FCC SAR Test Report

APPLICANT	: Motorola Mobility LLC
EQUIPMENT	: Mobile Cellular Phone
BRAND NAME	: Motorola
MODEL NAME	: XT2309-3
FCC ID	: IHDT56AG9
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
FA2O2807-01	Rev. 01	Initial issue of report.	Jan. 13, 2023

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2309-3,** are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 5mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission
			1g SAR (W/kg)			1g SAR (W/kg)
Licensed	GSM	GSM850	0.98	1.19	1.19	1.59
		GSM1900	0.99	**1.26**	0.56	
	WCDMA	WCDMA II	0.99	1.24	0.93	
		WCDMA IV	0.98	1.25	0.92	
		WCDMA V	0.99	1.21	1.21	
	LTE	LTE Band 2	0.99	1.25	0.99	
		LTE Band 7	0.99	1.24	1.07	
		LTE Band 12	0.99	1.04	1.04	
		LTE Band 13	0.98	1.21	1.21	
		LTE Band 14	0.98	1.20	1.20	
		LTE Band 26/5	0.98	1.13	1.13	
		LTE Band 66/4	0.98	1.25	0.99	
		LTE Band 71	0.98	0.85	0.85	
		LTE Band 41/38	0.99	**1.26**	**1.26**	
		LTE Band 48	0.98	0.99	0.35	
	5G NR	FR1 n2	0.98	1.25	0.77	
		FR1 n5	0.99	1.03	1.03	
		FR1 n7	0.99	1.24	0.98	
		FR1 n14	0.17	0.80	0.80	
		FR1 n66	0.98	1.25	0.84	
		FR1 n71	0.98	0.48	0.48	
		FR1 n41	0.98	1.25	1.21	
		FR1 n48	0.98	0.95	0.42	
		FR1 n77/78	0.99	1.24	1.20	
DTS	WLAN	2.4GHz WLAN	**1.40**	0.40	1.19	1.59
NII		5GHz WLAN	1.20	0.39	1.19	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.19	0.15	0.10	1.59

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	GSM	GSM850	1.20	3.98
		GSM1900	2.69	
	WCDMA	WCDMA II	2.76	
		WCDMA IV	2.75	
		WCDMA V	2.66	
	LTE	LTE Band 2	2.75	
		LTE Band 7	2.76	
		LTE Band 12	2.67	
		LTE Band 13	2.61	
		LTE Band 14	2.50	
		LTE Band 26/5	2.68	
		LTE Band 66/4	2.75	
		LTE Band 71	0.46	
		LTE Band 41/38	2.72	
		LTE Band 48	2.74	
	5G NR	FR1 n2	2.75	
		FR1 n5	0.58	
		FR1 n7	2.73	
		FR1 n14	0.47	
		FR1 n66	2.76	
		FR1 n71	0.24	
		FR1 n41	2.76	
		FR1 n48	2.75	
		FR1 n77/78	**2.77**	
DTS	WLAN	2.4GHz WLAN	2.45	3.98
NII		5GHz WLAN	1.93	3.98
Date of Testing:			2022/11/2 ~ 2022/12/22	

Remark:
1. This device supports LTE B4 / B5 / B38 and B66 / B26 / B41. Since the supported frequency span for LTE B4 / B5 / B38 falls completely within the supports frequency span for LTE B66 / B26 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66 / B26 / B41.
2. This device supports 5GNR n78 and n77. Since the supported frequency span for 5GNR n78 falls completely within the supports frequency span for n77, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for 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.
	SAR02-KS	CN1257	314309

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

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

3. Guidance Applied

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

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

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2309-3
FCC ID	IHDT56AG9
IMEI Code	351347720008291
Frequency Band	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MH 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz WLAN 6GHz U-NII-5: 5925 MHz ~ 6425 MHz WLAN 6GHz U-NII-6: 6425 MHz ~ 6525 MHz WLAN 6GHz U-NII-7: 6525 MHz ~ 6875 MHz WLAN 6GHz U-NII-8: 6875 MHz ~ 7125 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+(16QAM uplink is 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 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac/ax VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160

	WLAN 6GHz 802.11a WLAN 6GHz 802.11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC: ASK
HW Version	DVT2
SW Version	T1TB33.20
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). WLAN 6GHz 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 Qualcomm smart transmit 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, body-worn, hotspot 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 power level is higher than hotspot power level, so front/back sensor on SAR can represent hotspot conservatively.
10. This device implements antenna tuning techniques for several WWAN (cellular) operating modes and frequencies for the purpose of improving antenna efficiency over a broad range of frequencies. Specifically, these techniques are employed in the WCDMA, LTE and 5GNR modes. In this report SAR was measured according to the normally required SAR configurations with the tuner active and worst tune state (auto tune) was used for SAR testing. The detail descriptions of the antenna tuner and supplemental data for additional information can be referred to section 18 and appendix F.
11. This device supports HPUE for LTE Band 41 and 5GNR n41/n77 with class 2 level, HPUE power has been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
12. For 5GNR n41/n77 HPUE, 5GNR n41/n77 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
13. 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.
14. 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.
15. 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.
16. 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.
17. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.
18. SAR and Power density test report for WLAN 6GHz 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.
19. The device support DBS (Dual Band Simultaneous) function, when the device 2.4GHz and 5GHz or 6GHz transmit at the same time the module will limit different output power for simultaneous transmission compliance.

<5G NR>

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

4.2 General LTE SAR Test and Reporting Considerations

<table>
<tr><th colspan="2">Summarized necessary items addressed in KDB 941225 D05 v02r05</th></tr>
<tr><td>FCC ID</td><td>IHDT56AG9</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 14: 788 MHz ~ 798 MHz
LTE Band 26: 814 MHz ~ 849 MHz
LTE Band 38: 2570 MHz ~ 2620 MHz
LTE Band 41: 2496 MHz ~ 2690 MHz
LTE Band 48: 3550 MHz ~ 3700 MHz
LTE Band 66: 1710 MHz ~ 1780 MHz
LTE Band 71: 663 MHz ~ 698 MHz</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 14: 5MHz, 10MHz
LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM / 256QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Voice and Data</td></tr>
<tr><td>LTE Release Version</td><td>R15, 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 5 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 14				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Channel #	Channel #	Freq.(MHz)
L	23305	790.5	23330	793
M	23330	793		
H	23355	795.5		
LTE Band 26										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

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

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

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

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

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

<For LTE Overlap Bands Description>

1) LTE Bands BW

Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes

2) LTE Bands tune up:

Band	Antenna	Head DSI 2 Tune-up Limit	Body Worn DSI 3 Tune-up Limit	Extremely DSI 6 Tune-up Limit	Sensor Off DSI4 Tune-up Limit	Default Tune-up Limit
LTE Band 5	Ant 0	24	23.5	24	24	24
LTE Band 26	Ant 0	24	23.5	24	24	24
LTE Band 4	Ant 0	24	16.1	21.5	24	24
LTE Band 66	Ant 0	24	16.1	21.5	24	24
LTE Band 38	Ant 0	24	20.6	23.2	24	24
LTE Band 41	Ant 0	24	20.6	23.2	24	24

Band	Antenna	Head DSI 2 Tune-up Limit	Body Worn DSI 3 Tune-up Limit	Extremely DSI 6 Tune-up Limit	Sensor Off DSI4 Tune-up Limit	Default Tune-up Limit
LTE Band 5	Ant 1	21.8	23.4	24	24	24
LTE Band 26	Ant 1	21.8	23.4	24	24	24
LTE Band 4	Ant 1	16.4	17.1	20.2	23	23
LTE Band 66	Ant 1	16.4	17.1	20.2	23	23
LTE Band 38	Ant 1	18.3	19.3	23	23	23
LTE Band 41	Ant 1	18.3	19.3	23	23	23

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n2	LTE B5/12/13/14/66
LTE Anchor Bands for n5	LTE B2/48/66
LTE Anchor Bands for n7	LTE B66
LTE Anchor Bands for n66	LTE B2/5/7/12/13/14/48
LTE Anchor Bands for n71	LTE B2/66
LTE Anchor Bands for n41	LTE B2/66
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/66
LTE Anchor Bands for n78	LTE B5/7/66

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

NR Band 2

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860
M	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900

NR Band 5

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

NR Band 7

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550

NR Band 14

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

NR Band 66

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

NR Band 71								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133100	665.5	133600	668	134100	670.5	134600	673
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5
H	139100	695.5	138600	693	138100	690.5	137600	688

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

NR Band 48						
	Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	637334	3560.01	637668	3565.02	638000	3570
M	641666	3624.99	641666	3624.99	641666	3624.99
H	646000	3690	645666	3684.99	645332	3679.98

NR Band 77																				
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664834	3972.51	664666	3970.02	664332	3965.01	664000	3960	663668	3955.02	663332	3950.01	663000	3945	662666	3940.02	662332	3935.01	662000	3930

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

For <3450 MHz ~ 3550 MHz >

NR Band 77																				
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636332	3544.98	636166	3542.49	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99		

NR Band 78																				
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636332	3544.98	636166	3542.49	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

<For NR Overlap Bands Description>

1) NR Bands BW

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	N77	TDD	30	10,15,20, 30, 40, 50, 60, 70, 80, 90, 100
	N78	TDD	30	10,15,20, 30, 40, 50, 60, 70, 80, 90, 100
SA	N77	TDD	30	10,15,20, 30, 40, 50, 60, 70, 80, 90, 100
	N78	TDD	30	10,15,20, 30, 40, 50, 60, 70, 80, 90, 100

2) NR Bands Tune up:

Band	Antenna	Head	Body Worn	Extremely	Sensor Off	Default
		DSI 2	DSI 3	DSI 6	DSI4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
5G NR n77	Ant 2	13.3	12.9	17.6	24	24
5G NR n78	Ant 2	13.3	12.9	17.6	24	24

Band	Antenna	Head	Body Worn	Extremely	Sensor Off	Default
		DSI 2	DSI 3	DSI 6	DSI4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
5G NR n77	Ant 4	15.2	16.6	20.7	20.7	24
5G NR n78	Ant 4	15.2	16.6	20.7	20.7	24

Band	Antenna	Head	Body Worn	Extremely	Sensor Off	Default
		DSI 2	DSI 3	DSI 6	DSI4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
5G NR n77	Ant 5	14.5	17.2	20.5	24	24
5G NR n78	Ant 5	14.5	17.2	20.5	24	24

Band	Antenna	Head	Body Worn	Extremely	Sensor Off	Default
		DSI 2	DSI 3	DSI 6	DSI4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
5G NR n77	Ant 7	24	19.5	20.3	20.3	24
5G NR n78	Ant 7	24	19.5	20.3	20.3	24

5. Smart Transmit feature for RF Exposure compliance

The 2nd generation of Smart Transmit (GEN2) operates based on pre-defined sub6 antenna groups (AG). This Device is enabled with the Qualcomm® Smart Transmit Gen2 feature. The RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.

Note that WLAN/BT operations are not enabled with Smart Transmit.

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 Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit GEN2 Feature.

<Terminologies in this report>

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

<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 Smart Transmit to control and manage RF exposure for f < 6 GHz.

Antenna Group:

Antenna Group 0 (AG0)	ANT1 & ANT2 & ANT4 & ANT5
Antenna Group 1 (AG1)	ANT0 & ANT7

<SAR design target and uncertainty>

Item	Uncertainty dB (k=2)
Total uncertainty	1.5

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

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

The Smart Transmit 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.

Smart Transmit 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. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

<P_{limit} for supported technologies and bands (P_{limit} in EFS file)>

Band	Antenna	Head DSI 2 Power	Body Worn &Hotspot DSI 3 Power	Extremity DSI6 Power	Sensor Off DSI4	Pmax
GSM850	Ant 0	30.0	23.8	24.2	24.2	24.2
GSM850	Ant 1	21.3	24.2	24.2	24.2	24.2
GSM1900	Ant 0	34.3	15.2	20.8	21.2	21.2
GSM1900	Ant 1	16.5	17.7	20.5	20.5	20.5
WCDMA II	Ant 0	30.6	13.8	21.6	23.0	23.0
WCDMA II	Ant 1	15.2	15.7	20.0	22.0	22.0
WCDMA IV	Ant 0	31.5	15.4	19.8	23.0	23.0
WCDMA IV	Ant 1	15.3	16.2	19.8	22.0	22.0
WCDMA V	Ant 0	28.7	23.2	23.1	23.0	23.0
WCDMA V	Ant 1	21.2	22.5	25.5	23.0	23.0
LTE Band 2	Ant 0	30.4	13.7	20.6	23.0	23.0
LTE Band 2	Ant 1	15.9	16.8	20.0	22.0	22.0
LTE Band 66(4)	Ant 0	31.6	15.1	20.5	23.0	23.0
LTE Band 66(4)	Ant 1	15.4	16.1	19.2	22.0	22.0
LTE Band 26(5)	Ant 0	30.7	22.5	24.0	23.0	23.0
LTE Band 26(5)	Ant 1	20.8	22.4	23.1	23.0	23.0
LTE Band 7	Ant 0	34.4	17.8	20.4	23.0	23.0
LTE Band 7	Ant 1	15.1	14.9	19.7	21.0	21.0
LTE Band 12	Ant 0	31.3	23.8	23.0	23.0	23.0
LTE Band 12	Ant 1	21.8	23.2	21.8	23.0	23.0
LTE Band 13	Ant 0	30.8	23.2	23.6	23.0	23.0
LTE Band 13	Ant 1	20.1	21.3	22.5	23.0	23.0
LTE Band 14	Ant 0	30.5	23.4	23.7	23.0	23.0
LTE Band 14	Ant 1	20.1	22.5	22.5	23.0	23.0
LTE Band 71	Ant 0	33.9	24.7	23.0	23.0	23.0
LTE Band 71	Ant 1	21.0	24.3	23.0	23.0	23.0
LTE Band 41 PC3(38 PC3)	Ant 0	33.7	17.6	20.2	22.4	21.0
LTE Band 41 PC2	Ant 0	33.7	17.6	20.2	22.4	22.4
LTE Band 41 PC3(38 PC3)	Ant 1	15.3	16.3	20.0	21.4	20.0
LTE Band 41 PC2	Ant 1	15.3	16.3	20.0	21.4	21.4
LTE Band 48	Ant 2	11.4	11.8	17.3	21.0	21.0
5G NR n2	Ant 0	33.2	14.7	20.8	23.0	23.0
5G NR n2	Ant 1	15.8	16.8	20.9	23.0	23.0
5G NR n5	Ant 0	31.3	23.8	23.0	23.0	23.0
5G NR n5	Ant 1	20.3	23.5	23.0	23.0	23.0
5G NR n7	Ant 0	34.9	18.6	20.9	23.0	23.0
5G NR n7	Ant 1	14.9	15.3	19.7	23.0	23.0
5G NR n14	Ant 0	31.5	24.9	23.0	23.0	23.0
5G NR n66	Ant 0	32.4	14.5	20.4	23.0	23.0
5G NR n66	Ant 1	16.5	16.0	21.7	23.0	23.0
5G NR n71	Ant 0	35.1	34.6	23.0	23.0	23.0
5G NR n71	Ant 1	20.7	26.2	23.0	23.0	23.0
5G NR n41 PC3	Ant 0	33.2	18.9	21.1	23.0	23.0
5G NR n41 PC2	Ant 0	33.2	18.9	21.1	23.0	22.0
5G NR n41 PC3	Ant 1	14.7	15.4	20.1	23.0	23.0
5G NR n41 PC2	Ant 1	14.7	15.4	20.1	23.0	23.0

5G NR n41 PC3	Ant 2	16.4	16.2	20.0	23.0	23.0
5G NR n41 PC2	Ant 2	16.4	16.2	20.0	23.0	22.0
5G NR n41 PC3	Ant 7	26.5	19.3	19.3	19.3	23.0
5G NR n41 PC2	Ant 7	26.5	19.3	19.3	19.3	23.0
5G NR n48	Ant 2	12.8	11.9	16.4	23.0	23.0
5G NR n77 PC3(n78 PC3)	Ant 2	12.3	11.9	16.6	23.0	23.0
5G NR n77 PC2	Ant 2	12.3	11.9	16.6	23.0	23.0
5G NR n77 PC3(n78 PC3)	Ant 4	14.2	15.6	19.7	19.7	23.0
5G NR n77 PC2	Ant 4	14.2	15.6	19.7	19.7	23.0
5G NR n77 PC3(n78 PC3)	Ant 5	13.5	16.2	19.5	23.0	23.0
5G NR n77 PC2	Ant 5	13.5	16.2	19.5	23.0	23.0
5G NR n77 PC3(n78 PC3)	Ant 7	28.8	18.5	19.3	19.3	23.0
5G NR n77 PC2	Ant 7	28.8	18.5	19.3	19.3	23.0

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& NR TDD).

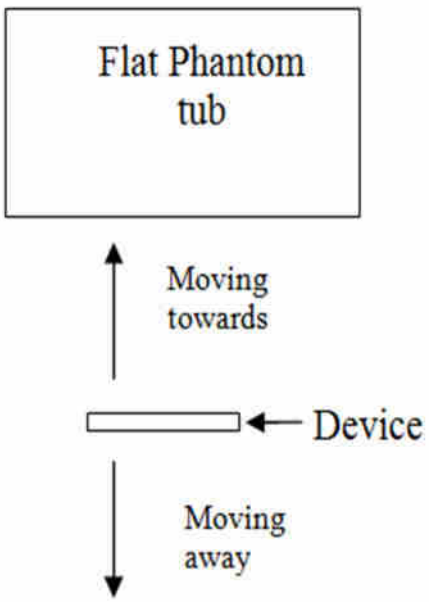
3) The max allowed output power is the Plimit + 1.0 dB device uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.

4) For 5GNR n41/n77 HPUE, 5GNR n41/n77 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.

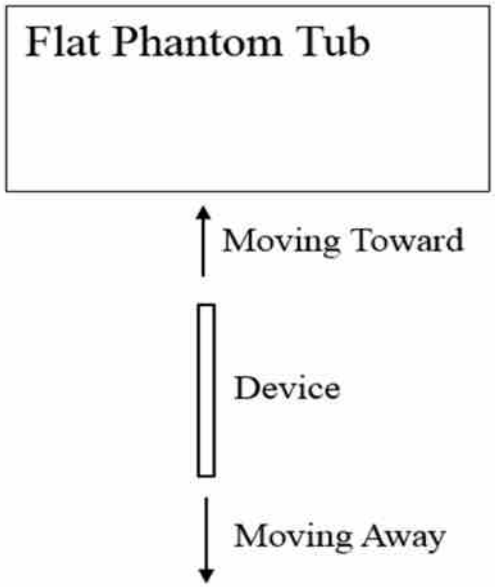
6. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (5850MHz) and lowest (750MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensors placed coincident with antenna elements at the top and bottom ends of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back of the device.
3. The output power will reduce to body worn power level when top and bottom sensor pad be detected.
4. The sensors used to detect the proximity of the user's body at the front or back surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s). When front or back body worn condition is detected reduced power will be active.
5. The device employs proximity sensors also can detect the presence of the user's a finger or hand when handheld state at the front/back/top/bottom/left/right sides of the device. When front/back/top/bottom/left/right sides of handheld condition is detected reduced power will be active.
6. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed:



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



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

<P-Sensor>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	17	17	22	19

<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	7	10	9	15	11	14

<Handheld for ANT 1>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	10	7	16	7	10	8	11

<Handheld for ANT 2>

Proximity Sensor Triggering Distance (mm)						
Position	Front		Back		Left Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	10	8	15	10	17

<Handheld for ANT 3&5>

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	6	13	10	16	7	9	8	7

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:

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

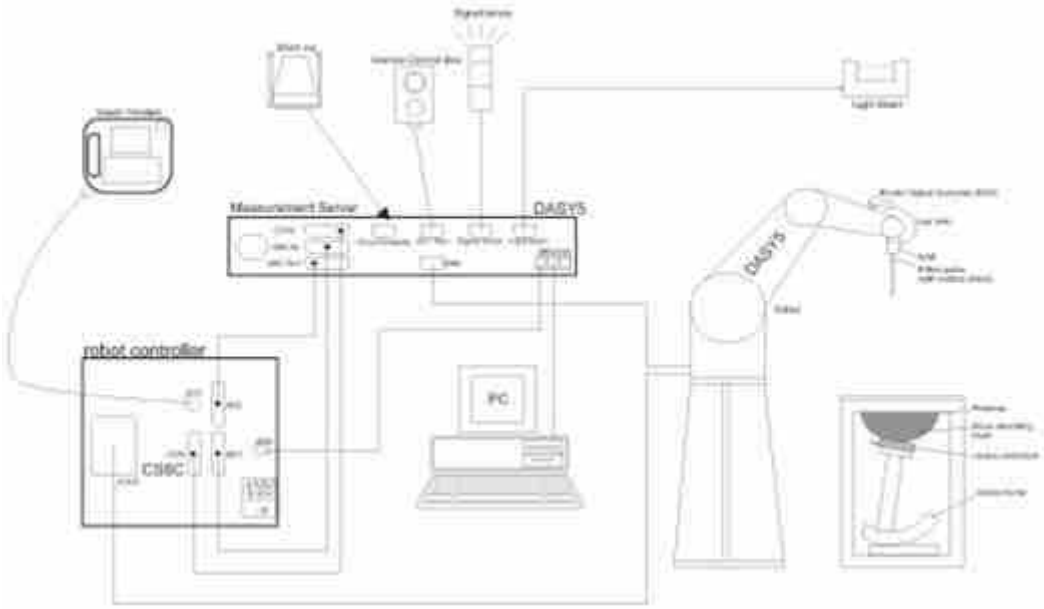
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

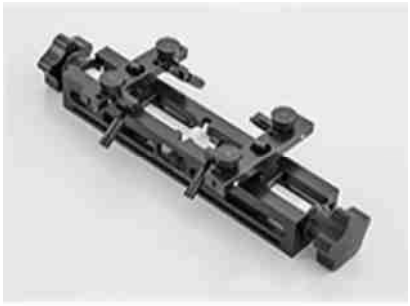
The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices or for evaluating transmitters operating at low frequencies. ELI is fully compatible with standard and all known tissue simulating liquids.

