FCC SAR Test Report

APPLICANT	: Motorola Mobility LLC
EQUIPMENT	: Mobile Cellular Phone
BRAND NAME	: Motorola
MODEL NAME	: XT2527-2
FCC ID	: IHDT56AV4
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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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA530724-01	Rev. 01	Initial issue of report.	Apr. 30, 2025
FA530724-01	Rev. 02	Updated the WLAN 5.3GHz power for Appendix E. This report is an updated version, replacing the report issued on Apr. 30, 2025.	May 15, 2025

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2527-2,** 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	0.49	**1.43**	**1.43**	1.59
		GSM1900	0.15	1.28	1.20	
	WCDMA	WCDMA II	0.19	0.84	0.84	
		WCDMA V	0.34	1.26	1.26	
	LTE	LTE Band 7	0.89	0.96	0.97	
		LTE Band 71	0.80	0.88	0.82	
		LTE Band 2	0.89	0.90	1.07	
		LTE Band 26/5	0.88	1.36	1.36	
		LTE Band 41/38	0.91	1.29	1.32	
		LTE Band 42	0.89	0.63	0.88	
	5G NR	FR1 n7	0.91	**1.43**	1.35	
		FR1 n71	0.55	0.76	0.62	
		FR1 n26/n5	0.88	1.28	1.28	
		FR1 n41/n38	0.88	1.23	0.89	
		FR1 n77/n78	0.89	1.29	1.19	
DTS	WLAN	2.4GHz WLAN	**1.20**	0.66	1.20	1.59
NII		5GHz WLAN	1.19	0.66	1.15	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.24	0.43	0.43	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	3.08	3.99
		GSM1900	2.52	
	WCDMA	WCDMA II	**3.32**	
		WCDMA V	2.19	
	LTE	LTE Band 7	2.45	
		LTE Band 2	2.46	
		LTE Band 26/5	2.59	
		LTE Band 41/38	3.08	
		LTE Band 42	2.78	
	5G NR	FR1 n7	2.85	
		FR1 n41/n38	3.08	
		FR1 n77/n78	2.81	
DTS	WLAN	2.4GHz WLAN	1.22	3.99
NII		WLAN5GHz	3.18	3.99
Date of Testing:			2025/4/3 ~ 2025/4/19	

Remark:
1. This device supports LTE B5 / B38 and B26 / B41. Since the supported frequency span for LTE LTE B5 / B38 falls completely within the support's frequency span for LTE B26 / 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 B26 / B41.
2. This device supports 5GNR n38 / n78 and n41 / n77. Since the supported frequency span for 5GNR n38 / n78 falls completely within the support's frequency span for n41 / n77, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for n41 / n77.

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.
	SAR04	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. Data Reuse Approach

3.1 Introduction Section

This application re-uses data collected on a similar device, FCC ID: IHDT56AV5 (reference model) and FCC ID: IHDT56AV4 (variant model). Due to the same design are identical between parent model and variant model, SAR data reuse is requested and spot check data in this report is used to justify the SAR data reuse.

Per KDB 484596 D01 v02r03, the deviation of variant model 1g SAR and 10g SAR spot check result was no larger than 3 dB, the WWAN/WLAN/BT max SAR summary was always choosing the higher SAR between parent model and variant model.

The applicant should take full responsibility that the test data as referenced in this report represent compliance for this FCC ID: IHDT56AV4

3.2 Model Difference Information

The **main** difference between FCC ID: IHDT56AV5 and FCC ID: IHDT56AV4 is as below:

- Removed WCDMA Band IV, LTE B4/12/13/17/25/66 and 5G NR n2/n66.
- Added LTE B20/32/71/38C/41C and 5G NR n8/n20/n71
- Added NSA mode for 5G NR n5/n77
- LTE B41/B41C and 5G NR n77/N78 upgraded to PC2 via software.

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2527-2_Operational Description of Product Equality Declaration).

3.3 Reference detail Section

Rule Part	Equipment Class	Wireless Technology	Frequency Band (MHz)	FCC ID (Reference)	Type Grant/ Permissive Change	Reference Title	FCC ID Filling (Variant)	Test on the variant
Part 2.1093	PCE	GSM	GSM850/1900	IHDT56AV5	Original Grant	FA530724	IHDT56AV4	Spot check
		WCDMA	B2/5	IHDT56AV5	Original Grant	FA530724	IHDT56AV4	Spot check
		LTE	B2/5/7/42/26	IHDT56AV5	Original Grant	FA530724	IHDT56AV4	Spot check
		LTE	B71/41/38				IHDT56AV4	Full Test
		5GNR FR1	n71/n77/n78				IHDT56AV4	Full Test
		5GNR FR1	n7/n26/n38/n41	IHDT56AV5	Original Grant	FA530724	IHDT56AV4	Spot check
	DTS	BLE/ WiFi	2400~2483.5	IHDT56AV5	Original Grant	FA530724	IHDT56AV4	Spot check
	NII	Wi-Fi	5150 ~ 5250 5250 ~ 5350 5470 ~ 5725 5725 ~ 5850	IHDT56AV5	Original Grant	FA530724	IHDT56AV4	Spot check
	DSS	Bluetooth	2400~2483.5	IHDT56AV5	Original Grant	FA530724	IHDT56AV4	Spot check
	DXX	NFC	13.56				IHDT56AV4	Full Test

4. 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
- FCC KDB 484596 D01 Referencing Test Data v02r03

5. Equipment Under Test (EUT) Information

5.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2527-2
FCC ID	IHDT56AV4
IMEI Code	Sample 1: IMEI1: 358674600016513 IMEI2: 358674600016521 Sample 2: IMEI1: 358731430009157 IMEI2: 358731430009165 Sample 3: IMEI1: 358731430007979 IMEI2: 358731430007987
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 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 2.4GHz 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 WLAN 5GHz 802.11ax HE20/HE40/HE80 Bluetooth BR/EDR/LE NFC: ASK

HW Version	DVT2
SW Version	V2VN35.50
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:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5GNR (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 power table at appendix E.
7. For WLAN/BT when transmit simultaneously with each other, or when transmit simultaneous with WWAN, power reduction will be activated to head exposure condition. For WLAN when transmit simultaneous with WWAN/BT 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. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
10. This device supports HPUE for LTE Band 41 with class 2 level, HPUE power has been measured separately. 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 power class 3 was chosen to perform full SAR testing and power class 2 verify the worst case of power class 3 SAR.
11. This device supports HPUE mode for 5G NR n77/n78 with higher power, so 5GNR n77/n78 HPUE SAR was chosen to perform full SAR testing and HPUE SAR can represent power class 3 level SAR.
12. There are three samples, the difference between them refer to the XT2527-2_Operational Description of Product Equality Declaration which is exhibit separately. According to the differences, so sample 1 was chosen to perform full SAR testing, and the sample 2/3 are verified the difference with the sample 1.
13. This device has NFC function and the NFC SAR report will be separately submitted.
14. This device supports 5GNR 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	n5	FDD	15	5, 10, 15, 20
	n41	TDD	30	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 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
SA	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 50
	n26	FDD	15	5, 10, 15, 20
	n71	FDD	15	5, 10, 15, 20
	n38	TDD	30	10, 15, 20, 25, 30, 40
	n41	TDD	30	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 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

5.2 General LTE SAR Test and Reporting Considerations

<table>
<tr><th colspan="2">Summarized necessary items addressed in KDB 941225 D05 v02r05</th></tr>
<tr><td>FCC ID</td><td>IHDT56AV4</td></tr>
<tr><td>Equipment Name</td><td>Mobile Cellular Phone</td></tr>
<tr><td>Operating Frequency Range of each LTE transmission band</td><td>LTE Band 2: 1850 MHz ~ 1910 MHz
LTE Band 5: 824 MHz ~ 849 MHz
LTE Band 7: 2500 MHz ~ 2570 MHz
LTE Band 26: 814 MHz ~ 849 MHz
LTE Band 71: 663 MHz ~ 698 MHz
LTE Band 38: 2570 MHz ~ 2620 MHz
LTE Band 41: 2496 MHz ~ 2690 MHz
LTE Band 42: 3450 MHz ~ 3550 MHz</td></tr>
<tr><td>Channel Bandwidth</td><td>LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM / 256QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Voice and Data</td></tr>
<tr><td>LTE Release Version</td><td>R15</td></tr>
<tr><td>CA Support</td><td>Supported, Uplink and Downlink</td></tr>
<tr><td>LTE MPR permanently built-in by design</td><td>
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3
<table>
<tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr>
<tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr>
<tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr>
<tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr>
</table>
</td></tr>
<tr><td>LTE A-MPR</td><td>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)</td></tr>
<tr><td>Spectrum plots for RB configuration</td><td>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.</td></tr>
<tr><td>Power reduction applied to satisfy SAR compliance</td><td>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 section 15.</td></tr>
<tr><td>LTE Carrier Aggregation Combinations</td><td>Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 15.</td></tr>
<tr><td>LTE Carrier Aggregation Additional Information</td><td>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 3 carriers in the downlink and 2 carriers in the uplink.</td></tr>
</table>

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 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)				
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)				
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 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)
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 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 42								
	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	42115	3452.5	42140	3455	42165	3457.5	42190	3460
M	42590	3500	42590	3500	42590	3500	42590	3500
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540

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

<For LTE Overlap Bands Description>

1) LTE Bands BW

Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes

2) LTE Bands tune up:

Band	Antenna	Head	Body-worn	Hotspot	Extremity	Sensor Off	Default
		ECI 2	ECI 3	ECI 7	ECI 6	ECI4	Tune-up Limit
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
LTE Band 5	Ant 0	24.0	24.0	24.0	24.0	24.0	24.0
LTE Band 26	Ant 0	24.0	24.0	24.0	24.0	24.0	24.0
LTE Band 5	Ant 4	23.6	23.6	22.0	24.0	24.0	24.0
LTE Band 26	Ant 4	23.6	23.6	22.0	24.0	24.0	24.0
LTE Band 38	Ant1	24.0	24.0	22.2	24.0	24.0	24.0
LTE Band 41	Ant1	24.0	24.0	22.2	24.0	24.0	24.0
LTE Band 41 HPUE	Ant1	27.0	27.0	23.8	27.0	27.0	27.0
LTE Band 38 Other PA	Ant1	24.0	24.0	22.2	24.0	24.0	24.0
LTE Band 41Other PA	Ant1	24.0	24.0	22.2	24.0	24.0	24.0
LTE Band 41 Other PA HPUE	Ant1	27.0	27.0	23.8	27.0	27.0	27.0
LTE Band 38	Ant4	21.8	21.2	19.0	22.3	24.0	24.0
LTE Band 41	Ant4	21.8	21.2	19.0	22.3	24.0	24.0
LTE Band 41 HPUE	Ant4	23.4	22.8	20.6	23.9	27.0	27.0

5.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz 5G NR n71: 663 MHz ~ 698 MHz
Channel Bandwidth	The detail please refers to section 5.1 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 n5	LTE B7
LTE Anchor Bands for n41	LTE B5
LTE Anchor Bands for n77	LTE B7
LTE Anchor Bands for n78	LTE B2/5/7/38/41

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band

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 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 71

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133100	665.5	133600	668	134100	670.5	134600	673
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5
H	139100	695.5	138600	693	138100	690.5	137600	688

NR Band 38

	Bandwidth10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98

NR Band 41

	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz		Bandwidth 45MHz		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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	501702	2508.51	502200	2511	502704	2513.52	503202	2516.01	503700	2518.5	504204	2521.02	505200	2526	500202	2501.01	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	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	535500	2677.5	534996	2674.98	534498	2672.49	534000	2670	533496	2667.48	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640

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 NR Overlap Bands Description>

1) NR Bands BW

Band	Duplex	SCS(KHz)	Bandwidths(BW)
n5	FDD	15	5, 10, 15, 20
n26	FDD	15	5, 10, 15, 20
n38	TDD	30	10, 15, 20, 25, 30, 40
n41	TDD	30	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 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

2) NR Bands Tune up:

Band	Antenna	Head	Body-worn	Hotspot	Extremity	Sensor Off	Default
		ECI 2	ECI 3	ECI 7	ECI 6	ECI4	Tune-up Limit
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
FR1 n5	Ant 0	24.0	23.5	23.5	24.0	24.0	24.0
FR1 n26	Ant 0	24.0	23.5	23.5	24.0	24.0	24.0
FR1 n5	Ant 4	23.6	23.5	22.0	24.0	24.0	24.0
FR1 n26	Ant 4	23.6	23.5	22.0	24.0	24.0	24.0
FR1 n38	Ant 1	24.0	20.7	19.3	21.2	24.0	24.0
FR1 n41	Ant 1	24.0	20.7	19.3	21.2	24.0	24.0
FR1 n38	Ant 4	20.9	19.4	17.6	20.8	24.0	24.0
FR1 n41	Ant 4	20.9	19.4	17.6	20.8	24.0	24.0
FR1 n77	Ant 5	16.3	18.4	14.6	19.7	24.0	24.0
FR1 n78	Ant 5	16.3	18.4	14.6	19.7	24.0	24.0
FR1 n77 HPUE	Ant 5	16.3	18.4	14.6	19.7	27.0	27.0
FR1 n78 HPUE	Ant 5	16.3	18.4	14.6	19.7	27.0	27.0
FR1 n77	Ant 3	19.5	13.9	12.8	16.6	19.5	19.5
FR1 n78	Ant 3	19.5	13.9	12.8	16.6	19.5	19.5
FR1 n77 HPUE	Ant 3	22.5	13.9	12.8	16.6	22.5	22.5
FR1 n78 HPUE	Ant 3	22.5	13.9	12.8	16.6	22.5	22.5
FR1 n77	Ant 7	15.5	18.6	17.5	22.0	24.0	24.0
FR1 n78	Ant 7	15.5	18.6	17.5	22.0	24.0	24.0
FR1 n77 HPUE	Ant 7	15.5	18.6	17.5	22.0	27.0	27.0
FR1 n78 HPUE	Ant 7	15.5	18.6	17.5	22.0	27.0	27.0
FR1 n77	Ant 9	20.5	17.9	15.9	17.6	20.5	20.5
FR1 n78	Ant 9	20.5	17.9	15.9	17.6	20.5	20.5
FR1 n77 HPUE	Ant 9	23.5	17.9	15.9	17.6	23.5	23.5
FR1 n78 HPUE	Ant 9	23.5	17.9	15.9	17.6	23.5	23.5

6. 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 ≤ 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 Plimit 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) Plimit 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

<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 >

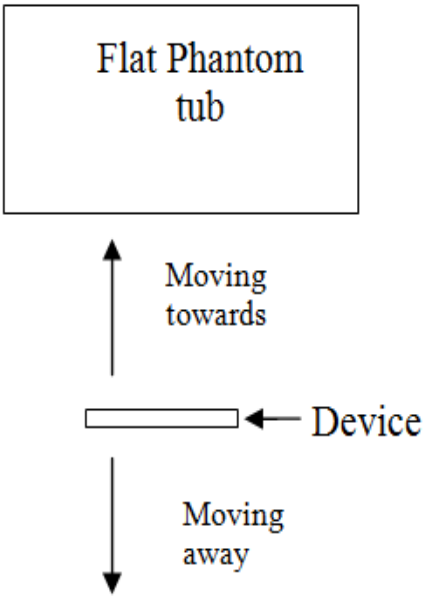
Band	Antenna	Head ECI2	Body worn ECI3	Hotspot ECI7	Extremity ECI6	Sensor off ECI4	Pmax*
GSM850	Ant0	28.7	26.6	26.6	24.5	24.5	24.5
GSM1900	Ant1	30.7	25.4	25.4	25.4	21.2	21.2
WCDMA II	Ant1	31.2	20.0	20.0	22.1	23.0	23.0
WCDMA V	Ant0	28.7	22.4	22.4	24.6	23.0	23.0
LTE Band 7	Ant1	29.4	18.6	18.4	20.4	23.0	23.0
LTE Band 7 Other PA	Ant1	29.4	18.6	18.4	20.4	23.0	23.0
LTE Band 7	Ant4	18.5	18.0	15.9	18.8	23.0	23.0
LTE Band 2	Ant1	31.3	20.8	19.7	21.8	23.0	23.0
LTE Band 2 Other PA	Ant1	31.3	20.8	19.7	21.8	23.0	23.0
LTE Band 2	Ant4	18.5	18.2	15.6	20.2	23.0	23.0
LTE Band 26(5)	Ant0	28.9	23.0	23.0	24.0	23.0	23.0
LTE Band 26(5)	Ant4	22.0	22.6	21.0	23.0	23.0	23.0
LTE Band 71	Ant0	32.0	25.0	24.6	23.0	23.0	23.0
LTE Band 71	Ant4	23.4	25.1	23.6	23.0	23.0	23.0
LTE Band 41(38)	Ant1	28.9	22.4	19.2	22.4	22.4	21.0
LTE Band 41(38) Other PA	Ant1	28.9	22.4	19.2	22.4	22.4	21.0
LTE Band 41_HPUE	Ant1	28.9	22.4	19.2	22.4	22.4	22.4
LTE Band 41 Other PA_HPUE	Ant1	28.9	22.4	19.2	22.4	22.4	22.4
LTE Band 41(38)	Ant4	18.8	18.2	16.0	19.3	22.4	21.0
LTE Band 41_HPUE	Ant4	18.8	18.2	16.0	19.3	22.4	22.4
LTE Band 42	Ant5	15.1	16.5	13.1	18.4	21.0	21.0
FR1 n7	Ant1	30.4	21.2	19.2	21.1	23.0	23.0
FR1 n7 Other PA	Ant1	30.4	21.2	19.2	21.1	23.0	23.0
FR1 n7	Ant4	19.6	19.6	18.3	21.0	23.0	23.0
FR1 n7 Other PA	Ant4	19.6	19.6	18.3	21.0	23.0	23.0
FR1 n26(5)	Ant0	30.3	22.5	22.5	23.0	23.0	23.0
FR1 n26(5)	Ant4	22.6	22.5	21.0	23.0	23.0	23.0
FR1 n71	Ant0	33.5	26.1	25.7	23.0	23.0	23.0
FR1 n71	Ant4	25.2	25.6	24.1	23.0	23.0	23.0
FR1 n41(38) PC3	Ant1	30.5	19.7	18.3	20.2	23.0	23.0
FR1 n41(38) PC3	Ant4	19.9	18.4	16.6	19.8	23.0	23.0
FR1 n77(78) PC3	Ant5	15.3	17.4	13.6	18.7	26.0	23.0
FR1 n77(78) PC3	Ant3	26.5	12.9	11.8	15.6	21.5	18.5
FR1 n77(78) PC3	Ant7	14.5	17.6	16.5	21.0	26.0	23.0
FR1 n77(78) PC3	Ant9	27.2	16.6	14.9	18.6	18.6	19.5
FR1 n77(78) PC2	Ant5	15.3	17.4	13.6	18.7	26.0	26.0
FR1 n77(78) PC2	Ant3	26.5	12.9	11.8	15.6	21.5	21.5
FR1 n77(78) PC2	Ant7	14.5	17.6	16.5	21.0	26.0	26.0
FR1 n77(78) PC2	Ant9	27.2	16.6	14.9	18.6	18.6	22.5

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.

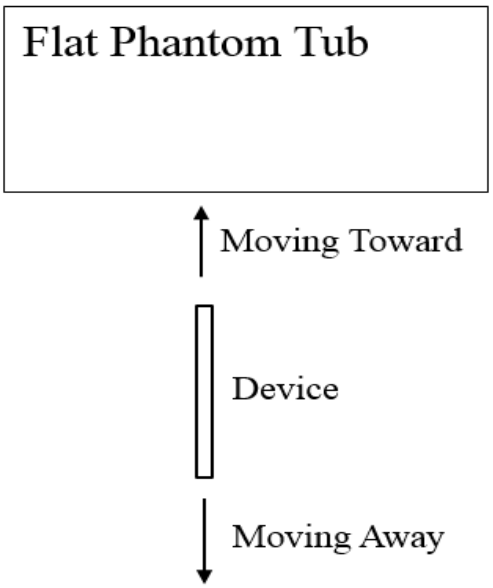
7. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (5825MHz) and lowest (835MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensors placed coincident with antenna elements at the top and bottom ends of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back of the device.
3. The output power will reduce to body worn power level when top and bottom sensor pad be detected.
4. The sensors used to detect the proximity of the user's body at the front or back surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s). When front or back body worn condition is detected reduced power will be active.
5. The device employs proximity sensors also can detect the presence of the user's a finger or hand when handheld state at the front/back/top/bottom/left/right sides of the device. When front/back/top/bottom/left/right sides of handheld condition is detected reduced power will be active.
6. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed:



Sensor/Handheld detection test set-up, Front and Back sides



Handheld detection test set-up, Left Side, Right Side, Bottom Side and Top Side

<P-Sensor>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	18	25	21	30

<Handheld for ANT 1>

Proximity Sensor Triggering Distance (mm)						
Position	Front		Back		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	12	6	10	11	17

<Handheld for ANT4>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	11	12	17	9	14	10	15

<Handheld for ANT 5/7>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Right Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	14	19	19	23	18	23	14	19

8. RF Exposure Limits

8.1 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.

8.2 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.

9. Specific Absorption Rate (SAR)

9.1 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.

9.2 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:

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

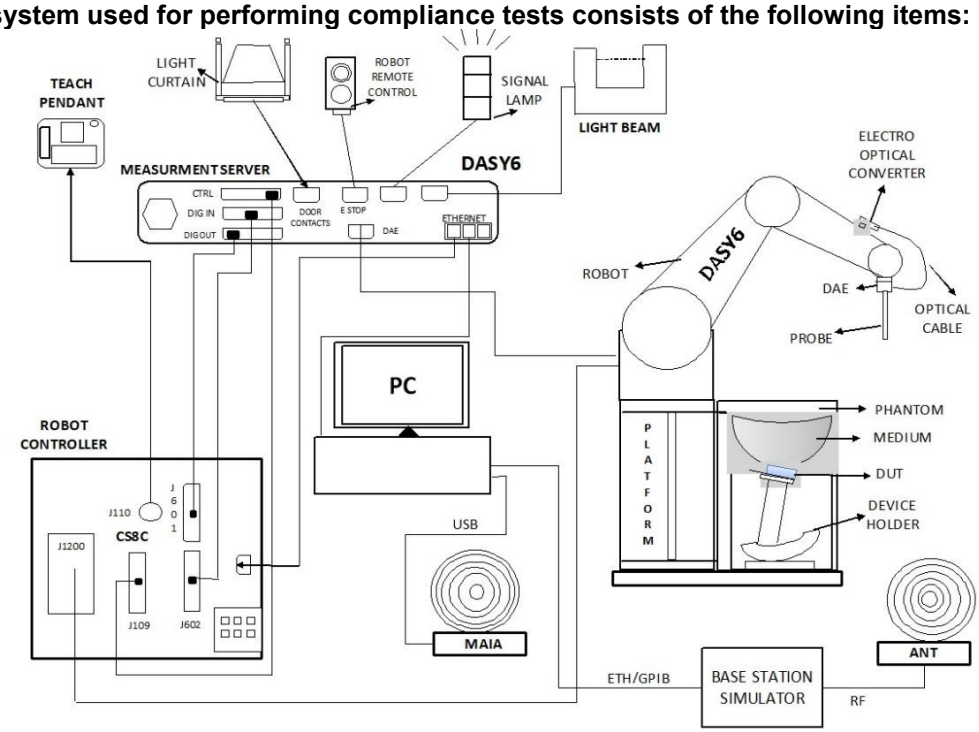
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

10. 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 Win7 or Win10 and the DASY5 or DASY6 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.

10.1 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

10.2 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.

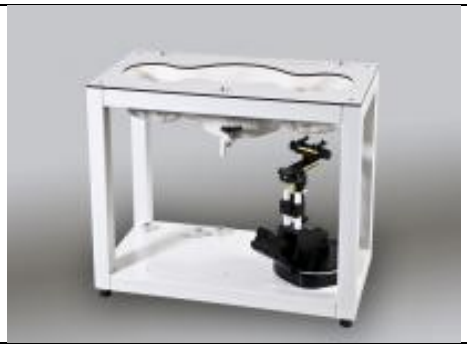
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

10.3 Phantom

<SAM Twin Phantom>

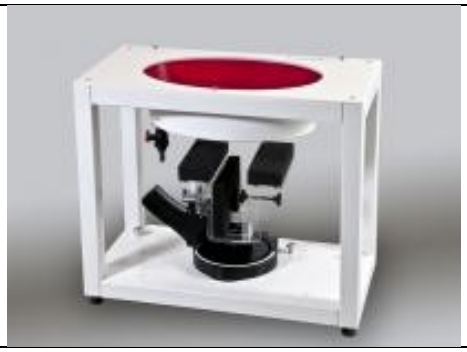
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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.

10.4 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

11. 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

11.1 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 form 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

11.2 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.

11.3 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	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

11.4 Zoom Scan

Zoom scans are used 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 shoes 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 1st 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	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
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 *reported* SAR from the *area scan based 1-g SAR estimation* 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.

11.5 Volume Scan Procedures

The volume scan is used for 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.

11.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY 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.

12. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1099	2024/12/13	2025/12/12
SPEAG	835MHz System Validation Kit	D835V2	4d162	2024/12/13	2025/12/12
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2024/12/16	2025/12/15
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	1358	2024/5/23	2025/5/22
SPEAG	Data Acquisition Electronics	DAE4	1650	2024/11/25	2025/11/24
SPEAG	Dosimetric E-Field Probe	EX3DV4	7774	2024/6/27	2025/6/26
SPEAG	Dosimetric E-Field Probe	EX3DV4	7630	2024/8/22	2025/8/21
SPEAG	SAM Twin Phantom	SAM Twin	TP-2024	NCR	NCR
Beichuang	Thermo-Hygrometer	HTC-1	1929540	2024/5/15	2025/5/14
Beichuang	Thermo-Hygrometer	HTC-1	1929543	2024/5/15	2025/5/14
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2024/7/4	2025/7/3
Agilent	ENA Series Network Analyzer	E5071C	MY46112129	2024/7/4	2025/7/3
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	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2024/7/4	2025/7/3
R&S	BLUETOOTH TESTER	CBT	101246	2024/7/4	2025/7/3
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	ARRA	Note 1	
MCL	Attenuation1	BW-S10W5+	MCL	Note 1	
MCL	Attenuation2	BW-S10W5+	MCL	Note 1	
MCL	Attenuation3	BW-S10W5+	MCL	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.

13. System Verification

13.1 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.

