

FCC SAR Test Report

APPLICANT : Sonim Technologies, Inc.
EQUIPMENT : Smartphone
BRAND NAME : Sonim
MODEL NAME : X802
FCC ID : WYPS3111
STANDARD : FCC 47 CFR Part 2 (2.1093)

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

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



Approved by: Si Zhang



Sporton International Inc. (Kunshan)

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



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA4O2403	Rev. 01	Initial issue of report.	May 22, 2025

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Sonim Technologies, Inc., Smartphone, X802**, are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 10mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	WCDMA	WCDMA II	0.96	0.97	0.97	1.59
		WCDMA IV	1.06	0.59	0.59	
		WCDMA V	0.92	0.77	0.77	
	LTE	LTE Band 71	0.96	0.37	0.37	
		LTE Band 12	0.75	0.31	0.31	
		LTE Band 13	0.89	0.78	0.78	
		LTE Band 14	0.84	0.78	0.78	
		LTE Band 26/5	0.84	0.73	0.73	
		LTE Band 66/4	0.91	0.56	0.56	
		LTE Band 25/2	0.95	0.87	0.87	
		LTE Band 30	0.99	0.74	0.72	
		LTE Band 7	0.97	0.99	0.67	
		LTE Band 41/38	0.91	1.03	0.72	
		LTE Band 42	0.87	0.60	0.60	
		LTE Band 48/43	0.86	0.80	0.80	
	5G NR	FR1 n71	0.69	0.41	0.41	
		FR1 n14	0.80	0.68	0.68	
		FR1 n26/n5	0.85	0.75	0.75	
		FR1 n70	0.37	0.40	0.39	
		FR1 n66	0.99	0.68	0.68	
		FR1 n2	0.32	0.48	0.48	
		FR1 n25	1.05	0.94	0.94	
		FR1 n30	0.99	0.94	0.80	
		FR1 n7	0.92	1.06	0.72	
		FR1 n41/n38	0.97	1.02	0.72	
		FR1 n48	0.88	0.92	0.92	
		FR1 n77/n78	0.93	1.00	1.00	
DTS	WLAN	2.4GHz WLAN	0.30	0.29	0.29	1.29
NII		5GHz WLAN	1.20	1.17	1.19	1.59
DSS	Bluetooth	2.4GHz Bluetooth	<0.10	0.19	0.19	1.59

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
NII	WLAN	5GHz WLAN	2.47	2.47
Date of Testing:			2025/1/6 ~ 2025/4/27	
Remark: 1. This device supports LTE B2 / B4 / B5 / B43 / B38 and B25 / B66 / B26 / B48 / B41. Since the supported frequency span for LTE B4 / B5 / B43 / B38 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B48 / 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 / B48 / B41. 2. This device supports 5GNR n38/n5/n78 and n41/n26/n77. Since the supported frequency span for 5GNR n38/n5/n78 falls completely within the supports frequency span for n41/n26/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/n26/n77.				
Declaration of Conformity:				
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.				
Comments and Explanations:				
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.				



2. Administration Data

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

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR02-KS SAR04-KS	CN1257	314309

Applicant	
Company Name	Sonim Technologies, Inc.
Address	4445 Eastgate Mall, Suite 200, San Diego, CA 92121, USA

Manufacturer	
Company Name	Sonim Technologies, Inc.
Address	4445 Eastgate Mall, Suite 200, San Diego, CA 92121, USA

3. Guidance Applied

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

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

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Smartphone
Brand Name	Sonim
Model Name	X802
FCC ID	WYPS3111
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz, 3550 MHz ~ 3600 MHz LTE Band 43: 3600 MHz ~ 3700 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz 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	RMC/AMR 12.2Kbps HSDPA/HSUPA 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 802.11ax HE20/HE40



	WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/VHT160 WLAN 5GHz 802.11ax HE20/HE40/HE80/HE160 WLAN 6GHz 802.11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC: ASK
HW Version	V1.0
SW Version	X80.0-01-14.0-42.18.00
EUT Stage	Identical Prototype
Remark: 1. This device supports VoIP in 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 Bluetooth can transmit in SISO mode only and they have no MIMO mode. 6. The device implements proximity sensor /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. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E. 7. For WLAN when transmit simultaneous with WWAN/BT, WLAN power reduction will be activated to head, body-worn, hotspot and extremity exposure condition. 8. This device supports HPUE mode for LTE Band41 and 5GNR n41/n77/n78 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/n77/n78 HPUE, 5GNR n41/n77/n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission. 10. 5G NR n77/n78 supports UL MIMO mode. Based on Qualcomm Smart Transmit algorithm, the MIMO antennas located in same AGs and the MIMO Plimit is not populated in the EFS file, so additional verification tests need to be added, the more detail UL MIMO analysis results please referred to appendix G. 11. This device has NFC function and the NFC SAR report will be separately submitted. 12. SAR and Power density test report for WLAN 6GHz U-NII-5/6/7/8 will be separately submitted. About co-located SAR with WWAN/Bluetooth always chose higher SAR of WLAN5GHz U-NII-1/2A/2C/3 and WLAN 6GHz U-NII-5/6/7/8. 13. 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	n2	FDD	15	5, 10, 15, 20
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20
	n26	FDD	15	5, 10, 15, 20
	n66	FDD	15	5, 10, 15, 20, 25, 30
	n71	FDD	15	5, 10, 15, 20
	n38	TDD	30	20, 30, 40
	n41	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100
	n77	TDD	30	20, 30, 40, 60, 80, 100
SA	n78	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100
	n2	FDD	15	5, 10, 15, 20
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20
	n14	FDD	15	5, 10
	n25	FDD	15	5, 10, 15, 20, 25, 30
	n26	FDD	15	5, 10, 15, 20
	n30	FDD	15	10
	n66	FDD	15	5, 10, 15, 20, 25, 30
	n70	FDD	15	5, 10, 15
	n71	FDD	15	5, 10, 15, 20
	n38	TDD	30	20, 30, 40
	n41	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100
	n48	TDD	30	20, 30, 40
	n77	TDD	30	20, 30, 40, 60, 80, 100
	n78	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100



4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																	
FCC ID		WYPS3111																																																															
Equipment Name		Smartphone																																																															
Operating Frequency Range of each LTE transmission band		LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz, 3550 MHz ~ 3600 MHz LTE Band 43: 3600 MHz ~ 3700 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz																																																															
Channel Bandwidth		LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 43: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz																																																															
uplink modulations used		QPSK / 16QAM / 64QAM / 256QAM																																																															
LTE Voice / Data requirements		Voice and Data																																																															
LTE Release Version		R17																																																															
CA Support		Supported, Uplink and Downlink																																																															
LTE MPR permanently built-in by design		<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</th></tr><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>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>256 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></td><td colspan="6">≥ 1</td><td>≤ 5</td></tr></table>		Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3								Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	256 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3		≥ 1						≤ 5
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3																																																																	
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QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																																										
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																																										
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2																																																										
256 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3																																																										
	≥ 1						≤ 5																																																										
LTE A-MPR		In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																															
Spectrum plots for RB configuration		A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																															
Power reduction applied to satisfy SAR compliance		Yes, when operating in Proximity sensors/receiver/hotspot detect mechanism, head/body -worn /hotspot/extremity will trigger reduced power for some bands applied to satisfy SAR compliance, the detail please referred to section 14.																																																															
LTE Carrier Aggregation Combinations		Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 14.																																																															
LTE Carrier Aggregation Additional Information	1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band and inter-band with two component carriers in the uplink. SAR Measurements and conducted																																																																

				powers were evaluated per FCC Guidance. 2. This device supports maximum of 5 carriers in the downlink and 2 carriers in the uplink.								
Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	20407	824.7	20415	825.5	20425	826.5	20450	829				
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)	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)	Ch. #	Freq. (MHz)		
L	23017	699.7	23025	700.5	23035	701.5	23060	704				
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5				
H	23173	715.3	23165	714.5	23155	713.5	23130	711				
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	23205		779.5		23230		782					
M	23230		782									
H	23255		784.5									
LTE Band 14												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Channel #		Channel #		Freq.(MHz)					
L	23305		790.5		23330		793					
M	23330		793									
H	23355		795.5									
LTE Band 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)	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 30				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	27685	2307.5	27710	2310
M	27710	2310		
H	27735	2312.5		

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 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	43115	3552.5	43140	3555	43165	3557.5	43190	3560
M	43340	3575	43340	3575	43340	3575	43340	3575
H	43565	3597.5	43540	3595	43515	3592.5	43490	3590

LTE Band 43								
	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	43615	3602.5	43640	3605	43665	3607.5	43690	3610
M	44090	3650	44090	3650	44090	3650	44090	3650
H	44565	3697.5	44540	3695	44515	3692.5	44490	3690

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

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 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes
LTE Band 25	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 2	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 42			Yes	Yes	Yes	Yes
LTE Band 43			Yes	Yes	Yes	Yes
LTE Band 48			Yes	Yes	Yes	Yes

2) LTE Bands tune up:

Band	Antenna	Default Tune-up Limit	Receiver On	Seonsor On	Seonsor Off
			DSI 4&5 Tune-up Limit	DSI 1&3 Tune-up Limit	DSI 2&6 Tune-up Limit
LTE Band 66(4)	Ant 2	24.5	20.5	24.5	24.5
LTE Band 66(4)	Ant 5	25.0	25.0	25.0	25.0
LTE Band 26(5)	Ant 1	25.0	23.5	25.0	25.0
LTE Band 25(2)	Ant 2	24.5	20.0	23.0	24.5
LTE Band 25(2)	Ant 5	25.0	25.0	25.0	25.0
LTE Band 41(38)	Ant 2	25.0	19.0	25.0	25.0
LTE Band 41 HPUE	Ant 2	27.0	20.6	27.0	27.0
LTE Band 41(38)	Ant 6	25.0	25.0	25.0	25.0
LTE Band 41 HPUE	Ant 6	27.0	27.0	27.0	27.0
LTE Band 43	Ant 3	25.0	23.0	22.0	22.0
LTE Band 42 Part96	Ant 3	25.0	23.0	22.0	22.0
LTE Band 48	Ant 3	25.0	23.5	22.0	22.0

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77 : 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78 : 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n2	LTE B4/5/7/12/13/14/66
LTE Anchor Bands for n5	LTE B2/7/66/48
LTE Anchor Bands for n7	LTE B2/4/5/12
LTE Anchor Bands for n26	LTE B7
LTE Anchor Bands for n66	LTE B2/5/12/13/14
LTE Anchor Bands for n71	LTE B2/7/66
LTE Anchor Bands for n38	LTE B2/4/5
LTE Anchor Bands for n41	LTE B12/66
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/41/66
LTE Anchor Bands for n78	LTE B2/4/5/7/12/26/38/66/41

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	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510
M	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560
NR Band 14								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	158100	790.5						
M	158600	793						
H	159100	795.5						



NR Band 25												
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900

NR Band 26									
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Freq. (MHz)
L	163300	816.5	163800	819	164300	821.5	164800	824	824
M	166300	831.5	166300	831.5	166300	831.5	166300	831.5	831.5
H	169300	846.5	168800	844	168300	841.5	167800	839	839

NR Band 30									
	Bandwidth 10MHz								
	Ch. #						Freq. (MHz)		
M	462000						2310		

NR Band 66												
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz	
	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
M	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

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 70						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	339500	1697.5	340000	1700	340500	1702.5
M	340500	1702.5	340500	1702.5		
H	341500	1707.5	341000	1705		

NR Band 38						
	Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	516000	2580	517000	2585	518000	2590
M	519000	2595	519000	2595	519000	2595
H	522000	2610	521000	2605	520000	2600

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



NR Band 77												
	Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647334	3710.01	647668	3715.02	648000	3720	648668	3730.02	649334	3740.01	650000	3750
M	656000	3840	656000	3840.00	656000	3840	656000	3840	656000	3840	656000	3840
H	664666	3969.99	664332	3964.98	664000	3960	663332	3949.98	662666	3939.99	662000	3930

NR Band 78 SCS30KHz																		
	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	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750.00	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	652666	3789.99	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	651000	3765	650666	3759.99	650332	3754.98		

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

NR Band 77												
	Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630668	3460.02	631000	3465	631334	3470.01	632000	3480	632668	3490.02		
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636000	3540	635666	3534.99	635332	3529.98	634666	3519.99	634000	3510		

NR Band 78 SCS30KHz																		
	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	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99		



<For NR Overlap Bands Description>

1) NR Bands BW

Band	5 MHz	10 MHz	15 MHz	20 MHz	25 MHz	30 MHz	35 MHz	40 MHz	45 MHz	50 MHz	60 MHz	70 MHz	80 MHz	90 MHz	100 MHz
FR1 n5	Yes	Yes	Yes	Yes											
FR1 n26	Yes	Yes	Yes	Yes											
FR1 n38				Yes		Yes		Yes							
FR1 n41				Yes		Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes
FR1 n2	Yes	Yes	Yes	Yes											
FR1 n25	Yes	Yes	Yes	Yes	Yes	Yes									
FR1 n77				Yes		Yes		Yes			Yes		Yes		Yes
FR1 n78				Yes		Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes

2) NR Bands Tune up:

Band	Antenna	Default	Receiver On	Seonsor On	Seonsor Off
		Tune-up Limit	DSI 4&5 Tune-up Limit	DSI 1&3 Tune-up Limit	DSI 2&6 Tune-up Limit
FR1 n25(2)	Ant 2	25.5	19.5	23.5	25.5
FR1 n26(5)	Ant 1	25.0	24.0	25.0	25.0
FR1 n41(38)	Ant 2	25.5	16.5	22.5	25.5
FR1 n41 HPUE	Ant 2	27.5	19.5	25.5	27.5
FR1 n41(38)	Ant 5	25.0	25.0	25.0	25.0
FR1 n41 HPUE	Ant 5	27.0	27.0	27.0	27.0
FR1 n41(38)	Ant 6	25.0	25.0	25.0	25.0
FR1 n41 HPUE	Ant 6	27.0	27.0	27.0	27.0
FR1 n41(38)	Ant 8	25.0	22.0	25.0	25.0
FR1 n41 HPUE	Ant 8	27.0	25.0	27.0	27.0
FR1 n77(78) Part 27O	Ant 3	25.0	19.5	20.5	20.5
FR1 n77(78) HPUE Part 27O	Ant 3	27.0	22.5	23.5	23.5
FR1 n77(78) Part 27Q	Ant 3	25.5	19.5	20.5	20.5
FR1 n77(78) HPUE Part 27Q	Ant 3	27.5	22.5	23.5	23.5
FR1 n77(78) Part 27O	Ant 7	25.0	18.0	25.0	25.0
FR1 n77(78) HPUE Part 27O	Ant 7	27.0	21.0	27.0	27.0
FR1 n77(78) Part 27Q	Ant 7	25.0	18.0	25.0	25.0
FR1 n77(78) HPUE Part 27Q	Ant 7	27.0	21.0	27.0	27.0
FR1 n77(78) Part 27O	Ant 4	26.0	26.0	26.0	26.0
FR1 n77(78) HPUE Part 27O	Ant 4	29.0	29.0	29.0	29.0
FR1 n77(78) Part 27Q	Ant 4	26.0	26.0	26.0	26.0
FR1 n77(78) HPUE Part 27Q	Ant 4	29.0	29.0	29.0	29.0
FR1 n77(78) Part 27O	Ant 6	25.0	25.0	25.0	25.0
FR1 n77(78) HPUE Part 27O	Ant 6	27.0	27.0	27.0	27.0
FR1 n77(78) Part 27Q	Ant 6	24.0	24.0	24.0	24.0
FR1 n77(78) HPUE Part 27Q	Ant 6	26.0	26.0	26.0	26.0

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 $\leq 6\text{GHz}$). 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 $f < 6\text{GHz}$.

<Uncertainty>

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 DSI4&5	Head Pmax*	Bodyworn/Hotspot/Extremity sensor on DSI1&3	Bodyworn/Hotspot/Extremity sensor off DSI2&6	Pmax*	Total Uncertainty dB (k=2)
WCDMA II	Ant 2	17.0	23.0	21.5	23.0	23.0	2.00
WCDMA IV	Ant 2	18.0	23.0	23.0	23.0	23.0	2.00
WCDMA V	Ant 1	21.5	24.0	24.6	24.6	24.0	1.00
LTE Band 71	Ant 1	22.0	24.0	27.9	27.9	24.0	1.00
LTE Band 12	Ant 1	21.0	24.0	28.6	28.6	24.0	1.00
LTE Band 13	Ant 1	22.0	24.0	24.6	24.6	24.0	1.00
LTE Band 14	Ant 1	22.5	24.0	24.6	24.6	24.0	1.00
LTE Band 26(5)	Ant 1	22.5	24.0	24.9	24.9	24.0	1.00
LTE Band 66(4)	Ant 2	19.0	23.0	23.0	23.0	23.0	1.50
LTE Band 66(4)	Ant 5	32.2	24.0	34.9	34.9	24.0	1.00
LTE Band 25(2)	Ant 2	18.5	23.0	21.5	23.0	23.0	1.50
LTE Band 25(2)	Ant 5	31.6	24.0	28.6	28.6	24.0	1.00
LTE Band 30	Ant 2	17.0	23.0	22.5	23.0	23.0	1.50
LTE Band 7	Ant 2	16.0	23.0	21.0	23.0	23.0	1.50
LTE Band 7	Ant 5	32.0	24.0	28.1	28.1	24.0	1.00
LTE Band 7	Ant 6	34.8	22.0	28.4	28.4	22.0	1.00
LTE Band 7	Ant 8	22.0	24.0	52.8	52.8	24.0	1.00
LTE Band 41(38) PC3	Ant 2	16.0	22.0	22.4	22.4	22.0	1.00
LTE Band 41 PC2	Ant 2	16.0	22.4	22.4	22.4	22.4	1.00
LTE Band 41(38) PC3	Ant 6	32.8	22.0	28.7	28.7	22.0	1.00
LTE Band 41 PC2	Ant 6	32.8	22.4	28.7	28.7	22.4	1.00
LTE Band 42	Ant 3	19.5	21.5	18.5	18.5	21.5	1.50
LTE Band 43	Ant 3	19.5	21.5	18.5	18.5	21.5	1.50
LTE Band 48	Ant 3	20.0	21.5	18.5	18.5	21.5	1.50
LTE Band 48	Ant 7	16.0	22.0	29.5	29.5	22.0	1.00
FR1 n71	Ant 1	21.0	24.0	27.4	27.4	24.0	1.00
FR1 n14	Ant 1	22.5	24.0	25.2	25.2	24.0	1.00
FR1 n26(5)	Ant 1	23.0	24.0	24.8	24.8	24.0	1.00
FR1 n70	Ant 5	29.4	24.0	29.1	29.1	24.0	1.00
FR1 n66	Ant 2	19.0	24.0	24.0	24.0	24.0	1.50
FR1 n2	Ant 5	30.1	24.0	28.4	28.4	24.0	1.00
FR1 n25(2)	Ant 2	18.0	24.0	22.0	24.0	24.0	1.50
FR1 n30	Ant 2	17.0	24.0	22.5	24.0	24.0	1.50
FR1 n7	Ant 2	15.0	24.0	21.0	24.0	24.0	1.50
FR1 n7	Ant 5	30.4	24.0	26.6	26.6	24.0	1.00
FR1 n41(38) PC3	Ant 2	15.0	24.0	21.0	24.0	24.0	1.50
FR1 n41 PC2	Ant 2	15.0	23.0	21.0	24.0	23.0	1.50
FR1 n41(38) PC3	Ant 5	30.2	24.0	26.4	26.4	24.0	1.00
FR1 n41 PC2	Ant 5	30.2	23.0	26.4	26.4	23.0	1.00
FR1 n41(38) PC3	Ant 6	35.2	24.0	27.2	27.2	24.0	1.00
FR1 n41 PC2	Ant 6	35.2	23.0	27.2	27.2	23.0	1.00
FR1 n41(38) PC3	Ant 8	21.0	24.0	25.8	25.8	24.0	1.00
FR1 n41 PC2	Ant 8	21.0	23.0	25.8	25.8	23.0	1.00
FR1 n48	Ant 3	18.0	23.0	19.5	19.5	23.0	1.50
FR1 n77(78) Part 27O	Ant 3	18.0	21.5	19.0	19.0	23.5	1.50
FR1 n77(78) HPUE Part 27O	Ant 3	18.0	20.5	19.0	19.0	22.5	1.50
FR1 n77(78) Part 27Q	Ant 3	18.0	22.0	19.0	19.0	24.0	1.50