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	4d091	2022/8/19	2023/8/18
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2023/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d118	2022/3/30	2023/3/29
SPEAG	2450MHz System Validation Kit	D2450V2	1040	2020/5/6	2023/5/4
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/24
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2020/11/25	2023/11/23
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2020/11/25	2023/11/23
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2020/5/14	2023/5/12
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2022/9/23	2023/9/22
SPEAG	Data Acquisition Electronics	DAE4	1303	2022/11/24	2023/11/23
SPEAG	Dosimetric E-Field Probe	EX3DV4	7515	2021/12/28	2022/12/27
SPEAG	Dosimetric E-Field Probe	EX3DV4	7706	2022/1/20	2023/1/19
SPEAG	SAM Twin Phantom	SAM Twin	TP-1842	NCR	NCR
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/1/6	2023/1/5
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2022/7/14	2023/7/13
Agilent	ENA Series Network Analyzer	E5071C	MY46104587	2022/5/24	2023/5/23
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	2022/1/24	2023/1/23
Anritsu	Vector Signal Generator	MG3710A	6201682672	2022/1/6	2023/1/5
Rohde & Schwarz	Power Meter	NRVD	102081	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2022/7/14	2023/7/13
R&S	CBT BLUETOOTH TESTER	CBT	100641	2022/1/5	2023/1/4
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2022/10/12	2023/10/11
TES	DIGITAC THERMOMETER	1310	200505600	2022/7/12	2023/7/11
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

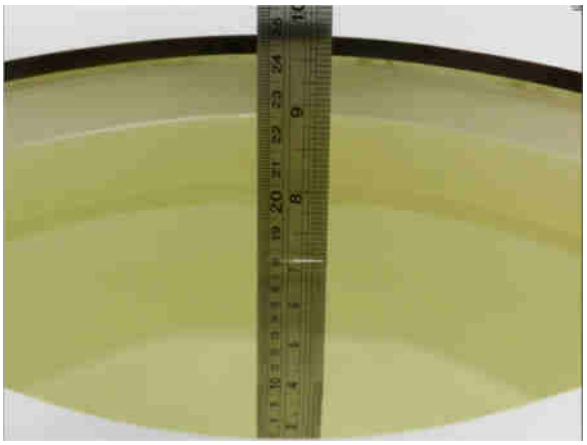


Fig 11.2 Photo of Liquid Height for Body SAR

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)	Liquid 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	0.888	42.261	0.89	41.90	-0.22	0.86	±5	2022/12/2
835	Head	22.6	0.911	41.927	0.90	41.50	1.22	1.03	±5	2022/12/4
1750	Head	22.6	1.316	40.206	1.37	40.10	-3.94	0.26	±5	2022/12/6
1900	Head	22.8	1.406	40.191	1.40	40.00	0.43	0.48	±5	2022/12/8
2450	Head	22.7	1.744	39.260	1.80	39.20	-3.11	0.15	±5	2022/12/10
2600	Head	22.6	2.028	40.299	1.96	39.00	3.47	3.33	±5	2022/12/11
3500	Head	22.7	2.813	38.738	2.91	37.90	-3.33	2.21	±5	2022/12/12
3700	Head	22.8	2.992	38.385	3.12	37.70	-4.10	1.82	±5	2022/12/13
3900	Head	22.6	3.174	38.061	3.32	37.50	-4.40	1.50	±5	2022/12/14
5250	Head	22.8	4.579	35.736	4.71	35.90	-2.78	-0.46	±5	2022/12/15
5600	Head	22.7	4.954	35.115	5.07	35.50	-2.29	-1.08	±5	2022/12/16
5750	Head	22.8	5.113	34.882	5.22	35.40	-2.05	-1.46	±5	2022/12/17
750	Head	22.6	0.923	41.917	0.89	41.90	3.71	0.04	±5	2022/12/18
835	Head	22.9	0.944	41.253	0.90	41.50	4.89	-0.60	±5	2022/12/20
1750	Head	22.7	1.351	40.380	1.37	40.10	-1.39	0.70	±5	2022/12/22
1900	Head	22.5	1.462	40.086	1.40	40.00	4.43	0.21	±5	2022/12/24
2450	Head	22.7	1.851	39.055	1.80	39.20	2.83	-0.37	±5	2022/12/25
2600	Head	22.9	1.980	39.054	1.96	39.00	1.02	0.14	±5	2022/12/26
3500	Head	22.6	2.788	39.598	2.91	37.90	-4.19	4.48	±5	2022/12/27
3700	Head	22.9	2.972	39.289	3.12	37.70	-4.74	4.21	±5	2022/12/28
3900	Head	22.7	3.168	39.003	3.32	37.50	-4.58	4.01	±5	2022/12/29
5250	Head	22.6	4.672	36.649	4.71	35.90	-0.81	2.09	±5	2022/12/30
5600	Head	22.7	5.078	36.003	5.07	35.50	0.16	1.42	±5	2022/12/31
5750	Head	22.6	5.250	35.754	5.22	35.40	0.57	1.00	±5	2023/1/2

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)	Liquid 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 (%)
2022/12/2	750	Head	50	1087	7515	1303	0.426	8.58	8.52	-0.70
2022/12/4	835	Head	50	4d091	7515	1303	0.495	9.45	9.9	4.76
2022/12/6	1750	Head	50	1090	7515	1303	1.800	37.00	36	-2.70
2022/12/8	1900	Head	50	5d118	7515	1303	1.890	39.30	37.8	-3.82
2022/12/10	2450	Head	50	1040	7515	1303	2.420	51.80	48.4	-6.56
2022/12/11	2600	Head	50	1061	7515	1303	2.700	56.60	54	-4.59
2022/12/12	3500	Head	50	1037	7515	1303	3.220	68.00	64.4	-5.29
2022/12/13	3700	Head	50	1008	7515	1303	3.220	67.60	64.4	-4.73
2022/12/14	3900	Head	50	1048	7515	1303	3.250	70.20	65	-7.41
2022/12/15	5250	Head	50	1113	7515	1303	3.750	81.50	75	-7.98
2022/12/16	5600	Head	50	1113	7515	1303	3.960	82.60	79.2	-4.12
2022/12/17	5750	Head	50	1113	7515	1303	3.980	80.80	79.6	-1.49
2022/12/18	750	Head	50	1087	7515	1303	0.426	8.58	8.52	-0.70
2022/12/20	835	Head	50	4d091	7515	1303	0.493	9.45	9.86	4.34
2022/12/22	1750	Head	50	1090	7515	1303	1.760	37.00	35.2	-4.86
2022/12/24	1900	Head	50	5d118	7515	1303	1.880	39.30	37.6	-4.33
2022/12/25	2450	Head	50	1040	7515	1303	2.520	51.80	50.4	-2.70
2022/12/26	2600	Head	50	1061	7515	1303	2.620	56.60	52.4	-7.42
2022/12/27	3500	Head	50	1037	7706	1303	3.150	68.00	63	-7.35
2022/12/28	3700	Head	50	1008	7706	1303	3.240	67.60	64.8	-4.14
2022/12/29	3900	Head	50	1048	7706	1303	3.270	70.20	65.4	-6.84
2022/12/30	5250	Head	50	1113	7706	1303	3.770	81.50	75.4	-7.48
2022/12/31	5600	Head	50	1113	7706	1303	4.060	82.60	81.2	-1.69
2023/1/2	5750	Head	50	1113	7706	1303	3.760	80.80	75.2	-6.93

<10g SAR>

Date	Frequency (MHz)	Liquid 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 (%)
2022/12/2	750	Head	50	1087	7515	1303	0.288	5.65	5.76	1.95
2022/12/4	835	Head	50	4d091	7515	1303	0.332	6.22	6.64	6.75
2022/12/6	1750	Head	50	1090	7515	1303	0.933	19.50	18.66	-4.31
2022/12/8	1900	Head	50	5d118	7515	1303	1.020	20.40	20.4	0.00
2022/12/10	2450	Head	50	1040	7515	1303	1.150	24.00	23	-4.17
2022/12/11	2600	Head	50	1061	7515	1303	1.250	25.10	25	-0.40
2022/12/12	3500	Head	50	1037	7515	1303	1.190	25.40	23.8	-6.30
2022/12/13	3700	Head	50	1008	7515	1303	1.260	24.40	25.2	3.28
2022/12/14	3900	Head	50	1048	7515	1303	1.140	24.40	22.8	-6.56
2022/12/15	5250	Head	50	1113	7515	1303	1.080	23.30	21.6	-7.30
2022/12/16	5600	Head	50	1113	7515	1303	1.180	23.70	23.6	-0.42
2022/12/17	5750	Head	50	1113	7515	1303	1.180	23.00	23.6	2.61
2022/12/18	750	Head	50	1087	7515	1303	0.287	5.65	5.74	1.59
2022/12/20	835	Head	50	4d091	7515	1303	0.328	6.22	6.56	5.47
2022/12/22	1750	Head	50	1090	7515	1303	0.962	19.50	19.24	-1.33
2022/12/24	1900	Head	50	5d118	7515	1303	1.020	20.40	20.4	0.00
2022/12/25	2450	Head	50	1040	7515	1303	1.220	24.00	24.4	1.67
2022/12/26	2600	Head	50	1061	7515	1303	1.220	25.10	24.4	-2.79
2022/12/27	3500	Head	50	1037	7706	1303	1.180	25.40	23.6	-7.09
2022/12/28	3700	Head	50	1008	7706	1303	1.270	24.40	25.4	4.10
2022/12/29	3900	Head	50	1048	7706	1303	1.130	24.40	22.6	-7.38
2022/12/30	5250	Head	50	1113	7706	1303	1.110	23.30	22.2	-4.72
2022/12/31	5600	Head	50	1113	7706	1303	1.190	23.70	23.8	0.42
2023/1/2	5750	Head	50	1113	7706	1303	1.110	23.00	22.2	-3.48

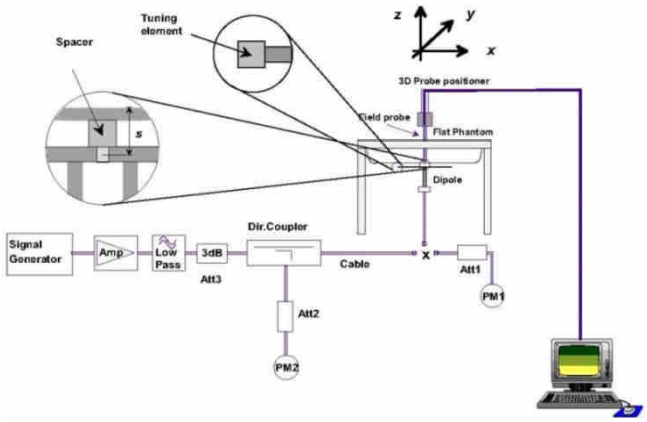


Fig 11.3.1 System Performance Check Setup

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.

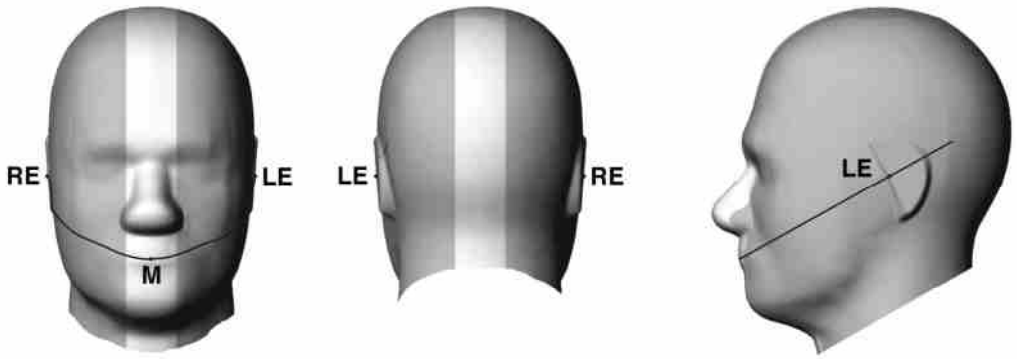


Fig 12.1.1 Front, back, and side views of SAM twin phantom

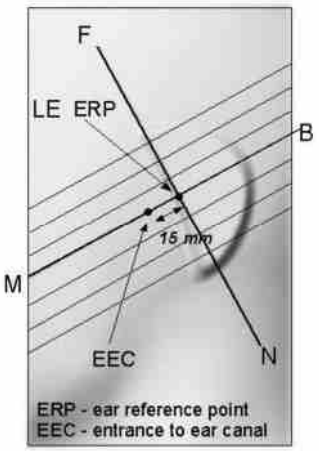


Fig 12.1.2 Close-up side view of phantom showing the ear region.

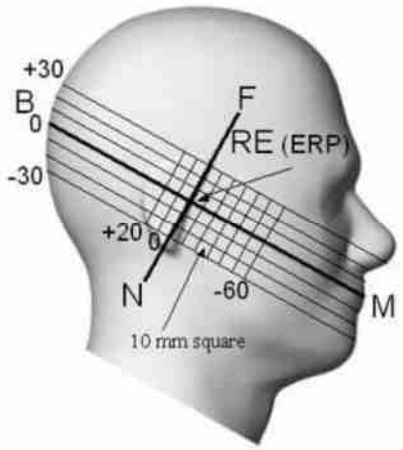


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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.

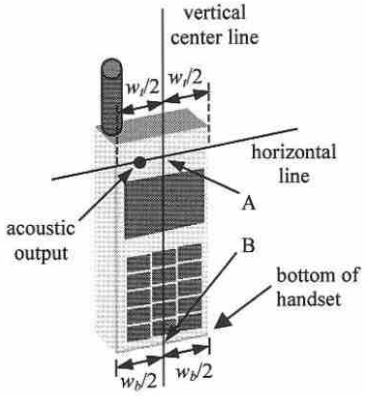


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

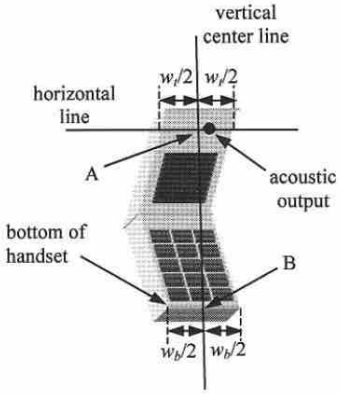


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

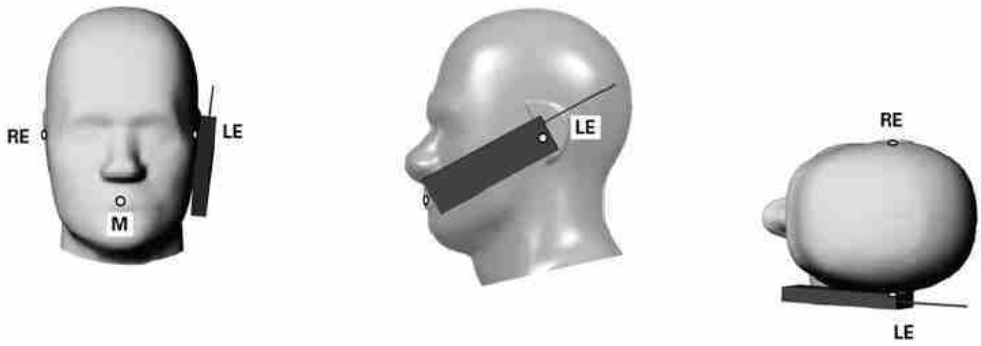


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

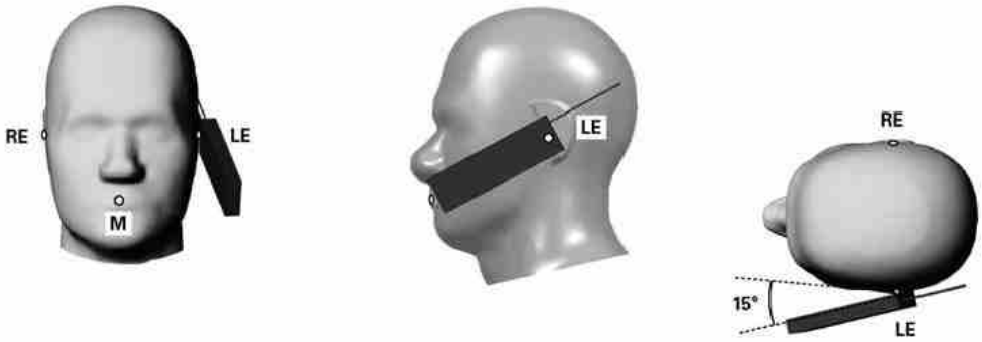


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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 11.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.

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

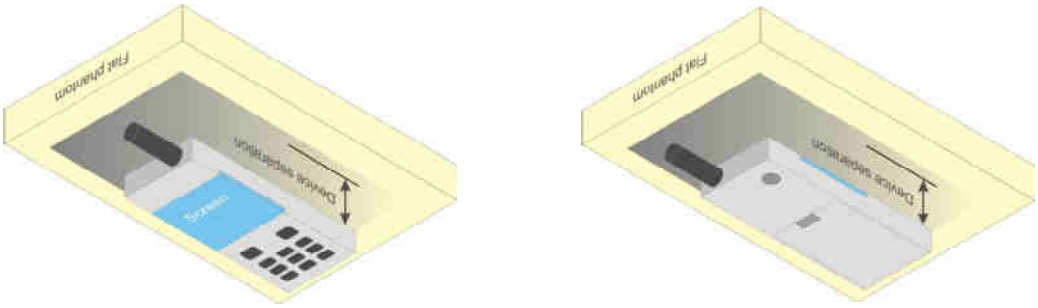


Fig 12.4 Body Worn Position

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

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.

2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

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 $\beta_{hs} = 30/15 * \beta_c$.

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

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 $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with $\beta_{hs} = 5/15 * \beta_c$.

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.		

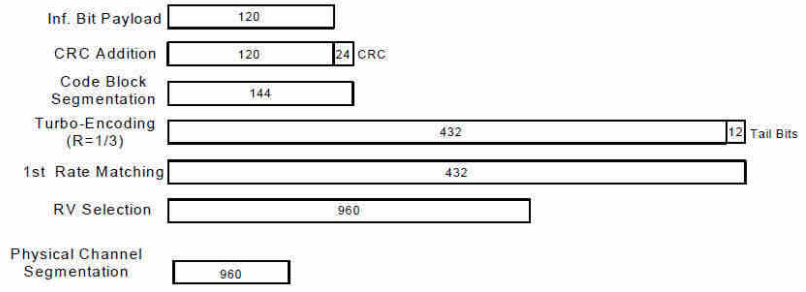


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

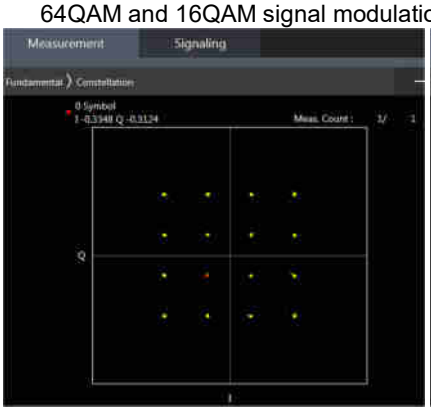
General Note:

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.

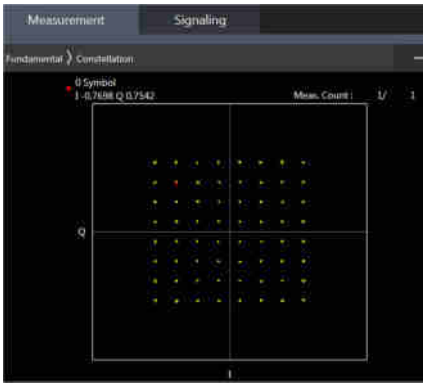
<LTE Conducted Power>

General Note:

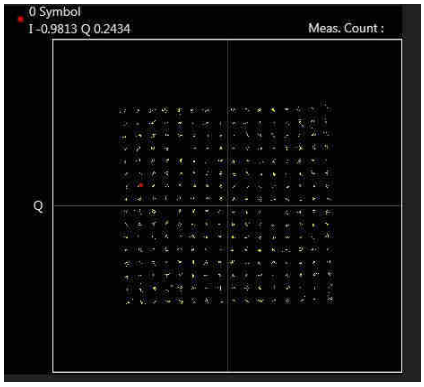
1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested 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 / B26 / B38 / B71 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 / B5 / B38 SAR test was covered by B66 / B26 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to May 2017 TCB workshop, for 16QAM and 64QAM, 256QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 256QAM, 64QAM and 16QAM signal modulation are correct.



16QAM



64QAM



256QAM

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

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

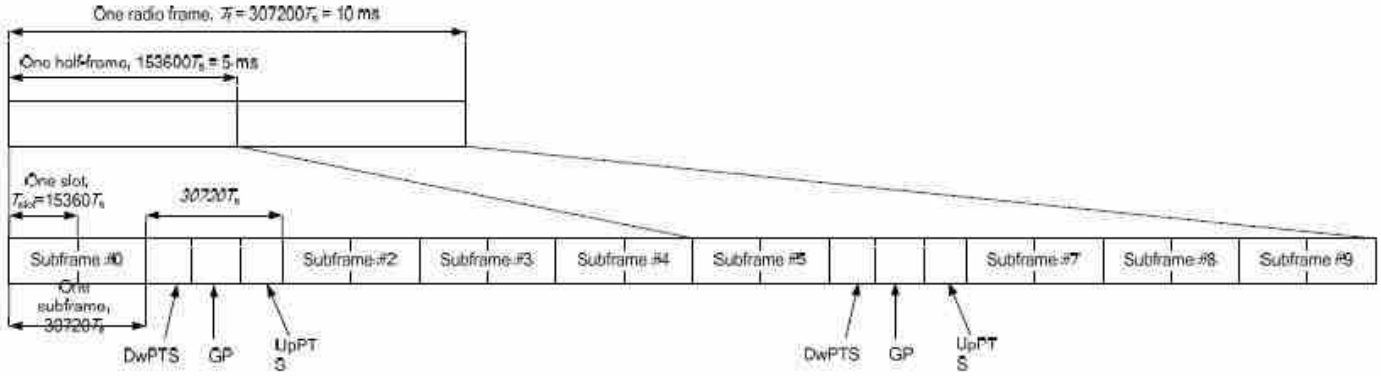


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

For LTE TDD Power class 2

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

For LTE TDD Power class 3

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

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

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

<LTE Carrier Aggregation>

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			5CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	CA_13A-48A	3CC#9	1	CA_12A-66A-66A	4CC#7	1	CA_13A-48A-48C		1	CA_2A-2A-5A-66B	
2	CA_26A-41A		2	CA_12A-66C	4CC#8	2	CA_13A-48A-66B		2	CA_2A-2A-5A-66C	
3	CA_2A-2A	3CC#12	3	CA_13A-66A-66A	4CC#10	3	CA_13A-48A-66C		3	CA_2A-5B-66B	
4	CA_2A-48A	3CC#19	4	CA_13A-66B	4CC#2	4	CA_13A-48C-66A		4	CA_2A-5B-66C	
5	CA_2A-71A	3CC#26	5	CA_13A-66C	4CC#3	5	CA_13A-48D		5	CA_5A-7C-66A-66A	
6	CA_2C	3CC#34	6	CA_14A-66A-66A		6	CA_13A-66A-66B				
7	CA_41A-41A		7	CA_26A-41C		7	CA_2A-12A-66A-66A				
8	CA_48A-48A	3CC#19	8	CA_2A-12A-66A	4CC#7	8	CA_2A-12A-66C				
9	CA_48A-66A	3CC#20	9	CA_2A-13A-48A		9	CA_2A-13A-48C				
10	CA_4A-48A		10	CA_2A-13A-66A	4CC#14	10	CA_2A-13A-66A-66A				
11	CA_4A-4A	3CC#24	11	CA_2A-14A-66A		11	CA_2A-13A-66B				
12	CA_4A-71A	3CC#48	12	CA_2A-2A-12A	4CC#13	12	CA_2A-13A-66C				
13	CA_5A-48A	3CC#50	13	CA_2A-2A-13A	4CC#14	13	CA_2A-2A-12A-66A				
14	CA_5A-5A	3CC#52	14	CA_2A-2A-14A		14	CA_2A-2A-13A-66A				
15	CA_66A-66A	3CC#6	15	CA_2A-2A-4A	4CC#15	15	CA_2A-2A-4A-12A				
16	CA_66A-71A	3CC#31	16	CA_2A-2A-5A	4CC#17	16	CA_2A-2A-4A-4A				
17	CA_7A-66A	3CC#64	17	CA_2A-2A-66A	4CC#19	17	CA_2A-2A-4A-5A				
18	CA_7A-7A		18	CA_2A-2A-71A	4CC#18	18	CA_2A-2A-4A-71A				
19	CA_7B		19	CA_2A-48A-48A		19	CA_2A-2A-5A-66A				
			20	CA_2A-48A-66A		20	CA_2A-2A-5B				
			21	CA_2A-48C	4CC#26	21	CA_2A-2A-66A-66A				
			22	CA_2A-4A-12A		22	CA_2A-2A-66A-71A				
			23	CA_2A-4A-13A		23	CA_2A-2A-66B	5CC#1			
			24	CA_2A-4A-4A	4CC#16	24	CA_2A-2A-66C	5CC#2			
			25	CA_2A-4A-5A		25	CA_2A-48A-48C				
			26	CA_2A-4A-71A		26	CA_2A-48C-66A				
			27	CA_2A-5A-48A		27	CA_2A-48D				
			28	CA_2A-5A-66A	4CC#32	28	CA_2A-4A-4A-12A				
			29	CA_2A-5B	4CC#30	29	CA_2A-4A-4A-5A				
			30	CA_2A-66A-66A	4CC#32	30	CA_2A-4A-5B				
			31	CA_2A-66A-71A		31	CA_2A-5A-48C				
			32	CA_2A-66B		32	CA_2A-5A-66A-66A				
			33	CA_2A-66C	4CC#34	33	CA_2A-5A-66B	5CC#1			
			34	CA_2C-66A	4CC#40	34	CA_2A-5A-66C	5CC#2			
			35	CA_41A-41C		35	CA_2A-5B-66A				
			36	CA_41D		36	CA_2A-66A-66A-71A				
			37	CA_48A-48A-66A	4CC#41	37	CA_2A-66A-66B				
			38	CA_48A-48C	4CC#25	38	CA_2A-66C-71A				
			39	CA_48A-66A-66A		39	CA_2A-7C-66A				
			40	CA_48A-66B		40	CA_2C-66A-66A				
			41	CA_48A-66C		41	CA_48A-48A-66A-66A				
			42	CA_48C-66A	4CC#44	42	CA_48A-48A-66B				
			43	CA_48D	4CC#55	43	CA_48A-48A-66C				

			44	CA_4A-48C		44	CA_48A-48C-66A				
			45	CA_4A-4A-12A		45	CA_48A-48D				
			46	CA_4A-4A-13A		46	CA_48C-48C				
			47	CA_4A-4A-5A		47	CA_48C-66A-66A				
			48	CA_4A-4A-71A		48	CA_48C-66B				
			49	CA_4A-5B		49	CA_48C-66C				
			50	CA_5A-48A-66A		50	CA_48D-66A				
			51	CA_5A-48C	4CC#54	51	CA_48E				
			52	CA_5A-5A-66A	4CC#56	52	CA_4A-48D				
			53	CA_5A-66A-66A		53	CA_4A-4A-5B				
			54	CA_5A-66B		54	CA_5A-48C-66A				
			55	CA_5A-66C		55	CA_5A-48D				
			56	CA_5A-7A-66A	4CC#59	56	CA_5A-5A-66A-66A				
			57	CA_5A-7C	4CC#60	57	CA_5A-5A-66B				
			58	CA_5B-66A	4CC#61	58	CA_5A-5A-66C				
			59	CA_66A-66A-66A		59	CA_5A-7A-66A-66A				
			60	CA_66A-66A-71A		60	CA_5A-7C-66A	5CC#5			
			61	CA_66A-66B		61	CA_5B-66A-66A				
			62	CA_66A-66C		62	CA_5B-66B				
			63	CA_66C-71A		63	CA_5B-66C				
			64	CA_7A-66A-66A		64	CA_7C-66A-66A	5CC#5			
			65	CA_7C-66A	4CC#64						

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 five 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 Band 2/4/7/41/48/66 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 2/4/7/41/48/66

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	Main Antenna Tx	ASDiv Tx
CA_41C	Ant 0	Ant 1
CA_66C	Ant 0	Ant 1
CA_7C	Ant 0	Ant 1
CA_66B	Ant 0	Ant 1
CA_48C	Ant 2	
CA_5B	Ant 0	Ant 1

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B5/7/66/41/48 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 Nov. 2017 TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

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

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

<Inter-band uplink carrier aggregation consideration>

LTE Uplink CA	Main Antenna Tx	ASDiv Tx
CA_2A-66A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_2A-7A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_4A-12A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_4A-5A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_5A-66A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_5A-7A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_2A-4A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_12A-66A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_13A-66A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_2A-12A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_2A-13A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_2A-5A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_4A-13A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_14A-66A	Ant 0 + Ant 1	Ant 1 + Ant 0
CA_2A-14A	Ant 0 + Ant 1	Ant 1 + Ant 0

General Note:

1. The single carrier of inter band CA uplink power level is the same as Non-CA standalone LTE power level.
2. The product implements Qualcomm Smart Transmit 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.
3. For LTE inter-band CA mode, Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure between two LTE bands. Smart Transmit 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 / n7 / n66 / n71 / n41 / n77 / n78 is NSA mode.
2. 5G NR n2 / n5 / n14 / n66 / n71 / n41 / 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-s QPSK and the reported SAR for the DFT-s QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
   c. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
   d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested
   f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
   g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. This device supports HPUE for 5GNR n77/n78 with class 2 level, HPUE power has been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
5. For 5GNR n41/n77 HPUE, 5GNR n41/n77 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
6. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
7. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
8. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
9. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.

