power reduction applied to satisfy SAR compliance	Yes, when operating in Proximity sensors/receiver/hotspot detect mechanism, head/body-worn /hotspot/extremity will trigger reduced power for some bands applied to satisfy SAR compliance, the detail please referred to original report.																																																														
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power verification please referred to original report.																																																														
LTE Carrier Aggregation Additional Information	1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band and inter-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 2 carriers in the uplink.																																																														



Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829				
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5				
H	20643	848.3	20635	847.5	20625	846.5	20600	844				
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510				
M	21100	2535	21100	2535	21100	2535	21100	2535				
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560				
LTE Band 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704				
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5				
H	23173	715.3	23165	714.5	23155	713.5	23130	711				
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		782					
M	23230		782									
H	23255		784.5									
LTE Band 14												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Channel #		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23305		790.5		23330		793					
M	23330		793									
H	23355		795.5									
LTE Band 17												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)		Channel #		Freq. (MHz)	
L	23755		706.5		23780		709					
M	23790		710		23790		710					
H	23825		713.5		23800		711					
LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		



LTE Band 30				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	27685	2307.5	27710	2310
M	27710	2310		
H	27735	2312.5		

LTE Band 38								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610

LTE Band 41								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

LTE Band 71								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673
M	133247	675.5	133272	678	133297	680.5	133322	683
H	133447	695.5	133422	693	133397	690.5	133372	688

LTE Band 48								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560
LM	55810	3607	55815	3607.5	55820	3608	55830	3609
MH	56170	3643	56165	3642.5	56160	3642	56150	3641
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n14: 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n30: 2305 MHz ~ 2315 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70: 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	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
LTE Anchor Bands for n2	LTE B4/5/7/12/13/14/30/48/66
LTE Anchor Bands for n5	LTE B2/4/7/30/48/66
LTE Anchor Bands for n7	LTE B2/4/5/12/66
LTE Anchor Bands for n12	LTE B2/66
LTE Anchor Bands for n25	LTE B7/12/26/66
LTE Anchor Bands for n66	LTE B2/5/7/12/13/14/30/48/71
LTE Anchor Bands for n71	LTE B2/7/48/66
LTE Anchor Bands for n41	LTE B2/4/5/12/25/26/66/71
LTE Anchor Bands for n48	LTE B5/71
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/25/26/30/66/71
LTE Anchor Bands for n78	LTE B2/4/5/7/12/13/25/66/71

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band																
NR Band 2																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	373500	1867.5	374000	1870
M	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895	378500	1892.5	378000	1890

NR Band 5								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165300	826.5	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5
H	169300	846.5	168800	844	168300	841.5	167800	839

NR Band 7																		
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	503500	2517.5	504000	2520	505000	2525
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510500	2552.5	510000	2550	509000	2545

NR Band 12						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	140300	701.5	140800	704	141300	706.5
M	141500	707.5	141500	707.5	141500	707.5
H	142700	713.5	142200	711	141700	708.5



NR Band 14					
	Bandwidth 5MHz			Bandwidth 10MHz	
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)
L	158100	790.5		158600	793
M	158600	793			
H	159100	795.5			

NR Band 25																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	373500	1867.5	374000	1870
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895

NR Band 26									
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	163300	816.5	163800	819	164300	821.5	164800	824	
M	166300	831.5	166300	831.5	166300	831.5	166300	831.5	
H	169300	846.5	168800	844	168300	841.5	167800	839	

NR Band 30					
	Bandwidth 5MHz			Bandwidth 10MHz	
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)
L	461500	2307.5		462000	2310
M	462000	2310			
H	462500	2312.5			

NR Band 66																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	345500	1727.5	346000	1730
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352500	1762.5	352000	1760

NR Band 70							
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	339500	1697.5	340000	1700	340500	1702.5	
M	340500	1702.5	340500	1702.5			
H	341500	1707.5	341000	1705			

NR Band 71															
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	133100	665.5	133600	668	134100	670.5	134600	673	135100	675.5	135600	678			
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5	136100	680.5	136100	680.5	136100	680.5	
H	139100	695.5	138600	693	138100	690.5	137600	688	137100	685.5	136600	683			

NR Band 41																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640

NR Band48														
	Bandwidth 10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	637834	3567.51	639668	3595.02	640000	3600
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646332	3694.98	646166	3692.49	646000	3690	645666	3684.99	645500	3682.5	643666	3654.99	643332	3649.98



NR Band 77																								
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840.00	656000	3840.00	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664834	3972.51	664668	3970.02	664500	3967.50	664334	3965.01	664000	3960	663668	3955.02	663334	3950.01	663000	3945	662668	3940.02	662334	3935.01	662000	3930

NR Band 78																								
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750	650000	3750	650000	3750.00	650000	3750.00	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652500	3787.5	652334	3785.01	652000	3780	651668	3775.02	651334	3770.01	651000	3765	650668	3760.02	650334	3755.01		

For <3450 MHz ~ 3550 MHz >

NR Band 77																								
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

NR Band 78																								
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

5. TA-SAR feature for RF Exposure compliance

WWAN bands are all enabled with MediaTek TA-SAR Gen2 feature to improve antenna performance by applying separate SAR budgets to each predefined antenna group. This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time.

Note that WLAN/BT operations are not enabled with TA-SAR Gen2 feature.

The FCC RF exposure limit is defined based on time-averaged RF exposure. The product implements MediaTek TA-SAR feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency \leq 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.

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

The P_{limit} values correspond to SAR_{design_target}. The power will be fixed at the static reduce power level at different exposure conditions for RF exposure compliance. For the GSM (TDD) P_{limit} power levels in the table correspond to the burst average power levels which don't account for TX duty cycle.

This report describes the procedures for the SAR char generation, and the parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for TA-SAR Gen2 algorithm. SAR char will be entered via the MediaTek's NV suggestion to enable the TA-SAR Gen2 Feature.

<Terminologies in this report>

P_{limit}	The time-averaged RF power which corresponds to SAR _{design_target} .
P_{max}	Maximum target power level
SAR_{design_target}:	The design target for SAR compliance. It should be less than regulatory SAR limit to account for all device design related uncertainty.
SAR char	P _{limit} for all the technologies/bands for all applicable ECI

<SAR Characterization>

SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating at 6 GHz or below. It will then be used as input for TA-SAR Gen2 algorithm to control and manage RF exposure for $f < 6$ GHz.

SPLSR_Group (Antenna Group):

Antenna Group 0 (AG0)	ANT0 & ANT1 & ANT9
Antenna Group 1 (AG1)	ANT3 & ANT4 & ANT5 & ANT7 & ANT10



<SAR design target and uncertainty>

Item	Uncertainty dB (k=2)
Total uncertainty	1.5

To account for total uncertainty, SAR_design_target should be determined as:

$$SAR_{design_target} < SAR_{regulatory_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

The TA-SAR Gen2 algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit, for each characterized technology and band.

TA-SAR allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit.

<Plimit for supported technologies and bands >

Band	Antenna	Head ECI2	Bodyworn ECI3	Hotspot ECI7	Extremity ECI6	Sensor off ECI4	Pmax*
GSM850	Ant0	30.6	23.1	23.1	27.4	26.5	26.5
GSM1900	Ant1	29.6	20.9	18.9	23.2	22.5	22.5
WCDMA II	Ant1	29.6	20.0	18.7	21.7	23.0	23.0
WCDMA IV	Ant1	31.6	19.1	18.3	21.8	23.0	23.0
WCDMA V	Ant0	28.7	21.7	21.7	25.5	23.0	23.0
LTE Band 25(2)	Ant1	30.9	20.0	18.9	22.2	23.0	23.0
LTE Band 25(2)	Ant4	14.6	15.9	11.0	16.6	21.0	21.0
LTE Band 25(2) Other PA	Ant4	16.5	17.5	12.5	18.0	23.0	23.0
LTE Band 66(4)	Ant1	30.9	19.8	18.8	22.0	23.0	23.0
LTE Band 66(4)	Ant4	14.9	16.8	12.0	15.7	21.0	21.0
LTE Band 66(4) Other PA	Ant4	16.5	18.5	14.0	19.5	23.0	23.0
LTE Band 26(5)	Ant0	28.5	22.2	22.2	25.0	23.0	23.0
LTE Band 26(5)	Ant4	19.6	19.6	18.1	24.5	23.0	23.0
LTE Band 7	Ant1	28.9	20.8	17.8	19.9	23.0	23.0
LTE Band 7	Ant4	22.5	24.2	18.8	24.8	23.0	23.0
LTE Band 12(17)	Ant0	29.8	23.0	23.0	25.0	23.0	23.0
LTE Band 12(17)	Ant4	19.9	21.6	19.9	26.0	23.0	23.0
LTE Band 13	Ant0	29.0	23.0	23.0	26.0	23.0	23.0
LTE Band 13	Ant4	19.9	21.6	19.9	26.4	23.0	23.0
LTE Band 14	Ant0	29.3	24.2	23.0	25.3	23.0	23.0
LTE Band 14	Ant4	20.6	21.6	20.4	25.9	23.0	23.0
LTE Band 30	Ant1	30.8	23.6	20.7	23.2	23.0	23.0
LTE Band 30 Other PA	Ant4	25.3	26.5	21.7	23.0	23.0	23.0
LTE Band 71	Ant0	30.2	23.9	23.9	26.7	23.0	23.0
LTE Band 71	Ant4	23.8	24.2	23.0	23.0	23.0	23.0
LTE Band 41(38) PC3	Ant1	28.9	20.2	18.9	20.2	22.4	21.0
LTE Band 41 PC2	Ant1	28.9	20.2	18.9	20.2	22.4	22.4
LTE Band 41 PC3	Ant4	16.1	16.1	10.2	20.3	18.4	17.0
LTE Band 41 PC2	Ant4	16.1	16.1	10.2	20.3	18.4	18.4
LTE Band 41 PC3	Ant0	31.1	21.6	21.6	22.6	21.4	20.0
LTE Band 41 PC2	Ant0	31.1	21.6	21.6	22.6	21.4	21.4
LTE Band 41 PC3	Ant10	31.3	16.9	15.5	19.4	19.4	18.0
LTE Band 41 PC2	Ant10	31.3	16.9	15.5	19.4	19.4	19.4
LTE Band 48	Ant3	18.4	13.3	11.1	16.8	21.0	21.0
FR1 n25(2)	Ant1	32.1	22.3	20.8	24.1	23.0	23.0
FR1 n2 Other PA	Ant1	32.1	22.3	20.8	24.1	23.0	23.0
FR1 n25(2)	Ant4	15.0	17.5	13.0	17.5	21.0	21.0



FR1 n25(2) Other PA	Ant4	16.9	18.8	14.1	18.8	23.0	23.0
FR1 n25(2) Other Path	Ant4	16.9	18.8	14.1	18.8	23.0	23.0
FR1 n26(5)	Ant0	30.8	24.2	24.2	23.0	23.0	23.0
FR1 n26(5)	Ant4	21.9	22.0	20.9	27.0	23.0	23.0
FR1 n7	Ant1	29.4	22.2	19.2	21.0	23.0	23.0
FR1 n12	Ant0	32.0	25.3	25.3	23.0	23.0	23.0
FR1 n12	Ant4	22.5	22.5	21.4	23.0	23.0	23.0
FR1 n14	Ant0	31.5	24.6	24.6	23.0	23.0	23.0
FR1 n14	Ant4	22.5	23.1	21.7	23.0	23.0	23.0
FR1 n30	Ant1	33.0	23.7	20.1	22.5	23.0	23.0
FR1 n66	Ant1	32.4	21.5	20.1	23.3	23.0	23.0
FR1 n66	Ant4	15.5	15.5	12.5	18.5	21.0	21.0
FR1 n66 Other PA	Ant4	18.0	17.7	14.6	20.5	23.0	23.0
FR1 n66 Other Path	Ant4	18.0	17.7	14.6	20.5	23.0	23.0
FR1 n70	Ant1	32.5	22.0	20.6	24.0	23.0	23.0
FR1 n70	Ant4	17.0	17.4	15.4	20.5	21.0	21.0
FR1 n71	Ant0	32.0	24.8	24.8	23.0	23.0	23.0
FR1 n71	Ant4	23.3	24.7	23.1	23.0	23.0	23.0
FR1 n41 PC3	Ant1	30.5	20.8	19.8	21.0	26.0	23.0
FR1 n41 PC2	Ant1	30.5	20.8	19.8	21.0	26.0	26.0
FR1 n41 PC3	Ant4	17.0	18.2	12.8	19.9	22.0	19.0
FR1 n41 PC2	Ant4	17.0	18.2	12.8	19.9	22.0	22.0
FR1 n41 PC3	Ant0	30.3	23.1	23.1	24.0	25.0	22.0
FR1 n41 PC2	Ant0	30.3	23.1	23.1	24.0	25.0	25.0
FR1 n41 PC3	Ant10	33.4	19.2	17.6	20.3	20.3	20.0
FR1 n41 PC2	Ant10	33.4	19.2	17.6	20.3	20.3	23.0
FR1 n48	Ant3	18.0	14.3	13.3	17.0	23.0	23.0
FR1 n48	Ant5	19.1	15.9	14.4	23.8	23.8	17.0
FR1 n48	Ant9	29.6	20.3	17.9	21.0	21.0	23.5
FR1 n48	Ant7	19.8	16.5	14.7	22.0	17.0	17.0
FR1 n77(78) PC3	Ant3	16.0	12.7	11.7	16.5	24.5	23.0
FR1 n77(78) PC2	Ant3	16.0	12.7	11.7	16.5	24.5	26.0
FR1 n77(78) PC3	Ant5	19.1	15.6	14.2	23.4	23.4	17.0
FR1 n77(78) PC2	Ant5	19.1	15.6	14.2	23.4	23.4	20.0
FR1 n77(78) PC3	Ant9	29.6	19.2	16.7	19.2	19.2	24.0
FR1 n77(78) PC2	Ant9	29.6	19.2	16.7	19.2	19.2	27.0
FR1 n77(78) PC3	Ant7	17.0	16.3	13.8	21.0	20.0	17.0
FR1 n77(78) PC2	Ant7	17.0	16.3	13.8	21.0	20.0	20.0

Note:

- 1) *Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1.0 dB device uncertainty.
- 2) All Plimit power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).
- 3) The max allowed output power is the Plimit + 1.0 dB device uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.

6. RF Exposure Limits

6.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

6.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

7. Specific Absorption Rate (SAR)

7.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

7.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\text{SAR} = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

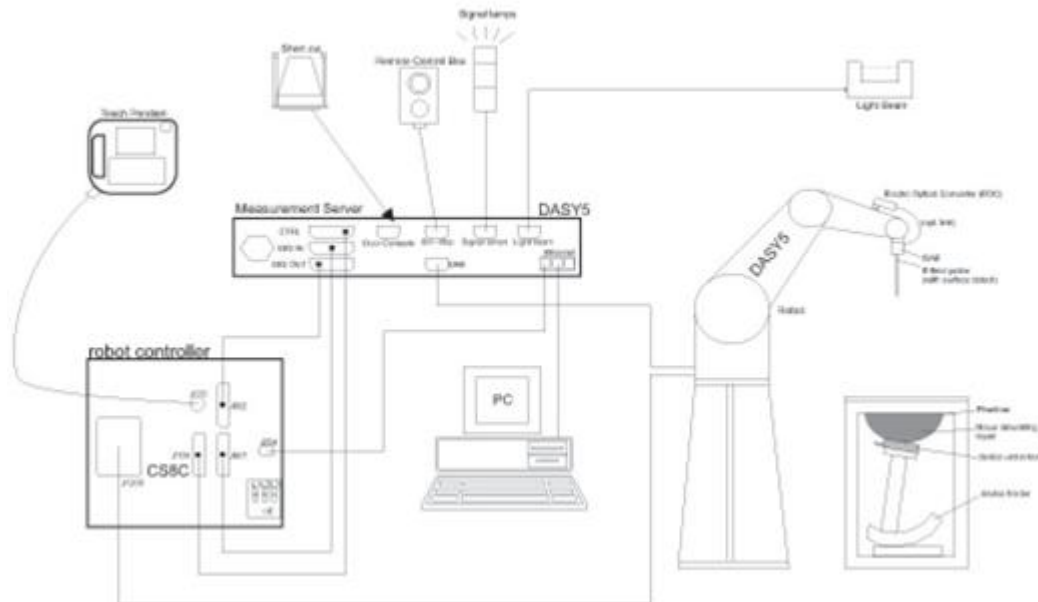
SAR is expressed in units of Watts per kilogram (W/kg)

$$\text{SAR} = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

8. System Description and Setup

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




- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG).The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 10 GHz Linearity: ±0.2 dB (30 MHz – 10 GHz)	
Directivity	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

8.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.


The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.



Photo of DAE

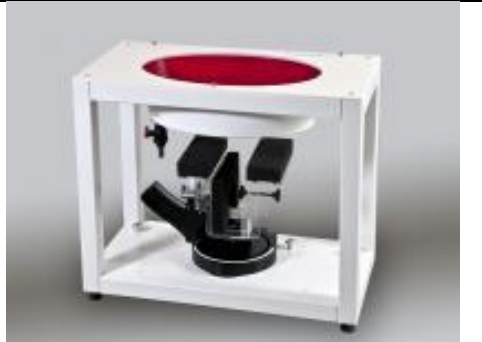
8.3 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet	
Measurement Areas	Left Hand, Right Hand, Flat Phantom	

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)	
Filling Volume	Approx. 30 liters	
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm	

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices or for evaluating transmitters operating at low frequencies. ELI is fully compatible with standard and all known tissue simulating liquids.

8.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.



Mounting Device for Laptops

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

- (a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- (b) Read the WWAN RF power level from the base station simulator.
- (c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
- (d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix D demonstrates.
- (c) Set scan area, grid size and other setting on the DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

9.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

9.2 Power Reference Measurement

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

9.3 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 found in the scanned area, within a range of the global maximum. The range (in dB0 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 FCC KDB 865664 D01v01r04 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: $\Delta x_{Area}, \Delta y_{Area}$	≤ 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.	

9.4 Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram 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 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

		≤ 3 GHz	> 3 GHz	
Maximum zoom scan spatial resolution: Δx_{Zoom} , Δy_{Zoom}		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm	
	graded grid	$\Delta z_{Zoom}(1)$: between 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
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm	
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

9.5 Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

9.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASYS measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2025/3/12	2026/3/11
SPEAG	835MHz System Validation Kit	D835V2	4d298	2024/1/26	2026/1/24
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2025/3/12	2026/3/11
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2024/12/16	2025/12/15
SPEAG	2300MHz System Validation Kit	D2300V2	1055	2023/8/21	2025/8/19
SPEAG	2450MHz System Validation Kit	D2450V2	1095	2024/2/8	2026/2/6
SPEAG	2600MHz System Validation Kit	D2600V2	1112	2023/12/18	2025/12/16
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2023/11/20	2025/11/18
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2023/11/20	2025/11/18
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2023/3/9	2026/3/6
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2022/9/23	2025/9/21
SPEAG	Data Acquisition Electronics	DAE4	1279	2024/8/20	2025/8/19
SPEAG	Dosimetric E-Field Probe	EX3DV4	3857	2025/2/19	2026/2/18
SPEAG	SAM Twin Phantom	SAM Twin	TP-1842	NCR	NCR
Beichuang	Thermo-Hygrometer	HTC-1	1959630	2025/5/27	2026/5/26
Beichuang	Thermo-Hygrometer	HTC-1	1949251	2025/1/11	2026/1/10
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8820C	6201563900	2025/7/2	2026/7/1
Agilent	ENA Series Network Analyzer	E5071C	MY46112129	2025/7/2	2026/7/1
SPEAG	Dielectric Probe Kit	DAK-3.5	1144	2024/8/20	2025/8/19
Anritsu	Vector Signal Generator	MG3710A	6201682672	2025/1/3	2026/1/2
Rohde & Schwarz	Power Meter	NRVD	102081	2025/7/2	2026/7/1
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2025/7/2	2026/7/1
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2025/7/2	2026/7/1
R&S	BLUETOOTH TESTER	CBT	101246	2025/7/3	2026/7/2
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2024/10/11	2025/10/10
TES	DIGITAC THERMOMETER	TYPE-K	220305411	2025/1/2	2026/1/1
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	

Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

11. System Verification

11.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.2.

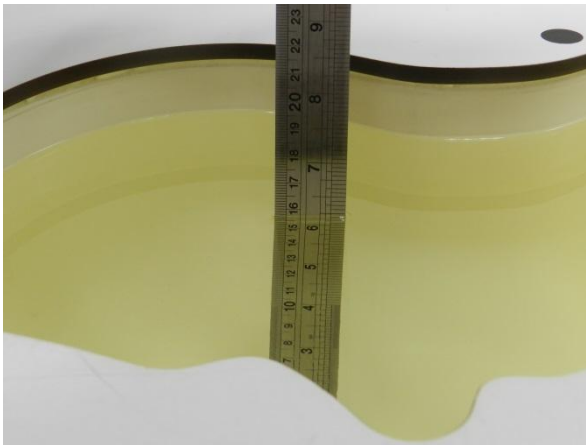


Fig 11.1 Photo of Liquid Height for Head SAR

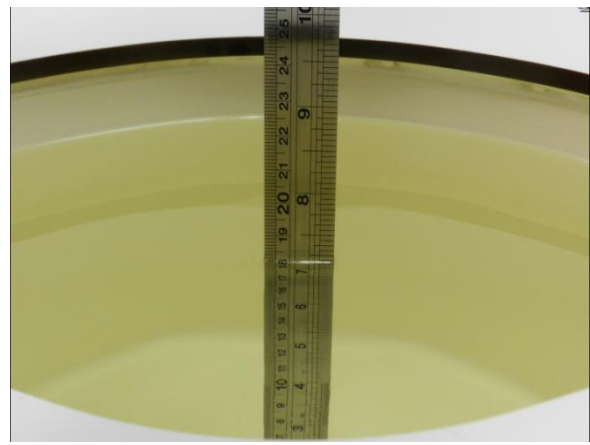


Fig 11.2 Photo of Liquid Height for Body SAR

11.2 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (ϵ_r)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%



<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
750	Head	22.8	0.887	42.851	0.89	41.90	-0.34	2.27	±5	2025/8/1
835	Head	22.7	0.923	42.535	0.90	41.50	2.56	2.49	±5	2025/8/2
1750	Head	22.8	1.371	40.746	1.37	40.10	0.07	1.61	±5	2025/8/4
1900	Head	22.6	1.453	39.141	1.40	40.00	3.79	-2.15	±5	2025/8/5
2300	Head	22.7	1.617	39.557	1.67	39.50	-3.17	0.14	±5	2025/8/7
2450	Head	22.7	1.762	39.339	1.80	39.20	-2.11	0.35	±5	2025/8/8
2600	Head	22.9	1.899	38.869	1.96	39.00	-3.11	-0.34	±5	2025/8/9
3500	Head	22.7	2.950	37.821	2.91	37.90	1.37	-0.21	±5	2025/8/10
3700	Head	22.7	3.164	37.534	3.12	37.70	1.41	-0.44	±5	2025/8/10
3900	Head	22.7	3.400	37.299	3.33	37.51	2.10	-0.56	±5	2025/8/11
5250	Head	22.6	4.697	36.228	4.71	35.95	-0.28	0.77	±5	2025/8/11
5600	Head	22.7	5.038	35.693	5.07	35.50	-0.63	0.54	±5	2025/8/12
5750	Head	22.8	5.221	35.738	5.22	35.35	0.02	1.10	±5	2025/8/12

11.3 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2025/8/1	750	Head	50	1087	3857	1279	0.418	8.680	8.36	-3.69	0.280	5.610	5.6	-0.18
2025/8/2	835	Head	50	4d298	3857	1279	0.481	9.890	9.62	-2.73	0.321	6.450	6.42	-0.47
2025/8/4	1750	Head	50	1090	3857	1279	1.890	36.600	37.8	3.28	1.030	19.500	20.6	5.64
2025/8/5	1900	Head	50	5d182	3857	1279	1.940	39.800	38.8	-2.51	1.050	21.000	21	0.00
2025/8/7	2300	Head	50	1055	3857	1279	2.410	48.400	48.2	-0.41	1.190	23.700	23.8	0.42
2025/8/8	2450	Head	50	1095	3857	1279	2.680	52.600	53.6	1.90	1.270	24.700	25.4	2.83
2025/8/9	2600	Head	50	1112	3857	1279	2.770	55.100	55.4	0.54	1.280	24.800	25.6	3.23
2025/8/10	3500	Head	50	1037	3857	1279	3.490	65.400	69.8	6.73	1.310	24.700	26.2	6.07
2025/8/10	3700	Head	50	1008	3857	1279	3.560	67.200	71.2	5.95	1.340	24.400	26.8	9.84
2025/8/11	3900	Head	50	1048	3857	1279	3.790	69.100	75.8	9.70	1.270	24.100	25.4	5.39
2025/8/11	5250	Head	50	1113	3857	1279	4.080	81.500	81.6	0.12	1.170	23.300	23.4	0.43
2025/8/12	5600	Head	50	1113	3857	1279	4.340	82.600	86.8	5.08	1.220	23.700	24.4	2.95
2025/8/12	5750	Head	50	1113	3857	1279	3.650	80.800	73	-9.65	1.080	23.000	21.6	-6.09

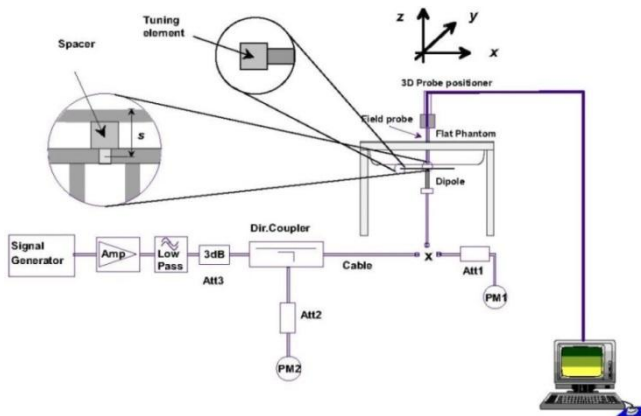


Fig 11.3.1 System Performance Check Setup



Fig 11.3.2 Setup Photo

12. RF Exposure Positions

12.1 Ear and handset reference point

Figure 12.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled “M,” the left ear reference point (ERP) is marked “LE,” and the right ERP is marked “RE.” Each ERP is 15 mm along the B-M (back-mouth) line behind the entrance-to-ear-canal (EEC) point, as shown in Figure 12.1.2 The Reference Plane is defined as passing through the two ear reference points and point M. The line N-F (neck-front), also called the reference pivoting line, is normal to the Reference Plane and perpendicular to both a line passing through RE and LE and the B-M line (see Figure 12.1.3). Both N-F and B-M lines should be marked on the exterior of the phantom shell to facilitate handset positioning. Posterior to the N-F line the ear shape is a flat surface with 6 mm thickness at each ERP, and forward of the N-F line the ear is truncated, as illustrated in Figure 12.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

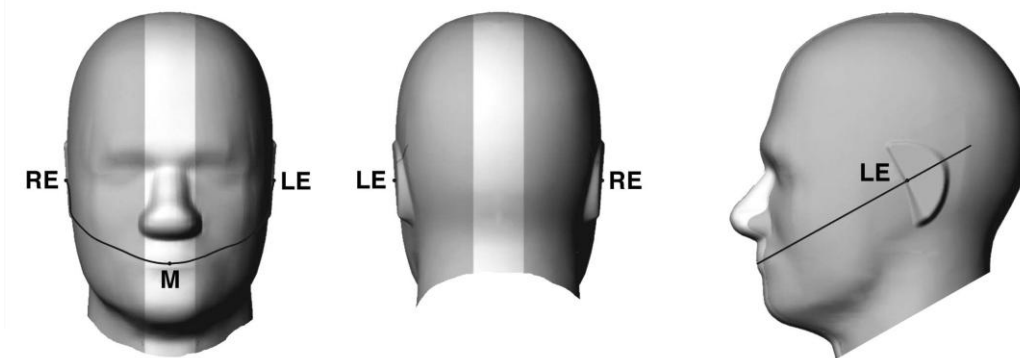


Fig 12.1.1 Front, back, and side views of SAM twin phantom

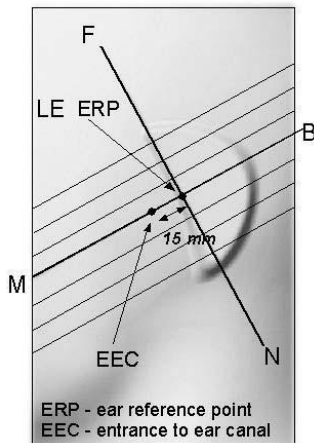


Fig 12.1.2 Close-up side view of phantom showing the ear region.