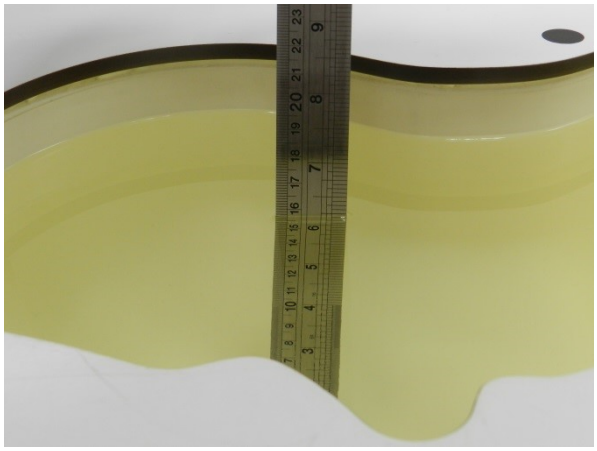


Fig 11.1 Photo of Liquid Height for Head SAR

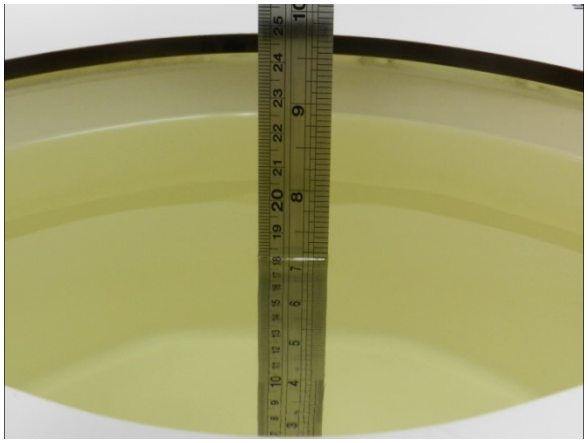


Fig 11.2 Photo of Liquid Height for Body SAR

13.2 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 (εr)
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. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.7	0.896	43.9	0.89	41.90	0.67	4.77	±5	2025/4/3
750	Head	22.6	0.900	43.2	0.89	41.90	1.12	3.10	±5	2025/4/5
835	Head	22.7	0.925	43.5	0.90	41.50	2.78	4.82	±5	2025/4/4
1900	Head	22.7	1.43	41.7	1.40	40.00	2.14	4.25	±5	2025/4/6
2450	Head	22.7	1.81	40.9	1.80	39.20	0.56	4.34	±5	2025/4/10
2600	Head	22.8	1.93	40.7	1.96	39.00	-1.53	4.36	±5	2025/4/8
2600	Head	22.7	1.92	40.0	1.96	39.00	-2.04	2.56	±5	2025/4/17
3500	Head	22.6	2.79	39.6	2.91	37.90	-4.12	4.49	±5	2025/4/16
3700	Head	22.8	3.06	37.5	3.12	37.70	-1.92	-0.53	±5	2025/4/18
3700	Head	22.8	2.97	39.3	3.12	37.70	-4.81	4.24	±5	2025/4/19
3900	Head	22.8	3.19	38.4	3.33	37.51	-4.20	2.37	±5	2025/4/19
3900	Head	22.8	3.28	37.6	3.33	37.51	-1.50	0.24	±5	2025/4/18
5250	Head	22.8	4.55	37.0	4.71	35.95	-3.40	2.92	±5	2025/4/12
5600	Head	22.8	4.95	36.4	5.07	35.50	-2.37	2.54	±5	2025/4/14
5750	Head	22.8	5.12	36.1	5.22	35.35	-1.92	2.12	±5	2025/4/15

13.3 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 (%)
2025/4/3	750	Head	50	1099	7630	1650	0.397	8.280	7.94	-4.11	0.277	5.370	5.54	3.17
2025/4/5	750	Head	50	1099	7630	1650	0.396	8.280	7.92	-4.35	0.276	5.370	5.52	2.79
2025/4/4	835	Head	50	4d162	7630	1650	0.432	9.080	8.64	-4.85	0.301	5.850	6.02	2.91
2025/4/6	1900	Head	50	5d182	7630	1650	2.110	39.800	42.2	6.03	1.150	21.000	23	9.52
2025/4/10	2450	Head	50	1095	7630	1650	2.690	52.600	53.8	2.28	1.310	24.700	26.2	6.07
2025/4/8	2600	Head	50	1112	7630	1650	2.660	55.100	53.2	-3.45	1.250	24.800	25	0.81
2025/4/17	2600	Head	50	1112	7630	1650	2.690	55.100	53.8	-2.36	1.260	24.800	25.2	1.61
2025/4/16	3500	Head	50	1037	7630	1650	3.430	65.400	68.6	4.89	1.340	24.700	26.8	8.50
2025/4/18	3700	Head	50	1008	7774	1358	3.220	67.200	64.4	-4.17	1.190	24.400	23.8	-2.46
2025/4/19	3700	Head	50	1008	7774	1358	3.130	67.200	62.6	-6.85	1.150	24.400	23	-5.74
2025/4/19	3900	Head	50	1048	7774	1358	3.470	69.100	69.4	0.43	1.240	24.100	24.8	2.90
2025/4/18	3900	Head	50	1048	7774	1358	3.340	69.100	66.8	-3.33	1.210	24.100	24.2	0.41
2025/4/12	5250	Head	50	1113	7630	1650	3.840	81.500	76.8	-5.77	1.100	23.300	22	-5.58
2025/4/14	5600	Head	50	1113	7630	1650	3.750	82.600	75	-9.20	1.080	23.700	21.6	-8.86
2025/4/15	5750	Head	50	1113	7630	1650	3.640	80.800	72.8	-9.90	1.050	23.000	21	-8.70

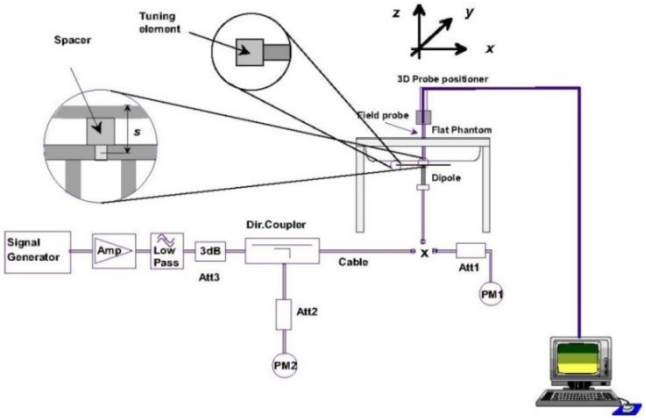


Fig 11.3.1 System Performance Check Setup

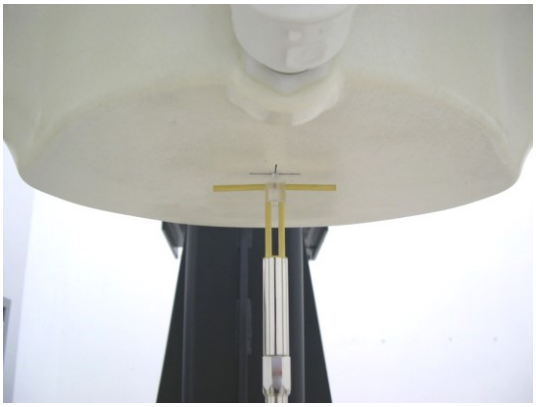


Fig 11.3.2 Setup Photo

14. RF Exposure Positions

14.1 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.

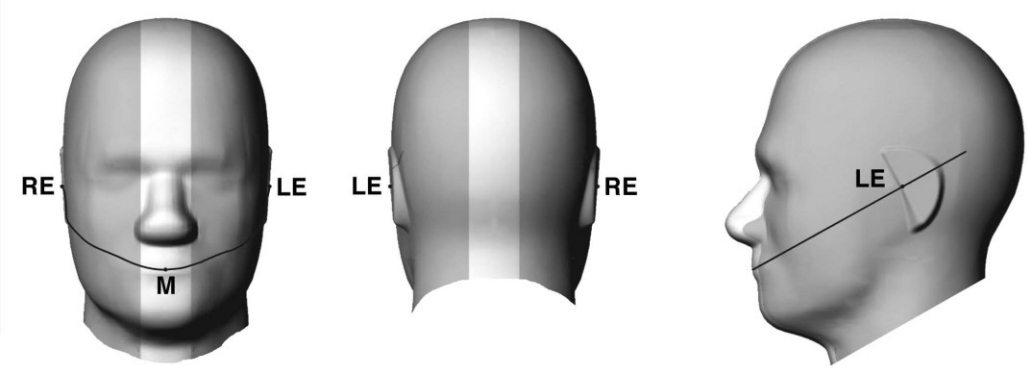


Fig 12.1.1 Front, back, and side views of SAM twin phantom

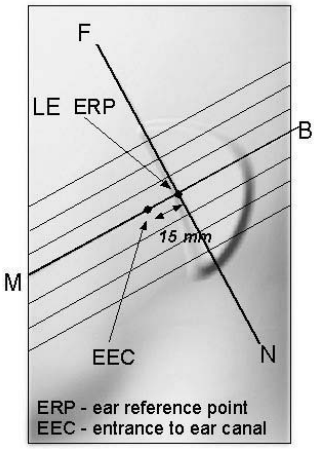


Fig 12.1.2 Close-up side view of phantom showing the ear region.

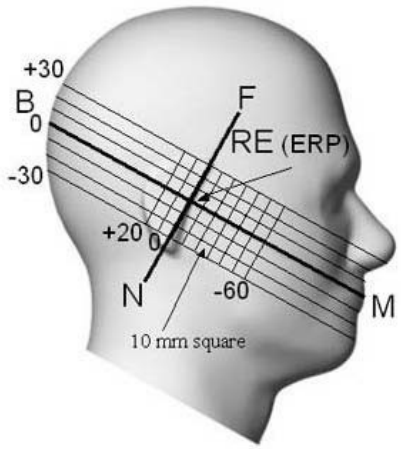


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

14.2 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 wt 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 wb 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.

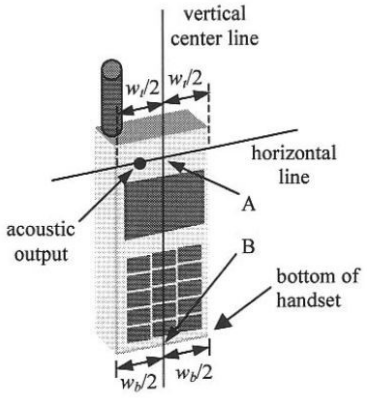


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

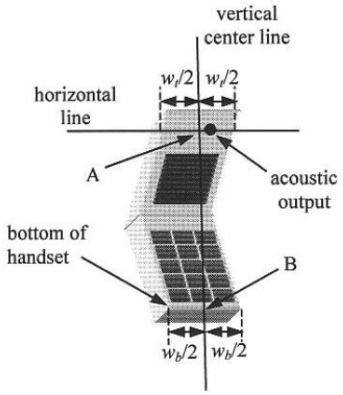


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

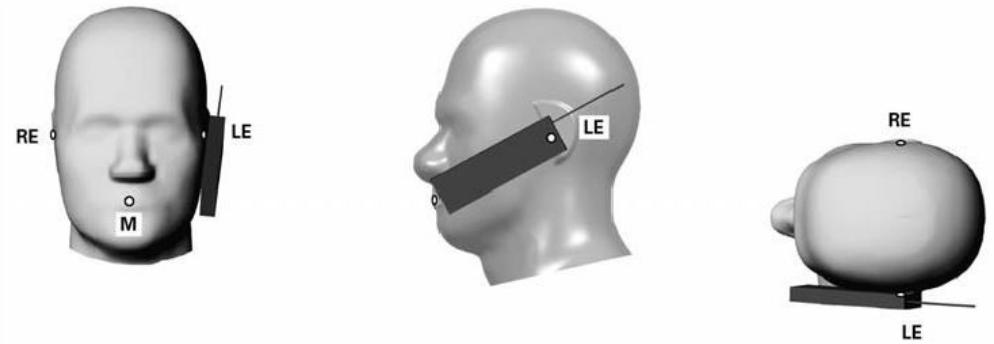


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

14.3 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

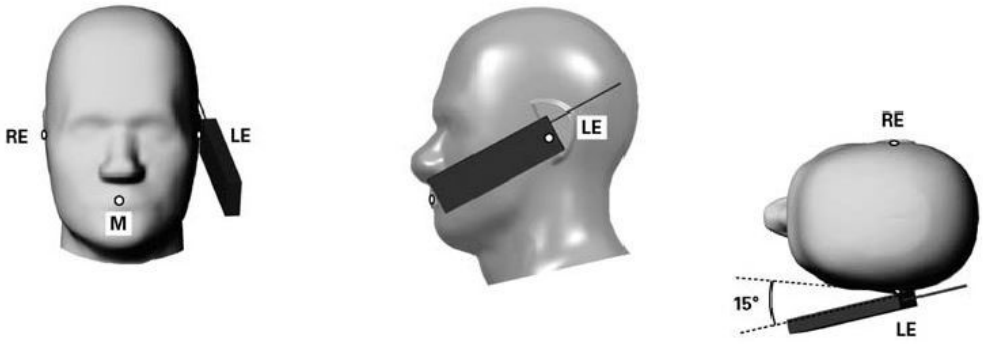


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

14.4 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 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset 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.

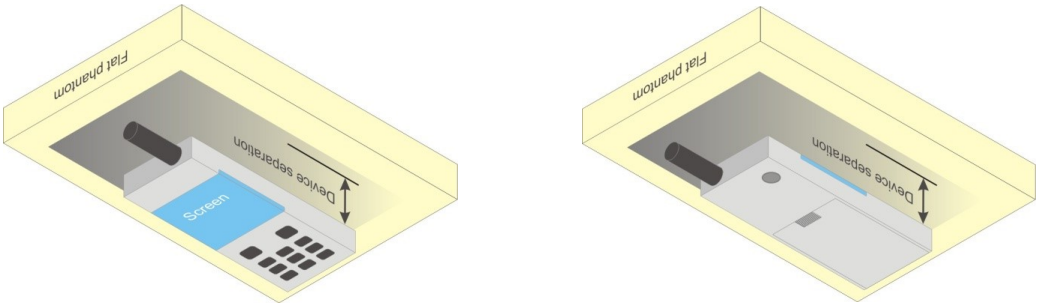


Fig 12.4 Body Worn Position

14.5 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.

14.6 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 x W ≥ 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 form 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.

15. Conducted RF Output Power (Unit: dBm)

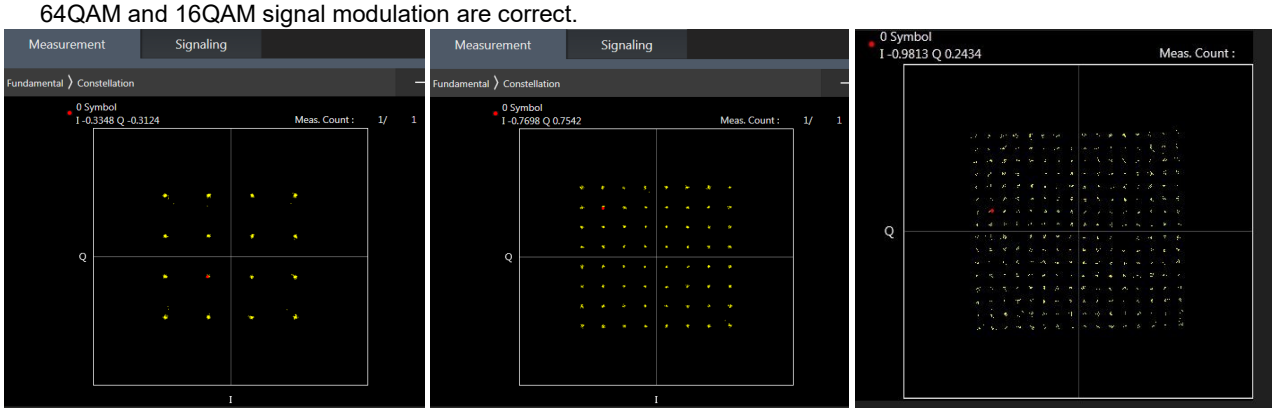
The detailed conducted power table can refer to Appendix E.

<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B5 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B5 / B38 SAR test was covered by B26 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
    a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
    b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

10. According to May 2017 TCB workshop, for 16QAM and 64QAM, 256QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 256QAM, 64QAM and 16QAM signal modulation are correct.



16QAM **64QAM** **256QAM**

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
b. “special subframe S” contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

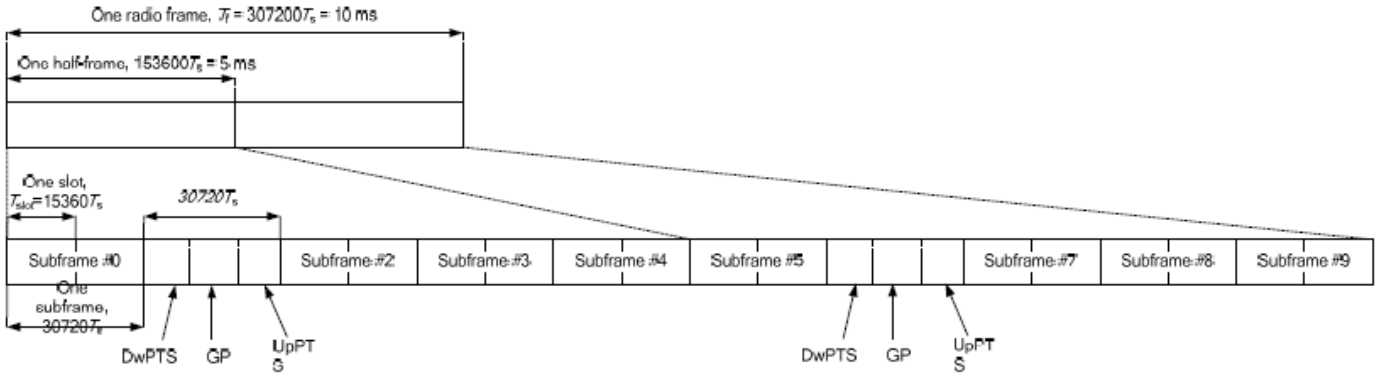


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

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

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

Special subframe (30720·T_s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	**Normal cyclic prefix in uplink**	**Extended cyclic prefix in uplink**
Uplink duty factor in one special subframe	**0~4**	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T_s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	**Normal cyclic prefix in uplink**	**Extended cyclic prefix in uplink**
Uplink duty factor in one special subframe	**0~3**	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

For LTE TDD Power class 2

i. Uplink-downlink configuration: 1. In a half-frame consisted of 5 subfames, uplink operation is in 2 uplink subframes and 1 special subframe.
ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (2+0.167)/5 = 43.3%
iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (2+0.143)/5 = 42.9%
v. For TDD LTE SAR measurement, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 43.3%/42.9% = 1.009 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

For LTE TDD Power class 3

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, uplink operation is in 3 uplink subframes and 1 special subframe.
ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.167)/5 = 63.3%
iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.143)/5 = 62.9%
v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

The device can adjust uplink/downlink configuration automatically according to the transmitting power class level, as followings:

LTE TDD Band	Power Class level	support uplink/downlink configuration
LTE Band 41	> 23	1,2,3,4,5
	=23	0,1,2,3,4,5,6
	< 23	0,1,2,3,4,5,6

<LTE Carrier Aggregation>

The detailed LTE Carrier Aggregation conducted power table can refer to Appendix F.

General Note:

1. Per Oct. 2024 TCB workshop, the downlink (DL) pertains to receiver functionality, thus it is not related to RF exposure compliance limits related to cumulative effects of different transmitters.
2. Per Oct. 2024 TCB workshop, equipment authorization applications shall refer to the worst-case UL powers resulting from all the possible modes of operations. Accordingly, CA-DL cases do not need to be analyzed separately, unless pertinent to establishing UL power setting.
3. Per Oct. 2024 TCB workshop, Manufacturer declares that TX power measurement for multiple DL CA configurations is deemed not required as the DL CA has no impact on the TX power according to preliminary scan. TX power measured in LTE standalone operation represents the worst case.
4. This device supports LTE carrier aggregation in the downlink. All uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	Antenna Tx
CA_38C	Ant 1
CA_41C	Ant 1
CA_7C	Ant 1

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B7/38/41 with a maximum of two uplink component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.

ii. According Nov. 2017 TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

iii. Additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.

<Inter-band uplink carrier aggregation consideration>

LTE Uplink CA	2CC Uplink Carrier Aggregation
Inter-band	Main Antenna Tx
CA_5A-7A	Ant 4 + Ant 1

General Note:

1. The single carrier of inter band CA uplink power level is the same as Non-CA standalone LTE power level.
2. The product implements MediaTek TA-SAR Gen2 feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 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.
3. For LTE inter-band CA mode, MediaTek TA-SAR Gen2 algorithm in WWAN adds directly the time-averaged RF exposure between two LTE bands. TA-SAR Gen2 algorithm controls the total RF exposure base on LTE inter CA bands to not exceed FCC limit. In Part 1 Report, simultaneous transmission compliance was evaluated with other Radios (WLAN or BT) using standalone LTE SAR mode.

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n5/n41/n77/n78 is NSA mode.
2. 5G NR n5/n7/n26/n38/n41/n77/n78 is SA mode.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-s QPSK and the reported SAR for the DFT-s QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
   c. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
   d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested
   f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
   g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
5. For 5GNR, the simultaneous transmission analysis is used standalone SAR at total power level to show compliance.
6. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
7. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
8. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
9. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.

<3GPP 38.101 MPR for EN-DC>

Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
		≤ 0.5[2]	≤ 0.5[2]	0[2]
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26 dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

Table 6.2.2-2 Maximum power reduction (MPR) for power class 2

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5	≤ 0.5	0
	QPSK	≤ 3.5	≤ 1	0
	16 QAM	≤ 3.5	≤ 2	≤ 1
	64 QAM	≤ 3.5	≤ 2.5	
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3.5	≤ 3	≤ 1.5
	16 QAM	≤ 3.5	≤ 3	≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

<EN-DC combination>

ENDC	Main Antenna Tx	
	LTE TX	NR TX
DC_7A_n5A	Ant 1	Ant 4
DC_5A_ n41A	Ant 4	Ant 1
DC_7A_n77A	Ant 1	Ant 5
DC_5A_n78A	Ant 0	Ant 5
DC_7A_n78A	Ant 1	Ant 5
DC_38A_n78A	Ant 1	Ant 5
DC_41A_n78A	Ant 1	Ant 5
DC_2A_n78A	Ant 1	Ant 5

16. Antenna Location

The detailed antenna location information can refer to SAR Test Setup Photos.

17. Spot Check SAR and Full Test SAR Results

General Note:

1. According to section 3.3, spot check conducted power test against the variant project based on the worst-case SAR condition from the original project was performed in this filing to demonstrate the test data from original project remains representative for the variant project. Detail Conducted power measurement referred to appendix E.
2. SAR spot check verification on the worst cases from the original model was performed to demonstrate the test data from original model remains representative for the variant model.
3. Per KDB 484596 D01 v02r03, the variant filings must demonstrate that the referenced test data remain valid for the variant device by including spot-check measurements that meet the following criteria:
   a. Spot-check measurements shall be made in correspondence to the worst-case scenario reported in the reference device filing, i.e., for those conditions that are the closest to non-compliance
   b. Spot-check measurements, while being always compliant with the applicable rule part(s) for the test under consideration, may show a deviation ddB from the reference data no larger than 3 dB:
   $$d_{dB} = | VdB – RdB | \leq 3\ dB \quad (1)$$
   where between VdB, the variant spot-check level in dB, and RdB is the corresponding measurement level in dB for the reference model.
4. The Spot check results showed that Deviation of the SAR results did not exceed 3 dB, therefore referring to the guidance in the KDB inquiry, SAR data reuse is justified.
5. 1st as parent model, 2nd as variant model.

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For SAR testing of Bluetooth signal with 83.3% theoretical duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle) *83.3%".
   d. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   e. For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   f. For TDD LTE SAR measurement of power class 3, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. 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.
4. 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 power table at appendix E.
5. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2

W/kg SAR test reduction threshold.

a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of GSM850/1900, WCDMA Band II/V, LTE Band 2/5/7/26/38/41/42, 5GNR n7/n38/n41/n77 /n78, WLAN 2.4/5.2/5.8GHz, therefore product specific 10g SAR is necessary.
b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

6. Although the headset SAR is greater than 0.8 W/kg, the headset SAR verified the worst of the non-headset SAR and less than non-headset SAR, so there is no need to be tested other channels.
7. According to Nov. 2017 TCB workshop, when the reported 1gSAR for UL CA configuration is <1.2 W/kg, UL CA 1gSAR is not required for all required test channels (PCC based).
8. LTE B2/7/38/41 and 5GNR n7 at Ant 1 and 5GNR n7 at Ant 4 support different PAs for same antennas. And some LTE/NR bands support Other PA only under ENDC& UL CA. Some LTE/NR bands support different PAs for some antennas, whether it is the maximum power of Main PA is higher than and very close to the other PA, for RF exposure, after verification all PAs in a same position, so the worst-case PA was chosen to perform full SAR testing to ensure the RF exposure is compliance and another PA verified the worst case. Since this application SAR test data Referencing from FCC ID: IHDT56AV5 (reference model), so only LTE B38/41 at Ant 1 are all evaluated for SAR testing in this report.
9. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hotspot SAR.
10. For Phablet devices, when hotspot mode is not supported, Product specific 10-g SAR is required for all surfaces and edges with an antenna located at ≤ 25mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B5 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE B5 / B38 SAR test was covered by B26 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   c. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   d. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
   e. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
   f. For 5G FR1 n5 /n7/n26/n38/n41 /n77 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

ECI status description:

The device has the following ECI state which used at different exposure condition.

This WWAN bands enabled with MediaTek TA-SAR Gen2 feature which located at chapter 5. The default power is Pmax power, When Plimit power higher than Pmax power, the output power will be limited at Pmax, and so the SAR will use Pmax power to do the testing.

Exposure Condition	ECI	Trigger conditions
Head SAR	ECI2	Earpiece On
Hotspot SAR	ECI7	Hotspot On
Body worn SAR	ECI3	Sensor On
Extremity SAR	ECI6	Sensor On
Body worn/ Extremity SAR	ECI4	Sensor Off

17.1 Head SAR

Plot No.	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)	Deviation dB
750MHZ																							
	2nd	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	133297	680.5	1	22.82	24.00	1.312	-	-	0.08	0.075	0.098	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	133297	680.5	1	21.87	23.00	1.297	-	-	-0.07	0.062	0.080	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	133297	680.5	1	22.82	24.00	1.312	-	-	0.05	0.000	0.000	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	133297	680.5	1	21.87	23.00	1.297	-	-	-0.11	0.000	0.000	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	133297	680.5	1	22.82	24.00	1.312	-	-	-0.12	0.124	0.163	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	133297	680.5	1	21.87	23.00	1.297	-	-	0.03	0.103	0.134	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	133297	680.5	1	22.82	24.00	1.312	-	-	-0.16	0.059	0.077	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	133297	680.5	1	21.87	23.00	1.297	-	-	-0.02	0.054	0.070	
01	2nd	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	133297	680.5	1	22.75	24.00	1.334	-	-	0.07	0.601	**0.801**	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	133297	680.5	2	22.75	24.00	1.334	-	-	0.02	0.553	0.737	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	133297	680.5	3	22.75	24.00	1.334	-	-	-0.01	0.521	0.695	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	133297	680.5	1	21.78	23.00	1.324	-	-	0.15	0.506	0.670	
	2nd	LTE Band 71	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	ECI 2	133297	680.5	1	21.75	23.00	1.334	-	-	-0.09	0.530	0.707	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	133297	680.5	1	22.75	24.00	1.334	-	-	0.11	0.577	0.769	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	133297	680.5	1	21.78	23.00	1.324	-	-	-0.05	0.476	0.630	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	ECI 2	133297	680.5	1	22.75	24.00	1.334	-	-	0.16	0.244	0.325	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	ECI 2	133297	680.5	1	21.78	23.00	1.324	-	-	0.05	0.200	0.265	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	133297	680.5	1	22.75	24.00	1.334	-	-	0.05	0.248	0.331	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	ECI 2	133297	680.5	1	21.78	23.00	1.324	-	-	-0.03	0.208	0.275	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	136100	680.5	1	23.18	24.00	1.208	-	-	-0.15	0.048	0.058	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	136100	680.5	1	23.14	24.00	1.219	-	-	0.02	0.060	0.073	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	136100	680.5	1	23.18	24.00	1.208	-	-	0.07	0.000	0.000	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	136100	680.5	1	23.14	24.00	1.219	-	-	0.16	0.000	0.000	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	136100	680.5	1	23.18	24.00	1.208	-	-	0.13	0.087	0.105	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	136100	680.5	1	23.14	24.00	1.219	-	-	-0.18	0.095	0.116	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	136100	680.5	1	23.18	24.00	1.208	-	-	0.02	0.051	0.062	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	136100	680.5	1	23.14	24.00	1.219	-	-	0.16	0.052	0.063	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	ECI 2	136100	680.5	1	22.98	24.00	1.265	-	-	-0.03	0.361	0.457	
02	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	ECI 2	136100	680.5	1	22.89	24.00	1.291	-	-	0.04	0.424	**0.547**	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	ECI 2	136100	680.5	1	22.98	24.00	1.265	-	-	0.03	0.341	0.431	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	ECI 2	136100	680.5	1	22.89	24.00	1.291	-	-	0.01	0.364	0.470	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	ECI 2	136100	680.5	1	22.98	24.00	1.265	-	-	-0.01	0.149	0.188	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	ECI 2	136100	680.5	1	22.89	24.00	1.291	-	-	-0.06	0.186	0.240	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	ECI 2	136100	680.5	1	22.98	24.00	1.265	-	-	-0.04	0.159	0.201	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	ECI 2	136100	680.5	1	22.89	24.00	1.291	-	-	-0.09	0.185	0.239	
835MHz																							
	1st	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI 2	189	836.4	1	27.16	28.50	1.361	-	-	0.01	0.360	0.490	0.099
03	2nd	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI 2	189	836.4	1	27.22	28.50	1.343	-	-	0.02	0.357	**0.479**	
	1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI 2	4182	836.4	1	22.58	24.00	1.387	-	-	-0.09	0.247	0.343	0.025
04	2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI 2	4182	836.4	1	22.53	24.00	1.403	-	-	-0.01	0.243	**0.341**	
	1st	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	26865	831.5	1	22.65	24.00	1.365	-	-	0.16	0.243	0.332	0.340
	2nd	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	26865	831.5	1	22.54	24.00	1.400	-	-	0.03	0.219	0.307	
	1st	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	26865	831.5	1	22.19	23.00	1.205	-	-	-0.11	0.734	0.884	0.521
05	2nd	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	26865	831.5	1	22.14	23.00	1.219	-	-	0.01	0.643	**0.784**	
	1st	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	166300	831.5	1	22.72	24.00	1.343	-	-	0.11	0.178	0.239	0.092
	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	166300	831.5	1	22.69	24.00	1.352	-	-	0.03	0.173	0.234	
	1st	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	ECI 2	166300	831.5	1	22.52	23.60	1.282	-	-	0.01	0.686	0.880	0.414
06	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	ECI 2	166300	831.5	1	22.52	23.60	1.282	-	-	-0.06	0.624	**0.800**	
1900MHz																							
	1st	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 1	ECI 2	661	1880		25.39	26.50	1.291	-	-	-0.06	0.113	0.146	0.030

