

# FCC SAR Test Report

APPLICANT : Xiaomi Communications Co., Ltd.  
EQUIPMENT : Mobile Phone  
BRAND NAME : Xiaomi  
MODEL NAME : 2210129SG  
FCC ID : 2AFZZ129SG  
STANDARD : FCC 47 CFR Part 2 (2.1093)

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

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



Approved by: Si Zhang

**Sporton International Inc. (Kunshan)**

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



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### 1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Xiaomi Communications Co., Ltd., Mobile Phone, 2210129SG**, are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 15mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.55	0.69	0.21	1.59
		GSM1900	0.63	0.40	0.13	
	WCDMA	WCDMA II	0.81	0.86	0.46	
		WCDMA IV	1.06	1.00	0.48	
		WCDMA V	<b>1.09</b>	0.79	0.28	
	LTE	LTE Band 2	0.89	0.88	0.48	
		LTE Band 4	1.07	0.28	0.53	
		LTE Band 7	1.08	0.53	0.49	
		LTE Band 12/17	0.99	0.98	0.35	
		LTE Band 13	0.80	0.82	0.25	
		LTE Band 26/5	1.00	1.02	0.36	
		LTE Band 38	<b>1.09</b>	0.59	0.28	
		LTE Band 41/38	1.02	0.50	0.31	
		LTE Band 42	1.03	<b>1.08</b>	0.30	
		LTE Band 66/4	0.95	1.03	0.58	
	5G NR	FR1 n5	1.04	0.83	0.25	
		FR1 n7	<b>1.09</b>	0.61	0.49	
		FR1 n41/38	1.06	0.51	0.55	
		FR1 n66	0.96	1.00	0.65	
		FR1 n77	0.92	0.95	0.66	
	FR1 n78	0.84	1.07	<b>0.74</b>		
DTS	WLAN	2.4GHz WLAN	0.78	0.50	0.17	1.59
NII		5GHz WLAN	1.04	1.07	0.25	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.26	<0.10	<0.10	1.59

**Remark:**

- This device supports LTE B4 / B5 / B17 / B38 and B66 / B26 / B12 / B41. Since the supported frequency span for LTE B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66 / B26 / B12 / B41.
- This device supports 5GNR n38 and n41. Since the supported frequency span for 5GNR n38 falls completely within the supports frequency span for n41, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for n41.



Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	WCDMA	WCDMA II	2.42	2.54
		WCDMA IV	<b>2.54</b>	
	LTE	LTE Band 2	2.02	
		LTE Band 42	1.76	
		LTE Band 66/4	<b>2.54</b>	
	5G NR	n66	2.42	
NII	WLAN	5GHz WLAN	1.43	2.54
Date of Testing:			2022/8/5 ~ 2022/9/18	

**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 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR02-KS	CN1257	314309

Applicant	
Company Name	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

Manufacturer	
Company Name	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

### 3. Guidance Applied

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

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

## 4. Equipment Under Test (EUT) Information

### 4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Phone
Brand Name	Xiaomi
Model Name	2210129SG
FCC ID	2AFZZ129SG
IMEI Code	SIM1: 866583060770222 SIM2: 866583060770230
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 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 ~ 3550MHz LTE Band 66: 1710 MHz ~ 1780 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA/HSUPA DC-HSDPA HSPA+(16QAM uplink is supported) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR : CP-OFDM / DFT-s-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/VHT160 WLAN 5GHz 802.11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC:ASK
HW Version	P2
SW Version	MIUI 13
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
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**Remark:**

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (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 2.4GHz WLAN/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 33.
5. This device has NFC operations, the NFC antenna is integrated into the device for this model, therefore, all SAR test were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the antenna can be found in the operational description. According to FCC KDB publication 447498 D01v06, transmitters are consider to be operating simultaneously when there is overlapping transmission, with the exception of transmission during network hand-offs with maximum hand-off duration less than 30 seconds.
6. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). After pre-scan two SIM cards power, we found test result of the SIM1 was the worse, so we chose SIM1 slot to perform all tests.
7. This device has two different types of EUT: Dual SIM and Single SIM card slot + eSIM. For Single SIM card slot + eSIM mobile supports Dual SIM Dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). We chose Dual SIM card mobile to perform all tests.
8. There are three samples. The sample 1 is memory for 8G+128GB capacity; the sample 2 is memory for 8G+256GB capacity and sample 3 is memory for 6G+128GB capacity. According to the differences, we choose sample 1 to perform full test.
9. This product has two kinds of battery options only different is manufacturer, therefore RF exposure evaluation was selected battery1 performed SAR testing.
10. The device implements Proximity sensors/receiver detect mechanism/hotspot trigger reduced power for the power management for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity). The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E. power table. Full power table and reduced power table (Default Power: full power, DSI 1: receiver on reduced power for head; DSI 5: hotspot on power; DSI 3: P-sensor on for handheld; DSI 4: receiver off/P-sensor off).
11. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head, hotspot, body-worn and extremity.
12. For 5G NR n78 HUPE, 5G NR n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission.
13. For 5G NR, the simultaneous transmission analysis is used standalone SAR at total power level to show compliance.
14. 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.
15. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
16. 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.
17. 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.
18. 5G NR n78 supports HPUE, HPUE power and SAR testing performed separately.
19. 5G NR n78 HUPE with higher power. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
20. For 5G NR EN-DC mode, standalone SAR performed for 5G NR band with the maximum power, EN-DC SAR summed 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
21. This device supports 5G NR FR1 bands as following table, including NSA mode and SA mode.

**<5G NR>**

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
SA/ NSA	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40
	n66	FDD	15	5, 10, 15, 20, 30, 40
	n38	TDD	30	10, 15, 20, 30, 40
	n41	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100
	n77	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100





4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	2AFZZ129SG																																																														
Equipment Name	Mobile Phone																																																														
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 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 ~ 3550MHz LTE Band 66: 1710 MHz ~ 1780 MHz																																																														
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz 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 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz																																																														
uplink modulations used	QPSK / 16QAM / 64QAM /256QAM																																																														
LTE Voice / Data requirements	Voice and Data																																																														
LTE Release Version	R16, Cat18																																																														
CA Support	Supported, Uplink and Downlink																																																														
LTE MPR permanently built-in by design	<p><b>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</b></p> <table border="1"> <thead> <tr> <th rowspan="2">Modulation</th> <th colspan="6">Channel bandwidth / Transmission bandwidth (N<sub>RB</sub>)</th> <th rowspan="2">MPR (dB)</th> </tr> <tr> <th>1.4 MHz</th> <th>3.0 MHz</th> <th>5 MHz</th> <th>10 MHz</th> <th>15 MHz</th> <th>20 MHz</th> </tr> </thead> <tbody> <tr> <td>QPSK</td> <td>&gt; 5</td> <td>&gt; 4</td> <td>&gt; 8</td> <td>&gt; 12</td> <td>&gt; 16</td> <td>&gt; 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>64 QAM</td> <td>&gt; 5</td> <td>&gt; 4</td> <td>&gt; 8</td> <td>&gt; 12</td> <td>&gt; 16</td> <td>&gt; 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>&gt; 5</td> <td>&gt; 4</td> <td>&gt; 8</td> <td>&gt; 12</td> <td>&gt; 16</td> <td>&gt; 18</td> <td>≤ 3</td> </tr> <tr> <td>256 QAM</td> <td colspan="6">≥ 1</td> <td>≤ 5</td> </tr> </tbody> </table>	Modulation	Channel bandwidth / Transmission bandwidth (N <sub>RB</sub> )						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3	256 QAM	≥ 1						≤ 5
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256 QAM	≥ 1						≤ 5																																																								
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																														
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																														
Power reduction applied to satisfy SAR compliance	Yes, when operating in Proximity sensors/receiver detect mechanism/hotspot, head/body-worn/ hotspot/extremity will trigger reduced power for some bands applied to satisfy SAR compliance, the detail please referred to section 13.																																																														
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 13.																																																														
LTE Carrier Aggregation Additional Information	1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band and inter-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 4 carriers in the downlink and 2 carriers in the uplink.																																																														



Transmission (H, M, L) channel numbers and frequencies in each LTE band																
LTE Band 2																
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860				
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880				
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900				
LTE Band 4																
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720				
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5				
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745				
LTE Band 5																
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		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	20407	824.7	20415	825.5	20425	826.5	20450	829	20450	829	20450	829				
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5				
H	20643	848.3	20635	847.5	20625	846.5	20600	844	20600	844	20600	844				
LTE Band 7																
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510	20850	2510	20850	2510				
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535				
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560	21350	2560	21350	2560				
LTE Band 12																
	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	23017	699.7	23025	700.5	23035	701.5	23060	704	23060	704	23060	704				
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5				
H	23173	715.3	23165	714.5	23155	713.5	23130	711	23130	711	23130	711				
LTE Band 13																
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		782		23230		782		23230		782	
M	23230		782		23230		782		23230		782		23230		782	
H	23255		784.5		23230		782		23230		782		23230		782	
LTE Band 17																
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23755		706.5		23780		709		23780		709		23780		709	
M	23790		710		23790		710		23790		710		23790		710	
H	23825		713.5		23800		711		23800		711		23800		711	



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

LTE Band 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

<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 12	Yes	Yes	Yes	Yes		
LTE Band 17			Yes	Yes		
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	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	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
LTE Band 12	Ant 0	25.5	25.5	25.5	25.5	25.5
LTE Band 17	Ant 0	25.5	25.5	25.5	25.5	25.5
LTE Band 5	Ant 0	25.5	25.5	25.5	25.5	25.5
LTE Band 26	Ant 0	25.5	25.5	25.5	25.5	25.5
LTE Band 4	Ant 0	24	24	24	24	24
LTE Band 66	Ant 0	24	24	24	24	24
LTE Band 38	Ant 0	23.5	23.5	23.5	23.5	23.5
LTE Band 41	Ant 0	23.5	23.5	23.5	23.5	23.5

Band	Antenna	Head	Body Worn	Hotspot	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
LTE Band 12	Ant 1	25.5	25.5	25.5	25.5	25.5
LTE Band 17	Ant 1	25	25	25	25	25
LTE Band 12 for ENDC	Ant 1	23	25.5	23	25.5	25.5
LTE Band 17 for ENDC	Ant 1	22.5	25	22.5	25	25
LTE Band 5	Ant 1	25	24	24	24	25
LTE Band 26	Ant 1	25.7	25.7	25.7	25.7	25.7

Band	Antenna	Head	Body Worn	Hotspot	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
LTE Band 4	Ant 3	25.5	25.5	23.5	24.5	25.5
LTE Band 66	Ant 3	25	25	23.5	24.5	25
LTE Band 4 for ENDC	Ant 3	25.5	25.5	21	24.5	25.5
LTE Band 66 for ENDC	Ant 3	25	25	21	24.5	25
LTE Band 38	Ant 3	25.5	25.5	25.5	25.5	25.5
LTE Band 41	Ant 3	25.5	25.5	25.5	25.5	25.5

Band	Antenna	Head	Body Worn	Hotspot	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
LTE Band 4	Ant 4	23	24.5	23	24.5	24.5
LTE Band 66	Ant 4	21	24.5	21	24.5	24.5
LTE Band 38	Ant 4	22.5	25	22	25	25
LTE Band 41	Ant 4	21.5	24.5	21.5	24.5	25
LTE Band 38 for ENDC	Ant 4	18	25	22	25	25
LTE Band 41 for ENDC	Ant 4	18	24.5	21.5	24.5	25

Band	Antenna	Head	Body Worn	Hotspot	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
LTE Band 4	Ant 5	20	25	20	25	25
LTE Band 66	Ant 5	18.5	25	18.5	25	25
LTE Band 38	Ant 5	22	24.5	22	24.5	24.5
LTE Band 41	Ant 5	22	24.5	22	24.5	24.5



### 4.3 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 n38 : 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n5	LTE B7
LTE Anchor Bands for n7	LTE B66
LTE Anchor Bands for n38	LTE B66
LTE Anchor Bands for n41	LTE B66
LTE Anchor Bands for n66	LTE B2/5/12
LTE Anchor Bands for n78	LTE B2/5/7/38/41/66

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 40MHz	
	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	504000	2520
M	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	510000	2550

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

NR Band 38										
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515004	2575.02	515502	2577.51	516000	2580	517002	2585.01	518004	2590.02
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	522996	2614.98	522498	2612.49	522000	2610	520998	2604.99	519996	2599.98

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



<3700 MHz ~ 3980 MHz>

NR Band 77																						
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	647000	3705	647168	3707.52	647334	3710.01	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	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930

NR Band 78																						
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	647000	3705	647168	3707.52	647334	3710.01	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	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652832	3792.48	652666	3789.99	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	651000	3765	650666	3759.99	650332	3754.98		

<3450 MHz ~ 3550 MHz>

NR Band 77																						
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636332	3544.98	636166	3542.49	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99		

NR Band 78																						
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636332	3544.98	636166	3542.49	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99		

<For NR Overlap Bands Description>

1) NR Bands BW

Band	Duplex	SCS(KHz)	Bandwidths(BW)
n38	TDD	30	10, 15, 20, 30, 40
n41	TDD	30	20, 30, 40, 50,60,70,80,90,100

2) NR Bands Tune up:

Band	Antenna	Head	Body Worn	Hotspot	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
5G NR n41	Ant 0	24	24	24	24	24
5G NR n38	Ant 0	24	24	24	24	24

Band	Antenna	Head	Body Worn	Hotspot	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
5G NR n41	Ant 3	25	25	22.5	22.5	25
5G NR n38	Ant 3	25	25	22.5	22.5	25



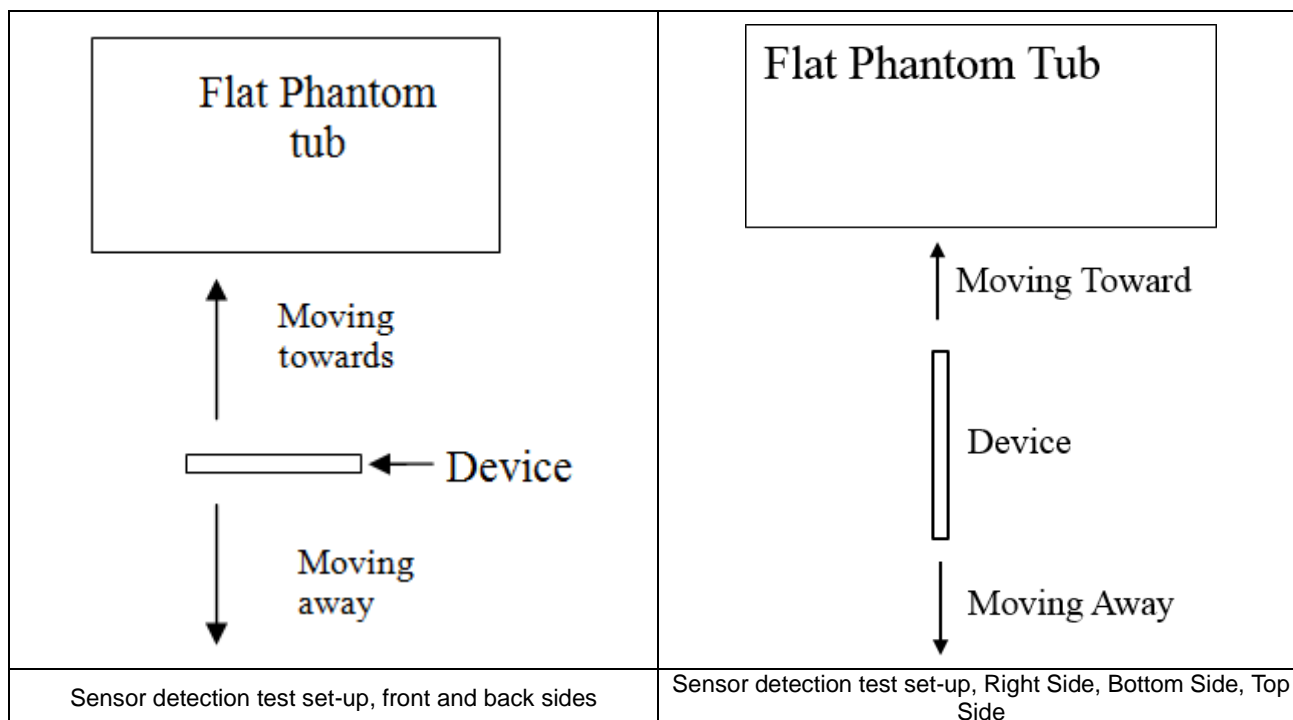
Band	Antenna	Head	Body Worn	Hotspot	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
5G NR n38	Ant 4	20	21.5	20	21.5	23.5
5G NR n41	Ant 4	20	22.5	20	22.5	23.5
5G NR n38 for ENDC	Ant 4	17	21.5	20	21.5	23.5
5G NR n41 for ENDC	Ant 4	17	22.5	20	22.5	23.5

Band	Antenna	Head	Body Worn	Hotspot	Extremely	Default
		DSI 1	DSI 4	DSI 5	DSI 3	Tune-up Limit
		Receiver on	Sensor on	Hotspot	Handheld	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
5G NR n38	Ant 5	18	24.5	18	21.5	24.5
5G NR n41	Ant 5	18	24.5	18	22	24.5

## 5. Proximity Sensor Triggering Test

### 5.1 Proximity sensor triggering distances(Per KDB616217§6.2)

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.
2. Proximity sensor triggering distance testing was performed according 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 (3980MHz) and lowest (1750MHz) frequency was used for proximity sensor triggering testing.
3. Capacitive proximity sensor placed coincident with antenna elements at the top/bottom end of the phone are utilized to determine when the device comes in proximity of the user's body or finger or hand at the front or back or bottom or right or top side of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
4. The sensors can use to detect the proximity of the user's body or handheld states at the front or back or bottom or top or right side of the device use a detection threshold distance. When front/back/right/top/bottom sides of body or handheld condition is detected reduced power will be active. The trigger distance shown in the sections below. The verification test and more details please refer to sensor operation description.
5. 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.







**<P-Sensor>**

**<Sensor on for Ant0/3 >**

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Right Side		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving towards	Moving towards	Moving away	Moving towards	Moving away
Minimum	16	16	16	16	16	16	16	16

**<Sensor on for Ant5/11 >**

Proximity Sensor Triggering Distance (mm)						
Position	Front		Back		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	6	6	6	6	6

## **6. RF Exposure Limits**

### **6.1 Uncontrolled Environment**

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

### **6.2 Controlled Environment**

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

**Limits for Occupational/Controlled Exposure (W/kg)**

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

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

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

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

## **7. Specific Absorption Rate (SAR)**

### **7.1 Introduction**

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

### **7.2 SAR Definition**

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

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

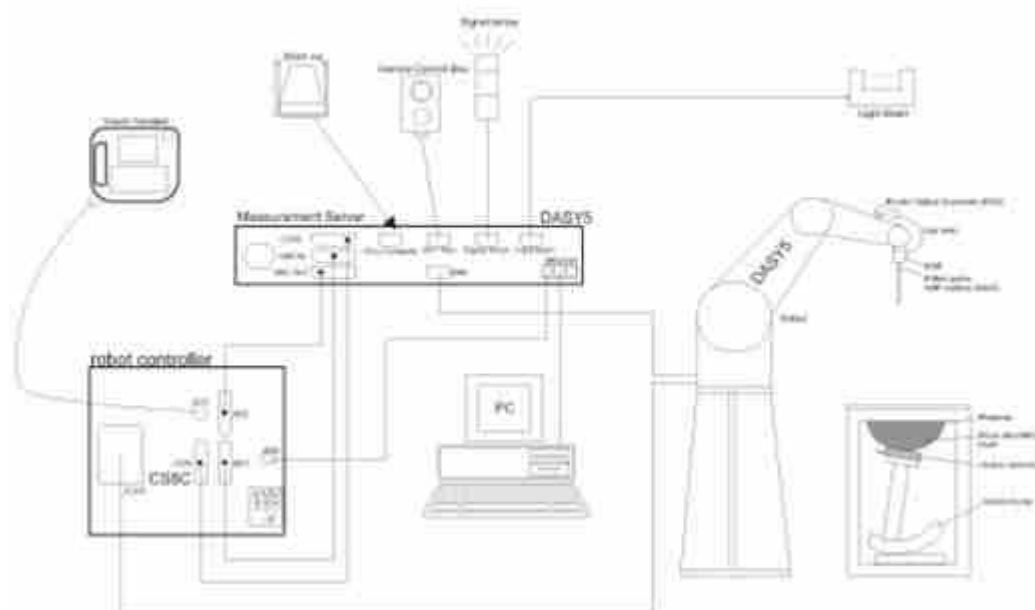
SAR is expressed in units of Watts per kilogram (W/kg)

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

Where:  $\sigma$  is the conductivity of the tissue,  $\rho$  is the mass density of the tissue and E is the RMS electrical field strength.

## **8. System Description and Setup**

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




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


**8.1 E-Field Probe**

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

**<ES3DV3 Probe>**

<b>Construction</b>	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
<b>Frequency</b>	10 MHz – 4 GHz; Linearity: ±0.2 dB (30 MHz – 4 GHz)	
<b>Directivity</b>	±0.2 dB in TSL (rotation around probe axis) ±0.3 dB in TSL (rotation normal to probe axis)	
<b>Dynamic Range</b>	5 µW/g – >100 mW/g; Linearity: ±0.2 dB	
<b>Dimensions</b>	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

**<EX3DV4 Probe>**

<b>Construction</b>	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
<b>Frequency</b>	10 MHz – >6 GHz Linearity: ±0.2 dB (30 MHz – 6 GHz)	
<b>Directivity</b>	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)	
<b>Dynamic Range</b>	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/g)	
<b>Dimensions</b>	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

**8.2 Data Acquisition Electronics (DAE)**

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


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



**Photo of DAE**


**8.3 Phantom**

**<SAM Twin Phantom>**

<b>Shell Thickness</b>	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	
<b>Filling Volume</b>	Approx. 25 liters	
<b>Dimensions</b>	Length: 1000 mm; Width: 500 mm; Height: adjustable feet	
<b>Measurement Areas</b>	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>**

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

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

## 8.4 Device Holder

### <Mounting Device for Hand-Held Transmitter>

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



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

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

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



Mounting Device for Laptops

## 9. Measurement Procedures

The measurement procedures are as follows:

### <Conducted power measurement>

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

### <SAR measurement>

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

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

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

### 9.1 Spatial Peak SAR Evaluation

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

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

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

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



### 9.2 Power Reference Measurement

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

### 9.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

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

	$\leq 3$ GHz	$> 3$ GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	$5 \pm 1$ mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{Area}$ , $\Delta y_{Area}$	$\leq 2$ GHz: $\leq 15$ mm $2 - 3$ GHz: $\leq 12$ mm	$3 - 4$ GHz: $\leq 12$ mm $4 - 6$ GHz: $\leq 10$ mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

### 9.4 Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}$ , $\Delta y_{Zoom}$			$\leq 2$ GHz: $\leq 8$ mm 2 – 3 GHz: $\leq 5$ mm*	3 – 4 GHz: $\leq 5$ mm* 4 – 6 GHz: $\leq 4$ mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		$\leq 5$ mm	3 – 4 GHz: $\leq 4$ mm 4 – 5 GHz: $\leq 3$ mm 5 – 6 GHz: $\leq 2$ mm
	graded grid	$\Delta z_{Zoom}(1)$ : between 1 <sup>st</sup> two points closest to phantom surface	$\leq 4$ mm	3 – 4 GHz: $\leq 3$ mm 4 – 5 GHz: $\leq 2.5$ mm 5 – 6 GHz: $\leq 2$ mm
		$\Delta z_{Zoom}(n>1)$ : between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z	$\geq 30$ mm	3 – 4 GHz: $\geq 28$ mm 4 – 5 GHz: $\geq 25$ mm 5 – 6 GHz: $\geq 22$ mm	
Note: $\delta$ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is $\leq 1.4$ W/kg, $\leq 8$ mm, $\leq 7$ mm and $\leq 5$ mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

### 9.5 Volume Scan Procedures

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

### 9.6 Power Drift Monitoring

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



### 10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2022/2/24	2023/2/23
SPEAG	835MHz System Validation Kit	D835V2	4d162	2021/12/17	2022/12/16
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2023/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2021/12/20	2022/12/19
SPEAG	2450MHz System Validation Kit	D2450V2	1040	2020/5/6	2023/5/4
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/25
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2020/11/25	2023/11/24
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2020/11/25	2023/11/24
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2020/5/14	2023/5/12
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2019/9/24	2022/9/22
SPEAG	Data Acquisition Electronics	DAE4	1338	2021/12/1	2022/11/30
SPEAG	Data Acquisition Electronics	DAE4	1691	2021/10/4	2022/10/3
SPEAG	Dosimetric E-Field Probe	EX3DV4	7641	2022/4/11	2023/4/10
SPEAG	Dosimetric E-Field Probe	EX3DV4	7729	2022/5/30	2023/5/29
SPEAG	Dosimetric E-Field Probe	ES3DV3	3293	2021/11/23	2022/11/22
SPEAG	SAM Twin Phantom	SAM Twin	TP-1842	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-2022	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2022/7/14	2023/7/13
Agilent	ENA Series Network Analyzer	E5071C	MY46104587	2022/5/24	2023/5/23
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	2022/1/24	2023/1/23
Anritsu	Vector Signal Generator	MG3710A	6201682672	2022/1/6	2023/1/5
Rohde & Schwarz	Power Meter	NRVD	102081	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2022/7/14	2023/7/13
R&S	CBT BLUETOOTH TESTER	CBT	100641	2022/1/5	2023/1/4
EXA	Spectrum Analyzer	FSV7	101631	2021/10/14	2022/10/13
FLUKE	DIGITAC THERMOMETER	51II	97240029	2021/10/23	2022/10/22
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/1/6	2023/1/5
SPEAG	Device Holder	N/A	N/A	N/A	N/A
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	

**Note:**

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

## 11. System Verification

### 11.1 Tissue Simulating Liquids

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



Fig 11.1 Photo of Liquid Height for Head SAR

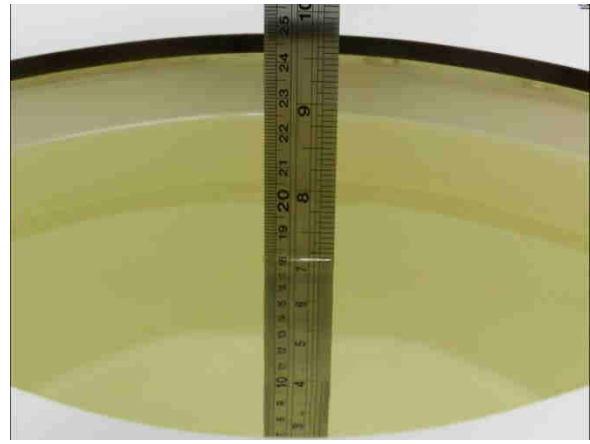


Fig 11.2 Photo of Liquid Height for Body SAR



### 11.2 Tissue Verification

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

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

#### Simulating Liquid for 5GHz, Manufactured by SPEAG

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

#### <Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε <sub>r</sub> )	Conductivity Target (σ)	Permittivity Target (ε <sub>r</sub> )	Delta (σ) (%)	Delta (ε <sub>r</sub> ) (%)	Limit (%)	Date
750	Head	22.5	0.900	41.184	0.89	41.90	1.12	-1.71	±5	2022/8/12
835	Head	22.7	0.924	42.865	0.90	41.50	2.67	3.29	±5	2022/8/14
1750	Head	22.6	1.390	38.500	1.37	40.10	1.46	-3.99	±5	2022/8/16
1900	Head	22.8	1.456	40.696	1.40	40.00	4.00	1.74	±5	2022/8/18
2600	Head	22.7	1.927	38.322	1.96	39.00	-1.68	-1.74	±5	2022/8/20
3500	Head	22.7	2.809	39.002	2.91	37.90	-3.47	2.91	±5	2022/8/23
3700	Head	22.6	2.995	38.682	3.12	37.70	-4.01	2.60	±5	2022/8/26
3900	Head	22.8	3.195	38.391	3.32	37.50	-3.77	2.38	±5	2022/8/29
750	Head	22.6	0.923	41.920	0.89	41.90	3.71	0.05	±5	2022/8/8
835	Head	22.6	0.929	40.921	0.90	41.50	3.22	-1.40	±5	2022/8/8
1750	Head	22.7	1.374	40.239	1.37	40.10	0.29	0.35	±5	2022/8/9
1900	Head	22.7	1.452	39.632	1.40	40.00	3.71	-0.92	±5	2022/8/9
2600	Head	22.7	1.980	39.054	1.96	39.00	1.02	0.14	±5	2022/8/9
3500	Head	22.8	2.783	39.158	2.91	37.90	-4.36	3.32	±5	2022/8/10
3700	Head	22.8	3.004	37.496	3.12	37.70	-3.72	-0.54	±5	2022/8/10
3900	Head	22.8	3.210	37.055	3.32	37.50	-3.31	-1.19	±5	2022/8/10
750	Head	22.7	0.906	42.762	0.89	41.90	1.80	2.06	±5	2022/8/5
835	Head	22.7	0.926	41.056	0.90	41.50	2.89	-1.07	±5	2022/8/5
1750	Head	22.6	1.351	40.006	1.37	40.10	-1.39	-0.23	±5	2022/8/6
1900	Head	22.6	1.432	39.770	1.40	40.00	2.29	-0.57	±5	2022/8/6
2600	Head	22.6	2.013	40.642	1.96	39.00	2.70	4.21	±5	2022/8/6
3500	Head	22.7	2.808	39.002	2.91	37.90	-3.51	2.91	±5	2022/8/6
3700	Head	22.7	2.994	38.681	3.12	37.70	-4.04	2.60	±5	2022/8/7
3900	Head	22.7	3.194	38.385	3.32	37.50	-3.80	2.36	±5	2022/8/7
2450	Head	22.8	1.831	37.489	1.80	39.20	1.72	-4.36	±5	2022/8/8
5250	Head	22.7	4.640	36.528	4.71	35.90	-1.49	1.75	±5	2022/8/10
5600	Head	22.8	4.989	35.907	5.07	35.50	-1.60	1.15	±5	2022/8/8
5750	Head	22.6	5.215	35.594	5.22	35.40	-0.10	0.55	±5	2022/8/10
5250	Head	22.7	4.586	36.311	4.71	35.90	-2.63	1.14	±5	2022/9/10
5600	Head	22.7	4.954	35.751	5.07	35.50	-2.29	0.71	±5	2022/9/10
2600	Head	22.6	2.009	40.523	1.96	39.00	2.50	3.91	±5	2022/9/18



11.3 System Performance Check Results

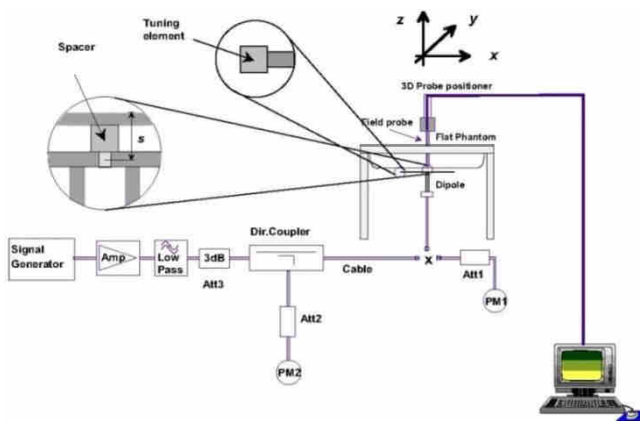
Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the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

<1g SAR>

Table with 11 columns: 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 (%). Rows include test data from 2022/8/12 to 2022/9/18.

