FCC SAR Test Report

APPLICANT	:	Xiaomi Communications Co., Ltd.
EQUIPMENT	:	Mobile Phone
BRAND NAME	:	POCO
MODEL NAME	:	22041219PG
FCC ID	:	2AFZZ1219PG
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 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.

Tony Zhang

Reviewed by: Tony Zhang / Supervisor

Kat Yin

Approved by: Kat Yin / Manager

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

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA211901-02	Rev. 01	Initial issue of report.	Mar. 21, 2022

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Xiaomi Communications Co., Ltd., Mobile Phone, 22041219PG,** 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	0.90	0.31	0.17	1.59
		GSM1900	1.08	**1.09**	0.34	
	WCDMA	Band II	0.80	0.93	0.94	
		Band IV	1.07	0.87	0.94	
		Band V	0.95	0.49	0.25	
	LTE	Band 2	0.81	1.07	0.88	
		Band 4	1.08	0.99	**1.09**	
		Band 5	0.85	0.46	0.24	
		Band 7	1.02	0.97	0.89	
		Band 41/Band 38	**1.09**	0.81	0.54	
	5G NR	n5	0.74	0.38	0.22	
		n7	1.07	**1.09**	0.83	
		n41/ n38	0.87	**1.09**	0.95	
		n77/ n78	1.01	1.02	0.77	
DTS	WLAN	2.4GHz WLAN	0.44	0.44	0.23	1.51
NII		5GHz WLAN	0.50	0.49	0.42	1.59
DSS	Bluetooth	2.4GHz Bluetooth	<0.10	<0.10	<0.10	1.59

Highest 10g SAR Summary			
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)
NII	WLAN	5GHz WLAN	**1.31**
Date of Testing:			2022/2/15 ~ 2022/3/8

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

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

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

2. Administration Data

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

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR03-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	POCO
Model Name	22041219PG
FCC ID	2AFZZ1219PG
IMEI Code	SIM1: 864235060052781 SIM2: 864235060052799
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 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 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 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) LTE: QPSK, 16QAM, 64QAM LTE: 256QAM(Downlink Only) 5G NR : CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 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
Remark: 1. 802.11n-HT40 is not supported in 2.4GHz WLAN. 2. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation. 3. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications. 4. 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).

5. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12.
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. There are two samples. Sample 1 is 1st source battery for CoxMX of 4G+64G and sample 2 is 2nd source battery for Sunwoda of 6G+128G. According to the differences, we choose sample 1 to perform full test.
8. 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 (DSI 1: receiver on reduced power for head; DSI 3/4: P-sensor on for hotspot/ handheld; DSI 2: receiver off/P-sensor off).
9. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
10. 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.
11. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
12. 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.
13. 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.
14. 5G NR n41/n77/n78 supports HPUE, HPUE power and SAR testing performed separately.
15. 5G NR n41/n77/n78 HPUE with higher power, n41/n77/n78 HPUE SAR can represent power class 3 level SAR.
16. For 5G NR 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.
17. For 5GNR FDD/TDD supports SCS15KHz and SCS30KHz, chose higher power which is SCS30KHz to perform SAR testing
18. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode.

<5G NR>

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

4.2 General LTE SAR Test and Reporting Considerations

<table>
<tr><th colspan="2">Summarized necessary items addressed in KDB 941225 D05 v02r05</th></tr>
<tr><td>FCC ID</td><td>2AFZZ1219PG</td></tr>
<tr><td>Equipment Name</td><td>Mobile Phone</td></tr>
<tr><td>Operating Frequency Range of each LTE transmission band</td><td>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 38: 2570 MHz ~ 2620 MHz
LTE Band 41: 2496 MHz ~ 2690 MHz</td></tr>
<tr><td>Channel Bandwidth</td><td>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 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Voice and Data</td></tr>
<tr><td>LTE Release Version</td><td>R15, Cat13</td></tr>
<tr><td>CA Support</td><td>Supported, Uplink and Downlink</td></tr>
<tr><td>LTE MPR permanently built-in by design</td><td>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3
<table>
<tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr>
<tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr>
<tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr>
<tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr>
</table></td></tr>
<tr><td>LTE A-MPR</td><td>In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)</td></tr>
<tr><td>Spectrum plots for RB configuration</td><td>A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.</td></tr>
<tr><td>Power reduction applied to satisfy SAR compliance</td><td>Yes, head/body-worn/ hotspot/extremity will trigger reduced power for some LTE bands, the detail please referred to section 13.</td></tr>
<tr><td>LTE Carrier Aggregation Combinations</td><td>Intra-Band possible combinations and the detail power verification please referred to section 13.</td></tr>
<tr><td>LTE Carrier Aggregation Additional Information</td><td>1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance.
2. This device supports maximum of 2 carriers in the downlink and 2 carriers in the uplink.</td></tr>
</table>

Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5								
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844
LTE Band 7								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560
LTE Band 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

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 n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Channel Bandwidth	**For SCS-15KHz:** 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n38: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 40MHz, 50MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 40MHz, 50MHz 5G NR n78: 10MHz, 15MHz, 20MHz, 40MHz, 50MHz **For SCS-30KHz:** 5G NR n5: 10MHz, 15MHz, 20MHz 5G NR n7: 10MHz, 15MHz, 20MHz 5G NR n38: 10MHz, 15MHz, 20MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz 5G NR n78: 10MHz, 15MHz, 20MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz
SCS	FDD/TDD: SCS15KHz, 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 B5/7
LTE Anchor Bands for n77	LTE B41
LTE Anchor Bands for n78	LTE B5/7/38/41
LTE Anchor Bands for n41	LTE B41

NR Band 5 SCS15KHz								
	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 SCS15KHz								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510
M	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560
NR Band 38 SCS15KHz								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515000	2575	515004	2575.02	515502	2577.51	516000	2580
M	519000	2595	519000	2595	519000	2595	519000	2595
H	523000	2615	522996	2614.98	522498	2612.49	522000	2610

NR Band 41 SCS15KHz										
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	503202	2516.01	504204	2521.02
M	518598	2595.99	518598	2595.99	518598	2595.99	518598	2595.99	518598	2595.99
H	537000	2685	536496	2685.48	535998	2679.99	534000	2670	532998	2664.99

NR Band 5 SCS30KHz						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5
H	168800	844	168300	841.5	167800	839
NR Band 7 SCS30KHz						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	501000	2505	501500	2507.5	502000	2510
M	507000	2535	507000	2535	507000	2535
H	513000	2565	512500	2562.5	512000	2560
NR Band 38 SCS30KHz						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515004	2575.02	515502	2577.51	516000	2580
M	519000	2595	519000	2595	519000	2595
H	522996	2614.98	522498	2612.49	522000	2610

NR Band 41 SCS30KHz																		
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		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	500202	2501.01	500700	2503.5	501204	2506.02	503202	2516.01	504204	2521.02	505200	2526	507204	2536.02	508200	2541	509202	2546.01
M	518598	2595.99	518598	2595.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2685.48	535998	2679.99	534000	2670	532998	2664.99	531996	2659.98	529998	2649.99	528996	2644.98	528000	2640

<3700 MHz ~ 3980 MHz>

NR Band 77 SCS15KHz										
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	648000	3720	648334	3725.01
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664834	3972.51	664668	3970.02	664000	3960	663668	3955.01

NR Band 78 SCS15KHz										
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	648000	3720		
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652000	3780		

NR Band 77 SCS30KHz																		
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		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	647000	3705	647168	3707.52	647334	3710.01	648000	3720	648334	3725.01	648668	3730.02	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
H	665000	3975	664834	3972.51	664668	3970.02	664000	3960	663668	3955.02	663334	3950.01	662668	3940.02	662334	3935.01	662000	3930

NR Band 78 SCS30KHz																		
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		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	647000	3705	647168	3707.52	647334	3710.01	648000	3720	648334	3725.01	648668	3730.02	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
H	653000	3795	652834	3792.51	652668	3790.02	652000	3780	651668	3775.02	651334	3770.01	650668	3760.02	650334	3755.01		

<3450 MHz ~ 3550 MHz>

NR Band 77 SCS15KHz										
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	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	631334	3470.01		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635334	3530.01		

NR Band 78 SCS15KHz										
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	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	631334	3470.01		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635334	3530.01		

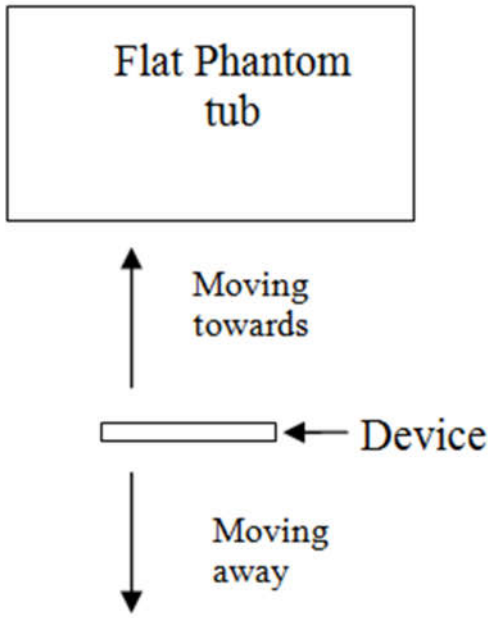
NR Band 77 SCS30KHz																		
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630550	3457.5	630668	3460.02	631334	3470.01	631668	3475.02	632000	3480	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
H	636334	3545.01	636168	3542.52	636000	3540	635334	3530.01	635000	3525	634668	3520.02	634000	3510	633668	3505.02		

NR Band 78 SCS30KHz																		
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		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	630334	3455.01	630550	3457.5	630668	3460.02	631334	3470.01	631668	3475.02	632000	3480	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
H	636334	3545.01	636168	3542.52	636000	3540	635334	3530.01	635000	3525	634668	3520.02	634000	3510	633668	3505.02		

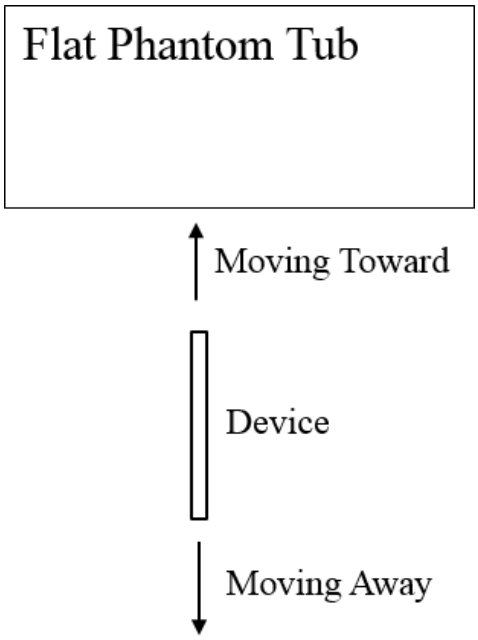
5. Proximity Sensor Triggering Test

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 (3900MHz) and lowest (835MHz) 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 left 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 left side of the device use a detection threshold distance. When front/back/left/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.



Sensor detection test set-up, front and back sides



Sensor detection test set-up, left/top/bottom sides

<P-Sensor>

<Sensor on for Ant1 >

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

<Sensor on for Ant3/4 >

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

<Sensor on for Ant2 >

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Top Side		Left Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	16	16	16	16	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 (ρ). The equation description is as below:

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

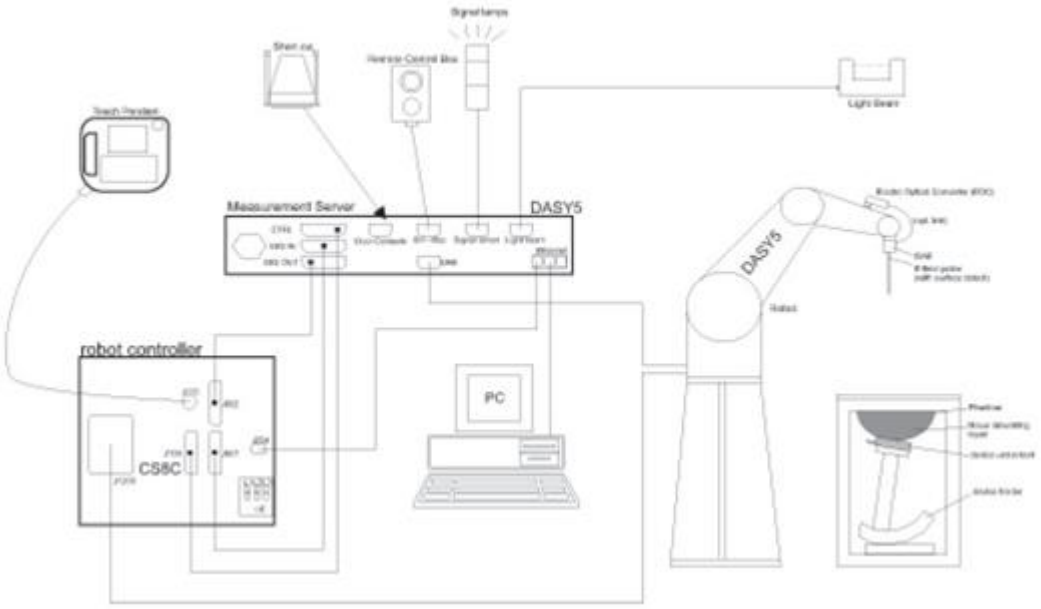
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

8. System Description and Setup

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



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

8.1 E-Field Probe

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

<EX3DV4 Probe>

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

8.2 Data Acquisition Electronics (DAE)

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

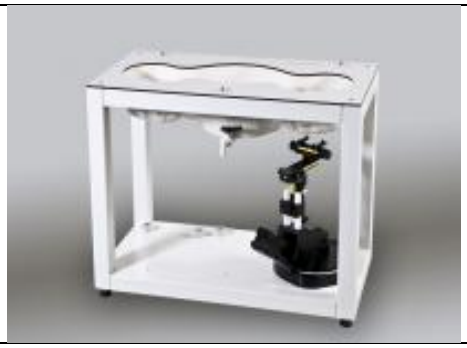
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

8.3 Phantom

<SAM Twin Phantom>

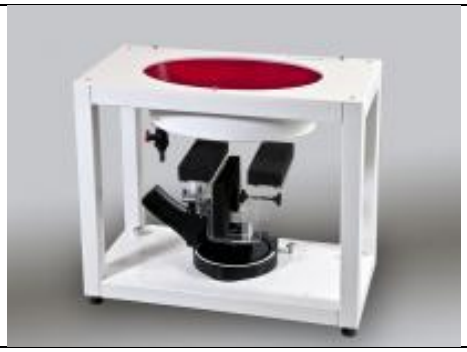
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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

<ELI Phantom>

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



The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices 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 form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

9.2 Power Reference Measurement

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

9.3 Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan

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

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

9.5 Volume Scan Procedures

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

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	835MHz System Validation Kit	D835V2	4d258	2020/5/7	2023/5/6
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2019/3/27	2022/3/25
SPEAG	1900MHz System Validation Kit	D1900V2	5d170	2019/3/26	2022/3/24
SPEAG	2450MHz System Validation Kit	D2450V2	908	2019/3/25	2022/3/23
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	2023/5/13
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2019/9/24	2022/9/22
SPEAG	Data Acquisition Electronics	DAE4	1303	2021/6/18	2022/6/17
SPEAG	Dosimetric E-Field Probe	EX3DV4	7684	2021/10/4	2022/10/3
SPEAG	SAM Twin Phantom	SAM Twin	TP-1697	NCR	NCR
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/1/6	2023/1/5
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Rohde & Schwarz	Signal Generator	SMB100A	178155	2021/4/13	2022/4/12
Keysight	Preamplifier	83017A	MY57280111	2021/7/12	2022/7/11
Anritsu	Radio Communication Analyzer	MT8821C	6201432831	2021/4/13	2022/4/12
Agilent	ENA Series Network Analyzer	E5071C	MY46106933	2021/7/31	2022/7/30
SPEAG	Dielectric Probe Kit	DAK-3.5	1138	2021/6/9	2022/6/8
Anritsu	Vector Signal Generator	MG3710A	6201682672	2022/1/6	2023/1/5
Rohde & Schwarz	Power Meter	NRVD	102081	2021/8/12	2022/8/11
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2021/8/12	2022/8/11
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2021/8/12	2022/8/11
Rohde & Schwarz	Power Sensor	NRP50S	101385	2021/3/15	2022/3/14
R&S	CBT BLUETOOTH TESTER	CBT	101246	2021/4/12	2022/4/11
EXA	Spectrum Analyzer	FSV7	101631	2021/10/14	2022/10/13
FLUKE	DIGITAC THERMOMETER	51II	97240029	2021/8/13	2022/8/12
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	

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.

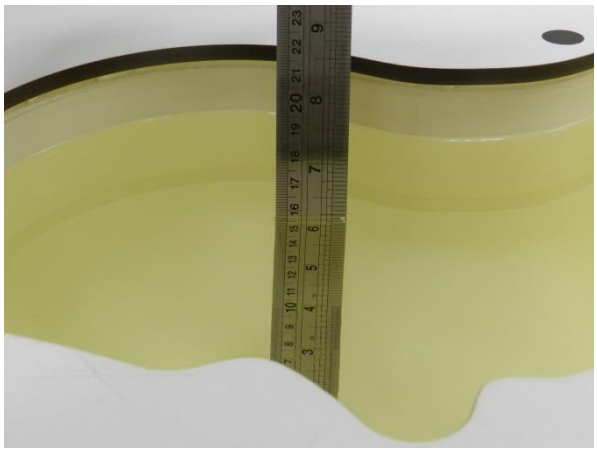


Fig 11.1 Photo of Liquid Height for Head SAR

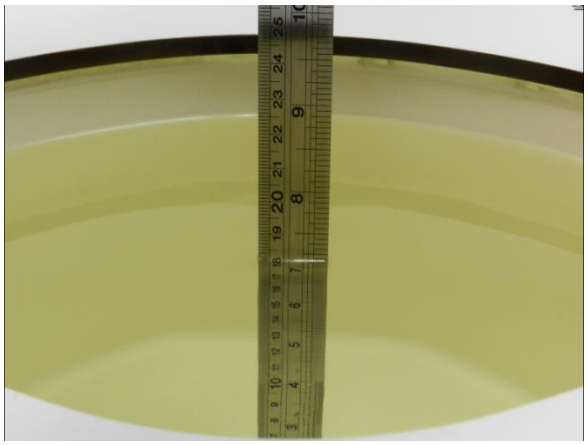


Fig 11.2 Photo of Liquid Height for Body SAR

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 (εr)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Head	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
835	Head	22.6	0.939	43.128	0.90	41.50	4.33	3.92	±5	2022/2/15
1750	Head	22.7	1.359	40.934	1.37	40.10	-0.80	2.08	±5	2022/2/16
1900	Head	22.8	1.455	40.692	1.40	40.00	3.93	1.73	±5	2022/2/17
2600	Head	22.6	1.978	40.578	1.96	39.00	0.92	4.05	±5	2022/2/18
3500	Head	22.7	2.826	39.043	2.91	37.90	-2.89	3.02	±5	2022/2/19
3900	Head	22.8	3.219	38.416	3.32	37.50	-3.04	2.44	±5	2022/2/20
835	Head	22.7	0.934	41.189	0.90	41.50	3.78	-0.75	±5	2022/2/21
1750	Head	22.6	1.401	40.510	1.37	40.10	2.26	1.02	±5	2022/2/22
1900	Head	22.8	1.433	39.086	1.40	40.00	2.36	-2.29	±5	2022/2/23
2600	Head	22.8	2.009	40.645	1.96	39.00	2.50	4.22	±5	2022/2/24
3500	Head	22.9	2.796	38.953	2.91	37.90	-3.92	2.78	±5	2022/2/25
3900	Head	22.8	3.181	38.351	3.32	37.50	-4.19	2.27	±5	2022/2/26
2450	Head	22.8	1.869	40.799	1.80	39.20	3.83	4.08	±5	2022/2/27
5250	Head	22.9	4.637	36.499	4.71	35.90	-1.55	1.67	±5	2022/3/2
5600	Head	22.8	4.989	35.914	5.07	35.50	-1.60	1.17	±5	2022/3/5
5750	Head	22.7	5.214	35.621	5.22	35.40	-0.11	0.62	±5	2022/3/8
3700	Head	22.7	3.015	38.714	3.12	37.70	-3.37	2.69	±5	2022/2/19
3700	Head	22.9	2.981	38.645	3.12	37.70	-4.46	2.51	±5	2022/2/25

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>

Date	Frequency (MHz)	Head	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 (%)
2022/2/15	835	Head	50	4d258	7684	1303	0.495	9.44	9.9	4.87
2022/2/16	1750	Head	50	1090	7684	1303	1.840	36.40	36.8	1.10
2022/2/17	1900	Head	50	5d170	7684	1303	2.050	39.00	41	5.13
2022/2/18	2600	Head	50	1061	7684	1303	2.650	56.60	53	-6.36
2022/2/19	3500	Head	50	1037	7684	1303	3.410	68.00	68.2	0.29
2022/2/20	3900	Head	50	1048	7684	1303	3.260	70.20	65.2	-7.12
2022/2/21	835	Head	50	4d258	7684	1303	0.499	9.44	9.98	5.72
2022/2/22	1750	Head	50	1090	7684	1303	1.850	36.40	37	1.65
2022/2/23	1900	Head	50	5d170	7684	1303	2.040	39.00	40.8	4.62
2022/2/24	2600	Head	50	1061	7684	1303	2.690	56.60	53.8	-4.95
2022/2/25	3500	Head	50	1037	7684	1303	3.320	68.00	66.4	-2.35
2022/2/26	3900	Head	50	1048	7684	1303	3.250	70.20	65	-7.41
2022/2/27	2450	Head	50	908	7684	1303	2.460	52.80	49.2	-6.82
2022/3/2	5250	Head	50	1113	7684	1303	3.760	80.50	75.2	-6.58
2022/3/5	5600	Head	50	1113	7684	1303	3.920	83.40	78.4	-6.00
2022/3/8	5750	Head	50	1113	7684	1303	3.720	80.00	74.4	-7.00
2022/2/19	3700	Head	50	1008	7684	1303	3.150	67.60	63	-6.80
2022/2/25	3700	Head	50	1008	7684	1303	3.130	67.60	62.6	-7.40

<10g SAR>

Date	Frequency (MHz)	Head	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 (%)
2022/3/2	5250	Head	50	1113	7684	1303	1.080	23.10	21.6	-6.49
2022/3/5	5600	Head	50	1113	7684	1303	1.110	23.80	22.2	-6.72
2022/3/8	5750	Head	50	1113	7684	1303	1.060	22.80	21.2	-7.02

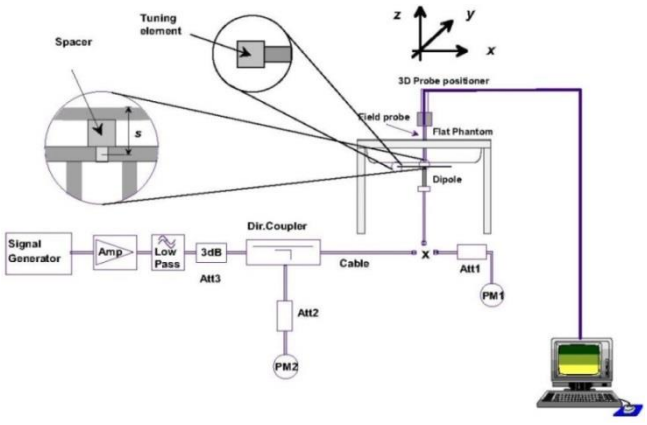


Fig 11.3.1 System Performance Check Setup

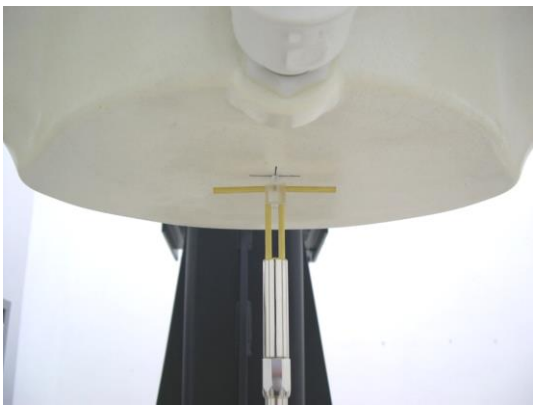


Fig 11.3.2 Setup Photo

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.

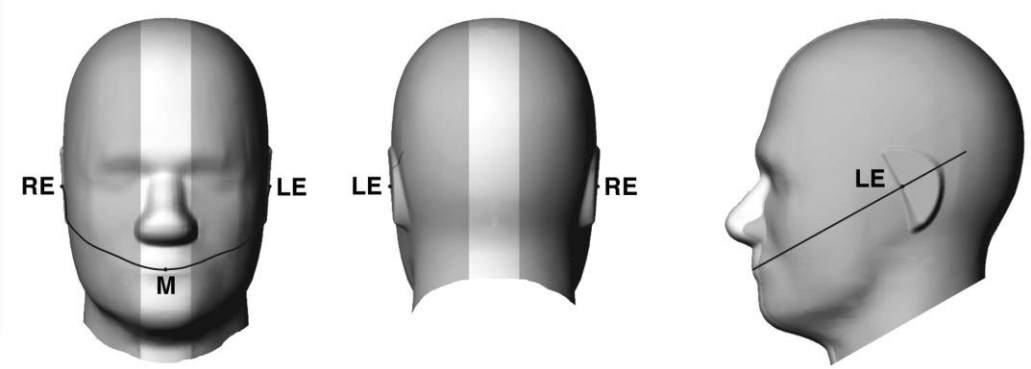


Fig 12.1.1 Front, back, and side views of SAM twin phantom

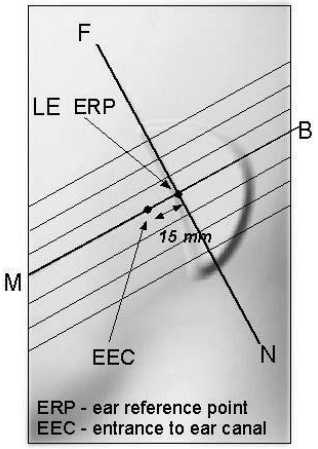


Fig 12.1.2 Close-up side view of phantom showing the ear region.