07	2nd	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 1	ECI 2	661	1880		25.33	26.50	1.309	-	-	-0.08	0.111	**0.145**	
	1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	ECI 2	9400	1880	1	22.70	24.00	1.349	-	-	0.07	0.143	0.193	0.045
08	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	ECI 2	9400	1880	1	22.65	24.00	1.365	-	-	0.01	0.140	**0.191**	
	1st	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	26340	1880	1	22.93	24.00	1.279	-	-	0.02	0.149	0.191	0.455
	2nd	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	18900	1880	1	22.79	24.00	1.321	-	-	0.06	0.130	0.172	
	1st	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	26340	1880	1	18.90	19.50	1.148	-	-	-0.06	0.772	0.886	0.000
09	2nd	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	18900	1880	1	18.79	19.50	1.178	-	-	-0.01	0.752	**0.886**	
2600MHz																							
	1st	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	21100	2535	1	22.84	24.00	1.306	-	-	-0.02	0.225	0.294	0.386
	2nd	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	21100	2535	1	22.72	24.00	1.343	-	-	0.01	0.200	0.269	
	1st	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	20850	2510	1	18.73	19.50	1.194	-	-	-0.05	0.741	0.885	0.460
10	2nd	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	20850	2510	1	18.78	19.50	1.180	-	-	0.02	0.674	**0.796**	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	40620	2593	1	22.93	24.00	1.279	62.9	1.006	0.08	0.163	0.210	
	2nd	LTE Band 41C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 1	ECI 2	40620+ 40818	2593+ 2612.8	1	22.79	24.00	1.321	62.9	1.006	0.08	0.151	0.201	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	40620	2593	1	21.93	23.00	1.279	62.9	1.006	0.01	0.131	0.169	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	1	22.93	24.00	1.279	62.9	1.006	0.03	0.051	0.066	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	1	21.93	23.00	1.279	62.9	1.006	-0.08	0.043	0.055	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	40620	2593	1	22.93	24.00	1.279	62.9	1.006	-0.08	0.098	0.126	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	40620	2593	1	21.93	23.00	1.279	62.9	1.006	0.1	0.062	0.080	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	40620	2593	1	22.93	24.00	1.279	62.9	1.006	-0.18	0.073	0.094	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	40620	2593	1	21.93	23.00	1.279	62.9	1.006	0.1	0.060	0.077	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	40620	2593	1	25.90	27.00	1.288	42.9	1.009	0.12	0.203	0.264	
	2nd	LTE Band 41C HPUE	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 1	ECI 2	40620+ 40818	2593+ 2612.8	1	25.73	27.00	1.340	42.9	1.009	0.01	0.171	0.231	
	2nd	LTE Band 41 Other pa	20M	QPSK	1	0		Right Cheek	0mm	Ant 1	ECI 2	40620	2593	1	22.89	24.00	1.291	62.9	1.006	0.03	0.145	0.188	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	40620	2593	1	21.24	21.80	1.138	62.9	1.006	0.08	0.695	0.795	
11	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	39750	2506	1	21.15	21.80	1.161	62.9	1.006	-0.03	0.778	**0.909**	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	40185	2549.5	1	21.06	21.80	1.186	62.9	1.006	0.03	0.701	0.836	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	41055	2636.5	1	21.18	21.80	1.153	62.9	1.006	-0.08	0.719	0.834	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	41490	2680	1	21.01	21.80	1.199	62.9	1.006	-0.08	0.666	0.804	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	40620	2593	1	21.03	21.80	1.194	62.9	1.006	0.1	0.572	0.687	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	39750	2506	1	20.99	21.80	1.205	62.9	1.006	0.1	0.631	0.765	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	40185	2549.5	1	20.94	21.80	1.219	62.9	1.006	0.12	0.589	0.722	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	41055	2636.5	1	20.99	21.80	1.205	62.9	1.006	0.08	0.581	0.704	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	41490	2680	1	20.91	21.80	1.227	62.9	1.006	-0.17	0.568	0.701	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	ECI 2	40620	2593	1	20.93	21.80	1.222	62.9	1.006	-0.03	0.576	0.708	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	40620	2593	1	21.24	21.80	1.138	62.9	1.006	0.14	0.754	0.863	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	39750	2506	1	21.15	21.80	1.161	62.9	1.006	-0.05	0.766	0.895	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	40185	2549.5	1	21.06	21.80	1.186	62.9	1.006	0.18	0.695	0.829	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	41055	2636.5	1	21.18	21.80	1.153	62.9	1.006	0.14	0.695	0.806	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	41490	2680	1	21.01	21.80	1.199	62.9	1.006	-0.17	0.751	0.906	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	40620	2593	1	21.03	21.80	1.194	62.9	1.006	0.17	0.613	0.736	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	39750	2506	1	20.99	21.80	1.205	62.9	1.006	0.01	0.613	0.743	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	40185	2549.5	1	20.94	21.80	1.219	62.9	1.006	0.1	0.587	0.720	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	41055	2636.5	1	20.99	21.80	1.205	62.9	1.006	-0.17	0.660	0.800	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	41490	2680	1	20.91	21.80	1.227	62.9	1.006	0.04	0.648	0.800	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	ECI 2	40620	2593	1	20.93	21.80	1.222	62.9	1.006	-0.01	0.607	0.746	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	ECI 2	40620	2593	1	21.24	21.80	1.138	62.9	1.006	-0.08	0.459	0.525	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	ECI 2	40620	2593	1	21.03	21.80	1.194	62.9	1.006	0.12	0.370	0.444	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	40620	2593	1	21.24	21.80	1.138	62.9	1.006	-0.1	0.557	0.637	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	39750	2506	1	21.15	21.80	1.161	62.9	1.006	-0.15	0.430	0.502	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	40185	2549.5	1	21.06	21.80	1.186	62.9	1.006	0.19	0.489	0.583	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	41055	2636.5	1	21.18	21.80	1.153	62.9	1.006	0.07	0.535	0.621	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	41490	2680	1	21.01	21.80	1.199	62.9	1.006	-0.18	0.521	0.629	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	ECI 2	40620	2593	1	21.03	21.80	1.194	62.9	1.006	0.03	0.453	0.544	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 4	ECI 2	40620	2593	1	20.93	21.80	1.222	62.9	1.006	-0.08	0.449	0.552	

	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	39750	2506	1	22.76	23.40	1.159	42.9	1.009	-0.01	0.766	0.896	
	1st	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	507000	2535	1	23.08	24.00	1.236	-	-	-0.15	0.187	0.231	0.134
	2nd	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	507000	2535	1	22.97	24.00	1.268	-	-	0.08	0.177	0.224	
	1st	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	ECI 2	507000	2535	1	19.09	20.60	1.416	-	-	0.05	0.640	0.906	0.131
12	2nd	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	ECI 2	507000	2535.000	1	19.16	20.60	1.393	-	-	0.12	0.631	**0.879**	
	1st	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	ECI 2	518598	2592.99	1	23.15	24.00	1.216	-	-	0.13	0.186	0.226	0.217
	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	ECI 2	518598	2592.99	1	23.15	24.00	1.216	-	-	0.01	0.177	0.215	
	1st	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	518598	2592.99	1	19.49	20.90	1.383	-	-	0.01	0.637	0.881	0.020
13	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	518598	2592.990	1	19.45	20.90	1.396	-	-	0.03	0.628	**0.877**	
3500MHz																							
	1st	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	ECI 2	42990	3540	1	17.05	18.10	1.274	62.9	1.006	-0.02	0.694	0.889	0.546
14	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	ECI 2	42990	3540	1	17.13	18.10	1.250	62.9	1.006	-0.01	0.623	**0.784**	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	ECI 2	656000	3840	1	15.58	16.30	1.180	-	-	0.08	0.492	0.581	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	ECI 2	656000	3840	1	15.52	16.30	1.197	-	-	-0.17	0.428	0.512	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	ECI 2	656000	3840	1	15.58	16.30	1.180	-	-	0.14	0.609	0.719	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	ECI 2	656000	3840	1	15.52	16.30	1.197	-	-	0.11	0.529	0.633	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	ECI 2	656000	3840	1	15.58	16.30	1.180	-	-	0.18	0.602	0.711	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	ECI 2	656000	3840	1	15.52	16.30	1.197	-	-	0.14	0.541	0.647	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	656000	3840	1	15.58	16.30	1.180	-	-	-0.07	0.742	0.876	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	656000	3840	1	15.52	16.30	1.197	-	-	0.17	0.616	0.737	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	656000	3840	1	15.49	16.30	1.205	-	-	-0.05	0.623	0.751	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	ECI 2	656000	3840	1	21.74	22.50	1.191	-	-	0.03	0.235	0.280	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	ECI 2	656000	3840	1	21.67	22.50	1.211	-	-	0.01	0.227	0.275	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	ECI 2	656000	3840	1	21.74	22.50	1.191	-	-	-0.17	0.157	0.187	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	ECI 2	656000	3840	1	21.67	22.50	1.211	-	-	0.04	0.146	0.177	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	ECI 2	656000	3840	1	21.74	22.50	1.191	-	-	-0.01	0.075	0.089	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	ECI 2	656000	3840	1	21.67	22.50	1.211	-	-	-0.08	0.072	0.087	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	ECI 2	656000	3840	1	21.74	22.50	1.191	-	-	0.05	0.064	0.076	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	ECI 2	656000	3840	1	21.67	22.50	1.211	-	-	0.06	0.059	0.071	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	656000	3840	1	14.55	15.50	1.245	-	-	-0.09	0.141	0.175	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	656000	3840	1	14.47	15.50	1.268	-	-	-0.08	0.130	0.165	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	656000	3840	1	14.55	15.50	1.245	-	-	0.12	0.144	0.179	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	656000	3840	1	14.47	15.50	1.268	-	-	0.03	0.141	0.179	
15	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	1	14.55	15.50	1.245	-	-	0.07	0.711	**0.885**	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	2	14.55	15.50	1.245	-	-	0.08	0.567	0.706	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	3	14.55	15.50	1.245	-	-	0.01	0.656	0.816	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	1	14.47	15.50	1.268	-	-	0.16	0.617	0.782	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	1	14.46	15.50	1.271	-	-	-0.1	0.583	0.741	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	656000	3840	1	14.55	15.50	1.245	-	-	0.07	0.229	0.285	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	656000	3840	1	14.47	15.50	1.268	-	-	0.18	0.208	0.264	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	ECI 2	656000	3840	1	22.35	23.50	1.303	-	-	-0.19	0.337	0.439	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	ECI 2	656000	3840	1	22.29	23.50	1.321	-	-	0.01	0.252	0.333	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 9	ECI 2	656000	3840	1	22.35	23.50	1.303	-	-	-0.15	0.131	0.171	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 9	ECI 2	656000	3840	1	22.29	23.50	1.321	-	-	0.19	0.102	0.135	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	ECI 2	656000	3840	1	22.35	23.50	1.303	-	-	0.07	0.221	0.288	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	ECI 2	656000	3840	1	22.29	23.50	1.321	-	-	-0.18	0.147	0.194	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 9	ECI 2	656000	3840	1	22.35	23.50	1.303	-	-	0.03	0.144	0.188	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 9	ECI 2	656000	3840	1	22.29	23.50	1.321	-	-	-0.15	0.141	0.186	

Plot No.	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)	Deviation dB
WLAN/ Bluetooth																			
	1st	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Standalone	6	2437	1	15.81	17.00	1.315	99.14	1.009	-0.05	0.902	1.197	
16	2nd	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Standalone	6	2437	1	15.80	17.00	1.318	99.14	1.009	0.1	0.898	**1.194**	0.011
	2nd	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Standalone	6	2437	2	15.80	17.00	1.318	99.14	1.009	-0.02	0.823	1.095	
	2nd	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Standalone	6	2437	3	15.80	17.00	1.318	99.14	1.009	0.01	0.789	1.049	
	1st	Bluetooth	1Mbps	Left Cheek	0mm	Ant 6	Standalone	78	2480	1	12.62	13.50	1.225	76.94	1.083	0.08	0.182	0.241	0.054
17	2nd	Bluetooth	1Mbps	Left Cheek	0mm	Ant 6	Standalone	78	2480	1	12.56	13.50	1.242	76.94	1.083	0.03	0.177	**0.238**	
	1st	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	58	5290	1	13.53	14.50	1.250	87.5	1.143	-0.05	0.776	1.109	
18	2nd	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	58	5290	1	13.49	14.50	1.262	87.5	1.143	-0.01	0.589	**0.849**	1.160
	2nd	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	58	5290	2	13.49	14.50	1.262	87.5	1.143	-0.09	0.541	0.780	
	2nd	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	58	5290	3	13.49	14.50	1.262	87.5	1.143	0.03	0.522	0.753	
	1st	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	122	5610	1	14.37	16.00	1.455	87.5	1.143	-0.04	0.716	1.191	
19	2nd	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	122	5610	1	14.21	16.00	1.510	87.5	1.143	0.02	0.526	**0.908**	1.178
	2nd	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	122	5610	2	14.21	16.00	1.510	87.5	1.143	-0.04	0.511	0.882	
	2nd	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	122	5610	3	14.21	16.00	1.510	87.5	1.143	0.05	0.489	0.844	
	1st	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	155	5775	1	13.61	15.50	1.545	87.5	1.143	0.03	0.670	1.183	
20	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	155	5775	1	13.57	15.50	1.560	87.5	1.143	0.01	0.461	**0.822**	1.581
	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	155	5775	2	13.57	15.50	1.560	87.5	1.143	0.07	0.456	0.813	
	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Standalone	155	5775	3	13.57	15.50	1.560	87.5	1.143	-0.03	0.411	0.733	

17.2 Hotspot SAR

Plot No.	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)	Deviation dB
750MHZ																							
	2nd	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	133297	680.5	1	22.82	24.00	1.312	-	-	0.11	0.511	0.671	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	133297	680.5	1	21.87	23.00	1.297	-	-	-0.08	0.419	0.544	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	133297	680.5	1	22.82	24.00	1.312	-	-	-0.08	0.638	0.837	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	133297	680.5	1	21.87	23.00	1.297	-	-	-0.04	0.489	0.634	
	2nd	LTE Band 71	20M	QPSK	100	0	-	Back	5mm	Ant 0	ECI 7	133297	680.5	1	21.79	23.00	1.321	-	-	-0.08	0.469	0.620	
21	2nd	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	133297	680.5	1	22.82	24.00	1.312	-	-	0.02	0.673	**0.883**	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	133297	680.5	2	22.82	24.00	1.312	-	-	-0.15	0.542	0.711	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	133297	680.5	3	22.82	24.00	1.312	-	-	0.19	0.611	0.802	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	133297	680.5	1	21.87	23.00	1.297	-	-	0.17	0.529	0.686	
	2nd	LTE Band 71	20M	QPSK	100	0	-	Left Side	5mm	Ant 0	ECI 7	133297	680.5	1	21.79	23.00	1.321	-	-	0.18	0.51	0.673	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	133297	680.5	1	22.82	24.00	1.312	-	-	-0.04	0.119	0.156	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	133297	680.5	1	21.87	23.00	1.297	-	-	-0.08	0.095	0.123	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	133297	680.5	1	22.82	24.00	1.312	-	-	-0.13	0.593	0.778	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	133297	680.5	1	21.87	23.00	1.297	-	-	-0.13	0.468	0.607	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 4	ECI 7	133297	680.5	1	22.75	24.00	1.334	-	-	-0.03	0.132	0.176	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 4	ECI 7	133297	680.5	1	21.78	23.00	1.324	-	-	-0.03	0.113	0.150	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	133297	680.5	1	22.75	24.00	1.334	-	-	-0.06	0.404	0.539	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 4	ECI 7	133297	680.5	1	21.78	23.00	1.324	-	-	0.08	0.298	0.395	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	133297	680.5	1	22.75	24.00	1.334	-	-	0.05	0.236	0.315	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI 7	133297	680.5	1	21.78	23.00	1.324	-	-	-0.11	0.302	0.400	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Right Side	5mm	Ant 4	ECI 7	133297	680.5	1	22.75	24.00	1.334	-	-	-0.12	0.067	0.089	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Right Side	5mm	Ant 4	ECI 7	133297	680.5	1	21.78	23.00	1.324	-	-	0.03	0.059	0.078	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	133297	680.5	1	22.75	24.00	1.334	-	-	-0.16	0.230	0.307	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Top Side	5mm	Ant 4	ECI 7	133297	680.5	1	21.78	23.00	1.324	-	-	-0.02	0.222	0.294	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	136100	680.5	1	23.18	24.00	1.208	-	-	0.15	0.431	0.521	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	136100	680.5	1	23.14	24.00	1.219	-	-	-0.09	0.432	0.527	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	136100	680.5	1	23.18	24.00	1.208	-	-	0.11	0.568	0.686	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	136100	680.5	1	23.14	24.00	1.219	-	-	-0.05	0.524	0.639	
22	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	136100	680.5	1	23.18	24.00	1.208	-	-	-0.08	0.630	**0.761**	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	136100	680.5	1	23.14	24.00	1.219	-	-	-0.03	0.568	0.692	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	136100	680.5	1	23.18	24.00	1.208	-	-	0.16	0.103	0.124	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	136100	680.5	1	23.14	24.00	1.219	-	-	0.05	0.103	0.126	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	136100	680.5	1	23.18	24.00	1.208	-	-	0.05	0.494	0.597	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	136100	680.5	1	23.14	24.00	1.219	-	-	-0.03	0.479	0.584	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 4	ECI 7	136100	680.5	1	22.98	24.00	1.265	-	-	-0.15	0.150	0.190	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 4	ECI 7	136100	680.5	1	22.89	24.00	1.291	-	-	0.02	0.175	0.226	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 7	136100	680.5	1	22.98	24.00	1.265	-	-	0.07	0.317	0.401	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 7	136100	680.5	1	22.89	24.00	1.291	-	-	0.06	0.383	0.495	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 4	ECI 7	136100	680.5	1	22.98	24.00	1.265	-	-	0.16	0.321	0.406	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 4	ECI 7	136100	680.5	1	22.89	24.00	1.291	-	-	0.13	0.336	0.434	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 4	ECI 7	136100	680.5	1	22.98	24.00	1.265	-	-	-0.18	0.071	0.090	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 4	ECI 7	136100	680.5	1	22.89	24.00	1.291	-	-	0.02	0.052	0.067	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	136100	680.5	1	22.98	24.00	1.265	-	-	0.16	0.307	0.388	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	136100	680.5	1	22.89	24.00	1.291	-	-	-0.03	0.343	0.443	
835MHz																							
	1st	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	5mm	Ant 0	ECI 7	189	836.4	1	27.16	28.50	1.361	-	-	-0.03	1.050	1.430	
23	2nd	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	5mm	Ant 0	ECI 7	189	836.4	1	27.22	28.50	1.343	-	-	-0.01	1.010	**1.356**	0.231
	2nd	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	5mm	Ant 0	ECI 7	189	836.4	2	27.22	28.50	1.343	-	-	0.07	0.945	1.269	
	2nd	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	5mm	Ant 0	ECI 7	189	836.4	3	27.22	28.50	1.343	-	-	-0.18	0.989	1.328	
	1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	4132	826.4	1	22.53	23.40	1.222	-	-	-0.05	1.030	1.258	0.063

24	2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	4132	826.4	1	22.51	23.40	1.227	-	-	-0.08	1.010	**1.240**	
	1st	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	1	22.65	24.00	1.365	-	-	0.01	0.999	1.363	0.293
25	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	1	22.54	24.00	1.400	-	-	0.01	0.910	**1.274**	
	1st	LTE Band 26	15M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	26865	831.5	1	21.07	22.00	1.239	-	-	-0.04	0.505	0.626	0.070
	2nd	LTE Band 26	15M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	26865	831.5	1	20.97	22.00	1.268	-	-	-0.03	0.486	0.616	
	1st	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	1	22.75	23.50	1.189	-	-	-0.03	1.080	1.284	0.625
26	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	1	22.71	23.50	1.199	-	-	0.02	0.927	**1.112**	
	1st	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	166300	831.5	1	20.88	22.00	1.294	-	-	-0.07	0.487	0.630	0.270
	2nd	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Top Side	5mm	Ant 4	ECI 7	166300	831.5	1	20.82	22.00	1.312	-	-	-0.04	0.451	0.592	
1900MHz																							
	1st	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	5mm	Ant 1	ECI 7	512	1850.2	1	25.39	26.50	1.291	-	-	0.01	0.991	1.280	
27	2nd	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	5mm	Ant 1	ECI 7	512	1850.2	1	25.28	26.50	1.324	-	-	0.01	0.880	**1.165**	0.409
	2nd	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	5mm	Ant 1	ECI 7	512	1850.2	2	25.28	26.50	1.324	-	-	-0.15	0.825	1.093	
	2nd	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	5mm	Ant 1	ECI 7	512	1850.2	3	25.28	26.50	1.324	-	-	0.11	0.787	1.042	
	1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	ECI 7	9262	1852.4	1	19.98	21.00	1.265	-	-	-0.06	0.664	0.840	0.005
28	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	ECI 7	9262	1852.4	1	19.95	21.00	1.274	-	-	0.09	0.659	**0.839**	
	1st	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	26340	1880	1	19.72	20.70	1.253	-	-	-0.07	0.721	0.904	0.029
29	2nd	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	18900	1880	1	19.71	20.70	1.256	-	-	-0.02	0.715	**0.898**	
	1st	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	26340	1880	1	15.23	16.60	1.371	-	-	-0.07	0.449	0.616	0.078
	2nd	LTE Band 2	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	18900	1880	1	15.13	16.60	1.403	-	-	-0.16	0.431	0.605	
2600MHz																							
	1st	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	20850	2510	1	18.44	19.40	1.247	-	-	0.01	0.768	0.958	0.018
30	2nd	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	20850	2510	1	18.32	19.40	1.282	-	-	-0.04	0.744	**0.954**	
	1st	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	21100	2535	1	15.74	16.90	1.306	-	-	0.01	0.468	0.611	0.021
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	21100	2535	1	15.66	16.90	1.330	-	-	-0.09	0.457	0.608	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	40620	2593	1	21.29	22.20	1.233	62.9	1.006	0.07	0.685	0.850	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	39750	2506	1	21.11	22.20	1.285	62.9	1.006	-0.03	0.678	0.877	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	40185	2549.5	1	21.12	22.20	1.282	62.9	1.006	0.09	0.604	0.779	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	41055	2636.5	1	21.19	22.20	1.262	62.9	1.006	-0.08	0.600	0.762	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	41490	2680	1	21.12	22.20	1.282	62.9	1.006	-0.05	0.624	0.805	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	40620	2593	1	21.23	22.20	1.250	62.9	1.006	-0.03	0.507	0.638	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	39750	2506	1	21.07	22.20	1.297	62.9	1.006	0.17	0.554	0.723	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	40185	2549.5	1	21.19	22.20	1.262	62.9	1.006	-0.14	0.499	0.633	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	41055	2636.5	1	21.07	22.20	1.297	62.9	1.006	0.06	0.486	0.634	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	41490	2680	1	21.04	22.20	1.306	62.9	1.006	-0.06	0.523	0.687	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Front	5mm	Ant 1	ECI 7	40620	2593	1	21.21	22.20	1.256	62.9	1.006	-0.15	0.509	0.643	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	40620	2593	1	21.29	22.20	1.233	62.9	1.006	-0.12	0.556	0.690	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	39750	2506	1	21.11	22.20	1.285	62.9	1.006	-0.16	0.598	0.773	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	40185	2549.5	1	21.12	22.20	1.282	62.9	1.006	-0.03	0.573	0.739	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	41055	2636.5	1	21.19	22.20	1.262	62.9	1.006	0.17	0.463	0.588	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	41490	2680	1	21.12	22.20	1.282	62.9	1.006	0.02	0.470	0.606	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	40620	2593	1	21.23	22.20	1.250	62.9	1.006	0	0.439	0.552	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 1	ECI 7	40620	2593	1	21.21	22.20	1.256	62.9	1.006	-0.08	0.422	0.533	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	40620	2593	1	21.29	22.20	1.233	62.9	1.006	0	0.070	0.087	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	40620	2593	1	21.23	22.20	1.250	62.9	1.006	-0.14	0.049	0.062	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	40620	2593	1	21.29	22.20	1.233	62.9	1.006	0.01	0.141	0.175	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	40620	2593	1	21.23	22.20	1.250	62.9	1.006	0.18	0.123	0.155	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	40620	2593	1	21.29	22.20	1.233	62.9	1.006	0.02	0.774	0.960	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	39750	2506	1	21.11	22.20	1.285	62.9	1.006	0.16	0.851	1.100	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	40185	2549.5	1	21.12	22.20	1.282	62.9	1.006	0.06	0.858	1.107	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	41055	2636.5	1	21.19	22.20	1.262	62.9	1.006	-0.02	0.870	1.104	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	41490	2680	1	21.12	22.20	1.282	62.9	1.006	-0.07	0.960	1.238	
	2nd	LTE Band 41other pa	20M	QPSK	1	0		Bottom Side	5mm	Ant 1	ECI 7	41490	2680	1	21.02	22.20	1.312	62.9	1.006	-0.01	0.921	1.216	
	2nd	LTE Band 41C	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	41490+ 41292	2680+ 2660	1	20.91	22.20	1.346	62.9	1.006	-0.08	0.869	1.177	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	ECI 7	40620	2593	1	21.23	22.20	1.250	62.9	1.006	0.07	0.614	0.772	

	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	ECI 7	39750	2506	1	21.07	22.20	1.297	62.9	1.006	-0.17	0.691	0.902	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	ECI 7	40185	2549.5	1	21.19	22.20	1.262	62.9	1.006	0.1	0.723	0.918	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	ECI 7	41055	2636.5	1	21.07	22.20	1.297	62.9	1.006	0.08	0.717	0.936	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	ECI 7	41490	2680	1	21.04	22.20	1.306	62.9	1.006	0	0.806	1.059	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 1	ECI 7	40620	2593	1	21.21	22.20	1.256	62.9	1.006	-0.13	0.666	0.842	
31	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	41490	2680	1	22.85	23.80	1.245	42.9	1.009	0.03	1.030	**1.293**	
	2nd	LTE Band 41C HPUE	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	ECI 7	41490+ 41292	2680+ 2660	1	22.64	23.80	1.306	42.9	1.009	0.1	0.923	1.216	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 4	ECI 7	40620	2593	1	18.24	19.00	1.191	62.9	1.006	-0.06	0.201	0.241	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 4	ECI 7	40620	2593	1	18.20	19.00	1.202	62.9	1.006	0.13	0.160	0.194	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	40620	2593	1	18.24	19.00	1.191	62.9	1.006	0	0.508	0.609	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	39750	2506	1	18.18	19.00	1.208	62.9	1.006	-0.03	0.517	0.628	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	40185	2549.5	1	18.19	19.00	1.205	62.9	1.006	0.07	0.493	0.598	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	41055	2636.5	1	18.11	19.00	1.227	62.9	1.006	-0.12	0.496	0.612	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	41490	2680	1	18.06	19.00	1.242	62.9	1.006	-0.03	0.468	0.585	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	ECI 7	40620	2593	1	18.20	19.00	1.202	62.9	1.006	0.02	0.378	0.457	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 4	ECI 7	40620	2593	1	18.19	19.00	1.205	62.9	1.006	-0.1	0.422	0.512	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	40620	2593	1	18.24	19.00	1.191	62.9	1.006	0.05	0.222	0.266	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI 7	40620	2593	1	18.20	19.00	1.202	62.9	1.006	-0.08	0.176	0.213	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 4	ECI 7	40620	2593	1	18.24	19.00	1.191	62.9	1.006	-0.05	0.036	0.043	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 4	ECI 7	40620	2593	1	18.20	19.00	1.202	62.9	1.006	0.14	0.028	0.034	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	40620	2593	1	18.24	19.00	1.191	62.9	1.006	-0.01	0.512	0.614	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	39750	2506	1	18.18	19.00	1.208	62.9	1.006	-0.12	0.476	0.578	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	40185	2549.5	1	18.19	19.00	1.205	62.9	1.006	0.07	0.448	0.543	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	41055	2636.5	1	18.11	19.00	1.227	62.9	1.006	-0.07	0.505	0.624	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	41490	2680	1	18.06	19.00	1.242	62.9	1.006	0.09	0.497	0.621	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 4	ECI 7	40620	2593	1	18.20	19.00	1.202	62.9	1.006	0.04	0.380	0.460	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Top Side	5mm	Ant 4	ECI 7	40620	2593	1	18.19	19.00	1.205	62.9	1.006	0.17	0.377	0.457	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	40620	2593	1	19.86	20.60	1.186	42.9	1.009	0.04	0.512	0.613	
	1st	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	507000	2535	1	19.10	20.20	1.288	-	-	-0.01	0.987	1.272	
32	2nd	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	507000	2535	1	19.10	20.20	1.288	-	-	0.02	1.110	**1.430**	0.508
	2nd	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	507000	2535	2	19.10	20.20	1.288	-	-	-0.08	0.962	1.239	
	2nd	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	507000	2535	3	19.10	20.20	1.288	-	-	0.1	0.911	1.174	
	2nd	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 7	507000	2535	1	18.15	19.30	1.303	-	-	0.01	0.482	0.628	0.191
	2nd	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	ECI 7	507000	2535	1	18.15	19.30	1.303	-	-	0.03	0.461	0.601	
	1st	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	ECI 7	518598	2592.99	1	18.17	19.30	1.297	-	-	0.02	0.945	1.226	1.117
33	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	ECI 7	518598	2592.99	1	18.17	19.30	1.297	-	-	-0.05	0.731	**0.948**	
	1st	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECI 7	518598	2592.99	1	16.73	17.60	1.222	-	-	0.01	0.512	0.626	0.797
	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECI 7	518598	2592.99	1	16.65	17.60	1.245	-	-	-0.01	0.419	0.521	
3500MHz																							
	1st	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 5	ECI 7	42990	3540	1	15.03	16.10	1.279	62.9	1.006	-0.05	0.488	0.628	
34	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 5	ECI 7	42990	3540	1	14.94	16.10	1.306	62.9	1.006	-0.02	0.451	**0.593**	0.249
	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 5	ECI 7	42990	3540	2	14.94	16.10	1.306	62.9	1.006	0.12	0.444	0.583	
	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 5	ECI 7	42990	3540	3	14.94	16.10	1.306	62.9	1.006	0.08	0.432	0.568	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 5	ECI 7	656000	3840	1	13.32	14.60	1.343	-	-	0.16	0.166	0.223	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 5	ECI 7	656000	3840	1	13.21	14.60	1.377	-	-	-0.15	0.163	0.224	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	ECI 7	656000	3840	1	13.32	14.60	1.343	-	-	-0.09	0.432	0.580	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	ECI 7	656000	3840	1	13.21	14.60	1.377	-	-	0.14	0.349	0.481	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 5	ECI 7	656000	3840	1	13.32	14.60	1.343	-	-	-0.09	0.052	0.070	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 5	ECI 7	656000	3840	1	13.21	14.60	1.377	-	-	0.07	0.047	0.065	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 5	ECI 7	656000	3840	1	13.32	14.60	1.343	-	-	-0.09	0.054	0.073	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 5	ECI 7	656000	3840	1	13.21	14.60	1.377	-	-	-0.16	0.063	0.087	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 5	ECI 7	656000	3840	1	13.32	14.60	1.343	-	-	-0.18	0.371	0.498	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 5	ECI 7	656000	3840	1	13.21	14.60	1.377	-	-	-0.03	0.468	0.645	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 3	ECI 7	656000	3840	1	11.82	12.80	1.253	-	-	-0.02	0.015	0.019	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	ECI 7	656000	3840	1	11.81	12.80	1.256	-	-	-0.05	0.011	0.014	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	ECI 7	656000	3840	1	11.82	12.80	1.253	-	-	0.01	0.497	0.623	