<3GPP 38.101 MPR for EN-DC>

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

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

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

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

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

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

ENDC	Main Antenna Tx		ASDiv Tx	
	LTE TX	NR TX	LTE TX	NR TX
DC_2A_n5A	Ant 0	Ant 1	Ant 1	Ant 0
DC_2A_n41A	Ant 0	Ant 1	Ant 1	Ant 0
DC_2A_n66A	Ant 0	Ant 1	Ant 1	Ant 0
DC_2A_n71A	Ant 0	Ant 1	Ant 1	Ant 0
DC_2A_n77A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
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 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_5A_n78A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_66A_n2A	Ant 0	Ant 1	Ant 1	Ant 0
DC_66A_n5A	Ant 0	Ant 1	Ant 1	Ant 0
DC_66A_n41A	Ant 0	Ant 1	Ant 1	Ant 0
DC_66A_n71A	Ant 0	Ant 1	Ant 1	Ant 0
DC_66A_n77A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_66A_n78A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_66A_n7A	Ant 0	Ant 1		
DC_7A_n66A	Ant 0	Ant 1	Ant 1	Ant 0
DC_7A_n77A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_7A_n78A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_12A_n2A	Ant 1	Ant 0	Ant 0	Ant 1
DC_12A_n66A	Ant 1	Ant 0	Ant 0	Ant 1
DC_12A_n77A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_13A_n2A	Ant 1	Ant 0	Ant 0	Ant 1
DC_13A_n66A	Ant 1	Ant 0	Ant 0	Ant 1
DC_13A_n77A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_14A_n2A	Ant 1	Ant 0	Ant 0	Ant 1
DC_14A_n66A	Ant 1	Ant 0	Ant 0	Ant 1
DC_14A_n77A	Ant 0	Ant 2/4/5/7	Ant 1	Ant 2/4/5/7
DC_48A_n5A	Ant 2	Ant 0		
DC_48A_n66A	Ant 2	Ant 0		

<WLAN Conducted Power>

General Note:

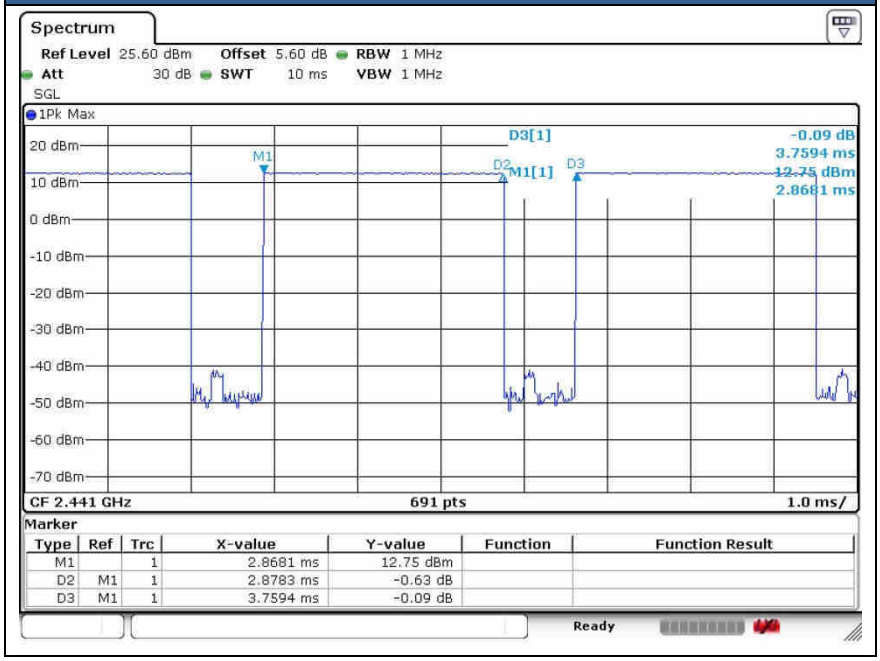
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
2. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
3. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
4. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of the initial test position is ≤ 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 full tone and partial tone supported for WLAN2.4GHz/WLAN5GHz, after verification for the partial tone power level is far less than full tone power level, so we chose full tone power to be measured in this report.
6. The 2.4GHz/5GHz/6GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.

<2.4GHz Bluetooth>

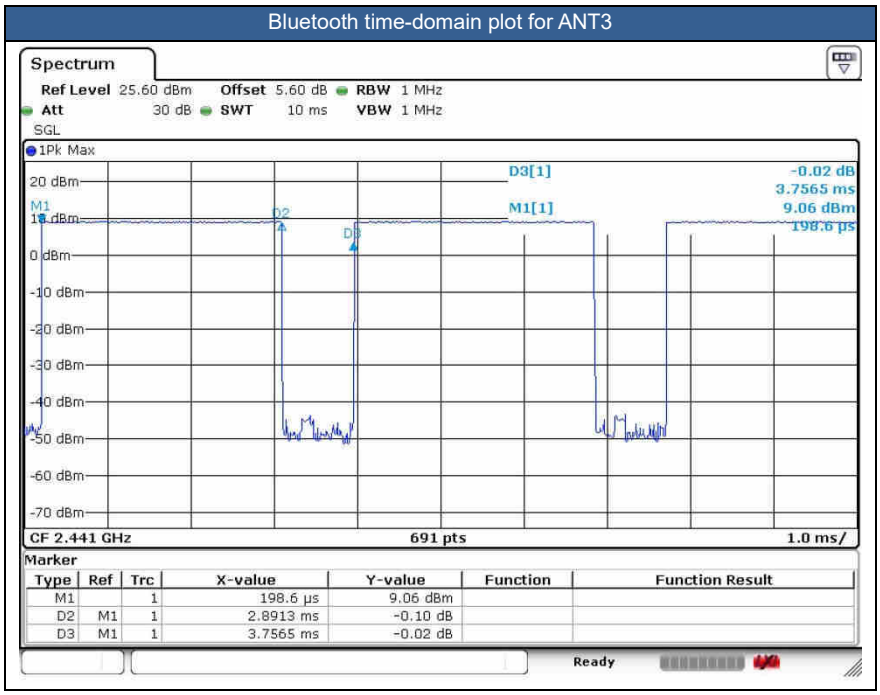
General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 76.97% for ANT3, 76.56% for ANT6 as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to 83.3% for Bluetooth reported SAR calculation.

Bluetooth time-domain plot for ANT6



Bluetooth time-domain plot for ANT3



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.
   f. For TDD LTE SAR measurement of power class 2, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 43.3%/42.9% = 1.009 is applied to scale-up the measured SAR result. The 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 Qualcomm smart transmit 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, body-worn, hotspot 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 power level is higher than hotspot power level, so front/back sensor on SAR can represent hotspot conservatively.
7. This device supports HPUE for LTE Band 41 and 5GNR n41/n77 with class 2 level, HPUE power has been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
8. For 5GNR n41/n77 HPUE, 5GNR n41/n77 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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/IV/V, LTE Band 2/4/5/7/12/13/14/26/66/71/38/41/48, 5GNR n2/n5/n7/n14/n66/n71/n41/n48/n77/n78, WLAN2.4/5.8GHz, therefore product specific 10g SAR is necessary.
b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

14. For Ant 4 and Ant 6 which support WLAN5GHz or WLAN2.4GHz MIMO, there is no cap sensor on Ant 4 and Ant 6, thus the power of Ant 4 and Ant 6 will force cutback at all exposure conditions to meet the SAR compliance on WLAN transmit simultaneously with WWAN.

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 / B26 / B38 / B71 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 / B5 / B38 SAR test was covered by LTE B66 / B26 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   c. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   d. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
   e. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
   f. For 5G FR1 n5 /n7/n41/n66/n77 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

WLAN/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. Per April 2019 TCB workshops, General principles of FCC KDB Publication 248227 D01 can be applied to determine the SAR Initial Test Configurations and test reduction for 802.11ax SAR testing. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing.
6. For modes is with the same maximum output power, the guidance from section 5.3.2 a) of FCC KDB Publication 248227 D01 should be applied, with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency bands.
7. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

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 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	133322	683	22.85	24.00	1.303	-0.05	0.078	0.101
	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 2	133322	683	21.80	23.00	1.318	-0.16	0.046	0.061
	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	133322	683	22.85	24.00	1.303	0.05	0.001	0.001
	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 2	133322	683	21.80	23.00	1.318	0.06	0.001	0.001
	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	133322	683	22.85	24.00	1.303	0.17	0.058	0.076
	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 2	133322	683	21.80	23.00	1.318	0.05	0.001	0.001
	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	133322	683	22.85	24.00	1.303	-0.16	0.026	0.034
	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 2	133322	683	21.80	23.00	1.318	0.08	0.001	0.001
	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	133322	683	21.04	22.00	1.247	0.11	0.546	0.681
	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	133322	683	20.94	22.00	1.276	0.01	0.441	0.563
	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	133322	683	20.94	22.00	1.276	0.05	0.531	0.678
01	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	133322	683	21.04	22.00	1.247	0.06	0.786	**0.980**
	LTE Band 71	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	133322	683	20.87	22.00	1.297	0.17	0.518	0.672
	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	133322	683	21.04	22.00	1.247	0.15	0.253	0.316
	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 2	133322	683	20.94	22.00	1.276	0.07	0.161	0.206
	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	133322	683	21.04	22.00	1.247	-0.04	0.317	0.395
	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 2	133322	683	20.94	22.00	1.276	0.07	0.194	0.248
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.84	24.00	1.306	0.09	0.142	0.185
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	21.74	23.00	1.337	0.06	0.085	0.114
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.84	24.00	1.306	0.05	0.080	0.104
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	21.74	23.00	1.337	0.04	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.84	24.00	1.306	0.15	0.110	0.144
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	21.74	23.00	1.337	0.01	0.067	0.090
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.84	24.00	1.306	-0.08	0.075	0.098
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 2	23095	707.5	21.74	23.00	1.337	0.04	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	21.61	22.80	1.315	-0.14	0.700	0.921
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	21.53	22.80	1.340	-0.14	0.622	0.833
	LTE Band 12	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	21.43	22.80	1.371	-0.15	0.614	0.842
02	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	21.61	22.80	1.315	-0.02	0.752	**0.989**
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	21.53	22.80	1.340	0.08	0.650	0.871
	LTE Band 12	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	21.43	22.80	1.371	-0.19	0.652	0.894
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	23095	707.5	21.61	22.80	1.315	0.08	0.349	0.459
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 2	23095	707.5	21.53	22.80	1.340	0.07	0.303	0.406
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	23095	707.5	21.61	22.80	1.315	-0.17	0.414	0.545
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 2	23095	707.5	21.53	22.80	1.340	0.05	0.388	0.520
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	23230	782	22.97	24.00	1.268	0.02	0.162	0.205
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 2	23230	782	21.87	23.00	1.297	0.06	0.093	0.121
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	23230	782	22.97	24.00	1.268	0.03	0.102	0.129
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 2	23230	782	21.87	23.00	1.297	-0.17	0.057	0.074
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	23230	782	22.97	24.00	1.268	0.08	0.121	0.153
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 2	23230	782	21.87	23.00	1.297	-0.12	0.067	0.087
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	23230	782	22.97	24.00	1.268	0.02	0.099	0.125
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 2	23230	782	21.87	23.00	1.297	0.04	0.054	0.070
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	23230	782	20.05	21.10	1.274	0.08	0.753	0.959
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 2	23230	782	20.03	21.10	1.279	0.15	0.721	0.922
	LTE Band 13	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	23230	782	19.90	21.10	1.318	-0.08	0.522	0.688
03	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	23230	782	20.05	21.10	1.274	-0.07	0.767	**0.977**
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 2	23230	782	20.03	21.10	1.279	0.19	0.721	0.922
	LTE Band 13	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	23230	782	19.90	21.10	1.318	0.04	0.531	0.700
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	23230	782	20.05	21.10	1.274	-0.12	0.424	0.540
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 2	23230	782	20.03	21.10	1.279	-0.06	0.382	0.489

	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	23230	782	20.05	21.10	1.274	0.05	0.492	0.627
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 2	23230	782	20.03	21.10	1.279	0.1	0.470	0.601
	LTE Band 14	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	23330	793	23.07	24.00	1.239	0.01	0.179	0.222
	LTE Band 14	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 2	23330	793	22.02	23.00	1.253	0.07	0.102	0.128
	LTE Band 14	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	23330	793	23.07	24.00	1.239	0.07	0.092	0.114
	LTE Band 14	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 2	23330	793	22.02	23.00	1.253	-0.05	0.052	0.065
	LTE Band 14	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	23330	793	23.07	24.00	1.239	0.04	0.105	0.130
	LTE Band 14	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 2	23330	793	22.02	23.00	1.253	0.08	0.061	0.076
	LTE Band 14	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	23330	793	23.07	24.00	1.239	0.09	0.089	0.110
	LTE Band 14	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 2	23330	793	22.02	23.00	1.253	0.19	0.051	0.064
04	LTE Band 14	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	23330	793	19.73	21.10	1.371	-0.07	0.718	**0.984**
	LTE Band 14	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 2	23330	793	19.64	21.10	1.400	0.12	0.686	0.960
	LTE Band 14	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	23330	793	19.55	21.10	1.429	0.06	0.682	0.975
	LTE Band 14	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	23330	793	19.73	21.10	1.371	0.09	0.715	0.980
	LTE Band 14	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 2	23330	793	19.64	21.10	1.400	-0.03	0.692	0.969
	LTE Band 14	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	23330	793	19.55	21.10	1.429	0.12	0.682	0.975
	LTE Band 14	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	23330	793	19.73	21.10	1.371	0.08	0.403	0.552
	LTE Band 14	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 2	23330	793	19.64	21.10	1.400	0.04	0.382	0.535
	LTE Band 14	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	23330	793	19.73	21.10	1.371	-0.09	0.460	0.631
	LTE Band 14	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 2	23330	793	19.64	21.10	1.400	0.07	0.435	0.609
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	136100	680.5	23.11	24.00	1.227	0.13	0.049	0.060
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	136100	680.5	23.05	24.00	1.245	-0.03	0.063	0.078
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	136100	680.5	23.11	24.00	1.227	0.09	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	136100	680.5	23.05	24.00	1.245	0.02	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	136100	680.5	23.11	24.00	1.227	0.07	0.044	0.054
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	136100	680.5	23.05	24.00	1.245	0.07	0.047	0.058
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	136100	680.5	23.11	24.00	1.227	0.04	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	136100	680.5	23.05	24.00	1.245	0.03	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	136100	680.5	20.70	21.70	1.259	0.17	0.557	0.701
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	136100	680.5	20.63	21.70	1.279	-0.17	0.713	0.912
	FR1 n71	20M	QPSK	100	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	136100	680.5	20.58	21.70	1.294	-0.18	0.538	0.696
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	136100	680.5	20.70	21.70	1.259	-0.01	0.567	0.714
05	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	136100	680.5	20.63	21.70	1.279	-0.11	0.762	**0.975**
	FR1 n71	20M	QPSK	100	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	136100	680.5	20.58	21.70	1.294	-0.01	0.573	0.742
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	136100	680.5	20.70	21.70	1.259	-0.08	0.248	0.312
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	136100	680.5	20.63	21.70	1.279	-0.18	0.318	0.407
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	136100	680.5	20.70	21.70	1.259	0.08	0.322	0.405
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	136100	680.5	20.63	21.70	1.279	0.04	0.396	0.507
06	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	158600	793	23.05	24.00	1.245	-0.05	0.140	**0.174**
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	158600	793	22.98	24.00	1.265	0.05	0.119	0.151
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	158600	793	23.05	24.00	1.245	-0.07	0.085	0.106
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	158600	793	22.98	24.00	1.265	-0.12	0.001	0.001
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	158600	793	23.05	24.00	1.245	0.06	0.107	0.133
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	158600	793	22.98	24.00	1.265	0.09	0.064	0.081
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	158600	793	23.05	24.00	1.245	0.01	0.086	0.107
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	158600	793	22.98	24.00	1.265	-0.12	0.017	0.022
835MHz																		
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	189	836.4	28.67	29.50	1.211	0.07	0.275	0.333
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	189	836.4	28.67	29.50	1.211	-0.11	0.142	0.172
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	189	836.4	28.67	29.50	1.211	0.03	0.168	0.203
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	189	836.4	28.67	29.50	1.211	0.07	0.133	0.161
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	189	836.4	24.47	25.40	1.239	-0.19	0.722	0.894
07	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	128	824.2	24.35	25.40	1.274	0.14	0.772	**0.983**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	251	848.8	24.41	25.40	1.256	0.02	0.600	0.754
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	189	836.4	24.47	25.40	1.239	-0.1	0.684	0.847
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	128	824.2	24.35	25.40	1.274	0.08	0.711	0.905

	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	251	848.8	24.41	25.40	1.256	-0.15	0.600	0.754
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 1	DSI 2	189	836.4	24.47	25.40	1.239	0.03	0.420	0.520
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 1	DSI 2	189	836.4	24.47	25.40	1.239	0.07	0.418	0.518
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4182	836.4	23.23	24.00	1.194	-0.04	0.278	0.332
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	4182	836.4	23.23	24.00	1.194	-0.05	0.151	0.180
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	4182	836.4	23.23	24.00	1.194	-0.18	0.168	0.201
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	4182	836.4	23.23	24.00	1.194	0.02	0.136	0.162
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4182	836.4	20.87	22.20	1.358	-0.04	0.710	0.964
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4132	826.4	20.83	22.20	1.371	-0.09	0.674	0.924
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4233	846.6	20.81	22.20	1.377	-0.08	0.714	0.983
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4182	836.4	20.87	22.20	1.358	-0.06	0.681	0.925
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4132	826.4	20.83	22.20	1.371	0.09	0.666	0.913
08	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4233	846.6	20.81	22.20	1.377	0.11	0.718	**0.989**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	4182	836.4	20.87	22.20	1.358	-0.03	0.379	0.515
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	4182	836.4	20.87	22.20	1.358	0.05	0.251	0.341
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	22.87	24.00	1.297	0.03	0.164	0.213
	LTE Band 5B	10M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	20476+ 20575	831.6+ 841.5	22.81	24.00	1.315	0.06	0.155	0.204
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	21.84	23.00	1.306	-0.17	0.105	0.137
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	26865	831.5	22.87	24.00	1.297	0.16	0.076	0.099
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	DSI 2	26865	831.5	21.84	23.00	1.306	0.07	0.048	0.063
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	26865	831.5	22.87	24.00	1.297	0.14	0.101	0.131
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	DSI 2	26865	831.5	21.84	23.00	1.306	0.02	0.062	0.081
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	26865	831.5	22.87	24.00	1.297	-0.17	0.076	0.099
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	DSI 2	26865	831.5	21.84	23.00	1.306	0.01	0.046	0.060
09	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	26865	831.5	20.91	21.80	1.227	-0.08	0.797	**0.978**
	LTE Band 5B	10M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	20476+ 20575	831.6+ 841.5	20.85	21.80	1.245	0.04	0.736	0.916
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 1	DSI 2	26865	831.5	20.85	21.80	1.245	0.08	0.681	0.848
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 1	DSI 2	26865	831.5	20.83	21.80	1.250	0.04	0.676	0.845
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	26865	831.5	20.91	21.80	1.227	0.03	0.767	0.941
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 1	DSI 2	26865	831.5	20.85	21.80	1.245	0.04	0.668	0.831
	LTE Band 26	15M	QPSK	75	0	-	Right Tilted	0mm	Ant 1	DSI 2	26865	831.5	20.83	21.80	1.250	0.02	0.669	0.836
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	26865	831.5	20.91	21.80	1.227	0.03	0.450	0.552
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 1	DSI 2	26865	831.5	20.85	21.80	1.245	0.17	0.421	0.524
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	26865	831.5	20.91	21.80	1.227	0.08	0.472	0.579
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 1	DSI 2	26865	831.5	20.85	21.80	1.245	0.07	0.413	0.514
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.23	24.00	1.194	0.04	0.153	0.183
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.20	24.00	1.202	0.08	0.125	0.150
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	167300	836.5	23.23	24.00	1.194	0.18	0.060	0.072
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	167300	836.5	23.20	24.00	1.202	-0.15	0.057	0.069
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.23	24.00	1.194	0.04	0.085	0.101
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.20	24.00	1.202	0.03	0.073	0.088
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	167300	836.5	23.23	24.00	1.194	0.07	0.056	0.067
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	167300	836.5	23.20	24.00	1.202	0.06	0.056	0.067
10	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.26	21.30	1.271	-0.12	0.779	**0.990**
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.17	21.30	1.297	-0.15	0.650	0.843
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.11	21.30	1.315	0.1	0.659	0.867
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.26	21.30	1.271	-0.1	0.737	0.936
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.17	21.30	1.297	-0.16	0.711	0.922
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.11	21.30	1.315	0.18	0.682	0.897
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.26	21.30	1.271	-0.18	0.480	0.610
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.17	21.30	1.297	0.07	0.411	0.533
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.26	21.30	1.271	0.03	0.473	0.601
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.17	21.30	1.297	0.04	0.423	0.549

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)
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	1413	1732.6	23.13	24.00	1.222	-	-	0.04	0.045	0.055
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	1413	1732.6	23.13	24.00	1.222	-	-	0.12	0.037	0.045
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	1413	1732.6	23.13	24.00	1.222	-	-	0.17	0.145	0.177
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	1413	1732.6	23.13	24.00	1.222	-	-	0.03	0.037	0.045
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	1413	1732.6	15.31	16.30	1.256	-	-	0.02	0.778	0.977
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	1312	1712.4	15.29	16.30	1.262	-	-	0.12	0.754	0.951
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	1513	1752.6	15.22	16.30	1.282	-	-	0.16	0.758	0.972
11	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1413	1732.6	15.31	16.30	1.256	-	-	-0.06	0.781	**0.981**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1312	1712.4	15.29	16.30	1.262	-	-	0.06	0.752	0.949
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1513	1752.6	15.22	16.30	1.282	-	-	0.07	0.730	0.936
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	1413	1732.6	15.31	16.30	1.256	-	-	-0.09	0.349	0.438
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	1413	1732.6	15.31	16.30	1.256	-	-	0.14	0.426	0.535
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	132322	1745	22.94	24.00	1.276	-	-	-0.09	0.096	0.123
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 2	132322	1745	21.86	23.00	1.300	-	-	0.12	0.062	0.081
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	132322	1745	22.94	24.00	1.276	-	-	-0.06	0.077	0.098
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 2	132322	1745	21.86	23.00	1.300	-	-	-0.12	0.051	0.066
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	132322	1745	22.94	24.00	1.276	-	-	0.02	0.135	0.172
	LTE Band 66C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 0	DSI 2	132322+ 132520	1745+ 1764.8	22.08	23.00	1.236	-	-	0.04	0.110	0.136
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 2	132322	1745	21.86	23.00	1.300	-	-	0.1	0.088	0.114
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	132322	1745	22.94	24.00	1.276	-	-	-0.06	0.075	0.096
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 2	132322	1745	21.86	23.00	1.300	-	-	-0.09	0.049	0.064
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	132322	1745	15.49	16.40	1.233	-	-	0.09	0.784	0.967
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	132072	1720	15.35	16.40	1.274	-	-	0.05	0.726	0.925
12	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	132572	1770	15.47	16.40	1.239	-	-	0.03	0.791	**0.980**
	LTE Band 66C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	132572+ 132374	1770+ 1750.2	15.18	16.40	1.324	-	-	0.02	0.733	0.971
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	132322	1745	15.44	16.40	1.247	-	-	-0.12	0.672	0.838
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	132072	1720	15.32	16.40	1.282	-	-	0.04	0.691	0.886
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	132572	1770	15.37	16.40	1.268	-	-	0.15	0.655	0.830
	LTE Band 66	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 2	132322	1745	15.41	16.40	1.256	-	-	0.03	0.670	0.842
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	15.49	16.40	1.233	-	-	0.01	0.730	0.900
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	132072	1720	15.35	16.40	1.274	-	-	0.04	0.728	0.927
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	132572	1770	15.47	16.40	1.239	-	-	0.09	0.737	0.913
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	15.44	16.40	1.247	-	-	0.02	0.680	0.848
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	132072	1720	15.32	16.40	1.282	-	-	0.17	0.691	0.886
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	132572	1770	15.37	16.40	1.268	-	-	0.03	0.706	0.895
	LTE Band 66	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	15.41	16.40	1.256	-	-	0.08	0.674	0.847
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	132322	1745	15.49	16.40	1.233	-	-	0.07	0.370	0.456
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 2	132322	1745	15.44	16.40	1.247	-	-	0.08	0.346	0.432
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	132322	1745	15.49	16.40	1.233	-	-	-0.08	0.467	0.576
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 2	132322	1745	15.44	16.40	1.247	-	-	0.07	0.294	0.367
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	349000	1745	23.10	24.00	1.230	-	-	0.12	0.082	0.101
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	349000	1745	22.93	24.00	1.279	-	-	-0.19	0.060	0.077
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	349000	1745	23.10	24.00	1.230	-	-	-0.03	0.061	0.075
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	349000	1745	22.93	24.00	1.279	-	-	-0.17	0.052	0.067
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	349000	1745	23.10	24.00	1.230	-	-	-0.06	0.117	0.144
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	349000	1745	22.93	24.00	1.279	-	-	0.02	0.092	0.118
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	349000	1745	23.10	24.00	1.230	-	-	0.01	0.056	0.069
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	349000	1745	22.93	24.00	1.279	-	-	0.05	0.050	0.064
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	349000	1745	16.64	17.50	1.219	-	-	0.06	0.760	0.926
13	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	349000	1745	16.56	17.50	1.242	-	-	0.12	0.791	**0.982**
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	349000	1745	16.51	17.50	1.256	-	-	0.06	0.668	0.839
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	16.64	17.50	1.219	-	-	0.05	0.718	0.875