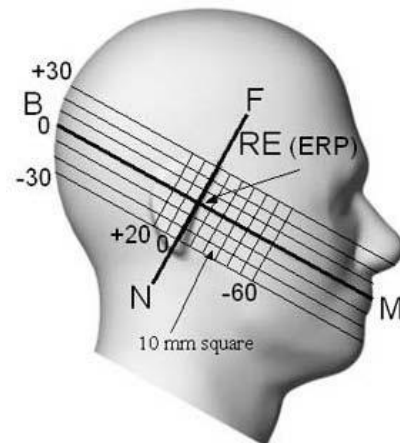


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

12.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width w_t of the handset at the level of the acoustic output (point A in Figure 12.2.1 and Figure 12.2.2), and the midpoint of the width w_b of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 12.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 12.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 12.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 12.2.3. The actual rotation angles should be documented in the test report.

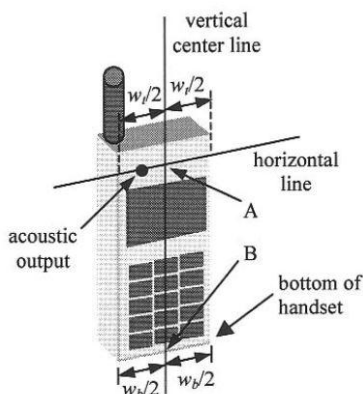


Fig 12.2.1 Handset vertical and horizontal reference lines—“fixed case”

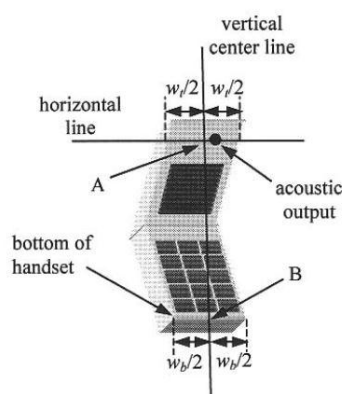


Fig 12.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

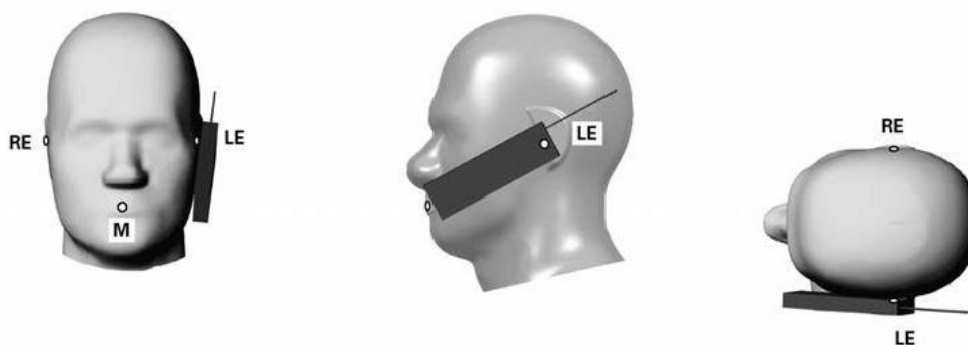


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

12.3 Definition of the tilt position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. While maintaining the orientation of the handset, move the handset away from the pinna along the line passing through RE and LE far enough to allow a rotation of the handset away from the cheek by 15°.
3. Rotate the handset around the horizontal line by 15°.
4. While maintaining the orientation of the handset, move the handset towards the phantom on the line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact point is on the pinna. See Figure 12.3.1. If contact occurs at any location other than the pinna, e.g., the antenna at the back of the phantom head, the angle of the handset should be reduced. In this case, the tilt position is obtained if any point on the handset is in contact with the pinna and a second point

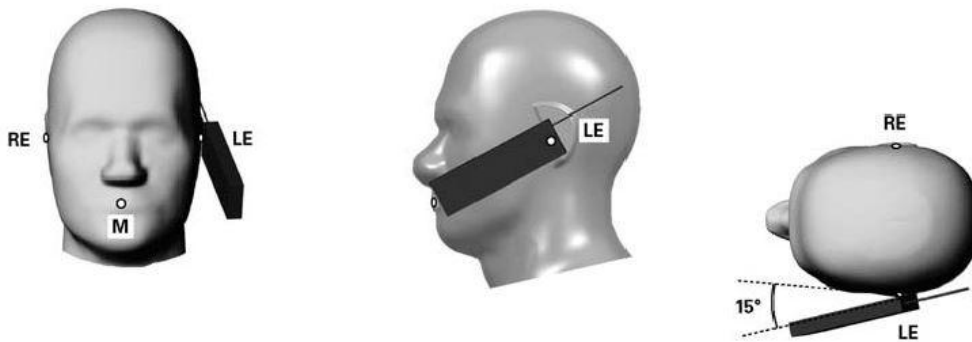


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

12.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 11.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is $> 1.2 \text{ W/kg}$, 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.

Accessories for body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-chip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

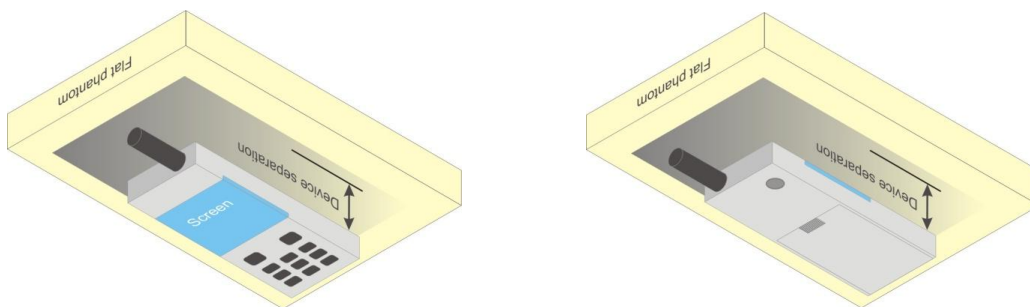


Fig 12.4 Body Worn Position

12.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, that can provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets and support voice calls next to the ear, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. 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.

12.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets ($L \times W \geq 9$ cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The "Portable Hotspot" feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.



13. SAR Test Results

13.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																					
01	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	133322	683	1	23.09	24.00	1.233	-	-	0.01	0.198	0.244
	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	133322	683	1	23.19	24.00	1.205	-	-	-0.02	0.603	0.727
02	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	1	22.99	24.00	1.262	-	-	0.05	0.198	0.249
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	23095	707.5	1	20.04	20.90	1.219	-	-	-0.07	0.567	0.691
03	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	23230	782	1	22.92	24.00	1.282	-	-	0.01	0.163	0.209
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	23230	782	1	20.05	20.90	1.216	-	-	0.01	0.514	0.625
04	LTE Band 14	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	23330	793	1	23.03	24.00	1.250	-	-	0.04	0.200	0.250
	LTE Band 14	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	23330	793	1	20.65	21.60	1.245	-	-	-0.03	0.607	0.755
05	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	136100	680.5	1	23.16	24.00	1.213	-	-	-0.03	0.111	0.135
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	136100	680.5	1	23.33	24.00	1.167	-	-	0.07	0.572	0.667
06	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	141500	707.5	1	23.17	24.00	1.211	-	-	-0.05	0.125	0.151
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	141500	707.5	1	22.75	23.50	1.189	-	-	0.01	0.713	0.847
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	141500	707.5	2	22.75	23.50	1.189	-	-	-0.06	0.703	0.836
07	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	158600	793	1	23.29	24.00	1.178	-	-	0.06	0.142	0.167
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	158600	793	1	22.94	23.50	1.138	-	-	-0.07	0.635	0.722
835MHz																					
08	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	189	836.4	1	29.09	30.50	1.384	-	-	0.03	0.401	0.555
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	189	836.4	2	29.09	30.50	1.384	-	-	0.07	0.303	0.419
09	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	4182	836.4	1	23.22	24.00	1.197	-	-	-0.01	0.233	0.279
10	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	26865	831.5	1	23.06	24.00	1.242	-	-	0.12	0.256	0.318
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	26865	831.5	1	19.72	20.60	1.225	-	-	-0.08	0.555	0.680
11	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	166300	831.5	1	23.33	24.00	1.167	-	-	-0.06	0.163	0.190
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	166300	831.5	1	21.61	22.90	1.346	-	-	-0.01	0.642	0.864
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	166300	831.5	2	21.61	22.90	1.346	-	-	-0.02	0.603	0.812
1750MHz																					
12	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	1413	1732.6	1	23.33	24.00	1.167	-	-	-0.07	0.108	0.126
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	132322	1745	1	23.29	24.00	1.178	-	-	-0.12	0.154	0.181
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	132322	1745	2	23.29	24.00	1.178	-	-	0.06	0.127	0.150
13	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	132072	1720	1	14.35	15.90	1.429	-	-	0.12	0.472	0.674
14	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	340500	1702.5	1	23.13	24.00	1.222	-	-	-0.14	0.102	0.125
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 2	340500	1702.5	1	17.22	18.00	1.197	-	-	0.01	0.549	0.657
15	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	1	23.19	24.00	1.205	-	-	0.05	0.111	0.134
	FR1 n66 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 2	349000	1745	1	18.09	19.00	1.233	-	-	-0.08	0.702	0.866
	FR1 n66 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 2	349000	1745	2	18.09	19.00	1.233	-	-	0.04	0.485	0.598
1900MHz																					
16	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	661	1880	1	25.09	26.50	1.384	-	-	0.03	0.125	0.173
17	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	9400	1880	1	23.15	24.00	1.216	-	-	-0.02	0.174	0.212
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	9400	1880	2	23.15	24.00	1.216	-	-	0.01	0.108	0.131
18	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	26340	1880	1	23.15	24.00	1.216	-	-	0.16	0.157	0.191
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	26340	1880	1	21.23	22.00	1.194	-	-	-0.07	0.554	0.661
19	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	376500	1882.5	1	23.36	24.00	1.159	-	-	0.06	0.114	0.132
	FR1 n25 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 2	376500	1882.5	1	17.13	17.90	1.194	-	-	-0.05	0.722	0.862
	FR1 n25 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 2	376500	1882.5	2	17.13	17.90	1.194	-	-	-0.03	0.556	0.664
2300MHz																					
	LTE Band 30	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	27710	2310	1	23.20	24.00	1.202	-	-	-0.11	0.154	0.185



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20	LTE Band 30	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	27710	2310	2	23.20	24.00	1.202	-	-	0.05	0.151	0.182
	LTE Band 30 Other PA	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	27710	2310	1	23.02	24.00	1.253	-	-	0.01	0.409	0.513
	LTE Band 30 Other PA	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	27710	2310	2	23.02	24.00	1.253	-	-	0.06	0.353	0.442
21	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	462000	2310	1	23.37	24.00	1.156	-	-	-0.07	0.099	0.115
2600MHz																					
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	21100	2535	1	23.19	24.00	1.205	-	-	-0.03	0.241	0.290
22	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	21350	2560	1	22.27	23.50	1.327	-	-	0.03	0.608	0.807
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	21350	2560	2	22.27	23.50	1.327	-	-	-0.04	0.412	0.547
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	40620	2593	1	26.14	27.00	1.219	42.9	1.009	0.07	0.198	0.244
23	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	40620	2593	1	20.05	20.70	1.161	42.9	1.009	0.04	0.632	0.741
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	40620	2593	1	25.11	26.00	1.227	42.9	1.009	-0.03	0.096	0.119
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 10	DSI 2	40620	2593	1	23.02	24.00	1.253	42.9	1.009	-0.04	0.013	0.016
24	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	1	23.32	24.00	1.169	-	-	0.04	0.163	0.191
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	1	26.41	27.00	1.146	-	-	0.06	0.385	0.441
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	2	26.41	27.00	1.146	-	-	0.04	0.374	0.428
25	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	518598	2592.99	1	17.29	18.00	1.178	-	-	0.05	0.584	0.688
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	1	25.33	26.00	1.167	-	-	-0.07	0.311	0.363
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	2	25.33	26.00	1.167	-	-	0.06	0.275	0.321
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	DSI 2	518598	2592.99	1	23.14	24.00	1.219	-	-	-0.12	0.052	0.063
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	DSI 2	518598	2592.99	2	23.14	24.00	1.219	-	-	0.07	0.051	0.062
3500MHz																					
26	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 2	56640	3690	1	19.98	21.40	1.387	62.9	1.006	-0.02	0.599	0.836
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 2	56640	3690	2	19.98	21.40	1.387	62.9	1.006	-0.04	0.389	0.543
27	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	643332	3649.98	1	17.79	19.00	1.321	-	-	-0.04	0.487	0.643
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 2	641666	3624.99	1	17.37	18.00	1.156	-	-	0.09	0.425	0.491
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 2	641666	3624.99	1	24.22	25.00	1.067	-	-	0.01	0.256	0.273
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	641666	3624.99	1	17.61	18.00	1.094	-	-	0.04	0.369	0.404
28	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	656000	3840	1	15.73	17.00	1.340	-	-	-0.09	0.600	0.804
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	633334	3500.01	1	15.79	17.00	1.321	-	-	0.02	0.325	0.429
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	656000	3840	1	18.59	20.10	1.416	-	-	0.07	0.356	0.504
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	656000	3840	2	18.59	20.10	1.416	-	-	0.01	0.333	0.471
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	633334	3500.01	1	19.13	20.10	1.250	-	-	0.01	0.254	0.318
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 2	656000	3840	1	27.21	28.00	1.199	-	-	0.01	0.500	0.600
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 2	656000	3840	2	27.21	28.00	1.199	-	-	0.12	0.397	0.476
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 2	633334	3500.01	1	26.83	28.00	1.309	-	-	-0.01	0.214	0.280
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	656000	3840	1	16.65	18.00	1.365	-	-	0.06	0.263	0.359
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	633334	3500.01	1	17.46	18.00	1.132	-	-	0.07	0.526	0.596
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	633334	3500.01	2	17.46	18.00	1.132	-	-	0.11	0.422	0.478



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
WLAN/BT																	
29	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Receiver on	6	2437	1	13.49	15.00	1.416	98.26	1.018	0.19	0.932	1.343
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Receiver on	6	2437	2	13.49	15.00	1.416	98.26	1.018	0.04	0.826	1.190
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 6	Simultaneous	6	2437	1	13.49	15.00	1.416	98.26	1.018	0.01	0.101	0.146
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 6	Simultaneous	6	2437	1	13.49	15.00	1.416	98.26	1.018	-0.02	0.118	0.170
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Simultaneous	6	2437	1	13.49	15.00	1.416	98.26	1.018	0.02	0.235	0.339
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 6	Simultaneous	6	2437	1	13.49	15.00	1.416	98.26	1.018	0.06	0.125	0.180
30	Bluetooth	1Mbps	Left Cheek	0mm	Ant 6	Full Power	0	2402	1	14.04	15.00	1.248	76.79	1.085	-0.03	0.208	0.282
31	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Receiver on	58	5290	1	16.59	18.50	1.552	100	1.000	-0.08	0.702	1.090
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Receiver on	58	5290	2	16.59	18.50	1.552	100	1.000	-0.02	0.677	1.051
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	Simultaneous	58	5290	1	12.36	13.50	1.552	100	1.000	0.05	0.075	0.116
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	Simultaneous	58	5290	1	12.36	13.50	1.300	100	1.000	0.13	0.073	0.095
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Simultaneous	58	5290	1	12.36	13.50	1.552	100	1.000	-0.15	0.220	0.342
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Simultaneous	58	5290	1	12.36	13.50	1.552	100	1.000	0.08	0.142	0.220
32	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Receiver on	106	5530	1	15.67	17.50	1.524	100	1.000	0.06	0.568	0.866
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Receiver on	106	5530	2	15.67	17.50	1.524	100	1.000	-0.01	0.474	0.722
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	Simultaneous	106	5530	1	11.35	11.50	1.035	100	1.000	-0.15	0.081	0.084
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	Simultaneous	106	5530	1	11.35	11.50	1.035	100	1.000	0.06	0.075	0.078
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Simultaneous	106	5530	1	11.35	11.50	1.035	100	1.000	0.02	0.298	0.308
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Simultaneous	106	5530	1	11.35	11.50	1.035	100	1.000	0.14	0.191	0.198
33	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Receiver on	155	5775	1	15.74	17.50	1.500	100	1.000	-0.07	0.648	0.972
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Receiver on	155	5775	2	15.74	17.50	1.500	100	1.000	0.07	0.641	0.961
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	Simultaneous	155	5775	1	10.67	11.50	1.211	100	1.000	0.05	0.087	0.105
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	Simultaneous	155	5775	1	10.67	11.50	1.211	100	1.000	0.01	0.079	0.096
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Simultaneous	155	5775	1	10.67	11.50	1.211	100	1.000	-0.02	0.299	0.362
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Simultaneous	155	5775	1	10.67	11.50	1.211	100	1.000	0.11	0.194	0.235



13.2 Hotspot SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																					
34	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	133322	683	1	23.09	24.00	1.233	-	-	-0.07	0.831	1.025
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	133322	683	1	23.19	24.00	1.205	-	-	0.05	0.521	0.628
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	133322	683	2	23.19	24.00	1.205	-	-	0	0.402	0.484
35	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23095	707.5	1	22.99	24.00	1.262	-	-	0.13	0.870	1.098
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	23095	707.5	1	20.04	20.90	1.219	-	-	0.01	0.435	0.530
36	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23230	782	1	22.92	24.00	1.282	-	-	0.08	0.834	1.282
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23230	782	2	22.92	24.00	1.282	-	-	-0.02	0.610	1.282
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	23230	782	1	20.05	20.90	1.216	-	-	-0.09	0.414	0.504
37	LTE Band 14	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	23330	793	1	23.03	24.00	1.250	-	-	0.02	0.929	1.161
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	23330	793	1	20.65	21.40	1.189	-	-	0.04	0.511	0.607
38	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	136100	680.5	1	23.16	24.00	1.213	-	-	-0.02	0.536	0.650
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 7	136100	680.5	1	23.33	24.00	1.167	-	-	-0.06	0.487	0.568
39	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	141500	707.5	1	23.17	24.00	1.211	-	-	-0.05	0.511	0.619
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 7	141500	707.5	1	21.27	22.40	1.297	-	-	0.04	0.457	0.593
40	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	158600	793	1	23.29	24.00	1.178	-	-	-0.07	0.517	0.609
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 7	158600	793	1	21.34	22.70	1.368	-	-	-0.03	0.421	0.576
835MHz																					
41	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	128	824.2	1	25.72	27.10	1.374	-	-	-0.18	0.896	1.231
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	128	824.2	2	25.72	27.10	1.374	-	-	0.12	0.852	1.171
42	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	4132	826.4	1	21.27	22.70	1.390	-	-	-0.03	0.804	1.118
43	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	1	22.49	23.20	1.178	-	-	0.14	0.960	1.131
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	26865	831.5	1	18.24	19.10	1.219	-	-	0.04	0.475	0.579
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	26865	831.5	2	18.24	19.10	1.219	-	-	-0.01	0.415	0.506
44	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	1	23.33	24.00	1.167	-	-	0.07	0.692	0.807
	FR1 n26	20M	QPSK	64	33	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 7	166300	831.5	1	20.32	21.90	1.439	-	-	0.12	0.412	0.593
1750MHz																					
45	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	ECI 7	1513	1752.6	1	18.12	19.30	1.312	-	-	0.07	0.779	1.022
46	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	132322	1745	1	18.70	19.80	1.288	-	-	0.07	0.799	1.029
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	132572	1770	1	11.72	13.00	1.343	-	-	0.03	0.458	0.615
47	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	340500	1702.5	1	20.10	21.60	1.413	-	-	-0.03	0.834	1.178
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	340500	1702.5	2	20.10	21.60	1.413	-	-	0.05	0.695	0.982
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	340500	1702.5	1	15.20	16.40	1.318	-	-	0.14	0.458	0.604
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	340500	1702.5	2	15.20	16.40	1.318	-	-	0.06	0.350	0.461
48	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	349000	1745	1	20.23	21.10	1.222	-	-	0.08	0.885	1.081
	FR1 n66 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	349000	1745	1	14.83	15.60	1.194	-	-	-0.02	0.463	0.553
1900MHz																					
49	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 1	ECI 7	810	1909.8	1.00	22.79	24.00	1.321	-	-	0.03	0.826	1.091
50	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	ECI 7	9538	1907.6	1	18.65	19.70	1.274	-	-	0.04	0.911	1.160
51	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	26590	1905	1	18.65	19.90	1.334	-	-	0.05	0.773	1.031
	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	26340	1880	1	10.67	12.00	1.358	-	-	0.05	0.432	0.587
52	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	376500	1882.5	1	20.89	21.80	1.233	-	-	0.04	1.020	1.258
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	376500	1882.5	2	20.89	21.80	1.233	-	-	0.12	0.618	0.762
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	376500	1882.5	1	12.81	14.00	1.315	-	-	0.06	0.542	0.713
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	376500	1882.5	2	12.81	14.00	1.315	-	-	-0.16	0.441	0.580
2300MHz																					
53	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	27710	2310	1	20.73	21.70	1.250	-	-	0.07	0.774	0.968
	LTE Band 30 Other PA	10M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	27710	2310	CID 60	22.05	22.70	1.161	-	-	0.03	0.510	0.592
54	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	462000	2310	1	20.01	21.10	1.285	-	-	0.02	0.846	1.087
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	462000	2310	2	20.01	21.10	1.285	-	-	-0.06	0.671	0.862