	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	ECI 7	656000	3840	1	11.81	12.80	1.256	-	-	-0.13	0.173	0.217	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 3	ECI 7	656000	3840	1	11.82	12.80	1.253	-	-	0.16	0.116	0.145	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 3	ECI 7	656000	3840	1	11.81	12.80	1.256	-	-	0.01	0.048	0.060	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 3	ECI 7	656000	3840	1	11.82	12.80	1.253	-	-	0.1	0.003	0.004	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 3	ECI 7	656000	3840	1	11.81	12.80	1.256	-	-	-0.04	0.002	0.003	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 3	ECI 7	656000	3840	1	11.82	12.80	1.253	-	-	-0.01	0.017	0.021	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 3	ECI 7	656000	3840	1	11.81	12.80	1.256	-	-	0	0.006	0.008	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	ECI 7	656000	3840	1	16.05	17.50	1.396	-	-	0.17	0.202	0.282	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 7	ECI 7	656000	3840	1	16.02	17.50	1.406	-	-	0.06	0.184	0.259	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 7	656000	3840	1	16.05	17.50	1.396	-	-	0.02	0.447	0.624	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 7	656000	3840	1	16.02	17.50	1.406	-	-	-0.04	0.381	0.536	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 7	ECI 7	656000	3840	1	16.05	17.50	1.396	-	-	0.11	0.029	0.040	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 7	ECI 7	656000	3840	1	16.02	17.50	1.406	-	-	-0.02	0.029	0.041	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECI 7	656000	3840	1	16.05	17.50	1.396	-	-	0.1	0.303	0.423	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECI 7	656000	3840	1	16.02	17.50	1.406	-	-	0.04	0.298	0.419	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	656000	3840	1	16.05	17.50	1.396	-	-	-0.18	0.278	0.388	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	656000	3840	1	16.02	17.50	1.406	-	-	-0.11	0.266	0.374	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 9	ECI 7	656000	3840	1	14.95	15.90	1.245	-	-	0.07	0.468	0.582	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 9	ECI 7	656000	3840	1	14.94	15.90	1.247	-	-	0	0.382	0.477	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	ECI 7	656000	3840	1	14.95	15.90	1.245	-	-	-0.01	0.864	1.075	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 9	ECI 7	656000	3840	1	14.94	15.90	1.247	-	-	-0.06	0.610	0.761	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 9	ECI 7	656000	3840	1	14.90	15.90	1.259	-	-	-0.04	0.670	0.843	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 9	ECI 7	656000	3840	1	14.95	15.90	1.245	-	-	-0.09	0.017	0.021	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 9	ECI 7	656000	3840	1	14.94	15.90	1.247	-	-	-0.17	0.025	0.031	
35	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECI 7	656000	3840	1	14.95	15.90	1.245	-	-	-0.03	1.040	**1.294**	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECI 7	656000	3840	1	14.94	15.90	1.247	-	-	-0.1	0.971	1.211	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECI 7	656000	3840	1	14.90	15.90	1.259	-	-	0.18	0.834	1.050	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 9	ECI 7	656000	3840	1	14.95	15.90	1.245	-	-	-0.17	0.241	0.300	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 9	ECI 7	656000	3840	1	14.94	15.90	1.247	-	-	-0.04	0.191	0.238	

Plot No.	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)	Deviation dB
WLAN& Bluetooth																			
	1st	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Simultaneous	6	2437	1	14.71	16.00	1.346	99.14	1.009	-0.03	0.485	0.659	0.060
36	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Simultaneous	6	2437	1	14.62	16.00	1.374	99.14	1.009	0.06	0.469	**0.650**	
	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Simultaneous	6	2437	2	14.62	16.00	1.374	99.14	1.009	0.01	0.444	0.616	
	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Simultaneous	6	2437	3	14.62	16.00	1.374	99.14	1.009	0.1	0.432	0.599	
	1st	Bluetooth	1Mbps	Back	5mm	Ant 6	Full power	78	2480	1	16.21	17.00	1.199	76.94	1.083	0.01	0.331	0.430	1.283
37	2nd	Bluetooth	1Mbps	Back	5mm	Ant 6	Full power	78	2480	1	16.17	17.00	1.211	76.94	1.083	-0.08	0.244	**0.320**	
	1st	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 5	Simultaneous	42	5210	1	12.59	14.00	1.384	87.5	1.143	0.03	0.418	0.661	0.053
38	2nd	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 5	Simultaneous	42	5210	1	12.46	14.00	1.426	87.5	1.143	-0.01	0.401	**0.653**	
	2nd	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 5	Simultaneous	42	5210	2	12.46	14.00	1.426	87.5	1.143	-0.01	0.382	0.622	
	2nd	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 5	Simultaneous	42	5210	3	12.46	14.00	1.426	87.5	1.143	-0.08	0.333	0.543	
	1st	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 5	Simultaneous	155	5775	1	12.32	14.00	1.472	87.5	1.143	-0.1	0.333	0.560	0.086
39	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 5	Simultaneous	155	5775	1	12.30	14.00	1.479	87.5	1.143	-0.09	0.325	**0.549**	
	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 5	Simultaneous	155	5775	2	12.30	14.00	1.479	87.5	1.143	0.03	0.301	0.509	
	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 5	Simultaneous	155	5775	3	12.30	14.00	1.479	87.5	1.143	0.18	0.314	0.531	

17.3 Body Worn Accessory SAR

Plot No.	No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	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)	Deviation dB
750MHZ																								
	2nd	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI 3	133297	680.5	1	22.82	24.00	1.312	-	-	0.08	0.499	0.655	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 0	-	ECI 3	133297	680.5	1	22.82	24.00	1.312	-	-	0.01	0.409	0.537	
40	2nd	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI 3	133297	680.5	1	22.82	24.00	1.312	-	-	0.04	0.623	**0.818**	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI 3	133297	680.5	1	22.82	24.00	1.312	-	-	-0.08	0.478	0.627	
	2nd	LTE Band 71	20M	QPSK	100	0	-	Back	5mm	Ant 0	-	ECI 3	133297	680.5	1	22.82	24.00	1.312	-	-	-0.08	0.458	0.601	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	ECI 3	133297	680.5	1	22.75	24.00	1.334	-	-	-0.17	0.132	0.176	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	ECI 3	133297	680.5	1	22.75	24.00	1.334	-	-	0.04	0.113	0.151	
	2nd	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	133297	680.5	1	22.75	24.00	1.334	-	-	-0.06	0.404	0.539	
	2nd	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	133297	680.5	1	22.75	24.00	1.334	-	-	-0.01	0.298	0.397	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	ECI 3	136100	680.5	1	23.18	24.00	1.208	-	-	0.05	0.390	0.471	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	-	ECI 3	136100	680.5	1	23.18	24.00	1.208	-	-	0.06	0.391	0.472	
41	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	ECI 3	136100	680.5	1	23.18	24.00	1.208	-	-	-0.02	0.514	**0.621**	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	-	ECI 3	136100	680.5	1	23.18	24.00	1.208	-	-	-0.09	0.474	0.573	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 4	-	ECI 3	136100	680.5	1	22.98	24.00	1.265	-	-	-0.08	0.150	0.190	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 4	-	ECI 3	136100	680.5	1	22.98	24.00	1.265	-	-	0.13	0.175	0.221	
	2nd	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	ECI 3	136100	680.5	1	22.98	24.00	1.265	-	-	0.12	0.317	0.401	
	2nd	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 4	-	ECI 3	136100	680.5	1	22.98	24.00	1.265	-	-	0.06	0.383	0.484	
835MHz																								
	1st	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	5mm	Ant 0	-	ECI 3	189	836.4	1	27.16	28.50	1.361	-	-	-0.03	1.050	1.430	0.231
42	2nd	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	5mm	Ant 0	-	ECI 3	189	836.4	1	27.22	28.50	1.343	-	-	-0.01	1.010	**1.356**	
	1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	ECI 3	4132	826.4	1	22.53	23.40	1.222	-	-	-0.05	1.030	1.258	0.084
43	2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	ECI 3	4132	826.4	1	22.53	23.40	1.222	-	-	-0.08	1.010	**1.234**	
	1st	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI 3	26865	831.5	1	22.65	24.00	1.365	-	-	0.01	0.999	1.363	0.293
44	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI 3	26865	831.5	1	22.54	24.00	1.400	-	-	0.01	0.910	**1.274**	
	1st	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	26865	831.5	1	22.61	23.60	1.256	-	-	0.03	0.711	0.893	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	26865	831.5	1	22.56	23.60	1.271	-	-	-0.13	0.684	0.869	0.118
	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	26865	831.5	2	22.56	23.60	1.271	-	-	-0.08	0.555	0.705	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	26865	831.5	3	22.56	23.60	1.271	-	-	0.17	0.623	0.792	
	1st	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	ECI 3	166300	831.5	1	22.75	23.50	1.189	-	-	-0.03	1.080	1.284	0.586
45	2nd	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	ECI 3	166300	831.5	1	22.67	23.50	1.211	-	-	0.02	0.927	**1.122**	
	1st	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 4	-	ECI 3	166300	831.5	1	22.93	23.50	1.140	-	-	-0.03	0.781	0.891	0.866
	2nd	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 4	-	ECI 3	166300	831.5	1	22.74	23.50	1.191	-	-	0.03	0.613	0.730	
1900MHz																								
	1st	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	5mm	Ant 1	-	ECI 3	512	1850.2	1	25.39	26.50	1.291	-	-	-0.01	0.929	1.200	0.770
46	2nd	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	5mm	Ant 1	-	ECI 3	512	1850.2	1	25.33	26.50	1.309	-	-	-0.07	0.768	**1.005**	
	1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	ECI 3	9262	1852.4	1	19.98	21.00	1.265	-	-	-0.06	0.664	0.840	0.094
47	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	ECI 3	9262	1852.4	1	20.04	21.00	1.247	-	-	0.09	0.659	**0.822**	
	1st	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	26340	1880	1	20.83	21.80	1.250	-	-	-0.01	0.857	1.071	0.008
48	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	18900	1880	1	20.81	21.80	1.256	-	-	-0.05	0.851	**1.069**	
	1st	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	26140	1860	1	18.63	19.20	1.140	-	-	-0.04	0.776	0.885	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	18900	1880	1	18.78	19.20	1.102	-	-	0.09	0.733	0.807	0.401
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	18900	1880	2	18.78	19.20	1.102	-	-	0.18	0.653	0.719	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	18900	1880	3	18.78	19.20	1.102	-	-	-0.04	0.611	0.673	
2600MHz																								
	1st	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	20850	2510	1	18.31	19.60	1.346	-	-	0.06	0.722	0.972	0.201
49	2nd	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	20850	2510	1	18.27	19.60	1.358	-	-	0.06	0.683	**0.928**	
	1st	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	21100	2535	1	18.14	19.00	1.219	-	-	-0.07	0.717	0.874	0.136
	2nd	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	21100	2535	1	18.22	19.00	1.197	-	-	0.01	0.708	0.847	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	40620	2593	1	22.93	24.00	1.279	62.9	1.006	0.1	0.755	0.972	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	39750	2506	1	22.74	24.00	1.337	62.9	1.006	-0.07	0.769	1.034	

	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	39750	2506	1	22.52	24.00	1.406	62.9	1.006	0.07	0.711	1.006	
	2nd	LTE Band 41C	20M	QPSK	1	99	-	Front	5mm	Ant 1	-	ECI 3	39750+ 39948	2506+ 2525.8	1	22.55	24.00	1.396	62.9	1.006	0.03	0.707	0.993	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	40185	2549.5	1	22.63	24.00	1.371	62.9	1.006	-0.18	0.666	0.919	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	41055	2636.5	1	22.68	24.00	1.355	62.9	1.006	0.1	0.661	0.901	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	41490	2680	1	22.63	24.00	1.371	62.9	1.006	0.12	0.688	0.949	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	ECI 3	40620	2593	1	21.93	23.00	1.279	62.9	1.006	0.08	0.559	0.719	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	ECI 3	39750	2506	1	21.79	23.00	1.321	62.9	1.006	-0.17	0.611	0.812	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	ECI 3	40185	2549.5	1	21.78	23.00	1.324	62.9	1.006	-0.03	0.550	0.733	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	ECI 3	41055	2636.5	1	21.62	23.00	1.374	62.9	1.006	0.14	0.536	0.741	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	ECI 3	41490	2680	1	21.69	23.00	1.352	62.9	1.006	0.11	0.577	0.785	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Front	5mm	Ant 1	-	ECI 3	40620	2593	1	21.77	23.00	1.327	62.9	1.006	-0.05	0.561	0.749	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	40620	2593	1	22.93	24.00	1.279	62.9	1.006	0.18	0.613	0.789	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	39750	2506	1	22.74	24.00	1.337	62.9	1.006	0.14	0.659	0.886	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	40185	2549.5	1	22.63	24.00	1.371	62.9	1.006	-0.17	0.632	0.872	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	41055	2636.5	1	22.68	24.00	1.355	62.9	1.006	0.17	0.511	0.697	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	41490	2680	1	22.63	24.00	1.371	62.9	1.006	-0.05	0.518	0.714	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI 3	40620	2593	1	21.93	23.00	1.279	62.9	1.006	0.01	0.484	0.623	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI 3	39750	2506	1	21.79	23.00	1.321	62.9	1.006	0.1	0.517	0.687	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI 3	40185	2549.5	1	21.78	23.00	1.324	62.9	1.006	-0.17	0.462	0.615	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI 3	41055	2636.5	1	21.62	23.00	1.374	62.9	1.006	0.04	0.408	0.564	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI 3	41490	2680	1	21.69	23.00	1.352	62.9	1.006	-0.01	0.435	0.592	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 1	-	ECI 3	40620	2593	1	21.77	23.00	1.327	62.9	1.006	-0.08	0.465	0.621	
50	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	39750	2506	1	25.81	27.00	1.315	42.9	1.009	-0.07	0.996	**1.322**	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Front	5mm	Ant 1	Headset	ECI 3	39750	2506	1	25.81	27.00	1.315	42.9	1.009	0.03	0.956	1.268	
	2nd	LTE Band 41C HPUE	20M	QPSK	1	99	-	Front	5mm	Ant 1	-	ECI 3	39750+ 39948	2506+ 2525.8	1	25.70	27.00	1.349	42.9	1.009	-0.08	0.875	1.191	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	ECI 3	40620	2593	1	20.22	21.20	1.253	62.9	1.006	0.05	0.257	0.324	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	ECI 3	40620	2593	1	20.21	21.20	1.256	62.9	1.006	0.12	0.205	0.259	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	40620	2593	1	20.22	21.20	1.253	62.9	1.006	0.07	0.701	0.884	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	40620	2593	2	20.22	21.20	1.253	62.9	1.006	-0.08	0.689	0.869	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	40620	2593	3	20.22	21.20	1.253	62.9	1.006	-0.13	0.634	0.799	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	39750	2506	1	20.06	21.20	1.300	62.9	1.006	0.18	0.648	0.848	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	40185	2549.5	1	20.11	21.20	1.285	62.9	1.006	-0.1	0.656	0.848	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	41055	2636.5	1	20.04	21.20	1.306	62.9	1.006	0.01	0.660	0.867	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	41490	2680	1	20.08	21.20	1.294	62.9	1.006	-0.15	0.625	0.814	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	40620	2593	1	20.21	21.20	1.256	62.9	1.006	0.19	0.510	0.644	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	39750	2506	1	20.09	21.20	1.291	62.9	1.006	0.07	0.558	0.725	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	40185	2549.5	1	20.15	21.20	1.274	62.9	1.006	-0.18	0.546	0.700	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	41055	2636.5	1	20.03	21.20	1.309	62.9	1.006	0.03	0.534	0.703	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	41490	2680	1	20.02	21.20	1.312	62.9	1.006	-0.15	0.530	0.700	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	ECI 3	40620	2593	1	20.16	21.20	1.271	62.9	1.006	-0.15	0.566	0.723	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	40620	2593	1	21.86	22.80	1.242	42.9	1.009	0.04	0.676	0.847	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	17mm	Ant 4	-	ECI 4	40620	2593	1	22.99	24.00	1.262	62.9	1.006	0.03	0.073	0.093	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Front	17mm	Ant 4	-	ECI 4	40620	2593	1	25.91	27.00	1.285	42.9	1.009	0.12	0.156	0.202	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	20mm	Ant 4	-	ECI 4	40620	2593	1	22.99	24.00	1.262	62.9	1.006	0.08	0.113	0.143	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	20mm	Ant 4	-	ECI 4	40620	2593	1	25.91	27.00	1.285	42.9	1.009	-0.17	0.255	0.331	
	1st	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 1	-	ECI 3	507000	2535	1	21.12	22.20	1.282	-	-	-0.04	1.050	1.346	0.239
51	2nd	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 1	-	ECI 3	507000	2535	1	21.19	22.20	1.262	-	-	-0.03	1.010	**1.274**	
	1st	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	ECI 3	507000	2535	1	19.16	20.60	1.393	-	-	-0.03	0.635	0.885	0.185
	2nd	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	ECI 3	507000	2535	1	19.16	20.60	1.393	-	-	0.01	0.609	0.848	
	1st	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	-	ECI 3	518598	2592.99	1	19.73	20.70	1.250	-	-	-0.05	0.654	0.818	0.327
52	2nd	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	-	ECI 3	518598	2592.99	1	19.62	20.70	1.282	-	-	0.07	0.688	**0.882**	
	1st	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	-	ECI 3	518598	2592.99	1	18.25	19.40	1.303	-	-	0.01	0.683	0.890	1.563
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	-	ECI 3	518598	2592.99	1	18.29	19.40	1.291	-	-	0.02	0.481	0.621	
3500MHz																								

	1st	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	ECI 3	42990	3540	1	18.06	19.50	1.393	62.9	1.006	0.09	0.631	0.884	0.743
53	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	ECI 3	42990	3540	1	18.08	19.50	1.387	62.9	1.006	0.07	0.534	**0.745**	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 5	-	ECI 3	656000	3840	1	17.30	18.40	1.288	-	-	0.08	0.264	0.340	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 5	-	ECI 3	656000	3840	1	17.20	18.40	1.318	-	-	0.01	0.260	0.343	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	-	ECI 3	656000	3840	1	17.30	18.40	1.288	-	-	-0.05	0.686	0.884	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	-	ECI 3	656000	3840	2	17.30	18.40	1.288	-	-	-0.13	0.611	0.787	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	-	ECI 3	656000	3840	3	17.30	18.40	1.288	-	-	0.06	0.567	0.730	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	-	ECI 3	656000	3840	1	17.20	18.40	1.318	-	-	-0.08	0.555	0.731	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 5	-	ECI 3	656000	3840	1	17.16	18.40	1.330	-	-	-0.08	0.632	0.841	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 5	-	ECI 4	656000	3840	1	26.15	27.00	1.216	-	-	-0.03	0.400	0.486	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	20mm	Ant 5	-	ECI 4	656000	3840	1	26.15	27.00	1.216	-	-	0.14	0.580	0.705	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 3	-	ECI 3	656000	3840	1	12.81	13.90	1.285	-	-	-0.18	0.020	0.026	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	-	ECI 3	656000	3840	1	12.81	13.90	1.285	-	-	0.1	0.016	0.021	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	-	ECI 3	656000	3840	1	12.81	13.90	1.285	-	-	0.09	0.684	0.879	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	-	ECI 3	656000	3840	2	12.81	13.90	1.285	-	-	-0.03	0.588	0.756	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	-	ECI 3	656000	3840	3	12.81	13.90	1.285	-	-	-0.03	0.645	0.829	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	-	ECI 3	656000	3840	1	12.81	13.90	1.285	-	-	0.12	0.238	0.306	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 3	-	ECI 3	656000	3840	1	12.77	13.90	1.297	-	-	0.08	0.594	0.770	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 3	-	ECI 4	656000	3840	1	21.74	22.50	1.191	-	-	0.11	0.170	0.203	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	20mm	Ant 3	-	ECI 4	656000	3840	1	21.74	22.50	1.191	-	-	-0.05	0.251	0.299	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	-	ECI 3	656000	3840	1	17.55	18.60	1.274	-	-	-0.03	0.313	0.399	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 7	-	ECI 3	656000	3840	1	17.50	18.60	1.288	-	-	0.14	0.285	0.367	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	-	ECI 3	656000	3840	1	17.55	18.60	1.274	-	-	0.01	0.694	0.884	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	-	ECI 3	656000	3840	1	17.50	18.60	1.288	-	-	-0.05	0.591	0.761	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 7	-	ECI 3	656000	3840	1	17.41	18.60	1.315	-	-	0.18	0.622	0.818	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 7	-	ECI 4	656000	3840	1	25.95	27.00	1.274	-	-	0.18	0.200	0.255	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	20mm	Ant 7	-	ECI 4	656000	3840	1	25.95	27.00	1.274	-	-	0.14	0.596	0.759	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 9	-	ECI 3	656000	3840	1	16.42	17.60	1.312	-	-	-0.17	0.492	0.646	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 9	-	ECI 3	656000	3840	1	16.41	17.60	1.315	-	-	0.17	0.401	0.527	
54	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	-	ECI 3	656000	3840	1	16.42	17.60	1.312	-	-	-0.07	0.907	**1.190**	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	-	ECI 3	656000	3840	2	16.42	17.60	1.312	-	-	0.08	0.888	1.165	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 9	-	ECI 3	656000	3840	3	16.42	17.60	1.312	-	-	-0.07	0.765	1.004	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 9	-	ECI 3	656000	3840	1	16.41	17.60	1.315	-	-	0.01	0.641	0.843	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 9	-	ECI 3	656000	3840	1	16.35	17.60	1.334	-	-	0.1	0.704	0.939	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	17mm	Ant 9	-	ECI 4	656000	3840	1	18.42	19.60	1.312	-	-	0.03	0.100	0.131	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	20mm	Ant 9	-	ECI 4	656000	3840	1	18.42	19.60	1.312	-	-	0.05	0.190	0.249	

Plot No.	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)	Deviation dB
WLAN&BT																			
	1st	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full power	6	2437	1	18.36	19.50	1.300	99.14	1.009	-0.08	0.914	1.199	0.084
55	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full power	6	2437	1	18.21	19.50	1.346	99.14	1.009	0.01	0.866	**1.176**	
	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full power	6	2437	2	18.21	19.50	1.346	99.14	1.009	0.05	0.811	1.101	
	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 6	Full power	6	2437	3	18.21	19.50	1.346	99.14	1.009	-0.11	0.782	1.062	
	1st	Bluetooth	1Mbps	Back	5mm	Ant 6	Full power	78	2480	1	16.21	17.00	1.199	76.94	1.083	-0.01	0.331	0.430	1.283
56	2nd	Bluetooth	1Mbps	Back	5mm	Ant 6	Full power	78	2480	1	16.17	17.00	1.211	76.94	1.083	-0.08	0.244	**0.320**	
	1st	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Standalone	58	5290	1	13.53	14.50	1.250	87.5	1.143	0.05	0.740	1.058	2.413
57	2nd	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	58	5290	1	13.49	14.50	1.262	87.5	1.143	0.02	0.421	**0.607**	
	2nd	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	58	5290	2	13.49	14.50	1.262	87.5	1.143	-0.12	0.411	0.593	
	2nd	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	58	5290	3	13.49	14.50	1.262	87.5	1.143	0.03	0.401	0.578	
	1st	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Standalone	122	5610	1	14.72	16.50	1.507	87.5	1.143	0.03	0.669	1.152	1.096
58	2nd	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	122	5610	1	14.67	16.50	1.524	87.5	1.143	-0.03	0.514	**0.895**	
	2nd	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	122	5610	2	14.67	16.50	1.524	87.5	1.143	-0.16	0.511	0.890	
	2nd	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	122	5610	3	14.67	16.50	1.524	87.5	1.143	-0.02	0.489	0.852	
	1st	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Standalone	155	5775	1	15.66	17.50	1.528	87.5	1.143	0.06	0.632	1.103	1.787
59	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	155	5775	1	15.63	17.50	1.538	87.5	1.143	0.01	0.416	**0.731**	
	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	155	5775	2	15.63	17.50	1.538	87.5	1.143	0.15	0.402	0.707	
	2nd	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 5	Full power	155	5775	3	15.63	17.50	1.538	87.5	1.143	-0.09	0.393	0.691	

17.4 Product specific 10g SAR

Plot No.	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)	Deviation dB
835MHz																							
	1st	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	0mm	Ant 0	ECI 6	128	824.2	1	27.25	28.50	1.334	-	-	-0.06	2.310	3.080	
60	2nd	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	0mm	Ant 0	ECI 6	128	824.2	1	27.21	28.50	1.346	-	-	-0.06	2.260	**3.042**	0.054
	2nd	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	0mm	Ant 0	ECI 6	128	824.2	2	27.21	28.50	1.346	-	-	-0.06	2.110	2.840	
	2nd	GSM850	-	-	-	-	GPRS (4Tx slots)	Back	0mm	Ant 0	ECI 6	128	824.2	3	27.21	28.50	1.346	-	-	-0.06	2.150	2.894	
	1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI 6	4182	836.4	1	22.53	24.00	1.403	-	-	0.02	1.560	2.188	
61	2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI 6	4182	836.4	1	22.53	24.00	1.403	-	-	-0.07	1.560	**2.188**	0.000
	1st	LTE Band 26	15M	QPSK	1	0	-	Back	0mm	Ant 0	ECI 6	26865	831.5	1	22.65	24.00	1.365	-	-	0.05	1.860	2.538	
62	2nd	LTE Band 26	15M	QPSK	1	0	-	Back	0mm	Ant 0	ECI 6	26865	831.5	1	22.54	24.00	1.400	-	-	-0.12	1.850	**2.589**	0.086
	1st	LTE Band 26	15M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	26865	831.5	1	22.61	24.00	1.377	-	-	0.08	1.790	2.465	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	26865	831.5	1	22.48	24.00	1.419	-	-	-0.01	1.390	1.972	
	2nd	LTE Band 26	15M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	26865	831.5	2	22.48	24.00	1.419	-	-	0.03	1.280	1.816	0.969
	2nd	LTE Band 26	15M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	26865	831.5	3	22.48	24.00	1.419	-	-	-0.15	1.330	1.887	
1900MHz																							
	1st	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	0mm	Ant 1	ECI 6	661	1880	1	25.39	26.50	1.291	-	-	0.01	1.950	2.518	
63	2nd	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	0mm	Ant 1	ECI 6	661	1880	1	25.33	26.50	1.309	-	-	-0.08	1.860	**2.435**	0.146
	1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 1	ECI 6	9400	1880	1	22.10	23.10	1.259	-	-	-0.01	2.640	3.324	
64	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 1	ECI 6	9400	1880	1	22.10	23.10	1.259	-	-	-0.05	2.380	**2.996**	0.451
	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 1	ECI 6	9400	1880	2	22.10	23.10	1.259	-	-	-0.08	2.140	2.694	
	2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 1	ECI 6	9400	1880	3	22.10	23.10	1.259	-	-	-0.17	2.250	2.833	
	1st	LTE Band 25	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI 6	26340	1880	1	21.75	22.80	1.274	-	-	-0.03	1.840	2.343	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI 6	18900	1880	1	21.63	22.80	1.309	-	-	-0.02	1.810	2.370	0.050
	1st	LTE Band 25	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	26140	1860	1	20.12	21.20	1.282	-	-	-0.07	1.920	2.462	
65	2nd	LTE Band 2	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	18900	1880	1	20.11	21.20	1.285	-	-	-0.06	1.900	**2.442**	0.035
	2nd	LTE Band 2	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	18900	1880	2	20.11	21.20	1.285	-	-	-0.08	1.780	2.288	
	2nd	LTE Band 2	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	18900	1880	3	20.11	21.20	1.285	-	-	-0.04	1.840	2.365	
2600MHz																							
	1st	LTE Band 7	20M	QPSK	1	0	-	Front	0mm	Ant 1	ECI 6	20850	2510	1	20.41	21.40	1.256	-	-	0.01	1.820	2.286	
	2nd	LTE Band 7	20M	QPSK	1	0	-	Front	0mm	Ant 1	ECI 6	20850	2510	1	20.34	21.40	1.276	-	-	0.06	1.640	2.093	0.383
	1st	LTE Band 7	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	21350	2560	1	18.65	19.80	1.303	-	-	-0.04	1.880	2.450	
66	2nd	LTE Band 7	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	21350	2560	1	18.60	19.80	1.318	-	-	0.01	1.680	**2.215**	0.438
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	0mm	Ant 1	ECI 6	40620	2593	1	22.93	24.00	1.279	62.9	1.006	-0.16	1.290	1.660	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	0mm	Ant 1	ECI 6	39750	2506	1	22.74	24.00	1.337	62.9	1.006	-0.17	1.440	1.936	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	0mm	Ant 1	ECI 6	40185	2549.5	1	22.63	24.00	1.371	62.9	1.006	0.11	1.260	1.738	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	0mm	Ant 1	ECI 6	41055	2636.5	1	22.68	24.00	1.355	62.9	1.006	-0.05	1.280	1.745	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Front	0mm	Ant 1	ECI 6	41490	2680	1	22.63	24.00	1.371	62.9	1.006	-0.01	1.270	1.751	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	0mm	Ant 1	ECI 6	40620	2593	1	21.93	23.00	1.279	62.9	1.006	-0.14	1.040	1.339	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	0mm	Ant 1	ECI 6	39750	2506	1	22.74	24.00	1.337	62.9	1.006	-0.03	1.100	1.479	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	0mm	Ant 1	ECI 6	40185	2549.5	1	22.63	24.00	1.371	62.9	1.006	0.06	1.010	1.393	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	0mm	Ant 1	ECI 6	41055	2636.5	1	22.68	24.00	1.355	62.9	1.006	0.01	0.964	1.314	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Front	0mm	Ant 1	ECI 6	41490	2680	1	22.63	24.00	1.371	62.9	1.006	0.01	0.980	1.352	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Front	0mm	Ant 1	ECI 6	40620	2593	1	21.77	23.00	1.327	62.9	1.006	0.01	1.030	1.375	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI 6	40620	2593	1	22.93	24.00	1.279	62.9	1.006	0.02	1.130	1.454	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI 6	39750	2506	1	22.74	24.00	1.337	62.9	1.006	-0.11	1.190	1.600	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI 6	40185	2549.5	1	22.63	24.00	1.371	62.9	1.006	-0.01	1.060	1.462	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI 6	41055	2636.5	1	22.68	24.00	1.355	62.9	1.006	0.09	1.110	1.513	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI 6	41490	2680	1	22.63	24.00	1.371	62.9	1.006	0.1	1.110	1.531	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 1	ECI 6	40620	2593	1	21.93	23.00	1.279	62.9	1.006	-0.04	0.905	1.165	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	0mm	Ant 1	ECI 6	40620	2593	1	21.77	23.00	1.327	62.9	1.006	0.15	0.896	1.196	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	40620	2593	1	22.93	24.00	1.279	62.9	1.006	0.09	1.710	2.201	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	39750	2506	1	22.74	24.00	1.337	62.9	1.006	-0.16	1.450	1.950	