	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	16.56	17.50	1.242	-	-	0.09	0.787	0.977
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	16.51	17.50	1.256	-	-	-0.02	0.701	0.880
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	16.64	17.50	1.219	-	-	0.08	0.360	0.439
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	16.56	17.50	1.242	-	-	0.04	0.413	0.513
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	349000	1745	16.64	17.50	1.219	-	-	0.04	0.449	0.547
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	349000	1745	16.56	17.50	1.242	-	-	0.08	0.500	0.621
1900MHz																				
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	661	1880	25.35	26.50	1.303	-	-	-0.17	0.001	0.001
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	661	1880	25.35	26.50	1.303	-	-	-0.08	0.001	0.001
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	661	1880	25.35	26.50	1.303	-	-	-0.04	0.067	0.087
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	661	1880	25.35	26.50	1.303	-	-	-0.15	0.001	0.001
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	661	1880	19.39	20.50	1.291	-	-	0.14	0.713	0.921
14	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	512	1850.2	19.30	20.50	1.318	-	-	-0.02	0.750	**0.989**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	810	1909.8	19.24	20.50	1.337	-	-	-0.16	0.687	0.918
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	661	1880	19.39	20.50	1.291	-	-	-0.14	0.728	0.940
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	512	1850.2	19.30	20.50	1.318	-	-	-0.06	0.724	0.954
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	810	1909.8	19.24	20.50	1.337	-	-	-0.12	0.732	0.978
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 1	DSI 2	661	1880	19.39	20.50	1.291	-	-	0.04	0.440	0.568
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 1	DSI 2	661	1880	19.39	20.50	1.291	-	-	-0.12	0.477	0.616
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	9400	1880	23.06	24.00	1.242	-	-	-0.18	0.089	0.111
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	9400	1880	23.06	24.00	1.242	-	-	0.05	0.088	0.109
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	9400	1880	23.06	24.00	1.242	-	-	0.11	0.173	0.215
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	9400	1880	23.06	24.00	1.242	-	-	0.04	0.072	0.089
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	9400	1880	15.24	16.20	1.247	-	-	0.08	0.755	0.942
15	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	9262	1852.4	15.19	16.20	1.262	-	-	0.09	0.784	**0.989**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	9538	1907.6	15.16	16.20	1.271	-	-	-0.06	0.652	0.828
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9400	1880	15.24	16.20	1.247	-	-	-0.16	0.674	0.841
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9262	1852.4	15.19	16.20	1.262	-	-	-0.14	0.700	0.883
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9538	1907.6	15.16	16.20	1.271	-	-	0.08	0.692	0.879
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	9400	1880	15.24	16.20	1.247	-	-	-0.12	0.431	0.538
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	9400	1880	15.24	16.20	1.247	-	-	0.04	0.423	0.528
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	18900	1880	22.66	24.00	1.361	-	-	0.06	0.093	0.127
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 2	18900	1880	21.72	23.00	1.343	-	-	0.06	0.056	0.075
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	18900	1880	22.66	24.00	1.361	-	-	0.16	0.088	0.120
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 2	18900	1880	21.72	23.00	1.343	-	-	0.1	0.055	0.074
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	18900	1880	22.66	24.00	1.361	-	-	-0.09	0.168	0.229
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 2	18900	1880	21.72	23.00	1.343	-	-	-0.12	0.104	0.140
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	18900	1880	22.66	24.00	1.361	-	-	-0.17	0.074	0.101
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 2	18900	1880	21.72	23.00	1.343	-	-	0.06	0.001	0.001
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	18900	1880	15.78	16.90	1.294	-	-	-0.03	0.696	0.901
16	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	18700	1860	15.66	16.90	1.330	-	-	-0.03	0.743	**0.989**
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	19100	1900	15.74	16.90	1.306	-	-	0.07	0.600	0.784
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	18900	1880	15.72	16.90	1.312	-	-	0.09	0.655	0.859
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	18700	1860	15.58	16.90	1.355	-	-	0.07	0.561	0.760
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	19100	1900	15.64	16.90	1.337	-	-	0.06	0.577	0.771
	LTE Band 2	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 2	18900	1880	15.67	16.90	1.327	-	-	-0.03	0.562	0.746
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	18900	1880	15.78	16.90	1.294	-	-	0.15	0.724	0.937
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	18700	1860	15.66	16.90	1.330	-	-	0.12	0.695	0.925
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	19100	1900	15.74	16.90	1.306	-	-	0.07	0.644	0.841
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	18900	1880	15.72	16.90	1.312	-	-	-0.03	0.617	0.810
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	18700	1860	15.58	16.90	1.355	-	-	0.11	0.647	0.877
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	19100	1900	15.64	16.90	1.337	-	-	0.04	0.601	0.803
	LTE Band 2	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	18900	1880	15.67	16.90	1.327	-	-	-0.17	0.605	0.803
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	18900	1880	15.78	16.90	1.294	-	-	0.04	0.417	0.540
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 2	18900	1880	15.72	16.90	1.312	-	-	0.14	0.377	0.495
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	18900	1880	15.78	16.90	1.294	-	-	0.05	0.443	0.573

	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 2	18900	1880	15.72	16.90	1.312	-	-	-0.13	0.365	0.479
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	376000	1880	23.03	24.00	1.250	-	-	0.02	0.054	0.068
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	376000	1880	22.97	24.00	1.268	-	-	0.09	0.044	0.056
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	376000	1880	23.03	24.00	1.250	-	-	-0.12	0.046	0.058
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	376000	1880	22.97	24.00	1.268	-	-	0.04	0.042	0.053
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	376000	1880	23.03	24.00	1.250	-	-	0.11	0.096	0.120
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	376000	1880	22.97	24.00	1.268	-	-	-0.11	0.083	0.105
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	376000	1880	23.03	24.00	1.250	-	-	0.15	0.001	0.001
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	376000	1880	22.97	24.00	1.268	-	-	0.02	0.001	0.001
17	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	376000	1880	15.50	16.80	1.349	-	-	-0.08	0.724	**0.977**
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	372000	1860	15.41	16.80	1.377	-	-	-0.03	0.701	0.965
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	380000	1900	15.36	16.80	1.393	-	-	0.07	0.677	0.943
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	376000	1880	15.42	16.80	1.374	-	-	0.02	0.632	0.868
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	372000	1860	15.36	16.80	1.393	-	-	0.04	0.651	0.907
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	380000	1900	15.33	16.80	1.403	-	-	-0.12	0.620	0.870
	FR1 n2	20M	QPSK	100	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	376000	1880	15.35	16.80	1.396	-	-	-0.14	0.627	0.876
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	376000	1880	15.50	16.80	1.349	-	-	-0.1	0.711	0.959
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	372000	1860	15.41	16.80	1.377	-	-	-0.12	0.687	0.946
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	380000	1900	15.36	16.80	1.393	-	-	0.05	0.668	0.931
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	376000	1880	15.42	16.80	1.374	-	-	-0.09	0.624	0.857
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	372000	1860	15.36	16.80	1.393	-	-	-0.01	0.621	0.865
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	380000	1900	15.33	16.80	1.403	-	-	0.07	0.611	0.857
	FR1 n2	20M	QPSK	100	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	376000	1880	15.35	16.80	1.396	-	-	-0.03	0.607	0.848
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	376000	1880	15.50	16.80	1.349	-	-	0.09	0.420	0.567
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	376000	1880	15.42	16.80	1.374	-	-	0.13	0.385	0.529
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	376000	1880	15.50	16.80	1.349	-	-	0.02	0.484	0.653
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	376000	1880	15.42	16.80	1.374	-	-	0.18	0.438	0.602
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	21100	2535	22.77	24.00	1.327	-	-	0.08	0.014	0.019
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 2	21100	2535	21.94	23.00	1.276	-	-	0.03	0.009	0.011
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	21100	2535	22.77	24.00	1.327	-	-	0.05	0.010	0.013
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 2	21100	2535	21.94	23.00	1.276	-	-	0.05	0.008	0.010
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	21100	2535	22.77	24.00	1.327	-	-	0.01	0.068	0.091
	LTE Band 7C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 0	DSI 2	21100+ 21298	2535+ 2554.8	21.51	23.00	1.409	-	-	0.04	0.044	0.062
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 2	21100	2535	21.94	23.00	1.276	-	-	0.06	0.009	0.011
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	21100	2535	22.77	24.00	1.327	-	-	0.17	0.007	0.009
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 2	21100	2535	21.94	23.00	1.276	-	-	0.05	0.006	0.008
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	21100	2535	14.81	16.10	1.346	-	-	0.03	0.602	0.810
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	20850	2510	14.74	16.10	1.368	-	-	0.05	0.618	0.845
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	21350	2560	14.69	16.10	1.384	-	-	-0.06	0.595	0.823
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	21100	2535	14.74	16.10	1.368	-	-	0.01	0.584	0.799
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 2	21100	2535	14.69	16.10	1.384	-	-	0.06	0.533	0.737
18	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	21100	2535	14.81	16.10	1.346	-	-	0.04	0.734	**0.988**
	LTE Band 7C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 1	DSI 2	21100+ 21298	2535+ 2554.8	14.37	16.10	1.489	-	-	0.09	0.658	0.980
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	20850	2510	14.74	16.10	1.368	-	-	-0.03	0.711	0.972
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	21350	2560	14.69	16.10	1.384	-	-	0.02	0.674	0.933
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	21100	2535	14.74	16.10	1.368	-	-	-0.13	0.659	0.901
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	20850	2510	14.53	16.10	1.435	-	-	0.02	0.662	0.950
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	21350	2560	14.61	16.10	1.409	-	-	0.03	0.633	0.892
	LTE Band 7	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	21100	2535	14.69	16.10	1.384	-	-	0.05	0.628	0.869
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	21100	2535	14.81	16.10	1.346	-	-	-0.18	0.375	0.505
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 2	21100	2535	14.74	16.10	1.368	-	-	0.07	0.322	0.440
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	21100	2535	14.81	16.10	1.346	-	-	-0.03	0.522	0.703
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 2	21100	2535	14.74	16.10	1.368	-	-	0.06	0.462	0.632
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	40620	2593	23.35	24.00	1.161	62.9	1.006	-0.08	0.058	0.068

	LTE Band 41C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	DSI 2	40620+ 40818	2593+ 2612.8	23.23	24.00	1.194	62.9	1.006	0.06	0.051	0.061
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 2	40620	2593	22.38	23.00	1.153	62.9	1.006	-0.02	0.044	0.051
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	40620	2593	23.35	24.00	1.161	62.9	1.006	0.03	0.041	0.048
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 2	40620	2593	22.38	23.00	1.153	62.9	1.006	0.08	0.043	0.050
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	40620	2593	23.35	24.00	1.161	62.9	1.006	-0.13	0.028	0.033
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 2	40620	2593	22.38	23.00	1.153	62.9	1.006	0.11	0.025	0.029
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	40620	2593	23.35	24.00	1.161	62.9	1.006	-0.1	0.042	0.049
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 2	40620	2593	22.38	23.00	1.153	62.9	1.006	0.06	0.045	0.052
	LTE Band 41_HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	40620	2593	25.33	27.00	1.469	42.9	1.009	-0.09	0.066	0.098
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	40620	2593	17.44	18.30	1.219	62.9	1.006	0.01	0.296	0.363
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	40620	2593	17.40	18.30	1.230	62.9	1.006	0.07	0.197	0.244
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	40620	2593	17.44	18.30	1.219	62.9	1.006	0.08	0.665	0.815
19	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	39750	2506	17.32	18.30	1.253	62.9	1.006	0.04	0.785	**0.990**
	LTE Band 41C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 1	DSI 2	39750+ 39948	2506+ 2525.8	17.27	18.30	1.268	62.9	1.006	0.08	0.756	0.964
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	40185	2549.5	17.30	18.30	1.259	62.9	1.006	-0.08	0.623	0.789
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	41055	2636.5	17.36	18.30	1.242	62.9	1.006	0.03	0.652	0.814
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	41490	2680	17.23	18.30	1.279	62.9	1.006	0.17	0.630	0.811
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	40620	2593	17.40	18.30	1.230	62.9	1.006	0.09	0.684	0.847
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	39750	2506	17.17	18.30	1.297	62.9	1.006	0.09	0.652	0.851
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	40185	2549.5	17.25	18.30	1.274	62.9	1.006	0.05	0.622	0.797
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	41055	2636.5	17.31	18.30	1.256	62.9	1.006	0.05	0.648	0.819
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	41490	2680	17.28	18.30	1.265	62.9	1.006	0.01	0.643	0.818
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	40620	2593	17.33	18.30	1.250	62.9	1.006	0.05	0.635	0.799
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 2	40620	2593	17.44	18.30	1.219	62.9	1.006	0.06	0.187	0.229
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 2	40620	2593	17.40	18.30	1.230	62.9	1.006	-0.08	0.137	0.170
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 2	40620	2593	17.44	18.30	1.219	62.9	1.006	0.07	0.268	0.329
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 2	40620	2593	17.40	18.30	1.230	62.9	1.006	0.1	0.177	0.219
	LTE Band 41_HPUE	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	39750	2506	19.07	19.90	1.211	42.9	1.009	0.01	0.775	0.947
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	507000	2535	22.95	24.00	1.274	-	-	-0.01	0.063	0.081
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	507000	2535	22.91	24.00	1.285	-	-	0.01	0.051	0.066
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	507000	2535	22.95	24.00	1.274	-	-	-0.02	0.042	0.053
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	507000	2535	22.91	24.00	1.285	-	-	-0.12	0.037	0.048
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	507000	2535	22.95	24.00	1.274	-	-	0.06	0.058	0.074
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	507000	2535	22.91	24.00	1.285	-	-	0.05	0.061	0.078
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	507000	2535	22.95	24.00	1.274	-	-	0.08	0.028	0.036
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	507000	2535	22.91	24.00	1.285	-	-	0.03	0.033	0.042
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	14.93	15.90	1.250	-	-	0.01	0.644	0.805
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	14.91	15.90	1.256	-	-	-0.09	0.553	0.695
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	14.75	15.90	1.303	-	-	0.05	0.558	0.727
20	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	14.93	15.90	1.250	-	-	-0.13	0.788	**0.985**
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	14.91	15.90	1.256	-	-	0.05	0.653	0.820
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	14.75	15.90	1.303	-	-	0.05	0.655	0.854
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	507000	2535	14.93	15.90	1.250	-	-	0.02	0.392	0.490
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 2	507000	2535	14.91	15.90	1.256	-	-	0.04	0.338	0.425
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	507000	2535	14.93	15.90	1.250	-	-	0.1	0.458	0.573
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 2	507000	2535	14.91	15.90	1.256	-	-	0.04	0.397	0.499
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	22.63	24.00	1.371	-	-	0.01	0.061	0.084
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	22.61	24.00	1.377	-	-	0.12	0.063	0.087
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI 2	518598	2592.99	22.63	24.00	1.371	-	-	0.08	0.043	0.059
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI 2	518598	2592.99	22.61	24.00	1.377	-	-	0.15	0.044	0.061
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	22.63	24.00	1.371	-	-	0.02	0.069	0.095
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	22.61	24.00	1.377	-	-	0.17	0.068	0.094
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI 2	518598	2592.99	22.63	24.00	1.371	-	-	0.12	0.033	0.045
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI 2	518598	2592.99	22.61	24.00	1.377	-	-	0.07	0.031	0.043
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	25.57	26.00	1.104	50	1.000	0.06	0.065	0.072

	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	14.55	15.70	1.303	-	-	0.02	0.430	0.560
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	14.48	15.70	1.324	-	-	0.1	0.360	0.477
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	14.55	15.70	1.303	-	-	0.04	0.732	0.954
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	14.48	15.70	1.324	-	-	0.02	0.711	0.942
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	14.45	15.70	1.334	-	-	-0.14	0.701	0.935
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 2	518598	2592.99	14.55	15.70	1.303	-	-	-0.06	0.264	0.344
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 2	518598	2592.99	14.48	15.70	1.324	-	-	-0.05	0.221	0.293
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 2	518598	2592.99	14.55	15.70	1.303	-	-	-0.16	0.316	0.412
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 2	518598	2592.99	14.48	15.70	1.324	-	-	0.11	0.263	0.348
21	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	17.51	18.70	1.315	50	1.000	0.07	0.746	**0.981**
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	16.47	17.40	1.239	-	-	-0.07	0.744	0.922
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	16.33	17.40	1.279	-	-	0.03	0.761	0.974
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	16.25	17.40	1.303	-	-	0.08	0.723	0.942
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	518598	2592.99	16.47	17.40	1.239	-	-	0.17	0.154	0.191
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	518598	2592.99	16.33	17.40	1.279	-	-	0.07	0.168	0.215
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	518598	2592.99	16.47	17.40	1.239	-	-	-0.04	0.197	0.244
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	518598	2592.99	16.33	17.40	1.279	-	-	0.06	0.208	0.266
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	518598	2592.99	16.47	17.40	1.239	-	-	0.18	0.068	0.084
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	518598	2592.99	16.33	17.40	1.279	-	-	0.1	0.071	0.091
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	19.27	20.40	1.297	50	1.000	-0.09	0.734	0.952
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 2	518598	2592.99	22.61	24.00	1.377	-	-	0.07	0.118	0.163
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 2	518598	2592.99	22.56	24.00	1.393	-	-	0.12	0.136	0.189
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 2	518598	2592.99	22.61	24.00	1.377	-	-	0.02	0.120	0.165
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 2	518598	2592.99	22.56	24.00	1.393	-	-	0.03	0.127	0.177
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	518598	2592.99	22.61	24.00	1.377	-	-	0.02	0.214	0.295
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	518598	2592.99	22.56	24.00	1.393	-	-	-0.09	0.253	0.352
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 2	518598	2592.99	22.61	24.00	1.377	-	-	0.16	0.070	0.096
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 2	518598	2592.99	22.56	24.00	1.393	-	-	-0.01	0.093	0.130
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	518598	2592.99	25.59	27.00	1.384	50	1.000	0.05	0.234	0.324
3500MHz																				
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	55830	3609	13.19	14.40	1.321	62.9	1.006	-0.06	0.713	0.948
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	55340	3560	13.15	14.40	1.334	62.9	1.006	0.08	0.642	0.861
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	56150	3641	13.12	14.40	1.343	62.9	1.006	0.03	0.691	0.933
22	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	56640	3690	13.10	14.40	1.349	62.9	1.006	-0.09	0.722	**0.980**
	LTE Band 48C	20M	QPSK	1	99		Right Cheek	0mm	Ant 2	DSI 2	56442 +56640	3670.2 +3690	12.92	14.40	1.406	62.9	1.006	0.09	0.615	0.870
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	55830	3609	13.15	14.40	1.334	62.9	1.006	-0.13	0.673	0.903
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	55340	3560	13.07	14.40	1.358	62.9	1.006	0.05	0.655	0.895
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	56150	3641	13.12	14.40	1.343	62.9	1.006	0.07	0.633	0.855
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	56640	3690	13.11	14.40	1.346	62.9	1.006	0.17	0.694	0.940
	LTE Band 48	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 2	55830	3609	13.05	14.40	1.365	62.9	1.006	0.06	0.650	0.892
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 2	55830	3609	13.19	14.40	1.321	62.9	1.006	-0.12	0.116	0.154
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 2	55830	3609	13.15	14.40	1.334	62.9	1.006	-0.19	0.074	0.099
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	55830	3609	13.19	14.40	1.321	62.9	1.006	0.1	0.167	0.222
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	55830	3609	13.15	14.40	1.334	62.9	1.006	-0.1	0.113	0.152
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 2	55830	3609	13.19	14.40	1.321	62.9	1.006	-0.11	0.049	0.065
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 2	55830	3609	13.15	14.40	1.334	62.9	1.006	0.14	0.031	0.042
	LTE Band 48	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 2	DSI 2	55830	3609	13.05	14.40	1.365	62.9	1.006	0.1	0.033	0.045
23	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.78	13.80	1.265	-	-	-0.12	0.778	**0.984**
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	638000	3570	12.73	13.80	1.279	-	-	0.15	0.674	0.862
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	645332	3679.98	12.68	13.80	1.294	-	-	0.08	0.722	0.934
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.76	13.80	1.271	-	-	0.05	0.737	0.936
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	638000	3570	12.61	13.80	1.315	-	-	0.07	0.651	0.856
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	645332	3679.98	12.64	13.80	1.306	-	-	0.07	0.743	0.970
	FR1 n48	40M	QPSK	100	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.56	13.80	1.330	-	-	-0.07	0.679	0.903
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	641666	3624.99	12.78	13.80	1.265	-	-	0.01	0.120	0.152
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	641666	3624.99	12.76	13.80	1.271	-	-	0.08	0.114	0.145

	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.78	13.80	1.265	-	-	-0.15	0.179	0.226
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.76	13.80	1.271	-	-	0.08	0.168	0.213
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	641666	3624.99	12.78	13.80	1.265	-	-	0.19	0.052	0.066
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	641666	3624.99	12.76	13.80	1.271	-	-	0.15	0.049	0.062
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	656000	3840	12.69	13.30	1.151	-	-	-0.02	0.796	0.916
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	656000	3840	12.64	13.30	1.164	-	-	0.03	0.735	0.856
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	656000	3840	12.48	13.30	1.208	-	-	0.04	0.733	0.885
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	656000	3840	12.69	13.30	1.151	-	-	0.02	0.108	0.124
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	656000	3840	12.64	13.30	1.164	-	-	0.02	0.098	0.114
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	656000	3840	12.69	13.30	1.151	-	-	0.03	0.173	0.199
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	656000	3840	12.64	13.30	1.164	-	-	-0.12	0.225	0.262
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	656000	3840	12.69	13.30	1.151	-	-	0.06	0.045	0.052
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	656000	3840	12.64	13.30	1.164	-	-	-0.18	0.040	0.047
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	656000	3840	15.65	16.30	1.161	50	1.000	-0.02	0.839	0.974
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.89	13.30	1.099	-	-	0.07	0.430	0.473
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.83	13.30	1.114	-	-	0.04	0.501	0.558
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	633334	3500.01	12.89	13.30	1.099	-	-	0.07	0.097	0.107
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	633334	3500.01	12.83	13.30	1.114	-	-	-0.17	0.078	0.087
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.89	13.30	1.099	-	-	-0.14	0.102	0.112
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.83	13.30	1.114	-	-	0.04	0.123	0.137
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	633334	3500.01	12.89	13.30	1.099	-	-	0.06	0.034	0.037
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	633334	3500.01	12.83	13.30	1.114	-	-	-0.02	0.035	0.039
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	633334	3500.01	15.87	16.30	1.104	50	1.000	-0.06	0.521	0.575
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	14.18	15.20	1.265	-	-	0.08	0.545	0.689
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	14.04	15.20	1.306	-	-	0.11	0.508	0.664
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	656000	3840	14.18	15.20	1.265	-	-	0.07	0.604	0.764
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	656000	3840	14.04	15.20	1.306	-	-	0.15	0.557	0.728
24	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	656000	3840	14.18	15.20	1.265	-	-	-0.02	0.779	**0.985**
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	656000	3840	14.04	15.20	1.306	-	-	0.02	0.713	0.931
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	656000	3840	13.96	15.20	1.330	-	-	0.08	0.711	0.946
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	656000	3840	14.18	15.20	1.265	-	-	0.04	0.772	0.976
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	656000	3840	14.04	15.20	1.306	-	-	0.12	0.729	0.952
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	656000	3840	13.96	15.20	1.330	-	-	0.03	0.722	0.961
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	656000	3840	17.24	18.20	1.247	50	1.000	-0.08	0.733	0.914
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	633334	3500.01	14.11	15.20	1.285	-	-	0.18	0.349	0.449
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	633334	3500.01	13.95	15.20	1.334	-	-	0.07	0.384	0.512
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	633334	3500.01	14.11	15.20	1.285	-	-	0.04	0.390	0.501
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	633334	3500.01	13.95	15.20	1.334	-	-	-0.03	0.433	0.577
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	633334	3500.01	14.11	15.20	1.285	-	-	0.13	0.556	0.715
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	633334	3500.01	13.95	15.20	1.334	-	-	0.14	0.600	0.800
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	633334	3500.01	13.90	15.20	1.349	-	-	0.19	0.586	0.790
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	633334	3500.01	14.11	15.20	1.285	-	-	-0.05	0.516	0.663
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	633334	3500.01	13.95	15.20	1.334	-	-	0.06	0.569	0.759
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	633334	3500.01	17.21	18.20	1.256	50	1.000	-0.11	0.655	0.823
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 2	656000	3840	13.50	14.50	1.259	-	-	0.08	0.196	0.247
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 2	656000	3840	13.43	14.50	1.279	-	-	-0.17	0.177	0.226
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 2	656000	3840	13.50	14.50	1.259	-	-	0.06	0.186	0.234
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 2	656000	3840	13.43	14.50	1.279	-	-	-0.18	0.167	0.214
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	656000	3840	13.50	14.50	1.259	-	-	-0.09	0.774	0.974
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	656000	3840	13.43	14.50	1.279	-	-	0.02	0.670	0.857
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	656000	3840	13.32	14.50	1.312	-	-	0.04	0.652	0.856
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 2	656000	3840	13.50	14.50	1.259	-	-	0.12	0.662	0.833
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 2	656000	3840	13.43	14.50	1.279	-	-	-0.16	0.601	0.769
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 2	656000	3840	13.32	14.50	1.312	-	-	0.1	0.568	0.745
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	656000	3840	16.56	17.50	1.242	50	1.000	-0.04	0.733	0.910
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 2	633334	3500.01	13.71	14.50	1.199	-	-	0.13	0.141	0.169

