FCC SAR Test Report

APPLICANT	**: FairPhone B.V.**
EQUIPMENT	**: Fairphone (Gen.6)**
BRAND NAME	**: Fairphone**
MODEL NAME	**: FP6**
FCC ID	**: 2AUWUFP6**
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

ilac-MRA

ACCREDITED
Cert #5145.02

Sporton International Inc. (Kunshan)
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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA521107-01	Rev. 01	Initial issue of report.	Jul. 14, 2025

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **FairPhone B.V., Fairphone (Gen.6), FP6,** are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission
			1g SAR (W/kg)			1g SAR (W/kg)
Licensed	GSM	GSM850	1.15	0.59	1.08	1.58
		GSM1900	**1.34**	0.97	1.32	
	WCDMA	WCDMA II	1.12	0.98	1.25	
		WCDMA V	1.27	0.53	1.19	
	LTE	LTE Band 7	1.16	0.71	1.22	
		LTE Band 12/17	1.22	0.62	1.01	
		LTE Band 25/2	1.31	**1.03**	1.27	
		LTE Band 26/5	1.29	0.54	1.07	
		LTE Band 66/4	1.18	0.80	1.31	
		LTE Band 71	1.16	0.40	0.59	
		LTE Band 41/38	1.16	0.98	**1.33**	
		LTE Band 42	1.26	0.66	1.19	
	5G NR	FR1 n5	1.12	0.57	1.10	
		FR1 n2	1.22	0.84	1.15	
		FR1 n7	1.14	0.61	1.13	
		FR1 n66	1.13	0.72	0.95	
		FR1 n71	1.06	0.47	0.64	
		FR1 n41/38	1.27	0.63	1.25	
		FR1 n77/78	0.37	0.15	0.22	
DTS	WLAN	2.4GHz WLAN	1.14	0.57	1.13	1.58
NII		5GHz WLAN	0.60	0.76	1.16	1.58
6CD		WLAN 6GHz	0.78		0.74	1.57
DSS	Bluetooth	2.4GHz Bluetooth	<0.10	<0.10	<0.10	1.58

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	WCDMA	WCDMA II	1.73	3.98
	LTE	LTE Band 7	2.19	
		LTE Band 25/2	1.88	
		LTE Band 42	**3.10**	
		LTE Band 66/4	1.89	
	5G NR	FR1 n2	1.41	
		FR1 n7	1.68	
		FR1 n41/38	1.83	
		FR1 n66	1.60	
NII	WLAN	5GHz WLAN	1.87	3.98
6CD		WLAN 6GHz	0.35	3.38
Date of Testing:			2025/4/17 ~ 2025/6/19	

Equipment Class	Frequency Band	Measured APD			Reported PD
		Head (W/m^2)	Body Worn (W/m^2)	Phablet (W/m^2)	psPD (W/m^2)
6CD	6GHz WLAN	3.34	3.73	6.96	7.68
Date of Testing:		2025/4/17 ~ 2025/6/19			

Remark:

1. This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE LTE B2 / B4 / B5 / B17 / B38 falls completely within the support's frequency span for LTE B25 / B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41.
2. This device supports 5GNR n38 / n78 and n41 / n77. Since the supported frequency span for 5GNR n38 / n78 falls completely within the support's frequency span for n41 / n77, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for n41 / n77.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093), and Human Exposure to RF Radiation Limits (1.0 mW/cm^2=10 W/m^2) specified in FCC 47 CFR part 1.1310 and ANSI/IEEE C95.1-1992 and FCC 47 CFR Part1.1310, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

2. Administration Data

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

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR07-KS SAR04-KS SAR06-KS	CN1257	314309

Applicant	
Company Name	FairPhone B.V.
Address	Van Diemenstraat 200, 1013 CP,Amsterdam, The Netherlands

Manufacturer	
Company Name	FairPhone B.V.
Address	Van Diemenstraat 200, 1013 CP,Amsterdam, The Netherlands

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
- IEC/IEEE 62209-1528:2020
- 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 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
- IEC TR 63170:2018
- IEC 62479:2010
- SPEAG DASY6 System Handbook
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Fairphone (Gen.6)
Brand Name	Fairphone
Model Name	FP6
FCC ID	2AUWUFP6
IMEI Code	355870094594337/355870094594329, 355870094593719/355870094593701 355870094594030/355870094594022, 355870094595813/355870094595805
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 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 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz LTE Band 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 n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz, 3550 MHz ~ 3700 MHz, 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz, 3550 MHz ~ 3700 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: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ac VHT20/VHT40 WLAN 2.4GHz 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80

	WLAN 5GHz 802.11ax HE20/HE40/HE80 WLAN 6GHz 802.11a WLAN 6GHz 802.11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC: ASK
HW Version	DVT2
SW Version	FP6.DEV.15.66.0
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype

Remark:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
3. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only). WLAN 6GHz has no hotspot function.
4. This device supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active).
5. The 2.4GHz/5GHz/6GHz WLAN can transmit in SISO/MIMO antenna mode.
6. The device implements receiver detection 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. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
7. For WLAN when transmit simultaneous with WWAN/BT, WLAN power reduction will be activated to head, body-worn, hotspot exposure condition.
8. This device supports HPUE mode for LTE Band41 and 5GNR n41 with higher power. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
9. For 5GNR n41 HPUE, 5GNR n41 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission.
10. This device has NFC function and the NFC SAR report will be separately submitted.
11. This device will be equipped with accessories such as Protective Case, Card Holder, Palm ring and Lanyard. The Protective Case and Card Holder has no metallic wristband and do not contain any electronic circuitry, and they have no effect on RF exposure, so no need to test with them. The Palm ring and Lanyard have a metallic and do not contain any electronic circuitry, so they spot check the worst case of each band to satisfy SAR compliance.
12. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n71	FDD	15	5, 10, 15, 20
	n77	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
SA	n2	FDD	15	5, 10, 15, 20
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40, 50
	n66	FDD	15	5, 10, 15, 20, 25, 30, 40
	n71	FDD	15	5, 10, 15, 20
	n38	TDD	30	10, 15, 20, 30, 40
	n41	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n77	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100

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>2AUWUFP6</td></tr>
<tr><td>Equipment Name</td><td>Fairphone (Gen.6)</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 17: 704 MHz ~ 716 MHz
LTE Band 25: 1850 MHz ~ 1915 MHz
LTE Band 26: 814 MHz ~ 849 MHz
LTE Band 38: 2570 MHz ~ 2620 MHz
LTE Band 41: 2496 MHz ~ 2690 MHz
LTE Band 42: 3450 MHz ~ 3550 MHz
LTE Band 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 17: 5MHz, 10MHz
LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 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>R16</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 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 13.</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 13.</td></tr>
<tr><td>LTE Carrier Aggregation Additional Information</td><td>1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance.
2. This device supports maximum of 2 carriers in the uplink.</td></tr>
</table>

<table>
<tr><th colspan="13">Transmission (H, M, L) channel numbers and frequencies in each LTE band</th></tr>
<tr><th colspan="13">LTE Band 2</th></tr>
<tr><th rowspan="2"></th><th colspan="2">Bandwidth 1.4 MHz</th><th colspan="2">Bandwidth 3 MHz</th><th colspan="2">Bandwidth 5 MHz</th><th colspan="2">Bandwidth 10 MHz</th><th colspan="2">Bandwidth 15 MHz</th><th colspan="2">Bandwidth 20 MHz</th></tr>
<tr><th>Ch. #</th><th>Freq. (MHz)</th><th>Ch. #</th><th>Freq. (MHz)</th><th>Ch. #</th><th>Freq. (MHz)</th><th>Ch. #</th><th>Freq. (MHz)</th><th>Ch. #</th><th>Freq. (MHz)</th><th>Ch. #</th><th>Freq. (MHz)</th></tr>
</table>

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 17				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq. (MHz)
L	23755	706.5	23780	709
M	23790	710	23790	710
H	23825	713.5	23800	711

LTE Band 25												
	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	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905

LTE Band 26										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

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

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

LTE Band 66						
	Bandwidth 1.4 MHz	Bandwidth 3 MHz	Bandwidth 5 MHz	Bandwidth 10 MHz	Bandwidth 15 MHz	Bandwidth 20 MHz

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

LTE Band 42								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	42115	3452.5	42140	3455	42165	3457.5	42190	3460
M	42590	3500	42590	3500	42590	3500	42590	3500
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540

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

<For LTE Overlap Bands Description>

1) LTE Bands BW

Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
LTE Band 12	Yes	Yes	Yes	Yes		
LTE Band 17			Yes	Yes		
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 2	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 25	Yes	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	Head	Body-worn &Extremity	Body-worn &Extremity	Hotspot	Default
		DSI 2	DSI 6	DSI 0	DSI 4	DSI 1	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 12	Ant 0	23.50	22.50	24.50	24.50	24.50	24.50
LTE Band 17	Ant 0	23.50	22.50	24.50	24.50	24.50	24.50
LTE Band 5	Ant 0	24.50	23.50	24.50	24.50	24.50	24.50
LTE Band 26	Ant 0	24.50	23.50	24.50	24.50	24.50	24.50
LTE Band 2	Ant 2	19.50	18.50	21.00	20.00	21.00	24.00
LTE Band 25	Ant 2	19.50	18.50	21.00	20.00	21.00	24.00
LTE Band 4	Ant 2	19.00	18.00	21.00	19.50	21.00	24.00
LTE Band 66	Ant 2	19.00	18.00	21.00	19.50	21.00	24.00
LTE Band 38	Ant 4	18.50	17.50	24.50	23.00	24.50	24.50
LTE Band 41	Ant 4	18.50	17.50	24.50	23.00	24.50	24.50
LTE Band 41 HPUE	Ant 4	20.10	19.10	26.10	24.60	26.10	26.50
LTE Band 38	Ant 6	24.50	24.50	24.50	24.50	24.50	24.50
LTE Band 41	Ant 6	24.50	24.50	24.50	24.50	24.50	24.50
LTE Band 41 HPUE	Ant 6	26.10	26.10	26.10	26.10	26.10	26.50

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 n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz, 3550 MHz ~ 3700 MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz, 3550 MHz ~ 3700 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 n71	LTE B7
LTE Anchor Bands for n77	LTE B7
LTE Anchor Bands for n78	LTE B7/38/41

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		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520	505000	2525
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550	509000	2545

NR Band 66

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

NR Band 71

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

NR Band 38

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

NR Band 41 SCS30KHz																						
	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	500202	2501.01	500700	2503.5	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	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	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 77																								
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840.00	656000	3840.00	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664834	3972.51	664668	3970.02	664500	3967.50	664334	3965.01	664000	3960	663668	3955.02	663334	3950.01	663000	3945	662668	3940.02	662334	3935.01	662000	3930

NR Band 78																								
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750	650000	3750	650000	3750.00	650000	3750.00	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652500	3787.5	652334	3785.01	652000	3780	651668	3775.02	651334	3770.01	651000	3765	650668	3760.02	650334	3755.01		

For Part96

NR Band 77/78																		
	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	637334	3560.01	637668	3565.02	638000	3570	638334	3575.01	638668	3580.02	639000	3585	639334	3590.01	639668	3595.02	640000	3600
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646000	3690	645666	3684.99	645332	3624.99	645000	3675	644666	3669.99	644332	3664.98	644000	3660	643666	3654.99	643332	3649.98

NR Band 77 SCS30KHz																								
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

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

<For NR Overlap Bands Description>

1) NR Bands BW

Band	5 MHz	10 MHz	15 MHz	20 MHz	25 MHz	30 MHz	40 MHz	50 MHz	60 MHz	70 MHz	80 MHz	90 MHz	100 MHz
FR1 n38		Yes	Yes	Yes		Yes	Yes						
FR1 n41		Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FR1 n77		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FR1 n78		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2) NR Bands Tune up:

Band	Antenna	Head	Head	Body-worn &Extremity	Body-worn &Extremity	Hotspot	Default
		DSI 2	DSI 6	DSI 0	DSI 4	DSI 1	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
FR1 n38	Ant 4	18.50	17.50	21.50	20.50	21.50	24.50
FR1 n41	Ant 4	18.50	17.50	21.50	20.50	21.50	24.50
FR1 n41 HPUE	Ant 4	18.50	17.50	21.50	20.50	21.50	27.50
FR1 n77	Ant 2	18.50	17.50	20.00	19.00	20.00	24.50
FR1 n78	Ant 2	18.50	17.50	20.00	19.00	20.00	24.50
FR1 n77	Ant 3	19.50	18.50	21.00	20.00	21.00	22.50
FR1 n78	Ant 3	19.50	18.50	21.00	20.00	21.00	22.50
FR1 n77	Ant 4	18.50	17.50	21.00	20.00	21.00	25.50
FR1 n78	Ant 4	18.50	17.50	21.00	20.00	21.00	25.50
FR1 n77	Ant 8	19.00	18.00	20.00	19.00	20.00	23.00
FR1 n78	Ant 8	19.00	18.00	20.00	19.00	20.00	23.00

5. Smart Transmit feature for RF Exposure compliance

The FCC 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 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.

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) version 20 to enable the Smart Transmit GEN1 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.

<SAR design target and uncertainty >

Item	Uncertainty dB (k=2)
Total uncertainty	1.0

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 DSI2	Head DSI6	Head Pmax*	Body-worn &Extremity DSI0	Body-worn &Extremity DSI4	Hotspot DSI1	Pmax*
GSM850	Ant 0	23.5	22.5	24.0	24.0	23.0	24.0	24.0
GSM1900	Ant 2	17.0	16.0	21.0	20.0	19.0	20.0	21.0
WCDMA II	Ant 2	18.0	17.0	23.0	20.0	19.0	20.0	23.0
WCDMA V	Ant 0	22.5	21.5	23.5	23.5	23.0	23.5	23.5
LTE Band 7	Ant 4	17.5	16.5	23.5	20.5	19.5	20.5	23.5
LTE Band 7	Ant 6	34.8	33.8	23.5	30.3	29.3	23.5	23.5
LTE Band 12(17)	Ant 0	22.5	21.5	23.5	24.3	23.5	23.5	23.5
LTE Band 25(2)	Ant 2	18.5	17.5	23.0	20.0	19.0	20.0	23.0
LTE Band 26(5)	Ant 0	23.5	22.5	23.5	24.0	23.5	23.5	23.5
LTE Band 66(4)	Ant 2	18.0	17.0	23.0	20.0	18.5	20.0	23.0
LTE Band 71	Ant 0	23.0	22.0	23.5	26.6	25.6	23.5	23.5
LTE Band 41(38)	Ant 4	15.5	14.5	21.5	21.5	20.0	21.5	21.5
LTE Band 41 HPUE	Ant 4	15.5	14.5	21.9	21.5	20.0	21.5	21.9
LTE Band 41(38)	Ant 6	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 HPUE	Ant 6	21.5	21.5	21.9	21.5	21.5	21.5	21.9
LTE Band 42	Ant 2	16.5	15.5	21.0	19.0	18.0	19.0	21.0
LTE Band 42	Ant 3	17.5	16.5	20.0	19.0	18.0	19.0	20.0
LTE Band 42	Ant 4	16.0	15.0	21.5	17.5	17.5	17.5	21.5
LTE Band 42	Ant 8	17.5	16.5	20.0	18.0	17.0	18.0	20.0
FR1 n5	Ant 0	23.8	22.5	23.5	23.5	22.5	23.5	23.5
FR1 n2	Ant 2	19.0	18.0	23.5	20.0	19.0	20.0	23.5
FR1 n7	Ant 4	18.0	17.0	23.5	20.5	19.5	20.5	23.5
FR1 n7	Ant 6	36.8	35.8	23.5	30.2	29.2	23.5	23.5
FR1 n66	Ant 2	18.5	17.5	23.5	20.0	19.0	20.0	23.5
FR1 n71	Ant 0	22.0	21.0	23.5	26.2	25.2	23.5	23.5
FR1 n38	Ant 4	17.5	16.5	23.5	20.5	19.5	20.5	23.5
FR1 n41	Ant 4	17.5	16.5	22.0	20.5	19.5	20.5	23.5
FR1 n41 HPUE	Ant 4	17.5	16.5	22.0	20.5	19.5	20.5	23.5
FR1 n41	Ant 6	35.2	34.2	22.0	29.1	28.1	22.0	22.0
FR1 n41	Ant 0	17.5	16.5	23.0	22.0	21.0	22.0	23.0
FR1 n41	Ant 5	28.5	27.5	23.0	24.0	23.0	23.0	23.0
FR1 n77(78)Part 27O	Ant 2	13.0	13.0	21.0	13.0	13.0	13.0	23.5
FR1 n77(78)Part 27Q	Ant 2	13.0	13.0	21.0	13.0	13.0	13.0	23.5
FR1 n77(78)Part 96	Ant 2	13.0	13.0	13.0	13.0	13.0	13.0	13.0
FR1 n77(78)Part 27O	Ant 3	13.0	13.0	21.5	13.0	13.0	13.0	21.5
FR1 n77(78)Part 27Q	Ant 3	13.0	13.0	21.5	13.0	13.0	13.0	21.5
FR1 n77(78)Part 96	Ant 3	13.0	13.0	13.0	13.0	13.0	13.0	13.0
FR1 n77(78)Part 27O	Ant 4	13.0	13.0	24.5	13.0	13.0	13.0	24.5
FR1 n77(78)Part 27Q	Ant 4	13.0	13.0	24.5	13.0	13.0	13.0	24.5
FR1 n77(78)Part 96	Ant 4	13.0	13.0	13.0	13.0	13.0	13.0	13.0
FR1 n77(78)Part 27O	Ant 8	13.0	13.0	22.0	13.0	13.0	13.0	22.0
FR1 n77(78)Part 27Q	Ant 8	13.0	13.0	22.0	13.0	13.0	13.0	22.0
FR1 n77(78)Part 96	Ant 8	13.0	13.0	13.0	13.0	13.0	13.0	13.0

Note:

1) *Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1.0 dB device uncertainty.
2) All Plimit power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).
3) The max allowed output power is the Plimit + 1.0 dB device uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.
4) When the user is talking a call-in head scenario and the receiver detect mechanism trigger is earpiece on, the maximum power level for head exposure conditions will be reduced and is less than the full power level.

6. RF Exposure Limits

6.1 Uncontrolled Environment

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

6.2 Controlled Environment

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

6.3 RF Exposure limit for below 6GHz

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

1. 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.

6.4 RF Exposure limit for above 6GHz

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310. The unit of power density evaluation is W/m^2 or mW/cm^2.

Peak Spatially Averaged Power Density was evaluated over a square area of $4cm^2$ per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

Note: 1.0 mW/cm^2 is 10 W/m^2

7. Specific Absorption Rate (SAR)

7.1 Introduction

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

7.2 SAR Definition

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

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

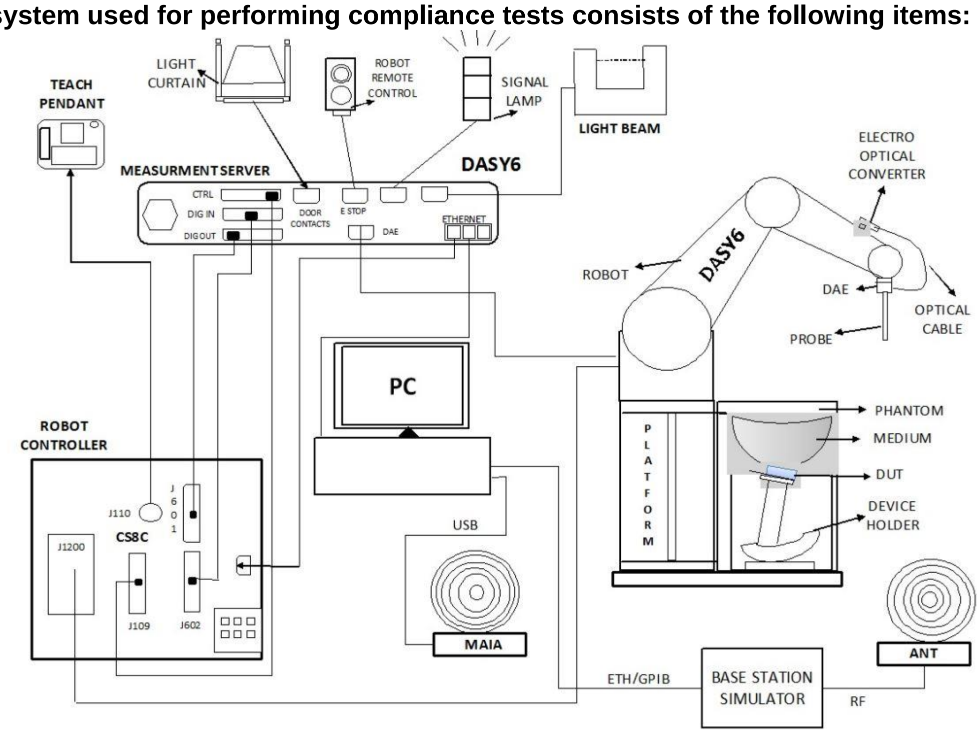
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

8. System Description and Setup

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 or Win10 and the DASY5 or DASY6 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

8.1 E-Field Probe

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

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 10 GHz Linearity: ±0.2 dB (30 MHz – 10 GHz)	
Directivity	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

8.2 Data Acquisition Electronics (DAE)

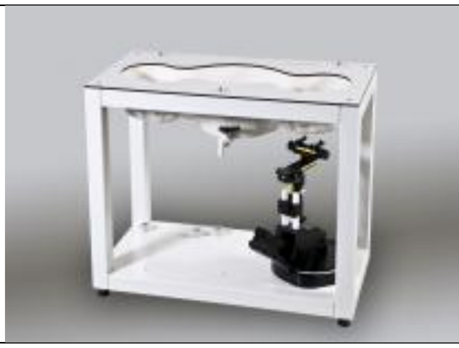
The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

8.3 Phantom

<SAM Twin Phantom>

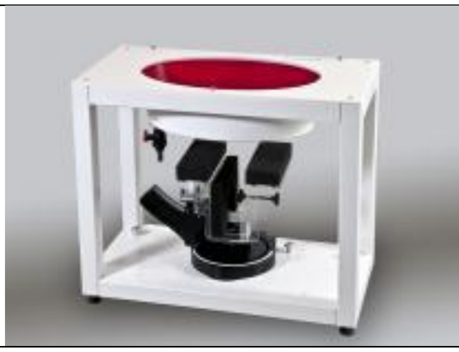
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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

<ELI Phantom>

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



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

8.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

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

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

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

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

Mounting Device for Laptops

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

<SAR measurement>

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

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

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

9.1 Spatial Peak SAR Evaluation

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

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

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

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

9.2 Power Reference Measurement

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

9.3 Area Scan

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

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

<table>
<tr><th></th><th>≤ 3 GHz</th><th>> 3 GHz</th></tr>
<tr><td>Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td>Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
</table>

9.4 Zoom Scan

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

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

<table>
<tr><th colspan="3"></th><th>≤ 3 GHz</th><th>> 3 GHz</th></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}</td><td>≤ 2 GHz: ≤ 8 mm
2 – 3 GHz: ≤ 5 mm*</td><td>3 – 4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>≤ 5 mm</td><td>3 – 4 GHz: ≤ 4 mm
4 – 5 GHz: ≤ 3 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>≤ 4 mm</td><td>3 – 4 GHz: ≤ 3 mm
4 – 5 GHz: ≤ 2.5 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3 – 4 GHz: ≥ 28 mm
4 – 5 GHz: ≥ 25 mm
5 – 6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">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 <u>reported</u> 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.</td></tr>
</table>

9.5 Volume Scan Procedures

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

9.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1099	2024/12/13	2025/12/12
SPEAG	835MHz System Validation Kit	D835V2	4d162	2024/12/13	2025/12/12
SPEAG	1750MHz System Validation Kit	D1750V2	1137	2024/10/15	2025/10/14
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2024/12/16	2025/12/15
SPEAG	2450MHz System Validation Kit	D2450V2	1095	2024/2/8	2026/2/6
SPEAG	2600MHz System Validation Kit	D2600V2	1112	2023/12/18	2025/12/16
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2023/11/20	2025/11/18
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2023/11/20	2025/11/18
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2023/3/9	2026/3/6
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2022/9/23	2025/9/21
SPEAG	6500MHz System Validation Kit	D6.5GHzV2	1026	2025/1/28	2026/1/27
SPEAG	5G Verification Source	10GHz	2005	2024/12/4	2025/12/3
SPEAG	Data Acquisition Electronics	DAE4	1649	2024/7/3	2025/7/2
SPEAG	Data Acquisition Electronics	DAE4	1358	2024/5/23	2025/5/22
SPEAG	Data Acquisition Electronics	DAE4	1650	2024/11/25	2025/11/24
SPEAG	Dosimetric E-Field Probe	EX3DV4	7918	2025/3/24	2026/3/23
SPEAG	Dosimetric E-Field Probe	EX3DV4	7774	2024/6/27	2025/6/26
SPEAG	Dosimetric E-Field Probe	EX3DV4	7764	2024/9/2	2025/9/1
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9553	2024/11/15	2025/11/14
SPEAG	mmWave Phantom	mmWave	1065	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-2022	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-2024	NCR	NCR
Beichuang	Thermo-Hygrometer	HTC-1	1929542	2024/5/15	2025/5/14
Beichuang	Thermo-Hygrometer	HTC-1	1929543	2024/5/15	2025/5/14
Beichuang	Thermo-Hygrometer	HTC-1	1949251	2025/1/11	2026/1/10
Testo	Thermo-Hygrometer	HTC-1	55011	2025/1/2	2026/1/1
Beichuang	Thermo-Hygrometer	HTC-1	1949246	2025/1/11	2026/1/10
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2024/7/4	2025/7/3
Keysight	Preamplifier	83017A	MY57280106	2025/4/18	2026/4/17
Agilent	ENA Series Network Analyzer	E5071C	MY46112129	2024/7/4	2025/7/3
SPEAG	Dielectric Probe Kit	DAK-3.5	1144	2024/8/20	2025/8/19
Anritsu	Vector Signal Generator	MG3710A	6201682672	2025/1/3	2026/1/2
Rohde & Schwarz	Signal Generator	SMB100A	100455	2025/1/2	2026/1/1
Rohde & Schwarz	Power Meter	NRVD	102081	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRP50S	101385	2024/10/15	2025/10/14
R&S	BLUETOOTH TESTER	CBT	101246	2024/7/4	2025/7/3
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2024/10/11	2025/10/10
TES	DIGITAC THERMOMETER	TYPE-K	220305411	2025/1/2	2026/1/1
TES	DIGITAC THERMOMETER	1310	200505600	2024/7/8	2025/7/7
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
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1
ET Industries	Dual Directional Coupler	C-058-10	N/A	Note 1
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1
mini-circuits	amplifier	ZVE-3W-83+	162601250	Note 1

Note:

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

11. System Verification

11.1 Tissue Simulating Liquids

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

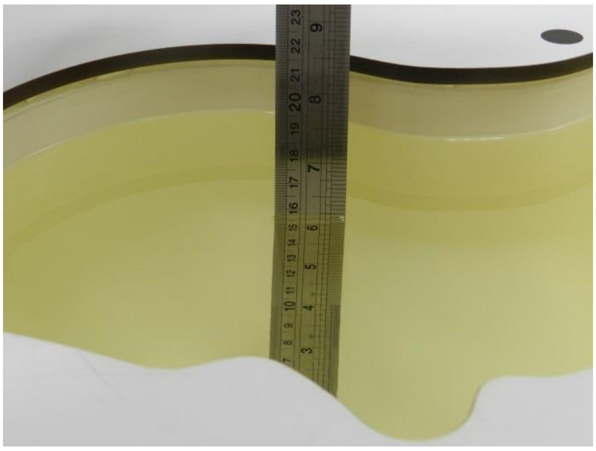


Fig 11.1 Photo of Liquid Height for Head SAR

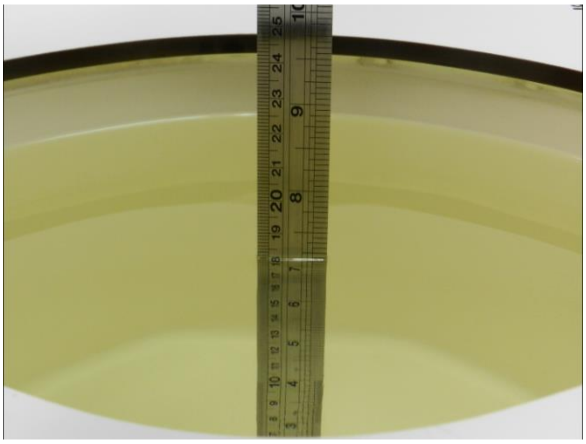


Fig 11.2 Photo of Liquid Height for Body SAR

11.2 Tissue Verification

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

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

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Head	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.8	0.884	42.7	0.89	41.90	-0.67	1.91	±5	2025/4/17
750	Head	22.7	0.889	42.8	0.89	41.90	-0.11	2.15	±5	2025/4/18
750	Head	22.8	0.892	42.7	0.89	41.90	0.22	1.91	±5	2025/5/3
835	Head	22.8	0.919	42.0	0.90	41.50	2.11	1.20	±5	2025/4/19
835	Head	22.7	0.923	42.0	0.90	41.50	2.56	1.20	±5	2025/4/20
835	Head	22.8	0.922	42.0	0.90	41.50	2.44	1.20	±5	2025/5/4
1750	Head	22.8	1.37	40.9	1.37	40.10	0.00	2.00	±5	2025/4/20
1750	Head	22.7	1.37	41.0	1.37	40.10	0.00	2.24	±5	2025/4/22
1750	Head	22.8	1.36	41.0	1.37	40.10	-0.73	2.24	±5	2025/5/5
1900	Head	22.8	1.43	39.4	1.40	40.00	2.14	-1.50	±5	2025/4/23
1900	Head	22.7	1.44	39.5	1.40	40.00	2.86	-1.25	±5	2025/4/24
1900	Head	22.8	1.44	39.4	1.40	40.00	2.86	-1.50	±5	2025/5/6
2450	Head	22.7	1.78	38.9	1.80	39.20	-1.11	-0.77	±5	2025/5/4
2450	Head	22.8	1.75	38.8	1.80	39.20	-2.78	-1.02	±5	2025/5/12
2600	Head	22.8	1.94	38.4	1.96	39.00	-1.02	-1.54	±5	2025/4/25
2600	Head	22.7	1.95	38.3	1.96	39.00	-0.51	-1.79	±5	2025/4/26
2600	Head	22.8	1.93	38.2	1.96	39.00	-1.53	-2.05	±5	2025/5/7
3500	Head	22.7	2.86	37.6	2.91	37.90	-1.72	-0.79	±5	2025/4/27
3500	Head	22.6	2.85	37.8	2.91	37.90	-2.06	-0.26	±5	2025/4/28
3500	Head	22.7	2.91	37.7	2.91	37.90	0.00	-0.53	±5	2025/5/8
5250	Head	22.6	4.59	35.6	4.71	35.95	-2.55	-0.97	±5	2025/5/5
5250	Head	22.8	4.61	35.5	4.71	35.95	-2.12	-1.25	±5	2025/5/13
5600	Head	22.8	5.06	35.0	5.07	35.50	-0.20	-1.41	±5	2025/5/6
5600	Head	22.8	4.99	35.1	5.07	35.50	-1.58	-1.13	±5	2025/5/14
5750	Head	22.7	5.18	34.6	5.22	35.35	-0.77	-2.12	±5	2025/5/7
5750	Head	22.8	5.17	34.9	5.22	35.35	-0.96	-1.27	±5	2025/5/14
6500	Head	22.8	6.02	34.1	6.07	34.50	-0.82	-1.16	±5	2025/5/13
3500	Head	22.8	2.98	37.6	2.91	37.90	2.41	-0.79	±5	2025/6/18
3500	Head	22.7	2.95	37.7	2.91	37.90	1.37	-0.53	±5	2025/6/19
3700	Head	22.8	3.19	37.5	3.12	37.70	2.24	-0.53	±5	2025/6/18
3700	Head	22.7	3.18	37.5	3.12	37.70	1.92	-0.53	±5	2025/6/19
3900	Head	22.8	3.37	37.3	3.33	37.51	1.20	-0.56	±5	2025/6/18
3900	Head	22.7	3.40	37.3	3.33	37.51	2.10	-0.56	±5	2025/6/19

