FCC SAR Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2205-3
FCC ID	:	IHDT56AE8
STANDARD	:	FCC 47 CFR Part 2 (2.1093)

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

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

Si Zhang

Approved by: Si Zhang

ACCREDITED Cert #5145.02

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
FA240834-01	Rev. 01	Initial issue of report.	Jun. 23, 2022

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2205-3, a**re as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 5mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission
			1g SAR (W/kg)			1g SAR (W/kg)
'Licensed	GSM	GSM850	0.41	1.25	1.25	1.59
		GSM1900	0.11	**1.44**	1.25	
	WCDMA	Band II	0.30	1.36	**1.27**	
		Band V	0.38	1.27	**1.27**	
	LTE	Band 2	1.00	1.24	1.25	
		Band 5	0.99	1.00	0.99	
		Band 7	<0.10	1.26	1.24	
		Band 12	0.99	0.70	0.70	
		Band 13	0.99	0.81	0.81	
		Band 66/ 4	0.99	1.25	1.25	
		Band 48	1.01	1.00	1.00	
	5G NR	n2	1.00	1.24	1.24	
		n5	0.99	1.05	1.02	
		n66	1.00	1.25	1.23	
		n48	0.94	1.00	1.00	
		n77/n78	0.99	1.00	1.00	
DTS	WLAN	2.4GHz WLAN	**1.26**	0.34	0.94	1.59
NII		5GHz WLAN	1.06	0.34	1.17	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.24	0.19	0.19	1.46

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	GSM	GSM850	2.33	3.99
		GSM1900	3.06	
	WCDMA	Band II	3.10	
		Band V	2.67	
	LTE	Band 2	3.14	
		Band 7	2.50	
		Band 66/ 4	3.11	
		Band 48	2.68	
	5G NR	n2	3.14	
		n66	3.15	
		n48	2.74	
		n77/n78	**3.58**	
NII	WLAN	5GHz WLAN	2.32	3.99
Date of Testing:			2022/5/10 ~ 2022/6/4	

Remark:

1. This device supports LTE B4 and B66. Since the supported frequency span for LTE B4 falls completely within the supports frequency span for LTE B66, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66.
2. This device supports 5GNR n77 and 5GNR n78. Since the supported frequency span for 5GNR n78 falls completely within the supports frequency span for 5GNR n77, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for 5GNR 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	Motorola Mobility LLC
Address	222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

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

3. Guidance Applied

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

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

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2205-3
FCC ID	IHDT56AE8
IMEI Code	351397430012315
Frequency Band	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz 5G NR n260 : 37 GHz~40 GHz 5G NR n261 : 27.5 GHz~28.35 GHz 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 ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz WLAN 6E U-NII-5: 5925 MHz ~ 6425 MHz WLAN 6E U-NII-6: 6425 MHz ~ 6525 MHz WLAN 6E U-NII-7: 6525 MHz ~ 6875 MHz WLAN 6E U-NII-8: 6875 MHz ~ 7125 MHz Bluetooth: 2402 MHz ~ 2480 MHz WPT: 110 kHz ~ 148 kHz NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+(16QAM uplink is not supported) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR : CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ac/ax VHT20/VHT40/HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac/ax VHT20/VHT40/VHT80/HE20/HE40/HE80 WLAN 6GHz 802.11ax HE20/HE40/HE80 Bluetooth BR/EDR/LE WPT: ASK NFC: ASK
HW Version	DVT2
SW Version	S2ST32.37
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype
Remark: 1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE	

operation.
2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
3. This device 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). WIFI 6E has no hotspot function.
4. The 2.4GHz/5GHz/6GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.
5. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12.
6. This device has NFC operations, the NFC antenna is integrated into the device for this model, therefore, all SAR test were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the antenna can be found in the operational description. According to FCC KDB publication 447498 D01v06, transmitters are consider to be operating simultaneously when there is overlapping transmission, with the exception of transmission during network hand-offs with maximum hand-off duration less than 30 seconds.
7. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the MediaTek TAS will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
8. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head and Handheld. For WLAN when transmit simultaneous with WWAN and Proximity sensors trigger, power reduction will be activated to body-worn and Handheld.
9. For some WWAN bands, sensor on reduced power level is higher than hotspot reduced power level, so front/back sensor on SAR can represent hotspot conservatively.
10. 5G NR n77 supports HPUE, HPUE power and SAR testing performed separately.
11. 5G NR n77 HUPE with higher power, 5G NR n77 HUPE SAR can represent power class 3 level SAR.
12. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
13. For 5GNR FDD/TDD supports SCS15KHz and SCS30KHz, after verification for 30KHz at FDD power level is less than 15KHz at FDD power level, also verification for 15KHz at TDD power level is less than 30KHz at TDD power level, so only show 15KHz at FDD power and 30KHz at TDD power, and chose higher power which is SCS15KHz for FDD bands and SCS30KHz for TDD bands to perform SAR testing.
14. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so NSA SAR can represent SA mode SAR.
15. 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.
16. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
17. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
18. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.
19. SAR Power density test report for WIFI 6E U-NII-5/6/7/8 will be separately submitted. About co-located SAR with WWAN/Bluetooth, always chose higher SAR of WLAN5G U-NII-1/2A/2C/3 and U-NII-5/6/7/8.
20. RF exposure report for WPC (Wireless power charging) will be separately submitted.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n2	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n5	FDD	15	5, 10, 15, 20
		FDD	30	10, 15, 20
	n66	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n77	TDD	15	10, 15, 20, 25, 30, 40, 50
		TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	15	10, 15, 20, 25, 30, 40, 50
		TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
SA	n2	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n5	FDD	15	5, 10, 15, 20
		FDD	30	10, 15, 20
	n66	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n48	TDD	15	10, 15, 20, 30, 40
		TDD	30	10, 15, 20, 30, 40
	n77	TDD	15	10, 15, 20, 25, 30, 40, 50
		TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	15	10, 15, 20, 25, 30, 40, 50
		TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 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>IHDT56AE8</td></tr>
<tr><td>Equipment Name</td><td>Mobile Cellular Phone</td></tr>
<tr><td>Operating Frequency Range of each LTE transmission band</td><td>LTE Band 2: 1850 MHz ~ 1910 MHz
LTE Band 4: 1710 MHz ~ 1755 MHz
LTE Band 5: 824 MHz ~ 849 MHz
LTE Band 7: 2500 MHz ~ 2570 MHz
LTE Band 12: 699 MHz ~ 716 MHz
LTE Band 13: 777 MHz ~ 787 MHz
LTE Band 48: 3550 MHz ~ 3700 MHz
LTE Band 66: 1710 MHz ~ 1780 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 12:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 13: 5MHz, 10MHz
LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM /256QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Voice and Data</td></tr>
<tr><td>LTE Release Version</td><td>R15, Cat18</td></tr>
<tr><td>CA Support</td><td>Supported, Uplink and Downlink</td></tr>
<tr><td>LTE MPR permanently built-in by design</td><td>
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3
<table>
<tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr>
<tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr>
<tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr>
<tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr>
</table>
</td></tr>
<tr><td>LTE A-MPR</td><td>In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)</td></tr>
<tr><td>Spectrum plots for RB configuration</td><td>A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.</td></tr>
<tr><td>Power reduction applied to satisfy SAR compliance</td><td>Yes, when operating in Proximity sensors/receiver/hotspot detect mechanism, head/body -worn /hotspot/extremity will trigger reduced power for some bands applied to satisfy SAR compliance, the detail please referred to section 14.</td></tr>
<tr><td>LTE Carrier Aggregation Combinations</td><td>Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 14.</td></tr>
<tr><td>LTE Carrier Aggregation Additional Information</td><td>1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band and inter-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance.
2. This device supports maximum of 4 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 12								
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711
LTE Band 13				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	23205	779.5	23230	782
M	23230	782		
H	23255	784.5		

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

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

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
SCS	FDD/ 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 n2	LTE B2/5/13/48/66
LTE Anchor Bands for n5	LTE B2/48/66
LTE Anchor Bands for n66	LTE B2/5/7/13/48/66
LTE Anchor Bands for n77	LTE B2/5/7/13/48/66
LTE Anchor Bands for n78	LTE B5/7

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

NR Band 2 SCS15KHz

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870
M	376000	1880	376000	1880	376000	1880	376500	1882.5	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	381000	1905	379500	1897.5	379000	1895	378000	1890

NR Band 2 SCS30KHz

	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870
M	376000	1880	376000	1880	376500	1882.5	376000	1880	376000	1880	376000	1880
H	381000	1905	380500	1902.5	381000	1905	379500	1897.5	379000	1895	378000	1890

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 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 66 SCS15KHz														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	346000	1730
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352000	1760

NR Band 66 SCS30KHz												
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	346000	1730
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745
H	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352000	1760

NR Band 48 SCS15KHz										
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	638000	3570
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646332.00	3694.98	646166.00	3692.49	646000	3690	645666.00	3684.99	645332.00	3679.98

NR Band 48 SCS30KHz										
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	638000	3570
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646332.00	3694.98	646166.00	3692.49	646000	3690	645666.00	3684.99	645332.00	3679.98

NR Band 77 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01
M	656000	3840	656000	3840	656000	3840	656000	3840.00	656000	3840.00	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.50	664332	3964.98	664000	3960	663666	3954.99

NR Band 77 SCS30KHz																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840.00	656000	3840.00	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.50	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930

NR Band 78 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01
M	650000	3750	650000	3750	650000	3750	650000	3750.00	650000	3750.00	650000	3750	650000	3750
H	653000	3795	652832	3792.48	652666	3789.99	652500	3787.50	652332	3784.98	652000	3780	651666	3774.99

NR Band 78 SCS30KHz																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750	650000	3750	650000	3750.00	650000	3750.00	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652832	3792.48	652666	3789.99	652500	3787.50	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	651000	3765	650666	3759.99	650332	3754.98		

For <3450 MHz ~ 3550 MHz >

NR Band 77 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636332	3544.98	636166	3542.49	636000	3540	635832	3537.48	635666	3534.99	635332	3529.98	635000	3525

NR Band 77 SCS30KHz																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636332	3544.98	636166	3542.49	636000	3540	635832	3537.48	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99		

NR Band 78 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525

NR Band 78 SCS30KHz																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

5. TAS feature for RF Exposure compliance

WWAN bands and mmWave are all enabled with MediaTek TAS feature. This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time. Note that WLAN operations are not enabled with TAS feature.

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

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

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

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

<Terminologies in this report>

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

<SAR Characterization>

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

<SAR design target and uncertainty>

	Uncertainty dB (k=2)
Sub6 radio TPC	1.0
Device to device variation	1.2
Total uncertainty	1.5

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

$$SAR\_design\_target < SAR_{regulatory\_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

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

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

<P_{limit} for supported technologies and bands>

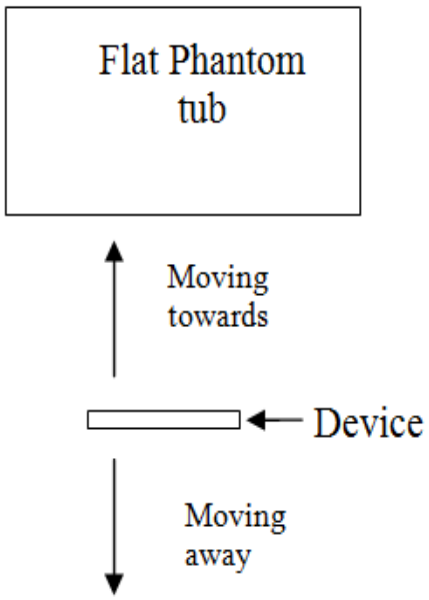
Band	Antenna	Head ECI2 Standalone	Body Worn ECI3 Standalone	Body Worn & Hotspot ECI7 Simultaneous	Extremely ECI6 Standalone	Sensor Off ECI4	Pmax*
GSM850 (4 Tx slots)	Ant 0	31.3	25.3	25.3	29.5	28.2	26.5
GSM1900 (4 Tx slots)	Ant 0	34.2	16.5	16.5	20.2	24.9	23.5
WCDMA II	Ant 0	29.1	12.3	12.3	16.4	23	23
WCDMA V	Ant 0	28.1	21.3	21.3	23.7	24.2	23
LTE Band 2	Ant 0	34.2	15.4	14.3	19	24.5	23
LTE Band 2	Ant 1	15.6	16.2	16	18.1	26.2	23
LTE Band 4	Ant 0	42.1	17.5	16.3	19.5	24.7	23
LTE Band 4	Ant 1	16.5	16.7	16.7	18.9	25.4	23
LTE Band 5	Ant 0	29.4	26.5	26.5	23	23	23
LTE Band 5	Ant 1	20.9	22.6	22.2	23	31.6	23
LTE Band 7	Ant 0	40.4	20.9	16.7	23.9	24.4	23
LTE Band 12	Ant 0	29.1	27.3	27.3	23	23	23
LTE Band 12	Ant 1	22.3	24.5	24.5	23	23	23
LTE Band 13	Ant 0	30.5	24.9	24.9	23	23	23
LTE Band 13	Ant 1	23	25.2	25.2	23	23	23
LTE Band 66	Ant 0	42.1	17.5	16.3	19.5	24.7	23
LTE Band 66	Ant 1	16.5	16.7	16.7	18.9	25.4	23
LTE Band 48	Ant 3	16.9	15.7	15.7	18	23.5	21.0
LTE Band 48	Ant 4	22.4	15.4	15.4	18	22.2	21.0
LTE Band 48	Ant 5	36.4	18.4	18.4	20.7	22.0	20.3
LTE Band 48	Ant 8	32.3	9.2	9.2	15.2	21.8	20.1
5G NR n2	Ant 0	33.3	16.5	15.1	20.4	25.2	23
5G NR n2	Ant 1	16.1	16.9	16.5	19.4	27.2	23
5G NR n5	Ant 0	30.4	23.9	23.9	23	23	23
5G NR n5	Ant 1	20.7	22.5	22.5	23	30.6	23
5G NR n66	Ant 0	33.9	19.3	15.3	19.8	24.7	23.5
5G NR n66	Ant 1	15.8	17.1	15.7	18.3	25.9	23
5G NR n48	Ant 3	18.9	17.7	17.7	22.4	26.8	23
5G NR n48	Ant 4	22.8	16.7	16.7	19.8	23.4	22.4
5G NR n48	Ant 5	30.2	19.5	19.5	20.9	26.3	23
5G NR n48	Ant 8	39.4	10.3	10.3	17	23.5	21.6
5G NR n77 PC3	Ant 3	17.3	17.1	17.1	20	26.7	23
5G NR n77 PC3	Ant 4	20.2	15.4	15.4	17.8	22.5	23
5G NR n77 PC3	Ant 5	34.3	18.4	18.4	20.4	27.6	23
5G NR n77 PC3	Ant 8	32.7	11.4	11.4	16.3	25.8	21.5
5G NR n77 PC2	Ant 3	17.3	17.1	17.1	20	26.7	26
5G NR n77 PC2	Ant 4	20.2	15.4	15.4	17.8	22.5	25.5
5G NR n77 PC2	Ant 5	34.3	18.4	18.4	20.4	27.6	26
5G NR n77 PC2	Ant 8	32.7	11.4	11.4	16.3	25.8	22.5
5G NR n78	Ant 3	17.3	17.1	17.1	20	26.7	23
5G NR n78	Ant 4	20.2	15.4	15.4	17.8	22.5	22.7
5G NR n78	Ant 5	24	18.4	18.4	20.4	27.6	23
5G NR n78	Ant 8	22.4	11.4	11.4	16.3	25.8	21.4

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

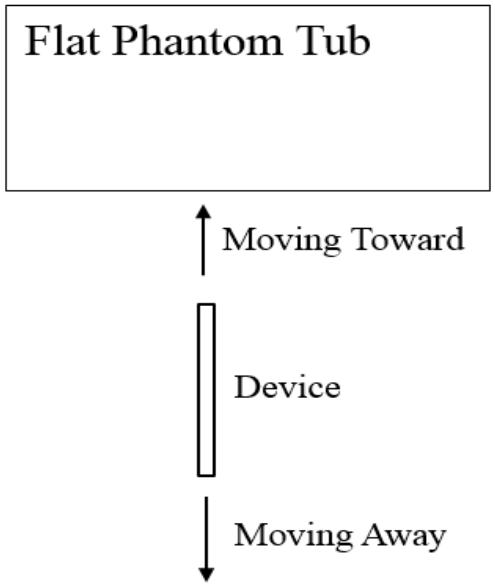
6. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

1. 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 (5850MHz) and lowest (835MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensors placed coincident with antenna elements at the top and bottom ends of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back of the device.
3. The output power will reduce to body worn power level when top and bottom sensor pad be detected.
4. The sensors used to detect the proximity of the user's body at the front or back surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s). When front or back body worn condition is detected reduced power will be active.
5. The device employs proximity sensors also can detect the presence of the user's a finger or hand when handheld state at the front/back/top/bottom/left/right sides of the device. When front/back/top/bottom/left/right sides of handheld condition is detected reduced power will be active.
6. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed:



Sensor detection test set-up, front and back sides



Sensor detection test set-up, top, bottom, right and left sides

<P-Sensor>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	17	21	21	26

<Handheld for ANT0>

Proximity Sensor Triggering Distance (mm)						
Position	Front		Back		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	8	12	12	15	12	18

<Handheld for ANT1>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	7	12	11	14	5	8	12	17

<Handheld for ANT3>

Proximity Sensor Triggering Distance (mm)				
Position	Back		Left Side	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	5	6	4	5

<Handheld for ANT4& ANT5>

Proximity Sensor Triggering Distance (mm)		
Position	Back	
	Moving towards	Moving away
Minimum	4	5

<Handheld for ANT8>

Proximity Sensor Triggering Distance (mm)		
Position	Back	
	Moving towards	Moving away
Minimum	9	10

<Handheld for ANT2>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Right Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	9	10	14	15	11	12	13	14

<Handheld for ANT9>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Right Side	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	2	3	5	5

7. RF Exposure Limits

7.1 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.

7.2 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.

8. Specific Absorption Rate (SAR)

8.1 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.

8.2 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:

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

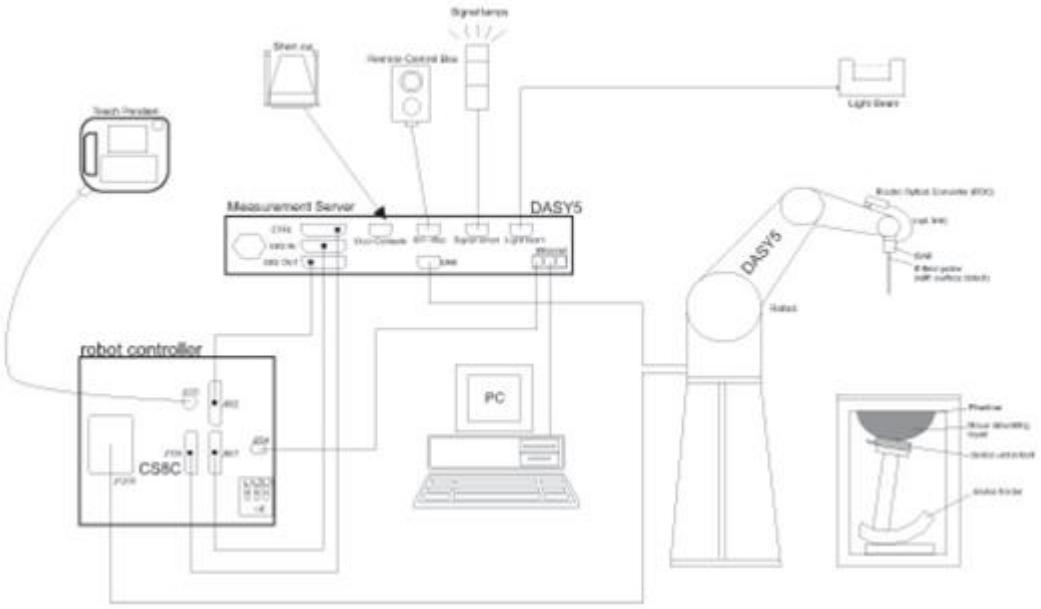
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

9. System Description and Setup

The DASY5 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win10 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.

9.1 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

9.2 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.

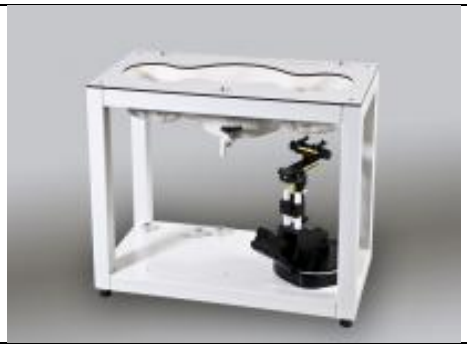
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

9.3 Phantom

<SAM Twin Phantom>

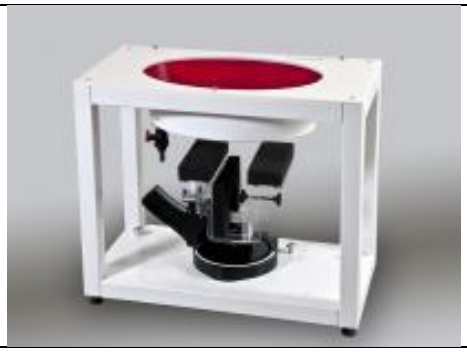
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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.

9.4 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

10. 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

10.1 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

10.2 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.

10.3 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.	

10.4 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.

10.5 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.

10.6 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.

11. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2022/2/24	2023/2/23
SPEAG	835MHz System Validation Kit	D835V2	4d162	2021/12/17	2022/12/16
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2023/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2021/12/20	2022/12/19
SPEAG	2450MHz System Validation Kit	D2450V2	924	2020/9/2	2023/9/1
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/25
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2020/11/25	2023/11/24
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2020/11/25	2023/11/24
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2020/5/14	2023/5/12
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2019/9/24	2022/9/22
SPEAG	Data Acquisition Electronics	DAE4	916	2021/12/30	2022/12/29
SPEAG	Dosimetric E-Field Probe	EX3DV4	3857	2021/11/24	2022/11/23
SPEAG	SAM Twin Phantom	SAM Twin	TP-1697	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306173	2021/7/15	2022/7/14
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
Anritsu	Power Meter	NRVD	102081	2021/8/12	2022/8/11
Anritsu	Power Meter	ML2495A	1005002	2022/1/5	2023/1/4
Anritsu	Power Meter	ML2495A	1435004	2021/10/14	2022/10/13
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
Anritsu	Power Sensor	MA2411B	1531198	2021/10/14	2022/10/13
R&S	CBT BLUETOOTH TESTER	CBT	100641	2022/1/5	2023/1/4
EXA	Spectrum Analyzer	FSV7	101631	2021/10/14	2022/10/13
FLUKE	DIGITAC THERMOMETER	51II	97240029	2021/10/23	2022/10/22
Testo	Thermo-Hygrometer	608-H1	1241332102	2022/1/6	2023/1/5
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	

Note:

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

12. System Verification

12.1 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.

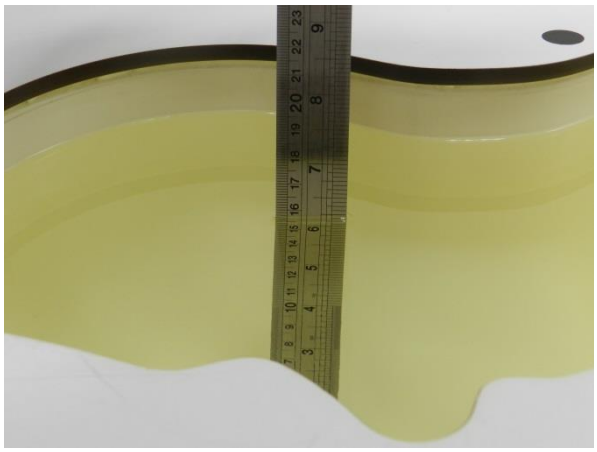


Fig 11.1 Photo of Liquid Height for Head SAR

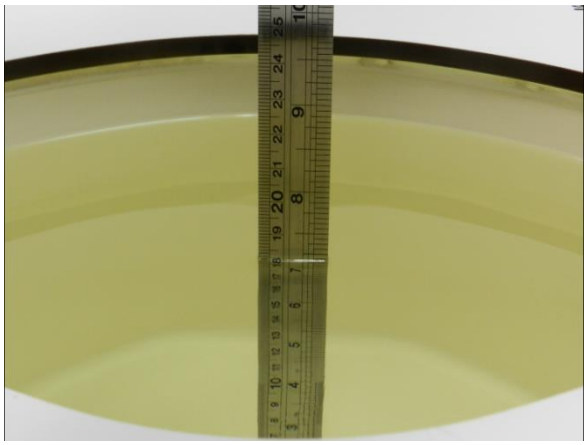


Fig 11.2 Photo of Liquid Height for Body SAR

12.2 Tissue Verification

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

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

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.8	0.905	42.762	0.89	41.90	1.69	2.06	±5	2022/5/10
835	Head	22.7	0.936	42.525	0.90	41.50	4.00	2.47	±5	2022/5/11
1750	Head	22.6	1.370	41.290	1.37	40.10	0.00	2.97	±5	2022/5/12
1900	Head	22.7	1.427	38.725	1.40	40.00	1.93	-3.19	±5	2022/5/13
2450	Head	22.9	1.824	39.243	1.80	39.20	1.33	0.11	±5	2022/5/14
2600	Head	22.9	1.931	39.054	1.96	39.00	-1.48	0.14	±5	2022/5/15
3500	Head	22.8	2.808	39.002	2.91	37.90	-3.51	2.91	±5	2022/5/16
3700	Head	22.6	2.994	38.681	3.12	37.70	-4.04	2.60	±5	2022/5/17
3900	Head	22.8	3.194	38.385	3.32	37.50	-3.80	2.36	±5	2022/5/18
5250	Head	22.7	4.552	36.211	4.71	35.90	-3.35	0.87	±5	2022/5/19
5600	Head	22.7	4.933	35.666	5.07	35.50	-2.70	0.47	±5	2022/5/20
5750	Head	22.9	5.097	35.471	5.22	35.40	-2.36	0.20	±5	2022/5/21
750	Head	22.6	0.906	42.775	0.89	41.90	1.80	2.09	±5	2022/5/24
835	Head	22.9	0.935	42.543	0.90	41.50	3.89	2.51	±5	2022/5/25
1750	Head	22.7	1.409	40.664	1.37	40.10	2.85	1.41	±5	2022/5/26
1900	Head	22.6	1.431	39.772	1.40	40.00	2.21	-0.57	±5	2022/5/27
2450	Head	22.9	1.805	38.557	1.80	39.20	0.28	-1.64	±5	2022/5/28
2600	Head	22.6	1.924	38.250	1.96	39.00	-1.84	-1.92	±5	2022/5/29
3500	Head	22.7	2.787	39.527	2.91	37.90	-4.23	4.29	±5	2022/5/30
3700	Head	22.6	3.004	37.496	3.12	37.70	-3.72	-0.54	±5	2022/5/31
3900	Head	22.8	3.210	37.055	3.32	37.50	-3.31	-1.19	±5	2022/6/1
5250	Head	22.7	4.562	35.992	4.71	35.90	-3.14	0.26	±5	2022/6/2
5600	Head	22.6	4.960	35.440	5.07	35.50	-2.17	-0.17	±5	2022/6/3
5750	Head	22.6	5.131	35.243	5.22	35.40	-1.70	-0.44	±5	2022/6/4

12.3 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)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2022/5/10	750	Head	50	1087	3857	916	0.406	8.58	8.12	-5.36
2022/5/11	835	Head	50	4d162	3857	916	0.476	9.64	9.52	-1.24
2022/5/12	1750	Head	50	1090	3857	916	1.830	37.00	36.6	-1.08
2022/5/13	1900	Head	50	5d182	3857	916	1.980	39.60	39.6	0.00
2022/5/14	2450	Head	50	924	3857	916	2.550	51.40	51	-0.78
2022/5/15	2600	Head	50	1061	3857	916	2.700	56.60	54	-4.59
2022/5/16	3500	Head	50	1037	3857	916	3.250	68.00	65	-4.41
2022/5/17	3700	Head	50	1008	3857	916	3.160	67.60	63.2	-6.51
2022/5/18	3900	Head	50	1048	3857	916	3.300	70.20	66	-5.98
2022/5/19	5250	Head	50	1113	3857	916	3.850	80.50	77	-4.35
2022/5/20	5600	Head	50	1113	3857	916	4.050	83.40	81	-2.88
2022/5/21	5750	Head	50	1113	3857	916	3.700	80.00	74	-7.50
2022/5/24	750	Head	50	1087	3857	916	0.426	8.58	8.52	-0.70
2022/5/25	835	Head	50	4d162	3857	916	0.499	9.64	9.98	3.53
2022/5/26	1750	Head	50	1090	3857	916	1.880	37.00	37.6	1.62
2022/5/27	1900	Head	50	5d182	3857	916	2.030	39.60	40.6	2.53
2022/5/28	2450	Head	50	924	3857	916	2.430	51.40	48.6	-5.45
2022/5/29	2600	Head	50	1061	3857	916	2.690	56.60	53.8	-4.95
2022/5/30	3500	Head	50	1037	3857	916	3.230	68.00	64.6	-5.00
2022/5/31	3700	Head	50	1008	3857	916	3.170	67.60	63.4	-6.21
2022/6/1	3900	Head	50	1048	3857	916	3.320	70.20	66.4	-5.41
2022/6/2	5250	Head	50	1113	3857	916	3.860	80.50	77.2	-4.10
2022/6/3	5600	Head	50	1113	3857	916	4.080	83.40	81.6	-2.16
2022/6/4	5750	Head	50	1113	3857	916	3.720	80.00	74.4	-7.00

<10g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2022/5/10	750	Head	50	1087	3857	916	0.263	5.65	5.26	-6.90
2022/5/11	835	Head	50	4d162	3857	916	0.311	6.26	6.22	-0.64
2022/5/12	1750	Head	50	1090	3857	916	0.976	19.50	19.52	0.10
2022/5/13	1900	Head	50	5d182	3857	916	1.030	20.20	20.6	1.98
2022/5/14	2450	Head	50	924	3857	916	1.250	24.00	25	4.17
2022/5/15	2600	Head	50	1061	3857	916	1.260	25.10	25.2	0.40
2022/5/16	3500	Head	50	1037	3857	916	1.270	25.40	25.4	0.00
2022/5/17	3700	Head	50	1008	3857	916	1.200	24.40	24	-1.64
2022/5/18	3900	Head	50	1048	3857	916	1.150	24.40	23	-5.74
2022/5/19	5250	Head	50	1113	3857	916	1.110	23.10	22.2	-3.90
2022/5/20	5600	Head	50	1113	3857	916	1.140	23.80	22.8	-4.20
2022/5/21	5750	Head	50	1113	3857	916	1.070	22.80	21.4	-6.14
2022/5/24	750	Head	50	1087	3857	916	0.276	5.65	5.52	-2.30
2022/5/25	835	Head	50	4d162	3857	916	0.326	6.26	6.52	4.15
2022/5/26	1750	Head	50	1090	3857	916	1.000	19.50	20	2.56
2022/5/27	1900	Head	50	5d182	3857	916	1.070	20.20	21.4	5.94
2022/5/28	2450	Head	50	924	3857	916	1.180	24.00	23.6	-1.67
2022/5/29	2600	Head	50	1061	3857	916	1.180	25.10	23.6	-5.98
2022/5/30	3500	Head	50	1037	3857	916	1.260	25.40	25.2	-0.79
2022/5/31	3700	Head	50	1008	3857	916	1.210	24.40	24.2	-0.82
2022/6/1	3900	Head	50	1048	3857	916	1.130	24.40	22.6	-7.38
2022/6/2	5250	Head	50	1113	3857	916	1.110	23.10	22.2	-3.90
2022/6/3	5600	Head	50	1113	3857	916	1.160	23.80	23.2	-2.52
2022/6/4	5750	Head	50	1113	3857	916	1.080	22.80	21.6	-5.26

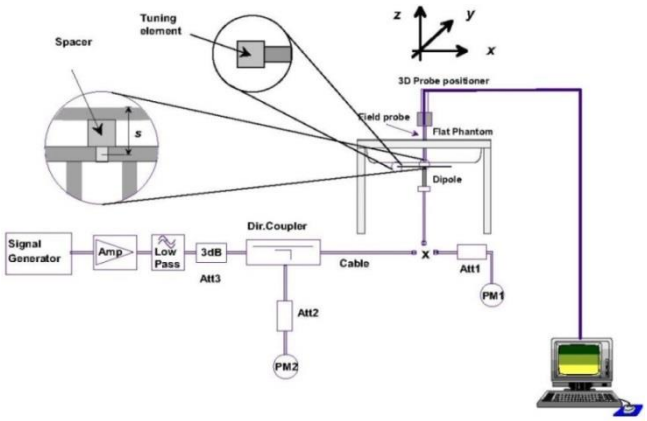


Fig 11.3.1 System Performance Check Setup

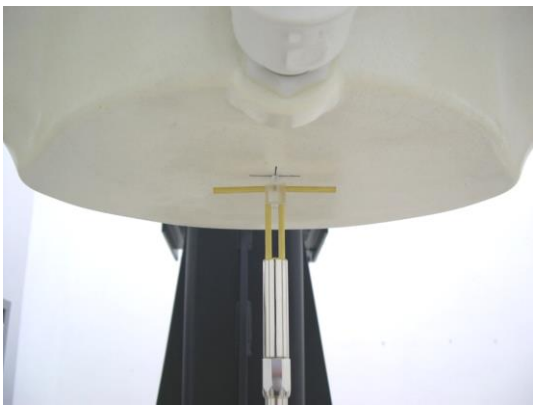


Fig 11.3.2 Setup Photo

13. RF Exposure Positions

13.1 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.

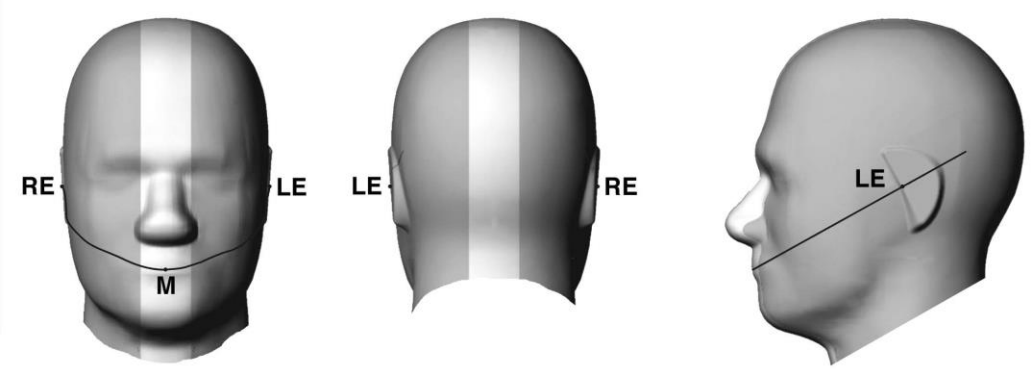


Fig 12.1.1 Front, back, and side views of SAM twin phantom

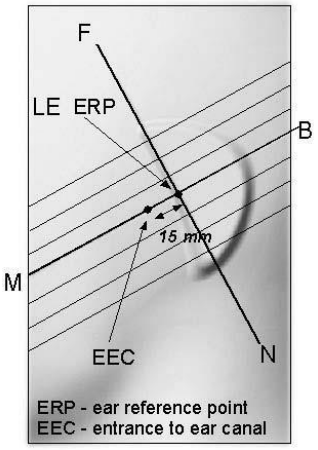


Fig 12.1.2 Close-up side view of phantom showing the ear region.

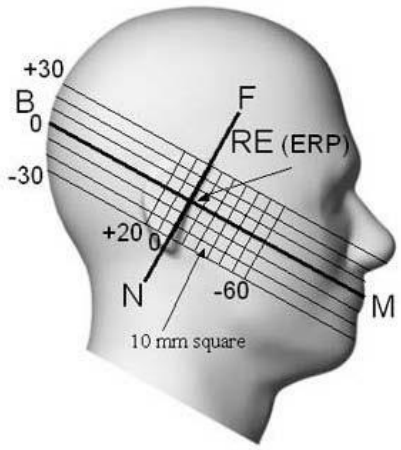


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

13.2 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.

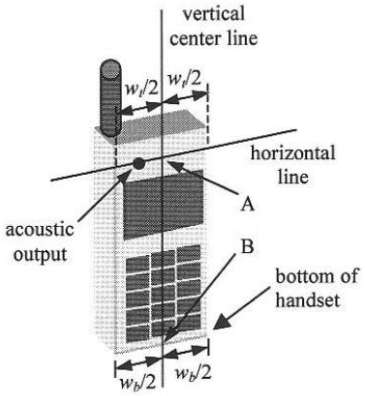


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

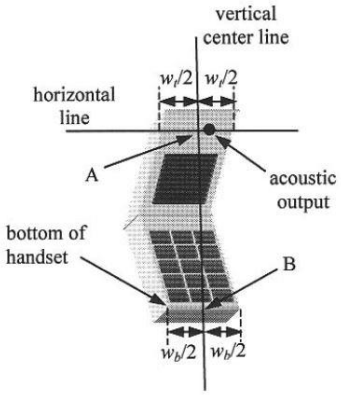


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

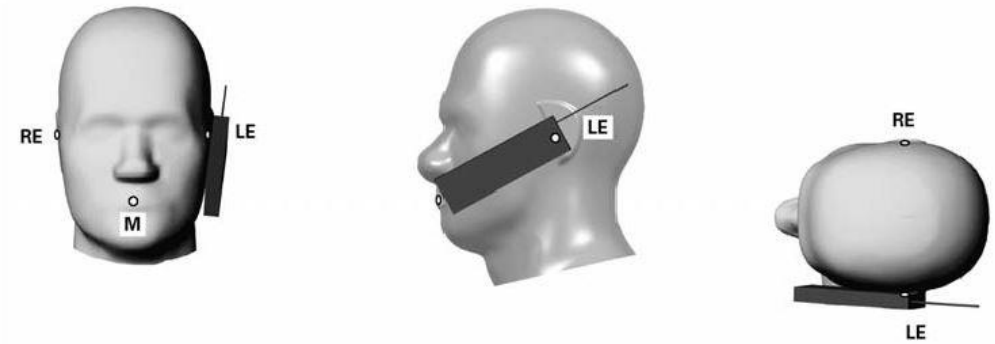


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

13.3 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

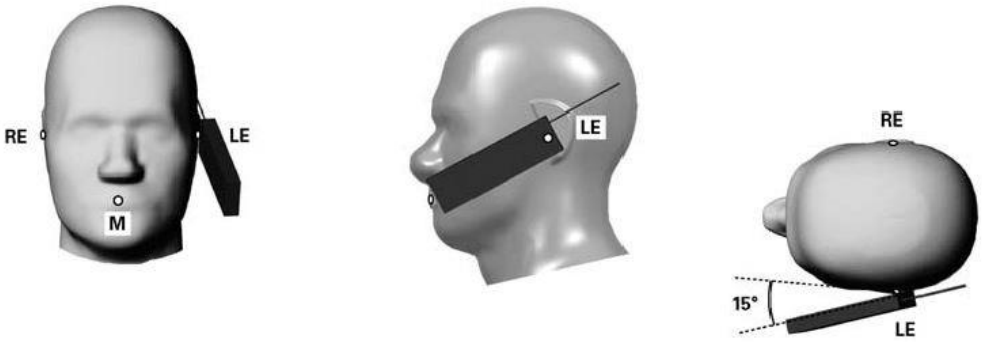


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

13.4 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.

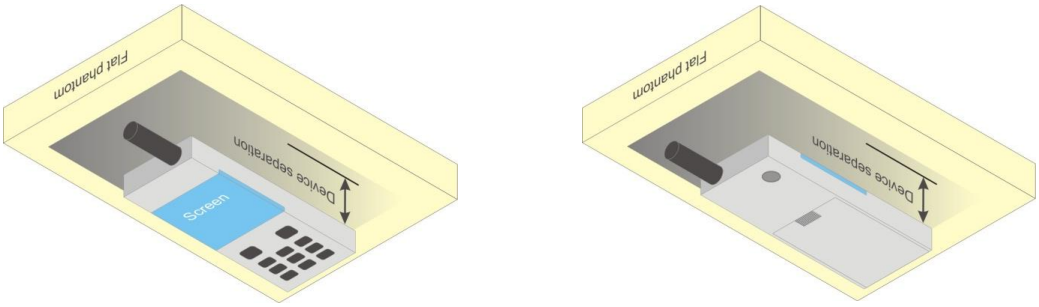


Fig 12.4 Body Worn Position

13.5 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.

13.6 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.