**<10g SAR>**

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2022/8/12	750	Head	50	1087	3293	1691	0.282	5.65	5.64	-0.18
2022/8/14	835	Head	50	4d162	3293	1691	0.319	6.26	6.38	1.92
2022/8/16	1750	Head	50	1090	3293	1691	1.010	19.50	20.20	3.59
2022/8/18	1900	Head	50	5d182	3293	1691	1.090	20.20	21.80	7.92
2022/8/20	2600	Head	50	1061	3293	1691	1.230	25.10	24.60	-1.99
2022/8/23	3500	Head	50	1037	7729	1691	1.350	25.40	27.00	6.30
2022/8/26	3700	Head	50	1008	7729	1691	1.280	24.40	25.60	4.92
2022/8/29	3900	Head	50	1048	7729	1691	1.280	24.40	25.60	4.92
2022/8/8	750	Head	50	1087	7641	1338	0.283	5.65	5.66	0.18
2022/8/8	835	Head	50	4d162	7641	1338	0.296	6.26	5.92	-5.43
2022/8/9	1750	Head	50	1090	7641	1338	1.000	19.50	20.00	2.56
2022/8/9	1900	Head	50	5d182	7641	1338	1.080	20.20	21.60	6.93
2022/8/9	2600	Head	50	1061	7641	1338	1.270	25.10	25.40	1.20
2022/8/10	3500	Head	50	1037	7641	1338	1.320	25.40	26.40	3.94
2022/8/10	3700	Head	50	1008	7641	1338	1.150	24.40	23.00	-5.74
2022/8/10	3900	Head	50	1048	7729	1338	1.160	24.40	23.20	-4.92
2022/8/5	750	Head	50	1087	7641	1338	0.279	5.65	5.58	-1.24
2022/8/5	835	Head	50	4d162	7641	1338	0.308	6.26	6.16	-1.60
2022/8/6	1750	Head	50	1090	7641	1338	0.937	19.50	18.74	-3.90
2022/8/6	1900	Head	50	5d182	7641	1338	1.040	20.20	20.80	2.97
2022/8/6	2600	Head	50	1061	7641	1338	1.250	25.10	25.00	-0.40
2022/8/6	3500	Head	50	1037	7641	1338	1.230	25.40	24.60	-3.15
2022/8/7	3700	Head	50	1008	7641	1338	1.250	24.40	25.00	2.46
2022/8/7	3900	Head	50	1048	7729	1338	1.180	24.40	23.60	-3.28
2022/8/8	2450	Head	50	1040	7729	1691	1.190	24.00	23.80	-0.83
2022/8/10	5250	Head	50	1113	7729	1691	1.100	23.10	22.00	-4.76
2022/8/8	5600	Head	50	1113	7729	1691	1.140	23.80	22.80	-4.20
2022/8/10	5750	Head	50	1113	7729	1691	1.070	22.80	21.40	-6.14
2022/9/10	5250	Head	50	1113	7729	1691	1.080	23.10	21.60	-6.49
2022/9/10	5600	Head	50	1113	7729	1691	1.150	23.80	23.00	-3.36
2022/9/18	2600	Head	50	1061	7641	1338	1.240	25.10	24.80	-1.20



**Fig 11.3.1 System Performance Check Setup**



**Fig 11.3.2 Setup Photo**



## 12. RF Exposure Positions

### 12.1 Ear and handset reference point

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

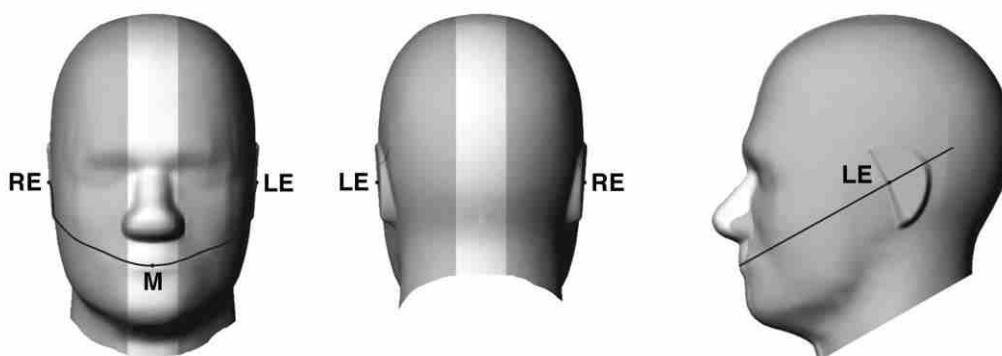


Fig 12.1.1 Front, back, and side views of SAM twin phantom

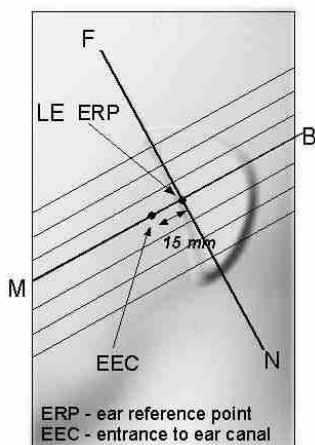


Fig 12.1.2 Close-up side view of phantom showing the ear region.

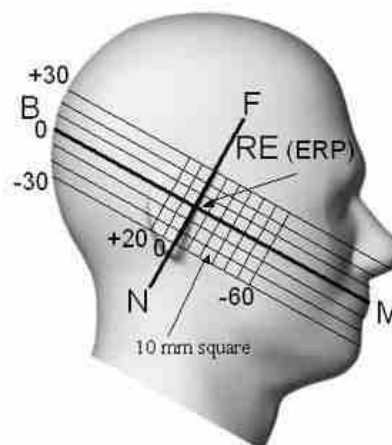


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations



### 12.2 Definition of the cheek position

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

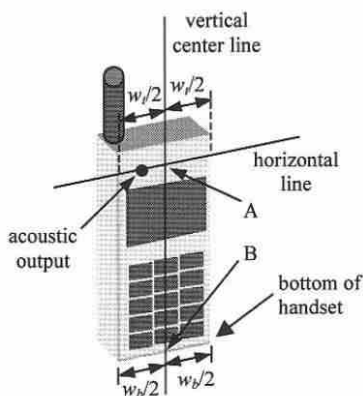


Fig 12.2.1 Handset vertical and horizontal reference lines—“fixed case”

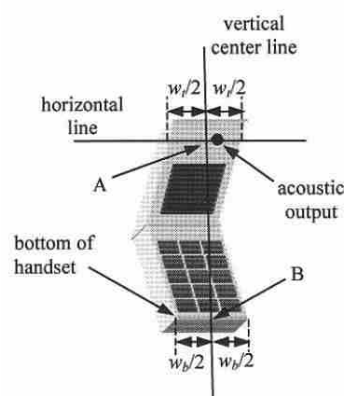


Fig 12.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

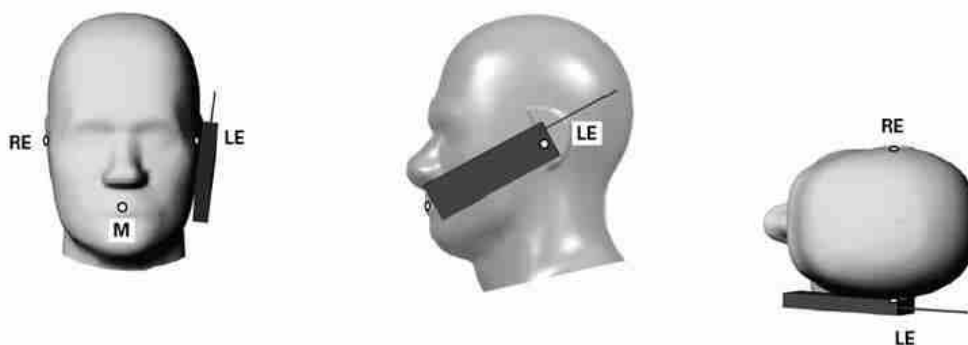


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

### 12.3 Definition of the tilt position

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

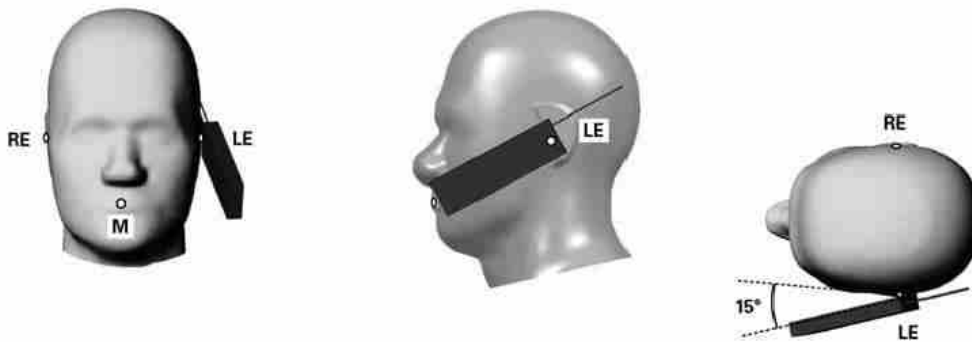


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

### 12.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 12.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is  $> 1.2 \text{ W/kg}$ , the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

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

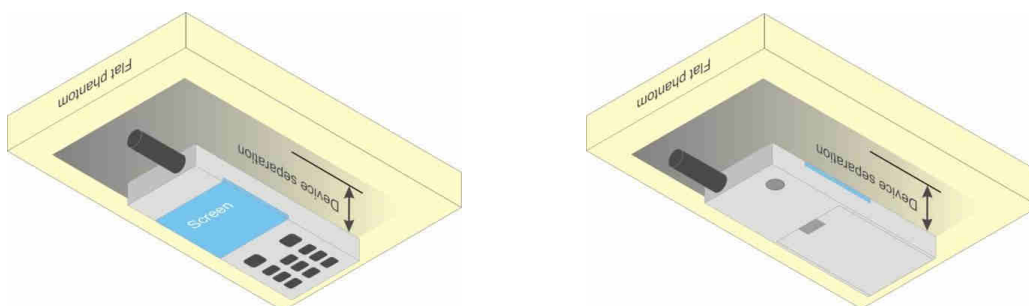


Fig 12.4 Body Worn Position



## **12.5 Product Specific 10g SAR Exposure**

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that 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  $\leq 25$  mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

## **12.6 Wireless Router**

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

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

### **13. Conducted RF Output Power (Unit: dBm)**

The detailed conducted power table can refer to Appendix E.

#### **<GSM Conducted Power>**

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode, SAR measurement is not required for the secondary mode.

#### **<WCDMA Conducted Power>**

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For HSPA+ devices supporting 16 QAM in the uplink, power measurements procedure is according to the configurations in Table C.11.1.4 of 3GPP TS 34.121-1.
4. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

#### **HSDPA Setup Configuration:**

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
  - i. Set Gain Factors ( $\beta_c$  and  $\beta_d$ ) and parameters were set according to each
  - ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
  - iii. Set RMC 12.2Kbps + HSDPA mode.
  - iv. Set Cell Power = -86 dBm
  - v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
  - vi. Select HSDPA Uplink Parameters
  - vii. Set Delta ACK, Delta NACK and Delta CQI = 8
  - viii. Set Ack-Nack Repetition Factor to 3
  - ix. Set CQI Feedback Cycle (k) to 4 ms
  - x. Set CQI Repetition Factor to 2
  - xi. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

Table C.10.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_o/\beta_d$	$\beta_{HS}$ (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

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

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

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

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

Setup Configuration



**HSUPA Setup Configuration:**

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting \* :
  - i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
  - ii. Set the Gain Factors ( $\beta_c$  and  $\beta_d$ ) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
  - iii. Set Cell Power = -86 dBm
  - iv. Set Channel Type = 12.2k + HSPA
  - v. Set UE Target Power
  - vi. Power Ctrl Mode= Alternating bits
  - vii. Set and observe the E-TFCI
  - viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

**Table C.11.1.3:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH**

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}$ (Note1)	$\beta_{hc}$	$\beta_{ed}$ (Note 4) (Note 5)	$\beta_{ed}$ (SF)	$\beta_{ed}$ (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}$ : 47/15 $\beta_{ed2}$ : 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

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

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

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

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

Note 5:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.

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

**Setup Configuration**

**DC-HSDPA 3GPP release 8 Setup Configuration:**

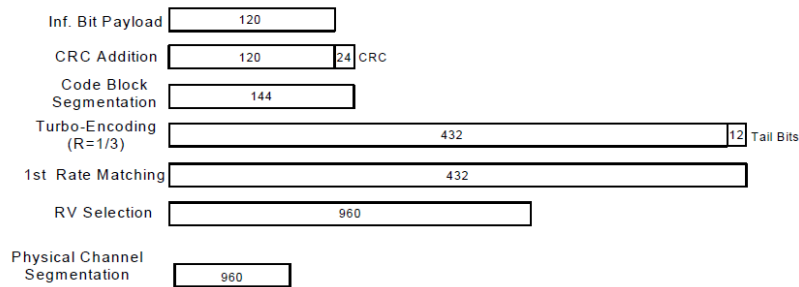
- a. The EUT was connected to Base Station referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
  - i. Set RMC 12.2Kbps + HSDPA mode.
  - ii. Set Cell Power = -25 dBm
  - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
  - iv. Select HSDPA Uplink Parameters
  - v. Set Gain Factors ( $\beta_c$  and  $\beta_d$ ) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
    - a). Subtest 1:  $\beta_c/\beta_d=2/15$
    - b). Subtest 2:  $\beta_c/\beta_d=12/15$
    - c). Subtest 3:  $\beta_c/\beta_d=15/8$
    - d). Subtest 4:  $\beta_c/\beta_d=15/4$
  - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
  - vii. Set Ack-Nack Repetition Factor to 3
  - viii. Set CQI Feedback Cycle (k) to 4 ms
  - ix. Set CQI Repetition Factor to 2
  - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

**C.8.1.12 Fixed Reference Channel Definition H-Set 12**

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

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload ( $N_{INF}$ )	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table. Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		



**Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)**

**Setup Configuration**



**HSPA+ 3GPP release 7 (uplink category 7) 16QAM, Setup Configuration:**

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting \* :
  - i. Call Configs = 5.2E:HSPA+:UL with 16QAM
  - ii. Set the Gain Factors ( $\beta_c$  and  $\beta_d$ ) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.4, quoted from the TS 34.121-1 s5.2E
  - iii. Set Channel Parm
  - iv. Set Cell Power = -86 dBm
  - v. Set Channel Type = HSPA
  - vi. Set UE Target Power =21 dBm
  - vii. Power Ctrl Mode= All Up Bits
  - viii. Set Manual Uplink DPCH Bc/Bd = Manual
  - ix. Set Manual Uplink DPCH Bc and Bd=15,15(for 34.121-1 v8.10.0 table C11.1.4 sub-test 1)
  - x. Set HSPA Conn DL Channel Levels
  - xi. Set HS-SCCH Configs
  - xii. Set RB Test Mode Setup
  - xiii. Set Common HSUPA Parameters
  - xiv. Set Serving Grant
  - xv. Confirm that E-TFCI is equal to the target E-TFCI of 105 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

**Table C.11.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM**

Sub-test	$\beta_c$ (Note 3)	$\beta_d$	$\beta_{HS}$ (Note 1)	$\beta_{ec}$	$\beta_{ed}$ (2xSF2) (Note 4)	$\beta_{ed}$ (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	$\beta_{ed1}$ : 30/15 $\beta_{ed2}$ : 30/15	$\beta_{ed3}$ : 24/15 $\beta_{ed4}$ : 24/15	3.5	2.5	14	105	105

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

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).

Note 3: DPDCH is not configured, therefore the  $\beta_c$  is set to 1 and  $\beta_d = 0$  by default.

Note 4:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.

Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.

**Setup Configuration**



**<WCDMA Conducted Power>**

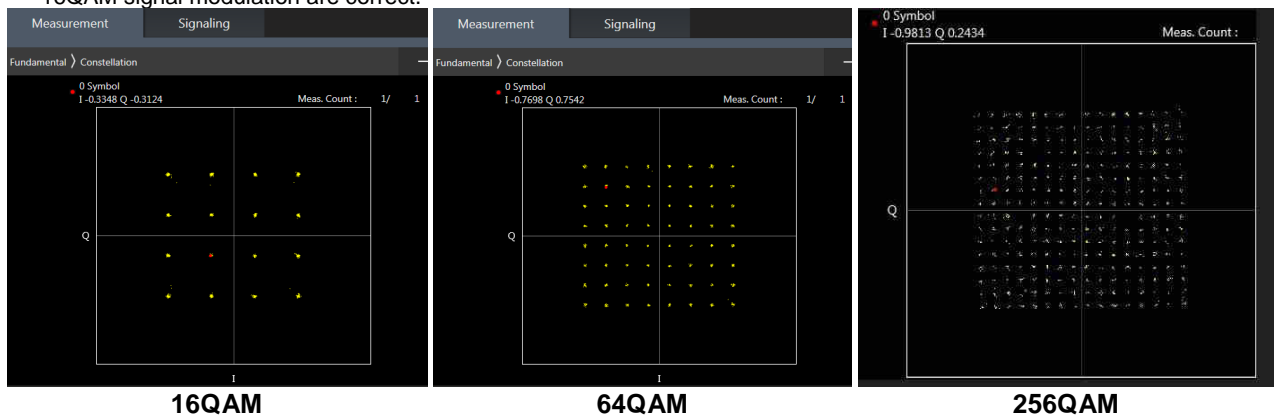
**General Note:**

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is  $\leq \frac{1}{4}$  dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than  $\frac{1}{4}$  dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

**<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  $\leq 0.8$  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  $\frac{1}{2}$  dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is  $\leq 1.45$  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  $\frac{1}{2}$  dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is  $\leq 1.45$  W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / 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 band 4/5/17/38 SAR test was covered by Band 66/26/12/41; 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  $\leq$  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.



<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.

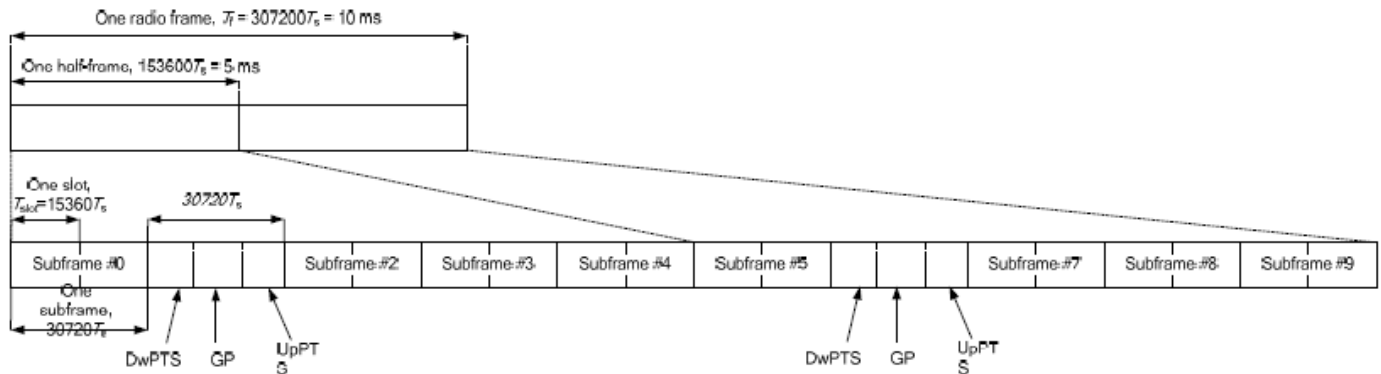


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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 · Ts	2192 · Ts	2560 · Ts	7680 · Ts	2192 · Ts	2560 · Ts
1	19760 · Ts			20480 · Ts		
2	21952 · Ts			23040 · Ts		
3	24144 · Ts			25600 · Ts		
4	26336 · Ts	4384 · Ts	5120 · Ts	7680 · Ts	4384 · Ts	5120 · Ts
5	6592 · Ts			20480 · Ts		
6	19760 · Ts			23040 · Ts		
7	21952 · Ts			12800 · Ts		
8	24144 · Ts			-		
9	13168 · Ts	-	-	-	-	-

Special subframe (30720·T <sub>s</sub> ): 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 <sub>s</sub> ): 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:

- i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, 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.



<LTE Carrier Aggregation>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. The gray color table is covered by other combinations and no need to verify power.
4. All permutations exist. No restrictions on Pcell & Scell combinations.

2CC Downlink Carrier Aggregation				3CC Downlink Carrier Aggregation				4CC Downlink Carrier Aggregation			
Number	Combination	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset
1	CA_2A-2A			1	CA_2A-4A-5A	4A		1	CA_41E	41E	
2	CA_2A-4A	4A	1-3CC	2	CA_2A-7A-7A	7A		2	CA_41C-42C	41C, 42C	
3	CA_2A-5A		1-3CC	3	CA_2A-7A-66A	7A, 66A					
4	CA_2A-7A	7A	3-3CC	4	CA_2A-7C	7C					
5	CA_2A-66A	66A	3-3CC	5	CA_4A-7C	4A, 7C					
6	CA_2C			6	CA_5A-7A-7A	7A					
7	CA_4A-5A	4A		7	CA_5A-7A-66A	7A, 66A					
8	CA_4A-7A	7A		8	CA_5A-7C	7C					
9	CA_5A-7A	7A	6-3CC	9	CA_5A-66A-66A	66A					
10	CA_5A-66A	66A	7-3CC	10	CA_7A-66A-66A	7A, 66A					
11	CA_5A-41A	41A		11	CA_12A-66A-66A	66A					
12	CA_7A-7A	7A	6-3CC	12	CA_41A-41A-41A	41A					
13	CA_7A-66A	7A, 66A	7-3CC	13	CA_41A-42C	41A, 42C					
14	CA_7C	7C	8-3CC	14	CA_41C-42A	41C, -42A					
15	CA_12A-66A	66A	11-3CC	15	CA_41D	41D					
16	CA_38C	38C									
16	CA_41A-41A	41A	12-3CC								
17	CA_41A-42A	41A, 42A									
18	CA_41C	41C	14-3CC								
19	CA_42C	42C	13-3CC								
20	CA_66A-66A	66A	11-3CC								
23	CA_66B	66B									
21	CA_66C	66C									

**LTE Carrier Aggregation Conducted Power (Downlink)**

- i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.
- ii. 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.
- iii. The device supports downlink four carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
- iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.
- v. For inter-band CA, the SCC selected highest bandwidth and near the middle of its transmission band. For SCC DL RB size and offset will base on the PCC corresponding RB allocation.
- vi. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.
- vii. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

$$\text{Nominal channel spacing} = \left\lceil \frac{BW_{\text{Channel}(1)} + BW_{\text{Channel}(2)} - 0.1|BW_{\text{Channel}(1)} - BW_{\text{Channel}(2)}|}{0.6} \right\rceil 0.3 \text{ [MHz]}$$

**LTE 4x4 MIMO (Downlink)**

This device supports downlink 4x4 MIMO operations for LTE Bands 4/7/38/41/42/66 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC Guidance, SAR for downlink 4x4 MIMO was not needed since the maximum average output power in 4x4 downlink MIMO mode was not > 0.25 dB higher than the maximum output power with downlink 4x4 MIMO inactive. When carrier aggregation is applicable, power measurements were performed with the downlink carrier aggregation and 4x4 DL MIMO active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

4X4 MIMO	WWAN Band
	LTE Band: B4/7/38/41/42/66



LTE Carrier Aggregation Conducted Power (Uplink)

<Intra-band>

2CC Uplink Carrier Aggregation		
Number	Combination	Ant No.
1	7C	Ant3/4/5/0
2	38C	Ant3/4/5/0

General Note:

- i. The device supports intra-band uplink carrier aggregation for LTE B7/B38 with a maximum of two 20MHz 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. The device supports uplink carrier aggregation with a maximum of two 20MHz 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 the 3GPP requirement.
- iii. 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.
- iv. 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	
Combination	Band&Ant No.	Band&Ant No.
CA_2A-4A	LTE B2: Ant3/4	LTE B4: Ant5/0
CA_4A-7A	LTE B4: Ant3/4	LTE B7: Ant5/0

General Note:

The single carrier of inter band CA uplink power level is the same as Non-CA standalone LTE power level. For Inter-band CA co-located SAR analysis is performed using standalone SAR summed together and they are more conservatively for inter band CA.



**5G NR Output Power (Unit: dBm)****General Note:**

1. 5G NR n5, n7, n66, n38, n41, n77, n78 supports SA/NSA operation.
2. 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-QPSK and the reported SAR for the DFT-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
3. For 5G NR n78 HUPE, 5G NR n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission.
4. 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.
5. 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.
6. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
7. 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.
8. 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.
9. 5G NR n78 supports HPUE, HPUE power and SAR testing performed separately.
10. 5G NR n78 HUPE with higher power. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
11. For 5G NR EN-DC mode, standalone SAR performed for 5G NR band with the maximum power, EN-DC SAR summed 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.

<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	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
		$\leq 0.5^2$	$\leq 0.5^2$	0 <sup>2</sup>
	QPSK		$\leq 1$	0
	16 QAM		$\leq 2$	$\leq 1$
	64 QAM			
CP-OFDM	256 QAM		$\leq 2.5$	
	QPSK		$\leq 4.5$	
	16 QAM	$\leq 3$		$\leq 1.5$
	64 QAM	$\leq 3$		$\leq 2$
	256 QAM		$\leq 3.5$	
NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability <i>powerBoosting-pi2BPSK</i> and if the IE <i>powerBoostPi2BPSK</i> is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 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 <i>powerBoostPi2BPSK</i> is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.				

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	$\leq 3.5$	$\leq 0.5$	0
	QPSK	$\leq 3.5$	$\leq 1$	0
	16 QAM	$\leq 3.5$	$\leq 2$	$\leq 1$
	64 QAM	$\leq 3.5$		$\leq 2.5$
	256 QAM		$\leq 4.5$	
CP-OFDM	QPSK	$\leq 3.5$	$\leq 3$	$\leq 1.5$
	16 QAM	$\leq 3.5$	$\leq 3$	$\leq 2$
	64 QAM		$\leq 3.5$	
	256 QAM		$\leq 6.5$	

ENDC List	LTE Ant	NR Ant
DC_7A_n5A	B7: Ant5/0/3/4	n5: Ant0/1
DC_41A_n77A	B41: Ant3/4	n77: Ant11/9/10/0
DC_5A_n78A	B5: Ant0/1	n78: Ant11/9/10/0
DC_7A_n78A	B7: Ant3/4/5/0	n78: Ant11/9/10/0
DC_38A_n78A	B38: Ant3/4	n78: Ant11/9/10/0
DC_41A_n78A	B41: Ant3/4	n78: Ant11/9/10/0
DC_66A_n7A	B66: Ant3/4	n7: Ant5/0
DC_66A_n38A	B66: Ant 5/0	n38: Ant3/4
DC_66A_n41A	B66: Ant 5/0	n41: Ant3/4
DC_2A_n66A	B2: Ant3/4	n66: Ant5/0
DC_5A_n66A	B5: Ant0/1	n66: Ant5/0/3/4
DC_12A_n66A	B12: Ant0/1	n66: Ant5/0/3/4
DC_2A_n78A	B2: Ant3/4	n78: Ant11/9/10/0
DC_66A_n78A	B66: Ant3/4/5/0	n78: Ant11/9/10/0



**<WLAN Conducted Power>**

**General Note:**

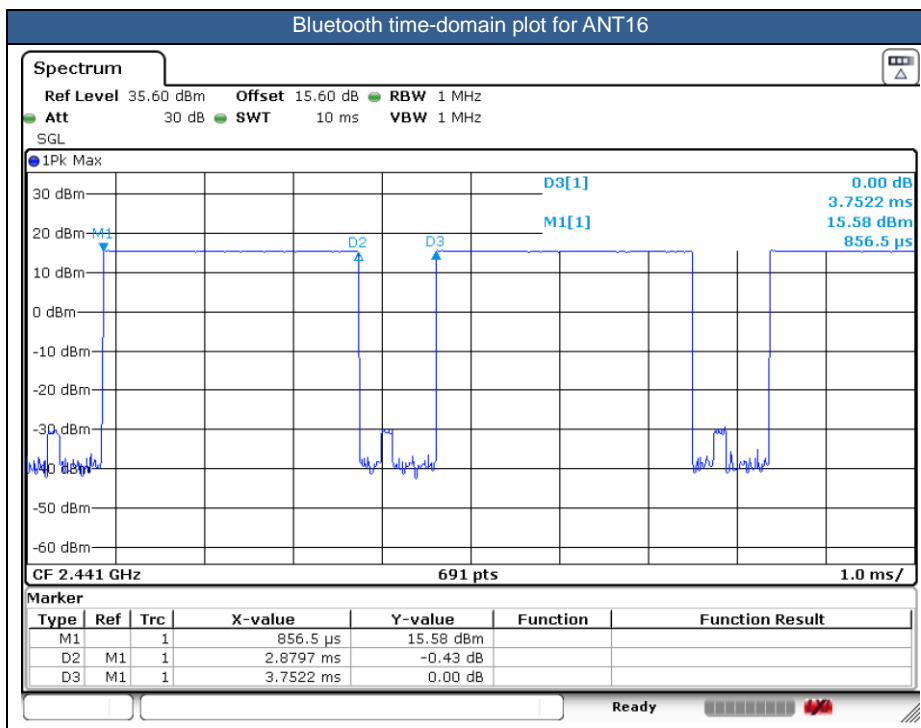
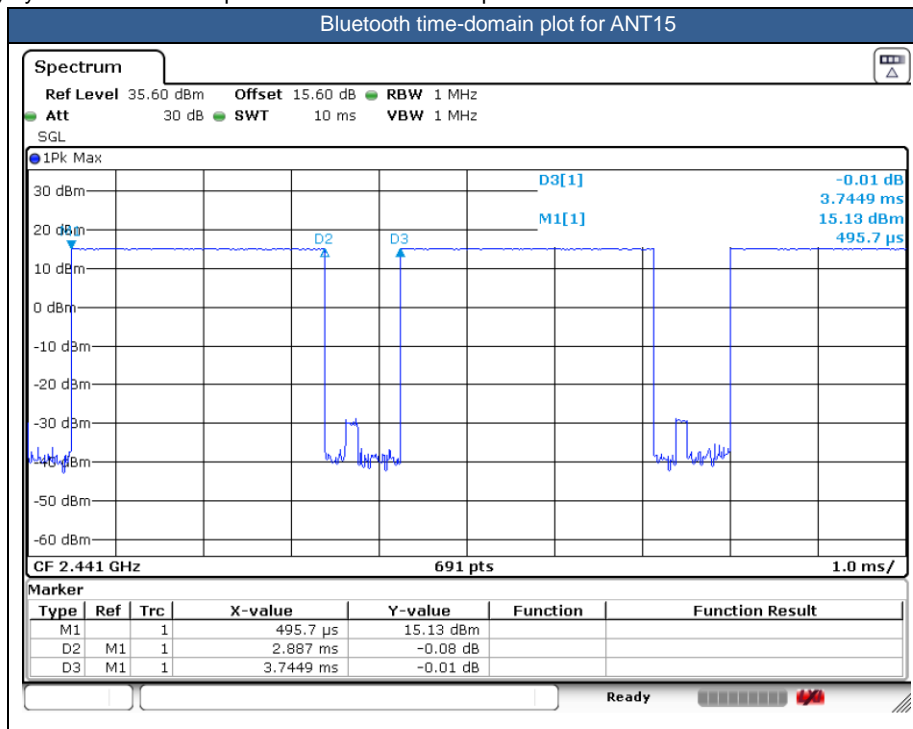
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
2. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
3. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
4. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
  - a. When the reported SAR of the initial test position is  $\leq 0.4$  W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
  - b. When the reported SAR of the test position is  $> 0.4$  W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is  $\leq 0.8$  W/kg or all required test position are tested.
  - c. For all positions/configurations, when the reported SAR is  $> 0.8$  W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is  $\leq 1.2$  W/kg or all required channels are tested.
5. 802.11ax full tone and partial tone supported for WLAN2.4GHz/WLAN5GHz, after verification for the partial tone power level is far less than full tone power level, so we chose full tone power to be measured in this report.
6. SISO and MIMO all supported by WLAN2.4GHz/WLAN5GHz, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, so only chose MIMO power to perform SAR testing.
7. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.



<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle is 77.09 % for Ant15, and 76.75 % for Ant16 as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation





## **14. Antenna Location**

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

## 15. SAR Test Results

### 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 BT/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 WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)\*Tune-up Scaling Factor
  - d. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)\* Duty Cycle scaling factor \* Tune-up scaling factor
  - e. 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 Reported TDD LTE SAR = 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:
  - $\leq 0.8$  W/kg or  $2.0$  W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
  - $\leq 0.6$  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
  - $\leq 0.4$  W/kg or  $1.0$  W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is  $\geq 0.8$ W/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. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). After pre-scan two SIM cards power, we found test result of the SIM1 was the worse, so we chose SIM1 slot to perform all tests.
5. The device implements Proximity sensors/receiver detect mechanism/hotspot trigger reduced power for the power management for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity). The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E. power table. Full power table and reduced power table (Default Power: full power, DSI 1: receiver on reduced power for head; DSI 5: hotspot on power; DSI 3: P-sensor on for handheld; DSI 4: receiver off/P-sensor off).
6. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head, hotspot, body-worn and extremity.
7. For 5G NR n78 HUPE, 5G NR n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission.
8. 5G NR n78 SA supports HPUE, HPUE power and SAR testing performed separately.
9. 5G NR n78 HUPE with higher power. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
10. For 5G NR EN-DC mode, standalone SAR performed for 5G NR band with the maximum power, EN-DC SAR summed 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
11. 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.
12. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
13. 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.
14. 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.
15. 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,
- WCDMA B2/B4, LTE B2/B66/B42, 5GNR n66, and WLAN5.2G are required to be tested.
  - WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
  - 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.
- For some WWAN bands, full power level higher than receiver off reduced power level, so front/back full power SAR can represent Body-worn receiver off SAR conservatively.
  - LTE B4/7/66/38/41 ant3/4/5 and 5GNR n/7/38/41 ant3/4/5 bands support different PAs for some antennas, the maximum power of Main PA is higher than and very close to the other PA, so we choose Main PA to perform full SAR tested to ensure the RF exposure is compliance.
  - For distance SAR and non-distance SAR, always chose higher SAR to do co-located analysis.

**GSM Note:**

- Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.
- Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode, SAR measurement is not required for the secondary mode.

**WCDMA Note:**

- Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
- Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is  $\leq \frac{1}{4}$  dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than  $\frac{1}{4}$  dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

**LTE Note:**

- 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.
- Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
- 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  $\leq 0.8$  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.
- Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is  $>$  not  $\frac{1}{2}$  dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is  $\leq 1.45$  W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM SAR testing is not required.
- Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is  $>$  not  $\frac{1}{2}$  dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is  $\leq 1.45$  W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
- For LTE B4 / B5 / B12 / B17 / 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.



**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  $\leq 0.8$  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  $\frac{1}{2}$  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  $\frac{1}{2}$  dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is  $\leq 1.45$  W/kg, smaller bandwidth SAR testing is not required for this device.
  - f. For 5G FR1 n5/n41/n66/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.

**WLAN Note:**

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is  $\leq 1.2$  W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is  $> 0.4$  W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is  $\leq 0.8$  W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is  $> 0.8$  W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is  $\leq 1.2$  W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
6. 802.11ax supports full tone size and partial tone size, after verification for the partial tone size mode power level will not higher than full tone size power level, so chose full tone power to be measured in this report.
7. SISO and MIMO all supported by WLAN2.4GHz/WLAN5GHz, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, so only chose MIMO power to perform SAR testing.
8. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.