11.3 System Performance Check Results

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

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2025/4/17	750	Head	50	1099	7918	1649	0.445	8.280	8.9	7.49	0.287	5.370	5.74	6.89
2025/4/18	750	Head	50	1099	7774	1358	0.431	8.280	8.62	4.11	0.289	5.370	5.78	7.64
2025/5/3	750	Head	50	1099	7918	1649	0.445	8.280	8.9	7.49	0.286	5.370	5.72	6.52
2025/4/19	835	Head	50	4d162	7918	1649	0.495	9.080	9.9	9.03	0.317	5.850	6.34	8.38
2025/4/20	835	Head	50	4d162	7774	1358	0.468	9.080	9.36	3.08	0.314	5.850	6.28	7.35
2025/5/4	835	Head	50	4d162	7918	1649	0.492	9.080	9.84	8.37	0.315	5.850	6.3	7.69
2025/4/20	1750	Head	50	1137	7918	1649	1.760	36.800	35.2	-4.35	0.940	19.600	18.8	-4.08
2025/4/22	1750	Head	50	1137	7774	1358	1.870	36.800	37.4	1.63	1.000	19.600	20	2.04
2025/5/5	1750	Head	50	1137	7918	1649	1.760	36.800	35.2	-4.35	0.937	19.600	18.74	-4.39
2025/4/23	1900	Head	50	5d182	7918	1649	2.110	39.800	42.2	6.03	1.040	21.000	20.8	-0.95
2025/4/24	1900	Head	50	5d182	7774	1358	2.080	39.800	41.6	4.52	1.120	21.000	22.4	6.67
2025/5/6	1900	Head	50	5d182	7918	1649	2.150	39.800	43	8.04	1.050	21.000	21	0.00
2025/5/4	2450	Head	50	1095	7774	1358	2.720	52.600	54.4	3.42	1.280	24.700	25.6	3.64
2025/5/12	2450	Head	50	1095	7918	1649	2.540	52.600	50.8	-3.42	1.200	24.700	24	-2.83
2025/4/25	2600	Head	50	1112	7918	1649	2.670	55.100	53.4	-3.09	1.220	24.800	24.4	-1.61
2025/4/26	2600	Head	50	1112	7774	1358	2.760	55.100	55.2	0.18	1.260	24.800	25.2	1.61
2025/5/7	2600	Head	50	1112	7918	1649	2.640	55.100	52.8	-4.17	1.220	24.800	24.4	-1.61
2025/4/27	3500	Head	50	1037	7918	1649	3.310	65.400	66.2	1.22	1.260	24.700	25.2	2.02
2025/4/28	3500	Head	50	1037	7774	1358	3.560	65.400	71.2	8.87	1.280	24.700	25.6	3.64
2025/5/8	3500	Head	50	1037	7918	1649	3.370	65.400	67.4	3.06	1.280	24.700	25.6	3.64
2025/5/5	5250	Head	50	1113	7774	1358	4.090	81.500	81.8	0.37	1.180	23.300	23.6	1.29
2025/5/13	5250	Head	50	1113	7918	1649	3.760	81.500	75.2	-7.73	1.110	23.300	22.2	-4.72
2025/5/6	5600	Head	50	1113	7774	1358	4.290	82.600	85.8	3.87	1.220	23.700	24.4	2.95
2025/5/14	5600	Head	50	1113	7918	1649	3.860	82.600	77.2	-6.54	1.240	23.700	24.8	4.64
2025/5/7	5750	Head	50	1113	7774	1358	3.830	80.800	76.6	-5.20	1.100	23.000	22	-4.35
2025/5/14	5750	Head	50	1113	7918	1649	3.910	80.800	78.2	-3.22	1.260	23.000	25.2	9.57
2025/5/13	6500	Head	50	1026	7764	1649	14.8	296.00	296	0.00	2.77	54.80	55.4	1.09
2025/6/18	3500	Head	50	1037	7918	1649	2.95	65.400	59	-9.79	1.15	24.700	23	-6.88
2025/6/19	3500	Head	50	1037	7918	1649	3.01	65.400	60.2	-7.95	1.14	24.700	22.8	-7.69
2025/6/18	3700	Head	50	1008	7918	1649	3.21	67.200	64.2	-4.46	1.25	24.400	25	2.46
2025/6/19	3700	Head	50	1008	7918	1649	3.22	67.200	64.4	-4.17	1.25	24.400	25	2.46
2025/6/18	3900	Head	50	1048	7918	1649	3.76	69.100	75.2	8.83	1.30	24.100	26	7.88
2025/6/19	3900	Head	50	1048	7918	1649	3.71	69.100	74.2	7.38	1.31	24.100	26.2	8.71

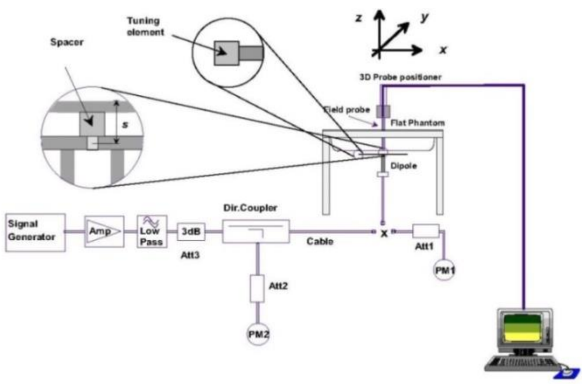


Fig 11.3.1 System Performance Check Setup

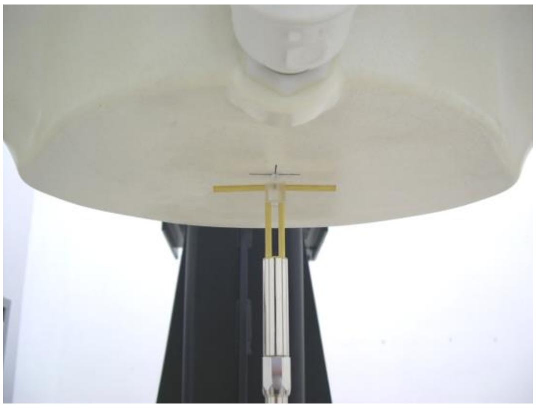


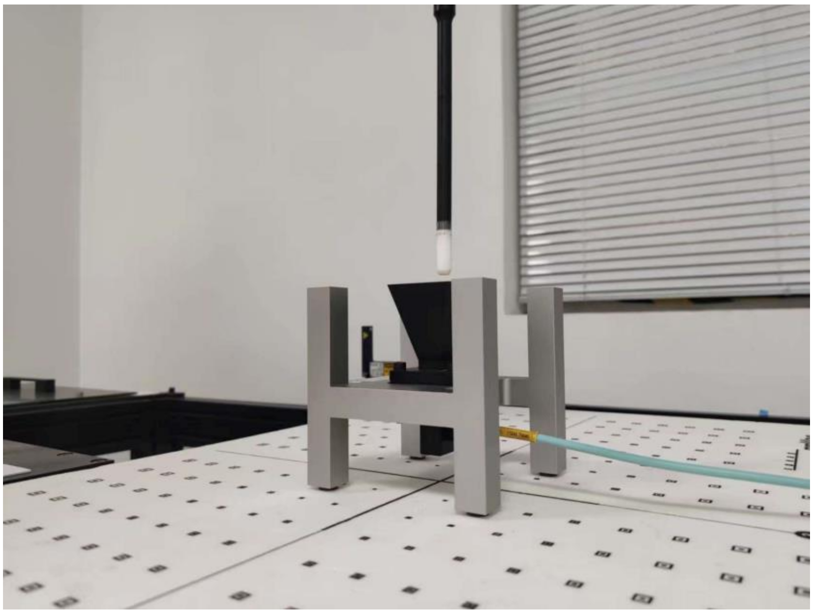
Fig 11.3.2 Setup Photo

11.4 PD System Verification Results

The system was verified to be within ±0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check. The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes.

Frequency (GHz)	5G Verification Source	Probe S/N	DAE S/N	Distance (mm)	Input Power (mW)	Measured psPDn+ 4 cm^2 (W/m^2)	Normalized(1) psPDn+ 4 cm^2 (W/m^2)	Targeted psPDn+ 4 cm^2 (W/m^2)	Deviation (dB)	Measured psPDtot+ 4 cm^2 (W/m^2)	Normalized(1) psPDtot+ 4 cm^2 (W/m^2)	Targeted psPDtot+ 4 cm^2 (W/m^2)	Deviation (dB)	Measured psPDmod+ 4 cm^2 (W/m^2)	Normalized(1) psPDmod+ 4 cm^2 (W/m^2)	Targeted psPDmod+ 4 cm^2 (W/m^2)	Deviation (dB)	Date
10	10GHz_2005	9553	1650	10	100	99.5	157.7	171	-0.35	100	158.4	172	-0.36	103	163.2	177	-0.35	2025/5/28

Note: (1) means the measured PD was normalized to Prad power which can be referred to DASY Calibration Certificate in appendix C.



System Verification Setup Photo

12. RF Exposure Positions

12.1 Ear and handset reference point

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

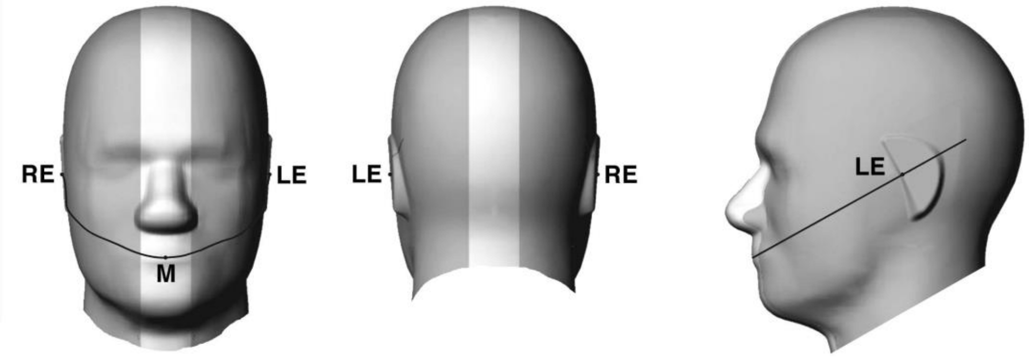


Fig 12.1.1 Front, back, and side views of SAM twin phantom

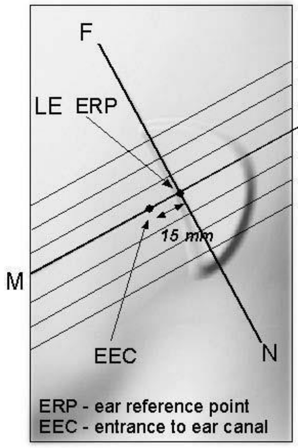


Fig 12.1.2 Close-up side view of phantom showing the ear region.

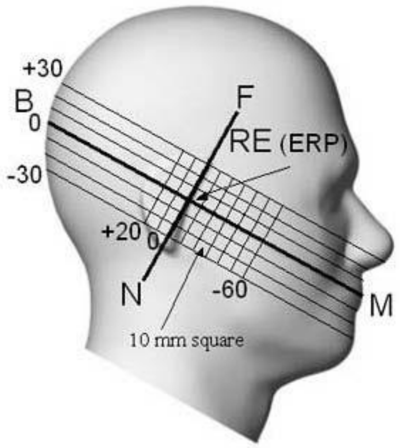


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

12.2 Definition of the cheek position

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

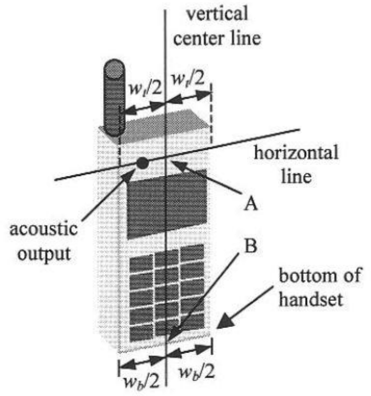


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

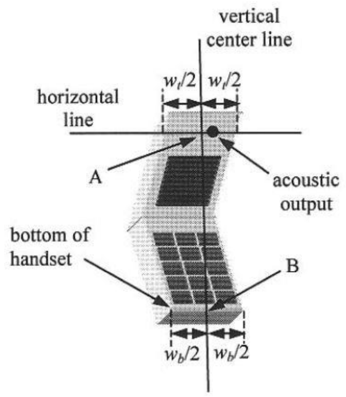


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

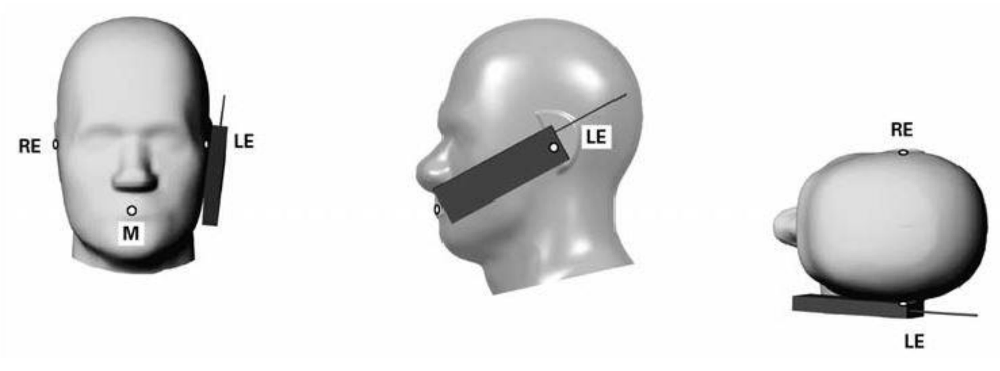


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

12.3 Definition of the tilt position

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

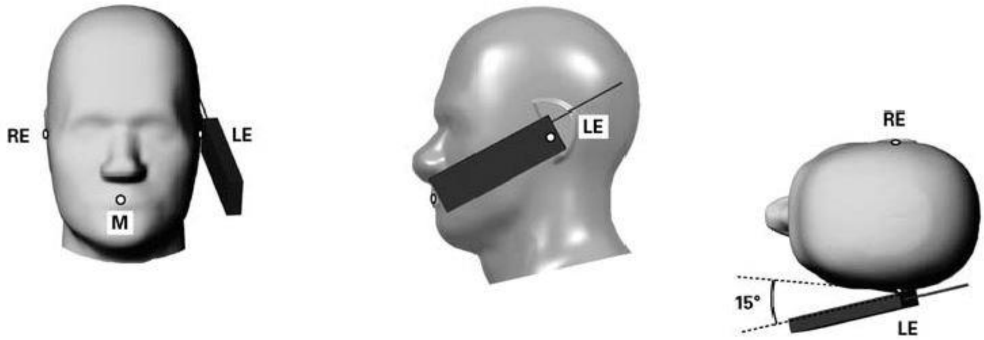


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

12.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 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.

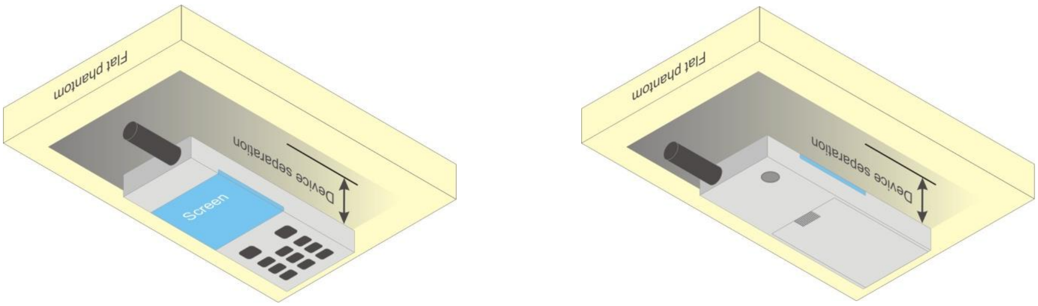


Fig 12.4 Body Worn Position

12.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, that 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.

12.6 Wireless Router

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

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

12.7 Miscellaneous Testing Considerations

- Evaluate SAR using 6-7 GHz parameters per IEC/IEEE 62209-1528:2020.
- Per procedures of KDB Pubs. 447498 and 248227, and applicable product-specific procedures among KDB Pubs. 648474 (handsets/phablets).
- Where supported by the test system, also report estimated absorbed (epithelial) power density (for reference purposes only, not specifically for compliance) and estimated incident PD, derived from measured SAR.
- In addition, for the highest SAR test configurations evaluate incident PD using the mmw near-field probe and total-field/power-density reconstruction method (2 mm closest meas. plane)
    - Adjust measured results per amount that measurement uncertainty exceeds 30 % (see e.g. IEC 62479:2010)

13. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d *(SF)*	β_c/β_d	β_{HS} *(Note1, Note 2)*	CM (dB) *(Note 3)*	MPR (dB) *(Note 3)*
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 *(Note 4)*	15/15 *(Note 4)*	64	12/15 *(Note 4)*	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

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

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

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

Setup Configuration

HSUPA Setup Configuration:

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

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

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

Note 1: For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c . For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c .
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.
Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C 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	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table. Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		

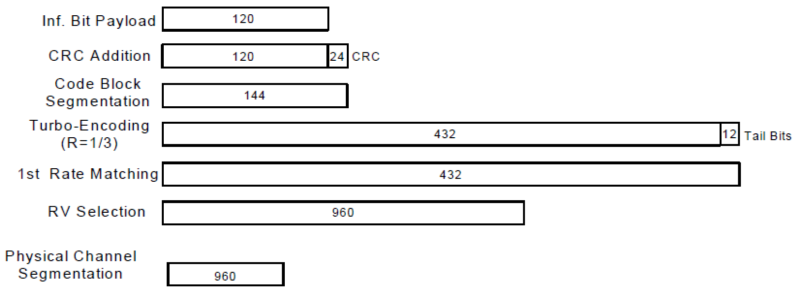


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

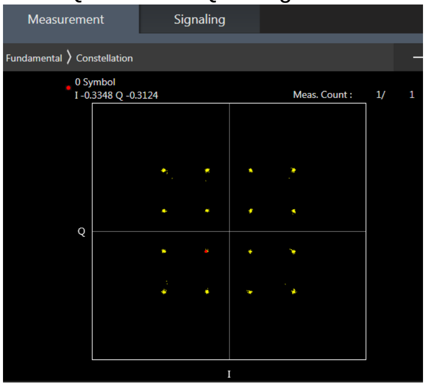
General Note:

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.

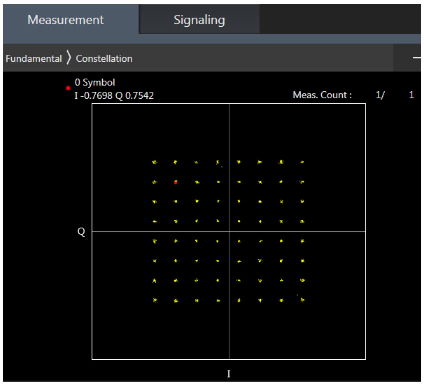
<LTE Conducted Power>

General Note:

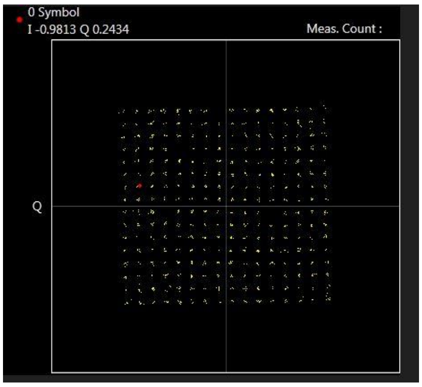
1. Anritsu MT8821C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested 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 / B17 / 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 B2 / B17 / B4 / B5 / B38 SAR test was covered by B25 / B12 / 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.

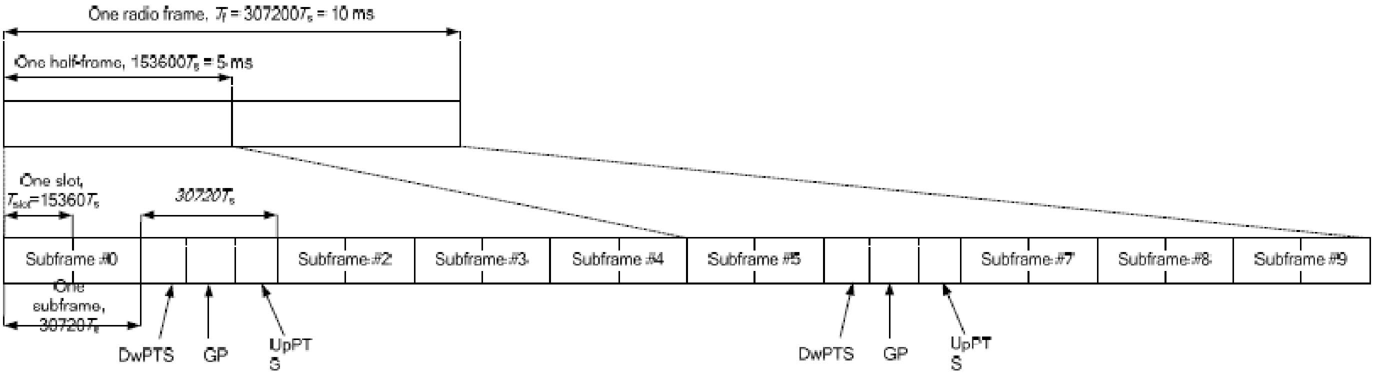


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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

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

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

The highest duty factor is resulted from:

For LTE TDD Power class 2

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

For LTE TDD Power class 3

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

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

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

<LTE Carrier Aggregation>

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

General Note:

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

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	Main Antenna Tx
CA_5B	Ant0
CA_7C	Ant4
CA_38C	Ant4

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B5/38/7 with a maximum of two uplink component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.

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

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

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n71/n77/n78 is NSA mode.
2. 5G NR n2/n5/n7 /n38/n41 /n66 /n71/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. 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.
5. 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.
6. 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.
7. 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.
8. For 5GNR n41 HPUE, 5GNR n41 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission.

<3GPP 38.101 MPR for EN-DC>

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

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

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

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

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

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

<EN-DC combination>

ENDC	Main Antenna Tx	
	LTE TX	NR TX
DC_38A_n78A	Ant6	Ant2
DC_7A_n77A	Ant6	Ant2
DC_7A_n78A	Ant6	Ant2
DC_7A_n71A	Ant4	Ant0
DC_41A_n78A	Ant6	Ant2

Inter-Band CA Configuration:

NR Uplink CA	2CC Uplink Carrier Aggregation	
Inter-band	**Antenna Tx**	**Antenna Tx**
CA_ n7A-n78A	Ant6	Ant2

<WLAN Conducted Power>

General Note:

1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) 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 in the initial test configuration. Additional output power measurements were not necessary.
2. 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.
3. 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).
4. 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.
5. 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.
6. 802.11 ax supports both full tone size mode and partial tone size mode, after verification on partial tone size mode that partial size tone mode power will not be higher than full tone size mode, therefore, full tone mode power was chosen to be measured in this report.
7. The 2.4GHz/5GHz/6GHz WLAN can transmit in SISO/MIMO antenna mode only.
8. SISO and MIMO all supported by WLAN2.4GHz/WLAN5GHz, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, so only chose MIMO mode to perform SAR testing.
9. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.
10. The 6GHz WLAN can transmit in SISO/MIMO antenna mode, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, SAR and PD for MIMO was evaluated by making a measurement with both antennas transmitting simultaneously.

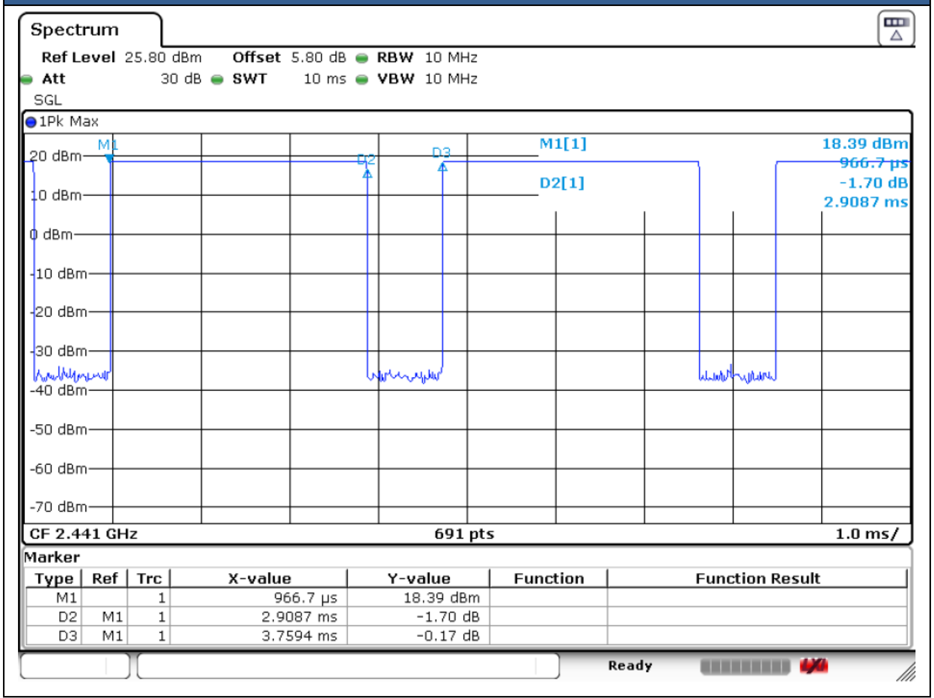
11. When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
12. Per 201904 TCBC 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. For the table below the 802.11ax maximum power is SU (non-OFDMA), and the SU maximum power also higher than RU (OFDMA)
13. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
14. For modes 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.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 77.37% as following figure, for Bluetooth SAR scaling need further consideration and the theoretical 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



14. Antenna Location

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

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For SAR testing of Bluetooth signal with 83.3% theoretical duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle) *83.3%".
   d. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   e. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   f. For TDD LTE SAR measurement of power class 3, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
   g. 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 receiver detection 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. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
5. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
6. For WLAN/BT when transmit simultaneously with each other, or when transmit simultaneous with WWAN/BT, power reduction will be activated to head, body-worn, extremity exposure condition.
7. 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 transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of WCDMA Band II, LTE Band 2/4/7/25/42/66, 5GNR n2 /n7 /n38/n41/n77/n66/n78 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.
8. According to Nov. 2017 TCB workshop, when the reported 1gSAR for UL CA configuration is <1.2 W/kg, UL CA 1gSAR is not required for all required test channels (PCC based).
9. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hotspot SAR.
10. For Phablet devices, when hotspot mode is not supported, Product specific 10-g SAR is required for all surfaces and edges with an antenna located at ≤ 25mm from that surface or edge in direct contact with a flat phantom, to address

interactive hand use exposure conditions.
11. For WLAN 6GHz doesn't support wireless router capability.
12. Per FCC guidance, SAR was performed using 6.5 GHz SAR probe calibration factors.
13. Per October 2020 TCB Workshop Interim procedures, start instead with a minimum of 5 test channels across the full band, then adapt and apply conducted power and SAR test reduction procedures of KDB Pub. 248227 v02r02.
14. Absorbed power density (APD) using a 4cm^2 averaging area is reported based on SAR measurements.
15. For testing the WLAN 6GHz of this DUT, the selection of test channels was based on FCC guidance, with five channels selected across the entire WLAN 6GHz Bands. For the U-NII-5/U-NII-7 band supporting Standard AP mode and indoor Client mode, the higher output mode was measured among the selected channels.
16. Per FCC guidance, the WLAN 6GHz Sim-Tx analysis are using the SAR results with the conventional SPLSR etc procedures from KDB 447498 D01.