14. 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 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.		

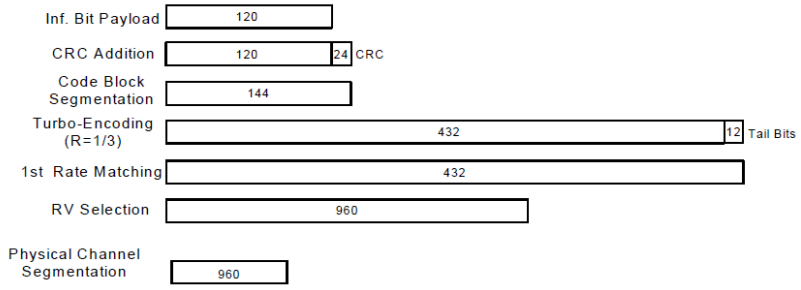


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

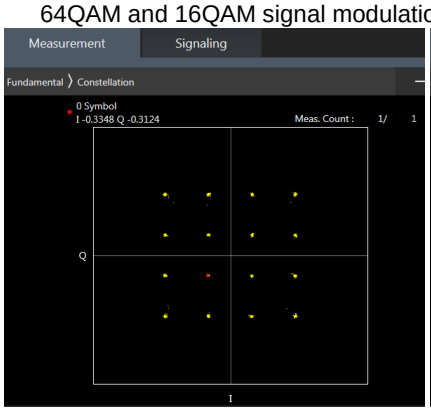
General Note:

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 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 to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

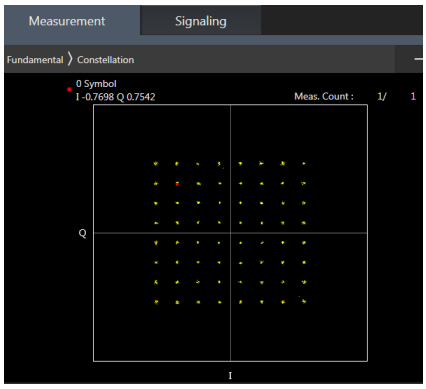
<LTE Conducted Power>

General Note:

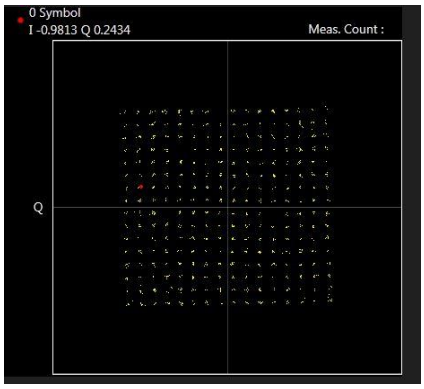
1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 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 B4 SAR test was covered by B66; 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 16QAM and 64QAM, 256QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 256QAM, 64QAM and 16QAM signal modulation are correct.



16QAM



64QAM



256QAM

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

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

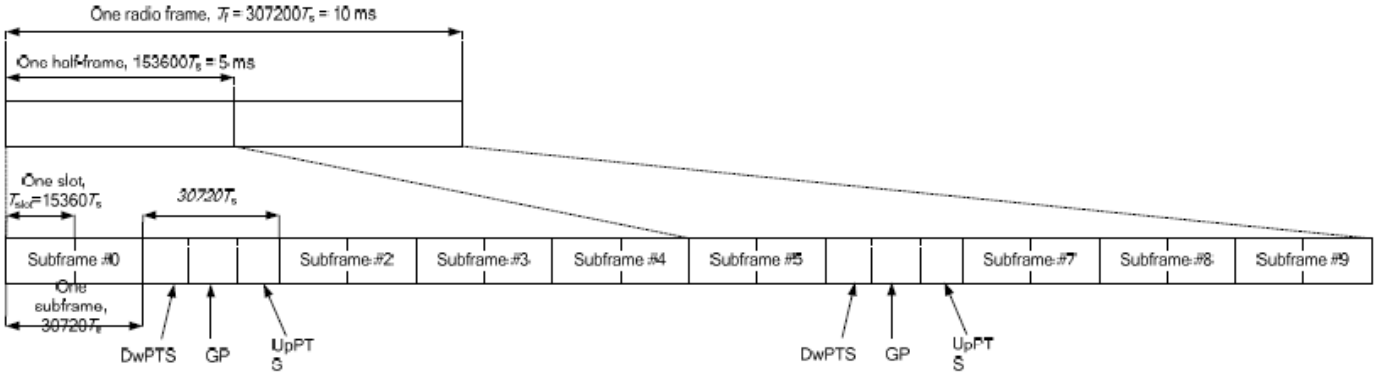


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

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.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	CA_2A-2A	3CC#1	1	CA_2A-2A-4A	4CC#1	1	CA_2A-2A-4A-4A	
2	CA_2A-4A	3CC#1	2	CA_2A-2A-5A	4CC#2	2	CA_2A-2A-4A-5A	
3	CA_2A-5A	3CC#2	3	CA_2A-2A-13A	4CC#3	3	CA_2A-2A-4A-13A	
4	CA_2A-7A	3CC#12	4	CA_2A-2A-66A	4CC#5	4	CA_2A-2A-5B	
5	CA_2A-13A	3CC#13	5	CA_2A-4A-4A	4CC#1	5	CA_2A-2A-5A-66A	
6	CA_2A-48A	3CC#19	6	CA_2A-4A-5A	4CC#2	6	CA_2A-2A-13A-66A	
7	CA_2A-66A	3CC#21	7	CA_2A-4A-13A	4CC#11	7	CA_2A-2A-66B	
8	CA_4A-4A	3CC#24	8	CA_2A-5B	4CC#4	8	CA_2A-2A-66C	
9	CA_4A-5A	3CC#23	9	CA_2A-5A-48A	4CC#46	9	CA_2A-2A-66A-66A	
10	CA_4A-13A	3CC#24	10	CA_2A-5A-66A	4CC#17	10	CA_2A-4A-4A-5A	
11	CA_4A-48A		11	CA_2A-7C	4CC#21	11	CA_2A-4A-4A-13A	
12	CA_5B	3CC#27	12	CA_2A-7A-7A	4CC#22	12	CA_2A-5A-5A-66A	
13	CA_5A-5A	3CC#28	13	CA_2A-7A-13A	4CC#22	13	CA_2A-4A-5B	
14	CA_5A-48A	3CC#31	14	CA_2A-7A-66A	4CC#24	14	CA_2A-5B-66A	
15	CA_5A-66A	3CC#28	15	CA_2A-13A-48A	4CC#26	15	CA_2A-5A-48C	
16	CA_7B		16	CA_2A-13A-66A	4CC#27	16	CA_2A-5A-48A-48A	
17	CA_7C	3CC#37	17	CA_2A-48C	4CC#32	17	CA_2A-5A-48A-66A	
18	CA_7A-7A	3CC#36	18	CA_2A-48A-48A	4CC#34	18	CA_2A-5A-66B	
19	CA_7A-13A	3CC#26	19	CA_2A-48A-66A	4CC#34	19	CA_2A-5A-66C	
20	CA_7A-66A	3CC#14	20	CA_2A-66B	4CC#35	20	CA_2A-5A-66A-66A	
21	CA_13A-48A	3CC#40	21	CA_2A-66C	4CC#32	21	CA_2A-7C-13A	
22	CA_13A-66A	3CC#16	22	CA_2A-66A-66A	4CC#36	22	CA_2A-7A-7A-13A	
23	CA_48B		23	CA_4A-4A-5A	4CC#10	23	CA_2A-7C-66A	
24	CA_48C	3CC#39	24	CA_4A-4A-13A	4CC#11	24	CA_2A-7A-7A-66A	
25	CA_48A-48A	3CC#40B	25	CA_4A-5B	4CC#37	25	CA_2A-13A-48C	
26	CA_48A-66A	3CC#41	26	CA_4A-48C		26	CA_2A-13A-48A-48A	
27	CA_66B	3CC#42	27	CA_5B-66A	4CC#41	27	CA_2A-13A-48A-66A	
28	CA_66C	3CC#54	28	CA_5A-5A-66A	4CC#12	28	CA_2A-13A-66B	
29	CA_66A-66A	3CC#55	29	CA_5A-48C	4CC#15	29	CA_2A-13A-66C	
30			30	CA_5A-48A-48A	4CC#16	30	CA_2A-13A-66A-66A	
31			31	CA_5A-48A-66A	4CC#17	31	CA_2A-48D	
32			32	CA_5A-66B	4CC#18	32	CA_2A-48A-48C	
33			33	CA_5A-66C	4CC#19	33	CA_2A-48C-66A	
34			34	CA_5A-66A-66A	4CC#20	34	CA_2A-48A-48A-66A	
35			35	CA_7C-13A	4CC#21	35	CA_2A-66A-66B	
36			36	CA_7A-7A-13A	4CC#22	36	CA_2A-66A-66A-66A	
37			37	CA_7C-66A	4CC#23	37	CA_4A-4A-5B	
38			38	CA_7A-7A-66A	4CC#24	38	CA_4A-48D	
39			39	CA_13A-48C	4CC#25	39	CA_5B-66B	
40			40	CA_13A-48A-48A	4CC#26	40	CA_5B-66C	
41			41	CA_13A-48A-66A	4CC#27	41	CA_5B-66A-66A	
42			42	CA_13A-66B	4CC#28	42	CA_5A-5A-66B	
43			43	CA_13A-66C	4CC#29	43	CA_5A-5A-66C	
44			44	CA_13A-66A-66A	4CC#30	44	CA_5A-5A-66A-66A	

45			45	CA_48D	4CC#31	45	CA_5A-48D	
46			46	CA_48A-48C	4CC#32	46	CA_5A-48A-48C	
47			47	CA_48A-48A-48A		47	CA_5A-48C-66A	
48			48	CA_48C-66A	4CC#33	48	CA_5A-48A-48A-66A	
49			49	CA_48A-48A-66A	4CC#34	49	CA_13A-48D	
50			50	CA_48A-66B	4CC#53	50	CA_13A-48A-48C	
51			51	CA_48A-66C	4CC#54	51	CA_13A-48C-66A	
52			52	CA_48A-66A-66A	4CC#52	52	CA_13A-48A-48A-66A	
53			53	CA_66A-66B	4CC#55	53	CA_13A-48A-66B	
54			54	CA_66A-66C		54	CA_13A-48A-66C	
55			55	CA_66A-66A-66A	4CC#68	55	CA_13A-66A-66B	
56			56			56	CA_13A-66A-66A-66A	
57			57			57	CA_48C-48C	
58			58			58	CA_48E	
59			59			59	CA_48A-48D	
60			60			60	CA_48D-66A	
61			61			61	CA_48A-48C-66A	
62			62			62	CA_48C-66B	
63			63			63	CA_48C-66C	
64			64			64	CA_48C-66A-66A	
65			65			65	CA_48A-48A-66B	
66			66			66	CA_48A-48A-66C	
67			67			67	CA_48A-48A-66A-66A	
68			68			68	CA_48A-66A-66A-66A	

LTE Carrier Aggregation Conducted Power (Downlink)

i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.

ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.

iii. The device supports downlink four carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.

iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

v. For inter-band CA, the SCC selected highest bandwidth and near the middle of its transmission band. For SCC DL RB size and offset will base on the PCC corresponding RB allocation.

vi. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.

vii. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Bands 2/4/7/48/66 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

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

4X4 MIMO	Band
	LTE Band B2/4/7/48/66

LTE Carrier Aggregation Conducted Power (Uplink)

2CC Uplink Carrier Aggregation		
Number	Combination	Ant No.
1	5B	ANT0/1
2	48B	ANT3/4/5/8
3	48C	ANT3/4/5/8
4	66B	ANT0/1
5	66C	ANT0/1

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B5/B48/B66 with a maximum of two uplink component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.

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

v. LTE CA_66B/CA_48B test was covered by CA_66C/CA_48C; therefore, SAR was only assessed for CA_66C/ CA_48C.

<Inter-band uplink carrier aggregation consideration>

CA	Main Antenna Tx0	Main Antenna Tx1	ASDiv Tx0	ASDiv Tx1
CA_2A-4A	Ant 0	Ant 1	Ant 1	Ant 0
CA_2A-5A	Ant 0	Ant 1	Ant 1	Ant 0
CA_2A-13A	Ant 0	Ant 1	Ant 1	Ant 0
CA_2A-48A	Ant 0	Ant 3	Ant 1	Ant 4/5/8
CA_2A-66A	Ant 0	Ant 1	Ant 1	Ant 0
CA_4A-5A	Ant 0	Ant 1	Ant 1	Ant 0
CA_4A-13A	Ant 0	Ant 1	Ant 1	Ant 0
CA_5A-66A	Ant 1	Ant 0	Ant 0	Ant 1
CA_13A-66A	Ant 1	Ant 0	Ant 0	Ant 1
CA_48A-66A	Ant 3	Ant 0	Ant 4/5/8	Ant 1

General Note:

1. The single carrier of inte-band CA uplink power level is the same as Non-CA standalone LTE power level.
2. The product implements MediaTek TAS feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency $\leqslant$ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.
3. MediaTek's TAS algorithm controls the total RF exposure base on LTE inter CA bands to not exceed FCC limit. In Part 1 Report, simultaneous transmission compliance was evaluated with other Radios (WLAN or BT) using standalone LTE SAR mode.

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n2 / n5 / n66 / n77 is NSA mode.
2. 5G NR n2 / n5 / n66 / n48 / n77 / n78 is SA mode.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
   c. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
   d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested
   f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
   g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
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. 5G NR n77 supports HPUE, HPUE power and SAR testing performed separately.
6. 5G NR n77 HUPE with higher power, 5G NR n77 HUPE SAR can represent power class 3 level SAR.
7. 5G NR n77 supports MIMO mode only limit to SA mode. For per chain maximum power of MIMO mode power level is SISO mode power level (standalone SA mode). MIMO SAR base on standalone SAR summed together as MIMO SAR.
8. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so NSA SAR can represent NSA mode SAR.
9. 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.
10. 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.
11. 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.
12. For Inter-band NR CA and NR DC bands co-located SAR analysis is performed using standalone SAR summed together and they are more conservatively for Inter-band NR CA and NR DC bands.

<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	Main Antenna Tx		ASDiv Tx	
	LTE TX	NR TX	LTE TX	NR TX
DC_2A_n2A	Ant 0	Ant 1	Ant 1	Ant 0
DC_2A_n5A	Ant 0	Ant 1	Ant 1	Ant 0
DC_2A_n66A	Ant 0	Ant 1	Ant 1	Ant 0
DC_2A_n77A	Ant 0	Ant 3	Ant 1/0	Ant 3/4/5/8
DC_5A_n2A	Ant 0	Ant 1	Ant 1	Ant 0
DC_5A_n66A	Ant 0	Ant 1	Ant 1	Ant 0
DC_5A_n77A	Ant 0	Ant 3	Ant 1/0	Ant 3/4/5/8
DC_5A_n78A	Ant 0	Ant 3	Ant 1/0	Ant 3/4/5/8
DC_7A_n66A	Ant 0	Ant 1		
DC_7A_n77A	Ant 0	Ant 5		
DC_7A_n78A	Ant 0	Ant 5		
DC_13A_n2A	Ant 0	Ant 1	Ant 1	Ant 0
DC_13A_n66A	Ant 0	Ant 1	Ant 1	Ant 0
DC_13A_n77A	Ant 0	Ant 3	Ant 1/0	Ant 3/4/5/8
DC_48A_n2A	Ant 3	Ant 1	Ant 3/4/5/8	Ant 0/1
DC_48A_n5A	Ant 3	Ant 1	Ant 3/4/5/8	Ant 0/1
DC_48A_n66A	Ant 3	Ant 1	Ant 3/4/5/8	Ant 0/1
DC_48A_n77A	Ant 3	Ant 5		
DC_66A_n2A	Ant 0	Ant 1	Ant 1	Ant 0
DC_66A_n5A	Ant 0	Ant 1	Ant 1	Ant 0
DC_66A_n66A	Ant 0	Ant 1	Ant 1	Ant 0
DC_66A_n77A	Ant 0	Ant 3	Ant 1/0	Ant 3/4/5/8

Inter-Band CA Configuration:

CA	Main Antenna Tx0	Main Antenna Tx1	ASDiv Tx0	ASDiv Tx1
CA_n2A-n5A	Ant 1	Ant 0	Ant 0	Ant 1
CA_n2A-n48A	Ant 0	Ant 3	Ant 1	Ant 4/5/8
CA_n2A-n66A	Ant 1	Ant 0	Ant 0	Ant 1
CA_n2A-n77A	Ant 0	Ant 3	Ant 1	Ant 4/5/8
CA_n5A-n48A	Ant 0	Ant 3	Ant 1	Ant 4/5/8
CA_n5A-n66A	Ant 0	Ant 1	Ant 1	Ant 0
CA_n5A-n77A	Ant 1	Ant 3	Ant 0	Ant 4/5/8
CA_n48A-n66A	Ant 3	Ant 0	Ant 4/5/8	Ant 1
CA_n48A-n77A	Ant 3	Ant 5	Ant 4/5/8	Ant 3/4/8
CA_n66A-n77A	Ant 0	Ant 3	Ant 1	Ant 4/5/8

Inter-Band NR DC Configuration:

NRDC	Main Antenna Tx		ASDiv Tx	
	NR TX	NR TX	NR TX	NR TX
DC_ n2A-n48A	Ant 1	Ant 3	Ant 0/1	Ant 3/4/5/8
DC_ n2A-n77A	Ant 1	Ant 3	Ant 0/1	Ant 3/4/5/8
DC_ n5A-n48A	Ant 1	Ant 3	Ant 0/1	Ant 3/4/5/8
DC_ n5A-n77A	Ant 1	Ant 3	Ant 0/1	Ant 3/4/5/8
DC_ n48A-n66A	Ant 3	Ant 1	Ant 3/4/5/8	Ant 0/1
DC_ n66A-n77A	Ant 1	Ant 3	Ant 0/1	Ant 3/4/5/8

NR UL MIMO Configuration:

NR UL MIMO	TX Ant	TX Ant
FR1 n77	Ant3/Ant4	Ant5/Ant8

<WLAN Conducted Power>

General Note:

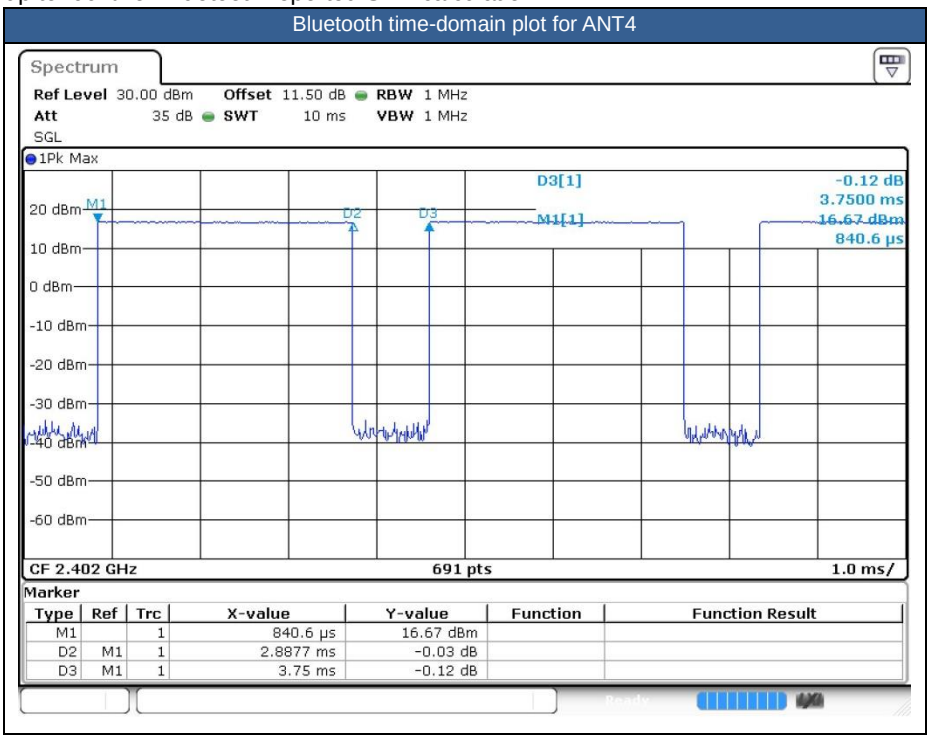
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. 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.
5. 802.11ax supports full tone size and partial tone size, after verification for the partial tone size mode power level will not higher than full tone size power level, so chose full tone power to be measured in this report.
6. The 2.4GHz/5GHz/6GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 77.01 % for 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 to100% for Bluetooth reported SAR calculation

Bluetooth time-domain plot for ANT4



15. Antenna Location

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

16. 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 of power class 3, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the MediaTek TAS will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
5. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head and Handheld. For WLAN when transmit simultaneous with WWAN and Proximity sensors trigger, power reduction will be activated to body-worn and Handheld.
6. For some WWAN bands, sensor on reduced power level is higher than hotspot reduced power level, so front/back sensor on SAR can represent hotspot conservatively.
7. 5G NR n77 supports HPUE, HPUE power and SAR testing performed separately.
8. 5G NR n77 HUPE with higher power, 5G NR n77 HUPE SAR can represent power class 3 level SAR.
9. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
10. For 5GNR FDD/TDD supports SCS15KHz and SCS30KHz, after verification for 30KHz at FDD power level is less than 15KHz at FDD power level, also verification for 15KHz at TDD power level is less than 30KHz at TDD power level, so only show 15KHz at FDD power and 30KHz at TDD power, and chose higher power which is SCS15KHz for FDD bands and SCS30KHz for TDD bands to perform SAR testing.
11. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
12. 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.
13. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
14. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
15. This device supports 5GNR FR1 bands, including NSA mode and SA mode. NSA and SA mode performed SAR separately.
16. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR

must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of GSM850/1900, WCDMA Band II/V, LTE Band 2/4/7/66/48, 5GNR n2/n66/n48/n77, therefore product specific 10g SAR is necessary.
b. WLAN 5.3/5.5/6GHz tested the product specific 10g SAR since it has no hotspot mode.
c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

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 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 to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4 / B5 / B12 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 B4 SAR test was covered by LTE B66; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   c. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   d. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
   e. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
   f. For 5G FR1 n5/n66/n77 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

WLAN/Bluetooth 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. 802.11ax supports full tone size and partial tone size, after verification for the partial tone size mode power level will not higher than full tone size power level, so chose full tone power to be measured in this report.
7. The 2.4GHz/5GHz/6GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.

ECI status description：

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

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

Exposure Condition	ECI
Head SAR	ECI2
Body worn Mode SAR	ECI3
Hotspot Mode SAR	ECI7
Extremity(Handheld) SAR	ECI6
Sensor off SAR	ECI4

16.1 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)
750MHz																		
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI2	23095	707.5	22.77	24.00	1.327	0.04	0.231	0.307
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI2	23095	707.5	21.66	23.00	1.361	0.11	0.111	0.151
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI2	23095	707.5	22.77	24.00	1.327	-0.06	0.145	0.192
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI2	23095	707.5	21.66	23.00	1.361	-0.04	0.076	0.103
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI2	23095	707.5	22.77	24.00	1.327	-0.02	0.204	0.271
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI2	23095	707.5	21.66	23.00	1.361	-0.11	0.101	0.138
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI2	23095	707.5	22.77	24.00	1.327	0.05	0.138	0.183
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI2	23095	707.5	21.66	23.00	1.361	0.01	0.070	0.095
01	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI2	23095	707.5	22.01	23.30	1.346	-0.03	0.736	**0.991**
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI2	23095	707.5	21.02	22.30	1.343	0.04	0.371	0.498
	LTE Band 12	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI2	23095	707.5	21.06	22.30	1.330	-0.02	0.384	0.511
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	23095	707.5	22.01	23.30	1.346	-0.17	0.600	0.808
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI2	23095	707.5	21.02	22.30	1.343	-0.18	0.307	0.412
	LTE Band 12	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI2	23095	707.5	21.06	22.30	1.330	0.09	0.313	0.416
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI2	23095	707.5	22.01	23.30	1.346	0.06	0.487	0.655
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI2	23095	707.5	21.02	22.30	1.343	0.04	0.256	0.344
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI2	23095	707.5	22.01	23.30	1.346	0.13	0.479	0.645
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI2	23095	707.5	21.02	22.30	1.343	-0.09	0.251	0.337
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI2	23230	782	22.89	24.00	1.291	0.04	0.172	0.222
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI2	23230	782	21.70	23.00	1.349	-0.10	0.109	0.147
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI2	23230	782	22.89	24.00	1.291	0.19	0.098	0.127
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI2	23230	782	21.70	23.00	1.349	0.11	0.060	0.081
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI2	23230	782	22.89	24.00	1.291	0.02	0.153	0.198
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI2	23230	782	21.70	23.00	1.349	-0.10	0.094	0.127
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI2	23230	782	22.89	24.00	1.291	-0.18	0.100	0.129
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI2	23230	782	21.70	23.00	1.349	-0.10	0.065	0.088
02	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI2	23230	782	22.92	24.00	1.282	-0.07	0.775	**0.994**
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI2	23230	782	21.78	23.00	1.324	-0.03	0.478	0.633
	LTE Band 13	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI2	23230	782	21.70	23.00	1.349	-0.05	0.480	0.648
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	23230	782	22.92	24.00	1.282	0.17	0.610	0.782
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI2	23230	782	21.78	23.00	1.324	0.02	0.377	0.499
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI2	23230	782	22.92	24.00	1.282	0.02	0.521	0.668
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI2	23230	782	21.78	23.00	1.324	0.06	0.325	0.430
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI2	23230	782	22.92	24.00	1.282	0.10	0.513	0.658
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI2	23230	782	21.78	23.00	1.324	0.06	0.323	0.428
835MHz																		
03	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	ECI2	189	836.4	28.79	30.50	1.483	0.09	0.275	**0.408**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	ECI2	189	836.4	28.79	30.50	1.483	-0.04	0.134	0.199
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI2	189	836.4	28.79	30.50	1.483	0.17	0.264	0.391
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	ECI2	189	836.4	28.79	30.50	1.483	0.02	0.134	0.199
	LTE Band 5	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI2	20525	836.5	23.12	24.00	1.225	0.01	0.234	0.287
	LTE Band 5B	10M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	ECI2	20525+20597	836.5+843.7	22.97	24.00	1.268	0.03	0.209	0.265
	LTE Band 5	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI2	20525	836.5	22.05	23.00	1.245	-0.07	0.131	0.163
	LTE Band 5	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI2	20525	836.5	23.12	24.00	1.225	0.03	0.104	0.127
	LTE Band 5	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI2	20525	836.5	22.05	23.00	1.245	-0.17	0.000	0.000
	LTE Band 5	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI2	20525	836.5	23.12	24.00	1.225	-0.01	0.097	0.119
	LTE Band 5	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI2	20525	836.5	22.05	23.00	1.245	-0.07	0.000	0.000
	LTE Band 5	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI2	20525	836.5	23.12	24.00	1.225	0.05	0.099	0.121
	LTE Band 5	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI2	20525	836.5	22.05	23.00	1.245	0.18	0.000	0.000
04	LTE Band 5	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI2	20525	836.5	20.91	21.90	1.256	-0.02	0.789	**0.991**

	LTE Band 5B	10M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	ECI2	20525+20597	836.5+843.7	20.78	21.90	1.294	0.06	0.703	0.910
	LTE Band 5	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI2	20525	836.5	19.78	20.90	1.294	0.08	0.418	0.541
	LTE Band 5	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI2	20525	836.5	19.77	20.90	1.297	0.03	0.424	0.550
	LTE Band 5	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	20525	836.5	20.91	21.90	1.256	-0.08	0.631	0.793
	LTE Band 5	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI2	20525	836.5	19.78	20.90	1.294	0.05	0.337	0.436
	LTE Band 5	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI2	20525	836.5	20.91	21.90	1.256	0.02	0.542	0.681
	LTE Band 5	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI2	20525	836.5	19.78	20.90	1.294	0.05	0.293	0.379
	LTE Band 5	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI2	20525	836.5	20.91	21.90	1.256	-0.16	0.523	0.657
	LTE Band 5	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI2	20525	836.5	19.78	20.90	1.294	-0.17	0.278	0.360
05	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI2	4182	836.4	23.24	24.00	1.191	0.09	0.322	**0.384**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	ECI2	4182	836.4	23.24	24.00	1.191	-0.19	0.151	0.180
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI2	4182	836.4	23.24	24.00	1.191	0.04	0.281	0.335
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	ECI2	4182	836.4	23.24	24.00	1.191	-0.18	0.145	0.173
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 0	ECI2	167300	836.5	23.11	24.00	1.227	0.01	0.184	0.226
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 0	ECI2	167300	836.5	22.79	24.00	1.321	0.11	0.183	0.242
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 0	ECI2	167300	836.5	23.11	24.00	1.227	0.03	0.085	0.104
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 0	ECI2	167300	836.5	22.79	24.00	1.321	-0.10	0.087	0.115
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	ECI2	167300	836.5	23.11	24.00	1.227	0.02	0.144	0.177
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 0	ECI2	167300	836.5	22.79	24.00	1.321	0.06	0.155	0.205
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 0	ECI2	167300	836.5	23.11	24.00	1.227	-0.17	0.085	0.104
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 0	ECI2	167300	836.5	22.79	24.00	1.321	0.06	0.094	0.124
06	FR1 n5	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	ECI2	167300	836.5	20.77	21.70	1.239	-0.06	0.798	**0.989**
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	ECI2	167300	836.5	20.74	21.70	1.247	0.17	0.679	0.847
	FR1 n5	20M	QPSK	100	0	DFT-15	Right Cheek	0mm	Ant 1	ECI2	167300	836.5	20.61	21.70	1.285	0.08	0.445	0.572
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	ECI2	167300	836.5	20.77	21.70	1.239	0.03	0.587	0.727
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	ECI2	167300	836.5	20.74	21.70	1.247	-0.15	0.492	0.614
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	ECI2	167300	836.5	20.77	21.70	1.239	-0.09	0.529	0.655
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 1	ECI2	167300	836.5	20.74	21.70	1.247	0.04	0.475	0.593
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	ECI2	167300	836.5	20.77	21.70	1.239	0.14	0.550	0.681
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 1	ECI2	167300	836.5	20.74	21.70	1.247	0.06	0.431	0.538
1750MHz																		
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI2	132322	1745	22.57	24.00	1.390	0.05	0.011	0.015
	LTE Band 66C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	ECI2	132322+132520	1745+1764.8	22.43	24.00	1.435	0.01	0.010	0.014
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI2	132322	1745	21.63	23.00	1.371	0.08	0.008	0.011
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI2	132322	1745	22.57	24.00	1.390	0.04	0.007	0.010
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI2	132322	1745	21.63	23.00	1.371	0.07	0.005	0.007
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI2	132322	1745	22.57	24.00	1.390	0.02	0.010	0.014
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI2	132322	1745	21.63	23.00	1.371	0.09	0.009	0.012
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI2	132322	1745	22.57	24.00	1.390	0.03	0.006	0.008
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI2	132322	1745	21.63	23.00	1.371	-0.01	0.004	0.005
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI2	132322	1745	16.44	17.50	1.276	0.04	0.522	0.666
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI2	132322	1745	15.68	16.50	1.208	0.09	0.242	0.292
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	132322	1745	16.44	17.50	1.276	0.08	0.635	0.811
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	132072	1720	16.36	17.50	1.300	-0.16	0.620	0.806
07	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	132572	1770	16.42	17.50	1.282	-0.09	0.768	**0.985**
	LTE Band 66C	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	132572+132374	1770+1750.2	16.25	17.50	1.334	0.07	0.684	0.912
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI2	132322	1745	15.68	16.50	1.208	0.05	0.283	0.342
	LTE Band 66	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	ECI2	132322	1745	15.68	16.50	1.208	0.14	0.296	0.358
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI2	132322	1745	16.44	17.50	1.276	0.12	0.242	0.309
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI2	132322	1745	15.68	16.50	1.208	0.09	0.112	0.135
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI2	132322	1745	16.44	17.50	1.276	0.04	0.314	0.401
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI2	132322	1745	15.68	16.50	1.208	0.05	0.145	0.175
	FR1 n66	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 0	ECI2	349000	1745	23.73	24.50	1.194	-0.1	0.096	0.115
	FR1 n66	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 0	ECI2	349000	1745	23.53	24.50	1.250	0.1	0.086	0.108
	FR1 n66	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 0	ECI2	349000	1745	23.73	24.50	1.194	0.15	0.058	0.069
	FR1 n66	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 0	ECI2	349000	1745	23.53	24.50	1.250	0.05	0.056	0.070

	FR1 n66	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	ECI2	349000	1745	23.73	24.50	1.194	0.05	0.092	0.110
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 0	ECI2	349000	1745	23.53	24.50	1.250	0.03	0.088	0.110
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 0	ECI2	349000	1745	23.73	24.50	1.194	0.06	0.066	0.079
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 0	ECI2	349000	1745	23.53	24.50	1.250	0.02	0.055	0.069
	FR1 n66	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	ECI2	349000	1745	15.81	16.80	1.256	0.07	0.581	0.730
	FR1 n66	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 1	ECI2	349000	1745	15.68	16.80	1.294	0.14	0.674	0.872
	FR1 n66	40M	QPSK	216	0	DFT-15	Right Cheek	0mm	Ant 1	ECI2	349000	1745	15.65	16.80	1.303	0.13	0.435	0.567
	FR1 n66	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	ECI2	349000	1745	15.81	16.80	1.256	0.03	0.681	0.855
08	FR1 n66	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	ECI2	349000	1745	15.68	16.80	1.294	0.07	0.771	**0.998**
	FR1 n66	40M	QPSK	216	0	DFT-15	Right Tilted	0mm	Ant 1	ECI2	349000	1745	15.65	16.80	1.303	0.15	0.502	0.654
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	ECI2	349000	1745	15.81	16.80	1.256	0.03	0.252	0.317
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 1	ECI2	349000	1745	15.68	16.80	1.294	0.02	0.290	0.375
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	ECI2	349000	1745	15.81	16.80	1.256	-0.08	0.338	0.425
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 1	ECI2	349000	1745	15.68	16.80	1.294	0.02	0.382	0.494

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 (4 Tx slots)	Right Cheek	0mm	Ant 0	ECI2	661	1880	25.71	27.50	1.510	0.19	0.060	0.091
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	ECI2	661	1880	25.71	27.50	1.510	-0.13	0.049	0.074
09	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI2	661	1880	25.71	27.50	1.510	0.01	0.070	**0.106**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	ECI2	661	1880	25.71	27.50	1.510	0.06	0.044	0.066
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI2	9400	1880	23.06	24.00	1.242	0.09	0.178	0.221
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	ECI2	9400	1880	23.06	24.00	1.242	0.08	0.146	0.181
10	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI2	9400	1880	23.06	24.00	1.242	0.09	0.245	**0.304**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	ECI2	9400	1880	23.06	24.00	1.242	0.06	0.137	0.170
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI2	18900	1880	22.62	24.00	1.374	-0.13	0.048	0.066
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI2	18900	1880	21.82	23.00	1.312	0.01	0.000	0.000
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI2	18900	1880	22.62	24.00	1.374	0.18	0.047	0.065
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI2	18900	1880	21.82	23.00	1.312	0.08	0.000	0.000
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI2	18900	1880	22.62	24.00	1.374	0.09	0.068	0.093
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI2	18900	1880	21.82	23.00	1.312	0.09	0.030	0.039
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI2	18900	1880	22.62	24.00	1.374	0.11	0.043	0.059
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI2	18900	1880	21.82	23.00	1.312	-0.19	0.000	0.000
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI2	18900	1880	15.56	16.60	1.271	0.05	0.635	0.807
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI2	18700	1860	15.48	16.60	1.294	-0.13	0.670	0.867
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI2	19100	1900	15.33	16.60	1.340	0.17	0.604	0.809
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI2	18900	1880	14.66	15.60	1.242	0.06	0.319	0.396
	LTE Band 2	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	ECI2	18900	1880	14.62	15.60	1.253	-0.12	0.259	0.325
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	18900	1880	15.56	16.60	1.271	-0.08	0.745	0.947
11	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	18700	1860	15.48	16.60	1.294	-0.09	0.776	**1.004**
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI2	19100	1900	15.33	16.60	1.340	0.06	0.692	0.927
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI2	18900	1880	14.66	15.60	1.242	-0.14	0.355	0.441
	LTE Band 2	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	ECI2	18900	1880	14.62	15.60	1.253	0.04	0.349	0.437
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI2	18900	1880	15.56	16.60	1.271	0.09	0.265	0.337
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI2	18900	1880	14.66	15.60	1.242	0.08	0.111	0.138
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI2	18900	1880	15.56	16.60	1.271	0.18	0.325	0.413
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI2	18900	1880	14.66	15.60	1.242	0.05	0.142	0.176
	FR1 n2	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 0	ECI2	376000	1880	23.92	24.00	1.019	0.17	0.084	0.086
	FR1 n2	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 0	ECI2	376000	1880	23.84	24.00	1.038	0.15	0.078	0.081
	FR1 n2	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 0	ECI2	376000	1880	23.92	24.00	1.019	0.02	0.078	0.079
	FR1 n2	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 0	ECI2	376000	1880	23.84	24.00	1.038	0.17	0.072	0.075
	FR1 n2	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	ECI2	376000	1880	23.92	24.00	1.019	0.04	0.114	0.116
	FR1 n2	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 0	ECI2	376000	1880	23.84	24.00	1.038	0.06	0.098	0.102
	FR1 n2	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 0	ECI2	376000	1880	23.92	24.00	1.019	-0.19	0.069	0.070
	FR1 n2	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 0	ECI2	376000	1880	23.84	24.00	1.038	0.08	0.069	0.072

	FR1 n2	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	ECI2	376000	1880	16.18	17.10	1.236	-0.15	0.610	0.754
	FR1 n2	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 1	ECI2	376000	1880	16.01	17.10	1.285	0.13	0.602	0.774
	FR1 n2	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	ECI2	376000	1880	16.18	17.10	1.236	0.02	0.704	0.870
	FR1 n2	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	ECI2	374000	1870	16.03	17.10	1.279	-0.18	0.731	0.935
	FR1 n2	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	ECI2	378000	1890	16.09	17.10	1.262	0.05	0.691	0.872
	FR1 n2	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	ECI2	376000	1880	16.01	17.10	1.285	-0.13	0.695	0.893
12	FR1 n2	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	ECI2	374000	1870	15.88	17.10	1.324	-0.07	0.751	**0.995**
	FR1 n2	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	ECI2	378000	1890	16.00	17.10	1.288	0.02	0.674	0.868
	FR1 n2	40M	QPSK	216	0	DFT-15	Right Tilted	0mm	Ant 1	ECI2	376000	1880	15.98	17.10	1.294	0.01	0.411	0.532
	FR1 n2	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	ECI2	376000	1880	16.18	17.10	1.236	0.06	0.254	0.314
	FR1 n2	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 1	ECI2	376000	1880	16.01	17.10	1.285	0.02	0.252	0.324
	FR1 n2	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	ECI2	376000	1880	16.18	17.10	1.236	0.01	0.329	0.407
	FR1 n2	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 1	ECI2	376000	1880	16.01	17.10	1.285	0.01	0.328	0.422