15.1 Head SAR

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	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	
<b>750MHz</b>																			
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	23095	707.5	24.74	25.50	1.191	0.02	0.115	0.137	
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 1	23095	707.5	23.72	24.50	1.197	-0.12	0.089	0.107	
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	23095	707.5	24.74	25.50	1.191	0.02	0.105	0.125	
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 1	23095	707.5	23.72	24.50	1.197	0.05	0.085	0.102	
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	23095	707.5	24.74	25.50	1.191	0.04	0.114	0.136	
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 1	23095	707.5	23.72	24.50	1.197	0.03	0.104	0.124	
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	23095	707.5	24.74	25.50	1.191	0.13	0.071	0.085	
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 1	23095	707.5	23.72	24.50	1.197	0.07	0.056	0.067	
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	23095	707.5	24.31	25.50	1.315	-0.05	0.463	0.609	
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 1	23095	707.5	23.27	24.50	1.327	0.09	0.400	0.531	
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	23095	707.5	24.31	25.50	1.315	-0.01	0.091	0.120	
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 1	23095	707.5	23.27	24.50	1.327	0.08	0.072	0.096	
01	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	23095	707.5	24.31	25.50	1.315	-0.03	0.754	0.992	
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 1	23095	707.5	23.27	24.50	1.327	0.16	0.654	0.868	
	LTE Band 12	10M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	23095	707.5	23.22	24.50	1.343	0.01	0.662	0.889	
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	23095	707.5	24.31	25.50	1.315	0.07	0.108	0.142	
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 1	23095	707.5	23.27	24.50	1.327	-0.04	0.090	0.119	
	LTE Band 12 for ENDC	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	23095	707.5	21.79	23.00	1.321	0.08	0.387	0.511	
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	23230	782	23.63	24.50	1.222	0.02	0.121	0.148	
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 1	23230	782	22.67	23.50	1.211	0.09	0.095	0.115	
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	23230	782	23.63	24.50	1.222	0.05	0.083	0.101	
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 1	23230	782	22.67	23.50	1.211	-0.12	0.067	0.081	
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	23230	782	23.63	24.50	1.222	-0.01	0.120	0.147	
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 1	23230	782	22.67	23.50	1.211	0.02	0.103	0.125	
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	23230	782	23.63	24.50	1.222	-0.18	0.071	0.087	
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 1	23230	782	22.67	23.50	1.211	0.06	0.059	0.071	
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	23230	782	23.28	24.50	1.324	-0.13	0.331	0.438	
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 1	23230	782	22.33	23.50	1.309	0.12	0.254	0.333	
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	23230	782	23.28	24.50	1.324	-0.1	0.062	0.082	
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 1	23230	782	22.33	23.50	1.309	0.03	0.050	0.065	
02	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	23230	782	23.28	24.50	1.324	0.06	0.604	0.800	
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 1	23230	782	22.33	23.50	1.309	0.1	0.470	0.615	
	LTE Band 13	10M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	23230	782	22.31	23.50	1.315	0.05	0.484	0.637	
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	23230	782	23.28	24.50	1.324	0.08	0.084	0.111	
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 1	23230	782	22.33	23.50	1.309	0.09	0.064	0.084	
<b>835MHz</b>																			
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 1	189	836.4	26.08	27.50	1.387	0.03	0.129	0.179	
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	DSI 1	189	836.4	26.08	27.50	1.387	0.1	0.087	0.121	
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	DSI 1	189	836.4	26.08	27.50	1.387	-0.04	0.167	0.232	
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	DSI 1	189	836.4	26.08	27.50	1.387	-0.15	0.084	0.116	
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 1	189	836.4	26.24	26.50	1.062	0.01	0.274	0.291	
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 1	189	836.4	26.24	26.50	1.062	0.05	0.048	0.051	
03	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 1	DSI 1	189	836.4	26.24	26.50	1.062	-0.09	0.515	0.547	
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 1	DSI 1	189	836.4	26.24	26.50	1.062	-0.19	0.064	0.068	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 1	4182	836.4	24.93	25.50	1.140	0.1	0.154	0.176	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 1	4182	836.4	24.93	25.50	1.140	0.15	0.115	0.131	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	4182	836.4	24.93	25.50	1.140	0.01	0.192	0.219	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 1	4182	836.4	24.93	25.50	1.140	0.11	0.076	0.087	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	4182	836.4	24.43	25.00	1.140	0.06	0.495	0.564	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	4182	836.4	24.43	25.00	1.140	0.01	0.089	0.101	
04	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4182	836.4	24.43	25.00	1.140	0.02	0.954	1.088	



**FCC SAR Test Report**

**Report No. : FA271606**

	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4132	826.4	24.41	25.00	1.146	0.12	0.786	0.900	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4233	846.6	24.32	25.00	1.169	-0.15	0.816	0.954	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	4182	836.4	24.43	25.00	1.140	-0.03	0.126	0.144	
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	26865	831.5	24.58	25.50	1.236	-0.1	0.065	0.080	
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	DSI 1	26865	831.5	23.50	24.50	1.259	0.03	0.101	0.127	
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	26865	831.5	24.58	25.50	1.236	0.03	0.046	0.057	
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	DSI 1	26865	831.5	23.50	24.50	1.259	0.05	0.074	0.093	
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	24.58	25.50	1.236	0.02	0.101	0.125	
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	23.50	24.50	1.259	0.03	0.131	0.165	
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	26865	831.5	24.58	25.50	1.236	-0.11	0.083	0.103	
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	DSI 1	26865	831.5	23.50	24.50	1.259	0.18	0.068	0.086	
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	26865	831.5	24.25	25.70	1.396	0.07	0.344	0.480	
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 1	DSI 1	26865	831.5	23.24	24.70	1.400	0.09	0.373	0.522	
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	26865	831.5	24.25	25.70	1.396	0.03	0.074	0.103	
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 1	DSI 1	26865	831.5	23.24	24.70	1.400	0.05	0.063	0.088	
05	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	26865	831.5	24.25	25.70	1.396	0.05	0.716	<b>1.000</b>	
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 1	DSI 1	26865	831.5	23.24	24.70	1.400	0.09	0.627	0.878	
	LTE Band 26	15M	QPSK	75	0	-	Left Cheek	0mm	Ant 1	DSI 1	26865	831.5	23.18	24.70	1.419	-0.15	0.662	0.939	
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	26865	831.5	24.25	25.70	1.396	-0.14	0.101	0.141	
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 1	DSI 1	26865	831.5	23.24	24.70	1.400	0.04	0.082	0.115	
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	167300	836.5	24.96	25.50	1.132	0.04	0.143	0.162	
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	167300	836.5	24.90	25.50	1.148	-0.07	0.137	0.157	
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	167300	836.5	24.96	25.50	1.132	0.1	0.098	0.111	
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	167300	836.5	24.90	25.50	1.148	0.09	0.081	0.093	
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	24.96	25.50	1.132	-0.05	0.187	0.212	
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	24.90	25.50	1.148	-0.05	0.181	0.208	
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	167300	836.5	24.96	25.50	1.132	0.06	0.085	0.096	
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	167300	836.5	24.90	25.50	1.148	0.07	0.079	0.091	
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.84	24.50	1.164	0.02	0.473	0.551	
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.83	24.50	1.167	0.08	0.454	0.530	
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 1	167300	836.5	23.84	24.50	1.164	0.15	0.087	0.101	
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 1	167300	836.5	23.83	24.50	1.167	0.07	0.077	0.090	
06	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.84	24.50	1.164	-0.09	0.893	<b>1.040</b>	
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.83	24.50	1.167	0.08	0.862	1.006	
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.47	24.00	1.130	-0.15	0.758	0.856	
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 1	167300	836.5	23.84	24.50	1.164	0.02	0.114	0.133	
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 1	167300	836.5	23.83	24.50	1.167	0.07	0.107	0.125	
	FR1 n5 for ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	167300	836.5	20.75	21.50	1.189	0.05	0.427	0.507	
<b>1750MHz</b>																			
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI 1	1413	1732.6	24.88	25.50	1.153	0.01	0.234	0.270	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI 1	1413	1732.6	24.88	25.50	1.153	0.13	0.084	0.097	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI 1	1413	1732.6	24.88	25.50	1.153	0.06	0.178	0.205	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI 1	1413	1732.6	24.88	25.50	1.153	-0.1	0.152	0.175	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	1413	1732.6	17.91	19.00	1.285	0.08	0.816	1.049	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	1312	1712.4	17.88	19.00	1.294	-0.01	0.665	0.861	
07	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	1513	1752.6	17.87	19.00	1.297	0.03	0.819	<b>1.062</b>	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 5	DSI 1	1413	1732.6	17.91	19.00	1.285	0.09	0.621	0.798	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 5	DSI 1	1413	1732.6	17.91	19.00	1.285	-0.12	0.423	0.544	
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 5	DSI 1	1413	1732.6	17.91	19.00	1.285	-0.06	0.434	0.558	
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	20175	1732.5	24.68	25.50	1.208	-0.07	0.229	0.277	
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	20175	1732.5	23.64	24.50	1.219	-0.09	0.182	0.222	
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	20175	1732.5	24.68	25.50	1.208	0.15	0.082	0.099	
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	20175	1732.5	23.64	24.50	1.219	-0.15	0.065	0.079	
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	20175	1732.5	24.68	25.50	1.208	0.03	0.211	0.255	
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	20175	1732.5	23.64	24.50	1.219	0.09	0.176	0.215	
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	20175	1732.5	24.68	25.50	1.208	0.1	0.113	0.136	

**Sporton International Inc. (Kunshan)**

TEL : 86-512-57900158 / FAX : 86-512-57900958

FCC ID : 2AFZZ129SG

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**FCC SAR Test Report**

**Report No. : FA271606**

	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	20175	1732.5	23.64	24.50	1.219	0.15	0.094	0.115
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.29	23.00	1.483	0.02	0.645	0.956
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.22	23.00	1.507	-0.02	0.654	0.985
	LTE Band 4	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.20	23.00	1.514	0.08	0.641	0.970
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.29	23.00	1.483	0.13	0.191	0.283
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.22	23.00	1.507	-0.01	0.199	0.300
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.29	23.00	1.483	-0.12	0.199	0.295
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.22	23.00	1.507	0.13	0.207	0.312
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.29	23.00	1.483	0.08	0.093	0.138
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.22	23.00	1.507	-0.18	0.093	0.140
	LTE Band 4 for ENDC&UL CA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	20175	1732.5	18.88	20.50	1.452	0.04	0.381	0.553
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	20175	1732.5	18.99	20.00	1.262	0.17	0.831	1.049
08	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	20175	1732.5	18.96	20.00	1.271	0.08	0.839	1.066
	LTE Band 4	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 5	DSI 1	20175	1732.5	18.88	20.00	1.294	0.02	0.814	1.053
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	20175	1732.5	18.99	20.00	1.262	0.09	0.616	0.777
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	20175	1732.5	18.96	20.00	1.271	0.12	0.621	0.789
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	20175	1732.5	18.99	20.00	1.262	0.11	0.472	0.596
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	20175	1732.5	18.96	20.00	1.271	-0.08	0.476	0.605
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	20175	1732.5	18.99	20.00	1.262	-0.1	0.468	0.591
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	20175	1732.5	18.96	20.00	1.271	0.16	0.464	0.590
	LTE Band 4 for ULCA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	20175	1732.5	16.15	17.00	1.216	0.05	0.445	0.541
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	132322	1745	23.02	24.00	1.253	-0.06	0.031	0.039
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 1	132322	1745	21.95	23.00	1.274	0.08	0.034	0.043
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	132322	1745	23.02	24.00	1.253	0.01	0.030	0.038
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 1	132322	1745	21.95	23.00	1.274	0.01	0.031	0.039
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	132322	1745	23.02	24.00	1.253	0.03	0.053	0.066
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 1	132322	1745	21.95	23.00	1.274	0.06	0.045	0.057
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	132322	1745	23.02	24.00	1.253	0.02	0.001	0.001
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 1	132322	1745	21.95	23.00	1.274	0.08	0.001	0.001
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	132322	1745	24.17	25.00	1.211	0.04	0.185	0.224
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	132322	1745	23.17	24.00	1.211	0.07	0.147	0.178
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	132322	1745	24.17	25.00	1.211	0.15	0.066	0.080
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	132322	1745	23.17	24.00	1.211	0.18	0.052	0.063
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	132322	1745	24.17	25.00	1.211	-0.14	0.170	0.206
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	132322	1745	23.17	24.00	1.211	0.14	0.142	0.172
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	132322	1745	24.17	25.00	1.211	-0.03	0.091	0.110
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	132322	1745	23.17	24.00	1.211	0.05	0.076	0.092
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	132322	1745	19.31	21.00	1.476	0.02	0.362	0.534
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	132322	1745	19.25	21.00	1.496	0.03	0.383	0.573
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	132322	1745	19.31	21.00	1.476	0.02	0.110	0.162
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	132322	1745	19.25	21.00	1.496	-0.12	0.117	0.175
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	132322	1745	19.31	21.00	1.476	-0.02	0.098	0.145
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	132322	1745	19.25	21.00	1.496	0.11	0.102	0.153
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	132322	1745	19.31	21.00	1.476	0.15	0.052	0.077
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	132322	1745	19.25	21.00	1.496	0.12	0.046	0.069
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	132322	1745	17.78	18.50	1.180	0.07	0.731	0.863
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	132072	1720	17.69	18.50	1.205	0.1	0.585	0.705
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	132572	1770	17.65	18.50	1.216	0.07	0.758	0.922
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	132322	1745	17.66	18.50	1.213	0.1	0.722	0.876
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	132072	1720	17.61	18.50	1.227	-0.11	0.616	0.756
09	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	132572	1770	17.60	18.50	1.230	0.19	0.773	0.951
	LTE Band 66	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 5	DSI 1	132322	1745	17.74	18.50	1.191	-0.08	0.742	0.884
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	132322	1745	17.78	18.50	1.180	0.04	0.531	0.627
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	132322	1745	17.66	18.50	1.213	0.02	0.545	0.661
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	132322	1745	17.78	18.50	1.180	0.05	0.406	0.479
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	132322	1745	17.66	18.50	1.213	0.02	0.415	0.504

**Sporton International Inc. (Kunshan)**

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	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	132322	1745	17.78	18.50	1.180	0.08	0.387	0.457	
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	132322	1745	17.66	18.50	1.213	-0.07	0.389	0.472	
	LTE Band 66 for ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	132572	1770	15.04	16.00	1.247	0.04	0.414	0.516	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	349000	1745	23.03	23.50	1.114	0.07	0.001	0.001	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	349000	1745	23.02	23.50	1.117	0.18	0.042	0.047	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	349000	1745	23.03	23.50	1.114	0.09	0.001	0.001	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	349000	1745	23.02	23.50	1.117	-0.07	0.029	0.032	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	349000	1745	23.03	23.50	1.114	0.08	0.045	0.050	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	349000	1745	23.02	23.50	1.117	0.01	0.059	0.066	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	349000	1745	23.03	23.50	1.114	-0.11	0.001	0.001	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	349000	1745	23.02	23.50	1.117	0.13	0.001	0.001	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI 1	349000	1745	24.45	25.00	1.135	-0.12	0.213	0.242	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI 1	349000	1745	24.40	25.00	1.148	0.03	0.221	0.254	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI 1	349000	1745	24.45	25.00	1.135	0.05	0.079	0.090	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI 1	349000	1745	24.40	25.00	1.148	0.03	0.089	0.102	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI 1	349000	1745	24.45	25.00	1.135	0.08	0.160	0.182	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI 1	349000	1745	24.40	25.00	1.148	0.04	0.150	0.172	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI 1	349000	1745	24.45	25.00	1.135	0.03	0.109	0.124	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI 1	349000	1745	24.40	25.00	1.148	-0.08	0.108	0.124	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	349000	1745	22.88	23.50	1.153	0.05	0.676	0.780	
10	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	349000	1745	22.74	23.50	1.191	-0.03	0.802	0.955	
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	349000	1745	21.89	22.50	1.151	0.06	0.649	0.747	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 1	349000	1745	22.88	23.50	1.153	0.16	0.195	0.225	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 1	349000	1745	22.74	23.50	1.191	-0.08	0.233	0.278	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	DSI 1	349000	1745	22.88	23.50	1.153	-0.15	0.196	0.226	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	DSI 1	349000	1745	22.74	23.50	1.191	0.06	0.246	0.293	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	DSI 1	349000	1745	22.88	23.50	1.153	0.07	0.082	0.095	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	DSI 1	349000	1745	22.74	23.50	1.191	0.04	0.096	0.114	
	FR1 n66 for ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	349000	1745	20.32	21.00	1.169	0.01	0.459	0.537	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	349000	1745	17.98	18.50	1.127	0.03	0.716	0.807	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	349000	1745	17.94	18.50	1.138	0.01	0.788	0.896	
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	349000	1745	17.89	18.50	1.151	0.09	0.771	0.887	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 1	349000	1745	17.98	18.50	1.127	0.02	0.584	0.658	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 1	349000	1745	17.94	18.50	1.138	0.15	0.627	0.713	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 1	349000	1745	17.98	18.50	1.127	0.06	0.393	0.443	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 1	349000	1745	17.94	18.50	1.138	0.05	0.430	0.489	
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 1	349000	1745	17.98	18.50	1.127	0.09	0.405	0.457	
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 1	349000	1745	17.94	18.50	1.138	0.12	0.438	0.498	
	FR1 n66 for ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	349000	1745	15.13	16.00	1.222	0.01	0.413	0.505	
<b>1900MHz</b>																			
	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Right Cheek	0mm	Ant 3	DSI 1	661	1880	30.01	30.50	1.119	0.01	0.072	0.081	
	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Right Tilted	0mm	Ant 3	DSI 1	661	1880	30.01	30.50	1.119	0.09	0.027	0.030	
	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Left Cheek	0mm	Ant 3	DSI 1	661	1880	30.01	30.50	1.119	0.05	0.044	0.049	
	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Left Tilted	0mm	Ant 3	DSI 1	661	1880	30.01	30.50	1.119	0.03	0.001	0.001	
11	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 5	DSI 1	661	1880	20.49	22.00	1.416	0.04	0.445	0.630	
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 5	DSI 1	661	1880	20.49	22.00	1.416	0.15	0.361	0.511	
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 5	DSI 1	661	1880	20.49	22.00	1.416	-0.06	0.239	0.338	
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 5	DSI 1	661	1880	20.49	22.00	1.416	0.08	0.237	0.336	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI 1	9400	1880	24.88	25.50	1.153	0.07	0.196	0.226	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI 1	9400	1880	24.88	25.50	1.153	0.06	0.108	0.125	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI 1	9400	1880	24.88	25.50	1.153	0.02	0.202	0.233	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI 1	9400	1880	24.88	25.50	1.153	-0.12	0.187	0.216	
12	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	9400	1880	18.46	19.50	1.271	0.07	0.641	0.814	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	9262	1852.4	18.39	19.50	1.291	-0.01	0.618	0.798	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	9538	1907.6	18.28	19.50	1.324	0.09	0.607	0.804	
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 5	DSI 1	9400	1880	18.46	19.50	1.271	-0.13	0.522	0.663	



	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 5	DSI 1	9400	1880	18.46	19.50	1.271	-0.12	0.354	0.450
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 5	DSI 1	9400	1880	18.46	19.50	1.271	0.03	0.355	0.451
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	18900	1880	24.64	25.50	1.219	0.04	0.198	0.241
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	18900	1880	23.69	24.50	1.205	-0.03	0.157	0.189
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	18900	1880	24.64	25.50	1.219	-0.13	0.121	0.147
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	18900	1880	23.69	24.50	1.205	0.08	0.084	0.101
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	18900	1880	24.64	25.50	1.219	0.04	0.192	0.234
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	18900	1880	23.69	24.50	1.205	-0.04	0.143	0.172
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	18900	1880	24.64	25.50	1.219	0.01	0.148	0.180
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	18900	1880	23.69	24.50	1.205	0.05	0.102	0.123
13	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	20.90	22.50	1.445	-0.17	0.616	0.890
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	20.88	22.50	1.452	-0.14	0.601	0.873
	LTE Band 2	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	20.84	22.50	1.466	0.09	0.600	0.879
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	20.90	22.50	1.445	0.02	0.169	0.244
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	20.88	22.50	1.452	0.06	0.170	0.247
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	18900	1880	20.90	22.50	1.445	-0.08	0.212	0.306
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	18900	1880	20.88	22.50	1.452	0.11	0.190	0.276
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	18900	1880	20.90	22.50	1.445	-0.01	0.071	0.103
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	18900	1880	20.88	22.50	1.452	-0.17	0.071	0.103
	LTE Band 2 for ENDC&UL CA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	19.15	20.50	1.365	0.09	0.401	0.547

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)	Reported 1g SAR (W/kg)	
<b>2600MHz</b>																					
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	21100	2535	22.84	24.00	1.306	-	-	0.06	0.160	0.209	
	LTE Band 7C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	DSI 1	21100+ 21298	2535+ 2554.8	22.00	24.00	1.585	-	-	0.09	0.122	0.193	
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 1	21100	2535	21.78	23.00	1.324	-	-	-0.16	0.129	0.171	
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	21100	2535	22.84	24.00	1.306	-	-	0.09	0.054	0.071	
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 1	21100	2535	21.78	23.00	1.324	-	-	-0.11	0.053	0.070	
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	21100	2535	22.84	24.00	1.306	-	-	0.02	0.074	0.097	
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 1	21100	2535	21.78	23.00	1.324	-	-	0.12	0.058	0.077	
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	21100	2535	22.84	24.00	1.306	-	-	-0.17	0.089	0.116	
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 1	21100	2535	21.78	23.00	1.324	-	-	-0.11	0.062	0.082	
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	21100	2535	24.91	25.50	1.146	-	-	0.05	0.217	0.249	
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	21100	2535	23.89	24.50	1.151	-	-	-0.11	0.176	0.203	
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	21100	2535	24.91	25.50	1.146	-	-	0.03	0.130	0.149	
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	21100	2535	23.89	24.50	1.151	-	-	0.1	0.116	0.133	
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	21100	2535	24.91	25.50	1.146	-	-	0.02	0.393	0.450	
	LTE Band 7C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 3	DSI 1	21100+ 21298	2535+ 2554.8	23.84	25.50	1.466	-	-	0.02	0.387	0.567	
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	21100	2535	23.89	24.50	1.151	-	-	-0.02	0.362	0.417	
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	21100	2535	24.91	25.50	1.146	-	-	0.01	0.146	0.167	
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	21100	2535	23.89	24.50	1.151	-	-	0.05	0.117	0.135	
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	18.52	19.50	1.253	-	-	0.05	0.666	0.835	
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	20850	2510	18.38	19.50	1.294	-	-	-0.12	0.660	0.854	
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	21350	2560	18.43	19.50	1.279	-	-	0.03	0.679	0.869	
	LTE Band 7C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	21350+ 21152	2560+ 2540.2	18.09	19.50	1.384	-	-	0.09	0.595	0.823	
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	18.46	19.50	1.271	-	-	0.06	0.673	0.855	
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	20850	2510	18.38	19.50	1.294	-	-	-0.05	0.660	0.854	
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	21350	2560	18.38	19.50	1.294	-	-	0.17	0.653	0.845	
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	18.45	19.50	1.274	-	-	0.07	0.655	0.834	
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	18.52	19.50	1.253	-	-	0.05	0.257	0.322	
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	18.46	19.50	1.271	-	-	0.18	0.255	0.324	
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	21100	2535	18.52	19.50	1.253	-	-	0.11	0.177	0.222	
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	21100	2535	18.46	19.50	1.271	-	-	-0.03	0.169	0.215	



	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	18.52	19.50	1.253	-	-	0.17	0.103	0.129
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	18.46	19.50	1.271	-	-	0.01	0.103	0.131
	LTE Band 7 for ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	21350	2560	16.32	17.50	1.312	-	-	0.02	0.412	0.541
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	19.41	20.00	1.146	-	-	-0.12	0.904	1.036
14	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	20850	2510	19.27	20.00	1.183	-	-	-0.14	0.912	1.079
	LTE Band 7C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 5	DSI 1	20850+ 21048	2510+ 2529.8	19.18	20.00	1.208	-	-	0.01	0.891	1.076
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	21350	2560	19.40	20.00	1.148	-	-	-0.1	0.897	1.030
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	19.36	20.00	1.159	-	-	0.04	0.897	1.039
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	20850	2510	19.32	20.00	1.169	-	-	-0.14	0.897	1.049
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21350	2560	19.25	20.00	1.189	-	-	0.15	0.889	1.057
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	19.21	20.00	1.199	-	-	0.03	0.872	1.046
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	19.41	20.00	1.146	-	-	-0.12	0.837	0.959
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	20850	2510	19.27	20.00	1.183	-	-	0.07	0.806	0.954
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	21350	2560	19.40	20.00	1.148	-	-	-0.19	0.874	1.003
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	19.36	20.00	1.159	-	-	-0.03	0.829	0.961
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	20850	2510	19.32	20.00	1.169	-	-	0.11	0.822	0.961
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	21350	2560	19.25	20.00	1.189	-	-	-0.17	0.867	1.030
	LTE Band 7	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	19.21	20.00	1.199	-	-	-0.06	0.829	0.994
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	21100	2535	19.41	20.00	1.146	-	-	0.07	0.441	0.505
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	21100	2535	19.36	20.00	1.159	-	-	0.12	0.443	0.513
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	21100	2535	19.41	20.00	1.146	-	-	0.11	0.502	0.575
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	21100	2535	19.36	20.00	1.159	-	-	0.11	0.498	0.577
	LTE Band 7C for ENDC&UL CA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	20850	2510	16.54	17.00	1.112	-	-	0.05	0.475	0.528
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	507000	2535	23.47	24.00	1.130	-	-	0.02	0.127	0.143
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	507000	2535	23.20	24.00	1.202	-	-	0.03	0.133	0.160
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	507000	2535	23.47	24.00	1.130	-	-	0.01	0.062	0.070
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	507000	2535	23.20	24.00	1.202	-	-	0.05	0.063	0.076
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	507000	2535	23.47	24.00	1.130	-	-	-0.09	0.064	0.072
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	507000	2535	23.20	24.00	1.202	-	-	0.16	0.065	0.078
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	507000	2535	23.47	24.00	1.130	-	-	-0.02	0.045	0.051
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	507000	2535	23.20	24.00	1.202	-	-	-0.04	0.056	0.067
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI 1	507000	2535	24.47	25.00	1.130	-	-	0.03	0.238	0.269
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI 1	507000	2535	24.42	25.00	1.143	-	-	-0.1	0.233	0.266
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI 1	507000	2535	24.47	25.00	1.130	-	-	-0.07	0.130	0.147
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI 1	507000	2535	24.42	25.00	1.143	-	-	0.07	0.122	0.139
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI 1	507000	2535	24.47	25.00	1.130	-	-	-0.06	0.374	0.423
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI 1	507000	2535	24.42	25.00	1.143	-	-	0.07	0.379	0.433
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI 1	507000	2535	24.47	25.00	1.130	-	-	0.06	0.167	0.189
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI 1	507000	2535	24.42	25.00	1.143	-	-	0.14	0.172	0.197
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	19.02	19.50	1.117	-	-	0.03	0.829	0.926
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	18.99	19.50	1.125	-	-	0.14	0.801	0.901
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	18.90	19.50	1.148	-	-	0.07	0.802	0.921
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	19.02	19.50	1.117	-	-	0.15	0.282	0.315
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	18.99	19.50	1.125	-	-	0.16	0.270	0.304
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	DSI 1	507000	2535	19.02	19.50	1.117	-	-	0.08	0.237	0.265
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	DSI 1	507000	2535	18.99	19.50	1.125	-	-	-0.04	0.229	0.258
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	DSI 1	507000	2535	19.02	19.50	1.117	-	-	0.07	0.123	0.137
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	DSI 1	507000	2535	18.99	19.50	1.125	-	-	0.05	0.122	0.137
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	17.87	18.50	1.156	-	-	0.08	0.683	0.790
15	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	17.81	18.50	1.172	-	-	0.01	0.931	1.091
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	17.79	18.50	1.178	-	-	0.07	0.707	0.833
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	17.87	18.50	1.156	-	-	0.02	0.633	0.732
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	17.81	18.50	1.172	-	-	0.09	0.615	0.721
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 1	507000	2535	17.87	18.50	1.156	-	-	-0.18	0.385	0.445
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 1	507000	2535	17.81	18.50	1.172	-	-	0.11	0.363	0.426





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	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	17.87	18.50	1.156	-	-	0.09	0.429	0.496
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	17.81	18.50	1.172	-	-	-0.04	0.408	0.478
	FR1 n7 for ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	14.81	15.50	1.172	-	-	0.06	0.455	0.533
16	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	38000	2595	21.20	22.50	1.349	62.9	1.006	0.01	0.801	1.087
	LTE Band 38C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 4	DSI 1	37901+38099	2585.1+2604.9	21.00	22.50	1.413	62.9	1.006	0.12	0.703	0.999
	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	37850	2580	21.06	22.50	1.393	62.9	1.006	-0.11	0.757	1.061
	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	38150	2610	21.11	22.50	1.377	62.9	1.006	0.08	0.762	1.056
	LTE Band 38	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	38000	2595	21.12	22.50	1.374	62.9	1.006	0.15	0.766	1.059
	LTE Band 38	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	37850	2580	21.01	22.50	1.409	62.9	1.006	0.04	0.758	1.075
	LTE Band 38	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	38150	2610	21.06	22.50	1.393	62.9	1.006	0.08	0.761	1.067
	LTE Band 38	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	38000	2595	21.09	22.50	1.384	62.9	1.006	0.13	0.764	1.063
	LTE Band 38	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	38000	2595	21.20	22.50	1.349	62.9	1.006	-0.02	0.296	0.402
	LTE Band 38	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	38000	2595	21.12	22.50	1.374	62.9	1.006	0.18	0.298	0.412
	LTE Band 38	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	38000	2595	21.20	22.50	1.349	62.9	1.006	0.05	0.223	0.303
	LTE Band 38	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	38000	2595	21.12	22.50	1.374	62.9	1.006	-0.06	0.232	0.321
	LTE Band 38	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	38000	2595	21.20	22.50	1.349	62.9	1.006	-0.15	0.126	0.171
	LTE Band 38	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	38000	2595	21.12	22.50	1.374	62.9	1.006	0.09	0.138	0.191
	LTE Band 38 for ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	38000	2595	16.88	18.00	1.294	62.9	1.006	0.05	0.421	0.548
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	40620	2593	22.72	23.50	1.197	62.9	1.006	0.02	0.092	0.111
	LTE Band 38C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	DSI 1	37901+38099	2585.1+2604.9	21.59	23.50	1.552	62.9	1.006	0.05	0.070	0.109
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 1	40620	2593	21.65	22.50	1.216	62.9	1.006	0.15	0.077	0.094
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	40620	2593	22.72	23.50	1.197	62.9	1.006	0.02	0.055	0.066
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 1	40620	2593	21.65	22.50	1.216	62.9	1.006	0.02	0.049	0.060
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	40620	2593	22.72	23.50	1.197	62.9	1.006	-0.06	0.052	0.063
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 1	40620	2593	21.65	22.50	1.216	62.9	1.006	0.19	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	40620	2593	22.72	23.50	1.197	62.9	1.006	-0.04	0.049	0.059
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 1	40620	2593	21.65	22.50	1.216	62.9	1.006	0.04	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	40620	2593	24.81	25.50	1.172	62.9	1.006	0.18	0.148	0.175
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	40620	2593	23.79	24.50	1.178	62.9	1.006	0.17	0.123	0.146
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	40620	2593	24.81	25.50	1.172	62.9	1.006	0.08	0.109	0.129
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	40620	2593	23.79	24.50	1.178	62.9	1.006	-0.04	0.077	0.091
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	40620	2593	24.81	25.50	1.172	62.9	1.006	0.02	0.236	0.278
	LTE Band 38C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 3	DSI 1	37901+38099	2585.1+2604.9	23.62	25.50	1.542	62.9	1.006	0.02	0.176	0.273
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	40620	2593	23.79	24.50	1.178	62.9	1.006	0.12	0.195	0.231
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	40620	2593	24.81	25.50	1.172	62.9	1.006	0.05	0.079	0.093
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	40620	2593	23.79	24.50	1.178	62.9	1.006	0.02	0.061	0.072
17	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	20.34	21.50	1.306	62.9	1.006	0.08	0.774	1.017
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	39750	2506	20.30	21.50	1.318	62.9	1.006	-0.02	0.727	0.964
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	40185	2549.5	20.23	21.50	1.340	62.9	1.006	-0.12	0.751	1.012
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	41055	2636.5	20.12	21.50	1.374	62.9	1.006	-0.07	0.727	1.005
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	41490	2680	20.15	21.50	1.365	62.9	1.006	0.18	0.739	1.014
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	20.21	21.50	1.346	62.9	1.006	0.06	0.744	1.007
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	39750	2506	20.15	21.50	1.365	62.9	1.006	-0.05	0.733	1.006
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	40185	2549.5	20.07	21.50	1.390	62.9	1.006	0.04	0.704	0.984
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	41055	2636.5	20.03	21.50	1.403	62.9	1.006	-0.17	0.717	1.012
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	41490	2680	20.05	21.50	1.396	62.9	1.006	-0.15	0.692	0.972
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	20.18	21.50	1.355	62.9	1.006	-0.06	0.744	1.014
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	20.34	21.50	1.306	62.9	1.006	-0.09	0.274	0.360
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	20.21	21.50	1.346	62.9	1.006	0.09	0.274	0.371
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	40620	2593	20.34	21.50	1.306	62.9	1.006	0.12	0.189	0.248
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	40620	2593	20.21	21.50	1.346	62.9	1.006	-0.11	0.217	0.294
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	40620	2593	20.34	21.50	1.306	62.9	1.006	0.1	0.114	0.150
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	40620	2593	20.21	21.50	1.346	62.9	1.006	0.14	0.115	0.156
	LTE Band 41 for ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	16.71	18.00	1.346	62.9	1.006	0.06	0.404	0.547
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	40620	2593	21.48	22.00	1.127	62.9	1.006	-0.1	0.821	0.931