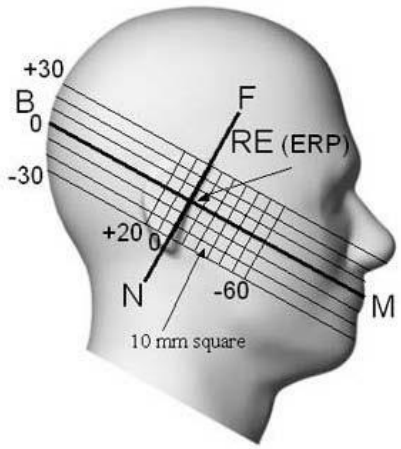


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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

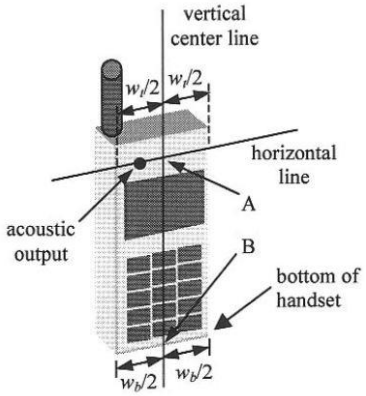


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

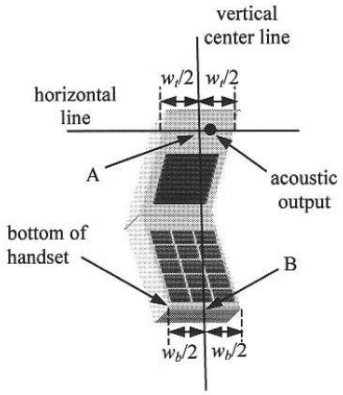


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

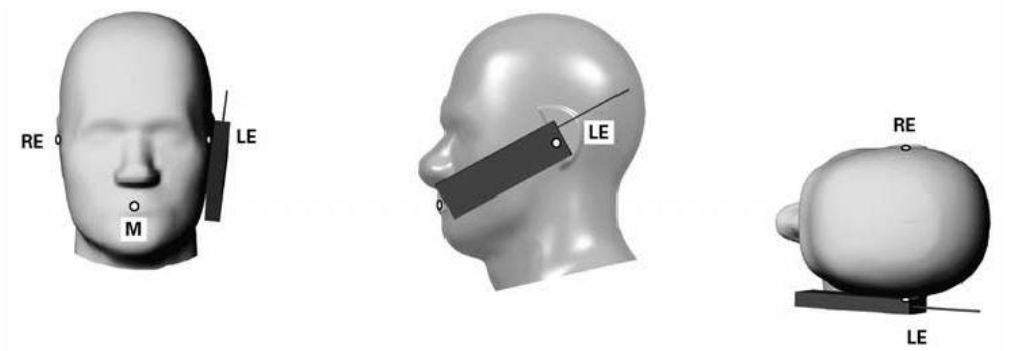


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

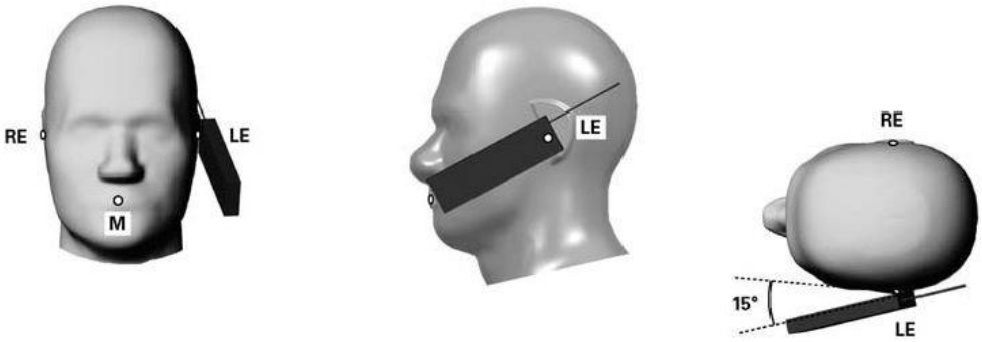


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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

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

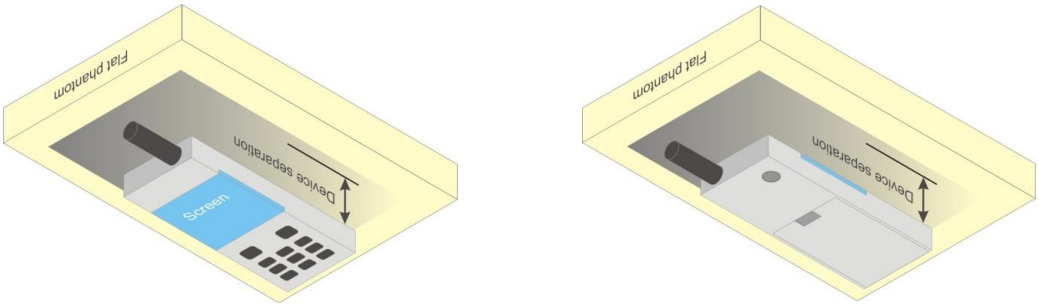


Fig 12.4 Body Worn Position

12.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that 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 ≤ 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 x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

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

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 ≤ ¼ 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 (β_c and β_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: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, 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: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_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, Δ_{ACK} and Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c/β_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 β_c = 11/15 and β_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 (β_c and β_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: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{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	209/225	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	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 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, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c/β_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 β_c = 10/15 and β_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: β_{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 (β_c and β_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: β_c/β_d=2/15
      b). Subtest 2: β_c/β_d=12/15
      c). Subtest 3: β_c/β_d=15/8
      d). Subtest 4: β_c/β_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	Proces ses	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.		

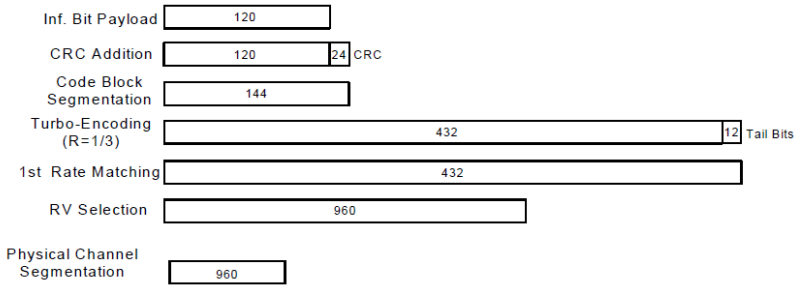


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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 (β_c and β_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 Parms
   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: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{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	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_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 β_c is set to 1 and β_d = 0 by default.
Note 4: β_{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>

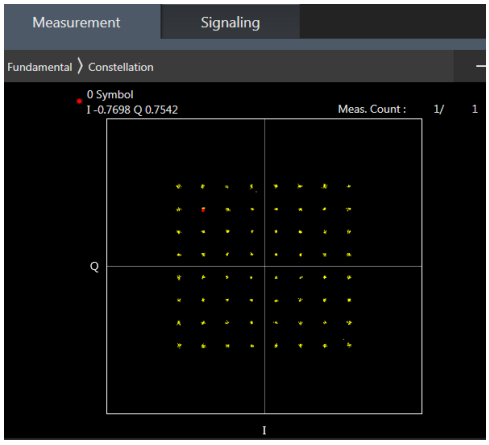
General Note:

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 ≤ ¼ 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 ≤ 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 ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

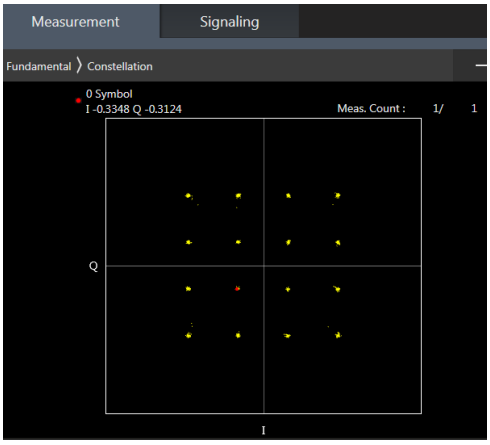
<LTE Conducted Power>

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 ≤ 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 output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / 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 B38 SAR test was covered by B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM 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 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations

b. "special subframe S" contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS

c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

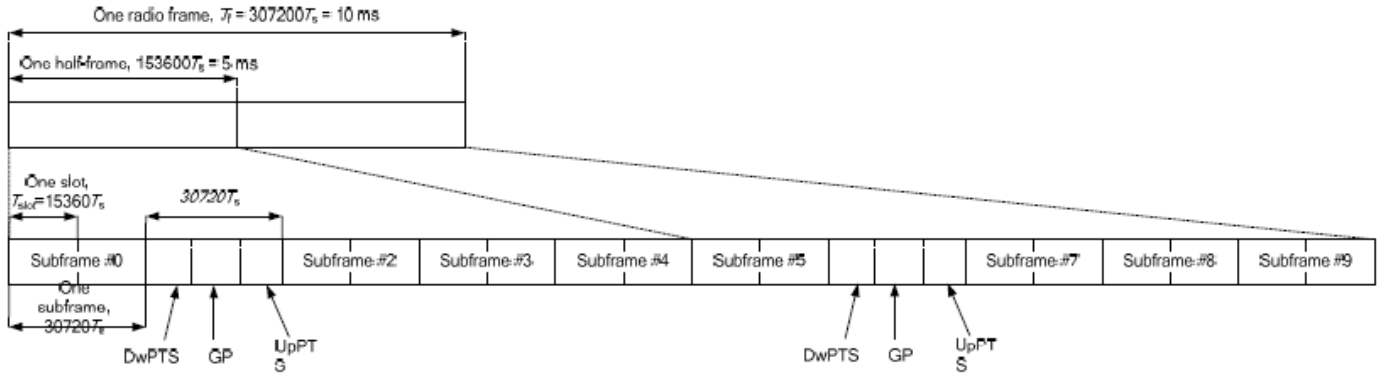


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, uplink operation is in 3 uplink subframes and 1 special subframe.

ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink

iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.167)/5 = 63.3%

iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.143)/5 = 62.9%

v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

<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	
Number	Combination
1	CA_2C
2	CA_2A-4A
3	CA_2A_5A
4	CA_2A-7A
5	CA_4A-5A
6	CA_4A-7A
7	CA_5A-7A
8	CA_7C
9	CA_7A-7A
10	CA_38C
11	CA_41C
12	CA_41A-41A

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 two 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.

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Bands 7/38/41 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: B7/B38/B41

LTE Carrier Aggregation Conducted Power (Uplink)

<Intra-band>

2CC Uplink Carrier Aggregation	
Number	Combination
1	7C
2	38C

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 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. According 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.

v. 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.

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n5, n7, n38, n41, n77, n78 supports SA operation.
2. 5G NR n5, n7, n41, n77, n78 supports NSA.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-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/64 QAM/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 AM SAR testing are not required.
   g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.
5. 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.
6. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
7. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
8. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
9. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
10. 5G NR n41/n77/n78 supports HPUE, HPUE power and SAR testing performed separately.
11. 5G NR n41/n77/n78 HPUE with higher power, n41/n77/n78 HPUE SAR can represent power class 3 level SAR.
12. For 5G NR 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.

<3GPP 38.101 MPR for EN-DC>

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

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

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

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

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

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

ENDC List	LTE Ant No.	NR Ant No.
DC_7A_n5A	Ant2	Ant4
DC_5A_n7A	Ant1	Ant2
DC_41A_n77A	Ant2	Ant3
DC_5A_n78A	Ant1	Ant3
DC_7A_n78A	Ant2	Ant3
DC_38A_n78A	Ant2	Ant3
DC_41A_n78A	Ant2	Ant3
DC_7A_n7A	Ant2	Ant1
DC_41A_n41A	Ant2	Ant1

<WLAN Conducted Power>

General Note:

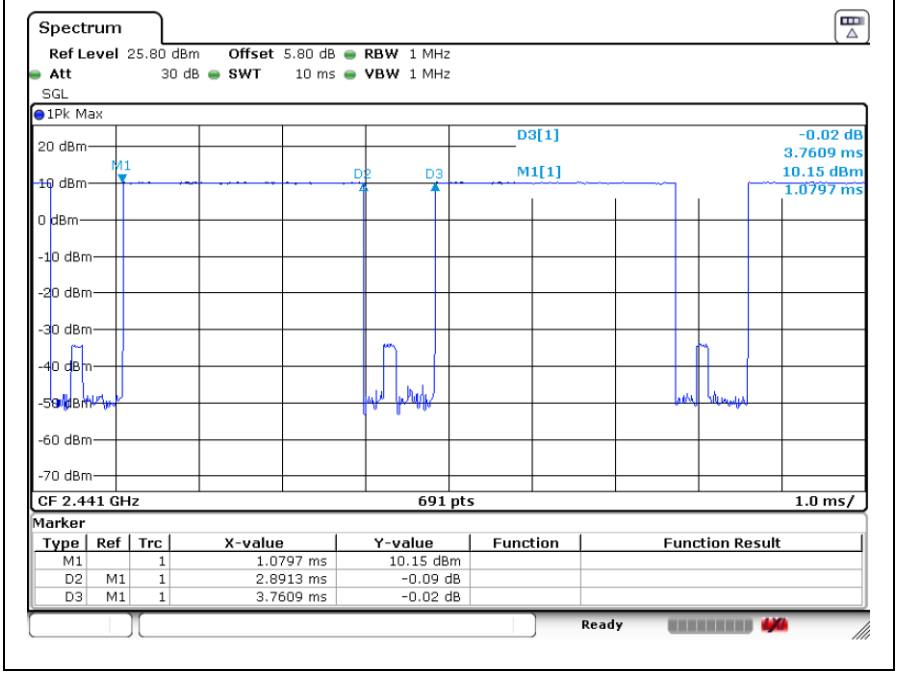
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. 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 ≤ 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 ≤ 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 ≤ 1.2 W/kg or all required channels are tested.

<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 76.88 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation

Bluetooth time-domain plot



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:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. 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 (DSI 1: receiver on reduced power for head; DSI 3/4: P-sensor on for hotspot/ handheld; DSI 2: P-sensor off).
6. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
7. 5G NR n41/n77/n78 supports HPUE, HPUE power and SAR testing performed separately.
8. 5G NR n41/n77/n78 HPUE with higher power, n41/n77/n78 HPUE SAR can represent power class 3 level SAR.
9. For 5GNR 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.
10. 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.
11. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
12. 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.
13. 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.
14. For 5GNR FDD/TDD supports SCS15KHz and SCS30KHz, chose higher power which is SCS30KHz to perform SAR testing
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,
    a. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
    b. 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.

16. For different distance SAR always chose higher SAR at the same position to do co-located analysis.
17. For the front and back sensor distance SAR of hotspot exposure condition could be referred to front and back body-worn SAR.

GSM Note:

1. 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.
2. 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 ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA 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 ≤ ¼ 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 ≤ 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 ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4 / B5 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE B38 SAR test was covered by B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   c. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   d. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM /64QAM/256QAM SAR testing are not required.
   e. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device.
   f. For 5G FR1 n38/n41/n77/n78 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 ≤ 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 ≤ 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 ≤ 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 ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
6. Based on WLAN2.4GHz and Bluetooth share the same, so Bluetooth RF exposure evaluation chose the worst position of WLAN 2.4GHz to perform Bluetooth SAR test, and used this Bluetooth SAR value conservatively represent other position do co-located analysis with WWAN.

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)
835MHz																		
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 1	DSI 1	189	836.4	29.22	29.50	1.067	0.01	0.167	0.178
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 1	DSI 1	189	836.4	29.22	29.50	1.067	-0.07	0.079	0.084
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 1	DSI 1	189	836.4	29.22	29.50	1.067	0.07	0.123	0.131
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 1	DSI 1	189	836.4	29.22	29.50	1.067	0.03	0.102	0.109
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 4	DSI 1	189	836.4	27.93	28.50	1.140	-0.12	0.702	0.800
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 4	DSI 1	128	824.2	27.91	28.50	1.146	-0.08	0.575	0.659
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 4	DSI 1	251	848.8	27.89	28.50	1.151	0.17	0.757	0.871
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 4	DSI 1	189	836.4	27.93	28.50	1.140	-0.16	0.691	0.788
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 4	DSI 1	189	836.4	27.93	28.50	1.140	0.19	0.768	0.876
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 4	DSI 1	128	824.2	27.91	28.50	1.146	-0.17	0.613	0.702
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 4	DSI 1	251	848.8	27.89	28.50	1.151	0.11	0.751	0.864
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 4	DSI 1	189	836.4	27.93	28.50	1.140	-0.07	0.702	0.800
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 4	DSI 1	128	824.2	27.91	28.50	1.146	0.01	0.619	0.709
01	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 4	DSI 1	251	848.8	27.89	28.50	1.151	-0.09	0.779	**0.896**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	4182	836.4	23.98	25.50	1.419	0.07	0.174	0.247
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	4182	836.4	23.98	25.50	1.419	0.13	0.100	0.142
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4182	836.4	23.98	25.50	1.419	0.08	0.196	0.278
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	4182	836.4	23.98	25.50	1.419	0.07	0.125	0.177
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	4182	836.4	23.12	24.50	1.374	0.1	0.633	0.870
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	4132	826.4	23.04	24.50	1.400	0.07	0.597	0.836
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	4233	846.6	23.05	24.50	1.396	-0.05	0.670	0.936
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	4182	836.4	23.12	24.50	1.374	0.02	0.617	0.848
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	4132	826.4	23.04	24.50	1.400	-0.12	0.571	0.799
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	4233	846.6	23.05	24.50	1.396	-0.16	0.649	0.906
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	4182	836.4	23.12	24.50	1.374	0.05	0.648	0.890
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	4132	826.4	23.04	24.50	1.400	0.1	0.610	0.854
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	4233	846.6	23.05	24.50	1.396	-0.06	0.671	0.937
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	4182	836.4	23.12	24.50	1.374	0.08	0.651	0.895
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	4132	826.4	23.04	24.50	1.400	0.08	0.601	0.841
02	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	4233	846.6	23.05	24.50	1.396	-0.19	0.681	**0.951**
	LTE Band 5	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	20525	836.5	23.99	25.50	1.416	0.02	0.139	0.197
	LTE Band 5	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 1	20525	836.5	22.96	24.50	1.426	-0.09	0.123	0.175
	LTE Band 5	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	20525	836.5	23.99	25.50	1.416	-0.18	0.095	0.135
	LTE Band 5	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 1	20525	836.5	22.96	24.50	1.426	-0.07	0.082	0.117
	LTE Band 5	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	20525	836.5	23.99	25.50	1.416	0.06	0.179	0.253
	LTE Band 5	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 1	20525	836.5	22.96	24.50	1.426	0.11	0.149	0.212
	LTE Band 5	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	20525	836.5	23.99	25.50	1.416	-0.15	0.110	0.156
	LTE Band 5	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 1	20525	836.5	22.96	24.50	1.426	0.08	0.094	0.134
	LTE Band 5	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	20525	836.5	23.32	24.50	1.312	0.02	0.621	0.815
	LTE Band 5	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 4	DSI 1	20525	836.5	23.20	24.50	1.349	-0.11	0.616	0.831
	LTE Band 5	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	20525	836.5	23.10	24.50	1.380	0.06	0.612	0.845
	LTE Band 5	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	20525	836.5	23.32	24.50	1.312	-0.05	0.610	0.800
	LTE Band 5	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 4	DSI 1	20525	836.5	23.20	24.50	1.349	0.02	0.604	0.815
	LTE Band 5	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	20525	836.5	23.10	24.50	1.380	-0.03	0.603	0.832
	LTE Band 5	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	20525	836.5	23.32	24.50	1.312	-0.09	0.642	0.842
03	LTE Band 5	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 4	DSI 1	20525	836.5	23.20	24.50	1.349	0.02	0.632	**0.853**
	LTE Band 5	10M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	20525	836.5	23.10	24.50	1.380	-0.05	0.613	0.846
	LTE Band 5	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	20525	836.5	23.32	24.50	1.312	-0.09	0.637	0.836
	LTE Band 5	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 4	DSI 1	20525	836.5	23.20	24.50	1.349	-0.18	0.627	0.846
	LTE Band 5	10M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	20525	836.5	23.10	24.50	1.380	0.05	0.606	0.837
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 1	167300	836.5	24.11	25.50	1.377	0.04	0.129	0.178

	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 1	167300	836.5	24.06	25.50	1.393	0.08	0.146	0.203
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 1	167300	836.5	24.11	25.50	1.377	0.14	0.081	0.112
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 1	167300	836.5	24.06	25.50	1.393	0.05	0.085	0.118
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	167300	836.5	24.11	25.50	1.377	0.09	0.150	0.207
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	167300	836.5	24.06	25.50	1.393	-0.01	0.174	0.242
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 1	167300	836.5	24.11	25.50	1.377	0.19	0.094	0.129
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 1	167300	836.5	24.06	25.50	1.393	0.06	0.103	0.143
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	167300	836.5	23.28	24.50	1.324	0.09	0.488	0.646
04	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	167300	836.5	23.25	24.50	1.334	0.03	0.558	**0.744**
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	167300	836.5	23.28	24.50	1.324	0.09	0.454	0.601
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	167300	836.5	23.25	24.50	1.334	-0.14	0.498	0.664
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	167300	836.5	23.28	24.50	1.324	0.15	0.489	0.648
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	167300	836.5	23.25	24.50	1.334	-0.03	0.513	0.684
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	167300	836.5	23.28	24.50	1.324	0.07	0.459	0.608
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	167300	836.5	23.25	24.50	1.334	0.05	0.510	0.680

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)
1750MHz																		
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	1413	1732.6	23.54	25.00	1.400	0.01	0.043	0.060
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1413	1732.6	23.54	25.00	1.400	0.07	0.000	0.000
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	1413	1732.6	23.54	25.00	1.400	0.16	0.000	0.000
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	1413	1732.6	23.54	25.00	1.400	0.07	0.000	0.000
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	1413	1732.6	21.08	22.00	1.236	0.09	0.675	0.834
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	1312	1712.4	20.99	22.00	1.262	0.08	0.659	0.832
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	1513	1752.6	21.06	22.00	1.242	0.11	0.699	0.868
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1413	1732.6	21.08	22.00	1.236	0.13	0.821	1.015
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1312	1712.4	20.99	22.00	1.262	0.03	0.717	0.905
05	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1513	1752.6	21.06	22.00	1.242	-0.01	0.864	**1.073**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	1413	1732.6	21.08	22.00	1.236	0.09	0.519	0.641
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	1413	1732.6	21.08	22.00	1.236	0.06	0.668	0.826
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	1312	1712.4	20.99	22.00	1.262	0.06	0.592	0.747
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	1513	1752.6	21.06	22.00	1.242	0.03	0.704	0.874
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	20175	1732.5	23.55	25.00	1.396	0.03	0.050	0.070
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	20175	1732.5	22.52	24.00	1.406	0.03	0.048	0.067
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	20175	1732.5	23.55	25.00	1.396	0.09	0.041	0.057
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	20175	1732.5	22.52	24.00	1.406	0.17	0.039	0.055
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	20175	1732.5	23.55	25.00	1.396	0.06	0.083	0.116
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	20175	1732.5	22.52	24.00	1.406	0.05	0.077	0.108
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	20175	1732.5	23.55	25.00	1.396	0.06	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	20175	1732.5	22.52	24.00	1.406	-0.04	0.000	0.000
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.17	22.00	1.211	-0.07	0.701	0.849
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.10	22.00	1.230	0.08	0.696	0.856
	LTE Band 4	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.05	22.00	1.245	-0.08	0.694	0.864
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.17	22.00	1.211	0.04	0.861	1.042
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.10	22.00	1.230	0.18	0.858	1.056
06	LTE Band 4	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.05	22.00	1.245	-0.18	0.864	**1.075**
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.17	22.00	1.211	0.09	0.531	0.643
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	20175	1732.5	21.10	22.00	1.230	0.04	0.529	0.651
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.17	22.00	1.211	-0.03	0.694	0.840
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.10	22.00	1.230	0.06	0.693	0.853
	LTE Band 4	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 4	DSI 1	20175	1732.5	21.05	22.00	1.245	-0.09	0.685	0.852
1900MHz																		
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 1	DSI 1	661	1880	24.33	26.00	1.469	0.08	0.013	0.019
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 1	DSI 1	661	1880	24.33	26.00	1.469	0.02	0.003	0.004
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 1	DSI 1	661	1880	24.33	26.00	1.469	0.06	0.026	0.038