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																				
13	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI2	21100	2535	22.47	24.00	1.422	-	-	-0.03	0.016	**0.022**
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI2	21100	2535	21.69	23.00	1.352	-	-	-0.02	0.011	0.015
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI2	21100	2535	22.47	24.00	1.422	-	-	-0.07	0.008	0.011
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI2	21100	2535	21.69	23.00	1.352	-	-	0.07	0.004	0.005
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI2	21100	2535	22.47	24.00	1.422	-	-	-0.18	0.011	0.016
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI2	21100	2535	21.69	23.00	1.352	-	-	-0.06	0.006	0.008
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI2	21100	2535	22.47	24.00	1.422	-	-	-0.01	0.009	0.013
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI2	21100	2535	21.69	23.00	1.352	-	-	0.08	0.007	0.009
3500~3900MHz																				
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	ECI2	55830	3609	18.97	19.90	1.239	62.9	1.006	-0.06	0.644	0.803
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	ECI2	56150	3641	18.77	19.90	1.297	62.9	1.006	0.18	0.647	0.844
14	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	ECI2	56640	3690	18.84	19.90	1.276	62.9	1.006	-0.08	0.786	**1.009**
	LTE Band 48C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	ECI2	56640+56442	3690+3670.2	18.75	19.90	1.303	62.9	1.006	0.03	0.703	0.922
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	ECI2	55340	3560	18.84	19.90	1.276	62.9	1.006	0.19	0.508	0.652
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	ECI2	55830	3609	17.89	18.90	1.262	62.9	1.006	-0.10	0.226	0.287
	LTE Band 48	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 3	ECI2	55830	3609	17.82	18.90	1.282	62.9	1.006	0.08	0.249	0.321
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	ECI2	55830	3609	18.97	19.90	1.239	62.9	1.006	0.04	0.262	0.327
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	ECI2	55830	3609	17.89	18.90	1.262	62.9	1.006	0.07	0.093	0.118
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	ECI2	55830	3609	18.97	19.90	1.239	62.9	1.006	0.06	0.108	0.135
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	ECI2	55830	3609	17.89	18.90	1.262	62.9	1.006	0.04	0.043	0.055
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	ECI2	55830	3609	18.97	19.90	1.239	62.9	1.006	0.08	0.105	0.131
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	ECI2	55830	3609	17.89	18.90	1.262	62.9	1.006	-0.06	0.035	0.044
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI2	55830	3609	22.58	24.00	1.387	62.9	1.006	0.06	0.511	0.713
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI2	55830	3609	21.49	23.00	1.416	62.9	1.006	0.08	0.354	0.504
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI2	55830	3609	22.58	24.00	1.387	62.9	1.006	-0.01	0.517	0.721
	LTE Band 48C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 4	ECI2	55830+56028	3609+3579.8	22.45	24.00	1.429	62.9	1.006	0.11	0.463	0.666
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI2	55830	3609	21.49	23.00	1.416	62.9	1.006	0.02	0.342	0.487
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	ECI2	55830	3609	22.58	24.00	1.387	62.9	1.006	0.01	0.263	0.367
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	ECI2	55830	3609	21.49	23.00	1.416	62.9	1.006	-0.05	0.177	0.252
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI2	55830	3609	22.58	24.00	1.387	62.9	1.006	0.13	0.311	0.434
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	ECI2	55830	3609	21.49	23.00	1.416	62.9	1.006	0.08	0.147	0.209
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	ECI2	55830	3609	21.92	23.30	1.374	62.9	1.006	0.08	0.018	0.025
	LTE Band 48C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 5	ECI2	55830+56028	3609+3579.8	21.82	23.30	1.406	62.9	1.006	0.05	0.013	0.018
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	ECI2	55830	3609	20.97	22.30	1.358	62.9	1.006	-0.06	0.017	0.023
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	ECI2	55830	3609	21.92	23.30	1.374	62.9	1.006	0.02	0.016	0.022
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	ECI2	55830	3609	20.97	22.30	1.358	62.9	1.006	0.08	0.014	0.019
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	ECI2	55830	3609	21.92	23.30	1.374	62.9	1.006	0.17	0.014	0.019
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	ECI2	55830	3609	20.97	22.30	1.358	62.9	1.006	-0.03	0.012	0.016
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	ECI2	55830	3609	21.92	23.30	1.374	62.9	1.006	0.06	0.015	0.021

	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	ECI2	55830	3609	20.97	22.30	1.358	62.9	1.006	0.08	0.013	0.018
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 8	ECI2	55830	3609	21.76	23.10	1.361	62.9	1.006	0.11	0.023	0.032
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 8	ECI2	55830	3609	20.82	22.10	1.343	62.9	1.006	-0.16	0.019	0.026
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 8	ECI2	55830	3609	21.76	23.10	1.361	62.9	1.006	-0.07	0.021	0.029
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 8	ECI2	55830	3609	20.82	22.10	1.343	62.9	1.006	0.05	0.017	0.023
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 8	ECI2	55830	3609	21.76	23.10	1.361	62.9	1.006	-0.03	0.044	0.060
	LTE Band 48C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 8	ECI2	55830+56028	3609+3579.8	21.62	23.10	1.406	62.9	1.006	0.13	0.037	0.052
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 8	ECI2	55830	3609	20.82	22.10	1.343	62.9	1.006	0.09	0.036	0.049
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 8	ECI2	55830	3609	21.76	23.10	1.361	62.9	1.006	0.10	0.040	0.055
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 8	ECI2	55830	3609	20.82	22.10	1.343	62.9	1.006	0.15	0.033	0.045
15	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 3	ECI2	641666	3624.99	19.11	19.90	1.199	-	-	-0.07	0.786	**0.943**
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 3	ECI2	638000	3570	19.05	19.90	1.216	-	-	0.05	0.765	0.930
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 3	ECI2	645332	3679.98	18.96	19.90	1.242	-	-	0.03	0.743	0.923
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 3	ECI2	641666	3624.99	18.85	19.90	1.274	-	-	0.02	0.732	0.932
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 3	ECI2	638000	3570	18.79	19.90	1.291	-	-	0.08	0.708	0.914
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 3	ECI2	645332	3679.98	18.72	19.90	1.312	-	-	0.11	0.715	0.938
	FR1 n48	40M	QPSK	100	0	DFT-30	Right Cheek	0mm	Ant 3	ECI2	641666	3624.99	18.84	19.90	1.276	-	-	0.02	0.687	0.877
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 3	ECI2	641666	3624.99	19.11	19.90	1.199	-	-	-0.19	0.336	0.403
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 3	ECI2	641666	3624.99	18.85	19.90	1.274	-	-	0.07	0.365	0.465
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 3	ECI2	641666	3624.99	19.11	19.90	1.199	-	-	0.01	0.160	0.192
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 3	ECI2	641666	3624.99	18.85	19.90	1.274	-	-	0.02	0.165	0.210
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 3	ECI2	641666	3624.99	19.11	19.90	1.199	-	-	0.04	0.127	0.152
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 3	ECI2	641666	3624.99	18.85	19.90	1.274	-	-	-0.14	0.135	0.172
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	ECI2	641666	3624.99	22.34	23.40	1.276	-	-	0.18	0.633	0.808
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	ECI2	638000	3570	22.25	23.40	1.303	-	-	0.06	0.628	0.818
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	ECI2	645332	3679.98	22.20	23.40	1.318	-	-	-0.05	0.630	0.831
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 4	ECI2	641666	3624.99	22.18	23.40	1.324	-	-	0.04	0.631	0.836
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 4	ECI2	638000	3570	22.03	23.40	1.371	-	-	-0.09	0.616	0.844
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 4	ECI2	645332	3679.98	22.06	23.40	1.361	-	-	0.13	0.622	0.847
	FR1 n48	40M	QPSK	100	0	DFT-30	Right Cheek	0mm	Ant 4	ECI2	641666	3624.99	21.17	22.40	1.327	-	-	0.07	0.556	0.738
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	ECI2	641666	3624.99	22.34	23.40	1.276	-	-	-0.05	0.673	0.859
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	ECI2	638000	3570	22.25	23.40	1.303	-	-	0.02	0.661	0.861
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	ECI2	645332	3679.98	22.20	23.40	1.318	-	-	0.07	0.654	0.862
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 4	ECI2	641666	3624.99	22.18	23.40	1.324	-	-	-0.04	0.689	0.912
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 4	ECI2	638000	3570	22.03	23.40	1.371	-	-	-0.06	0.682	0.935
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 4	ECI2	645332	3679.98	22.06	23.40	1.361	-	-	0.05	0.673	0.916
	FR1 n48	40M	QPSK	100	0	DFT-30	Right Tilted	0mm	Ant 4	ECI2	641666	3624.99	21.17	22.40	1.327	-	-	-0.08	0.509	0.676
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 4	ECI2	641666	3624.99	22.34	23.40	1.276	-	-	-0.05	0.358	0.457
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 4	ECI2	641666	3624.99	22.18	23.40	1.324	-	-	0.19	0.390	0.516
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 4	ECI2	641666	3624.99	22.34	23.40	1.276	-	-	0.09	0.430	0.549
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 4	ECI2	641666	3624.99	22.18	23.40	1.324	-	-	-0.02	0.450	0.596
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 5	ECI2	641666	3624.99	23.19	24.00	1.205	-	-	0.09	0.157	0.189
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 5	ECI2	641666	3624.99	23.13	24.00	1.222	-	-	0.08	0.129	0.158
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 5	ECI2	641666	3624.99	23.19	24.00	1.205	-	-	0.08	0.094	0.113
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 5	ECI2	641666	3624.99	23.13	24.00	1.222	-	-	0.01	0.088	0.108
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 5	ECI2	641666	3624.99	23.19	24.00	1.205	-	-	-0.14	0.072	0.087
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 5	ECI2	641666	3624.99	23.13	24.00	1.222	-	-	0.18	0.063	0.077
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 5	ECI2	641666	3624.99	23.19	24.00	1.205	-	-	0.02	0.056	0.067
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 5	ECI2	641666	3624.99	23.13	24.00	1.222	-	-	0.04	0.057	0.070
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	ECI2	641666	3624.99	21.82	22.60	1.197	-	-	-0.04	0.007	0.008
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 8	ECI2	641666	3624.99	21.53	22.60	1.279	-	-	0.01	0.013	0.017
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	ECI2	641666	3624.99	21.82	22.60	1.197	-	-	0.08	0.006	0.007
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 8	ECI2	641666	3624.99	21.53	22.60	1.279	-	-	0.05	0.005	0.006
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	ECI2	641666	3624.99	21.82	22.60	1.197	-	-	-0.13	0.004	0.005
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 8	ECI2	641666	3624.99	21.53	22.60	1.279	-	-	0.18	0.005	0.006
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	ECI2	641666	3624.99	21.82	22.60	1.197	-	-	0.16	0.003	0.004

	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 8	ECI2	641666	3624.99	21.53	22.60	1.279	-	-	0.06	0.004	0.005
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 3	ECI2	656000	3840	17.31	18.30	1.256	-	-	0.05	0.788	0.990
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 3	ECI2	656000	3840	17.27	18.30	1.268	-	-	0.18	0.700	0.887
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Right Cheek	0mm	Ant 3	ECI2	656000	3840	17.25	18.30	1.274	-	-	0.11	0.716	0.912
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 3	ECI2	656000	3840	17.31	18.30	1.256	-	-	-0.14	0.363	0.456
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 3	ECI2	656000	3840	17.27	18.30	1.268	-	-	0.08	0.324	0.411
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 3	ECI2	656000	3840	17.31	18.30	1.256	-	-	0.05	0.161	0.202
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 3	ECI2	656000	3840	17.27	18.30	1.268	-	-	0.08	0.142	0.180
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 3	ECI2	656000	3840	17.31	18.30	1.256	-	-	-0.04	0.130	0.163
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 3	ECI2	656000	3840	17.27	18.30	1.268	-	-	0.04	0.116	0.147
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 3	ECI2	633334	3500.01	17.41	18.30	1.227	-	-	-0.02	0.378	0.464
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 3	ECI2	633334	3500.01	17.33	18.30	1.250	-	-	0.08	0.488	0.610
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 3	ECI2	633334	3500.01	17.41	18.30	1.227	-	-	0.18	0.158	0.194
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 3	ECI2	633334	3500.01	17.33	18.30	1.250	-	-	-0.14	0.192	0.240
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 3	ECI2	633334	3500.01	17.41	18.30	1.227	-	-	0.08	0.089	0.109
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 3	ECI2	633334	3500.01	17.33	18.30	1.250	-	-	0.08	0.111	0.139
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 3	ECI2	633334	3500.01	17.41	18.30	1.227	-	-	0.11	0.075	0.092
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 3	ECI2	633334	3500.01	17.33	18.30	1.250	-	-	0.05	0.092	0.115
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	ECI2	656000	3840	20.14	21.20	1.276	-	-	-0.08	0.493	0.629
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 4	ECI2	656000	3840	20.11	21.20	1.285	-	-	0.05	0.621	0.798
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	ECI2	656000	3840	20.14	21.20	1.276	-	-	0.07	0.515	0.657
16	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 4	ECI2	656000	3840	20.11	21.20	1.285	-	-	0.07	0.772	**0.992**
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Right Tilted	0mm	Ant 4	ECI2	656000	3840	20.03	21.20	1.309	-	-	0.01	0.749	0.981
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 4	ECI2	656000	3840	20.14	21.20	1.276	-	-	0.10	0.323	0.412
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 4	ECI2	656000	3840	20.11	21.20	1.285	-	-	0.15	0.444	0.571
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 4	ECI2	656000	3840	20.14	21.20	1.276	-	-	0.15	0.400	0.511
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 4	ECI2	656000	3840	20.11	21.20	1.285	-	-	-0.04	0.531	0.682
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	ECI2	633334	3500.01	20.36	21.20	1.213	-	-	0.06	0.397	0.482
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 4	ECI2	633334	3500.01	20.35	21.20	1.216	-	-	-0.18	0.438	0.533
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	ECI2	633334	3500.01	20.36	21.20	1.213	-	-	0.02	0.394	0.478
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 4	ECI2	633334	3500.01	20.35	21.20	1.216	-	-	-0.01	0.464	0.564
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 4	ECI2	633334	3500.01	20.36	21.20	1.213	-	-	0.06	0.224	0.272
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 4	ECI2	633334	3500.01	20.35	21.20	1.216	-	-	0.07	0.242	0.294
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 4	ECI2	633334	3500.01	20.36	21.20	1.213	-	-	0.09	0.236	0.286
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 4	ECI2	633334	3500.01	20.35	21.20	1.216	-	-	-0.11	0.281	0.342
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 5	ECI2	656000	3840	26.08	27.00	1.236	-	-	-0.18	0.065	0.080
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 5	ECI2	656000	3840	26.04	27.00	1.247	-	-	-0.08	0.117	0.146
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 5	ECI2	656000	3840	26.08	27.00	1.236	-	-	0.04	0.056	0.069
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 5	ECI2	656000	3840	26.04	27.00	1.247	-	-	-0.09	0.112	0.140
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 5	ECI2	656000	3840	26.08	27.00	1.236	-	-	0.07	0.023	0.028
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 5	ECI2	656000	3840	26.04	27.00	1.247	-	-	-0.04	0.046	0.057
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 5	ECI2	656000	3840	26.08	27.00	1.236	-	-	0.04	0.024	0.030
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 5	ECI2	656000	3840	26.04	27.00	1.247	-	-	0.03	0.043	0.054
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 5	ECI2	633334	3500.01	26.04	27.00	1.247	-	-	-0.15	0.034	0.042
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 5	ECI2	633334	3500.01	25.97	27.00	1.268	-	-	0.01	0.083	0.105
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 5	ECI2	633334	3500.01	26.04	27.00	1.247	-	-	-0.04	0.017	0.021
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 5	ECI2	633334	3500.01	25.97	27.00	1.268	-	-	-0.03	0.044	0.056
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 5	ECI2	633334	3500.01	26.04	27.00	1.247	-	-	0.03	0.015	0.019
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 5	ECI2	633334	3500.01	25.97	27.00	1.268	-	-	0.05	0.036	0.046
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 5	ECI2	633334	3500.01	26.04	27.00	1.247	-	-	-0.19	0.016	0.020
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 5	ECI2	633334	3500.01	25.97	27.00	1.268	-	-	-0.13	0.022	0.028
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	ECI2	656000	3840	23.46	23.50	1.009	-	-	-0.18	0.096	0.097
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 8	ECI2	656000	3840	23.37	23.50	1.030	-	-	-0.16	0.000	0.000
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	ECI2	656000	3840	23.46	23.50	1.009	-	-	0.02	0.064	0.065
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 8	ECI2	656000	3840	23.37	23.50	1.030	-	-	-0.01	0.000	0.000
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	ECI2	656000	3840	23.46	23.50	1.009	-	-	-0.06	0.000	0.000

	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 8	ECI2	656000	3840	23.37	23.50	1.030	-	-	0.06	0.034	0.035
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	ECI2	656000	3840	23.46	23.50	1.009	-	-	0.07	0.000	0.000
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 8	ECI2	656000	3840	23.37	23.50	1.030	-	-	-0.12	0.051	0.053
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	ECI2	633334	3500.01	22.46	23.50	1.271	-	-	-0.07	0.041	0.052
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 8	ECI2	633334	3500.01	21.96	23.50	1.426	-	-	0.08	0.000	0.000
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	ECI2	633334	3500.01	22.46	23.50	1.271	-	-	0.08	0.021	0.027
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 8	ECI2	633334	3500.01	21.96	23.50	1.426	-	-	0.05	0.000	0.000
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	ECI2	633334	3500.01	22.46	23.50	1.271	-	-	0.11	0.015	0.019
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 8	ECI2	633334	3500.01	21.96	23.50	1.426	-	-	0.05	0.000	0.000
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	ECI2	633334	3500.01	22.46	23.50	1.271	-	-	-0.15	0.019	0.024
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 8	ECI2	633334	3500.01	21.96	23.50	1.426	-	-	0.02	0.000	0.000

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)
WLAN/Bluetooth																
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 2+9	Standalone	6	2437	22.53	24.00	1.403	99.52	1.005	0.01	0.283	0.399
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 2+9	Standalone	6	2437	22.53	24.00	1.403	99.52	1.005	0.19	0.202	0.285
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 2+9	Standalone	6	2437	22.53	24.00	1.403	99.52	1.005	0.05	0.795	1.121
17	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 2+9	Standalone	1	2412	22.32	24.00	1.472	99.52	1.005	0.07	0.848	**1.255**
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 2+9	Simultaneous	1	2412	17.85	19.50	1.462	99.52	1.005	0.14	0.258	0.379
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 2+9	Standalone	11	2462	21.91	23.50	1.442	99.52	1.005	0.07	0.731	1.059
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 2+9	Standalone	6	2437	21.66	23.00	1.361	96.53	1.036	0.07	0.725	1.023
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 2+9	Standalone	1	2412	21.41	23.00	1.442	96.53	1.036	0.07	0.727	1.086
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 2+9	Standalone	6	2437	22.53	24.00	1.403	96.53	1.036	0.02	0.349	0.507
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	-0.07	0.060	0.085
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	-0.03	0.047	0.067
18	Bluetooth	1Mbps	Left Cheek	0mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	0.11	0.169	**0.241**
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	-0.03	0.073	0.104
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 2+9	Standalone	54	5270	19.33	21.00	1.469	94.12	1.062	0.02	0.136	0.212
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 2+9	Standalone	54	5270	19.33	21.00	1.469	94.12	1.062	0.09	0.176	0.275
19	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 2+9	Standalone	54	5270	19.33	21.00	1.469	94.12	1.062	0.01	0.650	**1.014**
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 2+9	Standalone	62	5310	16.62	18.00	1.374	94.12	1.062	0.06	0.396	0.578
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 2+9	Simultaneous	58	5290	12.42	14.00	1.439	89.19	1.121	-0.1	0.208	0.335
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 2+9	Standalone	54	5270	19.33	21.00	1.469	94.12	1.062	0.01	0.206	0.321
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 2+9	Standalone	110	5550	20.38	22.00	1.451	94.12	1.062	0.07	0.467	0.720
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 2+9	Standalone	110	5550	20.38	22.00	1.451	94.12	1.062	-0.12	0.627	0.966
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 2+9	Standalone	134	5670	18.18	19.50	1.355	94.12	1.062	0.09	0.415	0.597
20	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 2+9	Standalone	110	5550	20.38	22.00	1.451	94.12	1.062	0.01	0.685	**1.055**
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 2+9	Standalone	134	5670	18.18	19.50	1.355	94.12	1.062	0.13	0.462	0.665
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 2+9	Simultaneous	110	5550	16.95	18.50	1.429	94.12	1.062	0.05	0.229	0.348
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 2+9	Standalone	110	5550	20.38	22.00	1.451	94.12	1.062	-0.18	0.615	0.948
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 2+9	Standalone	134	5670	18.18	19.50	1.355	94.12	1.062	0.01	0.401	0.577
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 2+9	Standalone	155	5775	18.15	19.50	1.365	89.19	1.121	-0.18	0.397	0.607
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 2+9	Standalone	155	5775	18.15	19.50	1.365	89.19	1.121	0.14	0.504	0.771
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 2+9	Standalone	155	5775	18.15	19.50	1.365	89.19	1.121	-0.06	0.592	0.906
21	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 2+9	Standalone	155	5775	18.15	19.50	1.365	89.19	1.121	0.02	0.630	**0.964**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 2+9	Simultaneous	155	5775	13.26	15.00	1.493	89.19	1.121	0.02	0.199	0.333

16.2 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)
750MHz																		
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI7	23095	707.5	22.77	24.00	1.327	0.17	0.287	0.381
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI7	23095	707.5	21.66	23.00	1.361	-0.08	0.120	0.163
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI7	23095	707.5	22.77	24.00	1.327	0.06	0.347	0.461
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI7	23095	707.5	21.66	23.00	1.361	0.13	0.212	0.289
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI7	23095	707.5	22.77	24.00	1.327	0.10	0.162	0.215
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI7	23095	707.5	21.66	23.00	1.361	0.14	0.088	0.120
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI7	23095	707.5	22.77	24.00	1.327	0.08	0.218	0.289
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI7	23095	707.5	21.66	23.00	1.361	0.06	0.121	0.165
	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	23095	707.5	22.77	24.00	1.327	-0.03	0.259	0.344
	LTE Band 12	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI7	23095	707.5	21.66	23.00	1.361	0.07	0.149	0.203
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI7	23095	707.5	22.94	24.00	1.276	-0.04	0.540	0.689
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI7	23095	707.5	21.81	23.00	1.315	-0.14	0.304	0.400
22	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI7	23095	707.5	22.94	24.00	1.276	-0.04	0.548	**0.699**
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI7	23095	707.5	21.81	23.00	1.315	0.04	0.317	0.417
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI7	23095	707.5	22.94	24.00	1.276	0.14	0.473	0.604
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI7	23095	707.5	21.81	23.00	1.315	0.02	0.269	0.354
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI7	23095	707.5	22.94	24.00	1.276	0.02	0.308	0.393
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI7	23095	707.5	21.81	23.00	1.315	0.08	0.176	0.231
	LTE Band 12	10M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	23095	707.5	22.94	24.00	1.276	0.11	0.532	0.679
	LTE Band 12	10M	QPSK	25	0	-	Top side	5mm	Ant 1	ECI7	23095	707.5	21.81	23.00	1.315	-0.06	0.441	0.580
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI7	23230	782	22.89	24.00	1.291	0.09	0.443	0.572
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI7	23230	782	21.70	23.00	1.349	0.06	0.291	0.393
23	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI7	23230	782	22.89	24.00	1.291	-0.08	0.629	**0.812**
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI7	23230	782	21.70	23.00	1.349	-0.08	0.398	0.537
	LTE Band 13	10M	QPSK	50	0	-	Back	5mm	Ant 0	ECI7	23230	782	21.63	23.00	1.371	0.06	0.425	0.583
	LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI7	23230	782	22.89	24.00	1.291	0.04	0.173	0.223
	LTE Band 13	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI7	23230	782	21.70	23.00	1.349	-0.03	0.106	0.143
	LTE Band 13	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI7	23230	782	22.89	24.00	1.291	-0.06	0.295	0.381
	LTE Band 13	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI7	23230	782	21.70	23.00	1.349	0.10	0.185	0.250
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	23230	782	22.89	24.00	1.291	-0.03	0.453	0.585
	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI7	23230	782	21.70	23.00	1.349	0.12	0.267	0.360
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI7	23230	782	22.92	24.00	1.282	0.07	0.399	0.512
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI7	23230	782	21.78	23.00	1.324	-0.10	0.302	0.400
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI7	23230	782	22.92	24.00	1.282	0.08	0.472	0.605
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI7	23230	782	21.78	23.00	1.324	0.09	0.305	0.404
	LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI7	23230	782	22.92	24.00	1.282	0.05	0.191	0.245
	LTE Band 13	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI7	23230	782	21.78	23.00	1.324	0.08	0.126	0.167
	LTE Band 13	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI7	23230	782	22.92	24.00	1.282	-0.09	0.168	0.215
	LTE Band 13	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI7	23230	782	21.78	23.00	1.324	0.03	0.119	0.158
	LTE Band 13	10M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	23230	782	22.92	24.00	1.282	0.03	0.383	0.491
	LTE Band 13	10M	QPSK	25	0	-	Top side	5mm	Ant 1	ECI7	23230	782	21.78	23.00	1.324	-0.15	0.266	0.352
835MHz																		
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	ECI3	189	836.4	27.76	29.30	1.426	0.10	0.556	0.793
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI3	189	836.4	27.76	29.30	1.426	0.06	0.757	1.079
24	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI3	251	848.8	27.71	29.30	1.442	0.09	0.865	**1.247**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI3	128	824.2	27.70	29.30	1.445	0.04	0.751	1.086
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	ECI7	189	836.4	27.76	29.30	1.426	0.14	0.107	0.153
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Side	5mm	Ant 0	ECI7	189	836.4	27.76	29.30	1.426	-0.07	0.206	0.294
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI7	189	836.4	27.76	29.30	1.426	0.04	0.701	0.999
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI7	251	848.8	27.71	29.30	1.442	0.04	0.642	0.926

	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI7	128	824.2	27.70	29.30	1.445	0.05	0.520	0.752
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Top side	5mm	Ant 0	ECI7	189	836.4	27.76	29.30	1.426	0.03	0.052	0.074
	LTE Band 5	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI7	20525	836.5	23.12	24.00	1.225	0.05	0.279	0.342
	LTE Band 5	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI7	20525	836.5	22.05	23.00	1.245	0.02	0.147	0.183
	LTE Band 5	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI7	20525	836.5	23.12	24.00	1.225	-0.03	0.454	0.556
	LTE Band 5B	10M	QPSK	1	49	-	Back	5mm	Ant 0	ECI7	20525+20597	836.5+843.7	22.97	24.00	1.268	0.06	0.402	0.510
	LTE Band 5	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI7	20525	836.5	22.05	23.00	1.245	-0.13	0.251	0.312
	LTE Band 5	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI7	20525	836.5	23.12	24.00	1.225	0.03	0.045	0.055
	LTE Band 5	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI7	20525	836.5	22.05	23.00	1.245	0.06	0.000	0.000
	LTE Band 5	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI7	20525	836.5	23.12	24.00	1.225	0.02	0.108	0.132
	LTE Band 5	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI7	20525	836.5	22.05	23.00	1.245	0.06	0.061	0.076
	LTE Band 5	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	20525	836.5	23.12	24.00	1.225	0.03	0.373	0.457
	LTE Band 5	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI7	20525	836.5	22.05	23.00	1.245	0.07	0.215	0.268
	LTE Band 5	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI7	20525	836.5	22.13	23.20	1.279	0.07	0.490	0.627
	LTE Band 5	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI7	20525	836.5	21.11	22.20	1.285	0.03	0.264	0.339
	LTE Band 5	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI7	20525	836.5	22.13	23.20	1.279	0.04	0.665	0.851
	LTE Band 5	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI7	20525	836.5	21.11	22.20	1.285	0.13	0.369	0.474
	LTE Band 5	10M	QPSK	50	0	-	Back	5mm	Ant 1	ECI7	20525	836.5	21.10	22.20	1.288	0.10	0.384	0.495
	LTE Band 5	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI7	20525	836.5	22.13	23.20	1.279	-0.17	0.153	0.196
	LTE Band 5	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI7	20525	836.5	21.11	22.20	1.285	-0.06	0.091	0.117
	LTE Band 5	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI7	20525	836.5	22.13	23.20	1.279	0.11	0.145	0.186
	LTE Band 5	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI7	20525	836.5	21.11	22.20	1.285	0.02	0.079	0.102
25	LTE Band 5	10M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	20525	836.5	22.13	23.20	1.279	-0.03	0.779	**0.997**
	LTE Band 5B	10M	QPSK	1	49	-	Top side	5mm	Ant 1	ECI7	20525+20597	836.5+843.7	22.08	23.20	1.294	0.08	0.683	0.884
	LTE Band 5	10M	QPSK	25	0	-	Top side	5mm	Ant 1	ECI7	20525	836.5	21.11	22.20	1.285	0.08	0.326	0.419
	LTE Band 5	10M	QPSK	50	0	-	Top side	5mm	Ant 1	ECI7	20525	836.5	21.10	22.20	1.288	-0.13	0.328	0.423
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI7	4182	836.4	21.34	22.30	1.247	-0.02	0.658	0.821
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI7	4132	826.4	21.23	22.30	1.279	0.05	0.632	0.809
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI7	4233	846.6	21.27	22.30	1.268	-0.19	0.594	0.753
26	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI7	4182	836.4	21.34	22.30	1.247	0.02	1.020	**1.272**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI7	4132	826.4	21.23	22.30	1.279	0.05	0.945	1.209
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI7	4233	846.6	21.27	22.30	1.268	0.07	0.955	1.211
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI7	4182	836.4	21.34	22.30	1.247	0.04	0.138	0.172
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	ECI7	4182	836.4	21.34	22.30	1.247	0.06	0.297	0.370
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI7	4182	836.4	21.34	22.30	1.247	-0.10	0.706	0.881
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI7	4132	826.4	21.23	22.30	1.279	0.06	0.637	0.815
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI7	4233	846.6	21.27	22.30	1.268	0.06	0.642	0.814
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	5mm	Ant 0	ECI7	167300	836.5	23.11	24.00	1.227	-0.04	0.595	0.730
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	5mm	Ant 0	ECI7	167300	836.5	22.79	24.00	1.321	0.04	0.560	0.740
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	ECI7	167300	836.5	23.11	24.00	1.227	0.01	0.761	0.934
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	5mm	Ant 0	ECI7	167300	836.5	22.79	24.00	1.321	-0.04	0.729	0.963
	FR1 n5	20M	QPSK	100	0	DFT-15	Back	5mm	Ant 0	ECI7	167300	836.5	21.77	23.00	1.327	0.03	0.524	0.696
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 0	ECI7	167300	836.5	23.11	24.00	1.227	0.12	0.107	0.131
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Side	5mm	Ant 0	ECI7	167300	836.5	22.79	24.00	1.321	-0.12	0.157	0.207
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Side	5mm	Ant 0	ECI7	167300	836.5	23.11	24.00	1.227	-0.03	0.229	0.281
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Side	5mm	Ant 0	ECI7	167300	836.5	22.79	24.00	1.321	0.09	0.271	0.358
	FR1 n5	20M	QPSK	1	1	DFT-15	Bottom Side	5mm	Ant 0	ECI7	167300	836.5	23.11	24.00	1.227	0.02	0.709	0.870
	FR1 n5	20M	QPSK	50	28	DFT-15	Bottom Side	5mm	Ant 0	ECI7	167300	836.5	22.79	24.00	1.321	0.01	0.711	0.939
	FR1 n5	20M	QPSK	100	0	DFT-15	Bottom Side	5mm	Ant 0	ECI7	167300	836.5	21.77	23.00	1.327	0.02	0.443	0.588
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	ECI7	167300	836.5	22.79	23.50	1.178	0.08	0.822	0.968
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	5mm	Ant 1	ECI7	167300	836.5	22.62	23.50	1.225	0.05	0.796	0.975
	FR1 n5	20M	QPSK	100	0	DFT-15	Front	5mm	Ant 1	ECI7	167300	836.5	21.63	23.00	1.371	-0.14	0.525	0.720
27	FR1 n5	20M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	ECI7	167300	836.5	22.79	23.50	1.178	-0.09	0.893	**1.052**
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	5mm	Ant 1	ECI7	167300	836.5	22.62	23.50	1.225	0.15	0.748	0.916
	FR1 n5	20M	QPSK	100	0	DFT-15	Back	5mm	Ant 1	ECI7	167300	836.5	21.63	23.00	1.371	0.07	0.511	0.701
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 1	ECI7	167300	836.5	22.79	23.50	1.178	0.16	0.293	0.345

	FR1 n5	20M	QPSK	50	28	DFT-15	Left Side	5mm	Ant 1	ECI7	167300	836.5	22.62	23.50	1.225	0.03	0.272	0.333
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Side	5mm	Ant 1	ECI7	167300	836.5	22.79	23.50	1.178	0.10	0.240	0.283
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Side	5mm	Ant 1	ECI7	167300	836.5	22.62	23.50	1.225	0.19	0.224	0.274
	FR1 n5	20M	QPSK	1	1	DFT-15	Top side	5mm	Ant 1	ECI7	167300	836.5	22.79	23.50	1.178	0.06	0.788	0.928
	FR1 n5	20M	QPSK	50	28	DFT-15	Top side	5mm	Ant 1	ECI7	167300	836.5	22.62	23.50	1.225	-0.18	0.525	0.643
	FR1 n5	20M	QPSK	100	0	DFT-15	Top side	5mm	Ant 1	ECI7	167300	836.5	21.63	23.00	1.371	0.05	0.377	0.517
1750MHz																		
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI7	132322	1745	16.88	17.30	1.102	0.04	0.440	0.485
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI7	132322	1745	16.04	16.30	1.062	-0.01	0.353	0.375
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI7	132322	1745	16.88	17.30	1.102	-0.11	0.755	0.832
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI7	132072	1720	16.63	17.30	1.167	0.06	0.778	0.908
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI7	132572	1770	16.75	17.30	1.135	0.14	0.724	0.822
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI7	132322	1745	16.04	16.30	1.062	-0.13	0.351	0.373
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 0	ECI7	132322	1745	16.02	16.30	1.067	0.09	0.342	0.365
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI7	132322	1745	16.88	17.30	1.102	0.02	0.034	0.037
	LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI7	132322	1745	16.04	16.30	1.062	0.08	0.015	0.016
	LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI7	132322	1745	16.88	17.30	1.102	0.07	0.050	0.055
	LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI7	132322	1745	16.04	16.30	1.062	-0.01	0.025	0.027
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	132322	1745	16.88	17.30	1.102	-0.13	0.839	0.924
28	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	132072	1720	16.63	17.30	1.167	0.06	1.070	**1.248**
	LTE Band 66C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	ECI7	132072+132270	1720+1739.8	16.58	17.30	1.180	0.05	0.955	1.127
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	132572	1770	16.75	17.30	1.135	0.07	1.000	1.135
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI7	132322	1745	16.04	16.30	1.062	0.01	0.456	0.484
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI7	132322	1745	16.02	16.30	1.067	-0.05	0.458	0.489
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI7	132322	1745	16.44	17.70	1.337	0.07	0.401	0.536
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI7	132322	1745	15.68	16.70	1.265	-0.07	0.246	0.311
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI7	132322	1745	16.44	17.70	1.337	0.07	0.599	0.801
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI7	132072	1720	16.36	17.70	1.361	0.06	0.542	0.738
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI7	132572	1770	16.42	17.70	1.343	0.01	0.719	0.965
	LTE Band 66C	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI7	132572+132374	1770+1750.2	16.31	17.70	1.377	0.08	0.655	0.902
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI7	132322	1745	15.68	16.70	1.265	0.09	0.344	0.435
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 1	ECI7	132322	1745	15.66	16.70	1.271	-0.04	0.323	0.410
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI7	132322	1745	16.44	17.70	1.337	0.16	0.100	0.134
	LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI7	132322	1745	15.68	16.70	1.265	0.01	0.043	0.054
	LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI7	132322	1745	16.44	17.70	1.337	0.08	0.011	0.015
	LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI7	132322	1745	15.68	16.70	1.265	0.01	0.000	0.000
	LTE Band 66	20M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	132322	1745	16.44	17.70	1.337	0.03	0.729	0.974
	LTE Band 66	20M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	132072	1720	16.36	17.70	1.361	-0.04	0.569	0.775
	LTE Band 66	20M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	132572	1770	16.42	17.70	1.343	0.05	0.716	0.961
	LTE Band 66	20M	QPSK	50	0	-	Top side	5mm	Ant 1	ECI7	132322	1745	15.68	16.70	1.265	-0.09	0.347	0.439
	LTE Band 66	20M	QPSK	100	0	-	Top side	5mm	Ant 1	ECI7	132322	1745	15.66	16.70	1.271	0.05	0.328	0.417
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 0	ECI7	349000	1745	15.81	16.30	1.119	-0.14	0.419	0.469
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 0	ECI7	349000	1745	15.73	16.30	1.140	-0.10	0.352	0.401
	FR1 n66	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	ECI7	349000	1745	15.81	16.30	1.119	-0.12	0.567	0.635
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	ECI7	349000	1745	15.73	16.30	1.140	-0.04	0.564	0.643
	FR1 n66	40M	QPSK	216	0	DFT-15	Back	5mm	Ant 0	ECI7	349000	1745	15.68	16.30	1.153	-0.10	0.434	0.501
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 0	ECI7	349000	1745	15.81	16.30	1.119	-0.09	0.033	0.037
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Side	5mm	Ant 0	ECI7	349000	1745	15.73	16.30	1.140	0.14	0.033	0.038
	FR1 n66	40M	QPSK	1	1	DFT-15	Right Side	5mm	Ant 0	ECI7	349000	1745	15.81	16.30	1.119	0.15	0.053	0.059
	FR1 n66	40M	QPSK	108	54	DFT-15	Right Side	5mm	Ant 0	ECI7	349000	1745	15.73	16.30	1.140	0.02	0.048	0.055
	FR1 n66	40M	QPSK	1	1	DFT-15	Bottom Side	5mm	Ant 0	ECI7	349000	1745	15.81	16.30	1.119	-0.07	1.020	1.142
29	FR1 n66	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	ECI7	349000	1745	15.73	16.30	1.140	-0.05	1.100	**1.254**
	FR1 n66	40M	QPSK	216	0	DFT-15	Bottom Side	5mm	Ant 0	ECI7	349000	1745	15.68	16.30	1.153	0.16	0.767	0.885
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	ECI7	349000	1745	16.58	16.70	1.028	-0.13	0.312	0.321
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 1	ECI7	349000	1745	16.54	16.70	1.038	0.07	0.356	0.369
	FR1 n66	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	ECI7	349000	1745	16.58	16.70	1.028	-0.03	0.698	0.718

	FR1 n66	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 1	ECI7	349000	1745	16.54	16.70	1.038	0.14	0.684	0.710
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 1	ECI7	349000	1745	16.58	16.70	1.028	0.03	0.131	0.135
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Side	5mm	Ant 1	ECI7	349000	1745	16.54	16.70	1.038	0.14	0.135	0.140
	FR1 n66	40M	QPSK	1	1	DFT-15	Right Side	5mm	Ant 1	ECI7	349000	1745	16.58	16.70	1.028	0.08	0.013	0.013
	FR1 n66	40M	QPSK	108	54	DFT-15	Right Side	5mm	Ant 1	ECI7	349000	1745	16.54	16.70	1.038	-0.07	0.013	0.013
	FR1 n66	40M	QPSK	1	1	DFT-15	Top side	5mm	Ant 1	ECI7	349000	1745	16.58	16.70	1.028	-0.11	0.901	0.926
	FR1 n66	40M	QPSK	108	54	DFT-15	Top side	5mm	Ant 1	ECI7	349000	1745	16.54	16.70	1.038	0.07	0.963	0.999
	FR1 n66	40M	QPSK	216	0	DFT-15	Top side	5mm	Ant 1	ECI7	349000	1745	16.27	16.70	1.104	0.04	0.602	0.665