2600MHz																					
55	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECC 7	21350	2560	1	17.62	18.80	1.312	-	-	0.07	0.774	1.016
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECC 7	21100	2535	1	18.91	19.80	1.227	-	-	-0.01	0.429	0.527
56	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECC 7	40620	2593	1	22.30	23.50	1.318	42.9	1.009	0.06	0.865	1.151
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECC 7	40185	2549.5	1	24.69	26.00	1.352	42.9	1.009	-0.01	0.611	0.834
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECC 7	40620	2593	1	13.94	14.80	1.219	42.9	1.009	0.03	0.485	0.597
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECC 7	40620	2593	2	13.94	14.80	1.219	42.9	1.009	0.09	0.461	0.567
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECC 7	40620	2593	1	17.78	18.50	1.180	62.9	1.006	0.01	0.471	0.559
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECC 7	40620	2593	2	17.78	18.50	1.180	62.9	1.006	-0.11	0.378	0.449
57	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECC 7	507000	2535	1	18.98	20.20	1.324	-	-	0.09	0.778	1.030
58	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	ECC 7	518598	2592.99	1	22.79	24.10	1.352	-	-	-0.13	0.932	1.260
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	ECC 7	518598	2592.99	2	22.79	24.10	1.352	-	-	0.1	0.655	0.886
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	ECC 7	518598	2592.99	1	19.61	20.80	1.315	-	-	0.01	0.911	1.198
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	ECC 7	518598	2592.99	2	19.61	20.80	1.315	-	-	-0.06	0.655	0.861
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECC 7	518598	2592.99	1	12.78	13.80	1.265	-	-	-0.03	0.452	0.572
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 10	ECC 7	518598	2592.99	1	17.49	18.60	1.291	-	-	0.06	0.426	0.550
3500MHz																					
59	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	ECC 7	55340	3560	1	13.08	14.10	1.265	62.9	1.006	0.09	0.478	0.608
60	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	ECC 7	641666	3624.99	1	12.48	14.30	1.521	-	-	-0.07	0.412	0.626
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	ECC 7	641666	3624.99	1	14.37	15.40	1.268	-	-	0.01	0.411	0.521
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	ECC 7	641666	3624.99	1	14.64	15.70	1.276	-	-	-0.03	0.452	0.577
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	ECC 7	641666	3624.99	2	14.64	15.70	1.276	-	-	-0.01	0.420	0.536
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECC 7	641666	3624.99	1	17.84	18.90	1.276	-	-	0.12	0.335	0.428
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	ECC 7	656000	3840	1	11.28	12.70	1.387	-	-	0.02	0.341	0.473
61	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	ECC 7	633334	3500.01	1	11.14	12.70	1.432	-	-	-0.04	0.441	0.632
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	ECC 7	633334	3500.01	2	11.14	12.70	1.432	-	-	0.01	0.388	0.556
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	ECC 7	656000	3840	1	13.76	15.20	1.393	-	-	0.02	0.411	0.573
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	ECC 7	656000	3840	2	13.76	15.20	1.393	-	-	-0.01	0.395	0.550
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	ECC 7	633334	3500.01	1	14.54	15.20	1.164	-	-	0.04	0.405	0.471
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECC 7	656000	3840	1	13.91	14.80	1.227	-	-	0.03	0.198	0.243
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	ECC 7	633334	3500.01	1	14.02	14.80	1.197	-	-	-0.05	0.326	0.390
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECC 7	656000	3840	1	16.21	17.70	1.409	-	-	-0.09	0.407	0.574
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECC 7	656000	3840	2	16.21	17.70	1.409	-	-	-0.11	0.293	0.413
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECC 7	633334	3500.01	1	15.95	17.70	1.496	-	-	0.03	0.215	0.322

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	
2450MHz																		
62	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 6	Hotspot on	11	2462	1	17.11	18.50	1.377	98.26	1.018	0.06	0.458	0.642	
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 6	Hotspot on	11	2462	2	17.11	18.50	1.377	98.26	1.018	0.04	0.410	0.575	
63	Bluetooth	1Mbps	Back	5mm	Ant 6	Full Power	0	2402	1	14.04	15.00	1.248	76.79	1.085	-0.02	0.119	0.161	
5000MHz																		
64	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 7	Hotspot on	42	5210	1	11.76	13.00	1.330	100	1.000	-0.09	0.401	0.534	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 7	Hotspot on	42	5210	2	11.76	13.00	1.330	100	1.000	-0.01	0.386	0.514	
65	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 7	Hotspot on	155	5775	1	11.66	12.00	1.081	100	1.000	0.01	0.415	0.449	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 7	Hotspot on	155	5775	2	11.66	12.00	1.081	100	1.000	0.04	0.400	0.433	



13.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																					
66	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 3	133322	683	1	23.09	24.00	1.233	-	-	-0.07	0.831	1.025
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	133322	683	1	23.19	24.00	1.205	-	-	0.05	0.521	0.628
67	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 3	23095	707.5	1	22.99	24.00	1.262	-	-	0.13	0.870	1.098
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 3	23095	707.5	2	22.99	24.00	1.262	-	-	0.01	0.635	0.801
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	23095	707.5	1	21.05	22.60	1.429	-	-	0.07	0.601	0.859
68	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 3	23230	782	1	22.92	24.00	1.282	-	-	0.08	0.834	1.069
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	23230	782	1	21.12	22.60	1.406	-	-	-0.05	0.598	0.841
69	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 3	23330	793	1	23.03	24.00	1.250	-	-	-0.01	0.763	0.954
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	23330	793	1	21.69	22.60	1.233	-	-	0.08	0.704	0.868
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	23330	793	2	21.69	22.60	1.233	-	-	-0.03	0.648	0.799
70	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 3	136100	680.5	1	23.16	24.00	1.213	-	-	-0.02	0.536	0.650
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 3	136100	680.5	1	23.33	24.00	1.167	-	-	-0.06	0.487	0.568
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 3	141500	707.5	1	23.17	24.00	1.211	-	-	0.03	0.511	0.619
71	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 3	141500	707.5	1	22.73	23.50	1.194	-	-	0.03	0.535	0.639
72	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 3	158600	793	1	23.29	24.00	1.178	-	-	-0.07	0.517	0.609
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 3	158600	793	1	23.48	24.00	1.127	-	-	0.08	0.492	0.555
835MHz																					
73	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 3	128	824.2	1	28.22	29.60	1.374	-	-	-0.18	0.896	1.231
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 3	128	824.2	2	28.22	29.60	1.374	-	-	0.01	0.833	1.145
74	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 3	4132	826.4	1	21.27	22.70	1.390	-	-	-0.03	0.804	1.118
75	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 3	26865	831.5	1	22.49	23.20	1.178	-	-	0.14	0.960	1.131
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	26865	831.5	1	19.72	20.60	1.225	-	-	0.04	0.654	0.801
76	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 3	166300	831.5	1	23.33	24.00	1.167	-	-	0.07	0.692	0.807
	FR1 n26	20M	QPSK	64	33	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 3	166300	831.5	1	21.79	23.00	1.321	-	-	0.07	0.610	0.806
	FR1 n26	20M	QPSK	64	33	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 3	166300	831.5	2	21.79	23.00	1.321	-	-	0.12	0.492	0.650
1750MHz																					
77	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	ECI 3	1513	1752.6	1	19.11	20.10	1.256	-	-	0	0.645	0.810
78	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 3	132322	1745	1	19.67	20.80	1.297	-	-	0.15	0.732	0.950
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 3	132322	1745	2	19.67	20.80	1.297	-	-	0.18	0.248	0.322
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	132072	1720	1	16.47	17.80	1.358	-	-	-0.03	0.611	0.830
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	132072	1720	2	16.47	17.80	1.358	-	-	0.03	0.583	0.792
79	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 3	340500	1702.5	1	21.69	23.00	1.352	-	-	-0.06	0.681	0.921
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 3	340500	1702.5	1	17.16	18.40	1.330	-	-	-0.12	0.526	0.700
80	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 3	349000	1745	1	21.21	22.50	1.346	-	-	-0.07	0.700	0.942
	FR1 n66 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 3	349000	1745	1	17.84	18.70	1.219	-	-	0.16	0.587	0.716
1900MHz																					
81	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 1	ECI 3	661	1880	1	23.54	24.90	1.368	-	-	-0.08	0.730	0.998
82	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	ECI 3	9538	1907.6	1	20.16	21.00	1.213	-	-	0.05	0.813	0.986
83	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 3	26590	1905	1	20.13	21.00	1.222	-	-	0.11	0.981	1.199
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 3	26590	1905	2	20.13	21.00	1.222	-	-	0.04	0.277	0.338
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	26340	1880	1	15.64	16.90	1.337	-	-	0.03	0.611	0.817
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	26340	1880	2	15.64	16.90	1.337	-	-	0.09	0.600	0.802
84	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 3	376500	1882.5	1	21.92	23.30	1.374	-	-	-0.16	0.872	1.198
	FR1 n25 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 3	376500	1882.5	1	19.21	19.80	1.146	-	-	-0.14	0.700	0.802
2300MHz																					
85	LTE Band 30	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 3	27710	2310	1	23.20	24.00	1.202	-	-	0.19	0.716	0.861
	LTE Band 30 Other PA	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	27710	2310	1	23.02	24.00	1.253	-	-	-0.15	0.285	0.357
	LTE Band 30 Other PA	10M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	27710	2310	2	23.02	24.00	1.253	-	-	-0.01	0.202	0.253



86	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 3	462000	2310	1	23.37	24.00	1.156	-	-	-0.03	0.796	0.920
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 3	462000	2310	2	23.37	24.00	1.156	-	-	0.05	0.577	0.667
2600MHz																					
87	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 3	21100	2535	1	20.73	21.80	1.279	-	-	0.04	0.994	1.272
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 3	21100	2535	2	20.73	21.80	1.279	-	-	0.11	0.304	0.389
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	20850	2510	1	23.18	24.00	1.208	-	-	0.07	0.521	0.629
88	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 3	40620	2593	1	23.83	24.80	1.250	42.9	1.009	0.02	0.681	0.859
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 3	40185	2549.5	1	24.69	26.00	1.352	42.9	1.009	-0.01	0.611	0.834
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	40185	2549.5	1	19.98	20.70	1.180	42.9	1.009	0.05	0.600	0.715
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 3	40185	2549.5	2	19.98	20.70	1.180	42.9	1.009	0.15	0.568	0.676
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 3	41490	2680	1	18.76	19.90	1.300	62.9	1.006	-0.16	0.598	0.782
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 3	41490	2680	2	18.76	19.90	1.300	62.9	1.006	0.02	0.573	0.749
89	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 3	507000	2535	1	21.93	23.20	1.340	-	-	-0.06	0.823	1.103
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	ECI 3	518598	2592.99	1	20.56	21.80	1.330	-	-	-0.07	0.594	0.790
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	ECI 3	518598	2592.99	1	17.79	19.20	1.384	-	-	0.04	0.511	0.707
90	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 3	518598	2592.99	1	22.79	24.10	1.352	-	-	-0.13	0.932	1.260
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 3	518598	2592.99	2	22.79	24.10	1.352	-	-	0.06	0.655	0.886
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 10	ECI 3	518598	2592.99	1	19.01	20.20	1.315	-	-	0.07	0.582	0.765
3500MHz																					
91	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	ECI 3	55340	3560	1	14.61	16.30	1.476	62.9	1.006	-0.02	0.574	0.852
92	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	ECI 3	641666	3624.99	1	13.97	15.30	1.358	-	-	-0.01	0.663	0.901
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	ECI 3	641666	3624.99	1	15.92	16.90	1.253	-	-	0.07	0.621	0.778
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	ECI 3	641666	3624.99	2	15.92	16.90	1.253	-	-	-0.1	0.514	0.644
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 9	ECI 3	641666	3624.99	1	19.88	21.30	1.387	-	-	-0.04	0.502	0.696
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 3	641666	3624.99	1	16.00	17.50	1.413	-	-	0.08	0.611	0.863
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 3	641666	3624.99	2	16.00	17.50	1.413	-	-	0.13	0.601	0.849
93	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	20mm	Ant 3	ECI 4	633334	3500.01	1	24.66	25.50	1.213	-	-	-0.04	1.020	1.238
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	20mm	Ant 3	ECI 4	633334	3500.01	2	24.66	25.50	1.213	-	-	-0.14	1.010	1.226
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	ECI 3	656000	3840	1	15.23	16.60	1.371	-	-	0.04	0.521	0.714
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	ECI 3	656000	3840	1	19.17	20.20	1.268	-	-	0.07	0.850	1.078
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	ECI 3	656000	3840	2	19.17	20.20	1.268	-	-	0.16	0.614	0.778
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 3	633334	3500.01	1	16.45	17.30	1.216	-	-	-0.11	0.623	0.758



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	
WIFI/BT																		
94	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Sensor on	1	2412	1	19.17	21.00	1.524	98.26	1.018	0.01	0.797	1.237	
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Sensor on	1	2412	2	19.17	21.00	1.524	98.26	1.018	0.05	0.778	1.207	
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 6	Simultaneous	1	2412	1	13.11	15.00	1.545	98.26	1.018	0.02	0.063	0.099	
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Simultaneous	1	2412	1	13.11	15.00	1.545	98.26	1.018	0.05	0.196	0.308	
95	Bluetooth	1Mbps	Back	5mm	Ant 6	Full Power	0	2402	1	14.04	15.00	1.248	76.79	1.085	-0.02	0.119	0.161	
96	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Sensor on	58	5290	1	15.63	17.50	1.538	100	1.000	-0.09	0.501	0.771	
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Sensor on	58	5290	2	15.63	17.50	1.538	100	1.000	0.03	0.435	0.669	
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 7	Simultaneous	58	5290	1	10.88	12.00	1.294	100	1.000	-0.01	0.098	0.127	
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Simultaneous	58	5290	1	10.88	12.00	1.294	100	1.000	0.02	0.226	0.292	
97	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Sensor on	106	5530	1	15.67	17.50	1.524	100	1.000	0.02	0.535	0.815	
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Sensor on	106	5530	2	15.67	17.50	1.524	100	1.000	-0.02	0.514	0.783	
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 7	Simultaneous	106	5530	1	11.06	12.00	1.242	100	1.000	0.08	0.112	0.139	
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Simultaneous	106	5530	1	11.06	12.00	1.242	100	1.000	-0.05	0.241	0.299	
98	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Sensor on	155	5775	1	15.74	17.50	1.500	100	1.000	-0.05	0.628	0.942	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Sensor on	155	5775	2	15.74	17.50	1.500	100	1.000	0.14	0.615	0.922	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 7	Simultaneous	155	5775	1	10.67	11.50	1.211	100	1.000	0.08	0.121	0.146	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 7	Simultaneous	155	5775	1	10.67	11.50	1.211	100	1.000	0.12	0.234	0.283	



13.4 Product specific 10g SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
750MHz																					
99	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECl 6	23095	707.5	1	22.99	24.00	1.262	-	-	0.04	1.330	1.678
	LTE Band 12	10M	QPSK	1	0	-	Back	0mm	Ant 4	ECl 6	23095	707.5	1	23.21	24.00	1.199	-	-	-0.02	1.010	1.211
100	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECl 6	23230	782	1	22.92	24.00	1.282	-	-	-0.12	1.220	1.564
	LTE Band 13	10M	QPSK	1	0	-	Back	0mm	Ant 4	ECl 6	23230	782	1	23.11	24.00	1.227	-	-	0.04	0.871	1.069
101	LTE Band 14	10M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECl 6	23330	793	1	23.03	24.00	1.250	-	-	0.04	1.440	1.800
	LTE Band 14	10M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECl 6	23330	793	2	23.03	24.00	1.250	-	-	0.05	1.100	1.375
	LTE Band 14	10M	QPSK	1	0	-	Back	0mm	Ant 4	ECl 6	23330	793	1	23.26	24.00	1.186	-	-	0.01	1.020	1.209
	LTE Band 14	10M	QPSK	1	0	-	Back	0mm	Ant 4	ECl 6	23330	793	2	23.26	24.00	1.186	-	-	-0.03	1.010	1.198
835MHz																					
102	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	0mm	Ant 0	ECl 6	128	824.2	1	29.16	30.50	1.361	-	-	-0.04	1.570	2.137
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	0mm	Ant 0	ECl 6	128	824.2	2	29.16	30.50	1.361	-	-	0.03	1.470	2.001
103	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECl 6	4182	836.4	1	23.22	24.00	1.197	-	-	-0.06	1.360	1.628
104	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECl 6	26865	831.5	1	23.06	24.00	1.242	-	-	0.09	1.400	1.738
	LTE Band 26	15M	QPSK	1	0	-	Back	0mm	Ant 4	ECl 6	26865	831.5	1	23.33	24.00	1.167	-	-	0.01	1.250	1.459
	LTE Band 26	15M	QPSK	1	0	-	Back	0mm	Ant 4	ECl 6	26865	831.5	2	23.33	24.00	1.167	-	-	0.07	0.990	1.155
1750MHz																					
105	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	ECl 6	1513	1752.6	1	21.61	22.80	1.315	-	-	0.03	1.520	1.999
106	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	132572	1770	1	22.24	23.00	1.191	-	-	0.08	2.130	2.537
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	132572	1770	2	22.24	23.00	1.191	-	-	0.04	0.951	1.133
	LTE Band 66	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECl 6	132572	1770	1	15.35	16.70	1.365	-	-	0.03	1.850	2.524
	LTE Band 66	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECl 6	132572	1770	2	15.35	16.70	1.365	-	-	-0.01	1.740	2.374
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Bottom Side	0mm	Ant 1	ECl 6	340500	1702.5	1	23.13	24.00	1.222	-	-	0.01	0.904	1.105
107	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Top Side	0mm	Ant 4	ECl 6	340500	1702.5	1	20.57	21.50	1.239	-	-	0.05	1.610	1.994
108	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	0mm	Ant 1	ECl 6	349000	1745	1	23.18	24.00	1.208	-	-	0.05	2.000	2.416
	FR1 n66 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	0mm	Ant 4	ECl 6	349000	1745	1	20.91	21.50	1.146	-	-	0.03	1.620	1.856
1900MHz																					
109	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	0mm	Ant 1	ECl 6	810	1909.8	1	25.05	26.50	1.396	-	-	0.11	1.440	2.011
110	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	ECl 6	9538	1907.6	1	21.66	22.70	1.271	-	-	0.02	1.760	2.236
111	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	26590	1905	1	22.15	23.20	1.274	-	-	0.03	2.120	2.700
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	26590	1905	2	22.15	23.20	1.274	-	-	0.1	0.940	1.197
	LTE Band 25	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECl 6	26590	1905	1	16.10	17.60	1.413	-	-	0.05	1.680	2.373
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Front	0mm	Ant 1	ECl 6	376500	1882.5	1	23.36	24.00	1.159	-	-	0.04	2.030	2.352
112	FR1 n25 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	0mm	Ant 4	ECl 6	376500	1882.5	1	18.56	19.80	1.330	-	-	0.05	1.880	2.501
	FR1 n25 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	0mm	Ant 4	ECl 6	376500	1882.5	2	18.56	19.80	1.330	-	-	0.15	1.780	2.368
2300MHz																					
113	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	27710	2310	1	23.20	24.00	1.202	-	-	0.04	2.370	2.849
	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	27710	2310	2	23.20	24.00	1.202	-	-	0.04	1.420	1.707
114	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Bottom Side	0mm	Ant 1	ECl 6	462000	2310	1	22.40	23.50	1.288	-	-	-0.08	1.940	2.499
2600MHz																					
115	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	21100	2535	1	19.53	20.90	1.371	-	-	0.08	1.940	2.660
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECl 6	21100	2535	1	23.37	24.00	1.156	-	-	0.01	1.240	1.434
116	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	40620	2593	1	23.83	24.80	1.250	42.9	1.009	0.03	2.280	2.876
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	40620	2593	2	23.83	24.80	1.250	42.9	1.009	0.02	2.160	2.725
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECl 6	40620	2593	1	22.05	23.00	1.245	42.9	1.009	-0.11	1.050	1.319
117	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	0mm	Ant 1	ECl 6	507000	2535	1	20.92	22.00	1.282	-	-	-0.17	1.790	2.295
118	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 0	ECl 6	518598	2592.99	1	23.85	25.00	1.303	-	-	-0.07	2.440	3.180
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 0	ECl 6	518598	2592.99	2	23.85	25.00	1.303	-	-	0.02	1.830	2.385
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	0mm	Ant 1	ECl 6	518598	2592.99	1	21.00	22.00	1.259	-	-	-0.15	2.020	2.543



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	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	0mm	Ant 4	ECl 6	518598	2592.99	1	19.77	20.90	1.297	-	-	0.01	1.740	2.257
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	0mm	Ant 4	ECl 6	518598	2592.99	2	19.77	20.90	1.297	-	-	0.07	0.942	1.222
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 10	ECl 4	518598	2592.99	1	20.04	21.30	1.337	-	-	0.05	1.690	2.259
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 10	ECl 4	518598	2592.99	2	20.04	21.30	1.337	-	-	0.08	1.500	2.005
3500MHz																					
119	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 3	ECl 6	55340	3560	1	18.58	19.80	1.324	62.9	1.006	-0.01	0.880	1.172
120	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 3	ECl 6	641666	3624.99	1	17.04	18.00	1.247	-	-	-0.09	1.770	2.208
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 3	ECl 6	641666	3624.99	2	17.04	18.00	1.247	-	-	0.05	1.360	1.696
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECl 4	641666	3624.99	1	20.80	22.00	1.318	-	-	0.01	1.210	1.595
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECl 4	641666	3624.99	2	20.80	22.00	1.318	-	-	0.06	1.200	1.582
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 3	ECl 6	656000	3840	1	16.36	17.50	1.300	-	-	0.01	0.470	0.611
121	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 3	ECl 6	633334	3500.01	1	16.26	17.50	1.330	-	-	-0.19	1.620	2.155
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 5	ECl 4	656000	3840	1	19.58	21.00	1.387	-	-	0.04	0.541	0.750
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 5	ECl 4	633334	3500.01	1	20.11	21.00	1.227	-	-	-0.01	0.845	1.037
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 5	ECl 4	633334	3500.01	2	20.11	21.00	1.227	-	-	0.12	0.803	0.986
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	0mm	Ant 7	ECl 6	633334	3500.01	1	20.50	21.00	1.122	-	-	0.01	1.120	1.257
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	0mm	Ant 7	ECl 6	633334	3500.01	2	20.50	21.00	1.122	-	-	0.15	1.070	1.201
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECl 4	656000	3840	1	19.17	20.20	1.268	-	-	-0.03	0.720	0.913

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	
2450MHz																		
122	WLAN2.4GHz	802.11b 1Mbps	Top Side	0mm	Ant 6	Standalone	6	2437	1	20.58	22.00	1.387	98.26	1.018	0.04	2.440	3.445	
	WLAN2.4GHz	802.11b 1Mbps	Top Side	0mm	Ant 6	Standalone	6	2437	2	20.58	22.00	1.387	98.26	1.018	0.03	2.040	2.880	
	WLAN2.4GHz	802.11b 1Mbps	Top Side	0mm	Ant 6	Simultaneous	6	2437	1	15.54	17.00	1.400	98.26	1.018	0.05	0.622	0.886	
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 6	Simultaneous	6	2437	1	15.54	17.00	1.400	98.26	1.018	0.01	0.235	0.335	
5000MHz																		
123	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7	Full Power	46	5230	1	19.73	20.00	1.065	94.71	1.056	0.01	1.490	1.676	
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7	Full Power	46	5230	2	19.73	20.00	1.065	94.71	1.056	0.04	1.410	1.586	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 7	Simultaneous	42	5210	1	16.32	18.00	1.472	100	1.000	0.05	0.335	0.493	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 7	Simultaneous	42	5210	1	16.32	18.00	1.472	100	1.000	0.06	0.241	0.355	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 7	Simultaneous	42	5210	1	16.32	18.00	1.472	100	1.000	-0.01	0.633	0.932	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 7	Simultaneous	42	5210	1	16.32	18.00	1.472	100	1.000	0.13	0.226	0.333	
126	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7	Full Power	54	5270	1	19.65	20.00	1.085	94.71	1.056	-0.1	1.320	1.512	
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7	Full Power	54	5270	2	19.65	20.00	1.085	94.71	1.056	0.02	1.260	1.444	
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 7	Simultaneous	58	5290	1	16.33	18.00	1.469	100	1.000	0.13	0.311	0.457	
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 7	Simultaneous	58	5290	1	16.33	18.00	1.469	100	1.000	0.02	0.212	0.311	
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 7	Simultaneous	58	5290	1	16.33	18.00	1.469	100	1.000	-0.05	0.609	0.895	
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 7	Simultaneous	58	5290	1	16.33	18.00	1.469	100	1.000	0.06	0.213	0.313	
124	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7	Full Power	142	5710	1	18.09	18.50	1.099	94.71	1.056	0.09	1.240	1.439	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7	Full Power	142	5710	2	18.09	18.50	1.099	94.71	1.056	-0.03	1.210	1.404	
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 7	Simultaneous	138	5690	1	14.88	16.50	1.452	100	1.000	0.16	0.227	0.330	
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 7	Simultaneous	138	5690	1	14.88	16.50	1.452	100	1.000	-0.11	0.239	0.347	
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 7	Simultaneous	138	5690	1	14.88	16.50	1.452	100	1.000	0.02	0.614	0.892	
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 7	Simultaneous	138	5690	1	14.88	16.50	1.452	100	1.000	0.06	0.085	0.123	
125	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7	Full Power	151	5755	1	18.56	19.00	1.107	94.71	1.056	-0.07	1.430	1.671	
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7	Full Power	151	5755	2	18.56	19.00	1.107	94.71	1.056	0.01	1.370	1.601	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 7	Simultaneous	155	5775	1	13.81	15.50	1.476	100	1.000	-0.02	0.302	0.446	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 7	Simultaneous	155	5775	1	13.81	15.50	1.476	100	1.000	0.05	0.236	0.348	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 7	Simultaneous	155	5775	1	13.81	15.50	1.476	100	1.000	0.06	0.634	0.936	