	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 1	DSI 1	661	1880	24.33	26.00	1.469	0.18	0.006	0.009
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 4	DSI 1	661	1880	23.96	25.00	1.271	0.08	0.573	0.728
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 4	DSI 1	661	1880	23.96	25.00	1.271	0.15	0.812	1.032
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 4	DSI 1	512	1850.2	23.87	25.00	1.297	0.02	0.674	0.874
07	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 4	DSI 1	810	1909.8	23.77	25.00	1.327	-0.06	0.817	**1.084**
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 4	DSI 1	661	1880	23.96	25.00	1.271	-0.03	0.428	0.544
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 4	DSI 1	661	1880	23.96	25.00	1.271	0.15	0.584	0.742
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	9400	1880	23.64	25.00	1.368	0.04	0.086	0.118
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	9400	1880	23.64	25.00	1.368	-0.06	0.000	0.000
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	9400	1880	23.64	25.00	1.368	0.01	0.129	0.176
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	9400	1880	23.64	25.00	1.368	-0.03	0.000	0.000
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	9400	1880	19.60	20.50	1.230	-0.11	0.489	0.602
08	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	9400	1880	19.60	20.50	1.230	0.09	0.652	**0.802**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	9262	1852.4	19.53	20.50	1.250	0.1	0.632	0.790
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	9538	1907.6	19.57	20.50	1.239	0.18	0.632	0.783
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	9400	1880	19.60	20.50	1.230	0.05	0.376	0.463
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	9400	1880	19.60	20.50	1.230	0.04	0.509	0.626
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	18900	1880	23.73	25.00	1.340	0.02	0.112	0.150
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	18900	1880	22.67	24.00	1.358	0.18	0.111	0.151
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	18900	1880	23.73	25.00	1.340	0.01	0.097	0.130
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	18900	1880	22.67	24.00	1.358	0.14	0.098	0.133
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	18900	1880	23.73	25.00	1.340	0.03	0.172	0.230
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	18900	1880	22.67	24.00	1.358	0.08	0.178	0.242
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	18900	1880	23.73	25.00	1.340	0.12	0.080	0.107
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	18900	1880	22.67	24.00	1.358	0.12	0.077	0.105
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	19.85	20.50	1.161	-0.11	0.522	0.606
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	19.77	20.50	1.183	0.02	0.514	0.608
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	19.85	20.50	1.161	-0.06	0.672	0.780
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	19.77	20.50	1.183	-0.11	0.680	0.804
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	18700	1860	19.64	20.50	1.219	0.08	0.652	0.795
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	19100	1900	19.75	20.50	1.189	-0.1	0.656	0.780
09	LTE Band 2	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	19.82	20.50	1.169	0.04	0.688	**0.805**
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	18900	1880	19.85	20.50	1.161	0.08	0.396	0.460
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	18900	1880	19.77	20.50	1.183	-0.02	0.391	0.463
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	18900	1880	19.85	20.50	1.161	-0.13	0.534	0.620
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	18900	1880	19.77	20.50	1.183	0.09	0.538	0.636

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)
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	21100	2535	24.09	25.50	1.384	-	-	0.02	0.064	0.089
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	21100	2535	23.07	24.50	1.390	-	-	-0.08	0.066	0.092
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	21100	2535	24.09	25.50	1.384	-	-	-0.01	0.073	0.101
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	21100	2535	23.07	24.50	1.390	-	-	0.03	0.072	0.100
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	21100	2535	24.09	25.50	1.384	-	-	-0.01	0.081	0.112
	LTE Band 7C	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	21100+ 21298	2535+ 2554.8	23.58	25.50	1.556	-	-	0.04	0.062	0.096
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	21100	2535	23.07	24.50	1.390	-	-	0.01	0.078	0.108
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	21100	2535	24.09	25.50	1.384	-	-	0.06	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	21100	2535	23.07	24.50	1.390	-	-	0.04	0.000	0.000
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	21100	2535	16.95	18.00	1.274	-	-	0.15	0.344	0.438
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	21100	2535	16.93	18.00	1.279	-	-	0.06	0.353	0.452
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 1	21100	2535	16.95	18.00	1.274	-	-	0.04	0.174	0.222
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 1	21100	2535	16.93	18.00	1.279	-	-	0.05	0.172	0.220
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	21100	2535	16.95	18.00	1.274	-	-	0.18	0.082	0.104
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	21100	2535	16.93	18.00	1.279	-	-	0.09	0.078	0.100
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 1	21100	2535	16.95	18.00	1.274	-	-	-0.16	0.077	0.098
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 1	21100	2535	16.93	18.00	1.279	-	-	-0.12	0.076	0.097
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	18.42	20.00	1.439	-	-	0.02	0.592	0.852
	LTE Band 7	20M	QPSK	1	0		Right Cheek	0mm	Ant 4	DSI 1	20850	2510	18.30	20.00	1.479			0.04	0.548	0.811
	LTE Band 7	20M	QPSK	1	0		Right Cheek	0mm	Ant 4	DSI 1	21350	2560	18.32	20.00	1.472			0.09	0.559	0.823
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	18.27	20.00	1.489	-	-	0.06	0.587	0.874
	LTE Band 7	20M	QPSK	50	0		Right Cheek	0mm	Ant 4	DSI 1	20850	2510	18.07	20.00	1.560			-0.08	0.554	0.864
	LTE Band 7	20M	QPSK	50	0		Right Cheek	0mm	Ant 4	DSI 1	21350	2560	18.25	20.00	1.496			0.01	0.557	0.833
	LTE Band 7	20M	QPSK	100	0		Right Cheek	0mm	Ant 4	DSI 1	21100	2535	18.09	20.00	1.552			0.02	0.521	0.809
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	18.42	20.00	1.439	-	-	0.17	0.696	1.001
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	20850	2510	18.30	20.00	1.479	-	-	-0.08	0.657	0.972
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	21350	2560	18.32	20.00	1.472	-	-	0.09	0.651	0.958
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	18.27	20.00	1.489	-	-	0.15	0.646	0.962
10	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	20850	2510	18.07	20.00	1.560	-	-	0.18	0.653	**1.018**
	LTE Band 7C	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	20850+ 21084	2510+ 2533.4	18.27	20.00	1.489	-	-	0.02	0.653	0.973
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	21350	2560	18.25	20.00	1.496	-	-	-0.15	0.651	0.974
	LTE Band 7	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	18.09	20.00	1.552	-	-	0.04	0.634	0.984
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	21100	2535	18.42	20.00	1.439	-	-	0.03	0.439	0.632
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	21100	2535	18.27	20.00	1.489	-	-	-0.14	0.441	0.657
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	18.42	20.00	1.439	-	-	0.08	0.598	0.860
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	20850	2510	18.30	20.00	1.479	-	-	0.08	0.535	0.791
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	21350	2560	18.32	20.00	1.472	-	-	0.08	0.527	0.776
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	18.27	20.00	1.489	-	-	0.05	0.588	0.876
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	20850	2510	18.07	20.00	1.560	-	-	0.08	0.535	0.834
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	21350	2560	18.25	20.00	1.496	-	-	0.08	0.527	0.789
	LTE Band 7	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	18.09	20.00	1.552	-	-	0.08	0.533	0.827
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	40620	2593	24.12	25.50	1.374	62.9	1.006	0.06	0.120	0.166
	LTE Band 38C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	38000+ 38150	2595+ 2610	23.97	25.50	1.422	62.9	1.006	0.03	0.102	0.146
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	40620	2593	23.08	24.50	1.387	62.9	1.006	-0.04	0.095	0.133
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	40620	2593	24.12	25.50	1.374	62.9	1.006	0.07	0.079	0.109
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	40620	2593	23.08	24.50	1.387	62.9	1.006	0.02	0.062	0.086
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	40620	2593	24.12	25.50	1.374	62.9	1.006	0.02	0.073	0.101
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	40620	2593	23.08	24.50	1.387	62.9	1.006	0.11	0.053	0.074
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	40620	2593	24.12	25.50	1.374	62.9	1.006	0.05	0.047	0.065
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	40620	2593	23.08	24.50	1.387	62.9	1.006	-0.14	0.000	0.000

	LTE Band 41 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	40620	2593	17.99	19.00	1.262	62.9	1.006	0.03	0.404	0.513
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	40620	2593	17.86	19.00	1.300	62.9	1.006	-0.11	0.405	0.530
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 1	40620	2593	17.99	19.00	1.262	62.9	1.006	0.18	0.174	0.221
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 1	40620	2593	17.86	19.00	1.300	62.9	1.006	0.08	0.180	0.235
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	40620	2593	17.99	19.00	1.262	62.9	1.006	0.08	0.097	0.123
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	40620	2593	17.86	19.00	1.300	62.9	1.006	-0.06	0.106	0.139
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 1	40620	2593	17.99	19.00	1.262	62.9	1.006	0.05	0.130	0.165
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 1	40620	2593	17.86	19.00	1.300	62.9	1.006	0.08	0.134	0.175
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	21.50	23.00	1.413	62.9	1.006	0.07	0.412	0.585
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	21.46	23.00	1.426	62.9	1.006	0.03	0.418	0.599
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	21.50	23.00	1.413	62.9	1.006	0.06	0.606	0.861
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	39750	2506	21.33	23.00	1.469	62.9	1.006	0.07	0.498	0.736
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	40185	2549.5	21.47	23.00	1.422	62.9	1.006	0.04	0.468	0.670
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	41055	2636.5	21.30	23.00	1.479	62.9	1.006	-0.15	0.732	1.089
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	41490	2680	21.42	23.00	1.439	62.9	1.006	0.08	0.697	1.009
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	21.46	23.00	1.426	62.9	1.006	-0.05	0.596	0.855
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	39750	2506	21.35	23.00	1.462	62.9	1.006	0.16	0.503	0.740
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	40185	2549.5	21.42	23.00	1.439	62.9	1.006	0.05	0.474	0.686
11	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	41055	2636.5	21.40	23.00	1.445	62.9	1.006	-0.02	0.750	**1.091**
	LTE Band 38C	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	38150+ 38000	2610+ 2595	21.24	23.00	1.500	62.9	1.006	-0.02	0.721	1.088
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	41490	2680	21.34	23.00	1.466	62.9	1.006	0.07	0.698	1.029
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	21.38	23.00	1.452	62.9	1.006	0.02	0.597	0.872
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	40620	2593	21.50	23.00	1.413	62.9	1.006	0.15	0.346	0.492
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	40620	2593	21.46	23.00	1.426	62.9	1.006	0.02	0.337	0.483
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	40620	2593	21.50	23.00	1.413	62.9	1.006	-0.14	0.420	0.597
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	40620	2593	21.46	23.00	1.426	62.9	1.006	0.11	0.417	0.598
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 1	507000	2535	24.45	25.50	1.274	-	-	0.07	0.065	0.083
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 1	507000	2535	24.42	25.50	1.282	-	-	0.1	0.076	0.097
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 1	507000	2535	24.45	25.50	1.274	-	-	0.18	0.074	0.094
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 1	507000	2535	24.42	25.50	1.282	-	-	0.13	0.082	0.105
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	507000	2535	24.45	25.50	1.274	-	-	0.19	0.090	0.115
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	507000	2535	24.42	25.50	1.282	-	-	0.01	0.099	0.127
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 1	507000	2535	24.45	25.50	1.274	-	-	-0.13	0.041	0.052
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 1	507000	2535	24.42	25.50	1.282	-	-	-0.13	0.044	0.056
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	507000	2535	20.77	22.00	1.327	-	-	0.01	0.757	1.005
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	502000	2510	20.65	22.00	1.365	-	-	0.02	0.702	0.958
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	512000	2560	20.49	22.00	1.416	-	-	0.08	0.701	0.992
12	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	507000	2535	20.76	22.00	1.330	-	-	-0.02	0.801	**1.066**
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	502000	2510	20.56	22.00	1.393	-	-	-0.04	0.742	1.034
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	512000	2560	20.60	22.00	1.380	-	-	-0.03	0.726	1.002
	FR1 n7 ENDC	20M	QPSK	50	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	507000	2535	20.73	22.00	1.340	-	-	0.07	0.785	1.052
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	507000	2535	20.77	22.00	1.327	-	-	-0.15	0.388	0.515
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	507000	2535	20.76	22.00	1.330	-	-	0.16	0.387	0.515
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	507000	2535	20.77	22.00	1.327	-	-	0.09	0.195	0.259
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	507000	2535	20.76	22.00	1.330	-	-	0.12	0.192	0.255
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	507000	2535	20.77	22.00	1.327	-	-	-0.02	0.195	0.259
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	507000	2535	20.76	22.00	1.330	-	-	-0.04	0.189	0.251
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	19.02	19.50	1.117	-	-	-0.08	0.562	0.628
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	18.99	19.50	1.125	-	-	0.05	0.587	0.660
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	19.02	19.50	1.117	-	-	-0.05	0.741	0.828
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	502000	2510	18.88	19.50	1.153	-	-	0.02	0.712	0.821
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	512000	2560	18.98	19.50	1.127	-	-	0.08	0.698	0.787
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	18.99	19.50	1.125	-	-	-0.03	0.711	0.800
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	502000	2510	18.75	19.50	1.189	-	-	0.05	0.712	0.846
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	512000	2560	18.86	19.50	1.159	-	-	0.08	0.698	0.809
	FR1 n7	20M	QPSK	50	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	18.95	19.50	1.135	-	-	-0.06	0.766	0.869

	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	507000	2535	19.02	19.50	1.117	-	-	0.05	0.425	0.475
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	507000	2535	18.99	19.50	1.125	-	-	0.08	0.418	0.470
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	507000	2535	19.02	19.50	1.117	-	-	0.07	0.542	0.605
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	507000	2535	18.99	19.50	1.125	-	-	0.04	0.557	0.626
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 1	518598	2592.99	24.84	26.00	1.306	-	-	0.01	0.185	0.242
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 1	518598	2592.99	24.82	26.00	1.312	-	-	-0.14	0.165	0.217
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 1	518598	2592.99	24.84	26.00	1.306	-	-	-0.13	0.134	0.175
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 1	518598	2592.99	24.82	26.00	1.312	-	-	0.07	0.124	0.163
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	518598	2592.99	24.84	26.00	1.306	-	-	-0.08	0.149	0.195
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	518598	2592.99	24.82	26.00	1.312	-	-	0.04	0.138	0.181
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 1	518598	2592.99	24.84	26.00	1.306	-	-	0.11	0.078	0.102
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 1	518598	2592.99	24.82	26.00	1.312	-	-	0.03	0.075	0.098
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	518598	2592.99	18.82	20.00	1.312	-	-	0.09	0.535	0.702
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	518598	2592.99	18.84	20.00	1.306	-	-	0.05	0.641	0.837
13	FR1 n41 ENDC	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	518598	2592.99	18.76	20.00	1.330	-	-	-0.07	0.652	**0.867**
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	518598	2592.99	18.82	20.00	1.312	-	-	0.02	0.223	0.293
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	518598	2592.99	18.84	20.00	1.306	-	-	0.13	0.222	0.290
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	518598	2592.99	18.82	20.00	1.312	-	-	0.09	0.155	0.203
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	518598	2592.99	18.84	20.00	1.306	-	-	0.15	0.155	0.202
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	518598	2592.99	18.82	20.00	1.312	-	-	-0.09	0.193	0.253
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	518598	2592.99	18.84	20.00	1.306	-	-	0.04	0.192	0.251
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	15.86	17.00	1.300	-	-	-0.05	0.386	0.502
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	15.79	17.00	1.321	-	-	0.16	0.448	0.592
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	15.86	17.00	1.300	-	-	-0.07	0.341	0.443
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	15.79	17.00	1.321	-	-	0.08	0.337	0.445
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	518598	2592.99	15.86	17.00	1.300	-	-	0.05	0.488	0.634
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	518598	2592.99	15.79	17.00	1.321	-	-	-0.01	0.572	0.756
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	518598	2592.99	15.86	17.00	1.300	-	-	0.18	0.248	0.322
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	518598	2592.99	15.79	17.00	1.321	-	-	0.05	0.213	0.281

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)
3500MHz																		
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	656000	3840	19.78	21.00	1.324	0.11	0.614	0.813
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	656000	3840	19.72	21.00	1.343	-0.04	0.619	0.831
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	656000	3840	19.72	21.00	1.343	-0.04	0.611	0.820
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	656000	3840	19.78	21.00	1.324	0.02	0.265	0.351
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	656000	3840	19.72	21.00	1.343	-0.02	0.261	0.350
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	656000	3840	19.78	21.00	1.324	0.11	0.199	0.264
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	656000	3840	19.72	21.00	1.343	0.05	0.217	0.291
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	656000	3840	19.78	21.00	1.324	0.07	0.185	0.245
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	656000	3840	19.72	21.00	1.343	0.12	0.188	0.252
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	633334	3500.01	19.64	21.00	1.368	0.03	0.514	0.703
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	633334	3500.01	19.63	21.00	1.371	-0.13	0.526	0.721
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	633334	3500.01	19.64	21.00	1.368	0.06	0.478	0.654
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	633334	3500.01	19.63	21.00	1.371	0.06	0.488	0.669
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	633334	3500.01	19.64	21.00	1.368	-0.09	0.231	0.316
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	633334	3500.01	19.63	21.00	1.371	0.06	0.239	0.328
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	633334	3500.01	19.64	21.00	1.368	-0.04	0.230	0.315
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	633334	3500.01	19.63	21.00	1.371	-0.19	0.230	0.315
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 1	656000	3840	18.61	19.00	1.094	0.03	0.576	0.630
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 1	656000	3840	18.55	19.00	1.109	0.02	0.580	0.643
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	656000	3840	18.61	19.00	1.094	-0.17	0.741	0.811
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	656000	3840	18.55	19.00	1.109	-0.07	0.750	0.832
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	656000	3840	18.46	19.00	1.132	-0.17	0.702	0.795
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	656000	3840	18.61	19.00	1.094	0.04	0.772	0.845

	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	656000	3840	18.55	19.00	1.109	0.03	0.721	0.800
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	656000	3840	18.46	19.00	1.132	0.08	0.749	0.848
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	656000	3840	18.61	19.00	1.094	-0.08	0.901	0.986
14	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	656000	3840	18.55	19.00	1.109	0.09	0.911	**1.010**
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	656000	3840	18.46	19.00	1.132	0.02	0.879	0.995
	FR1 n77 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	656000	3840	15.63	16.00	1.089	0.03	0.432	0.470
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 1	633334	3500.01	18.37	19.00	1.156	0.05	0.421	0.487
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 1	633334	3500.01	18.27	19.00	1.183	0.14	0.433	0.512
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	633334	3500.01	18.37	19.00	1.156	-0.17	0.534	0.617
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	633334	3500.01	18.27	19.00	1.183	0.17	0.555	0.657
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	633334	3500.01	18.37	19.00	1.156	0.01	0.688	0.795
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	633334	3500.01	18.27	19.00	1.183	0.15	0.707	0.836
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	633334	3500.01	18.20	19.00	1.202	-0.1	0.638	0.767
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	633334	3500.01	18.37	19.00	1.156	0.05	0.732	0.846
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	633334	3500.01	18.27	19.00	1.183	0.08	0.712	0.842
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	633334	3500.01	18.20	19.00	1.202	0.09	0.695	0.836
	FR1 n77 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	633334	3500.01	15.25	16.00	1.189	0.05	0.321	0.382
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	656000	3840	15.59	17.00	1.384	-0.1	0.057	0.079
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	656000	3840	15.53	17.00	1.403	0.13	0.052	0.073
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	656000	3840	15.59	17.00	1.384	-0.15	0.053	0.073
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	656000	3840	15.53	17.00	1.403	0.07	0.048	0.067
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	656000	3840	15.59	17.00	1.384	0.09	0.287	0.397
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	656000	3840	15.53	17.00	1.403	0.04	0.268	0.376
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	656000	3840	15.53	17.00	1.403	-0.09	0.300	0.421
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	656000	3840	15.59	17.00	1.384	0.07	0.117	0.162
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	656000	3840	15.53	17.00	1.403	-0.17	0.110	0.154
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	633334	3500.01	15.48	17.00	1.419	-0.05	0.094	0.133
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	633334	3500.01	15.40	17.00	1.445	0.13	0.096	0.139
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	633334	3500.01	15.48	17.00	1.419	0.03	0.057	0.081
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	633334	3500.01	15.40	17.00	1.445	0.04	0.058	0.084
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	633334	3500.01	15.48	17.00	1.419	-0.08	0.559	0.793
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	633334	3500.01	15.40	17.00	1.445	-0.06	0.572	0.827
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	633334	3500.01	15.36	17.00	1.459	-0.09	0.556	0.811
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	633334	3500.01	15.48	17.00	1.419	-0.1	0.188	0.267
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	633334	3500.01	15.40	17.00	1.445	0.16	0.196	0.283
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	656000	3840	22.54	23.00	1.112	0.08	0.000	0.000
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	656000	3840	22.53	23.00	1.114	0.03	0.031	0.035
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	656000	3840	22.54	23.00	1.112	0.04	0.027	0.030
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	656000	3840	22.53	23.00	1.114	0.16	0.026	0.029
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	656000	3840	22.54	23.00	1.112	0.08	0.027	0.030
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	656000	3840	22.53	23.00	1.114	-0.07	0.029	0.032
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	656000	3840	22.54	23.00	1.112	0.03	0.036	0.040
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	656000	3840	22.53	23.00	1.114	-0.07	0.035	0.039
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	633334	3500.01	21.43	23.00	1.435	0.02	0.104	0.149
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	633334	3500.01	21.40	23.00	1.445	-0.08	0.098	0.142
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	633334	3500.01	21.43	23.00	1.435	-0.12	0.127	0.182
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	633334	3500.01	21.40	23.00	1.445	0.07	0.130	0.188
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	633334	3500.01	21.43	23.00	1.435	-0.11	0.191	0.274
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	633334	3500.01	21.40	23.00	1.445	-0.18	0.187	0.270
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	633334	3500.01	21.43	23.00	1.435	0.15	0.075	0.108
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	633334	3500.01	21.40	23.00	1.445	0.14	0.079	0.114

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)
2450MHz																
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 1	receiver on	6	2437	12.76	14.50	1.493	100	1.000	0.16	0.134	0.200
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 1	receiver on	6	2437	12.76	14.50	1.493	100	1.000	0.02	0.081	0.121
15	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 1	receiver on	6	2437	12.76	14.50	1.493	100	1.000	0.03	0.294	**0.439**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 1	receiver on	6	2437	12.76	14.50	1.493	100	1.000	0.18	0.188	0.281
16	Bluetooth	1Mbps	Left Cheek	0mm	Ant 1	Full	39	2441	10.83	12.00	1.309	76.88	1.301	0.01	0.048	**0.082**
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 1	Full	0	2402	10.83	12.00	1.309	76.88	1.301	0.08	0.023	0.039
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 1	Full	78	2480	10.83	12.00	1.309	76.88	1.301	0.14	0.033	0.056
5000MHz																
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 1	receiver on	58	5290	15.43	17.00	1.435	90.69	1.103	0.18	0.154	0.244
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 1	receiver on	58	5290	15.43	17.00	1.435	90.69	1.103	0.03	0.179	0.283
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 1	receiver on	58	5290	15.43	17.00	1.435	90.69	1.103	0.01	0.283	0.448
17	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 1	receiver on	58	5290	15.43	17.00	1.435	90.69	1.103	0.03	0.317	**0.502**
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 1	receiver on	138	5690	14.12	15.50	1.374	90.69	1.103	0.03	0.148	0.224
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 1	receiver on	138	5690	14.12	15.50	1.374	90.69	1.103	0.05	0.184	0.279
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 1	receiver on	138	5690	14.12	15.50	1.374	90.69	1.103	0.02	0.238	0.361
18	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 1	receiver on	138	5690	14.12	15.50	1.374	90.69	1.103	0.04	0.256	**0.388**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 1	receiver on	155	5775	14.37	16.00	1.455	90.69	1.103	0.17	0.150	0.241
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 1	receiver on	155	5775	14.37	16.00	1.455	90.69	1.103	0.06	0.208	0.334
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 1	receiver on	155	5775	14.37	16.00	1.455	90.69	1.103	0.06	0.268	0.430
19	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 1	receiver on	155	5775	14.37	16.00	1.455	90.69	1.103	0.03	0.286	**0.459**