	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	40185	2549.5	1	22.63	24.00	1.371	62.9	1.006	0.05	1.580	2.179	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	41055	2636.5	1	22.68	24.00	1.355	62.9	1.006	-0.02	1.860	2.536	
	2nd	LTE Band 41other pa	20M	QPSK	1	0		Bottom Side	0mm	Ant 1	ECI 6	41055	2636.5	1	22.65	24.00	1.365	62.9	1.006	-0.09	1.690	2.320	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	41055	2636.5	2	22.68	24.00	1.355	62.9	1.006	0.07	1.730	2.359	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	41055	2636.5	3	22.68	24.00	1.355	62.9	1.006	0.18	1.790	2.440	
	2nd	LTE Band 41C	20M	QPSK	1	99	-	Bottom Side	0mm	Ant 1	ECI 6	41055+41253	2636.5+2656.3	1	22.48	24.00	1.419	62.9	1.006	-0.18	1.680	2.398	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	41490	2680	1	22.63	24.00	1.371	62.9	1.006	0.08	1.810	2.496	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	ECI 6	40620	2593	1	21.93	23.00	1.279	62.9	1.006	-0.18	1.400	1.802	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	ECI 6	39750	2506	1	21.79	23.00	1.321	62.9	1.006	-0.03	1.190	1.582	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	ECI 6	40185	2549.5	1	21.78	23.00	1.324	62.9	1.006	-0.04	1.350	1.799	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	ECI 6	41055	2636.5	1	21.62	23.00	1.374	62.9	1.006	-0.09	1.490	2.060	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	ECI 6	41490	2680	1	21.69	23.00	1.352	62.9	1.006	0.18	1.530	2.081	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 1	ECI 6	40620	2593	1	21.77	23.00	1.327	62.9	1.006	0.11	1.410	1.883	
67	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	41055	2636.5	1	25.62	27.00	1.374	42.9	1.009	-0.02	2.220	**3.078**	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	41055	2636.5	2	25.62	27.00	1.374	42.9	1.009	-0.1	2.110	2.925	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	ECI 6	41055	2636.5	3	25.62	27.00	1.374	42.9	1.009	0.01	2.050	2.842	
	2nd	LTE Band 41C HPUE	20M	QPSK	1	99	-	Bottom Side	0mm	Ant 1	ECI 6	41055+41253	2636.5+2656.3	1	25.39	27.00	1.449	42.9	1.009	0.1	1.810	2.646	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI 6	40620	2593	1	21.70	22.30	1.148	62.9	1.006	-0.11	1.560	1.802	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI 6	39750	2506	1	21.47	22.30	1.211	62.9	1.006	0.14	1.600	1.949	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI 6	40185	2549.5	1	21.55	22.30	1.189	62.9	1.006	0.03	1.530	1.829	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI 6	41055	2636.5	1	21.53	22.30	1.194	62.9	1.006	0.1	1.540	1.850	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI 6	41490	2680	1	21.44	22.30	1.219	62.9	1.006	0.16	1.420	1.741	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Back	0mm	Ant 4	ECI 6	40620	2593	1	21.66	22.30	1.159	62.9	1.006	-0.06	1.280	1.492	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Back	0mm	Ant 4	ECI 6	40620	2593	1	21.64	22.30	1.164	62.9	1.006	0.17	1.270	1.487	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	40620	2593	1	21.70	22.30	1.148	62.9	1.006	0.01	2.170	2.506	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	39750	2506	1	21.47	22.30	1.211	62.9	1.006	-0.15	1.900	2.314	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	40185	2549.5	1	21.55	22.30	1.189	62.9	1.006	0.16	1.930	2.308	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	41055	2636.5	1	21.53	22.30	1.194	62.9	1.006	0.05	2.140	2.570	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	41490	2680	1	21.44	22.30	1.219	62.9	1.006	-0.06	1.990	2.440	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	ECI 6	40620	2593	1	21.66	22.30	1.159	62.9	1.006	-0.13	1.770	2.063	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	ECI 6	39750	2506	1	21.53	22.30	1.194	62.9	1.006	-0.01	1.530	1.838	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	ECI 6	40185	2549.5	1	21.53	22.30	1.194	62.9	1.006	-0.11	1.650	1.982	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	ECI 6	41055	2636.5	1	21.62	22.30	1.169	62.9	1.006	0.19	1.670	1.965	
	2nd	LTE Band 41	20M	QPSK	50	0	-	Top Side	0mm	Ant 4	ECI 6	41490	2680	1	21.49	22.30	1.205	62.9	1.006	-0.14	1.700	2.061	
	2nd	LTE Band 41	20M	QPSK	100	0	-	Top Side	0mm	Ant 4	ECI 6	40620	2593	1	21.64	22.30	1.164	62.9	1.006	-0.18	1.760	2.061	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	40620	2593	1	23.56	23.90	1.081	42.9	1.009	0.03	2.330	2.542	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	40620	2593	2	23.56	23.90	1.081	42.9	1.009	0.03	2.150	2.346	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Top Side	0mm	Ant 4	ECI 6	40620	2593	3	23.56	23.90	1.081	42.9	1.009	-0.08	2.240	2.444	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Back	11mm	Ant 4	ECI 6	40620	2593	1	22.99	24.00	1.262	62.9	1.006	-0.17	0.479	0.608	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	11mm	Ant 4	ECI 6	40620	2593	1	25.91	27.00	1.285	42.9	1.009	0.17	0.978	1.268	
	2nd	LTE Band 41	20M	QPSK	1	0	-	Top Side	9mm	Ant 4	ECI 6	40620	2593	1	22.99	24.00	1.262	62.9	1.006	-0.05	0.753	0.956	
	2nd	LTE Band 41 HPUE	20M	QPSK	1	0	-	Top Side	9mm	Ant 4	ECI 6	40620	2593	1	25.91	27.00	1.285	42.9	1.009	0.01	1.480	1.919	
	1st	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	0mm	Ant 1	ECI 7	507000	2535	1	21.08	22.10	1.265	-	-	-0.05	2.250	2.846	0.363
68	2nd	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	0mm	Ant 1	ECI 7	507000	2535	1	21.08	22.10	1.265	-	-	-0.07	2.070	**2.618**	
	1st	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Top Side	0mm	Ant 4	ECI 6	507000	2535	1	21.02	22.00	1.253	-	-	-0.04	2.010	2.519	0.176
	2nd	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Top Side	0mm	Ant 4	ECI 6	507000	2535	1	21.02	22.00	1.253	-	-	-0.05	1.930	2.419	
	1st	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	0mm	Ant 1	ECI 6	518598	2592.99	1	20.17	21.20	1.268	-	-	-0.05	2.430	3.080	1.091
	2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	0mm	Ant 1	ECI 6	518598	2592.99	1	20.17	21.20	1.268	-	-	0.02	1.890	2.396	
	1st	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 4	ECI 6	518598	2592.99	1	19.48	20.80	1.355	-	-	0.11	1.910	2.588	
69	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 4	ECI 6	518598	2592.99	1	19.36	20.80	1.393	-	-	-0.02	1.960	**2.731**	0.234
	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 4	ECI 6	518598	2592.99	2	19.36	20.80	1.393	-	-	-0.18	1.850	2.577	
	2nd	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 4	ECI 6	518598	2592.99	3	19.36	20.80	1.393	-	-	0.1	1.810	2.522	

Plot No.	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)	Deviation dB
3500MHz																							
	1st	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	0mm	Ant 5	ECI 6	42990	3540	1	20.80	21.40	1.148	62.9	1.006	0.01	2.160	2.495	0.473
70	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	0mm	Ant 5	ECI 6	42990	3540	1	20.73	21.40	1.167	62.9	1.006	0.03	2.370	**2.782**	
	1st	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	0mm	Ant 5	ECI 6	42990	3540	2	20.73	21.40	1.167	62.9	1.006	-0.17	2.110	2.477	
	2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	0mm	Ant 5	ECI 6	42990	3540	3	20.73	21.40	1.167	62.9	1.006	-0.03	1.950	2.289	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 5	ECI 6	656000	3840	1	18.72	19.70	1.253	-	-	0.11	0.716	0.897	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 5	ECI 6	656000	3840	1	18.67	19.70	1.268	-	-	-0.08	0.688	0.872	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 5	ECI 6	656000	3840	1	18.72	19.70	1.253	-	-	-0.01	0.984	1.233	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 5	ECI 6	656000	3840	1	18.67	19.70	1.268	-	-	-0.09	1.000	1.268	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	0mm	Ant 5	ECI 6	656000	3840	1	18.72	19.70	1.253	-	-	0.04	1.960	2.456	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 5	ECI 6	656000	3840	1	18.67	19.70	1.268	-	-	-0.17	1.870	2.371	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 5	ECI 6	656000	3840	1	18.58	19.70	1.294	-	-	-0.01	1.900	2.459	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 5	ECI 6	656000	3840	2	18.58	19.70	1.294	-	-	0.14	1.750	2.265	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	0mm	Ant 5	ECI 6	656000	3840	3	18.58	19.70	1.294	-	-	0.11	1.830	2.368	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	13mm	Ant 5	ECI 6	656000	3840	1	26.15	27.00	1.216	-	-	0.1	0.290	0.353	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 5	ECI 6	656000	3840	1	26.15	27.00	1.216	-	-	-0.17	0.441	0.536	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	13mm	Ant 5	ECI 6	656000	3840	1	26.15	27.00	1.216	-	-	0.04	0.876	1.065	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 3	ECI 6	656000	3840	1	15.82	16.60	1.197	-	-	-0.11	1.670	1.999	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 3	ECI 6	656000	3840	1	15.80	16.60	1.202	-	-	-0.06	1.410	1.695	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	0mm	Ant 3	ECI 6	656000	3840	1	15.78	16.60	1.208	-	-	0.01	1.670	2.017	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	0mm	Ant 3	ECI 6	656000	3840	2	15.78	16.60	1.208	-	-	-0.05	1.580	1.908	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	0mm	Ant 3	ECI 6	656000	3840	3	15.78	16.60	1.208	-	-	0.18	1.620	1.957	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 3	ECI 6	656000	3840	1	15.82	16.60	1.197	-	-	-0.15	0.729	0.872	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 3	ECI 6	656000	3840	1	15.80	16.60	1.202	-	-	0.03	0.339	0.408	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	11mm	Ant 3	ECI 6	656000	3840	1	21.74	22.50	1.191	-	-	-0.09	0.913	1.088	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	8mm	Ant 3	ECI 6	656000	3840	1	21.74	22.50	1.191	-	-	-0.08	0.637	0.759	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 7	ECI 6	656000	3840	1	21.03	22.00	1.250	-	-	0.02	1.960	2.451	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 7	ECI 6	656000	3840	2	21.03	22.00	1.250	-	-	0.14	1.850	2.313	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 7	ECI 6	656000	3840	3	21.03	22.00	1.250	-	-	-0.17	1.770	2.213	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 7	ECI 6	656000	3840	1	21.03	22.00	1.250	-	-	-0.15	1.640	2.050	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Front	0mm	Ant 7	ECI 6	656000	3840	1	20.89	22.00	1.291	-	-	-0.06	1.420	1.834	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 7	ECI 6	656000	3840	1	21.03	22.00	1.250	-	-	-0.14	0.988	1.235	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 7	ECI 6	656000	3840	1	21.03	22.00	1.250	-	-	-0.19	0.865	1.081	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	0mm	Ant 7	ECI 6	656000	3840	1	21.03	22.00	1.250	-	-	-0.16	0.773	0.966	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 7	ECI 6	656000	3840	1	21.03	22.00	1.250	-	-	-0.12	0.763	0.954	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	13mm	Ant 7	ECI 6	656000	3840	1	25.95	27.00	1.274	-	-	-0.01	0.200	0.255	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 7	ECI 6	656000	3840	1	25.95	27.00	1.274	-	-	-0.08	0.391	0.498	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	13mm	Ant 7	ECI 6	656000	3840	1	25.95	27.00	1.274	-	-	0.06	0.501	0.638	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 9	ECI 4	656000	3840	1	18.42	19.60	1.312	-	-	-0.05	0.824	1.081	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 9	ECI 4	656000	3840	1	18.41	19.60	1.315	-	-	0	0.630	0.829	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 9	ECI 4	656000	3840	1	18.42	19.60	1.312	-	-	-0.01	1.240	1.627	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 9	ECI 4	656000	3840	1	18.41	19.60	1.315	-	-	-0.09	1.060	1.394	
71	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECI 4	656000	3840	1	18.42	19.60	1.312	-	-	-0.12	2.140	**2.808**	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECI 4	656000	3840	2	18.42	19.60	1.312	-	-	0.17	2.010	2.638	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECI 4	656000	3840	3	18.42	19.60	1.312	-	-	-0.05	1.950	2.559	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECI 4	656000	3840	1	18.41	19.60	1.315	-	-	0.02	1.960	2.578	
	2nd	FR1 n77 Part 27O HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECI 4	656000	3840	1	18.35	19.60	1.334	-	-	-0.13	2.100	2.800	

Plot No.	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)	Deviation dB
	1st	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 6	Full power	6	2437	1	18.51	20.00	1.409	99.14	1.009	-0.01	0.856	1.217	0.190
72	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 6	Full power	6	2437	1	18.44	20.00	1.432	99.14	1.009	0.09	0.806	**1.165**	
	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 6	Full power	6	2437	2	18.44	20.00	1.432	99.14	1.009	-0.17	0.777	1.123	
	2nd	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 6	Full power	6	2437	3	18.44	20.00	1.432	99.14	1.009	0.04	0.734	1.061	
	1st	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	46	5230	1	17.29	19.00	1.482	93.28	1.072	-0.01	1.990	3.161	0.113
73	2nd	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	46	5230	1	17.25	19.00	1.496	93.28	1.072	0.04	1.920	**3.080**	
	2nd	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	46	5230	2	17.25	19.00	1.496	93.28	1.072	0.05	1.840	2.951	
	2nd	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	46	5230	3	17.25	19.00	1.496	93.28	1.072	0.01	1.810	2.903	
	1st	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	54	5270	1	17.42	19.00	1.438	93.28	1.072	-0.04	2.060	3.176	0.931
74	2nd	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	54	5270	1	17.39	19.00	1.449	93.28	1.072	-0.07	1.650	**2.563**	
	2nd	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	54	5270	2	17.39	19.00	1.449	93.28	1.072	-0.09	1.610	2.500	
	2nd	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	54	5270	3	17.39	19.00	1.449	93.28	1.072	-0.08	1.530	2.376	
	1st	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	126	5630	1	17.25	19.00	1.496	93.28	1.072	0.02	1.800	2.886	0.514
75	2nd	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	126	5630	1	17.20	19.00	1.514	93.28	1.072	-0.04	1.580	**2.564**	
	2nd	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	126	5630	2	17.20	19.00	1.514	93.28	1.072	0.13	1.430	2.320	
	2nd	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	126	5630	3	17.20	19.00	1.514	93.28	1.072	0.12	1.520	2.466	
	1st	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	151	5755	1	17.18	18.50	1.355	93.28	1.072	0.12	2.130	3.093	0.595
76	2nd	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	151	5755	1	17.07	18.50	1.390	93.28	1.072	-0.1	1.810	**2.697**	
	2nd	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	151	5755	2	17.07	18.50	1.390	93.28	1.072	0.16	1.780	2.652	
	2nd	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Standalone	151	5755	3	17.07	18.50	1.390	93.28	1.072	-0.1	1.670	2.488	

17.5 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	GSM850					GPRS (4Tx slots)	Back	5mm	Ant 0	ECI 7	189	836.4	27.22	28.50	1.343	-	-	-0.01	1.010	1	1.356
2nd	GSM850					GPRS (4Tx slots)	Back	5mm	Ant 0	ECI 7	189	836.4	27.22	28.50	1.343	-	-	0.02	0.990	1.020	1.329
1st	GSM1900					GPRS (3 Tx slots)	Bottom Side	5mm	Ant 1	ECI 7	512	1850.2	25.28	26.50	1.324	-	-	0.01	0.880	1	1.165
2nd	GSM1900					GPRS (3 Tx slots)	Bottom Side	5mm	Ant 1	ECI 7	512	1850.2	25.28	26.50	1.324	-	-	0.03	0.861	1.022	1.140
1st	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	507000	2535	19.10	20.20	1.288	-	-	0.02	1.110	1	1.430
2nd	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	ECI 7	507000	2535	19.10	20.20	1.288	-	-	0.02	1.030	1.078	1.327
1st	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECI 7	656000	3840	14.95	15.90	1.245	-	-	-0.03	1.040	1	1.294
2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 9	ECI 7	656000	3840	14.95	15.90	1.245	-	-	0.05	0.999	1.041	1.243
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Standalone	6	2437	15.80	17.00	1.318	99.14	1.009	0.1	0.898	1	1.194
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0mm	Ant 6	Standalone	6	2437	15.80	17.00	1.318	99.14	1.009	-0.03	0.856	1.049	1.139

<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	GSM850					GPRS (4Tx slots)	Back	0mm	Ant 0	ECI 6	128	824.2	27.21	28.50	1.346	-	-	-0.06	2.260	1	3.042
2nd	GSM850					GPRS (4Tx slots)	Back	0mm	Ant 0	ECI 6	128	824.2	27.21	28.50	1.346	-	-	0.03	2.100	1.076	2.826
1st	WCDMA II					RMC 12.2Kbps	Front	0mm	Ant 1	ECI 6	9400	1880	22.10	23.10	1.259	-	-	-0.05	2.380	1	2.996
2nd	WCDMA II					RMC 12.2Kbps	Front	0mm	Ant 1	ECI 6	9400	1880	22.10	23.10	1.259	-	-	0.03	2.210	1.077	2.782
1st	LTE Band 41 HPUE	20M	QPSK	1	0		Top Side	0mm	Ant 4	ECI 6	40620	2593	23.56	23.90	1.081	42.9	1.009	0.03	2.330	1	2.542
2nd	LTE Band 41 HPUE	20M	QPSK	1	0		Top Side	0mm	Ant 4	ECI 6	40620	2593	23.56	23.90	1.081	42.9	1.009	-0.09	2.260	1.031	2.466
1st	LTE Band 42 Part 27Q	20M	QPSK	1	0		Top Side	0mm	Ant 5	ECI 6	42990	3540	20.73	21.40	1.167	62.9	1.006	0.03	2.370	1	2.782
2nd	LTE Band 42 Part 27Q	20M	QPSK	1	0		Top Side	0mm	Ant 5	ECI 6	42990	3540	20.73	21.40	1.167	62.9	1.006	0.03	2.250	1.053	2.641
1st	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECI 4	656000	3840	18.42	19.60	1.312	-	-	-0.12	2.140	1	2.808
2nd	FR1 n77 Part 27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	0mm	Ant 9	ECI 4	656000	3840	18.42	19.60	1.312	-	-	0.01	1.980	1.081	2.598

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. 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.
3. 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.
4. The ratio is the difference in percentage between original and repeated *measured SAR*.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

17.6 TDD LTE Linearity Data Analysis

General Note:

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg for 1g and < 3.5 W/kg for 10g, Separate SAR testing for Power Class 2 is not required.

LTE B41-Linearity Data for Head Ant 1		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	22.93	25.90
Reported 1g SAR (W/kg)	0.210	0.264
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	124.28	168.46
Linearity SAR (W/kg)	0.285	
% deviation from expected linearity		-7.25%

LTE B41-Linearity Data for Head Ant 4		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	21.15	22.76
Reported 1g SAR (W/kg)	0.909	0.896
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	82.49	81.75
Linearity SAR (W/kg)	0.901	
% deviation from expected linearity		-0.54%

LTE B41-Linearity Data for Body-worn Ant 1		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	22.74	25.81
Reported 1g SAR (W/kg)	1.034	1.322
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	118.96	165.00
Linearity SAR (W/kg)	1.434	
% deviation from expected linearity		-7.82%

LTE B41-Linearity Data for Body-worn Ant 4		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	20.22	21.86
Reported 1g SAR (W/kg)	0.906	0.847
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	66.59	66.45
Linearity SAR (W/kg)	0.904	
% deviation from expected linearity		-6.31%

LTE B41-Linearity Data for Hotspot Ant 1		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	21.12	22.85
Reported 1g SAR (W/kg)	1.238	1.293
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	81.92	83.46
Linearity SAR (W/kg)	1.261	
% deviation from expected linearity		2.52%

LTE B41-Linearity Data for Hotspot Ant 4		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	18.18	19.86
Reported 1g SAR (W/kg)	0.652	0.613
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	41.63	41.93
Linearity SAR (W/kg)	0.657	
% deviation from expected linearity		-6.65%

LTE B41-Linearity Data for Extremity Ant 1		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	22.68	25.62
Reported 10g SAR (W/kg)	2.536	3.078
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	117.33	157.94
Linearity SAR (W/kg)	3.414	
% deviation from expected linearity		-9.84%

LTE B41-Linearity Data for Extremity Ant 4		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	21.53	23.56
Reported 10g SAR (W/kg)	2.570	2.542
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	90.03	98.29
Linearity SAR (W/kg)	2.806	
% deviation from expected linearity		-9.39%

18. 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:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. WWAN above includes 5G NR bands and EN-DC combination.
3. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
4. 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.
5. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
6. 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).
7. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
8. According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
9. According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz cannot transmit simultaneously.
10. WLAN 2.4GHz and Bluetooth share the same antenna, and they cannot transmit simultaneously.
11. NFC can transmit simultaneously with other Radios in extremity exposure condition.
12. For Headset SAR and non-Headset SAR always chose higher SAR to do co-located analysis.
13. For distance SAR and non-distance SAR at extremity exposure conditions always chose higher SAR to do co-located analysis.
14. For simultaneously analysis, since the SAR summation of 3 transmitters can cover others combination of 2 transmitters, therefore in this section did not additional to evaluate 2TX combination of simultaneously transmission.
15. For standalone WWAN, always choose the highest SAR among all WWAN bands within the selected antenna for each exposure position to perform simultaneous transmission analysis with WLAN/BT together. This is the worst co-located analysis and can represent each band.
16. The maximum SAR summation is calculated based on the same configuration and test position.
17. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (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.
    iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
    v) The SPLSR calculated results please refer to section 18.6.

18.1 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

$$x*A + y*B + m \le 1$$
$$x + y = g \le 1$$
$$g + m \le 1$$

Where, A is normalized reported time-averaged SAR exposure ratio from LTE, and A ≤ 1.0; B is normalized reported time-averaged exposure ratio from 5G NR (i.e., PD exposure for 5G FR2 or SAR exposure for 5G FR1), and B ≤1.0.

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

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

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

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

If A + m ≤ 1.0 and B + m ≤ 1.0 can be proven, then “x * A + y * B + m ≤ 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 ≤ 1.0, and
iii. x% * A + y * B ≤ 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

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 18.6 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 18.2/18.3 / 18.4 / 18.5 / 18.6 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.

Conclusion:

1. The Spot check results from chapter 17.1 to 17.4, showed that Deviation of the SAR results did not exceed 3 dB, SAR data reuse is justified.
2. For simultaneously transmission SAR analysis, Simultaneous transmission analysis for the WWAN/WLAN/BT bands and each position are based on max SAR results chosen between the original SAR results (Sporton SAR report no.: FA530724) and Spot check results.

18.2 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
Right Cheek	0.327	0.294	0.439	0.439
Right Tilted	0.173	0.131	0.171	0.173
Left Cheek	0.490	0.161	0.288	0.490
Left Tilted	0.197	0.108	0.188	0.197

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Right Cheek	0.280	0.909	0.581	0.175	0.909
Right Tilted	0.187	0.906	0.725	0.179	0.906
Left Cheek	0.089	0.628	0.711	0.885	0.885
Left Tilted	0.076	0.749	0.889	0.285	0.889

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

Test Position	WLAN2.4GHz Ant6	WLAN5GHz Ant5	BT Ant 6	WLAN5GHz Ant5+BT Ant 6	WLAN +BT worst case
Right Cheek	0.167	0.158	0.074	0.232	0.232
Right Tilted	0.191	0.284	0.085	0.369	0.369
Left Cheek	0.419	0.393	0.241	0.634	0.634
Left Tilted	0.222	0.319	0.167	0.486	0.486

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

Test Position	AG0	AG1	Wlan+BT worst case	AG0+AG1+ WLAN +BT worst case
Right Cheek	0.909	0.439	0.232	1.58
Right Tilted	0.906	0.173	0.369	1.45
Left Cheek	0.885	0.490	0.634	**2.01**
Left Tilted	0.889	0.197	0.486	1.57

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

Left Cheek					
Ant combination	AG0	AG1	Wlan+BT worst case	AG0+AG1+wlan +BT worst case(DBS/XBS)	SPLSR
Ant0-Ant3	0.490	0.089	0.634	1.21	
Ant0-Ant4	0.490	0.628	0.634	**1.75**	**1**
Ant0-Ant5	0.490	0.711	0.634	**1.84**	**2**
Ant0-Ant7	0.490	0.885	0.634	**2.01**	**3**
Ant1-Ant3	0.161	0.089	0.634	0.88	
Ant1-Ant4	0.161	0.628	0.634	1.42	
Ant1-Ant5	0.161	0.711	0.634	1.51	
Ant1-Ant7	0.161	0.885	0.634	**1.68**	**70**
Ant9-Ant3	0.288	0.089	0.634	1.01	
Ant9-Ant4	0.288	0.628	0.634	1.55	
Ant9-Ant5	0.288	0.711	0.634	**1.63**	**71**
Ant9-Ant7	0.288	0.885	0.634	**1.81**	**72**

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

Test Position	WLAN2.4GHz Ant6	WLAN5GHz Ant5	BT Ant 6	WLAN5GHz Ant5+BT Ant 6	WLAN +BT worst case
Right Cheek	0.167	0.158	0.074	0.23	0.23
Right Tilted	0.191	0.284	0.085	0.37	0.37
Left Cheek	0.419	0.393	0.241	0.63	0.63
Left Tilted	0.222	0.319	0.167	0.49	0.49

18.3 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
Front	0.964	1.258	0.582	1.258
Back	1.430	1.214	1.075	1.430
Left Side	1.019	0.439	0.031	1.019
Right Side	0.201	0.338	1.294	1.294
Top Side				0.000
Bottom Side	1.073	1.430	0.300	1.430

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Front	0.019	0.347	0.224	0.282	0.347
Back	0.623	0.628	0.580	0.624	0.628
Left Side	0.145	0.517	0.070	0.041	0.517
Right Side	0.004	0.092	0.087	0.563	0.563
Top Side	0.021	0.630	0.628	0.388	0.630
Bottom Side					

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

Test Position	WLAN2.4GHz Ant6	WLAN5GHz Ant5	BT Ant 6	WLAN5GHz Ant5+BT Ant 6	WLAN +BT worst case
Front	0.467	0.261	0.304	0.565	0.565
Back	0.659	0.530	0.430	0.960	0.960
Left Side	0.035	0.049	0.001	0.050	0.050
Right Side	0.462	0.364	0.286	0.650	0.650
Top Side	0.387	0.661	0.295	0.956	0.956
Bottom Side				0.000	0.000

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

Test Position	AG0	AG1	Wlan+BT worst case	AG0+AG1+ WLAN +BT worst case
Front	1.258	0.347	0.565	**2.17**
Back	1.430	0.628	0.960	**3.02**
Left Side	1.019	0.517	0.050	**1.59**
Right Side	1.294	0.563	0.650	**2.51**
Top Side	0.000	0.630	0.956	1.59
Bottom Side	1.430	0.000	0.000	1.43

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

Front					
Ant combination	AG0 SAR	AG1 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst cas	SPLSR
Ant0-Ant3	0.964	0.019	0.565	1.55	
Ant0-Ant4	0.964	0.347	0.565	**1.88**	**64**
Ant0-Ant5	0.964	0.224	0.565	**1.75**	**65**
Ant0-Ant7	0.964	0.282	0.565	**1.81**	**66**
Ant1-Ant3	1.258	0.019	0.565	**1.84**	**67**
Ant1-Ant4	1.258	0.347	0.565	**2.17**	**24**
Ant1-Ant5	1.258	0.224	0.565	**2.05**	**25**
Ant1-Ant7	1.258	0.282	0.565	**2.11**	**26**
Ant9-Ant3	0.582	0.019	0.565	1.17	
Ant9-Ant4	0.582	0.347	0.565	1.49	
Ant9-Ant5	0.582	0.224	0.565	1.37	
Ant9-Ant7	0.582	0.282	0.565	1.43	