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 (4 Tx slots)	Front	5mm	Ant 0	ECI7	661	1880	18.95	20.50	1.429	-	-	-0.10	0.472	0.674
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI7	661	1880	18.95	20.50	1.429	-	-	-0.09	0.737	1.053
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI7	512	1850.2	18.81	20.50	1.476	-	-	0.18	0.764	1.127
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI7	810	1909.8	18.92	20.50	1.439	-	-	0.06	0.869	1.250
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	ECI7	661	1880	18.95	20.50	1.429	-	-	0.06	0.036	0.051
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Side	5mm	Ant 0	ECI7	661	1880	18.95	20.50	1.429	-	-	-0.10	0.044	0.063
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI7	661	1880	18.95	20.50	1.429	-	-	-0.01	0.938	1.340
30	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI7	512	1850.2	18.81	20.50	1.476	-	-	-0.03	0.978	**1.443**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI7	810	1909.8	18.92	20.50	1.439	-	-	-0.10	0.997	1.434
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI7	9400	1880	11.97	13.30	1.358	-	-	0.06	0.531	0.721
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI7	9400	1880	11.97	13.30	1.358	-	-	0.19	0.855	1.161
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI7	9262	1852.4	11.90	13.30	1.380	-	-	0.09	0.839	1.158
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI7	9538	1907.6	11.89	13.30	1.384	-	-	0.05	0.891	1.233
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI7	9400	1880	11.97	13.30	1.358	-	-	0.05	0.031	0.042
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	ECI7	9400	1880	11.97	13.30	1.358	-	-	-0.06	0.035	0.048
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI7	9400	1880	11.97	13.30	1.358	-	-	0.03	0.978	1.328
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI7	9262	1852.4	11.90	13.30	1.380	-	-	-0.03	0.950	1.311
31	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI7	9538	1907.6	11.89	13.30	1.384	-	-	0.09	0.980	**1.356**
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI7	18900	1880	13.92	15.30	1.374	-	-	-0.19	0.376	0.517
	LTE Band 2	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI7	18900	1880	13.15	14.30	1.303	-	-	-0.08	0.177	0.231
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI7	18900	1880	13.92	15.30	1.374	-	-	-0.19	0.581	0.798
	LTE Band 2	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI7	18900	1880	13.15	14.30	1.303	-	-	-0.18	0.294	0.383
	LTE Band 2	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI7	18900	1880	13.92	15.30	1.374	-	-	-0.03	0.026	0.036
	LTE Band 2	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI7	18900	1880	13.15	14.30	1.303	-	-	-0.18	0.014	0.018
	LTE Band 2	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI7	18900	1880	13.92	15.30	1.374	-	-	0.05	0.031	0.043
	LTE Band 2	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI7	18900	1880	13.15	14.30	1.303	-	-	-0.12	0.015	0.020
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	18900	1880	13.92	15.30	1.374	-	-	-0.10	0.824	1.132
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	18700	1860	13.88	15.30	1.387	-	-	0.12	0.793	1.100
32	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	19100	1900	13.90	15.30	1.380	-	-	0.09	0.899	**1.241**
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI7	18900	1880	13.15	14.30	1.303	-	-	0.09	0.413	0.538
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI7	18900	1880	13.06	14.30	1.330	-	-	0.05	0.527	0.701
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI7	18900	1880	15.72	17.00	1.343	-	-	0.15	0.150	0.201
	LTE Band 2	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI7	18900	1880	14.88	16.00	1.294	-	-	-0.09	0.072	0.093
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI7	18900	1880	15.72	17.00	1.343	-	-	0.08	0.240	0.322
	LTE Band 2	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI7	18900	1880	14.88	16.00	1.294	-	-	0.08	0.135	0.175
	LTE Band 2	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI7	18900	1880	15.72	17.00	1.343	-	-	-0.15	0.089	0.120
	LTE Band 2	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI7	18900	1880	14.88	16.00	1.294	-	-	-0.07	0.044	0.057
	LTE Band 2	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI7	18900	1880	15.72	17.00	1.343	-	-	0.04	0.013	0.017
	LTE Band 2	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI7	18900	1880	14.88	16.00	1.294	-	-	0.19	0.000	0.000
	LTE Band 2	20M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	18900	1880	15.72	17.00	1.343	-	-	0.09	0.743	0.998
	LTE Band 2	20M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	18700	1860	15.69	17.00	1.352	-	-	0.02	0.707	0.956
	LTE Band 2	20M	QPSK	1	0	-	Top side	5mm	Ant 1	ECI7	19100	1900	15.64	17.00	1.368	-	-	-0.10	0.713	0.975
	LTE Band 2	20M	QPSK	50	0	-	Top side	5mm	Ant 1	ECI7	18900	1880	14.88	16.00	1.294	-	-	-0.10	0.327	0.423

	LTE Band 2	20M	QPSK	100	0	-	Top side	5mm	Ant 1	ECI7	18900	1880	14.82	16.00	1.312	-	-	-0.09	0.325	0.426
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 0	ECI7	376000	1880	15.22	16.10	1.225	-	-	0.04	0.432	0.529
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 0	ECI7	376000	1880	15.21	16.10	1.227	-	-	-0.06	0.453	0.556
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	ECI7	376000	1880	15.22	16.10	1.225	-	-	0.10	0.726	0.889
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	ECI7	374000	1870	15.05	16.10	1.274	-	-	-0.08	0.681	0.867
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	ECI7	378000	1890	15.01	16.10	1.285	-	-	-0.04	0.710	0.913
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	ECI7	376000	1880	15.21	16.10	1.227	-	-	-0.12	0.724	0.889
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	ECI7	374000	1870	15.01	16.10	1.285	-	-	0.10	0.706	0.907
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	ECI7	378000	1890	15.16	16.10	1.242	-	-	-0.01	0.763	0.947
	FR1 n2	40M	QPSK	216	0	DFT-15	Back	5mm	Ant 0	ECI7	376000	1880	15.14	16.10	1.247	-	-	0.07	0.506	0.631
	FR1 n2	40M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 0	ECI7	376000	1880	15.22	16.10	1.225	-	-	-0.16	0.031	0.038
	FR1 n2	40M	QPSK	108	54	DFT-15	Left Side	5mm	Ant 0	ECI7	376000	1880	15.21	16.10	1.227	-	-	0.13	0.033	0.041
	FR1 n2	40M	QPSK	1	1	DFT-15	Right Side	5mm	Ant 0	ECI7	376000	1880	15.22	16.10	1.225	-	-	0.05	0.042	0.051
	FR1 n2	40M	QPSK	108	54	DFT-15	Right Side	5mm	Ant 0	ECI7	376000	1880	15.21	16.10	1.227	-	-	0.17	0.043	0.053
	FR1 n2	40M	QPSK	1	1	DFT-15	Bottom Side	5mm	Ant 0	ECI7	376000	1880	15.22	16.10	1.225	-	-	-0.18	0.909	1.113
	FR1 n2	40M	QPSK	1	1	DFT-15	Bottom Side	5mm	Ant 0	ECI7	374000	1870	15.05	16.10	1.274	-	-	0.02	0.958	1.220
	FR1 n2	40M	QPSK	1	1	DFT-15	Bottom Side	5mm	Ant 0	ECI7	378000	1890	15.01	16.10	1.285	-	-	0.02	0.961	1.235
33	FR1 n2	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	ECI7	376000	1880	15.21	16.10	1.227	-	-	0.08	1.010	**1.240**
	FR1 n2	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	ECI7	374000	1870	15.01	16.10	1.285	-	-	0.03	0.956	1.229
	FR1 n2	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	ECI7	378000	1890	15.16	16.10	1.242	-	-	0.06	0.971	1.206
	FR1 n2	40M	QPSK	216	0	DFT-15	Bottom Side	5mm	Ant 0	ECI7	376000	1880	15.14	16.10	1.247	-	-	-0.01	0.689	0.859
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	ECI7	376000	1880	16.18	17.50	1.355	-	-	0.18	0.302	0.409
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 1	ECI7	376000	1880	16.05	17.50	1.396	-	-	0.03	0.284	0.397
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	ECI7	376000	1880	16.18	17.50	1.355	-	-	0.08	0.522	0.707
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 1	ECI7	376000	1880	16.05	17.50	1.396	-	-	0.07	0.553	0.772
	FR1 n2	40M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 1	ECI7	376000	1880	16.18	17.50	1.355	-	-	-0.02	0.085	0.115
	FR1 n2	40M	QPSK	108	54	DFT-15	Left Side	5mm	Ant 1	ECI7	376000	1880	16.05	17.50	1.396	-	-	0.05	0.086	0.120
	FR1 n2	40M	QPSK	1	1	DFT-15	Right Side	5mm	Ant 1	ECI7	376000	1880	16.18	17.50	1.355	-	-	0.04	0.012	0.016
	FR1 n2	40M	QPSK	108	54	DFT-15	Right Side	5mm	Ant 1	ECI7	376000	1880	16.05	17.50	1.396	-	-	-0.04	0.012	0.017
	FR1 n2	40M	QPSK	1	1	DFT-15	Top side	5mm	Ant 1	ECI7	376000	1880	16.18	17.50	1.355	-	-	0.09	0.618	0.838
	FR1 n2 SA	40M	QPSK	1	1	DFT-15	Top side	5mm	Ant 1	ECI7	374000	1870	15.91	17.50	1.442	-	-	0.03	0.695	1.002
	FR1 n2	40M	QPSK	1	1	DFT-15	Top side	5mm	Ant 1	ECI7	378000	1890	16.09	17.50	1.384	-	-	-0.04	0.588	0.814
	FR1 n2	40M	QPSK	108	54	DFT-15	Top side	5mm	Ant 1	ECI7	376000	1880	16.05	17.50	1.396	-	-	-0.13	0.653	0.912
	FR1 n2	40M	QPSK	108	54	DFT-15	Top side	5mm	Ant 1	ECI7	374000	1870	15.88	17.50	1.452	-	-	0.19	0.662	0.961
	FR1 n2	40M	QPSK	108	54	DFT-15	Top side	5mm	Ant 1	ECI7	378000	1890	16.00	17.50	1.413	-	-	-0.09	0.586	0.828
	FR1 n2	40M	QPSK	216	0	DFT-15	Top side	5mm	Ant 1	ECI7	376000	1880	15.98	17.50	1.419	-	-	0.06	0.381	0.541
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI7	21100	2535	16.82	17.70	1.225	-	-	-0.11	0.260	0.318
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI7	21100	2535	16.05	16.70	1.161	-	-	0.07	0.107	0.124
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI7	21100	2535	16.82	17.70	1.225	-	-	-0.13	0.487	0.596
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI7	21100	2535	16.05	16.70	1.161	-	-	0.04	0.273	0.317
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI7	21100	2535	16.82	17.70	1.225	-	-	0.04	0.012	0.015
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI7	21100	2535	16.05	16.70	1.161	-	-	0.05	0.007	0.008
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI7	21100	2535	16.82	17.70	1.225	-	-	0.07	0.108	0.132
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI7	21100	2535	16.05	16.70	1.161	-	-	0.07	0.044	0.051
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	21100	2535	16.82	17.70	1.225	-	-	0.06	0.655	0.802
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	20850	2510	16.57	17.70	1.297	-	-	0.17	0.926	1.201
34	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	21350	2560	16.71	17.70	1.256	-	-	0.09	0.999	**1.255**
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI7	21100	2535	16.05	16.70	1.161	-	-	-0.08	0.421	0.489
	LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI7	21100	2535	16.00	16.70	1.175	-	-	0.04	0.437	0.513
3500MHz-3900MHz																				
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 3	ECI7	55830	3609	17.46	18.70	1.330	62.9	1.006	-0.09	0.206	0.276
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 3	ECI7	55830	3609	16.36	17.70	1.361	62.9	1.006	0.01	0.099	0.136
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	ECI7	55830	3609	17.46	18.70	1.330	62.9	1.006	-0.14	0.599	0.802
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	ECI7	55340	3560	17.34	18.70	1.368	62.9	1.006	-0.11	0.604	0.831
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	ECI7	56150	3641	17.27	18.70	1.390	62.9	1.006	0.07	0.657	0.919

	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	ECI7	56640	3690	17.30	18.70	1.380	62.9	1.006	-0.05	0.716	0.994
	LTE Band 48C	20M	QPSK	1	0	-	Back	5mm	Ant 3	ECI7	56640+56442	3690+3670.2	17.17	18.70	1.422	62.9	1.006	0.07	0.632	0.904
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 3	ECI7	55830	3609	16.36	17.70	1.361	62.9	1.006	-0.11	0.283	0.388
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 3	ECI7	55830	3609	16.26	17.70	1.393	62.9	1.006	0.13	0.264	0.370
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 3	ECI7	55830	3609	17.46	18.70	1.330	62.9	1.006	-0.15	0.343	0.459
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 3	ECI7	55830	3609	16.36	17.70	1.361	62.9	1.006	0.01	0.193	0.264
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 3	ECI7	55830	3609	17.46	18.70	1.330	62.9	1.006	0.10	0.013	0.017
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 3	ECI7	55830	3609	16.36	17.70	1.361	62.9	1.006	-0.14	0.010	0.014
	LTE Band 48	20M	QPSK	1	0	-	Top side	5mm	Ant 3	ECI7	55830	3609	17.46	18.70	1.330	62.9	1.006	0.18	0.073	0.098
	LTE Band 48	20M	QPSK	50	0	-	Top side	5mm	Ant 3	ECI7	55830	3609	16.36	17.70	1.361	62.9	1.006	-0.11	0.042	0.058
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 4	ECI7	55830	3609	17.37	18.40	1.268	62.9	1.006	0.18	0.099	0.126
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 4	ECI7	55830	3609	16.35	17.40	1.274	62.9	1.006	0.06	0.060	0.077
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI7	55830	3609	17.37	18.40	1.268	62.9	1.006	-0.19	0.783	0.999
	LTE Band 48C	20M	QPSK	1	99	-	Back	5mm	Ant 4	ECI7	55830+56028	3609+3579.8	17.32	18.40	1.282	62.9	1.006	-0.03	0.693	0.894
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI7	55340	3560	17.17	18.40	1.327	62.9	1.006	0.17	0.679	0.907
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI7	56150	3641	17.01	18.40	1.377	62.9	1.006	-0.06	0.659	0.913
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI7	56640	3690	17.07	18.40	1.358	62.9	1.006	0.03	0.645	0.881
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 4	ECI7	55830	3609	16.35	17.40	1.274	62.9	1.006	0.05	0.420	0.538
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 4	ECI7	55830	3609	16.32	17.40	1.282	62.9	1.006	0.16	0.415	0.535
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI7	55830	3609	17.37	18.40	1.268	62.9	1.006	0.08	0.047	0.060
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI7	55830	3609	16.35	17.40	1.274	62.9	1.006	0.11	0.023	0.029
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 4	ECI7	55830	3609	17.37	18.40	1.268	62.9	1.006	0.03	0.008	0.010
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 4	ECI7	55830	3609	16.35	17.40	1.274	62.9	1.006	0.14	0.011	0.014
	LTE Band 48	20M	QPSK	1	0	-	Top side	5mm	Ant 4	ECI7	55830	3609	17.37	18.40	1.268	62.9	1.006	0.15	0.141	0.180
	LTE Band 48	20M	QPSK	50	0	-	Top side	5mm	Ant 4	ECI7	55830	3609	16.35	17.40	1.274	62.9	1.006	0.06	0.071	0.091
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 5	ECI7	55830	3609	20.31	21.40	1.285	62.9	1.006	0.01	0.019	0.025
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 5	ECI7	55830	3609	19.34	20.40	1.276	62.9	1.006	0.07	0.013	0.017
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 5	ECI7	55830	3609	20.31	21.40	1.285	62.9	1.006	-0.06	0.633	0.818
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 5	ECI7	55340	3560	20.24	21.40	1.306	62.9	1.006	0.03	0.687	0.903
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 5	ECI7	56150	3641	20.18	21.40	1.324	62.9	1.006	0.07	0.581	0.774
35	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 5	ECI7	56640	3690	20.16	21.40	1.330	62.9	1.006	0.09	0.750	**1.004**
	LTE Band 48C	20M	QPSK	1	0	-	Back	5mm	Ant 5	ECI7	56640+56442	3690+3670.2	20.07	21.40	1.358	62.9	1.006	0.05	0.661	0.903
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 5	ECI7	55830	3609	19.34	20.40	1.276	62.9	1.006	0.06	0.229	0.294
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 5	ECI7	55830	3609	19.37	20.40	1.268	62.9	1.006	0.01	0.227	0.289
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 5	ECI7	55830	3609	20.31	21.40	1.285	62.9	1.006	0.11	0.136	0.176
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 5	ECI7	55830	3609	19.34	20.40	1.276	62.9	1.006	0.19	0.081	0.104
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 5	ECI7	55830	3609	20.31	21.40	1.285	62.9	1.006	-0.07	0.020	0.026
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 5	ECI7	55830	3609	19.34	20.40	1.276	62.9	1.006	0.01	0.015	0.019
	LTE Band 48	20M	QPSK	1	0	-	Top side	5mm	Ant 5	ECI7	55830	3609	20.31	21.40	1.285	62.9	1.006	0.18	0.027	0.035
	LTE Band 48	20M	QPSK	50	0	-	Top side	5mm	Ant 5	ECI7	55830	3609	19.34	20.40	1.276	62.9	1.006	-0.18	0.019	0.024
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 8	ECI7	55830	3609	11.23	12.20	1.250	62.9	1.006	-0.06	0.003	0.004
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 8	ECI7	55830	3609	10.36	11.20	1.213	62.9	1.006	-0.07	0.003	0.004
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	ECI7	55830	3609	11.23	12.20	1.250	62.9	1.006	-0.01	0.796	1.001
	LTE Band 48C	20M	QPSK	1	99	-	Back	5mm	Ant 8	ECI7	55830+56028	3609+3579.8	11.20	12.20	1.259	62.9	1.006	0.04	0.712	0.902
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	ECI7	55340	3560	10.98	12.20	1.324	62.9	1.006	0.14	0.651	0.867
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	ECI7	56150	3641	11.19	12.20	1.262	62.9	1.006	0.06	0.556	0.706
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	ECI7	56640	3690	11.16	12.20	1.271	62.9	1.006	0.05	0.365	0.467
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 8	ECI7	55830	3609	10.36	11.20	1.213	62.9	1.006	-0.12	0.366	0.447
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 8	ECI7	55830	3609	10.19	11.20	1.262	62.9	1.006	0.05	0.412	0.523
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 8	ECI7	55830	3609	11.23	12.20	1.250	62.9	1.006	-0.17	0.005	0.006
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 8	ECI7	55830	3609	10.36	11.20	1.213	62.9	1.006	0.09	0.003	0.004
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 8	ECI7	55830	3609	11.23	12.20	1.250	62.9	1.006	-0.09	0.005	0.006
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 8	ECI7	55830	3609	10.36	11.20	1.213	62.9	1.006	-0.17	0.004	0.005
	LTE Band 48	20M	QPSK	1	0	-	Top side	5mm	Ant 8	ECI7	55830	3609	11.23	12.20	1.250	62.9	1.006	0.03	0.003	0.004
	LTE Band 48	20M	QPSK	50	0	-	Top side	5mm	Ant 8	ECI7	55830	3609	10.36	11.20	1.213	62.9	1.006	0.07	0.003	0.004
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 3	ECI7	641666	3624.99	17.48	18.70	1.324	-	-	0.15	0.271	0.359

	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 3	ECI7	641666	3624.99	17.36	18.70	1.361	-	-	0.02	0.238	0.324
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	ECI7	641666	3624.99	17.48	18.70	1.324	-	-	0.05	0.744	0.985
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	ECI7	638000	3570	17.39	18.70	1.352	-	-	-0.12	0.721	0.975
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	ECI7	645332	3679.98	17.14	18.70	1.432	-	-	0.03	0.684	0.980
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 3	ECI7	641666	3624.99	17.36	18.70	1.361	-	-	-0.10	0.719	0.979
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 3	ECI7	638000	3570	17.27	18.70	1.390	-	-	0.07	0.692	0.962
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 3	ECI7	645332	3679.98	17.21	18.70	1.409	-	-	0.11	0.673	0.948
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 3	ECI7	641666	3624.99	17.34	18.70	1.368	-	-	0.01	0.517	0.707
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 3	ECI7	641666	3624.99	17.48	18.70	1.324	-	-	0.08	0.465	0.616
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Side	5mm	Ant 3	ECI7	641666	3624.99	17.36	18.70	1.361	-	-	0.02	0.417	0.568
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 3	ECI7	641666	3624.99	17.48	18.70	1.324	-	-	0.15	0.018	0.024
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Side	5mm	Ant 3	ECI7	641666	3624.99	17.36	18.70	1.361	-	-	0.04	0.016	0.022
	FR1 n48	40M	QPSK	1	1	DFT-30	Top side	5mm	Ant 3	ECI7	641666	3624.99	17.48	18.70	1.324	-	-	0.11	0.091	0.121
	FR1 n48	40M	QPSK	50	28	DFT-30	Top side	5mm	Ant 3	ECI7	641666	3624.99	17.36	18.70	1.361	-	-	0.06	0.090	0.123
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 4	ECI7	641666	3624.99	16.47	17.70	1.327	-	-	0.12	0.099	0.131
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 4	ECI7	641666	3624.99	16.36	17.70	1.361	-	-	0.07	0.096	0.131
36	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	ECI7	641666	3624.99	16.47	17.70	1.327	-	-	-0.07	0.755	**1.002**
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	ECI7	638000	3570	16.39	17.70	1.352	-	-	0.01	0.724	0.979
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	ECI7	645332	3679.98	16.18	17.70	1.419	-	-	0.00	0.698	0.991
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 4	ECI7	641666	3624.99	16.36	17.70	1.361	-	-	-0.16	0.703	0.957
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 4	ECI7	638000	3570	16.26	17.70	1.393	-	-	0.04	0.685	0.954
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 4	ECI7	645332	3679.98	16.21	17.70	1.409	-	-	0.06	0.653	0.920
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 4	ECI7	641666	3624.99	16.32	17.70	1.374	-	-	0.05	0.519	0.713
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 4	ECI7	641666	3624.99	16.47	17.70	1.327	-	-	0.05	0.059	0.078
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Side	5mm	Ant 4	ECI7	641666	3624.99	16.36	17.70	1.361	-	-	0.02	0.055	0.075
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 4	ECI7	641666	3624.99	16.47	17.70	1.327	-	-	-0.05	0.008	0.011
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Side	5mm	Ant 4	ECI7	641666	3624.99	16.36	17.70	1.361	-	-	0.05	0.009	0.012
	FR1 n48	40M	QPSK	1	1	DFT-30	Top side	5mm	Ant 4	ECI7	641666	3624.99	16.47	17.70	1.327	-	-	-0.15	0.177	0.235
	FR1 n48	40M	QPSK	50	28	DFT-30	Top side	5mm	Ant 4	ECI7	641666	3624.99	16.36	17.70	1.361	-	-	-0.03	0.189	0.257
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 5	ECI7	641666	3624.99	19.68	20.50	1.208	-	-	-0.17	0.042	0.051
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 5	ECI7	641666	3624.99	19.64	20.50	1.219	-	-	-0.12	0.041	0.050
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	ECI7	641666	3624.99	19.68	20.50	1.208	-	-	0.01	0.828	1.000
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	ECI7	638000	3570	19.66	20.50	1.213	-	-	0.03	0.798	0.968
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	ECI7	645332	3679.98	19.51	20.50	1.256	-	-	0.09	0.764	0.960
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 5	ECI7	641666	3624.99	19.64	20.50	1.219	-	-	-0.05	0.778	0.948
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 5	ECI7	638000	3570	19.61	20.50	1.227	-	-	0.07	0.749	0.919
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 5	ECI7	645332	3679.98	19.54	20.50	1.247	-	-	-0.12	0.726	0.906
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 5	ECI7	641666	3624.99	19.62	20.50	1.225	-	-	0.03	0.603	0.738
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 5	ECI7	641666	3624.99	19.68	20.50	1.208	-	-	-0.11	0.251	0.303
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Side	5mm	Ant 5	ECI7	641666	3624.99	19.64	20.50	1.219	-	-	0.02	0.283	0.345
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 5	ECI7	641666	3624.99	19.68	20.50	1.208	-	-	0.07	0.012	0.014
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Side	5mm	Ant 5	ECI7	641666	3624.99	19.64	20.50	1.219	-	-	0.02	0.014	0.017
	FR1 n48	40M	QPSK	1	1	DFT-30	Top side	5mm	Ant 5	ECI7	641666	3624.99	19.68	20.50	1.208	-	-	0.14	0.018	0.022
	FR1 n48	40M	QPSK	50	28	DFT-30	Top side	5mm	Ant 5	ECI7	641666	3624.99	19.64	20.50	1.219	-	-	0.02	0.017	0.021
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	ECI7	641666	3624.99	10.17	11.30	1.297	-	-	0.18	0.003	0.004
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 8	ECI7	641666	3624.99	10.13	11.30	1.309	-	-	0.09	0.002	0.003
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	ECI7	641666	3624.99	10.17	11.30	1.297	-	-	-0.13	0.696	0.903
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	ECI7	638000	3570	10.12	11.30	1.312	-	-	0.06	0.653	0.857
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	ECI7	645332	3679.98	10.10	11.30	1.318	-	-	-0.01	0.623	0.821
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 8	ECI7	641666	3624.99	10.13	11.30	1.309	-	-	0.01	0.752	0.985
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 8	ECI7	638000	3570	10.07	11.30	1.327	-	-	0.03	0.720	0.956
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 8	ECI7	645332	3679.98	10.06	11.30	1.330	-	-	-0.12	0.703	0.935
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 8	ECI7	641666	3624.99	10.09	11.30	1.321	-	-	-0.15	0.522	0.690
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 8	ECI7	641666	3624.99	10.17	11.30	1.297	-	-	0.08	0.007	0.009
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Side	5mm	Ant 8	ECI7	641666	3624.99	10.13	11.30	1.309	-	-	0.16	0.007	0.009
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 8	ECI7	641666	3624.99	10.17	11.30	1.297	-	-	-0.05	0.004	0.005

	FR1 n48	40M	QPSK	50	28	DFT-30	Right Side	5mm	Ant 8	ECI7	641666	3624.99	10.13	11.30	1.309	-	-	-0.14	0.003	0.004
	FR1 n48	40M	QPSK	1	1	DFT-30	Top side	5mm	Ant 8	ECI7	641666	3624.99	10.17	11.30	1.297	-	-	0.08	0.003	0.004
	FR1 n48	40M	QPSK	50	28	DFT-30	Top side	5mm	Ant 8	ECI7	641666	3624.99	10.13	11.30	1.309	-	-	-0.09	0.003	0.004
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 3	ECI7	656000	3840	17.79	18.10	1.074	-	-	0.07	0.510	0.548
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 3	ECI7	656000	3840	17.75	18.10	1.084	-	-	0.05	0.403	0.437
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	ECI7	656000	3840	17.79	18.10	1.074	-	-	-0.07	0.927	0.996
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 3	ECI7	656000	3840	17.75	18.10	1.084	-	-	0.15	0.829	0.899
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 3	ECI7	656000	3840	17.73	18.10	1.089	-	-	0.08	0.799	0.870
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 3	ECI7	656000	3840	17.79	18.10	1.074	-	-	-0.05	0.620	0.666
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 3	ECI7	656000	3840	17.75	18.10	1.084	-	-	0.11	0.455	0.493
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 3	ECI7	656000	3840	17.79	18.10	1.074	-	-	0.16	0.021	0.023
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 3	ECI7	656000	3840	17.75	18.10	1.084	-	-	0.03	0.015	0.016
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Top side	5mm	Ant 3	ECI7	656000	3840	17.79	18.10	1.074	-	-	0.14	0.159	0.171
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Top side	5mm	Ant 3	ECI7	656000	3840	17.75	18.10	1.084	-	-	0.10	0.147	0.159
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 3	ECI7	633334	3500.01	17.65	18.10	1.109	-	-	-0.06	0.358	0.397
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 3	ECI7	633334	3500.01	17.57	18.10	1.130	-	-	0.04	0.250	0.282
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	ECI7	633334	3500.01	17.65	18.10	1.109	-	-	-0.07	0.794	0.881
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 3	ECI7	633334	3500.01	17.57	18.10	1.130	-	-	-0.17	0.621	0.702
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 3	ECI7	633334	3500.01	17.53	18.10	1.140	-	-	-0.07	0.631	0.719
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 3	ECI7	633334	3500.01	17.65	18.10	1.109	-	-	0.12	0.506	0.561
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 3	ECI7	633334	3500.01	17.57	18.10	1.130	-	-	0.01	0.451	0.510
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 3	ECI7	633334	3500.01	17.65	18.10	1.109	-	-	0.03	0.018	0.020
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 3	ECI7	633334	3500.01	17.57	18.10	1.130	-	-	0.19	0.015	0.017
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Top side	5mm	Ant 3	ECI7	633334	3500.01	17.65	18.10	1.109	-	-	0.08	0.104	0.115
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Top side	5mm	Ant 3	ECI7	633334	3500.01	17.57	18.10	1.130	-	-	0.13	0.097	0.110
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 4	ECI7	656000	3840	16.11	16.40	1.069	-	-	0.06	0.147	0.157
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 4	ECI7	656000	3840	16.09	16.40	1.074	-	-	0.19	0.151	0.162
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	ECI7	656000	3840	16.11	16.40	1.069	-	-	-0.12	0.784	0.838
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 4	ECI7	656000	3840	16.09	16.40	1.074	-	-	0.05	0.923	0.991
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 4	ECI7	656000	3840	16.04	16.40	1.086	-	-	0.01	0.726	0.789
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 4	ECI7	656000	3840	16.11	16.40	1.069	-	-	0.11	0.060	0.064
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 4	ECI7	656000	3840	16.09	16.40	1.074	-	-	-0.10	0.107	0.115
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 4	ECI7	656000	3840	16.11	16.40	1.069	-	-	0.05	0.007	0.007
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 4	ECI7	656000	3840	16.09	16.40	1.074	-	-	0.08	0.008	0.009
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Top side	5mm	Ant 4	ECI7	656000	3840	16.11	16.40	1.069	-	-	-0.06	0.191	0.204
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Top side	5mm	Ant 4	ECI7	656000	3840	16.09	16.40	1.074	-	-	0.09	0.245	0.263
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 4	ECI7	633334	3500.01	16.27	16.40	1.030	-	-	0.08	0.081	0.083
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 4	ECI7	633334	3500.01	16.21	16.40	1.045	-	-	0.03	0.097	0.101
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	ECI7	633334	3500.01	16.27	16.40	1.030	-	-	-0.11	0.778	0.802
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 4	ECI7	633334	3500.01	16.21	16.40	1.045	-	-	0.02	0.717	0.749
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 4	ECI7	633334	3500.01	16.19	16.40	1.050	-	-	-0.05	0.768	0.806
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 4	ECI7	633334	3500.01	16.27	16.40	1.030	-	-	-0.07	0.057	0.059
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 4	ECI7	633334	3500.01	16.21	16.40	1.045	-	-	-0.12	0.066	0.069
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 4	ECI7	633334	3500.01	16.27	16.40	1.030	-	-	0.03	0.007	0.007
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 4	ECI7	633334	3500.01	16.21	16.40	1.045	-	-	-0.01	0.009	0.009
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Top side	5mm	Ant 4	ECI7	633334	3500.01	16.27	16.40	1.030	-	-	0.01	0.135	0.139
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Top side	5mm	Ant 4	ECI7	633334	3500.01	16.21	16.40	1.045	-	-	0.05	0.165	0.172
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 5	ECI7	656000	3840	17.99	19.40	1.384	-	-	0.01	0.040	0.055
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 5	ECI7	656000	3840	17.79	19.40	1.449	-	-	0.01	0.052	0.075
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	ECI7	656000	3840	17.99	19.40	1.384	-	-	0.12	0.618	0.855
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 5	ECI7	656000	3840	17.79	19.40	1.449	-	-	-0.09	0.670	0.971
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 5	ECI7	656000	3840	17.77	19.40	1.455	-	-	0.06	0.568	0.827
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 5	ECI7	656000	3840	17.99	19.40	1.384	-	-	-0.14	0.221	0.306
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 5	ECI7	656000	3840	17.79	19.40	1.449	-	-	0.19	0.330	0.478
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 5	ECI7	656000	3840	17.99	19.40	1.384	-	-	0.06	0.011	0.015
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 5	ECI7	656000	3840	17.79	19.40	1.449	-	-	-0.11	0.014	0.020

	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Top side	5mm	Ant 5	ECI7	656000	3840	17.99	19.40	1.384	-	-	-0.08	0.025	0.035
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Top side	5mm	Ant 5	ECI7	656000	3840	17.79	19.40	1.449	-	-	0.05	0.028	0.041
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 5	ECI7	633334	3500.01	18.66	19.40	1.186	-	-	0.03	0.018	0.021
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 5	ECI7	633334	3500.01	18.51	19.40	1.227	-	-	0.03	0.036	0.044
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	ECI7	633334	3500.01	18.66	19.40	1.186	-	-	0.01	0.697	0.826
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 5	ECI7	633334	3500.01	18.51	19.40	1.227	-	-	0.03	0.730	0.896
37	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 5	ECI7	633334	3500.01	18.49	19.40	1.233	-	-	-0.16	0.810	**0.999**
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 5	ECI7	633334	3500.01	18.66	19.40	1.186	-	-	0.03	0.101	0.120
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 5	ECI7	633334	3500.01	18.51	19.40	1.227	-	-	0.05	0.226	0.277
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 5	ECI7	633334	3500.01	18.66	19.40	1.186	-	-	-0.02	0.013	0.015
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 5	ECI7	633334	3500.01	18.51	19.40	1.227	-	-	0.01	0.021	0.026
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Top side	5mm	Ant 5	ECI7	633334	3500.01	18.66	19.40	1.186	-	-	0.05	0.013	0.015
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Top side	5mm	Ant 5	ECI7	633334	3500.01	18.51	19.40	1.227	-	-	0.19	0.023	0.028
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	ECI7	656000	3840	11.88	12.40	1.127	-	-	0.07	0.004	0.005
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 8	ECI7	656000	3840	11.75	12.40	1.161	-	-	0.14	0.004	0.005
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	ECI7	656000	3840	11.88	12.40	1.127	-	-	0.15	0.809	0.912
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 8	ECI7	656000	3840	11.75	12.40	1.161	-	-	0.00	0.848	0.985
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 8	ECI7	656000	3840	11.73	12.40	1.167	-	-	0.03	0.823	0.960
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 8	ECI7	656000	3840	11.88	12.40	1.127	-	-	-0.04	0.008	0.009
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 8	ECI7	656000	3840	11.75	12.40	1.161	-	-	-0.18	0.013	0.015
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 8	ECI7	656000	3840	11.88	12.40	1.127	-	-	0.08	0.005	0.006
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 8	ECI7	656000	3840	11.75	12.40	1.161	-	-	-0.17	0.006	0.007
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Top side	5mm	Ant 8	ECI7	656000	3840	11.88	12.40	1.127	-	-	0.14	0.005	0.006
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Top side	5mm	Ant 8	ECI7	656000	3840	11.75	12.40	1.161	-	-	0.07	0.006	0.007
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	ECI7	633334	3500.01	11.38	12.40	1.265	-	-	0.15	0.005	0.006
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 8	ECI7	633334	3500.01	11.34	12.40	1.276	-	-	0.04	0.005	0.006
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	ECI7	633334	3500.01	11.38	12.40	1.265	-	-	0.05	0.222	0.281
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 8	ECI7	633334	3500.01	11.34	12.40	1.276	-	-	-0.03	0.428	0.546
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 8	ECI7	633334	3500.01	11.38	12.40	1.265	-	-	-0.05	0.006	0.008
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 8	ECI7	633334	3500.01	11.34	12.40	1.276	-	-	0.02	0.004	0.005
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 8	ECI7	633334	3500.01	11.38	12.40	1.265	-	-	0.13	0.000	0.000
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 8	ECI7	633334	3500.01	11.34	12.40	1.276	-	-	0.15	0.004	0.005
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Top side	5mm	Ant 8	ECI7	633334	3500.01	11.38	12.40	1.265	-	-	0.02	0.004	0.005
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Top side	5mm	Ant 8	ECI7	633334	3500.01	11.34	12.40	1.276	-	-	-0.18	0.007	0.009

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)
WLAN/Bluetooth																
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 2+9	Hotspot On	6	2437	18.06	19.50	1.393	99.52	1.005	0.05	0.183	0.256
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 2+9	Hotspot On	6	2437	18.06	19.50	1.393	99.52	1.005	-0.19	0.200	0.280
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 2+9	Hotspot On	6	2437	18.06	19.50	1.393	99.52	1.005	0.07	0.019	0.027
38	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 2+9	Hotspot On	6	2437	18.06	19.50	1.393	99.52	1.005	0.05	0.244	**0.342**
	WLAN2.4GHz	802.11b 1Mbps	Top side	5mm	Ant 2+9	Hotspot On	6	2437	18.06	19.50	1.393	99.52	1.005	0.04	0.089	0.125
	Bluetooth	1Mbps	Front	5mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	-0.1	0.062	0.088
39	Bluetooth	1Mbps	Back	5mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	0.03	0.132	**0.188**
	Bluetooth	1Mbps	Left Side	5mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	0.09	0.023	0.033
	Bluetooth	1Mbps	Right Side	5mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	0.09	0.031	0.044
	Bluetooth	1Mbps	Top side	5mm	Ant 2	Full	39	2441	18.10	18.50	1.096	77.01	1.299	-0.14	0.048	0.068
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 2+9	Hotspot On	42	5210	12.28	14.00	1.486	89.19	1.121	0.02	0.091	0.152
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 2+9	Hotspot On	42	5210	12.28	14.00	1.486	89.19	1.121	0.01	0.116	0.193
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 2+9	Hotspot On	42	5210	12.28	14.00	1.486	89.19	1.121	-0.05	0.016	0.027
40	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 2+9	Hotspot On	42	5210	12.28	14.00	1.486	89.19	1.121	0.06	0.205	**0.341**
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top side	5mm	Ant 2+9	Hotspot On	42	5210	12.28	14.00	1.486	89.19	1.121	-0.18	0.114	0.190
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 2+9	Hotspot On	155	5775	12.83	14.50	1.469	89.19	1.121	-0.1	0.062	0.102
41	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 2+9	Hotspot On	155	5775	12.83	14.50	1.469	89.19	1.121	0.01	0.208	**0.343**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 2+9	Hotspot On	155	5775	12.83	14.50	1.469	89.19	1.121	0.04	0.021	0.035
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 2+9	Hotspot On	155	5775	12.83	14.50	1.469	89.19	1.121	0.16	0.156	0.257
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top side	5mm	Ant 2+9	Hotspot On	155	5775	12.83	14.50	1.469	89.19	1.121	-0.02	0.197	0.324

16.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	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)
750MHz																			
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI3	23095	707.5	22.77	24.00	1.327	0.17	0.287	0.381
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	ECI3	23095	707.5	21.66	23.00	1.361	-0.08	0.120	0.163
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	23095	707.5	22.77	24.00	1.327	0.06	0.347	0.461
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	ECI3	23095	707.5	21.66	23.00	1.361	0.13	0.212	0.289
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI3	23095	707.5	22.94	24.00	1.276	-0.04	0.540	0.689
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	ECI3	23095	707.5	21.81	23.00	1.315	-0.14	0.304	0.400
42	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI3	23095	707.5	22.94	24.00	1.276	-0.04	0.548	**0.699**
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	ECI3	23095	707.5	21.81	23.00	1.315	0.04	0.317	0.417
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI3	23230	782	22.89	24.00	1.291	0.09	0.443	0.572
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	ECI3	23230	782	21.70	23.00	1.349	0.06	0.291	0.393
43	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	23230	782	22.89	24.00	1.291	-0.08	0.629	**0.812**
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	ECI3	23230	782	21.70	23.00	1.349	-0.08	0.398	0.537
	LTE Band 13	10M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI3	23230	782	21.63	23.00	1.371	0.03	0.563	0.772
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI3	23230	782	22.92	24.00	1.282	0.07	0.399	0.512
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	ECI3	23230	782	21.78	23.00	1.324	-0.10	0.302	0.400
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI3	23230	782	22.92	24.00	1.282	0.08	0.472	0.605
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	ECI3	23230	782	21.78	23.00	1.324	0.09	0.305	0.404
835MHz																			
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	ECI3	189	836.4	27.76	29.30	1.426	0.10	0.556	0.793
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	ECI3	189	836.4	27.76	29.30	1.426	0.06	0.757	1.079
44	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	ECI3	251	848.8	27.71	29.30	1.442	0.09	0.865	**1.247**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	Headset	ECI3	251	848.8	27.71	29.30	1.442	0.03	0.834	1.203
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	ECI3	128	824.2	27.70	29.30	1.445	0.04	0.751	1.086
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	16mm	Ant 0	-	ECI4	189	836.4	28.79	30.50	1.483	0.04	0.130	0.193
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	20mm	Ant 0	-	ECI4	251	848.8	28.75	30.50	1.496	-0.15	0.113	0.169
	LTE Band 5	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI3	20525	836.5	23.12	24.00	1.225	0.05	0.279	0.342
	LTE Band 5	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	ECI3	20525	836.5	22.05	23.00	1.245	0.02	0.147	0.183
	LTE Band 5	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	20525	836.5	23.12	24.00	1.225	-0.03	0.454	0.556
	LTE Band 5B	10M	QPSK	1	49	-	Back	5mm	Ant 0	-	ECI3	20525+20597	836.5+843.7	22.97	24.00	1.268	0.08	0.426	0.540
	LTE Band 5	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	ECI3	20525	836.5	22.05	23.00	1.245	-0.13	0.251	0.312
	LTE Band 5	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI3	20525	836.5	22.69	23.60	1.233	0.07	0.594	0.732
	LTE Band 5	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	ECI3	20525	836.5	21.52	22.60	1.282	0.03	0.319	0.409
45	LTE Band 5	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI3	20525	836.5	22.69	23.60	1.233	0.04	0.799	**0.985**
	LTE Band 5B	10M	QPSK	1	49	-	Back	5mm	Ant 1	-	ECI3	20525+20597	836.5+843.7	22.61	23.60	1.256	0.02	0.733	0.921
	LTE Band 5	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	ECI3	20525	836.5	21.52	22.60	1.282	0.13	0.440	0.564
	LTE Band 5	10M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI3	20525	836.5	21.50	22.60	1.288	0.10	0.465	0.599
	LTE Band 5	10M	QPSK	1	0	-	Front	16mm	Ant 1	-	ECI4	20525	836.5	22.69	24.00	1.352	0.09	0.067	0.091
	LTE Band 5	10M	QPSK	1	0	-	Back	20mm	Ant 1	-	ECI4	20525	836.5	22.69	24.00	1.352	0.13	0.101	0.137
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	ECI3	4182	836.4	21.34	22.30	1.247	-0.02	0.658	0.821
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	ECI3	4132	826.4	21.23	22.30	1.279	0.05	0.632	0.809
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	ECI3	4233	846.6	21.27	22.30	1.268	-0.19	0.594	0.753
46	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	ECI3	4182	836.4	21.34	22.30	1.247	0.02	1.020	**1.272**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	Headset	ECI3	4182	836.4	21.34	22.30	1.247	0.03	0.998	1.245
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	ECI3	4132	826.4	21.23	22.30	1.279	0.05	0.945	1.209
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	ECI3	4233	846.6	21.27	22.30	1.268	0.07	0.955	1.211
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 0	-	ECI4	4182	836.4	23.24	24.00	1.191	-0.19	0.230	0.274
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	20mm	Ant 0	-	ECI4	4182	836.4	23.24	24.00	1.191	0.04	0.240	0.286
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	5mm	Ant 0	-	ECI3	167300	836.5	23.11	24.00	1.227	-0.04	0.595	0.730
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	5mm	Ant 0	-	ECI3	167300	836.5	22.79	24.00	1.321	0.04	0.560	0.740
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	-	ECI3	167300	836.5	23.11	24.00	1.227	0.01	0.761	0.934
47	FR1 n5	20M	QPSK	50	28	DFT-15	Back	5mm	Ant 0	-	ECI3	167300	836.5	22.79	24.00	1.321	-0.09	0.768	**1.015**