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	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	39750	2506	21.31	22.00	1.172	62.9	1.006	0.1	0.807	0.952
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	40185	2549.5	21.43	22.00	1.140	62.9	1.006	0.06	0.745	0.855
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	41055	2636.5	21.41	22.00	1.146	62.9	1.006	-0.08	0.800	0.922
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	41490	2680	21.38	22.00	1.153	62.9	1.006	-0.06	0.856	0.993
	LTE Band 38C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	38150+37952	2610+2590.2	21.26	22.00	1.186	62.9	1.006	0.08	0.831	0.991
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	40620	2593	21.42	22.00	1.143	62.9	1.006	-0.09	0.800	0.920
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	39750	2506	21.23	22.00	1.194	62.9	1.006	0.05	0.779	0.936
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	40185	2549.5	21.24	22.00	1.191	62.9	1.006	-0.05	0.823	0.986
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	41055	2636.5	21.17	22.00	1.211	62.9	1.006	0.14	0.807	0.983
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	41490	2680	21.26	22.00	1.186	62.9	1.006	-0.03	0.828	0.988
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 5	DSI 1	40620	2593	21.37	22.00	1.156	62.9	1.006	0.02	0.793	0.922
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	40620	2593	21.48	22.00	1.127	62.9	1.006	0.04	0.779	0.883
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	39750	2506	21.31	22.00	1.172	62.9	1.006	0.16	0.710	0.837
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	40185	2549.5	21.43	22.00	1.140	62.9	1.006	0.08	0.807	0.926
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	41055	2636.5	21.41	22.00	1.146	62.9	1.006	-0.03	0.759	0.875
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	41490	2680	21.38	22.00	1.153	62.9	1.006	0.17	0.807	0.936
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	40620	2593	21.42	22.00	1.143	62.9	1.006	0.01	0.766	0.881
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	39750	2506	21.23	22.00	1.194	62.9	1.006	0.12	0.717	0.861
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	40185	2549.5	21.24	22.00	1.191	62.9	1.006	0.13	0.793	0.950
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	41055	2636.5	21.17	22.00	1.211	62.9	1.006	0.02	0.745	0.907
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	41490	2680	21.26	22.00	1.186	62.9	1.006	0.04	0.779	0.929
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 5	DSI 1	40620	2593	21.37	22.00	1.156	62.9	1.006	0.08	0.766	0.891
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	40620	2593	21.48	22.00	1.127	62.9	1.006	-0.08	0.383	0.434
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	40620	2593	21.42	22.00	1.143	62.9	1.006	-0.06	0.371	0.427
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	40620	2593	21.48	22.00	1.127	62.9	1.006	0.03	0.397	0.450
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	40620	2593	21.42	22.00	1.143	62.9	1.006	0.06	0.426	0.490
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 1	518598	2592.99	22.98	24.00	1.265	-	-	0.06	0.156	0.197
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 1	518598	2592.99	22.93	24.00	1.279	-	-	-0.15	0.120	0.154
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI 1	518598	2592.99	22.98	24.00	1.265	-	-	0.08	0.075	0.095
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI 1	518598	2592.99	22.93	24.00	1.279	-	-	0.07	0.043	0.055
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 1	518598	2592.99	22.98	24.00	1.265	-	-	0.09	0.078	0.099
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 1	518598	2592.99	22.93	24.00	1.279	-	-	0.07	0.063	0.081
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI 1	518598	2592.99	22.98	24.00	1.265	-	-	0.04	0.063	0.080
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI 1	518598	2592.99	22.93	24.00	1.279	-	-	0.19	0.053	0.068
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 1	518598	2592.99	24.39	25.00	1.151	-	-	0.03	0.179	0.206
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 1	518598	2592.99	24.23	25.00	1.194	-	-	0.08	0.175	0.209
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	518598	2592.99	24.39	25.00	1.151	-	-	0.01	0.110	0.127
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	518598	2592.99	24.23	25.00	1.194	-	-	0.09	0.128	0.153
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	518598	2592.99	24.39	25.00	1.151	-	-	0.05	0.317	0.365
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	518598	2592.99	24.23	25.00	1.194	-	-	0.04	0.288	0.344
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	518598	2592.99	24.39	25.00	1.151	-	-	-0.17	0.128	0.147
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	518598	2592.99	24.23	25.00	1.194	-	-	0.05	0.108	0.129
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	19.08	20.00	1.236	-	-	0.18	0.640	0.791
18	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	19.03	20.00	1.250	-	-	0.09	0.850	1.063
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	19.01	20.00	1.256	-	-	0.06	0.741	0.931
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	19.08	20.00	1.236	-	-	0.06	0.212	0.262
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	19.03	20.00	1.250	-	-	-0.13	0.311	0.389
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	518598	2592.99	19.08	20.00	1.236	-	-	0.02	0.175	0.216
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	518598	2592.99	19.03	20.00	1.250	-	-	0.03	0.240	0.300
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	518598	2592.99	19.08	20.00	1.236	-	-	0.03	0.090	0.111
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	518598	2592.99	19.03	20.00	1.250	-	-	-0.11	0.127	0.159
	FR1 n41 for ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	15.97	17.00	1.268	-	-	-0.07	0.404	0.512
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	17.57	18.00	1.104	-	-	0.07	0.812	0.897
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	17.55	18.00	1.109	-	-	0.04	0.677	0.751
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	17.48	18.00	1.127	-	-	0.05	0.704	0.794
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	17.57	18.00	1.104	-	-	0.11	0.650	0.718

Sporton International Inc. (Kunshan)

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FCC ID : 2AFZZ129SG

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FCC SAR Test Report

Report No. : FA271606

Table with columns for device model (FR1 n41, LTE Band 42, FR1 n77), power (100M, 20M), modulation (QPSK), and various SAR test parameters including frequency, distance, antenna, and SAR values.



FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 1	633334	3500.01	23.09	24.00	1.233	-	-	-0.01	0.057	0.070
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 1	633334	3500.01	23.06	24.00	1.242	-	-	-0.02	0.054	0.067
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI 1	633334	3500.01	23.09	24.00	1.233	-	-	-0.1	0.056	0.069
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI 1	633334	3500.01	23.06	24.00	1.242	-	-	0.01	0.055	0.068
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 1	633334	3500.01	23.09	24.00	1.233	-	-	0.09	0.001	0.001
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 1	633334	3500.01	23.06	24.00	1.242	-	-	-0.07	0.001	0.001
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI 1	633334	3500.01	23.09	24.00	1.233	-	-	0.05	0.001	0.001
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI 1	633334	3500.01	23.06	24.00	1.242	-	-	0.17	0.001	0.001
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 1	656000	3840	15.17	15.50	1.079	-	-	0.09	0.417	0.450
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 1	656000	3840	15.15	15.50	1.084	-	-	0.03	0.396	0.429
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 9	DSI 1	656000	3840	15.17	15.50	1.079	-	-	0.07	0.326	0.352
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 9	DSI 1	656000	3840	15.15	15.50	1.084	-	-	0.16	0.289	0.313
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	656000	3840	15.17	15.50	1.079	-	-	0.06	0.121	0.131
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	656000	3840	15.15	15.50	1.084	-	-	-0.14	0.116	0.126
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 9	DSI 1	656000	3840	15.17	15.50	1.079	-	-	-0.03	0.102	0.110
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 9	DSI 1	656000	3840	15.15	15.50	1.084	-	-	0.04	0.093	0.101
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 1	633334	3500.01	15.20	15.50	1.072	-	-	0.01	0.327	0.350
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 1	633334	3500.01	15.14	15.50	1.086	-	-	0.07	0.434	0.472
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 9	DSI 1	633334	3500.01	15.20	15.50	1.072	-	-	0.09	0.266	0.285
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 9	DSI 1	633334	3500.01	15.14	15.50	1.086	-	-	0.05	0.345	0.375
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	633334	3500.01	15.20	15.50	1.072	-	-	-0.14	0.079	0.085
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	633334	3500.01	15.14	15.50	1.086	-	-	0.07	0.107	0.116
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 9	DSI 1	633334	3500.01	15.20	15.50	1.072	-	-	0.08	0.074	0.079
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 9	DSI 1	633334	3500.01	15.14	15.50	1.086	-	-	-0.11	0.114	0.124
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	DSI 1	656000	3840	24.73	25.70	1.250	-	-	-0.07	0.416	0.520
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	DSI 1	656000	3840	24.67	25.70	1.268	-	-	0.18	0.372	0.472
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 10	DSI 1	656000	3840	24.73	25.70	1.250	-	-	-0.07	0.177	0.221
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 10	DSI 1	656000	3840	24.67	25.70	1.268	-	-	-0.12	0.139	0.176
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	DSI 1	656000	3840	24.73	25.70	1.250	-	-	0.06	0.116	0.145
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	DSI 1	656000	3840	24.67	25.70	1.268	-	-	0.08	0.079	0.100
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 10	DSI 1	656000	3840	24.73	25.70	1.250	-	-	0.02	0.061	0.076
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 10	DSI 1	656000	3840	24.67	25.70	1.268	-	-	-0.18	0.052	0.066
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	DSI 1	633334	3500.01	25.09	25.70	1.151	-	-	0.06	0.478	0.550
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	DSI 1	633334	3500.01	24.91	25.70	1.199	-	-	0.11	0.457	0.548
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 10	DSI 1	633334	3500.01	25.09	25.70	1.151	-	-	-0.12	0.436	0.502
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 10	DSI 1	633334	3500.01	24.91	25.70	1.199	-	-	0.04	0.360	0.432
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	DSI 1	633334	3500.01	25.09	25.70	1.151	-	-	0.03	0.170	0.196
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	DSI 1	633334	3500.01	24.91	25.70	1.199	-	-	0.09	0.149	0.179
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 10	DSI 1	633334	3500.01	25.09	25.70	1.151	-	-	0.03	0.210	0.242
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 10	DSI 1	633334	3500.01	24.91	25.70	1.199	-	-	0.07	0.189	0.227
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 11	DSI 1	656000	3840	15.37	16.20	1.211	-	-	0.02	0.247	0.299
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 11	DSI 1	656000	3840	15.33	16.20	1.222	-	-	-0.09	0.231	0.282
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 11	DSI 1	656000	3840	15.37	16.20	1.211	-	-	0.04	0.288	0.349
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 11	DSI 1	656000	3840	15.33	16.20	1.222	-	-	-0.05	0.270	0.330
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	656000	3840	15.37	16.20	1.211	-	-	0.03	0.338	0.409
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	656000	3840	15.33	16.20	1.222	-	-	-0.1	0.346	0.423
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	656000	3840	15.37	16.20	1.211	-	-	-0.06	0.391	0.473
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	656000	3840	15.33	16.20	1.222	-	-	-0.04	0.387	0.473
FR1 n77 for ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	656000	3840	13.22	14.20	1.253	-	-	0.05	0.240	0.301
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.47	16.20	1.183	-	-	0.02	0.475	0.562
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.45	16.20	1.189	-	-	0.08	0.449	0.534
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 11	DSI 1	633334	3500.01	15.47	16.20	1.183	-	-	0.03	0.603	0.713
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 11	DSI 1	633334	3500.01	15.45	16.20	1.189	-	-	0.07	0.532	0.632
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.47	16.20	1.183	-	-	-0.18	0.694	0.821
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.45	16.20	1.189	-	-	-0.11	0.601	0.714
FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.39	16.20	1.205	-	-	0.03	0.581	0.700





FCC SAR Test Report

Report No. : FA271606

Table with 21 columns (ID, Model, Power, Modulation, Channels, Frequency, Position, Distance, Antenna, Polarization, Power Density, etc.) and multiple rows of test data.

Sporton International Inc. (Kunshan)

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FCC ID : 2AFZZ129SG

Issued Date : Sep. 19, 2022

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**FCC SAR Test Report**

**Report No. : FA271606**

	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 10	DSI 1	633334	3500.01	23.56	24.50	1.242	-	-	0.16	0.337	0.418
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 10	DSI 1	633334	3500.01	23.48	24.50	1.265	-	-	-0.08	0.270	0.341
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	DSI 1	633334	3500.01	23.56	24.50	1.242	-	-	0.09	0.136	0.169
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	DSI 1	633334	3500.01	23.48	24.50	1.265	-	-	0.08	0.110	0.139
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 10	DSI 1	633334	3500.01	23.56	24.50	1.242	-	-	0.04	0.153	0.190
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 10	DSI 1	633334	3500.01	23.48	24.50	1.265	-	-	-0.04	0.140	0.177
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	DSI 1	633334	3500.01	26.36	27.50	1.300	50	1.000	0.17	0.284	0.369
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 11	DSI 1	650000	3750	15.21	16.50	1.346	-	-	0.03	0.289	0.389
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 11	DSI 1	650000	3750	15.18	16.50	1.355	-	-	0.15	0.277	0.375
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 11	DSI 1	650000	3750	15.21	16.50	1.346	-	-	0.01	0.358	0.482
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 11	DSI 1	650000	3750	15.18	16.50	1.355	-	-	0.16	0.339	0.459
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	650000	3750	15.21	16.50	1.346	-	-	-0.09	0.399	0.537
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	650000	3750	15.18	16.50	1.355	-	-	-0.05	0.363	0.492
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	650000	3750	15.21	16.50	1.346	-	-	0.07	0.476	0.641
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	650000	3750	15.18	16.50	1.355	-	-	-0.17	0.442	0.599
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	650000	3750	18.29	19.50	1.321	50	1.000	0.01	0.490	0.647
	FR1 n78 PC3 for ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	650000	3750	13.35	14.50	1.303	-	-	0.05	0.269	0.351
	FR1 n78 PC2 for ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	650000	3750	16.25	17.50	1.334	50	1.000	0.08	0.275	0.367
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.69	16.50	1.205	-	-	0.07	0.413	0.498
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.63	16.50	1.222	-	-	0.08	0.374	0.457
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 11	DSI 1	633334	3500.01	15.69	16.50	1.205	-	-	0.01	0.509	0.613
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 11	DSI 1	633334	3500.01	15.63	16.50	1.222	-	-	0.11	0.458	0.560
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.69	16.50	1.205	-	-	0.07	0.574	0.692
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 11	DSI 1	633334	3500.01	15.63	16.50	1.222	-	-	0.09	0.497	0.607
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	633334	3500.01	15.69	16.50	1.205	-	-	0.04	0.682	0.822
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	633334	3500.01	15.63	16.50	1.222	-	-	0.09	0.608	0.743
	FR1 n78 PC3	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	633334	3500.01	15.58	16.50	1.236	-	-	0.01	0.551	0.681
21	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	633334	3500.01	18.65	19.50	1.216	50	1.000	0.01	0.691	0.840
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	633334	3500.01	18.63	19.50	1.222	50	1.000	0.09	0.631	0.771
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	633334	3500.01	18.61	19.50	1.227	50	1.000	-0.05	0.628	0.771
	FR1 n78 PC3 for ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	633334	3500.01	13.50	14.50	1.259	-	-	0.01	0.393	0.495
	FR1 n78 PC2 for ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 11	DSI 1	633334	3500.01	16.54	17.50	1.247	50	1.000	0.02	0.403	0.503



Plot No.	Band	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)	Reported 1g SAR (W/kg)
<b>WLAN&amp;BT</b>																
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 15+16	Standalone	11	2462	17.63	19.50	1.538	97.86	1.022	-0.13	0.143	0.225
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 15+16	Standalone	11	2462	17.63	19.50	1.538	97.86	1.022	0.01	0.139	0.219
22	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 15+16	Standalone	11	2462	17.63	19.50	1.538	97.86	1.022	-0.01	0.493	<b>0.775</b>
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 15+16	Standalone	11	2462	17.63	19.50	1.538	97.86	1.022	0.18	0.348	0.547
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 15+16	Simultaneous	11	2462	15.21	17.00	1.510	97.86	1.022	0.02	0.304	0.469
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 15	Standalone	39	2441	14.70	16.00	1.349	77.09	1.081	0.02	0.063	0.092
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 15	Standalone	39	2441	14.70	16.00	1.349	77.09	1.081	0.14	0.072	0.105
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 15	Standalone	39	2441	14.70	16.00	1.349	77.09	1.081	0.01	0.138	0.201
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 15	Standalone	39	2441	14.70	16.00	1.349	77.09	1.081	0.14	0.129	0.188
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 16	Standalone	39	2441	15.28	16.00	1.180	76.75	1.085	-0.09	0.044	0.056
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 16	Standalone	39	2441	15.28	16.00	1.180	76.75	1.085	-0.1	0.038	0.049
23	Bluetooth	1Mbps	Left Cheek	0mm	Ant 16	Standalone	39	2441	15.28	16.00	1.180	76.75	1.085	-0.12	0.199	<b>0.255</b>
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 16	Standalone	39	2441	15.28	16.00	1.180	76.75	1.085	0.06	0.121	0.155
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 16+17	Standalone	58	5290	15.85	17.50	1.462	100	1.000	0.05	0.397	0.580
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 16+17	Standalone	58	5290	15.85	17.50	1.462	100	1.000	0.01	0.488	0.714
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 16+17	Standalone	58	5290	15.85	17.50	1.462	100	1.000	0.12	0.630	0.921
24	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 16+17	Standalone	58	5290	15.85	17.50	1.462	100	1.000	-0.01	0.712	<b>1.041</b>
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 16+17	Simultaneous	58	5290	11.72	13.50	1.507	100	1.000	0.01	0.165	0.249
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 16+17	Standalone	106	5530	14.35	16.00	1.462	100	1.000	0.01	0.238	0.348
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 16+17	Standalone	106	5530	14.35	16.00	1.462	100	1.000	-0.09	0.318	0.465
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 16+17	Standalone	106	5530	14.35	16.00	1.462	100	1.000	0.05	0.345	0.504
25	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 16+17	Standalone	106	5530	14.35	16.00	1.462	100	1.000	-0.02	0.442	<b>0.646</b>
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 16+17	Simultaneous	106	5530	10.34	12.00	1.466	100	1.000	0.01	0.164	0.240
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 16+17	Standalone	155	5775	16.12	18.00	1.542	100	1.000	-0.14	0.286	0.441
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 16+17	Standalone	155	5775	16.12	18.00	1.542	100	1.000	-0.13	0.366	0.564
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 16+17	Standalone	155	5775	16.12	18.00	1.542	100	1.000	-0.07	0.400	0.617
26	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 16+17	Standalone	155	5775	16.12	18.00	1.542	100	1.000	0.01	0.456	<b>0.703</b>
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 16+17	Simultaneous	155	5775	12.18	14.00	1.521	100	1.000	0.09	0.157	0.239





15.2 Hotspot SAR

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	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
<b>750MHz</b>																		
	LTE Band 12	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 5	23095	707.5	24.74	25.50	1.191	-0.07	0.145	0.173
	LTE Band 12	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI 5	23095	707.5	23.72	24.50	1.197	0.06	0.123	0.147
	LTE Band 12	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	23095	707.5	24.74	25.50	1.191	0.14	0.191	0.228
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 5	23095	707.5	23.72	24.50	1.197	0.07	0.148	0.177
	LTE Band 12	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 5	23095	707.5	24.74	25.50	1.191	-0.11	0.243	0.289
	LTE Band 12	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI 5	23095	707.5	23.72	24.50	1.197	0.02	0.212	0.254
	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	23095	707.5	24.74	25.50	1.191	0.09	0.085	0.101
	LTE Band 12	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI 5	23095	707.5	23.72	24.50	1.197	0.11	0.072	0.086
	LTE Band 12	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 5	23095	707.5	24.31	25.50	1.315	-0.03	0.361	0.475
	LTE Band 12	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 5	23095	707.5	23.27	24.50	1.327	-0.17	0.283	0.376
	LTE Band 12	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 5	23095	707.5	24.31	25.50	1.315	0.1	0.459	0.604
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 5	23095	707.5	23.27	24.50	1.327	0.07	0.363	0.482
27	LTE Band 12	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 5	23095	707.5	24.31	25.50	1.315	-0.02	0.743	<b>0.977</b>
	LTE Band 12	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 5	23095	707.5	23.27	24.50	1.327	0.17	0.585	0.777
	LTE Band 12	10M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 5	23095	707.5	23.22	24.50	1.343	0.04	0.565	0.759
	LTE Band 12 for ENDC	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 5	23095	707.5	21.79	23.00	1.321	0.01	0.255	0.337
	LTE Band 12 for ENDC	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 5	23095	707.5	21.79	23.00	1.321	0.08	0.403	0.532
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 5	23230	782	23.63	24.50	1.222	-0.11	0.160	0.195
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI 5	23230	782	22.67	23.50	1.211	0.05	0.135	0.163
	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	23230	782	23.63	24.50	1.222	-0.07	0.179	0.219
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 5	23230	782	22.67	23.50	1.211	-0.12	0.145	0.176
	LTE Band 13	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 5	23230	782	23.63	24.50	1.222	-0.12	0.160	0.195
	LTE Band 13	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI 5	23230	782	22.67	23.50	1.211	0.17	0.113	0.137
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	23230	782	23.63	24.50	1.222	0.05	0.086	0.105
	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI 5	23230	782	22.67	23.50	1.211	0.06	0.067	0.081
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 5	23230	782	23.28	24.50	1.324	0.06	0.303	0.401
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 5	23230	782	22.33	23.50	1.309	-0.15	0.246	0.322
	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 5	23230	782	23.28	24.50	1.324	0.02	0.407	0.539
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 5	23230	782	22.33	23.50	1.309	-0.1	0.317	0.415
28	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 5	23230	782	23.28	24.50	1.324	0.02	0.619	<b>0.820</b>
	LTE Band 13	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 5	23230	782	22.33	23.50	1.309	-0.02	0.474	0.621
	LTE Band 13	10M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 5	23230	782	22.31	23.50	1.315	-0.02	0.431	0.567
<b>835MHz</b>																		
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 0	DSI 5	189	836.4	26.08	27.50	1.387	0.1	0.222	0.308
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 0	DSI 5	189	836.4	26.08	27.50	1.387	0.1	0.230	0.319
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Side	10mm	Ant 0	DSI 5	189	836.4	26.08	27.50	1.387	-0.05	0.181	0.251
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 0	DSI 5	189	836.4	26.08	27.50	1.387	0.19	0.131	0.182
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 1	DSI 5	189	836.4	26.24	26.50	1.062	-0.03	0.304	0.323
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 1	DSI 5	189	836.4	26.24	26.50	1.062	0.08	0.421	0.447
29	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 1	DSI 5	189	836.4	26.24	26.50	1.062	0.02	0.652	<b>0.692</b>
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 5	4182	836.4	24.93	25.50	1.140	-0.12	0.345	0.393
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 5	4182	836.4	24.93	25.50	1.140	-0.04	0.372	0.424
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 5	4182	836.4	24.93	25.50	1.140	-0.11	0.287	0.327
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 5	4182	836.4	24.93	25.50	1.140	-0.13	0.202	0.230
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 5	4182	836.4	23.63	24.00	1.089	0.1	0.392	0.427
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 5	4182	836.4	23.63	24.00	1.089	-0.15	0.507	0.552
30	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 5	4182	836.4	23.63	24.00	1.089	0.04	0.721	<b>0.785</b>
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 5	4132	826.4	23.60	24.00	1.096	0.01	0.712	0.781
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 5	4233	846.6	23.45	24.00	1.135	-0.07	0.610	0.692
	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 5	26865	831.5	24.58	25.50	1.236	0.05	0.153	0.189
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 0	DSI 5	26865	831.5	23.50	24.50	1.259	0.08	0.204	0.257



	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	26865	831.5	24.58	25.50	1.236	-0.14	0.168	0.208
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 0	DSI 5	26865	831.5	23.50	24.50	1.259	-0.03	0.218	0.274
	LTE Band 26	15M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 5	26865	831.5	24.58	25.50	1.236	-0.13	0.128	0.158
	LTE Band 26	15M	QPSK	36	0	-	Right Side	10mm	Ant 0	DSI 5	26865	831.5	23.50	24.50	1.259	0.15	0.169	0.213
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	26865	831.5	24.58	25.50	1.236	0.18	0.089	0.110
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	10mm	Ant 0	DSI 5	26865	831.5	23.50	24.50	1.259	0.05	0.121	0.152
	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 5	26865	831.5	24.25	25.70	1.396	0.11	0.386	0.539
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 1	DSI 5	26865	831.5	23.24	24.70	1.400	-0.13	0.305	0.427
	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 5	26865	831.5	24.25	25.70	1.396	0.15	0.491	0.686
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 1	DSI 5	26865	831.5	23.24	24.70	1.400	0.06	0.397	0.556
31	LTE Band 26	15M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 5	26865	831.5	24.25	25.70	1.396	-0.09	0.731	1.021
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 1	DSI 5	26865	831.5	23.24	24.70	1.400	-0.11	0.579	0.810
	LTE Band 26	15M	QPSK	75	0	-	Left Side	10mm	Ant 1	DSI 5	26865	831.5	23.18	24.70	1.419	-0.11	0.553	0.785
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 5	167300	836.5	24.96	25.50	1.132	-0.14	0.350	0.396
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 5	167300	836.5	24.90	25.50	1.148	-0.19	0.309	0.355
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 5	167300	836.5	24.96	25.50	1.132	-0.09	0.381	0.431
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 5	167300	836.5	24.90	25.50	1.148	0.06	0.316	0.363
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 5	167300	836.5	24.96	25.50	1.132	0.06	0.266	0.301
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 5	167300	836.5	24.90	25.50	1.148	0.18	0.224	0.257
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI 5	167300	836.5	24.96	25.50	1.132	0.16	0.227	0.257
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI 5	167300	836.5	24.90	25.50	1.148	0.03	0.189	0.217
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 5	167300	836.5	23.45	24.00	1.135	0.05	0.365	0.414
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 5	167300	836.5	23.24	24.00	1.191	0.02	0.332	0.395
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 5	167300	836.5	23.45	24.00	1.135	-0.14	0.453	0.514
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 5	167300	836.5	23.24	24.00	1.191	-0.1	0.420	0.500
32	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 5	167300	836.5	23.45	24.00	1.135	0.09	0.734	0.833
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 5	167300	836.5	23.24	24.00	1.191	0.04	0.620	0.739
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 5	167300	836.5	23.23	24.00	1.194	-0.04	0.637	0.761
	FR1 n5 for ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 5	167300	836.5	20.75	21.50	1.189	0.01	0.399	0.474
1750MHz																		
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 3	DSI 5	1413	1732.6	23.41	24.00	1.146	-0.06	0.568	0.651
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 3	DSI 5	1312	1712.4	23.33	24.00	1.167	-0.1	0.552	0.644
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 3	DSI 5	1513	1752.6	23.40	24.00	1.148	0.08	0.571	0.656
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 3	DSI 5	1413	1732.6	23.41	24.00	1.146	-0.1	0.583	0.668
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 3	DSI 5	1312	1712.4	23.33	24.00	1.167	0.03	0.541	0.631
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 3	DSI 5	1513	1752.6	23.40	24.00	1.148	0.02	0.623	0.715
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 3	DSI 5	1413	1732.6	23.41	24.00	1.146	0.08	0.187	0.214
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 3	DSI 5	1413	1732.6	23.41	24.00	1.146	0.11	0.837	0.959
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 3	DSI 5	1312	1712.4	23.33	24.00	1.167	-0.08	0.777	0.907
33	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 3	DSI 5	1513	1752.6	23.40	24.00	1.148	0.02	0.874	1.003
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 5	DSI 5	1413	1732.6	17.91	19.00	1.285	0.02	0.110	0.141
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 5	DSI 5	1413	1732.6	17.91	19.00	1.285	-0.19	0.153	0.197
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 5	DSI 5	1413	1732.6	17.91	19.00	1.285	0.02	0.071	0.091
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 5	DSI 5	1413	1732.6	17.91	19.00	1.285	-0.11	0.159	0.204
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 5	20175	1732.5	21.29	23.00	1.483	0.09	0.070	0.104
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 5	20175	1732.5	21.22	23.00	1.507	0.02	0.071	0.107
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 5	20175	1732.5	21.29	23.00	1.483	0.06	0.124	0.184
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 5	20175	1732.5	21.22	23.00	1.507	-0.06	0.126	0.190
	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 5	20175	1732.5	21.29	23.00	1.483	-0.18	0.160	0.237
34	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 5	20175	1732.5	21.22	23.00	1.507	0.01	0.183	0.276
	LTE Band 4	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 5	20175	1732.5	21.29	23.00	1.483	-0.12	0.001	0.001
	LTE Band 4	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 5	20175	1732.5	21.22	23.00	1.507	0.08	0.001	0.002
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 5	20175	1732.5	18.99	20.00	1.262	0.04	0.137	0.173
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 5	20175	1732.5	18.96	20.00	1.271	0.17	0.139	0.177
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 5	20175	1732.5	18.99	20.00	1.262	0.09	0.163	0.206
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 5	20175	1732.5	18.96	20.00	1.271	0.09	0.162	0.206



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	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI 5	20175	1732.5	18.99	20.00	1.262	0.06	0.047	0.059
	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 5	20175	1732.5	18.96	20.00	1.271	0.12	0.049	0.062
	LTE Band 4	20M	QPSK	1	0	-	Top Side	10mm	Ant 5	DSI 5	20175	1732.5	18.99	20.00	1.262	0.06	0.174	0.220
	LTE Band 4	20M	QPSK	50	0	-	Top Side	10mm	Ant 5	DSI 5	20175	1732.5	18.96	20.00	1.271	0.02	0.181	0.230
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 5	132322	1745	23.02	24.00	1.253	0.13	0.225	0.282
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI 5	132322	1745	21.95	23.00	1.274	-0.12	0.192	0.245
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	132322	1745	23.02	24.00	1.253	0.17	0.218	0.273
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI 5	132322	1745	21.95	23.00	1.274	-0.17	0.173	0.220
	LTE Band 66	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 5	132322	1745	23.02	24.00	1.253	0.01	0.233	0.292
	LTE Band 66	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI 5	132322	1745	21.95	23.00	1.274	-0.03	0.191	0.243
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	132322	1745	23.02	24.00	1.253	-0.01	0.161	0.202
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI 5	132322	1745	21.95	23.00	1.274	0.08	0.129	0.164
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 5	132322	1745	22.67	23.50	1.211	-0.11	0.507	0.614
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 5	132322	1745	22.61	23.50	1.227	-0.13	0.385	0.473
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 5	132322	1745	22.67	23.50	1.211	0.03	0.540	0.654
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 5	132322	1745	22.61	23.50	1.227	0.17	0.439	0.539
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI 5	132322	1745	22.67	23.50	1.211	0.08	0.172	0.208
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI 5	132322	1745	22.61	23.50	1.227	0.08	0.126	0.155
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 3	DSI 5	132322	1745	22.67	23.50	1.211	0.02	0.776	0.939
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 3	DSI 5	132072	1720	22.51	23.50	1.256	0.05	0.703	0.883
35	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 3	DSI 5	132572	1770	22.41	23.50	1.285	0.01	0.802	<b>1.031</b>
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 3	DSI 5	132322	1745	22.61	23.50	1.227	0.07	0.652	0.800
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 3	DSI 5	132072	1720	22.47	23.50	1.268	0.19	0.587	0.744
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 3	DSI 5	132572	1770	22.53	23.50	1.250	0.02	0.651	0.814
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 3	DSI 5	132322	1745	22.58	23.50	1.236	-0.08	0.644	0.796
	LTE Band 66 for ENDC	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 3	DSI 5	132572	1770	20.08	21.00	1.236	0.01	0.428	0.529
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 5	132322	1745	19.31	21.00	1.476	0.12	0.058	0.086
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 5	132322	1745	19.25	21.00	1.496	-0.04	0.060	0.090
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 5	132322	1745	19.31	21.00	1.476	-0.08	0.103	0.152
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 5	132322	1745	19.25	21.00	1.496	0.09	0.101	0.151
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 5	132322	1745	19.31	21.00	1.476	-0.15	0.135	0.199
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 5	132322	1745	19.25	21.00	1.496	0.11	0.131	0.196
	LTE Band 66	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 5	132322	1745	19.31	21.00	1.476	-0.06	0.001	0.001
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 5	132322	1745	19.25	21.00	1.496	0.06	0.001	0.001
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 5	132322	1745	17.78	18.50	1.180	0.02	0.162	0.191
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 5	132322	1745	17.66	18.50	1.213	0.1	0.160	0.194
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 5	132322	1745	17.78	18.50	1.180	-0.18	0.203	0.240
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 5	132322	1745	17.66	18.50	1.213	0.05	0.202	0.245
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI 5	132322	1745	17.78	18.50	1.180	0.07	0.061	0.072
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 5	132322	1745	17.66	18.50	1.213	0.07	0.063	0.076
	LTE Band 66	20M	QPSK	1	0	-	Top Side	10mm	Ant 5	DSI 5	132322	1745	17.78	18.50	1.180	0.02	0.217	0.256
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 5	DSI 5	132322	1745	17.66	18.50	1.213	0.06	0.214	0.260
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 5	349000	1745	23.03	23.50	1.114	0.02	0.282	0.314
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 5	349000	1745	23.02	23.50	1.117	0.05	0.279	0.312
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 5	349000	1745	23.03	23.50	1.114	0.05	0.280	0.312
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 5	349000	1745	23.02	23.50	1.117	-0.14	0.262	0.293
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 5	349000	1745	23.03	23.50	1.114	-0.01	0.319	0.355
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 5	349000	1745	23.02	23.50	1.117	-0.09	0.322	0.360
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI 5	349000	1745	23.03	23.50	1.114	0.02	0.249	0.277
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI 5	349000	1745	23.02	23.50	1.117	0.1	0.267	0.298
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 3	DSI 5	349000	1745	23.59	24.00	1.099	-0.12	0.545	0.599
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 3	DSI 5	349000	1745	23.52	24.00	1.117	0.07	0.574	0.641
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 3	DSI 5	349000	1745	23.59	24.00	1.099	-0.13	0.604	0.664
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 3	DSI 5	349000	1745	23.52	24.00	1.117	-0.02	0.636	0.710
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 3	DSI 5	349000	1745	23.59	24.00	1.099	0.02	0.176	0.193
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 3	DSI 5	349000	1745	23.52	24.00	1.117	-0.07	0.200	0.223



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Table with columns for test parameters (FR1 n66, GSM1900, WCDMA II, LTE Band 2) and SAR values. Includes rows 36, 37, 38, and 39 with various modulation schemes and antenna configurations.