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)
835MHz																		
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 1	DSI 3	189	836.4	29.22	29.50	1.067	-0.12	0.118	0.126
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 1	DSI 3	189	836.4	29.22	29.50	1.067	0.01	0.242	0.258
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 1	DSI 2	189	836.4	29.22	29.50	1.067	0.18	0.090	0.096
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Side	10mm	Ant 1	DSI 2	189	836.4	29.22	29.50	1.067	0.04	0.072	0.077
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	10mm	Ant 1	DSI 3	189	836.4	29.22	29.50	1.067	-0.16	0.149	0.159
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 4	DSI 4	189	836.4	28.85	29.00	1.035	0.08	0.162	0.168
20	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 4	DSI 4	189	836.4	28.85	29.00	1.035	-0.01	0.299	**0.310**
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 4	DSI 2	189	836.4	29.26	29.50	1.057	0.05	0.048	0.051
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Top Side	10mm	Ant 4	DSI 4	189	836.4	28.85	29.00	1.035	0.03	0.209	0.216
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Top Side	15mm	Ant 4	DSI 2	189	836.4	29.26	29.50	1.057	0.09	0.106	0.112
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 3	4182	836.4	23.03	24.50	1.403	0.11	0.132	0.185
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 3	4182	836.4	23.03	24.50	1.403	-0.02	0.259	0.363
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 2	4182	836.4	23.98	25.50	1.419	0.05	0.109	0.155
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 1	DSI 2	4182	836.4	23.98	25.50	1.419	0.06	0.101	0.143
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 3	4182	836.4	23.03	24.50	1.403	0.07	0.120	0.168
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 1	DSI 2	4182	836.4	23.98	25.50	1.419	0.03	0.092	0.131
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 4	DSI 4	4182	836.4	24.31	25.50	1.315	0.03	0.226	0.297
21	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 4	DSI 4	4182	836.4	24.31	25.50	1.315	-0.04	0.374	**0.492**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 4	DSI 2	4182	836.4	24.31	25.50	1.315	0.15	0.073	0.096
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 4	DSI 4	4182	836.4	24.31	25.50	1.315	0.03	0.342	0.450
	LTE Band 5	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 3	20525	836.5	22.92	24.50	1.439	0.08	0.132	0.190
	LTE Band 5	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 3	20525	836.5	22.81	24.50	1.476	0.03	0.134	0.198
	LTE Band 5	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 3	20525	836.5	22.92	24.50	1.439	0.05	0.279	0.401
	LTE Band 5	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 3	20525	836.5	22.81	24.50	1.476	0.03	0.280	0.413
	LTE Band 5	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 2	20525	836.5	23.99	25.50	1.416	-0.07	0.144	0.204
	LTE Band 5	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 2	20525	836.5	22.96	24.50	1.426	-0.15	0.114	0.163
	LTE Band 5	10M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 2	20525	836.5	23.99	25.50	1.416	-0.11	0.132	0.187
	LTE Band 5	10M	QPSK	25	0	-	Right Side	10mm	Ant 1	DSI 2	20525	836.5	22.96	24.50	1.426	0.04	0.102	0.145
	LTE Band 5	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	20525	836.5	22.92	24.50	1.439	-0.11	0.140	0.201
	LTE Band 5	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 1	DSI 3	20525	836.5	22.81	24.50	1.476	-0.06	0.104	0.153
	LTE Band 5	10M	QPSK	1	0	-	Bottom Side	15mm	Ant 1	DSI 2	20525	836.5	23.99	25.50	1.416	0.02	0.078	0.110
	LTE Band 5	10M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	20525	836.5	24.24	25.50	1.337	0.05	0.199	0.266
	LTE Band 5	10M	QPSK	25	0	-	Front	10mm	Ant 4	DSI 4	20525	836.5	23.13	24.50	1.371	0.03	0.155	0.212
22	LTE Band 5	10M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	20525	836.5	24.24	25.50	1.337	-0.07	0.342	**0.457**
	LTE Band 5	10M	QPSK	25	0	-	Back	10mm	Ant 4	DSI 4	20525	836.5	23.13	24.50	1.371	0.04	0.269	0.369
	LTE Band 5	10M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 2	20525	836.5	24.24	25.50	1.337	0.04	0.069	0.092
	LTE Band 5	10M	QPSK	25	0	-	Left Side	10mm	Ant 4	DSI 2	20525	836.5	23.13	24.50	1.371	0.04	0.054	0.074
	LTE Band 5	10M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	20525	836.5	24.24	25.50	1.337	-0.1	0.196	0.262
	LTE Band 5	10M	QPSK	25	0	-	Top Side	10mm	Ant 4	DSI 4	20525	836.5	23.13	24.50	1.371	0.07	0.195	0.267
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 3	167300	836.5	23.22	24.50	1.343	-0.07	0.096	0.129
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 3	167300	836.5	23.21	24.50	1.346	0.04	0.109	0.147
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 3	167300	836.5	23.22	24.50	1.343	0.05	0.194	0.260
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 3	167300	836.5	23.21	24.50	1.346	-0.02	0.223	0.300
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 2	167300	836.5	24.11	25.50	1.377	0.06	0.105	0.145
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 2	167300	836.5	24.06	25.50	1.393	0.02	0.122	0.170
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI 2	167300	836.5	24.11	25.50	1.377	0.15	0.093	0.128
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI 2	167300	836.5	24.06	25.50	1.393	0.02	0.100	0.139
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 3	167300	836.5	23.22	24.50	1.343	0.06	0.104	0.140
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 3	167300	836.5	23.21	24.50	1.346	-0.07	0.118	0.159
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	167300	836.5	24.11	25.50	1.377	0.18	0.070	0.096
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 4	167300	836.5	24.22	25.50	1.343	-0.03	0.141	0.189

	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 4	167300	836.5	24.08	25.50	1.387	-0.13	0.165	0.229
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	167300	836.5	24.22	25.50	1.343	-0.07	0.240	0.322
23	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	167300	836.5	24.08	25.50	1.387	-0.1	0.277	**0.384**
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 2	167300	836.5	24.22	25.50	1.343	0.19	0.047	0.063
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 2	167300	836.5	24.08	25.50	1.387	-0.15	0.058	0.080
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	167300	836.5	24.22	25.50	1.343	0.15	0.157	0.211
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	167300	836.5	24.08	25.50	1.387	0.03	0.197	0.273
1750MHz																		
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 3	1413	1732.6	19.16	20.50	1.361	0.16	0.149	0.203
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 3	1413	1732.6	19.16	20.50	1.361	-0.11	0.473	0.644
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 2	1413	1732.6	21.59	23.00	1.384	0.16	0.000	0.000
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 1	DSI 2	1413	1732.6	21.59	23.00	1.384	0.08	0.048	0.066
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 3	1413	1732.6	19.16	20.50	1.361	0.01	0.591	0.805
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 3	1312	1712.4	19.08	20.50	1.387	-0.03	0.566	0.785
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 3	1513	1752.6	19.10	20.50	1.380	-0.18	0.595	0.821
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 1	DSI 2	1413	1732.6	21.59	23.00	1.384	-0.18	0.582	0.805
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 1	DSI 2	1312	1712.4	21.45	23.00	1.429	-0.15	0.574	0.820
24	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 1	DSI 2	1513	1752.6	21.46	23.00	1.426	-0.18	0.607	**0.865**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 4	DSI 4	1413	1732.6	18.81	20.00	1.315	-0.05	0.120	0.158
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 4	DSI 4	1413	1732.6	18.81	20.00	1.315	-0.03	0.491	0.646
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 4	DSI 2	1413	1732.6	23.87	25.00	1.297	0.04	0.184	0.239
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 4	DSI 4	1413	1732.6	18.81	20.00	1.315	-0.09	0.244	0.321
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	15mm	Ant 4	DSI 2	1413	1732.6	23.87	25.00	1.297	-0.18	0.416	0.540
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 3	20175	1732.5	19.02	20.50	1.406	0.15	0.166	0.233
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 3	20175	1732.5	18.82	20.50	1.472	0.13	0.155	0.228
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 3	20175	1732.5	19.02	20.50	1.406	0.02	0.507	0.713
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 3	20175	1732.5	18.82	20.50	1.472	0.05	0.510	0.751
	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 2	20175	1732.5	21.55	23.00	1.396	0.16	0.075	0.105
	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 2	20175	1732.5	21.47	23.00	1.422	-0.15	0.065	0.092
	LTE Band 4	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 2	20175	1732.5	21.55	23.00	1.396	-0.18	0.130	0.182
	LTE Band 4	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 2	20175	1732.5	21.47	23.00	1.422	0.18	0.103	0.146
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	20175	1732.5	19.02	20.50	1.406	0.07	0.585	0.823
	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 3	20175	1732.5	18.82	20.50	1.472	0.09	0.533	0.785
	LTE Band 4	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 1	DSI 3	20175	1732.5	18.66	20.50	1.528	0.09	0.522	0.797
25	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 1	DSI 2	20175	1732.5	21.55	23.00	1.396	-0.15	0.712	**0.994**
	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	15mm	Ant 1	DSI 2	20175	1732.5	21.47	23.00	1.422	-0.11	0.687	0.977
	LTE Band 4	20M	QPSK	100	0	-	Bottom Side	15mm	Ant 1	DSI 2	20175	1732.5	21.45	23.00	1.429	-0.1	0.674	0.963
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	20175	1732.5	19.14	20.00	1.219	-0.18	0.160	0.195
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 4	20175	1732.5	19.09	20.00	1.233	0.17	0.163	0.201
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	20175	1732.5	19.14	20.00	1.219	0.07	0.644	0.785
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 4	20175	1732.5	19.09	20.00	1.233	-0.12	0.648	0.799
	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 2	20175	1732.5	24.14	25.00	1.219	-0.02	0.229	0.279
	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 2	20175	1732.5	23.02	24.00	1.253	-0.13	0.184	0.231
	LTE Band 4	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	20175	1732.5	19.14	20.00	1.219	0.08	0.305	0.372
	LTE Band 4	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 4	20175	1732.5	19.09	20.00	1.233	0.04	0.303	0.374
	LTE Band 4	20M	QPSK	1	0	-	Top Side	15mm	Ant 4	DSI 2	20175	1732.5	24.14	25.00	1.219	0.1	0.402	0.490

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)
1900MHz																		
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 1	DSI 3	661	1880	20.80	22.00	1.318	-0.11	0.239	0.315
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 1	DSI 3	661	1880	20.80	22.00	1.318	0.01	0.628	0.828
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 1	DSI 3	512	1850.2	20.75	22.00	1.334	-0.03	0.531	0.708
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 1	DSI 3	810	1909.8	20.73	22.00	1.340	-0.07	0.680	0.911
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 1	DSI 2	661	1880	24.33	26.00	1.469	0.02	0.042	0.062
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Side	10mm	Ant 1	DSI 2	661	1880	24.33	26.00	1.469	-0.08	0.071	0.104
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	10mm	Ant 1	DSI 3	661	1880	20.80	22.00	1.318	0.1	0.766	1.010
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	10mm	Ant 1	DSI 3	512	1850.2	20.75	22.00	1.334	-0.01	0.684	0.912
26	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	10mm	Ant 1	DSI 3	810	1909.8	20.73	22.00	1.340	0.06	0.814	**1.090**
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	15mm	Ant 1	DSI 2	661	1880	24.33	26.00	1.469	0.07	0.418	0.614
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 4	DSI 4	661	1880	22.43	23.00	1.140	0.03	0.116	0.132
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 4	DSI 4	661	1880	22.43	23.00	1.140	-0.1	0.613	0.699
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 4	DSI 2	661	1880	24.21	26.00	1.510	0.07	0.058	0.088
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Top Side	10mm	Ant 4	DSI 4	661	1880	22.43	23.00	1.140	0.13	0.276	0.315
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Top Side	15mm	Ant 4	DSI 2	661	1880	24.21	26.00	1.510	-0.13	0.135	0.204
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 3	9400	1880	18.66	20.00	1.361	0.17	0.182	0.248
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 3	9400	1880	18.66	20.00	1.361	-0.14	0.531	0.723
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 2	9400	1880	21.55	23.00	1.396	0.03	0.065	0.091
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 1	DSI 2	9400	1880	21.55	23.00	1.396	-0.11	0.114	0.159
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 3	9400	1880	18.66	20.00	1.361	0.09	0.655	0.892
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 3	9262	1852.4	18.65	20.00	1.365	-0.02	0.643	0.877
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 3	9538	1907.6	18.62	20.00	1.374	-0.01	0.613	0.842
27	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 1	DSI 2	9400	1880	21.55	23.00	1.396	-0.06	0.669	**0.934**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 1	DSI 2	9262	1852.4	21.38	23.00	1.452	-0.06	0.619	0.899
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 1	DSI 2	9538	1907.6	21.43	23.00	1.435	-0.06	0.608	0.873
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 4	DSI 4	9400	1880	19.69	20.50	1.205	0.08	0.150	0.181
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 4	DSI 4	9400	1880	19.69	20.50	1.205	0.03	0.562	0.677
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 4	DSI 2	9400	1880	24.12	25.00	1.225	0.08	0.161	0.197
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 4	DSI 4	9400	1880	19.69	20.50	1.205	-0.06	0.473	0.570
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	15mm	Ant 4	DSI 2	9400	1880	24.12	25.00	1.225	-0.11	0.680	0.833
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	15mm	Ant 4	DSI 2	9262	1852.4	24.06	25.00	1.242	-0.11	0.633	0.786
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	15mm	Ant 4	DSI 2	9538	1907.6	24.08	25.00	1.236	-0.11	0.647	0.800
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 3	18900	1880	18.87	20.50	1.455	-0.08	0.171	0.249
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 3	18900	1880	18.75	20.50	1.496	0.18	0.170	0.254
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 3	18900	1880	18.87	20.50	1.455	-0.03	0.481	0.700
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 3	18900	1880	18.75	20.50	1.496	0.19	0.479	0.717
	LTE Band 2	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 2	18900	1880	21.53	23.00	1.403	0.02	0.157	0.220
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 2	18900	1880	21.49	23.00	1.416	0.07	0.160	0.227
	LTE Band 2	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 2	18900	1880	21.53	23.00	1.403	0.14	0.301	0.422
	LTE Band 2	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 2	18900	1880	21.49	23.00	1.416	-0.04	0.299	0.423
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	18900	1880	18.87	20.50	1.455	-0.03	0.612	0.891
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	18700	1860	18.65	20.50	1.531	-0.03	0.601	0.920
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	19100	1900	18.72	20.50	1.507	-0.03	0.598	0.901
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 3	18900	1880	18.75	20.50	1.496	-0.03	0.591	0.884
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 3	18700	1860	18.70	20.50	1.514	-0.03	0.574	0.869
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 3	19100	1900	18.58	20.50	1.556	-0.03	0.562	0.874
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 1	DSI 3	18900	1880	18.78	20.50	1.486	-0.01	0.575	0.854
28	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 1	DSI 2	18900	1880	21.53	23.00	1.403	-0.11	0.761	**1.068**
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 1	DSI 2	18700	1860	21.38	23.00	1.452	0.06	0.709	1.030
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 1	DSI 2	19100	1900	21.41	23.00	1.442	0.02	0.711	1.025
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	15mm	Ant 1	DSI 2	18900	1880	21.49	23.00	1.416	-0.14	0.722	1.022
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	15mm	Ant 1	DSI 2	18700	1860	21.30	23.00	1.479	-0.14	0.702	1.038

	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	15mm	Ant 1	DSI 2	19100	1900	21.34	23.00	1.466	-0.14	0.687	1.007
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	15mm	Ant 1	DSI 2	18900	1880	21.43	23.00	1.435	0.08	0.709	1.018
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	18900	1880	19.98	20.50	1.127	0.03	0.129	0.145
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 4	18900	1880	19.94	20.50	1.138	0.13	0.127	0.144
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	18900	1880	19.98	20.50	1.127	0.07	0.473	0.533
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 4	18900	1880	19.94	20.50	1.138	0.05	0.474	0.539
	LTE Band 2	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 2	18900	1880	24.26	25.00	1.186	0.12	0.163	0.193
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 2	18900	1880	23.23	24.00	1.194	-0.06	0.128	0.153
	LTE Band 2	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	18900	1880	19.98	20.50	1.127	-0.03	0.391	0.441
	LTE Band 2	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 4	18900	1880	19.94	20.50	1.138	0.05	0.391	0.445
	LTE Band 2	20M	QPSK	1	0	-	Top Side	15mm	Ant 4	DSI 2	18900	1880	24.26	25.00	1.186	-0.14	0.546	0.647

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)
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 3	21100	2535	18.16	19.50	1.361	-	-	-0.11	0.039	0.053
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 3	21100	2535	18.09	19.50	1.384	-	-	0.08	0.039	0.054
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 3	21100	2535	18.16	19.50	1.361	-	-	0.07	0.098	0.133
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 3	21100	2535	18.09	19.50	1.384	-	-	0.07	0.099	0.137
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 2	21100	2535	22.55	24.00	1.396	-	-	0.02	0.049	0.068
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 2	21100	2535	22.43	24.00	1.435	-	-	-0.02	0.039	0.056
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 2	21100	2535	22.55	24.00	1.396	-	-	0.15	0.039	0.054
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 2	21100	2535	22.43	24.00	1.435	-	-	0.08	0.031	0.045
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	21100	2535	18.16	19.50	1.361	-	-	-0.04	0.535	0.728
	LTE Band 7C	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	21100+ 21298	2535+ 2554.8	18.06	19.50	1.393	-	-	-0.04	0.487	0.678
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 3	21100	2535	18.09	19.50	1.384	-	-	0.03	0.415	0.574
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 1	DSI 2	21100	2535	22.55	24.00	1.396	-	-	0.08	0.262	0.366
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 4	21100	2535	15.15	16.50	1.365	-	-	-0.03	0.050	0.068
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 4	21100	2535	15.12	16.50	1.374	-	-	-0.08	0.050	0.069
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 4	21100	2535	15.15	16.50	1.365	-	-	-0.04	0.328	0.448
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 4	21100	2535	15.12	16.50	1.374	-	-	-0.02	0.342	0.470
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 2	21100	2535	20.56	21.50	1.242	-	-	0.08	0.694	0.862
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 2	20850	2510	20.25	21.50	1.334	-	-	-0.17	0.495	0.660
29	LTE Band 7 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 2	21350	2560	20.23	21.50	1.340	-	-	-0.08	0.721	**0.966**
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 2	21100	2535	20.44	21.50	1.276	-	-	-0.09	0.628	0.802
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 2	20850	2510	20.32	21.50	1.312	-	-	-0.08	0.578	0.758
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 2	21350	2560	20.22	21.50	1.343	-	-	-0.08	0.668	0.897
	LTE Band 7 ENDC	20M	QPSK	100	0	-	Left Side	10mm	Ant 2	DSI 2	21100	2535	20.35	21.50	1.303	-	-	0.12	0.583	0.760
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 2	21100	2535	20.56	21.50	1.242	-	-	0.01	0.076	0.094
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 2	21100	2535	20.44	21.50	1.276	-	-	0.08	0.080	0.102
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	21100	2535	16.98	18.50	1.419	-	-	-0.03	0.097	0.138
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 4	21100	2535	16.91	18.50	1.442	-	-	-0.15	0.098	0.141
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	21100	2535	16.98	18.50	1.419	-	-	0.08	0.309	0.438
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 4	21100	2535	16.91	18.50	1.442	-	-	0.03	0.311	0.448
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 2	21100	2535	23.85	25.50	1.462	-	-	0.17	0.059	0.086
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 2	21100	2535	22.72	24.50	1.507	-	-	0.02	0.047	0.071
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	21100	2535	16.98	18.50	1.419	-	-	-0.08	0.351	0.498
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 4	21100	2535	16.91	18.50	1.442	-	-	0.06	0.340	0.490
	LTE Band 7	20M	QPSK	1	0	-	Top Side	15mm	Ant 4	DSI 2	21100	2535	23.85	25.50	1.462	-	-	-0.15	0.649	0.949
	LTE Band 7C	20M	QPSK	1	0	-	Top Side	15mm	Ant 4	DSI 2	21100+ 21298	2535+ 2554.8	23.80	25.50	1.479	-	-	-0.05	0.612	0.905
	LTE Band 7	20M	QPSK	1	0	-	Top Side	15mm	Ant 4	DSI 2	20850	2510	23.79	25.50	1.483	-	-	-0.1	0.601	0.891
	LTE Band 7	20M	QPSK	1	0	-	Top Side	15mm	Ant 4	DSI 2	21350	2560	23.83	25.50	1.469	-	-	-0.09	0.622	0.914
	LTE Band 7	20M	QPSK	100	0		Top Side	15mm	Ant 4	DSI 2	21100	2535	22.66	24.50	1.528			-0.09	0.587	0.897
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 3	40620	2593	20.18	21.50	1.355	62.9	1.006	0.04	0.049	0.067
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 3	40620	2593	20.10	21.50	1.380	62.9	1.006	0.04	0.049	0.068

	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 3	40620	2593	20.18	21.50	1.355	62.9	1.006	0.07	0.116	0.158
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 3	40620	2593	20.10	21.50	1.380	62.9	1.006	0.16	0.116	0.161
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 2	40620	2593	24.12	25.50	1.374	62.9	1.006	0.07	0.044	0.061
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 2	40620	2593	23.08	24.50	1.387	62.9	1.006	-0.11	0.035	0.049
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 2	40620	2593	24.12	25.50	1.374	62.9	1.006	-0.08	0.053	0.073
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 2	40620	2593	23.08	24.50	1.387	62.9	1.006	0.02	0.038	0.053
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	40620	2593	20.18	21.50	1.355	62.9	1.006	-0.01	0.447	0.609
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	39750	2506	19.97	21.50	1.422	62.9	1.006	0.09	0.418	0.598
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	40185	2549.5	20.07	21.50	1.390	62.9	1.006	-0.11	0.407	0.569
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	41055	2636.5	20.09	21.50	1.384	62.9	1.006	0.05	0.419	0.583
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	41490	2680	20.08	21.50	1.387	62.9	1.006	-0.01	0.415	0.579
	LTE Band 38C	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 3	38000+ 38150	2595+ 2610	19.95	21.50	1.429	62.9	1.006	-0.01	0.395	0.568
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 3	40620	2593	20.10	21.50	1.380	62.9	1.006	-0.08	0.347	0.482
	LTE Band 41	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 1	DSI 3	40620	2593	20.03	21.50	1.403	62.9	1.006	-0.08	0.349	0.493
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 1	DSI 2	40620	2593	24.12	25.50	1.374	62.9	1.006	-0.09	0.352	0.487
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 4	40620	2593	17.61	18.50	1.227	62.9	1.006	-0.12	0.044	0.054
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 4	40620	2593	17.51	18.50	1.256	62.9	1.006	0.08	0.046	0.058
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 4	40620	2593	17.61	18.50	1.227	62.9	1.006	0.01	0.304	0.375
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 4	40620	2593	17.51	18.50	1.256	62.9	1.006	0.03	0.302	0.382
30	LTE Band 41 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 2	40620	2593	20.08	21.00	1.236	62.9	1.006	-0.09	0.648	**0.806**
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 2	39750	2506	19.96	21.00	1.271	62.9	1.006	0.09	0.232	0.297
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 2	40185	2549.5	19.95	21.00	1.274	62.9	1.006	0.06	0.462	0.592
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 2	41055	2636.5	19.58	21.00	1.387	62.9	1.006	0.02	0.532	0.742
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 2	41490	2680	19.91	21.00	1.285	62.9	1.006	0.01	0.465	0.601
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 2	40620	2593	19.91	21.00	1.285	62.9	1.006	-0.17	0.490	0.634
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 2	39750	2506	19.85	21.00	1.303	62.9	1.006	0.07	0.282	0.370
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 2	40185	2549.5	19.88	21.00	1.294	62.9	1.006	0.01	0.469	0.611
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 2	41055	2636.5	19.77	21.00	1.327	62.9	1.006	-0.19	0.551	0.736
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 2	41490	2680	19.79	21.00	1.321	62.9	1.006	0.08	0.472	0.627
	LTE Band 41 ENDC	20M	QPSK	100	0	-	Left Side	10mm	Ant 2	DSI 2	40620	2593	19.86	21.00	1.300	62.9	1.006	0.18	0.503	0.658
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 2	40620	2593	20.08	21.00	1.236	62.9	1.006	0.08	0.058	0.072
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 2	40620	2593	19.91	21.00	1.285	62.9	1.006	0.06	0.059	0.076
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	40620	2593	20.96	22.50	1.426	62.9	1.006	0.03	0.123	0.176
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 4	40620	2593	20.88	22.50	1.452	62.9	1.006	0.02	0.124	0.181
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	40620	2593	20.96	22.50	1.426	62.9	1.006	-0.15	0.382	0.548
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 4	40620	2593	20.88	22.50	1.452	62.9	1.006	-0.18	0.382	0.558
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 2	40620	2593	23.96	25.50	1.426	62.9	1.006	0.07	0.080	0.115
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 2	40620	2593	22.94	24.50	1.432	62.9	1.006	0.09	0.050	0.072
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	40620	2593	20.96	22.50	1.426	62.9	1.006	-0.11	0.443	0.635
	LTE Band 38C	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	38000+ 38150	2595+ 2610	20.74	22.50	1.500	62.9	1.006	-0.01	0.413	0.623
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	39750	2506	20.78	22.50	1.486	62.9	1.006	0.09	0.443	0.662
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	40185	2549.5	20.83	22.50	1.469	62.9	1.006	0.05	0.419	0.619
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	41055	2636.5	20.83	22.50	1.469	62.9	1.006	-0.02	0.405	0.598
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	41490	2680	20.81	22.50	1.476	62.9	1.006	0.06	0.415	0.616
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 4	40620	2593	20.88	22.50	1.452	62.9	1.006	0.03	0.401	0.586
	LTE Band 41	20M	QPSK	100	0	-	Top Side	10mm	Ant 4	DSI 4	40620	2593	20.68	22.50	1.521	62.9	1.006	0.09	0.378	0.578
	LTE Band 41	20M	QPSK	1	0	-	Top Side	15mm	Ant 4	DSI 2	40620	2593	23.96	25.50	1.426	62.9	1.006	0.09	0.429	0.615
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 3	507000	2535	18.55	19.50	1.245	-	-	-0.08	0.149	0.185
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 3	507000	2535	18.51	19.50	1.256	-	-	0.01	0.155	0.195
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 3	507000	2535	18.55	19.50	1.245	-	-	0.11	0.363	0.452
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 3	507000	2535	18.51	19.50	1.256	-	-	-0.07	0.387	0.486
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 2	507000	2535	22.97	24.00	1.268	-	-	0.03	0.151	0.191
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 2	507000	2535	22.92	24.00	1.282	-	-	-0.1	0.153	0.196
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI 2	507000	2535	22.97	24.00	1.268	-	-	0.02	0.051	0.065
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI 2	507000	2535	22.92	24.00	1.282	-	-	0.03	0.049	0.063