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 / B17/ 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 B2 / B17 / B4 / B5 / B38 SAR test was covered by B25 / B12 / 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 /n66/n38/n41/n77 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

WLAN/Bluetooth Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
6. For determination of the scaling factor for report SAR of MIMO mode, if the hot spots are separated the scaling factors are individually determined from each transmit chain. Further simplification chose the worse SAR value and the worst scaling factor from each transmit chain perform reported SAR calculation conservatively. If the hot spots are not spatially separated, the scaling factor is determined from the worst number of each transmit chain.
   1) 10+9(9) represents the test in 2TX operation, while the SAR or power data is associated with antenna 9;
   2) 10+9(10) represents the test in 2TX operation, while the SAR or power data is associated with antenna 10;
   3) 10+7(7) represents the test in 2TX operation, while the SAR or power data is associated with antenna 7;
   4) 10+7(10) represents the test in 2TX operation, while the SAR or power data is associated with antenna 10;

DSI status description：

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

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

Exposure Condition	DSI	Trigger Conditions
Head SAR- Standalone	DSI 2	Receiver on
Head SAR - Simultaneous	DSI 6	Receiver On+WLAN
Hotspot	DSI 1	Hotspot On
Body worn/Extremity SAR - Standalone	DSI 0	Receiver Off
Body worn/Extremity SAR - Simultaneous	DSI 4	Receiver Off+WLAN

15.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
01	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	133297	680.5	22.98	24.00	1.265	-	-	-0.03	0.915	1.157
	LTE Band 71 with Palm ring	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	133297	680.5	22.98	24.00	1.265	-	-	0.08	0.887	1.122
	LTE Band 71 with Lanyard	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	133297	680.5	22.98	24.00	1.265	-	-	0.01	0.899	1.137
	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 2	133297	680.5	22.45	23.50	1.274	-	-	0.08	0.801	1.020
	LTE Band 71	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 0	DSI 2	133297	680.5	22.40	23.50	1.288	-	-	0.01	0.872	1.123
	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	133297	680.5	22.98	24.00	1.265	-	-	0.03	0.694	0.878
	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 2	133297	680.5	22.45	23.50	1.274	-	-	-0.08	0.625	0.796
	LTE Band 71	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 0	DSI 2	133297	680.5	22.40	23.50	1.288	-	-	-0.08	0.671	0.864
	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	133297	680.5	22.98	24.00	1.265	-	-	0.1	0.523	0.662
	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 2	133297	680.5	22.45	23.50	1.274	-	-	-0.18	0.472	0.601
	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	133297	680.5	22.98	24.00	1.265	-	-	0.1	0.406	0.514
	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 2	133297	680.5	22.45	23.50	1.274	-	-	0.12	0.371	0.473
	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 6	133297	680.5	22.05	23.00	1.245	-	-	0.01	0.734	0.914
02	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.42	23.50	1.282	-	-	-0.07	0.948	1.215
	LTE Band 12 with Palm ring	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.42	23.50	1.282	-	-	0.03	0.935	1.199
	LTE Band 12 with Lanyard	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.42	23.50	1.282	-	-	-0.08	0.922	1.182
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.38	23.50	1.294	-	-	0.08	0.840	1.087
	LTE Band 12	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.35	23.50	1.303	-	-	-0.17	0.818	1.066
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.42	23.50	1.282	-	-	-0.03	0.733	0.940
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.38	23.50	1.294	-	-	0.14	0.682	0.883
	LTE Band 12	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.35	23.50	1.303	-	-	0.11	0.675	0.880
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.42	23.50	1.282	-	-	-0.05	0.641	0.822
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.38	23.50	1.294	-	-	0.18	0.584	0.756
	LTE Band 12	10M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.35	23.50	1.303	-	-	0.14	0.572	0.745
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.42	23.50	1.282	-	-	-0.17	0.526	0.674
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.38	23.50	1.294	-	-	0.17	0.417	0.540
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 6	23095	707.5	21.50	22.50	1.259	-	-	0.04	0.785	0.988
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	136100	680.5	22.36	23.00	1.159	-	-	0.01	0.793	0.919
03	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	136100	680.5	22.35	23.00	1.161	-	-	0.01	0.912	1.059
	FR1 n71 with Palm ring	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	136100	680.5	22.35	23.00	1.161	-	-	-0.08	0.886	1.029
	FR1 n71 with Lanyard	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	136100	680.5	22.35	23.00	1.161	-	-	0.1	0.895	1.039
	FR1 n71	20M	QPSK	100	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	136100	680.5	22.26	23.00	1.186	-	-	0.1	0.713	0.846
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	136100	680.5	22.36	23.00	1.159	-	-	-0.17	0.562	0.651
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	136100	680.5	22.35	23.00	1.161	-	-	0.04	0.665	0.772
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	136100	680.5	22.36	23.00	1.159	-	-	-0.08	0.449	0.520
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	136100	680.5	22.35	23.00	1.161	-	-	0.05	0.549	0.637
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	136100	680.5	22.36	23.00	1.159	-	-	-0.09	0.335	0.388
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	136100	680.5	22.35	23.00	1.161	-	-	-0.08	0.412	0.478
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 6	136100	680.5	21.38	22.00	1.153	-	-	-0.03	0.736	0.849
850MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	189	836.4	26.58	27.50	1.236	-	-	-0.17	0.816	1.009
04	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	128	824.2	26.52	27.50	1.253	-	-	-0.02	0.918	1.150
	GSM850 with Palm ring	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	128	824.2	26.52	27.50	1.253	-	-	-0.18	0.896	1.123
	GSM850 with Lanyard	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	128	824.2	26.52	27.50	1.253	-	-	0.1	0.881	1.104
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	251	848.8	26.54	27.50	1.247	-	-	0.1	0.879	1.096
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	189	836.4	26.58	27.50	1.236	-	-	0.12	0.749	0.926
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	128	824.2	26.52	27.50	1.253	-	-	0.08	0.911	1.141
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	251	848.8	26.54	27.50	1.247	-	-	-0.17	0.840	1.047

	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	189	836.4	26.58	27.50	1.236	-	-	-0.03	0.690	0.853
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	128	824.2	26.52	27.50	1.253	-	-	0.14	0.820	1.027
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	251	848.8	26.54	27.50	1.247	-	-	0.11	0.742	0.925
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	189	836.4	26.58	27.50	1.236	-	-	-0.05	0.645	0.797
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	128	824.2	26.52	27.50	1.253	-	-	0.18	0.807	1.011
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	251	848.8	26.54	27.50	1.247	-	-	0.14	0.788	0.983
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 6	128	824.2	25.51	26.50	1.256	-	-	-0.03	0.775	0.973
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4182	836.4	22.32	23.50	1.312	-	-	0.13	0.734	0.963
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4132	826.4	22.31	23.50	1.315	-	-	0.12	0.872	1.147
05	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4233	846.6	22.25	23.50	1.334	-	-	0.03	0.955	**1.274**
	WCDMA V with Palm ring	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4233	846.6	22.25	23.50	1.334	-	-	0.12	0.936	1.249
	WCDMA V with Lanyard	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4233	846.6	22.25	23.50	1.334	-	-	0.08	0.928	1.238
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	4182	836.4	22.32	23.50	1.312	-	-	0.03	0.692	0.908
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	4132	826.4	22.31	23.50	1.315	-	-	0.18	0.803	1.056
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	4233	846.6	22.25	23.50	1.334	-	-	0.16	0.824	1.099
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	4182	836.4	22.32	23.50	1.312	-	-	-0.1	0.606	0.795
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	4132	826.4	22.31	23.50	1.315	-	-	0.07	0.706	0.928
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	4233	846.6	22.25	23.50	1.334	-	-	0.18	0.727	0.970
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	4182	836.4	22.32	23.50	1.312	-	-	-0.1	0.570	0.748
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	4132	826.4	22.31	23.50	1.315	-	-	0.01	0.638	0.839
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	4233	846.6	22.25	23.50	1.334	-	-	-0.15	0.630	0.840
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 6	4233	846.6	21.43	22.50	1.279	-	-	0.04	0.777	0.994
06	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	23.15	24.50	1.365	-	-	-0.01	0.945	**1.290**
	LTE Band 26 with Palm ring	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	23.15	24.50	1.365	-	-	-0.17	0.929	1.268
	LTE Band 26 with Lanyard	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	23.15	24.50	1.365	-	-	-0.03	0.933	1.274
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	22.17	23.50	1.358	-	-	0.08	0.851	1.156
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	22.15	23.50	1.365	-	-	0.01	0.827	1.129
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 2	26865	831.5	23.15	24.50	1.365	-	-	0.03	0.846	1.155
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	DSI 2	26865	831.5	22.17	23.50	1.358	-	-	-0.08	0.769	1.044
	LTE Band 26	15M	QPSK	75	0	-	Right Tilted	0mm	Ant 0	DSI 2	26865	831.5	22.15	23.50	1.365	-	-	-0.08	0.744	1.016
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	26865	831.5	23.15	24.50	1.365	-	-	0.1	0.758	1.035
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	DSI 2	26865	831.5	22.17	23.50	1.358	-	-	-0.18	0.705	0.957
	LTE Band 26	15M	QPSK	75	0	-	Left Cheek	0mm	Ant 0	DSI 2	26865	831.5	22.15	23.50	1.365	-	-	0.1	0.679	0.927
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 2	26865	831.5	23.15	24.50	1.365	-	-	0.12	0.703	0.960
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	DSI 2	26865	831.5	22.17	23.50	1.358	-	-	0.08	0.571	0.775
	LTE Band 26	15M	QPSK	75	0	-	Left Tilted	0mm	Ant 0	DSI 2	26865	831.5	22.15	23.50	1.365	-	-	-0.17	0.549	0.749
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 6	26865	831.5	22.33	23.50	1.309	-	-	0.04	0.762	0.997
	LTE Band 5B	10M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	20476+ 20575	831.6+ 841.5	22.94	24.50	1.432	-	-	0.06	0.823	1.179
07	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.84	24.50	1.164	-	-	0.02	0.961	**1.119**
	FR1 n5 with Palm ring	25M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.84	24.50	1.164	-	-	0.14	0.948	1.103
	FR1 n5 with Lanyard	25M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.84	24.50	1.164	-	-	0.11	0.941	1.095
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.78	24.50	1.180	-	-	-0.03	0.832	0.982
	FR1 n5	25M	QPSK	128	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	22.75	23.50	1.189	-	-	0.14	0.798	0.949
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	167300	836.5	23.84	24.50	1.164	-	-	0.11	0.868	1.010
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	167300	836.5	23.78	24.50	1.180	-	-	-0.05	0.784	0.925
	FR1 n5	25M	QPSK	128	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 2	167300	836.5	22.75	23.50	1.189	-	-	0.18	0.754	0.897
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.84	24.50	1.164	-	-	0.14	0.767	0.893
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.78	24.50	1.180	-	-	-0.17	0.799	0.943
	FR1 n5	25M	QPSK	128	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 2	167300	836.5	22.75	23.50	1.189	-	-	0.17	0.693	0.824
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	167300	836.5	23.84	24.50	1.164	-	-	-0.05	0.698	0.812
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	167300	836.5	23.78	24.50	1.180	-	-	0.01	0.637	0.752
	FR1 n5	25M	QPSK	128	0	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 2	167300	836.5	22.75	23.50	1.189	-	-	0.1	0.563	0.669
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 6	167300	836.5	22.88	23.50	1.153	-	-	-0.03	0.766	0.883
1750MHz																				

	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	132322	1745	17.92	19.00	1.282	-	-	0.19	0.642	0.823
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	132072	1720	17.88	19.00	1.294	-	-	0.07	0.601	0.778
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	132572	1770	17.86	19.00	1.300	-	-	-0.18	0.653	0.849
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	132322	1745	17.89	19.00	1.291	-	-	0.03	0.515	0.665
	LTE Band 66	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 2	132322	1745	17.87	19.00	1.297	-	-	0.11	0.523	0.678
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 2	132322	1745	17.92	19.00	1.282	-	-	-0.08	0.134	0.172
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 2	132322	1745	17.89	19.00	1.291	-	-	-0.17	0.110	0.142
08	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	132322	1745	17.92	19.00	1.282	-	-	0.12	0.922	**1.182**
	LTE Band 66 with Palm ring	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	132322	1745	17.92	19.00	1.282	-	-	-0.05	0.911	1.168
	LTE Band 66 with Lanyard	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	132322	1745	17.92	19.00	1.282	-	-	0.18	0.908	1.164
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	132072	1720	17.88	19.00	1.294	-	-	-0.08	0.859	1.112
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	132572	1770	17.86	19.00	1.300	-	-	-0.04	0.905	1.177
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	132322	1745	17.89	19.00	1.291	-	-	-0.08	0.758	0.979
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	132072	1720	17.87	19.00	1.297	-	-	0.17	0.698	0.905
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	132572	1770	17.84	19.00	1.306	-	-	0.18	0.769	1.004
	LTE Band 66	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 2	DSI 2	132322	1745	17.87	19.00	1.297	-	-	-0.04	0.758	0.983
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 2	132322	1745	17.92	19.00	1.282	-	-	-0.08	0.106	0.136
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 2	132322	1745	17.89	19.00	1.291	-	-	-0.13	0.086	0.111
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 6	132322	1745	17.02	18.00	1.253	-	-	0.02	0.726	0.910
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 2	349000	1745	18.83	19.50	1.167	-	-	-0.13	0.652	0.761
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 2	349000	1745	18.81	19.50	1.172	-	-	0.06	0.631	0.740
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 2	349000	1745	18.83	19.50	1.167	-	-	-0.03	0.146	0.170
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 2	349000	1745	18.81	19.50	1.172	-	-	0.08	0.155	0.182
09	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	18.83	19.50	1.167	-	-	-0.09	0.969	**1.131**
	FR1 n66 with Palm ring	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	18.83	19.50	1.167	-	-	0.09	0.945	1.103
	FR1 n66 with Lanyard	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	18.83	19.50	1.167	-	-	0.02	0.936	1.092
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	18.81	19.50	1.172	-	-	-0.07	0.957	1.122
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	18.80	19.50	1.175	-	-	0.05	0.774	0.909
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 2	349000	1745	18.83	19.50	1.167	-	-	-0.11	0.113	0.132
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 2	349000	1745	18.81	19.50	1.172	-	-	-0.12	0.121	0.142
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 6	349000	1745	17.87	18.50	1.156	-	-	-0.15	0.752	0.869
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 2	DSI 2	661	1880	19.75	21.00	1.334	-	-	0.08	0.587	0.783
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 2	DSI 2	512	1850.2	19.73	21.00	1.340	-	-	0.01	0.617	0.827
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 2	DSI 2	810	1909.8	19.65	21.00	1.365	-	-	0.03	0.530	0.723
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 2	DSI 2	661	1880	19.75	21.00	1.334	-	-	-0.08	0.132	0.176
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 2	DSI 2	661	1880	19.75	21.00	1.334	-	-	-0.08	0.859	1.146
10	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 2	DSI 2	512	1850.2	19.73	21.00	1.340	-	-	0.08	1.000	**1.340**
	GSM1900 with Palm ring	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 2	DSI 2	512	1850.2	19.73	21.00	1.340	-	-	0.14	0.985	1.320
	GSM1900 with Lanyard	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 2	DSI 2	512	1850.2	19.73	21.00	1.340	-	-	-0.17	0.966	1.294
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 2	DSI 2	810	1909.8	19.65	21.00	1.365	-	-	0.1	0.872	1.190
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 2	DSI 2	661	1880	19.75	21.00	1.334	-	-	-0.18	0.101	0.135
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 2	DSI 6	512	1850.2	18.77	20.00	1.327	-	-	0.07	0.728	0.966
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 2	9400	1880	18.25	19.00	1.189	-	-	0.03	0.590	0.702
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI 2	9400	1880	18.25	19.00	1.189	-	-	0.15	0.134	0.159
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 2	9400	1880	18.25	19.00	1.189	-	-	-0.09	0.910	1.082
11	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 2	9262	1852.4	18.13	19.00	1.222	-	-	0.02	0.913	**1.116**
	WCDMA II with Palm ring	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 2	9262	1852.4	18.13	19.00	1.222	-	-	0.17	0.895	1.094
	WCDMA II with Lanyard	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 2	9262	1852.4	18.13	19.00	1.222	-	-	-0.05	0.886	1.083
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 2	9538	1907.6	18.22	19.00	1.197	-	-	0.11	0.860	1.029
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI 2	9400	1880	18.25	19.00	1.189	-	-	-0.05	0.095	0.113
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 6	9262	1852.4	17.16	18.00	1.213	-	-	0.04	0.737	0.894
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	26340	1880	18.65	19.50	1.216	-	-	0	0.712	0.866

	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	26140	1860	18.53	19.50	1.250	-	-	0.18	0.762	0.953
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	26590	1905	18.58	19.50	1.236	-	-	-0.11	0.687	0.849
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	26340	1880	18.62	19.50	1.225	-	-	-0.05	0.561	0.687
	LTE Band 25	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 2	26340	1880	18.61	19.50	1.227	-	-	0	0.561	0.688
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 2	26340	1880	18.65	19.50	1.216	-	-	-0.14	0.144	0.175
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 2	26340	1880	18.62	19.50	1.225	-	-	0.01	0.118	0.145
12	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	26340	1880	18.65	19.50	1.216	-	-	0.07	1.080	1.313
	LTE Band 25 with Palm ring	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	26340	1880	18.65	19.50	1.216	-	-	0.01	1.010	1.228
	LTE Band 25 with Lanyard	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	26340	1880	18.65	19.50	1.216	-	-	0.1	0.989	1.203
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	26140	1860	18.53	19.50	1.250	-	-	0.06	1.040	1.300
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	26590	1905	18.58	19.50	1.236	-	-	-0.06	0.975	1.205
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	26340	1880	18.62	19.50	1.225	-	-	-0.15	0.808	0.990
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	26140	1860	18.55	19.50	1.245	-	-	-0.12	0.829	1.032
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	26590	1905	18.60	19.50	1.230	-	-	-0.16	0.770	0.947
	LTE Band 25	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 2	DSI 2	26340	1880	18.61	19.50	1.227	-	-	-0.03	0.820	1.006
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 2	26340	1880	18.65	19.50	1.216	-	-	0.17	0.104	0.126
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 2	26340	1880	18.62	19.50	1.225	-	-	0.02	0.084	0.103
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 6	26340	1880	17.75	18.50	1.189	-	-	0.14	0.762	0.906
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 2	376000	1880	19.15	20.00	1.216	-	-	-0.08	0.593	0.721
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 2	376000	1880	19.13	20.00	1.222	-	-	0.05	0.596	0.728
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 2	376000	1880	19.15	20.00	1.216	-	-	0.07	0.136	0.165
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 2	376000	1880	19.13	20.00	1.222	-	-	0.16	0.137	0.167
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	376000	1880	19.15	20.00	1.216	-	-	0.13	0.951	1.156
13	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	372000	1860	19.13	20.00	1.222	-	-	0.07	0.994	1.215
	FR1 n2 with Palm ring	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	372000	1860	19.13	20.00	1.222	-	-	-0.17	0.975	1.191
	FR1 n2 with Lanyard	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	372000	1860	19.13	20.00	1.222	-	-	0.04	0.966	1.180
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	380000	1900	19.09	20.00	1.233	-	-	-0.18	0.940	1.159
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	376000	1880	19.13	20.00	1.222	-	-	0.02	0.951	1.162
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	372000	1860	19.06	20.00	1.242	-	-	0.16	0.925	1.149
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	380000	1900	19.08	20.00	1.236	-	-	-0.03	0.857	1.059
	FR1 n2	20M	QPSK	100	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 2	376000	1880	19.12	20.00	1.225	-	-	0.07	0.727	0.891
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 2	376000	1880	19.15	20.00	1.216	-	-	0	0.102	0.124
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 2	376000	1880	19.13	20.00	1.222	-	-	0.01	0.101	0.123
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 6	372000	1860	18.09	19.00	1.233	-	-	-0.06	0.747	0.921
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	21100	2535	17.48	18.50	1.265	-	-	0.17	0.787	0.996
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	20850	2510	17.44	18.50	1.276	-	-	-0.14	0.879	1.122
14	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	21350	2560	17.39	18.50	1.291	-	-	0.04	0.901	1.163
	LTE Band 7 with Palm ring	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	21350	2560	17.39	18.50	1.291	-	-	-0.01	0.887	1.145
	LTE Band 7 with Lanyard	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	21350	2560	17.39	18.50	1.291	-	-	-0.08	0.869	1.122
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	21100	2535	17.46	18.50	1.271	-	-	-0.16	0.651	0.827
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	20850	2510	17.42	18.50	1.282	-	-	0.05	0.699	0.896
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	21350	2560	17.39	18.50	1.291	-	-	0.08	0.757	0.977
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 2	21100	2535	17.45	18.50	1.274	-	-	-0.18	0.654	0.833
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	21100	2535	17.48	18.50	1.265	-	-	-0.03	0.142	0.180
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 2	21100	2535	17.46	18.50	1.271	-	-	-0.04	0.123	0.156
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 2	21100	2535	17.48	18.50	1.265	-	-	-0.09	0.288	0.364
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 2	21100	2535	17.46	18.50	1.271	-	-	0.07	0.231	0.294
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 2	21100	2535	17.48	18.50	1.265	-	-	-0.05	0.056	0.071
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 2	21100	2535	17.46	18.50	1.271	-	-	-0.03	0.047	0.060
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 6	21350	2560	16.51	17.50	1.256	-	-	0.07	0.752	0.945
	LTE Band 7C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	21350+ 21152	2560+ 2540.2	17.29	18.50	1.321	-	-	0.06	0.866	1.144
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 2	21100	2535	22.88	24.50	1.452	-	-	-0.17	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 2	21100	2535	21.94	23.50	1.432	-	-	0.04	0.000	0.000

	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 2	21100	2535	22.88	24.50	1.452	-	-	-0.01	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 2	21100	2535	21.94	23.50	1.432	-	-	-0.08	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 2	21100	2535	22.88	24.50	1.452	-	-	0.18	0.061	0.089
	LTE Band 7 with Palm ring	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 2	21100	2535	22.88	24.50	1.452	-	-	0.05	0.058	0.084
	LTE Band 7 with Lanyard	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 2	21100	2535	22.88	24.50	1.452	-	-	0.06	0.055	0.080
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 2	21100	2535	21.94	23.50	1.432	-	-	0.05	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 2	21100	2535	22.88	24.50	1.452	-	-	0.06	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 2	21100	2535	21.94	23.50	1.432	-	-	-0.09	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	40620	2593	17.55	18.50	1.245	62.9	1.006	0.09	0.605	0.758
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	39750	2506	17.44	18.50	1.276	62.9	1.006	-0.04	0.535	0.687
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	40185	2549.5	17.50	18.50	1.259	62.9	1.006	0.15	0.492	0.623
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	41055	2636.5	17.48	18.50	1.265	62.9	1.006	0.09	0.717	0.912
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	41490	2680	17.50	18.50	1.259	62.9	1.006	-0.15	0.869	1.101
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	40620	2593	17.52	18.50	1.253	62.9	1.006	-0.13	0.494	0.623
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	39750	2506	17.40	18.50	1.288	62.9	1.006	-0.11	0.414	0.536
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	40185	2549.5	17.46	18.50	1.271	62.9	1.006	0.03	0.395	0.505
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	41055	2636.5	17.50	18.50	1.259	62.9	1.006	-0.05	0.578	0.732
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	41490	2680	17.42	18.50	1.282	62.9	1.006	0.14	0.712	0.918
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 2	40620	2593	17.51	18.50	1.256	62.9	1.006	-0.01	0.494	0.624
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	40620	2593	17.55	18.50	1.245	62.9	1.006	-0.12	0.129	0.162
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 2	40620	2593	17.52	18.50	1.253	62.9	1.006	0.12	0.110	0.139
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 2	40620	2593	17.55	18.50	1.245	62.9	1.006	0.17	0.200	0.250
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 2	40620	2593	17.52	18.50	1.253	62.9	1.006	-0.14	0.170	0.214
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 2	40620	2593	17.55	18.50	1.245	62.9	1.006	-0.11	0.056	0.070
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 2	40620	2593	17.52	18.50	1.253	62.9	1.006	-0.01	0.046	0.058
15	LTE Band 41 PC2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	41490	2680	19.06	20.10	1.271	42.9	1.009	0.07	0.906	**1.162**
	LTE Band 41 PC2 with Palm ring	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	41490	2680	19.06	20.10	1.271	42.9	1.009	-0.09	0.889	1.140
	LTE Band 41 PC2 with Lanyard	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	41490	2680	19.06	20.10	1.271	42.9	1.009	-0.08	0.876	1.123
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 6	41490	2680	18.07	19.10	1.268	42.9	1.009	0.07	0.757	0.969
	LTE Band 38C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 4	DSI 2	38150+ 37952	2610+ 2590.2	17.41	18.50	1.285	62.9	1.006	0.01	0.811	1.048
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 2	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.01	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 2	40620	2593	22.00	23.50	1.413	62.9	1.006	-0.06	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 2	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.04	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 2	40620	2593	22.00	23.50	1.413	62.9	1.006	-0.09	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 2	40620	2593	22.99	24.50	1.416	62.9	1.006	0.06	0.079	0.113
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 2	40620	2593	22.00	23.50	1.413	62.9	1.006	-0.17	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 2	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.1	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 2	40620	2593	22.00	23.50	1.413	62.9	1.006	0.18	0.000	0.000
	LTE Band 41 PC2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 2	40620	2593	25.03	26.10	1.279	42.9	1.009	0.02	0.083	0.107
	LTE Band 41 PC2 with Palm ring	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 2	40620	2593	25.03	26.10	1.279	42.9	1.009	0.13	0.078	0.101
	LTE Band 41 PC2 with Lanyard	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 2	40620	2593	25.03	26.10	1.279	42.9	1.009	0.12	0.076	0.098
16	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	507000	2535	18.38	19.00	1.153	-	-	0.09	0.987	**1.138**
	FR1 n7 with Palm ring	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	507000	2535	18.38	19.00	1.153	-	-	0.03	0.966	1.114
	FR1 n7 with Lanyard	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	507000	2535	18.38	19.00	1.153	-	-	0.18	0.975	1.124
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	507000	2535	18.35	19.00	1.161	-	-	-0.17	0.941	1.093
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 2	507000	2535	18.33	19.00	1.167	-	-	-0.04	0.833	0.972
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 2	507000	2535	18.38	19.00	1.153	-	-	-0.05	0.164	0.189
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 2	507000	2535	18.35	19.00	1.161	-	-	0	0.167	0.194
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	DSI 2	507000	2535	18.38	19.00	1.153	-	-	-0.01	0.377	0.435
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	DSI 2	507000	2535	18.35	19.00	1.161	-	-	-0.09	0.375	0.435

	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	DSI 2	507000	2535	18.38	19.00	1.153	-	-	0.02	0.080	0.092
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	DSI 2	507000	2535	18.35	19.00	1.161	-	-	-0.13	0.081	0.094
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 6	507000	2535	17.40	18.00	1.148	-	-	0.19	0.721	0.828
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 2	507000	2535	23.81	24.50	1.172	-	-	0.17	0.000	0.000
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 2	507000	2535	23.62	24.50	1.225	-	-	0.06	0.000	0.000
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 2	507000	2535	23.81	24.50	1.172	-	-	0	0.000	0.000
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 2	507000	2535	23.62	24.50	1.225	-	-	-0.04	0.000	0.000
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 6	DSI 2	507000	2535	23.81	24.50	1.172	-	-	-0.15	0.038	0.045
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Cheek	0mm	Ant 6	DSI 2	507000	2535	23.62	24.50	1.225	-	-	0.02	0.046	0.056
	FR1 n7 with Palm ring	50M	QPSK	135	68	DFT-SCS-15KHz	Left Cheek	0mm	Ant 6	DSI 2	507000	2535	23.62	24.50	1.225	-	-	0.06	0.042	0.051
	FR1 n7 with Lanyard	50M	QPSK	135	68	DFT-SCS-15KHz	Left Cheek	0mm	Ant 6	DSI 2	507000	2535	23.62	24.50	1.225	-	-	0.02	0.039	0.048
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 6	DSI 2	507000	2535	23.81	24.50	1.172	-	-	0.11	0.019	0.022
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Tilted	0mm	Ant 6	DSI 2	507000	2535	23.62	24.50	1.225	-	-	-0.02	0.000	0.000
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	518598	2592.99	17.85	18.50	1.161	-	-	0.1	0.835	0.969
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	518598	2592.99	17.84	18.50	1.164	-	-	0.13	0.926	1.078
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	518598	2592.99	17.83	18.50	1.167	-	-	0.04	0.738	0.861
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	518598	2592.99	17.85	18.50	1.161	-	-	0.13	0.162	0.188
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	518598	2592.99	17.84	18.50	1.164	-	-	-0.18	0.205	0.239
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	518598	2592.99	17.85	18.50	1.161	-	-	-0.16	0.326	0.378
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	518598	2592.99	17.84	18.50	1.164	-	-	-0.15	0.321	0.374
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	518598	2592.99	17.85	18.50	1.161	-	-	-0.14	0.075	0.087
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	518598	2592.99	17.84	18.50	1.164	-	-	-0.19	0.071	0.083
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	518598	2592.99	20.77	21.50	1.183	50	1.000	-0.15	0.974	1.152
	FR1 n41 PC2 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	518598	2592.99	20.77	21.50	1.183	50	1.000	0.16	0.966	1.143
	FR1 n41 PC2 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	518598	2592.99	20.77	21.50	1.183	50	1.000	-0.1	0.958	1.133
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 6	518598	2592.99	19.79	20.50	1.178	-	-	0.04	0.754	0.888
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 2	518598	2592.99	21.98	23.00	1.265	-	-	0.01	0.000	0.000
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 2	518598	2592.99	21.84	23.00	1.306	-	-	0.06	0.000	0.000
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 2	518598	2592.99	21.98	23.00	1.265	-	-	0.02	0.000	0.000
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 2	518598	2592.99	21.84	23.00	1.306	-	-	0.12	0.000	0.000
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 2	518598	2592.99	21.98	23.00	1.265	-	-	-0.16	0.027	0.034
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 2	518598	2592.99	21.84	23.00	1.306	-	-	0.01	0.044	0.057
	FR1 n41 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 2	518598	2592.99	21.84	23.00	1.306	-	-	0.07	0.042	0.055
	FR1 n41 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 2	518598	2592.99	21.84	23.00	1.306	-	-	0.18	0.039	0.051
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 2	518598	2592.99	21.98	23.00	1.265	-	-	-0.12	0.000	0.000
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 2	518598	2592.99	21.84	23.00	1.306	-	-	0.07	0.000	0.000
17	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	17.31	18.50	1.315	-	-	-0.02	0.964	**1.268**
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	17.31	18.50	1.315	-	-	-0.1	0.955	1.256
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	17.31	18.50	1.315	-	-	0.01	0.948	1.247
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	17.29	18.50	1.321	-	-	-0.02	0.807	1.066
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	17.27	17.50	1.054	-	-	0.12	0.824	0.868
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI 2	518598	2592.99	17.31	18.50	1.315	-	-	-0.05	0.594	0.781
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI 2	518598	2592.99	17.29	18.50	1.321	-	-	-0.13	0.523	0.691
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	17.31	18.50	1.315	-	-	0.08	0.325	0.427
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	17.29	18.50	1.321	-	-	0.16	0.288	0.380
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI 2	518598	2592.99	17.31	18.50	1.315	-	-	0.01	0.240	0.316
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI 2	518598	2592.99	17.29	18.50	1.321	-	-	-0.16	0.177	0.234
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI 6	518598	2592.99	16.31	17.50	1.315	-	-	0.01	0.756	0.994
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 2	518598	2592.99	22.54	24.00	1.400	-	-	0.1	0.104	0.146
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 2	518598	2592.99	22.42	24.00	1.439	-	-	-0.04	0.124	0.178
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 2	518598	2592.99	22.54	24.00	1.400	-	-	-0.01	0.069	0.097
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 2	518598	2592.99	22.42	24.00	1.439	-	-	0	0.093	0.134
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	518598	2592.99	22.54	24.00	1.400	-	-	-0.11	0.231	0.323
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	518598	2592.99	22.42	24.00	1.439	-	-	-0.04	0.233	0.335

	FR1 n41 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	518598	2592.99	22.42	24.00	1.439	-	-	-0.15	0.225	0.324
	FR1 n41 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 2	518598	2592.99	22.42	24.00	1.439	-	-	0.19	0.218	0.314
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 2	518598	2592.99	22.54	24.00	1.400	-	-	-0.06	0.048	0.067
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 2	518598	2592.99	22.42	24.00	1.439	-	-	-0.15	0.065	0.094
3500MHz																				
18	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	42590	3500	18.78	19.50	1.180	62.9	1.006	0.02	1.060	1.258
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	42590	3500	18.78	19.50	1.180	62.9	1.006	0.07	1.030	1.223
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	42590	3500	18.78	19.50	1.180	62.9	1.006	-0.18	1.010	1.199
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	42190	3460	18.75	19.50	1.189	62.9	1.006	0.07	1.000	1.196
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	42990	3540	18.70	19.50	1.202	62.9	1.006	0.08	1.030	1.245
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	42590	3500	18.75	19.50	1.189	62.9	1.006	0.19	0.851	1.018
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	42190	3460	18.73	19.50	1.194	62.9	1.006	-0.06	0.814	0.978
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 2	42990	3540	18.64	19.50	1.219	62.9	1.006	0	0.833	1.022
	LTE Band 42	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 2	42590	3500	18.74	19.50	1.191	62.9	1.006	-0.03	0.846	1.014
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 2	42590	3500	18.78	19.50	1.180	62.9	1.006	0.07	0.339	0.402
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 2	42590	3500	18.75	19.50	1.189	62.9	1.006	0.02	0.268	0.321
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	42590	3500	18.78	19.50	1.180	62.9	1.006	0	0.860	1.021
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	42190	3460	18.75	19.50	1.189	62.9	1.006	-0.1	0.819	0.980
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	42990	3540	18.70	19.50	1.202	62.9	1.006	0.05	0.828	1.001
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	42590	3500	18.75	19.50	1.189	62.9	1.006	0	0.696	0.833
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	42190	3460	18.73	19.50	1.194	62.9	1.006	0.07	0.673	0.808
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 2	42990	3540	18.64	19.50	1.219	62.9	1.006	0.15	0.678	0.831
	LTE Band 42	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 2	DSI 2	42590	3500	18.74	19.50	1.191	62.9	1.006	-0.05	0.687	0.823
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 2	42590	3500	18.78	19.50	1.180	62.9	1.006	-0.08	0.170	0.202
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 2	42590	3500	18.75	19.50	1.189	62.9	1.006	-0.08	0.132	0.158
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 6	42590	3500	17.85	18.50	1.161	62.9	1.006	0.14	0.778	0.909
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 2	42590	3500	19.74	20.50	1.191	62.9	1.006	0.03	0.408	0.489
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 2	42590	3500	19.71	20.50	1.199	62.9	1.006	-0.15	0.338	0.408
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 2	42590	3500	19.74	20.50	1.191	62.9	1.006	-0.09	0.174	0.208
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 2	42590	3500	19.71	20.50	1.199	62.9	1.006	0.14	0.136	0.164
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 2	42590	3500	19.74	20.50	1.191	62.9	1.006	0.1	0.932	1.117
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 2	42190	3460	19.66	20.50	1.213	62.9	1.006	-0.09	0.843	1.029
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 2	42990	3540	19.69	20.50	1.205	62.9	1.006	-0.06	0.975	1.182
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 2	42990	3540	19.69	20.50	1.205	62.9	1.006	0.03	0.956	1.159
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 2	42990	3540	19.69	20.50	1.205	62.9	1.006	-0.15	0.943	1.143
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 2	42590	3500	19.71	20.50	1.199	62.9	1.006	0.07	0.759	0.916
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 2	42190	3460	19.67	20.50	1.211	62.9	1.006	-0.09	0.635	0.774
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 2	42990	3540	19.63	20.50	1.222	62.9	1.006	-0.16	0.828	1.018
	LTE Band 42	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI 2	42590	3500	19.69	20.50	1.205	62.9	1.006	-0.18	0.750	0.909
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 2	42590	3500	19.74	20.50	1.191	62.9	1.006	-0.07	0.423	0.507
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 2	42590	3500	19.71	20.50	1.199	62.9	1.006	-0.1	0.338	0.408
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 6	42990	3540	18.77	19.50	1.183	62.9	1.006	0.02	0.751	0.894
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	42590	3500	17.95	19.00	1.274	62.9	1.006	0.05	0.782	1.002
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	42190	3460	17.92	19.00	1.282	62.9	1.006	-0.06	0.713	0.920
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 2	42990	3540	17.93	19.00	1.279	62.9	1.006	-0.06	0.850	1.094
	LTE Band 42 with Palm ring	20M	QPSK	1	0		Right Cheek	0mm	Ant 4	DSI 2	42990	3540	17.93	19.00	1.279	62.9	1.006	-0.15	0.823	1.059
	LTE Band 42 with Lanyard	20M	QPSK	1	0		Right Cheek	0mm	Ant 4	DSI 2	42990	3540	17.93	19.00	1.279	62.9	1.006	0.11	0.838	1.078
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	42590	3500	17.93	19.00	1.279	62.9	1.006	-0.13	0.608	0.782
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	42190	3460	17.91	19.00	1.285	62.9	1.006	-0.01	0.525	0.679
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 2	42990	3540	17.87	19.00	1.297	62.9	1.006	-0.11	0.725	0.946
	LTE Band 42	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 2	42590	3500	17.91	19.00	1.285	62.9	1.006	0.19	0.618	0.799
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 2	42590	3500	17.95	19.00	1.274	62.9	1.006	-0.14	0.222	0.285
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 2	42590	3500	17.93	19.00	1.279	62.9	1.006	0.02	0.184	0.237
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 2	42590	3500	17.95	19.00	1.274	62.9	1.006	0.01	0.194	0.249