	FR1 n5	20M	QPSK	100	0	DFT-15	Back	5mm	Ant 0	-	ECI3	167300	836.5	21.77	23.00	1.327	0.03	0.524	0.696
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	-	ECI3	167300	836.5	22.79	23.50	1.178	0.08	0.822	0.968
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	5mm	Ant 1	-	ECI3	167300	836.5	22.62	23.50	1.225	0.05	0.796	0.975
	FR1 n5	20M	QPSK	100	0	DFT-15	Front	5mm	Ant 1	-	ECI3	167300	836.5	21.63	22.50	1.222	-0.14	0.525	0.641
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	-	ECI3	167300	836.5	22.79	23.50	1.178	-0.09	0.853	1.004
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	5mm	Ant 1	-	ECI3	167300	836.5	22.62	23.50	1.225	0.15	0.748	0.916
	FR1 n5	20M	QPSK	100	0	DFT-15	Back	5mm	Ant 1	-	ECI3	167300	836.5	21.63	22.50	1.222	0.07	0.511	0.624
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	16mm	Ant 1	-	ECI4	167300	836.5	22.62	24.00	1.374	0.06	0.114	0.157
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	20mm	Ant 1	-	ECI4	167300	836.5	22.79	24.00	1.321	0.12	0.132	0.174
1750MHz																			
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI3	132322	1745	17.66	18.50	1.213	0.05	0.554	0.672
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 0	-	ECI3	132322	1745	16.78	17.50	1.180	0.03	0.254	0.300
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	132322	1745	17.66	18.50	1.213	0.03	0.951	1.154
48	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	132072	1720	17.44	18.50	1.276	-0.02	0.980	**1.251**
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	Headset	ECI3	132072	1720	17.44	18.50	1.276	0.04	0.964	1.230
	LTE Band 66C	20M	QPSK	1	99	-	Back	5mm	Ant 0	-	ECI3	132072+132270	1720+1739.8	17.23	18.50	1.340	0.05	0.891	1.194
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	132572	1770	17.45	18.50	1.274	-0.05	0.911	1.160
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI3	132322	1745	16.78	17.50	1.180	0.03	0.442	0.522
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 0	-	ECI3	132322	1745	16.82	17.50	1.169	0.07	0.431	0.504
	LTE Band 66	20M	QPSK	1	0	-	Front	16mm	Ant 0	-	ECI4	132322	1745	22.57	24.00	1.390	0.12	0.520	0.723
	LTE Band 66	20M	QPSK	1	0	-	Back	20mm	Ant 0	-	ECI4	132072	1720	22.33	24.00	1.469	-0.08	0.578	0.849
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI3	132322	1745	16.44	17.70	1.337	0.07	0.415	0.555
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	ECI3	132322	1745	15.68	16.70	1.265	-0.07	0.256	0.324
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI3	132322	1745	16.44	17.70	1.337	0.07	0.599	0.801
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI3	132072	1720	16.36	17.70	1.361	0.06	0.515	0.701
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI3	132572	1770	16.42	17.70	1.343	0.01	0.747	1.003
	LTE Band 66C	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI3	132572+132374	1770+1750.2	16.31	17.70	1.377	0.08	0.713	0.982
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI3	132322	1745	15.68	16.70	1.265	0.09	0.353	0.446
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 1	-	ECI3	132322	1745	15.68	16.70	1.265	-0.04	0.334	0.422
	LTE Band 66	20M	QPSK	1	0	-	Front	16mm	Ant 1	-	ECI4	132322	1745	22.23	24.00	1.503	0.03	0.244	0.367
	LTE Band 66	20M	QPSK	1	0	-	Back	20mm	Ant 1	-	ECI4	132572	1770	22.15	24.00	1.531	-0.12	0.374	0.573
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 0	-	ECI3	349000	1745	19.39	20.30	1.233	-0.14	0.619	0.763
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 0	-	ECI3	349000	1745	19.30	20.30	1.259	-0.10	0.569	0.716
	FR1 n66	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	-	ECI3	349000	1745	19.39	20.30	1.233	-0.12	0.987	1.217
49	FR1 n66	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	-	ECI3	349000	1745	19.30	20.30	1.259	-0.04	0.980	**1.234**
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	Headset	ECI3	349000	1745	19.30	20.30	1.259	0.01	0.957	1.205
	FR1 n66	40M	QPSK	216	0	DFT-15	Back	5mm	Ant 0	-	ECI3	349000	1745	19.28	20.30	1.265	-0.10	0.667	0.844
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	16mm	Ant 0	-	ECI4	349000	1745	23.73	24.50	1.194	0.03	0.672	0.802
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	20mm	Ant 0	-	ECI4	349000	1745	23.53	24.50	1.250	0.06	0.749	0.936
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	-	ECI3	349000	1745	16.71	18.10	1.377	-0.13	0.435	0.599
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 1	-	ECI3	349000	1745	16.62	18.10	1.406	0.07	0.396	0.557
	FR1 n66	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	-	ECI3	349000	1745	16.71	18.10	1.377	-0.03	0.721	0.993
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 1	-	ECI3	349000	1745	16.62	18.10	1.406	0.14	0.714	1.004
	FR1 n66	40M	QPSK	216	0	DFT-15	Back	5mm	Ant 1	-	ECI3	349000	1745	16.57	18.10	1.422	0.02	0.499	0.710
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	16mm	Ant 1	-	ECI4	349000	1745	22.82	24.00	1.312	-0.03	0.329	0.432
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	20mm	Ant 1	-	ECI4	349000	1745	22.79	24.00	1.321	0.09	0.385	0.509

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	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 (4 Tx slots)	Front	5mm	Ant 0	-	ECI3	661	1880	18.95	20.50	1.429	-0.10	0.472	0.674
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	ECI3	661	1880	18.95	20.50	1.429	-0.09	0.737	1.053
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	ECI3	512	1850.2	18.81	20.50	1.476	0.18	0.764	1.127
50	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	ECI3	810	1909.8	18.92	20.50	1.439	0.06	0.870	**1.252**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	Headset	ECI3	810	1909.8	18.92	20.50	1.439	0.02	0.856	1.232
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	16mm	Ant 0	-	ECI4	661	1880	25.71	27.50	1.510	0.05	0.518	0.782
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	20mm	Ant 0	-	ECI4	810	1909.8	25.65	27.50	1.531	0.16	0.593	0.908
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	ECI3	9400	1880	11.97	13.30	1.358	0.06	0.531	0.721
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	ECI3	9400	1880	11.97	13.30	1.358	0.19	0.855	1.161
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	ECI3	9262	1852.4	11.90	13.30	1.380	0.09	0.839	1.158
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	ECI3	9538	1907.6	11.89	13.30	1.384	-0.01	0.891	1.233
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	Headset	ECI3	9538	1907.6	11.89	13.30	1.384	0.01	0.854	1.182
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 0	-	ECI4	9400	1880	23.06	24.00	1.242	0.02	0.983	1.221
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 0	Headset	ECI4	9400	1880	23.06	24.00	1.242	0.06	0.971	1.206
51	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	20mm	Ant 0	-	ECI4	9538	1907.6	22.96	24.00	1.271	-0.16	0.998	**1.268**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	20mm	Ant 0	Headset	ECI4	9538	1907.6	22.96	24.00	1.271	-0.01	0.979	1.244
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI3	18900	1880	14.96	16.40	1.393	-0.19	0.524	0.730
	LTE Band 2	20M	QPSK	50	0	-	Front	5mm	Ant 0	-	ECI3	18900	1880	14.07	15.40	1.358	-0.08	0.247	0.336
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	18900	1880	14.96	16.40	1.393	-0.19	0.811	1.130
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	18700	1860	14.86	16.40	1.426	0.03	0.845	1.205
52	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	19100	1900	14.91	16.40	1.409	0.01	0.884	**1.246**
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 0	Headset	ECI3	19100	1900	14.91	16.40	1.409	-0.02	0.853	1.202
	LTE Band 2	20M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI3	18900	1880	14.07	15.40	1.358	-0.18	0.411	0.558
	LTE Band 2	20M	QPSK	100	0	-	Back	5mm	Ant 0	-	ECI3	18900	1880	14.07	15.40	1.358	0.17	0.416	0.565
	LTE Band 2	20M	QPSK	1	0	-	Front	16mm	Ant 0	-	ECI4	18900	1880	22.62	24.00	1.374	0.06	0.594	0.816
	LTE Band 2	20M	QPSK	1	0	-	Back	20mm	Ant 0	-	ECI4	19100	1900	22.56	24.00	1.393	-0.06	0.636	0.886
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI3	18900	1880	15.89	17.20	1.352	0.15	0.150	0.203
	LTE Band 2	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	ECI3	18900	1880	14.79	16.20	1.384	-0.09	0.072	0.100
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI3	18900	1880	15.89	17.20	1.352	0.08	0.240	0.324
	LTE Band 2	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI3	18900	1880	14.79	16.20	1.384	0.08	0.135	0.187
	LTE Band 2	20M	QPSK	1	0	-	Front	16mm	Ant 1	-	ECI4	18900	1880	22.32	24.00	1.472	-0.07	0.248	0.365
	LTE Band 2	20M	QPSK	1	0	-	Back	20mm	Ant 1	-	ECI4	18900	1880	22.32	24.00	1.472	-0.14	0.322	0.474
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 0	-	ECI3	376000	1880	16.77	17.50	1.183	0.04	0.561	0.664
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 0	-	ECI3	376000	1880	16.71	17.50	1.199	-0.06	0.588	0.705
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	-	ECI3	376000	1880	16.77	17.50	1.183	0.10	0.942	1.114
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	-	ECI3	374000	1870	16.69	17.50	1.205	-0.08	0.883	1.064
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	-	ECI3	378000	1890	16.41	17.50	1.285	-0.04	0.920	1.182
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	-	ECI3	376000	1880	16.71	17.50	1.199	-0.12	0.939	1.126
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	-	ECI3	374000	1870	16.69	17.50	1.205	0.10	0.915	1.103
53	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	-	ECI3	378000	1890	16.52	17.50	1.253	-0.01	0.988	**1.238**
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	Headset	ECI3	378000	1890	16.52	17.50	1.253	0.02	0.964	1.208
	FR1 n2	40M	QPSK	216	0	DFT-15	Back	5mm	Ant 0	-	ECI3	376000	1880	16.69	17.50	1.205	0.07	0.657	0.792
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	16mm	Ant 0	-	ECI4	376000	1880	23.84	24.00	1.038	-0.09	0.611	0.634
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	20mm	Ant 0	-	ECI4	378000	1890	23.75	24.00	1.059	0.02	0.705	0.747
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	-	ECI3	376000	1880	16.61	17.90	1.346	0.18	0.362	0.487
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 1	-	ECI3	376000	1880	16.51	17.90	1.377	0.03	0.340	0.468
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	-	ECI3	376000	1880	16.61	17.90	1.346	0.08	0.625	0.841
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	-	ECI3	374000	1870	16.56	17.90	1.361	0.16	0.728	0.991
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	-	ECI3	378000	1890	16.48	17.90	1.387	0.09	0.690	0.957
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 1	-	ECI3	376000	1880	16.51	17.90	1.377	0.07	0.663	0.913
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 1	-	ECI3	374000	1870	16.40	17.90	1.413	0.03	0.685	0.968

	FR1 n2	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 1	-	ECI3	378000	1890	16.37	17.90	1.422	-0.12	0.656	0.933
	FR1 n2	40M	QPSK	216	0	DFT-15	Back	5mm	Ant 1	-	ECI3	376000	1880	16.45	17.90	1.396	-0.15	0.402	0.561
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	16mm	Ant 1	-	ECI4	376000	1880	23.63	24.00	1.089	0.08	0.291	0.317
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	20mm	Ant 1	-	ECI4	374000	1870	23.60	24.00	1.096	0.05	0.344	0.377

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	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	5mm	Ant 0	-	ECI3	21100	2535	20.78	21.90	1.294	-	-	-0.11	0.390	0.505
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 0	-	ECI3	21100	2535	20.03	20.90	1.222	-	-	0.07	0.160	0.195
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	21100	2535	20.78	21.90	1.294	-	-	-0.13	0.731	0.946
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	20850	2510	20.47	21.90	1.390	-	-	0.08	0.869	1.208
54	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI3	21350	2560	20.72	21.90	1.312	-	-	0.05	0.943	**1.237**
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	Headset	ECI3	21350	2560	20.72	21.90	1.312	-	-	-0.03	0.921	1.209
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI3	21100	2535	20.03	20.90	1.222	-	-	0.04	0.410	0.501
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 0	-	ECI3	21100	2535	19.93	20.90	1.250	-	-	-0.04	0.415	0.519
	LTE Band 7	20M	QPSK	1	0	-	Front	16mm	Ant 0	-	ECI4	21100	2535	22.47	24.00	1.422	-	-	0.02	0.287	0.408
	LTE Band 7	20M	QPSK	1	0	-	Back	20mm	Ant 0	-	ECI4	21350	2560	22.45	24.00	1.429	-	-	-0.07	0.338	0.483
3500-3900MHz																					
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 3	-	ECI3	55830	3609	17.46	18.70	1.330	62.9	1.006	-0.09	0.206	0.276
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 3	-	ECI3	55830	3609	16.36	17.70	1.361	62.9	1.006	0.01	0.099	0.136
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	ECI3	55830	3609	17.46	18.70	1.330	62.9	1.006	-0.14	0.599	0.802
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	ECI3	55340	3560	17.34	18.70	1.368	62.9	1.006	-0.11	0.604	0.831
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	ECI3	56150	3641	17.27	18.70	1.390	62.9	1.006	0.07	0.657	0.919
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	ECI3	56640	3690	17.30	18.70	1.380	62.9	1.006	-0.05	0.716	0.994
	LTE Band 48C	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	ECI3	56640+ 56442	3690+ 3670.2	17.17	18.70	1.422	62.9	1.006	-0.07	0.658	0.942
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 3	-	ECI3	55830	3609	16.36	17.70	1.361	62.9	1.006	-0.11	0.283	0.388
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 3	-	ECI3	55830	3609	16.26	17.70	1.393	62.9	1.006	0.13	0.264	0.370
	LTE Band 48	20M	QPSK	1	0	-	Front	16mm	Ant 3	-	ECI4	55830	3609	22.61	24.00	1.377	62.9	1.006	-0.03	0.157	0.218
	LTE Band 48	20M	QPSK	1	0	-	Back	20mm	Ant 3	-	ECI4	56640	3690	22.49	24.00	1.416	62.9	1.006	0.15	0.305	0.434
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	ECI3	55830	3609	17.37	18.40	1.268	62.9	1.006	0.18	0.099	0.126
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	ECI3	55830	3609	16.35	17.40	1.274	62.9	1.006	0.06	0.060	0.077
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI3	55830	3609	17.37	18.40	1.268	62.9	1.006	-0.19	0.783	0.999
	LTE Band 48C	20M	QPSK	1	99	-	Back	5mm	Ant 4	-	ECI3	55830+ 56028	3609+ 3579.8	17.32	18.40	1.282	62.9	1.006	-0.09	0.764	0.986
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI3	55340	3560	17.17	18.40	1.327	62.9	1.006	0.17	0.679	0.907
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI3	56150	3641	17.01	18.40	1.377	62.9	1.006	-0.06	0.659	0.913
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI3	56640	3690	17.07	18.40	1.358	62.9	1.006	0.03	0.645	0.881
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI3	55830	3609	16.35	17.40	1.274	62.9	1.006	0.05	0.420	0.538
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	ECI3	55830	3609	16.32	17.40	1.282	62.9	1.006	0.16	0.415	0.535
	LTE Band 48	20M	QPSK	1	0	-	Front	16mm	Ant 4	-	ECI4	55830	3609	22.58	24.00	1.387	62.9	1.006	0.07	0.068	0.095
	LTE Band 48	20M	QPSK	1	0	-	Back	20mm	Ant 4	-	ECI4	55830	3609	22.58	24.00	1.387	62.9	1.006	0.16	0.226	0.315
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 5	-	ECI3	55830	3609	20.31	21.40	1.285	62.9	1.006	0.01	0.019	0.025
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 5	-	ECI3	55830	3609	19.34	20.40	1.276	62.9	1.006	0.07	0.013	0.017
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	ECI3	55830	3609	20.31	21.40	1.285	62.9	1.006	-0.06	0.621	0.803
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	ECI3	55340	3560	20.24	21.40	1.306	62.9	1.006	0.03	0.687	0.903
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	ECI3	56150	3641	20.18	21.40	1.324	62.9	1.006	0.07	0.581	0.774
55	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	ECI3	56640	3690	20.16	21.40	1.330	62.9	1.006	0.09	0.750	**1.004**
	LTE Band 48C	20M	QPSK	1	0	-	Back	5mm	Ant 5	-	ECI3	56640+ 56442	3690+ 3670.2	20.07	21.40	1.358	62.9	1.006	-0.09	0.724	0.989
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 5	-	ECI3	55830	3609	19.34	20.40	1.276	62.9	1.006	0.06	0.229	0.294
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 5	-	ECI3	55830	3609	19.37	20.40	1.268	62.9	1.006	0.01	0.227	0.289
	LTE Band 48	20M	QPSK	1	0	-	Front	16mm	Ant 5	-	ECI4	55830	3609	21.92	23.30	1.374	62.9	1.006	0.08	0.003	0.004
	LTE Band 48	20M	QPSK	1	0	-	Back	20mm	Ant 5	-	ECI4	56640	3690	21.76	23.30	1.426	62.9	1.006	0.05	0.097	0.139
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 8	-	ECI3	55830	3609	11.23	12.20	1.250	62.9	1.006	-0.06	0.003	0.004
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 8	-	ECI3	55830	3609	10.36	11.20	1.213	62.9	1.006	-0.07	0.002	0.002
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	ECI3	55830	3609	11.23	12.20	1.250	62.9	1.006	-0.01	0.796	1.001

	LTE Band 48C	20M	QPSK	1	99	-	Back	5mm	Ant 8	-	ECI3	55830+ 56028	3609+ 3579.8	11.20	12.20	1.259	62.9	1.006	0.07	0.789	0.999
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	ECI3	55340	3560	10.98	12.20	1.324	62.9	1.006	0.14	0.651	0.867
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	ECI3	56150	3641	11.19	12.20	1.262	62.9	1.006	0.06	0.556	0.706
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	ECI3	56640	3690	11.16	12.20	1.271	62.9	1.006	0.05	0.365	0.467
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 8	-	ECI3	55830	3609	10.36	11.20	1.213	62.9	1.006	-0.12	0.366	0.447
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 8	-	ECI3	55830	3609	10.19	11.20	1.262	62.9	1.006	0.05	0.412	0.523
	LTE Band 48	20M	QPSK	1	0	-	Front	16mm	Ant 8	-	ECI4	55830	3609	21.76	23.10	1.361	62.9	1.006	0.14	0.001	0.001
	LTE Band 48	20M	QPSK	1	0	-	Back	20mm	Ant 8	-	ECI4	55830	3609	21.76	23.10	1.361	62.9	1.006	0.06	0.492	0.674
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 3	-	ECI3	641666	3624.99	17.48	18.70	1.324	-	-	0.15	0.271	0.359
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 3	-	ECI3	641666	3624.99	17.36	18.70	1.361	-	-	0.02	0.238	0.324
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	-	ECI3	641666	3624.99	17.48	18.70	1.324	-	-	0.05	0.744	0.985
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	-	ECI3	638000	3570	17.39	18.70	1.352	-	-	0.04	0.713	0.964
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	-	ECI3	645332	3679.98	17.14	18.70	1.432	-	-	0.06	0.659	0.944
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 3	-	ECI3	641666	3624.99	17.36	18.70	1.361	-	-	-0.01	0.719	0.979
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 3	-	ECI3	638000	3570	17.27	18.70	1.390	-	-	-0.04	0.697	0.969
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 3	-	ECI3	645332	3679.98	17.21	18.70	1.409	-	-	-0.03	0.689	0.971
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 3	-	ECI3	641666	3624.99	17.34	18.70	1.368	-	-	0.01	0.517	0.707
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	16mm	Ant 3	-	ECI4	641666	3624.99	22.96	24.00	1.271	-	-	0.02	0.151	0.192
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	20mm	Ant 3	-	ECI4	641666	3624.99	22.96	24.00	1.271	-	-	-0.04	0.325	0.413
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 4	-	ECI3	641666	3624.99	16.47	17.70	1.327	-	-	0.12	0.099	0.131
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 4	-	ECI3	641666	3624.99	16.36	17.70	1.361	-	-	0.07	0.096	0.131
56	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	-	ECI3	641666	3624.99	16.47	17.70	1.327	-	-	-0.07	0.755	**1.002**
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	-	ECI3	638000	3570	16.39	17.70	1.352	-	-	0.02	0.712	0.963
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	-	ECI3	645332	3679.98	16.18	17.70	1.419	-	-	-0.03	0.679	0.964
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 4	-	ECI3	641666	3624.99	16.36	17.70	1.361	-	-	-0.16	0.703	0.957
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 4	-	ECI3	638000	3570	16.26	17.70	1.393	-	-	0.04	0.694	0.967
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 4	-	ECI3	645332	3679.98	16.21	17.70	1.409	-	-	-0.05	0.681	0.960
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 4	-	ECI3	641666	3624.99	16.32	17.70	1.374	-	-	0.05	0.519	0.713
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	16mm	Ant 4	-	ECI4	641666	3624.99	22.34	23.40	1.276	-	-	0.05	0.063	0.080
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	20mm	Ant 4	-	ECI4	641666	3624.99	22.34	23.40	1.276	-	-	-0.10	0.225	0.287
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 5	-	ECI3	641666	3624.99	19.68	20.50	1.208	-	-	-0.17	0.042	0.051
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 5	-	ECI3	641666	3624.99	19.64	20.50	1.219	-	-	-0.12	0.041	0.050
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	-	ECI3	641666	3624.99	19.68	20.50	1.208	-	-	0.01	0.828	1.000
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	-	ECI3	638000	3570	19.66	20.50	1.213	-	-	0.07	0.781	0.948
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	-	ECI3	645332	3679.98	19.51	20.50	1.256	-	-	0.01	0.767	0.963
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 5	-	ECI3	641666	3624.99	19.64	20.50	1.219	-	-	0.09	0.778	0.948
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 5	-	ECI3	638000	3570	19.61	20.50	1.227	-	-	-0.03	0.759	0.932
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 5	-	ECI3	645332	3679.98	19.54	20.50	1.247	-	-	-0.01	0.737	0.919
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 5	-	ECI3	641666	3624.99	19.62	20.50	1.225	-	-	0.03	0.603	0.738
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	16mm	Ant 5	-	ECI4	641666	3624.99	23.19	24.00	1.205	-	-	0.06	0.006	0.007
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	20mm	Ant 5	-	ECI4	641666	3624.99	23.19	24.00	1.205	-	-	0.18	0.247	0.298
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	-	ECI3	641666	3624.99	10.17	11.30	1.297	-	-	0.18	0.003	0.004
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 8	-	ECI3	641666	3624.99	10.13	11.30	1.309	-	-	0.09	0.002	0.003
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	-	ECI3	641666	3624.99	10.17	11.30	1.297	-	-	-0.13	0.696	0.903
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	-	ECI3	638000	3570	10.12	11.30	1.312	-	-	0.06	0.673	0.883
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	-	ECI3	645332	3679.98	10.10	11.30	1.318	-	-	0.07	0.651	0.858
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 8	-	ECI3	641666	3624.99	10.13	11.30	1.309	-	-	0.01	0.752	0.985
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 8	-	ECI3	638000	3570	10.07	11.30	1.327	-	-	-0.03	0.721	0.957
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 8	-	ECI3	645332	3679.98	10.06	11.30	1.330	-	-	0.01	0.703	0.935
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 8	-	ECI3	641666	3624.99	10.09	11.30	1.321	-	-	-0.15	0.522	0.690
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	16mm	Ant 8	-	ECI4	641666	3624.99	21.82	22.60	1.197	-	-	0.08	0.003	0.004
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	20mm	Ant 8	-	ECI4	641666	3624.99	21.53	22.60	1.279	-	-	0.17	0.500	0.640
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 3	-	ECI3	656000	3840	17.79	18.10	1.074	-	-	0.07	0.510	0.548
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 3	-	ECI3	656000	3840	17.75	18.10	1.084	-	-	0.05	0.403	0.437
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	-	ECI3	656000	3840	17.79	18.10	1.074	-	-	-0.07	0.927	0.996
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 3	-	ECI3	656000	3840	17.75	18.10	1.084	-	-	0.15	0.829	0.899

	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 3	-	ECI3	656000	3840	17.73	18.10	1.089	-	-	0.08	0.799	0.870
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	16mm	Ant 3	-	ECI4	656000	3840	26.16	27.00	1.213	-	-	0.08	0.248	0.301
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	20mm	Ant 3	-	ECI4	656000	3840	26.16	27.00	1.213	-	-	-0.02	0.465	0.564
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 3	-	ECI3	633334	3500.01	17.65	18.10	1.109	-	-	-0.06	0.358	0.397
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 3	-	ECI3	633334	3500.01	17.57	18.10	1.130	-	-	0.04	0.250	0.282
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	-	ECI3	633334	3500.01	17.65	18.10	1.109	-	-	-0.07	0.794	0.881
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 3	-	ECI3	633334	3500.01	17.57	18.10	1.130	-	-	-0.17	0.621	0.702
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 3	-	ECI3	633334	3500.01	17.53	18.10	1.140	-	-	-0.07	0.631	0.719
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	16mm	Ant 3	-	ECI4	633334	3500.01	26.19	27.00	1.205	-	-	-0.08	0.139	0.167
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	20mm	Ant 3	-	ECI4	633334	3500.01	26.19	27.00	1.205	-	-	0.07	0.280	0.337
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 4	-	ECI3	656000	3840	16.11	16.40	1.069	-	-	0.06	0.147	0.157
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 4	-	ECI3	656000	3840	16.09	16.40	1.074	-	-	0.19	0.151	0.162
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	-	ECI3	656000	3840	16.11	16.40	1.069	-	-	-0.12	0.784	0.838
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 4	-	ECI3	656000	3840	16.09	16.40	1.074	-	-	0.05	0.923	0.991
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 4	-	ECI3	656000	3840	16.04	16.40	1.086	-	-	0.01	0.726	0.789
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	16mm	Ant 4	-	ECI4	656000	3840	22.56	23.50	1.242	-	-	0.07	0.102	0.127
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	20mm	Ant 4	-	ECI4	656000	3840	22.56	23.50	1.242	-	-	0.14	0.236	0.293
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 4	-	ECI3	633334	3500.01	16.27	16.40	1.030	-	-	0.08	0.081	0.083
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 4	-	ECI3	633334	3500.01	16.21	16.40	1.045	-	-	0.03	0.097	0.101
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	-	ECI3	633334	3500.01	16.27	16.40	1.030	-	-	-0.11	0.778	0.802
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 4	-	ECI3	633334	3500.01	16.21	16.40	1.045	-	-	0.02	0.717	0.749
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 4	-	ECI3	633334	3500.01	16.19	16.40	1.050	-	-	-0.05	0.768	0.806
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	16mm	Ant 4	-	ECI4	633334	3500.01	22.55	23.50	1.245	-	-	0.15	0.023	0.029
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	20mm	Ant 4	-	ECI4	633334	3500.01	22.48	23.50	1.265	-	-	0.03	0.220	0.271
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	20mm	Ant 4	-	ECI4	633334	3500.01	22.61	23.50	1.227	-	-	-0.04	0.214	0.270
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 5	-	ECI3	656000	3840	17.99	19.40	1.384	-	-	0.01	0.040	0.055
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 5	-	ECI3	656000	3840	17.79	19.40	1.449	-	-	0.01	0.052	0.075
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	-	ECI3	656000	3840	17.99	19.40	1.384	-	-	0.12	0.618	0.855
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 5	-	ECI3	656000	3840	17.79	19.40	1.449	-	-	-0.09	0.670	0.971
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 5	-	ECI3	656000	3840	17.77	19.40	1.455	-	-	0.06	0.568	0.827
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	16mm	Ant 5	-	ECI4	656000	3840	26.04	27.00	1.247	-	-	0.12	0.080	0.100
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	20mm	Ant 5	-	ECI4	656000	3840	26.04	27.00	1.247	-	-	0.03	0.134	0.167
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 5	-	ECI3	633334	3500.01	18.66	19.40	1.186	-	-	0.03	0.018	0.021
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 5	-	ECI3	633334	3500.01	18.51	19.40	1.227	-	-	0.03	0.036	0.044
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	-	ECI3	633334	3500.01	18.66	19.40	1.186	-	-	0.01	0.697	0.826
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 5	-	ECI3	633334	3500.01	18.51	19.40	1.227	-	-	0.03	0.730	0.896
57	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 5	-	ECI3	633334	3500.01	18.49	19.40	1.233	-	-	-0.16	0.810	**0.999**
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	16mm	Ant 5	-	ECI4	633334	3500.01	25.97	27.00	1.268	-	-	-0.06	0.030	0.038
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	20mm	Ant 5	-	ECI4	633334	3500.01	26.04	27.00	1.247	-	-	0.11	0.131	0.163
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	20mm	Ant 5	-	ECI4	633334	3500.01	24.98	26.00	1.265	-	-	0.07	0.120	0.152
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	-	ECI3	656000	3840	11.88	12.40	1.127	-	-	0.07	0.003	0.003
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 8	-	ECI3	656000	3840	11.75	12.40	1.161	-	-	0.14	0.004	0.005
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	-	ECI3	656000	3840	11.88	12.40	1.127	-	-	0.15	0.809	0.912
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 8	-	ECI3	656000	3840	11.75	12.40	1.161	-	-	0.00	0.848	0.985
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 8	-	ECI3	656000	3840	11.73	12.40	1.167	-	-	0.03	0.823	0.960
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	16mm	Ant 8	-	ECI4	656000	3840	23.37	23.50	1.030	-	-	-0.11	0.010	0.010
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	20mm	Ant 8	-	ECI4	656000	3840	23.37	23.50	1.030	-	-	0.13	0.453	0.467
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	-	ECI3	633334	3500.01	11.38	12.40	1.265	-	-	0.15	0.030	0.038
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 8	-	ECI3	633334	3500.01	11.34	12.40	1.276	-	-	0.04	0.005	0.006
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	-	ECI3	633334	3500.01	11.38	12.40	1.265	-	-	0.05	0.222	0.281
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 8	-	ECI3	633334	3500.01	11.34	12.40	1.276	-	-	-0.03	0.428	0.546
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	16mm	Ant 8	-	ECI4	633334	3500.01	22.46	23.50	1.271	-	-	0.05	0.080	0.102
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	20mm	Ant 8	-	ECI4	633334	3500.01	21.96	23.50	1.426	-	-	-0.03	0.122	0.174

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Headset	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)
WIFI/Bluetooth																	
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 2+9	-	Full	6	2437	22.96	24.50	1.426	99.52	1.005	-0.12	0.522	0.748
58	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 2+9	-	Full	6	2437	22.96	24.50	1.426	99.52	1.005	-0.03	0.655	**0.938**
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 2+9	-	Simultaneous	6	2437	19.11	20.50	1.377	99.52	1.005	0.06	0.231	0.320
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 2+9	-	Full	1	2412	22.76	24.50	1.493	99.52	1.005	0.05	0.570	0.855
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 2+9	-	Full	11	2462	21.91	23.50	1.442	99.52	1.005	-0.03	0.512	0.742
	WLAN2.4GHz	802.11b 1Mbps	Back	20mm	Ant 2+9	-	Full	6	2437	22.96	24.50	1.426	99.52	1.005	0.08	0.134	0.192
	Bluetooth	1Mbps	Front	5mm	Ant 2	-	Full	39	2441	18.10	18.50	1.096	77.01	1.299	-0.1	0.062	0.088
59	Bluetooth	1Mbps	Back	5mm	Ant 2	-	Full	39	2441	18.10	18.50	1.096	77.01	1.299	0.03	0.132	**0.188**
	WLAN 5.3GHz	802.11n-HT40 MCS0	Front	5mm	Ant 2+9	-	Standalone	54	5270	19.78	21.50	1.486	94.12	1.062	0.15	0.556	0.877
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	5mm	Ant 2+9	-	Standalone	62	5310	16.62	18.00	1.374	94.12	1.062	0.02	0.405	0.591
60	WLAN 5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 2+9	-	Standalone	54	5270	19.78	21.50	1.486	94.12	1.062	-0.02	0.743	**1.173**
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 2+9	-	Simultaneous	54	5270	14.12	15.50	1.374	89.19	1.121	0.07	0.209	0.322
	WLAN 5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 2+9	-	Standalone	62	5310	16.62	18.00	1.374	94.12	1.062	-0.02	0.401	0.585
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	16mm	Ant 2+9	-	Full	54	5270	20.21	22.00	1.510	94.12	1.062	0.02	0.098	0.157
	WLAN 5.3GHz	802.11n-HT40 MCS0	Back	20mm	Ant 2+9	-	Full	54	5270	20.21	22.00	1.510	94.12	1.062	-0.02	0.106	0.170
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 2+9	-	Standalone	110	5550	17.43	19.00	1.435	94.12	1.062	0.07	0.165	0.252
61	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 2+9	-	Standalone	110	5550	17.43	19.00	1.435	94.12	1.062	0.01	0.668	**1.018**
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 2+9	-	Simultaneous	106	5530	13.02	14.50	1.406	89.19	1.121	0.05	0.202	0.318
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 2+9	-	Standalone	102	5510	15.75	17.50	1.496	94.12	1.062	0.01	0.246	0.391
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 2+9	-	Standalone	134	5670	17.32	19.00	1.472	94.12	1.062	-0.11	0.444	0.694
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	16mm	Ant 2+9	-	Full	110	5550	20.38	22.00	1.451	94.12	1.062	0.07	0.110	0.169
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	20mm	Ant 2+9	-	Full	110	5550	20.38	22.00	1.451	94.12	1.062	-0.11	0.205	0.316
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 2+9	-	Standalone	155	5775	17.36	18.50	1.300	89.19	1.121	-0.1	0.167	0.243
62	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 2+9	-	Standalone	155	5775	17.36	18.50	1.300	89.19	1.121	0.01	0.591	**0.861**
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 2+9	-	Simultaneous	155	5775	12.83	14.50	1.469	89.19	1.121	-0.15	0.195	0.321
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Front	16mm	Ant 2+9	-	Full	155	5775	20.61	22.50	1.545	89.19	1.121	-0.1	0.114	0.197
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Back	20mm	Ant 2+9	-	Full	155	5775	20.61	22.50	1.545	89.19	1.121	0.01	0.185	0.320

16.4 Product specific 10g SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
835MHz																		
63	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	0mm	Ant 0	ECI4	189	836.4	28.79	30.50	1.483	0.02	1.570	**2.328**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	0mm	Ant 0	ECI4	251	836.4	28.75	30.50	1.496	0.08	1.440	2.155
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	0mm	Ant 0	ECI4	128	824.2	28.77	30.50	1.489	0.13	1.370	2.040
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	0mm	Ant 0	ECI4	189	836.4	28.79	30.50	1.483	0.09	1.270	1.883
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 0	ECI4	4182	836.4	23.24	24.00	1.191	-0.02	1.670	1.989
64	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI4	4182	836.4	23.24	24.00	1.191	0.07	2.240	**2.668**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI4	4132	826.4	23.09	24.00	1.233	0.18	1.640	2.022
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI4	4233	846.6	23.22	24.00	1.197	-0.05	1.830	2.190
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	ECI4	4182	836.4	23.24	24.00	1.191	-0.10	1.660	1.977
1750MHz																		
	LTE Band 66	20M	QPSK	1	0	-	Front	0mm	Ant 0	ECI6	132322	1745	18.91	20.50	1.442	0.04	1.150	1.658
	LTE Band 66	20M	QPSK	50	0	-	Front	0mm	Ant 0	ECI6	132322	1745	17.93	19.50	1.435	0.02	0.430	0.617
	LTE Band 66	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI6	132322	1745	18.91	20.50	1.442	0.07	1.580	2.279
	LTE Band 66	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI6	132072	1720	18.65	20.50	1.531	-0.16	1.560	2.388
	LTE Band 66	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI6	132572	1770	18.83	20.50	1.469	-0.07	1.810	2.659
	LTE Band 66	20M	QPSK	50	0	-	Back	0mm	Ant 0	ECI6	132322	1745	17.93	19.50	1.435	0.09	0.688	0.988
	LTE Band 66	20M	QPSK	100	0	-	Back	0mm	Ant 0	ECI6	132322	1745	17.85	19.50	1.462	0.05	0.710	1.038
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECI6	132322	1745	18.91	20.50	1.442	0.14	1.560	2.250
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECI6	132072	1720	18.65	20.50	1.531	0.01	1.330	2.036
65	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECI6	132572	1770	18.83	20.50	1.469	0.05	2.120	**3.114**
	LTE Band 66C	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECI6	132572+132374	1770+1750.2	18.70	20.50	1.514	0.06	1.830	2.770
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	ECI6	132322	1745	17.93	19.50	1.435	-0.17	0.891	1.279
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 0	ECI6	132322	1745	17.85	19.50	1.462	0.06	0.759	1.110
	LTE Band 66	20M	QPSK	1	0	-	Front	7mm	Ant 0	ECI4	132322	1745	22.57	24.00	1.390	0.15	0.965	1.341
	LTE Band 66	20M	QPSK	1	0	-	Back	11mm	Ant 0	ECI4	132572	1770	22.44	24.00	1.432	0.13	0.742	1.063
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	11mm	Ant 0	ECI4	132572	1770	22.44	24.00	1.432	0.03	0.961	1.376
	LTE Band 66	20M	QPSK	1	0	-	Front	0mm	Ant 1	ECI6	132322	1745	18.18	19.90	1.486	-0.04	0.910	1.352
	LTE Band 66	20M	QPSK	50	0	-	Front	0mm	Ant 1	ECI6	132322	1745	17.42	18.90	1.406	-0.04	0.466	0.655
	LTE Band 66	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI6	132322	1745	18.18	19.90	1.486	-0.07	0.913	1.357
	LTE Band 66	20M	QPSK	50	0	-	Back	0mm	Ant 1	ECI6	132322	1745	17.42	18.90	1.406	-0.10	0.447	0.629
	LTE Band 66	20M	QPSK	1	0	-	Top side	0mm	Ant 1	ECI6	132322	1745	18.18	19.90	1.486	0.01	1.410	2.095
	LTE Band 66C	20M	QPSK	1	99	-	Top side	0mm	Ant 1	ECI6	132322+132520	1745+1764.8	18.06	19.90	1.528	0.08	1.210	1.848
	LTE Band 66	20M	QPSK	1	0	-	Top side	0mm	Ant 1	ECI6	132072	1720	18.10	19.90	1.514	0.02	1.260	1.907
	LTE Band 66	20M	QPSK	1	0	-	Top side	0mm	Ant 1	ECI6	132572	1770	18.06	19.90	1.528	0.03	1.310	2.001
	LTE Band 66	20M	QPSK	50	0	-	Top side	0mm	Ant 1	ECI6	132322	1745	17.42	18.90	1.406	-0.09	0.720	1.012
	LTE Band 66	20M	QPSK	100	0	-	Top side	0mm	Ant 1	ECI6	132322	1745	17.37	18.90	1.422	0.09	0.667	0.949
	LTE Band 66	20M	QPSK	1	0	-	Front	6mm	Ant 1	ECI4	132322	1745	22.23	24.00	1.503	0.04	0.144	0.216
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 1	ECI4	132322	1745	22.23	24.00	1.503	0.19	0.590	0.887
	LTE Band 66	20M	QPSK	1	0	-	Top side	11mm	Ant 1	ECI4	132322	1745	22.23	24.00	1.503	-0.06	0.460	0.691
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	0mm	Ant 0	ECI6	349000	1745	19.76	20.80	1.271	-0.05	1.960	2.490
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	0mm	Ant 0	ECI6	349000	1745	19.46	20.80	1.361	-0.08	1.940	2.641
	FR1 n66	40M	QPSK	216	0	DFT-15	Front	0mm	Ant 0	ECI6	349000	1745	19.42	20.80	1.374	0.09	1.410	1.937
	FR1 n66	40M	QPSK	1	1	DFT-15	Back	0mm	Ant 0	ECI6	349000	1745	19.76	20.80	1.271	0.07	2.070	2.630
66	FR1 n66	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 0	ECI6	349000	1745	19.46	20.80	1.361	0.09	2.310	**3.145**
	FR1 n66	40M	QPSK	216	0	DFT-15	Back	0mm	Ant 0	ECI6	349000	1745	19.42	20.80	1.374	0.16	1.870	2.569
	FR1 n66	40M	QPSK	1	1	DFT-15	Bottom Side	0mm	Ant 0	ECI6	349000	1745	19.76	20.80	1.271	-0.15	2.080	2.643
	FR1 n66	40M	QPSK	108	54	DFT-15	Bottom Side	0mm	Ant 0	ECI6	349000	1745	19.46	20.80	1.361	0.18	2.190	2.982
	FR1 n66	40M	QPSK	216	0	DFT-15	Bottom Side	0mm	Ant 0	ECI6	349000	1745	19.42	20.80	1.374	0.06	1.710	2.350
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	7mm	Ant 0	ECI4	349000	1745	23.53	24.50	1.250	0.13	1.280	1.600
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	11mm	Ant 0	ECI4	349000	1745	23.53	24.50	1.250	0.06	1.070	1.338