13.5 Repeated SAR Measurement

<1g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Receiver on	6	2437	13.49	15.00	1.416	98.26	1.018	0.19	0.932	1	1.343
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Receiver on	6	2437	13.49	15.00	1.416	98.26	1.018	0.01	0.911	1.023	1.313
1st	LTE Band 14	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECl 7	23330	793	23.03	24.00	1.250	-	-	0.02	0.929	1	1.161
2nd	LTE Band 14	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECl 7	23330	793	23.03	24.00	1.250	-	-	0.01	0.855	1.087	1.069
1st	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	ECl 3	26865	831.5	22.49	23.20	1.178	-	-	0.14	0.960	1	1.131
2nd	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	ECl 3	26865	831.5	22.49	23.20	1.178	-	-	0.01	0.945	1.016	1.113
1st	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECl 7	349000	1745	20.23	21.10	1.222	-	-	0.08	0.885	1	1.081
2nd	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECl 7	349000	1745	20.23	21.10	1.222	-	-	-0.12	0.845	1.047	1.032
1st	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECl 7	376500	1882.5	20.89	21.80	1.233	-	-	0.04	1.020	1	1.258
2nd	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECl 7	376500	1882.5	20.89	21.80	1.233	-	-	0.1	0.920	1.109	1.134
1st	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECl 7	462000	2310	20.01	21.10	1.285	-	-	0.02	0.846	1	1.087
2nd	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECl 7	462000	2310	20.01	21.10	1.285	-	-	0.05	0.812	1.042	1.044
1st	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECl 3	21100	2535	20.73	21.80	1.279	-	-	0.04	0.994	1	1.272
2nd	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECl 3	21100	2535	20.73	21.80	1.279	-	-	0.02	0.955	1.041	1.222
1st	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	20mm	Ant 3	ECl 4	633334	3500.01	24.66	25.50	1.213	-	-	-0.04	1.020	1	1.238
2nd	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	20mm	Ant 3	ECl 4	633334	3500.01	24.66	25.50	1.213	-	-	0.01	1.010	1.010	1.226
1st	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	ECl 3	656000	3840	19.17	20.20	1.268	-	-	0.07	0.850	1	1.078
2nd	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	ECl 3	656000	3840	19.17	20.20	1.268	-	-	0.01	0.825	1.030	1.046

<10g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	132572	1770	22.24	23.00	1.191	-	-	0.08	2.130	1	2.537
2nd	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	132572	1770	22.24	23.00	1.191	-	-	0.02	2.100	1.014	2.502
1st	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	26590	1905	22.15	23.20	1.274	-	-	0.03	2.120	1	2.700
2nd	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	26590	1905	22.15	23.20	1.274	-	-	0.02	1.980	1.071	2.522
1st	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	27710	2310	23.20	24.00	1.202	-	-	0.04	2.370	1	2.849
2nd	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECl 6	27710	2310	23.20	24.00	1.202	-	-	0.05	2.310	1.026	2.777
1st	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 0	ECl 6	518598	2592.99	23.85	25.00	1.303	-	-	-0.07	2.440	1	3.180
2nd	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 0	ECl 6	518598	2592.99	23.85	25.00	1.303	-	-	-0.07	2.410	1.012	3.141
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Top Side	0mm	Ant 6	Standalone	6	2437	20.58	22.00	1.387	98.26	1.018	0.04	2.440	1	3.445
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Top Side	0mm	Ant 6	Standalone	6	2437	20.58	22.00	1.387	98.26	1.018	0.05	2.320	1.052	3.275

General Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8W/kg$.
- Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45W/kg$, only one repeated measurement is required.
- Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
- The ratio is the difference in percentage between original and repeated *measured SAR*.
- All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

14. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	WLAN5GHz+ Bluetooth	Yes	Yes	Yes	Yes
5.	WWAN + WLAN5GHz+ Bluetooth	Yes	Yes	Yes	Yes
6.	WWAN + WLAN2.4GHz + NFC				Yes
7.	WWAN + WLAN5GHz + NFC				Yes
8.	WWAN + Bluetooth + NFC				Yes
9.	WLAN5GHz+ Bluetooth + NFC				Yes
10.	WWAN + WLAN5GHz+ Bluetooth + NFC				Yes

General Note:

- This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- WWAN above includes 5G NR bands and EN-DC combination.
- EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- For EN-DC mode, MediaTek TA-SAR Gen2 algorithm in WWAN adds directly the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from 5G NR. TA-SAR Gen2 algorithm controls the total RF exposure from both 4G and 5G NR to not exceed SAR exposure limit. Therefore, simultaneous transmission compliance between 4G+5G NR operation is demonstrated in the Part 2 Report during algorithm validation. In this Report, simultaneous transmission compliance was evaluated individually with other Radios (WLAN or BT) using one of 4G or 5G NR.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
- The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
- According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz can't transmit simultaneously.
- According to the EUT characteristic, WLAN 2.4GHz and Bluetooth cannot transmit simultaneously.
- NFC can transmit simultaneously with other Radios in extremity exposure condition.
- For Headset SAR and non-Headset SAR always chose higher SAR to do co-located analysis.
- For standalone WWAN, always choose the highest SAR among all WWAN bands within the selected antenna for Head/hotspot/extremity exposure condition each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each band. If the co-located analysis within standalone SAR is higher SAR limit (1.6W/kg for 1g SAR, 4.0W/kg for 10g SAR), always choose the highest SAR among the selected WWAN bands within the selected antenna for each exposure position to perform simultaneous transmission analysis with WLAN/BT.
- The maximum SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
 - The SPLSR calculated results please refer to section 14.6.

14.1 5G NR + LTE + WLAN + BT Sim-Tx analysis

In 5G NR + LTE + WLAN + BT simultaneous transmission, 5G NR and LTE transmission are managed and controlled by MediaTek TA-SAR, while the RF exposure from WLAN and BT radios is managed using legacy approach, i.e., through a fixed power back-off if needed.

Since WLAN and BT do not employ time-averaging, 1gSAR and 10gSAR measurement for WLAN and BT need to be conducted at their corresponding rated power following current FCC test procedures to determine reported SAR values.

TA-SAR current implementation assumes hotspots from 5G NR and LTE are collocated. Therefore, for a total of 100% exposure margin, if LTE uses x, then the exposure margin left for 5G NR is capped to y. Thus, the compliance equation for LTE + 5G NR is

$$\begin{aligned}x * A + y * B + m &\leq 1 \\x + y &= g \leq 1 \\g + m &\leq 1\end{aligned}$$

Where, A is normalized reported time-averaged SAR exposure ratio from LTE, and $A \leq 1.0$; B is normalized reported time-averaged exposure ratio from 5G NR (i.e., SAR exposure for 5G FR1), and $B \leq 1.0$.

Let m = normalized reported SAR exposure ratio from WLAN+BT, then for compliance,

$$x * A + y * B + m \leq 1.0 \quad (1)$$

$$x * A + y * B \leq x * \max(A, B) + (g-x) * \max(A, B) \leq \max(A, B)$$

$$x * A + (g-x) * B + m \leq \max(A, B) + m \leq 1.0 \quad (2)$$

If $A + m \leq 1.0$ and $B + m \leq 1.0$ can be proven, then " $x * A + y * B + m \leq 1.0$ ". Therefore simultaneous transmission analysis for 5G NR + LTE + WLAN + BT can be performed in two steps

Step 1: Prove total exposure ratio (TER) of LTE + WLAN + BT < 1

Step 2: Prove total exposure ratio (TER) of 5G NR + WLAN + BT < 1

Else, if $A + m > 1.0$ and/or $B + m > 1.0$, then the followings need to hold true for compliance:

- i. A and m are decoupled based on the SPLSR criteria, and
- ii. $y * B + m \leq 1.0$, and
- iii. $x * A + y * B \leq 1.0$

Note iii. is covered in Part 2 report; i. and ii. should be addressed in Part 1 report.

Above analysis is also apply to LTE inter-band uplink, LTE1 + LTE2 + WLAN + BT simultaneous transmission, so inter-band uplink CA no need to do additional simultaneously analysis again. Only required comply with total exposure ratio (TER) of LTE + WLAN + BT < 1.

The device also enabled Mediatek’s TA-SAR Gen2 algorithm to improve antenna performance by applying separate SAR budgets to each predefined antenna group. There are two predefined antenna groups of AG0, AG1, more detail as following table. Each antenna group is spatially separated to others. Simultaneous transmission analysis is performed per antenna group. Below analysis demonstrates the spatially separation of AG0, AG1, and the compliance between AG0 and BT/WLAN/NFC and between AG1 and BT/WLAN/NFC.

Thus, the concept was to split the SAR/TER on the transmitting RATs even they are transmitting on different antennas. Such approach is considered as a worst-case scenario in terms of transmitting power. Thus, to enhance the performance of the transmission power of RATs, consider the spatial properties of each antenna and the correlations between the antenna’s transmissions.

SPLSR_Group (Antenna Group):

Antenna Group 0 (AG0)	ANT0 & ANT1& ANT9
Antenna Group 1 (AG1)	ANT3 &ANT4 & ANT5& ANT7 & ANT10

Note that WLAN/BT operations are not enabled with TA-SAR Gen2 feature.

The verification of spatial separation of the antenna groups is demonstrated through the following steps, together with WIF/BT simultaneous transmission analysis results.

- i) The highest reported SAR at Plimit (or Pmax when Plimit > Pmax) for each antenna should be obtained out of all supported technologies and frequency bands for each power index. Demonstrate that the sum of reported SAR of one antenna from each of the antenna groups and the sum of RF exposure from all supported radios outside of TAS feature should be less than the regulatory limit as given below for each power index.
- ii) If the sum of SAR from step i) is over 1.6 W/kg for 1g, demonstrate for a given power index that every antenna from one antenna group meets SPLSR criteria with every antenna in another antenna group for all frequency bands. SPLSR criteria must be demonstrated for all antenna pair combinations irrespective of supported simultaneous transmission scenarios, SPLSR Hotspot combination procedure (Hybrid SPLSR) also be considered for simultaneous transmission analysis.
- iii) If SPLSR evaluation and analysis is needed to determine compliance for a certain power index configuration, SPLSR is performed by taking the highest summation SAR for each of the supported technologies and bands per antenna, along with the minimum of peak SAR location distance. The minimum of peak location distance is documented in the Highest Report SAR and Hotspot Location below for each power index configuration.
- iv) In section 14.6 SPLSR analysis only evaluation Sim-Tx SAR configuration are rounded to two decimal higher or equal to 1.6W/kg.
- v) The analysis addresses the simultaneous transmission and the transition among non-simultaneous transmission radios.

For summed SAR results and SPLSR detailed analysis, please refer to section 14.2/14.3 / 14.4 / 14.5 / 14.6 of this report. All of the combinations of sub6 antenna groups are sufficient to show that AG0 is mutually exclusive from AG1 and that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.

14.2 Head Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.
Simultaneous Transmission Evaluation of WWAN+WLAN+BT:
<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Right Cheek	0.318	0.459	0.746	0.746
Right Tilted	0.242	0.182	0.291	0.291
Left Cheek	0.555	0.257	0.383	0.555
Left Tilted	0.267	0.285	0.457	0.457

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	Ant10	MAX
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Right Cheek	0.896	0.886	0.439	0.235	0.080	0.896
Right Tilted	0.465	0.906	0.450	0.225	0.000	0.906
Left Cheek	0.280	0.566	0.575	0.669	0.000	0.669
Left Tilted	0.213	0.630	0.562	0.282	0.000	0.630

<WLAN2.4GHz/5GHz +BT Worse-case SAR>:

Test Position	NO	1	2	3	2+3	WLAN+BT worse case
	WLAN2.4GHz Ant6 Simultaneous	WLAN5GHz Ant7 Simultaneous	BT Ant 6	Summed 1g SAR (W/kg)		
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)		
Right Cheek	0.146	0.116	0.112	0.228	0.228	
Right Tilted	0.170	0.096	0.142	0.238	0.238	
Left Cheek	0.350	0.395	0.286	0.681	0.681	
Left Tilted	0.261	0.235	0.233	0.468	0.468	

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Right Cheek	0.896	0.746	0.228	1.87
Right Tilted	0.906	0.291	0.238	1.44
Left Cheek	0.669	0.555	0.681	1.91
Left Tilted	0.630	0.457	0.468	1.56

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.



Right Cheek					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.318	0.896	0.228	1.44	-
Ant0-Ant4	0.318	0.886	0.228	1.43	-
Ant0-Ant5	0.318	0.439	0.228	0.99	-
Ant0-Ant7	0.318	0.235	0.228	0.78	-
Ant0-Ant10	0.318	0.080	0.228	0.63	-
Ant1-Ant3	0.459	0.896	0.228	1.58	-
Ant1-Ant4	0.459	0.886	0.228	1.57	-
Ant1-Ant5	0.459	0.439	0.228	1.13	-
Ant1-Ant7	0.459	0.235	0.228	0.92	-
Ant1-Ant10	0.459	0.080	0.228	0.77	-
Ant9-Ant3	0.746	0.896	0.228	1.87	Case 1
Ant9-Ant4	0.746	0.886	0.228	1.86	Case 2
Ant9-Ant5	0.746	0.439	0.228	1.41	-
Ant9-Ant7	0.746	0.235	0.228	1.21	-
Ant9-Ant10	0.746	0.080	0.228	1.05	-

Left Cheek					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.555	0.280	0.681	1.52	-
Ant0-Ant4	0.555	0.566	0.681	1.80	Case 3
Ant0-Ant5	0.555	0.575	0.681	1.81	Case 4
Ant0-Ant7	0.555	0.669	0.681	1.91	Case 5
Ant0-Ant10	0.555	0.080	0.681	1.32	-
Ant1-Ant3	0.257	0.280	0.681	1.22	-
Ant1-Ant4	0.257	0.566	0.681	1.50	-
Ant1-Ant5	0.257	0.575	0.681	1.51	-
Ant1-Ant7	0.257	0.669	0.681	1.61	Case 6
Ant1-Ant10	0.257	0.080	0.681	1.02	-
Ant9-Ant3	0.383	0.280	0.681	1.34	-
Ant9-Ant4	0.383	0.566	0.681	1.63	Case 7
Ant9-Ant5	0.383	0.575	0.681	1.64	Case 8
Ant9-Ant7	0.383	0.669	0.681	1.73	Case 9
Ant9-Ant10	0.383	0.080	0.681	1.14	-

<Simultaneous Transmission analysis of WLAN/BT only without WWAN>:

Test Position	WLAN5GHz Ant 7 Standalone	BT Ant 6	WLAN5GHz Ant7+BT
	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)
Right Cheek	0.342	0.112	0.45
Right Tilted	0.321	0.142	0.46
Left Cheek	1.196	0.286	1.48
Left Tilted	0.840	0.233	1.07

14.3 Hotspot Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Front	0.958	0.954	0.428	0.958
Back	1.294	1.072	0.696	1.294
Left Side	1.124	0.409	0.355	1.124
Right Side	0.244	0.362	1.289	1.289
Bottom Side	1.288	1.294	0.317	1.294

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	Ant10	MAX
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Front	0.111	0.373	0.143	0.221	0.021	0.373
Back	0.642	0.666	0.634	0.622	0.635	0.666
Left Side	0.469	0.237	0.133	0.020	0.107	0.469
Right Side	0.008	0.153	0.082	0.591	0.000	0.591
Top Side	0.094	0.633	0.256	0.139	0.022	0.633

<WLAN2.4GHz/5GHz +BT Worse-case SAR>:

NO	1	2	3	2+3	WLAN+BT worse case
	WLAN2.4GHz Ant6 Simultaneous	WLAN5GHz Ant7 Simultaneous	BT Ant6		
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)		
Front	0.297	0.169	0.091	0.260	0.297
Back	0.435	0.318	0.175	0.493	0.493
Left Side				0.000	0.000
Right Side	0.186	0.547	0.079	0.626	0.626
Top Side	0.649	0.118	0.102	0.220	0.649

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN /BT worse case
	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.373	0.958	0.297	1.63
Back	0.666	1.294	0.493	2.45
Left Side	0.469	1.124	0.000	1.59
Right Side	0.591	1.289	0.626	2.51
Top Side	0.633		0.649	1.28
Bottom Side		1.294	0.000	1.29

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.



Front					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.958	0.111	0.297	1.37	-
Ant0-Ant4	0.958	0.373	0.297	1.63	Case 35
Ant0-Ant5	0.958	0.143	0.297	1.40	-
Ant0-Ant7	0.958	0.221	0.297	1.48	-
Ant0-Ant10	0.958	0.021	0.297	1.28	-
Ant1-Ant3	0.954	0.111	0.297	1.36	-
Ant1-Ant4	0.954	0.373	0.297	1.62	Case 36
Ant1-Ant5	0.954	0.143	0.297	1.39	-
Ant1-Ant7	0.954	0.221	0.297	1.47	-
Ant1-Ant10	0.954	0.021	0.297	1.27	-
Ant9-Ant3	0.428	0.111	0.297	0.84	-
Ant9-Ant4	0.428	0.373	0.297	1.10	-
Ant9-Ant5	0.428	0.143	0.297	0.87	-
Ant9-Ant7	0.428	0.221	0.297	0.95	-
Ant9-Ant10	0.428	0.021	0.297	0.75	-

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	1.294	0.642	0.493	2.43	Case 37
Ant0-Ant4	1.294	0.666	0.493	2.45	Case 38
Ant0-Ant5	1.294	0.634	0.493	2.42	Case 39
Ant0-Ant7	1.294	0.622	0.493	2.41	Case 40
Ant0-Ant10	1.294	0.635	0.493	2.42	Case 41
Ant1-Ant3	1.072	0.642	0.493	2.21	Case 42
Ant1-Ant4	1.072	0.642	0.493	2.21	Case 43
Ant1-Ant5	1.072	0.634	0.493	2.20	Case 44
Ant1-Ant7	1.072	0.622	0.493	2.19	Case 45
Ant1-Ant10	1.072	0.635	0.493	2.20	Case 46
Ant9-Ant3	0.696	0.642	0.493	1.83	Case 47
Ant9-Ant4	0.696	0.666	0.493	1.86	Case 48
Ant9-Ant5	0.696	0.634	0.493	1.82	Case 49
Ant9-Ant7	0.696	0.622	0.493	1.81	Case 50
Ant9-Ant10	0.696	0.635	0.493	1.82	Case 51



Right Side					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.244	0.008	0.626	0.88	
Ant0-Ant4	0.244	0.153	0.626	1.02	
Ant0-Ant5	0.244	0.082	0.626	0.95	
Ant0-Ant7	0.244	0.591	0.626	1.46	
Ant0-Ant10	0.244	0.000	0.626	0.87	
Ant1-Ant3	0.362	0.008	0.626	1.00	
Ant1-Ant4	0.362	0.153	0.626	1.14	
Ant1-Ant5	0.362	0.082	0.626	1.07	
Ant1-Ant7	0.362	0.591	0.626	1.58	
Ant1-Ant10	0.362	0.000	0.626	0.99	
Ant9-Ant3	1.289	0.008	0.626	1.92	Case 52
Ant9-Ant4	1.289	0.153	0.626	2.07	Case 53
Ant9-Ant5	1.289	0.082	0.626	2.00	Case 54
Ant9-Ant7	1.289	0.591	0.626	2.51	Case 55
Ant9-Ant10	1.289	0.000	0.626	1.92	Case 56

14.4 Body-Worn Accessory Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Front	0.958	1.143	0.856	1.143
Back	1.294	1.291	1.279	1.294

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	Ant10	MAX
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Front	0.145	0.566	0.202	0.313	0.029	0.566
Back	0.929	0.907	0.894	0.881	0.902	0.929

<WLAN2.4GHz/5GHz +BT Worst-case SAR>:

Test Position	NO	1	2	3	2+3	WLAN+BT worst case
	WLAN2.4GHz Ant6 Simultaneous	WLAN5GHz Ant7 Simultaneous	BT Ant6	Summed 1g SAR (W/kg)		
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Front	0.099	0.146	0.091		0.237	0.237
Back	0.333	0.329	0.175		0.504	0.504

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worst-case>:

Test Position	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN /BT worst case
	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.566	1.143	0.237	1.95
Back	0.929	1.294	0.504	2.73

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Ant combination	Front				Note
	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.958	0.145	0.237	1.34	-
Ant0-Ant4	0.958	0.566	0.237	1.76	Case 11
Ant0-Ant5	0.958	0.202	0.237	1.40	-
Ant0-Ant7	0.958	0.313	0.237	1.51	-
Ant0-Ant10	0.958	0.029	0.237	1.22	-
Ant1-Ant3	1.143	0.145	0.237	1.53	-
Ant1-Ant4	1.143	0.566	0.237	1.95	Case 12
Ant1-Ant5	1.143	0.202	0.237	1.58	-
Ant1-Ant7	1.143	0.313	0.237	1.69	Case 13
Ant1-Ant10	1.143	0.029	0.237	1.41	-
Ant9-Ant3	0.856	0.145	0.237	1.24	-
Ant9-Ant4	0.856	0.566	0.237	1.66	Case 14
Ant9-Ant5	0.856	0.202	0.237	1.30	-
Ant9-Ant7	0.856	0.313	0.237	1.41	-
Ant9-Ant10	0.856	0.029	0.237	1.12	-

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	1.294	0.929	0.504	2.73	Case 15
Ant0-Ant4	1.294	0.907	0.504	2.71	Case 16
Ant0-Ant5	1.294	0.894	0.504	2.69	Case 17
Ant0-Ant7	1.294	0.881	0.504	2.68	Case 18
Ant0-Ant10	1.294	0.902	0.504	2.70	Case 19
Ant1-Ant3	1.291	0.929	0.504	2.72	Case 20
Ant1-Ant4	1.291	0.907	0.504	2.70	Case 21
Ant1-Ant5	1.291	0.894	0.504	2.69	Case 22
Ant1-Ant7	1.291	0.881	0.504	2.68	Case 23
Ant1-Ant10	1.291	0.902	0.504	2.70	Case 24
Ant9-Ant3	1.279	0.929	0.504	2.71	Case 25
Ant9-Ant4	1.279	0.907	0.504	2.69	Case 26
Ant9-Ant5	1.279	0.894	0.504	2.68	Case 27
Ant9-Ant7	1.279	0.881	0.504	2.66	Case 28
Ant9-Ant10	1.279	0.902	0.504	2.69	Case 29

<Simultaneous Transmission analysis of WLAN/BT only without WWAN>:

Test Position	WLAN5GHz Ant 7 Standalone	BT Ant 6	WLAN5GHz Ant7+BT Summed
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Front	0.546	0.091	0.64
Back	1.116	0.175	1.29

<Sensor off>

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Front	0.512	0.818	0.344	0.818
Back	0.239	0.392	0.310	0.392

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	Ant10	MAX
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Front	0.678	0.566	0.140	0.121	0.005	0.678
Back	1.298	0.304	0.159	0.064	0.127	1.298

<WLAN2.4GHz/5GHz/BT Worse-case SAR

NO	1	2	3	2+3	WLAN+BT worse case
	WLAN2.4GHz Ant6 Simultaneous	WLAN5GHz Ant7 Simultaneous	BT Ant6		
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.361	0.266	0.001	0.267	0.361
Back	0.154	0.285	0.001	0.286	0.286

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN/BT Worse-case>:

Test Position	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN /BT worst case
	1g SAR (W/kg)	1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.678	0.818	0.361	1.86
Back	1.298	0.392	0.286	1.98

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Front					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.512	0.678	0.361	1.55	-
Ant0-Ant4	0.512	0.566	0.361	1.44	-
Ant0-Ant5	0.512	0.140	0.361	1.01	-
Ant0-Ant7	0.512	0.121	0.361	0.99	-
Ant0-Ant10	0.512	0.005	0.361	0.88	-
Ant1-Ant3	0.818	0.678	0.361	1.86	Case30
Ant1-Ant4	0.818	0.566	0.361	1.75	Case31
Ant1-Ant5	0.818	0.140	0.361	1.32	-
Ant1-Ant7	0.818	0.121	0.361	1.30	-
Ant1-Ant10	0.818	0.005	0.361	1.18	-
Ant9-Ant3	0.344	0.678	0.361	1.38	-
Ant9-Ant4	0.344	0.566	0.361	1.27	-
Ant9-Ant5	0.344	0.140	0.361	0.85	-
Ant9-Ant7	0.344	0.121	0.361	0.83	-
Ant9-Ant10	0.344	0.005	0.361	0.71	-

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worst case	Note
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant3	0.239	1.298	0.286	1.82	Case 32
Ant0-Ant4	0.239	0.304	0.286	0.83	-
Ant0-Ant5	0.239	0.159	0.286	0.68	-
Ant0-Ant7	0.239	0.064	0.286	0.59	-
Ant0-Ant10	0.239	0.127	0.286	0.65	-
Ant1-Ant3	0.392	1.298	0.286	1.98	Case 33
Ant1-Ant4	0.392	0.304	0.286	0.98	-
Ant1-Ant5	0.392	0.159	0.286	0.84	-
Ant1-Ant7	0.392	0.064	0.286	0.74	-
Ant1-Ant10	0.392	0.127	0.286	0.81	-
Ant9-Ant3	0.310	1.298	0.286	1.89	Case 34
Ant9-Ant4	0.310	0.304	0.286	0.90	-
Ant9-Ant5	0.310	0.159	0.286	0.76	-
Ant9-Ant7	0.310	0.064	0.286	0.66	-
Ant9-Ant10	0.310	0.127	0.286	0.72	-

14.5 Product specific 10g SAR Exposure Conditions

Remark:

- For Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT+NFC:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
Front	2.110	3.018	0.428	3.018
Back	3.180	2.718	1.296	3.180
Left Side	1.242			1.242
Right Side			3.169	3.169
Bottom Side	2.464	3.209		3.209

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	Ant10	MAX
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
Front						0.000
Back	2.518	2.063	1.138	1.093	2.473	2.518
Left Side	2.461					2.461
Right Side				1.403		1.403
Top Side		2.634				2.634

<WLAN2.4GHz/5GHz /BT Worse-case SAR>

NO	1	2	3	2+3	WLAN+BT worse case
	WLAN2.4GHz Ant6 Simultaneous	WLAN5GHz Ant7 Simultaneous	BT Ant6		
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)
Front		0.493		0.493	0.493
Back	0.335	0.355		0.355	0.355
Left Side				0.000	0.000
Right Side		0.966		0.966	0.966
Top Side	0.945	0.333		0.333	0.945

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN/BT Worse-case+NFC>:

Test Position	AG1	AG0	WLAN/BT worst case	NFC	AG1+AG0+WLAN /BT+NFC worst case
	10g SAR (W/kg)	10g SAR (W/kg)	Summed 10g SAR (W/kg)	10g SAR (W/kg)	Summed 10g SAR (W/kg)
Front	0.000	3.018	0.493	0.001	3.51
Back	2.518	3.180	0.355	0.004	6.06
Left Side	2.461	1.242	0.000	0.001	3.70
Right Side	1.403	3.169	0.966	0.001	5.54
Top Side	2.634		0.945	0.001	3.58
Bottom Side		3.209	0.000	0.001	3.21

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.