FR1 n77(78) HPUE Part 27Q	Ant 3	18.0	21.0	19.0	19.0	23.0	1.50
FR1 n77(78) Part 27O	Ant 7	16.5	23.5	26.5	26.5	23.5	1.50
FR1 n77(78) HPUE Part 27O	Ant 7	16.5	22.5	26.5	26.5	22.5	1.50
FR1 n77(78) Part 27Q	Ant 7	16.5	23.5	26.5	26.5	23.5	1.50
FR1 n77(78) HPUE Part 27Q	Ant 7	16.5	22.5	26.5	26.5	22.5	1.50
FR1 n77(78) Part 27O	Ant 4	35.6	25.0	33.3	33.3	25.0	1.00
FR1 n77(78) HPUE Part 27O	Ant 4	35.6	25.0	33.3	33.3	25.0	1.00
FR1 n77(78) Part 27Q	Ant 4	35.6	25.0	33.3	33.3	25.0	1.00
FR1 n77(78) HPUE Part 27Q	Ant 4	35.6	25.0	33.3	33.3	25.0	1.00
FR1 n77(78) Part 27O	Ant 6	34.3	24.0	31.5	31.5	24.0	1.00
FR1 n77(78) HPUE Part 27O	Ant 6	34.3	23.0	31.5	31.5	23.0	1.00
FR1 n77(78) Part 27Q	Ant 6	34.3	23.0	31.5	31.5	23.0	1.00
FR1 n77(78) HPUE Part 27Q	Ant 6	34.3	22.0	31.5	31.5	22.0	1.00

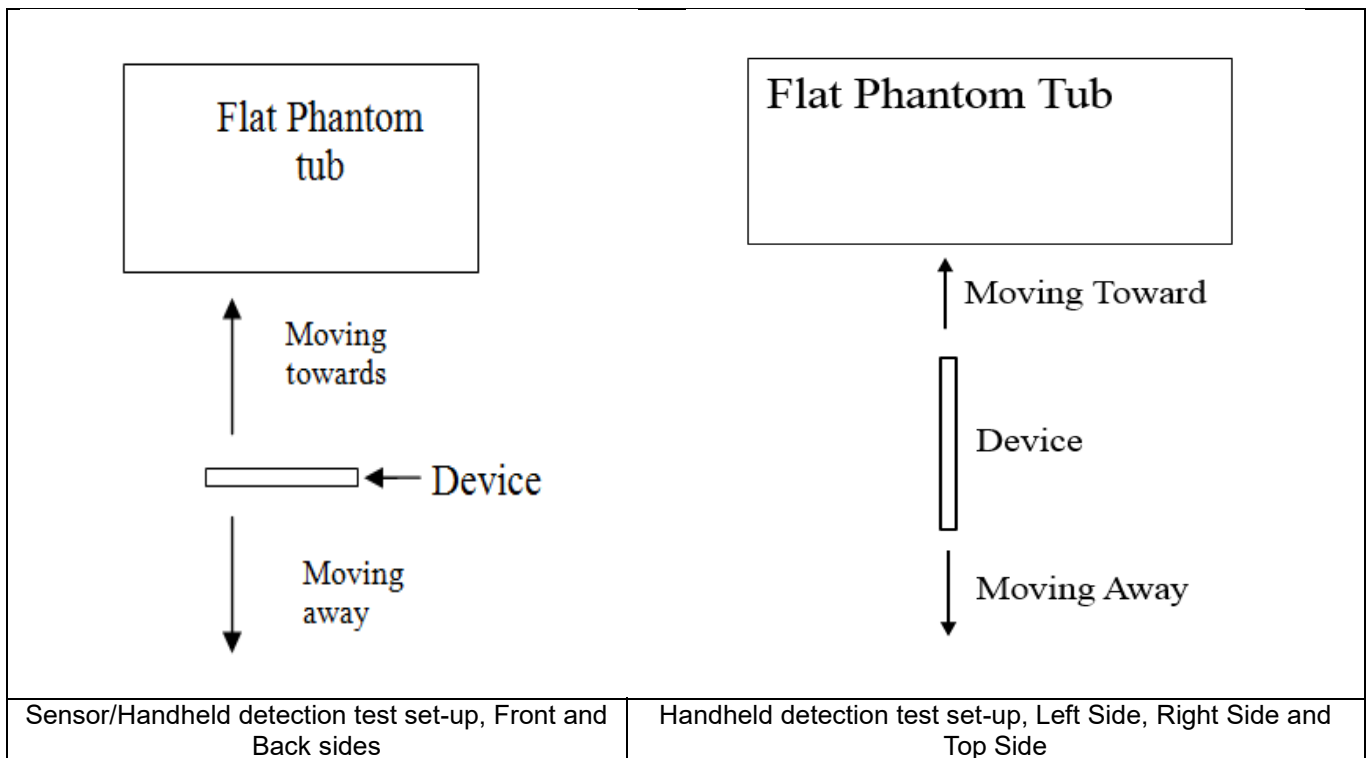
Note:

- 1) *Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + total 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., LTE TDD & NR TDD).
- 3) The max allowed output power is the Plimit + total 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. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (7125MHz) and lowest (1900MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensors placed coincident with antenna elements at the top of left and right sides of the phone are utilized to determine when the device comes in proximity of the user's body or finger or hand at the front or back or bottom or left or top side of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
3. The sensors can use to detect the proximity of the user's body or handheld states at the front or back or bottom or left or top side of the device use a detection threshold distance. When front/back/right/left/top sides of body or handheld condition is detected reduced power will be active. The trigger distance shown in the sections below.
4. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed.



<Sensor for Ant 2>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	17	21	23	30	20	25	12	16

<Sensor for ANT 11>

Proximity Sensor Triggering Distance (mm)						
Position	Front		Back		Right Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	17	21	18	24	25	31

7. RF Exposure Limits

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

8. Specific Absorption Rate (SAR)

8.1 Introduction

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

8.2 SAR Definition

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

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

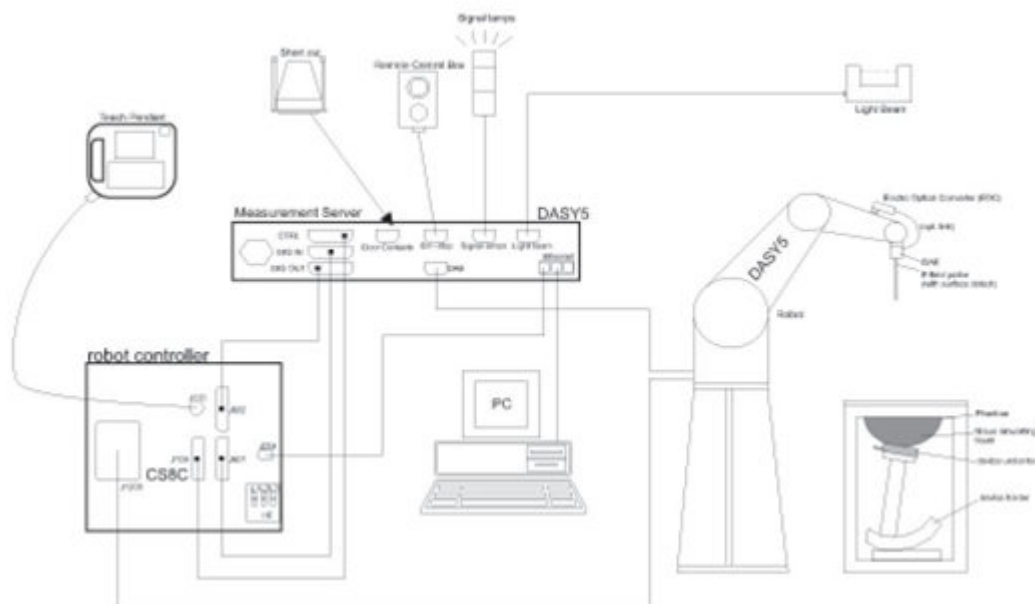
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

9. System Description and Setup

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



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

9.1 E-Field Probe

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

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	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 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

9.2 Data Acquisition Electronics (DAE)

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

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



Photo of DAE

9.3 Phantom

<SAM Twin Phantom>

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

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

<ELI Phantom>

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

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

9.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

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



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

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

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



Mounting Device for Laptops

10. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

<SAR measurement>

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

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

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

10.1 Spatial Peak SAR Evaluation

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

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

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

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

10.2 Power Reference Measurement

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

10.3 Area Scan

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

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

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

10.4 Zoom Scan

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

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

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

10.5 Volume Scan Procedures

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

10.6 Power Drift Monitoring

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

11. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2022/2/24	2025/2/22
SPEAG	835MHz System Validation Kit	D835V2	4d298	2024/1/26	2026/1/24
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2025/2/22
SPEAG	1900MHz System Validation Kit	D1900V2	5d118	2022/3/30	2025/3/28
SPEAG	2300MHz System Validation Kit	D2300V2	1055	2023/8/21	2025/8/19
SPEAG	2450MHz System Validation Kit	D2450V2	1095	2024/2/8	2026/2/6
SPEAG	2450MHz System Validation Kit	D2450V2	924	2023/11/3	2025/11/1
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	Data Acquisition Electronics	DAE4	1664	2024/7/10	2025/7/9
SPEAG	Data Acquisition Electronics	DAE4	1279	2024/8/20	2025/8/19
SPEAG	Dosimetric E-Field Probe	EX3DV4	7764	2024/9/2	2025/9/1
SPEAG	Dosimetric E-Field Probe	EX3DV4	7815	2025/1/8	2026/1/7
SPEAG	SAM Twin Phantom	SAM Twin	TP-1842	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-1795	NCR	NCR
Testo	Thermo-Hygrometer	HTC-1	55011	2025/1/2	2026/1/1
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2024/7/4	2025/7/3
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	Power Meter	NRVD	102081	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2024/7/4	2025/7/3
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
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	

Note:

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

12. System Verification

12.1 Tissue Simulating Liquids

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

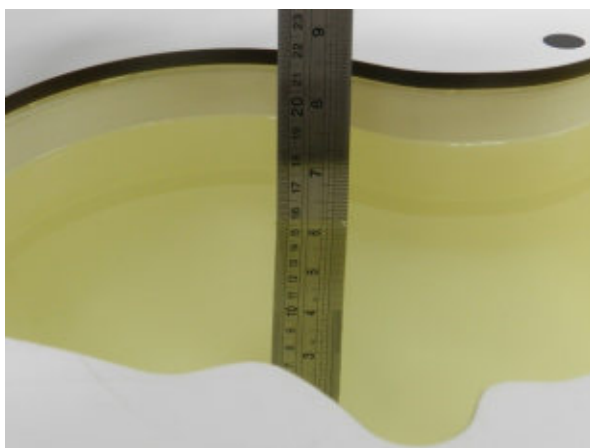


Fig 11.1 Photo of Liquid Height for Head SAR



Fig 11.2 Photo of Liquid Height for Body SAR

12.2 Tissue Verification

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

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (ϵ_r)
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. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	Head	22.6	0.9	41.192	0.89	41.90	1.12	-1.69	±5	2025/1/6
750	Head	22.6	0.888	42.26	0.89	41.90	-0.22	0.86	±5	2025/1/17
835	Head	22.9	0.902	41.24	0.90	41.50	0.22	-0.63	±5	2025/1/7
835	Head	22.7	0.912	41.937	0.90	41.50	1.33	1.05	±5	2025/1/18
1750	Head	22.8	1.409	40.669	1.37	40.10	2.85	1.42	±5	2025/1/8
1750	Head	22.9	1.317	40.224	1.37	40.10	-3.87	0.31	±5	2025/1/19
1900	Head	22.6	1.397	39.035	1.40	40.00	-0.21	-2.41	±5	2025/1/9
1900	Head	22.8	1.407	40.215	1.40	40.00	0.50	0.54	±5	2025/1/20
2300	Head	22.8	1.715	38.769	1.67	39.50	2.69	-1.85	±5	2025/1/10
2300	Head	22.7	1.716	39.46	1.67	39.50	2.75	-0.10	±5	2025/1/21
2450	Head	22.8	1.744	39.267	1.80	39.20	-3.11	0.17	±5	2025/2/15
2450	Head	22.4	1.801	39.318	1.80	39.20	0.06	0.30	±5	2025/4/27
2600	Head	22.7	1.926	38.23	1.96	39.00	-1.73	-1.97	±5	2025/1/11
2600	Head	22.9	2.03	40.346	1.96	39.00	3.57	3.45	±5	2025/1/22
3500	Head	22.9	2.784	38.912	2.91	37.90	-4.33	2.67	±5	2025/1/13
3500	Head	22.6	2.813	38.735	2.91	37.90	-3.33	2.20	±5	2025/1/24
3700	Head	22.6	2.988	38.36	3.12	37.70	-4.23	1.75	±5	2025/1/14
3700	Head	22.9	2.991	38.382	3.12	37.70	-4.13	1.81	±5	2025/1/25
3900	Head	22.7	3.171	38.038	3.32	37.50	-4.49	1.43	±5	2025/1/15
3900	Head	22.8	3.171	39.019	3.32	37.50	-4.49	4.05	±5	2025/1/26
5250	Head	22.7	4.573	35.72	4.71	35.90	-2.91	-0.50	±5	2025/2/18
5600	Head	22.8	4.997	35.371	5.07	35.50	-1.44	-0.36	±5	2025/2/22
5750	Head	22.9	5.105	34.869	5.22	35.40	-2.20	-1.50	±5	2025/2/26

12.3 System Performance Check Results

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

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 (%)
2025/1/6	750	Head	50	1087	7764	1279	0.436	8.58	8.72	1.63	0.293	5.65	5.86	3.72
2025/1/17	750	Head	50	1087	7764	1279	0.419	8.58	8.38	-2.33	0.281	5.65	5.62	-0.53
2025/1/7	835	Head	50	4d298	7764	1279	0.461	9.89	9.22	-6.77	0.307	6.45	6.14	-4.81
2025/1/18	835	Head	50	4d298	7764	1279	0.488	9.89	9.76	-1.31	0.328	6.45	6.56	1.71
2025/1/8	1750	Head	50	1090	7764	1279	1.910	37.00	38.2	3.24	0.998	19.50	19.96	2.36
2025/1/19	1750	Head	50	1090	7764	1279	1.930	37.00	38.6	4.32	1.050	19.50	21	7.69
2025/1/9	1900	Head	50	5d118	7764	1279	2.020	39.30	40.4	2.80	1.070	20.40	21.4	4.90
2025/1/20	1900	Head	50	5d118	7764	1279	1.970	39.30	39.4	0.25	1.060	20.40	21.2	3.92
2025/1/10	2300	Head	50	1055	7764	1279	2.530	48.40	50.6	4.55	1.270	23.70	25.4	7.17
2025/1/21	2300	Head	50	1055	7764	1279	2.370	48.40	47.4	-2.07	1.140	23.70	22.8	-3.80
2025/2/15	2450	Head	50	1095	7764	1279	2.670	52.60	53.4	1.52	1.260	24.70	25.2	2.02
2025/4/27	2450	Head	250	924	7815	1664	13.500	52.30	54	3.25	6.480	24.50	25.92	5.80
2025/1/11	2600	Head	50	1112	7764	1279	2.630	55.10	52.6	-4.54	1.200	24.80	24	-3.23
2025/1/22	2600	Head	50	1112	7764	1279	2.950	55.10	59	7.08	1.280	24.80	25.6	3.23
2025/1/13	3500	Head	50	1037	7764	1279	3.130	65.40	62.6	-4.28	1.180	24.70	23.6	-4.45
2025/1/24	3500	Head	50	1037	7764	1279	3.170	65.40	63.4	-3.06	1.200	24.70	24	-2.83
2025/1/14	3700	Head	50	1008	7764	1279	3.110	67.20	62.2	-7.44	1.130	24.40	22.6	-7.38
2025/1/25	3700	Head	50	1008	7764	1279	3.190	67.20	63.8	-5.06	1.190	24.40	23.8	-2.46
2025/1/15	3900	Head	50	1048	7764	1279	3.270	69.10	65.4	-5.35	1.150	24.10	23	-4.56
2025/1/26	3900	Head	50	1048	7764	1279	3.650	69.10	73	5.64	1.230	24.10	24.6	2.07
2025/2/18	5250	Head	50	1113	7764	1279	4.170	81.50	83.4	2.33	1.220	23.30	24.4	4.72
2025/2/22	5600	Head	50	1113	7764	1279	4.420	82.60	88.4	7.02	1.200	23.70	24	1.27
2025/2/26	5750	Head	50	1113	7764	1279	4.080	80.80	81.6	0.99	1.180	23.00	23.6	2.61

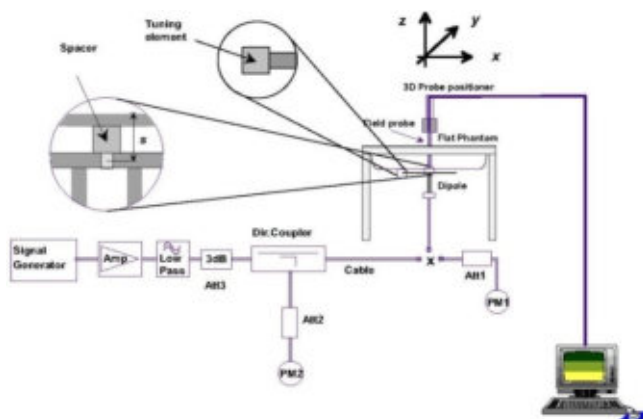


Fig 11.3.1 System Performance Check Setup



Fig 11.3.2 Setup Photo

13. RF Exposure Positions

13.1 Ear and handset reference point

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

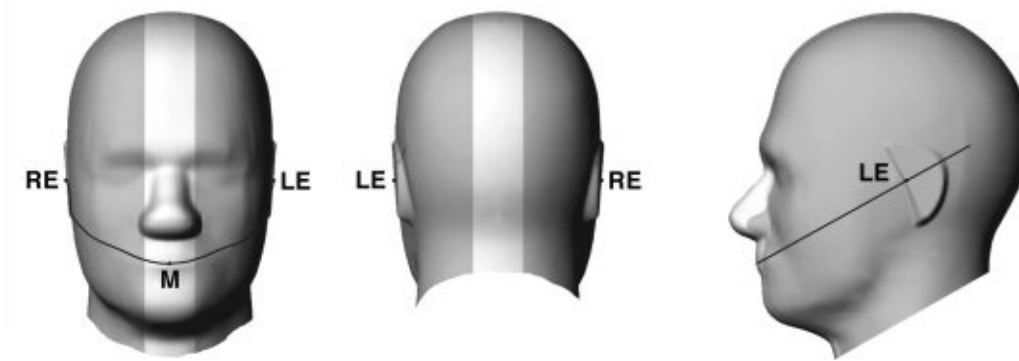


Fig 12.1.1 Front, back, and side views of SAM twin phantom

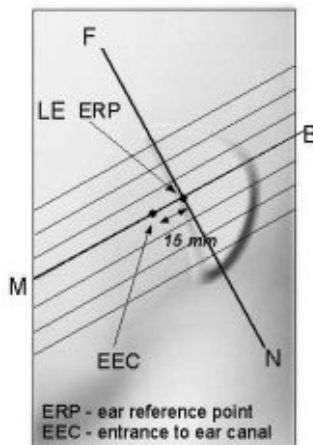


Fig 12.1.2 Close-up side view of phantom showing the ear region.