	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 3	507000	2535	18.55	19.50	1.245	-	-	-0.16	0.464	0.577
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 3	507000	2535	18.51	19.50	1.256	-	-	0.18	0.516	0.648
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	507000	2535	22.97	24.00	1.268	-	-	-0.03	0.713	0.904
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	502000	2510	22.80	24.00	1.318	-	-	0.09	0.655	0.863
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	512000	2560	22.81	24.00	1.315	-	-	0.05	0.674	0.886
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	507000	2535	18.86	20.50	1.459	-	-	-0.06	0.085	0.124
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	507000	2535	18.71	20.50	1.510	-	-	0.07	0.091	0.137
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	507000	2535	18.86	20.50	1.459	-	-	-0.13	0.498	0.726
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	507000	2535	18.71	20.50	1.510	-	-	0.03	0.594	0.897
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	502000	2510	18.62	20.50	1.542	-	-	0.03	0.547	0.843
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	512000	2560	18.55	20.50	1.567	-	-	0.09	0.539	0.844
	FR1 n7 ENDC	20M	QPSK	50	0	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	507000	2535	18.80	19.50	1.175	-	-	0.03	0.579	0.680
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	507000	2535	21.57	23.00	1.390	-	-	0.03	0.718	0.998
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	502000	2510	21.34	23.00	1.466	-	-	0.11	0.687	1.007
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	512000	2560	21.37	23.00	1.455	-	-	0.09	0.655	0.953
31	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	507000	2535	21.48	23.00	1.419	-	-	-0.12	0.770	**1.093**
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	502000	2510	21.28	23.00	1.486	-	-	0.09	0.712	1.058
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	512000	2560	21.44	23.00	1.432	-	-	0.06	0.718	1.028
	FR1 n7 ENDC	20M	QPSK	50	0	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	507000	2535	21.34	23.00	1.466	-	-	0.02	0.653	0.957
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 2	507000	2535	21.57	23.00	1.390	-	-	-0.18	0.179	0.249
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 2	507000	2535	21.48	23.00	1.419	-	-	0.07	0.186	0.264
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 4	507000	2535	17.08	17.50	1.102	-	-	0.15	0.072	0.079
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 4	507000	2535	16.95	17.50	1.135	-	-	0.18	0.078	0.089
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	507000	2535	17.08	17.50	1.102	-	-	0.03	0.240	0.264
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	507000	2535	16.95	17.50	1.135	-	-	0.09	0.264	0.300
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 2	507000	2535	23.41	24.00	1.146	-	-	0.1	0.037	0.042
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 2	507000	2535	23.32	24.00	1.169	-	-	-0.07	0.033	0.039
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	507000	2535	17.08	17.50	1.102	-	-	-0.05	0.282	0.311
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	507000	2535	16.95	17.50	1.135	-	-	-0.15	0.272	0.309
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Top Side	15mm	Ant 4	DSI 2	507000	2535	23.41	24.00	1.146	-	-	-0.08	0.754	0.864
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Top Side	15mm	Ant 4	DSI 2	502000	2510	23.40	24.00	1.148	-	-	0.09	0.722	0.829
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Top Side	15mm	Ant 4	DSI 2	512000	2560	23.38	24.00	1.153	-	-	0.05	0.718	0.828
	FR1 n7	20M	QPSK	50	0	DFT-SCS-30KHz	Top Side	15mm	Ant 4	DSI 2	507000	2560	22.34	23.00	1.164	-	-	0.05	0.700	0.815
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 3	518598	2592.99	18.95	19.50	1.135	-	-	-0.13	0.186	0.211
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 3	518598	2592.99	18.84	19.50	1.164	-	-	0.03	0.182	0.212
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 3	518598	2592.99	18.95	19.50	1.135	-	-	0.12	0.415	0.471
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 3	518598	2592.99	18.84	19.50	1.164	-	-	-0.17	0.405	0.471
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 2	518598	2592.99	24.81	25.50	1.172	-	-	0.06	0.091	0.107
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 2	518598	2592.99	24.72	25.50	1.197	-	-	0.02	0.080	0.096
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI 2	518598	2592.99	24.81	25.50	1.172	-	-	-0.1	0.053	0.062
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI 2	518598	2592.99	24.72	25.50	1.197	-	-	0.15	0.047	0.056
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 3	518598	2592.99	18.95	19.50	1.135	-	-	-0.07	0.705	0.800
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 3	518598	2592.99	18.84	19.50	1.164	-	-	-0.17	0.637	0.742
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 3	518598	2592.99	18.80	19.50	1.175	-	-	0.16	0.637	0.748
32	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	518598	2592.99	24.81	25.50	1.172	-	-	-0.05	0.931	**1.091**
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	518598	2592.99	24.59	25.50	1.233	-	-	-0.05	0.844	1.041
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	518598	2592.99	24.53	25.50	1.250	-	-	-0.05	0.829	1.036
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	518598	2592.99	24.29	25.50	1.321	-	-	-0.05	0.802	1.060
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	518598	2592.99	17.46	18.50	1.271	-	-	0.05	0.095	0.121
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	518598	2592.99	17.38	18.50	1.294	-	-	0.08	0.089	0.115
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	518598	2592.99	17.46	18.50	1.271	-	-	0.04	0.699	0.888
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	518598	2592.99	17.38	18.50	1.294	-	-	0.07	0.652	0.844
	FR1 n41 ENDC	100M	QPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	518598	2592.99	17.32	18.50	1.312	-	-	0.07	0.647	0.849
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	518598	2592.99	20.44	21.50	1.276	-	-	0.04	0.811	1.035
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	509202	2546.01	20.19	21.50	1.352	-	-	0.09	0.734	0.992
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	528000	2640	20.26	21.50	1.330	-	-	0.08	0.728	0.969

	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	518598	2592.99	20.44	21.50	1.276	-	-	-0.11	0.770	0.983
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	509202	2546.01	20.17	21.50	1.358	-	-	0.05	0.708	0.962
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	528000	2640	20.14	21.50	1.368	-	-	0.04	0.722	0.988
	FR1 n41 ENDC	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	518598	2592.99	20.40	21.50	1.288	-	-	0.06	0.782	1.007
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 2	518598	2592.99	20.44	21.50	1.276	-	-	-0.11	0.237	0.303
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 2	518598	2592.99	20.44	21.50	1.276	-	-	0.09	0.229	0.292
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 4	518598	2592.99	14.94	16.00	1.276	-	-	0.09	0.105	0.134
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 4	518598	2592.99	14.88	16.00	1.294	-	-	0.08	0.105	0.136
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	518598	2592.99	14.94	16.00	1.276	-	-	0.05	0.323	0.412
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	518598	2592.99	14.88	16.00	1.294	-	-	0.04	0.302	0.391
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	518598	2592.99	14.84	16.00	1.306	-	-	0.09	0.301	0.393
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 2	518598	2592.99	23.40	24.50	1.288	-	-	0.08	0.008	0.010
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 2	518598	2592.99	23.35	24.50	1.303	-	-	0.17	0.007	0.009
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	518598	2592.99	14.94	16.00	1.276	-	-	-0.05	0.380	0.485
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	518598	2592.99	14.88	16.00	1.294	-	-	0.03	0.373	0.483
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	518598	2592.99	14.84	16.00	1.306	-	-	-0.08	0.325	0.425
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	15mm	Ant 4	DSI 2	518598	2592.99	23.40	24.50	1.288	-	-	-0.07	0.838	1.080
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	15mm	Ant 4	DSI 2	509202	2546.01	23.12	24.50	1.374	-	-	0.09	0.784	1.077
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	15mm	Ant 4	DSI 2	528000	2640	23.26	24.50	1.330	-	-	0.02	0.754	1.003
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	15mm	Ant 4	DSI 2	518598	2592.99	23.36	24.50	1.300	-	-	0.17	0.732	0.952

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)
							3500MHz											
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	656000	3840	17.81	19.00	1.315	-0.17	0.048	0.063
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	656000	3840	17.77	19.00	1.327	-0.02	0.048	0.064
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	656000	3840	17.81	19.00	1.315	0.02	0.237	0.312
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	656000	3840	17.77	19.00	1.327	-0.07	0.249	0.331
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	656000	3840	17.64	19.00	1.368	-0.15	0.116	0.159
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	656000	3840	20.78	22.00	1.324	-0.17	0.750	0.993
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	656000	3840	20.72	22.00	1.343	0.13	0.709	0.952
33	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	656000	3840	20.69	22.00	1.352	-0.02	0.754	**1.019**
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 2	656000	3840	20.78	22.00	1.324	0.11	0.026	0.034
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 2	656000	3840	20.72	22.00	1.343	-0.17	0.023	0.031
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	633334	3500.01	17.65	19.00	1.365	0.12	0.126	0.172
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	633334	3500.01	17.46	19.00	1.426	0.02	0.126	0.180
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	633334	3500.01	17.65	19.00	1.365	-0.15	0.343	0.468
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	633334	3500.01	17.46	19.00	1.426	-0.12	0.312	0.445
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	633334	3500.01	17.55	19.00	1.396	0.04	0.350	0.489
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	633334	3500.01	20.65	22.00	1.365	-0.07	0.457	0.624
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 2	633334	3500.01	20.57	22.00	1.390	0.06	0.441	0.613
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 2	633334	3500.01	20.65	22.00	1.365	-0.04	0.110	0.150
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 2	633334	3500.01	20.57	22.00	1.390	0.05	0.116	0.161
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 4	656000	3840	19.19	19.50	1.074	0.08	0.188	0.202
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 4	656000	3840	18.91	19.50	1.146	0.06	0.192	0.220
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 4	656000	3840	19.19	19.50	1.074	0.07	0.508	0.546
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 4	656000	3840	18.91	19.50	1.146	0.06	0.521	0.597
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DSI 2	656000	3840	23.61	24.00	1.094	0.07	0.144	0.158
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DSI 2	656000	3840	23.49	24.00	1.125	0.19	0.137	0.154
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 4	656000	3840	19.19	19.50	1.074	0.02	0.734	0.788
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 4	656000	3840	18.91	19.50	1.146	0.03	0.729	0.835
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 4	656000	3840	18.84	19.50	1.164	0.08	0.652	0.759
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	15mm	Ant 3	DSI 2	656000	3840	23.61	24.00	1.094	0.04	0.722	0.790
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 4	633334	3500.01	18.83	19.50	1.167	-0.12	0.145	0.169
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 4	633334	3500.01	18.78	19.50	1.180	0.08	0.147	0.174
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 4	633334	3500.01	18.83	19.50	1.167	0.02	0.430	0.502
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 4	633334	3500.01	18.78	19.50	1.180	0.08	0.442	0.522
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DSI 2	633334	3500.01	23.50	24.00	1.122	0.11	0.159	0.178
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DSI 2	633334	3500.01	23.42	24.00	1.143	-0.11	0.158	0.181
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 4	633334	3500.01	18.83	19.50	1.167	-0.19	0.418	0.488
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 4	633334	3500.01	18.78	19.50	1.180	0.05	0.422	0.498
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	15mm	Ant 3	DSI 2	633334	3500.01	23.50	24.00	1.122	0.08	0.395	0.443
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 2	656000	3840	15.59	17.00	1.384	0.17	0.055	0.076
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 2	656000	3840	15.53	17.00	1.403	0.08	0.049	0.069
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 2	656000	3840	15.59	17.00	1.384	-0.03	0.374	0.517
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 2	656000	3840	15.53	17.00	1.403	-0.14	0.336	0.471
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 2	656000	3840	15.59	17.00	1.384	0.02	0.331	0.458
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 2	656000	3840	15.53	17.00	1.403	0.16	0.296	0.415
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 2	656000	3840	15.59	17.00	1.384	0.01	0.035	0.048
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 2	656000	3840	15.53	17.00	1.403	0.07	0.034	0.048
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 2	633334	3500.01	15.48	17.00	1.419	0.13	0.106	0.150
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 2	633334	3500.01	15.40	17.00	1.445	-0.07	0.088	0.127
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 2	633334	3500.01	15.48	17.00	1.419	-0.01	0.607	0.861
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 2	633334	3500.01	15.40	17.00	1.445	0.02	0.531	0.768
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 2	633334	3500.01	15.36	17.00	1.459	-0.05	0.537	0.783
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 2	633334	3500.01	15.48	17.00	1.419	0.09	0.572	0.812

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 2	633334	3500.01	15.40	17.00	1.445	-0.13	0.578	0.835
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 2	633334	3500.01	15.36	17.00	1.459	-0.05	0.563	0.821
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 2	633334	3500.01	15.48	17.00	1.419	0.19	0.054	0.077
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 2	633334	3500.01	15.40	17.00	1.445	-0.04	0.053	0.077
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 2	656000	3840	17.57	18.00	1.104	0.06	0.092	0.102
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 2	656000	3840	17.54	18.00	1.112	-0.14	0.082	0.091
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 2	656000	3840	17.57	18.00	1.104	-0.04	0.240	0.265
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 2	656000	3840	17.54	18.00	1.112	-0.04	0.225	0.250
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 2	656000	3840	17.57	18.00	1.104	0.07	0.145	0.160
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 2	656000	3840	17.54	18.00	1.112	0.04	0.134	0.149
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 2	656000	3840	17.57	18.00	1.104	0.04	0.140	0.155
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 2	656000	3840	17.54	18.00	1.112	0.09	0.141	0.157
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 2	633334	3500.01	16.48	18.00	1.419	0.18	0.055	0.078
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 2	633334	3500.01	16.40	18.00	1.445	0.08	0.056	0.081
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 2	633334	3500.01	16.48	18.00	1.419	-0.03	0.189	0.268
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 2	633334	3500.01	16.40	18.00	1.445	0.04	0.179	0.259
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 2	633334	3500.01	16.48	18.00	1.419	-0.12	0.158	0.224
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 2	633334	3500.01	16.40	18.00	1.445	0.02	0.175	0.253
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 2	633334	3500.01	16.48	18.00	1.419	0.14	0.059	0.084
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 2	633334	3500.01	16.40	18.00	1.445	0.18	0.067	0.097

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)
2450MHz																
34	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 1	Full	6	2437	19.22	21.00	1.507	100	1.000	-0.01	0.294	**0.443**
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 1	Full	6	2437	19.22	21.00	1.507	100	1.000	0.12	0.292	0.440
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 1	Full	6	2437	19.22	21.00	1.507	100	1.000	-0.18	0.221	0.333
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	Full	6	2437	19.22	21.00	1.507	100	1.000	0.06	0.172	0.259
35	Bluetooth	1Mbps	Front	10mm	Ant 1	Full	39	2441	10.83	12.00	1.309	76.88	1.301	0.01	0.024	**0.041**
	Bluetooth	1Mbps	Back	10mm	Ant 1	Full	39	2441	10.83	12.00	1.309	76.88	1.301	0.01	0.005	0.009
5000MHz																
	WLAN5.2GHz	802.11a 6Mbps	Front	10mm	Ant 1	Full	40	5200	15.91	17.50	1.442	97.46	1.026	0.03	0.051	0.075
	WLAN5.2GHz	802.11a 6Mbps	Back	10mm	Ant 1	Full	40	5200	15.91	17.50	1.442	97.46	1.026	-0.15	0.169	0.250
	WLAN5.2GHz	802.11a 6Mbps	Right Side	10mm	Ant 1	Full	40	5200	15.91	17.50	1.442	97.46	1.026	0.07	0.099	0.146
36	WLAN5.2GHz	802.11a 6Mbps	Top Side	10mm	Ant 1	Full	40	5200	15.91	17.50	1.442	97.46	1.026	-0.05	0.190	**0.281**
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	Ant 1	Full	165	5825	15.18	16.50	1.355	97.46	1.026	-0.12	0.079	0.110
	WLAN5.8GHz	802.11a 6Mbps	Back	10mm	Ant 1	Full	165	5825	15.18	16.50	1.355	97.46	1.026	0.12	0.322	0.448
	WLAN5.8GHz	802.11a 6Mbps	Right Side	10mm	Ant 1	Full	165	5825	15.18	16.50	1.355	97.46	1.026	0.04	0.237	0.329
37	WLAN5.8GHz	802.11a 6Mbps	Top Side	10mm	Ant 1	Full	165	5825	15.18	16.50	1.355	97.46	1.026	0.08	0.354	**0.492**

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	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
835MHz																		
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 1	DSI 2	189	836.4	29.22	29.50	1.067	0.08	0.114	0.122
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 1	DSI 2	189	836.4	29.22	29.50	1.067	-0.01	0.141	0.150
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 4	DSI 2	189	836.4	29.26	29.50	1.057	-0.16	0.122	0.129
38	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 4	DSI 2	189	836.4	29.26	29.50	1.057	-0.04	0.162	**0.171**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 2	4182	836.4	23.98	25.50	1.419	0.15	0.137	0.194
39	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 2	4182	836.4	23.98	25.50	1.419	-0.04	0.173	**0.245**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 4	DSI 2	4182	836.4	24.31	25.50	1.315	-0.05	0.089	0.117
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 2	4182	836.4	24.31	25.50	1.315	-0.09	0.131	0.172
	LTE Band 5	10M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 2	20525	836.5	23.99	25.50	1.416	0.12	0.133	0.188
	LTE Band 5	10M	QPSK	25	0	-	Front	15mm	Ant 1	DSI 2	20525	836.5	22.96	24.50	1.426	0.05	0.109	0.155
40	LTE Band 5	10M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	20525	836.5	23.99	25.50	1.416	0.07	0.172	**0.244**
	LTE Band 5	10M	QPSK	25	0	-	Back	15mm	Ant 1	DSI 2	20525	836.5	22.96	24.50	1.426	-0.03	0.142	0.202
	LTE Band 5	10M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 2	20525	836.5	24.24	25.50	1.337	0.04	0.069	0.092
	LTE Band 5	10M	QPSK	25	0	-	Front	15mm	Ant 4	DSI 2	20525	836.5	23.13	24.50	1.371	0.02	0.070	0.096
	LTE Band 5	10M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 2	20525	836.5	24.24	25.50	1.337	0.07	0.135	0.180
	LTE Band 5	10M	QPSK	25	0	-	Back	15mm	Ant 4	DSI 2	20525	836.5	23.13	24.50	1.371	0.1	0.107	0.147
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 2	167300	836.5	24.11	25.50	1.377	-0.1	0.112	0.154
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 2	167300	836.5	24.06	25.50	1.393	0.08	0.131	0.183
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 2	167300	836.5	24.11	25.50	1.377	0.06	0.133	0.183
41	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 2	167300	836.5	24.06	25.50	1.393	0.05	0.156	**0.217**
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 2	167300	836.5	24.22	25.50	1.343	0.06	0.071	0.095
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 2	167300	836.5	24.08	25.50	1.387	0.08	0.082	0.114
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 2	167300	836.5	24.22	25.50	1.343	-0.05	0.104	0.140
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 2	167300	836.5	24.08	25.50	1.387	-0.1	0.120	0.166
1750MHz																		
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 2	1413	1732.6	21.59	23.00	1.384	0.03	0.195	0.270
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 2	1413	1732.6	21.59	23.00	1.384	-0.09	0.558	0.772
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 2	1312	1712.4	21.45	23.00	1.429	0.02	0.495	0.707
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 2	1513	1752.6	21.46	23.00	1.426	0.07	0.498	0.710
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 4	DSI 2	1413	1732.6	23.87	25.00	1.297	0.12	0.196	0.254
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 2	1413	1732.6	23.87	25.00	1.297	0.05	0.682	0.885
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 2	1312	1712.4	23.86	25.00	1.300	0.08	0.607	0.789
42	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 2	1513	1752.6	23.84	25.00	1.306	-0.14	0.721	**0.942**
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 2	20175	1732.5	21.55	23.00	1.396	0.02	0.248	0.346
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 2	20175	1732.5	21.47	23.00	1.422	0.07	0.160	0.228
	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	20175	1732.5	21.55	23.00	1.396	-0.1	0.719	1.004
	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	20050	1720	21.41	23.00	1.442	0.06	0.715	1.031
43	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	20300	1745	21.36	23.00	1.459	-0.01	0.748	**1.091**
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	20175	1732.5	21.47	23.00	1.422	0.07	0.667	0.949
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	20050	1720	21.42	23.00	1.439	0.05	0.637	0.917
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	20300	1745	21.36	23.00	1.459	0.12	0.653	0.953
	LTE Band 4	20M	QPSK	100	0	-	Back	15mm	Ant 1	DSI 2	20175	1732.5	21.45	23.00	1.429	-0.04	0.652	0.932
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 2	20175	1732.5	24.14	25.00	1.219	-0.02	0.198	0.241
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 2	20175	1732.5	23.02	24.00	1.253	-0.04	0.157	0.197
	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 2	20175	1732.5	24.14	25.00	1.219	-0.06	0.696	0.848
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 2	20175	1732.5	23.02	24.00	1.253	0.02	0.550	0.689
	LTE Band 4	20M	QPSK	100	0	-	Back	15mm	Ant 4	DSI 2	20175	1732.5	22.99	24.00	1.262	-0.08	0.552	0.697

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)
1900MHz																				
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 1	DSI 2	661	1880	24.33	26.00	1.469	-	-	-0.02	0.062	0.091
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 1	DSI 2	661	1880	24.33	26.00	1.469	-	-	0.03	0.177	0.260
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 4	DSI 2	661	1880	24.21	26.00	1.510	-	-	0.03	0.049	0.074
44	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 4	DSI 2	661	1880	24.21	26.00	1.510	-	-	-0.15	0.224	**0.338**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 2	9400	1880	21.55	23.00	1.396	-	-	-0.03	0.232	0.324
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 2	9400	1880	21.55	23.00	1.396	-	-	-0.04	0.564	0.788
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 4	DSI 2	9400	1880	24.12	25.00	1.225	-	-	0.18	0.234	0.287
45	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 2	9400	1880	24.12	25.00	1.225	-	-	0.04	0.768	**0.941**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 2	9262	1852.4	24.06	25.00	1.242	-	-	0.04	0.722	0.896
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 2	9538	1907.6	24.08	25.00	1.236	-	-	0.04	0.709	0.876
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 2	18900	1880	21.53	23.00	1.403	-	-	0.03	0.230	0.323
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 2	18900	1880	21.49	23.00	1.416	-	-	0.17	0.235	0.333
	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	18900	1880	21.53	23.00	1.403	-	-	0.04	0.562	0.788
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	18900	1880	21.49	23.00	1.416	-	-	0.01	0.548	0.776
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 2	18900	1880	24.26	25.00	1.186	-	-	0.05	0.224	0.266
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 2	18900	1880	23.23	24.00	1.194	-	-	-0.1	0.175	0.209
46	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 2	18900	1880	24.26	25.00	1.186	-	-	-0.02	0.745	**0.883**
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 2	18900	1880	23.23	24.00	1.194	-	-	0.12	0.592	0.707
	LTE Band 2	20M	QPSK	100	0		Back	15mm	Ant 4	DSI 2	18900	1880	23.20	24.00	1.202			0.15	0.554	0.666
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 2	21100	2535	22.55	24.00	1.396	-	-	0.07	0.241	0.337
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 2	21100	2535	22.43	24.00	1.435	-	-	-0.08	0.218	0.313
47	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	21100	2535	22.55	24.00	1.396	-	-	0.09	0.637	**0.889**
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	21100+ 21298	2535+ 2554.8	22.38	24.00	1.452	-	-	0.01	0.525	0.762
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	20850	2510	22.44	24.00	1.432	-	-	0.18	0.509	0.729
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	21350	2560	22.23	24.00	1.503	-	-	0.04	0.404	0.607
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	21100	2535	22.43	24.00	1.435	-	-	-0.01	0.578	0.830
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	20850	2510	22.31	24.00	1.476	-	-	0.1	0.556	0.820
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	21350	2560	22.41	24.00	1.442	-	-	0.07	0.576	0.831
	LTE Band 7	20M	QPSK	100	0	-	Back	15mm	Ant 1	DSI 2	21100	2535	22.38	24.00	1.452	-	-	0.04	0.565	0.820
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI 2	21100	2535	20.56	21.50	1.242	-	-	0.02	0.061	0.076
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI 2	21100	2535	20.44	21.50	1.276	-	-	0.03	0.048	0.061
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 2	21100	2535	20.56	21.50	1.242	-	-	0.06	0.373	0.463
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI 2	21100	2535	20.44	21.50	1.276	-	-	0.09	0.287	0.366
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 2	21100	2535	23.85	25.50	1.462	-	-	0.06	0.191	0.279
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 2	21100	2535	22.72	24.50	1.507	-	-	0.08	0.154	0.232
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 2	21100	2535	23.85	25.50	1.462	-	-	-0.06	0.555	0.812
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 2	21100+ 21298	2535+ 2554.8	23.80	25.50	1.479	-	-	0.03	0.524	0.775
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 2	21100	2535	22.72	24.50	1.507	-	-	0.03	0.446	0.672
	LTE Band 7	20M	QPSK	100	0	-	Back	15mm	Ant 4	DSI 2	21100	2535	22.66	24.50	1.528			0.03	0.421	0.643
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 2	40620	2593	24.12	25.50	1.374	62.9	1.006	0.06	0.078	0.108
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 2	40620	2593	23.08	24.50	1.387	62.9	1.006	-0.05	0.069	0.096
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	40620	2593	24.12	25.50	1.374	62.9	1.006	-0.14	0.199	0.275
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	38000+ 38150	2595+ 2610	23.97	25.50	1.422	62.9	1.006	-0.14	0.156	0.223
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	40620	2593	23.08	24.50	1.387	62.9	1.006	0.17	0.185	0.258
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI 2	40620	2593	20.08	21.00	1.236	62.9	1.006	-0.12	0.066	0.082
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI 2	40620	2593	19.91	21.00	1.285	62.9	1.006	0.16	0.056	0.072
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 2	40620	2593	20.08	21.00	1.236	62.9	1.006	0.07	0.366	0.455
	LTE Band 41 ENDC	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI 2	40620	2593	19.91	21.00	1.285	62.9	1.006	0.01	0.314	0.406