Back						
Ant combination	AG0	AG1	WLAN/BT worst case	NFC	AG1+AG0+WLAN +BT worst case+NFC	Note
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	
Ant0-Ant3	3.180	2.518	0.355	0.004	6.06	Case 57
Ant0-Ant4	3.180	2.063	0.355	0.004	5.60	Case 58
Ant0-Ant5	3.180	1.138	0.355	0.004	4.68	Case 59
Ant0-Ant7	3.180	1.093	0.355	0.004	4.63	Case 60
Ant0-Ant10	3.180	2.473	0.355	0.004	6.01	Case 61
Ant1-Ant3	2.718	2.518	0.355	0.004	5.60	Case 62
Ant1-Ant4	2.718	2.063	0.355	0.004	5.14	Case 63
Ant1-Ant5	2.718	1.138	0.355	0.004	4.22	Case 64
Ant1-Ant7	2.718	1.093	0.355	0.004	4.17	Case 65
Ant1-Ant10	2.718	2.473	0.355	0.004	5.55	Case 66
Ant9-Ant3	1.296	2.518	0.355	0.004	4.17	Case 67
Ant9-Ant4	1.296	2.063	0.355	0.004	3.72	-
Ant9-Ant5	1.296	1.138	0.355	0.004	2.79	-
Ant9-Ant7	1.296	1.093	0.355	0.004	2.75	-
Ant9-Ant10	1.296	2.473	0.355	0.004	4.13	Case 68

Right Side						
Ant combination	AG0	AG1	WLAN/BT worst case	NFC	AG1+AG0+WLAN +BT worst case	Note
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	
Ant0-Ant3	0.000		0.966	0.001	0.97	
Ant0-Ant4	0.000		0.966	0.001	0.97	
Ant0-Ant5	0.000		0.966	0.001	0.97	
Ant0-Ant7	0.000	1.403	0.966	0.001	2.37	
Ant0-Ant10	0.000		0.966	0.001	0.97	
Ant1-Ant3	0.000		0.966	0.001	0.97	
Ant1-Ant4	0.000		0.966	0.001	0.97	
Ant1-Ant5	0.000		0.966	0.001	0.97	
Ant1-Ant7	0.000	1.403	0.966	0.001	2.37	
Ant1-Ant10	0.000		0.966	0.001	0.97	
Ant9-Ant3	3.169		0.966	0.001	4.14	Case 69
Ant9-Ant4	3.169		0.966	0.001	4.14	Case 70
Ant9-Ant5	3.169		0.966	0.001	4.14	Case 71
Ant9-Ant7	3.169	1.403	0.966	0.001	5.54	Case 72
Ant9-Ant10	3.169		0.966	0.001	4.14	Case 73

<Simultaneous Transmission analysis of WLAN/BT only without WWAN>:

Test Position	WLAN5GHz Ant 7 Standalone	BT Ant 6	NFC	WLAN5GHz Ant7+BT+NFC Summed 10g SAR (W/kg)
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	
Front	0.880		0.001	0.88
Back	0.906		0.006	0.91
Left Side			0.001	0.00
Right Side	1.846		0.001	1.85
Top Side	0.586		0.001	0.59
Bottom Side			0.001	0.00



<Sensor off>

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT+NFC:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant1	Ant9	MAX
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
Front		1.037		1.037
Back	0.252	0.912		0.912
Left Side				0.000
Right Side				0.000
Bottom Side		0.991		0.991

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	Ant10	MAX
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
Front						0.000
Back	1.650	0.946				1.650
Left Side	1.780					1.780
Right Side						0.000
Top Side		0.875				0.875

<WLAN2.4GHz/5GHz /BT Worse-case SAR>

NO	1	2	3	2+3	WLAN+BT worse case
	WLAN2.4GHz Ant6 Simultaneous	WLAN5GHz Ant7 Simultaneous	BT Ant6		
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)		
Front				0.000	0.000
Back	0.453			0.000	0.453
Left Side				0.000	0.000
Right Side		0.416		0.416	0.416
Top Side	0.425			0.000	0.425

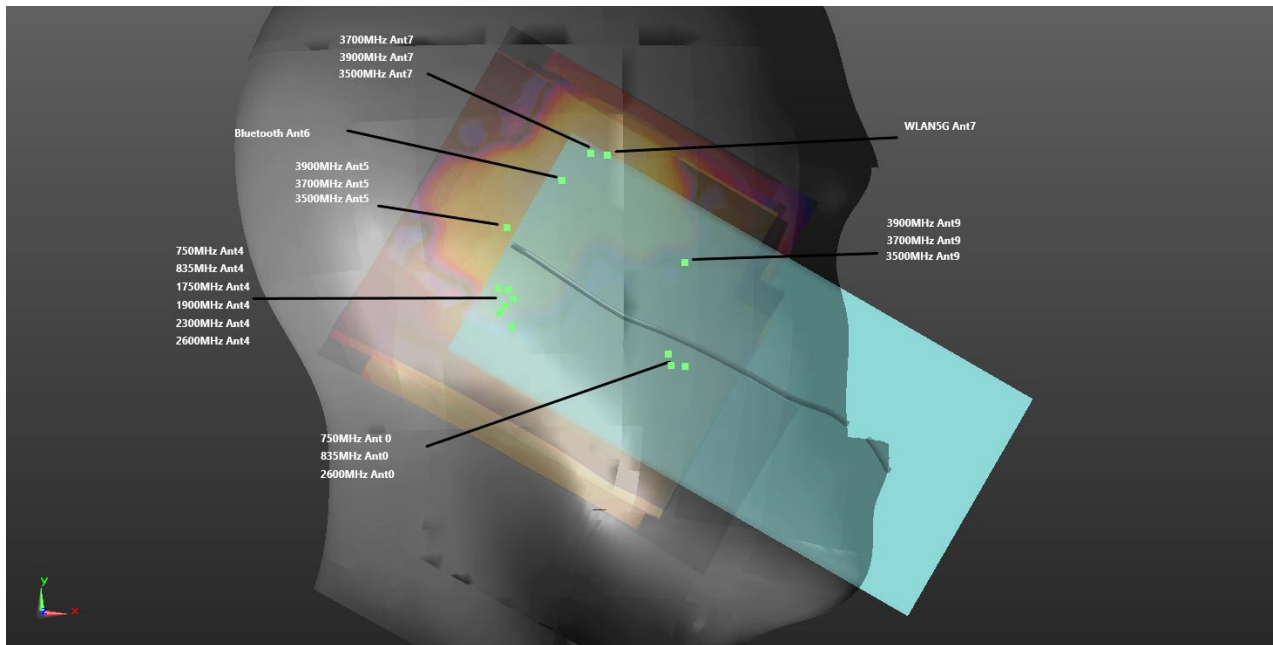
<Simultaneous Transmission analysis of AG0 + AG1 + WLAN/BT Worse-case >:

Test Position	AG1	AG0	WLAN/BT worst case	AG1+AG0+WLAN /BT worse case
	10g SAR (W/kg)	10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)
Front	0.000	1.037	0.000	1.04
Back	1.650	0.912	0.453	3.02
Left Side	1.780	0.000	0.000	1.78
Right Side	0.000	0.000	0.416	0.42
Top Side	0.875		0.425	1.30
Bottom Side		0.991	0.000	0.99

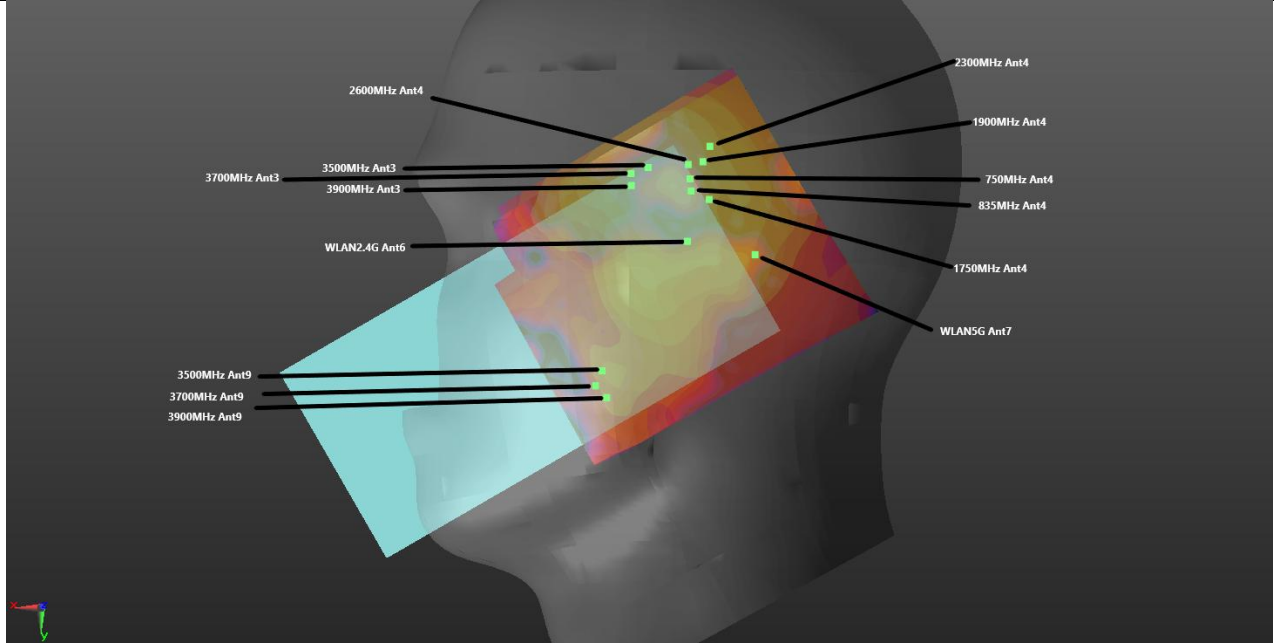
14.6 SPLSR Evaluation and Analysis

General Note:

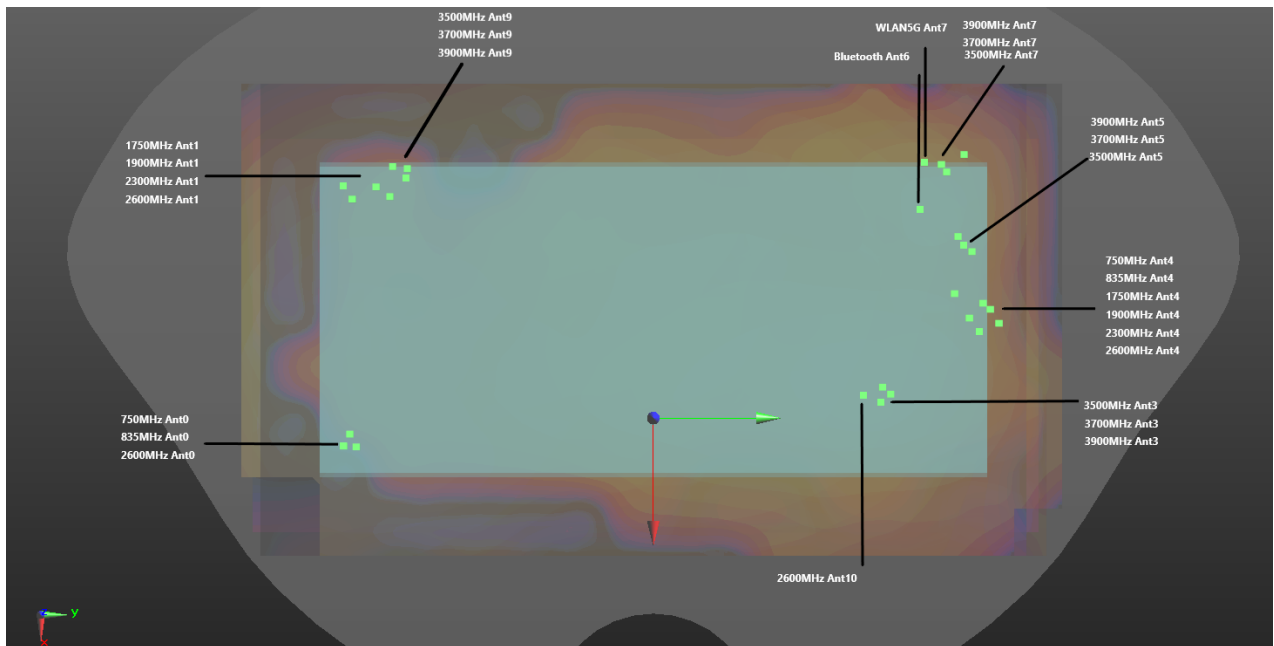
1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. $SPLSR = (SAR1 + SAR2)1.5 / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
3. Per April 2022 TCB Workshop Notes, WLAN5GHz Antenna 7, NFC Antenna and BT Antenna 6 was summed algebraically with the AG1 for the purposes of hybrid SPLSR combination and they are located at the top of the device
4. Per April 2022 TCB Workshop, instead of doing a small volume scan over a co-located antenna pair, used summing the SAR values of the co-located pair and using that value in SPLSR calculation. In the calculation used the minimum distance between the spatially separated antenna and the closest antenna of the co-located antenna pair to be conservative.
5. The detail hotspot point for each transmitter in each exposure condition are showing as below figure and the minimum 3D distance for each sum combination is used for SPLSR analysis.
6. The axis peak locations refer to Section 14.7.