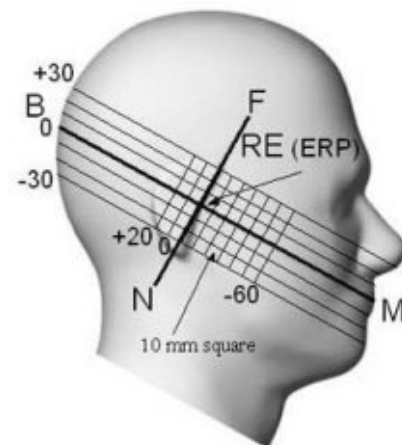


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

13.2 Definition of the cheek position

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

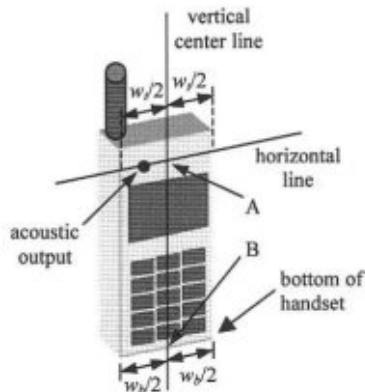


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case"

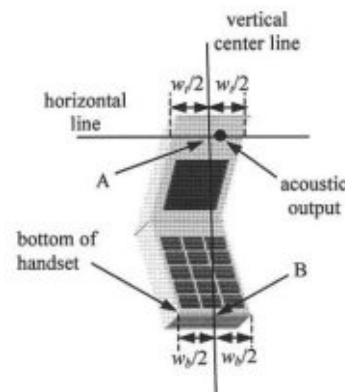


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

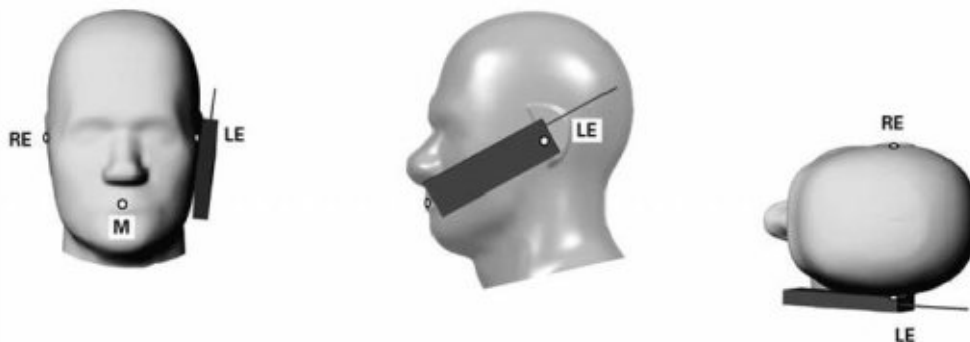


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

13.3 Definition of the tilt position

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



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

13.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 11.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is $> 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a 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-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

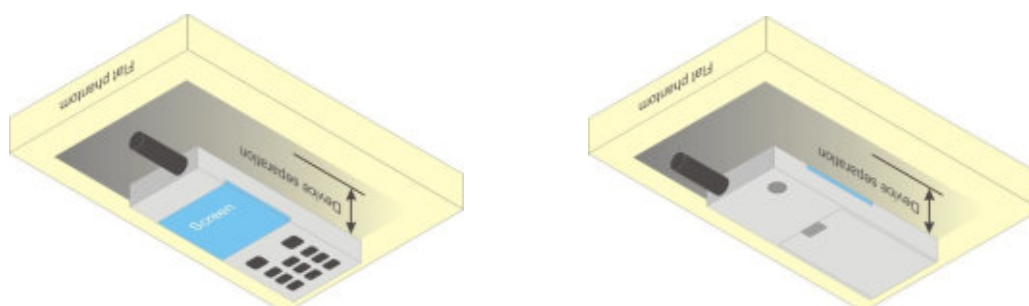


Fig 12.4 Body Worn Position

13.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, that can provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets and support voice calls next to the ear, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

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

13.6 Wireless Router

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

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

14. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<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.

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} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

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

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

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCCH, 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 $\beta_c = 11/15$ and $\beta_d = 15/15$.

Setup Configuration

HSUPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting * :
 - i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - ii. Set the Gain Factors (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} (Note 1)	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	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	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 $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

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

Note 3: For subtest 1 the 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, TF0) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

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

Note 5: 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
<WCDMA Conducted Power>
General Note:

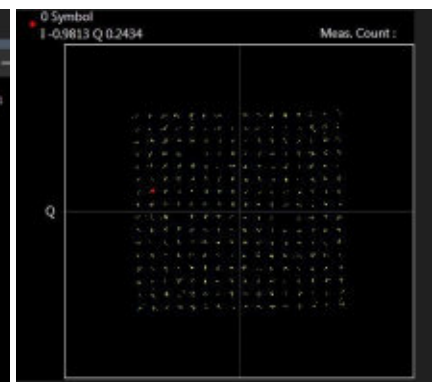
1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA is $\leq 1/4$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

<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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 $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B26 / B38 /B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B2 / B4 / B5 / B42(3450MHz ~ 3550MHz) / B43 / B38 SAR test was covered by B25 / B66 / B26 / B48 / 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 $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to May 2017 TCB workshop, for 16QAM and 64QAM, 256QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 256QAM, 64QAM and 16QAM signal modulation are correct.


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.

- 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “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
- Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

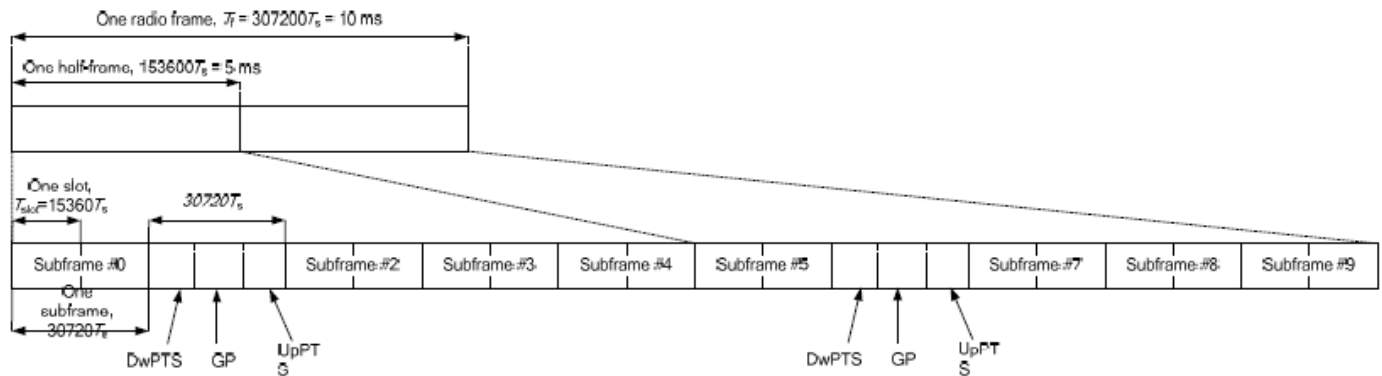


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

For LTE TDD Power class 2

- Uplink-downlink configuration: 1. In a half-frame consisted of 5 subframes, uplink operation is in 2 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(2+0.167)/5 = 43.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(2+0.143)/5 = 42.9\%$
- 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

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- 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_2C	Ant 2
CA_7C	Ant 2
CA_66B	Ant 2
CA_66C	Ant 2
CA_38C	Ant 2
CA_42C	Ant 3

<Intra-band>
General Note:

- The device supports intra-band uplink carrier aggregation for LTE B2/38/42//66/7 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.
- 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.
- 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.
- LTE CA_66B test was covered by LTE CA_66C; therefore, SAR was only assessed for LTE CA_66C.

<Inter-band uplink carrier aggregation consideration>

LTE Uplink CA	2CC Uplink Carrier Aggregation	
Inter-band	Antenna Tx	Antenna Tx
CA_2A-4A	Ant 2	Ant5
CA_2A-7A	Ant 2	Ant5
CA_2A-5A	Ant 2	Ant1
CA_2A-12A	Ant 2	Ant1
CA_2A-13A	Ant 2	Ant1
CA_2A-14A	Ant 2	Ant1
CA_2A-66A	Ant 2	Ant5
CA_2A-71A	Ant 2	Ant1
CA_4A-7A	Ant 2	Ant5
CA_4A-12A	Ant 2	Ant1
CA_5A-7A	Ant 1	Ant2
CA_5A-66A	Ant 1	Ant2
CA_7A-26A	Ant 2	Ant1
CA_7A-66A	Ant 2	Ant5
CA_12A-66A	Ant 1	Ant2
CA_13A-66A	Ant 1	Ant2
CA_14A-66A	Ant 1	Ant2
CA_66A-71A	Ant 2	Ant1

General Note:

1. The LTE inter band total power is the same as LTE standalone power.
2. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency $\leq 6\text{GHz}$). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.
3. For LTE inter-band CA mode, Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure between two LTE bands. Smart Transmit algorithm controls the total RF exposure base on LTE inter CA bands to not exceed FCC limit. In Part 1 Report, simultaneous transmission compliance was evaluated with other Radios (WLAN or BT) using standalone LTE SAR mode.

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n2/n5/n7 /n26/n41/n38/n66/n71/n77/n78 is NSA mode.
2. 5G NR n2/n5/n7 /n14/n25/n26/n30/n38/n41/n48/n66/n70/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. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
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 5G NR n41/n77/n78 HPUE, 5G NR n41/n77/n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission.

<3GPP 38.101 MPR for EN-DC>
Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
		$\leq 0.5^2$	$\leq 0.5^2$	0 ²
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
CP-OFDM	256 QAM	≤ 4.5		
	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_5A_n2A	Ant 1	Ant 2
DC_14A_n2A	Ant 1	Ant 2
DC_12A_n2A	Ant 1	Ant 2
DC_66A_n2A	Ant 5	Ant 2
DC_13A_n2A	Ant 1	Ant 2
DC_7A_n2A	Ant 5	Ant 2
DC_4A_n2A	Ant 5	Ant 2
DC_2A_n5A	Ant 2	Ant 1
DC_66A_n5A	Ant 2	Ant 1
DC_7A_n5A	Ant 2	Ant 1
DC_48A_n5A	Ant 7	Ant 1
DC_2A_n7A	Ant 5	Ant 2
DC_4A_n7A	Ant 5	Ant 2
DC_5A_n7A	Ant 1	Ant 2
DC_12A_n7A	Ant 1	Ant 2
DC_7A_n26A	Ant 2	Ant 1
DC_13A_n66A	Ant 1	Ant 2
DC_2A_n66A	Ant 5	Ant 2
DC_5A_n66A	Ant 1	Ant 2
DC_12A_n66A	Ant 1	Ant 2
DC_14A_n66A	Ant 1	Ant 2
DC_2A_n71A	Ant 2	Ant 1
DC_66A_n71A	Ant 2	Ant 1
DC_7A_n71A	Ant 2	Ant 1
DC_2A_n38A	Ant 5	Ant 2
DC_4A_n38A	Ant 5	Ant 2
DC_5A_n38A	Ant 1	Ant 2

DC_66A_n41A	Ant 5	Ant 2
DC_12A_n41A	Ant 1	Ant 2
DC_41A_n77A	Ant 2	Ant 3
DC_7A_n77A	Ant 2	Ant 3
DC_2A_n77A	Ant 2	Ant 3
DC_5A_n77A	Ant 1	Ant 7
DC_13A_n77A	Ant 1	Ant 7
DC_66A_n77A	Ant 2	Ant 3
DC_12A_n77A	Ant 1	Ant 7
DC_14A_n77A	Ant 1	Ant 7
DC_7A_n78A	Ant 2	Ant 3
DC_38A_n78A	Ant 2	Ant 3
DC_5A_n78A	Ant 1	Ant 7
DC_26A_n78A	Ant 1	Ant 7
DC_2A_n78A	Ant 2	Ant 3
DC_12A_n78A	Ant 1	Ant 7
DC_41A_n78A	Ant 2	Ant 3
DC_4A_n78A	Ant 2	Ant 3
DC_66A_n78A	Ant 2	Ant 3

UL MIMO combination:

NR UL MIMO	Antenna Tx
n77	ANT 3+ ANT 7
n78	ANT 3+ ANT 7

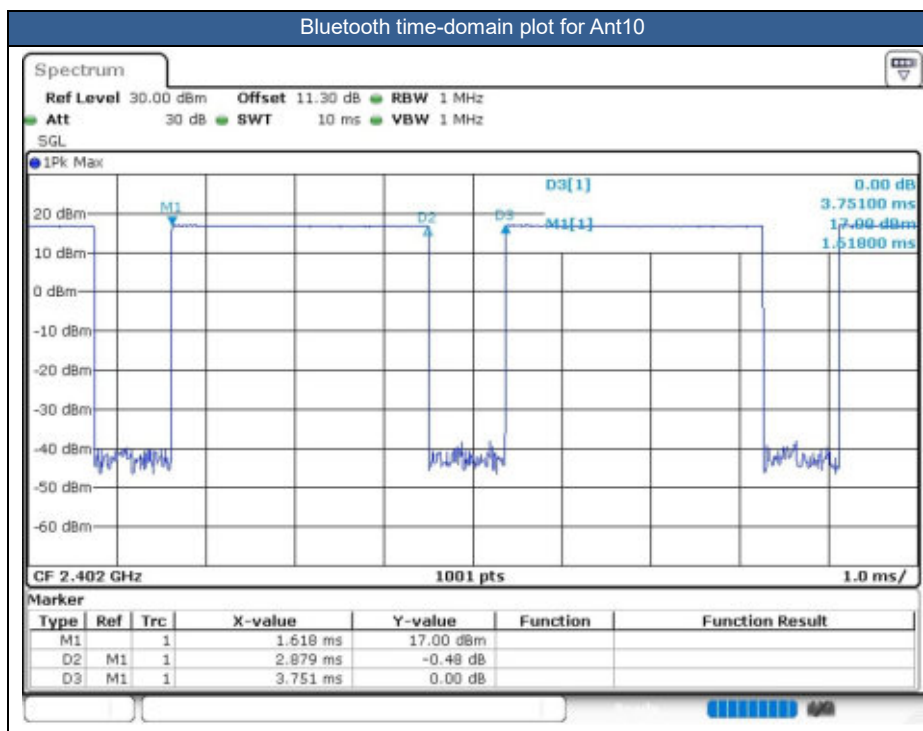
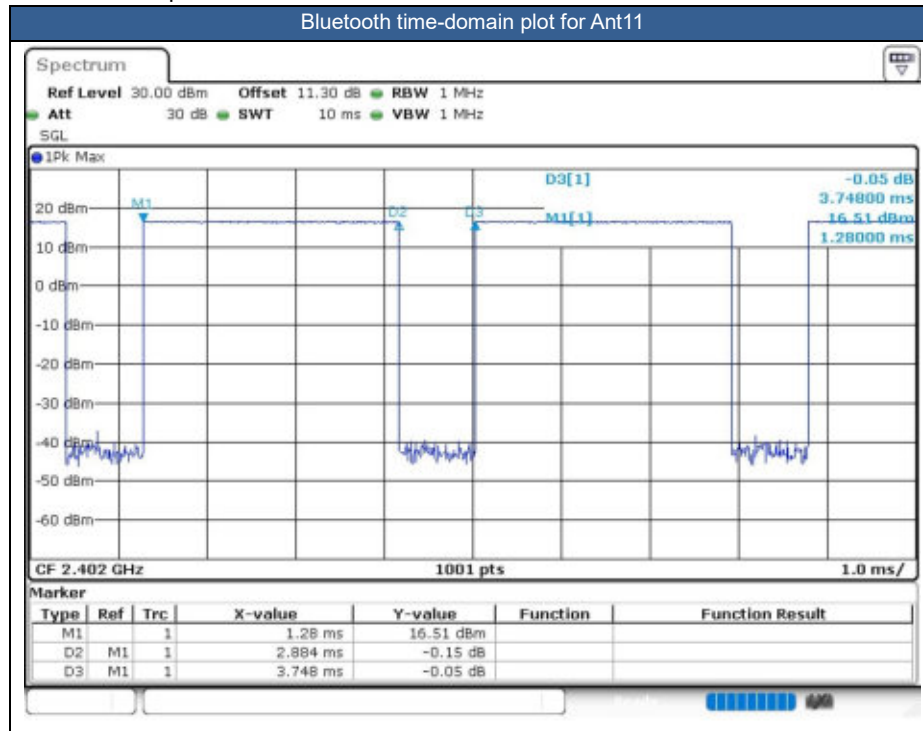
<WLAN Conducted Power>**General Note:**

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 MIMO antenna mode only.
8. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 76.95% for Ant11, 76.75% for Ant10 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





15. Antenna Location

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

16. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of 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 ≥ 0.8 W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The device implements proximity sensor /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. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
5. 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 WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of WLAN5.2GHz, 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 $\leq 25\text{mm}$ from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.

11. 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.

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 is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA .

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 $\frac{1}{2}$ 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 $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4 / B5 / B12 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE B2 / B4 / B5 / B42(3450MHz ~ 3550MHz) / B43 / B38 SAR test was covered by B25 / B66 / B26 / B48 / 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 $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

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 $\frac{1}{2}$ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
 - e. Smaller bandwidth output power for each RB allocation configuration for this device will not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
 - f. For 5G FR1 n5/n7/n26/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.