	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 2	42590	3500	17.93	19.00	1.279	62.9	1.006	-0.04	0.154	0.198
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 2	42590	3500	17.95	19.00	1.274	62.9	1.006	0.13	0.092	0.118
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 2	42590	3500	17.93	19.00	1.279	62.9	1.006	0.12	0.078	0.100
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 6	42990	3540	16.98	18.00	1.265	62.9	1.006	-0.04	0.652	0.830
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 8	DSI 2	42590	3500	19.65	20.50	1.216	62.9	1.006	-0.09	0.812	0.993
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 8	DSI 2	42190	3460	19.56	20.50	1.242	62.9	1.006	0.01	0.967	1.208
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 8	DSI 2	42190	3460	19.56	20.50	1.242	62.9	1.006	-0.08	0.948	1.184
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 8	DSI 2	42190	3460	19.56	20.50	1.242	62.9	1.006	-0.17	0.935	1.168
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 8	DSI 2	42990	3540	19.58	20.50	1.236	62.9	1.006	-0.06	0.760	0.945
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 8	DSI 2	42590	3500	19.62	20.50	1.225	62.9	1.006	-0.17	0.687	0.847
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 8	DSI 2	42190	3460	19.52	20.50	1.253	62.9	1.006	-0.01	0.805	1.015
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 8	DSI 2	42990	3540	19.49	20.50	1.262	62.9	1.006	-0.11	0.617	0.783
	LTE Band 42	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 8	DSI 2	42590	3500	19.60	20.50	1.230	62.9	1.006	0.14	0.596	0.737
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 8	DSI 2	42590	3500	19.65	20.50	1.216	62.9	1.006	0.03	0.070	0.086
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 8	DSI 2	42590	3500	19.62	20.50	1.225	62.9	1.006	0.1	0.055	0.068
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 8	DSI 2	42590	3500	19.65	20.50	1.216	62.9	1.006	0.16	0.472	0.577
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 8	DSI 2	42590	3500	19.62	20.50	1.225	62.9	1.006	-0.16	0.393	0.484
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 8	DSI 2	42590	3500	19.65	20.50	1.216	62.9	1.006	-0.15	0.130	0.159
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 8	DSI 2	42590	3500	19.62	20.50	1.225	62.9	1.006	0.16	0.106	0.131
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 8	DSI 6	42190	3460	18.67	19.50	1.211	62.9	1.006	-0.07	0.745	0.908

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)
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	656000	3840	12.99	14.00	1.262	-	-	-0.03	0.164	0.207
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	656000	3840	12.97	14.00	1.268	-	-	0.08	0.176	0.223
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	656000	3840	12.97	14.00	1.268	-	-	0.14	0.165	0.209
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	656000	3840	12.97	14.00	1.268	-	-	0.11	0.159	0.202
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	656000	3840	12.99	14.00	1.262	-	-	-0.05	0.037	0.047
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	656000	3840	12.97	14.00	1.268	-	-	0.18	0.047	0.060
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	656000	3840	12.99	14.00	1.262	-	-	0.14	0.128	0.162
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	656000	3840	12.97	14.00	1.268	-	-	-0.17	0.153	0.194
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	656000	3840	12.99	14.00	1.262	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	656000	3840	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.94	14.00	1.276	-	-	0.08	0.166	0.212
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.86	14.00	1.300	-	-	-0.09	0.173	0.225
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.86	14.00	1.300	-	-	0.01	0.166	0.216
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.86	14.00	1.300	-	-	0.03	0.158	0.205
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	633334	3500.01	12.94	14.00	1.276	-	-	-0.08	0.040	0.051
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	633334	3500.01	12.86	14.00	1.300	-	-	0.1	0.044	0.057
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.94	14.00	1.276	-	-	-0.18	0.152	0.194
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	633334	3500.01	12.86	14.00	1.300	-	-	0.1	0.116	0.151
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	633334	3500.01	12.94	14.00	1.276	-	-	0.08	0.023	0.029
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	633334	3500.01	12.86	14.00	1.300	-	-	-0.17	0.021	0.027
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.97	14.00	1.268	-	-	0.08	0.184	0.233
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.94	14.00	1.276	-	-	0.01	0.193	0.246
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.94	14.00	1.276	-	-	0.03	0.165	0.211
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.94	14.00	1.276	-	-	-0.08	0.142	0.181
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	641666	3624.99	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 2	641666	3624.99	12.94	14.00	1.276	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.97	14.00	1.268	-	-	-0.18	0.160	0.203
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 2	641666	3624.99	12.94	14.00	1.276	-	-	0.1	0.142	0.181
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	641666	3624.99	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 2	641666	3624.99	12.94	14.00	1.276	-	-	0	0.001	0.001

	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	656000	3840	12.98	14.00	1.265	-	-	0.01	0.067	0.085
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	656000	3840	12.92	14.00	1.282	-	-	0.1	0.078	0.100
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 2	656000	3840	12.98	14.00	1.265	-	-	-0.17	0.000	0.000
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 2	656000	3840	12.92	14.00	1.282	-	-	0.04	0.000	0.000
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	656000	3840	12.98	14.00	1.265	-	-	-0.01	0.181	0.229
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	656000	3840	12.92	14.00	1.282	-	-	-0.08	0.187	0.240
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	656000	3840	12.92	14.00	1.282	-	-	0.05	0.175	0.224
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	656000	3840	12.92	14.00	1.282	-	-	0.06	0.169	0.217
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 2	656000	3840	12.98	14.00	1.265	-	-	-0.09	0.074	0.094
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 2	656000	3840	12.92	14.00	1.282	-	-	-0.08	0.084	0.108
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	0.12	0.071	0.091
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	633334	3500.01	12.84	14.00	1.306	-	-	0.03	0.093	0.121
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	0.18	0.000	0.000
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 2	633334	3500.01	12.84	14.00	1.306	-	-	0.16	0.038	0.050
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	-0.1	0.176	0.225
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	633334	3500.01	12.84	14.00	1.306	-	-	0.07	0.191	0.249
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	633334	3500.01	12.84	14.00	1.306	-	-	0.18	0.185	0.242
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	633334	3500.01	12.84	14.00	1.306	-	-	-0.1	0.183	0.239
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	0.01	0.081	0.104
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 2	633334	3500.01	12.84	14.00	1.306	-	-	-0.15	0.096	0.125
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	641666	3624.99	13.02	14.00	1.253	-	-	-0.17	0.075	0.094
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 2	641666	3624.99	12.96	14.00	1.271	-	-	-0.03	0.073	0.093
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 2	641666	3624.99	13.02	14.00	1.253	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 2	641666	3624.99	12.96	14.00	1.271	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	641666	3624.99	13.02	14.00	1.253	-	-	-0.05	0.201	0.252
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	641666	3624.99	13.02	14.00	1.253	-	-	0.18	0.191	0.239
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	641666	3624.99	13.02	14.00	1.253	-	-	0.14	0.189	0.237
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 2	641666	3624.99	12.96	14.00	1.271	-	-	-0.17	0.189	0.240
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 2	641666	3624.99	13.02	14.00	1.253	-	-	0.17	0.070	0.088
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 2	641666	3624.99	12.96	14.00	1.271	-	-	-0.05	0.066	0.084
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	13.02	14.00	1.253	-	-	0.08	0.221	0.277
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	12.98	14.00	1.265	-	-	-0.06	0.231	0.292
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	12.98	14.00	1.265	-	-	0.01	0.226	0.286
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	12.98	14.00	1.265	-	-	0.03	0.215	0.272
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	656000	3840	13.02	14.00	1.253	-	-	-0.08	0.083	0.104
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	656000	3840	12.98	14.00	1.265	-	-	-0.08	0.112	0.142
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	656000	3840	13.02	14.00	1.253	-	-	0.1	0.080	0.100
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	656000	3840	12.98	14.00	1.265	-	-	-0.18	0.053	0.067
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	656000	3840	13.02	14.00	1.253	-	-	0.1	0.034	0.043
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	656000	3840	12.98	14.00	1.265	-	-	0.12	0.032	0.040
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	633334	3500.01	12.97	14.00	1.268	-	-	0.19	0.179	0.227
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	0.07	0.185	0.237
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	-0.18	0.177	0.226
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	0.03	0.172	0.220
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	633334	3500.01	12.97	14.00	1.268	-	-	-0.15	0.055	0.070
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	-0.15	0.074	0.095
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	633334	3500.01	12.97	14.00	1.268	-	-	0.11	0.051	0.065
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	-0.08	0.049	0.063
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	633334	3500.01	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	633334	3500.01	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	641666	3624.99	12.95	14.00	1.274	-	-	0.16	0.276	0.352
19	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	0.01	0.286	**0.366**
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	-0.03	0.275	0.352

	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	0.07	0.271	0.347
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	641666	3624.99	12.95	14.00	1.274	-	-	0.03	0.088	0.112
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	0.01	0.103	0.132
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	641666	3624.99	12.95	14.00	1.274	-	-	-0.01	0.066	0.084
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	-0.06	0.065	0.083
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	641666	3624.99	12.95	14.00	1.274	-	-	-0.04	0.038	0.048
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	-0.09	0.040	0.051
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	656000	3840	12.95	14.00	1.274	-	-	0.08	0.109	0.139
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	656000	3840	12.89	14.00	1.291	-	-	-0.17	0.135	0.174
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	656000	3840	12.89	14.00	1.291	-	-	-0.03	0.128	0.165
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	656000	3840	12.89	14.00	1.291	-	-	0.14	0.123	0.159
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 2	656000	3840	12.95	14.00	1.274	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 2	656000	3840	12.89	14.00	1.291	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 2	656000	3840	12.95	14.00	1.274	-	-	0.18	0.047	0.060
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 2	656000	3840	12.89	14.00	1.291	-	-	0.14	0.083	0.107
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 2	656000	3840	12.95	14.00	1.274	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 2	656000	3840	12.89	14.00	1.291	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	633334	3500.01	12.89	14.00	1.291	-	-	0.01	0.134	0.173
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	633334	3500.01	12.89	14.00	1.291	-	-	0.1	0.128	0.165
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	633334	3500.01	12.89	14.00	1.291	-	-	-0.17	0.125	0.161
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	633334	3500.01	12.85	14.00	1.303	-	-	0.04	0.130	0.169
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 2	633334	3500.01	12.89	14.00	1.291	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 2	633334	3500.01	12.85	14.00	1.303	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 2	633334	3500.01	12.89	14.00	1.291	-	-	0.05	0.132	0.170
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 2	633334	3500.01	12.85	14.00	1.303	-	-	0.06	0.089	0.116
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 2	633334	3500.01	12.89	14.00	1.291	-	-	-0.09	0.041	0.053
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 2	633334	3500.01	12.85	14.00	1.303	-	-	-0.08	0.032	0.042
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	0.01	0.140	0.179
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	641666	3624.99	12.88	14.00	1.294	-	-	0.1	0.151	0.195
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	641666	3624.99	12.88	14.00	1.294	-	-	-0.17	0.121	0.157
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 2	641666	3624.99	12.88	14.00	1.294	-	-	0.04	0.113	0.146
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 2	641666	3624.99	12.88	14.00	1.294	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	0.05	0.072	0.092
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 2	641666	3624.99	12.88	14.00	1.294	-	-	0.06	0.068	0.088
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 2	641666	3624.99	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 2	641666	3624.99	12.88	14.00	1.294	-	-	0	0.001	0.001

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
							2450MHz									
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.08	0.690	0.934
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 10+7(7)	Standalone	11	2462	16.83	18.00	1.309	98.35	1.017	0.01	0.533	0.710
20	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.02	0.840	1.137
	WLAN2.4GHz with Palm ring	802.11b 1Mbps	Right Tilted	0mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.11	0.826	1.118
	WLAN2.4GHz with Lanyard	802.11b 1Mbps	Right Tilted	0mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	-0.05	0.823	1.114
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 10+7(7)	Standalone	11	2462	16.83	18.00	1.309	98.35	1.017	-0.08	0.713	0.949
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.1	0.480	0.649
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.12	0.526	0.712
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 10+7(7)	Simultaneous	6	2437	14.02	15.00	1.253	98.35	1.017	0.02	0.342	0.436
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 10+7(7)	Simultaneous	6	2437	14.02	15.00	1.253	98.35	1.017	-0.02	0.445	0.567
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 10+7(7)	Simultaneous	6	2437	14.02	15.00	1.253	98.35	1.017	0.15	0.251	0.320
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 10+7(7)	Simultaneous	6	2437	14.02	15.00	1.253	98.35	1.017	-0.09	0.273	0.348

21	Bluetooth	1Mbps	Right Cheek	0mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	-0.05	0.041	**0.054**
	Bluetooth with Palm ring	1Mbps	Right Cheek	0mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	-0.08	0.038	0.050
	Bluetooth with Lanyard	1Mbps	Right Cheek	0mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.16	0.035	0.046
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0	0.001	0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0	0.001	0.001
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.14	0.028	0.037
5000MHz																
22	WLAN5.3GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(10)	Standalone	60	5300	16.59	17.50	1.233	99.32	1.007	-0.04	0.426	**0.529**
	WLAN5.3GHz with Palm ring	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(10)	Standalone	60	5300	16.59	17.50	1.233	99.32	1.007	0.05	0.415	0.515
	WLAN5.3GHz with Lanyard	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(10)	Standalone	60	5300	16.59	17.50	1.233	99.32	1.007	0.05	0.411	0.510
	WLAN5.3GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 10+9(10)	Standalone	60	5300	16.59	17.50	1.233	99.32	1.007	-0.03	0.111	0.138
	WLAN5.3GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 10+9(10)	Standalone	60	5300	16.59	17.50	1.233	99.32	1.007	0.14	0.114	0.142
	WLAN5.3GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 10+9(10)	Standalone	60	5300	16.59	17.50	1.233	99.32	1.007	0.11	0.087	0.108
23	WLAN5.5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(9)	Standalone	124	5620	16.33	17.50	1.309	99.32	1.007	-0.02	0.451	**0.595**
	WLAN5.5GHz with Palm ring	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(9)	Standalone	124	5620	16.33	17.50	1.309	99.32	1.007	-0.03	0.438	0.577
	WLAN5.5GHz with Lanyard	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(9)	Standalone	124	5620	16.33	17.50	1.309	99.32	1.007	-0.15	0.429	0.566
	WLAN5.5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 10+9(9)	Standalone	124	5620	16.33	17.50	1.309	99.32	1.007	0.08	0.205	0.270
	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 10+9(9)	Standalone	124	5620	16.33	17.50	1.309	99.32	1.007	0.01	0.111	0.146
	WLAN5.5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 10+9(9)	Standalone	124	5620	16.33	17.50	1.309	99.32	1.007	0.03	0.099	0.131
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 10+9(9)	Simultaneous	126	5630	15.59	17.00	1.384	100	1.000	-0.02	0.376	0.520
24	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(9)	Standalone	149	5745	15.93	17.00	1.279	99.32	1.007	0.01	0.281	**0.362**
	WLAN5.8GHz with Palm ring	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(9)	Standalone	149	5745	15.93	17.00	1.279	99.32	1.007	0.02	0.266	0.343
	WLAN5.8GHz with Lanyard	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(9)	Standalone	149	5745	15.93	17.00	1.279	99.32	1.007	0.07	0.273	0.352
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 10+9(9)	Standalone	149	5745	15.93	17.00	1.279	99.32	1.007	-0.08	0.191	0.246
	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 10+9(9)	Standalone	149	5745	15.93	17.00	1.279	99.32	1.007	-0.08	0.159	0.205
	WLAN5.8GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 10+9(9)	Standalone	149	5745	15.93	17.00	1.279	99.32	1.007	0.1	0.123	0.158

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Accessories	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)	Measured APD (W/m^2)
84	WLAN6GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(10)	Full power	-	49	6195	15.39	16.50	1.291	99.32	1.007	0.01	0.602	**0.783**	**3.34**
	WLAN6GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(10)	Full power	Palm ring	49	6195	15.39	16.50	1.291	99.32	1.007	0.08	0.588	0.765	3.26
	WLAN6GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(10)	Full power	Lanyard	49	6195	15.39	16.50	1.291	99.32	1.007	0.01	0.575	0.748	3.19
	WLAN6GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 10+9(10)	Full power	-	49	6195	15.39	16.50	1.291	99.32	1.007	0.02	0.238	0.309	1.41
	WLAN6GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 10+9(10)	Full power	-	49	6195	15.39	16.50	1.291	99.32	1.007	0.03	0.152	0.198	1.09
	WLAN6GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 10+9(10)	Full power	-	49	6195	15.39	16.50	1.291	99.32	1.007	0.02	0.130	0.169	1.01
	WLAN6GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(10)	Full power	-	1	5955	15.04	16.00	1.247	99.32	1.007	0.08	0.168	0.211	0.834
	WLAN6GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 10+9(10)	Full power	-	149	6695	15.78	17.00	1.324	99.32	1.007	0.01	0.288	0.384	1.58
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 10+9(10)	Full power	-	111	6505	10.44	11.50	1.276	100	1.000	0.03	0.007	0.009	0.039
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 10+9(9)	Full power	-	207	6985	10.69	12.00	1.352	100	1.000	-0.08	0.073	0.099	0.181
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 10+9(10)	Simultaneous	-	15	6025	13.92	15.00	1.282	100	1.000	0.12	0.407	0.522	2.26

15.2 Hotspot SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
	LTE Band 71	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 1	133297	680.5	23.41	24.50	1.285	-	-	0.1	0.231	0.297
	LTE Band 71	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI 1	133297	680.5	22.45	23.50	1.274	-	-	-0.18	0.212	0.270
	LTE Band 71	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 1	133297	680.5	23.41	24.50	1.285	-	-	0.1	0.246	0.316
	LTE Band 71	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI 1	133297	680.5	22.45	23.50	1.274	-	-	0.12	0.210	0.268
25	LTE Band 71	20M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 1	133297	680.5	23.41	24.50	1.285	-	-	0.01	0.308	0.396
	LTE Band 71 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 1	133297	680.5	23.41	24.50	1.285	-	-	0.19	0.295	0.379
	LTE Band 71 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 1	133297	680.5	23.41	24.50	1.285	-	-	-0.14	0.288	0.370
	LTE Band 71	20M	QPSK	50	0	-	Left Side	10mm	Ant 0	DSI 1	133297	680.5	22.45	23.50	1.274	-	-	-0.17	0.263	0.335
	LTE Band 71	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 1	133297	680.5	23.41	24.50	1.285	-	-	-0.03	0.086	0.111
	LTE Band 71	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI 1	133297	680.5	22.45	23.50	1.274	-	-	0.14	0.077	0.098
	LTE Band 71	20M	QPSK	1	0	-	Top Side	10mm	Ant 0	DSI 1	133297	680.5	23.41	24.50	1.285	-	-	0.11	0.211	0.271
	LTE Band 71	20M	QPSK	50	0	-	Top Side	10mm	Ant 0	DSI 1	133297	680.5	22.45	23.50	1.274	-	-	-0.05	0.190	0.242
	LTE Band 12	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 1	23095	707.5	23.45	24.50	1.274	-	-	0.18	0.420	0.535
	LTE Band 12	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI 1	23095	707.5	22.36	23.50	1.300	-	-	0.14	0.348	0.452
	LTE Band 12	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 1	23095	707.5	23.45	24.50	1.274	-	-	-0.17	0.403	0.513
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 1	23095	707.5	22.36	23.50	1.300	-	-	0.17	0.342	0.445
26	LTE Band 12	10M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 1	23095	707.5	23.45	24.50	1.274	-	-	0.04	0.486	0.619
	LTE Band 12 with Palm ring	10M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 1	23095	707.5	23.45	24.50	1.274	-	-	-0.18	0.475	0.605
	LTE Band 12 with Lanyard	10M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 1	23095	707.5	23.45	24.50	1.274	-	-	-0.06	0.469	0.598
	LTE Band 12	10M	QPSK	25	0	-	Left Side	10mm	Ant 0	DSI 1	23095	707.5	22.36	23.50	1.300	-	-	0.01	0.382	0.497
	LTE Band 12	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 1	23095	707.5	23.45	24.50	1.274	-	-	0.1	0.131	0.167
	LTE Band 12	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI 1	23095	707.5	22.36	23.50	1.300	-	-	-0.17	0.098	0.127
	LTE Band 12	10M	QPSK	1	0	-	Top Side	10mm	Ant 0	DSI 1	23095	707.5	23.45	24.50	1.274	-	-	0.04	0.393	0.501
	LTE Band 12	10M	QPSK	25	0	-	Top Side	10mm	Ant 0	DSI 1	23095	707.5	22.36	23.50	1.300	-	-	-0.01	0.326	0.424
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 1	136100	680.5	23.80	24.50	1.175	-	-	-0.08	0.239	0.281
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 1	136100	680.5	23.62	24.50	1.225	-	-	0.05	0.314	0.385
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 1	136100	680.5	23.80	24.50	1.175	-	-	0.06	0.258	0.303
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 1	136100	680.5	23.62	24.50	1.225	-	-	-0.09	0.310	0.380
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 0	DSI 1	136100	680.5	23.80	24.50	1.175	-	-	-0.08	0.324	0.381
27	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 0	DSI 1	136100	680.5	23.62	24.50	1.225	-	-	-0.16	0.385	0.472
	FR1 n71 with Palm ring	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 0	DSI 1	136100	680.5	23.62	24.50	1.225	-	-	0.02	0.366	0.448
	FR1 n71 with Lanyard	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 0	DSI 1	136100	680.5	23.62	24.50	1.225	-	-	0.16	0.371	0.454
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 1	136100	680.5	23.80	24.50	1.175	-	-	0.13	0.095	0.112
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 1	136100	680.5	23.62	24.50	1.225	-	-	0.12	0.138	0.169
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 0	DSI 1	136100	680.5	23.80	24.50	1.175	-	-	0.03	0.212	0.249
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 0	DSI 1	136100	680.5	23.62	24.50	1.225	-	-	0.18	0.282	0.345
850MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 0	DSI 1	189	836.4	27.07	28.00	1.239	-	-	0.08	0.416	0.515
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 0	DSI 1	189	836.4	27.07	28.00	1.239	-	-	0.01	0.445	0.551
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 0	DSI 1	189	836.4	27.07	28.00	1.239	-	-	0.03	0.444	0.550
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Side	10mm	Ant 0	DSI 1	189	836.4	27.07	28.00	1.239	-	-	-0.08	0.080	0.099
28	GSM850	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 0	DSI 1	189	836.4	27.07	28.00	1.239	-	-	0.01	0.475	0.589
	GSM850 with Palm ring	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 0	DSI 1	189	836.4	27.07	28.00	1.239	-	-	0.01	0.438	0.543
	GSM850 with Lanyard	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 0	DSI 1	189	836.4	27.07	28.00	1.239	-	-	-0.04	0.468	0.580
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 1	4182	836.4	23.37	24.50	1.297	-	-	0.1	0.387	0.502
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 1	4182	836.4	23.37	24.50	1.297	-	-	-0.18	0.399	0.518
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 1	4182	836.4	23.37	24.50	1.297	-	-	0.1	0.319	0.414
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 1	4182	836.4	23.37	24.50	1.297	-	-	0.12	0.079	0.102

29	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 0	DSI 1	4182	836.4	23.37	24.50	1.297	-	-	0.01	0.405	**0.525**
	WCDMA V with Palm ring	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 0	DSI 1	4182	836.4	23.37	24.50	1.297	-	-	0.13	0.389	0.505
	WCDMA V with Lanyard	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 0	DSI 1	4182	836.4	23.37	24.50	1.297	-	-	0.12	0.375	0.486
30	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 1	26865	831.5	23.15	24.50	1.365	-	-	0.03	0.397	**0.542**
	LTE Band 26 with Palm ring	15M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 1	26865	831.5	23.15	24.50	1.365	-	-	0.07	0.366	0.500
	LTE Band 26 with Lanyard	15M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 1	26865	831.5	23.15	24.50	1.365	-	-	0.08	0.379	0.517
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 0	DSI 1	26865	831.5	22.17	23.50	1.358	-	-	-0.03	0.308	0.418
	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 1	26865	831.5	23.15	24.50	1.365	-	-	0.14	0.372	0.508
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 0	DSI 1	26865	831.5	22.17	23.50	1.358	-	-	0.11	0.310	0.421
	LTE Band 26	15M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 1	26865	831.5	23.15	24.50	1.365	-	-	-0.05	0.315	0.430
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 0	DSI 1	26865	831.5	22.17	23.50	1.358	-	-	0.18	0.238	0.323
	LTE Band 26	15M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 1	26865	831.5	23.15	24.50	1.365	-	-	0.14	0.069	0.094
	LTE Band 26	15M	QPSK	36	0	-	Right Side	10mm	Ant 0	DSI 1	26865	831.5	22.17	23.50	1.358	-	-	-0.17	0.054	0.073
	LTE Band 26	15M	QPSK	1	0	-	Top Side	10mm	Ant 0	DSI 1	26865	831.5	23.15	24.50	1.365	-	-	0.17	0.389	0.531
	LTE Band 26	15M	QPSK	36	0	-	Top Side	10mm	Ant 0	DSI 1	26865	831.5	22.17	23.50	1.358	-	-	-0.05	0.315	0.428
	LTE Band 5B	10M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 1	20476+ 20575	831.6+ 841.5	22.94	24.50	1.432	-	-	0.01	0.311	0.445
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 1	167300	836.5	23.84	24.50	1.164	-	-	0.01	0.441	0.513
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 1	167300	836.5	23.78	24.50	1.180	-	-	0.1	0.369	0.435
31	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 1	167300	836.5	23.84	24.50	1.164	-	-	0.01	0.488	**0.568**
	FR1 n5 with Palm ring	25M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 1	167300	836.5	23.84	24.50	1.164	-	-	0.19	0.475	0.553
	FR1 n5 with Lanyard	25M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 1	167300	836.5	23.84	24.50	1.164	-	-	-0.06	0.469	0.546
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 1	167300	836.5	23.78	24.50	1.180	-	-	-0.17	0.406	0.479
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 0	DSI 1	167300	836.5	23.84	24.50	1.164	-	-	0.04	0.385	0.448
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Left Side	10mm	Ant 0	DSI 1	167300	836.5	23.78	24.50	1.180	-	-	-0.01	0.294	0.347
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 1	167300	836.5	23.84	24.50	1.164	-	-	-0.08	0.081	0.094
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 1	167300	836.5	23.78	24.50	1.180	-	-	0.05	0.056	0.066
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 0	DSI 1	167300	836.5	23.84	24.50	1.164	-	-	0.06	0.462	0.538
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Top Side	10mm	Ant 0	DSI 1	167300	836.5	23.78	24.50	1.180	-	-	-0.09	0.352	0.415
1750MHz																				
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	132322	1745	20.05	21.00	1.245	-	-	-0.08	0.452	0.563
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	132322	1745	19.94	21.00	1.276	-	-	0.03	0.343	0.438
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	132322	1745	20.05	21.00	1.245	-	-	0.07	0.452	0.563
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	132322	1745	19.94	21.00	1.276	-	-	0.01	0.362	0.462
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	132322	1745	20.05	21.00	1.245	-	-	-0.18	0.644	0.802
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	132072	1720	20.01	21.00	1.256	-	-	0.03	0.618	0.776
32	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	132572	1770	20.37	21.00	1.156	-	-	0.01	0.695	**0.803**
	LTE Band 66 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	132572	1770	20.37	21.00	1.156	-	-	0.07	0.666	0.770
	LTE Band 66 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	132572	1770	20.37	21.00	1.156	-	-	-0.03	0.687	0.794
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	132322	1745	19.94	21.00	1.276	-	-	-0.15	0.583	0.744
	LTE Band 66	20M	QPSK	100	0	-	Left Side	10mm	Ant 2	DSI 1	132322	1745	19.85	21.00	1.303	-	-	-0.17	0.566	0.737
	LTE Band 66	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 1	132322	1745	20.05	21.00	1.245	-	-	-0.08	0.078	0.097
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 1	132322	1745	19.94	21.00	1.276	-	-	-0.04	0.063	0.080
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 1	132322	1745	20.05	21.00	1.245	-	-	-0.08	0.059	0.073
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 1	132322	1745	19.94	21.00	1.276	-	-	0.17	0.047	0.060
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	349000	1745	20.43	21.00	1.140	-	-	0.08	0.393	0.448
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	349000	1745	20.39	21.00	1.151	-	-	0.01	0.401	0.462
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	349000	1745	20.43	21.00	1.140	-	-	-0.08	0.395	0.450
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	349000	1745	20.39	21.00	1.151	-	-	-0.08	0.397	0.457
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	349000	1745	20.43	21.00	1.140	-	-	-0.18	0.588	0.670
33	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	349000	1745	20.39	21.00	1.151	-	-	-0.01	0.621	**0.715**
	FR1 n66 with Palm ring	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	349000	1745	20.39	21.00	1.151	-	-	0.02	0.619	0.712
	FR1 n66 with Lanyard	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	349000	1745	20.39	21.00	1.151	-	-	0.12	0.611	0.703