	FR1 n66	40M	QPSK	108	54	DFT-15	Bottom Side	11mm	Ant 0	ECI4	349000	1745	23.53	24.50	1.250	0.05	1.410	1.763
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	0mm	Ant 1	ECI6	349000	1745	19.11	19.30	1.045	-0.08	1.180	1.233
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	0mm	Ant 1	ECI6	349000	1745	19.02	19.30	1.067	0.07	1.330	1.419
	FR1 n66	40M	QPSK	1	1	DFT-15	Back	0mm	Ant 1	ECI6	349000	1745	19.11	19.30	1.045	-0.07	1.130	1.181
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 1	ECI6	349000	1745	19.02	19.30	1.067	-0.13	1.260	1.344
	FR1 n66	40M	QPSK	1	1	DFT-15	Top side	0mm	Ant 1	ECI6	349000	1745	19.11	19.30	1.045	0.08	1.940	2.027
	FR1 n66	40M	QPSK	108	54	DFT-15	Top side	0mm	Ant 1	ECI6	349000	1745	19.02	19.30	1.067	0.08	1.980	2.112
	FR1 n66	40M	QPSK	216	0	DFT-15	Top side	0mm	Ant 1	ECI6	349000	1745	18.97	19.30	1.079	0.13	1.210	1.306
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	6mm	Ant 1	ECI4	349000	1745	22.79	24.00	1.321	-0.04	0.924	1.221
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	10mm	Ant 1	ECI4	349000	1745	22.79	24.00	1.321	-0.04	0.819	1.082
	FR1 n66	40M	QPSK	108	54	DFT-15	Top side	11mm	Ant 1	ECI4	349000	1745	22.79	24.00	1.321	0.05	0.856	1.131
1900MHz																		
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	0mm	Ant 0	ECI6	661	1880	23.08	24.20	1.294	0.04	1.570	2.032
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	0mm	Ant 0	ECI6	512	1850.2	22.98	24.20	1.324	-0.13	1.430	1.894
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	0mm	Ant 0	ECI6	810	1909.8	23.03	24.20	1.309	-0.05	1.500	1.964
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	0mm	Ant 0	ECI6	661	1880	23.08	24.20	1.294	0.05	1.470	1.902
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	0mm	Ant 0	ECI6	661	1880	23.08	24.20	1.294	-0.06	2.100	2.718
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	0mm	Ant 0	ECI6	512	1850.2	22.98	24.20	1.324	0.16	1.820	2.410
67	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	0mm	Ant 0	ECI6	810	1909.8	23.03	24.20	1.309	0.05	2.340	**3.063**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	7mm	Ant 0	ECI4	661	1880	25.71	27.50	1.510	0.02	0.966	1.459
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	11mm	Ant 0	ECI4	661	1880	25.71	27.50	1.510	0.14	0.786	1.187
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	11mm	Ant 0	ECI4	810	1909.8	25.65	27.50	1.531	-0.03	1.030	1.577
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 0	ECI6	9400	1880	16.49	17.40	1.233	0.06	1.710	2.109
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 0	ECI6	9262	1852.4	16.40	17.40	1.259	0.09	1.760	2.216
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	0mm	Ant 0	ECI6	9538	1907.6	16.42	17.40	1.253	0.02	1.680	2.105
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI6	9400	1880	16.49	17.40	1.233	-0.07	2.340	2.885
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI6	9262	1852.4	16.40	17.40	1.259	0.01	2.440	3.072
68	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI6	9538	1907.6	16.42	17.40	1.253	0.03	2.470	**3.095**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	ECI6	9400	1880	16.49	17.40	1.233	0.04	2.240	2.762
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	ECI6	9262	1852.4	16.40	17.40	1.259	-0.15	2.370	2.984
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	ECI6	9538	1907.6	16.42	17.40	1.253	-0.15	2.300	2.882
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	7mm	Ant 0	ECI4	9262	1852.4	23.02	24.00	1.253	0.12	1.970	2.469
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	7mm	Ant 0	ECI4	9400	1880	23.06	24.00	1.242	0.04	1.900	2.359
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	7mm	Ant 0	ECI4	9538	1907.6	22.96	24.00	1.271	0.09	1.850	2.351
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	11mm	Ant 0	ECI4	9400	1880	23.06	24.00	1.242	-0.05	1.800	2.235
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	11mm	Ant 0	ECI4	9262	1852.4	23.02	24.00	1.253	0.06	1.810	2.268
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	11mm	Ant 0	ECI4	9538	1907.6	22.96	24.00	1.271	0.05	1.750	2.224
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	11mm	Ant 0	ECI4	9262	1852.4	23.02	24.00	1.253	0.17	2.290	2.870
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	11mm	Ant 0	ECI4	9400	1880	23.06	24.00	1.242	0.01	2.310	2.868
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	11mm	Ant 0	ECI4	9538	1907.6	22.96	24.00	1.271	0.05	2.330	2.960
	LTE Band 2	20M	QPSK	1	0	-	Front	0mm	Ant 0	ECI6	18900	1880	18.32	20.00	1.472	-0.09	1.470	2.164
	LTE Band 2	20M	QPSK	1	0	-	Front	0mm	Ant 0	ECI6	18700	1860	18.31	20.00	1.476	-0.12	1.540	2.273
	LTE Band 2	20M	QPSK	1	0	-	Front	0mm	Ant 0	ECI6	19100	1900	18.29	20.00	1.483	-0.18	1.450	2.150
	LTE Band 2	20M	QPSK	50	0	-	Front	0mm	Ant 0	ECI6	18900	1880	17.54	19.00	1.400	-0.17	0.695	0.973
	LTE Band 2	20M	QPSK	100	0	-	Front	0mm	Ant 0	ECI6	18900	1880	17.44	19.00	1.432	-0.11	0.706	1.011
	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI6	18900	1880	18.32	20.00	1.472	-0.12	2.110	3.107
69	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI6	18700	1860	18.31	20.00	1.476	0.06	2.130	**3.143**
	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI6	19100	1900	18.29	20.00	1.483	0.06	2.100	3.113
	LTE Band 2	20M	QPSK	50	0	-	Back	0mm	Ant 0	ECI6	18900	1880	17.54	19.00	1.400	0.11	1.060	1.484
	LTE Band 2	20M	QPSK	100	0	-	Back	0mm	Ant 0	ECI6	18900	1880	17.44	19.00	1.432	-0.14	1.020	1.461
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECI6	18900	1880	18.32	20.00	1.472	0.07	1.950	2.871
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECI6	18700	1860	18.31	20.00	1.476	0.04	1.940	2.863
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECI6	19100	1900	18.29	20.00	1.483	0.04	1.930	2.861
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	ECI6	18900	1880	17.54	19.00	1.400	0.04	0.965	1.351
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 0	ECI6	18900	1880	17.44	19.00	1.432	0.01	0.943	1.351
	LTE Band 2	20M	QPSK	1	0	-	Front	7mm	Ant 0	ECI4	18700	1860	22.61	24.00	1.377	-0.08	1.140	1.570

	LTE Band 2	20M	QPSK	1	0	-	Back	11mm	Ant 0	ECI4	18700	1860	22.61	24.00	1.377	0.16	1.080	1.487
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	11mm	Ant 0	ECI4	18900	1880	22.62	24.00	1.374	0.10	1.490	2.047
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	11mm	Ant 0	ECI4	18700	1860	22.61	24.00	1.377	0.06	1.450	1.997
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	11mm	Ant 0	ECI4	19100	1900	22.56	24.00	1.393	-0.02	1.490	2.076
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	11mm	Ant 0	ECI4	18900	1880	21.78	23.00	1.324	0.02	0.672	0.890
	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 1	ECI6	18900	1880	17.69	19.10	1.384	0.04	1.040	1.439
	LTE Band 2	20M	QPSK	50	0	-	Back	0mm	Ant 1	ECI6	18900	1880	16.93	18.10	1.309	0.03	0.481	0.630
	LTE Band 2	20M	QPSK	1	0	-	Top side	0mm	Ant 1	ECI6	18900	1880	17.69	19.10	1.384	0.02	1.470	2.034
	LTE Band 2	20M	QPSK	1	0	-	Top side	0mm	Ant 1	ECI6	18700	1860	17.63	19.10	1.403	0.09	1.510	2.118
	LTE Band 2	20M	QPSK	1	0	-	Top side	0mm	Ant 1	ECI6	19100	1900	17.51	19.10	1.442	0.07	1.450	2.091
	LTE Band 2	20M	QPSK	50	0	-	Top side	0mm	Ant 1	ECI6	18900	1880	16.93	18.10	1.309	0.08	0.742	0.971
	LTE Band 2	20M	QPSK	100	0	-	Top side	0mm	Ant 1	ECI6	18900	1880	16.86	18.10	1.330	-0.06	0.723	0.962
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 1	ECI4	18900	1880	22.32	24.00	1.472	0.02	0.624	0.919
	LTE Band 2	20M	QPSK	1	0	-	Top side	11mm	Ant 1	ECI4	18700	1860	22.12	24.00	1.542	0.03	0.606	0.934
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	0mm	Ant 0	ECI6	376000	1880	20.31	21.40	1.285	0.11	1.630	2.095
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	0mm	Ant 0	ECI6	374000	1870	20.25	21.40	1.303	0.07	1.590	2.072
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	0mm	Ant 0	ECI6	378000	1890	20.17	21.40	1.327	0.13	1.650	2.190
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	0mm	Ant 0	ECI6	376000	1880	20.25	21.40	1.303	0.03	1.680	2.189
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	0mm	Ant 0	ECI6	374000	1870	20.07	21.40	1.358	-0.03	1.550	2.105
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	0mm	Ant 0	ECI6	378000	1890	20.10	21.40	1.349	-0.05	1.630	2.199
	FR1 n2	40M	QPSK	216	0	DFT-15	Front	0mm	Ant 0	ECI6	376000	1880	20.21	21.40	1.315	0.03	1.170	1.539
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	0mm	Ant 0	ECI6	376000	1880	20.31	21.40	1.285	0.06	2.310	2.969
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	0mm	Ant 0	ECI6	374000	1870	20.25	21.40	1.303	0.08	2.390	3.115
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	0mm	Ant 0	ECI6	378000	1890	20.17	21.40	1.327	0.03	2.310	3.066
70	FR1 n2	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 0	ECI6	376000	1880	20.25	21.40	1.303	0.02	2.410	**3.141**
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 0	ECI6	374000	1870	20.07	21.40	1.358	0.03	2.240	3.043
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 0	ECI6	378000	1890	20.10	21.40	1.349	-0.03	2.310	3.116
	FR1 n2	40M	QPSK	216	0	DFT-15	Back	0mm	Ant 0	ECI6	376000	1880	20.21	21.40	1.315	-0.05	1.630	2.144
	FR1 n2	40M	QPSK	1	1	DFT-15	Bottom Side	0mm	Ant 0	ECI6	376000	1880	20.31	21.40	1.285	-0.10	2.180	2.802
	FR1 n2	40M	QPSK	1	1	DFT-15	Bottom Side	0mm	Ant 0	ECI6	374000	1870	20.25	21.40	1.303	-0.11	2.300	2.997
	FR1 n2	40M	QPSK	1	1	DFT-15	Bottom Side	0mm	Ant 0	ECI6	378000	1890	20.17	21.40	1.327	0.03	2.210	2.934
	FR1 n2	40M	QPSK	108	54	DFT-15	Bottom Side	0mm	Ant 0	ECI6	376000	1880	20.25	21.40	1.303	0.17	2.140	2.789
	FR1 n2	40M	QPSK	108	54	DFT-15	Bottom Side	0mm	Ant 0	ECI6	374000	1870	20.07	21.40	1.358	-0.08	2.120	2.880
	FR1 n2	40M	QPSK	108	54	DFT-15	Bottom Side	0mm	Ant 0	ECI6	378000	1890	20.10	21.40	1.349	0.03	2.150	2.900
	FR1 n2	40M	QPSK	216	0	DFT-15	Bottom Side	0mm	Ant 0	ECI6	376000	1880	20.21	21.40	1.315	0.08	1.570	2.065
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	7mm	Ant 0	ECI4	378000	1890	23.75	24.00	1.059	0.03	1.310	1.388
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	11mm	Ant 0	ECI4	376000	1880	23.84	24.00	1.038	0.05	1.140	1.183
	FR1 n2	40M	QPSK	1	1	DFT-15	Bottom Side	11mm	Ant 0	ECI4	374000	1870	23.83	24.00	1.040	-0.17	1.500	1.560
	FR1 n2	40M	QPSK	1	1	DFT-15	Front	0mm	Ant 1	ECI6	376000	1880	19.28	20.40	1.294	0.13	0.953	1.233
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	0mm	Ant 1	ECI6	376000	1880	19.16	20.40	1.330	-0.05	1.000	1.330
	FR1 n2	40M	QPSK	1	1	DFT-15	Back	0mm	Ant 1	ECI6	376000	1880	19.28	20.40	1.294	0.19	1.010	1.307
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 1	ECI6	376000	1880	19.16	20.40	1.330	-0.18	1.110	1.477
	FR1 n2	40M	QPSK	1	1	DFT-15	Top side	0mm	Ant 1	ECI6	376000	1880	19.28	20.40	1.294	-0.09	1.550	2.006
	FR1 n2	40M	QPSK	1	1	DFT-15	Top side	0mm	Ant 1	ECI6	374000	1870	19.14	20.40	1.337	0.06	1.570	2.098
	FR1 n2	40M	QPSK	1	1	DFT-15	Top side	0mm	Ant 1	ECI6	378000	1890	19.10	20.40	1.349	0.07	1.440	1.943
	FR1 n2	40M	QPSK	108	54	DFT-15	Top side	0mm	Ant 1	ECI6	376000	1880	19.16	20.40	1.330	0.07	1.460	1.942
	FR1 n2	40M	QPSK	216	0	DFT-15	Top side	0mm	Ant 1	ECI6	376000	1880	19.12	20.40	1.343	-0.05	0.947	1.272
	FR1 n2	40M	QPSK	108	54	DFT-15	Front	6mm	Ant 1	ECI4	376000	1880	23.54	24.00	1.112	0.06	0.769	0.855
	FR1 n2	40M	QPSK	108	54	DFT-15	Back	10mm	Ant 1	ECI4	376000	1880	23.54	24.00	1.112	-0.13	0.660	0.734
	FR1 n2	40M	QPSK	1	1	DFT-15	Top side	11mm	Ant 1	ECI4	374000	1870	23.60	24.00	1.096	-0.06	0.636	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 10g SAR (W/kg)	Reported 10g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	0mm	Ant 0	ECI4	21100	2535	22.47	24.00	1.422	-	-	-0.08	1.010	1.437
	LTE Band 7	20M	QPSK	50	0	-	Front	0mm	Ant 0	ECI4	21100	2535	21.69	23.00	1.352	-	-	-0.07	0.552	0.746
	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI4	21100	2535	22.47	24.00	1.422	-	-	0.14	1.480	2.105
	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI4	20850	2510	22.21	24.00	1.510	-	-	-0.09	1.650	2.492
71	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 0	ECI4	21350	2560	22.45	24.00	1.429	-	-	0.04	1.750	**2.501**
	LTE Band 7	20M	QPSK	50	0	-	Back	0mm	Ant 0	ECI4	21100	2535	21.69	23.00	1.352	-	-	-0.03	0.770	1.041
	LTE Band 7	20M	QPSK	100	0	-	Back	0mm	Ant 0	ECI4	21100	2535	21.63	23.00	1.371	-	-	0.14	0.665	0.912
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	ECI4	21100	2535	22.47	24.00	1.422	-	-	-0.19	1.340	1.906
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	ECI4	21100	2535	21.69	23.00	1.352	-	-	-0.03	0.731	0.988
3500MHz-3900MHz																				
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 3	ECI6	55830	3609	19.90	21.00	1.288	62.9	1.006	0.16	1.550	2.009
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 3	ECI6	55340	3560	19.88	21.00	1.294	62.9	1.006	0.18	1.340	1.745
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 3	ECI6	56150	3641	19.59	21.00	1.384	62.9	1.006	0.02	1.520	2.116
	LTE Band 48C	20M	QPSK	1	99	-	Back	0mm	Ant 3	ECI6	56150+ 56348	3641+ 3579.8	19.43	21.00	1.435	62.9	1.006	0.03	1.324	1.912
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 3	ECI6	56640	3690	19.78	21.00	1.324	62.9	1.006	-0.10	1.370	1.825
	LTE Band 48	20M	QPSK	50	0	-	Back	0mm	Ant 3	ECI6	55830	3609	18.85	20.00	1.303	62.9	1.006	-0.15	0.716	0.939
	LTE Band 48	20M	QPSK	100	0	-	Back	0mm	Ant 3	ECI6	55830	3609	18.71	20.00	1.346	62.9	1.006	0.08	0.666	0.902
	LTE Band 48	20M	QPSK	1	0	-	Left Side	0mm	Ant 3	ECI6	55830	3609	19.90	21.00	1.288	62.9	1.006	-0.14	1.150	1.490
	LTE Band 48	20M	QPSK	50	0	-	Left Side	0mm	Ant 3	ECI6	55830	3609	18.85	20.00	1.303	62.9	1.006	0.04	0.556	0.729
	LTE Band 48	20M	QPSK	1	0	-	Back	4mm	Ant 3	ECI4	56150	3641	22.32	24.00	1.472	62.9	1.006	0.06	1.350	2.000
	LTE Band 48	20M	QPSK	1	0	-	Back	4mm	Ant 3	ECI4	55340	3560	22.56	24.00	1.393	62.9	1.006	0.02	1.140	1.598
	LTE Band 48	20M	QPSK	1	0	-	Back	4mm	Ant 3	ECI4	55830	3609	22.61	24.00	1.377	62.9	1.006	0.05	1.340	1.857
	LTE Band 48	20M	QPSK	1	0	-	Back	4mm	Ant 3	ECI4	56640	3690	22.49	24.00	1.416	62.9	1.006	0.11	1.120	1.595
	LTE Band 48	20M	QPSK	100	0	-	Back	4mm	Ant 3	ECI4	56150	3641	21.34	23.00	1.466	62.9	1.006	0.06	1.090	1.607
	LTE Band 48	20M	QPSK	1	0	-	Left Side	3mm	Ant 3	ECI4	55830	3609	22.61	24.00	1.377	62.9	1.006	0.08	0.857	1.187
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI6	55830	3609	19.99	21.00	1.262	62.9	1.006	0.06	1.690	2.145
	LTE Band 48C	20M	QPSK	1	99	-	Back	0mm	Ant 4	ECI6	55830+ 56028	3609+ 3579.8	19.97	21.00	1.268	62.9	1.006	0.13	1.470	1.875
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI6	55340	3560	19.89	21.00	1.291	62.9	1.006	0.04	1.600	2.078
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI6	56150	3641	19.86	21.00	1.300	62.9	1.006	-0.10	1.580	2.067
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 4	ECI6	56640	3690	19.96	21.00	1.271	62.9	1.006	0.03	1.580	2.020
	LTE Band 48	20M	QPSK	50	0	-	Back	0mm	Ant 4	ECI6	55830	3609	19.04	20.00	1.247	62.9	1.006	0.01	0.875	1.098
	LTE Band 48	20M	QPSK	100	0	-	Back	0mm	Ant 4	ECI6	55830	3609	19.01	20.00	1.256	62.9	1.006	0.04	0.858	1.084
72	LTE Band 48	20M	QPSK	1	0	-	Back	3mm	Ant 4	ECI4	55830	3609	22.58	24.00	1.387	62.9	1.006	0.06	1.920	**2.679**
	LTE Band 48C	20M	QPSK	1	0	-	Back	3mm	Ant 4	ECI4	55830+ 56028	3609+ 3579.8	22.58	24.00	1.387	62.9	1.006	0.13	1.710	2.458
	LTE Band 48	20M	QPSK	1	0	-	Back	3mm	Ant 4	ECI4	55340	3560	22.41	24.00	1.442	62.9	1.006	0.04	1.770	2.568
	LTE Band 48	20M	QPSK	1	0	-	Back	3mm	Ant 4	ECI4	56150	3641	22.42	24.00	1.439	62.9	1.006	0.02	1.640	2.374
	LTE Band 48	20M	QPSK	1	0	-	Back	3mm	Ant 4	ECI4	56640	3690	22.56	24.00	1.393	62.9	1.006	0.05	1.730	2.425
	LTE Band 48	20M	QPSK	100	0	-	Back	3mm	Ant 4	ECI4	55830	3609	21.48	23.00	1.419	62.9	1.006	0.09	1.550	2.213
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 5	ECI4	55830	3609	21.92	23.30	1.374	62.9	1.006	0.07	1.080	1.493
	LTE Band 48	20M	QPSK	50	0	-	Back	0mm	Ant 5	ECI4	55830	3609	20.97	22.30	1.358	62.9	1.006	-0.09	1.370	1.872
	LTE Band 48	20M	QPSK	50	0	-	Back	0mm	Ant 5	ECI4	55340	3560	20.88	22.30	1.387	62.9	1.006	0.02	1.250	1.744
	LTE Band 48	20M	QPSK	50	0	-	Back	0mm	Ant 5	ECI4	56150	3641	20.85	22.30	1.396	62.9	1.006	-0.12	1.310	1.840
	LTE Band 48	20M	QPSK	50	0	-	Back	0mm	Ant 5	ECI4	56640	3690	20.83	22.30	1.403	62.9	1.006	0.06	1.280	1.806
	LTE Band 48	20M	QPSK	100	0	-	Back	0mm	Ant 5	ECI4	55830	3609	20.94	22.30	1.368	62.9	1.006	0.07	1.190	1.637
	LTE Band 48C	20M	QPSK	1	99	-	Back	0mm	Ant 5	ECI4	55830+ 56028	3690+ 3670.2	21.82	23.30	1.406	62.9	1.006	0.14	1.210	1.712
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 8	ECI6	55830	3609	17.34	18.20	1.219	62.9	1.006	0.03	1.660	2.036
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 8	ECI6	55340	3560	17.13	18.20	1.279	62.9	1.006	0.02	1.670	2.149
	LTE Band 48C	20M	QPSK	1	99	-	Back	0mm	Ant 8	ECI6	55340+ 55538	3560+ 3579.8	17.13	18.20	1.279	62.9	1.006	0.05	1.473	1.896
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 8	ECI6	56150	3641	17.28	18.20	1.236	62.9	1.006	-0.18	1.220	1.517
	LTE Band 48	20M	QPSK	1	0	-	Back	0mm	Ant 8	ECI6	56640	3690	17.28	18.20	1.236	62.9	1.006	0.07	1.170	1.455

	LTE Band 48	20M	QPSK	50	0	-	Back	0mm	Ant 8	ECI6	55830	3609	16.43	17.20	1.194	62.9	1.006	-0.18	0.800	0.961
	LTE Band 48	20M	QPSK	100	0	-	Back	0mm	Ant 8	ECI6	55830	3609	16.29	17.20	1.233	62.9	1.006	0.06	0.780	0.968
	LTE Band 48	20M	QPSK	1	0	-	Back	8mm	Ant 8	ECI4	55340	3560	21.44	23.10	1.466	62.9	1.006	-0.15	0.765	1.128
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	0mm	Ant 3	ECI6	641666	3624.99	21.97	23.40	1.390	-	-	0.01	0.612	0.851
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	0mm	Ant 3	ECI6	641666	3624.99	21.93	23.40	1.403	-	-	0.06	0.514	0.721
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 3	ECI6	641666	3624.99	21.97	23.40	1.390	-	-	0.01	1.520	2.113
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 3	ECI6	638000	3570	21.90	23.40	1.413	-	-	-0.03	1.490	2.105
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 3	ECI6	645332	3679.98	21.72	23.40	1.472	-	-	0.04	1.430	2.105
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 3	ECI6	641666	3624.99	21.93	23.40	1.403	-	-	-0.14	1.470	2.062
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 3	ECI6	638000	3570	21.77	23.40	1.455	-	-	0.03	1.400	2.038
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 3	ECI6	645332	3679.98	21.66	23.40	1.493	-	-	0.12	1.370	2.045
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	0mm	Ant 3	ECI6	641666	3624.99	21.33	22.90	1.435	-	-	0.08	1.260	1.809
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Side	0mm	Ant 3	ECI6	641666	3624.99	21.97	23.40	1.390	-	-	0.04	1.430	1.988
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Side	0mm	Ant 3	ECI6	641666	3624.99	21.93	23.40	1.403	-	-	0.01	1.390	1.950
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	4mm	Ant 3	ECI4	641666	3624.99	22.96	24.00	1.271	-	-	0.09	1.140	1.448
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Side	3mm	Ant 3	ECI4	641666	3624.99	22.96	24.00	1.271	-	-	0.05	0.832	1.057
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 4	ECI6	641666	3624.99	19.29	20.80	1.416	-	-	-0.03	1.490	2.110
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 4	ECI6	638000	3570	19.11	20.80	1.476	-	-	-0.03	1.420	2.096
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 4	ECI6	645332	3679.98	19.07	20.80	1.489	-	-	-0.07	1.380	2.055
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 4	ECI6	641666	3624.99	19.26	20.80	1.426	-	-	-0.07	1.440	2.053
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 4	ECI6	638000	3570	19.03	20.80	1.503	-	-	-0.12	1.350	2.029
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 4	ECI6	645332	3679.98	19.02	20.80	1.507	-	-	-0.14	1.310	1.974
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	0mm	Ant 4	ECI6	641666	3624.99	19.04	20.80	1.500	-	-	0.04	1.170	1.755
73	FR1 n48	40M	QPSK	1	1	DFT-30	Back	3mm	Ant 4	ECI4	641666	3624.99	22.34	23.40	1.276	-	-	-0.03	2.150	**2.744**
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	3mm	Ant 4	ECI4	638000	3570	22.25	23.40	1.303	-	-	0.05	2.010	2.619
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	3mm	Ant 4	ECI4	645332	3679.98	22.20	23.40	1.318	-	-	0.04	1.990	2.623
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	3mm	Ant 4	ECI4	641666	3624.99	21.17	22.40	1.327	-	-	0.05	1.640	2.177
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 5	ECI6	641666	3624.99	21.11	21.90	1.199	-	-	0.12	1.720	2.063
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 5	ECI6	638000	3570	21.01	21.90	1.227	-	-	0.02	1.670	2.050
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 5	ECI6	645332	3679.98	21.09	21.90	1.205	-	-	-0.14	1.560	1.880
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 5	ECI6	641666	3624.99	21.06	21.90	1.213	-	-	-0.01	1.750	2.123
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 5	ECI6	638000	3570	20.95	21.90	1.245	-	-	0.05	1.700	2.116
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 5	ECI6	645332	3679.98	20.99	21.90	1.233	-	-	0.09	1.640	2.022
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	0mm	Ant 5	ECI6	641666	3624.99	21.02	21.90	1.225	-	-	0.07	1.310	1.604
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	3mm	Ant 5	ECI4	641666	3624.99	23.13	24.00	1.222	-	-	-0.01	1.330	1.625
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	ECI6	641666	3624.99	17.24	18.00	1.191	-	-	0.04	1.780	2.120
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	ECI6	638000	3570	17.09	18.00	1.233	-	-	0.05	1.690	2.084
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	ECI6	645332	3679.98	17.14	18.00	1.219	-	-	0.01	1.580	1.926
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	0mm	Ant 8	ECI6	641666	3624.99	17.16	18.00	1.213	-	-	-0.15	1.620	1.966
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	0mm	Ant 8	ECI6	641666	3624.99	17.12	18.00	1.225	-	-	-0.14	1.220	1.494
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	8mm	Ant 8	ECI4	641666	3624.99	21.82	22.60	1.197	-	-	0.05	1.430	1.711
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Front	0mm	Ant 3	ECI4	656000	3840	26.16	27.00	1.213	-	-	0.01	1.410	1.711
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Front	0mm	Ant 3	ECI4	656000	3840	26.14	27.00	1.219	-	-	0.05	1.290	1.572
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 3	ECI6	656000	3840	19.96	21.00	1.271	-	-	0.06	1.680	2.135
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 3	ECI6	656000	3840	19.95	21.00	1.274	-	-	-0.08	1.280	1.630
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	0mm	Ant 3	ECI6	656000	3840	19.88	21.00	1.294	-	-	-0.10	1.270	1.644
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Side	0mm	Ant 3	ECI6	656000	3840	19.96	21.00	1.271	-	-	0.08	1.470	1.868
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Side	0mm	Ant 3	ECI6	656000	3840	19.95	21.00	1.274	-	-	0.03	1.360	1.732
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Top side	0mm	Ant 3	ECI4	656000	3840	26.16	27.00	1.213	-	-	0.14	0.101	0.123
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Top side	0mm	Ant 3	ECI4	656000	3840	26.14	27.00	1.219	-	-	0.10	0.964	1.175
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	4mm	Ant 3	ECI4	656000	3840	26.16	27.00	1.213	-	-	0.17	2.470	2.997
	FR1 n77Par27O HPUE	100M	QPSK	270	1	DFT-30	Back	4mm	Ant 3	ECI4	656000	3840	25.17	26.00	1.211	-	-	0.03	2.320	2.809
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Side	3mm	Ant 3	ECI4	656000	3840	26.16	27.00	1.213	-	-	0.04	1.480	1.796
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Front	0mm	Ant 3	ECI4	633334	3500.01	26.19	27.00	1.205	-	-	0.18	0.933	1.124
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Front	0mm	Ant 3	ECI4	633334	3500.01	26.03	27.00	1.250	-	-	0.11	0.598	0.748
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 3	ECI6	633334	3500.01	20.23	21.00	1.194	-	-	-0.02	1.230	1.469

	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 3	ECI6	633334	3500.01	20.19	21.00	1.205	-	-	-0.10	0.983	1.185
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Side	0mm	Ant 3	ECI6	633334	3500.01	20.23	21.00	1.194	-	-	0.08	1.210	1.445
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Side	0mm	Ant 3	ECI6	633334	3500.01	20.19	21.00	1.205	-	-	-0.01	1.150	1.386
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	4mm	Ant 3	ECI4	633334	3500.01	26.19	27.00	1.205	-	-	0.08	2.400	2.892
	FR1 n77Part27Q HPUE	100M	QPSK	270	1	DFT-30	Back	4mm	Ant 3	ECI4	633334	3500.01	25.03	26.00	1.250	-	-	0.05	2.230	2.788
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Side	3mm	Ant 3	ECI4	633334	3500.01	26.19	27.00	1.205	-	-	0.16	1.500	1.808
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 4	ECI6	656000	3840	17.57	18.80	1.327	-	-	-0.02	1.510	2.004
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 4	ECI6	656000	3840	17.49	18.80	1.352	-	-	-0.04	1.580	2.136
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	0mm	Ant 4	ECI6	656000	3840	17.43	18.80	1.371	-	-	0.05	1.550	2.125
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Top side	0mm	Ant 4	ECI4	656000	3840	22.58	23.50	1.236	-	-	0.08	0.384	0.475
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Top side	0mm	Ant 4	ECI4	656000	3840	22.56	23.50	1.242	-	-	0.18	0.405	0.503
74	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	3mm	Ant 4	ECI4	656000	3840	22.56	23.50	1.242	-	-	-0.04	2.880	**3.576**
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	3mm	Ant 4	ECI4	656000	3840	22.58	23.50	1.236	-	-	0.03	2.810	3.473
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	3mm	Ant 4	ECI4	656000	3840	22.52	23.50	1.253	-	-	0.02	2.790	3.496
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 4	ECI6	633334	3500.01	17.72	18.80	1.282	-	-	-0.09	1.220	1.564
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 4	ECI6	633334	3500.01	17.56	18.80	1.330	-	-	-0.09	1.030	1.370
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	3mm	Ant 4	ECI4	633334	3500.01	22.61	23.50	1.227	-	-	-0.12	1.370	1.682
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 5	ECI6	656000	3840	20.24	21.40	1.306	-	-	0.07	0.988	1.290
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 5	ECI6	656000	3840	20.08	21.40	1.355	-	-	0.07	0.864	1.171
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Left Side	0mm	Ant 5	ECI4	656000	3840	26.08	27.00	1.236	-	-	-0.14	0.821	1.015
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Left Side	0mm	Ant 5	ECI4	656000	3840	26.04	27.00	1.247	-	-	0.19	0.803	1.002
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	3mm	Ant 5	ECI4	656000	3840	26.08	27.00	1.236	-	-	0.02	1.950	2.410
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	3mm	Ant 5	ECI4	656000	3840	25.00	26.00	1.259	-	-	0.09	1.320	1.662
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 5	ECI6	633334	3500.01	20.31	21.40	1.285	-	-	0.14	1.560	2.005
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 5	ECI6	633334	3500.01	20.21	21.40	1.315	-	-	0.03	1.370	1.802
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	0mm	Ant 5	ECI6	633334	3500.01	20.09	21.40	1.352	-	-	-0.08	1.550	2.096
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Left Side	0mm	Ant 5	ECI4	633334	3500.01	26.04	27.00	1.247	-	-	0.03	1.200	1.497
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Left Side	0mm	Ant 5	ECI4	633334	3500.01	25.97	27.00	1.268	-	-	0.05	1.130	1.432
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	3mm	Ant 5	ECI4	633334	3500.01	26.04	27.00	1.247	-	-	0.02	1.160	1.447
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	3mm	Ant 5	ECI4	633334	3500.01	24.98	26.00	1.265	-	-	0.03	1.080	1.366
	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	ECI6	656000	3840	16.20	17.30	1.288	-	-	0.18	1.560	2.010
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 8	ECI6	656000	3840	16.18	17.30	1.294	-	-	0.01	1.640	2.122
	FR1 n77Par27O HPUE	100M	QPSK	270	0	DFT-30	Back	0mm	Ant 8	ECI6	656000	3840	16.10	17.30	1.318	-	-	0.19	1.380	1.819
	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	8mm	Ant 8	ECI4	656000	3840	23.37	23.50	1.030	-	-	0.05	1.100	1.133
	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	0mm	Ant 8	ECI6	633334	3500.01	15.92	17.30	1.374	-	-	-0.07	1.470	2.020
	FR1 n77Part27Q HPUE	100M	QPSK	135	69	DFT-30	Back	0mm	Ant 8	ECI6	633334	3500.01	15.89	17.30	1.384	-	-	0.13	1.310	1.812
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	0mm	Ant 8	ECI6	633334	3500.01	15.85	17.30	1.396	-	-	-0.06	1.460	2.039
	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	8mm	Ant 8	ECI4	633334	3500.01	21.89	23.50	1.449	-	-	-0.19	0.470	0.681

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)
WLAN/Bluetooth																
	WLAN 5.2GHz	802.11n-HT40 MCS0	Back	0mm	Ant 2+9	Full	46	5230	20.61	22.00	1.379	94.12	1.062	-0.04	0.315	0.461
75	WLAN 5.2GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 2+9	Full	46	5230	20.61	22.00	1.379	94.12	1.062	-0.02	0.930	**1.362**
	WLAN 5.2GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 2+9	simultaneous	46	5230	17.76	19.50	1.493	94.12	1.062	0.05	0.465	0.737
	WLAN 5.2GHz	802.11n-HT40 MCS0	Right Side	4mm	Ant 2+9	Full	46	5230	20.61	22.00	1.379	94.12	1.062	0.08	0.436	0.638
	WLAN 5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 2+9	Full	54	5270	20.21	22.00	1.510	94.12	1.062	0.07	0.387	0.621
	WLAN 5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 2+9	Full	54	5270	20.21	22.00	1.510	94.12	1.062	-0.02	0.412	0.661
	WLAN 5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 2+9	Full	54	5270	20.21	22.00	1.510	94.12	1.062	0.04	0.047	0.075
76	WLAN 5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 2+9	Full	54	5270	20.21	22.00	1.510	94.12	1.062	0.06	0.962	**1.543**
	WLAN 5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 2+9	simultaneous	54	5270	17.85	19.50	1.462	94.12	1.062	0.02	0.541	0.840
	WLAN 5.3GHz	802.11n-HT40 MCS0	Top side	0mm	Ant 2+9	Full	54	5270	20.21	22.00	1.510	94.12	1.062	-0.07	0.876	1.405
	WLAN 5.3GHz	802.11n-HT40 MCS0	Right Side	4mm	Ant 2+9	Full	54	5270	20.21	22.00	1.510	94.12	1.062	0.03	0.527	0.845
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 2+9	Full	110	5550	20.38	22.00	1.452	94.12	1.062	0.02	0.464	0.716
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 2+9	Full	110	5550	20.38	22.00	1.452	94.12	1.062	0.17	0.903	1.393
	WLAN 5.5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 2+9	Full	110	5550	20.38	22.00	1.452	94.12	1.062	-0.12	0.117	0.180
	WLAN 5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 2+9	Full	110	5550	20.38	22.00	1.452	94.12	1.062	0.09	0.623	0.961
77	WLAN 5.5GHz	802.11n-HT40 MCS0	Top side	0mm	Ant 2+9	Full	110	5550	20.38	22.00	1.452	94.12	1.062	0.05	1.480	**2.282**
	WLAN 5.5GHz	802.11n-HT40 MCS0	Top side	0mm	Ant 2+9	Full	102	5510	15.75	17.50	1.496	94.12	1.062	0.05	1.020	1.621
	WLAN 5.5GHz	802.11n-HT40 MCS0	Top side	0mm	Ant 2+9	Full	134	5670	18.18	19.50	1.355	94.12	1.062	0.05	1.359	1.956
	WLAN 5.5GHz	802.11n-HT40 MCS0	Top side	0mm	Ant 2+9	simultaneous	110	5550	15.47	17.00	1.422	94.12	1.062	0.09	0.558	0.843
	WLAN 5.5GHz	802.11n-HT40 MCS0	Top side	12mm	Ant 2+9	Full	110	5550	20.38	22.00	1.452	94.12	1.062	0.07	0.315	0.486
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 2+9	standalone	155	5775	20.61	22.50	1.545	89.19	1.121	-0.06	1.040	1.802
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 2+9	standalone	155	5775	20.61	22.50	1.545	89.19	1.121	0.08	0.506	0.877
78	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Top side	0mm	Ant 2+9	standalone	155	5775	20.61	22.50	1.545	89.19	1.121	0.04	1.340	**2.321**
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Top side	0mm	Ant 2+9	simultaneous	155	5775	17.36	18.50	1.300	89.19	1.121	0.02	0.466	0.679
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Top side	12mm	Ant 2+9	Full	155	5775	20.61	22.50	1.545	89.19	1.121	0.09	0.309	0.535

16.5 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	WLAN 2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0mm	Ant 2+9	Standalone	1	2412	22.32	24.00	1.472	99.52	1.005	0.07	0.848	1	1.255
2nd	WLAN 2.4GHz	-	-	-	-	802.11b 1Mbps	Left Cheek	0mm	Ant 2+9	Standalone	1	2412	22.32	24.00	1.472	99.52	1.005	0.09	0.816	1.039	1.207
1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI7	4182	836.4	21.34	22.30	1.247	-	-	0.02	1.020	1	1.272
2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI7	4182	836.4	21.34	22.30	1.247	-	-	-0.03	0.989	1.031	1.234
1st	FR1 n2	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	ECI7	376000	1880	15.21	16.10	1.227	-	-	0.08	1.010	1	1.240
2nd	FR1 n2	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	ECI7	376000	1880	15.21	16.10	1.227	-	-	0.05	0.998	1.012	1.225
1st	FR1 n66	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	ECI7	349000	1745	15.73	16.30	1.140	-	-	-0.05	1.100	1	1.254
2nd	FR1 n66	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	ECI7	349000	1745	15.73	16.30	1.140	-	-	0.09	0.930	1.183	1.060
1st	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	21350	2560	16.71	17.70	1.256	-	-	0.09	0.999	1	1.255
2nd	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI7	21350	2560	16.71	17.70	1.256	-	-	0.01	0.953	1.048	1.197
1st	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	ECI3	641666	3624.99	19.68	20.50	1.208	-	-	0.01	0.828	1	1.000
2nd	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	ECI3	641666	3624.99	19.68	20.50	1.208	-	-	0.09	0.806	1.027	0.973
1st	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 5	ECI7	633334	3500.01	18.49	19.40	1.233	-	-	-0.16	0.810	1	0.999
2nd	FR1 n77Part27Q HPUE	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 5	ECI7	633334	3500.01	18.49	19.40	1.233	-	-	-0.01	0.792	1.023	0.977
1st	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	ECI3	656000	3840	17.79	18.10	1.074	-	-	-0.07	0.927	1	0.996
2nd	FR1 n77Par27O HPUE	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 3	ECI3	656000	3840	17.79	18.10	1.074	-	-	0.13	0.903	1.027	0.970

<10g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI4	4182	836.4	23.24	24.00	1.191	-	-	0.07	2.240	1	2.668
2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI4	4182	836.4	23.24	24.00	1.191	-	-	0.02	2.130	1.052	2.537
1st	FR1 n66	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 0	ECI6	349000	1745	19.46	20.80	1.361	-	-	0.09	2.310	1	3.145
2nd	FR1 n66	40M	QPSK	108	54	DFT-15	Back	0mm	Ant 0	ECI6	349000	1745	19.46	20.80	1.361	-	-	0.02	2.230	1.036	3.036
1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI6	9538	1907.6	16.42	17.40	1.253	-	-	0.03	2.470	1	3.095
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	ECI6	9538	1907.6	16.42	17.40	1.253	-	-	0.01	2.320	1.065	2.907
1st	FR1 n48	40M	QPSK	1	1	DFT-30	Back	3mm	Ant 4	ECI4	641666	3624.99	22.34	23.40	1.276	-	-	-0.03	2.150	1	2.744
2nd	FR1 n48	40M	QPSK	1	1	DFT-30	Back	3mm	Ant 4	ECI4	641666	3624.99	22.34	23.40	1.276	-	-	0.04	2.040	1.054	2.604
1st	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	4mm	Ant 3	ECI4	633334	3500.01	26.19	27.00	1.205	-	-	0.08	2.400	1	2.892
2nd	FR1 n77Part27Q HPUE	100M	QPSK	1	1	DFT-30	Back	4mm	Ant 3	ECI4	633334	3500.01	26.19	27.00	1.205	-	-	0.05	2.310	1.039	2.784
1st	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	3mm	Ant 4	ECI4	656000	3840	22.56	23.50	1.242	-	-	-0.04	2.880	1	3.576
2nd	FR1 n77Par27O HPUE	100M	QPSK	135	69	DFT-30	Back	3mm	Ant 4	ECI4	656000	3840	22.56	23.50	1.242	-	-	0.03	2.690	1.071	3.340

General Note:

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

17. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz	Yes	Yes	Yes	Yes
3.	WWAN + WLAN6E	Yes	Yes		Yes
4.	WWAN + Bluetooth	Yes	Yes	Yes	Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. WWAN above includes 5G NR bands.
3. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
4. For EN-DC mode, MediaTek's TAS algorithm in WWAN adds directly the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from 5G NR. MediaTek's TAS algorithm controls the total RF exposure from both 4G and 5G NR to not exceed FCC limit. Therefore, simultaneous transmission compliance between 4G+5G NR operation is demonstrated in the Part 2 Report during algorithm validation. In Part 1 Report, simultaneous transmission compliance was evaluated individually with other Radios (WLAN or BT) using one of 4G or 5G NR.
5. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
6. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).WIFI 6E has no hotspot function.
7. The 2.4GHz/5GHz/6GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.
8. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
9. WLAN 2.4GHz and Bluetooth share the same antenna so can't transmit simultaneously.
10. According to the EUT characteristic, WLAN 5GHz/6GHz and Bluetooth can't transmit simultaneously.
11. According to the EUT characteristic, WLAN 5GHz/6GHz and WLAN 2.4GHz can't transmit simultaneously.
12. According to the EUT characteristic, WLAN 5GHz and WLAN 6GHz can't transmit simultaneously.
13. The maximum SAR summation is calculated based on the same configuration and test position.
14. For Front/Back and Front/Back with headset, always chose higher SAR to do co-located analysis.
15. For distance SAR and non-distance SAR in body-worn, always chose higher SAR to do co-located analysis.
16. SAR Power density test report for WLAN6E U-NII-5/6/7/8 will be separately submitted. About co-located SAR with WWAN/Bluetooth, always chose higher SAR of WLAN5G U-NII-1/2A/2C/3 and U-NII-5/6/7/8.
17. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
    iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
    v) The SPLSR calculated results please refer to section 17.6.