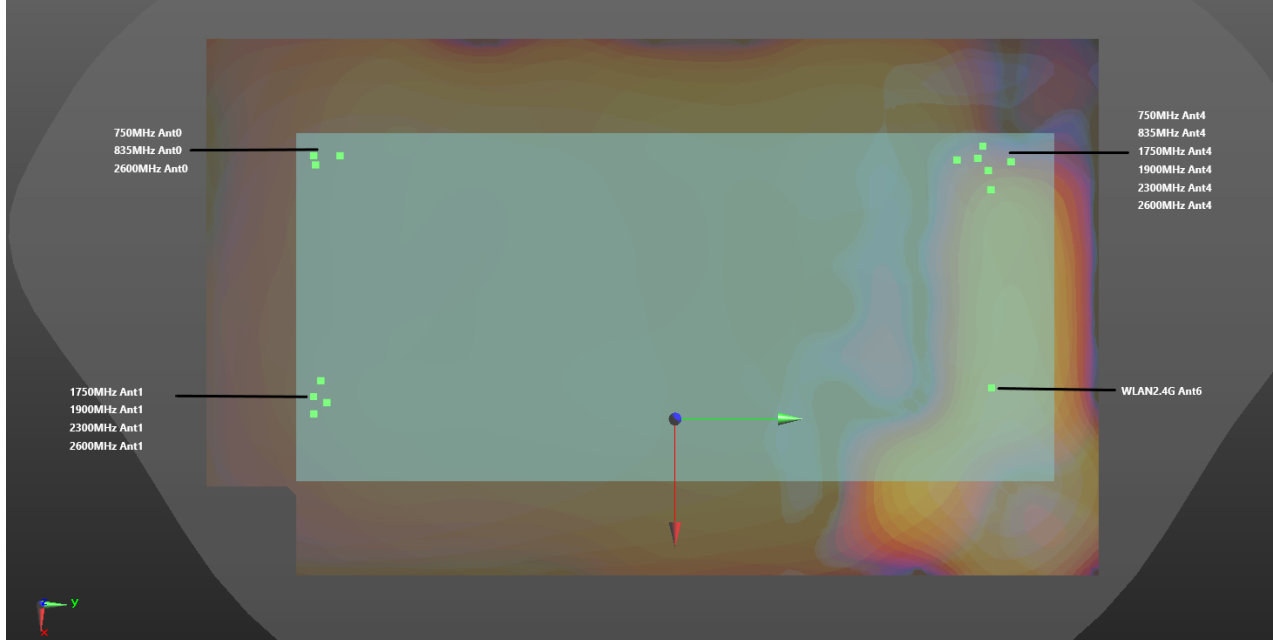
Head Left Check 0mm



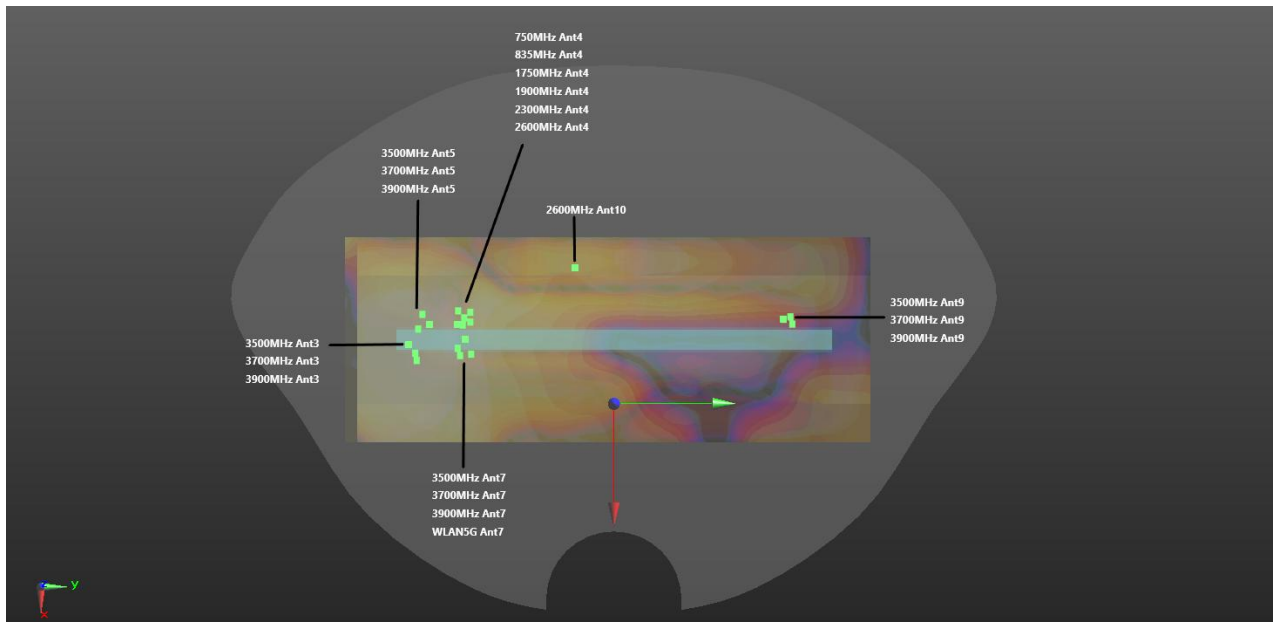
Head Right Cheek 0mm



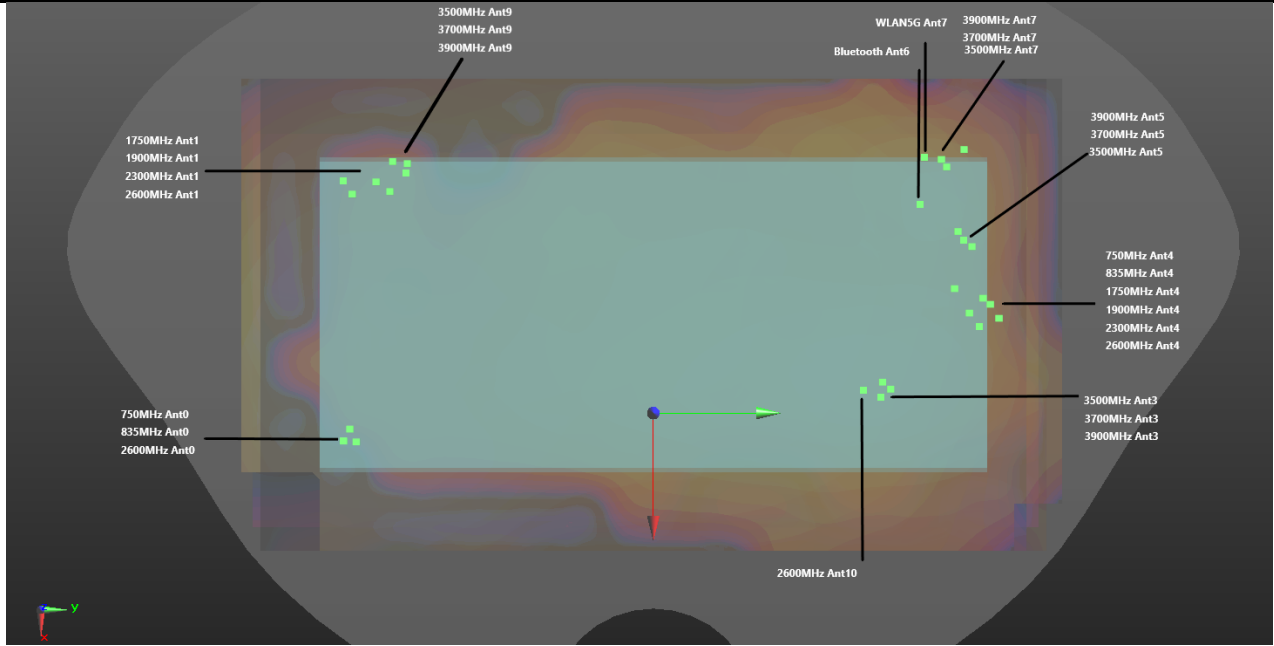
Hotspot Back 5mm



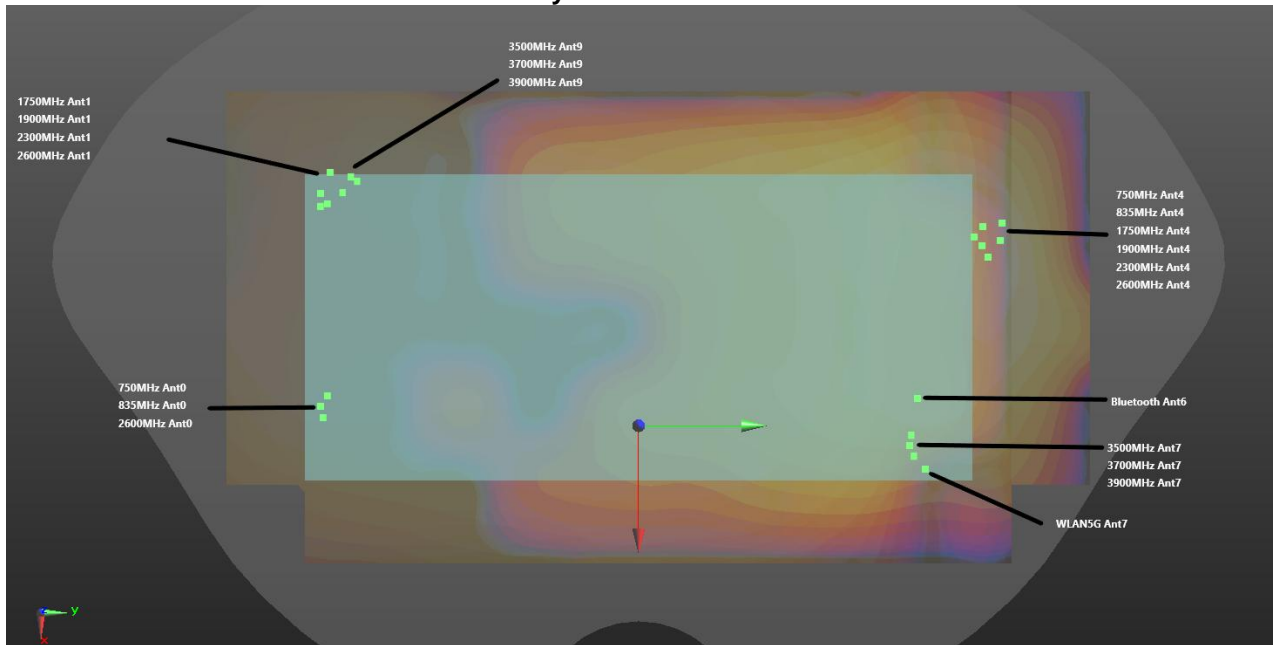
Hotspot Front 5mm



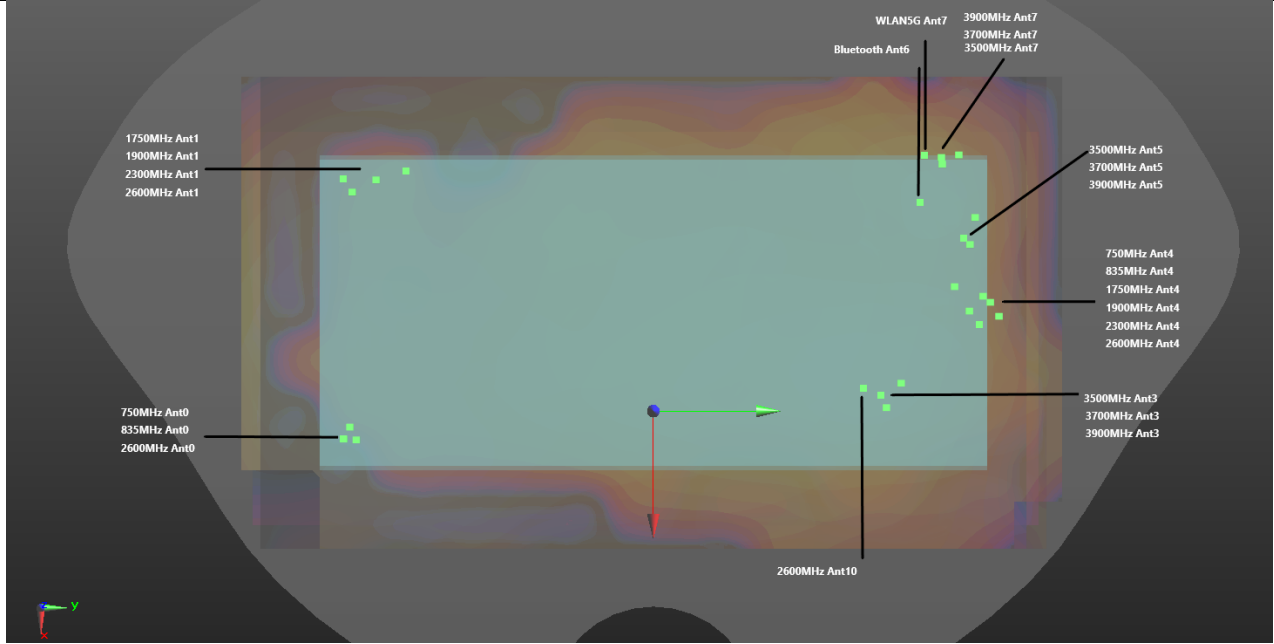
Hotspot Right Side 5mm



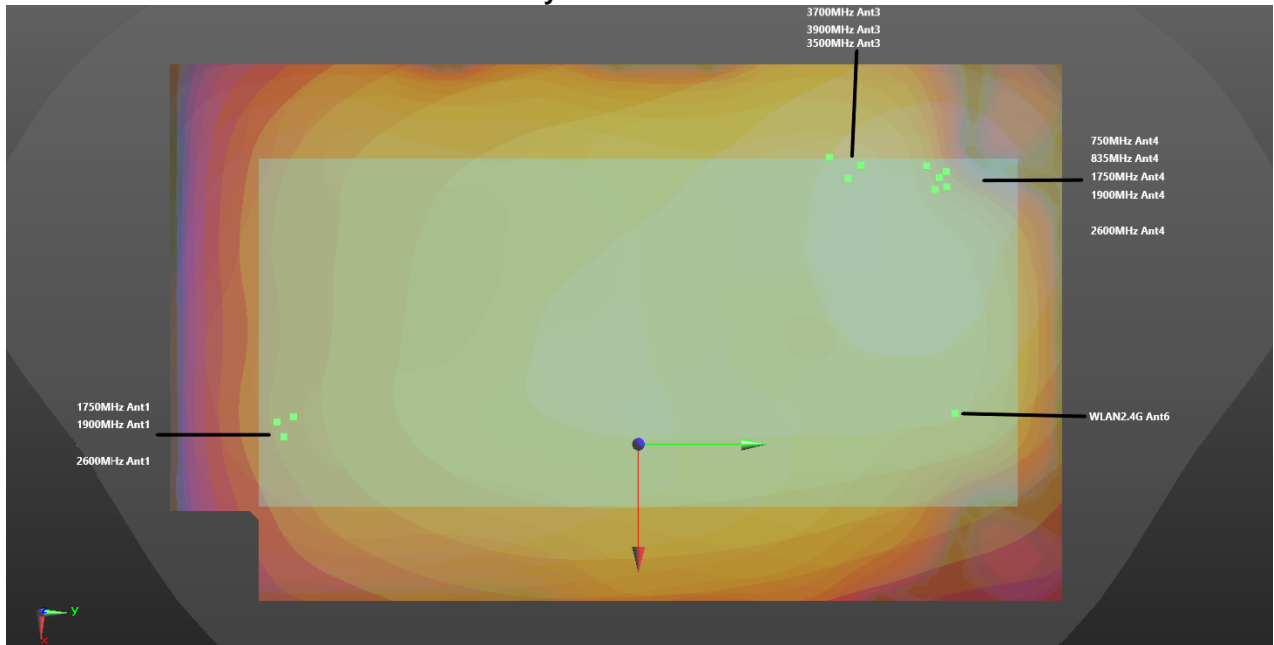
Body-worn Back 5mm



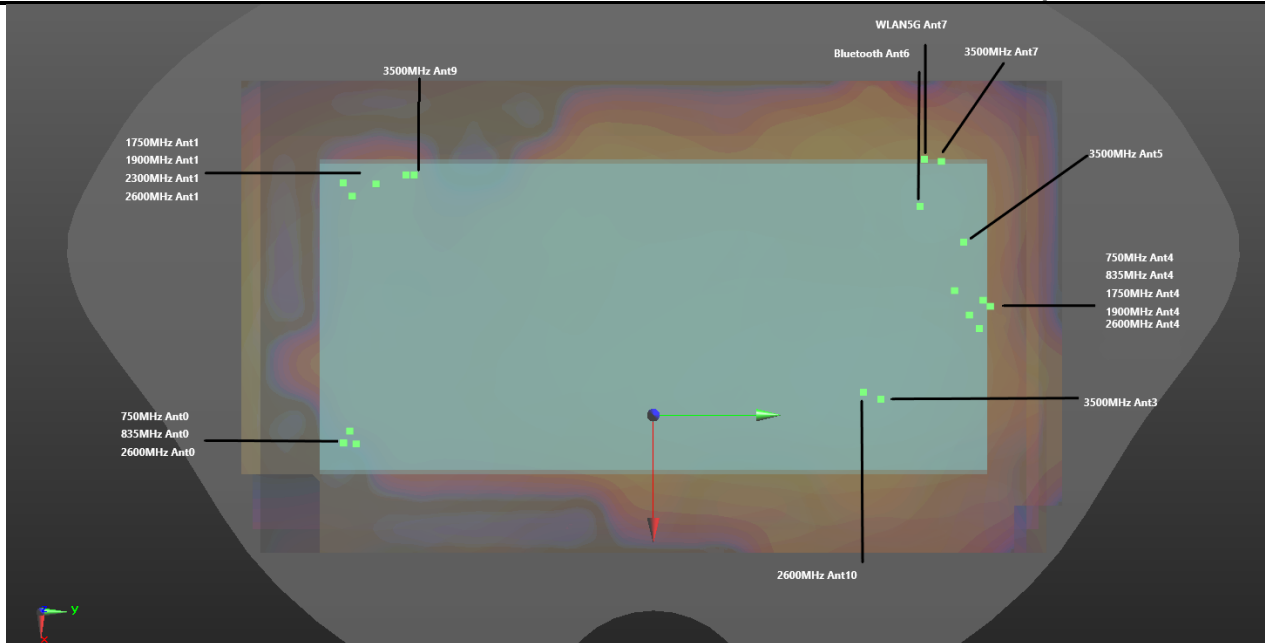
Body-worn Front 5mm



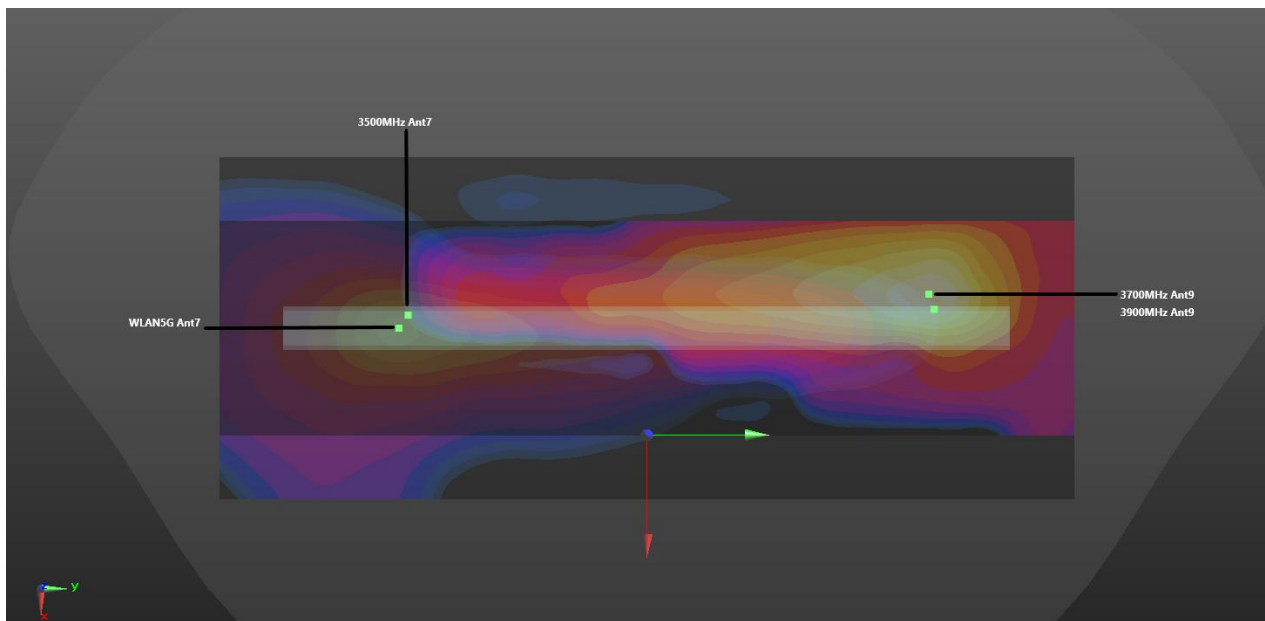
Body-worn Back 20mm



Body-worn Front 11mm



Extremity Back 0mm



Extremity Right Side 0mm



<Head>

No.1 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			1g SAR (W/kg)	(mm)	X	Y	Z				
Ant 9	Right Cheek	0.746	0.746	0mm	42.56	57.23	-1.15	84.8	1.87	0.03	Not required
Ant 3		0.896	1.124	0mm	25.52	-25.86	-1.02				
WLAN 5G Ant 7		0.116		0mm							
BT Ant 6		0.112		0mm							
Ant 9	Right Cheek	0.746	0.746	0mm	42.56	57.23	-1.15	64.4	1.87	0.04	Not required
Ant 3		0.896	1.124	0mm							
WLAN 5G Ant 7		0.116		0mm	-15.3	30.1	6.77				
BT Ant 6		0.112		0mm							
Ant 9	Right Cheek	0.746	0.746	0mm	42.56	57.23	-1.15	65.9	1.87	0.04	Not required
Ant 3		0.896	1.124	0mm							
WLAN 5G Ant 7		0.116		0mm							
BT Ant 6		0.112		0mm	-6.22	13.01	1.05				
No.2 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
1g SAR (W/kg)	(mm)	X	Y	Z							
Ant 9	Right Cheek	0.746	0.746	0mm	42.56	57.23	-1.15	88.1	1.86	0.03	Not required
Ant 4		0.886	1.114	0mm	9.37	-24.4	-1.36				
WLAN 5G Ant 7		0.116		0mm							
BT Ant 6		0.112		0mm							
Ant 9	Right Cheek	0.746	0.746	0mm	42.56	57.23	-1.15	64.4	1.86	0.04	Not required
Ant 4		0.886	1.114	0mm							
WLAN 5G Ant 7		0.116		0mm	-15.3	30.1	6.77				
BT Ant 6		0.112		0mm							
Ant 9	Right Cheek	0.746	0.746	0mm	42.56	57.23	-1.15	65.9	1.86	0.04	Not required
Ant 4		0.886	1.114	0mm							
WLAN 5G Ant 7		0.116		0mm							
BT Ant 6		0.112		0mm	-6.22	13.01	1.05				

No.3 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
			1g SAR (W/kg)	(mm)	X	Y	Z				
Ant 0	Left Cheek	0.555	0.555	0mm	50.26	-35.2	-2.11	62.8	1.80	0.04	Not required
Ant 4		0.566	1.247	0mm	-10.4	-19.63	2.05				
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm							
Ant 0	Left Cheek	0.555	0.555	0mm	50.26	-35.2	-2.11	89.7	1.80	0.03	Not required
Ant 4		0.566	1.247	0mm							
WLAN 5G Ant 7		0.395		0mm	17.2	48.2	-0.89				
BT Ant 6		0.286		0mm							
Ant 0	Left Cheek	0.555	0.555	0mm	50.26	-35.2	-2.11	87.9	1.80	0.03	Not required
Ant 4		0.566	1.247	0mm							
WLAN 5G Ant 7		0.395		0mm	13.26	44.56	-1.63				
BT Ant 6		0.286		0mm							
No.4 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
1g SAR (W/kg)	(mm)	X	Y	Z							
Ant 0	Left Cheek	0.555	0.555	0mm	50.26	-35.2	-2.11	72.9	1.81	0.03	Not required
Ant 5		0.575	1.256	0mm	-10.2	5.52	-1.04				
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm							
Ant 0	Left Cheek	0.555	0.555	0mm	50.26	-35.2	-2.11	89.7	1.81	0.03	Not required
Ant 5		0.575	1.256	0mm							
WLAN 5G Ant 7		0.395		0mm	17.2	48.2	-0.89				



No. Band	Position	SAR 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
BT Ant 6	Left Cheek	0.286	1.256	0mm				87.9	1.81	0.03	Not required
Ant 0		0.555		0mm	50.26	-35.2	-2.11				
Ant 5		0.575		0mm							
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm	13.26	44.56	-1.63				
Ant 0	Left Cheek	0.555	1.350	0mm	50.26	-35.2	-2.11	89.8	1.91	0.03	Not required
Ant 7		0.669		0mm	18.9	48.9	1.62				
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm							
Ant 0	Left Cheek	0.555	1.350	0mm	50.26	-35.2	-2.11	89.7	1.91	0.03	Not required
Ant 7		0.669		0mm							
WLAN 5G Ant 7		0.395		0mm	17.2	48.2	-0.89				
BT Ant 6		0.286		0mm							
Ant 0	Left Cheek	0.555	1.350	0mm	50.26	-35.2	-2.11	87.9	1.91	0.03	Not required
Ant 7		0.669		0mm							
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm	13.26	44.56	-1.63				
Ant 1	Left Cheek	0.257	1.350	0mm	47.1	-59.8	-0.13	112.3	1.61	0.02	Not required
Ant 7		0.669		0mm	18.9	48.9	1.62				
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm							
Ant 1	Left Cheek	0.257	1.350	0mm	47.1	-59.8	-0.13	112.1	1.61	0.02	Not required
Ant 7		0.669		0mm							
WLAN 5G Ant 7		0.395		0mm	17.2	48.2	-0.89				
BT Ant 6		0.286		0mm							
Ant 1	Left Cheek	0.257	1.350	0mm	47.1	-59.8	-0.13	109.7	1.61	0.02	Not required
Ant 7		0.669		0mm							
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm	13.26	44.56	-1.63				
Ant 9	Left Cheek	0.383	1.247	0mm	52.29	1.08	-1.84	53.1	1.63	0.04	Not required
Ant 4		0.566		0mm	-0.25	8.45	-1.11				
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm							
Ant 9	Left Cheek	0.383	1.247	0mm	52.29	1.08	-1.84	58.8	1.63	0.04	Not required
Ant 4		0.566		0mm							
WLAN 5G Ant 7		0.395		0mm	17.2	48.2	-0.89				
BT Ant 6		0.286		0mm							
Ant 9	Left Cheek	0.383	1.247	0mm	52.29	1.08	-1.84	58.4	1.63	0.04	Not required
Ant 4		0.566		0mm							
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm	13.26	44.56	-1.63				
Ant 9	Left Cheek	0.383	1.256	0mm	52.29	1.08	-1.84	62.7	1.64	0.03	Not required
Ant 5		0.575		0mm	-10.2	5.52	-1.04				
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm							



No.9 Band	Position	SAR 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Left Cheek	0.383	1.256	0mm	52.29	1.08	-1.84	58.8	1.64	0.04	Not required
Ant 5		0.575		0mm							
WLAN 5G Ant 7		0.395		0mm	17.2	48.2	-0.89				
BT Ant 6		0.286		0mm							
Ant 9	Left Cheek	0.383	1.256	0mm	52.29	1.08	-1.84	58.4	1.64	0.04	Not required
Ant 5		0.575		0mm							
WLAN 5G Ant 7		0.395		0mm							
BT Ant 6		0.286		0mm	13.26	44.56	-1.63				

<Hotspot>

No.35 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Front	0.958	0.670	5mm	-33	-81.7	-1.14	157.2	1.63	0.01	Not required
Ant 4		0.373		5mm	-37.6	75.4	-0.7				
WLAN2.4GHz Ant6		0.297		5mm							
Ant 0	Front	0.958	0.670	5mm	-33	-81.7	-1.14	160.5	1.63	0.01	Not required
Ant 4		0.373		5mm							
WLAN2.4GHz Ant6		0.297		5mm	21.2	69.4	-0.56				

No.37 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.294	1.135	5mm	22.8	-78.6	-0.91	133.4	2.43	0.03	Not required
Ant 3		0.642		5mm	23.4	54.8	-0.76				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.135	5mm	22.8	-78.6	-0.91	154.7	2.43	0.02	Not required
Ant 3		0.642		5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.135	5mm	22.8	-78.6	-0.91	156.9	2.43	0.02	Not required
Ant 3		0.642		5mm							



No.38 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
Ant 0	Back	1.294	1.294	5mm	22.8	-78.6	-0.91	150.5	2.45	0.03	Not required
Ant 4		0.666	1.159	5mm	18.8	71.8	-0.76				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294		1.294	5mm	22.8	-78.6	-0.91	154.7	2.45	0.02
Ant 4		0.666	1.159	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294		1.294	5mm	22.8	-78.6	-0.91	156.9	2.45	0.02
Ant 4		0.666	1.159	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.39 Band	Position	SAR 1g SAR (W/kg)		Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results
					X	Y	Z				
Ant 0	Back	1.294	1.294	5mm	22.8	-78.6	-0.91	156.0	2.42	0.02	Not required
Ant 5		0.634	1.127	5mm	-17	72.2	-0.98				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294		1.294	5mm	22.8	-78.6	-0.91	154.7	2.42	0.02
Ant 5		0.634	1.127	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294		1.294	5mm	22.8	-78.6	-0.91	156.9	2.42	0.02
Ant 5		0.634	1.127	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.40 Band	Position	SAR 1g SAR (W/kg)		Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results
					X	Y	Z				
Ant 0	Back	1.294	1.294	5mm	22.8	-78.6	-0.91	152.9	2.41	0.02	Not required
Ant 7		0.622	1.115	5mm	-44.8	58.6	-0.9				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294		1.294	5mm	22.8	-78.6	-0.91	154.7	2.41	0.02
Ant 7		0.622	1.115	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294		1.294	5mm	22.8	-78.6	-0.91	156.9	2.41	0.02
Ant 7		0.622	1.115	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.41 Band	Position	SAR 1g SAR (W/kg)		Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results
					X	Y	Z				
Ant 0	Back	1.294	1.294	5mm	22.8	-78.6	-0.91	121.2	2.42	0.03	Not required
Ant 10		0.635	1.128	5mm	26.6	42.5	-0.86				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294		1.294	5mm	22.8	-78.6	-0.91	154.7	2.42	0.02
Ant 10		0.635	1.128	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				



No.42 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
BT Ant 6	Back	0.175	1.128	5mm				156.9	2.42	0.02	Not required
Ant 0		1.294		5mm	22.8	-78.6	-0.91				
Ant 10		0.635		5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	134.4	2.21	0.02	Not required
Ant 3		0.642	5mm	23.4	54.8	-0.76					
WLAN 5G Ant 7		0.318	5mm								
BT Ant 6		0.175	5mm								
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	130.4	2.21	0.03	Not required
Ant 3		0.642	5mm								
WLAN 5G Ant 7		0.318	5mm	-36.8	64.2	-1.6					
BT Ant 6		0.175	5mm								
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	133.2	2.21	0.02	Not required
Ant 3		0.642	5mm								
WLAN 5G Ant 7		0.318	5mm								
BT Ant 6		0.175	5mm	-35.6	67	-1.03					
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	148.2	2.21	0.02	Not required
Ant 4		0.642	5mm	18.8	71.8	-0.76					
WLAN 5G Ant 7		0.318	5mm								
BT Ant 6		0.175	5mm								
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	130.4	2.21	0.03	Not required
Ant 4		0.642	5mm								
WLAN 5G Ant 7		0.318	5mm	-36.8	64.2	-1.6					
BT Ant 6		0.175	5mm								
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	133.2	2.21	0.02	Not required
Ant 4		0.642	5mm								
WLAN 5G Ant 7		0.318	5mm								
BT Ant 6		0.175	5mm	-35.6	67	-1.03					
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	139.6	2.20	0.02	Not required
Ant 5		0.634	5mm	-17	72.2	-0.98					
WLAN 5G Ant 7		0.318	5mm								
BT Ant 6		0.175	5mm								
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	130.4	2.20	0.03	Not required
Ant 5		0.634	5mm								
WLAN 5G Ant 7		0.318	5mm	-36.8	64.2	-1.6					
BT Ant 6		0.175	5mm								
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	133.2	2.20	0.02	Not required
Ant 5		0.634	5mm								
WLAN 5G Ant 7		0.318	5mm								
BT Ant 6		0.175	5mm	-35.6	67	-1.03					
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	125.2	2.19	0.03	Not required
Ant 7		0.622	5mm	-44.8	58.6	-0.9					
WLAN 5G Ant 7		0.318	5mm								
BT Ant 6		0.175	5mm								



No.46 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	130.4	2.19	0.02	Not required
Ant 7		0.622	1.115	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	133.2	2.19	0.02	Not required
Ant 7		0.622	1.115	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.47 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	125.0	2.20	0.03	Not required
Ant 10		0.635	1.128	5mm	26.6	42.5	-0.86				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	130.4	2.20	0.03	Not required
Ant 10		0.635	1.128	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 1	Back	1.072	1.072	5mm	-35.2	-66.2	-1.45	133.2	2.20	0.02	Not required
Ant 10		0.635	1.128	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.48 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	136.2	1.83	0.02	Not required
Ant 3		0.642	1.135	5mm	23.4	54.8	-0.76				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	130.4	1.83	0.02	Not required
Ant 3		0.642	1.135	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	133.2	1.83	0.02	Not required
Ant 3		0.642	1.135	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.49 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	149.7	1.86	0.02	Not required
Ant 4		0.666	1.159	5mm	18.8	71.8	-0.76				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	130.4	1.86	0.02	Not required
Ant 4		0.666	1.159	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	133.2	1.86	0.02	Not required
Ant 4		0.666	1.159	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.49 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	140.2	1.82	0.02	Not required



No.50 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 5		0.634	1.127	5mm	-17	72.2	-0.98	130.4	1.82	0.02	Not required
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	133.2	1.82	0.02	Not required
Ant 5		0.634	1.127	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6	0.175	5mm									
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	133.2	1.82	0.02	Not required
Ant 5		0.634	1.127	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6	0.175	5mm		-35.6	67	-1.03					
No.51 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant 9	Back	0.696	0.696	5mm	-39.2	-66.2	-1.32	124.9	1.81	0.02	Not required
Ant 7		0.622	1.115	5mm	-44.8	58.6	-0.9				
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm							
Ant 9	Back	0.696		0.696	5mm	-39.2	-66.2	-1.32	130.4	1.81	0.02
Ant 7		0.622	1.115	5mm							
WLAN 5G Ant 7		0.318		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 9	Back	0.696		0.696	5mm	-39.2	-66.2	-1.32	133.2	1.81	0.02
Ant 7		0.622	1.115	5mm							
WLAN 5G Ant 7		0.318		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.52 Band	Position	SAR 1g SAR (W/kg)		Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	162.9	1.92	0.02	Not required
Ant 3		0.008	0.634	5mm	-7.5	-99.5	-0.62				
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289		1.289	5mm	-10	63.4	-0.93	127.3	1.92	0.02
Ant 3		0.008	0.634	5mm							
WLAN 5G Ant 7		0.547		5mm	-2	-63.6	-1.35				
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289		1.289	5mm	-10	63.4	-0.93	126.4	1.92	0.02
Ant 3		0.008	0.634	5mm							
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm	0	-62.6	-1.36				



No.53 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	74.9	2.07	0.04	Not required
Ant 4		0.153	0.779	5mm	-14	-11.4	-1				
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	127.3	2.07	0.02	Not required
Ant 4		0.153	0.779	5mm							
WLAN 5G Ant 7		0.547		5mm	-2	-63.6	-1.35				
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	126.4	2.07	0.02	Not required
Ant 4		0.153	0.779	5mm							
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm	0	-62.6	-1.36				
No.54 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	138.8	2.00	0.02	Not required
Ant 5		0.082	0.708	5mm	-20.8	-75	-0.71				
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	127.3	2.00	0.02	Not required
Ant 5		0.082	0.708	5mm							
WLAN 5G Ant 7		0.547		5mm	-2	-63.6	-1.35				
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	126.4	2.00	0.02	Not required
Ant 5		0.082	0.708	5mm							
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm	0	-62.6	-1.36				
No.55 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	126.5	2.51	0.03	Not required
Ant 7		0.591	1.217	5mm	-5.3	-63	-0.97				
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	127.3	2.51	0.03	Not required
Ant 7		0.591	1.217	5mm							
WLAN 5G Ant 7		0.547		5mm	-2	-63.6	-1.35				
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	126.4	2.51	0.03	Not required
Ant 7		0.591	1.217	5mm							
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm	0	-62.6	-1.36				
No.56 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	152.0	1.92	0.02	Not required
Ant 10		0.000	0.626	5mm	-27.12	-87.68	-0.61				
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	127.3	1.92	0.02	Not required
Ant 10		0.000	0.626	5mm							
WLAN 5G Ant 7		0.547		5mm	-2	-63.6	-1.35				
BT Ant 6		0.079		5mm							
Ant 9	Right Side	1.289	1.289	5mm	-10	63.4	-0.93	126.4	1.92	0.02	Not required