	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	349000	1745	20.43	21.00	1.140	-	-	0.12	0.020	0.023
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	349000	1745	20.39	21.00	1.151	-	-	0.08	0.049	0.056
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 2	DSI 1	349000	1745	20.43	21.00	1.140	-	-	-0.17	0.032	0.036
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	10mm	Ant 2	DSI 1	349000	1745	20.39	21.00	1.151	-	-	-0.03	0.034	0.039
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 2	DSI 1	661	1880	22.14	24.00	1.535	-	-	0.07	0.345	0.530
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 2	DSI 1	661	1880	22.14	24.00	1.535	-	-	0.16	0.351	0.539
34	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 1	661	1880	22.14	24.00	1.535	-	-	-0.04	0.633	**0.972**
	GSM1900 with Palm ring	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 1	661	1880	22.14	24.00	1.535	-	-	0.05	0.628	0.964
	GSM1900 with Lanyard	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 1	661	1880	22.14	24.00	1.535	-	-	-0.1	0.615	0.944
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 1	512	1850.2	22.08	24.00	1.556	-	-	-0.18	0.567	0.882
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 1	810	1909.8	22.06	24.00	1.563	-	-	0.02	0.555	0.867
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 2	DSI 1	661	1880	22.14	24.00	1.535	-	-	0.16	0.072	0.111
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 2	DSI 1	661	1880	22.14	24.00	1.535	-	-	-0.03	0.001	0.002
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI 1	9400	1880	19.93	21.00	1.279	-	-	-0.13	0.421	0.538
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	9400	1880	19.93	21.00	1.279	-	-	0.01	0.418	0.535
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 1	9400	1880	19.93	21.00	1.279	-	-	-0.04	0.653	0.835
35	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 1	9262	1852.4	19.64	21.00	1.368	-	-	-0.03	0.715	**0.978**
	WCDMA II with Palm ring	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 1	9262	1852.4	19.64	21.00	1.368	-	-	-0.08	0.698	0.955
	WCDMA II with Lanyard	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 1	9262	1852.4	19.64	21.00	1.368	-	-	0.07	0.687	0.940
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 1	9538	1907.6	19.80	21.00	1.318	-	-	-0.17	0.625	0.824
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 2	DSI 1	9400	1880	19.93	21.00	1.279	-	-	-0.1	0.080	0.102
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 2	DSI 1	9400	1880	19.93	21.00	1.279	-	-	0.18	0.050	0.064
	LTE Band 25	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	26340	1880	19.59	21.00	1.384	-	-	-0.09	0.403	0.558
	LTE Band 25	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	26340	1880	19.51	21.00	1.409	-	-	-0.13	0.331	0.466
	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	26340	1880	19.59	21.00	1.384	-	-	0.06	0.455	0.630
	LTE Band 25	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	26340	1880	19.51	21.00	1.409	-	-	-0.15	0.353	0.497
	LTE Band 25	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	26340	1880	19.59	21.00	1.384	-	-	0.04	0.664	0.919
36	LTE Band 25	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	26140	1860	19.43	21.00	1.435	-	-	0.01	0.719	**1.032**
	LTE Band 25 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	26140	1860	19.43	21.00	1.435	-	-	-0.08	0.706	1.013
	LTE Band 25 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	26140	1860	19.43	21.00	1.435	-	-	-0.13	0.689	0.989
	LTE Band 25	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	26590	1905	19.32	21.00	1.472	-	-	-0.18	0.682	1.004
	LTE Band 25	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	26340	1880	19.51	21.00	1.409	-	-	-0.11	0.553	0.779
	LTE Band 25	20M	QPSK	100	0	-	Left Side	10mm	Ant 2	DSI 1	26340	1880	19.44	21.00	1.432	-	-	-0.06	0.557	0.798
	LTE Band 25	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 1	26340	1880	19.59	21.00	1.384	-	-	-0.14	0.077	0.107
	LTE Band 25	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 1	26340	1880	19.51	21.00	1.409	-	-	-0.19	0.063	0.089
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 1	26340	1880	19.59	21.00	1.384	-	-	0.01	0.042	0.058
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 1	26340	1880	19.51	21.00	1.409	-	-	0.06	0.034	0.048
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	376000	1880	20.17	21.00	1.211	-	-	0.14	0.351	0.425
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	376000	1880	20.15	21.00	1.216	-	-	0.18	0.352	0.428
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	376000	1880	20.17	21.00	1.211	-	-	-0.05	0.390	0.472
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	376000	1880	20.15	21.00	1.216	-	-	-0.17	0.372	0.452
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	376000	1880	20.17	21.00	1.211	-	-	0.05	0.666	0.807
37	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	372000	1860	20.12	21.00	1.225	-	-	0.05	0.686	**0.840**
	FR1 n2 with Palm ring	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	372000	1860	20.12	21.00	1.225	-	-	0.03	0.671	0.822
	FR1 n2 with Lanyard	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	372000	1860	20.12	21.00	1.225	-	-	-0.05	0.662	0.811
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	380000	1900	19.97	21.00	1.268	-	-	0.06	0.647	0.820
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	376000	1880	20.15	21.00	1.216	-	-	-0.09	0.592	0.720
	FR1 n2	20M	QPSK	100	0	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	376000	1880	20.12	21.00	1.225	-	-	0.12	0.466	0.571
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	376000	1880	20.17	21.00	1.211	-	-	0.03	0.070	0.085
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	376000	1880	20.15	21.00	1.216	-	-	0.18	0.057	0.069
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 2	DSI 1	376000	1880	20.17	21.00	1.211	-	-	0.16	0.037	0.045
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 2	DSI 1	376000	1880	20.15	21.00	1.216	-	-	-0.1	0.032	0.039

									2600MHz											
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 1	21100	2535	20.39	21.50	1.291	-	-	-0.01	0.299	0.386
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 1	21100	2535	20.32	21.50	1.312	-	-	-0.11	0.234	0.307
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 1	21100	2535	20.39	21.50	1.291	-	-	0.14	0.408	0.527
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 1	21100	2535	20.32	21.50	1.312	-	-	0.16	0.328	0.430
38	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	21100	2535	20.39	21.50	1.291	-	-	0.02	0.547	**0.706**
	LTE Band 7 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	21100	2535	20.39	21.50	1.291	-	-	-0.12	0.531	0.686
	LTE Band 7 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	21100	2535	20.39	21.50	1.291	-	-	0.07	0.525	0.678
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 1	21100	2535	20.32	21.50	1.312	-	-	-0.03	0.335	0.440
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 1	21100	2535	20.39	21.50	1.291	-	-	-0.15	0.010	0.013
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 1	21100	2535	20.32	21.50	1.312	-	-	0.16	0.006	0.008
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 1	21100	2535	20.39	21.50	1.291	-	-	0.05	0.068	0.088
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 1	21100	2535	20.32	21.50	1.312	-	-	-0.06	0.052	0.068
	LTE Band 7C	20M	QPSK	1	99	-	Left Side	10mm	Ant 4	DSI 1	21100+ 21298	2535+ 2554.8	20.22	21.50	1.343	-	-	0.01	0.459	0.616
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 1	21100	2535	22.88	24.50	1.452	-	-	0.02	0.090	0.131
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 1	21100	2535	21.94	23.50	1.432	-	-	0.16	0.068	0.097
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 1	21100	2535	22.88	24.50	1.452	-	-	0.01	0.080	0.116
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 1	21100	2535	21.94	23.50	1.432	-	-	-0.04	0.067	0.096
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 1	21100	2535	22.88	24.50	1.452	-	-	0.13	0.192	0.279
	LTE Band 7 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 1	21100	2535	22.88	24.50	1.452	-	-	0.11	0.181	0.263
	LTE Band 7 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 1	21100	2535	22.88	24.50	1.452	-	-	-0.13	0.175	0.254
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 6	DSI 1	21100	2535	21.94	23.50	1.432	-	-	0.12	0.146	0.209
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 1	21100	2535	22.88	24.50	1.452	-	-	0.07	0.001	0.001
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 1	21100	2535	21.94	23.50	1.432	-	-	0.08	0.001	0.001
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 6	DSI 1	21100	2535	22.88	24.50	1.452	-	-	0.19	0.001	0.001
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 6	DSI 1	21100	2535	21.94	23.50	1.432	-	-	-0.06	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	-0.08	0.325	0.418
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 1	40620	2593	22.46	23.50	1.271	62.9	1.006	-0.03	0.268	0.343
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	0.07	0.305	0.392
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 1	40620	2593	22.46	23.50	1.271	62.9	1.006	-0.12	0.260	0.332
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	-0.03	0.513	0.660
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	39750	2506	23.41	24.50	1.285	62.9	1.006	0.12	0.482	0.623
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	40185	2549.5	23.35	24.50	1.303	62.9	1.006	0.02	0.407	0.534
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	41055	2636.5	23.31	24.50	1.315	62.9	1.006	-0.03	0.611	0.808
39	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	41490	2680	23.39	24.50	1.291	62.9	1.006	-0.01	0.751	**0.975**
	LTE Band 41 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	41490	2680	23.39	24.50	1.291	62.9	1.006	0.12	0.744	0.966
	LTE Band 41 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	41490	2680	23.39	24.50	1.291	62.9	1.006	-0.11	0.723	0.939
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 1	40620	2593	22.46	23.50	1.271	62.9	1.006	-0.1	0.421	0.538
	LTE Band 41	20M	QPSK	100	0	-	Left Side	10mm	Ant 4	DSI 1	40620	2593	22.45	23.50	1.274	62.9	1.006	0.05	0.431	0.552
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	0.01	0.006	0.008
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 1	40620	2593	22.46	23.50	1.271	62.9	1.006	0.07	0.002	0.003
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	0.15	0.081	0.104
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 1	40620	2593	22.46	23.50	1.271	62.9	1.006	-0.05	0.061	0.078
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	41490	2680	25.07	26.10	1.268	42.9	1.009	-0.08	0.744	0.952
	LTE Band 38C	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	38150+ 37952	2610+ 2590.2	23.18	24.50	1.355	62.9	1.006	0.01	0.659	0.898
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 1	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.11	0.097	0.138
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 1	40620	2593	22.00	23.50	1.413	62.9	1.006	0.03	0.079	0.112
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 1	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.05	0.083	0.118
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 1	40620	2593	22.00	23.50	1.413	62.9	1.006	0.14	0.067	0.095
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 1	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.01	0.198	0.282
	LTE Band 41 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 1	40620	2593	22.99	24.50	1.416	62.9	1.006	0.17	0.181	0.258
	LTE Band 41 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 1	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.16	0.176	0.251
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 6	DSI 1	40620	2593	22.00	23.50	1.413	62.9	1.006	-0.12	0.158	0.225

	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 1	40620	2593	22.99	24.50	1.416	62.9	1.006	0.07	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 1	40620	2593	22.00	23.50	1.413	62.9	1.006	0.09	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 6	DSI 1	40620	2593	22.99	24.50	1.416	62.9	1.006	0.04	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 6	DSI 1	40620	2593	22.00	23.50	1.413	62.9	1.006	0.11	0.001	0.001
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 1	40620	2593	25.03	26.10	1.279	42.9	1.009	0.06	0.215	0.277
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 4	DSI 1	507000	2535	20.91	21.50	1.146	-	-	-0.18	0.317	0.363
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	10mm	Ant 4	DSI 1	507000	2535	20.86	21.50	1.159	-	-	0.03	0.330	0.382
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 4	DSI 1	507000	2535	20.91	21.50	1.146	-	-	-0.15	0.430	0.493
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Back	10mm	Ant 4	DSI 1	507000	2535	20.86	21.50	1.159	-	-	0.11	0.409	0.474
40	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 4	DSI 1	507000	2535	20.91	21.50	1.146	-	-	-0.09	0.528	0.605
	FR1 n7 with Palm ring	50M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 4	DSI 1	507000	2535	20.91	21.50	1.146	-	-	-0.17	0.519	0.595
	FR1 n7 with Lanyard	50M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 4	DSI 1	507000	2535	20.91	21.50	1.146	-	-	0.11	0.511	0.586
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	10mm	Ant 4	DSI 1	507000	2535	20.86	21.50	1.159	-	-	-0.17	0.465	0.539
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 4	DSI 1	507000	2535	20.91	21.50	1.146	-	-	-0.04	0.001	0.001
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Side	10mm	Ant 4	DSI 1	507000	2535	20.86	21.50	1.159	-	-	-0.08	0.001	0.001
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 4	DSI 1	507000	2535	20.91	21.50	1.146	-	-	0.17	0.065	0.074
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Top Side	10mm	Ant 4	DSI 1	507000	2535	20.86	21.50	1.159	-	-	0.18	0.059	0.068
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 6	DSI 1	507000	2535	23.81	24.50	1.172	-	-	-0.11	0.065	0.076
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	10mm	Ant 6	DSI 1	507000	2535	23.62	24.50	1.225	-	-	-0.01	0.074	0.091
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 6	DSI 1	507000	2535	23.81	24.50	1.172	-	-	0.09	0.050	0.059
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Back	10mm	Ant 6	DSI 1	507000	2535	23.62	24.50	1.225	-	-	0.1	0.070	0.086
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 6	DSI 1	507000	2535	23.81	24.50	1.172	-	-	-0.04	0.146	0.171
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	10mm	Ant 6	DSI 1	507000	2535	23.62	24.50	1.225	-	-	0.15	0.182	0.223
	FR1 n7 with Palm ring	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	10mm	Ant 6	DSI 1	507000	2535	23.62	24.50	1.225	-	-	-0.15	0.175	0.214
	FR1 n7 with Lanyard	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	10mm	Ant 6	DSI 1	507000	2535	23.62	24.50	1.225	-	-	-0.12	0.172	0.211
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 6	DSI 1	507000	2535	23.81	24.50	1.172	-	-	0.09	0.001	0.001
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Side	10mm	Ant 6	DSI 1	507000	2535	23.62	24.50	1.225	-	-	-0.16	0.001	0.001
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 6	DSI 1	507000	2535	23.81	24.50	1.172	-	-	0.05	0.001	0.001
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	10mm	Ant 6	DSI 1	507000	2535	23.62	24.50	1.225	-	-	0.08	0.001	0.001
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	518598	2592.99	20.89	21.50	1.151	-	-	-0.18	0.311	0.358
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	518598	2592.99	20.85	21.50	1.161	-	-	-0.03	0.311	0.361
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	518598	2592.99	20.89	21.50	1.151	-	-	-0.09	0.350	0.403
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	518598	2592.99	20.85	21.50	1.161	-	-	0.18	0.352	0.409
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 1	518598	2592.99	20.89	21.50	1.151	-	-	0.04	0.516	0.594
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 1	518598	2592.99	20.85	21.50	1.161	-	-	-0.03	0.431	0.500
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 4	DSI 1	518598	2592.99	20.89	21.50	1.151	-	-	-0.08	0.020	0.023
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 4	DSI 1	518598	2592.99	20.85	21.50	1.161	-	-	-0.05	0.019	0.022
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 1	518598	2592.99	20.89	21.50	1.151	-	-	-0.03	0.098	0.113
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 1	518598	2592.99	20.85	21.50	1.161	-	-	0.17	0.081	0.094
41	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 1	518598	2592.99	23.79	24.50	1.178	50	1.000	0.01	0.535	0.630
	FR1 n41 HPUE with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 1	518598	2592.99	23.79	24.50	1.178	50	1.000	-0.17	0.528	0.622
	FR1 n41 HPUE with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 1	518598	2592.99	23.79	24.50	1.178	50	1.000	0.08	0.516	0.608
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 1	518598	2592.99	21.98	23.00	1.265	-	-	-0.16	0.077	0.097
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 1	518598	2592.99	21.84	23.00	1.306	-	-	-0.03	0.070	0.091
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 1	518598	2592.99	21.98	23.00	1.265	-	-	0.17	0.062	0.078
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 1	518598	2592.99	21.84	23.00	1.306	-	-	0.02	0.059	0.077
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 1	518598	2592.99	21.98	23.00	1.265	-	-	-0.14	0.180	0.228
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 1	518598	2592.99	21.98	23.00	1.265	-	-	-0.11	0.175	0.221
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 1	518598	2592.99	21.98	23.00	1.265	-	-	-0.01	0.169	0.214
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 1	518598	2592.99	21.84	23.00	1.306	-	-	0.18	0.139	0.182
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 1	518598	2592.99	21.98	23.00	1.265	-	-	-0.11	0.001	0.001
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 1	518598	2592.99	21.84	23.00	1.306	-	-	-0.05	0.001	0.001

	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 1	518598	2592.99	21.98	23.00	1.265	-	-	-0.04	0.001	0.001
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 1	518598	2592.99	21.84	23.00	1.306	-	-	-0.08	0.001	0.001
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 1	518598	2592.99	21.81	23.00	1.315	-	-	0.18	0.295	0.388
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI 1	518598	2592.99	21.78	23.00	1.324	-	-	0.02	0.238	0.315
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 1	518598	2592.99	21.81	23.00	1.315	-	-	0.16	0.344	0.452
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 1	518598	2592.99	21.81	23.00	1.315	-	-	0.09	0.321	0.422
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 1	518598	2592.99	21.81	23.00	1.315	-	-	0.1	0.332	0.437
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI 1	518598	2592.99	21.78	23.00	1.324	-	-	0.06	0.174	0.230
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI 1	518598	2592.99	21.81	23.00	1.315	-	-	-0.02	0.260	0.342
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI 1	518598	2592.99	21.78	23.00	1.324	-	-	0.07	0.133	0.176
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 1	518598	2592.99	21.81	23.00	1.315	-	-	-0.17	0.001	0.001
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI 1	518598	2592.99	21.78	23.00	1.324	-	-	0.1	0.001	0.001
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 0	DSI 1	518598	2592.99	21.81	23.00	1.315	-	-	-0.1	0.164	0.216
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 0	DSI 1	518598	2592.99	21.78	23.00	1.324	-	-	-0.07	0.071	0.094
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 1	518598	2592.99	22.54	24.00	1.400	-	-	-0.02	0.291	0.407
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 1	518598	2592.99	22.54	24.00	1.400	-	-	-0.04	0.284	0.398
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 1	518598	2592.99	22.54	24.00	1.400	-	-	0.15	0.277	0.388
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 1	518598	2592.99	22.42	24.00	1.439	-	-	-0.17	0.277	0.399
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 1	518598	2592.99	22.54	24.00	1.400	-	-	0.01	0.232	0.325
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 1	518598	2592.99	22.42	24.00	1.439	-	-	0.1	0.264	0.380
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 1	518598	2592.99	22.54	24.00	1.400	-	-	0.11	0.138	0.193
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 1	518598	2592.99	22.42	24.00	1.439	-	-	-0.07	0.135	0.194
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 1	518598	2592.99	22.54	24.00	1.400	-	-	0.18	0.040	0.056
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 1	518598	2592.99	22.42	24.00	1.439	-	-	0.12	0.035	0.050
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI 1	518598	2592.99	22.54	24.00	1.400	-	-	0.07	0.248	0.347
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI 1	518598	2592.99	22.42	24.00	1.439	-	-	0.15	0.252	0.363
3500MHz																				
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	42590	3500	21.29	22.00	1.178	62.9	1.006	-0.03	0.294	0.348
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	42590	3500	21.22	22.00	1.197	62.9	1.006	-0.14	0.219	0.264
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	42590	3500	21.29	22.00	1.178	62.9	1.006	0.17	0.192	0.228
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	42590	3500	21.22	22.00	1.197	62.9	1.006	0.11	0.138	0.166
42	LTE Band 42	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	42590	3500	21.29	22.00	1.178	62.9	1.006	0.07	0.558	**0.661**
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	42590	3500	21.29	22.00	1.178	62.9	1.006	0.09	0.544	0.645
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	42590	3500	21.29	22.00	1.178	62.9	1.006	-0.16	0.539	0.639
	LTE Band 42	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	42590	3500	21.22	22.00	1.197	62.9	1.006	-0.13	0.404	0.486
	LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 1	42590	3500	21.29	22.00	1.178	62.9	1.006	-0.15	0.033	0.039
	LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 1	42590	3500	21.22	22.00	1.197	62.9	1.006	-0.09	0.023	0.028
	LTE Band 42	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 1	42590	3500	21.29	22.00	1.178	62.9	1.006	0.05	0.045	0.053
	LTE Band 42	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 1	42590	3500	21.22	22.00	1.197	62.9	1.006	0.13	0.037	0.045
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 1	42590	3500	21.39	22.00	1.151	62.9	1.006	0.14	0.198	0.229
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 1	42590	3500	21.35	22.00	1.161	62.9	1.006	0.04	0.150	0.175
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 1	42590	3500	21.39	22.00	1.151	62.9	1.006	-0.05	0.307	0.355
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 1	42590	3500	21.35	22.00	1.161	62.9	1.006	-0.04	0.244	0.285
	LTE Band 42	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI 1	42590	3500	21.39	22.00	1.151	62.9	1.006	0.14	0.032	0.037
	LTE Band 42	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI 1	42590	3500	21.35	22.00	1.161	62.9	1.006	0.03	0.023	0.027
	LTE Band 42	20M	QPSK	1	0	-	Right Side	10mm	Ant 3	DSI 1	42590	3500	21.39	22.00	1.151	62.9	1.006	0.16	0.445	0.515
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Right Side	10mm	Ant 3	DSI 1	42590	3500	21.39	22.00	1.151	62.9	1.006	-0.18	0.436	0.505
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Right Side	10mm	Ant 3	DSI 1	42590	3500	21.39	22.00	1.151	62.9	1.006	-0.03	0.429	0.497
	LTE Band 42	20M	QPSK	50	0	-	Right Side	10mm	Ant 3	DSI 1	42590	3500	21.35	22.00	1.161	62.9	1.006	0.14	0.351	0.410
	LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 3	DSI 1	42590	3500	21.39	22.00	1.151	62.9	1.006	-0.09	0.158	0.183
	LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 3	DSI 1	42590	3500	21.35	22.00	1.161	62.9	1.006	-0.12	0.086	0.100
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 1	42590	3500	19.51	20.50	1.256	62.9	1.006	-0.06	0.174	0.220
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 1	42590	3500	19.48	20.50	1.265	62.9	1.006	-0.19	0.146	0.186
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 1	42590	3500	19.51	20.50	1.256	62.9	1.006	0.09	0.184	0.232

	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 1	42590	3500	19.48	20.50	1.265	62.9	1.006	0.13	0.176	0.224
	LTE Band 42	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	42590	3500	19.51	20.50	1.256	62.9	1.006	-0.08	0.424	0.536
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	42590	3500	19.51	20.50	1.256	62.9	1.006	-0.04	0.412	0.521
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI 1	42590	3500	19.51	20.50	1.256	62.9	1.006	-0.09	0.408	0.516
	LTE Band 42	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI 1	42590	3500	19.48	20.50	1.265	62.9	1.006	0.12	0.360	0.458
	LTE Band 42	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 1	42590	3500	19.51	20.50	1.256	62.9	1.006	-0.03	0.011	0.014
	LTE Band 42	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 1	42590	3500	19.48	20.50	1.265	62.9	1.006	-0.06	0.018	0.023
	LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 1	42590	3500	19.51	20.50	1.256	62.9	1.006	0.08	0.053	0.067
	LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 1	42590	3500	19.48	20.50	1.265	62.9	1.006	-0.07	0.046	0.059
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 8	DSI 1	42590	3500	20.19	21.00	1.205	62.9	1.006	0.18	0.194	0.235
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 8	DSI 1	42590	3500	20.11	21.00	1.227	62.9	1.006	0.05	0.140	0.173
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 8	DSI 1	42590	3500	20.19	21.00	1.205	62.9	1.006	0.04	0.328	0.398
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 8	DSI 1	42590	3500	20.11	21.00	1.227	62.9	1.006	0.15	0.289	0.357
	LTE Band 42	20M	QPSK	1	0	-	Right Side	10mm	Ant 8	DSI 1	42590	3500	20.19	21.00	1.205	62.9	1.006	0.03	0.520	0.630
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Right Side	10mm	Ant 8	DSI 1	42590	3500	20.19	21.00	1.205	62.9	1.006	0.07	0.511	0.619
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Right Side	10mm	Ant 8	DSI 1	42590	3500	20.19	21.00	1.205	62.9	1.006	-0.03	0.503	0.610
	LTE Band 42	20M	QPSK	50	0	-	Right Side	10mm	Ant 8	DSI 1	42590	3500	20.11	21.00	1.227	62.9	1.006	-0.1	0.507	0.626
	LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 8	DSI 1	42590	3500	20.19	21.00	1.205	62.9	1.006	0.14	0.048	0.058
	LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 8	DSI 1	42590	3500	20.11	21.00	1.227	62.9	1.006	-0.16	0.040	0.049
	LTE Band 42	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 8	DSI 1	42590	3500	20.19	21.00	1.205	62.9	1.006	-0.02	0.018	0.022
	LTE Band 42	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 8	DSI 1	42590	3500	20.11	21.00	1.227	62.9	1.006	0.1	0.033	0.041

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	656000	3840	12.99	14.00	1.262	-	-	-0.1	0.036	0.045
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	656000	3840	12.97	14.00	1.268	-	-	-0.05	0.038	0.048
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	656000	3840	12.99	14.00	1.262	-	-	0.01	0.052	0.066
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	656000	3840	12.97	14.00	1.268	-	-	-0.09	0.057	0.072
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	656000	3840	12.99	14.00	1.262	-	-	-0.11	0.086	0.109
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	656000	3840	12.97	14.00	1.268	-	-	0.01	0.096	0.122
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	656000	3840	12.97	14.00	1.268	-	-	0.09	0.083	0.105
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	656000	3840	12.97	14.00	1.268	-	-	-0.08	0.090	0.114
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 2	656000	3840	12.99	14.00	1.262	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	656000	3840	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 2	656000	3840	12.99	14.00	1.262	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 2	656000	3840	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	633334	3500.01	12.94	14.00	1.276	-	-	-0.12	0.065	0.083
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	633334	3500.01	12.86	14.00	1.300	-	-	-0.07	0.064	0.083
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	633334	3500.01	12.94	14.00	1.276	-	-	-0.13	0.087	0.111
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	633334	3500.01	12.86	14.00	1.300	-	-	0.05	0.082	0.107
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	633334	3500.01	12.94	14.00	1.276	-	-	-0.08	0.109	0.139
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	633334	3500.01	12.94	14.00	1.276	-	-	0.17	0.102	0.130
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	633334	3500.01	12.94	14.00	1.276	-	-	-0.14	0.095	0.121
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	633334	3500.01	12.86	14.00	1.300	-	-	0.07	0.108	0.140
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 2	633334	3500.01	12.94	14.00	1.276	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	633334	3500.01	12.86	14.00	1.300	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 2	633334	3500.01	12.94	14.00	1.276	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 2	633334	3500.01	12.86	14.00	1.300	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	641666	3624.99	12.97	14.00	1.268	-	-	0.08	0.063	0.080
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	641666	3624.99	12.94	14.00	1.276	-	-	0.01	0.062	0.079
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	641666	3624.99	12.97	14.00	1.268	-	-	0.03	0.080	0.101

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	641666	3624.99	12.94	14.00	1.276	-	-	-0.08	0.068	0.087
43	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	641666	3624.99	12.97	14.00	1.268	-	-	-0.01	0.115	0.146
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	641666	3624.99	12.97	14.00	1.268	-	-	-0.08	0.106	0.134
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	641666	3624.99	12.97	14.00	1.268	-	-	0.1	0.102	0.129
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	641666	3624.99	12.94	14.00	1.276	-	-	-0.18	0.107	0.137
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 2	641666	3624.99	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	641666	3624.99	12.94	14.00	1.276	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 2	641666	3624.99	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 2	641666	3624.99	12.94	14.00	1.276	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	656000	3840	12.98	14.00	1.265	-	-	-0.12	0.049	0.062
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	656000	3840	12.92	14.00	1.282	-	-	0.18	0.039	0.050
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	656000	3840	12.98	14.00	1.265	-	-	0.14	0.056	0.071
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	656000	3840	12.92	14.00	1.282	-	-	0.03	0.059	0.076
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	656000	3840	12.98	14.00	1.265	-	-	0.09	0.039	0.049
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	656000	3840	12.92	14.00	1.282	-	-	-0.13	0.050	0.064
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 3	656000	3840	12.98	14.00	1.265	-	-	-0.09	0.077	0.097
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	656000	3840	12.92	14.00	1.282	-	-	-0.18	0.088	0.113
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	656000	3840	12.92	14.00	1.282	-	-	-0.16	0.081	0.104
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	656000	3840	12.92	14.00	1.282	-	-	-0.03	0.079	0.101
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 3	656000	3840	12.98	14.00	1.265	-	-	0.11	0.043	0.054
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	656000	3840	12.92	14.00	1.282	-	-	0.11	0.041	0.053
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	633334	3500.01	12.93	14.00	1.279	-	-	-0.06	0.041	0.052
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	633334	3500.01	12.84	14.00	1.306	-	-	-0.02	0.044	0.057
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	633334	3500.01	12.93	14.00	1.279	-	-	0.02	0.063	0.081
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	633334	3500.01	12.84	14.00	1.306	-	-	0.12	0.068	0.089
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	633334	3500.01	12.93	14.00	1.279	-	-	-0.11	0.037	0.047
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	633334	3500.01	12.84	14.00	1.306	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 3	633334	3500.01	12.93	14.00	1.279	-	-	-0.05	0.094	0.120
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	633334	3500.01	12.84	14.00	1.306	-	-	0.03	0.103	0.135
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	633334	3500.01	12.84	14.00	1.306	-	-	0.17	0.095	0.124
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	633334	3500.01	12.84	14.00	1.306	-	-	0.02	0.098	0.128
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 3	633334	3500.01	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	633334	3500.01	12.84	14.00	1.306	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	641666	3624.99	13.02	14.00	1.253	-	-	0.18	0.044	0.055
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	641666	3624.99	12.96	14.00	1.271	-	-	-0.04	0.044	0.056
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	641666	3624.99	13.02	14.00	1.253	-	-	-0.08	0.073	0.091
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	641666	3624.99	12.96	14.00	1.271	-	-	-0.13	0.063	0.080
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	641666	3624.99	13.02	14.00	1.253	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	641666	3624.99	12.96	14.00	1.271	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 3	641666	3624.99	13.02	14.00	1.253	-	-	-0.03	0.100	0.125
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 3	641666	3624.99	13.02	14.00	1.253	-	-	-0.03	0.098	0.123
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 3	641666	3624.99	13.02	14.00	1.253	-	-	0.08	0.091	0.114
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	641666	3624.99	12.96	14.00	1.271	-	-	-0.07	0.086	0.109
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 3	641666	3624.99	13.02	14.00	1.253	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	641666	3624.99	12.96	14.00	1.271	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	656000	3840	13.02	14.00	1.253	-	-	0.03	0.055	0.069
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	656000	3840	12.98	14.00	1.265	-	-	-0.17	0.054	0.068
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	656000	3840	13.02	14.00	1.253	-	-	-0.11	0.075	0.094
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	656000	3840	12.98	14.00	1.265	-	-	0.18	0.085	0.108
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	656000	3840	13.02	14.00	1.253	-	-	0.02	0.113	0.142