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 2	633334	3500.01	13.62	14.50	1.225	-	-	-0.18	0.161	0.197
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 2	633334	3500.01	13.71	14.50	1.199	-	-	0.18	0.145	0.174
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 2	633334	3500.01	13.62	14.50	1.225	-	-	-0.16	0.174	0.213
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	633334	3500.01	13.71	14.50	1.199	-	-	-0.02	0.560	0.672
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	633334	3500.01	13.62	14.50	1.225	-	-	-0.15	0.582	0.713
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 2	633334	3500.01	13.71	14.50	1.199	-	-	0.06	0.519	0.623
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 2	633334	3500.01	13.62	14.50	1.225	-	-	-0.17	0.569	0.697
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	633334	3500.01	16.65	17.50	1.216	50	1.000	-0.09	0.576	0.701
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 2	656000	3840	22.85	24.00	1.303	-	-	-0.11	0.088	0.115
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 2	656000	3840	22.77	24.00	1.327	-	-	0.14	0.068	0.090
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 2	656000	3840	22.85	24.00	1.303	-	-	-0.07	0.132	0.172
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 2	656000	3840	22.77	24.00	1.327	-	-	0.1	0.100	0.133
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	656000	3840	22.85	24.00	1.303	-	-	0.01	0.156	0.203
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	656000	3840	22.77	24.00	1.327	-	-	0.09	0.114	0.151
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 2	656000	3840	22.85	24.00	1.303	-	-	-0.09	0.093	0.121
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 2	656000	3840	22.77	24.00	1.327	-	-	-0.1	0.077	0.102
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	656000	3840	25.91	27.00	1.285	50	1.000	0.01	0.153	0.197
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 2	633334	3500.01	23.39	24.00	1.151	-	-	-0.02	0.142	0.163
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 2	633334	3500.01	23.33	24.00	1.167	-	-	0.07	0.121	0.141
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 2	633334	3500.01	23.39	24.00	1.151	-	-	0.02	0.218	0.251
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 2	633334	3500.01	23.33	24.00	1.167	-	-	-0.08	0.178	0.208
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	633334	3500.01	23.39	24.00	1.151	-	-	-0.13	0.283	0.326
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	633334	3500.01	23.33	24.00	1.167	-	-	0.19	0.245	0.286
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 2	633334	3500.01	23.39	24.00	1.151	-	-	0.14	0.150	0.173
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 2	633334	3500.01	23.33	24.00	1.167	-	-	-0.04	0.127	0.148
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 2	633334	3500.01	26.48	27.00	1.127	50	1.000	0.09	0.293	0.330

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)
						WIFI&BT										
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3+6	Standalone	6	2437	19.16	20.00	1.213	97.94	1.021	-0.09	0.447	0.554
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3+6	Standalone	6	2437	19.16	20.00	1.213	97.94	1.021	-0.16	0.528	0.654
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+6	Standalone	6	2437	19.16	20.00	1.213	97.94	1.021	-0.18	1.080	1.338
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+6	Standalone	1	2412	18.91	20.00	1.285	97.94	1.021	0.14	0.841	1.104
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+6	Standalone	11	2462	18.85	20.00	1.303	97.94	1.021	0.02	0.785	1.044
25	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+6	Standalone	6	2437	19.16	20.00	1.213	97.94	1.021	-0.02	1.130	**1.400**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+6	DBS only	6	2437	15.45	17.00	1.429	97.94	1.021	-0.09	0.547	0.798
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3+6	WWAN+non DBS	6	2437	12.53	14.00	1.403	97.94	1.021	0.01	0.102	0.146
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3+6	WWAN+non DBS	6	2437	12.53	14.00	1.403	97.94	1.021	-0.07	0.121	0.173
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+6	WWAN+non DBS	6	2437	12.53	14.00	1.403	97.94	1.021	-0.04	0.247	0.354
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+6	WWAN+non DBS	6	2437	12.53	14.00	1.403	97.94	1.021	0.06	0.258	0.370
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3+6	WWAN+DBS	6	2437	9.81	11.00	1.315	97.94	1.021	-0.03	0.058	0.078
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3+6	WWAN+DBS	6	2437	9.81	11.00	1.315	97.94	1.021	0.13	0.068	0.091
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+6	WWAN+DBS	6	2437	9.81	11.00	1.315	97.94	1.021	-0.01	0.140	0.188
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+6	WWAN+DBS	6	2437	9.81	11.00	1.315	97.94	1.021	-0.1	0.146	0.196
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+6	Standalone	1	2412	18.91	20.00	1.285	97.94	1.021	0.07	0.671	0.881
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+6	Standalone	11	2462	18.85	20.00	1.303	97.94	1.021	0.09	0.558	0.742
	WLAN2.4GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+6	Standalone	6	2437	18.30	20.00	1.479	100	1.000	0.01	0.766	1.133
	WLAN2.4GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+6	Standalone	3	2422	16.01	17.50	1.409	100	1.000	0.09	0.496	0.699
	WLAN2.4GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+6	Standalone	9	2452	16.03	17.50	1.403	100	1.000	-0.12	0.508	0.713
	WLAN2.4GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 3+6	Standalone	6	2437	18.30	20.00	1.479	100	1.000	0.06	0.776	1.148
	WLAN2.4GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 3+6	Standalone	3	2422	16.01	17.50	1.409	100	1.000	-0.17	0.480	0.676
	WLAN2.4GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 3+6	Standalone	9	2452	16.03	17.50	1.403	100	1.000	0.05	0.535	0.751
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	0.07	0.047	0.060
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	0.1	0.011	0.014

26	Bluetooth	1Mbps	Left Cheek	0mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	-0.04	0.149	**0.189**
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	-0.12	0.038	0.048
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	-0.13	0.059	0.086
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	0.01	0.069	0.100
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	0.17	0.115	0.167
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	0.07	0.118	0.172
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	Standalone	58	5290	16.32	17.50	1.312	99.30	1.007	0.13	0.313	0.414
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	Standalone	58	5290	16.32	17.50	1.312	99.30	1.007	0.1	0.296	0.391
27	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Standalone	58	5290	16.32	17.50	1.312	99.30	1.007	-0.12	0.847	**1.119**
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	DBS only	58	5290	14.63	16.00	1.371	99.30	1.007	-0.09	0.566	0.781
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	WWAN+non DBS	58	5290	11.76	13.00	1.330	99.30	1.007	-0.11	0.109	0.146
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	WWAN+non DBS	58	5290	11.76	13.00	1.330	99.30	1.007	-0.03	0.103	0.138
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	WWAN+non DBS	58	5290	11.76	13.00	1.330	99.30	1.007	0.04	0.296	0.397
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	WWAN+non DBS	58	5290	11.76	13.00	1.330	99.30	1.007	-0.05	0.246	0.330
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	WWAN+DBS	58	5290	8.72	10.00	1.343	99.30	1.007	0.06	0.054	0.073
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	WWAN+DBS	58	5290	8.72	10.00	1.343	99.30	1.007	-0.11	0.051	0.069
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	WWAN+DBS	58	5290	8.72	10.00	1.343	99.30	1.007	0.01	0.146	0.197
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	WWAN+DBS	58	5290	8.72	10.00	1.343	99.30	1.007	-0.08	0.122	0.165
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Standalone	58	5290	16.32	17.50	1.312	99.30	1.007	0.06	0.705	0.932
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	Standalone	106	5530	15.92	17.00	1.282	99.30	1.007	-0.16	0.273	0.353
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	Standalone	106	5530	15.92	17.00	1.282	99.30	1.007	-0.18	0.276	0.356
28	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Standalone	106	5530	15.92	17.00	1.282	99.30	1.007	0.06	0.875	**1.130**
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	DBS only	106	5530	14.35	15.50	1.303	99.30	1.007	-0.1	0.600	0.787
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	WWAN+non DBS	106	5530	10.91	12.00	1.285	99.30	1.007	0.17	0.095	0.123
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	WWAN+non DBS	106	5530	10.91	12.00	1.285	99.30	1.007	-0.05	0.097	0.125
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	WWAN+non DBS	106	5530	10.91	12.00	1.285	99.30	1.007	-0.02	0.306	0.396
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	WWAN+non DBS	106	5530	10.91	12.00	1.285	99.30	1.007	-0.13	0.225	0.291
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	WWAN+DBS	106	5530	7.88	9.00	1.294	99.30	1.007	-0.13	0.045	0.058
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	WWAN+DBS	106	5530	7.88	9.00	1.294	99.30	1.007	-0.05	0.046	0.060
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	WWAN+DBS	106	5530	7.88	9.00	1.294	99.30	1.007	0.12	0.145	0.189
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	WWAN+DBS	106	5530	7.88	9.00	1.294	99.30	1.007	0.16	0.107	0.139
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Standalone	122	5610	15.65	17.00	1.365	99.30	1.007	0.03	0.755	1.037
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Standalone	106	5530	15.92	17.00	1.282	99.30	1.007	-0.03	0.644	0.832
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Standalone	122	5610	15.65	17.00	1.365	99.30	1.007	-0.1	0.561	0.771
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	Standalone	155	5775	14.60	16.00	1.380	99.3	1.007	-0.14	0.267	0.371
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	Standalone	155	5775	14.60	16.00	1.380	99.3	1.007	0.02	0.276	0.384
29	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Standalone	155	5775	14.60	16.00	1.380	99.3	1.007	-0.03	0.862	**1.198**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	DBS only	155	5775	12.63	14.00	1.371	99.3	1.007	0.1	0.505	0.697
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	WWAN+non DBS	155	5775	9.37	11.00	1.455	99.3	1.007	0.1	0.084	0.123
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	WWAN+non DBS	155	5775	9.37	11.00	1.455	99.3	1.007	-0.04	0.087	0.128
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	WWAN+non DBS	155	5775	9.37	11.00	1.455	99.3	1.007	-0.16	0.272	0.399
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	WWAN+non DBS	155	5775	9.37	11.00	1.455	99.3	1.007	-0.05	0.206	0.302
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	WWAN+DBS	155	5775	6.81	8.00	1.315	99.3	1.007	0.12	0.046	0.061
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	WWAN+DBS	155	5775	6.81	8.00	1.315	99.3	1.007	0.05	0.048	0.064
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	WWAN+DBS	155	5775	6.81	8.00	1.315	99.3	1.007	0.09	0.150	0.199
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	WWAN+DBS	155	5775	6.81	8.00	1.315	99.3	1.007	-0.01	0.114	0.151
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Standalone	155	5775	14.60	16.00	1.380	99.3	1.007	0.14	0.653	0.908

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																		
30	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	133322	683	22.85	24.00	1.303	0.13	0.653	**0.851**
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI 3	133322	683	21.80	23.00	1.318	-0.11	0.390	0.514
	LTE Band 71	20M	QPSK	100	0	-	Front	5mm	Ant 0	DSI 3	133322	683	21.70	23.00	1.349	-0.14	0.382	0.515
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	133322	683	22.85	24.00	1.303	0.05	0.359	0.468
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	133322	683	21.80	23.00	1.318	-0.17	0.259	0.341
	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	133322	683	22.85	24.00	1.303	0.13	0.070	0.091
	LTE Band 71	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI 3	133322	683	21.80	23.00	1.318	0.15	0.044	0.058
	LTE Band 71	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	133322	683	22.85	24.00	1.303	-0.14	0.290	0.378
	LTE Band 71	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI 3	133322	683	21.80	23.00	1.318	0.05	0.183	0.241
	LTE Band 71	20M	QPSK	1	0	-	Bottom side	5mm	Ant 0	DSI 3	133322	683	22.85	24.00	1.303	-0.05	0.565	0.736
	LTE Band 71	20M	QPSK	50	0	-	Bottom side	5mm	Ant 0	DSI 3	133322	683	21.80	23.00	1.318	-0.01	0.350	0.461
	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	133322	683	22.43	24.00	1.435	0.08	0.260	0.373
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI 3	133322	683	21.51	23.00	1.409	-0.05	0.161	0.227
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	133322	683	22.43	24.00	1.435	-0.03	0.509	0.731
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI 3	133322	683	21.51	23.00	1.409	0.16	0.315	0.444
	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	133322	683	22.43	24.00	1.435	-0.17	0.361	0.518
	LTE Band 71	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI 3	133322	683	21.51	23.00	1.409	0.15	0.250	0.352
	LTE Band 71	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	133322	683	22.43	24.00	1.435	0.05	0.146	0.210
	LTE Band 71	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI 3	133322	683	21.51	23.00	1.409	0.04	0.087	0.123
	LTE Band 71	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	133322	683	22.43	24.00	1.435	0.05	0.451	0.647
	LTE Band 71	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	133322	683	21.51	23.00	1.409	-0.02	0.277	0.390
31	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	23095	707.5	22.84	24.00	1.306	-0.02	0.793	**1.036**
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	DSI 3	23095	707.5	21.74	23.00	1.337	-0.05	0.467	0.624
	LTE Band 12	10M	QPSK	50	0	-	Front	5mm	Ant 0	DSI 3	23095	707.5	21.65	23.00	1.365	0.05	0.462	0.630
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	23095	707.5	22.84	24.00	1.306	-0.02	0.702	0.917
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	DSI 3	23095	707.5	21.74	23.00	1.337	0.03	0.415	0.555
	LTE Band 12	10M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	23095	707.5	21.65	23.00	1.365	0.06	0.405	0.553
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	23095	707.5	22.84	24.00	1.306	0.02	0.131	0.171
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	DSI 3	23095	707.5	21.74	23.00	1.337	0.12	0.050	0.067
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	23095	707.5	22.84	24.00	1.306	-0.07	0.397	0.519
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	DSI 3	23095	707.5	21.74	23.00	1.337	0.08	0.235	0.314
	LTE Band 12	10M	QPSK	1	0	-	Bottom side	5mm	Ant 0	DSI 3	23095	707.5	22.84	24.00	1.306	-0.04	0.533	0.696
	LTE Band 12	10M	QPSK	25	0	-	Bottom side	5mm	Ant 0	DSI 3	23095	707.5	21.74	23.00	1.337	0.07	0.314	0.420
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	23095	707.5	22.40	24.00	1.445	0.02	0.286	0.413
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 1	DSI 3	23095	707.5	21.60	23.00	1.380	0.15	0.201	0.277
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	23095	707.5	22.40	24.00	1.445	0.02	0.506	0.731
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 1	DSI 3	23095	707.5	21.60	23.00	1.380	0.07	0.272	0.375
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	23095	707.5	22.40	24.00	1.445	0.09	0.296	0.428
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	DSI 3	23095	707.5	21.60	23.00	1.380	0.08	0.150	0.207
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	23095	707.5	22.40	24.00	1.445	-0.13	0.134	0.194
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	DSI 3	23095	707.5	21.60	23.00	1.380	-0.16	0.082	0.113
	LTE Band 12	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	23095	707.5	22.40	24.00	1.445	0.05	0.682	0.986
	LTE Band 12	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	DSI 3	23095	707.5	21.60	23.00	1.380	-0.06	0.431	0.595
	LTE Band 12	10M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	23095	707.5	21.37	23.00	1.455	0.02	0.426	0.620
32	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	23230	782	22.97	24.00	1.268	0.03	0.953	**1.208**
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 0	DSI 3	23230	782	21.87	23.00	1.297	0.15	0.511	0.663
	LTE Band 13	10M	QPSK	50	0	-	Front	5mm	Ant 0	DSI 3	23230	782	21.82	23.00	1.312	-0.1	0.512	0.672
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	23230	782	22.97	24.00	1.268	-0.17	0.848	1.075
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 0	DSI 3	23230	782	21.87	23.00	1.297	-0.08	0.473	0.614
	LTE Band 13	10M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	23230	782	21.82	23.00	1.312	-0.12	0.466	0.611
	LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	23230	782	22.97	24.00	1.268	0.09	0.233	0.295

	LTE Band 13	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	DSI 3	23230	782	21.87	23.00	1.297	-0.03	0.123	0.160
	LTE Band 13	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	23230	782	22.97	24.00	1.268	0.13	0.331	0.420
	LTE Band 13	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	DSI 3	23230	782	21.87	23.00	1.297	0.17	0.180	0.233
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	23230	782	22.97	24.00	1.268	0.03	0.685	0.868
	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	DSI 3	23230	782	21.87	23.00	1.297	0.01	0.376	0.488
	LTE Band 13	10M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	23230	782	21.82	23.00	1.312	0.03	0.377	0.495
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	23230	782	21.12	22.30	1.312	0.07	0.314	0.412
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 1	DSI 3	23230	782	21.09	22.30	1.321	0.02	0.302	0.399
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	23230	782	21.12	22.30	1.312	0.02	0.526	0.690
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 1	DSI 3	23230	782	21.09	22.30	1.321	0.06	0.502	0.663
	LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	23230	782	21.12	22.30	1.312	-0.12	0.203	0.266
	LTE Band 13	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	DSI 3	23230	782	21.09	22.30	1.321	0.11	0.199	0.263
	LTE Band 13	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	23230	782	21.12	22.30	1.312	0.12	0.089	0.117
	LTE Band 13	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	DSI 3	23230	782	21.09	22.30	1.321	-0.17	0.075	0.099
	LTE Band 13	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	23230	782	21.12	22.30	1.312	-0.08	0.743	0.975
	LTE Band 13	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	DSI 3	23230	782	21.09	22.30	1.321	0.17	0.701	0.926
	LTE Band 13	10M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	23230	782	21.02	22.30	1.343	-0.09	0.695	0.933
33	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	23330	793	23.07	24.00	1.239	-0.04	0.971	**1.203**
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 0	DSI 3	23330	793	22.02	23.00	1.253	-0.19	0.514	0.644
	LTE Band 14	10M	QPSK	50	0	-	Front	5mm	Ant 0	DSI 3	23330	793	21.96	23.00	1.271	0.04	0.510	0.648
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	23330	793	23.07	24.00	1.239	0.11	0.821	1.017
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 0	DSI 3	23330	793	22.02	23.00	1.253	0.11	0.453	0.568
	LTE Band 14	10M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	23330	793	21.96	23.00	1.271	-0.14	0.446	0.567
	LTE Band 14	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	23330	793	23.07	24.00	1.239	-0.18	0.175	0.217
	LTE Band 14	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	DSI 3	23330	793	22.02	23.00	1.253	0.14	0.116	0.145
	LTE Band 14	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	23330	793	23.07	24.00	1.239	0.17	0.316	0.391
	LTE Band 14	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	DSI 3	23330	793	22.02	23.00	1.253	0.18	0.171	0.214
	LTE Band 14	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	23330	793	23.07	24.00	1.239	0.05	0.670	0.830
	LTE Band 14	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	DSI 3	23330	793	22.02	23.00	1.253	0.02	0.364	0.456
	LTE Band 14	10M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	23330	793	21.96	23.00	1.271	0.04	0.360	0.457
	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	23330	793	22.64	23.50	1.219	-0.11	0.334	0.407
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 1	DSI 3	23330	793	21.85	23.00	1.303	-0.06	0.266	0.347
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	23330	793	22.64	23.50	1.219	0.06	0.528	0.644
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 1	DSI 3	23330	793	21.85	23.00	1.303	0.02	0.402	0.524
	LTE Band 14	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	23330	793	22.64	23.50	1.219	0.03	0.214	0.261
	LTE Band 14	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	DSI 3	23330	793	21.85	23.00	1.303	0.03	0.156	0.203
	LTE Band 14	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	23330	793	22.64	23.50	1.219	-0.13	0.086	0.105
	LTE Band 14	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	DSI 3	23330	793	21.85	23.00	1.303	-0.12	0.065	0.085
	LTE Band 14	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	23330	793	22.64	23.50	1.219	-0.02	0.734	0.895
	LTE Band 14	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	DSI 3	23330	793	21.85	23.00	1.303	-0.17	0.622	0.811
	LTE Band 14	10M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	23330	793	21.70	23.00	1.349	0.05	0.602	0.812
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	136100	680.5	23.11	24.00	1.227	-0.08	0.069	0.085
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	136100	680.5	23.05	24.00	1.245	-0.1	0.059	0.073
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	136100	680.5	23.11	24.00	1.227	0.05	0.065	0.080
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	136100	680.5	23.05	24.00	1.245	-0.14	0.056	0.070
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	136100	680.5	23.11	24.00	1.227	0.01	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	136100	680.5	23.05	24.00	1.245	0.19	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	136100	680.5	23.11	24.00	1.227	-0.16	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	136100	680.5	23.05	24.00	1.245	0.15	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom side	5mm	Ant 0	DSI 3	136100	680.5	23.11	24.00	1.227	0.01	0.050	0.061
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom side	5mm	Ant 0	DSI 3	136100	680.5	23.05	24.00	1.245	0.15	0.046	0.057
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	136100	680.5	23.13	24.00	1.222	-0.03	0.200	0.244
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	136100	680.5	23.06	24.00	1.242	0.07	0.177	0.220
34	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	136100	680.5	23.13	24.00	1.222	-0.03	0.389	**0.475**
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	136100	680.5	23.06	24.00	1.242	0.02	0.370	0.459
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	136100	680.5	23.13	24.00	1.222	-0.19	0.273	0.334

	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	136100	680.5	23.06	24.00	1.242	-0.09	0.239	0.297
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	136100	680.5	23.13	24.00	1.222	0.03	0.081	0.099
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	136100	680.5	23.06	24.00	1.242	-0.03	0.073	0.091
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	136100	680.5	23.13	24.00	1.222	0.1	0.309	0.378
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	136100	680.5	23.06	24.00	1.242	0.16	0.330	0.410
35	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	158600	793	23.05	24.00	1.245	-0.18	0.642	**0.799**
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	158600	793	22.98	24.00	1.265	-0.08	0.497	0.629
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	158600	793	23.05	24.00	1.245	-0.17	0.548	0.682
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	158600	793	22.98	24.00	1.265	0.09	0.447	0.565
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	158600	793	23.05	24.00	1.245	0.06	0.162	0.202
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	158600	793	22.98	24.00	1.265	0.09	0.126	0.159
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	158600	793	23.05	24.00	1.245	0.16	0.160	0.199
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	158600	793	22.98	24.00	1.265	0.16	0.175	0.221
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Bottom side	5mm	Ant 0	DSI 3	158600	793	23.05	24.00	1.245	0.07	0.394	0.490
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Bottom side	5mm	Ant 0	DSI 3	158600	793	22.98	24.00	1.265	-0.17	0.345	0.436
							835MHz											
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	DSI 3	189	836.4	27.18	27.80	1.153	0.08	0.896	1.032
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	DSI 3	128	824.2	27.05	27.80	1.189	-0.02	0.868	1.032
36	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	DSI 3	251	848.8	27.15	27.80	1.161	0.04	1.020	**1.185**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	DSI 3	189	836.4	27.18	27.80	1.153	0.02	0.778	0.897
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	DSI 3	128	824.2	27.05	27.80	1.189	0.08	0.808	0.960
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	DSI 3	251	848.8	27.15	27.80	1.161	0.05	0.891	1.035
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	DSI 3	189	836.4	27.18	27.80	1.153	0.19	0.135	0.156
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Side	5mm	Ant 0	DSI 3	189	836.4	27.18	27.80	1.153	-0.19	0.264	0.305
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	DSI 3	189	836.4	27.18	27.80	1.153	0.16	0.515	0.594
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	5mm	Ant 1	DSI 3	189	836.4	28.74	29.50	1.191	-0.06	0.558	0.665
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	5mm	Ant 1	DSI 3	189	836.4	28.74	29.50	1.191	-0.18	0.703	0.837
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	5mm	Ant 1	DSI 3	128	824.2	28.62	29.50	1.225	0.07	0.752	0.921
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	5mm	Ant 1	DSI 3	251	848.8	28.64	29.50	1.219	0.18	0.592	0.722
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Side	5mm	Ant 1	DSI 3	189	836.4	28.74	29.50	1.191	0.08	0.296	0.353
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Side	5mm	Ant 1	DSI 3	189	836.4	28.74	29.50	1.191	0.03	0.151	0.180
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Top Side	5mm	Ant 1	DSI 3	189	836.4	28.74	29.50	1.191	0.06	0.582	0.693
37	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI 3	4182	836.4	23.23	24.00	1.194	0.09	1.010	**1.206**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI 3	4132	826.4	23.17	24.00	1.211	0.09	0.851	1.030
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI 3	4233	846.6	23.15	24.00	1.216	0.04	0.893	1.086
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 3	4182	836.4	23.23	24.00	1.194	0.04	0.868	1.036
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 3	4132	826.4	23.17	24.00	1.211	0.01	0.893	1.081
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 3	4233	846.6	23.15	24.00	1.216	0.15	0.843	1.025
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	DSI 3	4182	836.4	23.23	24.00	1.194	0.14	0.166	0.198
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	DSI 3	4182	836.4	23.23	24.00	1.194	0.03	0.301	0.359
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI 3	4182	836.4	23.23	24.00	1.194	-0.17	0.635	0.758
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI 3	4182	836.4	22.76	23.50	1.186	0.09	0.457	0.542
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	4182	836.4	22.76	23.50	1.186	0.05	0.774	0.918
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	4132	826.4	22.73	23.50	1.194	0.02	0.676	0.807
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	4233	846.6	22.69	23.50	1.205	0.1	0.650	0.783
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	DSI 3	4182	836.4	22.76	23.50	1.186	0.13	0.338	0.401
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 1	DSI 3	4182	836.4	22.76	23.50	1.186	-0.19	0.124	0.147
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI 3	4182	836.4	22.76	23.50	1.186	-0.02	0.574	0.681
38	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	26865	831.5	22.87	23.50	1.156	-0.08	0.975	**1.127**
	LTE Band 5B	10M	QPSK	1	49	-	Front	5mm	Ant 0	DSI 3	20476+ 20575	831.6+ 841.5	22.81	23.50	1.172	0.03	0.933	1.094
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 0	DSI 3	26865	831.5	21.84	23.00	1.306	0.04	0.602	0.786
	LTE Band 26	15M	QPSK	75	0	-	Front	5mm	Ant 0	DSI 3	26865	831.5	21.80	23.00	1.318	0.13	0.756	0.997
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	26865	831.5	22.87	23.50	1.156	0.04	0.941	1.088
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 0	DSI 3	26865	831.5	21.84	23.00	1.306	0.07	0.666	0.870
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 0	DSI 3	26865	831.5	21.80	23.00	1.318	-0.08	0.659	0.869
	LTE Band 26	15M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	26865	831.5	22.87	23.50	1.156	-0.05	0.146	0.169