Ant 10		0.000	0.626	5mm							
WLAN 5G Ant 7		0.547		5mm							
BT Ant 6		0.079		5mm	0	-62.6	-1.36				

<Body-worn>

No.11 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Front	0.958	0.958	5mm	-33	-81.7	-1.14	155.9	1.76	0.02	Not required
Ant 4		0.566		5mm	-39.6	74.1	-0.75				
WLAN 5G Ant 7		0.146		5mm							
BT Ant 6		0.091		5mm							
Ant 0	Front	0.958	0.958	5mm	-33	-81.7	-1.14	168.4	1.76	0.01	Not required
Ant 4		0.566		5mm							
WLAN 5G Ant 7		0.146		5mm	29.6	74.6	-1.02				
BT Ant 6		0.091		5mm							
Ant 0	Front	0.958	0.958	5mm	-33	-81.7	-1.14	159.9	1.76	0.01	Not required
Ant 4		0.566		5mm							
WLAN 5G Ant 7		0.146		5mm							
BT Ant 6		0.091		5mm	22.3	68.35	-0.42				
No.12 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	1.143	1.143	5mm	-18.9	-81.7	-0.59	157.2	1.95	0.02	Not required
Ant 4		0.566		5mm	-39.6	74.1	-0.75				
WLAN 5G Ant 7		0.146		5mm							
BT Ant 6		0.091		5mm							
Ant 0	Front	1.143	1.143	5mm	-33	-81.7	-1.14	168.4	1.95	0.02	Not required
Ant 4		0.566		5mm							
WLAN 5G Ant 7		0.146		5mm	29.6	74.6	-1.02				
BT Ant 6		0.091		5mm							
Ant 0	Front	1.143	1.143	5mm	-33	-81.7	-1.14	159.9	1.95	0.02	Not required
Ant 4		0.566		5mm							
WLAN 5G Ant 7		0.146		5mm							
BT Ant 6		0.091		5mm	22.3	68.35	-0.42				
No.13 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	1.143	1.143	5mm	-18.9	-81.7	-0.59	159.0	1.69	0.01	Not required
Ant 7		0.313		5mm	36.4	67.4	-1.01				
WLAN 5G Ant 7		0.146		5mm							
BT Ant 6		0.091		5mm							
Ant 0	Front	1.143	1.143	5mm	-33	-81.7	-1.14	168.4	1.69	0.01	Not required
Ant 4		0.313		5mm							
WLAN 5G Ant 7		0.146		5mm	29.6	74.6	-1.02				
BT Ant 6		0.091		5mm							
Ant 0	Front	1.143	1.143	5mm	-33	-81.7	-1.14	159.9	1.69	0.01	Not required
Ant 4		0.313		5mm							
WLAN 5G Ant 7		0.146		5mm							
BT Ant 6		0.091		5mm	22.3	68.35	-0.42				
No.14 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Front	0.856	0.856	5mm	34.4	-77	-0.36	168.2	1.66	0.01	Not required
Ant 4		0.566		5mm	-39.6	74.1	-0.75				
WLAN 5G Ant 7		0.146		5mm							
BT Ant 6		0.091		5mm							



Ant 0	Front	0.856	0.856	5mm	-33	-81.7	-1.14	168.4	1.66	0.01	Not required
Ant 4		0.566		5mm							
WLAN 5G Ant 7		0.146		5mm	29.6	74.6	-1.02				
BT Ant 6		0.091		5mm							
Ant 0	Front	0.856	0.803	5mm	-33	-81.7	-1.14	159.9	1.66	0.01	Not required
Ant 4		0.566		5mm							
WLAN 5G Ant 7		0.146		5mm							
BT Ant 6		0.091		5mm	22.3	68.35	-0.42				

No.15 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.294	1.433	5mm	22.8	-78.6	-0.91	133.4	2.73	0.03	Not required
Ant 3		0.929		5mm	23.4	54.8	-0.76				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.433	5mm	22.8	-78.6	-0.91	154.7	2.73	0.03	Not required
Ant 3		0.929		5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.433	5mm	22.8	-78.6	-0.91	156.9	2.73	0.03	Not required
Ant 3		0.929		5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.16 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.294	1.411	5mm	22.8	-78.6	-0.91	150.5	2.71	0.03	Not required
Ant 4		0.907		5mm	18.8	71.8	-0.76				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.411	5mm	22.8	-78.6	-0.91	154.7	2.71	0.03	Not required
Ant 4		0.907		5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.411	5mm	22.8	-78.6	-0.91	156.9	2.71	0.03	Not required
Ant 4		0.907		5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.17 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.294	1.398	5mm	22.8	-78.6	-0.91	156.0	2.69	0.03	Not required
Ant 5		0.894		5mm	-17	72.2	-0.98				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.398	5mm	22.8	-78.6	-0.91	154.7	2.69	0.03	Not required
Ant 5		0.894		5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.398	5mm	22.8	-78.6	-0.91	156.9	2.69	0.03	Not required
Ant 5		0.894		5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.18 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.294	1.385	5mm	22.8	-78.6	-0.91	152.9	2.68	0.03	Not required
Ant 7		0.881		5mm	-44.8	58.6	-0.9				
WLAN 5G Ant 7		0.329		5mm							



No.19 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
BT Ant 6	Back	0.175		5mm				154.7	2.68	0.03	Not required
Ant 0		1.294	1.294	5mm	22.8	-78.6	-0.91				
Ant 7		0.881	1.385	5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.294	5mm	22.8	-78.6	-0.91	156.9	2.68	0.03	Not required
Ant 7		0.881	5mm								
WLAN 5G Ant 7		0.329	5mm								
BT Ant 6		0.175	5mm	-35.6	67	-1.03					
BT Ant 6		0.175	5mm								
No.20 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	1.294	1.294	5mm	22.8	-78.6	-0.91	121.2	2.70	0.04	Not required
Ant 10		0.902	1.406	5mm	26.6	42.5	-0.86				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.294	5mm	22.8	-78.6	-0.91	154.7	2.70	0.03	Not required
Ant 10		0.902	1.406	5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 0	Back	1.294	1.294	5mm	22.8	-78.6	-0.91	156.9	2.70	0.03	Not required
Ant 10		0.902	1.406	5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.21 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	134.4	2.72	0.03	Not required
Ant 3		0.929	1.433	5mm	23.4	54.8	-0.76				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	130.4	2.72	0.03	Not required
Ant 3		0.929	1.433	5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	133.2	2.72	0.03	Not required
Ant 3		0.929	1.433	5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.22 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	148.2	2.70	0.03	Not required
Ant 4		0.907	1.411	5mm	18.8	71.8	-0.76				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	130.4	2.70	0.03	Not required
Ant 4		0.907	1.411	5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	133.2	2.70	0.03	Not required
Ant 4		0.907	1.411	5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.22 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	139.6	2.69	0.03	Not required
Ant 5		0.894	1.398	5mm	-17	72.2	-0.98				
WLAN 5G Ant 7		0.329		5mm							



No.23 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
BT Ant 6	Back	0.175		5mm				130.4	2.69	0.03	Not required
Ant 1		1.291	1.291	5mm	-35.2	-66.2	-1.45				
Ant 5		0.894	1.398	5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	133.2	2.69	0.03	Not required
Ant 5		0.894	5mm								
WLAN 5G Ant 7		0.329	5mm								
BT Ant 6		0.175	5mm	-35.6	67	-1.03					
No.24 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	125.2	2.68	0.04	Not required
Ant 7		0.881	1.385	5mm	-44.8	58.6	-0.9				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	130.4	2.68	0.03	Not required
Ant 7		0.881	5mm								
WLAN 5G Ant 7		0.329	5mm	-36.8	64.2	-1.6					
BT Ant 6		0.175	5mm								
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	133.2	2.68	0.03	Not required
Ant 7		0.881	5mm								
WLAN 5G Ant 7		0.329	5mm								
BT Ant 6		0.175	5mm	-35.6	67	-1.03					
No.25 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	125.0	2.70	0.04	Not required
Ant 10		0.902	1.406	5mm	26.6	42.5	-0.86				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	130.4	2.70	0.03	Not required
Ant 10		0.902	5mm								
WLAN 5G Ant 7		0.329	5mm	-36.8	64.2	-1.6					
BT Ant 6		0.175	5mm								
Ant 1	Back	1.291	1.291	5mm	-35.2	-66.2	-1.45	133.2	2.70	0.03	Not required
Ant 10		0.902	5mm								
WLAN 5G Ant 7		0.329	5mm								
BT Ant 6		0.175	5mm	-35.6	67	-1.03					
No.26 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	1.279	1.279	5mm	-39.2	-66.2	-1.32	136.2	2.71	0.03	Not required
Ant 3		0.929	1.433	5mm	23.4	54.8	-0.76				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 9	Back	1.279	1.279	5mm	-39.2	-66.2	-1.32	130.4	2.71	0.03	Not required
Ant 3		0.929	5mm								
WLAN 5G Ant 7		0.329	5mm	-36.8	64.2	-1.6					
BT Ant 6		0.175	5mm								
Ant 9	Back	1.279	1.279	5mm	-39.2	-66.2	-1.32	133.2	2.71	0.03	Not required
Ant 3		0.929	5mm								
WLAN 5G Ant 7		0.329	5mm								
BT Ant 6		0.175	5mm	-35.6	67	-1.03					
No.26 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	1.279	1.279	5mm	-39.2	-66.2	-1.32	149.7	2.69	0.03	Not required
Ant 4		0.907	1.411	5mm	18.8	71.8	-0.76				
WLAN 5G Ant 7		0.329		5mm							



BT Ant 6	Back	0.175	1.411	5mm				130.4	2.69	0.03	Not required
Ant 9		1.279		5mm	-39.2	-66.2	-1.32				
Ant 4		0.907		5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 9	Back	1.279	1.411	5mm	-39.2	-66.2	-1.32	133.2	2.69	0.03	Not required
Ant 4		0.907		5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.27 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	1.279	1.398	5mm	-39.2	-66.2	-1.32	140.2	2.68	0.03	Not required
Ant 5		0.894		5mm	-17	72.2	-0.98				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 9	Back	1.279	1.398	5mm	-39.2	-66.2	-1.32	130.4	2.68	0.03	Not required
Ant 5		0.894		5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 9	Back	1.279	1.398	5mm	-39.2	-66.2	-1.32	133.2	2.68	0.03	Not required
Ant 5		0.894		5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.28 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	1.279	1.385	5mm	-39.2	-66.2	-1.32	124.9	2.66	0.03	Not required
Ant 7		0.881		5mm	-44.8	58.6	-0.9				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 9	Back	1.279	1.385	5mm	-39.2	-66.2	-1.32	130.4	2.66	0.03	Not required
Ant 7		0.881		5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 9	Back	1.279	1.385	5mm	-39.2	-66.2	-1.32	133.2	2.66	0.03	Not required
Ant 7		0.881		5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				
No.29 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	1.279	1.406	5mm	-39.2	-66.2	-1.32	127.1	2.69	0.03	Not required
Ant 10		0.902		5mm	26.6	42.5	-0.86				
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm							
Ant 9	Back	1.279	1.406	5mm	-39.2	-66.2	-1.32	130.4	2.69	0.03	Not required
Ant 10		0.902		5mm							
WLAN 5G Ant 7		0.329		5mm	-36.8	64.2	-1.6				
BT Ant 6		0.175		5mm							
Ant 9	Back	1.279	1.406	5mm	-39.2	-66.2	-1.32	133.2	2.69	0.03	Not required
Ant 10		0.902		5mm							
WLAN 5G Ant 7		0.329		5mm							
BT Ant 6		0.175		5mm	-35.6	67	-1.03				



<Sensor off>

No.30 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	0.818	0.818	11mm	-18.9	-81.7	-0.59	145.8	1.86	0.02	Not required
Ant 3		0.678	1.039	11mm	-32	63.5	-0.88				
WLAN2.4GHz Ant6		0.361		11mm							
Ant 0	Front	0.818	0.818	11mm	-18.9	-81.7	-0.59	156.3	1.86	0.02	Not required
Ant 3		0.678	1.039	11mm							
WLAN2.4GHz Ant6		0.361		11mm	21.2	69.4	-0.56				

No.31 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Front	0.818	0.818	11mm	-18.9	-81.7	-0.59	157.2	1.75	0.01	Not required
Ant 4		0.566	0.927	11mm	-39.6	74.1	-0.75				
WLAN2.4GHz Ant6		0.361		11mm							
Ant 0	Front	0.818	0.818	11mm	-18.9	-81.7	-0.59	156.3	1.75	0.01	Not required
Ant 4		0.566	0.927	11mm							
WLAN2.4GHz Ant6		0.361		11mm	21.2	69.4	-0.56				

No.32 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	0.239	0.239	20mm	22.8	-78.6	-0.91	133.4	1.82	0.02	Not required
Ant 3		1.298	1.584	20mm	23.4	54.8	-0.76				
WLAN 5G Ant 7		0.285		20mm							
BT Ant 6		0.001		20mm							
Ant 0	Back	0.239	0.239	20mm	22.8	-78.6	-0.91	154.7	1.82	0.02	Not required
Ant 3		1.298	1.584	20mm							
WLAN 5G Ant 7		0.285		20mm	-36.8	64.2	-1.6				
BT Ant 6		0.001		20mm							
Ant 0	Back	0.239	0.239	20mm	22.8	-78.6	-0.91	156.9	1.82	0.02	Not required
Ant 3		1.298	1.584	20mm							
WLAN 5G Ant 7		0.285		20mm							
BT Ant 6		0.001		20mm	-35.6	67	-1.03				

No.33 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 1	Back	0.392	0.392	20mm	-35.2	-66.2	-1.45	134.4	1.98	0.02	Not required
Ant 3		1.298	1.584	20mm	23.4	54.8	-0.76				
WLAN 5G Ant 7		0.285		20mm							
BT Ant 6		0.001		20mm							
Ant 1	Back	0.392	0.392	20mm	-35.2	-66.2	-1.45	130.4	1.98	0.02	Not required
Ant 3		1.298	1.584	20mm							
WLAN 5G Ant 7		0.285		20mm	-36.8	64.2	-1.6				
BT Ant 6		0.001		20mm							
Ant 1	Back	0.392	0.392	20mm	-35.2	-66.2	-1.45	133.2	1.98	0.02	Not required
Ant 3		1.298	1.584	20mm							
WLAN 5G Ant 7		0.285		20mm							
BT Ant 6		0.001		20mm	-35.6	67	-1.03				

No.34 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Back	0.310	0.310	20mm	-39.2	-66.2	-1.32	136.2	1.89	0.02	Not required
Ant 3		1.298	1.584	20mm	23.4	54.8	-0.76				
WLAN 5G Ant 7		0.285		20mm							
BT Ant 6		0.001		20mm							
Ant 9	Back	0.310	0.310	20mm	-39.2	-66.2	-1.32	130.4	1.89	0.02	Not required



Ant 3	Back	1.298	1.584	20mm				133.2	1.89	0.02	Not required
WLAN 5G Ant 7		0.285		20mm	-36.8	64.2	-1.6				
BT Ant 6		0.001		20mm							
Ant 9		0.310	0.310	20mm	-39.2	-66.2	-1.32				
Ant 3		1.298	1.584	20mm							
WLAN 5G Ant 7		0.285		20mm							
BT Ant 6	0.001	20mm		-35.6	67	-1.03					

<Extremity>

No.57 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	155.7	6.06	0.10	Not required
Ant 3		2.518		0mm	26.4	70	-0.43				
WLAN5GHz Ant7		0.355		0mm							
NFC		0.004		0mm							
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	176.3	6.06	0.08	Not required
Ant 3		2.518		0mm							
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45				
NFC		0.004		0mm							
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	150.4	6.06	0.10	Not required
Ant 3		2.518		0mm							
WLAN5GHz Ant7		0.355		0mm							
NFC		0.004		0mm	23.4	64.8	-0.76				
No.58 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	164.8	5.60	0.08	Not required
Ant 4		2.063		0mm	19.4	79.3	-1.08				
WLAN5GHz Ant7		0.355		0mm							
NFC		0.004		0mm							
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	176.3	5.60	0.08	Not required
Ant 4		2.063		0mm							
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45				
NFC		0.004		0mm							
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	150.4	5.60	0.09	Not required
Ant 4		2.063		0mm							
WLAN5GHz Ant7		0.355		0mm							
NFC		0.004		0mm	23.4	64.8	-0.76				
No.59 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	154.7	4.68	0.07	Not required
Ant 5		1.138		0mm	-21	64	-0.89				
WLAN5GHz Ant7		0.355		0mm							
NFC		0.004		0mm							
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	176.3	4.68	0.06	Not required
Ant 5		1.138		0mm							
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45				
NFC		0.004		0mm							
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	150.4	4.68	0.07	Not required
Ant 5		1.138		0mm							
WLAN5GHz Ant7		0.355		0mm							
NFC		0.004		0mm	23.4	64.8	-0.76				
No.60 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	152.4	4.63	0.07	Not required
Ant 7		1.093		0mm	-33.7	57.6	-1.57				
WLAN5GHz Ant7		0.355		0mm							



NFC		0.004		0mm								
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	176.3	4.63	0.06	Not required	
Ant 7		1.093	1.452	0mm								
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45					
NFC		0.004		0mm								
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	150.4	4.63	0.07	Not required	
Ant 7		1.093	0mm									
WLAN5GHz Ant7		0.355	0mm									
NFC		0.004	0mm	23.4	64.8	-0.76						
No.61 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	147.9	6.01	0.10	Not required	
Ant 10		2.473	2.832	0mm	14	62.3	-0.91					
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm								
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	176.3	6.01	0.08	Not required	
Ant 10		2.473	0mm									
WLAN5GHz Ant7		0.355	0mm	-28.4	84.4	-1.45						
NFC		0.004	0mm									
Ant 0	Back	3.180	3.180	0mm	18.6	-85.5	-0.5	150.4	6.01	0.10	Not required	
Ant 10		2.473	2.832	0mm								
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm	23.4	64.8	-0.76					
No.62 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	161.5	5.60	0.08	Not required	
Ant 3		2.518	2.877	0mm	26.4	70	-0.43					
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	167.9	5.60	0.08	Not required	
Ant 3		2.518	2.877	0mm								
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45					
NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	155.7	5.60	0.09	Not required	
Ant 3		2.518	2.877	0mm								
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm	23.4	64.8	-0.76					
No.63 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	168.4	5.14	0.07	Not required	
Ant 4		2.063	2.422	0mm	19.4	79.3	-1.08					
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	167.9	5.14	0.07	Not required	
Ant 4		2.063	2.422	0mm								
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45					
NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	155.7	5.14	0.07	Not required	
Ant 4		2.063	2.422	0mm								
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm	23.4	64.8	-0.76					
No.64 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	147.4	4.22	0.06	Not required	
Ant 5		1.138	1.497	0mm	-21	64	-0.89					
WLAN5GHz Ant7		0.355		0mm								



NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	167.9	4.22	0.05	Not required	
Ant 5		1.138	1.497	0mm								
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45					
NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	155.7	4.22	0.06	Not required	
Ant 5		1.138	0mm									
WLAN5GHz Ant7		0.355	0mm									
NFC		0.004	0mm	23.4	64.8	-0.76						
No.65 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	141.3	4.17	0.06	Not required	
Ant 7		1.093	1.452	0mm	-33.7	57.6	-1.57					
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	167.9	4.17	0.05	Not required	
Ant 7		1.093	0mm									
WLAN5GHz Ant7		0.355	0mm	-28.4	84.4	-1.45						
NFC		0.004	0mm									
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	155.7	4.17	0.05	Not required	
Ant 7		1.093	1.452	0mm								
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm	23.4	64.8	-0.76					
No.66 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	150.6	5.55	0.09	Not required	
Ant 10		2.473	2.832	0mm	14	62.3	-0.91					
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	167.9	5.55	0.08	Not required	
Ant 10		2.473	2.832	0mm								
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45					
NFC		0.004		0mm								
Ant 1	Back	2.718	2.718	0mm	-24.23	-83.4	-0.57	155.7	5.55	0.08	Not required	
Ant 10		2.473	2.832	0mm								
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm	23.4	64.8	-0.76					
No.67 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant 9	Back	1.296	1.296	0mm	18.6	-85.5	-0.5	155.7	4.17	0.05	Not required	
Ant 3		2.518	2.877	0mm	26.4	70	-0.43					
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm								
Ant 9	Back	1.296	1.296	0mm	18.6	-85.5	-0.5	176.3	4.17	0.05	Not required	
Ant 3		2.518	2.877	0mm								
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45					
NFC		0.004		0mm								
Ant 9	Back	1.296	1.296	0mm	18.6	-85.5	-0.5	150.4	4.17	0.06	Not required	
Ant 3		2.518	2.877	0mm								
WLAN5GHz Ant7		0.355		0mm								
NFC		0.004		0mm	23.4	64.8	-0.76					
No.68 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant 9	Back	1.296	1.296	0mm	18.6	-85.5	-0.5	128.6	4.13	0.07	Not required	
Ant 10		2.473	2.832	0mm	14	43	-0.91					
WLAN5GHz Ant7		0.355		0mm								



NFC		0.004		0mm							
Ant 9	Back	1.296	1.296	0mm	18.6	-85.5	-0.5	176.3	4.13	0.05	Not required
Ant 10		2.473	2.832	0mm							
WLAN5GHz Ant7		0.355		0mm	-28.4	84.4	-1.45				
NFC		0.004		0mm							
Ant 9	Back	1.296	1.296	0mm	18.6	-85.5	-0.5	150.4	4.13	0.06	Not required
Ant 10		2.473	0mm								
WLAN5GHz Ant7		0.355	0mm								
NFC		0.004	0mm	23.4	64.8	-0.76					

No.69 Band	Position	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	134.8	4.14	0.06	Not required
WLAN5GHz Ant7		0.966	0.967	0mm	-9	-65.8	-0.64				
NFC		0.001		0mm							
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	172.0	4.14	0.05	Not required
WLAN5GHz Ant7		0.966	0.967	0mm							
NFC		0.001		0mm	-6.4	-103	-0.55				
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	134.8	4.14	0.06	Not required
WLAN5GHz Ant7		0.966	0.967	0mm	-9	-65.8	-0.64				
NFC		0.001		0mm							
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	172.0	4.14	0.05	Not required
WLAN5GHz Ant7		0.966	0.967	0mm							
NFC		0.001		0mm	-6.4	-103	-0.55				
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	134.8	4.14	0.06	Not required
WLAN5GHz Ant7		0.966	0.967	0mm	-9	-65.8	-0.64				
NFC		0.001		0mm							
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	172.0	4.14	0.05	Not required
WLAN5GHz Ant7		0.966	0.967	0mm							
NFC		0.001		0mm	-6.4	-103	-0.55				
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	130.5	5.54	0.10	Not required
Ant 7		1.403	2.37	0mm	-2.5	-61.5	-1.25				
WLAN5GHz Ant7		0.966		0mm							
NFC		0.001		0mm							
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	134.8	5.54	0.10	Not required
Ant 7		1.403	2.37	0mm							
WLAN5GHz Ant7		0.966		0mm	-9	-65.8	-0.64				
NFC		0.001		0mm							
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	172.0	5.54	0.08	Not required
Ant 7		1.403	2.37	0mm							
WLAN5GHz Ant7		0.966		0mm							
NFC		0.001		0mm	-6.4	-103	-0.55				
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	134.8	4.14	0.06	Not required
WLAN5GHz Ant7		0.966	0.967	0mm	-9	-65.8	-0.64				
NFC		0.001		0mm							
Ant 9	Right Side	3.169	3.169	0mm	-6	69	-0.94	172.0	4.14	0.05	Not required
WLAN5GHz Ant7		0.966	0.967	0mm							
NFC		0.001		0mm	-6.4	-103	-0.55				



14.7 Maximum Reported SAR and SAR Peak Locations

General Note:

1. The maximum reported SAR and SAR Peak Locations corresponding to each position of each frequency band of each antenna in the below tables are as follows.
2. The unit of SAR evaluation is W/kg. The unit of x, y, z with Axis evaluation is mm.