17.1 5G NR + LTE + WLAN + BT Sim-Tx analysis

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

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

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

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

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

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

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

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

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

if A + m ≤ 1.0 and B + m ≤ 1.0 can be proven, then “x * A + y * B + m ≤ 1.0”. Therefore simultaneous transmission analysis for 5G NR + LTE + WLAN + BT can be performed in two steps

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

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

17.2 Head Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2	1+3	1+4	1+5
		WWAN	WLAN2.4GHz Ant 2+9	WLAN5GHz Ant 2+9	Bluetooth Ant 2	WLAN6GHz Ant 2+9	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM850 Ant 0	Right Cheek	0.408	0.379	0.348	0.085	0.170	0.79	0.76	0.49	0.58
	Right Tilted	0.199	0.379	0.348	0.067	0.170	0.58	0.55	0.27	0.37
	Left Cheek	0.391	0.379	0.348	0.241	0.170	0.77	0.74	0.63	0.56
	Left Tilted	0.199	0.379	0.348	0.104	0.170	0.58	0.55	0.30	0.37
GSM1900 Ant 0	Right Cheek	0.091	0.379	0.348	0.085	0.170	0.47	0.44	0.18	0.26
	Right Tilted	0.074	0.379	0.348	0.067	0.170	0.45	0.42	0.14	0.24
	Left Cheek	0.106	0.379	0.348	0.241	0.170	0.49	0.45	0.35	0.28
	Left Tilted	0.066	0.379	0.348	0.104	0.170	0.45	0.41	0.17	0.24
WCDMA II Ant 0	Right Cheek	0.221	0.379	0.348	0.085	0.170	0.60	0.57	0.31	0.39
	Right Tilted	0.181	0.379	0.348	0.067	0.170	0.56	0.53	0.25	0.35
	Left Cheek	0.304	0.379	0.348	0.241	0.170	0.68	0.65	0.55	0.47
	Left Tilted	0.170	0.379	0.348	0.104	0.170	0.55	0.52	0.27	0.34
WCDMA V Ant 0	Right Cheek	0.384	0.379	0.348	0.085	0.170	0.76	0.73	0.47	0.55
	Right Tilted	0.180	0.379	0.348	0.067	0.170	0.56	0.53	0.25	0.35
	Left Cheek	0.335	0.379	0.348	0.241	0.170	0.71	0.68	0.58	0.51
	Left Tilted	0.173	0.379	0.348	0.104	0.170	0.55	0.52	0.28	0.34
LTE Band 2 Ant 0	Right Cheek	0.066	0.379	0.348	0.085	0.170	0.45	0.41	0.15	0.24
	Right Tilted	0.065	0.379	0.348	0.067	0.170	0.44	0.41	0.13	0.24
	Left Cheek	0.093	0.379	0.348	0.241	0.170	0.47	0.44	0.33	0.26
	Left Tilted	0.059	0.379	0.348	0.104	0.170	0.44	0.41	0.16	0.23
LTE Band 2 Ant 1	Right Cheek	0.867	0.379	0.348	0.085	0.170	1.25	1.22	0.95	1.04
	Right Tilted	1.004	0.379	0.348	0.067	0.170	1.38	1.35	1.07	1.17
	Left Cheek	0.337	0.379	0.348	0.241	0.170	0.72	0.69	0.58	0.51
	Left Tilted	0.413	0.379	0.348	0.104	0.170	0.79	0.76	0.52	0.58
LTE Band 5 Ant 0	Right Cheek	0.287	0.379	0.348	0.085	0.170	0.67	0.64	0.37	0.46
	Right Tilted	0.127	0.379	0.348	0.067	0.170	0.51	0.48	0.19	0.30
	Left Cheek	0.119	0.379	0.348	0.241	0.170	0.50	0.47	0.36	0.29
	Left Tilted	0.121	0.379	0.348	0.104	0.170	0.50	0.47	0.23	0.29
LTE Band 5 Ant 1	Right Cheek	0.991	0.379	0.348	0.085	0.170	1.37	1.34	1.08	1.16
	Right Tilted	0.793	0.379	0.348	0.067	0.170	1.17	1.14	0.86	0.96
	Left Cheek	0.681	0.379	0.348	0.241	0.170	1.06	1.03	0.92	0.85
	Left Tilted	0.657	0.379	0.348	0.104	0.170	1.04	1.01	0.76	0.83
LTE Band 7 Ant 0	Right Cheek	0.022	0.379	0.348	0.085	0.170	0.40	0.37	0.11	0.19
	Right Tilted	0.011	0.379	0.348	0.067	0.170	0.39	0.36	0.08	0.18
	Left Cheek	0.016	0.379	0.348	0.241	0.170	0.40	0.36	0.26	0.19
	Left Tilted	0.013	0.379	0.348	0.104	0.170	0.39	0.36	0.12	0.18
LTE Band 12 Ant 0	Right Cheek	0.307	0.379	0.348	0.085	0.170	0.69	0.66	0.39	0.48
	Right Tilted	0.192	0.379	0.348	0.067	0.170	0.57	0.54	0.26	0.36
	Left Cheek	0.271	0.379	0.348	0.241	0.170	0.65	0.62	0.51	0.44
	Left Tilted	0.183	0.379	0.348	0.104	0.170	0.56	0.53	0.29	0.35
LTE Band 12 Ant 1	Right Cheek	0.991	0.379	0.348	0.085	0.170	1.37	1.34	1.08	1.16
	Right Tilted	0.808	0.379	0.348	0.067	0.170	1.19	1.16	0.88	0.98
	Left Cheek	0.655	0.379	0.348	0.241	0.170	1.03	1.00	0.90	0.83
	Left Tilted	0.645	0.379	0.348	0.104	0.170	1.02	0.99	0.75	0.82
LTE Band 13 Ant 0	Right Cheek	0.222	0.379	0.348	0.085	0.170	0.60	0.57	0.31	0.39
	Right Tilted	0.127	0.379	0.348	0.067	0.170	0.51	0.48	0.19	0.30
	Left Cheek	0.198	0.379	0.348	0.241	0.170	0.58	0.55	0.44	0.37
	Left Tilted	0.129	0.379	0.348	0.104	0.170	0.51	0.48	0.23	0.30

LTE Band 13 Ant 1	Right Cheek	0.994	0.379	0.348	0.085	0.170	1.37	1.34	1.08	1.16
	Right Tilted	0.782	0.379	0.348	0.067	0.170	1.16	1.13	0.85	0.95
	Left Cheek	0.668	0.379	0.348	0.241	0.170	1.05	1.02	0.91	0.84
	Left Tilted	0.658	0.379	0.348	0.104	0.170	1.04	1.01	0.76	0.83
LTE Band 66 Ant 0	Right Cheek	0.015	0.379	0.348	0.085	0.170	0.39	0.36	0.10	0.19
	Right Tilted	0.010	0.379	0.348	0.067	0.170	0.39	0.36	0.08	0.18
	Left Cheek	0.014	0.379	0.348	0.241	0.170	0.39	0.36	0.26	0.18
	Left Tilted	0.008	0.379	0.348	0.104	0.170	0.39	0.36	0.11	0.18
LTE Band 66 Ant 1	Right Cheek	0.666	0.379	0.348	0.085	0.170	1.05	1.01	0.75	0.84
	Right Tilted	0.985	0.379	0.348	0.067	0.170	1.36	1.33	1.05	1.16
	Left Cheek	0.309	0.379	0.348	0.241	0.170	0.69	0.66	0.55	0.48
	Left Tilted	0.401	0.379	0.348	0.104	0.170	0.78	0.75	0.51	0.57
LTE Band 48 Ant 3	Right Cheek	1.009	0.379	0.348	0.085	0.170	1.39	1.36	1.09	1.18
	Right Tilted	0.327	0.379	0.348	0.067	0.170	0.71	0.68	0.39	0.50
	Left Cheek	0.135	0.379	0.348	0.241	0.170	0.51	0.48	0.38	0.31
	Left Tilted	0.131	0.379	0.348	0.104	0.170	0.51	0.48	0.24	0.30
LTE Band 48 Ant 4	Right Cheek	0.713	0.379	0.348	0.085	0.170	1.09	1.06	0.80	0.88
	Right Tilted	0.721	0.379	0.348	0.067	0.170	1.10	1.07	0.79	0.89
	Left Cheek	0.367	0.379	0.348	0.241	0.170	0.75	0.72	0.61	0.54
	Left Tilted	0.434	0.379	0.348	0.104	0.170	0.81	0.78	0.54	0.60
LTE Band 48 Ant 5	Right Cheek	0.025	0.379	0.348	0.085	0.170	0.40	0.37	0.11	0.20
	Right Tilted	0.022	0.379	0.348	0.067	0.170	0.40	0.37	0.09	0.19
	Left Cheek	0.019	0.379	0.348	0.241	0.170	0.40	0.37	0.26	0.19
	Left Tilted	0.021	0.379	0.348	0.104	0.170	0.40	0.37	0.13	0.19
LTE Band 48 Ant 8	Right Cheek	0.032	0.379	0.348	0.085	0.170	0.41	0.38	0.12	0.20
	Right Tilted	0.029	0.379	0.348	0.067	0.170	0.41	0.38	0.10	0.20
	Left Cheek	0.060	0.379	0.348	0.241	0.170	0.44	0.41	0.30	0.23
	Left Tilted	0.055	0.379	0.348	0.104	0.170	0.43	0.40	0.16	0.23

FR1 Band	Exposure Position	1	2	3	4	5	1+2	1+3	1+4	1+5
		FR1	WLAN2.4GHz Ant 2+9	WLAN5GHz Ant 2+9	Bluetooth Ant 2	WLAN6GHz Ant 2+9	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
FR1 n2 Ant 0	Right Cheek	0.086	0.379	0.348	0.085	0.170	0.47	0.43	0.17	0.26
	Right Tilted	0.079	0.379	0.348	0.067	0.170	0.46	0.43	0.15	0.25
	Left Cheek	0.116	0.379	0.348	0.241	0.170	0.50	0.46	0.36	0.29
	Left Tilted	0.072	0.379	0.348	0.104	0.170	0.45	0.42	0.18	0.24
FR1 n2 Ant 1	Right Cheek	0.774	0.379	0.348	0.085	0.170	1.15	1.12	0.86	0.94
	Right Tilted	0.995	0.379	0.348	0.067	0.170	1.37	1.34	1.06	1.17
	Left Cheek	0.324	0.379	0.348	0.241	0.170	0.70	0.67	0.57	0.49
	Left Tilted	0.422	0.379	0.348	0.104	0.170	0.80	0.77	0.53	0.59
FR1 n5 Ant 0	Right Cheek	0.242	0.379	0.348	0.085	0.170	0.62	0.59	0.33	0.41
	Right Tilted	0.115	0.379	0.348	0.067	0.170	0.49	0.46	0.18	0.29
	Left Cheek	0.205	0.379	0.348	0.241	0.170	0.58	0.55	0.45	0.38
	Left Tilted	0.124	0.379	0.348	0.104	0.170	0.50	0.47	0.23	0.29
FR1 n5 Ant 1	Right Cheek	0.989	0.379	0.348	0.085	0.170	1.37	1.34	1.07	1.16
	Right Tilted	0.727	0.379	0.348	0.067	0.170	1.11	1.08	0.79	0.90
	Left Cheek	0.655	0.379	0.348	0.241	0.170	1.03	1.00	0.90	0.83
	Left Tilted	0.681	0.379	0.348	0.104	0.170	1.06	1.03	0.79	0.85
FR1 n66 Ant 0	Right Cheek	0.115	0.379	0.348	0.085	0.170	0.49	0.46	0.20	0.29
	Right Tilted	0.070	0.379	0.348	0.067	0.170	0.45	0.42	0.14	0.24
	Left Cheek	0.110	0.379	0.348	0.241	0.170	0.49	0.46	0.35	0.28
	Left Tilted	0.079	0.379	0.348	0.104	0.170	0.46	0.43	0.18	0.25
FR1 n66	Right Cheek	0.872	0.379	0.348	0.085	0.170	1.25	1.22	0.96	1.04

Ant 1	Right Tilted	0.998	0.379	0.348	0.067	0.170	1.38	1.35	1.07	1.17
	Left Cheek	0.375	0.379	0.348	0.241	0.170	0.75	0.72	0.62	0.55
	Left Tilted	0.494	0.379	0.348	0.104	0.170	0.87	0.84	0.60	0.66
FR1 n48 Ant 3	Right Cheek	0.943	0.379	0.348	0.085	0.170	1.32	1.29	1.03	1.11
	Right Tilted	0.465	0.379	0.348	0.067	0.170	0.84	0.81	0.53	0.64
	Left Cheek	0.210	0.379	0.348	0.241	0.170	0.59	0.56	0.45	0.38
	Left Tilted	0.172	0.379	0.348	0.104	0.170	0.55	0.52	0.28	0.34
FR1 n48 Ant 4	Right Cheek	0.847	0.379	0.348	0.085	0.170	1.23	1.20	0.93	1.02
	Right Tilted	0.935	0.379	0.348	0.067	0.170	1.31	1.28	1.00	1.11
	Left Cheek	0.516	0.379	0.348	0.241	0.170	0.90	0.86	0.76	0.69
	Left Tilted	0.596	0.379	0.348	0.104	0.170	0.98	0.94	0.70	0.77
FR1 n48 Ant 5	Right Cheek	0.189	0.379	0.348	0.085	0.170	0.57	0.54	0.27	0.36
	Right Tilted	0.113	0.379	0.348	0.067	0.170	0.49	0.46	0.18	0.28
	Left Cheek	0.087	0.379	0.348	0.241	0.170	0.47	0.44	0.33	0.26
	Left Tilted	0.070	0.379	0.348	0.104	0.170	0.45	0.42	0.17	0.24
FR1 n48 Ant 8	Right Cheek	0.017	0.379	0.348	0.085	0.170	0.40	0.37	0.10	0.19
	Right Tilted	0.007	0.379	0.348	0.067	0.170	0.39	0.36	0.07	0.18
	Left Cheek	0.006	0.379	0.348	0.241	0.170	0.39	0.35	0.25	0.18
	Left Tilted	0.005	0.379	0.348	0.104	0.170	0.38	0.35	0.11	0.18
FR1 n77Par27O HPUE Ant 3	Right Cheek	0.990	0.379	0.348	0.085	0.170	1.37	1.34	1.08	1.16
	Right Tilted	0.456	0.379	0.348	0.067	0.170	0.84	0.80	0.52	0.63
	Left Cheek	0.202	0.379	0.348	0.241	0.170	0.58	0.55	0.44	0.37
	Left Tilted	0.163	0.379	0.348	0.104	0.170	0.54	0.51	0.27	0.33
FR1 n77Part27Q HPUE Ant 3	Right Cheek	0.610	0.379	0.348	0.085	0.170	0.99	0.96	0.70	0.78
	Right Tilted	0.240	0.379	0.348	0.067	0.170	0.62	0.59	0.31	0.41
	Left Cheek	0.139	0.379	0.348	0.241	0.170	0.52	0.49	0.38	0.31
	Left Tilted	0.115	0.379	0.348	0.104	0.170	0.49	0.46	0.22	0.29
FR1 n77Par27O HPUE Ant 4	Right Cheek	0.798	0.379	0.348	0.085	0.170	1.18	1.15	0.88	0.97
	Right Tilted	0.992	0.379	0.348	0.067	0.170	1.37	1.34	1.06	1.16
	Left Cheek	0.571	0.379	0.348	0.241	0.170	0.95	0.92	0.81	0.74
	Left Tilted	0.682	0.379	0.348	0.104	0.170	1.06	1.03	0.79	0.85
FR1 n77Part27Q HPUE Ant 4	Right Cheek	0.533	0.379	0.348	0.085	0.170	0.91	0.88	0.62	0.70
	Right Tilted	0.564	0.379	0.348	0.067	0.170	0.94	0.91	0.63	0.73
	Left Cheek	0.294	0.379	0.348	0.241	0.170	0.67	0.64	0.54	0.46
	Left Tilted	0.342	0.379	0.348	0.104	0.170	0.72	0.69	0.45	0.51
FR1 n77Par27O HPUE Ant 5	Right Cheek	0.146	0.379	0.348	0.085	0.170	0.53	0.49	0.23	0.32
	Right Tilted	0.140	0.379	0.348	0.067	0.170	0.52	0.49	0.21	0.31
	Left Cheek	0.057	0.379	0.348	0.241	0.170	0.44	0.41	0.30	0.23
	Left Tilted	0.054	0.379	0.348	0.104	0.170	0.43	0.40	0.16	0.22
FR1 n77Part27Q HPUE Ant 5	Right Cheek	0.105	0.379	0.348	0.085	0.170	0.48	0.45	0.19	0.28
	Right Tilted	0.056	0.379	0.348	0.067	0.170	0.44	0.40	0.12	0.23
	Left Cheek	0.046	0.379	0.348	0.241	0.170	0.43	0.39	0.29	0.22
	Left Tilted	0.028	0.379	0.348	0.104	0.170	0.41	0.38	0.13	0.20
FR1 n77Par27O HPUE Ant 8	Right Cheek	0.097	0.379	0.348	0.085	0.170	0.48	0.45	0.18	0.27
	Right Tilted	0.065	0.379	0.348	0.067	0.170	0.44	0.41	0.13	0.24
	Left Cheek	0.035	0.379	0.348	0.241	0.170	0.41	0.38	0.28	0.21
	Left Tilted	0.053	0.379	0.348	0.104	0.170	0.43	0.40	0.16	0.22
FR1 n77Part27Q HPUE Ant 8	Right Cheek	0.052	0.379	0.348	0.085	0.170	0.43	0.40	0.14	0.22
	Right Tilted	0.027	0.379	0.348	0.067	0.170	0.41	0.38	0.09	0.20
	Left Cheek	0.019	0.379	0.348	0.241	0.170	0.40	0.37	0.26	0.19
	Left Tilted	0.024	0.379	0.348	0.104	0.170	0.40	0.37	0.13	0.19

17.3 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 WLAN2.4GHz Ant 2+9 1g SAR (W/kg)	3 WLAN5GHz Ant 2+9 1g SAR (W/kg)	4 Bluetooth Ant 2 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	Case No
GSM850 Ant 0	Front	0.793	0.256	0.152	0.088	1.05	0.95	0.88	
	Back	1.247	0.280	0.343	0.188	1.53	1.59	1.44	
	Left side	0.153	0.027	0.035	0.033	0.18	0.19	0.19	
	Right side	0.294	0.342	0.341	0.044	0.64	0.64	0.34	
	Top side	0.074	0.125	0.324	0.068	0.20	0.40	0.14	
	Bottom side	0.999				1.00	1.00	1.00	
GSM1900 Ant 0	Front	0.674	0.256	0.152	0.088	0.93	0.83	0.76	
	Back	1.250	0.280	0.343	0.188	1.53	**1.59**	1.44	
	Left side	0.051	0.027	0.035	0.033	0.08	0.09	0.08	
	Right side	0.063	0.342	0.341	0.044	0.41	0.40	0.11	
	Top side	0.019	0.125	0.324	0.068	0.14	0.34	0.09	
	Bottom side	1.443				1.44	1.44	1.44	
WCDMA II Ant 0	Front	0.721	0.256	0.152	0.088	0.98	0.87	0.81	
	Back	1.233	0.280	0.343	0.188	1.51	1.58	1.42	
	Left side	0.042	0.027	0.035	0.033	0.07	0.08	0.08	
	Right side	0.048	0.342	0.341	0.044	0.39	0.39	0.09	
	Top side	0.014	0.125	0.324	0.068	0.14	0.34	0.08	
	Bottom side	1.356				1.36	1.36	1.36	
WCDMA V Ant 0	Front	0.821	0.256	0.152	0.088	1.08	0.97	0.91	
	Back	1.272	0.280	0.343	0.188	1.55	**1.62**	1.46	**1**
	Left side	0.172	0.027	0.035	0.033	0.20	0.21	0.21	
	Right side	0.370	0.342	0.341	0.044	0.71	0.71	0.41	
	Top side		0.125	0.324	0.068	0.13	0.32	0.07	
	Bottom side	0.881				0.88	0.88	0.88	
LTE Band 2 Ant 0	Front	0.517	0.256	0.152	0.088	0.77	0.67	0.61	
	Back	0.798	0.280	0.343	0.188	1.08	1.14	0.99	
	Left side	0.036	0.027	0.035	0.033	0.06	0.07	0.07	
	Right side	0.043	0.342	0.341	0.044	0.39	0.38	0.09	
	Top side		0.125	0.324	0.068	0.13	0.32	0.07	
	Bottom side	1.241				1.24	1.24	1.24	
LTE Band 2 Ant 1	Front	0.201	0.256	0.152	0.088	0.46	0.35	0.29	
	Back	0.322	0.280	0.343	0.188	0.60	0.67	0.51	
	Left side	0.120	0.027	0.035	0.033	0.15	0.16	0.15	
	Right side	0.017	0.342	0.341	0.044	0.36	0.36	0.06	
	Top side	0.998	0.125	0.324	0.068	1.12	1.32	1.07	
	Bottom side					0.00	0.00	0.00	
LTE Band 5 Ant 0	Front	0.342	0.256	0.152	0.088	0.60	0.49	0.43	
	Back	0.556	0.280	0.343	0.188	0.84	0.90	0.74	
	Left side	0.055	0.027	0.035	0.033	0.08	0.09	0.09	
	Right side	0.132	0.342	0.341	0.044	0.47	0.47	0.18	
	Top side		0.125	0.324	0.068	0.13	0.32	0.07	
	Bottom side	0.457				0.46	0.46	0.46	
LTE Band 5 Ant 1	Front	0.627	0.256	0.152	0.088	0.88	0.78	0.72	
	Back	0.851	0.280	0.343	0.188	1.13	1.19	1.04	
	Left side	0.196	0.027	0.035	0.033	0.22	0.23	0.23	
	Right side	0.186	0.342	0.341	0.044	0.53	0.53	0.23	
	Top side	0.997	0.125	0.324	0.068	1.12	1.32	1.07	
	Bottom side					0.00	0.00	0.00	

LTE Band 7 Ant 0	Front	0.318	0.256	0.152	0.088	0.57	0.47	0.41	
	Back	0.596	0.280	0.343	0.188	0.88	0.94	0.78	
	Left side	0.015	0.027	0.035	0.033	0.04	0.05	0.05	
	Right side	0.132	0.342	0.341	0.044	0.47	0.47	0.18	
	Top side		0.125	0.324	0.068	0.13	0.32	0.07	
	Bottom side	1.255				1.26	1.26	1.26	
LTE Band 12 Ant 0	Front	0.381	0.256	0.152	0.088	0.64	0.53	0.47	
	Back	0.461	0.280	0.343	0.188	0.74	0.80	0.65	
	Left side	0.215	0.027	0.035	0.033	0.24	0.25	0.25	
	Right side	0.289	0.342	0.341	0.044	0.63	0.63	0.33	
	Top side		0.125	0.324	0.068	0.13	0.32	0.07	
	Bottom side	0.344				0.34	0.34	0.34	
LTE Band 12 Ant 1	Front	0.689	0.256	0.152	0.088	0.95	0.84	0.78	
	Back	0.699	0.280	0.343	0.188	0.98	1.04	0.89	
	Left side	0.604	0.027	0.035	0.033	0.63	0.64	0.64	
	Right side	0.393	0.342	0.341	0.044	0.74	0.73	0.44	
	Top side	0.679	0.125	0.324	0.068	0.80	1.00	0.75	
	Bottom side					0.00	0.00	0.00	
LTE Band 13 Ant 0	Front	0.572	0.256	0.152	0.088	0.83	0.72	0.66	
	Back	0.812	0.280	0.343	0.188	1.09	1.16	1.00	
	Left side	0.223	0.027	0.035	0.033	0.25	0.26	0.26	
	Right side	0.381	0.342	0.341	0.044	0.72	0.72	0.43	
	Top side		0.125	0.324	0.068	0.13	0.32	0.07	
	Bottom side	0.585				0.59	0.59	0.59	
LTE Band 13 Ant 1	Front	0.512	0.256	0.152	0.088	0.77	0.66	0.60	
	Back	0.605	0.280	0.343	0.188	0.89	0.95	0.79	
	Left side	0.245	0.027	0.035	0.033	0.27	0.28	0.28	
	Right side	0.215	0.342	0.341	0.044	0.56	0.56	0.26	
	Top side	0.491	0.125	0.324	0.068	0.62	0.82	0.56	
	Bottom side					0.00	0.00	0.00	
LTE Band 66 Ant 0	Front	0.485	0.256	0.152	0.088	0.74	0.64	0.57	
	Back	0.908	0.280	0.343	0.188	1.19	1.25	1.10	
	Left side	0.037	0.027	0.035	0.033	0.06	0.07	0.07	
	Right side	0.055	0.342	0.341	0.044	0.40	0.40	0.10	
	Top side		0.125	0.324	0.068	0.13	0.32	0.07	
	Bottom side	1.248				1.25	1.25	1.25	
LTE Band 66 Ant 1	Front	0.536	0.256	0.152	0.088	0.79	0.69	0.62	
	Back	0.965	0.280	0.343	0.188	1.25	1.31	1.15	
	Left side	0.134	0.027	0.035	0.033	0.16	0.17	0.17	
	Right side	0.015	0.342	0.341	0.044	0.36	0.36	0.06	
	Top side	0.974	0.125	0.324	0.068	1.10	1.30	1.04	
	Bottom side					0.00	0.00	0.00	
LTE Band 48 Ant 3	Front	0.276	0.256	0.152	0.088	0.53	0.43	0.36	
	Back	0.994	0.280	0.343	0.188	1.27	1.34	1.18	
	Left side	0.459	0.027	0.035	0.033	0.49	0.49	0.49	
	Right side	0.017	0.342	0.341	0.044	0.36	0.36	0.06	
	Top side	0.098	0.125	0.324	0.068	0.22	0.42	0.17	
	Bottom side					0.00	0.00	0.00	
LTE Band 48 Ant 4	Front	0.126	0.256	0.152	0.088	0.38	0.28	0.21	
	Back	0.999	0.280	0.343	0.188	1.28	1.34	1.19	
	Left side	0.060	0.027	0.035	0.033	0.09	0.10	0.09	
	Right side	0.014	0.342	0.341	0.044	0.36	0.36	0.06	
	Top side	0.180	0.125	0.324	0.068	0.31	0.50	0.25	
	Bottom side					0.00	0.00	0.00	
LTE Band 48 Ant 5	Front	0.025	0.256	0.152	0.088	0.28	0.18	0.11	
	Back	1.004	0.280	0.343	0.188	1.28	1.35	1.19	

	Left side	0.176	0.027	0.035	0.033	0.20	0.21	0.21	
	Right side	0.026	0.342	0.341	0.044	0.37	0.37	0.07	
	Top side	0.035	0.125	0.324	0.068	0.16	0.36	0.10	
	Bottom side					0.00	0.00	0.00	
LTE Band 48 Ant 8	Front	0.004	0.256	0.152	0.088	0.26	0.16	0.09	
	Back	1.001	0.280	0.343	0.188	1.28	1.34	1.19	
	Left side	0.006	0.027	0.035	0.033	0.03	0.04	0.04	
	Right side	0.006	0.342	0.341	0.044	0.35	0.35	0.05	
	Top side	0.004	0.125	0.324	0.068	0.13	0.33	0.07	
	Bottom side					0.00	0.00	0.00	

FR1 Band	Exposure Position	1	2	3	4	1+2	1+3	1+4
		FR1	WLAN2.4GHz Ant 2+9	WLAN5GHz Ant 2+9	Bluetooth Ant 2	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
FR1 n2 Ant 0	Front	0.556	0.256	0.152	0.088	0.81	0.71	0.64
	Back	0.947	0.280	0.343	0.188	1.23	1.29	1.14
	Left side	0.041	0.027	0.035	0.033	0.07	0.08	0.07
	Right side	0.053	0.342	0.341	0.044	0.40	0.39	0.10
	Top side		0.125	0.324	0.068	0.13	0.32	0.07
	Bottom side	1.240				1.24	1.24	1.24
FR1 n2 Ant 1	Front	0.409	0.256	0.152	0.088	0.67	0.56	0.50
	Back	0.772	0.280	0.343	0.188	1.05	1.12	0.96
	Left side	0.120	0.027	0.035	0.033	0.15	0.16	0.15
	Right side	0.017	0.342	0.341	0.044	0.36	0.36	0.06
	Top side	1.002	0.125	0.324	0.068	1.13	1.33	1.07
	Bottom side					0.00	0.00	0.00
FR1 n5 Ant 0	Front	0.740	0.256	0.152	0.088	1.00	0.89	0.83
	Back	0.963	0.280	0.343	0.188	1.24	1.31	1.15
	Left side	0.207	0.027	0.035	0.033	0.23	0.24	0.24
	Right side	0.358	0.342	0.341	0.044	0.70	0.70	0.40
	Top side		0.125	0.324	0.068	0.13	0.32	0.07
	Bottom side	0.939				0.94	0.94	0.94
FR1 n5 Ant 1	Front	0.975	0.256	0.152	0.088	1.23	1.13	1.06
	Back	1.052	0.280	0.343	0.188	1.33	1.40	1.24
	Left side	0.345	0.027	0.035	0.033	0.37	0.38	0.38
	Right side	0.283	0.342	0.341	0.044	0.63	0.62	0.33
	Top side	0.928	0.125	0.324	0.068	1.05	1.25	1.00
	Bottom side					0.00	0.00	0.00
FR1 n66 Ant 0	Front	0.469	0.256	0.152	0.088	0.73	0.62	0.56
	Back	0.643	0.280	0.343	0.188	0.92	0.99	0.83
	Left side	0.038	0.027	0.035	0.033	0.07	0.07	0.07
	Right side	0.059	0.342	0.341	0.044	0.40	0.40	0.10
	Top side		0.125	0.324	0.068	0.13	0.32	0.07
	Bottom side	1.254				1.25	1.25	1.25
FR1 n66 Ant 1	Front	0.369	0.256	0.152	0.088	0.63	0.52	0.46
	Back	0.718	0.280	0.343	0.188	1.00	1.06	0.91
	Left side	0.140	0.027	0.035	0.033	0.17	0.18	0.17
	Right side	0.013	0.342	0.341	0.044	0.36	0.35	0.06
	Top side	0.999	0.125	0.324	0.068	1.12	1.32	1.07
	Bottom side					0.00	0.00	0.00
FR1 n48 Ant 3	Front	0.359	0.256	0.152	0.088	0.62	0.51	0.45
	Back	0.985	0.280	0.343	0.188	1.27	1.33	1.17
	Left side	0.616	0.027	0.035	0.033	0.64	0.65	0.65
	Right side	0.024	0.342	0.341	0.044	0.37	0.37	0.07
	Top side	0.123	0.125	0.324	0.068	0.25	0.45	0.19

	Bottom side					0.00	0.00	0.00
FR1 n48 Ant 4	Front	0.131	0.256	0.152	0.088	0.39	0.28	0.22
	Back	1.002	0.280	0.343	0.188	1.28	1.35	1.19
	Left side	0.078	0.027	0.035	0.033	0.11	0.11	0.11
	Right side	0.012	0.342	0.341	0.044	0.35	0.35	0.06
	Top side	0.257	0.125	0.324	0.068	0.38	0.58	0.33
	Bottom side					0.00	0.00	0.00
FR1 n48 Ant 5	Front	0.051	0.256	0.152	0.088	0.31	0.20	0.14
	Back	1.000	0.280	0.343	0.188	1.28	1.34	1.19
	Left side	0.345	0.027	0.035	0.033	0.37	0.38	0.38
	Right side	0.017	0.342	0.341	0.044	0.36	0.36	0.06
	Top side	0.022	0.125	0.324	0.068	0.15	0.35	0.09
	Bottom side					0.00	0.00	0.00
FR1 n48 Ant 8	Front	0.004	0.256	0.152	0.088	0.26	0.16	0.09
	Back	0.985	0.280	0.343	0.188	1.27	1.33	1.17
	Left side	0.009	0.027	0.035	0.033	0.04	0.04	0.04
	Right side	0.005	0.342	0.341	0.044	0.35	0.35	0.05
	Top side	0.004	0.125	0.324	0.068	0.13	0.33	0.07
	Bottom side					0.00	0.00	0.00
FR1 n77Par27O HPUE Ant 3	Front	0.548	0.256	0.152	0.088	0.80	0.70	0.64
	Back	0.996	0.280	0.343	0.188	1.28	1.34	1.18
	Left side	0.666	0.027	0.035	0.033	0.69	0.70	0.70
	Right side	0.023	0.342	0.341	0.044	0.37	0.36	0.07
	Top side	0.171	0.125	0.324	0.068	0.30	0.50	0.24
	Bottom side					0.00	0.00	0.00
FR1 n77Part27Q HPUE Ant 3	Front	0.397	0.256	0.152	0.088	0.65	0.55	0.49
	Back	0.881	0.280	0.343	0.188	1.16	1.22	1.07
	Left side	0.561	0.027	0.035	0.033	0.59	0.60	0.59
	Right side	0.020	0.342	0.341	0.044	0.36	0.36	0.06
	Top side	0.115	0.125	0.324	0.068	0.24	0.44	0.18
	Bottom side					0.00	0.00	0.00
FR1 n77Par27O HPUE Ant 4	Front	0.162	0.256	0.152	0.088	0.42	0.31	0.25
	Back	0.991	0.280	0.343	0.188	1.27	1.33	1.18
	Left side	0.115	0.027	0.035	0.033	0.14	0.15	0.15
	Right side	0.009	0.342	0.341	0.044	0.35	0.35	0.05
	Top side	0.263	0.125	0.324	0.068	0.39	0.59	0.33
	Bottom side					0.00	0.00	0.00
FR1 n77Part27Q HPUE Ant 4	Front	0.101	0.256	0.152	0.088	0.36	0.25	0.19
	Back	0.806	0.280	0.343	0.188	1.09	1.15	0.99
	Left side	0.069	0.027	0.035	0.033	0.10	0.10	0.10
	Right side	0.009	0.342	0.341	0.044	0.35	0.35	0.05
	Top side	0.172	0.125	0.324	0.068	0.30	0.50	0.24
	Bottom side					0.00	0.00	0.00
FR1 n77Par27O HPUE Ant 5	Front	0.075	0.256	0.152	0.088	0.33	0.23	0.16
	Back	0.971	0.280	0.343	0.188	1.25	1.31	1.16
	Left side	0.478	0.027	0.035	0.033	0.51	0.51	0.51
	Right side	0.020	0.342	0.341	0.044	0.36	0.36	0.06
	Top side	0.041	0.125	0.324	0.068	0.17	0.37	0.11
	Bottom side					0.00	0.00	0.00
FR1 n77Part27Q HPUE Ant 5	Front	0.044	0.256	0.152	0.088	0.30	0.20	0.13
	Back	0.999	0.280	0.343	0.188	1.28	1.34	1.19
	Left side	0.277	0.027	0.035	0.033	0.30	0.31	0.31
	Right side	0.026	0.342	0.341	0.044	0.37	0.37	0.07
	Top side	0.028	0.125	0.324	0.068	0.15	0.35	0.10
	Bottom side					0.00	0.00	0.00
FR1	Front	0.005	0.256	0.152	0.088	0.26	0.16	0.09

n77Par27O HPUE Ant 8	Back	0.985	0.280	0.343	0.188	1.27	1.33	1.17
	Left side	0.015	0.027	0.035	0.033	0.04	0.05	0.05
	Right side	0.007	0.342	0.341	0.044	0.35	0.35	0.05
	Top side	0.007	0.125	0.324	0.068	0.13	0.33	0.08
	Bottom side					0.00	0.00	0.00
FR1 n77Part27Q HPUE Ant 8	Front	0.006	0.256	0.152	0.088	0.26	0.16	0.09
	Back	0.546	0.280	0.343	0.188	0.83	0.89	0.73
	Left side	0.008	0.027	0.035	0.033	0.04	0.04	0.04
	Right side	0.005	0.342	0.341	0.044	0.35	0.35	0.05
	Top side	0.009	0.125	0.324	0.068	0.13	0.33	0.08
	Bottom side					0.00	0.00	0.00