Back					
Ant combination	AG0 SAR	AG1 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst cas	SPLSR
Ant0-Ant3	1.430	0.623	0.960	**3.01**	**27**
Ant0-Ant4	1.430	0.628	0.960	**3.02**	**28**
Ant0-Ant5	1.430	0.580	0.960	**2.97**	**29**
Ant0-Ant7	1.430	0.624	0.960	**3.01**	**30**
Ant1-Ant3	1.214	0.623	0.960	**2.80**	**31**
Ant1-Ant4	1.214	0.628	0.960	**2.80**	**32**
Ant1-Ant5	1.214	0.580	0.960	**2.75**	**33**
Ant1-Ant7	1.214	0.624	0.960	**2.80**	**34**
Ant9-Ant3	1.075	0.623	0.960	**2.66**	**35**
Ant9-Ant4	1.075	0.628	0.960	**2.66**	**36**
Ant9-Ant5	1.075	0.580	0.960	**2.62**	**37**
Ant9-Ant7	1.075	0.624	0.960	**2.66**	**38**

Right Side					
Ant combination	AG0 SAR	AG1 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst cas	SPLSR
Ant0-Ant3	0.201	0.004	0.650	0.86	
Ant0-Ant4	0.201	0.092	0.650	0.94	
Ant0-Ant5	0.201	0.087	0.650	0.94	
Ant0-Ant7	0.201	0.563	0.650	1.41	
Ant1-Ant3	0.364	0.004	0.650	1.02	
Ant1-Ant4	0.364	0.092	0.650	1.11	
Ant1-Ant5	0.364	0.087	0.650	1.10	
Ant1-Ant7	0.364	0.563	0.650	1.58	
Ant9-Ant3	1.294	0.004	0.650	**1.95**	**68**
Ant9-Ant4	1.294	0.092	0.650	**2.04**	**39**
Ant9-Ant5	1.294	0.087	0.650	**2.03**	**69**
Ant9-Ant7	1.294	0.563	0.650	**2.51**	**40**

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

Test Position	WLAN2.4GHz Ant6	WLAN5GHz Ant5	BT Ant 6	WLAN5GHz Ant5+BT Ant 6	WLAN +BT worst case
Front	0.467	0.261	0.269	0.53	0.53
Back	0.659	0.530	0.381	0.91	0.91
Left Side	0.035	0.049	0.001	0.05	0.05
Right Side	0.462	0.364	0.253	0.62	0.62
Top Side	0.387	0.661	0.261	0.92	0.92
Bottom Side				0.00	0.00

18.4 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
Front	0.964	1.346	0.646	**1.346**
Back	1.430	1.319	1.190	**1.430**

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Front	0.203	0.515	0.486	0.339	**0.515**
Back	0.879	0.893	0.884	0.884	**0.893**

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

Test Position	WLAN2.4GHz Ant6	WLAN5GHz Ant5	BT Ant 6	WLAN5GHz Ant5+BT Ant 6	WLAN +BT worst case
Front	0.274	0.268	0.342	0.610	0.610
Back	0.383	0.261	0.430	0.691	0.691

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

Test Position	AG0	AG1	Wlan+BT worst case	AG0+AG1+ WLAN +BT worst case
Front	1.346	0.515	0.610	**2.47**
Back	1.430	0.893	0.691	**3.01**

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

Front

Ant combination	AG0 SAR	AG1 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst case	SPLSR
Ant0-Ant3	0.964	0.203	0.610	**1.78**	**63**
Ant0-Ant4	0.964	0.515	0.610	**2.09**	**8**
Ant0-Ant5	0.964	0.486	0.610	**2.06**	**57**
Ant0-Ant7	0.964	0.339	0.610	**1.91**	**58**
Ant1-Ant3	1.346	0.203	0.610	**2.16**	**59**
Ant1-Ant4	1.346	0.515	0.610	**2.47**	**9**
Ant1-Ant5	1.346	0.486	0.610	**2.44**	**10**
Ant1-Ant7	1.346	0.339	0.610	**2.30**	**11**
Ant9-Ant3	0.646	0.203	0.610	1.46	
Ant9-Ant4	0.646	0.515	0.610	**1.77**	**60**
Ant9-Ant5	0.646	0.486	0.610	**1.74**	**61**
Ant9-Ant7	0.646	0.339	0.610	**1.60**	**62**

Back

Ant combination	AG0 SAR	AG1 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst case	SPLSR
Ant0-Ant3	1.430	0.879	0.691	**3.00**	**12**
Ant0-Ant4	1.430	0.893	0.691	**3.01**	**13**
Ant0-Ant5	1.430	0.884	0.691	**3.01**	**14**
Ant0-Ant7	1.430	0.884	0.691	**3.01**	**15**
Ant1-Ant3	1.319	0.879	0.691	**2.89**	**16**
Ant1-Ant4	1.319	0.893	0.691	**2.90**	**17**
Ant1-Ant5	1.319	0.884	0.691	**2.89**	**18**
Ant1-Ant7	1.319	0.884	0.691	**2.89**	**19**
Ant9-Ant3	1.190	0.879	0.691	**2.76**	**20**
Ant9-Ant4	1.190	0.893	0.691	**2.77**	**21**
Ant9-Ant5	1.190	0.884	0.691	**2.77**	**22**
Ant9-Ant7	1.190	0.884	0.691	**2.77**	**23**

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

Test Position	WLAN2.4GHz Ant6	WLAN5GHz Ant5	BT Ant 6	WLAN5GHz Ant5+BT Ant 6	WLAN +BT worst case
Front	0.274	0.268	0.342	0.61	0.61
Back	0.383	0.416	0.430	0.85	0.85

<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
Front	0.147	0.302	0.131	0.302
Back	0.157	0.278	0.249	0.278

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Front	0.203	0.291	0.486	0.255	0.486
Back	0.299	0.337	0.705	0.759	0.759

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

Test Position	WLAN2.4GHz Ant6	WLAN5GHz Ant5	BT Ant 6	WLAN5GHz Ant5+BT Ant 6	WLAN +BT worst case
Front	0.158	0.301	0.051	0.352	0.352
Back	0.127	0.353	0.040	0.393	0.393

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

Test Position	AG0	AG1	Wlan+BT worst case	AG0+AG1+ WLAN +BT worst case
Front	0.302	0.486	0.352	1.14
Back	0.278	0.759	0.393	1.43

18.5 Product specific 10g SAR Exposure Conditions

Remark:

1. 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
Front	2.688	3.324	1.081	3.324
Back	3.080	2.656	1.627	3.080
Left Side	1.988			1.988
Right Side			2.808	2.808
Top Side				0.000
Bottom Side	2.920	3.080		3.080

<AG1 maximum reported SAR>:

Test Position	Ant3	Ant4	Ant5	Ant7	MAX
Front		1.133	1.039	2.451	2.451
Back	2.017	1.949	1.268	1.235	2.017
Left Side	0.872	1.073			1.073
Right Side					0.000
Top Side		2.731	2.782	0.966	2.782
Bottom Side					0.000

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

Test Position	WLAN2.4GHz Ant6	WLAN5GHz Ant5	WLAN5GHz Ant5+BT Ant 6	WLAN +BT worst case
Front		0.457	0.457	0.457
Back	1.217	0.402	0.402	1.217
Left Side		0.643	0.643	0.643
Right Side		0.298	0.298	0.298
Top Side		1.158	1.158	1.158
Bottom Side			0.000	0.000

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

Test Position	AG0	AG1	Wlan+BT worst case	NFC	AG0+AG1+ WLAN +BT worst case
Front	3.324	2.451	0.457	0.001	**6.23**
Back	3.080	2.017	1.217	0.026	**6.34**
Left Side	1.988	1.073	0.643	0.001	3.71
Right Side	2.808	0.000	0.298	0.001	3.11
Top Side	0.000	2.782	1.158	0.001	3.94
Bottom Side	3.080	0.000	0.000	0.001	3.08

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

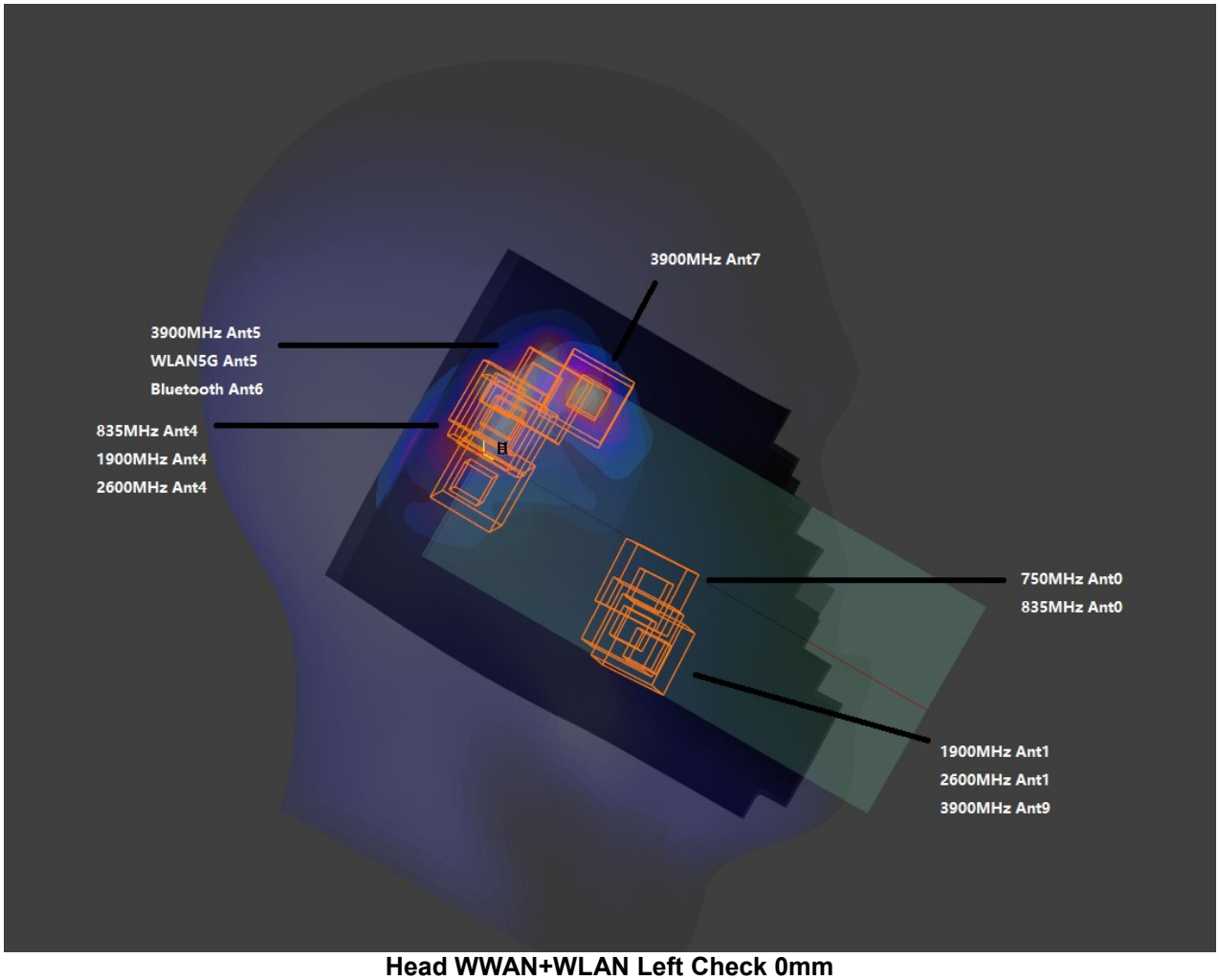
Front						
Ant combination	AG0 SAR	AG1 SAR	Wlan+BT worst case	NFC	AG0+AG1+wlan +BT worst case	SPLSR
Ant0-Ant3	2.688	0.000	0.457	0.001	3.15	
Ant0-Ant4	2.688	1.133	0.457	0.001	**4.28**	**41**
Ant0-Ant5	2.688	1.039	0.457	0.001	**4.19**	**42**
Ant0-Ant7	2.688	2.451	0.457	0.001	**5.60**	**43**
Ant1-Ant3	3.324	0.000	0.457	0.001	3.78	
Ant1-Ant4	3.324	1.133	0.457	0.001	**4.92**	**44**
Ant1-Ant5	3.324	1.039	0.457	0.001	**4.82**	**45**
Ant1-Ant7	3.324	2.451	0.457	0.001	**6.23**	**46**
Ant9-Ant3	1.081	0.000	0.457	0.001	1.54	
Ant9-Ant4	1.081	1.133	0.457	0.001	2.67	
Ant9-Ant5	1.081	1.039	0.457	0.001	2.58	
Ant9-Ant7	1.081	2.451	0.457	0.001	**3.99**	

Back						
Ant combination	AG0 SAR	AG1 SAR	Wlan+BT worst case	NFC	AG0+AG1+wlan +BT worst case	SPLSR
Ant0-Ant3	3.080	2.017	1.217	0.026	**6.34**	**47**
Ant0-Ant4	3.080	1.949	1.217	0.026	**6.27**	**48**
Ant0-Ant5	3.080	1.268	1.217	0.026	**5.59**	**49**
Ant0-Ant7	3.080	1.235	1.217	0.026	**5.56**	**50**
Ant1-Ant3	2.656	2.017	1.217	0.026	**5.92**	**51**
Ant1-Ant4	2.656	1.949	1.217	0.026	**5.85**	**52**
Ant1-Ant5	2.656	1.268	1.217	0.026	**5.17**	**53**
Ant1-Ant7	2.656	1.235	1.217	0.026	**5.13**	**54**
Ant9-Ant3	1.627	2.017	1.217	0.026	**4.89**	**75**
Ant9-Ant4	1.627	1.949	1.217	0.026	**4.82**	**76**
Ant9-Ant5	1.627	1.268	1.217	0.026	**4.14**	**77**
Ant9-Ant7	1.627	1.235	1.217	0.026	**4.11**	**78**

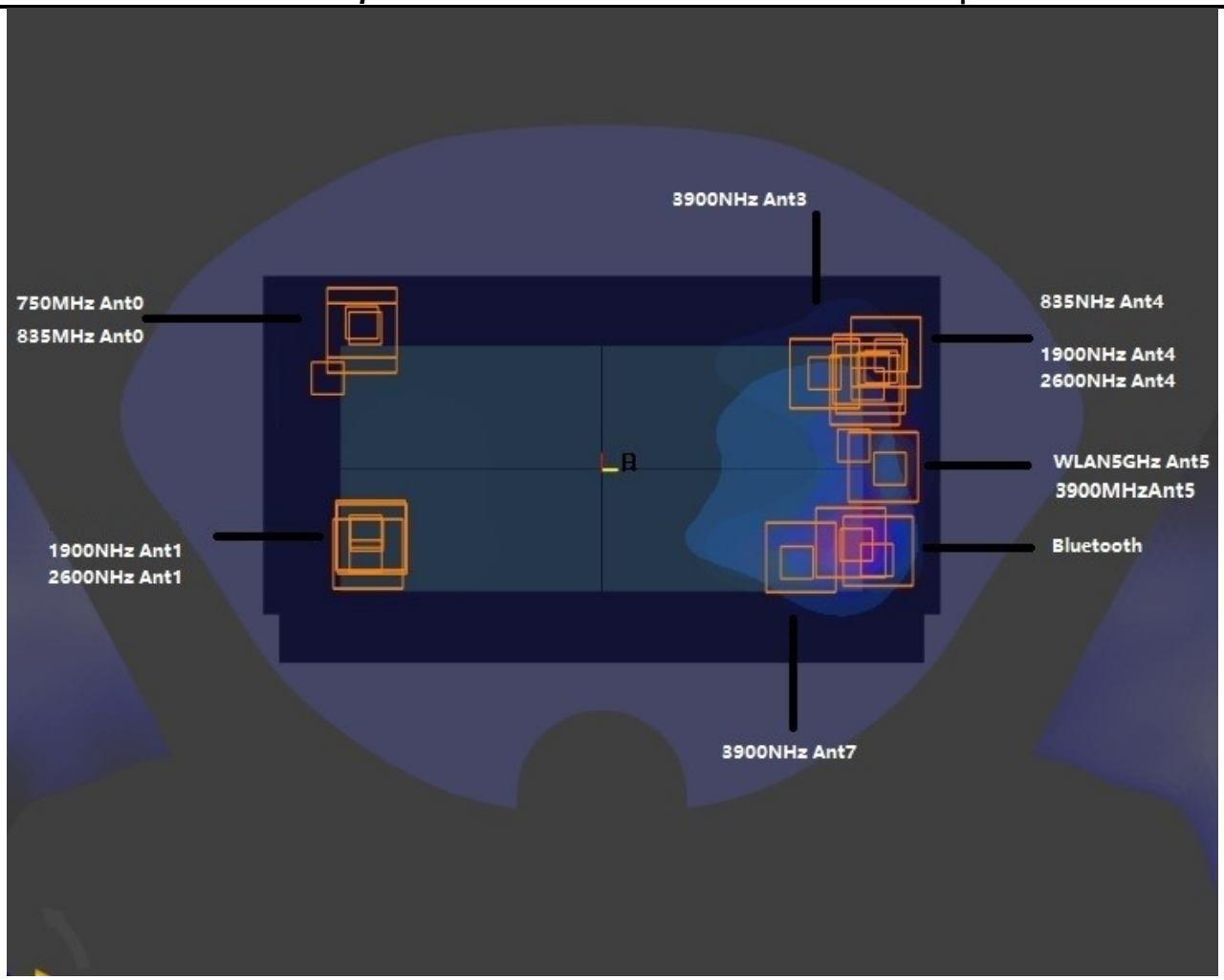
18.6 SPLSR Evaluation and Analysis

General Note:

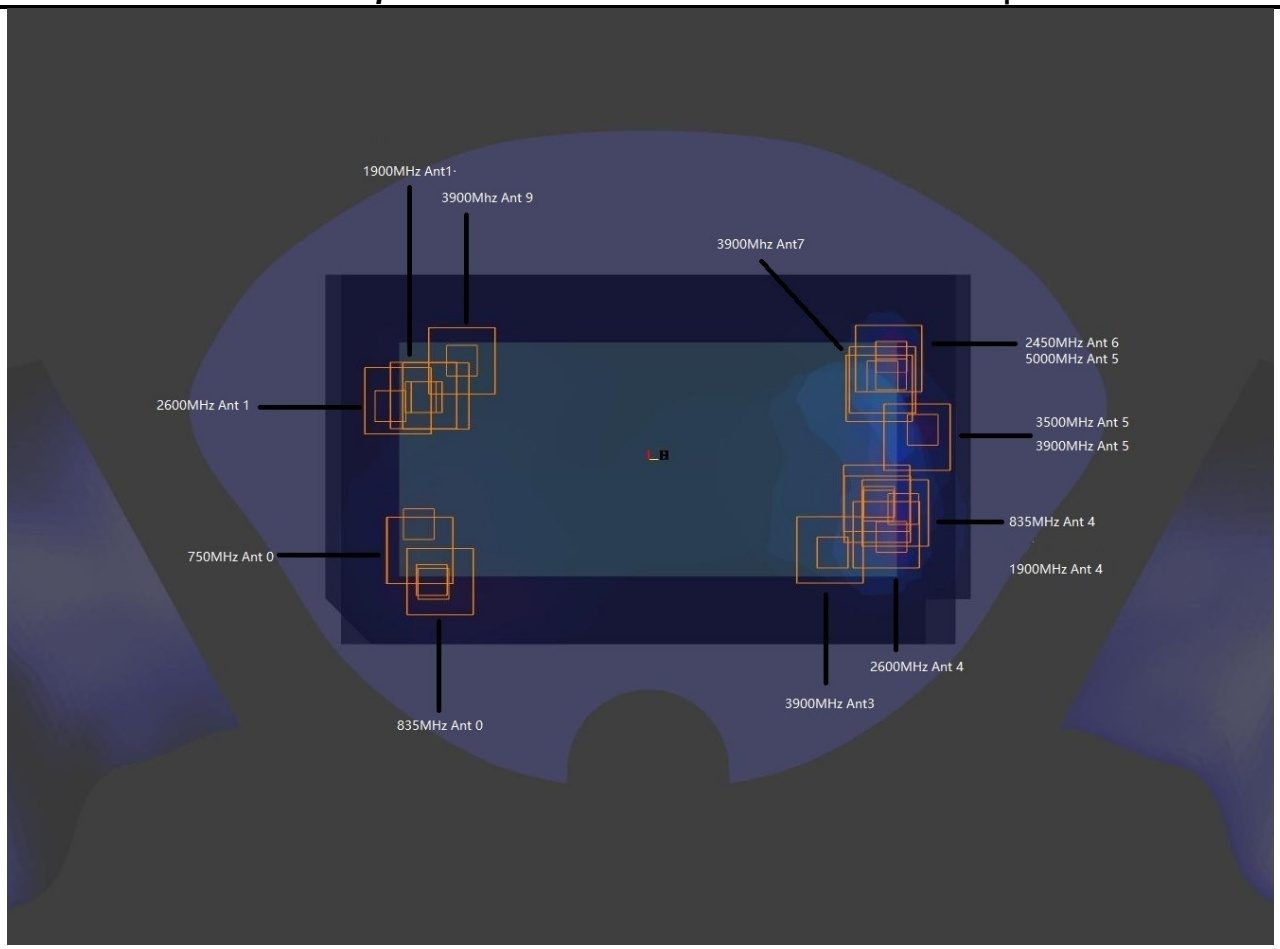
1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of [(x1−x2)2 + (y1−y2)2 + (z1−z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. SPLSR = (SAR1 + SAR2)1.5 / (min. separation distance, mm). If SPLSR ≤ 0.04 for 1g SAR and SPLSR ≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.
3. Per April 2022 TCB Workshop Notes, WLAN /BT/ NFC 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 18.7.