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	DSI 4/5	Receiver on
Body worn/ Hotspot/ Extremity (Handheld) SAR	DSI 1/3	Sensor On
Body worn/ Hotspot/ Extremity (Handheld) SAR	DSI 2/6	Sensor Off



16.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	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 1	DSI 4	133297	680.5	21.98	23.00	1.265	-	-	0.08	0.626	0.792
	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 4	133297	680.5	21.88	23.00	1.294	-	-	0.01	0.511	0.661
	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 4	133297	680.5	21.98	23.00	1.265	-	-	-0.08	0.447	0.565
	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 4	133297	680.5	21.88	23.00	1.294	-	-	-0.08	0.382	0.494
	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 4	133297	680.5	21.98	23.00	1.265	-	-	0.09	0.756	0.956
	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 4	133297	680.5	21.88	23.00	1.294	-	-	-0.18	0.638	0.826
	LTE Band 71	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 1	DSI 4	133297	680.5	21.61	23.00	1.377	-	-	0.1	0.626	0.862
	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 4	133297	680.5	21.98	23.00	1.265	-	-	0.12	0.662	0.837
02	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 4	133297	680.5	21.88	23.00	1.294	-	-	0.08	0.534	0.691
	LTE Band 71	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 1	DSI 4	133297	680.5	21.61	23.00	1.377	-	-	-0.17	0.536	0.738
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 4	23095	707.5	21.26	22.00	1.186	-	-	0.14	0.511	0.606
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 4	23095	707.5	21.18	22.00	1.208	-	-	0.11	0.415	0.501
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 4	23095	707.5	21.26	22.00	1.186	-	-	0.18	0.402	0.477
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 4	23095	707.5	21.18	22.00	1.208	-	-	0.14	0.312	0.377
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 4	23095	707.5	21.26	22.00	1.186	-	-	-0.19	0.631	0.748
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 4	23095	707.5	21.18	22.00	1.208	-	-	0.17	0.502	0.606
03	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 4	23095	707.5	21.26	22.00	1.186	-	-	0.01	0.535	0.634
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 4	23095	707.5	21.18	22.00	1.208	-	-	0.1	0.446	0.539
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 4	23230	782	21.85	23.00	1.303	-	-	-0.01	0.628	0.818
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 4	23230	782	21.70	23.00	1.349	-	-	-0.08	0.495	0.668
	LTE Band 13	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 4	23230	782	21.62	23.00	1.374	-	-	0.05	0.497	0.683
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 4	23230	782	21.85	23.00	1.303	-	-	0.06	0.483	0.629
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 4	23230	782	21.70	23.00	1.349	-	-	-0.09	0.373	0.503
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 4	23230	782	21.85	23.00	1.303	-	-	-0.12	0.682	0.889
04	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 4	23230	782	21.70	23.00	1.349	-	-	0.13	0.542	0.731
	LTE Band 13	10M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 4	23230	782	21.62	23.00	1.374	-	-	0.12	0.524	0.720
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 4	23230	782	21.85	23.00	1.303	-	-	0.03	0.596	0.777
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 4	23230	782	21.70	23.00	1.349	-	-	0.18	0.477	0.643
	LTE Band 14	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 4	23330	793	22.44	23.50	1.276	-	-	0.07	0.611	0.780
	LTE Band 14	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 4	23330	793	22.25	23.50	1.334	-	-	0.18	0.479	0.639
	LTE Band 14	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 4	23330	793	22.44	23.50	1.276	-	-	0.01	0.465	0.594
	LTE Band 14	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 4	23330	793	22.25	23.50	1.334	-	-	-0.15	0.360	0.480
05	LTE Band 14	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 4	23330	793	22.44	23.50	1.276	-	-	0.02	0.661	0.844
	LTE Band 14	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 4	23330	793	22.25	23.50	1.334	-	-	0.07	0.519	0.692
	LTE Band 14	10M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 4	23330	793	22.15	23.50	1.365	-	-	-0.18	0.505	0.689
	LTE Band 14	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 4	23330	793	22.44	23.50	1.276	-	-	0.03	0.572	0.730
	LTE Band 14	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 4	23330	793	22.25	23.50	1.334	-	-	-0.15	0.454	0.605
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 4	136100	680.5	21.47	22.00	1.130	-	-	-0.08	0.543	0.613
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 4	136100	680.5	21.39	22.00	1.151	-	-	-0.17	0.484	0.557
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 4	136100	680.5	21.47	22.00	1.130	-	-	-0.04	0.392	0.443
06	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 4	136100	680.5	21.39	22.00	1.151	-	-	-0.08	0.335	0.386
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 4	136100	680.5	21.47	22.00	1.130	-	-	-0.09	0.612	0.691
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 4	136100	680.5	21.39	22.00	1.151	-	-	0.18	0.586	0.674
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 4	136100	680.5	21.47	22.00	1.130	-	-	-0.08	0.572	0.646
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 4	136100	680.5	21.39	22.00	1.151	-	-	-0.13	0.539	0.620
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 4	158600	793	22.81	23.50	1.172	-	-	-0.03	0.596	0.699
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 4	158600	793	22.70	23.50	1.202	-	-	-0.03	0.544	0.654
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 4	158600	793	22.81	23.50	1.172	-	-	-0.07	0.444	0.520
06	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 4	158600	793	22.70	23.50	1.202	-	-	0.05	0.404	0.486
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 4	158600	793	22.81	23.50	1.172	-	-	-0.13	0.683	0.801



FCC SAR Test Report

Report No. : FA4O2403

	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 4	158600	793	22.70	23.50	1.202	-	-	-0.12	0.606	0.729
	FR1 n14	10M	QPSK	50	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 4	158600	793	22.49	23.50	1.262	-	-	0.01	0.607	0.766
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 4	158600	793	22.81	23.50	1.172	-	-	-0.16	0.587	0.688
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 4	158600	793	22.70	23.50	1.202	-	-	-0.02	0.524	0.630
835MHz																				
07	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 4	4182	836.4	21.65	22.50	1.216	-	-	0.02	0.755	0.918
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 4	4132	826.4	21.63	22.50	1.222	-	-	-0.17	0.705	0.861
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 4	4233	846.6	21.57	22.50	1.239	-	-	-0.03	0.702	0.870
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 4	4182	836.4	21.65	22.50	1.216	-	-	0.14	0.582	0.708
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 4	4182	836.4	21.65	22.50	1.216	-	-	0.18	0.702	0.854
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 4	4132	826.4	21.63	22.50	1.222	-	-	0.14	0.748	0.914
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 4	4233	846.6	21.57	22.50	1.239	-	-	-0.17	0.636	0.788
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 4	4182	836.4	21.65	22.50	1.216	-	-	0.17	0.627	0.763
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 4	26865	831.5	22.43	23.50	1.279	-	-	-0.17	0.609	0.779
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 1	DSI 4	26865	831.5	22.40	23.50	1.288	-	-	0.04	0.488	0.629
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 4	26865	831.5	22.43	23.50	1.279	-	-	-0.08	0.483	0.618
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 1	DSI 4	26865	831.5	22.40	23.50	1.288	-	-	0.05	0.394	0.508
08	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 4	26865	831.5	22.43	23.50	1.279	-	-	0.05	0.653	0.835
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 1	DSI 4	26865	831.5	22.40	23.50	1.288	-	-	-0.09	0.516	0.665
	LTE Band 26	15M	QPSK	75	0	-	Left Cheek	0mm	Ant 1	DSI 4	26865	831.5	22.19	23.50	1.352	-	-	-0.08	0.480	0.649
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 4	26865	831.5	22.43	23.50	1.279	-	-	0.13	0.575	0.736
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 1	DSI 4	26865	831.5	22.40	23.50	1.288	-	-	0.12	0.450	0.580
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 4	166300	831.5	23.34	24.00	1.164	-	-	0.16	0.670	0.780
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 4	166300	831.5	23.30	24.00	1.175	-	-	-0.1	0.640	0.752
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 4	166300	831.5	23.34	24.00	1.164	-	-	0.18	0.533	0.620
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 4	166300	831.5	23.30	24.00	1.175	-	-	-0.1	0.513	0.603
09	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 4	166300	831.5	23.34	24.00	1.164	-	-	-0.02	0.729	0.849
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 4	166300	831.5	23.30	24.00	1.175	-	-	-0.15	0.664	0.780
	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 4	166300	831.5	23.04	24.00	1.247	-	-	0.19	0.664	0.828
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 4	166300	831.5	23.34	24.00	1.164	-	-	0.07	0.647	0.753
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 4	166300	831.5	23.30	24.00	1.175	-	-	-0.18	0.581	0.683
1750MHz																				
10	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 4	1413	1732.6	18.10	20.00	1.549	-	-	-0.07	0.683	1.058
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 4	1312	1712.4	18.22	20.00	1.507	-	-	-0.1	0.666	1.003
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 4	1513	1752.6	18.16	20.00	1.528	-	-	0.18	0.676	1.033
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI 4	1413	1732.6	18.10	20.00	1.549	-	-	-0.17	0.356	0.551
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 4	1413	1732.6	18.10	20.00	1.549	-	-	0	0.274	0.424
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI 4	1413	1732.6	18.10	20.00	1.549	-	-	-0.09	0.249	0.386
11	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	132322	1745	19.00	20.50	1.413	-	-	-0.03	0.642	0.907
	LTE Band 66C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 2	DSI 4	132322+132520	1745+1764.8	18.89	20.50	1.449	-	-	0.01	0.602	0.872
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	132072	1720	18.74	20.50	1.500	-	-	-0.09	0.556	0.834
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	132572	1770	18.80	20.50	1.479	-	-	0.11	0.603	0.892
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	132322	1745	18.78	20.50	1.486	-	-	-0.05	0.503	0.747
	LTE Band 66	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 4	132322	1745	18.62	20.50	1.542	-	-	0.05	0.509	0.785
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 4	132322	1745	19.00	20.50	1.413	-	-	0.05	0.351	0.496
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 4	132322	1745	18.78	20.50	1.486	-	-	0.02	0.276	0.410
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 4	132322	1745	19.00	20.50	1.413	-	-	-0.18	0.272	0.384
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 4	132322	1745	18.78	20.50	1.486	-	-	-0.03	0.214	0.318
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 4	132322	1745	19.00	20.50	1.413	-	-	-0.01	0.217	0.307
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 4	132322	1745	18.78	20.50	1.486	-	-	-0.09	0.169	0.251
	LTE Band 66 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 4	132322	1745	23.99	25.00	1.262	-	-	-0.07	0.098	0.124
	LTE Band 66 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 4	132322	1745	22.95	24.00	1.274	-	-	0.05	0.071	0.090
	LTE Band 66 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 4	132322	1745	23.99	25.00	1.262	-	-	-0.11	0.055	0.069
	LTE Band 66 ENDC	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 4	132322	1745	22.95	24.00	1.274	-	-	-0.12	0.042	0.053



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	LTE Band 66 ENDC	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 4	132322	1745	23.99	25.00	1.262	-	-	0.03	0.155	0.196
	LTE Band 66 ENDC	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 4	132322	1745	22.95	24.00	1.274	-	-	-0.16	0.121	0.154
	LTE Band 66 ENDC	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 4	132322	1745	23.99	25.00	1.262	-	-	-0.02	0.000	0.000
	LTE Band 66 ENDC	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 4	132322	1745	22.95	24.00	1.274	-	-	0.15	0.000	0.000
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 4	340500	1702.5	23.57	25.00	1.390	-	-	-0.08	0.103	0.143
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 4	340500	1702.5	23.25	25.00	1.496	-	-	-0.13	0.114	0.171
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 4	340500	1702.5	23.57	25.00	1.390	-	-	-0.13	0.051	0.071
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 4	340500	1702.5	23.25	25.00	1.496	-	-	0.06	0.065	0.097
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 4	340500	1702.5	23.57	25.00	1.390	-	-	-0.03	0.175	0.243
12	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 4	340500	1702.5	23.25	25.00	1.496	-	-	0.08	0.248	0.371
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 4	340500	1702.5	23.57	25.00	1.390	-	-	-0.03	0.042	0.058
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 4	340500	1702.5	23.25	25.00	1.496	-	-	0.08	0.054	0.081
13	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	349000	1745	18.99	20.50	1.416	-	-	0.15	0.700	0.991
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	349000	1745	18.93	20.50	1.435	-	-	-0.15	0.683	0.980
	FR1 n66	30M	QPSK	160	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	349000	1745	18.61	20.50	1.545	-	-	-0.15	0.629	0.972
	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 4	349000	1745	18.99	20.50	1.416	-	-	0.11	0.334	0.473
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 4	349000	1745	18.93	20.50	1.435	-	-	-0.08	0.359	0.515
	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 4	349000	1745	18.99	20.50	1.416	-	-	-0.08	0.288	0.408
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 4	349000	1745	18.93	20.50	1.435	-	-	-0.04	0.305	0.438
	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 4	349000	1745	18.99	20.50	1.416	-	-	0.17	0.264	0.374
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 4	349000	1745	18.93	20.50	1.435	-	-	0.18	0.273	0.392
1900MHz																				
14	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 4	9400	1880	17.24	19.00	1.500	-	-	0.16	0.638	0.957
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 4	9262	1852.4	17.10	19.00	1.549	-	-	0.11	0.563	0.872
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 4	9538	1907.6	17.19	19.00	1.517	-	-	-0.08	0.628	0.953
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI 4	9400	1880	17.24	19.00	1.500	-	-	-0.1	0.341	0.511
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 4	9400	1880	17.24	19.00	1.500	-	-	-0.06	0.248	0.372
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI 4	9400	1880	17.24	19.00	1.500	-	-	-0.11	0.275	0.412
15	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	26340	1880	18.55	20.00	1.396	-	-	-0.13	0.681	0.951
	LTE Band 2C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 2	DSI 4	18900+ 19098	1880+ 1899.8	18.35	20.00	1.462	-	-	0.01	0.622	0.909
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	26140	1860	18.47	20.00	1.422	-	-	-0.05	0.605	0.861
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	26590	1905	18.52	20.00	1.406	-	-	-0.13	0.675	0.949
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	26340	1880	18.44	20.00	1.432	-	-	0.08	0.510	0.730
	LTE Band 25	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 4	26340	1880	18.29	20.00	1.483	-	-	-0.16	0.530	0.786
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 4	26340	1880	18.55	20.00	1.396	-	-	0.1	0.359	0.501
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 4	26340	1880	18.44	20.00	1.432	-	-	0	0.289	0.414
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 4	26340	1880	18.55	20.00	1.396	-	-	0.03	0.263	0.367
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 4	26340	1880	18.44	20.00	1.432	-	-	-0.15	0.209	0.299
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 4	26340	1880	18.55	20.00	1.396	-	-	0.1	0.283	0.395
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 4	26340	1880	18.44	20.00	1.432	-	-	-0.09	0.227	0.325
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 4	26340	1880	24.10	25.00	1.230	-	-	0.01	0.113	0.139
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 4	26340	1880	23.15	24.00	1.216	-	-	0.06	0.089	0.108
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 4	26340	1880	24.10	25.00	1.230	-	-	0.02	0.077	0.095
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 4	26340	1880	23.15	24.00	1.216	-	-	0.12	0.059	0.072
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 4	26340	1880	24.10	25.00	1.230	-	-	-0.16	0.183	0.225
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 4	26340	1880	23.15	24.00	1.216	-	-	-0.12	0.127	0.154
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 4	26340	1880	24.10	25.00	1.230	-	-	0.07	0.054	0.066
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 4	26340	1880	23.15	24.00	1.216	-	-	-0.02	0.044	0.054
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	376500	1882.5	18.11	19.50	1.377	-	-	0.09	0.663	0.913
	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	376500	1882.5	17.94	19.50	1.432	-	-	-0.02	0.698	1.000
16	FR1 n25	30M	QPSK	160	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	376500	1882.5	17.79	19.50	1.483	-	-	0.1	0.708	1.050
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 4	376500	1882.5	18.11	19.50	1.377	-	-	0.04	0.367	0.505



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	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 4	376500	1882.5	17.94	19.50	1.432	-	-	0.13	0.373	0.534
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 4	376500	1882.5	18.11	19.50	1.377	-	-	-0.11	0.287	0.395
	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 4	376500	1882.5	17.94	19.50	1.432	-	-	-0.16	0.328	0.470
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 4	376500	1882.5	18.11	19.50	1.377	-	-	-0.06	0.272	0.375
	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 4	376500	1882.5	17.94	19.50	1.432	-	-	-0.14	0.318	0.455
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 4	376000	1880	24.25	25.00	1.189	-	-	-0.13	0.163	0.194
	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 4	376000	1880	24.00	25.00	1.259	-	-	0.17	0.171	0.215
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 4	376000	1880	24.25	25.00	1.189	-	-	0.06	0.098	0.116
	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 4	376000	1880	24.00	25.00	1.259	-	-	0	0.115	0.145
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 4	376000	1880	24.25	25.00	1.189	-	-	-0.04	0.217	0.258
17	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 4	376000	1880	24.00	25.00	1.259	-	-	0.06	0.253	0.319
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 4	376000	1880	24.25	25.00	1.189	-	-	-0.15	0.072	0.086
	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 4	376000	1880	24.00	25.00	1.259	-	-	0.11	0.085	0.107
2300MHz																				
18	LTE Band 30	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	27710	2310	16.83	18.50	1.469	-	-	-0.08	0.672	0.987
	LTE Band 30	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 2	DSI 4	27710	2310	16.71	18.50	1.510	-	-	0.01	0.537	0.811
	LTE Band 30	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	27710	2310	16.56	18.50	1.563	-	-	-0.04	0.539	0.843
	LTE Band 30	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 4	27710	2310	16.83	18.50	1.469	-	-	0.13	0.413	0.607
	LTE Band 30	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 2	DSI 4	27710	2310	16.71	18.50	1.510	-	-	0.12	0.326	0.492
	LTE Band 30	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 4	27710	2310	16.83	18.50	1.469	-	-	0.08	0.186	0.273
	LTE Band 30	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 2	DSI 4	27710	2310	16.71	18.50	1.510	-	-	0.19	0.145	0.219
	LTE Band 30	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 4	27710	2310	16.83	18.50	1.469	-	-	0	0.181	0.266
	LTE Band 30	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 2	DSI 4	27710	2310	16.71	18.50	1.510	-	-	-0.03	0.143	0.216
19	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	462000	2310	17.17	18.50	1.358	-	-	-0.06	0.728	0.989
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	462000	2310	17.13	18.50	1.371	-	-	-0.06	0.690	0.946
	FR1 n30	10M	QPSK	50	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	462000	2310	16.88	18.50	1.452	-	-	-0.13	0.680	0.987
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 4	462000	2310	17.17	18.50	1.358	-	-	-0.01	0.357	0.485
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 4	462000	2310	17.13	18.50	1.371	-	-	-0.11	0.365	0.500
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 4	462000	2310	17.17	18.50	1.358	-	-	-0.14	0.182	0.247
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 4	462000	2310	17.13	18.50	1.371	-	-	-0.18	0.168	0.230
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 4	462000	2310	17.17	18.50	1.358	-	-	0.02	0.150	0.204
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 4	462000	2310	17.13	18.50	1.371	-	-	0.16	0.151	0.207
2600MHz																				
20	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	21100	2535	15.96	17.50	1.426	-	-	0.19	0.677	0.965
	LTE Band 7C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 2	DSI 4	21100+21298	2535+2554.8	15.85	17.50	1.462	-	-	0.02	0.614	0.898
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	20850	2510	15.85	17.50	1.462	-	-	-0.12	0.659	0.964
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	21350	2560	15.91	17.50	1.442	-	-	-0.03	0.613	0.884
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	21100	2535	15.81	17.50	1.476	-	-	0.02	0.545	0.804
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	20850	2510	15.71	17.50	1.510	-	-	0.12	0.532	0.803
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	21350	2560	15.72	17.50	1.507	-	-	0.02	0.486	0.732
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 4	21100	2535	15.65	17.50	1.531	-	-	-0.03	0.506	0.775
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 4	21100	2535	15.96	17.50	1.426	-	-	0.08	0.376	0.536
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 4	21100	2535	15.81	17.50	1.476	-	-	0.01	0.295	0.435
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 4	21100	2535	15.96	17.50	1.426	-	-	-0.08	0.121	0.172
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 4	21100	2535	15.81	17.50	1.476	-	-	0.01	0.093	0.137
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 4	21100	2535	15.96	17.50	1.426	-	-	0.03	0.118	0.168
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 4	21100	2535	15.81	17.50	1.476	-	-	-0.01	0.094	0.139
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 4	21100	2535	24.24	25.00	1.191	-	-	0.07	0.089	0.106
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 4	21100	2535	23.17	24.00	1.211	-	-	0.09	0.071	0.086
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 4	21100	2535	24.24	25.00	1.191	-	-	0.04	0.079	0.094
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 4	21100	2535	23.17	24.00	1.211	-	-	0.11	0.062	0.075
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 4	21100	2535	24.24	25.00	1.191	-	-	-0.13	0.171	0.204
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 4	21100	2535	23.17	24.00	1.211	-	-	0.12	0.135	0.163
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 4	21100	2535	24.24	25.00	1.191	-	-	-0.11	0.047	0.056
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 4	21100	2535	23.17	24.00	1.211	-	-	0.17	0.029	0.035
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 4	21100	2535	21.62	23.00	1.374	-	-	-0.16	0.049	0.067