	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 2	40620	2593	23.96	25.50	1.426	62.9	1.006	0.06	0.132	0.189
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 2	40620	2593	22.94	24.50	1.432	62.9	1.006	0.06	0.101	0.146
48	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 2	40620	2593	23.96	25.50	1.426	62.9	1.006	-0.06	0.373	**0.535**
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 2	38000+ 38150	2595+ 2610	23.54	25.50	1.570	62.9	1.006	-0.06	0.331	0.523
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 2	40620	2593	22.94	24.50	1.432	62.9	1.006	0.07	0.290	0.418
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 2	507000	2535	22.97	24.00	1.268	-	-	-0.1	0.229	0.290
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 2	507000	2535	22.92	24.00	1.282	-	-	-0.04	0.232	0.298
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 2	507000	2535	22.97	24.00	1.268	-	-	0.01	0.535	0.678
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 2	507000	2535	22.92	24.00	1.282	-	-	0.04	0.554	0.710
	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 2	507000	2535	21.57	23.00	1.390	-	-	-0.1	0.545	0.758
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 2	507000	2535	21.48	23.00	1.419	-	-	-0.17	0.582	0.826
49	FR1 n7 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	507000	2535	21.57	23.00	1.390	-	-	-0.09	0.600	**0.834**
	FR1 n7 ENDC	20M	QPSK	25	13	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	507000	2535	21.48	23.00	1.419	-	-	-0.09	0.582	0.826
	FR1 n7 ENDC	20M	QPSK	50	0	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	507000	2535	21.34	23.00	1.466	-	-	0.16	0.517	0.758
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 2	507000	2535	23.41	24.00	1.146	-	-	-0.04	0.200	0.229
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 2	507000	2535	23.32	24.00	1.169	-	-	0.05	0.201	0.235
	FR1 n7	20M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 2	507000	2535	23.41	24.00	1.146	-	-	-0.01	0.594	0.680
	FR1 n7	20M	QPSK	25	13	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 2	507000	2535	23.32	24.00	1.169	-	-	-0.08	0.581	0.679
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 2	518598	2592.99	24.81	25.50	1.172	-	-	0.02	0.222	0.260
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 2	518598	2592.99	24.72	25.50	1.197	-	-	-0.18	0.205	0.245
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 2	518598	2592.99	24.81	25.50	1.172	-	-	-0.02	0.444	0.520
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 2	518598	2592.99	24.72	25.50	1.197	-	-	-0.14	0.440	0.527
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 2	518598	2592.99	20.44	21.50	1.276	-	-	0.05	0.088	0.112
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 2	518598	2592.99	20.44	21.50	1.276	-	-	0.06	0.099	0.126
	FR1 n41 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	518598	2592.99	20.44	21.50	1.276	-	-	0.01	0.526	0.671
	FR1 n41 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	518598	2592.99	20.44	21.50	1.276	-	-	0.12	0.612	0.781
	FR1 n41 ENDC	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	518598	2592.99	20.40	21.50	1.288	-	-	0.14	0.532	0.685
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 2	518598	2592.99	23.40	24.50	1.288	-	-	0.06	0.262	0.338
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 2	518598	2592.99	23.35	24.50	1.303	-	-	0.07	0.256	0.334
	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 2	518598	2592.99	23.40	24.50	1.288	-	-	0.09	0.722	0.930
50	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 2	518598	2592.99	23.35	24.50	1.303	-	-	-0.02	0.728	**0.949**
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 2	518598	2592.99	23.36	24.50	1.300			0.08	0.706	0.918

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)
3500MHz																		
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 2	656000	3840	20.78	22.00	1.324	-0.09	0.128	0.170
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 2	656000	3840	20.72	22.00	1.343	-0.12	0.127	0.171
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	656000	3840	20.78	22.00	1.324	0.19	0.535	0.709
51	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	656000	3840	20.72	22.00	1.343	0.05	0.570	**0.765**
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 2	633334	3500.01	20.65	22.00	1.365	-0.1	0.064	0.087
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 2	633334	3500.01	20.57	22.00	1.390	0.07	0.066	0.092
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	633334	3500.01	20.65	22.00	1.365	-0.01	0.238	0.325
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 2	633334	3500.01	20.57	22.00	1.390	-0.16	0.231	0.321
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI 2	656000	3840	23.61	24.00	1.094	-0.03	0.170	0.186
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI 2	656000	3840	23.49	24.00	1.125	0.01	0.163	0.183
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 2	656000	3840	23.61	24.00	1.094	-0.1	0.554	0.606
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 2	656000	3840	23.49	24.00	1.125	0.03	0.511	0.575
	FR1 n77 ENDC	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 2	656000	3840	20.44	21.00	1.138	-0.03	0.278	0.316
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI 2	633334	3500.01	23.50	24.00	1.122	0.06	0.183	0.205
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI 2	633334	3500.01	23.42	24.00	1.143	-0.09	0.185	0.211
	FR1 n77 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 2	633334	3500.01	23.50	24.00	1.122	0.07	0.573	0.643
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 2	633334	3500.01	23.42	24.00	1.143	-0.06	0.604	0.690
	FR1 n77 ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 2	633334	3500.01	20.36	21.00	1.159	-0.06	0.303	0.351
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 2	656000	3840	15.59	17.00	1.384	-0.02	0.027	0.037
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 2	656000	3840	15.53	17.00	1.403	0.07	0.027	0.038

	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 2	656000	3840	15.59	17.00	1.384	0.11	0.170	0.235
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 2	656000	3840	15.53	17.00	1.403	-0.04	0.172	0.241
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 2	633334	3500.01	15.48	17.00	1.419	-0.12	0.047	0.067
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 2	633334	3500.01	15.40	17.00	1.445	-0.17	0.046	0.066
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 2	633334	3500.01	15.48	17.00	1.419	0.08	0.225	0.319
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 2	633334	3500.01	15.40	17.00	1.445	-0.09	0.235	0.340
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 2	633334	3500.01	15.36	17.00	1.459	0.06	0.222	0.324
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 2	656000	3840	17.57	18.00	1.104	-0.11	0.062	0.068
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 2	656000	3840	17.54	18.00	1.112	0.19	0.054	0.060
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 2	656000	3840	17.57	18.00	1.104	-0.03	0.152	0.168
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 2	656000	3840	17.54	18.00	1.112	0.09	0.151	0.168
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 2	633334	3500.01	16.48	18.00	1.419	-0.17	0.044	0.062
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 2	633334	3500.01	16.40	18.00	1.445	0.09	0.045	0.065
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 2	633334	3500.01	16.48	18.00	1.419	0.02	0.134	0.190
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 2	633334	3500.01	16.40	18.00	1.445	-0.03	0.143	0.207

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)
2450MHz																
52	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 1	Full	6	2437	19.22	21.00	1.507	100	1.000	0.01	0.155	**0.234**
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 1	Full	6	2437	19.22	21.00	1.507	100	1.000	0.06	0.153	0.231
53	Bluetooth	1Mbps	Front	15mm	Ant 1	Full	39	2441	10.83	12.00	1.309	76.88	1.301	0.04	0.001	**0.003**
5000MHz																
	WLAN5.3GHz	802.11a 6Mbps	Front	15mm	Ant 1	Full	60	5300	17.05	19.00	1.567	97.46	1.026	0.07	0.039	0.063
54	WLAN5.3GHz	802.11a 6Mbps	Back	15mm	Ant 1	Full	60	5300	17.05	19.00	1.567	97.46	1.026	0.09	0.186	**0.299**
	WLAN5.5GHz	802.11a 6Mbps	Front	15mm	Ant 1	Full	116	5580	17.20	19.00	1.514	97.46	1.026	0.04	0.058	0.090
55	WLAN5.5GHz	802.11a 6Mbps	Back	15mm	Ant 1	Full	116	5580	17.20	19.00	1.514	97.46	1.026	-0.09	0.271	**0.421**
	WLAN5.8GHz	802.11a 6Mbps	Front	15mm	Ant 1	Full	165	5825	15.18	16.50	1.355	97.46	1.026	0.09	0.072	0.100
56	WLAN5.8GHz	802.11a 6Mbps	Back	15mm	Ant 1	Full	165	5825	15.18	16.50	1.355	97.46	1.026	0.04	0.242	**0.336**

15.4 Product Specific SAR

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)
	WLAN5.3GHz	802.11a 6Mbps	Front	0mm	Ant 1	Full	60	5300	17.05	19.00	1.567	97.46	1.026	0.04	0.171	0.275
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	Ant 1	Full	60	5300	17.05	19.00	1.567	97.46	1.026	-0.08	0.344	0.553
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	Ant 1	Full	60	5300	17.05	19.00	1.567	97.46	1.026	-0.07	0.160	0.257
57	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	Ant 1	Full	60	5300	17.05	19.00	1.567	97.46	1.026	-0.06	0.559	**0.899**
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	Ant 1	Full	116	5580	17.20	19.00	1.514	97.46	1.026	0.15	0.267	0.415
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	Ant 1	Full	116	5580	17.20	19.00	1.514	97.46	1.026	-0.05	0.666	1.034
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 1	Full	116	5580	17.20	19.00	1.514	97.46	1.026	0.09	0.428	0.665
58	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Ant 1	Full	116	5580	17.20	19.00	1.514	97.46	1.026	0.07	0.843	**1.309**

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 IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1513	1752.6	21.06	22.00	1.242	-	-	-0.01	0.864	1	1.073
2nd	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1513	1752.6	21.06	22.00	1.242	-	-	0.09	0.847	1.020	1.052
1st	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 4	DSI 1	810	1909.8	23.77	25.00	1.327	-	-	-0.06	0.817	1	1.084
2nd	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 4	DSI 1	810	1909.8	23.77	25.00	1.327	-	-	0.08	0.801	1.020	1.063
1st	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	656000	3840	18.55	19.00	1.109	-	-	0.09	0.911	1	1.010
2nd	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	656000	3840	18.55	19.00	1.109	-	-	0.09	0.904	1.008	1.003
1st	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	518598	2592.99	24.81	25.50	1.172	-	-	-0.05	0.931	1	1.091
2nd	FR1 n41 PC2	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	15mm	Ant 1	DSI 2	518598	2592.99	24.81	25.50	1.172	-	-	-0.05	0.915	1.017	1.073

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. 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	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	Bluetooth + WLAN5GHz	Yes	Yes	Yes	Yes
5.	WWAN + Bluetooth + WLAN5GHz	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.
3. EN-DC SAR summed the standalone 5GNR SAR and LTE standalone SAR 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 and Bluetooth share the same antenna, so can't transmit simultaneously.
8. According to the characteristic of EUT, WLAN5GHz and Bluetooth can transmit simultaneously.
9. According to the EUT character, WLAN 2.4GHz and WLAN 5GHz cannot transmit simultaneously.
10. 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.
11. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
12. Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
13. The reported SAR summation is calculated based on the same configuration and test position.
14. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
    iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
    v) The SPLSR calculated results please refer to section 16.4.

16.1 Head Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2	1+3+4
		WWAN	WLAN2.4GHz	WLAN5GHz	Bluetooth	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)
WWAN All Bands	Right Cheek	1.066	0.200	0.244	0.082	1.27	1.39
	Right Tilted	1.091	0.121	0.334	0.082	1.21	1.51
	Left Cheek	0.937	0.439	0.448	0.082	1.38	1.47
	Left Tilted	1.010	0.281	0.502	0.082	1.29	**1.59**

<5G NR ENDC>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4+5
			WWAN	FR1	WLAN2.4GHz	WLAN5GHz	Bluetooth	**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)**
LTE Band5 Ant1	FR1 n7 Ant2	Right Cheek	0.197	1.066	0.200	0.244	0.082	1.46	1.59
		Right Tilted	0.135	0.515	0.121	0.334	0.082	0.77	1.07
		Left Cheek	0.253	0.259	0.439	0.448	0.082	0.95	1.04
		Left Tilted	0.156	0.259	0.281	0.502	0.082	0.70	1.00
LTE Band7 Ant2	FR1 n5 Ant4	Right Cheek	0.452	0.744	0.200	0.244	0.082	1.40	1.52
		Right Tilted	0.222	0.664	0.121	0.334	0.082	1.01	1.30
		Left Cheek	0.104	0.684	0.439	0.448	0.082	1.23	1.32
		Left Tilted	0.098	0.680	0.281	0.502	0.082	1.06	1.36
LTE Band41 Ant2(38A)	FR1 n77 Ant3(78A)	Right Cheek	0.530	0.470	0.200	0.244	0.082	1.20	1.33
		Right Tilted	0.235	0.470	0.121	0.334	0.082	0.83	1.12
		Left Cheek	0.139	0.470	0.439	0.448	0.082	1.05	1.14
		Left Tilted	0.175	0.470	0.281	0.502	0.082	0.93	1.23
LTE Band7 Ant2	FR1 n77 Ant3(78A)	Right Cheek	0.452	0.470	0.200	0.244	0.082	1.12	1.25
		Right Tilted	0.222	0.470	0.121	0.334	0.082	0.81	1.11
		Left Cheek	0.104	0.470	0.439	0.448	0.082	1.01	1.10
		Left Tilted	0.098	0.470	0.281	0.502	0.082	0.85	1.15
LTE Band5 Ant1	FR1 n77 Ant3(78A)	Right Cheek	0.197	0.470	0.200	0.244	0.082	0.87	0.99
		Right Tilted	0.135	0.470	0.121	0.334	0.082	0.73	1.02
		Left Cheek	0.253	0.470	0.439	0.448	0.082	1.16	1.25
		Left Tilted	0.156	0.470	0.281	0.502	0.082	0.91	1.21
LTE Band7 Ant2	FR1 n7 Ant1	Right Cheek	0.452	0.097	0.200	0.244	0.082	0.75	0.88
		Right Tilted	0.222	0.105	0.121	0.334	0.082	0.45	0.74
		Left Cheek	0.104	0.127	0.439	0.448	0.082	0.67	0.76
		Left Tilted	0.098	0.056	0.281	0.502	0.082	0.44	0.74
LTE Band41 Ant2(38A)	FR1 n41 Ant1	Right Cheek	0.530	0.242	0.200	0.244	0.082	0.97	1.10
		Right Tilted	0.235	0.175	0.121	0.334	0.082	0.53	0.83
		Left Cheek	0.139	0.195	0.439	0.448	0.082	0.77	0.86
		Left Tilted	0.175	0.102	0.281	0.502	0.082	0.56	0.86

16.2 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2	1+3+4
		WWAN	WLAN2.4GHz	WLAN5GHz	Bluetooth	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)
WWAN All Bands	Front	0.443	0.443	0.110	0.041	0.89	0.55
	Back	0.911	0.440	0.448	0.041	1.35	1.36
	Left side	1.093			0.041	1.09	1.09
	Right side	0.835	0.333	0.329	0.041	1.17	1.16
	Top side	1.080	0.259	0.492	0.041	1.34	1.57
	Bottom side	1.091			0.041	1.09	1.09

<5G NR ENDC>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4+5	Case No
			WWAN	FR1	WLAN2.4GHz	WLAN5GHz	Bluetooth	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)	
LTE Band5 Ant1	FR1 n7 Ant2	Front	0.198	0.137	0.443	0.110	0.041	0.78	0.49	
		Back	0.413	0.897	0.440	0.448	0.009	**1.75**	**1.77**	**1&2**
		Left side	0.204	1.093			0.041	1.30	1.34	
		Right side	0.187		0.333	0.329	0.041	0.52	0.56	
		Top side		0.264	0.259	0.492	0.041	0.52	0.80	
		Bottom side	0.201				0.041	0.20	0.24	
LTE Band7 Ant2	FR1 n5 Ant4	Front	0.069	0.229	0.443	0.110	0.041	0.74	0.45	
		Back	0.470	0.384	0.440	0.448	0.009	1.29	1.31	
		Left side	0.966	0.080			0.041	1.05	1.09	
		Right side			0.333	0.329	0.041	0.33	0.37	
		Top side	0.102	0.273	0.259	0.492	0.041	0.63	0.91	
		Bottom side					0.041	0.00	0.04	
LTE Band41 Ant2(38A)	FR1 n77 Ant3(78A)	Front	0.058	0.220	0.443	0.110	0.041	0.72	0.43	
		Back	0.382	0.597	0.440	0.448	0.009	1.42	1.44	
		Left side	0.806				0.041	0.81	0.85	
		Right side		0.181	0.333	0.329	0.041	0.51	0.55	
		Top side	0.076	0.835	0.259	0.492	0.041	1.17	1.44	
		Bottom side					0.041	0.00	0.04	
LTE Band7 Ant2	FR1 n77 Ant3(78A)	Front	0.069	0.220	0.443	0.110	0.041	0.73	0.44	
		Back	0.470	0.597	0.440	0.448	0.009	**1.51**	1.52	
		Left side	0.966				0.041	0.97	1.01	
		Right side		0.181	0.333	0.329	0.041	0.51	0.55	
		Top side	0.102	0.835	0.259	0.492	0.041	1.20	1.47	
		Bottom side					0.041	0.00	0.04	
LTE Band5 Ant1	FR1 n77 Ant3(78A)	Front	0.198	0.220	0.443	0.110	0.041	0.86	0.57	
		Back	0.413	0.597	0.440	0.448	0.009	1.45	1.47	
		Left side	0.204				0.041	0.20	0.25	
		Right side	0.187	0.181	0.333	0.329	0.041	0.70	0.74	
		Top side		0.835	0.259	0.492	0.041	1.09	1.37	
		Bottom side	0.201				0.041	0.20	0.24	
LTE Band7 Ant2	FR1 n7 Ant1	Front	0.069	0.195	0.443	0.110	0.041	0.71	0.42	
		Back	0.470	0.486	0.440	0.448	0.009	1.40	1.41	
		Left side	0.966	0.196			0.041	1.16	1.20	
		Right side		0.065	0.333	0.329	0.041	0.40	0.44	
		Top side	0.102		0.259	0.492	0.041	0.36	0.64	
		Bottom side		0.904			0.041	0.90	0.95	
LTE Band41 Ant2(38A)	FR1 n41 Ant1	Front	0.058	0.212	0.443	0.110	0.041	0.71	0.42	
		Back	0.382	0.476	0.440	0.448	0.009	1.30	1.32	
		Left side	0.806	0.106			0.041	0.91	0.95	
		Right side		0.062	0.333	0.329	0.041	0.40	0.43	
		Top side	0.076		0.259	0.492	0.041	0.34	0.61	
		Bottom side		1.091			0.041	1.09	1.13	

16.3 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2	1+3+4
		WWAN	WLAN2.4GHz	WLAN5GHz	Bluetooth	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)
WWAN All Bands	Front	0.877	0.234	0.100	0.003	1.11	0.98
	Back	1.091	0.231	0.421	0.003	1.32	1.52

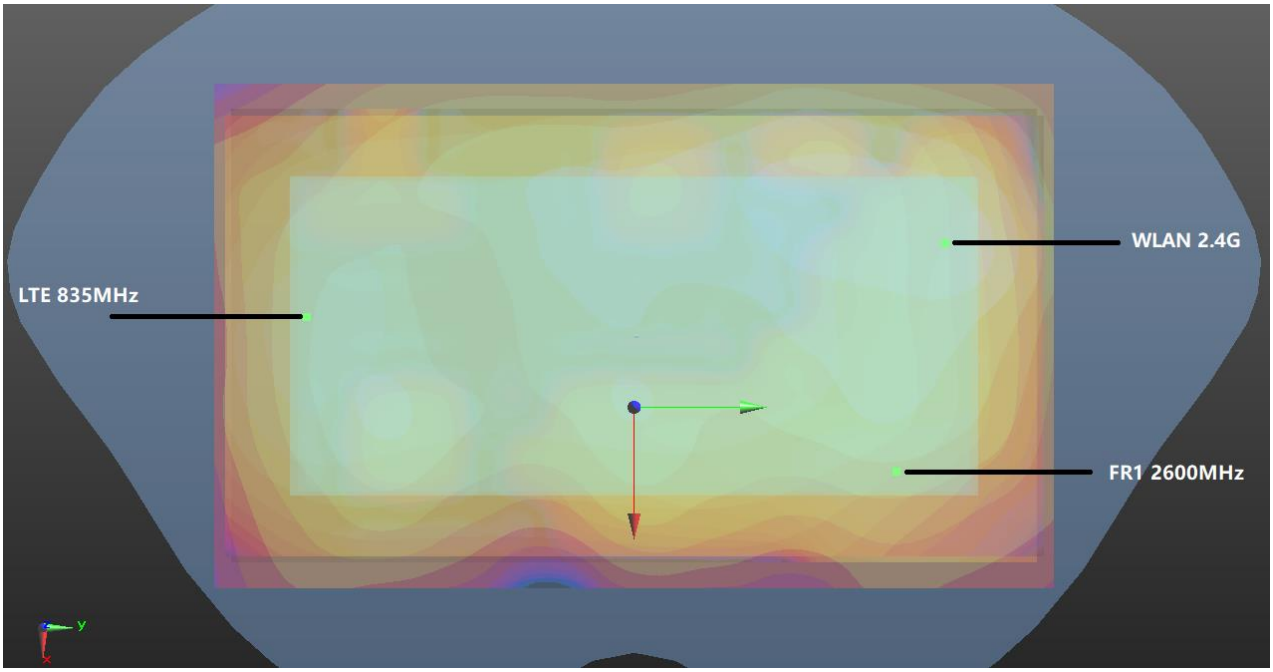
<5G NR ENDC>

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4+5	Case No
			WWAN	FR1	WLAN2.4GHz	WLAN5GHz	Bluetooth	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)	
LTE Band5 Ant1	FR1 n7 Ant2	Front	0.188	0.877	0.234	0.100	0.003	1.30	1.17	
		Back	0.244	0.885	0.231	0.421	0.003	1.13	1.55	
LTE Band7 Ant2	FR1 n5 Ant4	Front	0.076	0.096	0.234	0.100	0.003	0.17	0.28	
		Back	0.463	0.180	0.231	0.421	0.003	0.64	1.07	
LTE Band41 Ant2(38A)	FR1 n77 Ant3(78A)	Front	0.082	0.211	0.234	0.100	0.003	0.29	0.40	
		Back	0.455	0.690	0.231	0.421	0.003	1.15	1.57	
LTE Band7 Ant2	FR1 n77 Ant3(78A)	Front	0.076	0.211	0.234	0.100	0.003	0.29	0.39	
		Back	0.463	0.690	0.231	0.421	0.003	1.15	1.58	
LTE Band5 Ant1	FR1 n77 Ant3(78A)	Front	0.188	0.211	0.234	0.100	0.003	0.40	0.50	
		Back	0.244	0.690	0.231	0.421	0.003	0.93	1.36	
LTE Band7 Ant2	FR1 n7 Ant1	Front	0.076	0.298	0.234	0.100	0.003	0.37	0.48	
		Back	0.463	0.710	0.231	0.421	0.003	1.17	**1.60**	**3**
LTE Band41 Ant2(38A)	FR1 n41 Ant1	Front	0.082	0.260	0.234	0.100	0.003	0.34	0.45	
		Back	0.455	0.527	0.231	0.421	0.003	0.98	1.41	

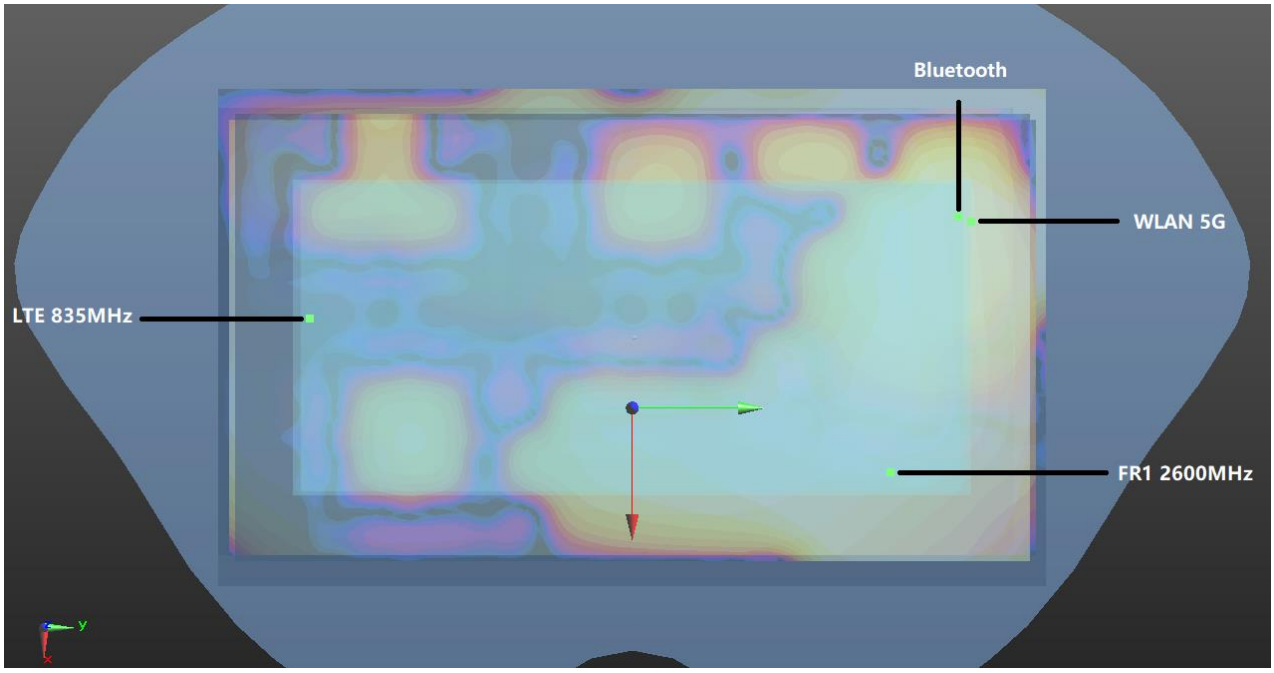
16.4 SPLSR Evaluation and Analysis

General Note:

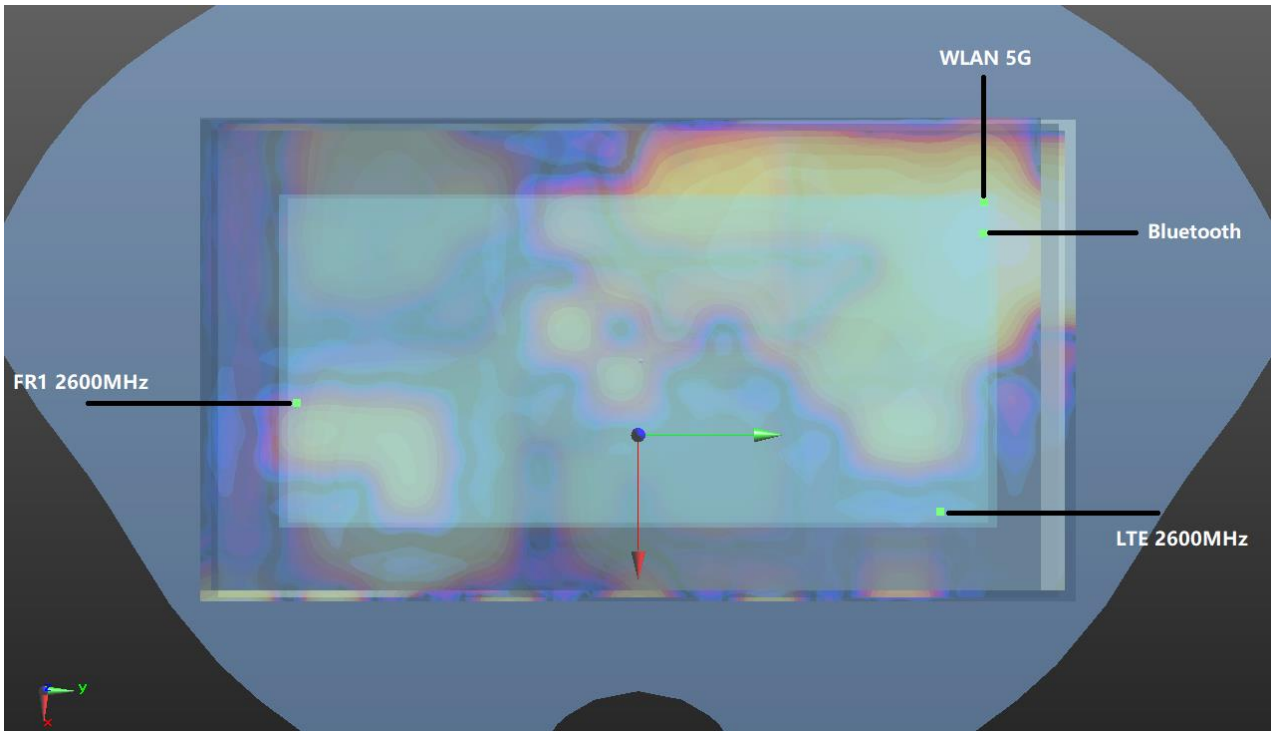
1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of [(x1−x2)2 + (y1−y2)2 + (z1−z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as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



WWAN + WLAN2.4GHz for Hotspot



WWAN + WLAN5GHz+ BT for Hotspot



WWAN + WLAN5GHz+ BT for Body

For Hotspot

	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				
Case 1	LTE Band 5 Ant 1	Back	0.413	10	-2.9	-78	-4.49	142.8	1.31	0.01	Not required
	FR1 n7 Ant 2		0.897	10	32.4	60.4	-4.14				
	LTE Band 5 Ant 1	Back	0.413	10	-2.9	-78	-4.49	160.9	0.85	0.00	Not required
	WALN2.4G		0.44	10	-26.5	81.2	-3.2				
	FR1 n7 Ant 2	Back	0.897	10	32.4	60.4	-4.14	62.5	1.34	0.02	Not required
	WALN2.4G		0.44	10	-26.5	81.2	-3.2				
Case 2	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 5 Ant 1	Back	0.413	10	-2.9	-78	-4.49	142.8	1.31	0.01	Not required
	FR1 n7 Ant 2		0.897	10	32.4	60.4	-4.14				
	LTE Band 5 Ant 1	Back	0.413	10	-2.9	-78	-4.49	164.2	0.86	0.00	Not required
	WALN5G		0.448	10	-29.8	84	-3.15				
	LTE Band 5 Ant 1	Back	0.413	10	-2.9	-78	-4.49	162.1	0.42	0.00	Not required
	Bluetooth		0.009	10	-28	82.1	-3.02				
	FR1 n7 Ant 2	Back	0.897	10	32.4	60.4	-4.14	66.5	1.35	0.02	Not required
	WALN5G		0.448	10	-29.8	84	-3.15				
	FR1 n7 Ant 2	Back	0.897	10	32.4	60.4	-4.14	64.2	0.91	0.01	Not required
	Bluetooth		0.009	10	-28	82.1	-3.02				

For Body

	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				
Case 3	LTE B7 Ant 2	Back	0.29	15	32.9	65.8	-4.04	145.7	1.13	0.01	Not required
	FR1 n7 Ant 1		0.837	15	9.6	-78	-4.38				
	LTE B7 Ant 2	Back	0.29	15	32.9	65.8	-4.04	70.9	0.79	0.01	Not required
	WALN5GHz		0.502	15	-36.8	79	-3.46				
	LTE B7 Ant 2	Back	0.29	15	32.9	65.8	-4.04	63.4	0.29	0.00	Not required
	Bluetooth		0.002	15	-28.2	82.7	-3.01				
	FR1 n7 Ant 1	Back	0.837	15	9.6	-78	-4.38	163.7	1.34	0.01	Not required
	WALN5GHz		0.502	15	-36.8	79	-3.46				
	FR1 n7 Ant 1	Back	0.837	15	9.6	-78	-4.38	165.1	0.84	0.00	Not required
	Bluetooth		0.002	15	-28.2	82.7	-3.01				

Test Engineer : Bruce Li, Martin Li, Ricky Gu

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 ≤ 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.

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

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/15

System Check_Head_835MHz

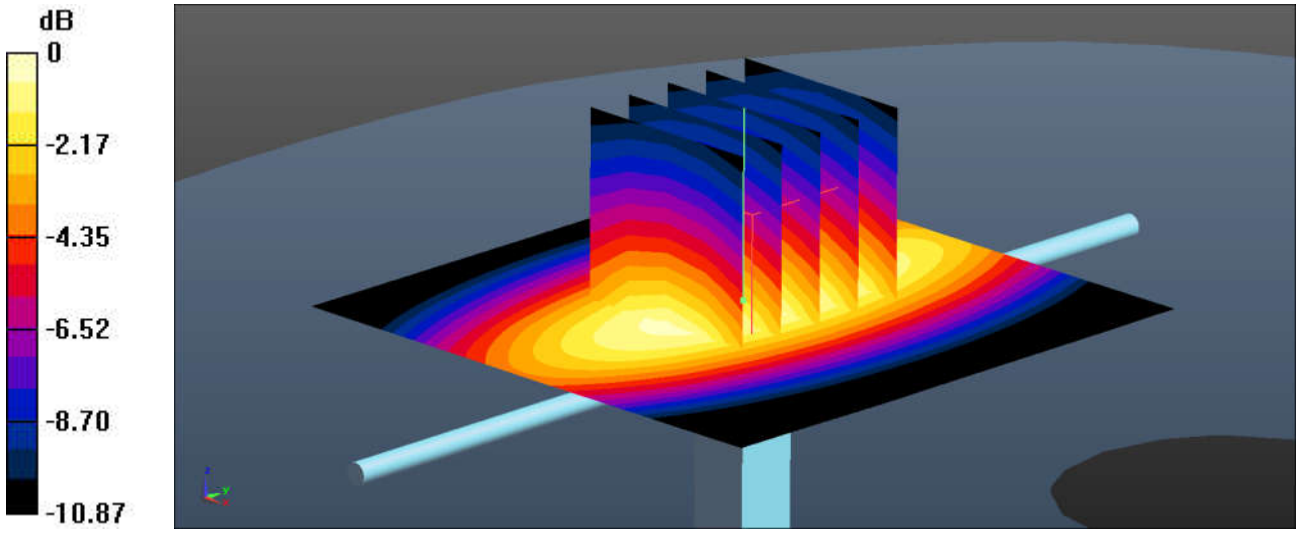
DUT: D835V2 - SN:4d258

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 835 MHz; σ = 0.939 S/m; ε_r = 43.128; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(10.5, 10.5, 10.5); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.667 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.20 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.844 W/kg
SAR(1 g) = 0.495 W/kg; SAR(10 g) = 0.325 W/kg
Maximum value of SAR (measured) = 0.653 W/kg



0 dB = 0.653 W/kg = -1.85 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/16

System Check_Head_1750MHz

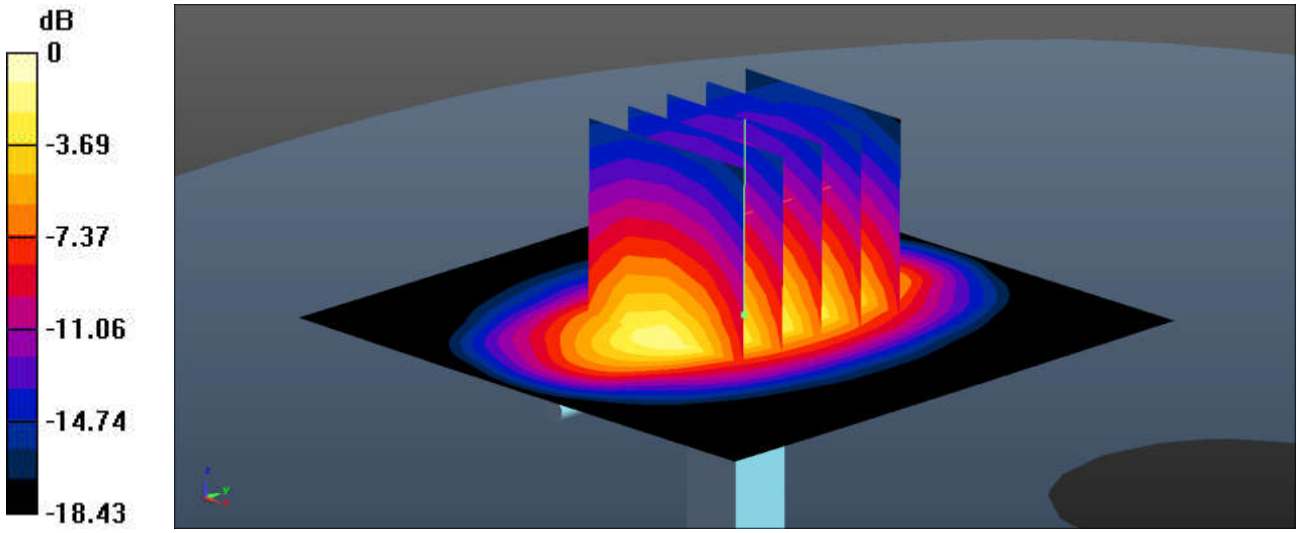
DUT: D1750V2 - SN:1090

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1750 MHz; σ = 1.359 S/m; ε_r = 40.934; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(9.15, 9.15, 9.15); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.84 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.30 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.41 W/kg
SAR(1 g) = 1.84 W/kg; SAR(10 g) = 0.971 W/kg
Maximum value of SAR (measured) = 2.85 W/kg



0 dB = 2.85 W/kg = 4.55 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/17

System Check_Head_1900MHz

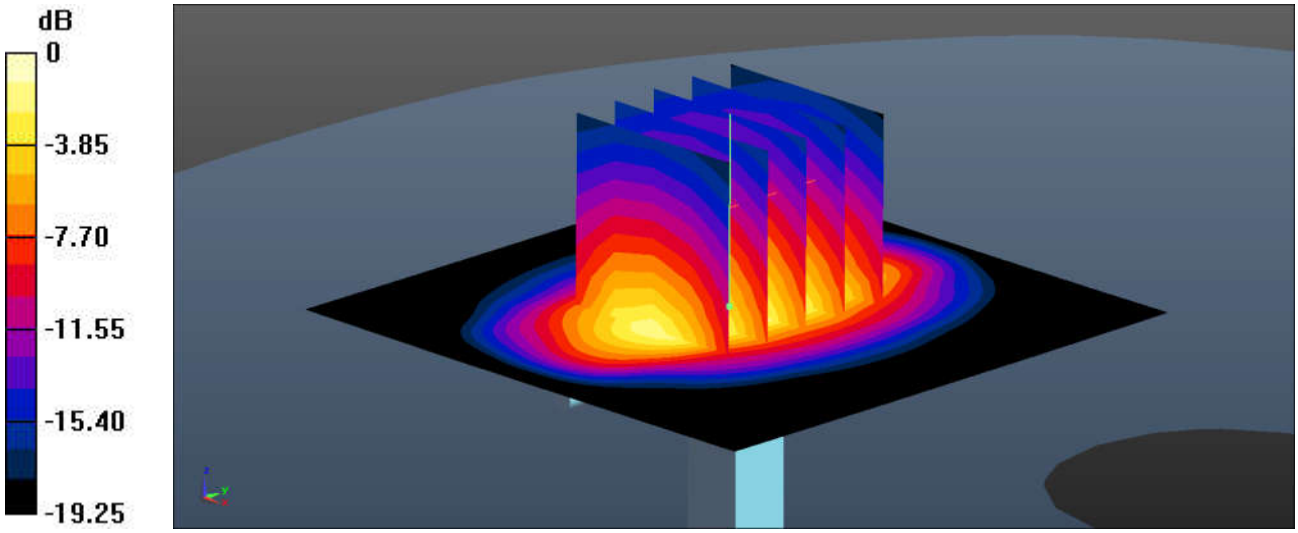
DUT: D1900V2 - SN:5d170

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.455 S/m; ε_r = 40.692; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(8.73, 8.73, 8.73); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.21 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.67 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 3.84 W/kg
SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.05 W/kg
Maximum value of SAR (measured) = 3.22 W/kg



0 dB = 3.22 W/kg = 5.08 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/18

System Check_Head_2600MHz

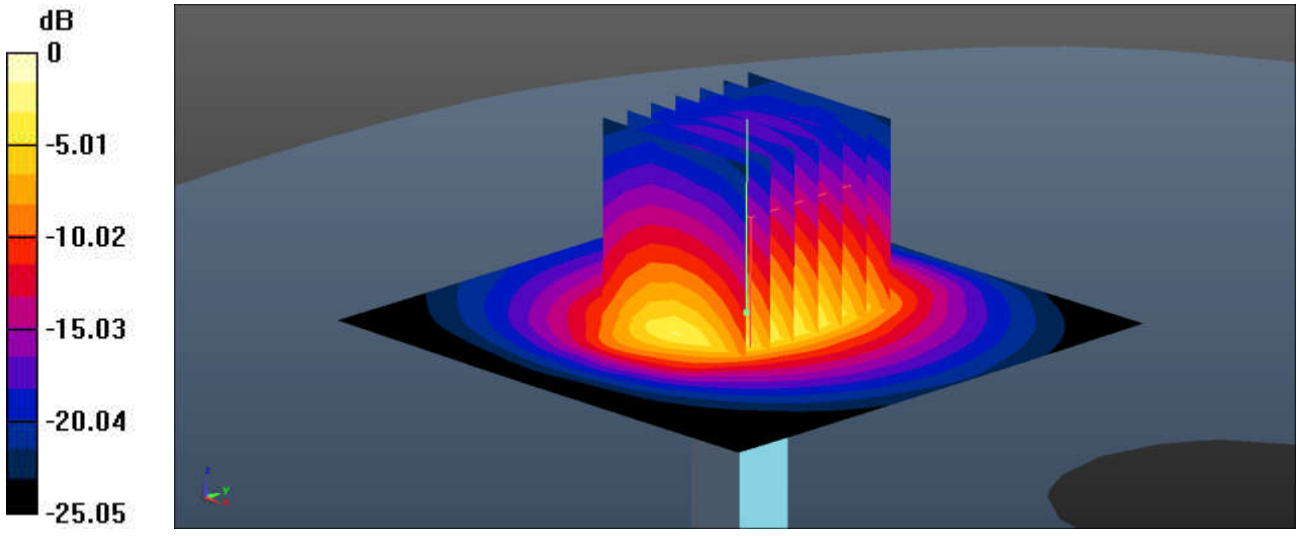
DUT: D2600V2 - SN:1061

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2600 MHz; σ = 1.978 S/m; ε_r = 40.578; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(8.14, 8.14, 8.14); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.41 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.22 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 5.82 W/kg
SAR(1 g) = 2.65 W/kg; SAR(10 g) = 1.16 W/kg
Maximum value of SAR (measured) = 4.53 W/kg



0 dB = 4.53 W/kg = 6.56 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/19

System Check_Head_3500MHz

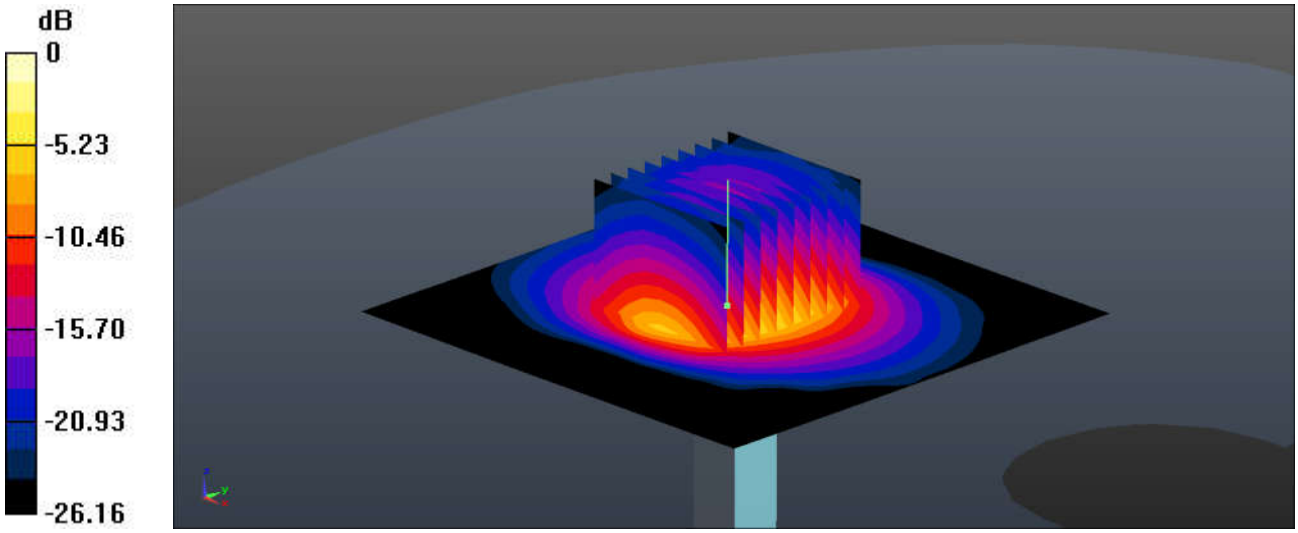
DUT: D3500V2 - SN:1037

Communication System: UID 0, CW (0); Frequency: 3500 MHz;Duty Cycle: 1:1
Medium: HSL_3500 Medium parameters used: f = 3500 MHz; σ = 2.826 S/m; ε_r = 39.043; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(7.37, 7.37, 7.37); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.59 W/kg

Pin=50mW/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 46.84 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 8.69 W/kg
SAR(1 g) = 3.41 W/kg; SAR(10 g) = 1.31 W/kg
Maximum value of SAR (measured) = 6.55 W/kg



0 dB = 6.55 W/kg = 8.16 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/20

System Check_Head_3900MHz

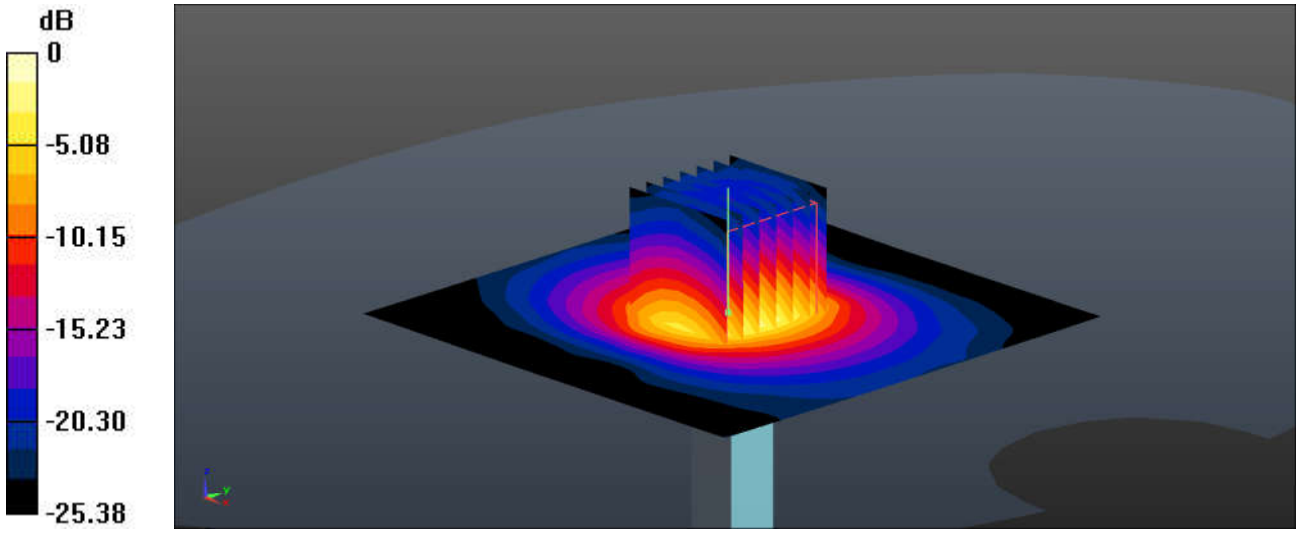
DUT: D3900V2 - SN:1048

Communication System: UID 0, CW (0); Frequency: 3900 MHz;Duty Cycle: 1:1
Medium: HSL_3900 Medium parameters used: f = 3900 MHz; σ = 3.219 S/m; ε_r = 38.416; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(6.83, 6.83, 6.83); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.60 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.94 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 8.72 W/kg
SAR(1 g) = 3.26 W/kg; SAR(10 g) = 1.16 W/kg
Maximum value of SAR (measured) = 6.57 W/kg



0 dB = 6.57 W/kg = 8.18 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/21

System Check_Head_835MHz

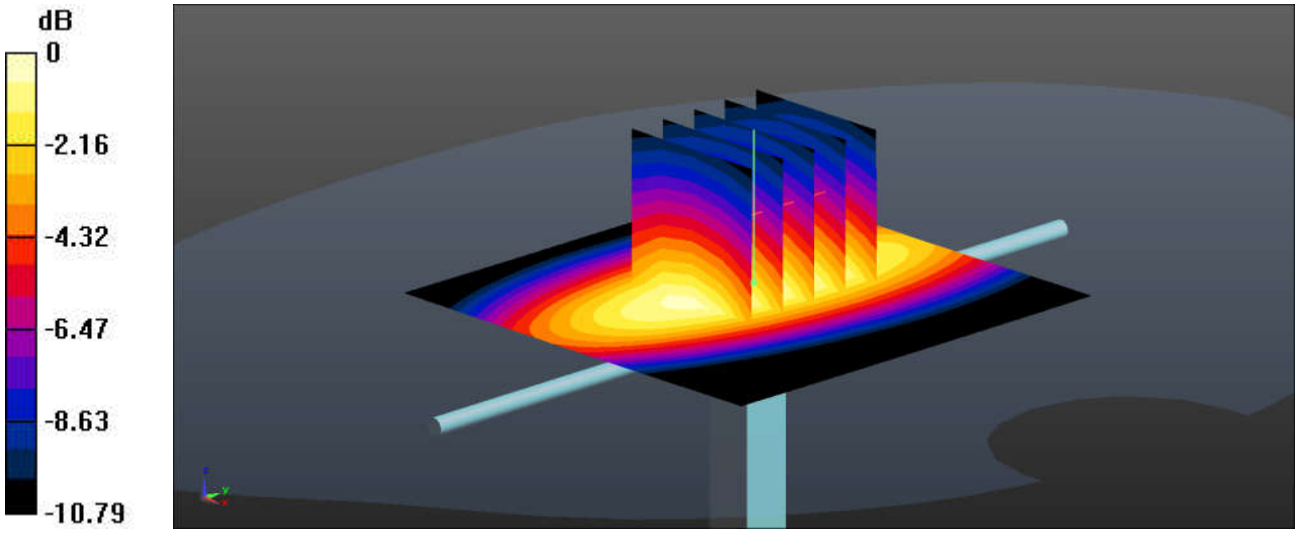
DUT: D835V2 - SN:4d258

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 835 MHz; σ = 0.934 S/m; ε_r = 41.189; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(10.5, 10.5, 10.5); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.574 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.98 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.743 W/kg
SAR(1 g) = 0.499 W/kg; SAR(10 g) = 0.325 W/kg
Maximum value of SAR (measured) = 0.583 W/kg



0 dB = 0.583 W/kg = -2.34 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/22

System Check_Head_1750MHz

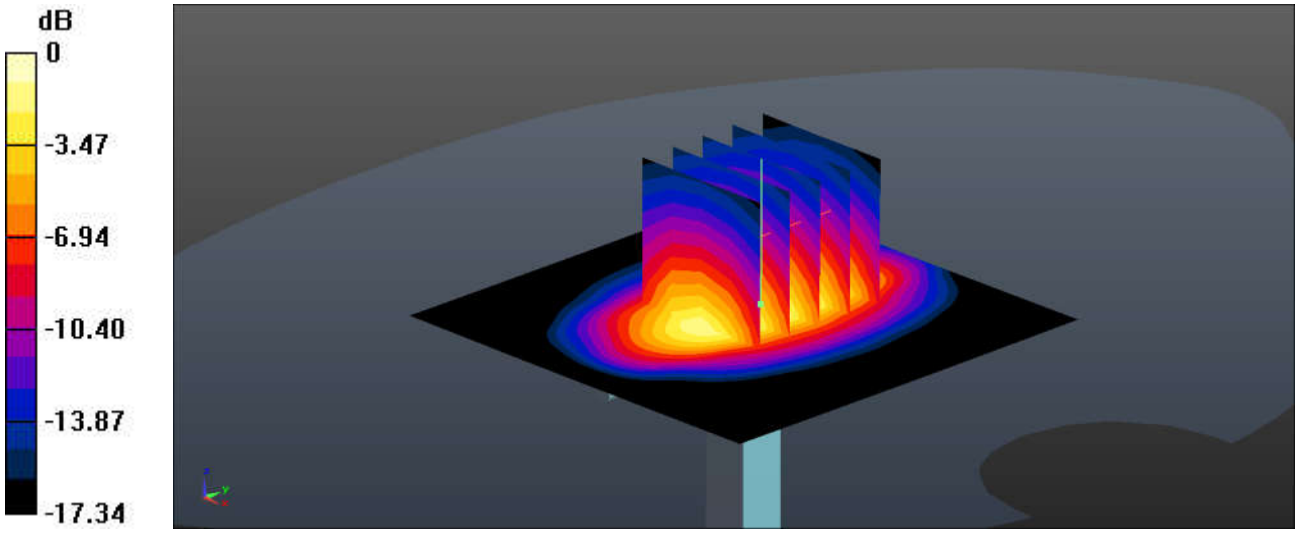
DUT: D1750V2 - SN:1090

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1750 MHz; σ = 1.401 S/m; ε_r = 40.51; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(9.15, 9.15, 9.15); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.92 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 43.72 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 3.48 W/kg
SAR(1 g) = 1.85 W/kg; SAR(10 g) = 0.978 W/kg
Maximum value of SAR (measured) = 2.90 W/kg