	LTE Band 26	15M	QPSK	36	0	-	Left Side	5mm	Ant 0	DSI 3	26865	831.5	21.84	23.00	1.306	0.06	0.082	0.107
	LTE Band 26	15M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	26865	831.5	22.87	23.50	1.156	0.04	0.277	0.320
	LTE Band 26	15M	QPSK	36	0	-	Right Side	5mm	Ant 0	DSI 3	26865	831.5	21.84	23.00	1.306	0.12	0.170	0.222
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	26865	831.5	22.87	23.50	1.156	0.03	0.863	0.998
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	5mm	Ant 0	DSI 3	26865	831.5	21.84	23.00	1.306	0.06	0.516	0.674
	LTE Band 26	15M	QPSK	75	0	-	Bottom Side	5mm	Ant 0	DSI 3	26865	831.5	21.80	23.00	1.318	0.08	0.510	0.672
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	26865	831.5	22.43	24.00	1.435	-0.06	0.554	0.795
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	26765	821.5	22.32	23.40	1.282	0.07	0.612	0.785
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	26965	841.5	22.31	23.40	1.285	-0.01	0.572	0.735
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 1	DSI 3	26865	831.5	21.50	23.00	1.413	0.01	0.371	0.524
	LTE Band 26	15M	QPSK	75	0	-	Front	5mm	Ant 1	DSI 3	26865	831.5	21.41	23.00	1.442	0.08	0.373	0.538
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	26865	831.5	22.43	23.40	1.250	0.04	0.748	0.935
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	26765	821.5	22.32	23.40	1.282	-0.05	0.772	0.990
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	26965	841.5	22.31	23.40	1.285	0.06	0.677	0.870
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 1	DSI 3	26865	831.5	21.50	23.00	1.413	-0.16	0.443	0.626
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 1	DSI 3	26865	831.5	21.41	23.00	1.442	0.08	0.348	0.502
	LTE Band 26	15M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	26865	831.5	22.43	23.40	1.250	0.1	0.427	0.534
	LTE Band 26	15M	QPSK	36	0	-	Left Side	5mm	Ant 1	DSI 3	26865	831.5	21.50	23.00	1.413	0.08	0.254	0.359
	LTE Band 26	15M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	26865	831.5	22.43	23.40	1.250	0.05	0.141	0.176
	LTE Band 26	15M	QPSK	36	0	-	Right Side	5mm	Ant 1	DSI 3	26865	831.5	21.50	23.00	1.413	0.1	0.084	0.119
	LTE Band 26	15M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	26865	831.5	22.43	23.40	1.250	0.06	0.711	0.889
	LTE Band 26	15M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	26765	821.5	22.32	23.40	1.282	0.04	0.786	1.008
	LTE Band 5B	10M	QPSK	1	49	-	Top Side	5mm	Ant 1	DSI 3	20450+ 20549	829+ 838.9	22.24	23.40	1.306	0.09	0.755	0.986
	LTE Band 26	15M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	26965	841.5	22.31	23.40	1.285	0.19	0.735	0.945
	LTE Band 26	15M	QPSK	36	0	-	Top Side	5mm	Ant 1	DSI 3	26865	831.5	21.50	23.00	1.413	-0.18	0.571	0.807
	LTE Band 26	15M	QPSK	36	0	-	Top Side	5mm	Ant 1	DSI 3	26765	821.5	21.44	23.00	1.432	-0.1	0.627	0.898
	LTE Band 26	15M	QPSK	36	0	-	Top Side	5mm	Ant 1	DSI 3	26965	841.5	21.43	23.00	1.435	0.14	0.558	0.801
	LTE Band 26	15M	QPSK	75	0	-	Top Side	5mm	Ant 1	DSI 3	26865	831.5	21.41	23.00	1.442	0.11	0.576	0.831
39	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	167300	836.5	23.23	24.00	1.194	-0.02	0.861	**1.028**
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	167300	836.5	23.20	24.00	1.202	0.02	0.783	0.941
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	167300	836.5	22.24	23.00	1.191	0.07	0.655	0.780
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	167300	836.5	23.23	24.00	1.194	0.09	0.755	0.901
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	167300	836.5	23.20	24.00	1.202	0.12	0.684	0.822
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	167300	836.5	22.24	23.00	1.191	0.03	0.654	0.779
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	167300	836.5	23.23	24.00	1.194	0.19	0.127	0.152
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	167300	836.5	23.20	24.00	1.202	0.08	0.147	0.177
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	167300	836.5	23.23	24.00	1.194	0.07	0.233	0.278
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	167300	836.5	23.20	24.00	1.202	0.05	0.259	0.311
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	167300	836.5	23.23	24.00	1.194	0.1	0.642	0.767
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	167300	836.5	23.20	24.00	1.202	-0.09	0.507	0.610
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	167300	836.5	23.22	24.00	1.197	-0.09	0.548	0.656
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	167300	836.5	23.19	24.00	1.205	0.09	0.345	0.416
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	167300	836.5	23.22	24.00	1.197	-0.14	0.737	0.882
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	167300	836.5	23.19	24.00	1.205	0.03	0.443	0.534
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	167300	836.5	22.21	23.00	1.199	0.04	0.438	0.525
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	167300	836.5	23.22	24.00	1.197	-0.02	0.348	0.416
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	167300	836.5	23.19	24.00	1.205	-0.05	0.194	0.234
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	167300	836.5	23.22	24.00	1.197	-0.03	0.112	0.134
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	167300	836.5	23.19	24.00	1.205	-0.19	0.107	0.129
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	167300	836.5	23.22	24.00	1.197	0.14	0.592	0.708
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	167300	836.5	23.19	24.00	1.205	-0.09	0.462	0.557

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)
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI 3	1413	1732.6	15.18	16.40	1.324	-	-	0.04	0.470	0.622
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 3	1413	1732.6	15.18	16.40	1.324	-	-	0.04	0.546	0.723
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	DSI 3	1413	1732.6	15.18	16.40	1.324	-	-	0.17	0.016	0.021
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	DSI 3	1413	1732.6	15.18	16.40	1.324	-	-	0.05	0.092	0.122
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	DSI 3	1312	1712.4	15.10	16.40	1.349	-	-	-0.09	0.092	0.124
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	DSI 3	1513	1752.6	15.08	16.40	1.355	-	-	-0.04	0.087	0.118
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI 3	1413	1732.6	15.18	16.40	1.324	-	-	-0.12	0.860	1.139
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI 3	1312	1712.4	15.10	16.40	1.349	-	-	-0.05	0.801	1.081
40	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI 3	1513	1752.6	15.08	16.40	1.355	-	-	-0.05	0.923	**1.251**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI 3	1413	1732.6	16.39	17.20	1.205	-	-	0.17	0.698	0.841
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI 3	1312	1712.4	16.28	17.20	1.236	-	-	0.12	0.613	0.758
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI 3	1513	1752.6	16.34	17.20	1.219	-	-	-0.17	0.646	0.787
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	1413	1732.6	16.39	17.20	1.205	-	-	0.01	0.765	0.922
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	1312	1712.4	16.28	17.20	1.236	-	-	-0.07	0.727	0.899
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	1513	1752.6	16.34	17.20	1.219	-	-	0.06	0.721	0.879
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	DSI 3	1413	1732.6	16.39	17.20	1.205	-	-	-0.03	0.223	0.269
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 1	DSI 3	1413	1732.6	16.39	17.20	1.205	-	-	-0.17	0.034	0.041
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI 3	1413	1732.6	16.39	17.20	1.205	-	-	-0.1	0.790	0.952
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI 3	1312	1712.4	16.28	17.20	1.236	-	-	-0.07	0.794	0.981
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI 3	1513	1752.6	16.34	17.20	1.219	-	-	-0.17	0.788	0.961
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	132322	1745	14.81	16.10	1.346	-	-	0.07	0.490	0.659
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI 3	132322	1745	14.75	16.10	1.365	-	-	0.1	0.405	0.553
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	132322	1745	14.81	16.10	1.346	-	-	-0.08	0.604	0.813
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	132072	1720	14.78	16.10	1.355	-	-	0.03	0.502	0.680
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	132572	1770	14.74	16.10	1.368	-	-	-0.05	0.486	0.665
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	132322	1745	14.75	16.10	1.365	-	-	0.14	0.419	0.572
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 0	DSI 3	132322	1745	14.70	16.10	1.380	-	-	0.07	0.418	0.577
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	132322	1745	14.81	16.10	1.346	-	-	-0.09	0.011	0.015
	LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI 3	132322	1745	14.75	16.10	1.365	-	-	0.06	0.008	0.011
	LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	132322	1745	14.81	16.10	1.346	-	-	0.03	0.089	0.120
	LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI 3	132322	1745	14.75	16.10	1.365	-	-	-0.1	0.069	0.094
41	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	132322	1745	14.81	16.10	1.346	-	-	0.03	0.932	**1.254**
	LTE Band 66C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	DSI 3	132322+ 132520	1745+ 1764.8	14.72	16.10	1.374	-	-	0.05	0.901	1.238
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	132072	1720	14.78	16.10	1.355	-	-	0.07	0.836	1.133
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	132572	1770	14.74	16.10	1.368	-	-	-0.18	0.878	1.201
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	132322	1745	14.75	16.10	1.365	-	-	0.13	0.704	0.961
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	132072	1720	14.64	16.10	1.400	-	-	0.08	0.679	0.950
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	132572	1770	14.63	16.10	1.403	-	-	0.13	0.676	0.948
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI 3	132322	1745	14.70	16.10	1.380	-	-	-0.04	0.708	0.977
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	132322	1745	16.15	17.10	1.245	-	-	0.05	0.671	0.835
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	132072	1720	15.95	17.10	1.303	-	-	-0.02	0.630	0.821
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	132572	1770	16.12	17.10	1.253	-	-	-0.11	0.625	0.783
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI 3	132322	1745	16.11	17.10	1.256	-	-	-0.07	0.545	0.685
	LTE Band 66	20M	QPSK	100	0	-	Front	5mm	Ant 1	DSI 3	132322	1745	16.04	17.10	1.276	-	-	-0.05	0.543	0.693
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	132322	1745	16.15	17.10	1.245	-	-	-0.02	0.687	0.855
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	132072	1720	15.95	17.10	1.303	-	-	0.05	0.728	0.949
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	132572	1770	16.12	17.10	1.253	-	-	0.07	0.787	0.986
	LTE Band 66C	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	132572+ 132374	1770+ 1750.2	16.03	17.10	1.279	-	-	-0.14	0.758	0.970
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI 3	132322	1745	16.11	17.10	1.256	-	-	0.12	0.534	0.671
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 1	DSI 3	132322	1745	16.04	17.10	1.276	-	-	0.06	0.534	0.682
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	132322	1745	16.15	17.10	1.245	-	-	-0.02	0.209	0.260
	LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI 3	132322	1745	16.11	17.10	1.256	-	-	-0.01	0.198	0.249
	LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	132322	1745	16.15	17.10	1.245	-	-	0.11	0.032	0.040
	LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI 3	132322	1745	16.11	17.10	1.256	-	-	-0.03	0.024	0.030
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	132322	1745	16.15	17.10	1.245	-	-	-0.17	0.748	0.931

	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	132072	1720	15.95	17.10	1.303	-	-	0.09	0.716	0.933
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	132572	1770	16.12	17.10	1.253	-	-	-0.1	0.780	0.977
	LTE Band 66	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	132322	1745	16.11	17.10	1.256	-	-	0.02	0.585	0.735
	LTE Band 66	20M	QPSK	100	0	-	Top Side	5mm	Ant 1	DSI 3	132322	1745	16.04	17.10	1.276	-	-	-0.14	0.623	0.795
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	349000	1745	14.02	15.50	1.406	-	-	-0.04	0.600	0.844
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	349000	1745	14.00	15.50	1.413	-	-	-0.17	0.462	0.653
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	349000	1745	13.86	15.50	1.459	-	-	-0.1	0.443	0.646
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	349000	1745	14.02	15.50	1.406	-	-	0.11	0.506	0.711
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	349000	1745	14.00	15.50	1.413	-	-	0.02	0.459	0.648
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	349000	1745	14.02	15.50	1.406	-	-	0.19	0.016	0.022
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	349000	1745	14.00	15.50	1.413	-	-	0.06	0.015	0.021
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	349000	1745	14.02	15.50	1.406	-	-	0.16	0.097	0.136
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	349000	1745	14.00	15.50	1.413	-	-	0.08	0.081	0.114
42	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	349000	1745	14.02	15.50	1.406	-	-	0.08	0.889	**1.250**
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	349000	1745	14.00	15.50	1.413	-	-	-0.1	0.875	1.236
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	349000	1745	13.86	15.50	1.459	-	-	-0.01	0.773	1.128
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	349000	1745	16.09	17.00	1.233	-	-	-0.1	0.433	0.534
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	349000	1745	16.03	17.00	1.250	-	-	0.07	0.498	0.623
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	349000	1745	16.09	17.00	1.233	-	-	-0.09	0.421	0.519
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	349000	1745	16.03	17.00	1.250	-	-	0.12	0.402	0.503
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	349000	1745	16.09	17.00	1.233	-	-	-0.16	0.166	0.205
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	349000	1745	16.03	17.00	1.250	-	-	-0.03	0.159	0.199
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	349000	1745	16.09	17.00	1.233	-	-	0.02	0.043	0.053
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	349000	1745	16.03	17.00	1.250	-	-	-0.11	0.050	0.063
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	349000	1745	16.09	17.00	1.233	-	-	0.09	0.693	0.855
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	349000	1745	16.03	17.00	1.250	-	-	-0.07	0.788	0.985
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	349000	1745	15.91	17.00	1.285	-	-	0.13	0.815	1.048
									1900MHz											
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	DSI 3	661	1880	18.01	19.20	1.315	-	-	0.05	0.322	0.424
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	DSI 3	661	1880	18.01	19.20	1.315	-	-	0.08	0.314	0.413
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	DSI 3	661	1880	18.01	19.20	1.315	-	-	0.16	0.017	0.022
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Side	5mm	Ant 0	DSI 3	661	1880	18.01	19.20	1.315	-	-	0.01	0.057	0.075
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	DSI 3	661	1880	18.01	19.20	1.315	-	-	0.07	0.669	0.880
43	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	DSI 3	512	1850.2	18.00	19.20	1.318	-	-	-0.07	0.955	**1.259**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	DSI 3	810	1909.8	18.05	19.20	1.303	-	-	0.09	0.731	0.953
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 1	DSI 3	661	1880	20.72	21.70	1.253	-	-	-0.11	0.423	0.530
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 1	DSI 3	661	1880	20.72	21.70	1.253	-	-	0.05	0.445	0.558
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 1	DSI 3	661	1880	20.72	21.70	1.253	-	-	-0.16	0.250	0.313
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Side	5mm	Ant 1	DSI 3	661	1880	20.72	21.70	1.253	-	-	0.14	0.029	0.036
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	5mm	Ant 1	DSI 3	661	1880	20.72	21.70	1.253	-	-	0.03	0.679	0.851
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	5mm	Ant 1	DSI 3	512	1850.2	20.60	21.70	1.288	-	-	0.09	0.765	0.986
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	5mm	Ant 1	DSI 3	810	1909.8	20.67	21.70	1.268	-	-	0.04	0.646	0.819
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI 3	9400	1880	14.13	14.80	1.167	-	-	0.04	0.532	0.621
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 3	9400	1880	14.13	14.80	1.167	-	-	-0.14	0.646	0.754
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	DSI 3	9400	1880	14.13	14.80	1.167	-	-	-0.02	0.026	0.030
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	DSI 3	9400	1880	14.13	14.80	1.167	-	-	0.13	0.098	0.114
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI 3	9400	1880	14.13	14.80	1.167	-	-	-0.03	1.020	1.190
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI 3	9262	1852.4	14.07	14.80	1.183	-	-	0.06	1.020	1.207
44	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI 3	9538	1907.6	14.09	14.80	1.178	-	-	-0.04	1.050	**1.236**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI 3	9400	1880	15.79	16.70	1.233	-	-	0.11	0.631	0.778
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	9400	1880	15.79	16.70	1.233	-	-	0.06	0.756	0.932
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	9262	1852.4	15.67	16.70	1.268	-	-	0.18	0.717	0.909
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	9538	1907.6	15.62	16.70	1.282	-	-	0.02	0.615	0.789
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	DSI 3	9400	1880	15.79	16.70	1.233	-	-	0.07	0.260	0.321
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 1	DSI 3	9400	1880	15.79	16.70	1.233	-	-	0.02	0.030	0.037
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI 3	9400	1880	15.79	16.70	1.233	-	-	-0.04	0.757	0.933
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI 3	9262	1852.4	15.67	16.70	1.268	-	-	-0.08	0.780	0.989
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI 3	9538	1907.6	15.62	16.70	1.282	-	-	0.05	0.685	0.878
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	18900	1880	13.83	14.70	1.222	-	-	0.01	0.508	0.621

	LTE Band 2	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI 3	18900	1880	13.75	14.70	1.245	-	-	-0.11	0.368	0.458
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	18900	1880	13.83	14.70	1.222	-	-	0.12	0.533	0.651
	LTE Band 2	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	18900	1880	13.75	14.70	1.245	-	-	0.09	0.412	0.513
	LTE Band 2	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	18900	1880	13.83	14.70	1.222	-	-	0.03	0.025	0.031
	LTE Band 2	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI 3	18900	1880	13.75	14.70	1.245	-	-	-0.06	0.019	0.024
	LTE Band 2	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	18900	1880	13.83	14.70	1.222	-	-	-0.03	0.091	0.111
	LTE Band 2	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI 3	18900	1880	13.75	14.70	1.245	-	-	-0.02	0.068	0.085
45	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	18900	1880	13.83	14.70	1.222	-	-	0.1	1.020	**1.246**
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	18700	1860	13.79	14.70	1.233	-	-	0.03	0.933	1.150
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	19100	1900	13.72	14.70	1.253	-	-	0.06	0.982	1.231
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	18900	1880	13.75	14.70	1.245	-	-	0.01	0.772	0.961
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	18700	1860	13.57	14.70	1.297	-	-	0.01	0.575	0.746
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	19100	1900	13.67	14.70	1.268	-	-	0.02	0.618	0.783
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI 3	18900	1880	13.71	14.70	1.256	-	-	-0.17	0.772	0.970
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	18900	1880	16.72	17.80	1.282	-	-	0.07	0.648	0.831
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	18700	1860	16.64	17.80	1.306	-	-	0.06	0.692	0.904
	LTE Band 2	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	19100	1900	16.69	17.80	1.291	-	-	-0.16	0.643	0.830
	LTE Band 2	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI 3	18900	1880	16.67	17.80	1.297	-	-	0.05	0.545	0.707
	LTE Band 2	20M	QPSK	100	0	-	Front	5mm	Ant 1	DSI 3	18900	1880	16.60	17.80	1.318	-	-	0.18	0.549	0.724
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	18900	1880	16.72	17.80	1.282	-	-	0.03	0.710	0.910
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	18700	1860	16.64	17.80	1.306	-	-	0.01	0.757	0.989
	LTE Band 2	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	19100	1900	16.69	17.80	1.291	-	-	0.01	0.718	0.927
	LTE Band 2	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI 3	18900	1880	16.67	17.80	1.297	-	-	-0.02	0.582	0.755
	LTE Band 2	20M	QPSK	100	0	-	Back	5mm	Ant 1	DSI 3	18900	1880	16.60	17.80	1.318	-	-	0.08	0.582	0.767
	LTE Band 2	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	18900	1880	16.72	17.80	1.282	-	-	-0.11	0.346	0.444
	LTE Band 2	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI 3	18900	1880	16.67	17.80	1.297	-	-	0.15	0.269	0.349
	LTE Band 2	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	18900	1880	16.72	17.80	1.282	-	-	0.06	0.029	0.037
	LTE Band 2	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI 3	18900	1880	16.67	17.80	1.297	-	-	0.09	0.021	0.027
	LTE Band 2	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	18900	1880	16.72	17.80	1.282	-	-	-0.17	0.577	0.740
	LTE Band 2	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	18900	1880	16.67	17.80	1.297	-	-	0.16	0.606	0.786
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	376000	1880	14.46	15.70	1.330	-	-	-0.13	0.434	0.577
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	376000	1880	14.44	15.70	1.337	-	-	-0.12	0.459	0.613
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	376000	1880	14.46	15.70	1.330	-	-	0.1	0.445	0.592
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	376000	1880	14.44	15.70	1.337	-	-	0.06	0.454	0.607
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	376000	1880	14.46	15.70	1.330	-	-	-0.13	0.021	0.028
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	376000	1880	14.44	15.70	1.337	-	-	0.13	0.022	0.029
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	376000	1880	14.46	15.70	1.330	-	-	0.01	0.076	0.101
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	376000	1880	14.44	15.70	1.337	-	-	0.07	0.075	0.100
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	376000	1880	14.46	15.70	1.330	-	-	0.17	0.890	1.184
46	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	372000	1860	14.35	15.70	1.365	-	-	0.02	0.913	**1.246**
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	380000	1900	14.40	15.70	1.349	-	-	-0.05	0.859	1.159
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	376000	1880	14.44	15.70	1.337	-	-	0.18	0.838	1.120
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	372000	1860	14.29	15.70	1.384	-	-	0.15	0.855	1.183
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	380000	1900	14.38	15.70	1.355	-	-	-0.13	0.846	1.146
	FR1 n2	20M	QPSK	100	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	376000	1880	14.41	15.70	1.346	-	-	0.12	0.847	1.140
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	376000	1880	16.93	17.80	1.222	-	-	0.1	0.544	0.665
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	376000	1880	16.86	17.80	1.242	-	-	-0.05	0.491	0.610
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	376000	1880	16.93	17.80	1.222	-	-	-0.1	0.630	0.770
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	376000	1880	16.86	17.80	1.242	-	-	-0.08	0.600	0.745
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	376000	1880	16.93	17.80	1.222	-	-	0.16	0.202	0.247
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	376000	1880	16.86	17.80	1.242	-	-	-0.03	0.195	0.242
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	376000	1880	16.93	17.80	1.222	-	-	-0.13	0.026	0.032
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	376000	1880	16.86	17.80	1.242	-	-	0.17	0.028	0.035
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	376000	1880	16.93	17.80	1.222	-	-	0.11	0.684	0.836
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	372000	1860	16.90	17.80	1.230	-	-	-0.11	0.710	0.873
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	380000	1900	16.89	17.80	1.233	-	-	0.13	0.694	0.856
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	376000	1880	16.86	17.80	1.242	-	-	-0.03	0.783	0.972
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	372000	1860	16.73	17.80	1.279	-	-	-0.15	0.407	0.521
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	380000	1900	16.81	17.80	1.256	-	-	-0.16	0.624	0.784