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	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 4	21100	2535	20.67	22.00	1.358	-	-	-0.17	0.044	0.060
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 4	21100	2535	21.62	23.00	1.374	-	-	0.11	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 4	21100	2535	20.67	22.00	1.358	-	-	-0.05	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 4	21100	2535	21.62	23.00	1.374	-	-	-0.01	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 4	21100	2535	20.67	22.00	1.358	-	-	-0.14	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 4	21100	2535	21.62	23.00	1.374	-	-	-0.15	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 4	21100	2535	20.67	22.00	1.358	-	-	-0.12	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 8	DSI 4	21100	2535	22.31	23.00	1.172	-	-	0.01	0.430	0.504
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 8	DSI 4	21100	2535	22.29	23.00	1.178	-	-	0.05	0.632	0.744
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 8	DSI 4	21100	2535	22.31	23.00	1.172	-	-	0.01	0.149	0.175
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 8	DSI 4	21100	2535	22.29	23.00	1.178	-	-	0.02	0.249	0.293
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 8	DSI 4	21100	2535	22.31	23.00	1.172	-	-	-0.11	0.375	0.440
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 8	DSI 4	21100	2535	22.29	23.00	1.178	-	-	-0.01	0.586	0.690
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 8	DSI 4	21100	2535	22.31	23.00	1.172	-	-	0.09	0.195	0.229
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 8	DSI 4	21100	2535	22.29	23.00	1.178	-	-	0.1	0.142	0.167
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	40620	2593	17.73	19.00	1.340	62.9	1.006	-0.04	0.523	0.705
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	39750	2506	17.44	19.00	1.432	62.9	1.006	0.15	0.612	0.882
21	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	40185	2549.5	17.55	19.00	1.396	62.9	1.006	0.09	0.645	0.906
	LTE Band 38C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 2	DSI 4	37901+38099	2321.1+2340.9	17.32	19.00	1.472	62.9	1.006	0.01	0.602	0.892
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	41055	2636.5	17.51	19.00	1.409	62.9	1.006	-0.16	0.441	0.625
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	41490	2680	17.43	19.00	1.435	62.9	1.006	0.05	0.436	0.630
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	40620	2593	17.47	19.00	1.422	62.9	1.006	0.08	0.434	0.621
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	39750	2506	17.33	19.00	1.469	62.9	1.006	-0.03	0.501	0.740
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	40185	2549.5	17.44	19.00	1.432	62.9	1.006	-0.04	0.478	0.689
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	41055	2636.5	17.45	19.00	1.429	62.9	1.006	-0.09	0.352	0.506
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 4	41490	2680	17.33	19.00	1.469	62.9	1.006	0.18	0.347	0.513
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 4	40620	2593	17.40	19.00	1.445	62.9	1.006	0.11	0.387	0.563
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 4	40620	2593	17.73	19.00	1.340	62.9	1.006	0.07	0.292	0.394
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 4	40620	2593	17.47	19.00	1.422	62.9	1.006	0.17	0.224	0.321
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 4	40620	2593	17.73	19.00	1.340	62.9	1.006	-0.03	0.095	0.128
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 4	40620	2593	17.47	19.00	1.422	62.9	1.006	0.17	0.072	0.103
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 4	40620	2593	17.73	19.00	1.340	62.9	1.006	0.02	0.099	0.133
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 4	40620	2593	17.47	19.00	1.422	62.9	1.006	0	0.076	0.109
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 4	40185	2549.5	19.36	20.60	1.330	42.9	1.009	-0.05	0.644	0.865
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 4	40620	2593	24.74	25.00	1.062	62.9	1.006	0.02	0.096	0.103
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 4	40620	2593	23.67	24.00	1.079	62.9	1.006	0.01	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 4	40620	2593	24.74	25.00	1.062	62.9	1.006	0.18	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 4	40620	2593	23.67	24.00	1.079	62.9	1.006	0.02	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 4	40620	2593	24.74	25.00	1.062	62.9	1.006	0.16	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 4	40620	2593	23.67	24.00	1.079	62.9	1.006	0.06	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 4	40620	2593	24.74	25.00	1.062	62.9	1.006	-0.02	0.055	0.059
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 4	40620	2593	23.67	24.00	1.079	62.9	1.006	0.07	0.051	0.055
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 4	40620	2593	26.73	27.00	1.064	42.9	1.009	0.01	0.110	0.118
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	507000	2535	14.92	16.50	1.439	-	-	0.01	0.626	0.901
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	502000	2510	14.89	16.50	1.449	-	-	0.1	0.597	0.865
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	512000	2560	14.86	16.50	1.459	-	-	-0.17	0.585	0.853
22	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	507000	2535	14.87	16.50	1.455	-	-	0.07	0.629	0.915
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	502000	2510	14.73	16.50	1.503	-	-	0.04	0.606	0.911
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	512000	2560	14.66	16.50	1.528	-	-	-0.01	0.582	0.889
	FR1 n7	20M	QPSK	100	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 4	507000	2535	14.58	16.50	1.556	-	-	-0.08	0.555	0.864
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 4	507000	2535	14.92	16.50	1.439	-	-	0.05	0.340	0.489
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 4	507000	2535	14.87	16.50	1.455	-	-	-0.08	0.333	0.485
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 4	507000	2535	14.92	16.50	1.439	-	-	0.18	0.121	0.174
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 4	507000	2535	14.87	16.50	1.455	-	-	0.07	0.116	0.169
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 4	507000	2535	14.92	16.50	1.439	-	-	-0.15	0.102	0.147



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	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 4	507000	2535	14.87	16.50	1.455	-	-	-0.18	0.096	0.140
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 4	507000	2535	23.96	25.00	1.271	-	-	-0.15	0.138	0.175
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 4	507000	2535	23.67	25.00	1.358	-	-	-0.15	0.128	0.174
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 4	507000	2535	23.96	25.00	1.271	-	-	0.11	0.109	0.138
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 4	507000	2535	23.67	25.00	1.358	-	-	-0.08	0.122	0.166
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 4	507000	2535	23.96	25.00	1.271	-	-	-0.17	0.233	0.296
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 4	507000	2535	23.67	25.00	1.358	-	-	0.07	0.208	0.283
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 4	507000	2535	23.96	25.00	1.271	-	-	-0.08	0.072	0.091
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 4	507000	2535	23.67	25.00	1.358	-	-	-0.04	0.072	0.098
23	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 4	518598	2592.99	15.21	16.50	1.346	-	-	-0.02	0.724	0.974
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 4	518598	2592.99	15.08	16.50	1.387	-	-	0.05	0.640	0.888
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 4	518598	2592.99	14.87	16.50	1.455	-	-	0.05	0.592	0.862
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 4	518598	2592.99	15.21	16.50	1.346	-	-	-0.03	0.372	0.501
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 4	518598	2592.99	15.08	16.50	1.387	-	-	-0.15	0.308	0.427
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 4	518598	2592.99	15.21	16.50	1.346	-	-	0.07	0.135	0.182
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 4	518598	2592.99	15.08	16.50	1.387	-	-	0.16	0.114	0.158
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 4	518598	2592.99	15.21	16.50	1.346	-	-	-0.18	0.118	0.159
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 4	518598	2592.99	15.08	16.50	1.387	-	-	0.02	0.095	0.132
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 4	518598	2592.99	18.18	19.50	1.355	50	1.000	0.09	0.711	0.964
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 4	518598	2592.99	23.40	25.00	1.445	-	-	-0.07	0.091	0.132
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 4	518598	2592.99	23.67	25.00	1.358	-	-	0.05	0.111	0.151
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 4	518598	2592.99	23.40	25.00	1.445	-	-	-0.11	0.087	0.126
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 4	518598	2592.99	23.67	25.00	1.358	-	-	-0.12	0.105	0.143
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 4	518598	2592.99	23.40	25.00	1.445	-	-	0.03	0.132	0.191
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 4	518598	2592.99	23.67	25.00	1.358	-	-	-0.16	0.228	0.310
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 4	518598	2592.99	23.40	25.00	1.445	-	-	-0.02	0.047	0.068
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 4	518598	2592.99	23.67	25.00	1.358	-	-	0.15	0.074	0.101
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 4	518598	2592.99	25.82	27.00	1.312	50	1.000	-0.09	0.190	0.249
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 4	518598	2592.99	23.47	25.00	1.422	-	-	0.11	0.062	0.088
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 4	518598	2592.99	23.38	25.00	1.452	-	-	-0.05	0.068	0.099
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 4	518598	2592.99	23.47	25.00	1.422	-	-	-0.08	0.000	0.000
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 4	518598	2592.99	23.38	25.00	1.452	-	-	0.16	0.000	0.000
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 4	518598	2592.99	23.47	25.00	1.422	-	-	0.05	0.038	0.054
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 4	518598	2592.99	23.38	25.00	1.452	-	-	0.05	0.039	0.057
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 4	518598	2592.99	23.47	25.00	1.422	-	-	-0.03	0.041	0.058
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 4	518598	2592.99	23.38	25.00	1.452	-	-	-0.15	0.040	0.058
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 4	518598	2592.99	25.35	27.00	1.462	50	1.000	0.02	0.049	0.072
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 4	518598	2592.99	21.11	22.00	1.227	-	-	0.05	0.663	0.814
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 4	518598	2592.99	21.05	22.00	1.245	-	-	0.16	0.576	0.717
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 4	518598	2592.99	20.82	22.00	1.312	-	-	-0.03	0.570	0.748
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 4	518598	2592.99	21.11	22.00	1.227	-	-	0.07	0.277	0.340
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 4	518598	2592.99	21.05	22.00	1.245	-	-	0	0.256	0.319
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 4	518598	2592.99	21.11	22.00	1.227	-	-	0.01	0.587	0.721
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 4	518598	2592.99	21.05	22.00	1.245	-	-	-0.01	0.550	0.684
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 4	518598	2592.99	21.11	22.00	1.227	-	-	-0.04	0.133	0.163
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 4	518598	2592.99	21.05	22.00	1.245	-	-	-0.09	0.129	0.161
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 4	518598	2592.99	23.72	25.00	1.343	50	1.000	0.02	0.640	0.859
3500MHz																				
24	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 4	42590	3500	22.13	23.00	1.222	62.9	1.006	-0.09	0.705	0.867
	LTE Band 42C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 3	DSI 4	42590+42788	3500+3519.8	22.08	23.00	1.236	62.9	1.006	0.03	0.622	0.773
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 4	42190	3460	22.00	23.00	1.259	62.9	1.006	-0.17	0.651	0.824
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 4	42990	3540	21.92	23.00	1.282	62.9	1.006	-0.1	0.658	0.849
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 4	42590	3500	21.98	23.00	1.265	62.9	1.006	0.18	0.545	0.693
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 4	42190	3460	21.81	23.00	1.315	62.9	1.006	-0.17	0.572	0.757
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 4	42990	3540	21.82	23.00	1.312	62.9	1.006	-0.04	0.568	0.750
	LTE Band 42	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 3	DSI 4	42590	3500	21.77	23.00	1.327	62.9	1.006	-0.05	0.545	0.728



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	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 4	42590	3500	22.13	23.00	1.222	62.9	1.006	0	0.179	0.220
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 4	42590	3500	21.98	23.00	1.265	62.9	1.006	-0.13	0.227	0.289
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 4	42590	3500	22.13	23.00	1.222	62.9	1.006	-0.01	0.499	0.613
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 4	42190	3460	22.00	23.00	1.259	62.9	1.006	-0.09	0.413	0.523
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 4	42990	3540	21.92	23.00	1.282	62.9	1.006	0.05	0.570	0.735
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 4	42590	3500	21.98	23.00	1.265	62.9	1.006	0.02	0.386	0.491
	LTE Band 42	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI 4	42590	3500	21.77	23.00	1.327	62.9	1.006	0.06	0.415	0.554
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 4	42590	3500	22.13	23.00	1.222	62.9	1.006	0	0.142	0.175
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 4	42590	3500	21.98	23.00	1.265	62.9	1.006	-0.04	0.118	0.150
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 4	55830	3609	22.68	23.50	1.208	62.9	1.006	0.04	0.684	0.831
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 4	55340	3560	22.53	23.50	1.250	62.9	1.006	-0.04	0.655	0.824
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 4	56150	3641	22.66	23.50	1.213	62.9	1.006	-0.01	0.590	0.720
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 4	56640	3690	22.53	23.50	1.250	62.9	1.006	0	0.336	0.423
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 4	55830	3609	22.66	23.50	1.213	62.9	1.006	-0.11	0.542	0.662
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 4	55340	3560	22.41	23.50	1.285	62.9	1.006	-0.06	0.533	0.689
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 4	56150	3641	22.40	23.50	1.288	62.9	1.006	-0.15	0.453	0.587
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 4	56640	3690	22.65	23.50	1.216	62.9	1.006	0.03	0.260	0.318
	LTE Band 48	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 3	DSI 4	55830	3609	22.44	23.50	1.276	62.9	1.006	-0.13	0.549	0.705
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 4	55830	3609	22.68	23.50	1.208	62.9	1.006	0.16	0.193	0.235
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 4	55830	3609	22.66	23.50	1.213	62.9	1.006	-0.15	0.159	0.194
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 4	55830	3609	22.68	23.50	1.208	62.9	1.006	-0.02	0.377	0.458
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 4	55830	3609	22.66	23.50	1.213	62.9	1.006	-0.09	0.304	0.371
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 4	55830	3609	22.68	23.50	1.208	62.9	1.006	-0.07	0.098	0.119
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 4	55830	3609	22.66	23.50	1.213	62.9	1.006	0.11	0.081	0.099
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 7	DSI 4	55830	3609	17.84	19.00	1.306	62.9	1.006	-0.08	0.637	0.837
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 7	DSI 4	55340	3560	17.65	19.00	1.365	62.9	1.006	-0.1	0.607	0.833
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 7	DSI 4	56150	3641	17.79	19.00	1.321	62.9	1.006	-0.01	0.626	0.832
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 7	DSI 4	56640	3690	17.66	19.00	1.361	62.9	1.006	-0.09	0.620	0.849
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 7	DSI 4	55830	3609	17.74	19.00	1.337	62.9	1.006	-0.06	0.631	0.848
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 7	DSI 4	55340	3560	17.50	19.00	1.413	62.9	1.006	-0.17	0.575	0.817
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 7	DSI 4	56150	3641	17.67	19.00	1.358	62.9	1.006	-0.01	0.622	0.850
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 7	DSI 4	56640	3690	17.59	19.00	1.384	62.9	1.006	-0.11	0.616	0.857
	LTE Band 48 ENDC	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 7	DSI 4	55830	3609	17.59	19.00	1.384	62.9	1.006	0.14	0.609	0.848
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 7	DSI 4	55830	3609	17.84	19.00	1.306	62.9	1.006	0.03	0.564	0.741
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 7	DSI 4	55340	3560	17.65	19.00	1.365	62.9	1.006	0.1	0.516	0.708
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 7	DSI 4	56150	3641	17.79	19.00	1.321	62.9	1.006	0.16	0.573	0.762
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 7	DSI 4	56640	3690	17.66	19.00	1.361	62.9	1.006	-0.06	0.602	0.825
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 7	DSI 4	55830	3609	17.74	19.00	1.337	62.9	1.006	0.02	0.562	0.756
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 7	DSI 4	55340	3560	17.50	19.00	1.413	62.9	1.006	-0.16	0.502	0.713
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 7	DSI 4	56150	3641	17.67	19.00	1.358	62.9	1.006	0.05	0.591	0.808
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 7	DSI 4	56640	3690	17.59	19.00	1.384	62.9	1.006	-0.03	0.572	0.796
	LTE Band 48 ENDC	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 7	DSI 4	55830	3609	17.59	19.00	1.384	62.9	1.006	0.17	0.570	0.793
25	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	DSI 4	55830	3609	17.84	19.00	1.306	62.9	1.006	0.11	0.654	0.859
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	DSI 4	55340	3560	17.65	19.00	1.365	62.9	1.006	-0.15	0.616	0.846
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	DSI 4	56150	3641	17.79	19.00	1.321	62.9	1.006	0.16	0.578	0.768
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	DSI 4	56640	3690	17.66	19.00	1.361	62.9	1.006	0.05	0.611	0.837
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	DSI 4	55830	3609	17.74	19.00	1.337	62.9	1.006	-0.06	0.628	0.844
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	DSI 4	55340	3560	17.50	19.00	1.413	62.9	1.006	-0.13	0.580	0.824
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	DSI 4	56150	3641	17.67	19.00	1.358	62.9	1.006	-0.01	0.613	0.838