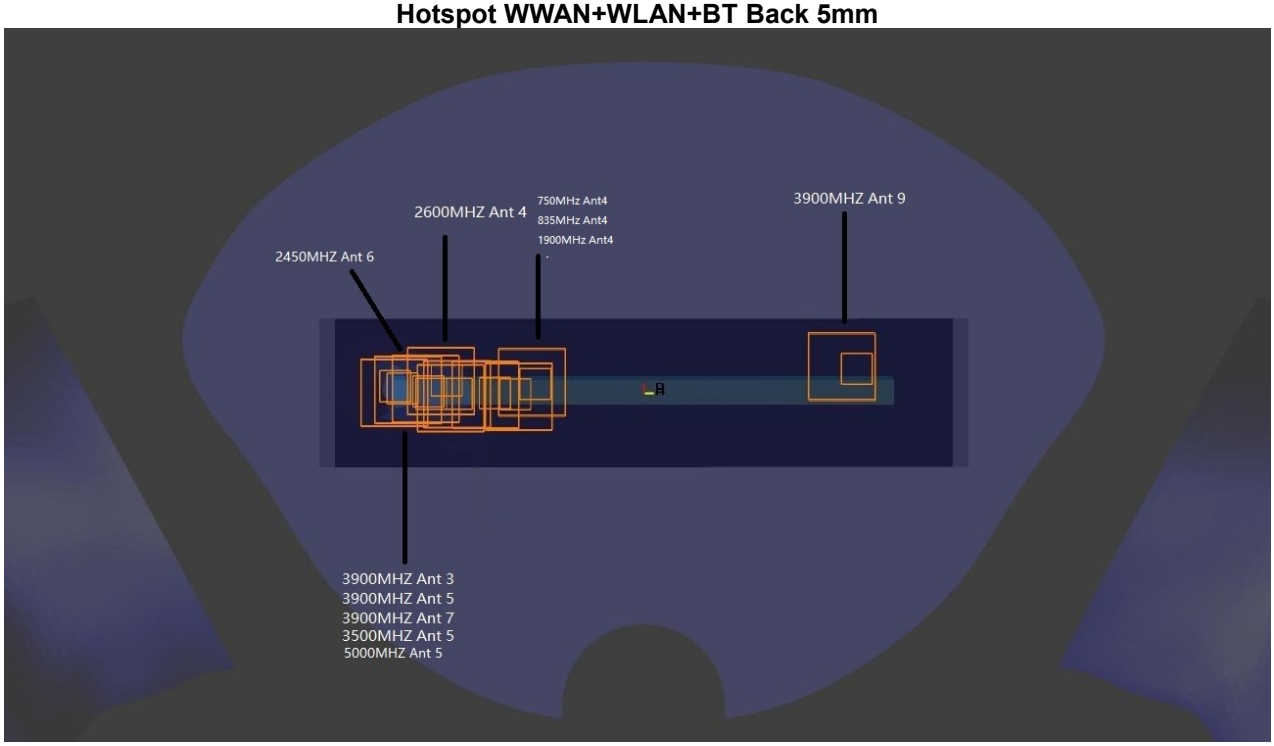
Head WWAN+WLAN Left Check 0mm



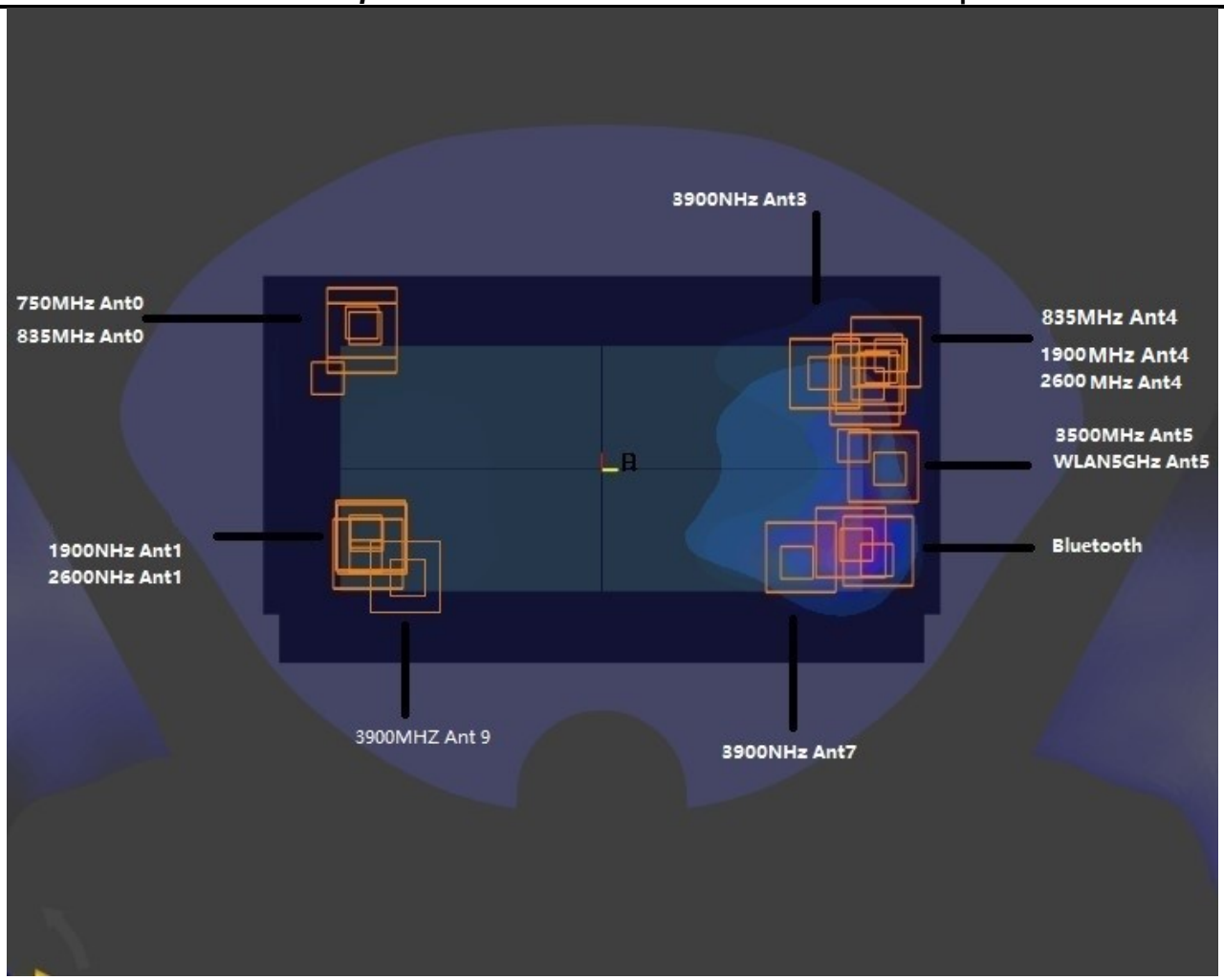
Hotspot WWAN+WLAN+BT Front 5mm



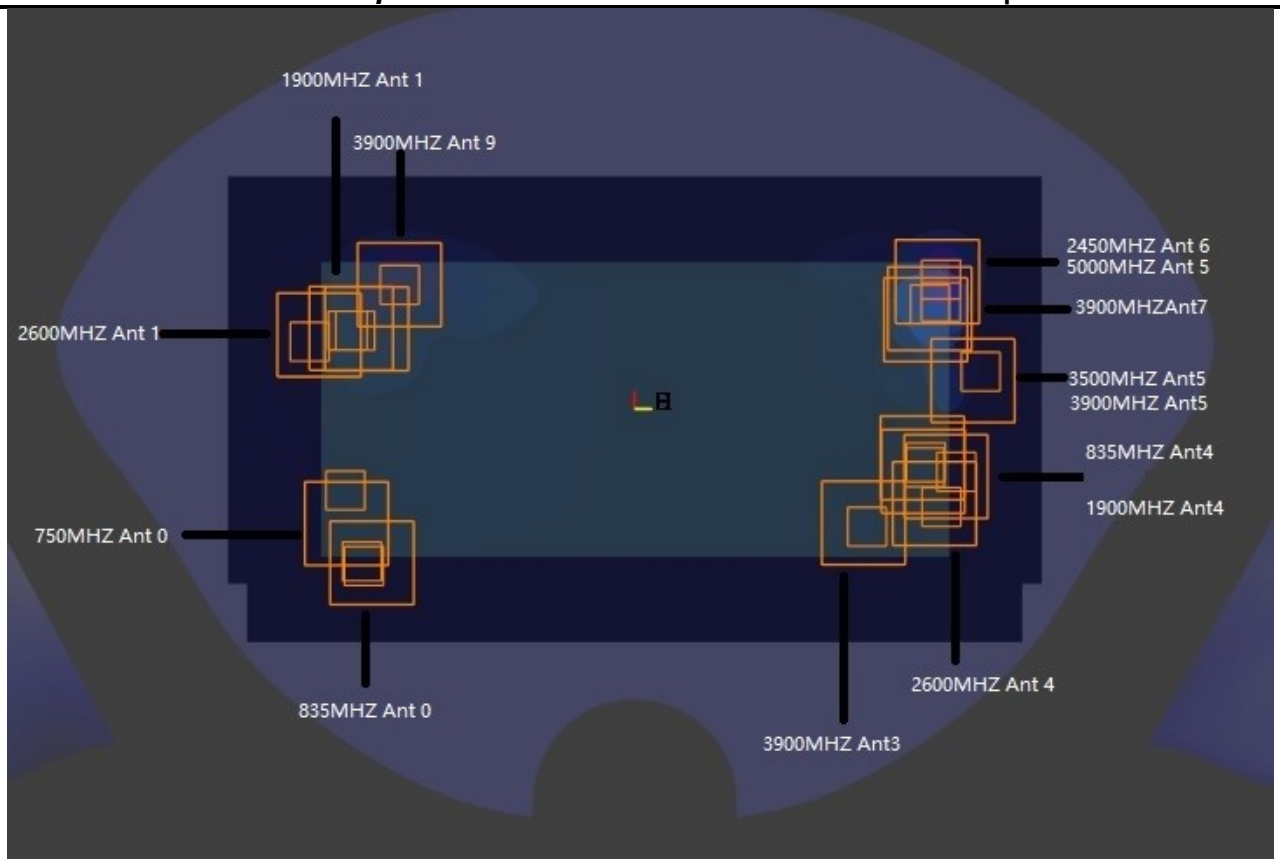
Hotspot WWAN+WLAN+BT Back 5mm



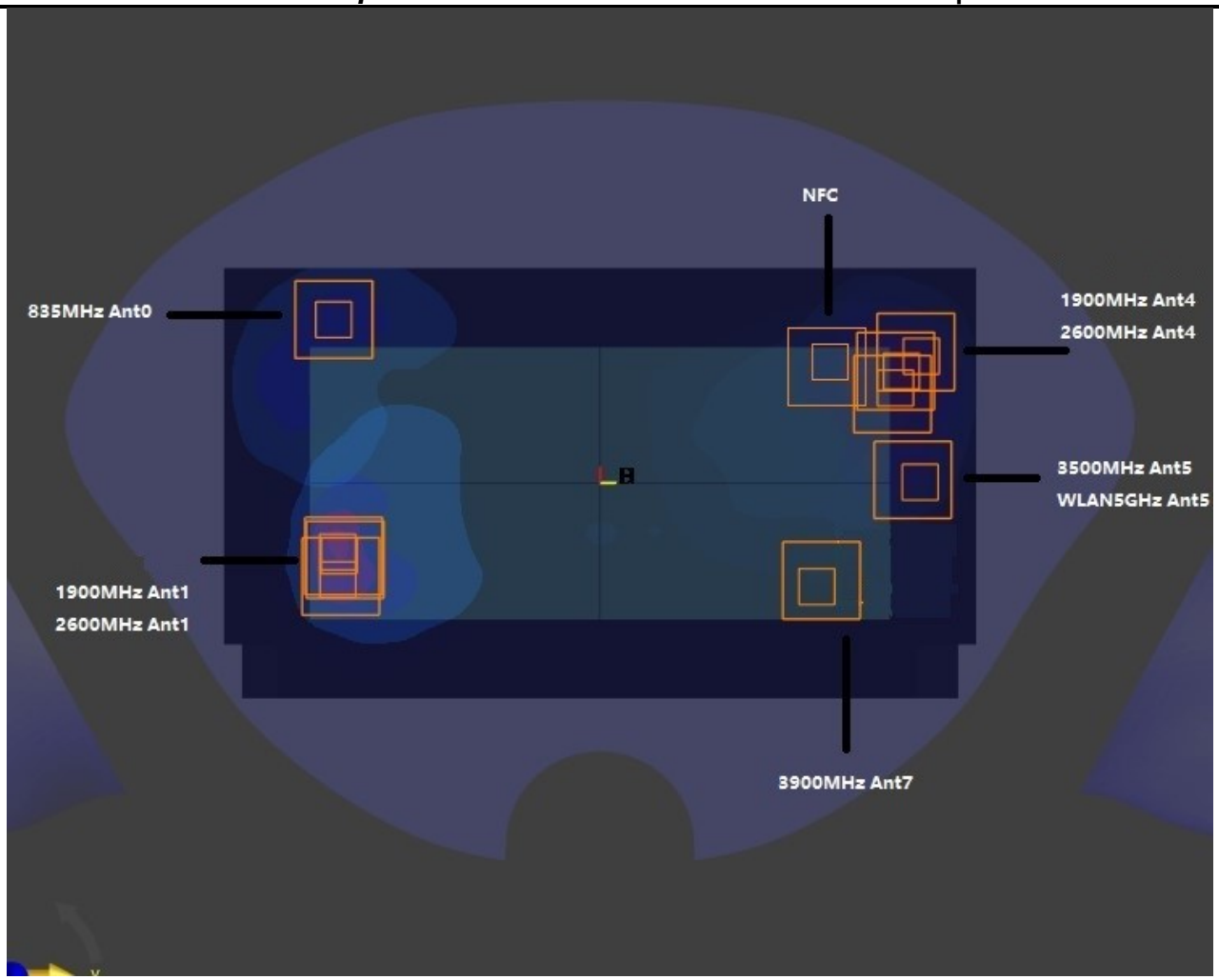
Hotspot WWAN+WLAN+BT Right Side 5mm



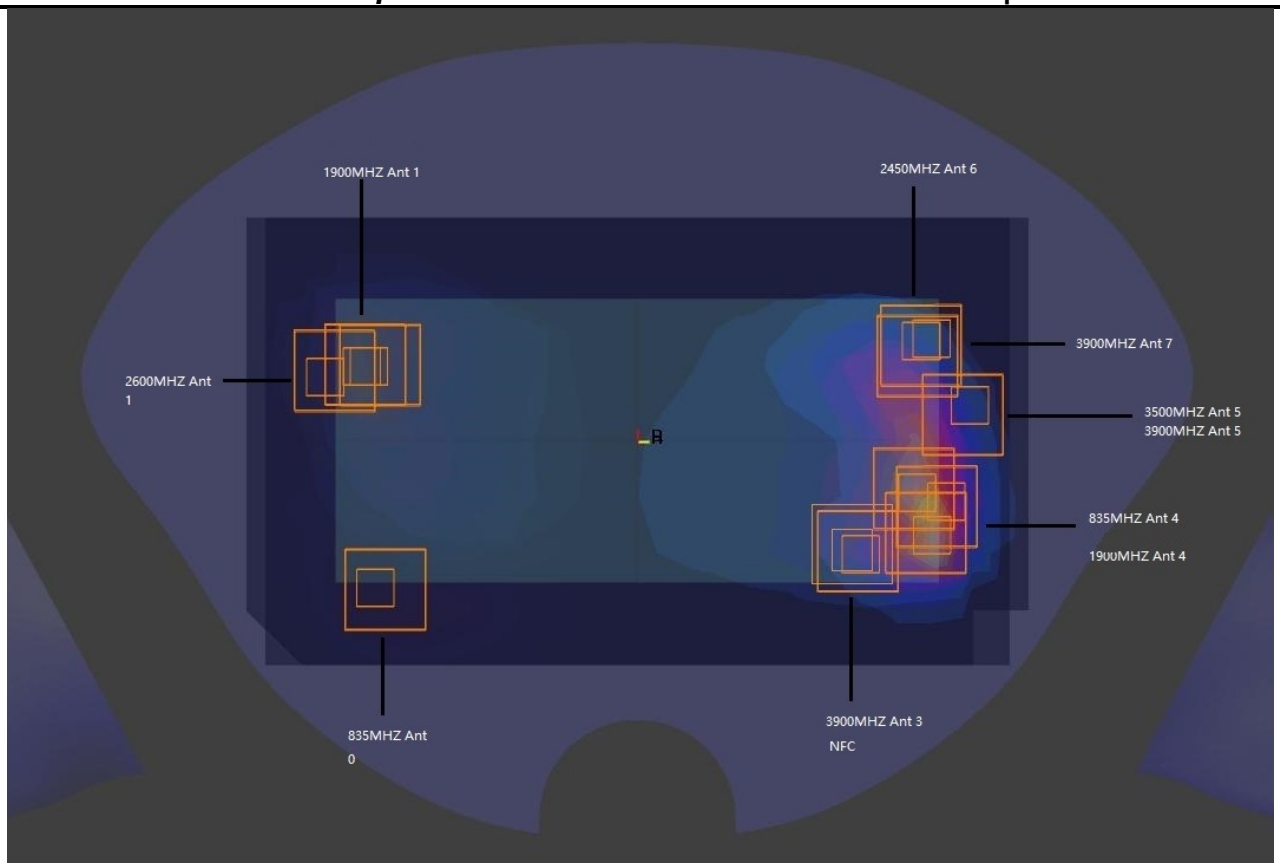
Body-worn WWAN+WLAN+BT Front 5mm



Body-Worn WWAN+WLAN+BT Back 5mm



Extremity WWAN+WLAN+BT+NFC Front 0mm



Extremity WWAN+WLAN+BT+NFC Back 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
					X	Y	Z				
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	65.3	1.75	0.04	Not required
Ant 4		0.628	1.262	0mm	8	311.2	-168.6				
WLAN5GHz		0.393		0mm							
BT		0.241		0mm							
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	81.5	1.75	0.03	Not required
Ant 4		0.628	1.262	0mm							
WLAN5GHz		0.393		0mm	25	340.9	-170.7				
BT		0.241		0mm							
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	72.5	1.75	0.03	Not required
Ant 4		0.628	1.262	0mm							
WLAN5GHz		0.393		0mm							
BT		0.241		0mm	26	331.6	-174.6				

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
					X	Y	Z				
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	69.4	1.84	0.04	Not required
Ant 5		0.711	1.345	0mm	41.5	332.9	-170.1				
WLAN5GHz		0.393		0mm							
BT		0.241		0mm							
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	81.5	1.84	0.03	Not required
Ant 5		0.711	1.345	0mm							
WLAN5GHz		0.393		0mm	25	340.9	-170.7				
BT		0.241		0mm							
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	72.5	1.84	0.03	Not required
Ant 5		0.711	1.345	0mm							
WLAN5GHz		0.393		0mm							
BT		0.241		0mm	26	331.6	-174.6				

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
					X	Y	Z				
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	73.8	2.01	0.04	Not required
Ant 7		0.885	1.519	0mm	38.3	336.8	-172.1				
WLAN5GHz		0.393		0mm							
BT		0.241		0mm							
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	81.5	2.01	0.03	Not required
Ant 7		0.885	1.519	0mm							
WLAN5GHz		0.393		0mm	25	340.9	-170.7				
BT		0.241		0mm							
Ant 0	Left Cheek	0.490	0.490	0mm	53.6	264.6	-172.4	72.5	2.01	0.04	Not required
Ant 7		0.885	1.519	0mm							
WLAN5GHz		0.393		0mm							
BT		0.241		0mm	26	331.6	-174.6				

No.70 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	Left Cheek	0.161	0.161	0mm	55.7	277.9	-172	61.4	1.68	0.04	Not required
Ant 7		0.885	1.519	0mm	38.3	336.8	-172.1				
WLAN5GHz		0.393		0mm							
BT		0.241		0mm							
Ant 1	Left Cheek	0.161	0.161	0mm	55.7	277.9	-172	70.1	1.68	0.03	Not required
Ant 7		0.885	1.519	0mm							
WLAN5GHz		0.393		0mm	25	340.9	-170.7				
BT		0.241		0mm							
Ant 1	Left Cheek	0.161	0.161	0mm	55.7	277.9	-172	61.4	1.68	0.04	Not required
Ant 7		0.885	1.519	0mm							
WLAN5GHz		0.393		0mm							

BT		0.241		0mm	26	331.6	-174.6				
No.71 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	Left Cheek	0.288	0.288	0mm	54.6	262.7	-172	75.5	1.63	0.03	Not required
Ant 5		0.711	1.345	0mm	6	320.4	-173.4				
WLAN5GHz		0.393		0mm							
BT		0.241		0mm							
Ant 9	Left Cheek	0.288	0.288	0mm	54.6	262.7	-172	83.6	1.63	0.03	Not required
Ant 5		0.711	1.345	0mm							
WLAN5GHz		0.393		0mm	25	340.9	-170.7				
BT		0.241		0mm							
Ant 9	Left Cheek	0.288	0.288	0mm	54.6	262.7	-172	74.6	1.63	0.03	Not required
Ant 5		0.711	1.345	0mm							
WLAN5GHz		0.393		0mm							
BT		0.241		0mm	26	331.6	-174.6				
No.72 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	Left Cheek	0.288	0.288	0mm	54.6	262.7	-172	75.9	1.81	0.03	Not required
Ant 7		0.885	1.519	0mm	38.3	336.8	-172.1				
WLAN5GHz		0.393		0mm							
BT		0.241		0mm							
Ant 9	Left Cheek	0.288	0.288	0mm	54.6	262.7	-172	83.6	1.81	0.03	Not required
Ant 7		0.885	1.519	0mm							
WLAN5GHz		0.393		0mm	25	340.9	-170.7				
BT		0.241		0mm							
Ant 9	Left Cheek	0.288	0.288	0mm				375.7	1.81	0.01	Not required
Ant 7		0.885	1.519	0mm							
WLAN5GHz		0.393		0mm							
BT		0.241		0mm	26	331.6	-174.6				

<Hotspot>

No.64 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	0.964	0.964	5mm	-67.3	-70.5	-204	146.0	1.88	0.02	Not required
Ant 4		0.347	0.912	5mm	-55	75	-204				
WLAN 5G		0.261		5mm							
BT		0.304		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	168.8	1.88	0.02	Not required
Ant 4		0.347	0.912	5mm							
WLAN 5G		0.261		5mm	3	83	-204				
BT		0.304		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	163.5	1.88	0.02	Not required
Ant 4		0.347	0.912	5mm							
WLAN 5G		0.261		5mm							
BT		0.304		5mm	-1	79	-204				
No.65 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	0.964	0.964	5mm	-67.3	-70.5	-204	163.6	1.75	0.01	Not required
Ant 5		0.224	0.789	5mm	-25	87.5	-204				
WLAN 5G		0.261		5mm							
BT		0.304		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	168.8	1.75	0.01	Not required
Ant 5		0.224	0.789	5mm							
WLAN 5G		0.261		5mm	3	83	-204				
BT		0.304		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	163.5	1.75	0.01	Not required

Ant 5		0.224	0.789	5mm							
WLAN 5G		0.261		5mm							
BT		0.304		5mm	-1	79	-204				
No.66 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	0.964	0.964	5mm	-67.3	-70.5	-204	148.7	1.81	0.02	Not required
Ant 7		0.282	0.847	5mm	4	60	-204				
WLAN 5G		0.261		5mm							
BT		0.304		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	168.8	1.81	0.01	Not required
Ant 7		0.282	0.847	5mm							
WLAN 5G		0.261		5mm	3	83	-204				
BT		0.304		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	163.5	1.81	0.01	Not required
Ant 7		0.282	0.847	5mm							
WLAN 5G		0.261		5mm							
BT		0.304		5mm	-1	79	-204				
No.67 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	1.258	1.258	5mm	-8.5	-73.5	-204	150.8	1.84	0.02	Not required
Ant 3		0.019	0.584	5mm	-55	70	-204				
WLAN 5G		0.261		5mm							
BT		0.304		5mm							
Ant 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	156.9	1.84	0.02	Not required
Ant 3		0.019	0.584	5mm							
WLAN 5G		0.261		5mm	3	83	-204				
BT		0.304		5mm							
Ant 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	152.7	1.84	0.02	Not required
Ant 3		0.019	0.584	5mm							
WLAN 5G		0.261		5mm							
BT		0.304		5mm	-1	79	-204				
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	Front	1.258	1.258	5mm	-8.5	-73.5	-204	155.6	2.17	0.02	Not required
Ant 4		0.347	0.912	5mm	-55	75	-204				
WLAN 5G		0.261		5mm							
BT		0.304		5mm							
Ant 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	156.9	2.17	0.02	Not required
Ant 4		0.347	0.912	5mm							
WLAN 5G		0.261		5mm	3	83	-204				
BT		0.304		5mm							
Ant 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	152.7	2.17	0.02	Not required
Ant 4		0.347	0.912	5mm							
WLAN 5G		0.261		5mm							
BT		0.304		5mm	-1	79	-204				
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	Front	1.258	1.258	5mm	-8.5	-73.5	-204	161.8	2.05	0.02	Not required
Ant 5		0.224	0.789	5mm	-25	87.5	-204				
WLAN 5G		0.261		5mm							
BT		0.304		5mm							
Ant 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	156.9	2.05	0.02	Not required
Ant 5		0.224	0.789	5mm							
WLAN 5G		0.261		5mm	3	83	-204				
BT		0.304		5mm							
Ant 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	152.7	2.05	0.02	Not required

Ant 5		0.224	0.789	5mm							
WLAN 5G		0.261		5mm							
BT		0.304		5mm	-1	79	-204				
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 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	134.1	2.11	0.02	Not required
Ant 7		0.282	0.847	5mm	4	60	-204				
WLAN 5G		0.261		5mm							
BT		0.304		5mm							
Ant 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	156.9	2.11	0.02	Not required
Ant 7		0.282	0.847	5mm							
WLAN 5G		0.261		5mm	3	83	-204				
BT		0.304		5mm							
Ant 1	Front	1.258	1.258	5mm	-8.5	-73.5	-204	152.7	2.11	0.02	Not required
Ant 7		0.282	0.847	5mm							
WLAN 5G		0.261		5mm							
BT		0.304		5mm	-1	79	-204				

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 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	154.4	3.01	0.03	Not required
Ant 3		0.623	1.583	5mm	-55	70	-204				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	163.7	3.01	0.03	Not required
Ant 3		0.623	1.583	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	161.9	3.01	0.03	Not required
Ant 3		0.623	1.583	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				
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 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	147.2	3.02	0.04	Not required
Ant 4		0.628	1.588	5mm	0.5	77.5	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	163.7	3.02	0.03	Not required
Ant 4		0.628	1.588	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	161.9	3.02	0.03	Not required
Ant 4		0.628	1.588	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				
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 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	162.2	2.97	0.03	Not required
Ant 5		0.580	1.540	5mm	-31.6	87	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	163.7	2.97	0.03	Not required
Ant 5		0.580	1.540	5mm							

WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	161.9	2.97	0.03	Not required
Ant 5		0.580	1.540	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

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 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	159.5	3.01	0.03	Not required
Ant 7		0.624	1.584	5mm	-52	77	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	163.7	3.01	0.03	Not required
Ant 7		0.624	1.584	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	11.6	-69.3	-207	161.9	3.01	0.03	Not required
Ant 7		0.624	1.584	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

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	Back	1.214	1.214	5mm	-44.5	-71.7	-207	142.1	2.80	0.03	Not required
Ant 3		0.623	1.583	5mm	-55	70	-204				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	151.3	2.80	0.03	Not required
Ant 3		0.623	1.583	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	151.8	2.80	0.03	Not required
Ant 3		0.623	1.583	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

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 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	155.1	2.80	0.03	Not required
Ant 4		0.628	1.588	5mm	-6.4	78.6	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	151.3	2.80	0.03	Not required
Ant 4		0.628	1.588	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	151.8	2.80	0.03	Not required
Ant 4		0.628	1.588	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

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	1.214	1.214	5mm	-44.5	-71.7	-207	159.2	2.75	0.03	Not required
Ant 5		0.580	1.540	5mm	-31.6	87	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	151.3	2.75	0.03	Not required
Ant 5		0.580	1.540	5mm							

WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	151.8	2.75	0.03	Not required
Ant 5		0.580	1.540	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

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 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	148.9	2.80	0.03	Not required
Ant 7		0.624	1.584	5mm	-52	77	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	151.3	2.80	0.03	Not required
Ant 7		0.624	1.584	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 1	Back	1.214	1.214	5mm	-44.5	-71.7	-207	151.8	2.80	0.03	Not required
Ant 7		0.624	1.584	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

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 9	Back	1.075	1.075	5mm	-58	-61.5	-207	131.6	2.66	0.03	Not required
Ant 3		0.623	1.583	5mm	-55	70	-204				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	140.5	2.66	0.03	Not required
Ant 3		0.623	1.583	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	141.7	2.66	0.03	Not required
Ant 3		0.623	1.583	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

No.36 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	1.075	1.075	5mm	-58	-61.5	-207	149.3	2.66	0.03	Not required
Ant 4		0.628	1.588	5mm	-6.4	78.6	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	140.5	2.66	0.03	Not required
Ant 4		0.628	1.588	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	141.7	2.66	0.03	Not required
Ant 4		0.628	1.588	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

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 9	Back	1.075	1.075	5mm	-58	-61.5	-207	150.7	2.62	0.03	Not required
Ant 5		0.580	1.540	5mm	-32.5	87	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	140.5	2.62	0.03	Not required
Ant 5		0.580	1.540	5mm							

WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	141.7	2.62	0.03	Not required
Ant 5		0.580	1.540	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

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				
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	138.6	2.66	0.03	Not required
Ant 7		0.624	1.584	5mm	-52	77	-207				
WLAN 5G		0.530		5mm							
BT		0.430		5mm							
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	140.5	2.66	0.03	Not required
Ant 7		0.624	1.584	5mm							
WLAN 5G		0.530		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 9	Back	1.075	1.075	5mm	-58	-61.5	-207	141.7	2.66	0.03	Not required
Ant 7		0.624	1.584	5mm							
WLAN 5G		0.530		5mm							
BT		0.430		5mm	-51	80	-207				

No.68 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	1.294	1.294	5mm	-32.7	67.2	-207	138.2	1.95	0.02	Not required
Ant 3		0.004	0.654	5mm	-30.6	-71	-204				
WLAN 5G		0.364		5mm							
BT		0.286		5mm							
Ant 9	Right Side	1.294	1.294	5mm	-32.7	67.2	-207	147.4	1.95	0.02	Not required
Ant 3		0.004	0.654	5mm							
WLAN 5G		0.364		5mm	-26.6	-80	-204				
BT		0.286		5mm							
Ant 9	Right Side	1.294	1.294	5mm	-32.7	67.2	-207	127.5	1.95	0.02	Not required
Ant 3		0.004	0.654	5mm							
WLAN 5G		0.364		5mm							
BT		0.286		5mm	-25	-60	-204				

No.39 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	1.294	1.294	5mm	-32.7	67.2	-207	102.4	2.04	0.03	Not required
Ant 4		0.092	0.742	5mm	-27.9	-35	-204				
WLAN 5G		0.364		5mm							
BT		0.286		5mm							
Ant 9	Right Side	1.294	1.294	5mm	-32.7	67.2	-207	147.4	2.04	0.02	Not required
Ant 4		0.092	0.742	5mm							
WLAN 5G		0.364		5mm	-26.6	-80	-204				
BT		0.286		5mm							
Ant 9	Right Side	1.294	1.294	5mm	-32.7	67.2	-207	127.5	2.04	0.02	Not required
Ant 4		0.092	0.742	5mm							
WLAN 5G		0.364		5mm							
BT		0.286		5mm	-25	-60	-204				

No.69 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	1.294	1.294	5mm	-32.7	67.2	-207	144.9	2.03	0.02	Not required
Ant 5		0.087	0.737	5mm	-25	-77.5	-204				
WLAN 5G		0.364		5mm							
BT		0.286		5mm							
Ant 9	Right Side	1.294	1.294	5mm	-32.7	67.2	-207	147.4	2.03	0.02	Not required

Ant 5		0.087		5mm							
WLAN 5G		0.364	0.737	5mm	-26.6	-80	-204				
BT		0.286		5mm							
Ant 9		1.294	1.294	5mm	-32.7	67.2	-207				
Ant 5	Right Side	0.087		5mm				127.5	2.03	0.02	Not required
WLAN 5G		0.364	0.737	5mm							
BT		0.286		5mm	-25	-60	-204				

No.40 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		1.294	1.294	5mm	-32.7	67.2	-207				
Ant 7	Right Side	0.563		5mm	-25	-69	-204	136.5	2.51	0.03	Not required
WLAN 5G		0.364	1.213	5mm							
BT		0.286		5mm							
Ant 9		1.294	1.294	5mm	-32.7	67.2	-207				
Ant 7	Right Side	0.563		5mm				147.4	2.51	0.03	Not required
WLAN 5G		0.364	1.213	5mm	-26.6	-80	-204				
BT		0.286		5mm							
Ant 9		1.294	1.294	5mm	-32.7	67.2	-207				
Ant 7	Right Side	0.563		5mm				127.5	2.51	0.03	Not required
WLAN 5G		0.364	1.213	5mm							
BT		0.286		5mm	-25	-60	-204				

<Body-worn>

No.63 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		0.964	0.964	5mm	-67.3	-70.5	-204				
Ant 3	Front	0.203		5mm	-55	70	-204	141.0	1.78	0.02	Not required
WLAN 5G		0.268	0.813	5mm							
BT		0.342		5mm							
Ant 0		0.964	0.964	5mm	-67.3	-70.5	-204				
Ant 3	Front	0.203		5mm				168.8	1.78	0.01	Not required
WLAN 5G		0.268	0.813	5mm	3	83	-204				
BT		0.342		5mm							
Ant 0		0.964	0.964	5mm	-67.3	-70.5	-204				
Ant 3	Front	0.203		5mm				163.5	1.78	0.01	Not required
WLAN 5G		0.268	0.813	5mm							
BT		0.342		5mm	-1	79	-204				

No.8 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		0.964	0.964	5mm	-67.3	-70.5	-204				
Ant 4	Front	0.515		5mm	-55	75	-204	146.0	2.09	0.02	Not required
WLAN 5G		0.268	1.125	5mm							
BT		0.342		5mm							
Ant 0		0.964	0.964	5mm	-67.3	-70.5	-204				
Ant 4	Front	0.515		5mm				168.8	2.09	0.02	Not required
WLAN 5G		0.268	1.125	5mm	3	83	-204				
BT		0.342		5mm							
Ant 0		0.964	0.964	5mm	-67.3	-70.5	-204				
Ant 4	Front	0.515		5mm				163.5	2.09	0.02	Not required
WLAN 5G		0.268	1.125	5mm							
BT		0.342		5mm	-1	79	-204				

No.57 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	0.964	0.964	5mm	-67.3	-70.5	-204	163.6	2.06	0.02	Not required
Ant 5		0.486	1.096	5mm	-25	87.5	-204				

WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	168.8	2.06	0.02	Not required
Ant 5		0.486	1.096	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	163.5	2.06	0.02	Not required
Ant 5		0.486	1.096	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

No.58 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	0.964	0.964	5mm	-67.3	-70.5	-204	148.7	1.91	0.02	Not required
Ant 7		0.339	0.949	5mm	4	60	-204				
WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	168.8	1.91	0.02	Not required
Ant 7		0.339	0.949	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 0	Front	0.964	0.964	5mm	-67.3	-70.5	-204	163.5	1.91	0.02	Not required
Ant 7		0.339	0.949	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

No.59 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	1.346	1.346	5mm	1	-73	-207	153.6	2.16	0.02	Not required
Ant 3		0.203	0.813	5mm	-55	70	-204				
WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 1	Front	1.346	1.346	5mm	1	-73	-207	156.0	2.16	0.02	Not required
Ant 3		0.203	0.813	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 1	Front	1.346	1.346	5mm	1	-73	-207	152.0	2.16	0.02	Not required
Ant 3		0.203	0.813	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

No.9 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	1.346	1.346	5mm	1	-73	-207	158.3	2.47	0.02	Not required
Ant 4		0.515	1.125	5mm	-55	75	-204				
WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 1	Front	1.346	1.346	5mm	1	-73	-207	156.0	2.47	0.02	Not required
Ant 4		0.515	1.125	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 1	Front	1.346	1.346	5mm	1	-73	-207	152.0	2.47	0.03	Not required
Ant 4		0.515	1.125	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

No.10 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	1.346	1.346	5mm	1	-73	-207	162.6	2.44	0.02	Not required
Ant 5		0.486	1.096	5mm	-25	87.5	-204				

WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 1	Front	1.346	1.346	5mm	1	-73	-207	156.0	2.44	0.02	Not required
Ant 5		0.486	1.096	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 1	Front	1.346	1.346	5mm	1	-73	-207	152.0	2.44	0.03	Not required
Ant 5		0.486	1.096	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

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 1	Front	1.346	1.346	5mm	1	-73	-207	133.1	2.30	0.03	Not required
Ant 7		0.339	0.949	5mm	4	60	-204				
WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 1	Front	1.346	1.346	5mm	1	-73	-207	156.0	2.30	0.02	Not required
Ant 7		0.339	0.949	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 1	Front	1.346	1.346	5mm				218.8	2.30	0.02	Not required
Ant 7		0.339	0.949	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