	FR1 n2	20M	QPSK	100	0	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	376000	1880	16.80	17.80	1.259	-	-	0.11	0.637	0.802
	2600MHz																			
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	21100	2535	17.69	18.80	1.291	-	-	0.06	0.419	0.541
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI 3	21100	2535	17.64	18.80	1.306	-	-	0.04	0.336	0.439
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	21100	2535	17.69	18.80	1.291	-	-	0.16	0.750	0.968
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	20850	2510	17.54	18.80	1.337	-	-	-0.1	0.682	0.912
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	21350	2560	17.66	18.80	1.300	-	-	0.04	0.824	1.071
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	21100	2535	17.64	18.80	1.306	-	-	0.19	0.602	0.786
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 0	DSI 3	21100	2535	17.61	18.80	1.315	-	-	-0.18	0.606	0.797
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	21100	2535	17.69	18.80	1.291	-	-	0.18	0.059	0.076
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI 3	21100	2535	17.64	18.80	1.306	-	-	-0.17	0.044	0.057
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	21100	2535	17.69	18.80	1.291	-	-	0.1	0.042	0.054
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI 3	21100	2535	17.64	18.80	1.306	-	-	-0.1	0.035	0.046
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	21100	2535	17.69	18.80	1.291	-	-	-0.12	0.944	1.219
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	20850	2510	17.54	18.80	1.337	-	-	0.08	0.902	1.206
47	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	21350	2560	17.66	18.80	1.300	-	-	0.11	0.956	**1.243**
	LTE Band 7C	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	21350+ 21152	2560+ 2540.2	17.49	18.80	1.352	-	-	0.08	0.918	1.241
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	21100	2535	17.64	18.80	1.306	-	-	-0.04	0.739	0.965
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	20850	2510	17.52	18.80	1.343	-	-	0.1	0.735	0.987
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	21350	2560	17.51	18.80	1.346	-	-	0.08	0.748	1.007
	LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI 3	21100	2535	17.61	18.80	1.315	-	-	0.02	0.735	0.967
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	21100	2535	14.88	15.90	1.265	-	-	0.07	0.334	0.422
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI 3	21100	2535	14.86	15.90	1.271	-	-	0.03	0.239	0.304
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	21100	2535	14.88	15.90	1.265	-	-	0.02	0.435	0.550
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI 3	21100	2535	14.86	15.90	1.271	-	-	0.06	0.448	0.569
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	21100	2535	14.88	15.90	1.265	-	-	0.08	0.055	0.070
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI 3	21100	2535	14.86	15.90	1.271	-	-	0.05	0.048	0.061
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	21100	2535	14.88	15.90	1.265	-	-	0.02	0.010	0.013
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI 3	21100	2535	14.86	15.90	1.271	-	-	0.04	0.001	0.001
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	21100	2535	14.88	15.90	1.265	-	-	0.08	0.725	0.917
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	20850	2510	14.75	15.90	1.303	-	-	0.15	0.693	0.903
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	21350	2560	14.69	15.90	1.321	-	-	-0.08	0.748	0.988
	LTE Band 7C	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	21350+ 21152	2560+ 2540.2	14.63	15.90	1.340	-	-	0.09	0.728	0.975
	LTE Band 7	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	21100	2535	14.86	15.90	1.271	-	-	0.13	0.588	0.747
	LTE Band 7	20M	QPSK	100	0	-	Top Side	5mm	Ant 1	DSI 3	21100	2535	14.79	15.90	1.291	-	-	0.03	0.580	0.749
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI 3	40620	2593	19.98	20.60	1.153	62.9	1.006	0.07	0.481	0.558
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI 3	40620	2593	19.96	20.60	1.159	62.9	1.006	0.08	0.409	0.477
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	40620	2593	19.98	20.60	1.153	62.9	1.006	-0.07	0.875	1.015
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	39750	2506	19.91	20.60	1.172	62.9	1.006	0.06	0.621	0.732
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	40185	2549.5	19.93	20.60	1.167	62.9	1.006	0.02	0.742	0.871
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	41055	2636.5	19.86	20.60	1.186	62.9	1.006	0.01	0.788	0.940
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	41490	2680	19.89	20.60	1.178	62.9	1.006	-0.06	1.030	1.220
	LTE Band 41C	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	41490+ 41492	2680+ 2680.2	19.74	20.60	1.219	62.9	1.006	0.04	0.992	1.216
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	40620	2593	19.96	20.60	1.159	62.9	1.006	0.17	0.792	0.923
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	39750	2506	19.61	20.60	1.256	62.9	1.006	0.01	0.571	0.721
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	40185	2549.5	19.66	20.60	1.242	62.9	1.006	-0.04	0.681	0.851
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	41055	2636.5	19.78	20.60	1.208	62.9	1.006	-0.07	0.709	0.861
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI 3	41490	2680	19.83	20.60	1.194	62.9	1.006	0.06	0.911	1.094
	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 0	DSI 3	40620	2593	19.89	20.60	1.178	62.9	1.006	-0.1	0.786	0.931
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI 3	40620	2593	19.98	20.60	1.153	62.9	1.006	0.01	0.041	0.048
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI 3	40620	2593	19.96	20.60	1.159	62.9	1.006	0.04	0.035	0.041
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI 3	40620	2593	19.98	20.60	1.153	62.9	1.006	0.03	0.045	0.052
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI 3	40620	2593	19.96	20.60	1.159	62.9	1.006	0.03	0.043	0.050
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	40620	2593	19.98	20.60	1.153	62.9	1.006	0.06	0.875	1.015
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	39750	2506	19.91	20.60	1.172	62.9	1.006	0.12	0.863	1.018
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	40185	2549.5	19.93	20.60	1.167	62.9	1.006	0.01	0.886	1.040
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	41055	2636.5	19.86	20.60	1.186	62.9	1.006	-0.07	0.818	0.976
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI 3	41490	2680	19.89	20.60	1.178	62.9	1.006	0.05	0.773	0.916

	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	40620	2593	19.96	20.60	1.159	62.9	1.006	0.01	0.738	0.860
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	39750	2506	19.61	20.60	1.256	62.9	1.006	0.19	0.792	1.001
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	40185	2549.5	19.66	20.60	1.242	62.9	1.006	0.05	0.757	0.946
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	41055	2636.5	19.78	20.60	1.208	62.9	1.006	0.02	0.595	0.723
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI 3	41490	2680	19.83	20.60	1.194	62.9	1.006	-0.03	0.585	0.703
	LTE Band 41	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI 3	40620	2593	19.89	20.60	1.178	62.9	1.006	0.04	0.733	0.868
48	LTE Band 41_HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	41490	2680	21.45	22.20	1.189	42.9	1.009	-0.06	1.050	**1.259**
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI 3	40620	2593	18.42	19.30	1.225	62.9	1.006	0.06	0.422	0.520
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI 3	40620	2593	18.39	19.30	1.233	62.9	1.006	0.08	0.365	0.453
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	40620	2593	18.42	19.30	1.225	62.9	1.006	-0.17	0.492	0.606
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	39750	2506	18.30	19.30	1.259	62.9	1.006	-0.08	0.546	0.691
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	40185	2549.5	18.37	19.30	1.239	62.9	1.006	-0.02	0.522	0.651
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	41055	2636.5	18.27	19.30	1.268	62.9	1.006	0.06	0.468	0.597
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI 3	41490	2680	18.32	19.30	1.253	62.9	1.006	-0.05	0.492	0.620
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI 3	40620	2593	18.39	19.30	1.233	62.9	1.006	0.19	0.452	0.561
	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 1	DSI 3	40620	2593	18.33	19.30	1.250	62.9	1.006	0.05	0.452	0.569
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI 3	40620	2593	18.42	19.30	1.225	62.9	1.006	-0.12	0.041	0.051
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI 3	40620	2593	18.39	19.30	1.233	62.9	1.006	0.09	0.039	0.048
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI 3	40620	2593	18.42	19.30	1.225	62.9	1.006	0.04	0.020	0.025
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI 3	40620	2593	18.39	19.30	1.233	62.9	1.006	0.09	0.016	0.020
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	40620	2593	18.42	19.30	1.225	62.9	1.006	-0.14	0.746	0.919
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	39750	2506	18.30	19.30	1.259	62.9	1.006	0.04	0.755	0.956
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	40185	2549.5	18.37	19.30	1.239	62.9	1.006	0.09	0.792	0.987
	LTE Band 41C	20M	QPSK	1	99	-	Top Side	5mm	Ant 1	DSI 3	40185+ 40383	2549.5+ 2569.3	18.14	19.30	1.306	62.9	1.006	0.08	0.750	0.986
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	41055	2636.5	18.27	19.30	1.268	62.9	1.006	-0.05	0.755	0.963
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	41490	2680	18.32	19.30	1.253	62.9	1.006	0.08	0.669	0.843
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	40620	2593	18.39	19.30	1.233	62.9	1.006	0.04	0.695	0.862
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	39750	2506	18.19	19.30	1.291	62.9	1.006	0.02	0.680	0.883
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	40185	2549.5	18.22	19.30	1.282	62.9	1.006	-0.14	0.665	0.858
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	41055	2636.5	18.38	19.30	1.236	62.9	1.006	-0.17	0.699	0.869
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DSI 3	41490	2680	18.17	19.30	1.297	62.9	1.006	0.03	0.680	0.887
	LTE Band 41	20M	QPSK	100	0	-	Top Side	5mm	Ant 1	DSI 3	40620	2593	18.33	19.30	1.250	62.9	1.006	0.08	0.708	0.890
	LTE Band 41_HPUE	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI 3	40185	2549.5	19.88	20.90	1.265	42.9	1.009	0.05	0.766	0.978
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	507000	2535	18.39	19.60	1.321	-	-	-0.11	0.520	0.687
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI 3	507000	2535	18.32	19.60	1.343	-	-	-0.13	0.531	0.713
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	507000	2535	18.39	19.60	1.321	-	-	-0.04	0.739	0.976
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	507000	2535	18.32	19.60	1.343	-	-	0.03	0.661	0.888
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI 3	507000	2535	18.30	19.60	1.349	-	-	0.06	0.648	0.874
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	507000	2535	18.39	19.60	1.321	-	-	-0.13	0.001	0.001
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI 3	507000	2535	18.32	19.60	1.343	-	-	0.16	0.051	0.068
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	507000	2535	18.39	19.60	1.321	-	-	-0.13	0.001	0.001
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI 3	507000	2535	18.32	19.60	1.343	-	-	0.04	0.001	0.001
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	507000	2535	18.39	19.60	1.321	-	-	0.13	0.914	1.208
49	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	507000	2535	18.32	19.60	1.343	-	-	0.06	0.923	**1.239**
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI 3	507000	2535	18.30	19.60	1.349	-	-	0.16	0.828	1.117
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	507000	2535	15.46	16.30	1.213	-	-	0.01	0.352	0.427
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI 3	507000	2535	15.36	16.30	1.242	-	-	0.11	0.366	0.454
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	507000	2535	15.46	16.30	1.213	-	-	-0.05	0.514	0.624
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI 3	507000	2535	15.36	16.30	1.242	-	-	0.08	0.498	0.618
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	507000	2535	15.46	16.30	1.213	-	-	0.17	0.053	0.064
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI 3	507000	2535	15.36	16.30	1.242	-	-	0.11	0.045	0.056
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	507000	2535	15.46	16.30	1.213	-	-	0.05	0.001	0.001
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI 3	507000	2535	15.36	16.30	1.242	-	-	0.03	0.001	0.001
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	507000	2535	15.46	16.30	1.213	-	-	0.14	0.738	0.895
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	507000	2535	15.36	16.30	1.242	-	-	0.01	0.791	0.982
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Top Side	5mm	Ant 1	DSI 3	507000	2535	15.32	16.30	1.253	-	-	-0.16	0.738	0.925
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	DSI 3	518598	2592.99	19.19	19.90	1.178	-	-	-0.09	0.467	0.550
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 0	DSI 3	518598	2592.99	19.18	19.90	1.180	-	-	-0.13	0.539	0.636
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	DSI 3	518598	2592.99	19.19	19.90	1.178	-	-	0.08	0.674	0.794

	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	DSI 3	518598	2592.99	19.18	19.90	1.180	-	-	-0.03	0.955	1.127
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 0	DSI 3	518598	2592.99	18.98	19.90	1.236	-	-	0.04	0.907	1.121
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 0	DSI 3	518598	2592.99	19.19	19.90	1.178	-	-	0.09	0.055	0.065
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 0	DSI 3	518598	2592.99	19.18	19.90	1.180	-	-	0.09	0.045	0.053
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 0	DSI 3	518598	2592.99	19.19	19.90	1.178	-	-	0.12	0.035	0.041
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 0	DSI 3	518598	2592.99	19.18	19.90	1.180	-	-	-0.17	0.049	0.058
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI 3	518598	2592.99	19.19	19.90	1.178	-	-	-0.02	0.783	0.922
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI 3	518598	2592.99	19.18	19.90	1.180	-	-	0.03	0.865	1.021
50	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI 3	518598	2592.99	18.98	19.90	1.236	-	-	0.01	1.010	**1.248**
	FR1 n41_HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI 3	518598	2592.99	22.06	22.90	1.213	50	1.000	0.03	0.969	1.176
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	DSI 3	518598	2592.99	15.52	16.40	1.225	-	-	0.01	0.325	0.398
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 1	DSI 3	518598	2592.99	15.46	16.40	1.242	-	-	0.04	0.301	0.374
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI 3	518598	2592.99	15.52	16.40	1.225	-	-	0.02	0.475	0.582
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI 3	518598	2592.99	15.46	16.40	1.242	-	-	-0.16	0.424	0.526
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 1	DSI 3	518598	2592.99	15.52	16.40	1.225	-	-	0.06	0.045	0.055
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 1	DSI 3	518598	2592.99	15.46	16.40	1.242	-	-	0.02	0.032	0.040
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 1	DSI 3	518598	2592.99	15.52	16.40	1.225	-	-	0.05	0.007	0.009
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 1	DSI 3	518598	2592.99	15.46	16.40	1.242	-	-	-0.18	0.009	0.011
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 1	DSI 3	518598	2592.99	15.52	16.40	1.225	-	-	0.09	0.775	0.949
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 1	DSI 3	518598	2592.99	15.46	16.40	1.242	-	-	-0.19	0.623	0.774
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 1	DSI 3	518598	2592.99	15.32	16.40	1.282	-	-	0.15	0.638	0.818
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 1	DSI 3	518598	2592.99	18.55	19.40	1.216	50	1.000	-0.05	0.806	0.980
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 3	518598	2592.99	15.81	17.20	1.377	-	-	-0.14	0.291	0.401
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 3	518598	2592.99	15.79	17.20	1.384	-	-	0.14	0.298	0.412
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 3	518598	2592.99	15.81	17.20	1.377	-	-	0.01	0.227	0.313
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 3	518598	2592.99	15.79	17.20	1.384	-	-	0.07	0.227	0.314
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	518598	2592.99	15.81	17.20	1.377	-	-	0.06	0.540	0.744
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	518598	2592.99	15.79	17.20	1.384	-	-	-0.09	0.708	0.980
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	518598	2592.99	15.61	17.20	1.442	-	-	0.01	0.596	0.860
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI 3	518598	2592.99	15.81	17.20	1.377	-	-	0.08	0.001	0.001
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI 3	518598	2592.99	15.79	17.20	1.384	-	-	0.06	0.011	0.015
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI 3	518598	2592.99	15.81	17.20	1.377	-	-	-0.04	0.056	0.077
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI 3	518598	2592.99	15.79	17.20	1.384	-	-	0.04	0.066	0.091
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	518598	2592.99	18.71	20.20	1.409	50	1.000	-0.07	0.684	0.964
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	DSI 3	518598	2592.99	19.58	20.30	1.180	-	-	-0.08	0.419	0.495
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 7	DSI 3	518598	2592.99	19.52	20.30	1.197	-	-	0.09	0.459	0.549
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	DSI 3	518598	2592.99	19.58	20.30	1.180	-	-	-0.02	0.380	0.449
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	DSI 3	518598	2592.99	19.52	20.30	1.197	-	-	-0.07	0.412	0.493
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	518598	2592.99	19.58	20.30	1.180	-	-	-0.18	0.901	1.063
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	518598	2592.99	19.52	20.30	1.197	-	-	0.05	0.926	1.108
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	518598	2592.99	19.51	20.30	1.199	-	-	-0.06	1.030	1.235
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 7	DSI 3	518598	2592.99	19.58	20.30	1.180	-	-	0.12	0.025	0.030
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 7	DSI 3	518598	2592.99	19.52	20.30	1.197	-	-	0.15	0.026	0.031
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 7	DSI 3	518598	2592.99	19.58	20.30	1.180	-	-	0.02	0.099	0.117
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 7	DSI 3	518598	2592.99	19.52	20.30	1.197	-	-	0.06	0.098	0.117
	FR1 n41_HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	518598	2592.99	22.55	23.30	1.189	50	1.000	0.02	0.982	1.167
3500MHz																				
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSI 3	55830	3609	13.82	14.80	1.253	62.9	1.006	0.18	0.278	0.350
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSI 3	55830	3609	13.75	14.80	1.274	62.9	1.006	0.07	0.255	0.327
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI 3	55830	3609	13.82	14.80	1.253	62.9	1.006	0.1	0.201	0.253
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI 3	55830	3609	13.75	14.80	1.274	62.9	1.006	0.03	0.184	0.236
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI 3	55830	3609	13.82	14.80	1.253	62.9	1.006	0.04	0.629	0.793
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI 3	55340	3560	13.71	14.80	1.285	62.9	1.006	0.06	0.480	0.621
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI 3	56150	3641	13.75	14.80	1.274	62.9	1.006	-0.01	0.726	0.930
51	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI 3	56640	3690	13.69	14.80	1.291	62.9	1.006	-0.09	0.762	**0.990**
	LTE Band 48C	20M	QPSK	1	99	-	Left Side	5mm	Ant 2	DSI 3	56442 +56640	3670.2 +3690	13.68	14.80	1.294	62.9	1.006	0.03	0.698	0.909
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI 3	55830	3609	13.75	14.80	1.274	62.9	1.006	0.09	0.517	0.662
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI 3	55340	3560	13.61	14.80	1.315	62.9	1.006	0.04	0.505	0.668
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI 3	56150	3641	13.66	14.80	1.300	62.9	1.006	0.06	0.498	0.651

	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI 3	56640	3690	13.65	14.80	1.303	62.9	1.006	-0.05	0.502	0.658
	LTE Band 48	20M	QPSK	100	0	-	Left Side	5mm	Ant 2	DSI 3	55830	3609	13.69	14.80	1.291	62.9	1.006	0.11	0.523	0.679
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DSI 3	55830	3609	13.82	14.80	1.253	62.9	1.006	-0.18	0.004	0.005
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DSI 3	55830	3609	13.75	14.80	1.274	62.9	1.006	0.06	0.003	0.004
	LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI 3	55830	3609	13.82	14.80	1.253	62.9	1.006	0.09	0.043	0.054
	LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI 3	55830	3609	13.75	14.80	1.274	62.9	1.006	-0.08	0.028	0.036
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 3	641666	3624.99	11.87	12.90	1.268	-	-	-0.09	0.324	0.411
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 3	641666	3624.99	11.83	12.90	1.279	-	-	-0.01	0.329	0.421
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 3	641666	3624.99	11.87	12.90	1.268	-	-	0.11	0.198	0.251
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 3	641666	3624.99	11.83	12.90	1.279	-	-	0.06	0.199	0.255
52	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	641666	3624.99	11.87	12.90	1.268	-	-	0.09	0.752	**0.953**
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	638000	3570	11.80	12.90	1.288	-	-	0.08	0.442	0.569
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	645332	3679.98	11.78	12.90	1.294	-	-	0.07	0.551	0.713
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	641666	3624.99	11.83	12.90	1.279	-	-	-0.14	0.593	0.759
	FR1 n48	40M	QPSK	100	0	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	641666	3624.99	11.76	12.90	1.300	-	-	0.02	0.468	0.608
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI 3	641666	3624.99	11.87	12.90	1.268	-	-	0.14	0.002	0.003
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI 3	641666	3624.99	11.83	12.90	1.279	-	-	-0.18	0.004	0.005
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI 3	641666	3624.99	11.87	12.90	1.268	-	-	0.11	0.051	0.065
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI 3	641666	3624.99	11.83	12.90	1.279	-	-	-0.03	0.062	0.079
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 3	656000	3840	11.67	12.90	1.327	-	-	-0.02	0.260	0.345
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 3	656000	3840	11.63	12.90	1.340	-	-	-0.04	0.247	0.331
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 3	656000	3840	11.67	12.90	1.327	-	-	-0.01	0.181	0.240
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 3	656000	3840	11.63	12.90	1.340	-	-	0.12	0.152	0.204
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	656000	3840	11.67	12.90	1.327	-	-	0.12	0.645	0.856
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	656000	3840	11.63	12.90	1.340	-	-	0.13	0.600	0.804
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	656000	3840	11.59	12.90	1.352	-	-	0.02	0.723	0.978
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI 3	656000	3840	11.67	12.90	1.327	-	-	-0.12	0.003	0.004
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI 3	656000	3840	11.63	12.90	1.340	-	-	-0.02	0.003	0.004
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI 3	656000	3840	11.67	12.90	1.327	-	-	-0.03	0.026	0.035
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI 3	656000	3840	11.63	12.90	1.340	-	-	-0.19	0.021	0.028
	FR1 n77_HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	656000	3840	14.47	15.90	1.390	50	1.000	0.16	0.690	0.959
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 3	633334	3500.01	11.82	12.90	1.282	-	-	-0.19	0.132	0.169
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 3	633334	3500.01	11.71	12.90	1.315	-	-	0.17	0.154	0.203
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 3	633334	3500.01	11.82	12.90	1.282	-	-	-0.03	0.125	0.160
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 3	633334	3500.01	11.71	12.90	1.315	-	-	-0.03	0.144	0.189
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	633334	3500.01	11.82	12.90	1.282	-	-	0.03	0.354	0.454
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	633334	3500.01	11.71	12.90	1.315	-	-	-0.19	0.390	0.513
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI 3	633334	3500.01	11.82	12.90	1.282	-	-	0.19	0.004	0.005
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI 3	633334	3500.01	11.71	12.90	1.315	-	-	-0.18	0.003	0.004
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI 3	633334	3500.01	11.82	12.90	1.282	-	-	0.15	0.065	0.083
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI 3	633334	3500.01	11.71	12.90	1.315	-	-	0.05	0.063	0.083
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI 3	633334	3500.01	14.75	15.90	1.303	50	1.000	0.09	0.426	0.555
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 3	656000	3840	15.71	16.60	1.227	-	-	-0.13	0.359	0.441
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 3	656000	3840	15.67	16.60	1.239	-	-	-0.05	0.369	0.457
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 3	656000	3840	15.71	16.60	1.227	-	-	0.05	0.338	0.415
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 3	656000	3840	15.67	16.60	1.239	-	-	-0.08	0.322	0.399
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 4	DSI 3	656000	3840	15.71	16.60	1.227	-	-	0.12	0.076	0.093
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 4	DSI 3	656000	3840	15.67	16.60	1.239	-	-	0.09	0.059	0.073
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 4	DSI 3	656000	3840	15.71	16.60	1.227	-	-	0.09	0.140	0.172
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 4	DSI 3	656000	3840	15.67	16.60	1.239	-	-	-0.03	0.122	0.151
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 4	DSI 3	656000	3840	15.71	16.60	1.227	-	-	0.14	0.752	0.923
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 4	DSI 3	656000	3840	15.67	16.60	1.239	-	-	-0.16	0.766	0.949
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 4	DSI 3	656000	3840	15.62	16.60	1.253	-	-	0.13	0.783	0.981
	FR1 n77_HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 4	DSI 3	656000	3840	18.52	19.60	1.282	50	1.000	0.07	0.688	0.882
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 3	633334	3500.01	15.54	16.60	1.276	-	-	-0.14	0.188	0.240
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 3	633334	3500.01	15.46	16.60	1.300	-	-	-0.04	0.262	0.341
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 3	633334	3500.01	15.54	16.60	1.276	-	-	0.14	0.177	0.226
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 3	633334	3500.01	15.46	16.60	1.300	-	-	0.05	0.217	0.282
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 4	DSI 3	633334	3500.01	15.54	16.60	1.276	-	-	0.07	0.019	0.024