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	ENDC																			
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	DSI 4	56640	3690	17.59	19.00	1.384	62.9	1.006	-0.11	0.592	0.824
	LTE Band 48 ENDC	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 7	DSI 4	55830	3609	17.59	19.00	1.384	62.9	1.006	0.19	0.607	0.845
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	DSI 4	55830	3609	17.84	19.00	1.306	62.9	1.006	-0.14	0.629	0.827
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	DSI 4	55340	3560	17.65	19.00	1.365	62.9	1.006	-0.18	0.609	0.836
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	DSI 4	56150	3641	17.79	19.00	1.321	62.9	1.006	-0.06	0.613	0.815
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	DSI 4	56640	3690	17.66	19.00	1.361	62.9	1.006	0.02	0.555	0.760
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 7	DSI 4	55830	3609	17.74	19.00	1.337	62.9	1.006	0.16	0.599	0.805
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 7	DSI 4	55340	3560	17.50	19.00	1.413	62.9	1.006	0.01	0.573	0.814
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 7	DSI 4	56150	3641	17.67	19.00	1.358	62.9	1.006	-0.04	0.603	0.824
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 7	DSI 4	56640	3690	17.59	19.00	1.384	62.9	1.006	0.13	0.604	0.841
	LTE Band 48 ENDC	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 7	DSI 4	55830	3609	17.59	19.00	1.384	62.9	1.006	0.12	0.609	0.848
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	641666	3624.99	18.24	19.50	1.337	-	-	0.07	0.599	0.801
26	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	638000	3570	18.13	19.50	1.371	-	-	-0.01	0.645	0.884
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	645332	3679.98	18.18	19.50	1.355	-	-	0.08	0.602	0.816
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	641666	3624.99	18.11	19.50	1.377	-	-	0.19	0.637	0.877
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	638000	3570	17.97	19.50	1.422	-	-	0.03	0.602	0.856
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	645332	3679.98	18.03	19.50	1.403	-	-	0.01	0.556	0.780
	FR1 n48	40M	QPSK	100	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	641666	3624.99	17.96	19.50	1.426	-	-	-0.03	0.474	0.676
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 4	641666	3624.99	18.24	19.50	1.337	-	-	0.07	0.128	0.171
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 4	641666	3624.99	18.11	19.50	1.377	-	-	-0.12	0.174	0.240
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 4	641666	3624.99	18.24	19.50	1.337	-	-	-0.03	0.322	0.430
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 4	641666	3624.99	18.11	19.50	1.377	-	-	0.02	0.398	0.548
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 4	641666	3624.99	18.24	19.50	1.337	-	-	0.05	0.068	0.091
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 4	641666	3624.99	18.11	19.50	1.377	-	-	0	0.075	0.103
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	656000	3840	18.99	19.50	1.125	-	-	0.02	0.087	0.098
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	656000	3840	18.92	19.50	1.143	-	-	0.07	0.061	0.070
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 4	656000	3840	18.99	19.50	1.125	-	-	0.15	0.042	0.047
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 4	656000	3840	18.92	19.50	1.143	-	-	-0.05	0.029	0.033
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 4	656000	3840	18.99	19.50	1.125	-	-	-0.08	0.054	0.061
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 4	656000	3840	18.92	19.50	1.143	-	-	-0.08	0.036	0.041
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 4	656000	3840	18.99	19.50	1.125	-	-	-0.13	0.020	0.022
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 4	656000	3840	18.92	19.50	1.143	-	-	0.01	0.015	0.017
	FR1 n77 Part 27O HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	656000	3840	21.66	22.50	1.213	50	1.000	-0.11	0.085	0.103
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	633332	3499.98	18.81	19.50	1.172	-	-	-0.01	0.506	0.593
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	633332	3499.98	18.67	19.50	1.211	-	-	0.01	0.660	0.799
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 4	633332	3499.98	18.81	19.50	1.172	-	-	0.1	0.209	0.245
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 4	633332	3499.98	18.67	19.50	1.211	-	-	-0.04	0.230	0.278
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 4	633332	3499.98	18.81	19.50	1.172	-	-	0.15	0.267	0.313
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 4	633332	3499.98	18.67	19.50	1.211	-	-	0.09	0.394	0.477
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 4	633332	3499.98	18.81	19.50	1.172	-	-	0.05	0.113	0.132
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 4	633332	3499.98	18.67	19.50	1.211	-	-	0.08	0.125	0.151
	FR1 n77 Part 27Q HPUE	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 4	633332	3499.98	21.49	22.50	1.262	50	1.000	-0.18	0.596	0.752
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 4	656000	3840	16.53	18.00	1.403	-	-	-0.08	0.287	0.403
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 4	656000	3840	16.44	18.00	1.432	-	-	-0.05	0.236	0.338
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 4	656000	3840	16.53	18.00	1.403	-	-	0.17	0.305	0.428
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 4	656000	3840	16.44	18.00	1.432	-	-	-0.14	0.266	0.381
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 4	656000	3840	16.53	18.00	1.403	-	-	-0.06	0.390	0.547
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 4	656000	3840	16.44	18.00	1.432	-	-	-0.02	0.408	0.584
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 4	656000	3840	16.53	18.00	1.403	-	-	-0.12	0.366	0.513



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	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 4	656000	3840	16.44	18.00	1.432	-	-	-0.16	0.378	0.541
	FR1 n77 Part 27Q HPUE ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 4	656000	3840	19.70	21.00	1.349	50	1.000	0.17	0.406	0.548
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 4	633332	3499.98	16.49	18.00	1.416	-	-	0.02	0.482	0.682
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 4	633332	3499.98	16.36	18.00	1.459	-	-	0	0.479	0.699
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 4	633332	3499.98	16.49	18.00	1.416	-	-	-0.11	0.385	0.545
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 4	633332	3499.98	16.36	18.00	1.459	-	-	-0.05	0.395	0.576
27	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 4	633332	3499.98	16.49	18.00	1.416	-	-	-0.06	0.656	0.929
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 4	633332	3499.98	16.36	18.00	1.459	-	-	-0.08	0.502	0.732
	FR1 n77 Part 27Q ENDC	100M	BPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 4	633332	3499.98	16.19	18.00	1.517	-	-	0	0.422	0.640
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 4	633332	3499.98	16.49	18.00	1.416	-	-	-0.14	0.459	0.650
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 4	633332	3499.98	16.36	18.00	1.459	-	-	0.01	0.472	0.689
	FR1 n77 Part 27Q HPUE ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 4	633332	3499.98	19.36	21.00	1.459	50	1.000	0.02	0.592	0.864
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 4	656000	3840	25.55	26.00	1.109	-	-	0.14	0.037	0.041
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 4	656000	3840	25.48	26.00	1.127	-	-	0.11	0.043	0.048
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 4	656000	3840	25.55	26.00	1.109	-	-	-0.05	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 4	656000	3840	25.48	26.00	1.127	-	-	0.18	0.026	0.029
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 4	656000	3840	25.55	26.00	1.109	-	-	0.14	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 4	656000	3840	25.48	26.00	1.127	-	-	-0.17	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 4	656000	3840	25.55	26.00	1.109	-	-	0.17	0.050	0.055
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 4	656000	3840	25.48	26.00	1.127	-	-	-0.05	0.053	0.060
	FR1 n77 Part 27Q HPUE	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 4	656000	3840	27.41	29.00	1.442	50	1.000	0.01	0.044	0.063
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 4	633332	3499.98	25.69	26.00	1.074	-	-	0.1	0.051	0.055
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 4	633332	3499.98	25.67	26.00	1.079	-	-	-0.17	0.052	0.056
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 4	633332	3499.98	25.69	26.00	1.074	-	-	0.04	0.052	0.056
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 4	633332	3499.98	25.67	26.00	1.079	-	-	-0.01	0.044	0.047
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 4	633332	3499.98	25.69	26.00	1.074	-	-	-0.08	0.104	0.112
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 4	633332	3499.98	25.67	26.00	1.079	-	-	0.05	0.071	0.077
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 4	633332	3499.98	25.69	26.00	1.074	-	-	0.06	0.036	0.039
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 4	633332	3499.98	25.67	26.00	1.079	-	-	-0.09	0.000	0.000
	FR1 n77 Part 27Q HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 4	633332	3499.98	27.96	29.00	1.271	50	1.000	-0.08	0.080	0.102
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 4	656000	3840	23.80	25.00	1.318	-	-	-0.08	0.042	0.055
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 4	656000	3840	23.76	25.00	1.330	-	-	-0.17	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 4	656000	3840	23.80	25.00	1.318	-	-	-0.08	0.084	0.111
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 4	656000	3840	23.76	25.00	1.330	-	-	-0.04	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 4	656000	3840	23.80	25.00	1.318	-	-	-0.08	0.041	0.054
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 4	656000	3840	23.76	25.00	1.330	-	-	0.17	0.040	0.053
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 4	656000	3840	23.80	25.00	1.318	-	-	0.18	0.034	0.045
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 4	656000	3840	23.76	25.00	1.330	-	-	-0.04	0.033	0.044
	FR1 n77 Part 27Q HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 4	656000	3840	25.77	27.00	1.327	50	1.000	-0.08	0.072	0.096
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 4	633332	3499.98	22.69	24.00	1.352	-	-	-0.13	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 4	633332	3499.98	22.51	24.00	1.409	-	-	-0.13	0.029	0.041
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 4	633332	3499.98	22.69	24.00	1.352	-	-	0.06	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 4	633332	3499.98	22.51	24.00	1.409	-	-	-0.03	0.039	0.055
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 4	633332	3499.98	22.69	24.00	1.352	-	-	-0.03	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 4	633332	3499.98	22.51	24.00	1.409	-	-	0.08	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 4	633332	3499.98	22.69	24.00	1.352	-	-	-0.07	0.000	0.000
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 4	633332	3499.98	22.51	24.00	1.409	-	-	0.05	0.000	0.000
	FR1 n77 Part 27Q HPUE	100M	BPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 4	633332	3499.98	24.38	26.00	1.452	50	1.000	-0.11	0.029	0.042



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 11+10	Standalone	6	2437	17.43	18.00	1.141	100	1.000	0.05	0.100	0.114
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 11+10	Standalone	6	2437	17.43	18.00	1.141	100	1.000	0.08	0.075	0.086
28	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 11+10	Standalone	6	2437	17.43	18.00	1.141	100	1.000	-0.13	0.264	0.301
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 11+10	Standalone	6	2437	17.43	18.00	1.141	100	1.000	-0.01	0.153	0.175
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 11+10(11)	Standalone	1	2412	14.10	15.00	1.230	100	1.000	0.17	0.223	0.274
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 11+10(11)	Standalone	11	2462	14.00	15.00	1.259	100	1.000	-0.06	0.211	0.266
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	-0.17	0.004	0.005
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	0.04	0.003	0.004
29	Bluetooth	1Mbps	Left Cheek	0mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	0.17	0.010	0.013
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	-0.01	0.004	0.005
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 11	Full Power	0	2402	8.20	10.00	1.514	76.95	1.083	-0.08	0.007	0.011
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 11	Full Power	78	2480	8.30	10.00	1.479	76.95	1.083	0.05	0.006	0.010
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	0.14	0.001	0.001
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	-0.16	0.001	0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	-0.02	0.002	0.002
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	0.1	0.001	0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 10	Full Power	39	2441	9.30	9.50	1.047	76.75	1.085	-0.1	0.001	0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 10	Full Power	78	2480	7.70	9.50	1.514	76.75	1.085	-0.05	0.001	0.002
5000MHz																
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 11+10(11)	Standalone	54	5270	16.95	18.50	1.429	100	1.000	-0.17	0.172	0.246
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 11+10(11)	Standalone	54	5270	16.95	18.50	1.429	100	1.000	-0.03	0.117	0.167
30	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 11+10(11)	Standalone	54	5270	16.95	18.50	1.429	100	1.000	-0.01	0.808	1.155
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 11+10(11)	Standalone	54	5270	16.95	18.50	1.429	100	1.000	-0.05	0.333	0.476
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 11+10(10)	Standalone	62	5310	15.70	17.50	1.514	100	1.000	0.11	0.708	1.072
	WLAN5.3GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 11+10(11)	Simultaneous	50	5250	12.11	14.00	1.545	100	1.000	0.14	0.245	0.379
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 11+10(11)	Standalone	138	5690	16.57	18.50	1.560	100	1.000	-0.08	0.130	0.203
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 11+10(11)	Standalone	138	5690	16.57	18.50	1.560	100	1.000	-0.08	0.084	0.131
31	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11+10(11)	Standalone	138	5690	16.57	18.50	1.560	100	1.000	0.02	0.768	1.198
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 11+10(11)	Standalone	138	5690	16.57	18.50	1.560	100	1.000	-0.18	0.234	0.365
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11+10(11)	Standalone	106	5530	15.37	17.00	1.455	100	1.000	0.12	0.496	0.722
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11+10(11)	Standalone	122	5610	16.55	18.50	1.567	100	1.000	0.09	0.686	1.075
	WLAN5.5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 11+10(10)	Simultaneous	114	5570	11.81	13.50	1.476	100	1.000	0.1	0.249	0.367
	WLAN5.8GHz	802.11ax-HE20 MCS0	Right Cheek	0mm	Ant 11+10(11)	Standalone	157	5785	11.60	13.50	1.549	100	1.000	0.08	0.029	0.045
	WLAN5.8GHz	802.11ax-HE20 MCS0	Right Tilted	0mm	Ant 11+10(11)	Standalone	157	5785	11.60	13.50	1.549	100	1.000	0.01	0.026	0.040
32	WLAN5.8GHz	802.11ax-HE20 MCS0	Left Cheek	0mm	Ant 11+10(11)	Standalone	157	5785	11.60	13.50	1.549	100	1.000	0.01	0.079	0.122
	WLAN5.8GHz	802.11ax-HE20 MCS0	Left Tilted	0mm	Ant 11+10(11)	Standalone	157	5785	11.60	13.50	1.549	100	1.000	0.03	0.032	0.050
	WLAN5.8GHz	802.11ax-HE20 MCS0	Left Cheek	0mm	Ant 11+10(10)	Standalone	149	5745	10.22	12.00	1.507	100	1.000	0.09	0.055	0.083
	WLAN5.8GHz	802.11ax-HE20 MCS0	Left Cheek	0mm	Ant 11+10(11)	Standalone	165	5825	11.17	13.00	1.524	100	1.000	0.01	0.062	0.094



16.2 Hotspot SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
33	LTE Band 71	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	133297	680.5	23.84	25.00	1.306	-	-	0.06	0.258	0.337
	LTE Band 71	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 6	133297	680.5	22.67	24.00	1.358	-	-	-0.09	0.228	0.310
	LTE Band 71	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	133297	680.5	23.84	25.00	1.306	-	-	0.09	0.280	0.366
	LTE Band 71	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 6	133297	680.5	22.67	24.00	1.358	-	-	-0.08	0.242	0.329
	LTE Band 71	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 6	133297	680.5	23.84	25.00	1.306	-	-	0.13	0.090	0.118
	LTE Band 71	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 6	133297	680.5	22.67	24.00	1.358	-	-	0.12	0.079	0.107
	LTE Band 71	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 6	133297	680.5	23.84	25.00	1.306	-	-	0.03	0.149	0.195
	LTE Band 71	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 6	133297	680.5	22.67	24.00	1.358	-	-	0.18	0.076	0.103
34	LTE Band 71	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 6	133297	680.5	23.84	25.00	1.306	-	-	0.16	0.185	0.242
	LTE Band 71	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI 6	133297	680.5	22.67	24.00	1.358	-	-	-0.1	0.154	0.209
	LTE Band 12	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	23095	707.5	24.16	25.00	1.213	-	-	0.07	0.230	0.279
	LTE Band 12	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 6	23095	707.5	22.87	24.00	1.297	-	-	0.18	0.196	0.254
	LTE Band 12	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	23095	707.5	24.16	25.00	1.213	-	-	0.01	0.254	0.308
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 6	23095	707.5	22.87	24.00	1.297	-	-	-0.1	0.213	0.276
	LTE Band 12	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 6	23095	707.5	24.16	25.00	1.213	-	-	0.01	0.069	0.084
	LTE Band 12	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 6	23095	707.5	22.87	24.00	1.297	-	-	-0.15	0.051	0.066
35	LTE Band 12	10M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 6	23095	707.5	24.16	25.00	1.213	-	-	0.19	0.133	0.161
	LTE Band 12	10M	QPSK	25	0	-	Right Side	10mm	Ant 1	DSI 6	23095	707.5	22.87	24.00	1.297	-	-	0.07	0.104	0.135
	LTE Band 12	10M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 6	23095	707.5	24.16	25.00	1.213	-	-	-0.18	0.224	0.272
	LTE Band 12	10M	QPSK	25	0	-	Top Side	10mm	Ant 1	DSI 6	23095	707.5	22.87	24.00	1.297	-	-	0.03	0.188	0.244
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	23230	782	23.79	25.00	1.321	-	-	-0.15	0.477	0.630
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 6	23230	782	22.84	24.00	1.306	-	-	-0.15	0.355	0.464
	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	23230	782	23.79	25.00	1.321	-	-	0.18	0.589	0.778
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 6	23230	782	22.84	24.00	1.306	-	-	0.11	0.480	0.627
36	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 6	23230	782	23.79	25.00	1.321	-	-	-0.08	0.074	0.098
	LTE Band 13	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 6	23230	782	22.84	24.00	1.306	-	-	-0.17	0.060	0.078
	LTE Band 13	10M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 6	23230	782	23.79	25.00	1.321	-	-	-0.08	0.174	0.230
	LTE Band 13	10M	QPSK	25	0	-	Right Side	10mm	Ant 1	DSI 6	23230	782	22.84	24.00	1.306	-	-	-0.04	0.138	0.180
	LTE Band 13	10M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 6	23230	782	23.79	25.00	1.321	-	-	-0.08	0.379	0.501
	LTE Band 13	10M	QPSK	25	0	-	Top Side	10mm	Ant 1	DSI 6	23230	782	22.84	24.00	1.306	-	-	0.17	0.313	0.409
	LTE Band 14	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	23330	793	23.82	25.00	1.312	-	-	0.18	0.503	0.660
	LTE Band 14	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 6	23330	793	22.86	24.00	1.300	-	-	-0.04	0.409	0.532
37	LTE Band 14	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	23330	793	23.82	25.00	1.312	-	-	0.01	0.596	0.782
	LTE Band 14	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 6	23330	793	22.86	24.00	1.300	-	-	-0.08	0.456	0.593
	LTE Band 14	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 6	23330	793	23.82	25.00	1.312	-	-	-0.13	0.081	0.106
	LTE Band 14	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 6	23330	793	22.86	24.00	1.300	-	-	-0.13	0.067	0.087
	LTE Band 14	10M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 6	23330	793	23.82	25.00	1.312	-	-	0.06	0.155	0.203
	LTE Band 14	10M	QPSK	25	0	-	Right Side	10mm	Ant 1	DSI 6	23330	793	22.86	24.00	1.300	-	-	-0.03	0.113	0.147
	LTE Band 14	10M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 6	23330	793	23.82	25.00	1.312	-	-	-0.03	0.399	0.524
	LTE Band 14	10M	QPSK	25	0	-	Top Side	10mm	Ant 1	DSI 6	23330	793	22.86	24.00	1.300	-	-	0.08	0.286	0.372
37	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	136100	680.5	24.37	25.00	1.156	-	-	-0.07	0.282	0.326
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	136100	680.5	24.17	25.00	1.211	-	-	0.05	0.311	0.376
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	136100	680.5	24.37	25.00	1.156	-	-	-0.11	0.304	0.351
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	136100	680.5	24.17	25.00	1.211	-	-	0.09	0.339	0.410
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 6	136100	680.5	24.37	25.00	1.156	-	-	-0.12	0.101	0.117
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 6	136100	680.5	24.17	25.00	1.211	-	-	0.03	0.104	0.126
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 6	136100	680.5	24.37	25.00	1.156	-	-	-0.16	0.175	0.202
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 6	136100	680.5	24.17	25.00	1.211	-	-	-0.02	0.196	0.237
37	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 1	DSI 6	136100	680.5	24.37	25.00	1.156	-	-	0.15	0.205	0.237
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 1	DSI 6	136100	680.5	24.17	25.00	1.211	-	-	-0.09	0.224	0.271