No.60 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	0.646	0.646	5mm	13	-58	-204	148.7	1.77	0.02	Not required
Ant 4		0.515	1.125	5mm	-53.5	75	-204				
WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 9	Front	0.646	0.646	5mm	13	-58	-204	141.4	1.77	0.02	Not required
Ant 4		0.515	1.125	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 9	Front	0.646	0.646	5mm	13	-58	-204	137.7	1.77	0.02	Not required
Ant 4		0.515	1.125	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

No.61 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	0.646	0.646	5mm	13	-58	-204	150.4	1.74	0.02	Not required
Ant 5		0.486	1.096	5mm	-25	87.5	-204				
WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 9	Front	0.646	0.646	5mm	13	-58	-204	141.4	1.74	0.02	Not required
Ant 5		0.486	1.096	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 9	Front	0.646	0.646	5mm	13	-58	-204	137.7	1.74	0.02	Not required
Ant 5		0.486	1.096	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

No.62 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	0.646	0.646	5mm	13	-58	-204	118.3	1.60	0.02	Not required
Ant 7		0.339	0.949	5mm	4	60	-204				

WLAN 5G		0.268		5mm							
BT		0.342		5mm							
Ant 9	Front	0.646	0.646	5mm	13	-58	-204	141.4	1.60	0.01	Not required
Ant 7		0.339	0.949	5mm							
WLAN 5G		0.268		5mm	3	83	-204				
BT		0.342		5mm							
Ant 9	Front	0.646	0.646	5mm	13	-58	-204	137.7	1.60	0.01	Not required
Ant 7		0.339	0.949	5mm							
WLAN 5G		0.268		5mm							
BT		0.342		5mm	-1	79	-204				

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 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	128.0	3.00	0.040	Not required
Ant 3		0.879	1.570	5mm	6	59	-207				
WLAN 5G		0.261		5mm							
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	166.1	3.00	0.03	Not required
Ant 3		0.879	1.570	5mm							
WLAN 5G		0.261		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	164.1	3.00	0.03	Not required
Ant 3		0.879	1.570	5mm							
WLAN 5G		0.261		5mm							
BT		0.430		5mm	-51	80	-207				

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 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	147.0	3.01	0.04	Not required
Ant 4		0.893	1.584	5mm	0.5	77.5	-207				
WLAN 5G		0.261		5mm							
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	166.1	3.01	0.03	Not required
Ant 4		0.893	1.584	5mm							
WLAN 5G		0.261		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	164.1	3.01	0.03	Not required
Ant 4		0.893	1.584	5mm							
WLAN 5G		0.261		5mm							
BT		0.430		5mm	-51	80	-207				

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 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	163.4	3.01	0.03	Not required
Ant 5		0.884	1.575	5mm	-31.6	87	-207				
WLAN 5G		0.261		5mm							
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	166.1	3.01	0.03	Not required
Ant 5		0.884	1.575	5mm							
WLAN 5G		0.261		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	164.1	3.01	0.03	Not required
Ant 5		0.884	1.575	5mm							
WLAN 5G		0.261		5mm							
BT		0.430		5mm	-51	80	-207				

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	1.430	1.430	5mm	19.2	-68.3	-207	161.8	3.01	0.03	Not required

Ant 7		0.884	1.575	5mm	-52	77	-207				
WLAN 5G		0.261		5mm							
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	166.1	3.01	0.03	Not required
Ant 7		0.884	1.575	5mm							
WLAN 5G		0.261		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 0	Back	1.430	1.430	5mm	19.2	-68.3	-207	164.1	3.01	0.03	Not required
Ant 7		0.884	1.575	5mm							
WLAN 5G		0.261		5mm							
BT		0.430		5mm	-51	80	-207				

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 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	141.2	2.89	0.03	Not required
Ant 3		0.879	1.570	5mm	6	59	-207				
WLAN 5G		0.261		5mm							
BT		0.430		5mm							
Ant 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	152.0	2.89	0.03	Not required
Ant 3		0.879	1.570	5mm							
WLAN 5G		0.261		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	152.6	2.89	0.03	Not required
Ant 3		0.879	1.570	5mm							
WLAN 5G		0.261		5mm							
BT		0.430		5mm	-51	80	-207				

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 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	156.9	2.90	0.03	Not required
Ant 4		0.893	1.584	5mm	0.5	77.5	-207				
WLAN 5G		0.261		5mm							
BT		0.430		5mm							
Ant 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	152.0	2.90	0.03	Not required
Ant 4		0.893	1.584	5mm							
WLAN 5G		0.261		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	152.6	2.90	0.03	Not required
Ant 4		0.893	1.584	5mm							
WLAN 5G		0.261		5mm							
BT		0.430		5mm	-51	80	-207				

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 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	160.1	2.89	0.03	Not required
Ant 5		0.884	1.575	5mm	-31.6	87	-207				
WLAN 5G		0.261		5mm							
BT		0.430		5mm							
Ant 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	152.0	2.89	0.03	Not required
Ant 5		0.884	1.575	5mm							
WLAN 5G		0.261		5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	152.6	2.89	0.03	Not required
Ant 5		0.884	1.575	5mm							
WLAN 5G		0.261		5mm							
BT		0.430		5mm	-51	80	-207				

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				
Ant 1	Back	1.319	1.319	5mm	-45.5	-72.5	-207	149.6	2.89	0.03	Not required

Ant 7		0.884		5mm	-52	77	-207				
WLAN 5G		0.261	1.575	5mm							
BT		0.430		5mm							
Ant 1		1.319	1.319	5mm	-45.5	-72.5	-207				
Ant 5	Back	0.884		5mm				152.0	2.89	0.03	Not required
WLAN 5G		0.261	1.575	5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 1		1.319	1.319	5mm	-45.5	-72.5	-207				
Ant 5	Back	0.884		5mm				152.6	2.89	0.03	Not required
WLAN 5G		0.261	1.575	5mm							
BT		0.430		5mm	-51	80	-207				

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 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 3	Back	0.879		5mm	6	59	-207	136.4	2.76	0.03	Not required
WLAN 5G		0.261	1.570	5mm							
BT		0.430		5mm							
Ant 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 3	Back	0.879		5mm				140.5	2.76	0.03	Not required
WLAN 5G		0.261	1.570	5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 3	Back	0.879		5mm				141.7	2.76	0.03	Not required
WLAN 5G		0.261	1.570	5mm							
BT		0.430		5mm	-51	80	-207				

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 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 4	Back	0.893		5mm	0.5	77.5	-207	150.8	2.77	0.03	Not required
WLAN 5G		0.261	1.584	5mm							
BT		0.430		5mm							
Ant 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 4	Back	0.893		5mm				140.5	2.77	0.03	Not required
WLAN 5G		0.261	1.584	5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 4	Back	0.893		5mm				141.7	2.77	0.03	Not required
WLAN 5G		0.261	1.584	5mm							
BT		0.430		5mm	-51	80	-207				

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 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 5	Back	0.884		5mm	-31.6	87	-207	150.8	2.77	0.03	Not required
WLAN 5G		0.261	1.575	5mm							
BT		0.430		5mm							
Ant 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 5	Back	0.884		5mm				140.5	2.77	0.03	Not required
WLAN 5G		0.261	1.575	5mm	-57.6	79	-207				
BT		0.430		5mm							
Ant 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 5	Back	0.884		5mm				141.7	2.77	0.03	Not required
WLAN 5G		0.261	1.575	5mm							
BT		0.430		5mm	-51	80	-207				

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				
Ant 9	Back	1.190	1.190	5mm	-58	-61.5	-207	138.6	2.77	0.03	Not required

Ant 7		0.884		5mm	-52	77	-207				
WLAN 5G		0.261	1.575	5mm							
BT		0.430		5mm							
Ant 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 7	Back	0.884		5mm							
WLAN 5G		0.261	1.575	5mm	-57.6	79	-207	140.5	2.77	0.03	Not required
BT		0.430		5mm							
Ant 9		1.190	1.190	5mm	-58	-61.5	-207				
Ant 7	Back	0.884		5mm							
WLAN 5G		0.261	1.575	5mm				141.7	2.77	0.03	Not required
BT		0.430		5mm	-51	80	-207				

<Extremity>

No.41 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	150.2	4.28	0.06	Not required
Ant4		1.133	1.591	0mm	-47	76	-204				
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm							
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	173.9	4.28	0.05	Not required
Ant4		1.133	1.591	0mm							
WLAN5GHz		0.457		0mm	3.1	85.6	-204				
NFC		0.001		0mm							
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	142.4	4.28	0.06	Not required
Ant4		1.133	1.591	0mm							
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm	-24.3	59.9	-177				
No.42 Band	**Position**	**SAR 10g SAR (W/kg)**	**Summed**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
					X	**Y**	**Z**				
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	167.3	4.19	0.05	Not required
Ant5		1.039	1.497	0mm	-24.1	88.6	-204				
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm							
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	173.9	4.19	0.05	Not required
Ant5		1.039	1.497	0mm							
WLAN5GHz		0.457		0mm	3.1	85.6	-204				
NFC		0.001		0mm							
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	142.4	4.19	0.06	Not required
Ant5		1.039	1.497	0mm							
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm	-24.3	59.9	-177				
No.43 Band	**Position**	**SAR 10g SAR (W/kg)**	**Summed**	**Gap**	**SAR peak location (mm)**			**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
					X	**Y**	**Z**				
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	163.4	5.60	0.08	Not required
Ant7		2.451	2.909	0mm	5.4	72.8	-204				
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm							
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	173.9	5.60	0.08	Not required
Ant7		2.451	2.909	0mm							
WLAN5GHz		0.457		0mm	3.1	85.6	-204				
NFC		0.001		0mm							
Ant0	Front	2.688	2.688	0mm	-69.3	-72.5	-204	142.4	5.60	0.09	Not required
Ant7		2.451	2.909	0mm							
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm	-24.3	59.9	-177				

No.44 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	167.2	4.92	0.07	Not required
Ant4		1.133	1.591	0mm	-47	76	-204				
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm							
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	170.9	4.92	0.06	Not required
Ant4		1.133	1.591	0mm							
WLAN5GHz		0.457		0mm	3.1	85.6	-204				
NFC		0.001		0mm							
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	155.5	4.92	0.07	Not required
Ant4		1.133	1.591	0mm							
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm	-29.3	65.1	-177				

No.45 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	175.1	4.82	0.06	Not required
Ant5		1.039	1.497	0mm	-24.1	88.6	-204				
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm							
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	170.9	4.82	0.06	Not required
Ant5		1.039	1.497	0mm							
WLAN5GHz		0.457		0mm	3.1	85.6	-204				
NFC		0.001		0mm							
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	155.5	4.82	0.07	Not required
Ant5		1.039	1.497	0mm							
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm	-29.3	65.1	-177				

No.46 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	158.2	6.23	0.10	Not required
Ant7		2.451	2.909	0mm	5.4	72.8	-204				
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm							
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	170.9	6.23	0.09	Not required
Ant7		2.451	2.909	0mm							
WLAN5GHz		0.457		0mm	3.1	85.6	-204				
NFC		0.001		0mm							
Ant1	Front	3.324	3.324	0mm	-2.9	-85.2	-207	155.5	6.23	0.10	Not required
Ant7		2.451	2.909	0mm							
WLAN5GHz		0.457		0mm							
NFC		0.001		0mm	-29.3	65.1	-177				

No.47 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	175.5	6.34	0.09	Not required
Ant3		2.017	3.260	0mm	-54.5	85.2	-204				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	167.0	6.34	0.10	Not required
Ant3		2.017	3.260	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	152.5	6.34	0.10	Not required
Ant3		2.017	3.260	0mm							
WLAN2.4GHz		1.217		0mm							

NFC		0.026		0mm	29.3	68.5	-177				
No.48 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	157.3	6.27	0.10	Not required
Ant4		1.949	3.192	0mm	0.7	77.9	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	167.0	6.27	0.09	Not required
Ant4		1.949	3.192	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	152.5	6.27	0.10	Not required
Ant4		1.949	3.192	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				
No.49 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	171.7	5.59	0.08	Not required
Ant5		1.268	2.511	0mm	-32.5	87.9	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	167.0	5.59	0.08	Not required
Ant5		1.268	2.511	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	152.5	5.59	0.09	Not required
Ant5		1.268	2.511	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				
No.50 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	177.4	5.56	0.07	Not required
Ant7		1.235	2.478	0mm	-53.5	87.6	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	167.0	5.56	0.08	Not required
Ant7		1.235	2.478	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant0	Back	3.080	3.080	0mm	6.5	-79.3	-207	152.5	5.56	0.09	Not required
Ant7		1.235	2.478	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				
No.51 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	164.8	5.92	0.09	Not required
Ant3		2.017	3.260	0mm	-54.5	85.2	-204				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	156.4	5.92	0.09	Not required
Ant3		2.017	3.260	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	167.2	5.92	0.09	Not required
Ant3		2.017	3.260	0mm							
WLAN2.4GHz		1.217		0mm							

NFC		0.026		0mm	29.3	68.5	-177				
No.52 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	162.2	5.85	0.09	Not required
Ant4		1.949	3.192	0mm	-6.8	78.9	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	156.4	5.85	0.09	Not required
Ant4		1.949	3.192	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	167.2	5.85	0.08	Not required
Ant4		1.949	3.192	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				
No.53 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	167.4	5.17	0.07	Not required
Ant5		1.268	2.511	0mm	-32.5	87.9	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	156.4	5.17	0.08	Not required
Ant5		1.268	2.511	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	167.2	5.17	0.07	Not required
Ant5		1.268	2.511	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				
No.54 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	167.1	5.13	0.07	Not required
Ant7		1.235	2.478	0mm	-53.5	87.6	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	156.4	5.13	0.07	Not required
Ant7		1.235	2.478	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant1	Back	2.656	2.656	0mm	-43	-79.2	-207	167.2	5.13	0.07	Not required
Ant7		1.235	2.478	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				
No.75 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	164.8	4.89	0.07	Not required
Ant3		2.017	3.260	0mm	-54.5	85.2	-204				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	156.4	4.89	0.07	Not required
Ant3		2.017	3.260	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	167.2	4.89	0.06	Not required
Ant3		2.017	3.260	0mm							
WLAN2.4GHz		1.217		0mm							

NFC		0.026		0mm	29.3	68.5	-177				
No.76 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	162.2	4.82	0.07	Not required
Ant4		1.949	3.192	0mm	-6.8	78.9	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	156.4	4.82	0.07	Not required
Ant4		1.949	3.192	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	167.2	4.82	0.06	Not required
Ant4		1.949	3.192	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				
No.77 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	167.4	4.14	0.05	Not required
Ant5		1.268	2.511	0mm	-32.5	87.9	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	156.4	4.14	0.05	Not required
Ant5		1.268	2.511	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	167.2	4.14	0.05	Not required
Ant5		1.268	2.511	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				
No.78 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	167.1	4.11	0.05	Not required
Ant7		1.235	2.478	0mm	-53.5	87.6	-207				
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm							
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	156.4	4.11	0.05	Not required
Ant7		1.235	2.478	0mm							
WLAN2.4GHz		1.217		0mm	-52.5	76.9	-207				
NFC		0.026		0mm							
Ant9	Back	1.627	1.627	0mm	-43	-79.2	-207	167.2	4.11	0.05	Not required
Ant7		1.235	2.478	0mm							
WLAN2.4GHz		1.217		0mm							
NFC		0.026		0mm	29.3	68.5	-177				

18.7 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>

Left Cheek 0mm																				
Band		Ant0			Ant1			Ant4			Ant5			Ant7			Ant9		
GSM850	SAR		0.490																
	Axis	49.7	250.4	-174.9															
GSM1900	SAR					0.132													
	Axis				55.7	277.9	-172												
WCDMA II	SAR					0.155													
	Axis				54.2	263.5	-172												
WCDMA V	SAR		0.343																
	Axis	53.6	264.6	-172.4															
LTE Band 7	SAR					0.161			0.369										
	Axis				53	255.5	-172	12	319.6	-170.9									
LTE Band 71	SAR		0.163						0.325										
	Axis	53.3	263.6	-172.4				8	311.2	-168.6									
LTE Band 2	SAR					0.120			0.628										
	Axis				55.2	261.2	-172	4.7	314.6	-168.6									
LTE Band 26	SAR		0.332						0.423										
	Axis	52.6	261.9	-172.4				9.9	321.6	-169.2									
LTE Band 41	SAR					0.126			0.403										
	Axis				53.5	258.5	-172	14.5	322.7	-171									
LTE Band 42	SAR											0.632							
	Axis										41.5	332.9	-170.1						
FR1 n7	SAR					0.147			0.417										
	Axis				55.1	263.4	-172	14.5	322.7	-171									
FR1 n71	SAR		0.116						0.240										
	Axis	53.1	262.3	-172.4				9.5	317.2	-168.6									
FR1 n26	SAR		0.239						0.473										
	Axis	55.3	263.6	-172.4				9.9	321.8	-169.2									
FR1 n41	SAR					0.158			0.527										
	Axis				54.6	262.7	-172	14.5	322.7	-171									
FR1 n77	SAR											0.711			0.885			0.288	
	Axis										6	320.4	-173.4	38.3	336.8	-172.1	54.6	262.7	-172

WLAN5GHz Ant5	SAR (W/kg)		0.393		Bluetooth Ant6	SAR (W/kg)		0.269	
	Axis	25	340.9	-170.7		Axis	26	331.6	-174.6

<Hotspot>

Front 5mm																				
Band		Ant0			Ant1			Ant3			Ant4			Ant5			Ant7		
GSM850	SAR		0.964																
	Axis	-67.3	-70.5	-204															
GSM1900	SAR					1.258													
	Axis				4.3	-76.4	-207												
WCDMA II	SAR					0.840													
	Axis				-1.9	-74.1	-207												
WCDMA V	SAR		0.869																
	Axis	-68.2	-74.2	-204															
LTE Band 7	SAR					0.853						0.242							
	Axis				1	-73	-207				-61	89	-204						
LTE Band 2	SAR					0.781						0.230							
	Axis				-8.5	-73.5	-204				-50	84	-204						
LTE Band 26	SAR		0.952									0.347							
	Axis	-68.5	-73.5	-204							-55	87	-204						
LTE Band 71	SAR		0.671									0.176							
	Axis	69.8	-75.6	-204							-65	89.5	-204						
LTE Band 41	SAR					0.877						0.241							
	Axis				1	-74	-207				-59.8	88	-204						
LTE Band 42	SAR														0.197				
	Axis													-25	89	-204			
FR1 n7	SAR					0.818						0.253							
	Axis				4.5	-77.5	-207				-62.2	83	-204						
FR1 n26	SAR		0.589									0.285							
	Axis	-68.5	-73.5	-204							-55	75	-204						
FR1 n71	SAR		0.527									0.226							
	Axis	-69.5	-77.5	-204							-58	89	-204						
FR1 n41	SAR					0.754						0.231							
	Axis				3.5	-77.5	-207				-61	81	-204						
FR1 n77	SAR								0.019						0.224			0.282	
	Axis							-55	70	-204				-25	87.5	-204	4	60	-204

WLAN5GHz Ant5	SAR (W/kg)		0.261		Bluetooth Ant6	SAR (W/kg)		0.304	
	Axis	3	83	-204		Axis	-1	79	-204

Back 5mm																				
Band		Ant0			Ant1			Ant3			Ant4			Ant5			Ant7			Ant9
GSM850	SAR		1.430																	
	Axis	19.2	-68.3	-207																
GSM1900	SAR					1.214														
	Axis				-42	-84.8	-204													
WCDMA II	SAR					0.774														
	Axis				-41.5	-85.5	-204													
WCDMA V	SAR		1.258																	
	Axis	11.6	-69.3	-207																
LTE Band 7	SAR					0.674						0.611								
	Axis				-43	-85	-204				0.5	77.5	-207							
LTE Band 2	SAR					0.605						0.473								
	Axis				-44.5	-71.7	-207				-6.4	78.6	-207							
LTE Band 26	SAR		1.363									0.509								
	Axis	15	-68.5	-207							-7.2	81.3	-207							
LTE Band 71	SAR		0.837									0.539								
	Axis	18	-69.5	-207							-5	79	-207							
LTE Band 41	SAR					0.773						0.628								

	Axis				-43.1	-73.1	-207				0.5	77.5	-207										
LTE Band 42	SAR														0.433								
	Axis													-32.5	87	-207							
FR1 n7	SAR					0.787						0.628											
	Axis				-45.5	-72.5	-207				-0.5	82	-207										
FR1 n26	SAR		1.284									0.493											
	Axis	13.2	-70	-207							-6	83.3	-207										
FR1 n71	SAR		0.686									0.495											
	Axis	17	-70.5	-207							-6	79.5	-207										
FR1 n41	SAR					0.714						0.586											
	Axis				-44	-74	-207				-1	82	-207										
FR1 n77	SAR								0.623						0.580			0.624			1.075		
	Axis							-55	70	-204				-31.6	87	-207	-52	77	-207	-58	-61.5	-207	

WLAN5GHz Ant5	SAR (W/kg)		0.530		Bluetooth Ant6	SAR (W/kg)		0.430	
	Axis	-57.6	79	-207		Axis	-51	80	-207

Right Side 5mm																				
Band		Ant3			Ant4			Ant5			Ant7			Ant9						
GSM850	SAR																			
	Axis																			
GSM1900	SAR																			
	Axis																			
WCDMA II	SAR																			
	Axis																			
WCDMA V	SAR																			
	Axis																			
LTE Band 7	SAR					0.043														
	Axis				-29	-64	-204													
LTE Band 2	SAR					0.036														
	Axis				-28.2	-36	-204													
LTE Band 26	SAR					0.092														
	Axis				-25.8	-46	-204													
LTE Band 71	SAR					0.089														
	Axis				-26.5	-59	-204													
LTE Band 41	SAR					0.043														
	Axis				-24.2	-63	-204													
LTE Band 42	SAR								0.040											
	Axis							-25	-77.5	-204										
FR1 n7	SAR					0.044														
	Axis				-28	-46.3	-204													
FR1 n26	SAR					0.078														
	Axis				-28.7	-46	-204													
FR1 n71	SAR					0.090														
	Axis				-27	-61	-204													
FR1 n41	SAR					0.043														
	Axis				-24	-61.2	-204													
FR1 n77	SAR		0.004						0.087			0.563				1.294				
	Axis	-30.6	-71	-204				-26.6	-78	-204	-25	-69	-204	-32.7	67.2	-207				

WLAN5GHz Ant5	SAR (W/kg)		0.364		Bluetooth Ant6	SAR (W/kg)		0.286	
	Axis	-26.6	-80	-204		Axis	-25	-60	-204

<Body-worn>

Front 5mm																										
Band		Ant0			Ant1			Ant3			Ant4			Ant5			Ant7			Ant9		
GSM850	SAR		0.964																			
	Axis	-67.3	-70.5	-204																		
GSM1900	SAR					1.200																
	Axis				4.3	-76.4	-207															
WCDMA II	SAR					0.840																
	Axis				-1.9	-74.1	-207															
WCDMA V	SAR		0.869																			
	Axis	-68.2	-74.2	-204																		
LTE Band 2	SAR					1.009						0.385										
	Axis				5.5	-79	-207				-62	90	-204									
LTE Band 7	SAR					0.972						0.305										
	Axis				1	-73	-207				-61	89	-204									
LTE Band 26	SAR		0.952									0.515										
	Axis	-68.5	-73.5	-204							-55	87	-204									
LTE Band 71	SAR		0.655									0.176										
	Axis	-69.4	-75.6	-204							-66	88	-204									
LTE Band 41	SAR					1.322						0.324										
	Axis				1	-74	-207				-59.8	88	-204									
LTE Band 42	SAR														0.310							
	Axis													-25	89	-204						
FR1 n7	SAR					1.346						0.355										
	Axis				4.5	-77.5	-207				-62.2	83	-204									
FR1 n26	SAR		0.874									0.499										
	Axis	-68.5	-73.5	-204							-55	75	-204									
FR1 n71	SAR		0.472									0.211										
	Axis	-69	-76.3	-204							-65	79	-204									
FR1 n41	SAR					0.882						0.350										
	Axis				3.5	-77.5	-207				-61	81	-204									
FR1 n77	SAR								0.203						0.486			0.399			0.646	
	Axis							-55	70	-204				-25	87.5	-204	4	60	-204	13	-58	-204

WLAN5GHz Ant5	SAR (W/kg)		0.268		Bluetooth Ant6	SAR (W/kg)		0.342	
	Axis	3	83	-204		Axis	-1	79	-204

BACK 5mm																						
Band		Ant0			Ant1			Ant3			Ant4			Ant5			Ant7			Ant9		
GSM850	SAR		1.430																			
	Axis	19.2	-68.3	-207																		
GSM1900	SAR					1.158																
	Axis				-42	-84.8	-204															
WCDMA II	SAR					0.734																
	Axis				-41.5	-85.5	-204															
WCDMA V	SAR		1.258																			
	Axis	11.6	-69.3	-207																		
LTE Band 2	SAR					1.069						0.885										
	Axis				-45	-88	-204				-8	79.5	-207									
LTE Band 7	SAR					0.743						0.874										
	Axis				-43	-85	-204				0.5	77.5	-207									
LTE Band 26	SAR		1.363									0.893										
	Axis	15	-68.5	-207							-7.2	81.3	-207									
LTE Band 71	SAR		0.818									0.539										
	Axis	18	-69.5	-207																		

LTE Band 41	SAR					0.886						0.884												
	Axis				-43.1	-73.1	-207				0.5	77.5	-207											
LTE Band 42	SAR														0.884									
	Axis													-32.5	87	-207								
FR1 n7	SAR					1.319						0.885												
	Axis				-45.5	-72.5	-207				-0.5	82	-207											
FR1 n26	SAR		1.284									0.891												
	Axis	13.2	-70	-207							-6	83.3	-207											
FR1 n71	SAR		0.621									0.484												
	Axis	15.4	-71	-207																				
FR1 n41	SAR					0.775						0.890												
	Axis				-44	-74	-207				-1	82	-207											
FR1 n77	SAR								0.879						0.884			0.884			1.190			
	Axis							6	59	-207				-31.6	87	-207	-52	77	-207	-58	-61.5	-207		

WLAN5GHz Ant5	SAR (W/kg)		0.416		Bluetooth Ant6	SAR (W/kg)		0.430	
	Axis	-57.6	79	-207		Axis	-51	80	-207

<Extremity>

Front 0mm																	
Band		Ant0			Ant1			Ant4			Ant5			Ant7			
GSM850	SAR		2.688														
	Axis	-69.3	-72.5	-204													
GSM1900	SAR					2.505											
	Axis				5.3	-87.2	-207										
WCDMA II	SAR					3.324											
	Axis				-2.9	-85.2	-207										
WCDMA V	SAR																
	Axis																
LTE Band 7	SAR					2.286			0.939								
	Axis				3	-89	-207	-61	83	-204							
LTE Band 2	SAR					2.254			1.013								
	Axis				4.9	-89.2	-204	-47	76	-204							
LTE Band 41	SAR					1.936											
	Axis				-5	-88.5	-204										
LTE Band 42	SAR											1.039					
	Axis										-26	89.7	-204				
FR1 n7	SAR					2.471			1.133								
	Axis				4.5	-87.5	-207	-60	80.8	-204							
FR1 n41	SAR					1.966			0.949								
	Axis				3.5	-87.5	-207	-59.8	80	-204							
FR1 n77	SAR											0.897			2.451		
	Axis										-24.1	88.6	-204	5.4	72.8	-204	

WLAN5GHz Ant5	SAR (W/kg)		0.261		NFC	SAR (W/kg)		0.001	
	Axis	3.1	85.6	-204		Axis	-29.3	65.1	-177

Back 0mm																	
Band		Ant0			Ant1			Ant3			Ant4			Ant5			Ant7			Ant9		
GSM850	SAR		3.080																			
	Axis	10.4	-83.9	-207																		
GSM1900	SAR					2.518																
	Axis				-41.5	-82	-204															
WCDMA II	SAR					2.656																
	Axis				-41.5	-85.5	-204															
WCDMA V	SAR		2.188																			

	Axis	6.5	-79.3	-207																		
LTE Band 7	SAR					1.581						1.397										
	Axis				-42.1	-86.8	-204				0.7	77.9	-207									
LTE Band 2	SAR					2.370						1.488										
	Axis				-47	-88.8	-207				-6.8	78.9	-207									
LTE Band 26	SAR		2.589									1.313										
	Axis	14	-82.4	-207							-7.5	82.7	-207									
LTE Band 41	SAR											1.949										
	Axis										0.7	77.9	-207									
LTE Band 42	SAR														1.155							
	Axis													-32.5	87.9	-207						
FR1 n7	SAR					1.651						1.174										
	Axis				-44.5	-83.7	-207				-0.9	82.4	-207									
FR1 n26	SAR																					
	Axis																					
FR1 n41	SAR					1.978						0.933										
	Axis				-42.5	-83.9	-207				-1.8	82.4	-207									
FR1 n77	SAR								2.017						1.268			1.235			1.627	
	Axis							-54.5	85.2	-204				-32.6	88.9	-207	-53.5	87.6	-207	-59	-62.5	-207

WLAN2.4GHz Ant6	SAR (W/kg)		0.659		NFC	SAR (W/kg)		0.026	
	Axis	-52.5	76.9	-207		Axis	29.3	68.5	-177

Test Engineer : Martin Li, Varus Wang, Light Wang, Ricky Gu

19. 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 ≤ 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.

20. 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.

[9] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015

[10] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[11] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[12] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[13] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

[14] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[15] FCC KDB 484596 D01 v02r03, “Test Reductions Via Data Referencing”, Mar. 2024

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. DASY Calibration Certificate

Appendix D. Test Setup Photos

Appendix E. Conducted RF Output Power Table

Appendix F. Power measurement connection diagram and CA Conducted RF Output Power Table

Appendix G. Power reduction mechanism verification

Appendix H. Reference report

Please refer to Sporton report number FA530724 which is exhibit separately.

------THE END------