0 dB = 2.90 W/kg = 4.62 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/23

System Check_Head_1900MHz

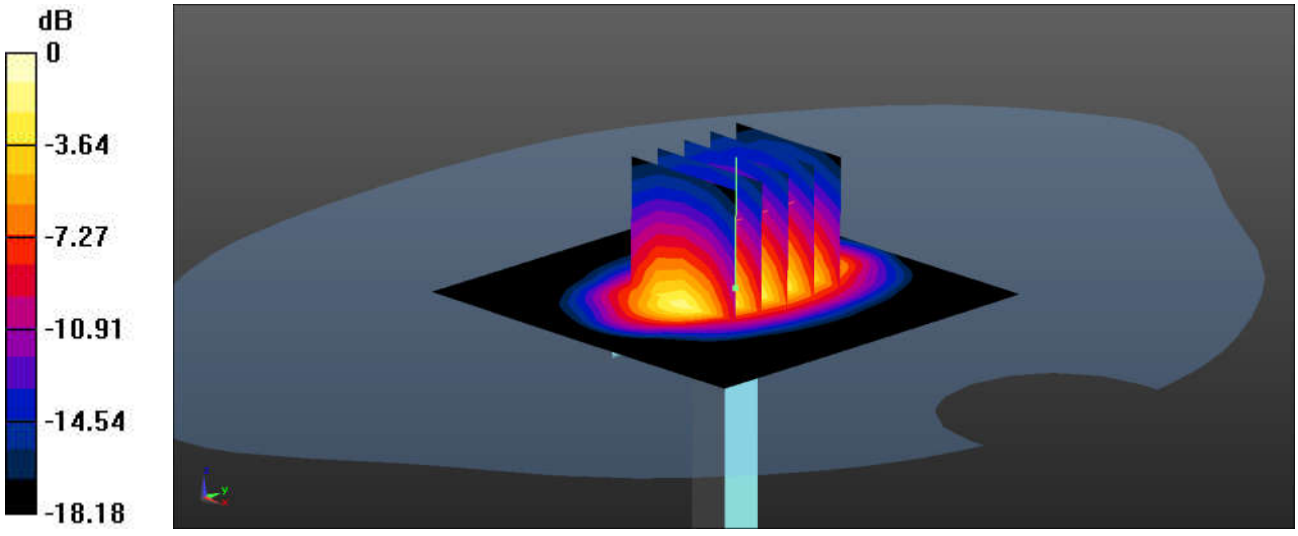
DUT: D1900V2 - SN:5d170

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.433 S/m; ε_r = 39.086; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(8.73, 8.73, 8.73); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.24 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.86 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.84 W/kg
SAR(1 g) = 2.04 W/kg; SAR(10 g) = 1.05 W/kg
Maximum value of SAR (measured) = 3.22 W/kg



0 dB = 3.22 W/kg = 5.08 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/24

System Check_Head_2600MHz

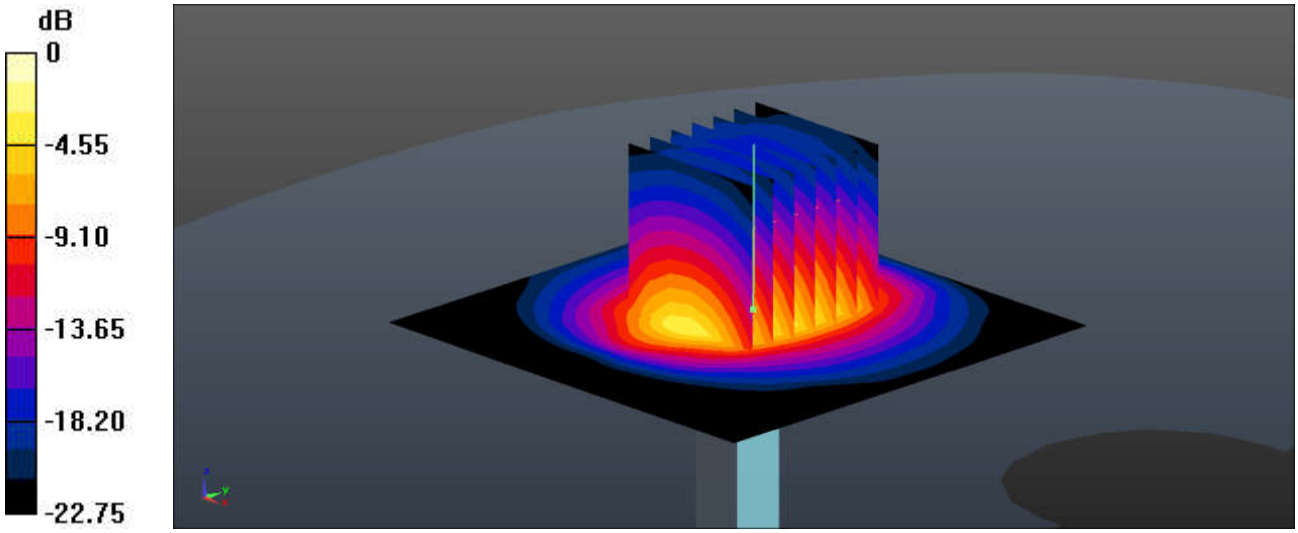
DUT: D2600V2 - SN:1061

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2600 MHz; σ = 2.009 S/m; ε_r = 40.645; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(8.14, 8.14, 8.14); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.63 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 42.28 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 5.85 W/kg
SAR(1 g) = 2.69 W/kg; SAR(10 g) = 1.2 W/kg
Maximum value of SAR (measured) = 4.65 W/kg



0 dB = 4.65 W/kg = 6.67 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/25

System Check_Head_3500MHz

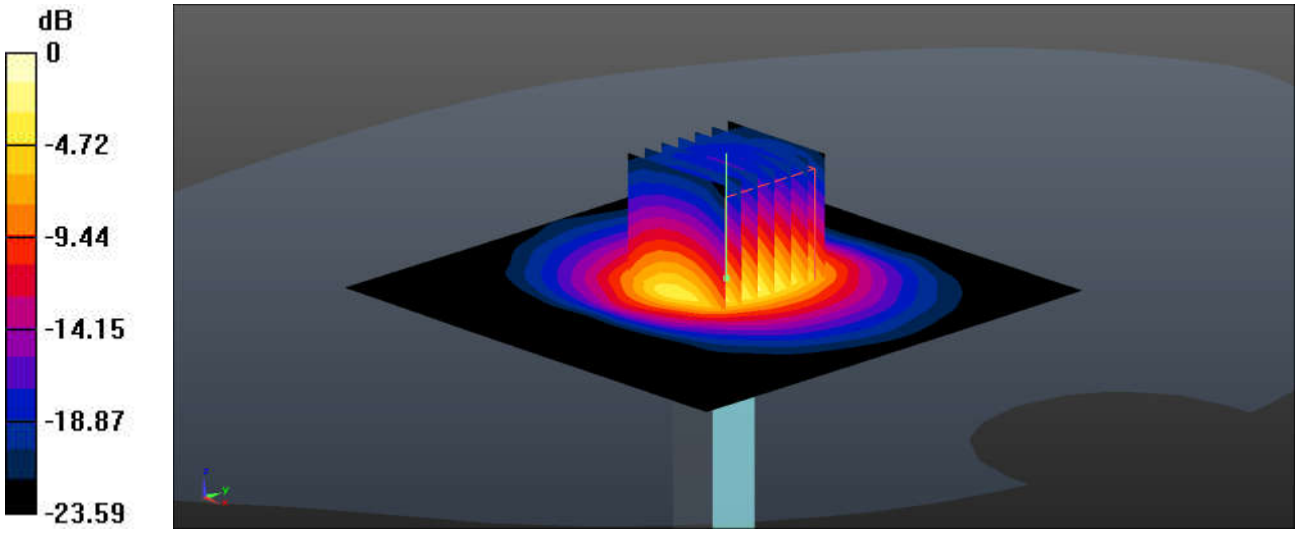
DUT: D3500V2 - SN:1037

Communication System: UID 0, CW (0); Frequency: 3500 MHz;Duty Cycle: 1:1
Medium: HSL_3500 Medium parameters used: f = 3500 MHz; σ = 2.796 S/m; ε_r = 38.953; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(7.37, 7.37, 7.37); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.55 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.09 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 8.77 W/kg
SAR(1 g) = 3.32 W/kg; SAR(10 g) = 1.24 W/kg
Maximum value of SAR (measured) = 6.54 W/kg



0 dB = 6.54 W/kg = 8.16 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/26

System Check_Head_3900MHz

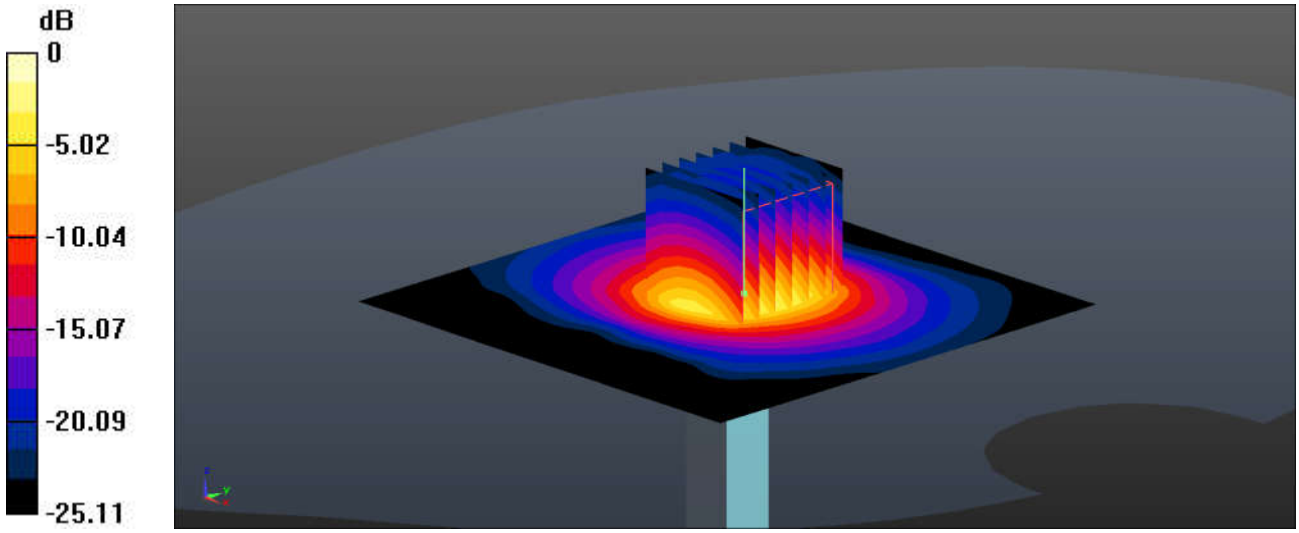
DUT: D3900V2 - SN:1048

Communication System: UID 0, CW (0); Frequency: 3900 MHz;Duty Cycle: 1:1
Medium: HSL_3900 Medium parameters used: f = 3900 MHz; σ = 3.181 S/m; ε_r = 38.351; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(6.83, 6.83, 6.83); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.41 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 45.64 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 8.78 W/kg
SAR(1 g) = 3.25 W/kg; SAR(10 g) = 1.18 W/kg
Maximum value of SAR (measured) = 6.58 W/kg



0 dB = 6.58 W/kg = 8.18 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/27

System Check_Head_2450MHz

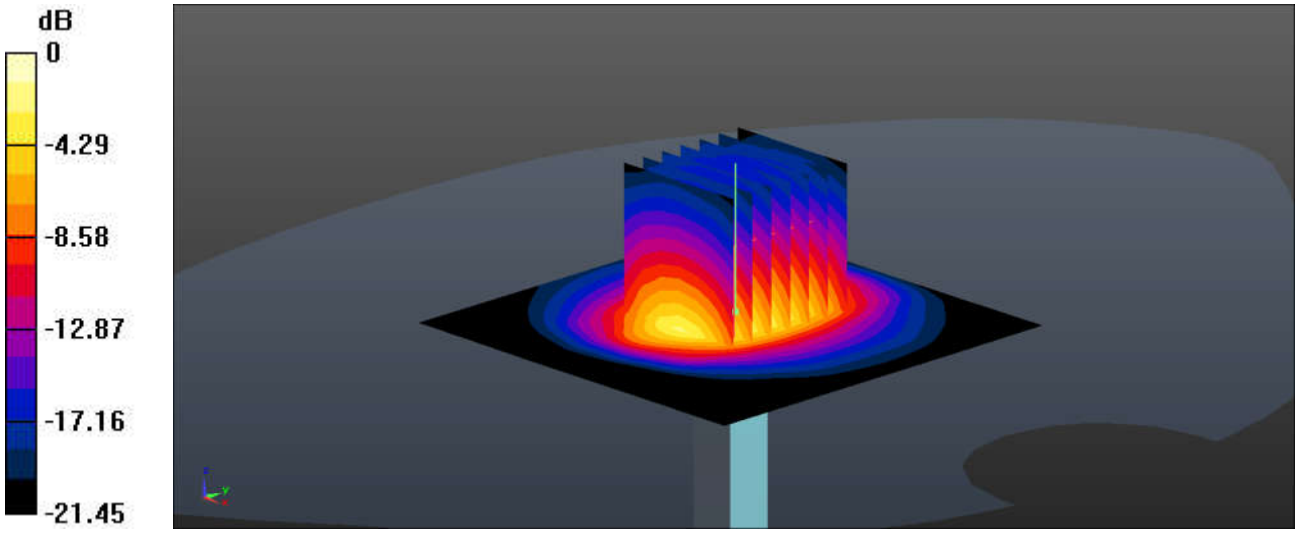
DUT: D2450V2 - SN:908

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2450 MHz; σ = 1.869 S/m; ε_r = 40.799; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(8.28, 8.28, 8.28); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 3.27 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.76 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 5.13 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.14 W/kg
Maximum value of SAR (measured) = 3.25 W/kg



0 dB = 3.25 W/kg = 5.12 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/3/2

System Check_Head_5250MHz

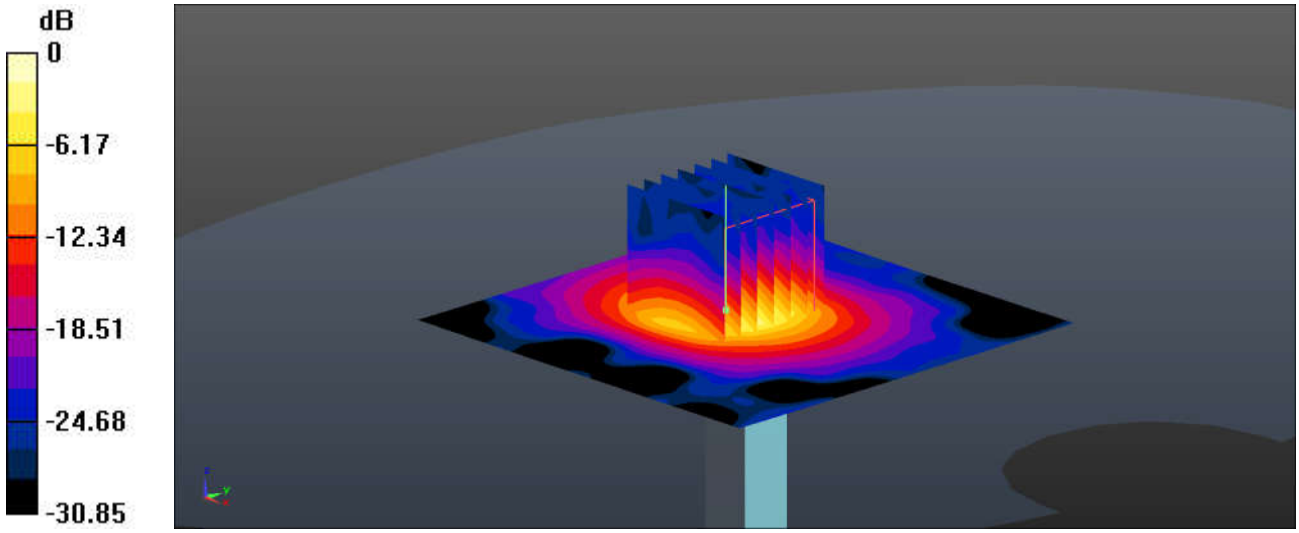
DUT: D5GHzV2 - SN:1113

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5250 MHz; σ = 4.637 S/m; ε_r = 36.499; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(5.85, 5.85, 5.85); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.63 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 36.81 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 14.8 W/kg
SAR(1 g) = 3.76 W/kg; SAR(10 g) = 1.08 W/kg
Maximum value of SAR (measured) = 9.44 W/kg



0 dB = 9.44 W/kg = 9.75 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/3/5

System Check_Head_5600MHz

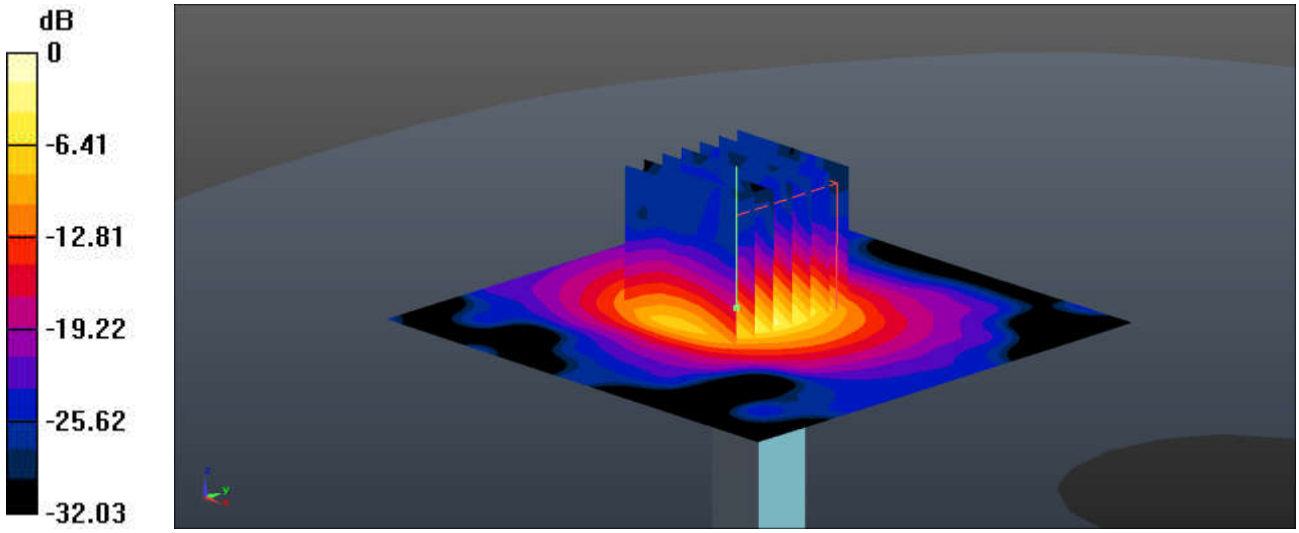
DUT: D5GHzV2 - SN:1113

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5600 MHz; σ = 4.989 S/m; ε_r = 35.914; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(5.05, 5.05, 5.05); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.44 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 36.64 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(1 g) = 3.92 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 10.2 W/kg = 10.09 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/3/8

System Check_Head_5750MHz

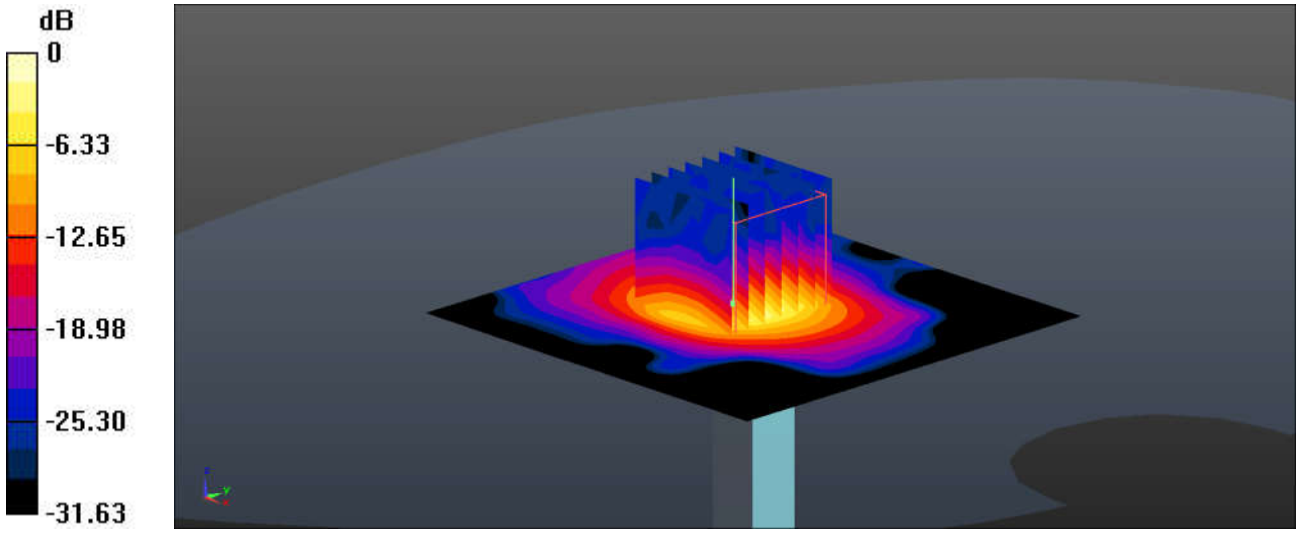
DUT: D5GHzV2 - SN:1113

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5750 MHz; σ = 5.214 S/m; ε_r = 35.621; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(5.25, 5.25, 5.25); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.63 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 34.80 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 3.72 W/kg; SAR(10 g) = 1.06 W/kg
Maximum value of SAR (measured) = 9.39 W/kg



0 dB = 9.39 W/kg = 9.73 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/2/19

System Check_Head_3700MHz

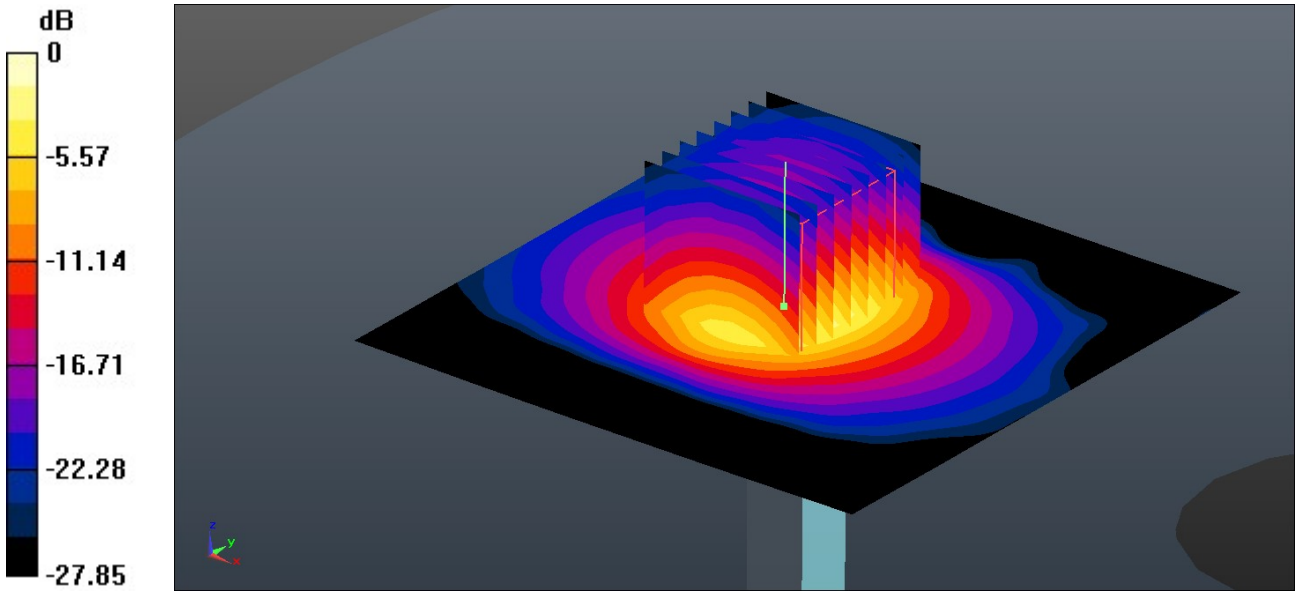
DUT: D3700V2 - SN:1008

Communication System: UID 0, CW (0); Frequency: 3700 MHz;Duty Cycle: 1:1
Medium: HSL_3700 Medium parameters used: f = 3700 MHz; σ = 3.015 S/m; ε_r = 38.714; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7684; ConvF(7.27, 7.27, 7.27); Calibrated: 2021/10/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.12 W/kg

Pin=50mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 44.49 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 8.10 W/kg
SAR(1 g) = 3.15 W/kg; SAR(10 g) = 1.17 W/kg
Maximum value of SAR (measured) = 6.15 W/kg



0 dB = 6.15 W/kg = 7.89 dBW/kg