FCC SAR Test Report

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	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	158600	793	24.21	25.00	1.199	-	-	0.11	0.500	0.600
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	158600	793	24.18	25.00	1.208	-	-	-0.05	0.475	0.574
38	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	158600	793	24.21	25.00	1.199	-	-	0.06	0.565	0.678
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	158600	793	24.18	25.00	1.208	-	-	-0.08	0.557	0.673
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 6	158600	793	24.21	25.00	1.199	-	-	0.16	0.077	0.092
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 6	158600	793	24.18	25.00	1.208	-	-	0.05	0.077	0.093
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 6	158600	793	24.21	25.00	1.199	-	-	0.05	0.155	0.186
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 6	158600	793	24.18	25.00	1.208	-	-	-0.03	0.139	0.168
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 1	DSI 6	158600	793	24.21	25.00	1.199	-	-	-0.15	0.378	0.453
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Top Side	10mm	Ant 1	DSI 6	158600	793	24.18	25.00	1.208	-	-	0.02	0.359	0.434
835MHz																				
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 6	4182	836.4	24.11	25.00	1.227	-	-	0.16	0.562	0.690
39	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	4182	836.4	24.11	25.00	1.227	-	-	-0.09	0.630	0.773
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 6	4182	836.4	24.11	25.00	1.227	-	-	-0.03	0.088	0.108
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 1	DSI 6	4182	836.4	24.11	25.00	1.227	-	-	0.07	0.104	0.128
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 6	4182	836.4	24.11	25.00	1.227	-	-	0	0.333	0.409
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	4132	826.4	24.09	25.00	1.233	-	-	0.01	0.587	0.724
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	4233	846.6	24.10	25.00	1.230	-	-	-0.01	0.626	0.770
	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	26865	831.5	23.87	25.00	1.297	-	-	-0.06	0.490	0.636
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 1	DSI 6	26865	831.5	22.75	24.00	1.334	-	-	-0.04	0.414	0.552
40	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	26865	831.5	23.87	25.00	1.297	-	-	0.14	0.566	0.734
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 1	DSI 6	26865	831.5	22.75	24.00	1.334	-	-	-0.09	0.480	0.640
	LTE Band 26	15M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 6	26865	831.5	23.87	25.00	1.297	-	-	-0.17	0.073	0.095
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 1	DSI 6	26865	831.5	22.75	24.00	1.334	-	-	-0.1	0.061	0.081
	LTE Band 26	15M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 6	26865	831.5	23.87	25.00	1.297	-	-	0.18	0.109	0.141
	LTE Band 26	15M	QPSK	36	0	-	Right Side	10mm	Ant 1	DSI 6	26865	831.5	22.75	24.00	1.334	-	-	-0.17	0.088	0.117
	LTE Band 26	15M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 6	26865	831.5	23.87	25.00	1.297	-	-	-0.04	0.358	0.464
	LTE Band 26	15M	QPSK	36	0	-	Top Side	10mm	Ant 1	DSI 6	26865	831.5	22.75	24.00	1.334	-	-	-0.05	0.249	0.332
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	166300	831.5	24.27	25.00	1.183	-	-	0	0.473	0.560
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	166300	831.5	24.19	25.00	1.205	-	-	-0.13	0.512	0.617
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	166300	831.5	24.27	25.00	1.183	-	-	-0.01	0.567	0.671
41	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	166300	831.5	24.19	25.00	1.205	-	-	0.02	0.620	0.747
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 6	166300	831.5	24.27	25.00	1.183	-	-	-0.09	0.064	0.076
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 6	166300	831.5	24.19	25.00	1.205	-	-	0.05	0.074	0.089
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 6	166300	831.5	24.27	25.00	1.183	-	-	0.02	0.100	0.118
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 6	166300	831.5	24.19	25.00	1.205	-	-	-0.13	0.118	0.142
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 1	DSI 6	166300	831.5	24.27	25.00	1.183	-	-	0.17	0.313	0.370
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 1	DSI 6	166300	831.5	24.19	25.00	1.205	-	-	0.06	0.343	0.413
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI 1	1413	1732.6	23.07	25.00	1.560	-	-	-0.15	0.345	0.538
42	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	1413	1732.6	23.07	25.00	1.560	-	-	-0.05	0.377	0.588
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 1	1413	1732.6	23.07	25.00	1.560	-	-	-0.06	0.291	0.454
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 2	DSI 1	1413	1732.6	23.07	25.00	1.560	-	-	-0.19	0.336	0.524
43	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	132322	1745	22.85	24.50	1.462	-	-	-0.04	0.384	0.561
	LTE Band 66C	20M	QPSK	1	99	-	Front	10mm	Ant 2	DSI 1	132322+132520	1745+1764.8	22.76	24.50	1.493	-	-	0.01	0.355	0.530
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	132322	1745	21.75	23.50	1.496	-	-	-0.15	0.296	0.443
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	132322	1745	22.85	24.50	1.462	-	-	0.11	0.352	0.515
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	132322	1745	21.75	23.50	1.496	-	-	-0.02	0.330	0.494
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	132322	1745	22.85	24.50	1.462	-	-	0.1	0.326	0.477
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	132322	1745	21.75	23.50	1.496	-	-	0.04	0.259	0.388
	LTE Band 66	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 1	132322	1745	22.85	24.50	1.462	-	-	-0.11	0.289	0.423
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 1	132322	1745	21.75	23.50	1.496	-	-	-0.16	0.250	0.374
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 6	132322	1745	23.99	25.00	1.262	-	-	0.17	0.386	0.487
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 6	132322	1745	22.95	24.00	1.274	-	-	-0.1	0.286	0.364
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 6	132322	1745	23.99	25.00	1.262	-	-	0.17	0.388	0.490



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	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 6	132322	1745	22.95	24.00	1.274	-	-	-0.15	0.310	0.395
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI 6	132322	1745	23.99	25.00	1.262	-	-	0.18	0.327	0.413
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 6	132322	1745	22.95	24.00	1.274	-	-	0.05	0.210	0.267
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI 6	132322	1745	23.99	25.00	1.262	-	-	0.03	0.442	0.558
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI 6	132322	1745	22.95	24.00	1.274	-	-	-0.1	0.361	0.460
	FR1 n70 ENDC	15M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	340500	1702.5	23.57	25.00	1.390	-	-	0.01	0.277	0.385
	FR1 n70 ENDC	15M	QPSK	36	22	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	340500	1702.5	23.25	25.00	1.496	-	-	0.06	0.249	0.373
	FR1 n70 ENDC	15M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	340500	1702.5	23.57	25.00	1.390	-	-	0.01	0.281	0.391
	FR1 n70 ENDC	15M	QPSK	36	22	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	340500	1702.5	23.25	25.00	1.496	-	-	0.02	0.218	0.326
	FR1 n70 ENDC	15M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 6	340500	1702.5	23.57	25.00	1.390	-	-	0.12	0.143	0.199
	FR1 n70 ENDC	15M	QPSK	36	22	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 6	340500	1702.5	23.25	25.00	1.496	-	-	-0.16	0.136	0.203
44	FR1 n70 ENDC	15M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 5	DSI 6	340500	1702.5	23.57	25.00	1.390	-	-	0.19	0.290	0.403
	FR1 n70 ENDC	15M	QPSK	36	22	DFT-SCS-15KHz	Bottom Side	10mm	Ant 5	DSI 6	340500	1702.5	23.25	25.00	1.496	-	-	-0.02	0.251	0.376
	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	349000	1745	23.88	25.50	1.452	-	-	-0.05	0.398	0.578
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	349000	1745	23.86	25.50	1.459	-	-	-0.13	0.401	0.585
45	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	349000	1745	23.88	25.50	1.452	-	-	-0.04	0.471	0.684
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	349000	1745	23.86	25.50	1.459	-	-	0.08	0.453	0.661
	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	349000	1745	23.88	25.50	1.452	-	-	0.16	0.328	0.476
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	349000	1745	23.86	25.50	1.459	-	-	0.01	0.294	0.429
	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	349000	1745	23.88	25.50	1.452	-	-	-0.04	0.349	0.507
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	349000	1745	23.86	25.50	1.459	-	-	-0.01	0.359	0.524
1900MHz																				
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI 1	9400	1880	21.73	23.50	1.503	-	-	-0.13	0.460	0.691
46	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	9400	1880	21.73	23.50	1.503	-	-	0.06	0.646	0.971
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	9262	1852.4	21.67	23.50	1.524	-	-	0.16	0.616	0.939
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	9538	1907.6	21.68	23.50	1.521	-	-	-0.15	0.577	0.877
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 1	9400	1880	21.73	23.50	1.503	-	-	-0.02	0.349	0.525
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 2	DSI 1	9400	1880	21.73	23.50	1.503	-	-	0.14	0.560	0.842
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 2	DSI 1	9262	1852.4	21.67	23.50	1.524	-	-	0.1	0.478	0.728
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 2	DSI 1	9538	1907.6	21.68	23.50	1.521	-	-	-0.09	0.558	0.848
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 2	DSI 6	9400	1880	23.14	25.00	1.535	-	-	0.08	0.214	0.328
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	22mm	Ant 2	DSI 6	9400	1880	23.14	25.00	1.535	-	-	0.01	0.169	0.259
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	19mm	Ant 2	DSI 6	9400	1880	23.14	25.00	1.535	-	-	-0.08	0.128	0.196
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	11mm	Ant 2	DSI 6	9400	1880	23.14	25.00	1.535	-	-	-0.08	0.494	0.758
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	17mm	Ant 2	DSI 1	9400	1880	21.73	23.50	1.503	-	-	0.03	0.254	0.382
	LTE Band 25	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	26340	1880	21.62	23.00	1.374	-	-	0.07	0.418	0.574
	LTE Band 25	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	26340	1880	21.45	23.00	1.429	-	-	-0.09	0.349	0.499
47	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	26340	1880	21.62	23.00	1.374	-	-	0.06	0.636	0.874
	LTE Band 2C	20M	QPSK	1	99	-	Back	10mm	Ant 2	DSI 1	18900+19098	1880+1899.8	21.33	23.00	1.469	-	-	0.01	0.582	0.855
	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	26140	1860	21.36	23.00	1.459	-	-	-0.16	0.586	0.855
	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	26590	1905	21.49	23.00	1.416	-	-	-0.18	0.616	0.872
	LTE Band 25	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	26340	1880	21.45	23.00	1.429	-	-	-0.07	0.518	0.740
	LTE Band 25	20M	QPSK	100	0	-	Back	10mm	Ant 2	DSI 1	26340	1880	21.30	23.00	1.479	-	-	-0.1	0.527	0.779
	LTE Band 25	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	26340	1880	21.62	23.00	1.374	-	-	-0.01	0.304	0.418
	LTE Band 25	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	26340	1880	21.45	23.00	1.429	-	-	-0.09	0.224	0.320
	LTE Band 25	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 1	26340	1880	21.62	23.00	1.374	-	-	-0.01	0.488	0.671
	LTE Band 25	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 1	26340	1880	21.45	23.00	1.429	-	-	-0.11	0.405	0.579
	LTE Band 25	20M	QPSK	1	0	-	Front	16mm	Ant 2	DSI 6	26340	1880	22.98	24.50	1.419	-	-	0.07	0.207	0.294
	LTE Band 25	20M	QPSK	1	0	-	Back	22mm	Ant 2	DSI 6	26340	1880	22.98	24.50	1.419	-	-	0.07	0.166	0.236
	LTE Band 25	20M	QPSK	1	0	-	Left Side	19mm	Ant 2	DSI 6	26340	1880	22.98	24.50	1.419	-	-	0.07	0.137	0.194
	LTE Band 25	20M	QPSK	1	0	-	Top Side	11mm	Ant 2	DSI 6	26340	1880	22.98	24.50	1.419	-	-	0.07	0.386	0.548
	LTE Band 25	20M	QPSK	1	0	-	Back	17mm	Ant 2	DSI 1	26340	1880	21.62	23.00	1.374	-	-	0.07	0.277	0.381
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 6	26340	1880	24.10	25.00	1.230	-	-	0.07	0.360	0.443
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 6	26340	1880	23.15	24.00	1.216	-	-	0.16	0.281	0.342
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 6	26340	1880	24.10	25.00	1.230	-	-	0.13	0.365	0.449



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	LTE Band 25 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 6	26340	1880	23.15	24.00	1.216	-	-	-0.18	0.303	0.369
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI 6	26340	1880	24.10	25.00	1.230	-	-	0.02	0.255	0.314
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 6	26340	1880	23.15	24.00	1.216	-	-	0.16	0.224	0.272
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI 6	26340	1880	24.10	25.00	1.230	-	-	0	0.174	0.214
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI 6	26340	1880	23.15	24.00	1.216	-	-	0.01	0.154	0.187
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	376000	1880	24.25	25.00	1.189	-	-	0.14	0.328	0.390
	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	376000	1880	24.00	25.00	1.259	-	-	0.03	0.373	0.470
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	376000	1880	24.25	25.00	1.189	-	-	0.1	0.361	0.429
48	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	376000	1880	24.00	25.00	1.259	-	-	-0.14	0.378	0.476
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 6	376000	1880	24.25	25.00	1.189	-	-	0.16	0.271	0.322
	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 6	376000	1880	24.00	25.00	1.259	-	-	-0.06	0.298	0.375
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 5	DSI 6	376000	1880	24.25	25.00	1.189	-	-	0.05	0.145	0.172
	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 5	DSI 6	376000	1880	24.00	25.00	1.259	-	-	-0.03	0.164	0.206
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	376500	1882.5	22.08	23.50	1.387	-	-	0.08	0.417	0.578
	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	376500	1882.5	22.01	23.50	1.409	-	-	0.01	0.452	0.637
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	376500	1882.5	22.08	23.50	1.387	-	-	0.03	0.610	0.846
49	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	376500	1882.5	22.01	23.50	1.409	-	-	0.09	0.670	0.944
	FR1 n25	30M	QPSK	160	0	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	376500	1882.5	21.77	23.50	1.489	-	-	-0.08	0.605	0.901
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	376500	1882.5	22.08	23.50	1.387	-	-	-0.08	0.277	0.384
	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	376500	1882.5	22.01	23.50	1.409	-	-	0.1	0.271	0.382
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	376500	1882.5	22.08	23.50	1.387	-	-	0.12	0.526	0.729
	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	376500	1882.5	22.01	23.50	1.409	-	-	0.08	0.391	0.551
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Front	16mm	Ant 2	DSI 6	376500	1882.5	23.99	25.50	1.416	-	-	0.1	0.231	0.327
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Back	22mm	Ant 2	DSI 6	376500	1882.5	23.99	25.50	1.416	-	-	-0.18	0.206	0.292
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Left Side	19mm	Ant 2	DSI 6	376500	1882.5	23.99	25.50	1.416	-	-	0.12	0.160	0.227
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Top Side	11mm	Ant 2	DSI 6	376500	1882.5	23.99	25.50	1.416	-	-	0.08	0.423	0.599
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Back	17mm	Ant 2	DSI 1	376500	1882.5	22.08	23.50	1.387	-	-	0.1	0.213	0.295
2300MHz																				
	LTE Band 30	10M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	27710	2310	22.78	24.00	1.324	-	-	-0.17	0.528	0.699
	LTE Band 30	10M	QPSK	25	0	-	Front	10mm	Ant 2	DSI 1	27710	2310	21.80	23.50	1.479	-	-	0.04	0.429	0.635
	LTE Band 30	10M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	27710	2310	22.78	24.00	1.324	-	-	0.07	0.546	0.723
	LTE Band 30	10M	QPSK	25	0	-	Back	10mm	Ant 2	DSI 1	27710	2310	21.80	23.50	1.479	-	-	-0.08	0.405	0.599
50	LTE Band 30	10M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	27710	2310	22.78	24.00	1.324	-	-	0.06	0.561	0.743
	LTE Band 30	10M	QPSK	25	0	-	Left Side	10mm	Ant 2	DSI 1	27710	2310	21.80	23.50	1.479	-	-	0.06	0.471	0.697
	LTE Band 30	10M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 1	27710	2310	22.78	24.00	1.324	-	-	0.12	0.309	0.409
	LTE Band 30	10M	QPSK	25	0	-	Top Side	10mm	Ant 2	DSI 1	27710	2310	21.80	23.50	1.479	-	-	0.03	0.250	0.370
	LTE Band 30	10M	QPSK	1	0	-	Front	16mm	Ant 2	DSI 6	27710	2310	22.78	24.50	1.486	-	-	-0.17	0.257	0.382
	LTE Band 30	10M	QPSK	1	0	-	Back	22mm	Ant 2	DSI 6	27710	2310	22.78	24.50	1.486	-	-	-0.03	0.144	0.214
	LTE Band 30	10M	QPSK	1	0	-	Left Side	19mm	Ant 2	DSI 6	27710	2310	22.78	24.50	1.486	-	-	0.11	0.245	0.364
	LTE Band 30	10M	QPSK	1	0	-	Top Side	11mm	Ant 2	DSI 6	27710	2310	22.78	24.50	1.486	-	-	-0.05	0.448	0.666
	LTE Band 30	10M	QPSK	1	0	-	Back	17mm	Ant 2	DSI 1	27710	2310	22.78	24.00	1.324	-	-	0.14	0.231	0.306
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	462000	2310	22.67	24.00	1.358	-	-	-0.03	0.586	0.796
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	462000	2310	22.61	24.00	1.377	-	-	0.14	0.574	0.791
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	462000	2310	22.67	24.00	1.358	-	-	-0.08	0.588	0.799
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	462000	2310	22.61	24.00	1.377	-	-	-0.05	0.565	0.778
51	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	462000	2310	22.67	24.00	1.358	-	-	0.09	0.694	0.943
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	462000	2310	22.61	24.00	1.377	-	-	0.14	0.634	0.873
	FR1 n30	10M	QPSK	50	0	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	462000	2310	22.38	24.00	1.452	-	-	-0.17	0.637	0.925
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	462000	2310	22.67	24.00	1.358	-	-	0.01	0.326	0.443
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	462000	2310	22.61	24.00	1.377	-	-	0.1	0.330	0.454
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	16mm	Ant 2	DSI 6	462000	2310	24.08	25.50	1.387	-	-	0.18	0.329	0.456
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	22mm	Ant 2	DSI 6	462000	2310	24.08	25.50	1.387	-	-	0.14	0.173	0.240
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	19mm	Ant 2	DSI 6	462000	2310	24.08	25.50	1.387	-	-	0.17	0.320	0.444
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Top Side	11mm	Ant 2	DSI 6	462000	2310	24.08	25.50	1.387	-	-	-0.05	0.507	0.703