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LTE Band 2	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 5	18900	1880	20.90	22.50	1.445	0.07	0.001	0.001
LTE Band 2	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 5	18900	1880	20.88	22.50	1.452	0.01	0.001	0.001

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)	Reported 1g SAR (W/kg)
<b>2600MHz</b>																				
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 5	21100	2535	22.84	24.00	1.306	-	-	0.05	0.136	0.178
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI 5	21100	2535	21.78	23.00	1.324	-	-	-0.14	0.120	0.159
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	21100	2535	22.84	24.00	1.306	-	-	0.01	0.153	0.200
	LTE Band 7C	20M	QPSK	1	99	-	Back	10mm	Ant 0	DSI 5	21100+21298	2535+2554.8	22.00	24.00	1.585	-	-	0.07	0.122	0.193
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI 5	21100	2535	21.78	23.00	1.324	-	-	0.03	0.119	0.158
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 5	21100	2535	22.84	24.00	1.306	-	-	0.08	0.136	0.178
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI 5	21100	2535	21.78	23.00	1.324	-	-	0.03	0.112	0.148
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	21100	2535	22.84	24.00	1.306	-	-	0.03	0.151	0.197
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI 5	21100	2535	21.78	23.00	1.324	-	-	0.07	0.119	0.158
40	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 5	21100	2535	22.48	23.00	1.127	-	-	0.06	0.474	<b>0.534</b>
	LTE Band 7C	20M	QPSK	1	99	-	Front	10mm	Ant 3	DSI 5	21100+21298	2535+2554.8	22.26	23.00	1.186	-	-	0.07	0.404	0.479
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 5	21100	2535	22.46	23.00	1.132	-	-	-0.02	0.462	0.523
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 5	21100	2535	22.48	23.00	1.127	-	-	0.04	0.437	0.493
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 5	21100	2535	22.46	23.00	1.132	-	-	0.03	0.462	0.523
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI 5	21100	2535	22.48	23.00	1.127	-	-	-0.13	0.162	0.183
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI 5	21100	2535	22.46	23.00	1.132	-	-	0.18	0.157	0.178
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 3	DSI 5	21100	2535	22.48	23.00	1.127	-	-	0.09	0.445	0.502
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 3	DSI 5	21100	2535	22.46	23.00	1.132	-	-	0.08	0.442	0.501
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 5	21100	2535	18.52	19.50	1.253	-	-	0.06	0.121	0.152
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 5	21100	2535	18.46	19.50	1.271	-	-	0.18	0.123	0.156
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 5	21100	2535	18.52	19.50	1.253	-	-	0.1	0.209	0.262
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 5	21100	2535	18.46	19.50	1.271	-	-	0.08	0.210	0.267
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 5	21100	2535	18.52	19.50	1.253	-	-	0.09	0.239	0.300
	LTE Band 7C	20M	QPSK	1	99	-	Left Side	10mm	Ant 4	DSI 5	21100+21298	2535+2554.8	18.17	19.50	1.358	-	-	0.04	0.214	0.291
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 5	21100	2535	18.46	19.50	1.271	-	-	0.05	0.234	0.297
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 5	21100	2535	18.52	19.50	1.253	-	-	0.03	0.035	0.044
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 5	21100	2535	18.46	19.50	1.271	-	-	-0.07	0.037	0.047
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 5	21100	2535	19.41	20.00	1.146	-	-	0.16	0.161	0.184
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 5	21100	2535	19.36	20.00	1.159	-	-	-0.01	0.158	0.183
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 5	21100	2535	19.41	20.00	1.146	-	-	0.03	0.254	0.291
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 5	21100	2535	19.36	20.00	1.159	-	-	-0.02	0.248	0.287
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI 5	21100	2535	19.41	20.00	1.146	-	-	0.01	0.080	0.092
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 5	21100	2535	19.36	20.00	1.159	-	-	-0.13	0.078	0.090
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 5	DSI 5	21100	2535	19.41	20.00	1.146	-	-	0.05	0.279	0.320
	LTE Band 7C	20M	QPSK	1	99	-	Top Side	10mm	Ant 5	DSI 5	21100+21298	2535+2554.8	19.20	20.00	1.202	-	-	0.02	0.244	0.293
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 5	DSI 5	21100	2535	19.36	20.00	1.159	-	-	-0.03	0.266	0.308
	LTE Band 38	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 5	38000	2595	20.64	22.00	1.368	62.9	1.006	0.05	0.203	0.279
	LTE Band 38	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 5	38000	2595	20.62	22.00	1.374	62.9	1.006	-0.05	0.214	0.296
	LTE Band 38	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 5	38000	2595	20.64	22.00	1.368	62.9	1.006	-0.1	0.364	0.501
	LTE Band 38	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 5	38000	2595	20.62	22.00	1.374	62.9	1.006	-0.04	0.374	0.517
41	LTE Band 38	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 5	38000	2595	20.64	22.00	1.368	62.9	1.006	-0.1	0.429	<b>0.590</b>
	LTE Band 38C	20M	QPSK	1	99	-	Left Side	10mm	Ant 4	DSI 5	37901+38099	2585.1+2604.9	20.50	22.00	1.413	62.9	1.006	0.01	0.401	0.570
	LTE Band 38	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 5	38000	2595	20.62	22.00	1.374	62.9	1.006	0.02	0.422	0.583
	LTE Band 38 for ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 5	38000	2595	16.88	18.00	1.294	62.90	1.006	0.09	0.161	0.210
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 5	40620	2593	22.72	23.50	1.197	62.9	1.006	0.12	0.094	0.113
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI 5	40620	2593	21.65	22.50	1.216	62.9	1.006	0.17	0.074	0.091
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	40620	2593	22.72	23.50	1.197	62.9	1.006	-0.03	0.103	0.124





	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI 5	40620	2593	21.65	22.50	1.216	62.9	1.006	0.01	0.084	0.103
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 5	40620	2593	22.72	23.50	1.197	62.9	1.006	0.06	0.102	0.123
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI 5	40620	2593	21.65	22.50	1.216	62.9	1.006	0.09	0.080	0.098
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	40620	2593	22.72	23.50	1.197	62.9	1.006	0.01	0.125	0.150
	LTE Band 38C	20M	QPSK	1	99	-	Bottom Side	10mm	Ant 0	DSI 5	37901+38099	2585.1+2604.9	21.59	23.50	1.552	62.9	1.006	0.01	0.095	0.148
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI 5	40620	2593	21.65	22.50	1.216	62.9	1.006	0.11	0.099	0.121
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 5	40620	2593	24.81	25.50	1.172	62.9	1.006	0.11	0.361	0.426
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 5	40620	2593	23.79	24.50	1.178	62.9	1.006	0.08	0.319	0.378
42	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 5	40620	2593	24.81	25.50	1.172	62.9	1.006	0.06	0.423	0.499
	LTE Band 38C	20M	QPSK	1	99	-	Back	10mm	Ant 3	DSI 5	37901+38099	2585.1+2604.9	23.62	25.50	1.542	62.9	1.006	0.01	0.312	0.484
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 5	40620	2593	23.79	24.50	1.178	62.9	1.006	0.08	0.329	0.390
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI 5	40620	2593	24.81	25.50	1.172	62.9	1.006	-0.03	0.138	0.163
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI 5	40620	2593	23.79	24.50	1.178	62.9	1.006	0.03	0.108	0.128
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 3	DSI 5	40620	2593	24.81	25.50	1.172	62.9	1.006	-0.12	0.378	0.446
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 3	DSI 5	40620	2593	23.79	24.50	1.178	62.9	1.006	0.17	0.300	0.355
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 5	40620	2593	20.34	21.50	1.306	62.9	1.006	-0.06	0.133	0.175
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 5	40620	2593	20.21	21.50	1.346	62.9	1.006	0.04	0.136	0.184
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 5	40620	2593	20.34	21.50	1.306	62.9	1.006	0.1	0.222	0.292
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 5	40620	2593	20.21	21.50	1.346	62.9	1.006	0.01	0.228	0.309
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 5	40620	2593	20.34	21.50	1.306	62.9	1.006	0.05	0.252	0.331
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 5	40620	2593	20.21	21.50	1.346	62.9	1.006	-0.1	0.264	0.357
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 5	40620	2593	20.34	21.50	1.306	62.9	1.006	-0.18	0.038	0.050
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 5	40620	2593	20.21	21.50	1.346	62.9	1.006	0.14	0.038	0.051
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 5	40620	2593	21.48	22.00	1.127	62.9	1.006	0.13	0.187	0.212
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 5	40620	2593	21.42	22.00	1.143	62.9	1.006	0.09	0.187	0.215
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 5	40620	2593	21.48	22.00	1.127	62.9	1.006	0.06	0.278	0.315
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 5	40620	2593	21.42	22.00	1.143	62.9	1.006	0.14	0.280	0.322
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI 5	40620	2593	21.48	22.00	1.127	62.9	1.006	-0.19	0.109	0.124
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 5	40620	2593	21.42	22.00	1.143	62.9	1.006	0.06	0.102	0.117
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 5	DSI 5	40620	2593	21.48	22.00	1.127	62.9	1.006	0.05	0.296	0.336
	LTE Band 38C	20M	QPSK	1	99	-	Top Side	10mm	Ant 5	DSI 5	37901+38099	2585.1+2604.9	21.33	22.00	1.167	62.9	1.006	0.01	0.272	0.319
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 5	DSI 5	40620	2593	21.42	22.00	1.143	62.9	1.006	0.08	0.290	0.333
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 5	507000	2535	23.47	24.00	1.130	-	-	-0.17	0.172	0.194
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 5	507000	2535	23.20	24.00	1.202	-	-	-0.12	0.180	0.216
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 5	507000	2535	23.47	24.00	1.130	-	-	0.15	0.188	0.212
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 5	507000	2535	23.20	24.00	1.202	-	-	0.13	0.197	0.237
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 5	507000	2535	23.47	24.00	1.130	-	-	0.03	0.144	0.163
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 5	507000	2535	23.20	24.00	1.202	-	-	-0.03	0.180	0.216
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI 5	507000	2535	23.47	24.00	1.130	-	-	0.03	0.198	0.224
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI 5	507000	2535	23.20	24.00	1.202	-	-	-0.09	0.220	0.264
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 3	DSI 5	507000	2535	22.33	23.00	1.167	-	-	0.03	0.504	0.588
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 3	DSI 5	507000	2535	22.31	23.00	1.172	-	-	0.12	0.478	0.560
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 3	DSI 5	507000	2535	22.33	23.00	1.167	-	-	0.09	0.450	0.525
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 3	DSI 5	507000	2535	22.31	23.00	1.172	-	-	-0.12	0.458	0.537
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 3	DSI 5	507000	2535	22.33	23.00	1.167	-	-	-0.05	0.167	0.195
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 3	DSI 5	507000	2535	22.31	23.00	1.172	-	-	0.17	0.162	0.190
43	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 3	DSI 5	507000	2535	22.33	23.00	1.167	-	-	-0.03	0.523	0.610
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	10mm	Ant 3	DSI 5	507000	2535	22.31	23.00	1.172	-	-	-0.07	0.463	0.543
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 4	DSI 5	507000	2535	19.02	19.50	1.117	-	-	0.09	0.169	0.189
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 4	DSI 5	507000	2535	18.99	19.50	1.125	-	-	-0.05	0.174	0.196
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 4	DSI 5	507000	2535	19.02	19.50	1.117	-	-	0.18	0.274	0.306
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 4	DSI 5	507000	2535	18.99	19.50	1.125	-	-	-0.03	0.282	0.317
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 4	DSI 5	507000	2535	19.02	19.50	1.117	-	-	0.03	0.336	0.375
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 4	DSI 5	507000	2535	18.99	19.50	1.125	-	-	0.02	0.304	0.342
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 4	DSI 5	507000	2535	19.02	19.50	1.117	-	-	-0.05	0.044	0.049



FCC SAR Test Report

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	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	10mm	Ant 4	DSI 5	507000	2535	18.99	19.50	1.125	-	-	0.06	0.043	0.048
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 5	507000	2535	17.87	18.50	1.156	-	-	0.18	0.130	0.150
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 5	507000	2535	17.81	18.50	1.172	-	-	0.18	0.127	0.149
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 5	507000	2535	17.87	18.50	1.156	-	-	-0.03	0.207	0.239
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 5	507000	2535	17.81	18.50	1.172	-	-	-0.12	0.193	0.226
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 5	507000	2535	17.87	18.50	1.156	-	-	-0.02	0.052	0.060
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 5	507000	2535	17.81	18.50	1.172	-	-	-0.14	0.050	0.059
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 5	DSI 5	507000	2535	17.87	18.50	1.156	-	-	0.08	0.198	0.229
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	10mm	Ant 5	DSI 5	507000	2535	17.81	18.50	1.172	-	-	0.08	0.179	0.210
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	518598	2592.99	22.98	24.00	1.265	-	-	-0.09	0.236	0.298
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	518598	2592.99	22.93	24.00	1.279	-	-	0.08	0.245	0.313
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 5	518598	2592.99	22.98	24.00	1.265	-	-	-0.19	0.242	0.306
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 5	518598	2592.99	22.93	24.00	1.279	-	-	0.04	0.239	0.306
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 5	518598	2592.99	22.98	24.00	1.265	-	-	0.03	0.219	0.277
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 5	518598	2592.99	22.93	24.00	1.279	-	-	0.06	0.285	0.365
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	518598	2592.99	22.98	24.00	1.265	-	-	-0.15	0.291	0.368
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	518598	2592.99	22.93	24.00	1.279	-	-	-0.01	0.316	0.404
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 5	518598	2592.99	21.99	22.50	1.125	-	-	0.01	0.368	0.414
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 5	518598	2592.99	21.82	22.50	1.169	-	-	0.06	0.366	0.428
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 5	518598	2592.99	21.99	22.50	1.125	-	-	0.07	0.359	0.404
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 5	518598	2592.99	21.82	22.50	1.169	-	-	0.04	0.349	0.408
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 5	518598	2592.99	21.99	22.50	1.125	-	-	0.1	0.137	0.154
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 5	518598	2592.99	21.82	22.50	1.169	-	-	-0.15	0.118	0.138
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 3	DSI 5	518598	2592.99	21.99	22.50	1.125	-	-	0.09	0.401	0.451
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 3	DSI 5	518598	2592.99	21.82	22.50	1.169	-	-	0.06	0.349	0.408
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 5	518598	2592.99	19.08	20.00	1.236	-	-	0.16	0.163	0.201
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 5	518598	2592.99	19.03	20.00	1.250	-	-	-0.1	0.181	0.226
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 5	518598	2592.99	19.08	20.00	1.236	-	-	-0.15	0.274	0.339
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 5	518598	2592.99	19.03	20.00	1.250	-	-	0.14	0.303	0.379
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 5	518598	2592.99	19.08	20.00	1.236	-	-	0.04	0.315	0.389
44	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 5	518598	2592.99	19.03	20.00	1.250	-	-	0.04	0.404	0.505
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 5	518598	2592.99	19.08	20.00	1.236	-	-	-0.17	0.043	0.053
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 5	518598	2592.99	19.03	20.00	1.250	-	-	0.03	0.049	0.061
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 5	518598	2592.99	17.98	18.00	1.005	-	-	0.15	0.090	0.090
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 5	518598	2592.99	17.94	18.00	1.014	-	-	0.07	0.094	0.095
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 5	518598	2592.99	17.98	18.00	1.005	-	-	0.13	0.144	0.145
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 5	518598	2592.99	17.94	18.00	1.014	-	-	0.18	0.137	0.139
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 5	518598	2592.99	17.98	18.00	1.005	-	-	-0.06	0.040	0.040
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 5	518598	2592.99	17.94	18.00	1.014	-	-	0.05	0.044	0.045
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 5	518598	2592.99	17.98	18.00	1.005	-	-	-0.15	0.149	0.150
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 5	518598	2592.99	17.94	18.00	1.014	-	-	-0.02	0.155	0.157
<b>3500MHz</b>																				
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 5	42590	3500	23.03	24.00	1.250	62.9	1.006	-0.12	0.314	0.395
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI 5	42590	3500	22.09	23.00	1.233	62.9	1.006	-0.03	0.257	0.319
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	42590	3500	23.03	24.00	1.250	62.9	1.006	-0.04	0.506	0.636
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	42190	3460	22.85	24.00	1.303	62.9	1.006	0.09	0.438	0.574
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 5	42990	3540	22.98	24.00	1.265	62.9	1.006	0.01	0.443	0.564
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI 5	42590	3500	22.09	23.00	1.233	62.9	1.006	-0.09	0.405	0.502
	LTE Band 42	20M	QPSK	100	0	-	Back	10mm	Ant 0	DSI 5	42590	3500	21.97	23.00	1.268	62.9	1.006	0.02	0.391	0.499
	LTE Band 42	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 5	42590	3500	23.03	24.00	1.250	62.9	1.006	-0.16	0.137	0.172
	LTE Band 42	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI 5	42590	3500	22.09	23.00	1.233	62.9	1.006	0.08	0.109	0.135
	LTE Band 42	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	42590	3500	23.03	24.00	1.250	62.9	1.006	0.04	0.836	1.051
	LTE Band 42	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	42190	3460	22.85	24.00	1.303	62.9	1.006	0.06	0.747	0.979
45	LTE Band 42	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 5	42990	3540	22.98	24.00	1.265	62.9	1.006	-0.07	0.847	1.078
	LTE Band 42	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI 5	42590	3500	22.09	23.00	1.233	62.9	1.006	0.18	0.680	0.844
	LTE Band 42	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI 5	42190	3460	21.96	23.00	1.271	62.9	1.006	0.18	0.568	0.726





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LTE Band 42	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI 5	42990	3540	22.01	23.00	1.256	62.9	1.006	0.18	0.695	0.878	
LTE Band 42	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 0	DSI 5	42590	3500	21.97	23.00	1.268	62.9	1.006	-0.12	0.675	0.861	
LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 9	DSI 5	42590	3500	19.21	20.20	1.256	62.9	1.006	0.07	0.127	0.160	
LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 9	DSI 5	42590	3500	19.17	20.20	1.268	62.9	1.006	-0.09	0.129	0.165	
LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 9	DSI 5	42590	3500	19.21	20.20	1.256	62.9	1.006	-0.1	0.251	0.317	
LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 9	DSI 5	42590	3500	19.17	20.20	1.268	62.9	1.006	0.07	0.244	0.311	
LTE Band 42	20M	QPSK	1	0	-	Left Side	10mm	Ant 9	DSI 5	42590	3500	19.21	20.20	1.256	62.9	1.006	-0.02	0.204	0.258	
LTE Band 42	20M	QPSK	50	0	-	Left Side	10mm	Ant 9	DSI 5	42590	3500	19.17	20.20	1.268	62.9	1.006	0.08	0.202	0.258	
LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 9	DSI 5	42590	3500	19.21	20.20	1.256	62.9	1.006	0.05	0.233	0.294	
LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 9	DSI 5	42590	3500	19.17	20.20	1.268	62.9	1.006	0.08	0.236	0.301	
LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 10	DSI 5	42590	3500	19.08	19.70	1.153	62.9	1.006	-0.09	0.030	0.035	
LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 10	DSI 5	42590	3500	19.05	19.70	1.161	62.9	1.006	0.03	0.034	0.040	
LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 10	DSI 5	42590	3500	19.08	19.70	1.153	62.9	1.006	0.12	0.633	0.735	
LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 10	DSI 5	42190	3460	18.95	19.70	1.189	62.9	1.006	0.08	0.579	0.692	
LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 10	DSI 5	42990	3540	18.90	19.70	1.202	62.9	1.006	-0.07	0.566	0.685	
LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 10	DSI 5	42590	3500	19.05	19.70	1.161	62.9	1.006	0.02	0.686	0.802	
LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 10	DSI 5	42190	3460	18.92	19.70	1.197	62.9	1.006	0.04	0.383	0.461	
LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 10	DSI 5	42990	3540	18.85	19.70	1.216	62.9	1.006	0.09	0.849	1.039	
LTE Band 42	20M	QPSK	100	0	-	Back	10mm	Ant 10	DSI 5	42590	3500	19.00	19.70	1.175	62.9	1.006	-0.07	0.781	0.923	
LTE Band 42	20M	QPSK	1	0	-	Left Side	10mm	Ant 10	DSI 5	42590	3500	19.08	19.70	1.153	62.9	1.006	0.06	0.160	0.186	
LTE Band 42	20M	QPSK	50	0	-	Left Side	10mm	Ant 10	DSI 5	42590	3500	19.05	19.70	1.161	62.9	1.006	0.11	0.156	0.182	
LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 10	DSI 5	42590	3500	19.08	19.70	1.153	62.9	1.006	-0.07	0.034	0.039	
LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 10	DSI 5	42590	3500	19.05	19.70	1.161	62.9	1.006	0.18	0.035	0.041	
LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 11	DSI 5	42590	3500	18.53	19.20	1.167	62.9	1.006	-0.11	0.116	0.136	
LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 11	DSI 5	42590	3500	18.49	19.20	1.178	62.9	1.006	0.03	0.119	0.141	
LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 11	DSI 5	42590	3500	18.53	19.20	1.167	62.9	1.006	0.02	0.162	0.190	
LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 11	DSI 5	42590	3500	18.49	19.20	1.178	62.9	1.006	0.04	0.163	0.193	
LTE Band 42	20M	QPSK	1	0	-	Right Side	10mm	Ant 11	DSI 5	42590	3500	18.53	19.20	1.167	62.9	1.006	0.01	0.028	0.033	
LTE Band 42	20M	QPSK	50	0	-	Right Side	10mm	Ant 11	DSI 5	42590	3500	18.49	19.20	1.178	62.9	1.006	0.13	0.043	0.051	
LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 11	DSI 5	42590	3500	18.53	19.20	1.167	62.9	1.006	0.06	0.260	0.305	
LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 11	DSI 5	42590	3500	18.49	19.20	1.178	62.9	1.006	-0.05	0.266	0.315	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	656000	3840	21.27	22.50	1.327	-	-	0.05	0.084	0.112	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	656000	3840	21.22	22.50	1.343	-	-	0.02	0.066	0.089	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 5	656000	3840	21.27	22.50	1.327	-	-	-0.05	0.068	0.090	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 5	656000	3840	21.22	22.50	1.343	-	-	0.07	0.078	0.105	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 5	656000	3840	21.27	22.50	1.327	-	-	-0.13	0.062	0.082	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 5	656000	3840	21.22	22.50	1.343	-	-	0.03	0.051	0.068	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	656000	3840	21.27	22.50	1.327	-	-	-0.15	0.162	0.215	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	656000	3840	21.22	22.50	1.343	-	-	-0.14	0.136	0.183	
FR1 n77 for ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	656000	3840	18.91	20.00	1.285	-	-	0.04	0.095	0.122	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	633334	3500.01	21.33	22.50	1.309	-	-	-0.14	0.285	0.373	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	633334	3500.01	21.24	22.50	1.337	-	-	0.07	0.255	0.341	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 5	633334	3500.01	21.33	22.50	1.309	-	-	0.01	0.425	0.556	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 5	633334	3500.01	21.24	22.50	1.337	-	-	-0.19	0.420	0.561	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 5	633334	3500.01	21.33	22.50	1.309	-	-	-0.12	0.096	0.126	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 5	633334	3500.01	21.24	22.50	1.337	-	-	0.03	0.102	0.136	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	633334	3500.01	21.33	22.50	1.309	-	-	0.03	0.710	0.930	
46	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	633334	3500.01	21.24	22.50	1.337	-	-	-0.14	0.713	0.953
FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	633334	3500.01	21.16	21.50	1.081	-	-	-0.13	0.571	0.617	
FR1 n77 for ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	633334	3500.01	18.89	20.00	1.291	-	-	0.08	0.434	0.560	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 9	DSI 5	656000	3840	15.17	15.50	1.079	-	-	0.03	0.068	0.073	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 9	DSI 5	656000	3840	15.15	15.50	1.084	-	-	0.02	0.062	0.067	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 9	DSI 5	656000	3840	15.17	15.50	1.079	-	-	0.18	0.101	0.109	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 9	DSI 5	656000	3840	15.15	15.50	1.084	-	-	0.14	0.082	0.089	
FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 9	DSI 5	656000	3840	15.17	15.50	1.079	-	-	0.17	0.124	0.134	
FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 9	DSI 5	656000	3840	15.15	15.50	1.084	-	-	0.06	0.104	0.113	

Sporton International Inc. (Kunshan)

TEL : 86-512-57900158 / FAX : 86-512-57900958

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	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 9	DSI 5	656000	3840	15.17	15.50	1.079	-	-	-0.03	0.086	0.093
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 9	DSI 5	656000	3840	15.15	15.50	1.084	-	-	0.02	0.067	0.073
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 9	DSI 5	633334	3500.01	15.20	15.50	1.072	-	-	-0.09	0.064	0.069
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 9	DSI 5	633334	3500.01	15.14	15.50	1.086	-	-	0.08	0.084	0.091
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 9	DSI 5	633334	3500.01	15.20	15.50	1.072	-	-	0.02	0.127	0.136
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 9	DSI 5	633334	3500.01	15.14	15.50	1.086	-	-	-0.01	0.160	0.174
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 9	DSI 5	633334	3500.01	15.20	15.50	1.072	-	-	0.09	0.099	0.106
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 9	DSI 5	633334	3500.01	15.14	15.50	1.086	-	-	0.02	0.130	0.141
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 9	DSI 5	633334	3500.01	15.20	15.50	1.072	-	-	-0.06	0.112	0.120
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 9	DSI 5	633334	3500.01	15.14	15.50	1.086	-	-	0.04	0.151	0.164
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 10	DSI 5	656000	3840	16.32	17.20	1.225	-	-	-0.07	0.028	0.034
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 10	DSI 5	656000	3840	16.28	17.20	1.236	-	-	0.03	0.023	0.028
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 10	DSI 5	656000	3840	16.32	17.20	1.225	-	-	0.08	0.274	0.336
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 10	DSI 5	656000	3840	16.28	17.20	1.236	-	-	-0.1	0.185	0.229
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 10	DSI 5	656000	3840	16.32	17.20	1.225	-	-	0.15	0.062	0.076
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 10	DSI 5	656000	3840	16.28	17.20	1.236	-	-	0.04	0.054	0.067
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 10	DSI 5	656000	3840	16.32	17.20	1.225	-	-	0.02	0.034	0.042
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 10	DSI 5	656000	3840	16.28	17.20	1.236	-	-	-0.1	0.035	0.043
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 10	DSI 5	633334	3500.01	16.72	17.20	1.117	-	-	0.07	0.016	0.018
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 10	DSI 5	633334	3500.01	16.66	17.20	1.132	-	-	0.09	0.022	0.025
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 10	DSI 5	633334	3500.01	16.72	17.20	1.117	-	-	0.07	0.566	0.632
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 10	DSI 5	633334	3500.01	16.66	17.20	1.132	-	-	-0.08	0.686	0.777
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 10	DSI 5	633334	3500.01	16.72	17.20	1.117	-	-	0.11	0.169	0.189
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 10	DSI 5	633334	3500.01	16.66	17.20	1.132	-	-	-0.03	0.166	0.188
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 10	DSI 5	633334	3500.01	16.72	17.20	1.117	-	-	-0.12	0.053	0.059
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 10	DSI 5	633334	3500.01	16.66	17.20	1.132	-	-	0.02	0.045	0.051
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 11	DSI 5	656000	3840	15.37	16.20	1.211	-	-	-0.05	0.079	0.096
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 11	DSI 5	656000	3840	15.33	16.20	1.222	-	-	0.02	0.075	0.092
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 11	DSI 5	656000	3840	15.37	16.20	1.211	-	-	-0.1	0.092	0.111
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 11	DSI 5	656000	3840	15.33	16.20	1.222	-	-	0.01	0.088	0.108
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 11	DSI 5	656000	3840	15.37	16.20	1.211	-	-	-0.03	0.036	0.044
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 11	DSI 5	656000	3840	15.33	16.20	1.222	-	-	-0.05	0.037	0.045
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	656000	3840	15.37	16.20	1.211	-	-	0.15	0.167	0.202
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	656000	3840	15.33	16.20	1.222	-	-	0.04	0.173	0.211
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 11	DSI 5	633334	3500.01	15.47	16.20	1.183	-	-	-0.02	0.077	0.091
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 11	DSI 5	633334	3500.01	15.45	16.20	1.189	-	-	0.15	0.066	0.078
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 11	DSI 5	633334	3500.01	15.47	16.20	1.183	-	-	0.08	0.122	0.144
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 11	DSI 5	633334	3500.01	15.45	16.20	1.189	-	-	0.09	0.114	0.135
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 11	DSI 5	633334	3500.01	15.47	16.20	1.183	-	-	0.07	0.032	0.038
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 11	DSI 5	633334	3500.01	15.45	16.20	1.189	-	-	-0.03	0.034	0.040
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	633334	3500.01	15.47	16.20	1.183	-	-	0.08	0.191	0.226
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	633334	3500.01	15.45	16.20	1.189	-	-	0.03	0.164	0.195
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	650000	3750	20.79	22.00	1.321	-	-	0.02	0.143	0.189
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	650000	3750	20.71	22.00	1.346	-	-	-0.07	0.104	0.140
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 5	650000	3750	20.79	22.00	1.321	-	-	0.02	0.177	0.234
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 5	650000	3750	20.71	22.00	1.346	-	-	-0.07	0.109	0.147
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 5	650000	3750	20.79	22.00	1.321	-	-	0.03	0.095	0.126
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 5	650000	3750	20.71	22.00	1.346	-	-	0.14	0.078	0.105
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	650000	3750	20.79	22.00	1.321	-	-	-0.02	0.353	0.466
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	650000	3750	20.71	22.00	1.346	-	-	0.07	0.229	0.308
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	650000	3750	23.69	25.00	1.352	50	1.000	0.09	0.162	0.219
	FR1 n78 PC3 for ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	650000	3750	17.83	19.00	1.309	-	-	0.05	0.148	0.194
	FR1 n78 PC2 for ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	650000	3750	20.86	22.00	1.300	50	1.000	0.09	0.166	0.216
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	633334	3500.01	21.02	22.00	1.253	-	-	-0.11	0.308	0.386
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 5	633334	3500.01	21.01	22.00	1.256	-	-	-0.17	0.269	0.338



FCC SAR Test Report

Report No. : FA271606

Table with columns: Model, Power, Modulation, Channels, Frequency, Position, Distance, Antenna, DSI, SAR, etc. Row 47 is highlighted with a yellow background.