17.4 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2	1+3	1+4	1+5
		WWAN	WLAN2.4GHz Ant 2+9	WLAN5GHz Ant 2+9	Bluetooth Ant 2	WLAN6GHz Ant 2+9	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM850 Ant 0	Front	0.793	0.320	0.322	0.088	0.230	1.11	1.12	0.88	1.02
	Back	1.247	0.320	0.322	0.188	0.230	1.57	1.57	1.44	1.48
GSM1900 Ant 0	Front	0.674	0.320	0.322	0.088	0.230	0.99	1.00	0.76	0.90
	Back	1.252	0.320	0.322	0.188	0.230	1.57	1.57	1.44	1.48
WCDMA II Ant 0	Front	0.721	0.320	0.322	0.088	0.230	1.04	1.04	0.81	0.95
	Back	1.233	0.320	0.322	0.188	0.230	1.55	1.56	1.42	1.46
WCDMA V Ant 0	Front	0.821	0.320	0.322	0.088	0.230	1.14	1.14	0.91	1.05
	Back	1.272	0.320	0.322	0.188	0.230	**1.59**	1.59	**1.46**	1.50
LTE Band 2 Ant 0	Front	0.730	0.320	0.322	0.088	0.230	1.05	1.05	0.82	0.96
	Back	1.246	0.320	0.322	0.188	0.230	1.57	1.57	1.43	1.48
LTE Band 2 Ant 1	Front	0.203	0.320	0.322	0.088	0.230	0.52	0.53	0.29	0.43
	Back	0.324	0.320	0.322	0.188	0.230	0.64	0.65	0.51	0.55
LTE Band 5 Ant 0	Front	0.342	0.320	0.322	0.088	0.230	0.66	0.66	0.43	0.57
	Back	0.556	0.320	0.322	0.188	0.230	0.88	0.88	0.74	0.79
LTE Band 5 Ant 1	Front	0.732	0.320	0.322	0.088	0.230	1.05	1.05	0.82	0.96
	Back	0.985	0.320	0.322	0.188	0.230	1.31	1.31	1.17	1.22
LTE Band 7 Ant 0	Front	0.505	0.320	0.322	0.088	0.230	0.83	0.83	0.59	0.74
	Back	1.237	0.320	0.322	0.188	0.230	1.56	1.56	1.43	1.47
LTE Band 12 Ant 0	Front	0.381	0.320	0.322	0.088	0.230	0.70	0.70	0.47	0.61
	Back	0.461	0.320	0.322	0.188	0.230	0.78	0.78	0.65	0.69
LTE Band 12 Ant 1	Front	0.689	0.320	0.322	0.088	0.230	1.01	1.01	0.78	0.92
	Back	0.699	0.320	0.322	0.188	0.230	1.02	1.02	0.89	0.93
LTE Band 13 Ant 0	Front	0.572	0.320	0.322	0.088	0.230	0.89	0.89	0.66	0.80
	Back	0.812	0.320	0.322	0.188	0.230	1.13	1.13	1.00	1.04
LTE Band 13 Ant 1	Front	0.512	0.320	0.322	0.088	0.230	0.83	0.83	0.60	0.74
	Back	0.605	0.320	0.322	0.188	0.230	0.93	0.93	0.79	0.84
LTE Band 66 Ant 0	Front	0.672	0.320	0.322	0.088	0.230	0.99	0.99	0.76	0.90
	Back	1.251	0.320	0.322	0.188	0.230	1.57	1.57	1.44	1.48
LTE Band 66 Ant 1	Front	0.555	0.320	0.322	0.088	0.230	0.88	0.88	0.64	0.79
	Back	1.003	0.320	0.322	0.188	0.230	1.32	1.33	1.19	1.23
LTE Band 48 Ant 3	Front	0.276	0.320	0.322	0.088	0.230	0.60	0.60	0.36	0.51
	Back	0.994	0.320	0.322	0.188	0.230	1.31	1.32	1.18	1.22
LTE Band 48 Ant 4	Front	0.126	0.320	0.322	0.088	0.230	0.45	0.45	0.21	0.36
	Back	1.116	0.320	0.322	0.188	0.230	1.44	1.44	1.30	1.35
LTE Band 48 Ant 5	Front	0.025	0.320	0.322	0.088	0.230	0.35	0.35	0.11	0.26
	Back	1.004	0.320	0.322	0.188	0.230	1.32	1.33	1.19	1.23
LTE Band 48 Ant 8	Front	0.004	0.320	0.322	0.088	0.230	0.32	0.33	0.09	0.23
	Back	1.054	0.320	0.322	0.188	0.230	1.37	1.38	1.24	1.28

FR1 Band	Exposure Position	1	2	3	4	5	1+2	1+3	1+4	1+5
		FR1	WLAN2.4GHz Ant 2+9	WLAN5GHz Ant 2+9	Bluetooth Ant 2	WLAN6GHz Ant 2+9	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
FR1 n2 Ant 0	Front	0.705	0.320	0.322	0.088	0.230	1.03	1.03	0.79	0.94
	Back	1.238	0.320	0.322	0.188	0.230	1.56	1.56	1.43	1.47
FR1 n2 Ant 1	Front	0.487	0.320	0.322	0.088	0.230	0.81	0.81	0.58	0.72
	Back	0.991	0.320	0.322	0.188	0.230	1.31	1.31	1.18	1.22
FR1 n5 Ant 0	Front	0.740	0.320	0.322	0.088	0.230	1.06	1.06	0.83	0.97
	Back	1.015	0.320	0.322	0.188	0.230	1.34	1.34	1.20	1.25
FR1 n5 Ant 1	Front	0.975	0.320	0.322	0.088	0.230	1.30	1.30	1.06	1.21
	Back	1.004	0.320	0.322	0.188	0.230	1.32	1.33	1.19	1.23
FR1 n66 Ant 0	Front	0.763	0.320	0.322	0.088	0.230	1.08	1.09	0.85	0.99
	Back	1.234	0.320	0.322	0.188	0.230	1.55	1.56	1.42	1.46
FR1 n66 Ant 1	Front	0.599	0.320	0.322	0.088	0.230	0.92	0.92	0.69	0.83
	Back	1.004	0.320	0.322	0.188	0.230	1.32	1.33	1.19	1.23
FR1 n48 Ant 3	Front	0.359	0.320	0.322	0.088	0.230	0.68	0.68	0.45	0.59
	Back	0.985	0.320	0.322	0.188	0.230	1.31	1.31	1.17	1.22
FR1 n48 Ant 4	Front	0.131	0.320	0.322	0.088	0.230	0.45	0.45	0.22	0.36
	Back	1.002	0.320	0.322	0.188	0.230	1.32	1.32	1.19	1.23
FR1 n48 Ant 5	Front	0.051	0.320	0.322	0.088	0.230	0.37	0.37	0.14	0.28
	Back	1.000	0.320	0.322	0.188	0.230	1.32	1.32	1.19	1.23
FR1 n48 Ant 8	Front	0.004	0.320	0.322	0.088	0.230	0.32	0.33	0.09	0.23
	Back	0.985	0.320	0.322	0.188	0.230	1.31	1.31	1.17	1.22
FR1 n77Par27O HPUE Ant 3	Front	0.548	0.320	0.322	0.088	0.230	0.87	0.87	0.64	0.78
	Back	0.996	0.320	0.322	0.188	0.230	1.32	1.32	1.18	1.23
FR1 n77Part27Q HPUE Ant 3	Front	0.397	0.320	0.322	0.088	0.230	0.72	0.72	0.49	0.63
	Back	0.881	0.320	0.322	0.188	0.230	1.20	1.20	1.07	1.11
FR1 n77Par27O HPUE Ant 4	Front	0.162	0.320	0.322	0.088	0.230	0.48	0.48	0.25	0.39
	Back	0.991	0.320	0.322	0.188	0.230	1.31	1.31	1.18	1.22
FR1 n77Part27Q HPUE Ant 4	Front	0.101	0.320	0.322	0.088	0.230	0.42	0.42	0.19	0.33
	Back	0.806	0.320	0.322	0.188	0.230	1.13	1.13	0.99	1.04
FR1 n77Par27O HPUE Ant 5	Front	0.075	0.320	0.322	0.088	0.230	0.40	0.40	0.16	0.31
	Back	0.971	0.320	0.322	0.188	0.230	1.29	1.29	1.16	1.20
FR1 n77Part27Q HPUE Ant 5	Front	0.044	0.320	0.322	0.088	0.230	0.36	0.37	0.13	0.27
	Back	0.999	0.320	0.322	0.188	0.230	1.32	1.32	1.19	1.23
FR1 n77Par27O HPUE Ant 8	Front	0.005	0.320	0.322	0.088	0.230	0.33	0.33	0.09	0.24
	Back	0.985	0.320	0.322	0.188	0.230	1.31	1.31	1.17	1.22
FR1 n77Part27Q HPUE Ant 8	Front	0.038	0.320	0.322	0.088	0.230	0.36	0.36	0.13	0.27
	Back	0.546	0.320	0.322	0.188	0.230	0.87	0.87	0.73	0.78

<Sensor Off>

WWAN Band	Exposure Position	1	2	3	1+2	1+3
		WWAN	WLAN2.4GHz Ant 2+9	WLAN5GHz Ant 2+9	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM850 Ant 0	Front at 16mm	0.193	0.192	0.197	0.39	0.39
	Back at 20mm	0.169	0.192	0.320	0.36	0.49
GSM1900 Ant 0	Front at 16mm	0.782	0.192	0.197	0.97	0.98
	Back at 20mm	0.908	0.192	0.320	1.10	1.23
WCDMA II Ant 0	Front at 16mm	1.221	0.192	0.197	1.41	1.42
	Back at 20mm	1.268	0.192	0.320	1.46	1.59
WCDMA V Ant 0	Front at 16mm	0.274	0.192	0.197	0.47	0.47
	Back at 20mm	0.286	0.192	0.320	0.48	0.61
LTE Band 2 Ant 0	Front at 16mm	0.816	0.192	0.197	1.01	1.01
	Back at 20mm	0.886	0.192	0.320	1.08	1.21
LTE Band 2 Ant 1	Front at 16mm	0.365	0.192	0.197	0.56	0.56
	Back at 20mm	0.474	0.192	0.320	0.67	0.79
LTE Band 5 Ant 1	Front at 16mm	0.091	0.192	0.197	0.28	0.29
	Back at 20mm	0.137	0.192	0.320	0.33	0.46
LTE Band 7 Ant 0	Front at 16mm	0.408	0.192	0.197	0.60	0.61
	Back at 20mm	0.483	0.192	0.320	0.68	0.80
LTE Band 66 Ant 0	Front at 16mm	0.723	0.192	0.197	0.92	0.92
	Back at 20mm	0.849	0.192	0.320	1.04	1.17
LTE Band 66 Ant 1	Front at 16mm	0.367	0.192	0.197	0.56	0.56
	Back at 20mm	0.573	0.192	0.320	0.77	0.89
LTE Band 48 Ant 3	Front at 16mm	0.218	0.192	0.197	0.41	0.42
	Back at 20mm	0.434	0.192	0.320	0.63	0.75
LTE Band 48 Ant 4	Front at 16mm	0.095	0.192	0.197	0.29	0.29
	Back at 20mm	0.315	0.192	0.320	0.51	0.64
LTE Band 48 Ant 5	Front at 16mm	0.004	0.192	0.197	0.20	0.20
	Back at 20mm	0.139	0.192	0.320	0.33	0.46
LTE Band 48 Ant 8	Front at 16mm	0.001	0.192	0.197	0.19	0.20
	Back at 20mm	0.674	0.192	0.320	0.87	0.99

FR1 Band	Exposure Position	1	2	3	1+2	1+3
		FR1	WLAN2.4GHz Ant 2+9	WLAN5GHz Ant 2+9	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
FR1 n2 Ant 0	Front at 16mm	0.634	0.192	0.197	0.83	0.83
	Back at 20mm	0.747	0.192	0.320	0.94	1.07
FR1 n2 Ant 1	Front at 16mm	0.317	0.192	0.197	0.51	0.51
	Back at 20mm	0.377	0.192	0.320	0.57	0.70
FR1 n5 Ant 1	Front at 16mm	0.157	0.192	0.197	0.35	0.35
	Back at 20mm	0.174	0.192	0.320	0.37	0.49
FR1 n66 Ant 0	Front at 16mm	0.802	0.192	0.197	0.99	1.00
	Back at 20mm	0.936	0.192	0.320	1.13	1.26
FR1 n66 Ant 1	Front at 16mm	0.432	0.192	0.197	0.62	0.63
	Back at 20mm	0.509	0.192	0.320	0.70	0.83
FR1 n48 Ant 3	Front at 16mm	0.192	0.192	0.197	0.38	0.39
	Back at 20mm	0.413	0.192	0.320	0.61	0.73
FR1 n48 Ant 4	Front at 16mm	0.080	0.192	0.197	0.27	0.28
	Back at 20mm	0.287	0.192	0.320	0.48	0.61
FR1 n48 Ant 5	Front at 16mm	0.007	0.192	0.197	0.20	0.20
	Back at 20mm	0.298	0.192	0.320	0.49	0.62
FR1 n48 Ant 8	Front at 16mm	0.004	0.192	0.197	0.20	0.20
	Back at 20mm	0.640	0.192	0.320	0.83	0.96
FR1 n77Par27O HPUE Ant 3	Front at 16mm	0.301	0.192	0.197	0.49	0.50
	Back at 20mm	0.564	0.192	0.320	0.76	0.88
FR1 n77Part27Q HPUE Ant 3	Front at 16mm	0.167	0.192	0.197	0.36	0.36
	Back at 20mm	0.337	0.192	0.320	0.53	0.66
FR1 n77Par27O HPUE Ant 4	Front at 16mm	0.127	0.192	0.197	0.32	0.32
	Back at 20mm	0.293	0.192	0.320	0.49	0.61
FR1 n77Part27Q HPUE Ant 4	Front at 16mm	0.029	0.192	0.197	0.22	0.23
	Back at 20mm	0.271	0.192	0.320	0.46	0.59
FR1 n77Par27O HPUE Ant 5	Front at 16mm	0.100	0.192	0.197	0.29	0.30
	Back at 20mm	0.167	0.192	0.320	0.36	0.49
FR1 n77Part27Q HPUE Ant 5	Front at 16mm	0.038	0.192	0.197	0.23	0.24
	Back at 20mm	0.152	0.192	0.320	0.34	0.47
FR1 n77Par27O HPUE Ant 8	Front at 16mm	0.010	0.192	0.197	0.20	0.21
	Back at 20mm	0.467	0.192	0.320	0.66	0.79
FR1 n77Part27Q HPUE Ant 8	Front at 16mm	0.102	0.192	0.197	0.29	0.30
	Back at 20mm	0.174	0.192	0.320	0.37	0.49

17.5 Product specific 10g SAR Exposure Conditions

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

WWAN Band	Exposure Position	1	2	3	1+2	1+3
		WWAN	WLAN5GHz Ant 2+9	WLAN6GHz Ant 2+9	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
GSM850 Ant 0	Front		0.843	0.189	0.84	0.19
	Back	2.328	0.843	0.189	3.17	2.52
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side	1.883		0.189	1.88	2.07
GSM1900 Ant 0	Front	2.032	0.843	0.189	2.88	2.22
	Back	1.902	0.843	0.189	2.75	2.09
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side	3.063		0.189	3.06	3.25
WCDMA II Ant 0	Front	2.216	0.843	0.189	3.06	2.41
	Back	3.095	0.843	0.189	3.94	3.28
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side	2.984		0.189	2.98	3.17
WCDMA V Ant 0	Front	1.989	0.843	0.189	2.83	2.18
	Back	2.668	0.843	0.189	3.51	2.86
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side	1.977		0.189	1.98	2.17
LTE Band 2 Ant 0	Front	2.273	0.843	0.189	3.12	2.46
	Back	3.143	0.843	0.189	**3.99**	3.33
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side	2.871		0.189	2.87	3.06
LTE Band 2 Ant 1	Front		0.843	0.189	0.84	0.19
	Back	1.439	0.843	0.189	2.28	1.63
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side	2.118	0.843	0.189	2.96	2.31
	Bottom side			0.189	0.00	0.19
LTE Band 5 Ant 1	Front		0.843	0.189	0.84	0.19
	Back		0.843	0.189	0.84	0.19
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
LTE Band 7 Ant 0	Front	1.437	0.843	0.189	2.28	1.63
	Back	2.501	0.843	0.189	3.34	2.69
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19

	Bottom side	1.906		0.189	1.91	2.10
LTE Band 66 Ant 0	Front	1.658	0.843	0.189	2.50	1.85
	Back	2.659	0.843	0.189	3.50	2.85
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side	3.114		0.189	3.11	3.30
LTE Band 66 Ant 1	Front	1.352	0.843	0.189	2.20	1.54
	Back	1.357	0.843	0.189	2.20	1.55
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side	2.095	0.843	0.189	2.94	2.28
	Bottom side			0.189	0.00	0.19
LTE Band 48 Ant 3	Front		0.843	0.189	0.84	0.19
	Back	2.116	0.843	0.189	2.96	2.31
	Left side	1.490	0.843	0.189	2.33	1.68
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
LTE Band 48 Ant 4	Front		0.843	0.189	0.84	0.19
	Back	2.145	0.843	0.189	2.99	2.33
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
LTE Band 48 Ant 5	Front		0.843	0.189	0.84	0.19
	Back	1.872	0.843	0.189	2.72	2.06
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
LTE Band 48 Ant 8	Front		0.843	0.189	0.84	0.19
	Back	2.149	0.843	0.189	2.99	2.34
	Left side		0.180	0.189	0.18	0.19
	Right side		1.543	0.189	1.54	0.19
	Top side		2.321	0.189	2.32	0.19
	Bottom side			0.189	0.00	0.19

FR1 Band	Exposure Position	1 FR1 10g SAR (W/kg)	2 WLAN5GHz Ant 2+9 10g SAR (W/kg)	3 WLAN6GHz Ant 2+9 10g SAR (W/kg)	1+2 Summed 10g SAR (W/kg)	1+3 Summed 10g SAR (W/kg)
FR1 n2 Ant 0	Front	2.199	0.843	0.189	3.04	2.39
	Back	3.141	0.843	0.189	3.98	3.33
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side	2.997		0.189	3.00	3.19
FR1 n2 Ant 1	Front	1.330	0.843	0.189	2.17	1.52
	Back	1.477	0.843	0.189	2.32	1.67
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side	2.098	0.843	0.189	2.94	2.29
	Bottom side			0.189	0.00	0.19
FR1 n66 Ant 0	Front	2.641	0.843	0.189	3.48	2.83
	Back	3.145	0.843	0.189	3.99	3.33

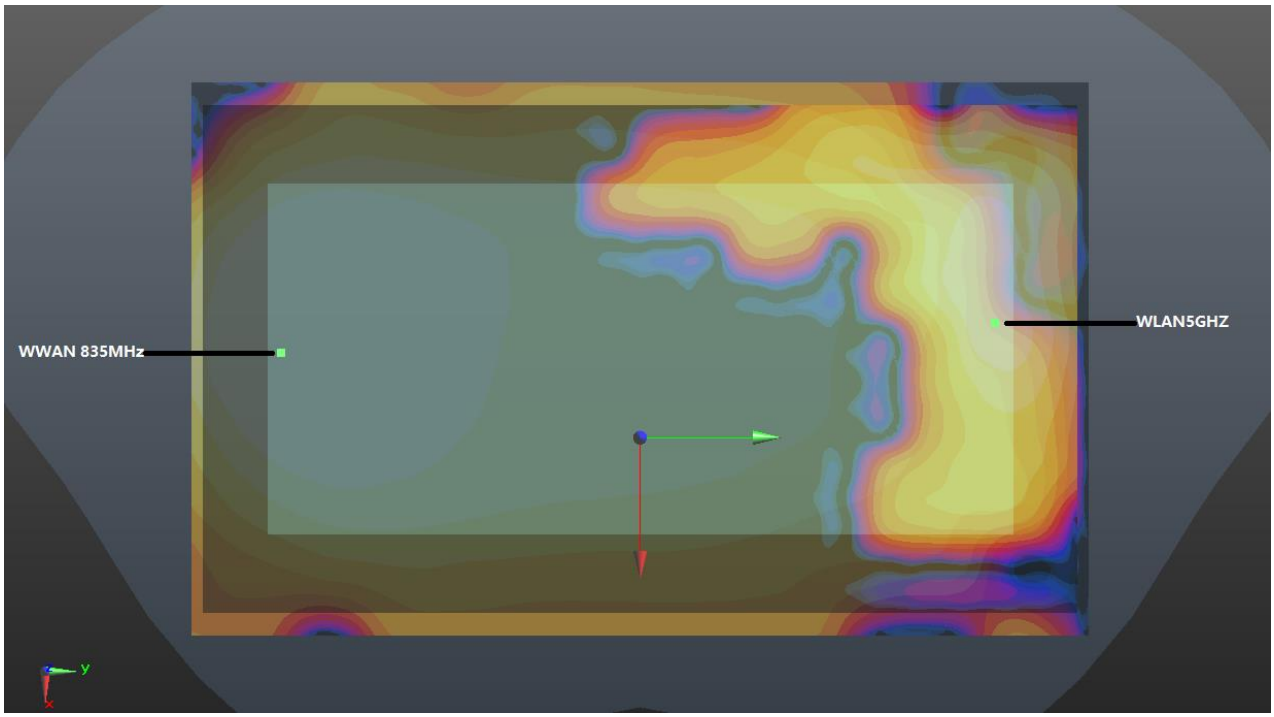
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side	2.982		0.189	2.98	3.17
FR1 n66 Ant 1	Front	1.419	0.843	0.189	2.26	1.61
	Back	1.344	0.843	0.189	2.19	1.53
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side	2.112	0.843	0.189	2.96	2.30
	Bottom side			0.189	0.00	0.19
FR1 n48 Ant 3	Front	0.851	0.843	0.189	1.69	1.04
	Back	2.113	0.843	0.189	2.96	2.30
	Left side	1.988	0.843	0.189	2.83	2.18
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n48 Ant 4	Front		0.843	0.189	0.84	0.19
	Back	2.110	0.843	0.189	2.95	2.30
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n48 Ant 5	Front		0.843	0.189	0.84	0.19
	Back	2.123	0.843	0.189	2.97	2.31
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n48 Ant 8	Front		0.843	0.189	0.84	0.19
	Back	2.120	0.843	0.189	2.96	2.31
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n77Par27O HPUE Ant 3	Front	1.711	0.843	0.189	2.55	1.90
	Back	2.135	0.843	0.189	2.98	2.32
	Left side	1.868	0.843	0.189	2.71	2.06
	Right side		0.843	0.189	0.84	0.19
	Top side	1.175	0.843	0.189	2.02	1.36
	Bottom side			0.189	0.00	0.19
FR1 n77Part27Q HPUE Ant 3	Front	1.124	0.843	0.189	1.97	1.31
	Back	1.469	0.843	0.189	2.31	1.66
	Left side	1.445	0.843	0.189	2.29	1.63
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n77Par27O HPUE Ant 4	Front		0.843	0.189	0.84	0.19
	Back	2.136	0.843	0.189	2.98	2.33
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side	0.503	0.843	0.189	1.35	0.69
	Bottom side			0.189	0.00	0.19
FR1 n77Part27Q HPUE Ant 4	Front		0.843	0.189	0.84	0.19
	Back	1.564	0.843	0.189	2.41	1.75
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19

	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n77Par27O HPUE Ant 5	Front		0.843	0.189	0.84	0.19
	Back	1.290	0.843	0.189	2.13	1.48
	Left side	1.015	0.843	0.189	1.86	1.20
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n77Part27Q HPUE Ant 5	Front		0.843	0.189	0.84	0.19
	Back	2.096	0.843	0.189	2.94	2.29
	Left side	1.497	0.843	0.189	2.34	1.69
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n77Par27O HPUE Ant 8	Front		0.843	0.189	0.84	0.19
	Back	2.122	0.843	0.189	2.97	2.31
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19
FR1 n77Part27Q HPUE Ant 8	Front		0.843	0.189	0.84	0.19
	Back	2.039	0.843	0.189	2.88	2.23
	Left side		0.843	0.189	0.84	0.19
	Right side		0.843	0.189	0.84	0.19
	Top side		0.843	0.189	0.84	0.19
	Bottom side			0.189	0.00	0.19

17.6 SPLSR Evaluation and Analysis

General Note:

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



WWAN+WLAN5GHz_Back 5mm

Case 1	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	WCDMA V	Back	1.272	5mm	4	-79.9	-4.68	162.1	1.62	0.01	Not required
	WLAN5GHz		0.343	5mm	-12	81.4	-2.98				

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

18. 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.

19. 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: 2022/5/10

System Check_Head_750MHz

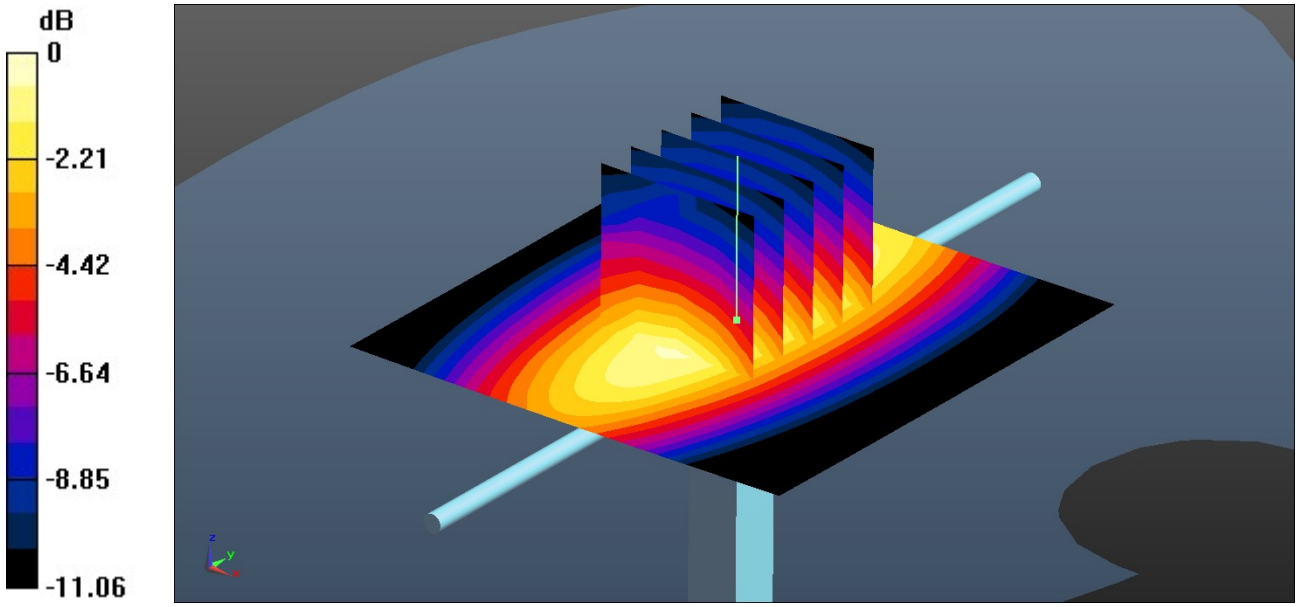
DUT: D750V3 - SN:1087

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 750 MHz; σ = 0.905 S/m; ε_r = 42.762; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.42, 9.42, 9.42); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn916; Calibrated: 2021/12/30
- 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) = 0.576 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.29 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.665 W/kg
SAR(1 g) = 0.406 W/kg; SAR(10 g) = 0.263 W/kg
Maximum value of SAR (measured) = 0.580 W/kg



0 dB = 0.580 W/kg = -2.37 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/5/11

System Check_Head_835MHz

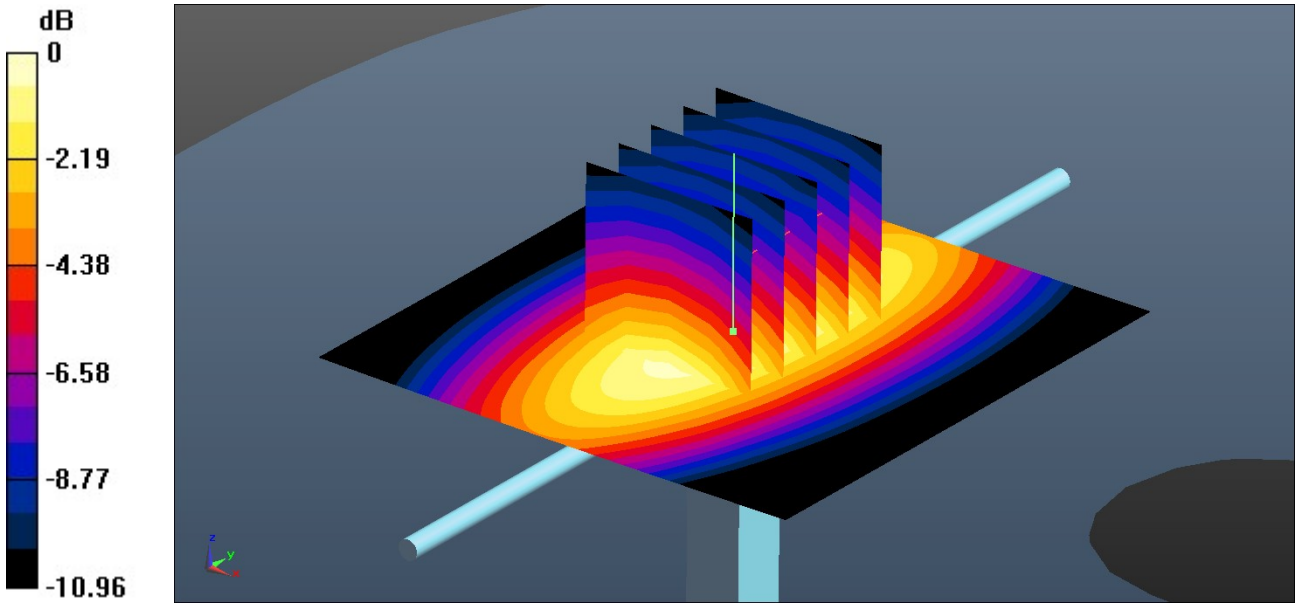
DUT: D835V2 - SN:4d162

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 835 MHz; σ = 0.936 S/m; ε_r = 42.525; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.18, 9.18, 9.18); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn916; Calibrated: 2021/12/30
- 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) = 0.666 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.87 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.754 W/kg
SAR(1 g) = 0.476 W/kg; SAR(10 g) = 0.311 W/kg
Maximum value of SAR (measured) = 0.670 W/kg



0 dB = 0.670 W/kg = -1.74 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/5/12

System Check_Head_1750MHz

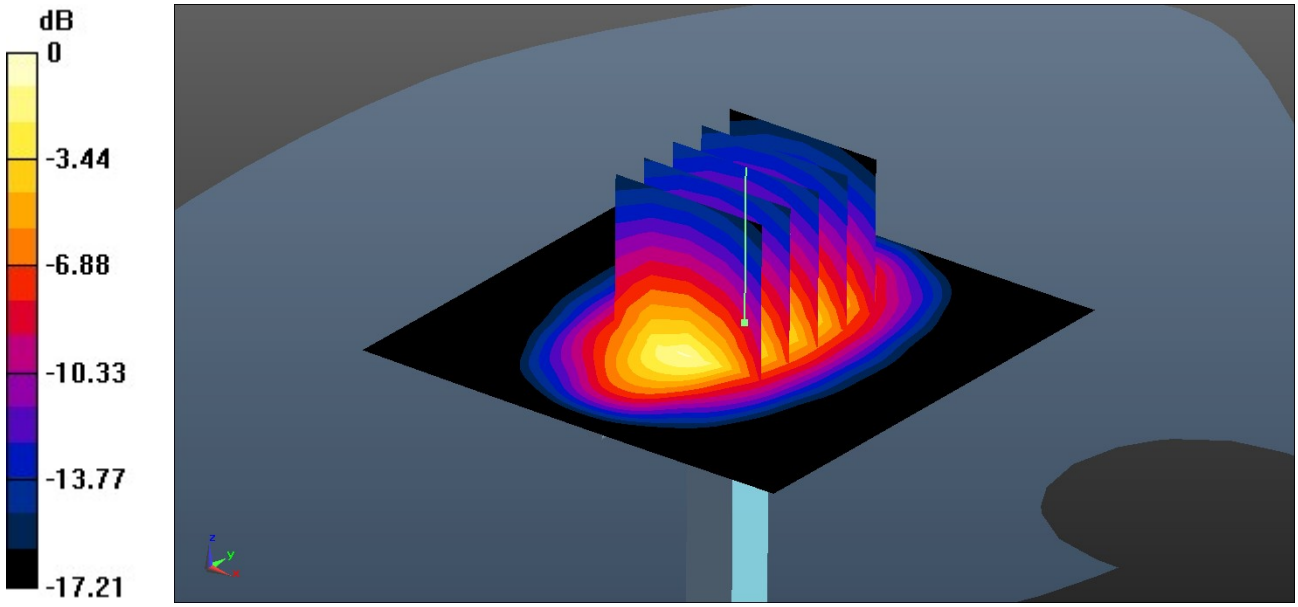
DUT: D1750V2 - SN:1090

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1750 MHz; σ = 1.37 S/m; ε_r = 41.29; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.13, 8.13, 8.13); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn916; Calibrated: 2021/12/30
- 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) = 2.86 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.64 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.36 W/kg
SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.976 W/kg
Maximum value of SAR (measured) = 2.82 W/kg



0 dB = 2.82 W/kg = 4.50 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/5/13

System Check_Head_1900MHz

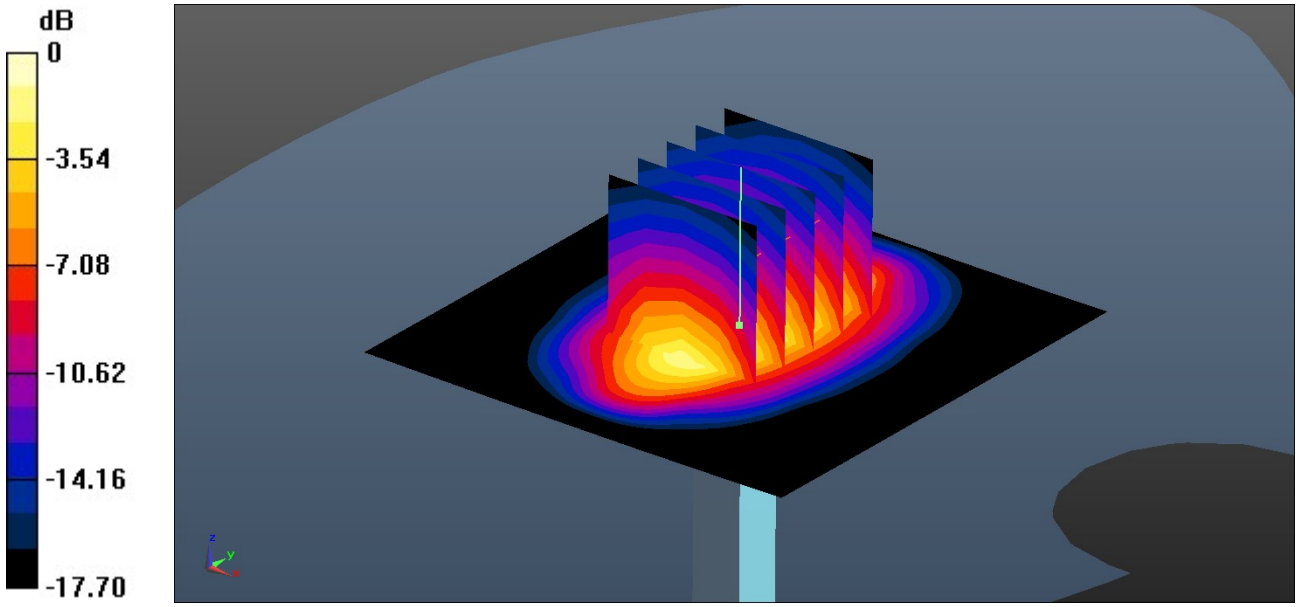
DUT: D1900V2 - SN:5d182

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.427 S/m; ε_r = 38.725; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.86, 7.86, 7.86); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn916; Calibrated: 2021/12/30
- 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) = 3.08 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.28 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.95 W/kg
SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.03 W/kg
Maximum value of SAR (measured) = 3.11 W/kg



0 dB = 3.11 W/kg = 4.93 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/5/14

System Check_Head_2450MHz

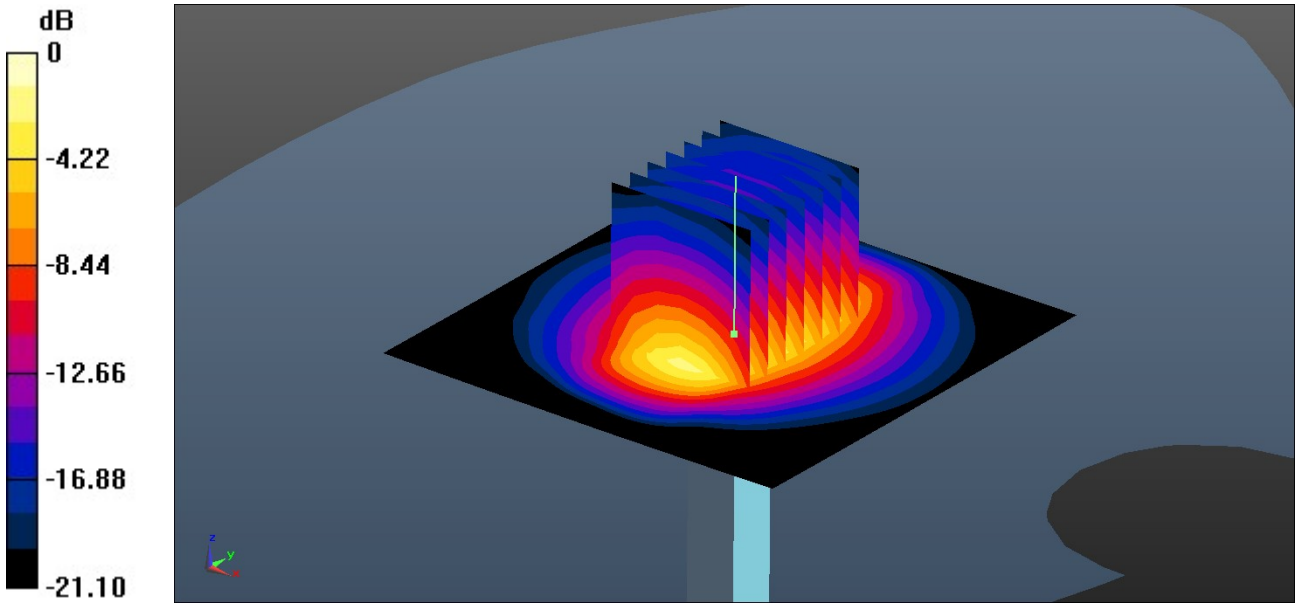
DUT: D2450V2 - SN:924

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2450 MHz; σ = 1.824 S/m; ε_r = 39.243; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.53, 7.53, 7.53); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn916; Calibrated: 2021/12/30
- 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) = 4.17 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.48 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 4.08 W/kg
SAR(1 g) = 2.55 W/kg; SAR(10 g) = 1.25 W/kg
Maximum value of SAR (measured) = 4.15 W/kg



0 dB = 4.15 W/kg = 6.18 dBW/kg