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 4	DSI 3	633334	3500.01	15.46	16.60	1.300	-	-	-0.15	0.017	0.022
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 4	DSI 3	633334	3500.01	15.54	16.60	1.276	-	-	-0.17	0.038	0.049
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 4	DSI 3	633334	3500.01	15.46	16.60	1.300	-	-	0.13	0.047	0.061
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 4	DSI 3	633334	3500.01	15.54	16.60	1.276	-	-	-0.03	0.482	0.615
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 4	DSI 3	633334	3500.01	15.46	16.60	1.300	-	-	0.08	0.540	0.702
	FR1 n77_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 4	DSI 3	633334	3500.01	18.44	19.60	1.306	50	1.000	0.09	0.525	0.686
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 5	DSI 3	656000	3840	16.20	17.20	1.259	-	-	0.14	0.312	0.393
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 5	DSI 3	656000	3840	16.17	17.20	1.268	-	-	0.09	0.341	0.432
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	DSI 3	656000	3840	16.20	17.20	1.259	-	-	0.16	0.275	0.346
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	DSI 3	656000	3840	16.17	17.20	1.268	-	-	-0.07	0.252	0.319
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 5	DSI 3	656000	3840	16.20	17.20	1.259	-	-	0.07	0.013	0.016
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 5	DSI 3	656000	3840	16.17	17.20	1.268	-	-	-0.1	0.014	0.018
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 5	DSI 3	656000	3840	16.20	17.20	1.259	-	-	-0.04	0.318	0.400
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 5	DSI 3	656000	3840	16.17	17.20	1.268	-	-	-0.02	0.379	0.480
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 5	DSI 3	656000	3840	16.20	17.20	1.259	-	-	0.09	0.784	0.987
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 5	DSI 3	656000	3840	16.17	17.20	1.268	-	-	0.1	0.511	0.648
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 5	DSI 3	656000	3840	16.13	17.20	1.279	-	-	0.09	0.717	0.917
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 5	DSI 3	656000	3840	19.13	20.20	1.279	50	1.000	0.01	0.702	0.898
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 5	DSI 3	633334	3500.01	16.25	17.20	1.245	-	-	-0.05	0.354	0.441
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 5	DSI 3	633334	3500.01	16.17	17.20	1.268	-	-	0.06	0.373	0.473
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	DSI 3	633334	3500.01	16.25	17.20	1.245	-	-	0.14	0.308	0.383
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	DSI 3	633334	3500.01	16.17	17.20	1.268	-	-	-0.03	0.278	0.352
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 5	DSI 3	633334	3500.01	16.25	17.20	1.245	-	-	-0.04	0.011	0.014
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 5	DSI 3	633334	3500.01	16.17	17.20	1.268	-	-	-0.09	0.014	0.018
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 5	DSI 3	633334	3500.01	16.25	17.20	1.245	-	-	-0.18	0.227	0.283
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 5	DSI 3	633334	3500.01	16.17	17.20	1.268	-	-	-0.16	0.223	0.283
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 5	DSI 3	633334	3500.01	16.25	17.20	1.245	-	-	0.05	0.634	0.789
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 5	DSI 3	633334	3500.01	16.17	17.20	1.268	-	-	-0.16	0.582	0.738
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 5	DSI 3	633334	3500.01	19.26	20.20	1.242	50	1.000	0.06	0.577	0.716
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	DSI 3	656000	3840	17.78	19.50	1.486	-	-	-0.09	0.804	1.195
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 7	DSI 3	656000	3840	17.71	19.50	1.510	-	-	0.06	0.783	1.182
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 7	DSI 3	656000	3840	17.66	19.50	1.528	-	-	-0.17	0.735	1.123
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	DSI 3	656000	3840	17.78	19.50	1.486	-	-	0.01	0.628	0.933
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	DSI 3	656000	3840	17.71	19.50	1.510	-	-	0.06	0.446	0.673
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 7	DSI 3	656000	3840	17.66	19.50	1.528	-	-	-0.19	0.499	0.762
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	656000	3840	17.78	19.50	1.486	-	-	-0.03	0.747	1.110
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	656000	3840	17.71	19.50	1.510	-	-	-0.03	0.433	0.654
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	656000	3840	17.66	19.50	1.528	-	-	-0.02	0.513	0.784
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 7	DSI 3	656000	3840	17.78	19.50	1.486	-	-	0.16	0.019	0.028
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 7	DSI 3	656000	3840	17.71	19.50	1.510	-	-	-0.01	0.011	0.017
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 7	DSI 3	656000	3840	17.78	19.50	1.486	-	-	0.02	0.167	0.248
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 7	DSI 3	656000	3840	17.71	19.50	1.510	-	-	-0.1	0.177	0.267
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	DSI 3	656000	3840	20.77	22.50	1.489	50	1.000	0.03	0.788	1.174
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	DSI 3	633334	3500.01	18.21	19.50	1.346	-	-	-0.02	0.568	0.764
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 7	DSI 3	633334	3500.01	18.12	19.50	1.374	-	-	-0.1	0.479	0.658
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	DSI 3	633334	3500.01	18.21	19.50	1.346	-	-	0.01	0.389	0.524
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	DSI 3	633334	3500.01	18.12	19.50	1.374	-	-	0.14	0.332	0.456
53	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	633334	3500.01	18.21	19.50	1.346	-	-	0.06	0.920	**1.238**
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	633334	3500.01	18.12	19.50	1.374	-	-	0.08	0.590	0.811
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	633334	3500.01	18.06	19.50	1.393	-	-	-0.05	0.851	1.186
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 7	DSI 3	633334	3500.01	18.21	19.50	1.346	-	-	-0.05	0.022	0.030
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 7	DSI 3	633334	3500.01	18.12	19.50	1.374	-	-	-0.11	0.016	0.022
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 7	DSI 3	633334	3500.01	18.21	19.50	1.346	-	-	0.06	0.091	0.122
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 7	DSI 3	633334	3500.01	18.12	19.50	1.374	-	-	0.19	0.073	0.100
	FR1 n77_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 7	DSI 3	633334	3500.01	21.23	22.50	1.340	50	1.000	-0.01	0.857	1.148

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)
WIFI&BT																
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 3+6	WWAN+non DBS	6	2437	16.03	17.50	1.403	97.94	1.021	0.08	0.220	0.315
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3+6	WWAN+non DBS	6	2437	16.03	17.50	1.403	97.94	1.021	-0.02	0.201	0.288
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 3+6	WWAN+non DBS	6	2437	16.03	17.50	1.403	97.94	1.021	0.17	0.018	0.026
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 3+6	WWAN+non DBS	6	2437	16.03	17.50	1.403	97.94	1.021	-0.19	0.176	0.252
54	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 3+6	WWAN+non DBS	6	2437	16.03	17.50	1.403	97.94	1.021	-0.03	0.279	**0.400**
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 3+6	WWAN+DBS	6	2437	13.11	14.50	1.377	97.94	1.021	-0.05	0.103	0.145
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3+6	WWAN+DBS	6	2437	13.11	14.50	1.377	97.94	1.021	-0.08	0.094	0.132
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 3+6	WWAN+DBS	6	2437	13.11	14.50	1.377	97.94	1.021	0.05	0.008	0.011
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 3+6	WWAN+DBS	6	2437	13.11	14.50	1.377	97.94	1.021	-0.1	0.082	0.115
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 3+6	WWAN+DBS	6	2437	13.11	14.50	1.377	97.94	1.021	0.03	0.132	0.186
	Bluetooth	1Mbps	Front	5mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	-0.07	0.051	0.065
	Bluetooth	1Mbps	Back	5mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	0.03	0.042	0.053
	Bluetooth	1Mbps	Left Side	5mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	0.18	0.001	0.001
	Bluetooth	1Mbps	Right Side	5mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	-0.02	0.095	0.121
	Bluetooth	1Mbps	Top Side	5mm	Ant 6	Full Power	0	2402	11.33	12.00	1.167	76.56	1.088	0.14	0.001	0.001
	Bluetooth	1Mbps	Front	5mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	0.1	0.061	0.089
	Bluetooth	1Mbps	Back	5mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	-0.17	0.071	0.103
	Bluetooth	1Mbps	Left Side	5mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	0.01	0.001	0.001
	Bluetooth	1Mbps	Right Side	5mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	0.1	0.001	0.001
55	Bluetooth	1Mbps	Top Side	5mm	Ant 3	Full Power	78	2480	9.21	10.50	1.346	76.97	1.082	-0.04	0.103	**0.150**
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5	WWAN+non DBS	42	5210	16.65	18.00	1.365	99.30	1.007	0.06	0.235	0.323
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5	WWAN+non DBS	42	5210	16.65	18.00	1.365	99.30	1.007	-0.18	0.163	0.224
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5	WWAN+non DBS	42	5210	16.65	18.00	1.365	99.30	1.007	-0.07	0.029	0.040
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5	WWAN+non DBS	42	5210	16.65	18.00	1.365	99.30	1.007	-0.07	0.117	0.161
56	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5	WWAN+non DBS	42	5210	16.65	18.00	1.365	99.30	1.007	0.04	0.253	**0.348**
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5	WWAN +DBS	42	5210	13.99	15.50	1.416	99.30	1.007	0.09	0.118	0.168
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5	WWAN +DBS	42	5210	13.99	15.50	1.416	99.30	1.007	0.01	0.069	0.098
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5	WWAN +DBS	42	5210	13.99	15.50	1.416	99.30	1.007	-0.15	0.013	0.019
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5	WWAN +DBS	42	5210	13.99	15.50	1.416	99.30	1.007	-0.02	0.059	0.085
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5	WWAN +DBS	42	5210	13.99	15.50	1.416	99.30	1.007	-0.06	0.130	0.186
57	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5	WWAN+non DBS	155	5775	15.71	17.00	1.346	99.30	1.007	0.13	0.284	**0.385**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5	WWAN+DBS	155	5775	12.63	14.00	1.371	99.30	1.007	-0.17	0.140	0.193
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5	WWAN+DBS	155	5775	12.63	14.00	1.371	99.30	1.007	-0.15	0.092	0.127
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5	WWAN+DBS	155	5775	12.63	14.00	1.371	99.30	1.007	0.04	0.010	0.013
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5	WWAN+DBS	155	5775	12.63	14.00	1.371	99.30	1.007	-0.06	0.095	0.131
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5	WWAN+DBS	155	5775	12.63	14.00	1.371	99.30	1.007	0.16	0.098	0.136
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5	WWAN+non DBS	149	5745	15.71	17.00	1.346	99.30	1.007	-0.02	0.174	0.236
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5	WWAN+non DBS	149	5745	15.71	17.00	1.346	99.30	1.007	0.17	0.020	0.027
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5	WWAN+non DBS	149	5745	15.71	17.00	1.346	99.30	1.007	-0.14	0.192	0.261
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5	WWAN+non DBS	149	5745	15.71	17.00	1.346	99.30	1.007	-0.16	0.192	0.261

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																			
58	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 3	133322	683	22.85	24.00	1.303	0.13	0.653	**0.851**
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 0	-	DSI 3	133322	683	21.80	23.00	1.318	-0.11	0.390	0.514
	LTE Band 71	20M	QPSK	100	0	-	Front	5mm	Ant 0	-	DSI 3	133322	683	21.70	23.00	1.349	-0.14	0.382	0.515
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	133322	683	22.85	24.00	1.303	0.05	0.359	0.468
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 0	-	DSI 3	133322	683	21.80	23.00	1.318	-0.17	0.259	0.341
	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	133322	683	22.43	24.00	1.435	0.08	0.260	0.373
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	DSI 3	133322	683	21.51	23.00	1.409	-0.05	0.161	0.227
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	133322	683	22.43	24.00	1.435	-0.03	0.509	0.731
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	DSI 3	133322	683	21.51	23.00	1.409	0.16	0.315	0.444
59	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 3	23095	707.5	22.84	24.00	1.306	-0.02	0.793	**1.036**
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	DSI 3	23095	707.5	21.74	23.00	1.337	-0.05	0.467	0.624
	LTE Band 12	10M	QPSK	50	0	-	Front	5mm	Ant 0	-	DSI 3	23095	707.5	21.65	23.00	1.365	0.05	0.462	0.630
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	23095	707.5	22.84	24.00	1.306	-0.02	0.702	0.917
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	DSI 3	23095	707.5	21.74	23.00	1.337	0.03	0.415	0.555
	LTE Band 12	10M	QPSK	50	0	-	Back	5mm	Ant 0	-	DSI 3	23095	707.5	21.65	23.00	1.365	0.06	0.405	0.553
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	23095	707.5	22.40	24.00	1.445	0.02	0.286	0.413
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	DSI 3	23095	707.5	21.60	23.00	1.380	0.15	0.201	0.277
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	23095	707.5	22.40	24.00	1.445	0.02	0.506	0.731
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	DSI 3	23095	707.5	21.60	23.00	1.380	0.07	0.272	0.375
60	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 3	23230	782	22.97	24.00	1.268	0.03	0.953	**1.208**
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	Headset	DSI 3	23230	782	22.97	24.00	1.268	-0.14	0.935	1.185
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	DSI 3	23230	782	21.87	23.00	1.297	0.15	0.511	0.663
	LTE Band 13	10M	QPSK	50	0	-	Front	5mm	Ant 0	-	DSI 3	23230	782	21.82	23.00	1.312	-0.1	0.512	0.672
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	23230	782	22.97	24.00	1.268	-0.17	0.848	1.075
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	DSI 3	23230	782	21.87	23.00	1.297	-0.08	0.473	0.614
	LTE Band 13	10M	QPSK	50	0	-	Back	5mm	Ant 0	-	DSI 3	23230	782	21.82	23.00	1.312	-0.12	0.466	0.611
	LTE Band 13	10M	QPSK	1	0	-	Front	16mm	Ant 0	-	DSI 4	23230	782	22.97	24.00	1.268	0.03	0.205	0.260
	LTE Band 13	10M	QPSK	1	0	-	Back	18mm	Ant 0	-	DSI 4	23230	782	22.97	24.00	1.268	0.09	0.210	0.266
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	23230	782	21.12	22.30	1.312	0.07	0.314	0.412
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	DSI 3	23230	782	21.09	22.30	1.321	0.02	0.302	0.399
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	23230	782	21.12	22.30	1.312	0.02	0.526	0.690
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	DSI 3	23230	782	21.09	22.30	1.321	0.06	0.502	0.663
	LTE Band 13	10M	QPSK	1	0	-	Front	16mm	Ant 1	-	DSI 4	23230	782	22.56	24.00	1.393	0.06	0.171	0.238
	LTE Band 13	10M	QPSK	1	0	-	Back	18mm	Ant 1	-	DSI 4	23230	782	22.56	24.00	1.393	0.03	0.168	0.234
61	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 3	23330	793	23.07	24.00	1.239	-0.04	0.971	**1.203**
	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 0	Headset	DSI 3	23330	793	23.07	24.00	1.239	0.06	0.944	1.169
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	DSI 3	23330	793	22.02	23.00	1.253	-0.19	0.514	0.644
	LTE Band 14	10M	QPSK	50	0	-	Front	5mm	Ant 0	-	DSI 3	23330	793	21.96	23.00	1.271	0.04	0.510	0.648
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	23330	793	23.07	24.00	1.239	0.11	0.821	1.017
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	DSI 3	23330	793	22.02	23.00	1.253	0.11	0.453	0.568
	LTE Band 14	10M	QPSK	50	0	-	Back	5mm	Ant 0	-	DSI 3	23330	793	21.96	23.00	1.271	-0.14	0.446	0.567
	LTE Band 14	10M	QPSK	1	0	-	Front	16mm	Ant 0	-	DSI 4	23330	793	23.07	24.00	1.239	0.06	0.195	0.242
	LTE Band 14	10M	QPSK	1	0	-	Back	18mm	Ant 0	-	DSI 4	23330	793	23.07	24.00	1.239	0.02	0.193	0.239
	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	23330	793	22.64	23.50	1.219	-0.11	0.334	0.407
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	DSI 3	23330	793	21.85	23.00	1.303	-0.06	0.266	0.347
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	23330	793	22.64	23.50	1.219	0.06	0.528	0.644
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	DSI 3	23330	793	21.85	23.00	1.303	0.02	0.402	0.524
	LTE Band 14	10M	QPSK	1	0	-	Front	16mm	Ant 1	-	DSI 4	23330	793	22.64	24.00	1.368	0.03	0.160	0.219
	LTE Band 14	10M	QPSK	1	0	-	Back	18mm	Ant 1	-	DSI 4	23330	793	22.64	24.00	1.368	-0.12	0.155	0.212
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	136100	680.5	23.11	24.00	1.227	-0.08	0.069	0.085
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	136100	680.5	23.05	24.00	1.245	-0.1	0.059	0.073

	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	136100	680.5	23.11	24.00	1.227	0.05	0.065	0.080
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	136100	680.5	23.05	24.00	1.245	-0.14	0.056	0.070
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	-	DSI 3	136100	680.5	23.13	24.00	1.222	-0.03	0.200	0.244
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	-	DSI 3	136100	680.5	23.06	24.00	1.242	0.07	0.177	0.220
62	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	-	DSI 3	136100	680.5	23.13	24.00	1.222	-0.03	0.389	**0.475**
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	-	DSI 3	136100	680.5	23.06	24.00	1.242	0.02	0.370	0.459
63	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	158600	793	23.05	24.00	1.245	-0.18	0.642	**0.799**
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	158600	793	22.98	24.00	1.265	-0.08	0.497	0.629
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	158600	793	23.05	24.00	1.245	-0.17	0.548	0.682
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	158600	793	22.98	24.00	1.265	0.09	0.447	0.565
835MHz																			
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 3	189	836.4	27.18	27.80	1.153	0.08	0.896	1.033
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 3	128	824.2	27.05	27.80	1.189	-0.02	0.868	1.032
64	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 3	251	848.8	27.15	27.80	1.161	0.04	1.020	**1.185**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	DSI 3	189	836.4	27.18	27.80	1.153	0.02	0.778	0.897
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	DSI 3	128	824.2	27.05	27.80	1.189	0.08	0.808	0.960
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	DSI 3	251	848.8	27.15	27.80	1.161	0.05	0.891	1.035
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	16mm	Ant 0	-	DSI 4	251	848.8	28.59	29.50	1.233	0.03	0.202	0.249
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	18mm	Ant 0	-	DSI 4	251	848.8	28.59	29.50	1.233	0.05	0.207	0.255
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	5mm	Ant 1	-	DSI 3	189	836.4	28.74	29.50	1.191	-0.06	0.558	0.665
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	5mm	Ant 1	-	DSI 3	189	836.4	28.74	29.50	1.191	-0.18	0.703	0.837
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	5mm	Ant 1	-	DSI 3	128	824.2	28.62	29.50	1.225	0.07	0.752	0.921
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	5mm	Ant 1	-	DSI 3	251	848.8	28.64	29.50	1.219	0.18	0.592	0.722
65	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 3	4182	836.4	23.23	24.00	1.194	0.09	1.010	**1.206**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	Headset	DSI 3	4182	836.4	23.23	24.00	1.194	-0.08	0.989	1.181
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 3	4132	826.4	23.17	24.00	1.211	0.09	0.851	1.030
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 3	4233	846.6	23.15	24.00	1.216	0.04	0.893	1.086
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 3	4182	836.4	23.23	24.00	1.194	0.04	0.868	1.036
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 3	4132	826.4	23.17	24.00	1.211	0.01	0.893	1.081
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 3	4233	846.6	23.15	24.00	1.216	0.15	0.843	1.025
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 0	-	DSI 4	4182	836.4	23.23	24.00	1.194	0.05	0.227	0.271
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	18mm	Ant 0	-	DSI 4	4132	826.4	23.17	24.00	1.211	0.03	0.237	0.287
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	DSI 3	4182	836.4	22.76	23.50	1.186	0.09	0.457	0.542
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	DSI 3	4182	836.4	22.76	23.50	1.186	0.05	0.774	0.918
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	DSI 3	4132	826.4	22.73	23.50	1.194	0.02	0.676	0.807
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	DSI 3	4233	846.6	22.69	23.50	1.205	0.1	0.650	0.783
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 1	-	DSI 4	4182	836.4	22.76	24.00	1.330	0.03	0.197	0.262
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	18mm	Ant 1	-	DSI 4	4182	836.4	22.76	24.00	1.330	0.01	0.140	0.186
66	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 3	26865	831.5	22.87	23.50	1.156	-0.08	0.975	**1.127**
	LTE Band 5B	10M	QPSK	1	49	-	Front	5mm	Ant 0	-	DSI 3	20476+ 20575	831.6+ 841.5	22.81	23.50	1.172	0.03	0.933	1.094
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 0	-	DSI 3	26865	831.5	21.84	23.00	1.306	0.04	0.602	0.786
	LTE Band 26	15M	QPSK	75	0	-	Front	5mm	Ant 0	-	DSI 3	26865	831.5	21.80	23.00	1.318	0.13	0.756	0.997
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	26865	831.5	22.87	23.50	1.156	0.04	0.941	1.088
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 0	-	DSI 3	26865	831.5	21.84	23.00	1.306	0.07	0.666	0.870
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 0	-	DSI 3	26865	831.5	21.80	23.00	1.318	-0.08	0.659	0.869
	LTE Band 26	15M	QPSK	1	0	-	Front	16mm	Ant 0	-	DSI 4	26865	831.5	22.87	24.00	1.297	0.06	0.197	0.256
	LTE Band 26	15M	QPSK	1	0	-	Back	18mm	Ant 0	-	DSI 4	26865	831.5	22.87	24.00	1.297	0.02	0.140	0.182
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	26865	831.5	22.43	23.40	1.250	-0.06	0.641	0.801
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	26765	821.5	22.32	23.40	1.282	0.07	0.612	0.785
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	26965	841.5	22.31	23.40	1.285	-0.01	0.572	0.735
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 1	-	DSI 3	26865	831.5	21.50	23.00	1.413	0.01	0.371	0.524
	LTE Band 26	15M	QPSK	75	0	-	Front	5mm	Ant 1	-	DSI 3	26865	831.5	21.41	23.00	1.442	0.08	0.373	0.538
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	26865	831.5	22.43	23.40	1.250	0.04	0.748	0.935
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	26765	821.5	22.32	23.40	1.282	-0.05	0.772	0.990
	LTE Band 5B	10M	QPSK	1	49	-	Back	5mm	Ant 1	-	DSI 3	20450+ 20549	829+ 838.9	22.24	23.40	1.306	0.06	0.721	0.942

	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	26965	841.5	22.31	23.40	1.285	0.06	0.677	0.870
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 1	-	DSI 3	26865	831.5	21.50	23.00	1.413	-0.16	0.443	0.626
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 1	-	DSI 3	26865	831.5	21.41	23.00	1.442	0.08	0.348	0.502
	LTE Band 26	15M	QPSK	1	0	-	Front	16mm	Ant 1	-	DSI 4	26865	831.5	22.43	24.00	1.435	-0.06	0.129	0.185
	LTE Band 26	15M	QPSK	1	0	-	Back	18mm	Ant 1	-	DSI 4	26765	821.5	22.32	24.00	1.472	-0.05	0.116	0.171
67	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	167300	836.5	23.23	24.00	1.194	-0.02	0.861	**1.028**
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	167300	836.5	23.20	24.00	1.202	0.02	0.783	0.941
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	167300	836.5	22.24	23.00	1.191	0.07	0.655	0.780
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	167300	836.5	23.23	24.00	1.194	0.09	0.755	0.901
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	167300	836.5	23.20	24.00	1.202	0.12	0.684	0.822
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 3	167300	836.5	22.24	23.00	1.191	0.03	0.654	0.779
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	-	DSI 3	167300	836.5	23.22	24.00	1.197	-0.09	0.548	0.656
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	-	DSI 3	167300	836.5	23.19	24.00	1.205	0.09	0.345	0.416
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	-	DSI 3	167300	836.5	23.22	24.00	1.197	-0.14	0.737	0.882
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	-	DSI 3	167300	836.5	23.19	24.00	1.205	0.03	0.443	0.534
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 1	-	DSI 3	167300	836.5	22.21	23.00	1.199	0.04	0.438	0.525
1750MHz																			
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 3	1413	1732.6	15.18	16.40	1.324	0.04	0.470	0.622
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 3	1413	1732.6	15.18	16.40	1.324	0.04	0.546	0.723
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 0	-	DSI 4	1413	1732.6	23.13	24.00	1.222	0.04	0.468	0.572
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	18mm	Ant 0	-	DSI 4	1413	1732.6	23.13	24.00	1.222	0.04	0.420	0.513
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	DSI 3	1413	1732.6	16.39	17.20	1.205	0.17	0.698	0.841
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	DSI 3	1312	1712.4	16.28	17.20	1.236	0.12	0.613	0.758
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	-	DSI 3	1513	1752.6	16.34	17.20	1.219	-0.17	0.646	0.787
68	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	DSI 3	1413	1732.6	16.39	17.20	1.205	0.01	0.765	**0.922**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	DSI 3	1312	1712.4	16.28	17.20	1.236	-0.07	0.727	0.899
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	-	DSI 3	1513	1752.6	16.34	17.20	1.219	0.06	0.721	0.879
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 1	-	DSI 4	1413	1732.6	21.79	23.00	1.321	0.17	0.460	0.608
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	18mm	Ant 1	-	DSI 4	1413	1732.6	21.79	23.00	1.321	0.01	0.460	0.608
	LTE Band 66	20M	SK	1	0	-	Front	5mm	Ant 0	-	DSI 3	132322	1745	14.81	16.10	1.346	0.07	0.490	0.659
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 0	-	DSI 3	132322	1745	14.75	16.10	1.365	0.1	0.405	0.553
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	132322	1745	14.81	16.10	1.346	-0.08	0.604	0.813
	LTE Band 66C	20M	QPSK	1	99	-	Back	5mm	Ant 0	-	DSI 3	132322+ 132520	1745+ 1764.8	14.72	16.10	1.374	0.04	0.588	0.808
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	132072	1720	14.78	16.10	1.355	0.03	0.502	0.680
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 3	132572	1770	14.74	16.10	1.368	-0.05	0.486	0.665
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	-	DSI 3	132322	1745	14.75	16.10	1.365	0.14	0.419	0.572
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 0	-	DSI 3	132322	1745	14.70	16.10	1.380	0.07	0.418	0.577
	LTE Band 66	20M	QPSK	1	0	-	Front	16mm	Ant 0	-	DSI 4	132322	1745	22.94	24.00	1.276	0.01	0.428	0.546
	LTE Band 66	20M	QPSK	1	0	-	Back	18mm	Ant 0	-	DSI 4	132322	1745	22.94	24.00	1.276	0.03	0.516	0.659
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	132322	1745	16.15	17.10	1.245	0.05	0.671	0.835
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	132072	1720	15.95	17.10	1.303	-0.02	0.630	0.821
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	DSI 3	132572	1770	16.12	17.10	1.253	-0.11	0.625	0.783
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	DSI 3	132322	1745	16.11	17.10	1.256	-0.07	0.545	0.685
	LTE Band 66	20M	QPSK	100	0	-	Front	5mm	Ant 1	-	DSI 3	132322	1745	16.04	17.10	1.276	-0.05	0.543	0.693
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	132322	1745	16.15	17.10	1.245	-0.02	0.687	0.855
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	132072	1720	15.95	17.10	1.303	0.05	0.728	0.949
69	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	132572	1770	16.12	17.10	1.253	0.07	0.787	**0.986**
	LTE Band 66C	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	DSI 3	132572+ 132374	1770+ 1750.2	16.03	17.10	1.279	0.01	0.766	0.980
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	DSI 3	132322	1745	16.11	17.10	1.256	0.12	0.534	0.671
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 1	-	DSI 3	132322	1745	16.04	17.10	1.276	0.06	0.534	0.682
	LTE Band 66	20M	QPSK	1	0	-	Front	16mm	Ant 1	-	DSI 4	132322	1745	21.39	23.00	1.449	0.06	0.413	0.598
	LTE Band 66	20M	QPSK	1	0	-	Back	18mm	Ant 1	-	DSI 4	132572	1770	21.37	23.00	1.455	0.02	0.364	0.530
70	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	349000	1745	14.02	15.50	1.406	-0.04	0.600	**0.844**
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	349000	1745	14.00	15.50	1.413	-0.17	0.462	0.653
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 3	349000	1745	13.86	15.50	1.459	-0.1	0.443	0.646