**FCC SAR Test Report**

**Report No. : FA271606**

FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 11	DSI 5	650000	3750	15.18	16.50	1.355	-	-	0.15	0.083	0.112
FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 11	DSI 5	650000	3750	15.21	16.50	1.346	-	-	-0.12	0.061	0.082
FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 11	DSI 5	650000	3750	15.18	16.50	1.355	-	-	0.16	0.037	0.050
FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	650000	3750	15.21	16.50	1.346	-	-	0.03	0.135	0.182
FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	650000	3750	15.18	16.50	1.355	-	-	0.03	0.140	0.190
FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	650000	3750	18.25	19.50	1.334	50	1.000	0.01	0.145	0.193
FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 11	DSI 5	633334	3500.01	15.69	16.50	1.205	-	-	0.01	0.090	0.108
FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 11	DSI 5	633334	3500.01	15.63	16.50	1.222	-	-	-0.14	0.087	0.106
FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 11	DSI 5	633334	3500.01	15.69	16.50	1.205	-	-	-0.16	0.160	0.193
FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 11	DSI 5	633334	3500.01	15.63	16.50	1.222	-	-	-0.12	0.143	0.175
FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 11	DSI 5	633334	3500.01	15.69	16.50	1.205	-	-	0.03	0.060	0.072
FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 11	DSI 5	633334	3500.01	15.63	16.50	1.222	-	-	0.11	0.040	0.049
FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	633334	3500.01	15.69	16.50	1.205	-	-	0.02	0.222	0.268
FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	633334	3500.01	15.63	16.50	1.222	-	-	0.04	0.209	0.255
FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 11	DSI 5	633334	3500.01	18.65	19.50	1.216	50	1.000	0.01	0.227	0.276

Plot No.	Band	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)	Reported 1g SAR (W/kg)
<b>2450MHz</b>																
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 15+16	Full power	11	2462	19.56	21.50	1.563	97.86	1.022	0.06	0.169	0.270
48	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 15+16	Full power	11	2462	19.56	21.50	1.563	97.86	1.022	-0.08	0.310	<b>0.495</b>
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 15+16	Full power	11	2462	19.56	21.50	1.563	97.86	1.022	0.08	0.246	0.393
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 15+16	Full power	11	2462	19.56	21.50	1.563	97.86	1.022	-0.1	0.194	0.310
	Bluetooth	1Mbps	Front	10mm	Ant 15	Full power	39	2441	14.70	16.00	1.349	77.09	1.081	-0.18	0.023	0.034
	Bluetooth	1Mbps	Back	10mm	Ant 15	Full power	39	2441	14.70	16.00	1.349	77.09	1.081	-0.06	0.052	0.075
	Bluetooth	1Mbps	Front	10mm	Ant 16	Full power	39	2441	15.28	16.00	1.180	76.75	1.085	0.04	0.001	0.001
49	Bluetooth	1Mbps	Back	10mm	Ant 16	Full power	39	2441	15.28	16.00	1.180	76.75	1.085	-0.02	0.073	<b>0.093</b>
<b>5000MHz</b>																
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 16+17	Standalone	46	5230	19.80	21.50	1.479	100	1.000	0.01	0.309	0.457
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 16+17	Standalone	46	5230	19.80	21.50	1.479	100	1.000	0.06	0.300	0.444
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 16+17	Standalone	46	5230	19.80	21.50	1.479	100	1.000	0.19	0.151	0.223
50	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 16+17	Standalone	46	5230	19.80	21.50	1.479	100	1.000	0.01	0.691	<b>1.022</b>
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 16+17	Standalone	38	5190	17.91	19.50	1.442	100	1.000	0.03	0.444	0.640
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 16+17	Simultaneous	42	5210	15.41	17.00	1.442	100	1.000	-0.18	0.171	0.247
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	Ant 16+17	Standalone	149	5745	21.01	22.50	1.409	99.32	1.007	0.03	0.231	0.328
	WLAN5.8GHz	802.11a 6Mbps	Back	10mm	Ant 16+17	Standalone	149	5745	21.01	22.50	1.409	99.32	1.007	0.16	0.350	0.497
	WLAN5.8GHz	802.11a 6Mbps	Right Side	10mm	Ant 16+17	Standalone	149	5745	21.01	22.50	1.409	99.32	1.007	-0.07	0.227	0.322
51	WLAN5.8GHz	802.11a 6Mbps	Top Side	10mm	Ant 16+17	Standalone	149	5745	21.01	22.50	1.409	99.32	1.007	0.01	0.753	<b>1.069</b>
	WLAN5.8GHz	802.11a 6Mbps	Top Side	10mm	Ant 16+17	Standalone	157	5785	20.89	22.50	1.449	99.32	1.007	0.11	0.724	1.056
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 16+17	Simultaneous	155	5775	13.76	15.50	1.493	100	1.000	0.02	0.165	0.246



15.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	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)
<b>750MHz</b>																				
	LTE Band 12	10M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 4	23095	707.5	24.74	25.50	1.191	-	-	0.17	0.161	0.192
	LTE Band 12	10M	QPSK	25	0	-	Front	15mm	Ant 0	DSI 4	23095	707.5	23.72	24.50	1.197	-	-	0.06	0.123	0.147
	LTE Band 12	10M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 4	23095	707.5	24.74	25.50	1.191	-	-	-0.07	0.169	0.201
	LTE Band 12	10M	QPSK	25	0	-	Back	15mm	Ant 0	DSI 4	23095	707.5	23.72	24.50	1.197	-	-	0.06	0.130	0.156
	LTE Band 12	10M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 4	23095	707.5	24.31	25.50	1.315	-	-	-0.13	0.199	0.262
	LTE Band 12	10M	QPSK	25	0	-	Front	15mm	Ant 1	DSI 4	23095	707.5	23.27	24.50	1.327	-	-	-0.07	0.172	0.228
52	LTE Band 12	10M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 4	23095	707.5	24.31	25.50	1.315	-	-	-0.05	0.263	0.346
	LTE Band 12	10M	QPSK	25	0	-	Back	15mm	Ant 1	DSI 4	23095	707.5	23.27	24.50	1.327	-	-	0.16	0.219	0.291
	LTE Band 13	10M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 4	23230	782	23.63	24.50	1.222	-	-	0.10	0.172	0.210
	LTE Band 13	10M	QPSK	25	0	-	Front	15mm	Ant 0	DSI 4	23230	782	22.67	23.50	1.211	-	-	0.06	0.141	0.171
	LTE Band 13	10M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 4	23230	782	23.63	24.50	1.222	-	-	0.03	0.191	0.233
	LTE Band 13	10M	QPSK	25	0	-	Back	15mm	Ant 0	DSI 4	23230	782	22.67	23.50	1.211	-	-	-0.03	0.159	0.192
	LTE Band 13	10M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 4	23230	782	23.28	24.50	1.324	-	-	-0.05	0.145	0.192
	LTE Band 13	10M	QPSK	25	0	-	Front	15mm	Ant 1	DSI 4	23230	782	22.33	23.50	1.309	-	-	-0.17	0.112	0.147
53	LTE Band 13	10M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 4	23230	782	23.28	24.50	1.324	-	-	-0.01	0.186	0.246
	LTE Band 13	10M	QPSK	25	0	-	Back	15mm	Ant 1	DSI 4	23230	782	22.33	23.50	1.309	-	-	0.05	0.148	0.194
<b>835MHz</b>																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 0	DSI 4	189	836.4	26.08	27.50	1.387	-	-	-0.03	0.136	0.189
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI 4	189	836.4	26.08	27.50	1.387	-	-	0.04	0.139	0.193
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 1	DSI 4	189	836.4	26.24	26.50	1.062	-	-	0.04	0.157	0.167
54	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI 4	189	836.4	26.24	26.50	1.062	-	-	-0.06	0.198	0.210
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 4	4182	836.4	24.93	25.50	1.140	-	-	0.15	0.166	0.189
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 4	4182	836.4	24.93	25.50	1.140	-	-	0.09	0.209	0.238
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 4	4182	836.4	23.63	24.00	1.089	-	-	0.01	0.195	0.212
55	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 4	4182	836.4	23.63	24.00	1.089	-	-	-0.05	0.241	0.275
	LTE Band 26	15M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 4	26865	831.5	24.58	25.50	1.236	-	-	-0.02	0.071	0.088
	LTE Band 26	15M	QPSK	36	0	-	Front	15mm	Ant 0	DSI 4	26865	831.5	23.50	24.50	1.259	-	-	0.05	0.109	0.137
	LTE Band 26	15M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 4	26865	831.5	24.58	25.50	1.236	-	-	0.04	0.095	0.117
	LTE Band 26	15M	QPSK	36	0	-	Back	15mm	Ant 0	DSI 4	26865	831.5	23.50	24.50	1.259	-	-	0.01	0.133	0.167
	LTE Band 26	15M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 4	26865	831.5	24.25	25.70	1.396	-	-	0.08	0.195	0.272
	LTE Band 26	15M	QPSK	36	0	-	Front	15mm	Ant 1	DSI 4	26865	831.5	23.24	24.70	1.400	-	-	0.08	0.166	0.232
56	LTE Band 26	15M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 4	26865	831.5	24.25	25.70	1.396	-	-	-0.14	0.254	0.355
	LTE Band 26	15M	QPSK	36	0	-	Back	15mm	Ant 1	DSI 4	26865	831.5	23.24	24.70	1.400	-	-	0.16	0.210	0.294
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI 4	167300	836.5	24.96	25.50	1.132	-	-	0.10	0.167	0.189
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI 4	167300	836.5	24.90	25.50	1.148	-	-	0.08	0.153	0.176
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI 4	167300	836.5	24.96	25.50	1.132	-	-	-0.02	0.207	0.234
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI 4	167300	836.5	24.90	25.50	1.148	-	-	0.05	0.172	0.197
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 1	DSI 4	167300	836.5	23.45	24.00	1.135	-	-	-0.09	0.168	0.191
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 1	DSI 4	167300	836.5	23.24	24.00	1.191	-	-	0.06	0.159	0.189
57	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI 4	167300	836.5	23.45	24.00	1.135	-	-	-0.15	0.217	0.246
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI 4	167300	836.5	23.24	24.00	1.191	-	-	0.08	0.198	0.236
<b>1750MHz</b>																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 3	DSI 4	1413	1732.6	24.88	25.50	1.153	-	-	0.07	0.394	0.454
58	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 3	DSI 4	1413	1732.6	24.88	25.50	1.153	-	-	-0.05	0.414	0.478
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 5	DSI 4	1413	1732.6	23.60	24.50	1.230	-	-	-0.04	0.320	0.394
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 5	DSI 4	1413	1732.6	23.60	24.50	1.230	-	-	-0.08	0.365	0.449
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI 4	20175	1732.5	24.68	25.50	1.208	-	-	0.06	0.392	0.473
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI 4	20175	1732.5	23.64	24.50	1.219	-	-	0.01	0.306	0.373
59	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI 4	20175	1732.5	24.68	25.50	1.208	-	-	-0.02	0.436	0.527
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI 4	20175	1732.5	23.64	24.50	1.219	-	-	-0.15	0.347	0.423





	LTE Band 66	20M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 4	132322	1745	23.02	24.00	1.253	-	-	-0.06	0.113	0.142
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI 4	132322	1745	21.95	23.00	1.274	-	-	0.04	0.100	0.127
	LTE Band 66	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 4	132322	1745	23.02	24.00	1.253	-	-	0.07	0.107	0.134
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI 4	132322	1745	21.95	23.00	1.274	-	-	0.06	0.088	0.112
	LTE Band 66	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI 4	132322	1745	24.17	25.00	1.211	-	-	0.01	0.316	0.383
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI 4	132322	1745	23.17	24.00	1.211	-	-	0.11	0.249	0.301
	LTE Band 66	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI 4	132322	1745	24.17	25.00	1.211	-	-	-0.13	0.373	0.452
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI 4	132322	1745	23.17	24.00	1.211	-	-	0.09	0.295	0.357
	LTE Band 66	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 4	132322	1745	22.90	24.50	1.445	-	-	0.05	0.057	0.082
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 4	132322	1745	21.83	23.50	1.469	-	-	0.03	0.049	0.072
	LTE Band 66	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 4	132322	1745	22.90	24.50	1.445	-	-	0.02	0.088	0.127
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 4	132322	1745	21.83	23.50	1.469	-	-	-0.14	0.072	0.106
	LTE Band 66	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI 4	132322	1745	24.05	25.00	1.245	-	-	0.09	0.381	0.474
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI 4	132322	1745	23.03	24.00	1.250	-	-	-0.02	0.298	0.373
60	LTE Band 66	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI 4	132322	1745	24.05	25.00	1.245	-	-	-0.18	0.464	0.577
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI 4	132322	1745	23.03	24.00	1.250	-	-	-0.07	0.366	0.458
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI 4	349000	1745	23.03	23.50	1.114	-	-	-0.07	0.125	0.139
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI 4	349000	1745	23.02	23.50	1.117	-	-	0.04	0.123	0.137
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI 4	349000	1745	23.03	23.50	1.114	-	-	0.05	0.120	0.134
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI 4	349000	1745	23.02	23.50	1.117	-	-	0.04	0.119	0.133
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 3	DSI 4	349000	1745	24.45	25.00	1.135	-	-	0.07	0.386	0.438
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 3	DSI 4	349000	1745	24.40	25.00	1.148	-	-	-0.14	0.404	0.464
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 3	DSI 4	349000	1745	24.45	25.00	1.135	-	-	-0.06	0.393	0.446
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 3	DSI 4	349000	1745	24.40	25.00	1.148	-	-	-0.19	0.417	0.479
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 4	DSI 4	349000	1745	22.88	23.50	1.153	-	-	-0.18	0.049	0.057
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 4	DSI 4	349000	1745	22.74	23.50	1.191	-	-	0.04	0.057	0.068
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 4	DSI 4	349000	1745	22.88	23.50	1.153	-	-	0.09	0.072	0.083
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 4	DSI 4	349000	1745	22.74	23.50	1.191	-	-	-0.09	0.083	0.099
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 5	DSI 4	349000	1745	24.55	25.00	1.109	-	-	0.06	0.402	0.446
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 5	DSI 4	349000	1745	24.35	25.00	1.161	-	-	-0.08	0.477	0.554
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI 4	349000	1745	24.55	25.00	1.109	-	-	0.02	0.487	0.540
61	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI 4	349000	1745	24.35	25.00	1.161	-	-	-0.02	0.555	0.645
<b>1900MHz</b>																				
	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Front	15mm	Ant 3	DSI 4	661	1880	30.01	31.00	1.256	-	-	0.02	0.102	0.128
62	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Back	15mm	Ant 3	DSI 4	661	1880	30.01	31.00	1.256	-	-	-0.05	0.104	0.131
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 5	DSI 4	661	1880	22.73	24.00	1.340	-	-	0.08	0.066	0.088
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 5	DSI 4	661	1880	22.73	24.00	1.340	-	-	-0.04	0.080	0.107
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 3	DSI 4	9400	1880	24.88	25.50	1.153	-	-	0.02	0.367	0.423
63	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 3	DSI 4	9400	1880	24.88	25.50	1.153	-	-	0.03	0.398	0.459
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 5	DSI 4	9400	1880	23.61	24.50	1.227	-	-	0.02	0.221	0.271
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 5	DSI 4	9400	1880	23.61	24.50	1.227	-	-	-0.08	0.278	0.341
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI 4	18900	1880	24.64	25.50	1.219	-	-	-0.08	0.322	0.393
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI 4	18900	1880	23.69	24.50	1.205	-	-	0.06	0.263	0.317
64	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI 4	18900	1880	24.64	25.50	1.219	-	-	-0.03	0.397	0.484
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI 4	18900	1880	23.69	24.50	1.205	-	-	0.13	0.316	0.381
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 4	18900	1880	23.56	25.00	1.393	-	-	0.18	0.082	0.114
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 4	18900	1880	22.63	24.00	1.371	-	-	0.02	0.067	0.092
	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 4	18900	1880	23.56	25.00	1.393	-	-	0.05	0.115	0.160
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 4	18900	1880	22.63	24.00	1.371	-	-	-0.07	0.093	0.127
<b>2600MHz</b>																				
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 4	21100	2535	22.84	24.00	1.306	-	-	0.06	0.078	0.102
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI 4	21100	2535	21.78	23.00	1.324	-	-	0.08	0.055	0.073
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 4	21100	2535	22.84	24.00	1.306	-	-	0.09	0.098	0.128
	LTE Band 7C	20M	QPSK	1	99	-	Back	15mm	Ant 0	DSI 4	21100+21298	2535+2554.8	22.00	24.00	1.585	-	-	0.01	0.070	0.111
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI 4	21100	2535	21.78	23.00	1.324	-	-	0.03	0.066	0.087
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI 4	21100	2535	24.91	25.50	1.146	-	-	-0.17	0.377	0.432



65	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI 4	21100	2535	23.89	24.50	1.151	-	-	0.07	0.309	0.356
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI 4	21100	2535	24.91	25.50	1.146	-	-	0.09	0.431	<b>0.494</b>
	LTE Band 7C	20M	QPSK	1	99	-	Back	15mm	Ant 3	DSI 4	21100+21298	2535+2554.8	23.84	25.50	1.466	-	-	0.01	0.321	0.470
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI 4	21100	2535	23.89	24.50	1.151	-	-	0.03	0.349	0.402
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 4	21100	2535	22.07	23.00	1.239	-	-	-0.13	0.196	0.243
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 4	21100	2535	21.97	23.00	1.268	-	-	0.12	0.198	0.251
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 4	21100	2535	22.07	23.00	1.239	-	-	-0.01	0.292	0.362
	LTE Band 7C	20M	QPSK	1	99	-	Back	15mm	Ant 4	DSI 4	21100+21298	2535+2554.8	21.60	23.00	1.380	-	-	0.04	0.224	0.309
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 4	21100	2535	21.97	23.00	1.268	-	-	0.02	0.281	0.356
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI 4	21100	2535	23.75	24.50	1.189	-	-	0.02	0.190	0.226
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI 4	21100	2535	22.79	23.50	1.178	-	-	0.02	0.192	0.226
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI 4	21100	2535	23.75	24.50	1.189	-	-	-0.09	0.295	0.351
	LTE Band 7C	20M	QPSK	1	99	-	Back	15mm	Ant 5	DSI 4	21100+21298	2535+2554.8	23.12	24.50	1.374	-	-	0.04	0.251	0.345
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI 4	21100	2535	22.79	23.50	1.178	-	-	0.05	0.292	0.344
	LTE Band 38	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 4	38000	2595	23.55	25.00	1.396	62.9	1.006	0.09	0.122	0.171
	LTE Band 38	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 4	38000	2595	22.61	24.00	1.377	62.9	1.006	0.07	0.098	0.136
66	LTE Band 38	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 4	38000	2595	23.55	25.00	1.396	62.9	1.006	-0.02	0.198	<b>0.278</b>
	LTE Band 38C	20M	QPSK	1	99	-	Back	15mm	Ant 4	DSI 4	37901+38099	2585.1+2604.9	22.25	24.00	1.496	62.9	1.006	0.04	0.153	0.230
	LTE Band 38	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 4	38000	2595	22.61	24.00	1.377	62.9	1.006	0.05	0.161	0.223
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 4	40620	2593	22.72	23.50	1.197	62.9	1.006	0.03	0.038	0.046
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI 4	40620	2593	21.65	22.50	1.216	62.9	1.006	-0.10	0.046	0.056
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 4	40620	2593	22.72	23.50	1.197	62.9	1.006	-0.08	0.062	0.075
	LTE Band 38C	20M	QPSK	1	99	-	Back	15mm	Ant 0	DSI 4	37901+38099	2585.1+2604.9	21.59	23.50	1.552	62.9	1.006	0.01	0.041	0.064
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI 4	40620	2593	21.65	22.50	1.216	62.9	1.006	0.08	0.045	0.055
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI 4	40620	2593	24.81	25.50	1.172	62.9	1.006	0.18	0.209	0.246
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI 4	40620	2593	23.79	24.50	1.178	62.9	1.006	0.06	0.165	0.195
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI 4	40620	2593	24.81	25.50	1.172	62.9	1.006	-0.15	0.227	0.268
	LTE Band 38C	20M	QPSK	1	99	-	Back	15mm	Ant 3	DSI 4	37901+38099	2585.1+2604.9	23.62	25.50	1.542	62.9	1.006	0.07	0.159	0.247
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI 4	40620	2593	23.79	24.50	1.178	62.9	1.006	-0.04	0.179	0.212
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 4	40620	2593	23.77	24.50	1.183	62.9	1.006	0.07	0.165	0.196
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 4	40620	2593	22.67	24.00	1.358	62.9	1.006	-0.09	0.123	0.168
67	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 4	40620	2593	23.77	24.50	1.183	62.9	1.006	-0.06	0.257	<b>0.306</b>
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 4	40620	2593	22.67	24.00	1.358	62.9	1.006	-0.11	0.201	0.275
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI 4	40620	2593	23.89	24.50	1.151	62.9	1.006	0.04	0.157	0.182
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI 4	40620	2593	22.83	23.50	1.167	62.9	1.006	0.17	0.128	0.150
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI 4	40620	2593	23.89	24.50	1.151	62.9	1.006	-0.01	0.259	0.300
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI 4	40620	2593	22.83	23.50	1.167	62.9	1.006	0.01	0.202	0.237
	LTE Band 38C	20M	QPSK	1	99	-	Back	15mm	Ant 5	DSI 4	37901+38099	2585.1+2604.9	22.94	24.50	1.432	62.9	1.006	0.01	0.205	0.295
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI 4	507000	2535	23.47	24.00	1.130	-	-	-0.07	0.076	0.086
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI 4	507000	2535	23.20	24.00	1.202	-	-	0.06	0.073	0.088
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI 4	507000	2535	23.47	24.00	1.130	-	-	0.10	0.079	0.089
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI 4	507000	2535	23.20	24.00	1.202	-	-	-0.02	0.105	0.126
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 3	DSI 4	507000	2535	24.47	25.00	1.130	-	-	0.09	0.322	0.364
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 3	DSI 4	507000	2535	24.42	25.00	1.143	-	-	-0.17	0.318	0.363
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 3	DSI 4	507000	2535	24.47	25.00	1.130	-	-	0.11	0.297	0.336
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 3	DSI 4	507000	2535	24.42	25.00	1.143	-	-	0.03	0.300	0.343
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 4	DSI 4	507000	2535	22.02	22.50	1.117	-	-	0.06	0.163	0.182
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 4	DSI 4	507000	2535	22.00	22.50	1.122	-	-	0.17	0.161	0.181
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 4	DSI 4	507000	2535	22.02	22.50	1.117	-	-	-0.06	0.270	0.302
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 4	DSI 4	507000	2535	22.00	22.50	1.122	-	-	-0.17	0.267	0.300
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 5	DSI 4	507000	2535	23.94	24.50	1.138	-	-	0.07	0.294	0.334
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 5	DSI 4	507000	2535	23.87	24.50	1.156	-	-	0.08	0.268	0.310
68	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI 4	507000	2535	23.94	24.50	1.138	-	-	-0.05	0.434	<b>0.494</b>
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI 4	507000	2535	23.87	24.50	1.156	-	-	-0.10	0.390	0.451
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	518598	2592.99	22.98	24.00	1.265	-	-	0.06	0.091	0.115
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	518598	2592.99	22.93	24.00	1.279	-	1.000	0.05	0.090	0.115





	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	518598	2592.99	22.98	24.00	1.265	-	-	-0.09	0.111	0.140
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	518598	2592.99	22.93	24.00	1.279		1.000	0.05	0.106	0.136
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI 4	518598	2592.99	24.39	25.00	1.151	-	-	0.07	0.359	0.413
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI 4	518598	2592.99	24.23	25.00	1.194	-	-	0.02	0.342	0.408
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 4	518598	2592.99	24.39	25.00	1.151	-	-	0.04	0.337	0.388
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 4	518598	2592.99	24.23	25.00	1.194	-	-	0.05	0.311	0.371
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 4	518598	2592.99	21.63	22.50	1.222	-	-	-0.15	0.158	0.193
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 4	518598	2592.99	21.47	22.50	1.268	-	-	0.01	0.172	0.218
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 4	518598	2592.99	21.63	22.50	1.222	-	-	0.03	0.254	0.310
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 4	518598	2592.99	21.47	22.50	1.268	-	-	-0.08	0.264	0.335
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 4	518598	2592.99	23.90	24.50	1.148	-	-	0.19	0.319	0.366
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 4	518598	2592.99	23.83	24.50	1.167	-	-	0.16	0.298	0.348
69	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 4	518598	2592.99	23.90	24.50	1.148	-	-	-0.05	0.480	0.551
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 4	518598	2592.99	23.83	24.50	1.167	-	-	0.02	0.420	0.490
<b>3500MHz</b>																				
	LTE Band 42	20M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 4	42590	3500	23.03	24.00	1.250	62.9	1.006	-0.02	0.162	0.204
	LTE Band 42	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI 4	42590	3500	22.09	23.00	1.233	62.9	1.006	-0.04	0.126	0.156
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 4	42590	3500	23.03	24.00	1.250	62.9	1.006	0.01	0.235	0.296
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI 4	42590	3500	22.09	23.00	1.233	62.9	1.006	0.02	0.195	0.242
	LTE Band 42	20M	QPSK	1	0	-	Front	15mm	Ant 9	DSI 4	42590	3500	21.16	22.20	1.271	62.9	1.006	0.05	0.097	0.124
	LTE Band 42	20M	QPSK	50	0	-	Front	15mm	Ant 9	DSI 4	42590	3500	21.12	22.20	1.282	62.9	1.006	-0.11	0.094	0.121
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 9	DSI 4	42590	3500	21.16	22.20	1.271	62.9	1.006	-0.07	0.157	0.201
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 9	DSI 4	42590	3500	21.12	22.20	1.282	62.9	1.006	-0.04	0.162	0.209
	LTE Band 42	20M	QPSK	1	0	-	Front	15mm	Ant 10	DSI 4	42590	3500	19.08	19.70	1.153	62.9	1.006	0.08	0.043	0.050
	LTE Band 42	20M	QPSK	50	0	-	Front	15mm	Ant 10	DSI 4	42590	3500	19.05	19.70	1.161	62.9	1.006	-0.19	0.036	0.042
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 10	DSI 4	42590	3500	19.08	19.70	1.153	62.9	1.006	0.02	0.239	0.277
70	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 10	DSI 4	42590	3500	19.05	19.70	1.161	62.9	1.006	0.01	0.255	0.298
	LTE Band 42	20M	QPSK	1	0	-	Front	15mm	Ant 11	DSI 4	42590	3500	24.83	25.70	1.222	62.9	1.006	0.16	0.128	0.157
	LTE Band 42	20M	QPSK	50	0	-	Front	15mm	Ant 11	DSI 4	42590	3500	23.90	24.70	1.202	62.9	1.006	-0.15	0.135	0.163
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 11	DSI 4	42590	3500	24.83	25.70	1.222	62.9	1.006	-0.12	0.185	0.227
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 11	DSI 4	42590	3500	23.90	24.70	1.202	62.9	1.006	0.07	0.194	0.235
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	656000	3840	22.99	24.00	1.262	-	-	0.06	0.068	0.086
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	656000	3840	22.91	24.00	1.285	-	-	0.15	0.059	0.076
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	656000	3840	22.99	24.00	1.262	-	-	-0.01	0.069	0.087
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	656000	3840	22.91	24.00	1.285	-	-	-0.01	0.074	0.095
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	633334	3500.01	23.09	24.00	1.233	-	-	0.12	0.152	0.187
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	633334	3500.01	23.06	24.00	1.242	-	-	0.07	0.155	0.192
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	633334	3500.01	23.09	24.00	1.233	-	-	-0.13	0.242	0.298
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	633334	3500.01	23.06	24.00	1.242	-	-	-0.09	0.269	0.334
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI 4	656000	3840	17.16	17.50	1.081	-	-	0.17	0.076	0.082
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI 4	656000	3840	17.05	17.50	1.109	-	-	0.09	0.072	0.080
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	656000	3840	17.16	17.50	1.081	-	-	0.09	0.107	0.116
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	656000	3840	17.05	17.50	1.109	-	-	0.16	0.082	0.091
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI 4	633334	3500.01	17.23	17.50	1.064	-	-	0.02	0.044	0.047
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI 4	633334	3500.01	17.20	17.50	1.072	-	-	0.03	0.066	0.071
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	633334	3500.01	17.23	17.50	1.064	-	-	-0.02	0.086	0.092
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	633334	3500.01	17.20	17.50	1.072	-	-	-0.01	0.106	0.114
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 10	DSI 4	656000	3840	16.32	17.20	1.225	-	-	-0.15	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 10	DSI 4	656000	3840	16.28	17.20	1.236	-	-	0.05	0.047	0.058
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	656000	3840	16.32	17.20	1.225	-	-	-0.05	0.133	0.163
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	656000	3840	16.28	17.20	1.236	-	-	0.08	0.097	0.120
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 10	DSI 4	633334	3500.01	16.72	17.20	1.117	-	-	0.04	0.017	0.019
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 10	DSI 4	633334	3500.01	16.66	17.20	1.132	-	-	0.15	0.016	0.018
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	633334	3500.01	16.72	17.20	1.117	-	-	0.05	0.237	0.265
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	633334	3500.01	16.66	17.20	1.132	-	-	0.02	0.262	0.297
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	656000	3840	24.87	25.70	1.211	-	-	0.07	0.213	0.258



**FCC SAR Test Report**

**Report No. : FA271606**

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	656000	3840	24.76	25.70	1.242	-	-	0.06	0.221	0.274
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	656000	3840	24.87	25.70	1.211	-	-	-0.02	0.221	0.268
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	656000	3840	24.76	25.70	1.242	-	-	-0.08	0.245	0.304
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	633334	3500.01	24.93	25.70	1.194	-	-	0.02	0.298	0.356
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	633334	3500.01	24.88	25.70	1.208	-	-	-0.08	0.273	0.330
71	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	633334	3500.01	24.93	25.70	1.194	-	-	-0.08	0.555	0.663
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	633334	3500.01	24.88	25.70	1.208	-	-	0.06	0.384	0.464
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	650000	3750	20.79	22.00	1.321	-	-	0.11	0.060	0.079
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	650000	3750	20.71	22.00	1.346	-	-	0.02	0.056	0.075
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	650000	3750	20.79	22.00	1.321	-	-	0.01	0.087	0.115
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	650000	3750	20.71	22.00	1.346	-	-	0.15	0.047	0.063
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	650000	3750	23.69	25.00	1.352	50	1.000	0.01	0.081	0.110
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	633334	3500.01	21.02	22.00	1.253	-	-	0.01	0.130	0.163
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI 4	633334	3500.01	21.01	22.00	1.256	-	-	-0.12	0.124	0.156
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	633334	3500.01	21.02	22.00	1.253	-	-	0.07	0.224	0.281
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	633334	3500.01	21.01	22.00	1.256	-	-	0.01	0.229	0.288
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI 4	633334	3500.01	23.94	25.00	1.276	50	1.000	0.01	0.249	0.318
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI 4	650000	3750	18.23	20.00	1.503	-	-	0.03	0.093	0.140
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI 4	650000	3750	18.20	20.00	1.514	-	-	0.06	0.085	0.129
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	650000	3750	18.23	20.00	1.503	-	-	-0.03	0.152	0.228
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	650000	3750	18.20	20.00	1.514	-	-	-0.02	0.140	0.212
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	650000	3750	21.29	23.00	1.483	50	1.000	-0.08	0.171	0.254
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI 4	633334	3500.01	18.19	20.00	1.517	-	-	0.12	0.058	0.088
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI 4	633334	3500.01	18.18	20.00	1.521	-	-	0.06	0.071	0.108
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	633334	3500.01	18.19	20.00	1.517	-	-	0.03	0.098	0.149
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	633334	3500.01	18.18	20.00	1.521	-	-	-0.02	0.133	0.202
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI 4	633334	3500.01	21.21	23.00	1.510	50	1.000	-0.04	0.129	0.195
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 10	DSI 4	650000	3750	15.82	17.50	1.472	-	-	0.03	0.045	0.066
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 10	DSI 4	650000	3750	15.77	17.50	1.489	-	-	-0.11	0.042	0.063
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	650000	3750	15.82	17.50	1.472	-	-	-0.05	0.166	0.244
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	650000	3750	15.77	17.50	1.489	-	-	0.16	0.123	0.183
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	650000	3750	18.73	20.50	1.503	50	1.000	-0.08	0.161	0.242
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 10	DSI 4	633334	3500.01	16.38	17.50	1.294	-	-	0.08	0.050	0.065
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 10	DSI 4	633334	3500.01	16.31	17.50	1.315	-	-	0.06	0.034	0.045
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	633334	3500.01	16.38	17.50	1.294	-	-	0.02	0.214	0.277
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	633334	3500.01	16.31	17.50	1.315	-	-	-0.02	0.263	0.346
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 10	DSI 4	633334	3500.01	19.20	20.50	1.349	50	1.000	-0.09	0.246	0.332
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	650000	3750	22.75	24.00	1.334	-	-	-0.05	0.287	0.383
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	650000	3750	22.56	24.00	1.393	-	-	0.07	0.265	0.369
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	650000	3750	22.75	24.00	1.334	-	-	0.07	0.279	0.372
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	650000	3750	22.56	24.00	1.393	-	-	-0.09	0.259	0.361
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	650000	3750	25.67	27.00	1.358	50	1.000	-0.09	0.235	0.319
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	633334	3500.01	23.08	24.00	1.236	-	-	0.15	0.322	0.398
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 11	DSI 4	633334	3500.01	22.96	24.00	1.271	-	-	-0.05	0.310	0.394
	FR1 n78 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	633334	3500.01	23.08	24.00	1.236	-	-	-0.13	0.533	0.659
	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	633334	3500.01	22.96	24.00	1.271	-	-	0.08	0.461	0.586
72	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 11	DSI 4	633334	3500.01	26.22	27.00	1.197	50	1.000	0.06	0.614	0.735



Plot No.	Band	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)	Reported 1g SAR (W/kg)
<b>2450MHz</b>																
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 15+16	full power	11	2462	19.56	21.50	1.563	97.86	1.022	0.09	0.064	0.102
73	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 15+16	full power	11	2462	19.56	21.50	1.563	97.86	1.022	-0.02	0.106	<b>0.169</b>
	Bluetooth	1Mbps	Front	15mm	Ant 15	Standalone	39	2441	14.70	16.00	1.349	77.09	1.081	0.09	0.001	0.001
	Bluetooth	1Mbps	Back	15mm	Ant 15	Standalone	39	2441	14.70	16.00	1.349	77.09	1.081	-0.08	0.020	0.029
	Bluetooth	1Mbps	Front	15mm	Ant 16	Standalone	39	2441	15.28	16.00	1.180	76.75	1.085	0.08	0.001	0.001
74	Bluetooth	1Mbps	Back	15mm	Ant 16	Standalone	39	2441	15.28	16.00	1.180	76.75	1.085	-0.01	0.023	<b>0.029</b>
<b>5000MHz</b>																
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 16+17	Standalone	58	5290	17.38	19.00	1.452	100	1.000	0.09	0.092	0.134
75	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 16+17	Standalone	58	5290	17.38	19.00	1.452	100	1.000	0.01	0.110	<b>0.160</b>
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 16+17	Standalone	106	5530	16.38	18.00	1.452	100	1.000	0.05	0.060	0.087
76	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 16+17	Standalone	106	5530	16.38	18.00	1.452	100	1.000	0.01	0.112	<b>0.163</b>
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 16+17	Standalone	155	5775	18.04	20.00	1.570	100	1.000	0.02	0.107	0.168
77	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 16+17	Standalone	155	5775	18.04	20.00	1.570	100	1.000	0.01	0.159	<b>0.250</b>