<Head>

Right Cheek										
Band		Ant9			Ant3			Ant4		
LTE Band 7	SAR (W/kg)							0.637		
	Axis							7.32	-24.41	-0.95
LTE Band 12	SAR (W/kg)							0.824		
	Axis							8.41	-28.53	-1.09
LTE Band 13	SAR (W/kg)							0.839		
	Axis							8.2	-28.19	-1.09
LTE Band 14	SAR (W/kg)							0.882		
	Axis							8.14	-28.1	-1.09
LTE Band 25	SAR (W/kg)							0.679		
	Axis							8.11	-28.36	-1.04
LTE Band 26	SAR (W/kg)							0.818		
	Axis							9.45	-27.35	-1.19
LTE Band 30	SAR (W/kg)							0.427		
	Axis							8.26	-25.68	-1
LTE Band 66	SAR (W/kg)							0.743		
	Axis							8.31	-28.69	-1.06
LTE Band 41	SAR (W/kg)							0.451		
	Axis							8.46	-27.45	-1.18
LTE Band 71	SAR (W/kg)							0.729		
	Axis							7.11	-29.31	-0.94
LTE Band 48	SAR (W/kg)				0.896					
	Axis				26.65	-28.19	-0.58			
FR1 n12	SAR (W/kg)							0.866		
	Axis							8.8	-28.55	-1.1
FR1 n14	SAR (W/kg)							0.729		
	Axis							8.22	-28.14	-1.09
FR1 n25	SAR (W/kg)							0.722		
	Axis							8.16	-28.44	-1.04
FR1 n26	SAR (W/kg)							0.886		
	Axis							9.72	-26.54	-0.76
FR1 n66	SAR (W/kg)							0.778		
	Axis							8.33	-28.9	-1.05
FR1 n70	SAR (W/kg)							0.774		
	Axis							8.2	8.41	-1.02
FR1 n41 HPUE	SAR (W/kg)							0.761		
	Axis							8.5	-27.66	-1.17
FR1 n71	SAR (W/kg)							0.827		
	Axis							9.37	-24.4	-1.36
FR1 n48	SAR (W/kg)	0.352			0.883					
	Axis	42.56	57.23	-1.15	25.52	-25.86	-1.02			
FR1 n77 PC2	SAR (W/kg)	0.746			0.876					
	Axis	43.6	63	-1.09	26.66	-27.01	-0.87			

WLAN2.4GHz Ant6	SAR (W/kg)	0.59		
	Axis	-6.08	12.52	1.05

WLAN5GHz Ant7	SAR (W/kg)	0.342		
	Axis	-15.3	30.1	6.77



BT Ant6	SAR (W/kg)	0.112		
	Axis	-6.22	13.01	1.05

Left Cheek																			
Band		Ant9			Ant4			Ant0			Ant5			Ant1			Ant7		
GSM850	SAR (W/kg)							0.493											
	Axis							50.65	-47.27	-2.09									
GSM1900	SAR (W/kg)												0.228						
	Axis												47.1	-62.5	-0.1				
WCDMA II	SAR (W/kg)												0.257						
	Axis												46.5	-60.27	-0.14				
WCDMA IV	SAR (W/kg)												0.175						
	Axis												48.83	-61.27	-0.15				
WCDMA V	SAR (W/kg)							0.345											
	Axis							51.36	-33.13	-2.04									
LTE Band 7	SAR (W/kg)				0.302									0.176					
	Axis				-0.05	10.49	-1.02							47.1	-59.8	-0.13			
LTE Band 12	SAR (W/kg)				0.435			0.266											
	Axis				-12.5	-17.42	2.12	49.63	-48.36	-2.11									
LTE Band 13	SAR (W/kg)				0.468			0.324											
	Axis				-11.5	-18.54	2.36	51.2	-39.6	-2.06									
LTE Band 14	SAR (W/kg)				0.492			0.298											
	Axis				-12.1	-19.4	2.22	50.36	-36.89	-1.96									
LTE Band 25	SAR (W/kg)				0.426									0.195					
	Axis				-16.2	-6.36	2.65							45.6	-60.3	-0.17			
LTE Band 26	SAR (W/kg)				0.473			0.364											
	Axis				-10.4	-19.63	2.05	50.2	-47.5	-1.96									
LTE Band 30	SAR (W/kg)				0.193									0.144					
	Axis				-0.25	8.45	-1.11							46.8	-60.27	-0.2			
LTE Band 66	SAR (W/kg)				0.461									0.207					
	Axis				-9.8	-7.63	-2.11							47.8	-60.28	-0.17			
LTE Band 41	SAR (W/kg)				0.328			0.137											
	Axis				-0.01	11.25	-1	48.6	-48.6	-1.63				48.86	-62.8	-0.13			
LTE Band 71	SAR (W/kg)				0.377			0.247											
	Axis				-11.15	-18.56	2.05	52.36	-32.56	-2.11									
LTE Band 48	SAR (W/kg)																		
	Axis																		
FR1 n7	SAR (W/kg)												0.152						
	Axis												49.63	-62.5	-0.15				
FR1 n12	SAR (W/kg)				0.492			0.162											
	Axis				-12.1	-19.8	2.35	48.93	-40.2	-2.04									
FR1 n14	SAR (W/kg)				0.453			0.183											
	Axis				-11.78	-19.21	2.27	51.62	-37.8	-2.06									
FR1 n25	SAR (W/kg)				0.566									0.123					
	Axis				-14.37	-5.11	2.65							48.22	-63.4	-0.17			
FR1 n26	SAR (W/kg)				0.466			0.215											
	Axis				-11.8	-20.1	2.45	50.26	-35.2	-2.11									
FR1 n66	SAR (W/kg)				0.486									0.07					
	Axis				-11.2	-4.77	2.53							44.21	-61.5	-0.25			
FR1 n70	SAR (W/kg)				0.481									0.147					



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FR1 n41 HPUE	Axis				-15.4	-5.02	2.74							46.85	-62.8	-0.24			
	SAR (W/kg)				0.435			0.382			0.219								
FR1 n71	Axis				-0.01	11.89	-1.06	44.41	-56.99	-1.42				48.31	-63.7	-0.26			
	SAR (W/kg)				0.515			0.161											
FR1 n48	Axis				-12.5	-19.05	2.33	52.11	-43.6	-1.96									
	SAR (W/kg)				0.144						0.531			0.461					
FR1 n77 PC2	Axis	52.29	1.08	-1.84							-0.8	5.56	-1.1				18.9	49.2	1.59
	SAR (W/kg)				0.383						0.575			0.669					
	Axis										-10.2	5.52	-1.04				18.9	48.9	1.62

WLAN2.4GHz Ant6	SAR (W/kg)	0.35		
	Axis	15.97	22.21	-1.5

WLAN5GHz Ant7	SAR (W/kg)	0.395		
	Axis	17.2	48.2	-0.89

BT Ant6	SAR (W/kg)	0.286		
	Axis	13.26	44.56	-1.63

<Hotspot>

Band	Front									
		Ant4			Ant0			Ant1		
GSM850	SAR (W/kg)				0.862					
	Axis				-35.2	-83.6	-1.09			
GSM1900	SAR (W/kg)							0.881		
	Axis							-18.5	-87.5	-0.48
WCDMA II	SAR (W/kg)							0.954		
	Axis							-18.5	-88	-0.5
WCDMA IV	SAR (W/kg)							0.674		
	Axis							-23.8	-87.5	-0.96
WCDMA V	SAR (W/kg)				0.799					
	Axis				-34.7	-84.1	-1.12			
LTE Band 7	SAR (W/kg)				0.137			0.679		
	Axis	-27.8	79.9	-0.81				-18.9	-81.7	-0.59
LTE Band 12	SAR (W/kg)				0.257			0.934		
	Axis	-38.5	76.3	-0.69	-33.2	-82.9	-1.1			
LTE Band 13	SAR (W/kg)				0.31			0.958		
	Axis	-39.6	74.1	-0.75	-34.8	-85.1	-1.15			
LTE Band 14	SAR (W/kg)				0.297			0.718		
	Axis	37.5	75.6	-0.72	-33	-81.7	-1.14			
LTE Band 25	SAR (W/kg)				0.215			0.887		
	Axis	-21.5	84.5	-1.46				17.1	-88	-0.45
LTE Band 26	SAR (W/kg)				0.34			0.906		
	Axis	-38.2	75.6	-0.71	-38.9	-84.6	-1.18			
LTE Band 30	SAR (W/kg)				0.175			0.765		
	Axis	-22.3	81.6	-0.75				18.2	-86.7	-0.36
LTE Band 66	SAR (W/kg)				0.248			0.748		
	Axis	-22.1	83.6	-1.57				22.4	-85.6	-0.89
LTE Band 41	SAR (W/kg)				0.117			0.336		
	Axis	-25.3	82.5	-0.72	-34.5	-86	-0.68	17.8	-85.2	-0.4
LTE Band 71	SAR (W/kg)				0.31			0.777		
	Axis	-39.4	77.2	-0.68	-34.8	-85.6	-1.19			
LTE Band 48	SAR (W/kg)									
	Axis									
FR1 n7	SAR (W/kg)							0.596		
	Axis							16.8	-87.6	-0.51
FR1 n12	SAR (W/kg)				0.265			0.544		



FR1 n14	Axis	-37.6	75.4	-0.7	-34	-84.2	-1.18			
	SAR (W/kg)	0.345			0.684					
FR1 n25	Axis	-37.1	76.2	-0.71	-35.6	-82.2	-1.04			
	SAR (W/kg)	0.199						0.932		
FR1 n26	Axis	-20.2	83.2	-1.52				21.6	-87.4	-0.89
	SAR (W/kg)	0.373			0.691					
FR1 n30	Axis	-35.2	78.9	-0.82	-33.9	-82.2	-1.05			
	SAR (W/kg)							0.816		
FR1 n66	Axis	-19.6	84.2	-1.42				21.7	-88.2	-0.91
	SAR (W/kg)	0.279						0.764		
FR1 n70	Axis	-18.4	82.1	-1.32				22.5	-86.3	-0.85
	SAR (W/kg)	0.333						0.686		
FR1 n41 HPUE	Axis	-26	81.4	-0.72	-34	-85.8	-0.64	15.2	-88	-0.43
	SAR (W/kg)	0.129			0.841			0.772		
FR1 n71	Axis	-38.4	76.9	-0.85	-35.4	-84.7	-1.16			
	SAR (W/kg)	0.287			0.655					
FR1 n48	Axis									
	SAR (W/kg)									
FR1 n77 PC2	Axis									
	SAR (W/kg)									

WLAN2.4GHz Ant6	SAR (W/kg)	0.297		
	Axis	21.2	69.4	-0.56

WLAN5GHz Ant7	SAR (W/kg)	0.169		
	Axis	29.6	74.6	-1.02

BT Ant6	SAR (W/kg)	0.091		
	Axis	22.3	6835	-0.42

Back										
Band		Ant9	Ant4	Ant0	Ant1	Ant7	Ant3	Ant5	Ant10	
GSM850	SAR (W/kg)			1.27						
	Axis			18.2	-92	-0.6				
GSM1900	SAR (W/kg)				1.058					
	Axis				-36.3	-94.1	-0.81			
WCDMA II	SAR (W/kg)				1.072					
	Axis				-36.3	-93.6	-0.81			
WCDMA IV	SAR (W/kg)				0.916					
	Axis				-37.5	-84.7	-0.85			
WCDMA V	SAR (W/kg)			1.287						
	Axis			18.3	-93.5	-0.59				
LTE Band 7	SAR (W/kg)		0.568		0.902					
	Axis		18.8	71.8	-0.76	-25.2	-86.1	-0.93		
LTE Band 12	SAR (W/kg)		0.625		1.287					
	Axis		15.2	83.9	-0.62	33.9	-80.1	-0.41		
LTE Band 13	SAR (W/kg)		0.62		1.282					
	Axis		15.2	83.9	-0.6	37.2	-80	-0.38		
LTE Band 14	SAR (W/kg)		0.623		0.979					
	Axis		13.6	79.9	-0.62	37.2	-80	-0.38		
LTE Band 25	SAR (W/kg)		0.622		1.003					
	Axis		5.9	81	-0.72	-21.1	-87.4	-0.9		
LTE Band 26	SAR (W/kg)		0.623		1.272					
	Axis		13.6	79.9	-0.63	18.6	-92.6	-0.59		
LTE Band 30	SAR (W/kg)		0.625		0.841					
	Axis		14.2	75.6	-0.8	-24	-87.1	-0.94		
LTE Band 66	SAR (W/kg)		0.626		0.915					
	Axis		-1.5	78.1	-0.94	-35.2	-66.2	-1.45		



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LTE Band 41	SAR (W/kg)	0.63			0.885			0.772			0.635		
	Axis	22.5	81.4	-1.06	22.8	-78.6	-0.91	-25.2	-86.1	-0.91	26.6	42.5	-0.86
LTE Band 71	SAR (W/kg)	0.666			1.051								
	Axis	21.8	80.6	-0.58	18.1	-81.3	-1.01						
LTE Band 48	SAR (W/kg)												
	Axis												
FR1 n7	SAR (W/kg)							0.763					
	Axis							-33.6	-76.6	-0.9			
FR1 n12	SAR (W/kg)	0.641			0.757								
	Axis	22.1	81.3	-0.63	17.1	-80.6	-0.97						
FR1 n14	SAR (W/kg)	0.622			0.893								
	Axis	22.4	79	-0.51	17.6	-82.2	-0.95						
FR1 n25	SAR (W/kg)	0.633						0.977					
	Axis	17.5	88.9	-0.98				-34.4	-81	-0.92			
FR1 n26	SAR (W/kg)	0.64			0.977								
	Axis	22.1	80	-0.61	17.1	-81.5	-1.02						
FR1 n30	SAR (W/kg)							0.956					
	Axis							-28.8	-83.2	-0.82			
FR1 n66	SAR (W/kg)	0.62						1.02					
	Axis	15.2	88.6	-1.15				-39.2	-66.2	-1.32			
FR1 n70	SAR (W/kg)	0.63						0.89					
	Axis	13.2	87.8	-1.11				-38.6	-66.5	-1.45			
FR1 n41 HPUE	SAR (W/kg)	0.617			1.294			0.922			0.594		
	Axis	21.2	83.8	-1.04	22.4	-79	-0.46	-31.2	-88.6	-0.92	18.2	47.6	-0.91
FR1 n71	SAR (W/kg)	0.603			0.855								
	Axis	22.7	80.3	-0.59	17.4	-83.1	-0.92						
FR1 n48	SAR (W/kg)	0.648						0.622			0.628		
	Axis	-39.2	66.2	-1.32				-44.8	58.6	-0.9	23.4	54.8	0.76
FR1 n77 PC2	SAR (W/kg)	0.696						0.419			0.642		
	Axis	-39.6	66.4	-1.29				-36.8	69.6	-0.89	20.6	68.6	0.73

WLAN2.4GHz Ant6	SAR (W/kg)	0.435		
	Axis	-34.4	69.6	-0.74

WLAN5GHz Ant7	SAR (W/kg)	0.318		
	Axis	-36.8	64.2	-1.6

BT Ant6	SAR (W/kg)	0.175		
	Axis	-35.6	67	-1.03

		Right Side																	
Band		Ant9			Ant4			Ant7			Ant3			Ant5			Ant10		
GSM850	SAR (W/kg)																		
	Axis																		
GSM1900	SAR (W/kg)																		
	Axis																		
WCDMA II	SAR (W/kg)																		
	Axis																		
WCDMA IV	SAR (W/kg)																		
	Axis																		
WCDMA V	SAR (W/kg)																		
	Axis																		
LTE Band 7	SAR (W/kg)				0.012														
	Axis	-14.3	-44	-0.96															
LTE Band 12	SAR (W/kg)				0.11														
	Axis	-16	-11.8	-2.6															
LTE Band 13	SAR (W/kg)				0.107														



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LTE Band 14	Axis				-14	-13.5	-1.8														
	SAR (W/kg)				0.102																
LTE Band 25	Axis				-15.5	-12.1	-1.6														
	SAR (W/kg)				0.014																
LTE Band 26	Axis				-15.8	-53.6	-1.2														
	SAR (W/kg)				0.095																
LTE Band 30	Axis				-15.4	-12	-1.7														
	SAR (W/kg)				0.008																
LTE Band 66	Axis				-13.6	-45.6	-1.2														
	SAR (W/kg)				0.013																
LTE Band 41	Axis				-14.5	-54.2	-1.2														
	SAR (W/kg)				0.019													0			
LTE Band 71	Axis				-14	-44	-0.95											-27.12	-87.68	-0.61	
	SAR (W/kg)				0.153																
LTE Band 48	Axis				-15.2	-11.52	-1.2														
	SAR (W/kg)																				
FR1 n7	Axis																				
	SAR (W/kg)				0.069																
FR1 n12	Axis				-14	-11.4	-1														
	SAR (W/kg)				0.111																
FR1 n14	Axis				-15	-11.42	-1.1														
	SAR (W/kg)				0.013																
FR1 n25	Axis				-14	-53	-0.92														
	SAR (W/kg)				0.112																
FR1 n26	Axis				-14.3	-11.56	-1.2														
	SAR (W/kg)																				
FR1 n30	Axis																				
	SAR (W/kg)				0.012																
FR1 n66	Axis				-14	-54.2	-0.96														
	SAR (W/kg)				0.023																
FR1 n70	Axis				-16	-11.89	-1.4														
	SAR (W/kg)				0.019														0		
FR1 n41 HPUE	Axis				-14	-45	-0.95												-26.8	-89	-0.64
	SAR (W/kg)				0.102																
FR1 n71	Axis				-15.9	-11.7	-2.3														
	SAR (W/kg)				1.276																
FR1 n48	Axis							0.591			0.005			0.074							
	SAR (W/kg)	-10.4	69	-0.96				-5.3	-63	-0.97	-6.4	-107	-0.55	-21.6	-77	-0.75					
FR1 n77 PC2	Axis				1.289																
	SAR (W/kg)							0.258			0.008			0.082							
FR1 n77 PC2	Axis				-10	63.4	-0.93														
	SAR (W/kg)							-5	-65	-0.95	-7.5	-99.5	-0.62	-20.8	-75	-0.71					

WLAN2.4GHz Ant6	SAR (W/kg)	0.186		
	Axis	0.54	-63.5	-1.39

WLAN5GHz Ant7	SAR (W/kg)	0.547		
	Axis	-2	-63.6	-1.35

BT Ant6	SAR (W/kg)	0.079		
	Axis	0	-62.6	-1.36



<Body-worn>

		Front														
Band		Ant9			Ant4			Ant0			Ant1			Ant7		
GSM850	SAR (W/kg)							0.801								
	Axis							-35.2	-83.6	-1.09						
GSM1900	SAR (W/kg)											1.063				
	Axis											-18.5	-87.5	-0.48		
WCDMA II	SAR (W/kg)											1.143				
	Axis											-18.5	-88	-0.5		
WCDMA IV	SAR (W/kg)											1.066				
	Axis											-23.8	-87.5	-0.96		
WCDMA V	SAR (W/kg)							0.917								
	Axis							-34.7	-84.1	-1.12						
LTE Band 7	SAR (W/kg)				0.308							0.963				
	Axis				-27.8	79.9	-0.81					-18.9	-81.7	-0.59		
LTE Band 12	SAR (W/kg)				0.362			0.934								
	Axis				-38.5	76.3	-0.69	-33.2	-82.9	-1.1						
LTE Band 13	SAR (W/kg)				0.437			0.958								
	Axis				-39.6	74.1	-0.75	-34.8	-85.1	-1.15						
LTE Band 14	SAR (W/kg)				0.42			0.718								
	Axis				37.5	75.6	-0.72	-33	-81.7	-1.14						
LTE Band 25	SAR (W/kg)				0.566							1.124				
	Axis				-21.5	84.5	-1.46					17.1	-88	-0.45		
LTE Band 26	SAR (W/kg)				0.387			0.906								
	Axis				-38.2	75.6	-0.71	-38.9	-84.6	-1.18						
LTE Band 30	SAR (W/kg)				0.221							1.007				
	Axis				-22.3	81.6	-0.75					18.2	-86.7	-0.36		
LTE Band 66	SAR (W/kg)				0.528							1.119				
	Axis				-22.1	83.6	-1.57					22.4	-85.6	-0.89		
LTE Band 41	SAR (W/kg)				0.375			0.336				0.843				
	Axis				-25.3	82.5	-0.72	-34.5	-86	-0.68		17.8	-85.2	-0.4		
LTE Band 71	SAR (W/kg)				0.31			0.777								
	Axis				-39.4	77.2	-0.68	-34.8	-85.6	-1.19						
LTE Band 48	SAR (W/kg)															
	Axis															
FR1 n7	SAR (W/kg)											1.118				
	Axis											16.8	-87.6	-0.51		
FR1 n12	SAR (W/kg)				0.34			0.544								
	Axis				-37.6	75.4	-0.7	-34	-84.2	-1.18						
FR1 n14	SAR (W/kg)				0.467			0.684								
	Axis				-37.1	76.2	-0.71	-35.6	-82.2	-1.04						
FR1 n25	SAR (W/kg)				0.552							1.09				
	Axis				-20.2	83.2	-1.52					21.6	-87.4	-0.89		
FR1 n26	SAR (W/kg)				0.523			0.691								
	Axis				-35.2	78.9	-0.82	-33.9	-82.2	-1.05						
FR1 n30	SAR (W/kg)											0.917				
	Axis											17.6	-89	-0.42		
FR1 n66	SAR (W/kg)				0.515							0.966				
	Axis				-19.6	84.2	-1.42					21.7	-88.2	-0.91		
FR1 n70	SAR (W/kg)				0.545							1.011				



	Axis				-38.2	75.6	-0.71			
LTE Band 30	SAR (W/kg)									
	Axis									
LTE Band 66	SAR (W/kg)				0.229			0.38		
	Axis				-22.1	83.6	-1.57	22.4	-85.6	-0.89
LTE Band 41	SAR (W/kg)				0.157			0.445		
	Axis				-25.3	82.5	-0.72	17.8	-85.2	-0.4
LTE Band 71	SAR (W/kg)									
	Axis									
LTE Band 48	SAR (W/kg)									
	Axis									
FR1 n7	SAR (W/kg)							0.445		
	Axis							16.8	-87.6	-0.51
FR1 n12	SAR (W/kg)				0.116					
	Axis				-37.6	75.4	-0.7			
FR1 n14	SAR (W/kg)									
	Axis									
FR1 n25	SAR (W/kg)				0.276			0.519		
	Axis				-20.2	83.2	-1.52	21.6	-87.4	-0.89
FR1 n26	SAR (W/kg)				0.139					
	Axis				-35.2	78.9	-0.82			
FR1 n30	SAR (W/kg)									
	Axis									
FR1 n66	SAR (W/kg)				0.176			0.515		
	Axis				-19.6	84.2	-1.42	21.7	-88.2	-0.91
FR1 n70	SAR (W/kg)				0.203			0.489		
	Axis				-18.4	82.1	-1.32	22.5	-86.3	-0.85
FR1 n41 HPUE	SAR (W/kg)				0.304			0.818		
	Axis				-26	81.4	-0.72	15.2	-88	-0.43
FR1 n71	SAR (W/kg)									
	Axis									
FR1 n48	SAR (W/kg)	0.822								
	Axis	-32	63.5	-0.88						
FR1 n77 PC2	SAR (W/kg)	1.298								
	Axis	-31.6	64.2	-0.74						

WLAN2.4GHz Ant6	SAR (W/kg)	0.361		
	Axis	21.2	69.4	-0.56

WLAN5GHz Ant7	SAR (W/kg)	0.266		
	Axis	29.6	74.6	-1.02

BT Ant6	SAR (W/kg)	0.001		
	Axis	22.3	68.35	-0.42

		Back								
Band		Ant9			Ant0			Ant1		Ant3
GSM850	SAR (W/kg)				0.239					
	Axis				18.2	-92	-0.6			
GSM1900	SAR (W/kg)							0.216		
	Axis							-36.3	-94.1	-0.81
WCDMA II	SAR (W/kg)							0.389		
	Axis							-36.3	-93.6	-0.81
WCDMA IV	SAR (W/kg)							0.303		
	Axis							-37.5	-84.7	-0.85
WCDMA V	SAR (W/kg)				0.189					
	Axis				22.4	-79	-0.46			
LTE Band 7	SAR (W/kg)							0.284		



<Extremity>

		Back													
Band		Ant9	Ant4			Ant0			Ant1			Ant7	Ant3	Ant5	Ant10
GSM850	SAR (W/kg)					2.56									
	Axis					18.9	-89.2	-0.52							
GSM1900	SAR (W/kg)								2.304						
	Axis								-24.61	-84.22	-0.63				
WCDMA II	SAR (W/kg)								2.706						
	Axis								-24.42	-84.25	-0.6				
WCDMA IV	SAR (W/kg)								2.627						
	Axis								-24.38	-83.96	-0.62				
WCDMA V	SAR (W/kg)								1.795						
	Axis					19.8	-88.9	-0.59							
LTE Band 7	SAR (W/kg)		1.538						1.96						
	Axis		20.4	80.2	-0.63				-22.25	-85.57	-0.62				
LTE Band 12	SAR (W/kg)		1.235						1.703						
	Axis		19.4	79.3	-1.08	18.6	-85.5	-0.5							
LTE Band 13	SAR (W/kg)		1.115						1.372						
	Axis		26.8	85.4	-0.88	19.8	-86.1	-0.52							
LTE Band 14	SAR (W/kg)		1.257												
	Axis		23.8	90.1	-0.54										
LTE Band 25	SAR (W/kg)		2.543						2.598						
	Axis		2.7	83.9	-0.55				-24.23	-83.4	-0.57				
LTE Band 26	SAR (W/kg)		1.75						1.813						
	Axis		21.3	85.5	-0.58	19.4	-89.2	-0.69							
LTE Band 30	SAR (W/kg)								1.9						
	Axis								-23.11	-84.98	-0.64				
LTE Band 66	SAR (W/kg)								2.471						
	Axis								-24.38	-84.52	-0.64				
LTE Band 41	SAR (W/kg)														
	Axis														
LTE Band 71	SAR (W/kg)														
	Axis														
LTE Band 48	SAR (W/kg)														
	Axis														
FR1 n7	SAR (W/kg)														
	Axis														
FR1 n12	SAR (W/kg)														
	Axis														
FR1 n14	SAR (W/kg)														
	Axis														
FR1 n25	SAR (W/kg)								2.236						
	Axis								-24.8	-84	-0.59				
FR1 n26	SAR (W/kg)														
	Axis														
FR1 n30	SAR (W/kg)								1.952						
	Axis								-22.3	-82.1	-0.58				
FR1 n66	SAR (W/kg)		1.592						2.718						
	Axis		3.6	84.8	-0.56				-24.61	-84.2	-0.58				
FR1 n70	SAR		1.933						2.238						



15. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, 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. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

16. References

- [1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”
- [2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992
- [3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 865664 D01 v01r04, “SAR Measurement Requirements for 100 MHz to 6 GHz”, Aug 2015.
- [6] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.
- [7] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.
- [8] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.
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Appendixes

Please refer to separated files for the following appendixes

Appendix A. Plots of System Performance Check

Appendix B. Plots of High SAR Measurement

Appendix C. DASYS Calibration Certificate

Appendix D. Test Setup Photos

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