	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	656000	3840	13.02	14.00	1.253	-	-	-0.11	0.106	0.133
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	656000	3840	13.02	14.00	1.253	-	-	-0.05	0.102	0.128
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	656000	3840	12.98	14.00	1.265	-	-	0.13	0.109	0.138
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 4	656000	3840	13.02	14.00	1.253	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 4	656000	3840	12.98	14.00	1.265	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	656000	3840	13.02	14.00	1.253	-	-	-0.09	0.028	0.035
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	656000	3840	12.98	14.00	1.265	-	-	-0.12	0.028	0.035
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	633334	3500.01	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	633334	3500.01	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	633334	3500.01	12.97	14.00	1.268	-	-	0.02	0.032	0.041
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	633334	3500.01	12.93	14.00	1.279	-	-	-0.07	0.046	0.059
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	633334	3500.01	12.97	14.00	1.268	-	-	-0.08	0.070	0.089
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	633334	3500.01	12.93	14.00	1.279	-	-	0.13	0.086	0.110
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	633334	3500.01	12.93	14.00	1.279	-	-	-0.14	0.082	0.105
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	633334	3500.01	12.93	14.00	1.279	-	-	0.01	0.079	0.101
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 4	633334	3500.01	12.97	14.00	1.268	-	-	-0.05	0.026	0.033
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 4	633334	3500.01	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	633334	3500.01	12.97	14.00	1.268	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	633334	3500.01	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	641666	3624.99	12.95	14.00	1.274	-	-	-0.12	0.046	0.059
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	641666	3624.99	12.93	14.00	1.279	-	-	0.03	0.045	0.058
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	641666	3624.99	12.95	14.00	1.274	-	-	-0.16	0.056	0.071
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	641666	3624.99	12.93	14.00	1.279	-	-	-0.02	0.058	0.074
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	641666	3624.99	12.95	14.00	1.274	-	-	0.15	0.103	0.131
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	641666	3624.99	12.95	14.00	1.274	-	-	-0.09	0.093	0.118
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	641666	3624.99	12.95	14.00	1.274	-	-	0.11	0.089	0.113
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	641666	3624.99	12.93	14.00	1.279	-	-	-0.05	0.091	0.116
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	641666	3624.99	12.95	14.00	1.274	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	641666	3624.99	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 4	641666	3624.99	12.95	14.00	1.274	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 4	641666	3624.99	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	656000	3840	12.95	14.00	1.274	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	656000	3840	12.89	14.00	1.291	-	-	0.06	0.038	0.049
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	656000	3840	12.95	14.00	1.274	-	-	0.01	0.050	0.064
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	656000	3840	12.89	14.00	1.291	-	-	-0.11	0.062	0.080
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 8	656000	3840	12.95	14.00	1.274	-	-	0.09	0.057	0.073
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 8	656000	3840	12.89	14.00	1.291	-	-	-0.07	0.067	0.086
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 8	656000	3840	12.89	14.00	1.291	-	-	0.07	0.062	0.080
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 8	656000	3840	12.89	14.00	1.291	-	-	-0.17	0.058	0.075
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 8	656000	3840	12.95	14.00	1.274	-	-	-0.08	0.026	0.033
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 8	656000	3840	12.89	14.00	1.291	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 8	656000	3840	12.95	14.00	1.274	-	-	0.15	0.030	0.038
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 8	656000	3840	12.89	14.00	1.291	-	-	-0.08	0.032	0.041
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	633334	3500.01	12.89	14.00	1.291	-	-	-0.05	0.049	0.063
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	633334	3500.01	12.85	14.00	1.303	-	-	-0.18	0.038	0.050
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	633334	3500.01	12.89	14.00	1.291	-	-	-0.08	0.078	0.101
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	633334	3500.01	12.85	14.00	1.303	-	-	0.18	0.069	0.090
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 8	633334	3500.01	12.89	14.00	1.291	-	-	0.06	0.107	0.138
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 8	633334	3500.01	12.89	14.00	1.291	-	-	0.1	0.101	0.130
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 8	633334	3500.01	12.89	14.00	1.291	-	-	0.08	0.095	0.123

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 8	633334	3500.01	12.85	14.00	1.303	-	-	0.04	0.085	0.111
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 8	633334	3500.01	12.89	14.00	1.291	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 8	633334	3500.01	12.85	14.00	1.303	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 8	633334	3500.01	12.89	14.00	1.291	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 8	633334	3500.01	12.85	14.00	1.303	-	-	-0.15	0.034	0.044
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	641666	3624.99	12.93	14.00	1.279	-	-	-0.08	0.039	0.050
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	641666	3624.99	12.88	14.00	1.294	-	-	0.16	0.039	0.050
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	641666	3624.99	12.93	14.00	1.279	-	-	0.05	0.077	0.098
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	641666	3624.99	12.88	14.00	1.294	-	-	0.05	0.073	0.094
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 8	641666	3624.99	12.93	14.00	1.279	-	-	-0.03	0.085	0.109
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 8	641666	3624.99	12.93	14.00	1.279	-	-	-0.15	0.056	0.072
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 8	641666	3624.99	12.93	14.00	1.279	-	-	0.02	0.061	0.078
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 8	641666	3624.99	12.88	14.00	1.294	-	-	0.07	0.084	0.109
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 8	641666	3624.99	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 8	641666	3624.99	12.88	14.00	1.294	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 8	641666	3624.99	12.93	14.00	1.279	-	-	0	0.001	0.001
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 8	641666	3624.99	12.88	14.00	1.294	-	-	0	0.001	0.001

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 10+7(10)	Hotspot	1	2412	17.26	18.50	1.330	98.35	1.017	0.1	0.180	0.244
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 10+7(10)	Hotspot	1	2412	17.26	18.50	1.330	98.35	1.017	0.12	0.324	0.438
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 10+7(10)	Hotspot	1	2412	17.26	18.50	1.330	98.35	1.017	0.08	0.094	0.127
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 10+7(10)	Hotspot	1	2412	17.26	18.50	1.330	98.35	1.017	0.01	0.001	0.001
44	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 10+7(10)	Hotspot	1	2412	17.26	18.50	1.330	98.35	1.017	-0.05	0.418	0.566
	WLAN2.4GHz with Palm ring	802.11b 1Mbps	Top Side	10mm	Ant 10+7(10)	Hotspot	1	2412	17.26	18.50	1.330	98.35	1.017	0.16	0.406	0.549
	WLAN2.4GHz with Lanyard	802.11b 1Mbps	Top Side	10mm	Ant 10+7(10)	Hotspot	1	2412	17.26	18.50	1.330	98.35	1.017	0.05	0.399	0.540
	Bluetooth	1Mbps	Front	10mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	-0.03	0.001	0.001
45	Bluetooth	1Mbps	Back	10mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.09	0.016	0.021
	Bluetooth with Palm ring	1Mbps	Back	10mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	-0.06	0.014	0.019
	Bluetooth with Lanyard	1Mbps	Back	10mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	-0.13	0.013	0.017
	Bluetooth	1Mbps	Left Side	10mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.14	0.001	0.001
	Bluetooth	1Mbps	Right Side	10mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.11	0.001	0.001
	Bluetooth	1Mbps	Top Side	10mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.04	0.006	0.008
5000MHz																
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 10+9(10)	Hotspot	46	5230	15.98	17.00	1.265	100	1.000	0.08	0.085	0.108
46	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 10+9(10)	Hotspot	46	5230	15.98	17.00	1.265	100	1.000	0.01	0.598	0.756
	WLAN5.2GHz with Palm ring	802.11n-HT40 MCS0	Back	10mm	Ant 10+9(10)	Hotspot	46	5230	15.98	17.00	1.265	100	1.000	-0.01	0.587	0.742
	WLAN5.2GHz with Lanyard	802.11n-HT40 MCS0	Back	10mm	Ant 10+9(10)	Hotspot	46	5230	15.98	17.00	1.265	100	1.000	-0.11	0.569	0.720
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 10+9(10)	Hotspot	46	5230	15.98	17.00	1.265	100	1.000	0.01	0.292	0.369
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 10+9(10)	Hotspot	46	5230	15.98	17.00	1.265	100	1.000	0.03	0.138	0.175
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 10+9(10)	Hotspot	46	5230	15.98	17.00	1.265	100	1.000	-0.08	0.097	0.123
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 10+9(9)	Hotspot	155	5775	14.70	15.50	1.202	100	1.000	-0.08	0.043	0.052
47	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 10+9(9)	Hotspot	155	5775	14.70	15.50	1.202	100	1.000	-0.07	0.522	0.628
	WLAN5.8GHz with Palm ring	802.11ac-VHT80 MCS0	Back	10mm	Ant 10+9(9)	Hotspot	155	5775	14.70	15.50	1.202	100	1.000	0.02	0.513	0.617
	WLAN5.8GHz with Lanyard	802.11ac-VHT80 MCS0	Back	10mm	Ant 10+9(9)	Hotspot	155	5775	14.70	15.50	1.202	100	1.000	-0.16	0.509	0.612
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 10+9(9)	Hotspot	155	5775	14.70	15.50	1.202	100	1.000	0.1	0.108	0.130
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 10+9(9)	Hotspot	155	5775	14.70	15.50	1.202	100	1.000	0.12	0.099	0.119
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 10+9(9)	Hotspot	155	5775	14.70	15.50	1.202	100	1.000	0.08	0.050	0.060

15.3 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	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																					
48	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	133297	680.5	23.41	24.50	1.285	-	-	0.04	0.457	0.587
	LTE Band 71 with Palm ring	20M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	133297	680.5	23.41	24.50	1.285	-	-	0.03	0.438	0.563
	LTE Band 71 with Lanyard	20M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	133297	680.5	23.41	24.50	1.285	-	-	0.1	0.425	0.546
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 0	-	DSI 0	133297	680.5	22.45	23.50	1.274	-	-	0.12	0.398	0.507
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 0	133297	680.5	23.41	24.50	1.285	-	-	0.03	0.444	0.571
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 0	-	DSI 0	133297	680.5	22.45	23.50	1.274	-	-	0.18	0.387	0.493
49	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	23095	707.5	23.45	24.50	1.274	-	-	-0.01	0.790	1.006
	LTE Band 12 with Palm ring	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	23095	707.5	23.45	24.50	1.274	-	-	0.16	0.781	0.995
	LTE Band 12 with Lanyard	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	23095	707.5	23.45	24.50	1.274	-	-	-0.06	0.768	0.978
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	DSI 0	23095	707.5	22.36	23.50	1.300	-	-	-0.1	0.638	0.829
	LTE Band 12	10M	QPSK	50	0	-	Front	5mm	Ant 0	-	DSI 0	23095	707.5	22.32	23.50	1.312	-	-	0.07	0.639	0.838
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 0	23095	707.5	23.45	24.50	1.274	-	-	0.18	0.679	0.865
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	DSI 0	23095	707.5	22.36	23.50	1.300	-	-	-0.1	0.545	0.709
	LTE Band 12	10M	QPSK	50	0	-	Back	5mm	Ant 0	-	DSI 0	23095	707.5	22.32	23.50	1.312	-	-	0.01	0.540	0.708
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 0	136100	680.5	23.80	24.50	1.175	-	-	0.08	0.387	0.455
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 0	136100	680.5	23.62	24.50	1.225	-	-	0.01	0.477	0.584
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 0	136100	680.5	23.80	24.50	1.175	-	-	0.03	0.487	0.572
50	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 0	136100	680.5	23.62	24.50	1.225	-	-	0.01	0.522	0.639
	FR1 n71 with Palm ring	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 0	136100	680.5	23.62	24.50	1.225	-	-	-0.11	0.518	0.635
	FR1 n71 with Lanyard	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 0	136100	680.5	23.62	24.50	1.225	-	-	0.14	0.506	0.620
850MHz																					
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 0	189	836.4	27.07	28.00	1.239	-	-	-0.15	0.687	0.851
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 0	128	824.2	26.96	28.00	1.271	-	-	0.19	0.766	0.974
51	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 0	251	848.8	27.23	28.00	1.194	-	-	-0.03	0.903	1.078
	GSM850 with Palm ring	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 0	251	848.8	27.23	28.00	1.194	-	-	-0.17	0.875	1.045
	GSM850 with Lanyard	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 0	251	848.8	27.23	28.00	1.194	-	-	-0.01	0.886	1.058
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	DSI 0	189	836.4	27.07	28.00	1.239	-	-	-0.18	0.687	0.851
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	DSI 0	128	824.2	26.96	28.00	1.271	-	-	0.03	0.699	0.888
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	-	DSI 0	251	848.8	27.23	28.00	1.194	-	-	-0.15	0.895	1.069
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	-	DSI 4	251	848.8	26.07	27.00	1.239	-	-	0.01	0.720	0.892
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 0	4182	836.4	23.37	24.50	1.297	-	-	-0.15	0.787	1.021
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 0	4132	826.4	23.31	24.50	1.315	-	-	0.11	0.839	1.103
52	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 0	4233	846.6	23.21	24.50	1.346	-	-	0.01	0.887	1.194
	WCDMA V with Palm ring	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 0	4233	846.6	23.21	24.50	1.346	-	-	-0.1	0.866	1.166
	WCDMA V with Lanyard	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 0	4233	846.6	23.21	24.50	1.346	-	-	-0.01	0.854	1.149
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 0	4182	836.4	23.37	24.50	1.297	-	-	-0.17	0.726	0.942
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 0	4132	826.4	23.31	24.50	1.315	-	-	-0.08	0.723	0.951
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	-	DSI 0	4233	846.6	23.21	24.50	1.346	-	-	-0.04	0.754	1.015
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	-	DSI 4	4233	846.6	22.68	24.00	1.355	-	-	0.01	0.737	0.999
53	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	26865	831.5	23.15	24.50	1.365	-	-	-0.01	0.783	1.069
	LTE Band 26 with Palm ring	15M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	26865	831.5	23.15	24.50	1.365	-	-	-0.09	0.766	1.046
	LTE Band 26 with Lanyard	15M	QPSK	1	0	-	Front	5mm	Ant 0	-	DSI 0	26865	831.5	23.15	24.50	1.365	-	-	-0.06	0.759	1.036
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 0	-	DSI 0	26865	831.5	22.17	23.50	1.358	-	-	0.17	0.594	0.807
	LTE Band 26	15M	QPSK	75	0	-	Front	5mm	Ant 0	-	DSI 0	26865	831.5	22.15	23.50	1.365	-	-	0.18	0.597	0.815
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	-	DSI 0	26865	831.5	23.15	24.50	1.365	-	-	-0.04	0.690	0.942
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 0	-	DSI 0	26865	831.5	22.17	23.50	1.358	-	-	-0.08	0.643	0.873

	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 0	-	DSI 0	26865	831.5	22.15	23.50	1.365	-	-	-0.13	0.609	0.831
	LTE Band 5B	10M	QPSK	1	49	-	Front	5mm	Ant 0	-	DSI 0	20476+ 20575	831.6+ 841.5	22.94	24.50	1.432	-	-	0.01	0.711	1.018
54	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 0	167300	836.5	23.84	24.50	1.164	-	-	0.02	0.944	**1.099**
	FR1 n5 with Palm ring	25M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 0	167300	836.5	23.84	24.50	1.164	-	-	0.11	0.931	1.084
	FR1 n5 with Lanyard	25M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 0	167300	836.5	23.84	24.50	1.164	-	-	-0.08	0.924	1.076
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 0	167300	836.5	23.78	24.50	1.180	-	-	-0.08	0.870	1.027
	FR1 n5	25M	QPSK	128	0	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 0	167300	836.5	22.75	23.50	1.189	-	-	-0.08	0.786	0.935
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 0	167300	836.5	23.84	24.50	1.164	-	-	0.1	0.722	0.840
	FR1 n5	25M	QPSK	64	33	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 0	167300	836.5	23.78	24.50	1.180	-	-	-0.18	0.704	0.831
	FR1 n5	25M	QPSK	128	0	DFT-SCS-15KHz	Back	5mm	Ant 0	-	DSI 0	167300	836.5	22.75	23.50	1.189	-	-	0.1	0.568	0.675
	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	DSI 4	167300	836.5	22.91	23.50	1.146	-	-	-0.05	0.735	0.842
										1750MHz											
55	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	132322	1745	20.05	21.00	1.245	-	-	-0.02	1.050	**1.307**
	LTE Band 66 with Palm ring	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	132322	1745	20.05	21.00	1.245	-	-	-0.18	1.02	1.270
	LTE Band 66 with Lanyard	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	132322	1745	20.05	21.00	1.245	-	-	-0.07	0.995	1.239
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	132072	1720	20.01	21.00	1.256	-	-	0.06	0.979	1.230
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	132572	1770	20.37	21.00	1.156	-	-	-0.03	1.040	1.202
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	DSI 0	132322	1745	19.94	21.00	1.276	-	-	-0.03	0.815	1.040
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	DSI 0	132072	1720	19.88	21.00	1.294	-	-	0.08	0.777	1.005
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	DSI 0	132572	1770	19.89	21.00	1.291	-	-	-0.07	0.809	1.044
	LTE Band 66	20M	QPSK	100	0	-	Front	5mm	Ant 2	-	DSI 0	132322	1745	19.85	21.00	1.303	-	-	0.05	0.842	1.097
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	132322	1745	20.05	21.00	1.245	-	-	-0.11	1.030	1.282
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	132072	1720	20.01	21.00	1.256	-	-	-0.12	0.946	1.188
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	132572	1770	19.97	21.00	1.268	-	-	0.03	1.030	1.306
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	132322	1745	19.94	21.00	1.276	-	-	-0.16	0.815	1.040
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	132072	1720	19.88	21.00	1.294	-	-	-0.02	0.777	1.005
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	132572	1770	19.89	21.00	1.291	-	-	0.15	0.826	1.066
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 2	-	DSI 0	132322	1745	19.85	21.00	1.303	-	-	-0.09	0.793	1.033
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 2	Headset	DSI 0	132322	1745	20.05	21.00	1.245	-	-	0.08	0.985	1.226
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 2	Headset	DSI 0	132572	1770	19.97	21.00	1.268	-	-	0.01	0.976	1.238
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 4	132322	1745	18.21	19.50	1.346	-	-	-0.02	0.668	0.899
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	349000	1745	20.43	21.00	1.140	-	-	0.12	0.773	0.881
56	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	349000	1745	20.39	21.00	1.151	-	-	-0.12	0.822	**0.946**
	FR1 n66 with Palm ring	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	349000	1745	20.39	21.00	1.151	-	-	-0.09	0.816	0.939
	FR1 n66 with Lanyard	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	349000	1745	20.39	21.00	1.151	-	-	0.07	0.809	0.931
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	349000	1745	20.37	21.00	1.156	-	-	0.08	0.605	0.699
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	349000	1745	20.43	21.00	1.140	-	-	-0.17	0.721	0.822
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	349000	1745	20.39	21.00	1.151	-	-	-0.03	0.736	0.847
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	349000	1745	20.37	21.00	1.156	-	-	0.14	0.620	0.717
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 4	349000	1745	19.28	20.00	1.180	-	-	0.02	0.701	0.827
										1900MHz											
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 2	-	DSI 0	661	1880	22.14	24.00	1.535	-	-	0.11	0.823	1.263
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 2	-	DSI 0	512	1850.2	22.08	24.00	1.556	-	-	-0.05	0.775	1.206
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 2	-	DSI 0	810	1909.8	22.06	24.00	1.563	-	-	-0.08	0.686	1.072
57	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 2	-	DSI 0	661	1880	22.14	24.00	1.535	-	-	0.01	0.857	**1.315**
	GSM1900 with Palm ring	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 2	-	DSI 0	661	1880	22.14	24.00	1.535	-	-	-0.09	0.823	1.263
	GSM1900 with Lanyard	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 2	-	DSI 0	661	1880	22.14	24.00	1.535	-	-	-0.16	0.848	1.302
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 2	-	DSI 0	512	1850.2	22.08	24.00	1.556	-	-	0.05	0.735	1.144
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 2	-	DSI 0	810	1909.8	22.06	24.00	1.563	-	-	0.05	0.658	1.028
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 2	Headset	DSI 0	661	1880	22.14	24.00	1.535	-	-	0.03	0.798	1.225
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 2	Headset	DSI 0	661	1880	22.14	24.00	1.535	-	-	-0.08	0.822	1.262
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 2	-	DSI 4	661	1880	21.45	23.00	1.429	-	-	0.02	0.687	0.982
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 2	-	DSI 0	9400	1880	19.93	21.00	1.279	-	-	-0.03	0.838	1.072
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 2	-	DSI 0	9262	1852.4	19.64	21.00	1.368	-	-	-0.15	0.892	1.220

	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 2	-	DSI 0	9538	1907.6	19.80	21.00	1.318	-	-	0.02	0.804	1.060
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 2	-	DSI 0	9400	1880	19.93	21.00	1.279	-	-	0.07	0.862	1.102
58	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 2	-	DSI 0	9262	1852.4	19.64	21.00	1.368	-	-	0.02	0.911	**1.246**
	WCDMA II with Palm ring	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 2	-	DSI 0	9262	1852.4	19.64	21.00	1.368	-	-	0.14	0.889	1.216
	WCDMA II with Lanyard	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 2	-	DSI 0	9262	1852.4	19.64	21.00	1.368	-	-	0.1	0.906	1.239
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 2	-	DSI 0	9538	1907.6	19.80	21.00	1.318	-	-	0.13	0.799	1.053
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 2	Headset	DSI 0	9262	1852.4	19.64	21.00	1.368	-	-	-0.08	0.865	1.183
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 2	Headset	DSI 0	9262	1852.4	19.64	21.00	1.368	-	-	0.1	0.893	1.222
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 2	-	DSI 4	9262	1852.4	18.73	20.00	1.340	-	-	-0.08	0.708	0.949
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	26340	1880	19.59	21.00	1.384	-	-	-0.18	0.835	1.156
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	26140	1860	19.43	21.00	1.435	-	-	0.18	0.845	1.213
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	26590	1905	19.32	21.00	1.472	-	-	0.16	0.778	1.145
	LTE Band 25	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	DSI 0	26340	1880	19.51	21.00	1.409	-	-	-0.03	0.623	0.878
	LTE Band 25	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	DSI 0	26140	1860	19.43	21.00	1.435	-	-	0.07	0.708	1.016
	LTE Band 25	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	DSI 0	26590	1905	19.32	21.00	1.472	-	-	-0.17	0.618	0.910
	LTE Band 25	20M	QPSK	100	0	-	Front	5mm	Ant 2	-	DSI 0	26340	1880	19.44	21.00	1.432	-	-	0.01	0.623	0.892
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	26340	1880	19.59	21.00	1.384	-	-	-0.01	0.826	1.143
59	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	26140	1860	19.43	21.00	1.435	-	-	-0.04	0.887	**1.273**
	LTE Band 25 with Palm ring	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	26140	1860	19.43	21.00	1.435	-	-	-0.02	0.866	1.243
	LTE Band 25 with Lanyard	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	26140	1860	19.43	21.00	1.435	-	-	-0.09	0.875	1.256
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	26590	1905	19.32	21.00	1.472	-	-	-0.04	0.807	1.188
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	26340	1880	19.51	21.00	1.409	-	-	-0.09	0.665	0.937
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	26140	1860	19.43	21.00	1.435	-	-	-0.17	0.694	0.996
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	26590	1905	19.32	21.00	1.472	-	-	-0.1	0.651	0.958
	LTE Band 25	20M	QPSK	100	0	-	Back	5mm	Ant 2	-	DSI 0	26340	1880	19.44	21.00	1.432	-	-	0.18	0.689	0.987
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 2	Headset	DSI 0	26140	1860	19.43	21.00	1.435	-	-	-0.18	0.816	1.171
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 2	Headset	DSI 0	26140	1860	19.43	21.00	1.435	-	-	0.1	0.859	1.233
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 4	26140	1860	18.48	20.00	1.419	-	-	-0.06	0.635	0.901
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	376000	1880	20.17	21.00	1.211	-	-	0.11	0.665	0.805
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	372000	1860	20.12	21.00	1.225	-	-	-0.05	0.736	0.902
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	380000	1900	19.97	21.00	1.268	-	-	0.18	0.612	0.776
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	376000	1880	20.15	21.00	1.216	-	-	0.14	0.638	0.776
	FR1 n2	20M	QPSK	100	0	DFT-SCS-15KHz	Front	5mm	Ant 2	-	DSI 0	376000	1880	20.12	21.00	1.225	-	-	-0.05	0.525	0.643
60	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	376000	1880	20.17	21.00	1.211	-	-	-0.02	0.948	**1.148**
	FR1 n2 with Palm ring	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	376000	1880	20.17	21.00	1.211	-	-	0.16	0.935	1.132
	FR1 n2 with Lanyard	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	376000	1880	20.17	21.00	1.211	-	-	-0.15	0.928	1.124
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	372000	1860	20.12	21.00	1.225	-	-	0.01	0.733	0.898
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	380000	1900	19.97	21.00	1.268	-	-	0.1	0.684	0.867
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	376000	1880	20.15	21.00	1.216	-	-	-0.17	0.652	0.793
	FR1 n2	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 0	376000	1880	20.12	21.00	1.225	-	-	-0.08	0.533	0.653
	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	-	DSI 4	376000	1880	19.16	20.00	1.213	-	-	-0.09	0.744	0.902
2600MHz																					
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 0	21100	2535	20.39	21.50	1.291	-	-	-0.04	0.561	0.724
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 0	21100	2535	20.32	21.50	1.312	-	-	-0.13	0.469	0.615
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	21100	2535	20.39	21.50	1.291	-	-	0.02	0.832	1.074
61	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	20850	2510	20.32	21.50	1.312	-	-	-0.05	0.933	**1.224**
	LTE Band 7 with Palm ring	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	20850	2510	20.32	21.50	1.312	-	-	0.03	0.918	1.204
	LTE Band 7 with Lanyard	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	20850	2510	20.32	21.50	1.312	-	-	-0.13	0.925	1.214
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	21350	2560	20.25	21.50	1.334	-	-	0.17	0.874	1.166
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	21100	2535	20.32	21.50	1.312	-	-	0.06	0.683	0.896
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	20850	2510	20.20	21.50	1.349	-	-	-0.02	0.666	0.898
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	21350	2560	20.24	21.50	1.337	-	-	-0.04	0.661	0.884
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	DSI 0	21100	2535	20.28	21.50	1.324	-	-	-0.15	0.653	0.865
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	Headset	DSI 0	20850	2510	20.32	21.50	1.312	-	-	0.02	0.916	1.202

	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 4	20850	2510	19.26	20.50	1.330	-	-	-0.03	0.729	0.970
	LTE Band 7C	20M	QPSK	1	99	-	Back	5mm	Ant 4	-	DSI 0	20850+ 21048	2510+ 2529.8	20.19	21.50	1.352	-	-	0.01	0.879	1.188
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 6	-	DSI 0	21100	2535	22.88	24.50	1.452	-	-	0.05	0.174	0.253
	LTE Band 7 with Palm ring	20M	QPSK	1	0	-	Front	5mm	Ant 6	-	DSI 0	21100	2535	22.88	24.50	1.452	-	-	-0.11	0.166	0.241
	LTE Band 7 with Lanyard	20M	QPSK	1	0	-	Front	5mm	Ant 6	-	DSI 0	21100	2535	22.88	24.50	1.452	-	-	-0.06	0.159	0.231
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 6	-	DSI 0	21100	2535	21.94	23.50	1.432	-	-	0.06	0.136	0.195
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 6	-	DSI 0	21100	2535	22.88	24.50	1.452	-	-	-0.09	0.151	0.219
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 6	-	DSI 0	21100	2535	21.94	23.50	1.432	-	-	-0.08	0.119	0.170
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 0	40620	2593	23.43	24.50	1.279	62.9	1.006	0.1	0.771	0.992
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 0	39750	2506	23.41	24.50	1.285	62.9	1.006	0.04	0.709	0.917
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 0	40185	2549.5	23.35	24.50	1.303	62.9	1.006	-0.18	0.648	0.849
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 0	41055	2636.5	23.31	24.50	1.315	62.9	1.006	-0.11	0.850	1.124
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 0	41490	2680	23.39	24.50	1.291	62.9	1.006	-0.16	0.904	1.174
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 0	40620	2593	22.46	23.50	1.271	62.9	1.006	-0.15	0.638	0.816
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 0	39750	2506	22.37	23.50	1.297	62.9	1.006	-0.06	0.551	0.719
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 0	40185	2549.5	22.33	23.50	1.309	62.9	1.006	-0.19	0.512	0.674
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 0	41055	2636.5	22.26	23.50	1.330	62.9	1.006	0.01	0.712	0.953
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 0	41490	2680	22.38	23.50	1.294	62.9	1.006	0.06	0.865	1.126
	LTE Band 41	20M	QPSK	100	0	-	Front	5mm	Ant 4	-	DSI 0	40620	2593	22.45	23.50	1.274	62.9	1.006	0.02	0.646	0.828
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	40620	2593	23.43	24.50	1.279	62.9	1.006	0.12	0.754	0.970
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	39750	2506	23.41	24.50	1.285	62.9	1.006	-0.16	0.943	1.219
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	40185	2549.5	23.35	24.50	1.303	62.9	1.006	0.07	0.773	1.013
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	41055	2636.5	23.31	24.50	1.315	62.9	1.006	-0.02	0.835	1.105
62	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	41490	2680	23.39	24.50	1.291	62.9	1.006	-0.18	1.020	1.325
	LTE Band 41 with Palm ring	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	41490	2680	23.39	24.50	1.291	62.9	1.006	-0.01	0.983	1.277
	LTE Band 41 with Lanyard	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	41490	2680	23.39	24.50	1.291	62.9	1.006	-0.15	0.968	1.257
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	40620	2593	22.46	23.50	1.271	62.9	1.006	-0.13	0.631	0.807
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	39750	2506	22.37	23.50	1.297	62.9	1.006	0.08	0.760	0.992
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	40185	2549.5	22.33	23.50	1.309	62.9	1.006	0.01	0.629	0.828
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	41055	2636.5	22.26	23.50	1.330	62.9	1.006	-0.16	0.674	0.902
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	41490	2680	22.38	23.50	1.294	62.9	1.006	0.1	0.796	1.036
	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	DSI 0	40620	2593	22.45	23.50	1.274	62.9	1.006	-0.04	0.646	0.828
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	41490	2680	25.07	26.50	1.390	42.9	1.009	0.03	0.941	1.320
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	Headset	DSI 0	41490	2680	23.39	24.50	1.291	62.9	1.006	0.06	0.977	1.269
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 4	41490	2680	21.93	23.00	1.279	62.9	1.006	0.01	0.732	0.942
	LTE Band 38C	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	38150+ 37952	2610+ 2590.2	23.18	24.50	1.355	62.9	1.006	0.01	0.879	1.198
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 6	-	DSI 0	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.08	0.301	0.429
	LTE Band 41 with Palm ring	20M	QPSK	1	0	-	Front	5mm	Ant 6	-	DSI 0	40620	2593	22.99	24.50	1.416	62.9	1.006	0.1	0.288	0.410
	LTE Band 41 with Lanyard	20M	QPSK	1	0	-	Front	5mm	Ant 6	-	DSI 0	40620	2593	22.99	24.50	1.416	62.9	1.006	-0.04	0.275	0.392
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 6	-	DSI 0	40620	2593	22.00	23.50	1.413	62.9	1.006	0.08	0.244	0.347
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 6	-	DSI 0	40620	2593	22.99	24.50	1.416	62.9	1.006	0.01	0.270	0.385
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 6	-	DSI 0	40620	2593	22.00	23.50	1.413	62.9	1.006	0.03	0.192	0.273
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Front	5mm	Ant 6	-	DSI 0	40620	2593	25.03	26.10	1.279	42.9	1.009	0.06	0.316	0.408
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 4	-	DSI 0	507000	2535	20.91	21.50	1.146	-	-	0.14	0.609	0.698
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 4	-	DSI 0	507000	2535	20.86	21.50	1.159	-	-	0.1	0.546	0.633
63	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 0	507000	2535	20.91	21.50	1.146	-	-	-0.04	0.988	1.132
	FR1 n7 with Palm ring	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 0	507000	2535	20.91	21.50	1.146	-	-	0.01	0.974	1.116
	FR1 n7 with Lanyard	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 0	507000	2535	20.91	21.50	1.146	-	-	-0.16	0.966	1.107
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 0	507000	2535	20.86	21.50	1.159	-	-	0.07	0.720	0.834
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 0	507000	2535	20.83	21.50	1.167	-	-	-0.09	0.542	0.633
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 4	-	DSI 4	507000	2535	19.91	20.50	1.146	-	-	0.09	0.741	0.849
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 6	-	DSI 0	507000	2535	23.81	24.50	1.172	-	-	-0.16	0.168	0.197
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 6	-	DSI 0	507000	2535	23.62	24.50	1.225	-	-	-0.18	0.210	0.257