15.4 Product Specific SAR

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)	Reported 10g SAR (W/kg)
<b>1750MHz</b>																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	1413	1732.6	23.41	24.00	1.146	-	-	0.08	2.14	2.451
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	1312	1712.4	23.33	24.00	1.167	-	-	0.02	2.04	2.380
78	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	1513	1752.6	23.40	24.00	1.148	-	-	0.11	2.21	<b>2.537</b>
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 3	DSI 4	1513	1752.6	24.82	25.50	1.169	-	-	0.01	0.37	0.433
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 3	DSI 3	132322	1745	23.61	24.50	1.227	-	-	0.07	2.00	2.455
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 3	DSI 3	132072	1720	23.58	24.50	1.236	-	-	0.1	1.94	2.398
79	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 3	DSI 3	132572	1770	23.49	24.50	1.262	-	-	0.15	2.01	<b>2.536</b>
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 3	DSI 3	132322	1745	23.11	24.00	1.227	-	-	0.09	1.74	2.136
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 3	DSI 3	132072	1720	22.93	24.00	1.279	-	-	0.01	1.66	2.124
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 3	DSI 3	132572	1770	22.94	24.00	1.276	-	-	0.02	1.65	2.106
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 3	DSI 3	132322	1745	23.16	24.00	1.213	-	-	0.15	1.88	2.281
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 3	DSI 4	132572	1770	24.09	25.00	1.233	-	-	0.08	0.36	0.443
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	0mm	Ant 3	DSI 3	349000	1745	23.62	24.00	1.091	-	-	0.02	2.040	2.227
80	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	0mm	Ant 3	DSI 3	349000	1745	23.56	24.00	1.107	-	-	-0.04	2.190	<b>2.424</b>
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Bottom Side	0mm	Ant 3	DSI 3	349000	1745	23.48	24.00	1.127	-	-	0.08	2.110	2.378
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	15mm	Ant 3	DSI 4	349000	1745	24.40	25.00	1.148	-	-	0.01	0.371	0.426
<b>1900MHz</b>																				
81	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	9400	1880	23.19	24.00	1.205	-	-	0.08	2.01	<b>2.422</b>
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	9262	1852.4	23.02	24.00	1.253	-	-	0.05	1.83	2.293
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	9538	1907.6	22.97	24.00	1.268	-	-	-0.02	1.81	2.294
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 3	DSI 4	9400	1880	24.88	25.50	1.153	-	-	0.09	0.30	0.347
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 3	DSI 3	18900	1880	23.33	24.00	1.167	-	-	0.02	1.68	1.960
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 3	DSI 3	18700	1860	23.26	24.00	1.186	-	-	-0.02	1.67	1.980
82	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 3	DSI 3	19100	1900	23.31	24.00	1.172	-	-	-0.1	1.72	<b>2.016</b>
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 3	DSI 3	18900	1880	23.29	24.00	1.178	-	-	0.01	1.59	1.872
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 3	DSI 3	18700	1860	23.13	24.00	1.222	-	-	0.09	1.56	1.906
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 3	DSI 3	19100	1900	23.19	24.00	1.205	-	-	-0.08	1.57	1.892
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 3	DSI 3	18900	1880	23.25	24.00	1.189	-	-	-0.1	1.55	1.842
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 3	DSI 4	19100	1900	24.50	25.50	1.259	-	-	0.08	0.26	0.327
<b>3500MHz</b>																				
	LTE Band 42	20M	QPSK	1	0	-	Back	0mm	Ant 10	DSI 3	42590	3500	19.08	19.70	1.153	62.9	1.006	-0.04	1.32	1.532
	LTE Band 42	20M	QPSK	1	0	-	Back	0mm	Ant 10	DSI 3	42190	3460	18.95	19.70	1.189	62.9	1.006	0.07	1.16	1.387
	LTE Band 42	20M	QPSK	1	0	-	Back	0mm	Ant 10	DSI 3	42990	3540	18.90	19.70	1.202	62.9	1.006	0.03	1.42	1.717
	LTE Band 42	20M	QPSK	50	0	-	Back	0mm	Ant 10	DSI 3	42590	3500	19.05	19.70	1.161	62.9	1.006	0.08	1.39	1.624
	LTE Band 42	20M	QPSK	50	0	-	Back	0mm	Ant 10	DSI 3	42190	3460	18.92	19.70	1.197	62.9	1.006	-0.16	1.21	1.457
83	LTE Band 42	20M	QPSK	50	0	-	Back	0mm	Ant 10	DSI 3	42990	3540	18.85	19.70	1.216	62.9	1.006	0.01	1.44	<b>1.762</b>
	LTE Band 42	20M	QPSK	100	0	-	Back	0mm	Ant 10	DSI 3	42590	3500	19.00	19.70	1.175	62.9	1.006	0.03	1.42	1.678



Plot No.	Band	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)	Reported 10g SAR (W/kg)
<b>5000MHz</b>																
84	WLAN 5.2GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 16+17	Standalone	42	5210	17.05	18.50	1.396	100	1.000	0.04	0.896	<b>1.251</b>
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 16+17	Standalone	58	5290	17.38	19.00	1.452	100	1.000	0.02	0.421	0.611
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 16+17	Standalone	58	5290	17.38	19.00	1.452	100	1.000	0.09	0.308	0.447
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 16+17	Standalone	58	5290	17.38	19.00	1.452	100	1.000	-0.01	0.127	0.184
85	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 16+17	Standalone	58	5290	17.38	19.00	1.452	100	1.000	0.09	0.983	<b>1.427</b>
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 16+17	Standalone	106	5530	16.38	18.00	1.452	100	1.000	0.06	0.349	0.507
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 16+17	Standalone	106	5530	16.38	18.00	1.452	100	1.000	0.08	0.317	0.460
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 16+17	Standalone	106	5530	16.38	18.00	1.452	100	1.000	0.02	0.619	0.899
86	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 16+17	Standalone	106	5530	16.38	18.00	1.452	100	1.000	0.01	0.924	<b>1.342</b>



15.5 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	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4182	836.4	24.43	25.00	1.140	-	-	0.02	0.954	1	1.088
2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4182	836.4	24.43	25.00	1.140	-	-	-0.09	0.948	1.006	1.081
1st	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	17.81	18.50	1.172	-	-	0.01	0.931	1	1.091
2nd	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	17.81	18.50	1.172	-	-	-0.07	0.927	1.004	1.087
1st	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	10mm	Ant 3	DSI 5	349000	1745	23.52	24.00	1.117	-	-	0.05	0.895	1	1.000
2nd	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	10mm	Ant 3	DSI 5	349000	1745	23.52	24.00	1.117	-	-	0.17	0.891	1.004	0.995
1st	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	633334	3500.01	21.01	22.00	1.256	-	-	0.09	0.851	1	1.069
2nd	FR1 n78 PC3	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI 5	633334	3500.01	21.01	22.00	1.256	-	-	0.07	0.845	1.007	1.061

<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	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	1513	1752.6	23.40	24.00	1.148	-	-	0.11	2.21	1	2.537
2nd	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	1513	1752.6	23.40	24.00	1.148	-	-	0.09	2.14	1.033	2.457
1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	9400	1880	23.19	24.00	1.205	-	-	0.08	2.01	1	2.422
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 3	DSI 3	9400	1880	23.19	24.00	1.205	-	-	-0.08	1.98	1.015	2.386

General Note:

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

## 16. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product Specific
1.	WWAN + WLAN2.4GHz SISO/MIMO	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz SISO/MIMO	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	Bluetooth + WLAN5GHz SISO/MIMO	Yes	Yes	Yes	Yes
5.	WWAN + Bluetooth + WLAN5GHz SISO/MIMO	Yes	Yes	Yes	Yes

**General Note:**

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP) and LTE supports VoLTE operation.
2. WWAN above includes 5G NR bands and EN-DC combination.
3. 5G NR NSA EN-DC mode, standalone SAR performed for 5GNR band with the maximum power, EN-DC SAR summed 5GNR standalone SAR and LTE standalone SAR , the result of EN-DC SAR is more conservatively.
4. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
5. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
6. This device 2.4GHz WLAN/ 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. WLAN2.4GHz/WLAN5GHz MIMO SAR can represent SISO SAR to do co-located SAR analysis.
8. According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
9. According to the EUT characteristic, WLAN 2.4GHz and Bluetooth cannot transmit simultaneously.
10. According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz cannot transmit simultaneously.
11. 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.
12. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
13. Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
14. The reported SAR summation is calculated based on the same configuration and test position.
15. For standalone WWAN, always choose the highest SAR among all WWAN bands for each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each bands.
16. 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)  $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$ , and the peak separation distance is determined from the square root of  $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$ , where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
  - iii) If  $SPLSR \leq 0.04$  for 1g SAR and  $SPLSR \leq 0.10$  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 16.5.





16.1 Head Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2	1+3+4	1+3+5
		WWAN	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
All Bands	Right Cheek	1.091	0.469	0.249	0.092	0.056	1.56	1.43	1.40
	Right Tilted	1.030	0.469	0.249	0.105	0.049	1.50	1.38	1.33
	Left Cheek	1.088	0.469	0.249	0.201	0.255	1.56	1.54	1.59
	Left Tilted	0.917	0.469	0.249	0.188	0.155	1.39	1.35	1.32

<EN-DC Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	1+2+3	1+2+4+5	1+2+4+6
			WWAN	FR1	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 0 LTE Band (7&12&66)	Ant 1 FR1 Band (n5)	Right Cheek	0.209	0.507	0.469	0.249	0.092	0.056	1.19	1.06	1.02
		Right Tilted	0.125	0.507	0.469	0.249	0.105	0.049	1.10	0.99	0.93
		Left Cheek	0.136	0.507	0.469	0.249	0.201	0.255	1.11	1.09	1.15
		Left Tilted	0.116	0.507	0.469	0.249	0.188	0.155	1.09	1.06	1.03
Ant 0 LTE Band (7&12&66)	Ant 3 FR1 Band (n66&n41)	Right Cheek	0.209	0.254	0.469	0.249	0.092	0.056	0.93	0.80	0.77
		Right Tilted	0.125	0.153	0.469	0.249	0.105	0.049	0.75	0.63	0.58
		Left Cheek	0.136	0.365	0.469	0.249	0.201	0.255	0.97	0.95	1.01
		Left Tilted	0.116	0.147	0.469	0.249	0.188	0.155	0.73	0.70	0.67
Ant 0 LTE Band (7&12&66)	Ant 4 FR1 Band (n66&n41)	Right Cheek	0.209	0.537	0.469	0.249	0.092	0.056	1.22	1.09	1.05
		Right Tilted	0.125	0.537	0.469	0.249	0.105	0.049	1.13	1.02	0.96
		Left Cheek	0.136	0.537	0.469	0.249	0.201	0.255	1.14	1.12	1.18
		Left Tilted	0.116	0.537	0.469	0.249	0.188	0.155	1.12	1.09	1.06
Ant 0 LTE Band (7&12&66)	Ant 5 FR1 Band (n66&n7)	Right Cheek	0.209	0.533	0.469	0.249	0.092	0.056	1.21	1.08	1.05
		Right Tilted	0.125	0.533	0.469	0.249	0.105	0.049	1.13	1.01	0.96
		Left Cheek	0.136	0.533	0.469	0.249	0.201	0.255	1.14	1.12	1.17
		Left Tilted	0.116	0.533	0.469	0.249	0.188	0.155	1.12	1.09	1.05
Ant 0 LTE Band (7&12&66)	Ant 9 FR1 Band (n77&n78)	Right Cheek	0.209	0.542	0.469	0.249	0.092	0.056	1.22	1.09	1.06
		Right Tilted	0.125	0.542	0.469	0.249	0.105	0.049	1.14	1.02	0.97
		Left Cheek	0.136	0.542	0.469	0.249	0.201	0.255	1.15	1.13	1.18
		Left Tilted	0.116	0.542	0.469	0.249	0.188	0.155	1.13	1.10	1.06
Ant 0 LTE Band (7&12&66)	Ant 10 FR1 Band (n77&n78)	Right Cheek	0.209	0.571	0.469	0.249	0.092	0.056	1.25	1.12	1.09
		Right Tilted	0.125	0.502	0.469	0.249	0.105	0.049	1.10	0.98	0.93
		Left Cheek	0.136	0.240	0.469	0.249	0.201	0.255	0.85	0.83	0.88
		Left Tilted	0.116	0.242	0.469	0.249	0.188	0.155	0.83	0.80	0.76
Ant 0 LTE Band (7&12&66)	Ant 11 FR1 Band (n77&n78)	Right Cheek	0.209	0.503	0.469	0.249	0.092	0.056	1.18	1.05	1.02
		Right Tilted	0.125	0.503	0.469	0.249	0.105	0.049	1.10	0.98	0.93
		Left Cheek	0.136	0.503	0.469	0.249	0.201	0.255	1.11	1.09	1.14
		Left Tilted	0.116	0.503	0.469	0.249	0.188	0.155	1.09	1.06	1.02
Ant 1 LTE Band12	Ant 0 FR1 Band (n5 &n7&n66&n77&n78 )	Right Cheek	0.511	0.162	0.469	0.249	0.092	0.056	1.14	1.01	0.98
		Right Tilted	0.511	0.112	0.469	0.249	0.105	0.049	1.09	0.98	0.92
		Left Cheek	0.511	0.212	0.469	0.249	0.201	0.255	1.19	1.17	1.23
		Left Tilted	0.511	0.096	0.469	0.249	0.188	0.155	1.08	1.04	1.01
Ant 1 LTE Band12	Ant 3 FR1 Band (n66&n41)	Right Cheek	0.511	0.254	0.469	0.249	0.092	0.056	1.23	1.11	1.07
		Right Tilted	0.511	0.153	0.469	0.249	0.105	0.049	1.13	1.02	0.96
		Left Cheek	0.511	0.365	0.469	0.249	0.201	0.255	1.35	1.33	1.38
		Left Tilted	0.511	0.147	0.469	0.249	0.188	0.155	1.13	1.10	1.06
Ant 1 LTE Band12	Ant 4 FR1 Band (n66&n41)	Right Cheek	0.511	0.537	0.469	0.249	0.092	0.056	1.52	1.39	1.35
		Right Tilted	0.511	0.537	0.469	0.249	0.105	0.049	1.52	1.40	1.35



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		Left Cheek	0.511	0.537	0.469	0.249	0.201	0.255	1.52	1.50	1.55
		Left Tilted	0.511	0.537	0.469	0.249	0.188	0.155	1.52	1.49	1.45
Ant 1 LTE Band12	Ant 5 FR1 Band (n66&n7)	Right Cheek	0.511	0.533	0.469	0.249	0.092	0.056	1.51	1.39	1.35
		Right Tilted	0.511	0.533	0.469	0.249	0.105	0.049	1.51	1.40	1.34
		Left Cheek	0.511	0.533	0.469	0.249	0.201	0.255	1.51	1.49	1.55
		Left Tilted	0.511	0.533	0.469	0.249	0.188	0.155	1.51	1.48	1.45
		Right Cheek	0.511	0.542	0.469	0.249	0.092	0.056	1.52	1.39	1.36
Ant 1 LTE Band12	Ant 9 FR1 Band (n77&n78)	Right Tilted	0.511	0.542	0.469	0.249	0.105	0.049	1.52	1.41	1.35
		Left Cheek	0.511	0.542	0.469	0.249	0.201	0.255	1.52	1.50	1.56
		Left Tilted	0.511	0.542	0.469	0.249	0.188	0.155	1.52	1.49	1.46
Ant 1 LTE Band12	Ant 10 FR1 Band (n77&n78)	Right Cheek	0.511	0.571	0.469	0.249	0.092	0.056	1.55	1.42	1.39
		Right Tilted	0.511	0.502	0.469	0.249	0.105	0.049	1.48	1.37	1.31
		Left Cheek	0.511	0.240	0.469	0.249	0.201	0.255	1.22	1.20	1.26
		Left Tilted	0.511	0.242	0.469	0.249	0.188	0.155	1.22	1.19	1.16
Ant 1 LTE Band12	Ant 11 FR1 Band (n77&n78)	Right Cheek	0.511	0.503	0.469	0.249	0.092	0.056	1.48	1.36	1.32
		Right Tilted	0.511	0.503	0.469	0.249	0.105	0.049	1.48	1.37	1.31
		Left Cheek	0.511	0.503	0.469	0.249	0.201	0.255	1.48	1.46	1.52
		Left Tilted	0.511	0.503	0.469	0.249	0.188	0.155	1.48	1.45	1.42
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 0 FR1 Band (n5 &n7&n66&77&78 )	Right Cheek	0.249	0.162	0.469	0.249	0.092	0.056	0.88	0.75	0.72
		Right Tilted	0.149	0.112	0.469	0.249	0.105	0.049	0.73	0.62	0.56
		Left Cheek	0.450	0.212	0.469	0.249	0.201	0.255	1.13	1.11	1.17
		Left Tilted	0.180	0.096	0.469	0.249	0.188	0.155	0.75	0.71	0.68
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 1 FR1 Band (n5)	Right Cheek	0.249	0.507	0.469	0.249	0.092	0.056	1.23	1.10	1.06
		Right Tilted	0.149	0.507	0.469	0.249	0.105	0.049	1.13	1.01	0.95
		Left Cheek	0.450	0.507	0.469	0.249	0.201	0.255	1.43	1.41	1.46
		Left Tilted	0.180	0.507	0.469	0.249	0.188	0.155	1.16	1.12	1.09
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 4 FR1 Band (n66&n41)	Right Cheek	0.249	0.537	0.469	0.249	0.092	0.056	1.26	1.13	1.09
		Right Tilted	0.149	0.537	0.469	0.249	0.105	0.049	1.16	1.04	0.98
		Left Cheek	0.450	0.537	0.469	0.249	0.201	0.255	1.46	1.44	1.49
		Left Tilted	0.180	0.537	0.469	0.249	0.188	0.155	1.19	1.15	1.12
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 5 FR1 Band (n66&n7)	Right Cheek	0.249	0.533	0.469	0.249	0.092	0.056	1.25	1.12	1.09
		Right Tilted	0.149	0.533	0.469	0.249	0.105	0.049	1.15	1.04	0.98
		Left Cheek	0.450	0.533	0.469	0.249	0.201	0.255	1.45	1.43	1.49
		Left Tilted	0.180	0.533	0.469	0.249	0.188	0.155	1.18	1.15	1.12
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 9 FR1 Band (n77&n78)	Right Cheek	0.249	0.542	0.469	0.249	0.092	0.056	1.26	1.13	1.10
		Right Tilted	0.149	0.542	0.469	0.249	0.105	0.049	1.16	1.05	0.99
		Left Cheek	0.450	0.542	0.469	0.249	0.201	0.255	1.46	1.44	1.50
		Left Tilted	0.180	0.542	0.469	0.249	0.188	0.155	1.19	1.16	1.13
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 10 FR1 Band (n77&n78)	Right Cheek	0.249	0.571	0.469	0.249	0.092	0.056	1.29	1.16	1.13
		Right Tilted	0.149	0.502	0.469	0.249	0.105	0.049	1.12	1.01	0.95
		Left Cheek	0.450	0.240	0.469	0.249	0.201	0.255	1.16	1.14	1.19
		Left Tilted	0.180	0.242	0.469	0.249	0.188	0.155	0.89	0.86	0.83
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 11 FR1 Band (n77&n78)	Right Cheek	0.249	0.503	0.469	0.249	0.092	0.056	1.22	1.09	1.06
		Right Tilted	0.149	0.503	0.469	0.249	0.105	0.049	1.12	1.01	0.95
		Left Cheek	0.450	0.503	0.469	0.249	0.201	0.255	1.42	1.40	1.46
		Left Tilted	0.180	0.503	0.469	0.249	0.188	0.155	1.15	1.12	1.09
Ant 4 LTE Band (2& 7& 38&& 41& 66)	Ant 0 FR1 Band (n5 &n7&n66&n77&n78 )	Right Cheek	0.548	0.162	0.469	0.249	0.092	0.056	1.18	1.05	1.02
		Right Tilted	0.548	0.112	0.469	0.249	0.105	0.049	1.13	1.01	0.96
		Left Cheek	0.548	0.212	0.469	0.249	0.201	0.255	1.23	1.21	1.26
		Left Tilted	0.548	0.096	0.469	0.249	0.188	0.155	1.11	1.08	1.05
Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 1 FR1 Band (n5)	Right Cheek	0.548	0.507	0.469	0.249	0.092	0.056	1.52	1.40	1.36
		Right Tilted	0.548	0.507	0.469	0.249	0.105	0.049	1.52	1.41	1.35
		Left Cheek	0.548	0.507	0.469	0.249	0.201	0.255	1.52	1.51	1.56
		Left Tilted	0.548	0.507	0.469	0.249	0.188	0.155	1.52	1.49	1.46
Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 3 FR1 Band (n66&n41)	Right Cheek	0.548	0.254	0.469	0.249	0.092	0.056	1.27	1.14	1.11
		Right Tilted	0.548	0.153	0.469	0.249	0.105	0.049	1.17	1.06	1.00



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66)		Left Cheek	0.548	0.365	0.469	0.249	0.201	0.255	1.38	1.36	1.42
		Left Tilted	0.548	0.147	0.469	0.249	0.188	0.155	1.16	1.13	1.10
Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 5 FR1 Band (n66&n7)	Right Cheek	0.548	0.533	0.469	0.249	0.092	0.056	1.55	1.42	1.39
		Right Tilted	0.548	0.533	0.469	0.249	0.105	0.049	1.55	1.44	1.38
		Left Cheek	0.548	0.533	0.469	0.249	0.201	0.255	1.55	1.53	1.59
		Left Tilted	0.548	0.533	0.469	0.249	0.188	0.155	1.55	1.52	1.49
Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 9 FR1 Band (n77&n78)	Right Cheek	0.548	0.542	0.469	0.249	0.092	0.056	1.56	1.43	1.40
		Right Tilted	0.548	0.542	0.469	0.249	0.105	0.049	1.56	1.44	1.39
		Left Cheek	0.548	0.542	0.469	0.249	0.201	0.255	1.56	1.54	1.59
		Left Tilted	0.548	0.542	0.469	0.249	0.188	0.155	1.56	1.53	1.49
Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 10 FR1 Band (n77&n78)	Right Cheek	0.548	0.571	0.469	0.249	0.092	0.056	1.59	1.46	1.42
		Right Tilted	0.548	0.502	0.469	0.249	0.105	0.049	1.52	1.40	1.35
		Left Cheek	0.548	0.240	0.469	0.249	0.201	0.255	1.26	1.24	1.29
		Left Tilted	0.548	0.242	0.469	0.249	0.188	0.155	1.26	1.23	1.19
Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 11 FR1 Band (n77&n78)	Right Cheek	0.548	0.503	0.469	0.249	0.092	0.056	1.52	1.39	1.36
		Right Tilted	0.548	0.503	0.469	0.249	0.105	0.049	1.52	1.41	1.35
		Left Cheek	0.548	0.503	0.469	0.249	0.201	0.255	1.52	1.50	1.56
		Left Tilted	0.548	0.503	0.469	0.249	0.188	0.155	1.52	1.49	1.46

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	1+2+3	1+2+4+5	1+2+4+6
			WWAN	FR1	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 5 LTE Band (7&66)	Ant 0 FR1 Band (n5 &n7&n66&77&78 )	Right Cheek	0.528	0.162	0.469	0.249	0.092	0.056	1.16	1.03	1.00
		Right Tilted	0.528	0.112	0.469	0.249	0.105	0.049	1.11	0.99	0.94
		Left Cheek	0.528	0.212	0.469	0.249	0.201	0.255	1.21	1.19	1.24
		Left Tilted	0.528	0.096	0.469	0.249	0.188	0.155	1.09	1.06	1.03
Ant 5 LTE Band (7&66)	Ant 1 FR1 Band(n5)	Right Cheek	0.528	0.507	0.469	0.249	0.092	0.056	1.50	1.38	1.34
		Right Tilted	0.528	0.507	0.469	0.249	0.105	0.049	1.50	1.39	1.33
		Left Cheek	0.528	0.507	0.469	0.249	0.201	0.255	1.50	1.49	1.54
		Left Tilted	0.528	0.507	0.469	0.249	0.188	0.155	1.50	1.47	1.44
Ant 5 LTE Band (7&66)	Ant 3 FR1 Band (n66&n41)	Right Cheek	0.528	0.254	0.469	0.249	0.092	0.056	1.25	1.12	1.09
		Right Tilted	0.528	0.153	0.469	0.249	0.105	0.049	1.15	1.04	0.98
		Left Cheek	0.528	0.365	0.469	0.249	0.201	0.255	1.36	1.34	1.40
		Left Tilted	0.528	0.147	0.469	0.249	0.188	0.155	1.14	1.11	1.08
Ant 5 LTE Band (7&66)	Ant 4 FR1 Band (n66&n41)	Right Cheek	0.528	0.537	0.469	0.249	0.092	0.056	1.53	1.41	1.37
		Right Tilted	0.528	0.537	0.469	0.249	0.105	0.049	1.53	1.42	1.36
		Left Cheek	0.528	0.537	0.469	0.249	0.201	0.255	1.53	1.52	1.57
		Left Tilted	0.528	0.537	0.469	0.249	0.188	0.155	1.53	1.50	1.47
Ant 5 LTE Band (7&66)	Ant 9 FR1 Band (n77&n78)	Right Cheek	0.528	0.542	0.469	0.249	0.092	0.056	1.54	1.41	1.38
		Right Tilted	0.528	0.542	0.469	0.249	0.105	0.049	1.54	1.42	1.37
		Left Cheek	0.528	0.542	0.469	0.249	0.201	0.255	1.54	1.52	1.57
		Left Tilted	0.528	0.542	0.469	0.249	0.188	0.155	1.54	1.51	1.47
Ant 5 LTE Band (7&66)	Ant 10 FR1 Band (n77&n78)	Right Cheek	0.528	0.571	0.469	0.249	0.092	0.056	1.57	1.44	1.40
		Right Tilted	0.528	0.502	0.469	0.249	0.105	0.049	1.50	1.38	1.33
		Left Cheek	0.528	0.240	0.469	0.249	0.201	0.255	1.24	1.22	1.27
		Left Tilted	0.528	0.242	0.469	0.249	0.188	0.155	1.24	1.21	1.17
Ant 5 LTE Band (7&66)	Ant 11 FR1 Band (n77&n78)	Right Cheek	0.528	0.503	0.469	0.249	0.092	0.056	1.50	1.37	1.34
		Right Tilted	0.528	0.503	0.469	0.249	0.105	0.049	1.50	1.39	1.33
		Left Cheek	0.528	0.503	0.469	0.249	0.201	0.255	1.50	1.48	1.54
		Left Tilted	0.528	0.503	0.469	0.249	0.188	0.155	1.50	1.47	1.44



<Inter UL CA Mode>

WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3	1+2+4+5	1+2+4+6
			WWAN	FR1	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 3	LTE Band 66(4) Ant 0	Right Cheek	0.241	0.043	0.469	0.249	0.092	0.056	0.75	0.63	0.59
		Right Tilted	0.147	0.039	0.469	0.249	0.105	0.049	0.66	0.54	0.48
		Left Cheek	0.234	0.066	0.469	0.249	0.201	0.255	0.77	0.75	0.80
		Left Tilted	0.180	0.001	0.469	0.249	0.188	0.155	0.65	0.62	0.59
LTE Band 2 Ant 4	LTE Band 4 Ant 5	Right Cheek	0.547	0.541	0.469	0.249	0.092	0.056	1.56	1.43	1.39
		Right Tilted	0.547	0.541	0.469	0.249	0.105	0.049	1.56	1.44	1.39
		Left Cheek	0.547	0.541	0.469	0.249	0.201	0.255	1.56	1.54	1.59
		Left Tilted	0.547	0.541	0.469	0.249	0.188	0.155	1.56	1.53	1.49
LTE Band 4 Ant 3	LTE Band 7 Ant 0	Right Cheek	0.277	0.209	0.469	0.249	0.092	0.056	0.96	0.83	0.79
		Right Tilted	0.099	0.071	0.469	0.249	0.105	0.049	0.64	0.52	0.47
		Left Cheek	0.255	0.097	0.469	0.249	0.201	0.255	0.82	0.80	0.86
		Left Tilted	0.136	0.116	0.469	0.249	0.188	0.155	0.72	0.69	0.66
LTE Band 4 Ant 4	LTE Band 7 Ant 5	Right Cheek	0.553	0.528	0.469	0.249	0.092	0.056	1.55	1.42	1.39
		Right Tilted	0.553	0.528	0.469	0.249	0.105	0.049	1.55	1.44	1.38
		Left Cheek	0.553	0.528	0.469	0.249	0.201	0.255	1.55	1.53	1.59
		Left Tilted	0.553	0.528	0.469	0.249	0.188	0.155	1.55	1.52	1.49



16.2 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2	1+3+4	1+3+5
		WWAN	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN All Band	Front	0.656	0.270	0.247	0.075	0.093	0.93	0.98	1.00
	Back	1.039	0.495	0.247	0.075	0.093	1.53	1.36	1.38
	Left side	1.021		0.247	0.075	0.093	1.02	1.34	1.36
	Right side	0.365	0.393	0.247	0.075	0.093	0.76	0.69	0.71
	Top side	0.340	0.310	0.247	0.075	0.093	0.65	0.66	0.68
	Bottom side	1.078					1.08	1.08	1.08

<EN-DC Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	1+2+3	1+2+4+5	1+2+4+6	Case No
			WWAN	FR1	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant 0 LTE Band (7&12&66)	Ant 1 FR1 Band (n5)	Front	0.282	0.474	0.270	0.247	0.075	0.093	1.03	1.08	1.10	
		Back	0.273	0.474	0.495	0.247	0.075	0.093	1.24	1.07	1.09	
		Left side		0.474		0.247	0.075	0.093	0.47	0.80	0.81	
		Right side	0.292		0.393	0.247	0.075	0.093	0.69	0.61	0.63	
		Top side			0.310	0.247	0.075	0.093	0.31	0.32	0.34	
		Bottom side	0.202			0.247	0.075	0.093	0.20	0.52	0.54	
Ant 0 LTE Band (7&12&66)	Ant 3 FR1 Band (n66&n41)	Front	0.282	0.641	0.270	0.247	0.075	0.093	1.19	1.25	1.26	
		Back	0.273	0.710	0.495	0.247	0.075	0.093	1.48	1.31	1.32	
		Left side		0.223		0.247	0.075	0.093	0.22	0.55	0.56	
		Right side	0.292		0.393	0.247	0.075	0.093	0.69	0.61	0.63	
		Top side			0.310	0.247	0.075	0.093	0.31	0.32	0.34	
		Bottom side	0.202	1.013		0.247	0.075	0.093	1.22	1.54	1.56	
Ant 0 LTE Band (7&12&66)	Ant 4 FR1 Band (n66&n41)	Front	0.282	0.226	0.270	0.247	0.075	0.093	0.78	0.83	0.85	
		Back	0.273	0.379	0.495	0.247	0.075	0.093	1.15	0.97	0.99	
		Left side		0.505		0.247	0.075	0.093	0.51	0.83	0.85	
		Right side	0.292		0.393	0.247	0.075	0.093	0.69	0.61	0.63	
		Top side		0.061	0.310	0.247	0.075	0.093	0.37	0.38	0.40	
		Bottom side	0.202			0.247	0.075	0.093	0.20	0.52	0.54	
Ant 0 LTE Band (7&12&66)	Ant 5 FR1 Band (n66&n7)	Front	0.282	0.162	0.270	0.247	0.075	0.093	0.71	0.77	0.78	
		Back	0.273	0.239	0.495	0.247	0.075	0.093	1.01	0.83	0.85	
		Left side		0.111		0.247	0.075	0.093	0.11	0.43	0.45	
		Right side	0.292		0.393	0.247	0.075	0.093	0.69	0.61	0.63	
		Top side		0.229	0.310	0.247	0.075	0.093	0.54	0.55	0.57	
		Bottom side	0.202			0.247	0.075	0.093	0.20	0.52	0.54	
Ant 0 LTE Band (7&12&66)	Ant 9 FR1 Band (n77&n78)	Front	0.282	0.132	0.270	0.247	0.075	0.093	0.68	0.74	0.75	
		Back	0.273	0.250	0.495	0.247	0.075	0.093	1.02	0.85	0.86	
		Left side		0.331		0.247	0.075	0.093	0.33	0.65	0.67	
		Right side	0.292		0.393	0.247	0.075	0.093	0.69	0.61	0.63	
		Top side		0.217	0.310	0.247	0.075	0.093	0.53	0.54	0.56	
		Bottom side	0.202			0.247	0.075	0.093	0.20	0.52	0.54	
Ant 0 LTE Band (7&12&66)	Ant 10 FR1 Band (n77&n78)	Front	0.282	0.550	0.270	0.247	0.075	0.093	1.10	1.15	1.17	
		Back	0.273	0.550	0.495	0.247	0.075	0.093	1.32	1.15	1.16	
		Left side		0.550		0.247	0.075	0.093	0.55	0.87	0.89	
		Right side	0.292		0.393	0.247	0.075	0.093	0.69	0.61	0.63	
		Top side		0.550	0.310	0.247	0.075	0.093	0.86	0.87	0.89	
		Bottom side	0.202			0.247	0.075	0.093	0.20	0.52	0.54	
Ant 0 LTE Band (7&12&66)	Ant 11 FR1 Band (n77&n78)	Front	0.282	0.108	0.270	0.247	0.075	0.093	0.66	0.71	0.73	
		Back	0.273	0.193	0.495	0.247	0.075	0.093	0.96	0.79	0.81	