	FR1 n7 with Palm ring	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 6	-	DSI 0	507000	2535	23.62	24.50	1.225	-	-	0.08	0.195	0.239
	FR1 n7 with Lanyard	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 6	-	DSI 0	507000	2535	23.62	24.50	1.225	-	-	0.16	0.188	0.230
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 6	-	DSI 0	507000	2535	23.81	24.50	1.172	-	-	-0.07	0.125	0.147
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Back	5mm	Ant 6	-	DSI 0	507000	2535	23.62	24.50	1.225	-	-	0.11	0.159	0.195
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	-	DSI 0	518598	2592.99	20.89	21.50	1.151	-	-	0.08	0.556	0.640
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	-	DSI 0	518598	2592.99	20.85	21.50	1.161	-	-	0.01	0.625	0.726
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 0	518598	2592.99	20.89	21.50	1.151	-	-	-0.12	1.01	1.163
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 0	518598	2592.99	20.89	21.50	1.151	-	-	-0.05	0.989	1.138
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 0	518598	2592.99	20.89	21.50	1.151	-	-	-0.13	0.976	1.123
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 0	518598	2592.99	20.85	21.50	1.161	-	-	-0.08	0.719	0.835
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 0	518598	2592.99	20.73	21.50	1.194	-	-	-0.08	0.694	0.829
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 0	518598	2592.99	23.79	24.50	1.178	50	1.000	0.01	0.952	1.121
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	-	DSI 4	518598	2592.99	19.82	20.50	1.169	-	-	-0.15	0.723	0.845
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 6	-	DSI 0	518598	2592.99	21.98	23.00	1.265	-	-	-0.08	0.186	0.235
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 6	-	DSI 0	518598	2592.99	21.98	23.00	1.265	-	-	0.07	0.175	0.221
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 6	-	DSI 0	518598	2592.99	21.98	23.00	1.265	-	-	-0.02	0.170	0.215
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 6	-	DSI 0	518598	2592.99	21.84	23.00	1.306	-	-	-0.1	0.159	0.208
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 6	-	DSI 0	518598	2592.99	21.98	23.00	1.265	-	-	-0.01	0.155	0.196
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 6	-	DSI 0	518598	2592.99	21.84	23.00	1.306	-	-	-0.09	0.151	0.197
64	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	-	DSI 0	518598	2592.99	21.81	23.00	1.315	-	-	-0.17	0.951	**1.251**
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	-	DSI 0	518598	2592.99	21.81	23.00	1.315	-	-	-0.16	0.944	1.241
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	-	DSI 0	518598	2592.99	21.81	23.00	1.315	-	-	-0.12	0.931	1.224
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 0	-	DSI 0	518598	2592.99	21.78	23.00	1.324	-	-	-0.01	0.756	1.001
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 0	-	DSI 0	518598	2592.99	21.81	23.00	1.315	-	-	0.08	0.744	0.978
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	-	DSI 0	518598	2592.99	21.81	23.00	1.315	-	-	-0.11	0.793	1.043
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	-	DSI 0	518598	2592.99	21.78	23.00	1.324	-	-	0.14	0.652	0.863
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 0	-	DSI 0	518598	2592.99	21.81	23.00	1.315	-	-	0.01	0.638	0.839
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	Headset	DSI 0	518598	2592.99	21.81	23.00	1.315	-	-	0.06	0.936	1.231
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	-	DSI 4	518598	2592.99	20.85	22.00	1.303	-	-	0.01	0.744	0.969
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 5	-	DSI 0	518598	2592.99	22.54	24.00	1.400	-	-	0.1	0.660	0.924
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 5	-	DSI 0	518598	2592.99	22.42	24.00	1.439	-	-	0.16	0.642	0.924
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 5	-	DSI 0	518598	2592.99	21.58	23.00	1.387	-	-	0.03	0.523	0.725
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 0	518598	2592.99	22.54	24.00	1.400	-	-	-0.06	0.696	0.974
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 0	518598	2592.99	22.54	24.00	1.400	-	-	0.02	0.684	0.958
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 0	518598	2592.99	22.54	24.00	1.400	-	-	0.12	0.677	0.948
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 0	518598	2592.99	22.42	24.00	1.439	-	-	0.08	0.671	0.966
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 5	-	DSI 0	518598	2592.99	21.58	23.00	1.387	-	-	-0.08	0.541	0.750
										3500MHz											
	LTE Band 42	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	42590	3500	21.29	22.00	1.178	62.9	1.006	0.05	0.715	0.847
	LTE Band 42	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	42190	3460	21.17	22.00	1.211	62.9	1.006	-0.03	0.763	0.930
	LTE Band 42	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	DSI 0	42990	3540	21.14	22.00	1.219	62.9	1.006	0.17	0.710	0.871
	LTE Band 42	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	DSI 0	42590	3500	21.22	22.00	1.197	62.9	1.006	-0.15	0.560	0.674
	LTE Band 42	20M	QPSK	100	0	-	Front	5mm	Ant 2	-	DSI 0	42590	3500	21.21	22.00	1.199	62.9	1.006	-0.06	0.541	0.653
65	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	42590	3500	21.29	22.00	1.178	62.9	1.006	0.14	1.000	**1.185**
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Back	5mm	Ant 2		DSI 0	42590	3500	21.29	22.00	1.178	62.9	1.006	0.01	0.978	1.159
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Back	5mm	Ant 2		DSI 0	42590	3500	21.29	22.00	1.178	62.9	1.006	0.06	0.986	1.168
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	42190	3460	21.17	22.00	1.211	62.9	1.006	-0.01	0.845	1.029
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 0	42990	3540	21.14	22.00	1.219	62.9	1.006	-0.11	0.831	1.019
	LTE Band 42	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	42590	3500	21.22	22.00	1.197	62.9	1.006	0.19	0.667	0.803
	LTE Band 42	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	42190	3460	21.12	22.00	1.225	62.9	1.006	-0.14	0.749	0.923
	LTE Band 42	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	DSI 0	42990	3540	21.15	22.00	1.216	62.9	1.006	-0.18	0.681	0.833
	LTE Band 42	20M	QPSK	100	0	-	Back	5mm	Ant 2	-	DSI 0	42590	3500	21.21	22.00	1.199	62.9	1.006	-0.06	0.734	0.885
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	DSI 4	42590	3500	20.12	21.00	1.225	62.9	1.006	-0.04	0.748	0.922

	LTE Band 42	20M	QPSK	1	0	-	Front	5mm	Ant 3	-	DSI 0	42590	3500	21.39	22.00	1.151	62.9	1.006	0.02	0.502	0.581
	LTE Band 42	20M	QPSK	50	0	-	Front	5mm	Ant 3	-	DSI 0	42590	3500	21.35	22.00	1.161	62.9	1.006	-0.04	0.376	0.439
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	DSI 0	42590	3500	21.39	22.00	1.151	62.9	1.006	0.05	0.814	0.943
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	DSI 0	42590	3500	21.39	22.00	1.151	62.9	1.006	-0.14	0.804	0.931
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	DSI 0	42590	3500	21.39	22.00	1.151	62.9	1.006	-0.19	0.795	0.921
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	DSI 0	42190	3460	21.18	22.00	1.208	62.9	1.006	0.07	0.752	0.914
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	DSI 0	42990	3540	21.16	22.00	1.213	62.9	1.006	0.08	0.723	0.882
	LTE Band 42	20M	QPSK	50	0	-	Back	5mm	Ant 3	-	DSI 0	42590	3500	21.35	22.00	1.161	62.9	1.006	0.19	0.534	0.624
	LTE Band 42	20M	QPSK	100	0	-	Back	5mm	Ant 3	-	DSI 0	42590	3500	21.32	22.00	1.169	62.9	1.006	-0.03	0.679	0.799
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 3	-	DSI 4	42590	3500	20.35	21.00	1.161	62.9	1.006	-0.17	0.600	0.701
	LTE Band 42	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	DSI 0	42590	3500	19.51	20.50	1.256	62.9	1.006	-0.12	0.400	0.505
	LTE Band 42	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	DSI 0	42590	3500	19.48	20.50	1.265	62.9	1.006	0.12	0.303	0.386
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	42590	3500	19.51	20.50	1.256	62.9	1.006	0.05	0.461	0.582
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	42590	3500	19.51	20.50	1.256	62.9	1.006	-0.15	0.455	0.575
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	DSI 0	42590	3500	19.51	20.50	1.256	62.9	1.006	-0.06	0.449	0.567
	LTE Band 42	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	DSI 0	42590	3500	19.48	20.50	1.265	62.9	1.006	0.07	0.348	0.443
	LTE Band 42	20M	QPSK	1	0	-	Front	5mm	Ant 8	-	DSI 0	42590	3500	20.19	21.00	1.205	62.9	1.006	0.01	0.373	0.452
	LTE Band 42	20M	QPSK	50	0	-	Front	5mm	Ant 8	-	DSI 0	42590	3500	20.11	21.00	1.227	62.9	1.006	-0.11	0.313	0.386
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	DSI 0	42590	3500	20.19	21.00	1.205	62.9	1.006	0.03	0.831	1.007
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	DSI 0	42190	3460	20.01	21.00	1.256	62.9	1.006	-0.07	0.913	1.154
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	DSI 0	42190	3460	20.01	21.00	1.256	62.9	1.006	-0.11	0.905	1.144
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	DSI 0	42190	3460	20.01	21.00	1.256	62.9	1.006	-0.16	0.891	1.126
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	DSI 0	42990	3540	19.98	21.00	1.265	62.9	1.006	0.14	0.856	1.089
	LTE Band 42	20M	QPSK	50	0	-	Back	5mm	Ant 8	-	DSI 0	42590	3500	20.11	21.00	1.227	62.9	1.006	-0.01	0.653	0.806
	LTE Band 42	20M	QPSK	50	0	-	Back	5mm	Ant 8	-	DSI 0	42190	3460	20.01	21.00	1.256	62.9	1.006	-0.12	0.688	0.869
	LTE Band 42	20M	QPSK	50	0	-	Back	5mm	Ant 8	-	DSI 0	42990	3540	19.98	21.00	1.265	62.9	1.006	0.07	0.641	0.816
	LTE Band 42	20M	QPSK	100	0	-	Back	5mm	Ant 8	-	DSI 0	42590	3500	20.04	21.00	1.247	62.9	1.006	0.09	0.626	0.785
	LTE Band 42	20M	QPSK	1	0	-	Back	5mm	Ant 8	-	DSI 4	42190	3460	18.92	20.00	1.282	62.9	1.006	-0.05	0.739	0.953

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)
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 0	656000	3840	12.99	14.00	1.262	-	-	-0.1	0.096	0.121
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 0	656000	3840	12.97	14.00	1.268	-	-	0.07	0.091	0.115
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	656000	3840	12.99	14.00	1.262	-	-	0.18	0.136	0.172
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	656000	3840	12.97	14.00	1.268	-	-	-0.01	0.140	0.178
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	656000	3840	12.97	14.00	1.268	-	-	-0.1	0.132	0.167
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	656000	3840	12.97	14.00	1.268	-	-	0.01	0.128	0.162
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 0	633334	3500.01	12.94	14.00	1.276	-	-	0.13	0.118	0.151
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 0	633334	3500.01	12.86	14.00	1.300	-	-	0.12	0.121	0.157
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	633334	3500.01	12.94	14.00	1.276	-	-	-0.09	0.156	0.199
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	633334	3500.01	12.94	14.00	1.276	-	-	0.03	0.148	0.189
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	633334	3500.01	12.94	14.00	1.276	-	-	0.18	0.145	0.185
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	633334	3500.01	12.86	14.00	1.300	-	-	0.16	0.150	0.195
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 0	641666	3624.99	12.97	14.00	1.268	-	-	-0.08	0.137	0.174
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI 0	641666	3624.99	12.94	14.00	1.276	-	-	-0.17	0.124	0.158
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	641666	3624.99	12.97	14.00	1.268	-	-	-0.06	0.150	0.190
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	641666	3624.99	12.97	14.00	1.268	-	-	-0.04	0.140	0.178
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	641666	3624.99	12.97	14.00	1.268	-	-	-0.08	0.138	0.175
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI 0	641666	3624.99	12.94	14.00	1.276	-	-	0.17	0.141	0.180
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI 0	656000	3840	12.98	14.00	1.265	-	-	-0.15	0.077	0.097
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI 0	656000	3840	12.92	14.00	1.282	-	-	0.19	0.083	0.106
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	656000	3840	12.98	14.00	1.265	-	-	0.07	0.101	0.128
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	656000	3840	12.92	14.00	1.282	-	-	0.04	0.110	0.141

	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	656000	3840	12.92	14.00	1.282	-	-	-0.18	0.102	0.131
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	656000	3840	12.92	14.00	1.282	-	-	0.03	0.099	0.127
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI 0	633334	3500.01	12.93	14.00	1.279	-	-	-0.15	0.048	0.061
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI 0	633334	3500.01	12.84	14.00	1.306	-	-	-0.15	0.056	0.073
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	633334	3500.01	12.93	14.00	1.279	-	-	0.11	0.077	0.098
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	633334	3500.01	12.84	14.00	1.306	-	-	-0.02	0.088	0.115
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	633334	3500.01	12.84	14.00	1.306	-	-	-0.08	0.085	0.111
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	633334	3500.01	12.84	14.00	1.306	-	-	-0.17	0.079	0.103
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI 0	641666	3624.99	13.02	14.00	1.253	-	-	0.13	0.079	0.099
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI 0	641666	3624.99	12.96	14.00	1.271	-	-	0.12	0.074	0.094
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	641666	3624.99	13.02	14.00	1.253	-	-	0.03	0.118	0.148
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	641666	3624.99	13.02	14.00	1.253	-	-	0.18	0.112	0.140
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	641666	3624.99	13.02	14.00	1.253	-	-	0.16	0.106	0.133
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI 0	641666	3624.99	12.96	14.00	1.271	-	-	-0.1	0.108	0.137
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 0	656000	3840	13.02	14.00	1.253	-	-	-0.08	0.070	0.088
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 0	656000	3840	12.98	14.00	1.265	-	-	-0.13	0.103	0.130
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	656000	3840	13.02	14.00	1.253	-	-	-0.13	0.131	0.164
66	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	656000	3840	12.98	14.00	1.265	-	-	0.01	0.175	**0.221**
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	656000	3840	12.98	14.00	1.265	-	-	0.06	0.166	0.210
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	656000	3840	12.98	14.00	1.265	-	-	-0.03	0.168	0.213
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 0	633334	3500.01	12.97	14.00	1.268	-	-	-0.08	0.064	0.081
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 0	633334	3500.01	12.93	14.00	1.279	-	-	-0.04	0.087	0.111
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	633334	3500.01	12.97	14.00	1.268	-	-	-0.08	0.096	0.122
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	633334	3500.01	12.93	14.00	1.279	-	-	0.17	0.108	0.138
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	633334	3500.01	12.93	14.00	1.279	-	-	0.18	0.101	0.129
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	633334	3500.01	12.93	14.00	1.279	-	-	-0.04	0.098	0.125
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 0	641666	3624.99	12.95	14.00	1.274	-	-	0.07	0.101	0.129
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	DSI 0	641666	3624.99	12.93	14.00	1.279	-	-	0.18	0.112	0.143
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	641666	3624.99	12.95	14.00	1.274	-	-	-0.1	0.141	0.180
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	641666	3624.99	12.95	14.00	1.274	-	-	0.01	0.121	0.154
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	641666	3624.99	12.95	14.00	1.274	-	-	-0.15	0.116	0.148
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	DSI 0	641666	3624.99	12.93	14.00	1.279	-	-	0.19	0.135	0.173
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 8	DSI 0	656000	3840	12.95	14.00	1.274	-	-	-0.12	0.071	0.090
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 8	DSI 0	656000	3840	12.89	14.00	1.291	-	-	0.03	0.091	0.117
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	656000	3840	12.95	14.00	1.274	-	-	-0.16	0.127	0.162
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	656000	3840	12.89	14.00	1.291	-	-	-0.02	0.131	0.169
	FR1 n77 with Palm ring	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	656000	3840	12.89	14.00	1.291	-	-	0.15	0.122	0.158
	FR1 n77 with Lanyard	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	656000	3840	12.89	14.00	1.291	-	-	-0.09	0.119	0.154
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 8	DSI 0	633334	3500.01	12.89	14.00	1.291	-	-	-0.03	0.115	0.148
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 8	DSI 0	633334	3500.01	12.85	14.00	1.303	-	-	0.08	0.096	0.125
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	633334	3500.01	12.89	14.00	1.291	-	-	-0.03	0.169	0.218
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	633334	3500.01	12.89	14.00	1.291	-	-	-0.07	0.154	0.199
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	633334	3500.01	12.89	14.00	1.291	-	-	0.05	0.153	0.198
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	633334	3500.01	12.85	14.00	1.303	-	-	-0.11	0.147	0.192
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 8	DSI 0	641666	3624.99	12.93	14.00	1.279	-	-	0.07	0.096	0.123
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 8	DSI 0	641666	3624.99	12.88	14.00	1.294	-	-	-0.18	0.111	0.144
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	641666	3624.99	12.93	14.00	1.279	-	-	0.03	0.121	0.155
	FR1 n77 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	641666	3624.99	12.93	14.00	1.279	-	-	-0.15	0.098	0.125
	FR1 n77 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	641666	3624.99	12.93	14.00	1.279	-	-	-0.15	0.091	0.116
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 8	DSI 0	641666	3624.99	12.88	14.00	1.294	-	-	0.11	0.104	0.135

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
WLAN/BT																
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	-0.18	0.461	0.624
67	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.08	0.838	**1.134**
	WLAN2.4GHz with Palm ring	802.11b 1Mbps	Back	5mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.01	0.823	1.114
	WLAN2.4GHz with Lanyard	802.11b 1Mbps	Back	5mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	-0.01	0.821	1.111
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 10+7(7)	Standalone	11	2462	16.83	18.00	1.309	98.35	1.017	-0.17	0.669	0.891
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 10+7(7)	Simultaneous	6	2437	14.02	15.00	1.253	98.35	1.017	0.08	0.250	0.319
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 10+7(7)	Simultaneous	6	2437	14.02	15.00	1.253	98.35	1.017	0.01	0.420	0.535
	Bluetooth	1Mbps	Front	5mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.11	0.001	0.001
68	Bluetooth	1Mbps	Back	5mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.19	0.049	**0.065**
	Bluetooth with Palm ring	1Mbps	Back	5mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	0.07	0.045	0.060
	Bluetooth with Lanyard	1Mbps	Back	5mm	Ant 10	Full power	39	2441	10.10	11.00	1.230	77.37	1.077	-0.06	0.044	0.058
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	5mm	Ant 10+9(9)	Standalone	54	5270	15.21	16.00	1.199	100	1.000	0.06	0.176	0.211
69	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 10+9(9)	Standalone	54	5270	15.21	16.00	1.199	100	1.000	-0.07	0.969	**1.162**
	WLAN5.3GHz with Palm ring	802.11n-HT40 MCS0	Back	5mm	Ant 10+9(9)	Standalone	54	5270	15.21	16.00	1.199	100	1.000	0.16	0.954	1.144
	WLAN5.3GHz with Lanyard	802.11n-HT40 MCS0	Back	5mm	Ant 10+9(9)	Standalone	54	5270	15.21	16.00	1.199	100	1.000	-0.03	0.958	1.149
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 10+9(10)	Standalone	62	5310	14.71	16.00	1.346	100	1.000	0.13	0.730	0.982
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 10+9(9)	Simultaneous	58	5290	11.29	12.50	1.321	100	1.000	0.08	0.076	0.100
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(9)	Simultaneous	58	5290	11.29	12.50	1.321	100	1.000	0.01	0.372	0.492
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 10+9(10)	Standalone	138	5690	14.09	15.00	1.233	100	1.000	0.03	0.139	0.171
70	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(10)	Standalone	138	5690	14.09	15.00	1.233	100	1.000	0.01	0.884	**1.090**
	WLAN5.5GHz with Palm ring	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(10)	Standalone	138	5690	14.09	15.00	1.233	100	1.000	-0.18	0.875	1.079
	WLAN5.5GHz with Lanyard	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(10)	Standalone	138	5690	14.09	15.00	1.233	100	1.000	0.02	0.868	1.070
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(9)	Standalone	122	5610	13.88	15.00	1.294	100	1.000	0.16	0.782	1.012
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 10+9(10)	Simultaneous	138	5690	11.05	12.00	1.245	100	1.000	0.03	0.069	0.086
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(10)	Simultaneous	138	5690	11.05	12.00	1.245	100	1.000	-0.08	0.428	0.533
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 10+9(9)	Standalone	155	5775	14.70	15.50	1.202	100	1.000	0.03	0.063	0.076
71	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(9)	Standalone	155	5775	14.70	15.50	1.202	100	1.000	0.01	0.919	**1.105**
	WLAN5.8GHz with Palm ring	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(9)	Standalone	155	5775	14.70	15.50	1.202	100	1.000	0.16	0.908	1.092
	WLAN5.8GHz with Lanyard	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(9)	Standalone	155	5775	14.70	15.50	1.202	100	1.000	0.13	0.911	1.095
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 10+9(9)	Simultaneous	155	5775	11.73	12.50	1.194	100	1.000	-0.08	0.031	0.037
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(9)	Simultaneous	155	5775	11.73	12.50	1.194	100	1.000	0.1	0.441	0.527

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Accessories	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)	Measured APD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Front	5mm	Ant 10+9(10)	Standalone		111	6505	9.96	11.00	1.271	100	1.000	0	0.001	0.001	0.001
	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 10+9(10)	Standalone		111	6505	9.96	11.00	1.271	100	1.000	0.01	0.448	0.569	2.72
	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 10+9(9)	Standalone		15	6025	8.76	9.50	1.186	100	1.000	0.01	0.385	0.457	2.04
85	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 10+9(9)	Standalone		47	6185	7.69	8.50	1.205	100	1.000	0.03	0.614	**0.740**	**3.73**
	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 10+9(9)	Standalone	Palm ring	47	6185	7.69	8.50	1.205	100	1.000	0.03	0.596	0.718	3.62
	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 10+9(9)	Standalone	Lanyard	47	6185	7.69	8.50	1.205	100	1.000	-0.08	0.583	0.703	3.54
	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 10+9(10)	Standalone		143	6665	9.76	10.50	1.187	100	1.000	0.09	0.469	0.557	2.8
	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 10+9(10)	Standalone		207	6985	7.71	9.00	1.346	100	1.000	0.02	0.297	0.400	1.75
	WLAN6GHz	802.11ax-HE160 MCS0	Back	5mm	Ant 10+9(10)	Simultaneous		47	6185	4.71	6.50	1.510	100	1.000	0.05	0.349	0.527	1.93

15.4 Product specific 10g SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
1750MHz																				
72	LTE Band 66	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	132322	1745	20.05	21.00	1.245	-	-	0.18	1.52	1.892
	LTE Band 66 with Palm ring	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	132322	1745	20.05	21.00	1.245	-	-	-0.12	1.48	1.843
	LTE Band 66 with Lanyard	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	132322	1745	20.05	21.00	1.245	-	-	-0.03	1.50	1.868
	LTE Band 66	20M	QPSK	50	0	-	Left Side	0mm	Ant 2	DSI 0	132322	1745	19.94	21.00	1.276	-	-	-0.13	1.12	1.429
73	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	0mm	Ant 2	DSI 0	349000	1745	20.43	21.00	1.140	-	-	-0.03	1.40	1.596
	FR1 n66 with Palm ring	40M	QPSK	1	1	DFT-SCS-15KHz	Front	0mm	Ant 2	DSI 0	349000	1745	20.43	21.00	1.140	-	-	0.02	1.35	1.539
	FR1 n66 with Lanyard	40M	QPSK	1	1	DFT-SCS-15KHz	Front	0mm	Ant 2	DSI 0	349000	1745	20.43	21.00	1.140	-	-	-0.03	1.32	1.505
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	0mm	Ant 2	DSI 0	349000	1745	20.39	21.00	1.151	-	-	-0.05	1.37	1.577
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	0mm	Ant 2	DSI 0	349000	1745	20.43	21.00	1.140	-	-	0.16	1.04	1.186
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	0mm	Ant 2	DSI 0	349000	1745	20.39	21.00	1.151	-	-	0.05	1.04	1.197
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	0mm	Ant 2	DSI 0	349000	1745	20.43	21.00	1.140	-	-	-0.03	1.31	1.493
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	0mm	Ant 2	DSI 0	349000	1745	20.39	21.00	1.151	-	-	-0.15	1.30	1.496
1900MHz																				
74	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	0mm	Ant 2	DSI 0	9400	1880	19.93	21.00	1.279	-	-	-0.17	1.35	1.727
	WCDMA II with Palm ring	-	-	-	-	RMC 12.2Kbps	Left Side	0mm	Ant 2	DSI 0	9400	1880	19.93	21.00	1.279	-	-	0.15	1.31	1.675
	WCDMA II with Lanyard	-	-	-	-	RMC 12.2Kbps	Left Side	0mm	Ant 2	DSI 0	9400	1880	19.93	21.00	1.279	-	-	-0.05	1.28	1.637
75	LTE Band 25	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	26340	1880	19.59	21.00	1.384	-	-	0.02	1.36	1.882
	LTE Band 25 with Palm ring	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	26340	1880	19.59	21.00	1.384	-	-	0.01	1.31	1.813
	LTE Band 25 with Lanyard	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	26340	1880	19.59	21.00	1.384	-	-	-0.11	1.33	1.841
	LTE Band 25	20M	QPSK	50	0	-	Left Side	0mm	Ant 2	DSI 0	26340	1880	19.51	21.00	1.409	-	-	-0.12	1.05	1.479
76	FR1 n2	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	0mm	Ant 2	DSI 0	376000	1880	20.17	21.00	1.211	-	-	0.07	1.16	1.405
	FR1 n2 with Palm ring	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	0mm	Ant 2	DSI 0	376000	1880	20.17	21.00	1.211	-	-	0.14	1.15	1.393
	FR1 n2 with Lanyard	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	0mm	Ant 2	DSI 0	376000	1880	20.17	21.00	1.211	-	-	-0.01	1.11	1.344
	FR1 n2	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	0mm	Ant 2	DSI 0	376000	1880	20.15	21.00	1.216	-	-	0.01	0.991	1.205
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	21100	2535	20.39	21.50	1.291	-	-	-0.13	1.55	2.001
	LTE Band 7	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	20850	2510	20.32	21.50	1.312	-	-	-0.01	1.59	2.086
77	LTE Band 7	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	21350	2560	20.25	21.50	1.334	-	-	-0.09	1.64	2.188
	LTE Band 7 with Palm ring	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	21350	2560	20.25	21.50	1.334	-	-	0.09	1.60	2.134
	LTE Band 7 with Lanyard	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	21350	2560	20.25	21.50	1.334	-	-	0.04	1.58	2.108
	LTE Band 7	20M	QPSK	50	0	-	Left Side	0mm	Ant 4	DSI 0	21100	2535	20.32	21.50	1.312	-	-	0.19	1.27	1.666
	LTE Band 7	20M	QPSK	100	0	-	Left Side	0mm	Ant 4	DSI 0	21100	2535	20.28	21.50	1.324	-	-	-0.06	1.29	1.708
	LTE Band 7C	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	21350+ 21152	2560+ 2540.2	20.14	21.50	1.368	-	-	0.01	1.59	2.175
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Side	0mm	Ant 4	DSI 0	507000	2535	20.91	21.50	1.146	-	-	-0.08	1.44	1.650
78	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	0mm	Ant 4	DSI 0	507000	2535	20.86	21.50	1.159	-	-	-0.03	1.45	1.681
	FR1 n7 with Palm ring	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	0mm	Ant 4	DSI 0	507000	2535	20.86	21.50	1.159	-	-	-0.05	1.39	1.611
	FR1 n7 with Lanyard	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	0mm	Ant 4	DSI 0	507000	2535	20.86	21.50	1.159	-	-	-0.01	1.37	1.588
79	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DSI 0	518598	2592.99	20.89	21.50	1.151	-	-	0.1	1.59	1.830
	FR1 n41 with Palm ring	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DSI 0	518598	2592.99	20.89	21.50	1.151	-	-	0.01	1.55	1.784
	FR1 n41 with Lanyard	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DSI 0	518598	2592.99	20.89	21.50	1.151	-	-	0.02	1.52	1.750
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DSI 0	518598	2592.99	20.85	21.50	1.161	-	-	-0.18	1.56	1.811
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DSI 0	518598	2592.99	23.79	24.50	1.178	50	1.000	-0.06	1.46	1.720
3500MHz																				

	LTE Band 42	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	42590	3500	21.29	22.00	1.178	62.9	1.006	-0.1	2.20	2.607
	LTE Band 42	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	42190	3460	21.17	22.00	1.211	62.9	1.006	-0.02	2.22	2.705
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	42190	3460	21.17	22.00	1.211	62.9	1.006	0.05	2.18	2.656
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	42190	3460	21.17	22.00	1.211	62.9	1.006	0.08	2.15	2.619
	LTE Band 42	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI 0	42990	3540	21.14	22.00	1.219	62.9	1.006	0.15	2.14	2.624
	LTE Band 42	20M	QPSK	50	0	-	Left Side	0mm	Ant 2	DSI 0	42590	3500	21.22	22.00	1.197	62.9	1.006	-0.05	1.85	2.228
	LTE Band 42	20M	QPSK	50	0	-	Left Side	0mm	Ant 2	DSI 0	42190	3460	21.12	22.00	1.225	62.9	1.006	-0.07	1.80	2.218
	LTE Band 42	20M	QPSK	50	0	-	Left Side	0mm	Ant 2	DSI 0	42990	3540	21.15	22.00	1.216	62.9	1.006	0.1	2.13	2.606
	LTE Band 42	20M	QPSK	100	0	-	Left Side	0mm	Ant 2	DSI 0	42590	3500	21.21	22.00	1.199	62.9	1.006	-0.11	1.85	2.231
	LTE Band 42	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	42590	3500	19.51	20.50	1.256	62.9	1.006	0.11	2.11	2.666
	LTE Band 42	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	42190	3460	19.38	20.50	1.294	62.9	1.006	-0.13	2.21	2.877
80	LTE Band 42	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	42990	3540	19.40	20.50	1.288	62.9	1.006	-0.04	2.39	3.097
	LTE Band 42 with Palm ring	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	42990	3540	19.40	20.50	1.288	62.9	1.006	0.18	2.32	3.006
	LTE Band 42 with Lanyard	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	42990	3540	19.40	20.50	1.288	62.9	1.006	0.11	2.28	2.954
	LTE Band 42	20M	QPSK	50	0	-	Left Side	0mm	Ant 4	DSI 0	42590	3500	19.48	20.50	1.265	62.9	1.006	0.17	1.78	2.265
	LTE Band 42	20M	QPSK	50	0	-	Left Side	0mm	Ant 4	DSI 0	42190	3460	19.40	20.50	1.288	62.9	1.006	-0.1	1.84	2.384
	LTE Band 42	20M	QPSK	50	0	-	Left Side	0mm	Ant 4	DSI 0	42990	3540	19.40	20.50	1.288	62.9	1.006	0.17	1.65	2.138
	LTE Band 42	20M	QPSK	100	0	-	Left Side	0mm	Ant 4	DSI 0	42590	3500	19.42	20.50	1.282	62.9	1.006	-0.15	1.75	2.257

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
							5000MHz									
	WLAN5.3GHz	802.11a 6Mbps	Front	0mm	Ant 10+9(10)	Full power	60	5300	16.59	17.50	1.233	99.32	1.007	-0.08	0.260	0.323
82	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	Ant 10+9(10)	Full power	60	5300	16.59	17.50	1.233	99.32	1.007	0.11	0.830	1.031
	WLAN5.3GHz with Palm ring	802.11a 6Mbps	Back	0mm	Ant 10+9(10)	Full power	60	5300	16.59	17.50	1.233	99.32	1.007	0.17	0.821	1.020
	WLAN5.3GHz with Lanyard	802.11a 6Mbps	Back	0mm	Ant 10+9(10)	Full power	60	5300	16.59	17.50	1.233	99.32	1.007	-0.15	0.818	1.016
	WLAN5.3GHz	802.11a 6Mbps	Left Side	0mm	Ant 10+9(10)	Full power	60	5300	16.59	17.50	1.233	99.32	1.007	-0.01	0.702	0.872
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	Ant 10+9(10)	Full power	60	5300	16.59	17.50	1.233	99.32	1.007	0.1	0.247	0.307
	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	Ant 10+9(10)	Full power	60	5300	16.59	17.50	1.233	99.32	1.007	-0.18	0.124	0.154
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	Ant 10+9(9)	Full power	124	5620	16.33	17.50	1.309	99.32	1.007	0.08	0.503	0.663
83	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	Ant 10+9(9)	Full power	124	5620	16.33	17.50	1.309	99.32	1.007	0.03	1.420	1.872
	WLAN5.5GHz with Palm ring	802.11a 6Mbps	Back	0mm	Ant 10+9(9)	Full power	124	5620	16.33	17.50	1.309	99.32	1.007	0.05	1.38	1.819
	WLAN5.5GHz with Lanyard	802.11a 6Mbps	Back	0mm	Ant 10+9(9)	Full power	124	5620	16.33	17.50	1.309	99.32	1.007	-0.03	1.36	1.793
	WLAN5.5GHz	802.11a 6Mbps	Left Side	0mm	Ant 10+9(9)	Full power	124	5620	16.33	17.50	1.309	99.32	1.007	0.01	0.665	0.877
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 10+9(9)	Full power	124	5620	16.33	17.50	1.309	99.32	1.007	0.03	0.372	0.490
	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Ant 10+9(9)	Full power	124	5620	16.33	17.50	1.309	99.32	1.007	-0.08	0.178	0.235

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	Measured APD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Front	0mm	Ant 10+9(10)	Standalone	111	6505	9.96	11.00	1.271	100	1.000	0.02	0.041	0.052	0.983
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 10+9(10)	Standalone	111	6505	9.96	11.00	1.271	100	1.000	0.06	0.275	0.349	6.62
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 10+9(10)	Standalone	111	6505	9.96	11.00	1.271	100	1.000	0.05	0.218	0.277	5.17
	WLAN6GHz	802.11ax-HE160 MCS0	Right Side	0mm	Ant 10+9(10)	Standalone	111	6505	9.96	11.00	1.271	100	1.000	-0.09	0.057	0.072	1.32
	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	Ant 10+9(10)	Standalone	111	6505	9.96	11.00	1.271	100	1.000	0.11	0.006	0.008	0.138
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 10+9(9)	Standalone	15	6025	8.76	9.50	1.186	100	1.000	0.06	0.285	0.338	6.85
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 10+9(9)	Standalone	47	6185	7.69	8.50	1.205	100	1.000	0.04	0.231	0.278	5.2
86	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 10+9(10)	Standalone	143	6665	9.76	10.50	1.187	100	1.000	0.08	0.293	0.348	6.96
	WLAN6GHz Palm ring	802.11ax-HE160 MCS0	Back	0mm	Ant 10+9(10)	Standalone	143	6665	9.76	10.50	1.187	100	1.000	-0.08	0.287	0.341	6.82
	WLAN6GHz Lanyard	802.11ax-HE160 MCS0	Back	0mm	Ant 10+9(10)	Standalone	143	6665	9.76	10.50	1.187	100	1.000	0.1	0.275	0.326	6.53
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 10+9(10)	Standalone	207	6985	7.71	9.00	1.346	100	1.000	0.01	0.239	0.322	5.69

15.5 PD Test Result

Power Density General Notes:

1. The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
2. Batteries are fully charged at the beginning of the measurements.
3. Absorbed power density (APD) using a 4cm^2 averaging area is reported based on SAR measurements.
4. Power density was calculated by repeated E-field measurements on two measurement planes separated by λ/4.
5. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.
6. Per FCC guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor.
7. Per April 2021 TCB Workshop and KDB 388624 D002v18r08, For the highest SAR test configurations also measure incident PD (total) using power-density reconstruction method in 2 mm closest measurement plane.
8. Per October 2020 TCB Workshop, PTP-PR algorithm was used during psPD measurement and calculations.
9. Since this device is considered a phablet and there is no different PD limit on different exposure conditions, therefore select highest phablet SAR at 0 mm test distance and configurations evaluate power density. Since there is no different PD limit on different exposure conditions, therefore the PD test was performed of a 2mm separation between Probe sensor and EUT surface to cover Head exposure conditions (Front) at head power level and other exposure conditions at body power level of Phone respectively.
10. The measurement procedure consists of measuring the PDinc at two different distances: 2 mm (compliance distance) and λ/5. The grid extents should be large enough to fully capture the transmitted energy. The grid step should be fine enough to demonstrate that the integrated Power Density iPDn fulfill the criterion described below. Since iPD ratio between the two distances is≥ -1dB, the grid step (0.0625) was sufficient for determining compliance at d=2mm.

$$10 \cdot log_{10} \frac{iPD_n(2mm)}{iPD_n(\lambda/5)} \geq -1$$

<WLAN PD>

Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Grid Step (λ)	iPDn	iPD ratio (≥ -1)	Normal psPD (W/m^2)	Total psPD (W/m^2)
WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 10+9(9)	Standalone	15	6025	8.76	0.0625	1.74	1.20	3.11	3.65
WLAN6GHz	802.11ax-HE160 MCS0	Back	10mm	Ant 10+9(9)	Standalone	15	6025	8.76	0.15	1.32		1.02	1.09
WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 10+9(10)	Standalone	207	6985	7.71	0.0625	2.25	-0.49	2.86	3.19
WLAN6GHz	802.11ax-HE160 MCS0	Back	8.59mm	Ant 10+9(10)	Standalone	207	6985	7.71	0.15	2.52		1.64	1.72

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	Grid Step (λ)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m^2)	Scaled Normal psPD (W/m^2)	Total psPD (W/m^2)	Scaled Total psPD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 10+9(9)	Standalone	15	6025	8.76	9.50	1.186	100	1.000	0.0625	1.5535	0.07	3.11	5.73	3.65	6.72
01	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 10+9(9)	Standalone	47	6185	7.69	8.50	1.205	100	1.000	0.0625	1.5535	-0.07	3.43	6.42	4.1	**7.68**
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 10+9(10)	Standalone	143	6665	9.76	10.50	1.187	100	1.000	0.0625	1.5535	0.06	3.35	6.18	3.95	7.28
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 10+9(10)	Standalone	111	6505	9.96	11.00	1.271	100	1.000	0.0625	1.5535	0.01	3.17	6.26	3.68	7.26
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 10+9(10)	Standalone	207	6985	7.71	9.00	1.346	100	1.000	0.0625	1.5535	0.14	2.86	5.98	3.19	6.67
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 10+9(9)	Full power	143	6665	10.92	12.00	1.282	100	1.000	0.0625	1.5535	-0.08	0.528	1.05	0.558	1.11
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 10+9(10)	Full power	111	6505	10.44	11.50	1.276	100	1.000	0.0625	1.5535	0.05	0.534	1.06	0.553	1.10
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 10+9(9)	Full power	207	6985	10.69	12.00	1.352	100	1.000	0.0625	1.5535	0.01	0.696	1.46	0.98	2.06
	WLAN6GHz	802.11a 6Mbps	Front	2mm	Ant 10+9(10)	Full power	1	5955	15.04	16.00	1.247	99.32	1.007	0.0625	1.5535	-0.1	0.907	1.77	1.85	3.61
	WLAN6GHz	802.11a 6Mbps	Front	2mm	Ant 10+9(10)	Full power	49	6195	15.39	16.50	1.291	99.32	1.007	0.0625	1.5535	-0.02	3.45	6.97	3.73	7.54
	WLAN6GHz	802.11a 6Mbps	Front	2mm	Ant 10+9(10)	Full power	149	6695	15.78	17.00	1.324	99.32	1.007	0.0625	1.5535	-0.05	1.86	3.85	2.2	4.56

15.6 Repeated SAR Measurement

<1g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.42	23.50	1.282	-	-	-0.07	0.948	1	1.215
2nd	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.42	23.50	1.282	-	-	0.06	0.915	1.036	1.173
1st	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.84	24.50	1.164	-	-	0.02	0.961	1	1.119
2nd	FR1 n5	25M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	23.84	24.50	1.164	-	-	0.07	0.954	1.007	1.110
1st	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSI 0	132322	1745	20.05	21.00	1.245	-	-	-0.02	1.050	1	1.307
2nd	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSI 0	132322	1745	20.05	21.00	1.245	-	-	0.06	1.01	1.040	1.257
1st	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	26340	1880	18.65	19.50	1.216	-	-	0.07	1.080	1	1.313
2nd	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	26340	1880	18.65	19.50	1.216	-	-	0.15	0.988	1.093	1.201
1st	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	DSI 0	41490	2680	23.39	24.50	1.291	62.9	1.006	-0.18	1.020	1	1.325
2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 4	DSI 0	41490	2680	23.39	24.50	1.291	62.9	1.006	0.06	1.00	1.020	1.292
1st	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	42590	3500	18.78	19.50	1.180	62.9	1.006	0.02	1.060	1	1.258
2nd	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	42590	3500	18.78	19.50	1.180	62.9	1.006	0.14	0.986	1.075	1.170
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Right Tilted	0mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.02	0.840	1	1.137
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Right Tilted	0mm	Ant 10+7(10)	Standalone	1	2412	17.26	18.50	1.330	98.35	1.017	0.11	0.823	1.021	1.114
1st	WLAN5.3GHz	-	-	-	-	802.11n-HT40 MCS0	Back	5mm	Ant 10+9(9)	Standalone	54	5270	15.21	16.00	1.199	100	1.000	-0.07	0.969	1	1.162
2nd	WLAN5.3GHz	-	-	-	-	802.11n-HT40 MCS0	Back	5mm	Ant 10+9(9)	Standalone	54	5270	15.21	16.00	1.199	100	1.000	0.05	0.948	1.022	1.137
1st	WLAN5.5GHz	-	-	-	-	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(10)	Standalone	138	5690	14.09	15.00	1.233	100	1.000	0.01	0.884	1	1.090
2nd	WLAN5.5GHz	-	-	-	-	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(10)	Standalone	138	5690	14.09	15.00	1.233	100	1.000	0.09	0.867	1.020	1.069
1st	WLAN5.8GHz	-	-	-	-	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(9)	Standalone	155	5775	14.70	15.50	1.202	100	1.000	0.01	0.919	1	1.105
2nd	WLAN5.8GHz	-	-	-	-	802.11ac-VHT80 MCS0	Back	5mm	Ant 10+9(9)	Standalone	155	5775	14.70	15.50	1.202	100	1.000	0.06	0.904	1.017	1.087

<10g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	LTE Band 42	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	42990	3540	19.40	20.50	1.288	62.9	1.006	-0.04	2.39	1	3.097
2nd	LTE Band 42	20M	QPSK	1	0	-	Left Side	0mm	Ant 4	DSI 0	42990	3540	19.40	20.50	1.288	62.9	1.006	0.06	2.35	1.017	3.045

General Note:

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

15.7 TDD LTE and 5GNR Linearity Data Analysis

General Note:
This device support Power Class 2 and Power Class 3 operations for LTE B41 and 5GNR n41. The highest available duty cycle for Power Class 2 operation is 43.3% for LTE and 50% for 5GNR using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each 5GNR configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg for 1g and < 3.5 W/kg for 10g, Separate SAR testing for Power Class 2 is not required.

LTE B41-Linearity Data for Head Ant 4			LTE B41-Linearity Data for Body-worn Ant 4		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)		LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	18.50	20.10	Maximum Tune up Power (dBm)	24.50	26.50
Reported 1g SAR (W/kg)	1.101	1.162	Reported 1g SAR (W/kg)	1.325	1.320
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	44.81	44.31	Frame Averaged (mW)	178.40	193.41
Linearity SAR (W/kg)	1.089		Linearity SAR (W/kg)	1.436	
% deviation from expected linearity		6.74%	% deviation from expected linearity		-8.11%
LTE B41-Linearity Data for Head Ant 6			**LTE B41-Linearity Data for Body-worn Ant 6**		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)		LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	26.10	Maximum Tune up Power (dBm)	24.50	26.10
Reported 1g SAR (W/kg)	0.113	0.107	Reported 1g SAR (W/kg)	0.429	0.408
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	178.40	176.40	Frame Averaged (mW)	178.40	176.40
Linearity SAR (W/kg)	0.112		Linearity SAR (W/kg)	0.424	
% deviation from expected linearity		-4.23%	% deviation from expected linearity		-3.81%
FR1 n41-Linearity Data for Head Ant 4			**FR1 n41-Linearity Data for Body-worn Ant 4**		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)		LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	18.50	21.50	Maximum Tune up Power (dBm)	21.50	24.50
Reported 1g SAR (W/kg)	1.078	1.152	Reported 1g SAR (W/kg)	1.163	1.121
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	70.79	70.63	Frame Averaged (mW)	141.25	140.92
Linearity SAR (W/kg)	1.075		Linearity SAR (W/kg)	1.160	
% deviation from expected linearity		7.12%	% deviation from expected linearity		-3.38%

LTE B41-Linearity Data for Hotspot Ant 4		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	26.10
Reported 1g SAR (W/kg)	0.975	0.952
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	178.40	176.40
Linearity SAR (W/kg)	0.964	
% deviation from expected linearity		-1.25%

LTE B41-Linearity Data for Hotspot Ant 6		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	26.10
Reported 1g SAR (W/kg)	0.282	0.277
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	178.40	176.40
Linearity SAR (W/kg)	0.279	
% deviation from expected linearity		-0.65%

FR1 n41-Linearity Data for Hotspot Ant 4		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	21.50	24.50
Reported 1g SAR (W/kg)	0.594	0.630
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	141.25	140.92
Linearity SAR (W/kg)	0.593	
% deviation from expected linearity		6.31%

FR1 n41-Linearity Data for Extremity Ant 4		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	21.50	24.50
Reported 10g SAR (W/kg)	1.830	1.720
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	141.25	140.92
Linearity SAR (W/kg)	1.826	
% deviation from expected linearity		-5.79%

16. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + 2.4GHz WLAN	Yes	Yes	Yes	Yes
2.	WWAN + 5GHz WLAN	Yes	Yes	Yes	Yes
3.	WWAN + 6GHz WLAN	Yes	Yes		Yes
4.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
5.	WWAN +2.4GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
6.	WWAN +5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
7.	WWAN +6GHz WLAN + Bluetooth	Yes	Yes		Yes
8.	WWAN + 2.4GHz WLAN+ NFC				Yes
9.	WWAN + 5GHz WLAN+ NFC				Yes
10.	WWAN + 6GHz WLAN+ NFC				Yes
11.	WWAN + Bluetooth+ NFC				Yes
12.	WWAN +2.4GHz WLAN + Bluetooth+ NFC				Yes
13.	WWAN +5GHz WLAN + Bluetooth+ NFC				Yes
14.	WWAN +6GHz WLAN + Bluetooth+ NFC				Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. WWAN above includes 5G NR bands and EN-DC combination.
3. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
4. Qualcomm Smart Transmit algorithm support to WWAN except WIFI/BT and NFC. And this device supports inter-band ULCA and EN-DC combination operations with component carriers from different antenna groups. Each antenna group has controlled the total RF exposure from all transmitter to not exceed FCC limit. Therefore, in this report, it is evaluated whether the sum of the groups of each antenna does not exceed FCC limit or spatial separation is applied. In addition, each antenna group need to satisfy simultaneous transmission analysis with External radios (WIFI/BT and NFC) in this report.
5. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
6. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only). WLAN6GHz has no hotspot function.
7. WLAN2.4GHz/WLAN5GHz/6GHz MIMO SAR can represent SISO SAR to do co-located SAR analysis.
8. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
9. According to the EUT characteristic, WLAN 5GHz/6GHz and Bluetooth can transmit simultaneously.
10. According to the EUT characteristic, WLAN 5GHz/6GHz and WLAN 2.4GHz can’t transmit simultaneously.
11. According to the EUT characteristic, when WLAN 2.4GHz and Bluetooth share the same antenna path and cannot transmit simultaneously; when WLAN2.4GHz and Bluetooth are located on different antennas, they can transmit simultaneously.
12. NFC can transmit simultaneously with other Radios in extremity exposure condition.
13. For standalone WWAN, always choose the highest SAR among all WWAN bands within the selected antenna for each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each band.
14. The maximum SAR summation is calculated based on the same configuration and test position.
15. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
    iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.

16.1 5G NR + LTE + WLAN + BT Sim-Tx analysis

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

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

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

$x\% * A + (100-x)\% * B \leq 1.0,$

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

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

$x\% * A + (100-x)\% * B + C \leq 1.0$ (1)

$x\% * A + (100-x)\% * B \leq x\% * \max(A, B) + (100-x)\% * \max(A, B) \leq \max(A, B)$

$x\% * A + (100-x)\% * B + C \leq \max(A, B) + C \leq 1.0$ (2)

If A + C ≤ 1.0 and B + C ≤ 1.0 can be proven, then “x% * A + (100-x)% * B + C ≤ 1.0”. Therefore simultaneous transmission analysis for 5G NR + LTE + WLAN + BT can be performed in two steps

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

Else, if A + C > 1.0 and/or B + C > 1.0, then the followings need to hold true for compliance:
i. A and C are decoupled based on the SPLSR criteria, and
ii. (100-x)% * B + C ≤ 1.0, and
iii. x% * A + (100-x)% * B ≤ 1.0
Note iii. is covered in Part 2 report; i. and ii. should be addressed in Part 1 report.

Above analysis is also apply to NR inter-band uplink CA, (NR)1 + (NR)2 + WLAN + BT simultaneous transmission, So inter-band uplink CA no need to do additional simultaneously analysis again. Only required comply with total exposure ratio (TER) of NR + WLAN + BT < 1.

16.2 Head Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2+5	1+3+5	1+4+5
		WWAN	WLAN2.4GHz Ant 10+7	WLAN5GHz Ant 10+9	WLAN6GHz Ant 10+9	Bluetooth Ant 10	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
All Bands Ant 0	Right Cheek	0.997	0.436	0.529	0.522	0.054	1.49	1.58	1.57
	Right Tilted	0.997	0.567	0.270	0.309	0.001	1.57	1.27	1.31
	Left Cheek	0.997	0.320	0.205	0.198	0.001	1.32	1.20	1.20
	Left Tilted	0.997	0.348	0.158	0.169	0.037	1.38	1.19	1.20
All Bands Ant 2	Right Cheek	0.966	0.436	0.529	0.522	0.054	1.46	1.55	1.54
	Right Tilted	0.966	0.567	0.270	0.309	0.001	1.53	1.24	1.28
	Left Cheek	0.966	0.320	0.205	0.198	0.001	1.29	1.17	1.17
	Left Tilted	0.966	0.348	0.158	0.169	0.037	1.35	1.16	1.17
All Bands Ant 3	Right Cheek	0.994	0.436	0.529	0.522	0.054	1.48	1.58	1.57
	Right Tilted	0.994	0.567	0.270	0.309	0.001	1.56	1.27	1.30
	Left Cheek	0.994	0.320	0.205	0.198	0.001	1.32	1.20	1.19
	Left Tilted	0.994	0.348	0.158	0.169	0.037	1.38	1.19	1.20
All Bands Ant 4	Right Cheek	0.969	0.436	0.529	0.522	0.054	1.46	1.55	1.55
	Right Tilted	0.969	0.567	0.270	0.309	0.001	1.54	1.24	1.28
	Left Cheek	0.969	0.320	0.205	0.198	0.001	1.29	1.18	1.17
	Left Tilted	0.969	0.348	0.158	0.169	0.037	1.35	1.16	1.18
All Bands Ant 5	Right Cheek	0.178	0.436	0.529	0.522	0.054	0.67	0.76	0.75
	Right Tilted	0.134	0.567	0.270	0.309	0.001	0.70	0.41	0.44
	Left Cheek	0.335	0.320	0.205	0.198	0.001	0.66	0.54	0.53
	Left Tilted	0.094	0.348	0.158	0.169	0.037	0.48	0.29	0.30
All Bands Ant 6	Right Cheek		0.436	0.529	0.522	0.054	0.49	0.58	0.58
	Right Tilted		0.567	0.270	0.309	0.001	0.57	0.27	0.31
	Left Cheek	0.113	0.320	0.205	0.198	0.001	0.43	0.32	0.31
	Left Tilted	0.022	0.348	0.158	0.169	0.037	0.41	0.22	0.23
All Bands Ant 8	Right Cheek	0.908	0.436	0.529	0.522	0.054	1.40	1.49	1.48
	Right Tilted	0.908	0.567	0.270	0.309	0.001	1.48	1.18	1.22
	Left Cheek	0.908	0.320	0.205	0.198	0.001	1.23	1.11	1.11
	Left Tilted	0.908	0.348	0.158	0.169	0.037	1.29	1.10	1.11

16.3 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 WLAN2.4GHz Ant 10+7 1g SAR (W/kg)	3 WLAN5GHz Ant 10+9 1g SAR (W/kg)	5 Bluetooth Ant 10 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)
All Bands Ant 0	Front	0.542	0.244	0.108	0.001	0.79	0.65
	Back	0.568	0.438	0.756	0.021	1.03	1.35
	Left side	0.619	0.127	0.369	0.001	0.75	0.99
	Right side	0.169	0.001	0.175	0.001	0.17	0.35
	Top side	0.589	0.566	0.123	0.008	1.16	0.72
All Bands Ant 2	Front	0.569	0.244	0.104	0.001	0.81	0.67
	Back	0.669	0.438	0.731	0.021	1.13	1.42
	Left side	1.032	0.127	0.357	0.001	1.16	1.39
	Right side	0.102	0.001	0.169	0.001	0.10	0.27
	Top side	0.111	0.566	0.119	0.008	0.69	0.24
All Bands Ant 4	Front	0.481	0.244	0.104	0.001	0.73	0.59
	Back	0.699	0.438	0.731	0.021	1.16	1.45
	Left side	0.986	0.127	0.357	0.001	1.11	1.34
	Right side	0.035	0.001	0.169	0.001	0.04	0.21
	Top side	0.188	0.566	0.119	0.008	0.76	0.32
All Bands Ant 6	Front	0.138	0.244	0.104	0.001	0.38	0.24
	Back	0.118	0.438	0.731	0.021	0.58	0.87
	Left side	0.282	0.127	0.357	0.001	0.41	0.64
	Right side	0.001	0.001	0.169	0.001	0.00	0.17
	Top side		0.566	0.119	0.008	0.57	0.13
	Bottom side	0.001				0.00	0.00
All Bands Ant 5	Front	0.407	0.244	0.104	0.001	0.65	0.51
	Back	0.380	0.438	0.731	0.021	0.84	1.13
	Left side	0.194	0.127	0.357	0.001	0.32	0.55
	Right side	0.056	0.001	0.169	0.001	0.06	0.23
	Top side		0.566	0.119	0.008	0.57	0.13
	Bottom side	0.363				0.36	0.36
All Bands Ant 3	Front	0.347	0.244	0.104	0.001	0.59	0.45
	Back	0.491	0.438	0.731	0.021	0.95	1.24
	Left side	0.039	0.127	0.357	0.001	0.17	0.40
	Right side	0.763	0.001	0.169	0.001	0.77	0.93
	Top side	0.224	0.566	0.119	0.008	0.80	0.35
All Bands Ant 8	Front	0.254	0.244	0.104	0.001	0.50	0.36
	Back	0.505	0.438	0.731	0.021	0.96	1.26
	Left side		0.127	0.357	0.001	0.13	0.36
	Right side	0.630	0.001	0.169	0.001	0.63	0.80
	Top side	0.072	0.566	0.119	0.008	0.65	0.20
	Bottom side	0.049				0.05	0.05

16.4 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2+5	1+3+5	1+4+5
		WWAN	WLAN2.4GHz Ant 10+7	WLAN5GHz Ant 10+9	WLAN6GHz Ant 10+9	Bluetooth Ant 10	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
All Bands Ant 0	Front	1.069	0.319	0.100	0.001	0.001	1.39	1.17	1.07
	Back	0.942	0.535	0.533	0.527	0.065	1.54	1.54	1.53
All Bands Ant 2	Front	0.899	0.319	0.089	0.001	0.001	1.22	0.99	0.90
	Back	0.982	0.535	0.533	0.527	0.065	**1.58**	**1.58**	**1.57**
All Bands Ant 4	Front	0.970	0.319	0.089	0.001	0.001	1.29	1.06	0.97
	Back	0.970	0.535	0.533	0.527	0.065	1.57	1.57	1.56
All Bands Ant 6	Front	0.429	0.319	0.089	0.001	0.001	0.75	0.52	0.43
	Back	0.385	0.535	0.533	0.527	0.065	0.99	0.98	0.98
All Bands Ant 5	Front	0.924	0.319	0.089	0.001	0.001	1.24	1.01	0.93
	Back	0.974	0.535	0.533	0.527	0.065	1.57	1.57	1.57
All Bands Ant 3	Front	0.893	0.319	0.089	0.001	0.001	1.21	0.98	0.90
	Back	0.916	0.535	0.533	0.527	0.065	1.52	1.51	1.51
All Bands Ant 8	Front	0.649	0.319	0.089	0.001	0.001	0.97	0.74	0.65
	Back	0.953	0.535	0.533	0.527	0.065	1.55	1.55	1.55

16.5 Product specific 10g SAR Exposure Conditions

Remark:

1. For WLAN2.4G/Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

WWAN Band	Exposure Position	1	2	3	4	1+2+4	1+3+4
		WWAN	WLAN5GHz Ant 10+9	WLAN6GHz Ant 10+9	NFC	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
All Bands Ant 2	Front	1.596	0.663	0.052	0.001	2.26	1.65
	Back	1.471	1.872	0.348	0.026	3.37	1.85
	Left side	2.705	0.877	0.277	0.001	3.58	2.98
	Right side		0.490	0.072	0.001	0.49	0.07
	Top side		0.235	0.008	0.001	0.24	0.01
All Bands Ant 4	Front		0.663	0.052	0.001	0.66	0.05
	Back	1.713	1.872	0.348	0.026	3.61	2.09
	Left side	3.097	0.877	0.277	0.001	**3.98**	**3.38**
	Right side		0.490	0.072	0.001	0.49	0.07
	Top side		0.235	0.008	0.001	0.24	0.01
All Bands Ant 8	Front		0.663	0.052	0.001	0.66	0.05
	Back	1.157	1.872	0.348	0.026	3.06	1.53
	Left side		0.877	0.277	0.001	0.88	0.28
	Right side	1.232	0.490	0.072	0.001	1.72	1.31
	Top side		0.235	0.008	0.001	0.24	0.01

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

17. Uncertainty Assessment

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

Declaration of Conformity:
The test results with all measurement uncertainty excluded is 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.

The component of uncertainly may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainly by the statistical analysis of a series of observations is termed a Type An evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor[(a)]	1/k[(b)]	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) κ is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.

Uncertainty Budget According to IEC/IEEE 62209-1528 (Frequency band: 4 MHz - 10 GHz range)							
Error Description	**Uncert. Value (±%)**	**Prob. Dist.**	**Div.**	**(Ci) 1g**	**(Ci) 10g**	**Standard Uncertainty (1g) (±%)**	**Standard Uncertainty (10g) (±%)**
Measurement System errors							
Probe calibration	18.6	N	2	1	1	9.3	9.3
Probe calibration drift	1.7	R	1.732	1	1	1.0	1.0
Probe linearity and detection Limit	4.7	R	1.732	1	1	2.7	2.7
Broadband signal	2.8	R	1.732	1	1	1.6	1.6
Probe isotropy	7.6	R	1.732	1	1	4.4	4.4
Other probe and data acquisition errors	2.4	N	1	1	1	2.4	2.4
RF ambient and noise	1.8	N	1	1	1	1.8	1.8
Probe positioning errors	0.006	N	1	0.5	0.5	0.0	0.0
Data processing errors	4.0	N	1	1	1	4.0	4.0
Phantom and Device Errors							
Measurement of phantom conductivity (σ)	2.5	N	1	0.78	0.71	2.0	1.8
Temperature effects (medium)	5.4	R	1.732	0.78	0.71	2.4	2.2
Shell permittivity	14.0	R	1.732	0.5	0.5	4.0	4.0
Distance between the radiating element of the DUT and the phantom medium	2.0	N	1	2	2	4.0	4.0
Repeatability of positioning the DUT or source against the phantom	1.0	N	1	1	1	1.0	1.0
Device holder effects	3.6	N	1	1	1	3.6	3.6
Effect of operating mode on probe sensitivity	2.4	R	1.732	1	1	1.4	1.4
Time-average SAR	1.7	R	1.732	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	2.5	N	1	1	1	2.5	2.5
Validation antenna uncertainty (validation measurement only)	0.0	N	1	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	0.0	N	1	1	1	0.0	0.0
Correction to the SAR results							
Phantom deviation from target (ε′,σ)	1.9	N	1	1	0.84	1.9	1.6
SAR scaling	0.0	R	1.732	1	1	0.0	0.0
Combined Std. Uncertainty						**14.5%**	**14.4%**
Coverage Factor for 95 %						**K=2**	**K=2**
Expanded STD Uncertainty						**29.0%**	**28.8%**

SAR Uncertainty Budget for frequency range 4MHz to 10GHz

cDASY6 Module mmWave Uncertainty Budget Evaluation Distances to the Antennas > λ/2π In Compliance with IEC TR 63170					
Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)
Uncertainty terms dep endent on the measurement system					
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance dependence	0.00	R	1.732	1	0.00
Amplitude and phase drift	0.00	R	1.732	1	0.00
Amplitude and phase noise	0.04	R	1.732	1	0.02
Measurement area truncation	0.00	R	1.732	1	0.00
Data acquisition	0.03	N	1	1	0.03
Sampling	0.00	R	1.732	1	0.00
Field reconstruction	2.00	R	1.732	1	1.15
Forward transformation	0.00	R	1.732	1	0.00
Power density scaling	0.00	R	1.732	1	0.00
Spatial averaging	0.10	R	1.732	1	0.06
System detection limit	0.04	R	1.732	1	0.02
Uncertainty terms dep endent on the DUT and environmental factors					
Probe coupling with DUT	0.00	R	1.732	1	0.0
Modulation response	0.40	R	1.732	1	0.2
Integration time	0.00	R	1.732	1	0.0
Response time	0.00	R	1.732	1	0.0
Device holder influence	0.10	R	1.732	1	0.1
DUT alignment	0.00	R	1.732	1	0.0
RF ambient conditions	0.04	R	1.732	1	0.0
Ambient reflections	0.04	R	1.732	1	0.0
Immunity / secondary reception	0.00	R	1.732	1	0.0
Drift of the DUT		R	1.732	1	
Combined Std. Uncertainty					1.34
Expanded STD Uncertainty (95%)					2.68

PD Uncertainty Budget

18. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[6] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.

[7] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[8] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

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

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

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

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[18] SPEAG DASY6 Application Note (Interim Procedures for Devices Operating at 6-10 GHz)

Appendixes

Please refer to separated files for the following appendixes

Appendix A. Plots of System Performance Check

Appendix B. Plots of High SAR and PD Measurement

Appendix C. DASY Calibration Certificate

Appendix D. Test Setup Photos

Appendix E. Conducted RF Output Power Table

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

Appendix G. Power reduction mechanism verification

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