		Left side				0.247	0.075	0.093	0.00	0.32	0.34	
		Right side	0.292	0.082	0.393	0.247	0.075	0.093	0.77	0.70	0.71	
		Top side		0.276	0.310	0.247	0.075	0.093	0.59	0.60	0.62	
		Bottom side	0.202			0.247	0.075	0.093	0.20	0.52	0.54	
Ant 1 LTE Band12	Ant 0 FR1 Band (n5 &n7&n66&n77&n78 )	Front	0.532	0.560	0.270	0.247	0.075	0.093	1.36	1.41	1.43	
		Back	0.532	0.560	0.495	0.247	0.075	0.093	1.59	1.41	1.43	
		Left side	0.532			0.247	0.075	0.093	0.53	0.85	0.87	
		Right side		0.560	0.393	0.247	0.075	0.093	0.95	0.88	0.90	
		Top side			0.310	0.247	0.075	0.093	0.31	0.32	0.34	
		Bottom side		0.560		0.247	0.075	0.093	0.56	0.88	0.90	
Ant 1 LTE Band12	Ant 3 FR1 Band (n66&n41)	Front	0.532	0.641	0.270	0.247	0.075	0.093	1.44	1.50	1.51	
		Back	0.337	0.710	0.495	0.247	0.075	0.093	1.54	1.37	1.39	
		Left side	0.532	0.223		0.247	0.075	0.093	0.76	1.08	1.10	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side			0.310	0.247	0.075	0.093	0.31	0.32	0.34	
		Bottom side		1.013		0.247	0.075	0.093	1.01	1.34	1.35	
Ant 1 LTE Band12	Ant 4 FR1 Band (n66&n41)	Front	0.532	0.226	0.270	0.247	0.075	0.093	1.03	1.08	1.10	
		Back	0.532	0.379	0.495	0.247	0.075	0.093	1.41	1.23	1.25	
		Left side	0.532	0.505		0.247	0.075	0.093	1.04	1.36	1.38	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side		0.061	0.310	0.247	0.075	0.093	0.37	0.38	0.40	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	
Ant 1 LTE Band12	Ant 5 FR1 Band (n66&n7)	Front	0.532	0.162	0.270	0.247	0.075	0.093	0.96	1.02	1.03	
		Back	0.532	0.239	0.495	0.247	0.075	0.093	1.27	1.09	1.11	
		Left side	0.532	0.111		0.247	0.075	0.093	0.64	0.97	0.98	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side		0.229	0.310	0.247	0.075	0.093	0.54	0.55	0.57	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	
Ant 1 LTE Band12	Ant 9 FR1 Band (n77&n78)	Front	0.532	0.132	0.270	0.247	0.075	0.093	0.93	0.99	1.00	
		Back	0.532	0.250	0.495	0.247	0.075	0.093	1.28	1.10	1.12	
		Left side	0.532	0.331		0.247	0.075	0.093	0.86	1.19	1.20	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side		0.217	0.310	0.247	0.075	0.093	0.53	0.54	0.56	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	
Ant 1 LTE Band12	Ant 10 FR1 Band (n77&n78)	Front	0.532	0.550	0.270	0.247	0.075	0.093	1.35	1.40	1.42	
		Back	0.532	0.550	0.495	0.247	0.075	0.093	1.58	1.40	1.42	
		Left side	0.532	0.550		0.247	0.075	0.093	1.08	1.40	1.42	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side		0.550	0.310	0.247	0.075	0.093	0.86	0.87	0.89	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	
Ant 1 LTE Band12	Ant 11 FR1 Band (n77&n78)	Front	0.532	0.108	0.270	0.247	0.075	0.093	0.91	0.96	0.98	
		Back	0.532	0.193	0.495	0.247	0.075	0.093	1.22	1.05	1.07	
		Left side	0.532			0.247	0.075	0.093	0.53	0.85	0.87	
		Right side		0.082	0.393	0.247	0.075	0.093	0.48	0.40	0.42	
		Top side		0.276	0.310	0.247	0.075	0.093	0.59	0.60	0.62	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	
Ant 3 LTE Band (2&7&41&66)	Ant 0 FR1 Band (n5 &n7&n66&77&78 )	Front	0.534	0.560	0.270	0.247	0.075	0.093	1.36	1.42	1.43	
		Back	0.534	0.560	0.495	0.247	0.075	0.093	1.59	1.42	1.43	
		Left side	0.534			0.247	0.075	0.093	0.53	0.86	0.87	
		Right side		0.560	0.393	0.247	0.075	0.093	0.95	0.88	0.90	
		Top side			0.310	0.247	0.075	0.093	0.31	0.32	0.34	
		Bottom side	0.534	0.560		0.247	0.075	0.093	1.09	1.42	1.43	
Ant 3 LTE Band (2&7&41&66)	Ant 1 FR1 Band (n5)	Front	0.534	0.474	0.270	0.247	0.075	0.093	1.28	1.33	1.35	
		Back	0.534	0.474	0.495	0.247	0.075	0.093	1.50	1.33	1.35	
		Left side	0.534	0.474		0.247	0.075	0.093	1.01	1.33	1.35	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	





		Top side			0.310	0.247	0.075	0.093	0.31	0.32	0.34	
		Bottom side	0.534			0.247	0.075	0.093	0.53	0.86	0.87	
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 4 FR1 Band (n66&n41)	Front	0.534	0.226	0.270	0.247	0.075	0.093	1.03	1.08	1.10	
		Back	0.534	0.379	0.495	0.247	0.075	0.093	1.41	1.24	1.25	
		Left side	0.534	0.505		0.247	0.075	0.093	1.04	1.36	1.38	
		Right side		0.006	0.393	0.247	0.075	0.093	0.40	0.33	0.35	
		Top side		0.061	0.310	0.247	0.075	0.093	0.37	0.38	0.40	
		Bottom side	0.534			0.247	0.075	0.093	0.53	0.86	0.87	
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 5 FR1 Band (n66&n7)	Front	0.534	0.162	0.270	0.247	0.075	0.093	0.97	1.02	1.04	
		Back	0.534	0.239	0.495	0.247	0.075	0.093	1.27	1.10	1.11	
		Left side	0.534	0.111		0.247	0.075	0.093	0.65	0.97	0.99	
		Right side		0.040	0.393	0.247	0.075	0.093	0.43	0.36	0.38	
		Top side		0.229	0.310	0.247	0.075	0.093	0.54	0.55	0.57	
		Bottom side	0.534			0.247	0.075	0.093	0.53	0.86	0.87	
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 9 FR1 Band (n77&n78)	Front	0.534	0.132	0.270	0.247	0.075	0.093	0.94	0.99	1.01	
		Back	0.534	0.250	0.495	0.247	0.075	0.093	1.28	1.11	1.12	
		Left side	0.534	0.331		0.247	0.075	0.093	0.87	1.19	1.21	
		Right side		0.052	0.393	0.247	0.075	0.093	0.45	0.37	0.39	
		Top side		0.217	0.310	0.247	0.075	0.093	0.53	0.54	0.56	
		Bottom side	0.534			0.247	0.075	0.093	0.53	0.86	0.87	
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 10 FR1 Band (n77&n78)	Front	0.534	0.550	0.270	0.247	0.075	0.093	1.35	1.41	1.42	
		Back	0.534	0.550	0.495	0.247	0.075	0.093	1.58	1.41	1.42	
		Left side	0.534	0.550		0.247	0.075	0.093	1.08	1.41	1.42	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side		0.550	0.310	0.247	0.075	0.093	0.86	0.87	0.89	
		Bottom side	0.534			0.247	0.075	0.093	0.53	0.86	0.87	
Ant 3 LTE Band (2& 7&&41& 66 )	Ant 11 FR1 Band (n77&n78)	Front	0.534	0.108	0.270	0.247	0.075	0.093	0.91	0.96	0.98	
		Back	0.534	0.193	0.495	0.247	0.075	0.093	1.22	1.05	1.07	
		Left side	0.534	0.066		0.247	0.075	0.093	0.60	0.92	0.94	
		Right side		0.082	0.393	0.247	0.075	0.093	0.48	0.40	0.42	
		Top side		0.276	0.310	0.247	0.075	0.093	0.59	0.60	0.62	
		Bottom side	0.534	0.067		0.247	0.075	0.093	0.60	0.92	0.94	
Ant 4 LTE Band (2& 7& 38& &41& 66)	Ant 0 FR1 Band (n5 &n7&n66&n77&n78 )	Front	0.296	0.396	0.270	0.247	0.075	0.093	0.96	1.01	1.03	
		Back	0.517	0.565	0.495	0.247	0.075	0.093	1.58	1.40	1.42	
		Left side	0.590	0.148		0.247	0.075	0.093	0.74	1.06	1.08	
		Right side	0.043	0.360	0.393	0.247	0.075	0.093	0.80	0.73	0.74	
		Top side	0.051	0.055	0.310	0.247	0.075	0.093	0.42	0.43	0.45	
		Bottom side	0.089	1.069		0.247	0.075	0.093	1.16	1.48	1.50	
Ant 4 LTE Band (2& 7& 38& &41& 66)	Ant 1 FR1 Band (n5)	Front	0.296	0.474	0.270	0.247	0.075	0.093	1.04	1.09	1.11	
		Back	0.517	0.474	0.495	0.247	0.075	0.093	1.49	1.31	1.33	
		Left side	0.357	0.474		0.247	0.075	0.093	0.83	1.15	1.17	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side	0.051		0.310	0.247	0.075	0.093	0.36	0.37	0.39	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	
Ant 4 LTE Band (2& 7& 38& &41& 66)	Ant 3 FR1 Band (n66&n41)	Front	0.296	0.641	0.270	0.247	0.075	0.093	1.21	1.26	1.28	
		Back	0.517	0.710	0.495	0.247	0.075	0.093	1.72	1.55	1.57	1
		Left side	0.357	0.223		0.247	0.075	0.093	0.58	0.90	0.92	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side	0.051		0.310	0.247	0.075	0.093	0.36	0.37	0.39	
		Bottom side		1.013		0.247	0.075	0.093	1.01	1.34	1.35	
Ant 4 LTE Band (2& 7& 38& &41& 66)	Ant 5 FR1 Band (n66&n7)	Front	0.296	0.162	0.270	0.247	0.075	0.093	0.73	0.78	0.80	
		Back	0.517	0.239	0.495	0.247	0.075	0.093	1.25	1.08	1.10	
		Left side	0.357	0.111		0.247	0.075	0.093	0.47	0.79	0.81	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side	0.051	0.229	0.310	0.247	0.075	0.093	0.59	0.60	0.62	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	



Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 9 FR1 Band (n77&n78)	Front	0.296	0.132	0.270	0.247	0.075	0.093	0.70	0.75	0.77	
		Back	0.517	0.250	0.495	0.247	0.075	0.093	1.26	1.09	1.11	
		Left side	0.357	0.331		0.247	0.075	0.093	0.69	1.01	1.03	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side	0.051	0.217	0.310	0.247	0.075	0.093	0.58	0.59	0.61	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	
Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 10 FR1 Band (n77&n78)	Front	0.296	0.550	0.270	0.247	0.075	0.093	1.12	1.17	1.19	
		Back	0.517	0.550	0.495	0.247	0.075	0.093	1.56	1.39	1.41	
		Left side	0.357	0.550		0.247	0.075	0.093	0.91	1.23	1.25	
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34	
		Top side	0.051	0.550	0.310	0.247	0.075	0.093	0.91	0.92	0.94	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	
Ant 4 LTE Band (2& 7& 38& 41& 66)	Ant 11 FR1 Band (n77&n78)	Front	0.296	0.108	0.270	0.247	0.075	0.093	0.67	0.73	0.74	
		Back	0.517	0.193	0.495	0.247	0.075	0.093	1.21	1.03	1.05	
		Left side	0.357			0.247	0.075	0.093	0.36	0.68	0.70	
		Right side		0.082	0.393	0.247	0.075	0.093	0.48	0.40	0.42	
		Top side	0.051	0.276	0.310	0.247	0.075	0.093	0.64	0.65	0.67	
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34	

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	1+2+3	1+2+4+5	1+2+4+6
			WWAN	FR1	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 5 LTE Band (7&66)	Ant 0 FR1 Band (n5 &n7&n66&77&78 )	Front	0.194	0.550	0.270	0.247	0.052	0.073	1.01	1.04	1.06
		Back	0.292	0.550	0.495	0.247	0.052	0.073	1.34	1.14	1.16
		Left side	0.092	0.550		0.247	0.052	0.073	0.64	0.94	0.96
		Right side			0.393	0.247	0.052	0.073	0.39	0.30	0.32
		Top side	0.321	0.550	0.310	0.247	0.052	0.073	1.18	1.17	1.19
		Bottom side				0.247	0.052	0.073	0.00	0.30	0.32
Ant 5 LTE Band (7&66)	Ant 1 FR1 Band (n5)	Front	0.194	0.474	0.270	0.247	0.052	0.073	0.94	0.97	0.99
		Back	0.292	0.474	0.495	0.247	0.052	0.073	1.26	1.07	1.09
		Left side	0.092	0.474		0.247	0.052	0.073	0.57	0.87	0.89
		Right side			0.393	0.247	0.052	0.073	0.39	0.30	0.32
		Top side	0.321		0.310	0.247	0.052	0.073	0.63	0.62	0.64
		Bottom side				0.247	0.052	0.073	0.00	0.30	0.32
Ant 5 LTE Band (7&66)	Ant 3 FR1 Band (n66&n41)	Front	0.194	0.641	0.270	0.247	0.052	0.073	1.11	1.13	1.16
		Back	0.292	0.710	0.495	0.247	0.052	0.073	1.50	1.30	1.32
		Left side	0.092	0.223		0.247	0.052	0.073	0.32	0.61	0.64
		Right side			0.393	0.247	0.052	0.073	0.39	0.30	0.32
		Top side	0.321		0.310	0.247	0.052	0.073	0.63	0.62	0.64
		Bottom side		1.013		0.247	0.052	0.073	1.01	1.31	1.33
Ant 5 LTE Band (7&66)	Ant 4 FR1 Band (n66&n41)	Front	0.194	0.226	0.270	0.247	0.052	0.073	0.69	0.72	0.74
		Back	0.292	0.379	0.495	0.247	0.052	0.073	1.17	0.97	0.99
		Left side	0.092	0.505		0.247	0.052	0.073	0.60	0.90	0.92
		Right side			0.393	0.247	0.052	0.073	0.39	0.30	0.32
		Top side	0.321	0.061	0.310	0.247	0.052	0.073	0.69	0.68	0.70
		Bottom side				0.247	0.052	0.073	0.00	0.30	0.32
Ant 5 LTE Band (7&66)	Ant 9 FR1 Band (n77&n78)	Front	0.194	0.132	0.270	0.247	0.052	0.073	0.60	0.63	0.65
		Back	0.292	0.250	0.495	0.247	0.052	0.073	1.04	0.84	0.86
		Left side	0.092	0.331		0.247	0.052	0.073	0.42	0.72	0.74
		Right side			0.393	0.247	0.052	0.073	0.39	0.30	0.32
		Top side	0.321	0.217	0.310	0.247	0.052	0.073	0.85	0.84	0.86
		Bottom side				0.247	0.052	0.073	0.00	0.30	0.32
Ant 5 LTE Band (7&66)	Ant 10 FR1 Band (n77&n78)	Front	0.194	0.550	0.270	0.247	0.052	0.073	1.01	1.04	1.06
		Back	0.292	0.550	0.495	0.247	0.052	0.073	1.34	1.14	1.16
		Left side	0.092	0.550		0.247	0.052	0.073	0.64	0.94	0.96



		Right side			0.393	0.247	0.052	0.073	0.39	0.30	0.32
		Top side	0.321	0.550	0.310	0.247	0.052	0.073	1.18	1.17	1.19
		Bottom side				0.247	0.052	0.073	0.00	0.30	0.32
Ant 5 LTE Band (7&66)	Ant 11 FR1 Band (n77&n78)	Front	0.194	0.108	0.270	0.247	0.052	0.073	0.57	0.60	0.62
		Back	0.292	0.193	0.495	0.247	0.052	0.073	0.98	0.78	0.81
		Left side	0.092			0.247	0.052	0.073	0.09	0.39	0.41
		Right side		0.082	0.393	0.247	0.052	0.073	0.48	0.38	0.40
		Top side	0.321	0.276	0.310	0.247	0.052	0.073	0.91	0.90	0.92
		Bottom side		0.067		0.247	0.052	0.073	0.07	0.37	0.39

<Inter UL CA Mode>

WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3 Summed 1g SAR (W/kg)	1+2+4+5 Summed 1g SAR (W/kg)	1+2+4+6 Summed 1g SAR (W/kg)
			WWAN	FR1	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
LTE Band 2 Ant 3	LTE Band 4 Ant 0	Front	0.533	0.282	0.270	0.247	0.075	0.093	1.09	1.14	1.16
		Back	0.533	0.273	0.495	0.247	0.075	0.093	1.30	1.13	1.15
		Left side	0.533			0.247	0.075	0.093	0.53	0.86	0.87
		Right side		0.292	0.393	0.247	0.075	0.093	0.69	0.61	0.63
		Top side			0.310	0.247	0.075	0.093	0.31	0.32	0.34
		Bottom side	0.533	0.202		0.247	0.075	0.093	0.74	1.06	1.08
LTE Band 2 Ant 4	LTE Band 4 Ant 5	Front	0.141	0.177	0.270	0.247	0.075	0.093	0.59	0.64	0.66
		Back	0.221	0.206	0.495	0.247	0.075	0.093	0.92	0.75	0.77
		Left side	0.296	0.062		0.247	0.075	0.093	0.36	0.68	0.70
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34
		Top side	0.001	0.230	0.310	0.247	0.075	0.093	0.54	0.55	0.57
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34
LTE Band 4 Ant 3	LTE Band 7 Ant 0	Front	0.529	0.178	0.270	0.247	0.075	0.093	0.98	1.03	1.05
		Back	0.529	0.200	0.495	0.247	0.075	0.093	1.22	1.05	1.07
		Left side	0.529			0.247	0.075	0.093	0.53	0.85	0.87
		Right side		0.178	0.393	0.247	0.075	0.093	0.57	0.50	0.52
		Top side			0.310	0.247	0.075	0.093	0.31	0.32	0.34
		Bottom side	0.529	0.197		0.247	0.075	0.093	0.73	1.05	1.07
LTE Band 4 Ant 4	LTE Band 7 Ant 5	Front	0.107	0.184	0.270	0.247	0.075	0.093	0.56	0.61	0.63
		Back	0.190	0.291	0.495	0.247	0.075	0.093	0.98	0.80	0.82
		Left side	0.276	0.092		0.247	0.075	0.093	0.37	0.69	0.71
		Right side			0.393	0.247	0.075	0.093	0.39	0.32	0.34
		Top side	0.002	0.320	0.310	0.247	0.075	0.093	0.63	0.64	0.66
		Bottom side				0.247	0.075	0.093	0.00	0.32	0.34



16.3 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2	1+3+4	1+3+5
		WWAN	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN All Bands	Front	0.554	0.102	0.168	0.001	0.001	0.66	0.72	0.72
	Back	0.735	0.169	0.250	0.029	0.029	0.90	1.01	1.01

<EN-DC Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	1+2+3	1+2+4+5	1+2+4+6
			WWAN	FR1	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 0 LTE Band (B7&B12&B66)	Ant 1 FR1 Band (n5)	Front	0.192	0.191	0.102	0.168	0.001	0.001	0.49	0.55	0.55
		Back	0.201	0.246	0.169	0.250	0.029	0.029	0.62	0.73	0.73
Ant 0 LTE Band (B7&B12&B66)	Ant 3 FR1 Band (n66&n41)	Front	0.192	0.464	0.102	0.168	0.001	0.001	0.76	0.83	0.83
		Back	0.201	0.479	0.169	0.250	0.029	0.029	0.85	0.96	0.96
Ant 0 LTE Band (B7&B12&B66)	Ant 4 FR1 Band (n66&n41)	Front	0.192	0.218	0.102	0.168	0.001	0.001	0.51	0.58	0.58
		Back	0.201	0.335	0.169	0.250	0.029	0.029	0.71	0.82	0.82
Ant 0 LTE Band (B7&B12&B66)	Ant 5 FR1 Band (n66&n7)	Front	0.192	0.554	0.102	0.168	0.001	0.001	0.85	0.92	0.92
		Back	0.201	0.645	0.169	0.250	0.029	0.029	1.02	1.13	1.13
Ant 0 LTE Band (B7&B12&B66)	Ant 9 FR1 Band (n77&n78)	Front	0.192	0.140	0.102	0.168	0.001	0.001	0.43	0.50	0.50
		Back	0.201	0.254	0.169	0.250	0.029	0.029	0.62	0.73	0.73
Ant 0 LTE Band (B7&B12&B66)	Ant 10 FR1 Band (n77&n78)	Front	0.192	0.066	0.102	0.168	0.001	0.001	0.36	0.43	0.43
		Back	0.201	0.346	0.169	0.250	0.029	0.029	0.72	0.83	0.83
Ant 0 LTE Band (B7&B12&B66)	Ant 11 FR1 Band (n77&n78)	Front	0.192	0.398	0.102	0.168	0.001	0.001	0.69	0.76	0.76
		Back	0.201	0.735	0.169	0.250	0.029	0.029	1.11	1.22	1.22
Ant 1 LTE Band12	Ant 0 FR1 Band (n5 &n7&n66&n77&n78)	Front	0.262	0.192	0.102	0.168	0.001	0.001	0.56	0.62	0.62
		Back	0.346	0.334	0.169	0.250	0.029	0.029	0.85	0.96	0.96
Ant 1 LTE Band12	Ant 3 FR1 Band (n66&n41)	Front	0.262	0.464	0.102	0.168	0.001	0.001	0.83	0.90	0.90
		Back	0.346	0.479	0.169	0.250	0.029	0.029	0.99	1.10	1.10
Ant 1 LTE Band12	Ant 4 FR1 Band (n66&n41)	Front	0.262	0.218	0.102	0.168	0.001	0.001	0.58	0.65	0.65
		Back	0.346	0.335	0.169	0.250	0.029	0.029	0.85	0.96	0.96
Ant 1 LTE Band12	Ant 5 FR1 Band (n66&n7)	Front	0.262	0.554	0.102	0.168	0.001	0.001	0.92	0.99	0.99
		Back	0.346	0.645	0.169	0.250	0.029	0.029	1.16	1.27	1.27
Ant 1 LTE Band12	Ant 9 FR1 Band (n77&n78)	Front	0.262	0.140	0.102	0.168	0.001	0.001	0.50	0.57	0.57
		Back	0.346	0.254	0.169	0.250	0.029	0.029	0.77	0.88	0.88
Ant 1 LTE Band12	Ant 10 FR1 Band (n77&n78)	Front	0.262	0.066	0.102	0.168	0.001	0.001	0.43	0.50	0.50
		Back	0.346	0.346	0.169	0.250	0.029	0.029	0.86	0.97	0.97
Ant 1 LTE Band12	Ant 11 FR1 Band (n77&n78)	Front	0.262	0.398	0.102	0.168	0.001	0.001	0.76	0.83	0.83
		Back	0.346	0.735	0.169	0.250	0.029	0.029	1.25	1.36	1.36
Ant 3 LTE Band (B2&B7&B41&B66)	Ant 0 FR1 Band (n5 &n7&n66&n77&n78)	Front	0.432	0.192	0.102	0.168	0.001	0.001	0.73	0.79	0.79
		Back	0.494	0.334	0.169	0.250	0.029	0.029	1.00	1.11	1.11
Ant 3 LTE Band (B2&B7&B41&B66)	Ant 1 FR1 Band (n5)	Front	0.432	0.191	0.102	0.168	0.001	0.001	0.73	0.79	0.79
		Back	0.494	0.246	0.169	0.250	0.029	0.029	0.91	1.02	1.02
Ant 3 LTE Band (B2&B7&B41&B66)	Ant 4 FR1 Band (n66&n41)	Front	0.432	0.218	0.102	0.168	0.001	0.001	0.75	0.82	0.82
		Back	0.494	0.335	0.169	0.250	0.029	0.029	1.00	1.11	1.11
Ant 3 LTE Band (B2&B7&B41&B66)	Ant 5 FR1 Band (n66&n7)	Front	0.432	0.554	0.102	0.168	0.001	0.001	1.09	1.16	1.16
		Back	0.494	0.645	0.169	0.250	0.029	0.029	1.31	1.42	1.42
Ant 3 LTE Band (B2&B7&B41&B66)	Ant 9 FR1 Band (n77&n78)	Front	0.432	0.140	0.102	0.168	0.001	0.001	0.67	0.74	0.74
		Back	0.494	0.254	0.169	0.250	0.029	0.029	0.92	1.03	1.03
Ant 3 LTE Band (B2&B7&B41&B66)	Ant 10 FR1 Band (n77&n78)	Front	0.432	0.066	0.102	0.168	0.001	0.001	0.60	0.67	0.67
		Back	0.494	0.346	0.169	0.250	0.029	0.029	1.01	1.12	1.12
Ant 3 LTE Band (B2&B7&B41&B66)	Ant 11 FR1 Band (n77&n78)	Front	0.432	0.398	0.102	0.168	0.001	0.001	0.93	1.00	1.00
		Back	0.494	0.735	0.169	0.250	0.029	0.029	1.40	1.51	1.51



Ant 4 LTE Band (B2&B7&B38&B41&B66)	Ant 0 FR1 Band (n5 &n7&n66&n77&n78)	Front	0.251	0.192	0.102	0.168	0.001	0.001	0.55	0.61	0.61
		Back	0.362	0.334	0.169	0.250	0.029	0.029	0.87	0.98	0.98
Ant 4 LTE Band (B2&B7&B38&B41&B66)	Ant 1 FR1 Band (n5)	Front	0.251	0.191	0.102	0.168	0.001	0.001	0.54	0.61	0.61
		Back	0.362	0.246	0.169	0.250	0.029	0.029	0.78	0.89	0.89
Ant 4 LTE Band (B2&B7&B38&B41&B66)	Ant 3 FR1 Band (n66&n41)	Front	0.251	0.464	0.102	0.168	0.001	0.001	0.82	0.88	0.88
		Back	0.362	0.479	0.169	0.250	0.029	0.029	1.01	1.12	1.12
Ant 4 LTE Band (B2&B7&B38&B41&B66)	Ant 5 FR1 Band (n66&n7)	Front	0.251	0.554	0.102	0.168	0.001	0.001	0.91	0.97	0.97
		Back	0.362	0.645	0.169	0.250	0.029	0.029	1.18	1.29	1.29
Ant 4 LTE Band (B2&B7&B38&B41&B66)	Ant 9 FR1 Band (n77&n78)	Front	0.251	0.140	0.102	0.168	0.001	0.001	0.49	0.56	0.56
		Back	0.362	0.254	0.169	0.250	0.029	0.029	0.79	0.90	0.90
Ant 4 LTE Band (B2&B7&B38&B41&B66)	Ant 10 FR1 Band (n77&n78)	Front	0.251	0.066	0.102	0.168	0.001	0.001	0.42	0.49	0.49
		Back	0.362	0.346	0.169	0.250	0.029	0.029	0.88	0.99	0.99
Ant 4 LTE Band (B2&B7&B38&B41&B66)	Ant 11 FR1 Band (n77&n78)	Front	0.251	0.398	0.102	0.168	0.001	0.001	0.75	0.82	0.82
		Back	0.362	0.735	0.169	0.250	0.029	0.029	1.27	1.38	1.38

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	1+2+3	1+2+4+5	1+2+4+6
			WWAN	FR1	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 5 LTE Band (B7&B66)	Ant 0 FR1 Band (n5 &n7&n66&n77&n78)	Front	0.474	0.192	0.102	0.168	0.001	0.001	0.77	0.84	0.84
		Back	0.577	0.334	0.169	0.250	0.029	0.029	1.08	1.19	1.19
Ant 5 LTE Band (B7&B66)	Ant 1 FR1 Band (n5)	Front	0.474	0.191	0.102	0.168	0.001	0.001	0.77	0.83	0.83
		Back	0.577	0.246	0.169	0.250	0.029	0.029	0.99	1.10	1.10
Ant 5 LTE Band (B7&B66)	Ant 3 FR1 Band (n66&n41)	Front	0.474	0.464	0.102	0.168	0.001	0.001	1.04	1.11	1.11
		Back	0.577	0.479	0.169	0.250	0.029	0.029	1.23	1.34	1.34
Ant 5 LTE Band (B7&B66)	Ant 4 FR1 Band (n66&n41)	Front	0.474	0.218	0.102	0.168	0.001	0.001	0.79	0.86	0.86
		Back	0.577	0.335	0.169	0.250	0.029	0.029	1.08	1.19	1.19
Ant 5 LTE Band (B7&B66)	Ant 9 FR1 Band (n77&n78)	Front	0.474	0.140	0.102	0.168	0.001	0.001	0.72	0.78	0.78
		Back	0.577	0.254	0.169	0.250	0.029	0.029	1.00	1.11	1.11
Ant 5 LTE Band (B7&B66)	Ant 10 FR1 Band (n77&n78)	Front	0.474	0.066	0.102	0.168	0.001	0.001	0.64	0.71	0.71
		Back	0.577	0.346	0.169	0.250	0.029	0.029	1.09	1.20	1.20
Ant 5 LTE Band (B7&B66)	Ant 11 FR1 Band (n77&n78)	Front	0.474	0.398	0.102	0.168	0.001	0.001	0.97	1.04	1.04
		Back	0.577	0.735	0.169	0.250	0.029	0.029	1.48	1.59	1.59

<Inter UL CA Mode>

WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3	1+2+4+5	1+2+4+6
			WWAN	WWAN	WLAN2.4GHz Ant 15+16	WLAN5GHz Ant 16+17	Bluetooth Ant 15	Bluetooth Ant 16	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 3	LTE Band 4 Ant 0	Front	0.393	0.142	0.102	0.168	0.001	0.001	0.64	0.70	0.70
		Back	0.484	0.134	0.169	0.250	0.029	0.029	0.79	0.90	0.90
LTE Band 2 Ant 4	LTE Band 4 Ant 5	Front	0.114	0.474	0.102	0.168	0.001	0.001	0.69	0.76	0.76
		Back	0.160	0.577	0.169	0.250	0.029	0.029	0.91	1.02	1.02
LTE Band 4 Ant 3	LTE Band 7 Ant 0	Front	0.473	0.102	0.102	0.168	0.001	0.001	0.68	0.74	0.74
		Back	0.527	0.128	0.169	0.250	0.029	0.029	0.82	0.93	0.93
LTE Band 4 Ant 4	LTE Band 7 Ant 5	Front	0.082	0.226	0.102	0.168	0.001	0.001	0.41	0.48	0.48
		Back	0.127	0.351	0.169	0.250	0.029	0.029	0.65	0.76	0.76



### 16.4 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.

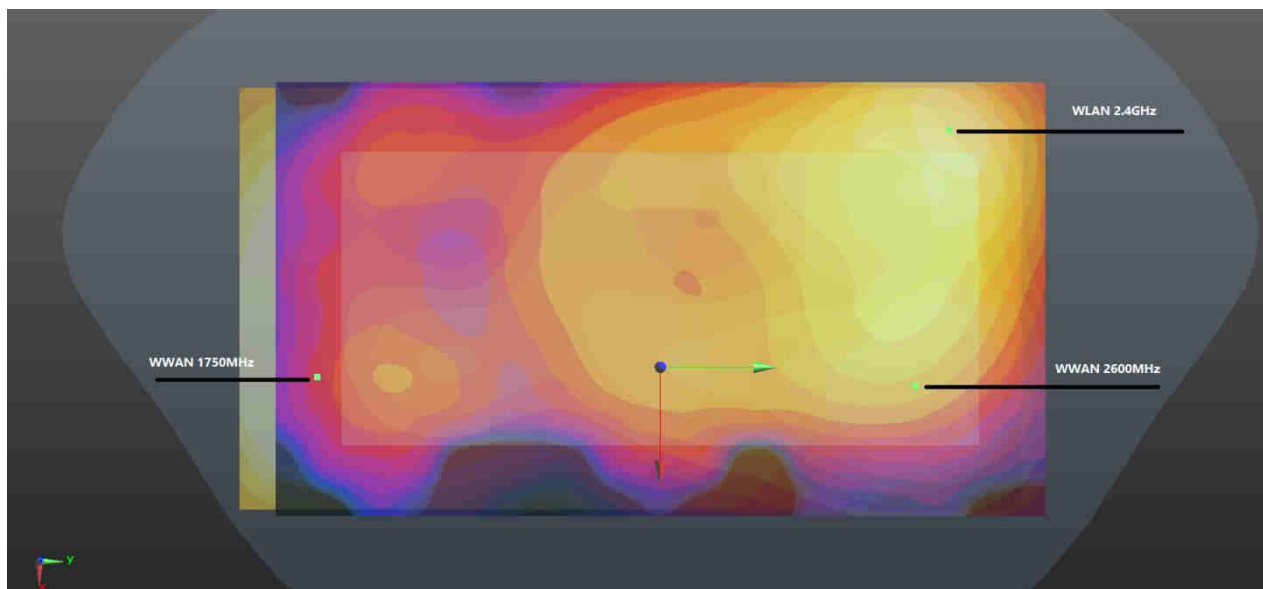
WWAN Band	Exposure Position	1	2	1+2
		WWAN	WLAN5GHz Ant 16+17	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
WWAN All Bands	Front		0.611	0.61
	Back	1.762	0.460	2.22
	Left side			0.00
	Right side		0.899	0.90
	Top side		1.427	1.43
	Bottom side	2.537		2.54



### 16.5 SPLSR Evaluation and Analysis

**General Note:**

1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of  $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$ , where  $(x1, y1, z1)$  and  $(x2, y2, z2)$  are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2.  $SPLSR = (SAR1 + SAR2)1.5 / (\text{min. separation distance, mm})$ . If  $SPLSR \leq 0.04$  for 1g SAR, simultaneously transmission SAR measurement is not necessary.



**WWAN+2.4GHz (10mm) Back**

Case 1	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 38 Ant 4	Back	0.517	10	21.6	62.6	0.99	64.4	1.01	0.02	Not required
	WLAN2.4GHz Ant 15+16		0.495	10	-42	73	1.04				
	FR1 n66 Ant 3	Back	0.71	10	17.9	-83.9	1.37	167.9	1.21	0.01	Not required
	WLAN2.4GHz Ant 15+16		0.495	10	-42	73	1.04				
	LTE Band 38 Ant 4	Back	0.517	10	21.6	62.6	0.99	146.5	1.23	0.01	Not required
	FR1 n66 Ant 3		0.71	10	17.9	-83.9	1.37				

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## **17. Uncertainty Assessment**

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



## **18. 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 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [8] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [9] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [10] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [11] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [12] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [13] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [14] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

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