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	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	17mm	Ant 2	DSI 1	462000	2310	22.67	24.00	1.358	-	-	-0.17	0.191	0.259
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	21100	2535	20.99	22.50	1.416	-	-	0.18	0.475	0.673
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	21100	2535	20.82	22.50	1.472	-	-	-0.1	0.400	0.589
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	21100	2535	20.99	22.50	1.416	-	-	0.01	0.411	0.582
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	21100	2535	20.82	22.50	1.472	-	-	0.07	0.294	0.433
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	21100	2535	20.99	22.50	1.416	-	-	0.03	0.611	0.865
52	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	20850	2510	20.77	22.50	1.489	-	-	0.1	0.665	0.990
	LTE Band 7C	20M	QPSK	1	99	-	Left Side	10mm	Ant 2	DSI 1	20850+21048	2510+2529.8	20.66	22.50	1.528	-	-	-0.07	0.627	0.958
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	21350	2560	20.82	22.50	1.472	-	-	-0.15	0.561	0.826
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	21100	2535	20.82	22.50	1.472	-	-	-0.15	0.556	0.819
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	20850	2510	20.64	22.50	1.535	-	-	0.11	0.519	0.796
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	21350	2560	20.69	22.50	1.517	-	-	-0.08	0.503	0.763
	LTE Band 7	20M	QPSK	100	0	-	Left Side	10mm	Ant 2	DSI 1	21100	2535	20.71	22.50	1.510	-	-	-0.17	0.505	0.763
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 1	21100	2535	20.99	22.50	1.416	-	-	-0.08	0.161	0.228
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 1	21100	2535	20.82	22.50	1.472	-	-	0.17	0.123	0.181
	LTE Band 7	20M	QPSK	1	0	-	Front	16mm	Ant 2	DSI 6	21100	2535	22.89	24.50	1.449	-	-	0.01	0.353	0.511
	LTE Band 7	20M	QPSK	1	0	-	Back	22mm	Ant 2	DSI 6	21100	2535	22.89	24.50	1.449	-	-	0.1	0.197	0.285
	LTE Band 7	20M	QPSK	1	0	-	Left Side	19mm	Ant 2	DSI 6	21100	2535	22.89	24.50	1.449	-	-	0.04	0.407	0.590
	LTE Band 7	20M	QPSK	1	0	-	Top Side	11mm	Ant 2	DSI 6	21100	2535	22.89	24.50	1.449	-	-	-0.01	0.430	0.623
	LTE Band 7	20M	QPSK	1	0	-	Back	17mm	Ant 2	DSI 1	21100	2535	20.99	22.50	1.416	-	-	-0.17	0.280	0.396
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 6	21100	2535	24.24	25.00	1.191	-	-	-0.03	0.413	0.492
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 6	21100	2535	23.17	24.00	1.211	-	-	-0.03	0.354	0.429
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 6	21100	2535	24.24	25.00	1.191	-	-	0.08	0.295	0.351
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 6	21100	2535	23.17	24.00	1.211	-	-	-0.07	0.237	0.287
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI 6	21100	2535	24.24	25.00	1.191	-	-	0.05	0.420	0.500
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 6	21100	2535	23.17	24.00	1.211	-	-	-0.11	0.354	0.429
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI 6	21100	2535	24.24	25.00	1.191	-	-	-0.16	0.111	0.132
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI 6	21100	2535	23.17	24.00	1.211	-	-	-0.02	0.095	0.115
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 6	21100	2535	21.62	23.00	1.374	-	-	0.15	0.098	0.135
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 6	21100	2535	20.67	22.00	1.358	-	-	-0.09	0.081	0.110
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 6	21100	2535	21.62	23.00	1.374	-	-	0.11	0.216	0.297
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 6	21100	2535	20.67	22.00	1.358	-	-	-0.05	0.173	0.235
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 6	21100	2535	21.62	23.00	1.374	-	-	0.05	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 6	21100	2535	20.67	22.00	1.358	-	-	0.05	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 6	DSI 6	21100	2535	21.62	23.00	1.374	-	-	-0.03	0.049	0.067
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 6	DSI 6	21100	2535	20.67	22.00	1.358	-	-	-0.15	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 8	DSI 6	21100	2535	24.28	25.00	1.180	-	-	0.02	0.406	0.479
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 8	DSI 6	21100	2535	23.20	24.00	1.202	-	-	0.07	0.225	0.271
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 8	DSI 6	21100	2535	24.28	25.00	1.180	-	-	0.16	0.396	0.467
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 8	DSI 6	21100	2535	23.20	24.00	1.202	-	-	0.13	0.374	0.450
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 8	DSI 6	21100	2535	24.28	25.00	1.180	-	-	-0.18	0.450	0.531
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 8	DSI 6	21100	2535	23.20	24.00	1.202	-	-	0.02	0.385	0.463
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 8	DSI 6	21100	2535	24.28	25.00	1.180	-	-	0.07	0.070	0.083
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 8	DSI 6	21100	2535	23.20	24.00	1.202	-	-	0	0.057	0.069
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	40620	2593	23.71	25.00	1.346	62.9	1.006	0.01	0.443	0.600
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	39750	2506	23.41	25.00	1.442	62.9	1.006	-0.06	0.461	0.669
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	40185	2549.5	23.57	25.00	1.390	62.9	1.006	0.09	0.514	0.719
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	41055	2636.5	23.54	25.00	1.400	62.9	1.006	-0.04	0.330	0.465
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	41490	2680	23.54	25.00	1.400	62.9	1.006	-0.09	0.334	0.470
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	40620	2593	22.79	24.00	1.321	62.9	1.006	-0.17	0.345	0.459
	LTE Band 41	20M	QPSK	100	0	-	Front	10mm	Ant 2	DSI 1	40620	2593	22.83	24.00	1.309	62.9	1.006	-0.1	0.317	0.418
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	40620	2593	23.71	25.00	1.346	62.9	1.006	0.18	0.323	0.437
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	40620	2593	22.79	24.00	1.321	62.9	1.006	-0.17	0.239	0.318
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	40620	2593	23.71	25.00	1.346	62.9	1.006	-0.04	0.563	0.762
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	39750	2506	23.41	25.00	1.442	62.9	1.006	0	0.710	1.030



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53	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	40185	2549.5	23.57	25.00	1.390	62.9	1.006	0.18	0.738	1.032
	LTE Band 38C	20M	QPSK	1	99	-	Left Side	10mm	Ant 2	DSI 1	37901+38099	2321.1+2340.9	23.45	25.00	1.429	62.9	1.006	0.09	0.668	0.960
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	41055	2636.5	23.54	25.00	1.400	62.9	1.006	-0.13	0.520	0.732
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	41490	2680	23.54	25.00	1.400	62.9	1.006	-0.01	0.529	0.745
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	40620	2593	22.79	24.00	1.321	62.9	1.006	-0.09	0.472	0.627
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	39750	2506	22.60	24.00	1.380	62.9	1.006	0.02	0.569	0.790
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	40185	2549.5	22.68	24.00	1.355	62.9	1.006	-0.13	0.557	0.759
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	41055	2636.5	22.68	24.00	1.355	62.9	1.006	0.17	0.394	0.537
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 1	41490	2680	22.69	24.00	1.352	62.9	1.006	0.06	0.414	0.563
	LTE Band 41	20M	QPSK	100	0	-	Left Side	10mm	Ant 2	DSI 1	40620	2593	22.83	24.00	1.309	62.9	1.006	0	0.484	0.637
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 1	40620	2593	23.71	25.00	1.346	62.9	1.006	0.11	0.230	0.311
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI 1	40620	2593	22.79	24.00	1.321	62.9	1.006	-0.02	0.175	0.233
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 1	40185	2549.5	25.79	27.00	1.321	42.9	1.009	0.04	0.759	1.012
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 6	40620	2593	24.74	25.00	1.062	62.9	1.006	0.06	0.115	0.123
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 6	40620	2593	23.67	24.00	1.079	62.9	1.006	0.02	0.114	0.124
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 6	40620	2593	24.74	25.00	1.062	62.9	1.006	0.12	0.261	0.279
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 6	40620	2593	23.67	24.00	1.079	62.9	1.006	-0.16	0.255	0.277
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 6	40620	2593	24.74	25.00	1.062	62.9	1.006	-0.02	0.042	0.045
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 6	40620	2593	23.67	24.00	1.079	62.9	1.006	-0.05	0.044	0.048
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 6	DSI 6	40620	2593	24.74	25.00	1.062	62.9	1.006	-0.13	0.047	0.050
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 6	DSI 6	40620	2593	23.67	24.00	1.079	62.9	1.006	0.08	0.049	0.053
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 6	40620	2593	26.73	27.00	1.064	42.9	1.009	0.16	0.263	0.282
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	507000	2535	20.94	22.50	1.432	-	-	0.02	0.494	0.708
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	507000	2535	20.85	22.50	1.462	-	-	-0.09	0.466	0.681
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	507000	2535	20.94	22.50	1.432	-	-	0.07	0.432	0.619
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	507000	2535	20.85	22.50	1.462	-	-	-0.18	0.416	0.608
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	507000	2535	20.94	22.50	1.432	-	-	-0.1	0.664	0.951
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	502000	2510	20.79	22.50	1.483	-	-	-0.01	0.694	1.029
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	512000	2560	20.80	22.50	1.479	-	-	-0.09	0.676	1.000
54	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	507000	2535	20.85	22.50	1.462	-	-	0.07	0.725	1.060
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	502000	2510	20.68	22.50	1.521	-	-	-0.06	0.692	1.052
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	512000	2560	20.76	22.50	1.493	-	-	-0.17	0.597	0.891
	FR1 n7	20M	QPSK	100	0	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 1	507000	2535	20.58	22.50	1.556	-	-	-0.01	0.639	0.994
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	507000	2535	20.94	22.50	1.432	-	-	0.03	0.225	0.322
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 1	507000	2535	20.85	22.50	1.462	-	-	0.1	0.224	0.328
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	16mm	Ant 2	DSI 6	507000	2535	23.82	25.50	1.472	-	-	-0.08	0.445	0.655
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	22mm	Ant 2	DSI 6	507000	2535	23.82	25.50	1.472	-	-	0.05	0.232	0.342
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	19mm	Ant 2	DSI 6	507000	2535	23.82	25.50	1.472	-	-	-0.09	0.597	0.879
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	11mm	Ant 2	DSI 6	507000	2535	23.82	25.50	1.472	-	-	-0.08	0.477	0.702
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	17mm	Ant 2	DSI 1	507000	2535	19.94	21.50	1.432	-	-	0.06	0.147	0.211
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	507000	2535	23.96	25.00	1.271	-	-	-0.17	0.376	0.478
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	507000	2535	23.67	25.00	1.358	-	-	-0.03	0.401	0.545
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	507000	2535	23.96	25.00	1.271	-	-	0.14	0.510	0.648
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	507000	2535	23.67	25.00	1.358	-	-	-0.03	0.529	0.719
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 6	507000	2535	23.96	25.00	1.271	-	-	-0.05	0.442	0.562
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 6	507000	2535	23.67	25.00	1.358	-	-	0.18	0.467	0.634
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 5	DSI 6	507000	2535	23.96	25.00	1.271	-	-	0.17	0.096	0.122
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 5	DSI 6	507000	2535	23.67	25.00	1.358	-	-	-0.05	0.113	0.153
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 1	518598	2592.99	21.17	22.50	1.358	-	-	0.01	0.500	0.679
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 1	518598	2592.99	21.14	22.50	1.368	-	-	0.17	0.476	0.651
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 1	518598	2592.99	21.17	22.50	1.358	-	-	0.16	0.470	0.638
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 1	518598	2592.99	21.14	22.50	1.368	-	-	0.05	0.452	0.618
55	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 1	518598	2592.99	21.17	22.50	1.358	-	-	0.08	0.748	1.016
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 1	518598	2592.99	21.14	22.50	1.368	-	-	-0.13	0.620	0.848
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 1	518598	2592.99	20.90	22.50	1.445	-	-	-0.01	0.661	0.955



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	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 1	518598	2592.99	21.17	22.50	1.358	-	-	-0.14	0.227	0.308
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI 1	518598	2592.99	21.14	22.50	1.368	-	-	-0.18	0.215	0.294
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 1	518598	2592.99	24.21	25.50	1.346	50	1.000	-0.06	0.698	0.939
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	16mm	Ant 2	DSI 6	518598	2592.99	24.12	25.50	1.374	-	-	0.13	0.461	0.633
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	22mm	Ant 2	DSI 6	518598	2592.99	24.12	25.50	1.374	-	-	0.03	0.248	0.341
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	19mm	Ant 2	DSI 6	518598	2592.99	24.12	25.50	1.374	-	-	0.07	0.568	0.780
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	19mm	Ant 2	DSI 6	518598	2592.99	26.13	27.50	1.371	50	1.000	0.18	0.484	0.664
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	11mm	Ant 2	DSI 6	518598	2592.99	24.12	25.50	1.374	-	-	-0.1	0.366	0.503
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	17mm	Ant 2	DSI 1	518598	2592.99	21.17	22.50	1.358	-	-	0.16	0.160	0.217
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	17mm	Ant 2	DSI 1	518598	2592.99	24.21	25.50	1.346	50	1.000	-0.1	0.168	0.226
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 6	518598	2592.99	23.40	25.00	1.445	-	-	-0.04	0.358	0.517
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 6	518598	2592.99	23.67	25.00	1.358	-	-	0.13	0.400	0.543
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 6	518598	2592.99	23.40	25.00	1.445	-	-	0.12	0.492	0.711
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 6	518598	2592.99	23.67	25.00	1.358	-	-	0.05	0.528	0.717
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 6	518598	2592.99	23.40	25.00	1.445	-	-	0.07	0.453	0.655
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 6	518598	2592.99	23.67	25.00	1.358	-	-	0.08	0.508	0.690
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 6	518598	2592.99	23.40	25.00	1.445	-	-	0.19	0.000	0.000
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 6	518598	2592.99	23.67	25.00	1.358	-	-	-0.06	0.000	0.000
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI 6	518598	2592.99	23.40	25.00	1.445	-	-	0	0.110	0.159
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI 6	518598	2592.99	23.67	25.00	1.358	-	-	-0.03	0.156	0.212
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 6	518598	2592.99	25.82	27.00	1.312	50	1.000	0.07	0.455	0.597
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	518598	2592.99	23.47	25.00	1.422	-	-	0.19	0.108	0.154
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	518598	2592.99	23.38	25.00	1.452	-	-	0.07	0.160	0.232
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	518598	2592.99	23.47	25.00	1.422	-	-	-0.18	0.281	0.400
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	518598	2592.99	23.38	25.00	1.452	-	-	0.03	0.395	0.574
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 6	518598	2592.99	23.47	25.00	1.422	-	-	0.11	0.068	0.097
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 6	518598	2592.99	23.38	25.00	1.452	-	-	-0.08	0.069	0.100
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 6	518598	2592.99	23.47	25.00	1.422	-	-	-0.17	0.057	0.081
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 6	518598	2592.99	23.38	25.00	1.452	-	-	-0.08	0.066	0.096
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	518598	2592.99	25.35	27.00	1.462	50	1.000	-0.04	0.340	0.497
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI 6	518598	2592.99	24.05	25.00	1.245	-	-	-0.08	0.357	0.444
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI 6	518598	2592.99	23.72	25.00	1.343	-	-	0.17	0.322	0.432
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI 6	518598	2592.99	24.05	25.00	1.245	-	-	0.18	0.354	0.441
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI 6	518598	2592.99	23.72	25.00	1.343	-	-	-0.04	0.325	0.436
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI 6	518598	2592.99	24.05	25.00	1.245	-	-	-0.08	0.440	0.548
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI 6	518598	2592.99	23.72	25.00	1.343	-	-	-0.13	0.352	0.473
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI 6	518598	2592.99	24.05	25.00	1.245	-	-	-0.03	0.097	0.121
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI 6	518598	2592.99	23.72	25.00	1.343	-	-	-0.03	0.104	0.140
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI 6	518598	2592.99	25.60	27.00	1.380	50	1.000	0.08	0.336	0.464
3500MHz																				
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 6	42590	3500	21.09	22.00	1.233	62.9	1.006	0.08	0.144	0.179
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 6	42590	3500	20.98	22.00	1.265	62.9	1.006	0.01	0.124	0.158
56	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	42590	3500	21.09	22.00	1.233	62.9	1.006	-0.04	0.486	0.603
	LTE Band 42C	20M	QPSK	1	99	-	Back	10mm	Ant 3	DSI 6	42590+ 42788	3500+ 3519.8	21.01	22.00	1.256	62.9	1.006	0.06	0.423	0.534
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	42590	3500	20.98	22.00	1.265	62.9	1.006	-0.08	0.464	0.590
	LTE Band 42	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI 6	42590	3500	21.09	22.00	1.233	62.9	1.006	0.12	0.365	0.453
	LTE Band 42	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI 6	42590	3500	20.98	22.00	1.265	62.9	1.006	-0.03	0.288	0.366
	LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 3	DSI 6	42590	3500	21.09	22.00	1.233	62.9	1.006	-0.17	0.043	0.053
	LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 3	DSI 6	42590	3500	20.98	22.00	1.265	62.9	1.006	0.17	0.033	0.042
	LTE Band 48	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 6	55830	3609	21.22	22.00	1.197	62.9	1.006	-0.09	0.116	0.140
	LTE Band 48	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 6	55830	3609	21.16	22.00	1.213	62.9	1.006	0.11	0.109	0.133
57	LTE Band 48	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	55830	3609	21.22	22.00	1.197	62.9	1.006	-0.08	0.662	0.797
	LTE Band 48	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	55340	3560	21.07	22.00	1.239	62.9	1.006	-0.05	0.621	0.774
	LTE Band 48	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	56150	3641	21.09	22.00	1.233	62.9	1.006	-0.08	0.641	0.795
	LTE Band 48	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	56640	3690	21.04	22.00	1.247	62.9	1.006	0.16	0.448	0.562
	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	55830	3609	21.16	22.00	1.213	62.9	1.006	0.05	0.494	0.603



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	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	55340	3560	20.94	22.00	1.276	62.9	1.006	0.05	0.477	0.613
	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	56150	3641	21.01	22.00	1.256	62.9	1.006	-0.03	0.500	0.632
	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	56640	3690	20.93	22.00	1.279	62.9	1.006	-0.15	0.362	0.466
	LTE Band 48	20M	QPSK	100	0	-	Back	10mm	Ant 3	DSI 6	55830	3609	20.95	22.00	1.274	62.9	1.006	0.02	0.553	0.708
	LTE Band 48	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI 6	55830	3609	21.22	22.00	1.197	62.9	1.006	0.07	0.339	0.408
	LTE Band 48	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI 6	55830	3609	21.16	22.00	1.213	62.9	1.006	0.02	0.279	0.341
	LTE Band 48	20M	QPSK	1	0	-	Top Side	10mm	Ant 3	DSI 6	55830	3609	21.22	22.00	1.197	62.9	1.006	-0.06	0.057	0.069
	LTE Band 48	20M	QPSK	50	0	-	Top Side	10mm	Ant 3	DSI 6	55830	3609	21.16	22.00	1.213	62.9	1.006	-0.04	0.055	0.067
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 7	DSI 6	55830	3609	23.76	25.00	1.330	62.9	1.006	-0.04	0.481	0.644
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 7	DSI 6	55340	3560	23.42	25.00	1.439	62.9	1.006	0.01	0.475	0.688
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 7	DSI 6	56150	3641	23.68	25.00	1.355	62.9	1.006	0.03	0.480	0.654
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 7	DSI 6	56640	3690	23.57	25.00	1.390	62.9	1.006	-0.08	0.470	0.657
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 7	DSI 6	55830	3609	22.79	24.00	1.321	62.9	1.006	-0.05	0.427	0.568
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 7	DSI 6	55340	3560	22.47	24.00	1.422	62.9	1.006	-0.08	0.412	0.590
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 7	DSI 6	56150	3641	22.70	24.00	1.349	62.9	1.006	0.1	0.400	0.543
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 7	DSI 6	56640	3690	22.77	24.00	1.327	62.9	1.006	-0.18	0.421	0.562
	LTE Band 48 ENDC	20M	QPSK	100	0	-	Front	10mm	Ant 7	DSI 6	55830	3609	22.75	24.00	1.334	62.9	1.006	0.1	0.431	0.578
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 7	DSI 6	55830	3609	23.76	25.00	1.330	62.9	1.006	0	0.547	0.732
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 7	DSI 6	55340	3560	23.42	25.00	1.439	62.9	1.006	0.12	0.501	0.725
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 7	DSI 6	56150	3641	23.68	25.00	1.355	62.9	1.006	0.08	0.521	0.710
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 7	DSI 6	56640	3690	23.57	25.00	1.390	62.9	1.006	-0.17	0.517	0.723
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 7	DSI 6	55830	3609	22.79	24.00	1.321	62.9	1.006	-0.13	0.494	0.657
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 7	DSI 6	55340	3560	22.47	24.00	1.422	62.9	1.006	-0.03	0.487	0.697
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 7	DSI 6	56150	3641	22.70	24.00	1.349	62.9	1.006	0.14	0.475	0.645
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 7	DSI 6	56640	3690	22.77	24.00	1.327	62.9	1.006	0.11	0.477	0.637
	LTE Band 48 ENDC	20M	QPSK	100	0	-	Back	10mm	Ant 7	DSI 6	55830	3609	22.75	24.00	1.334	62.9	1.006	-0.05	0.452	0.606
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Left Side	10mm	Ant 7	DSI 6	55830	3609	23.76	25.00	1.330	62.9	1.006	-0.01	0.052	0.070
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Left Side	10mm	Ant 7	DSI 6	55830	3609	22.79	24.00	1.321	62.9	1.006	-0.09	0.049	0.065
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Right Side	10mm	Ant 7	DSI 6	55830	3609	23.76	25.00	1.330	62.9	1.006	0.05	0.409	0.547
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Right Side	10mm	Ant 7	DSI 6	55830	3609	22.79	24.00	1.321	62.9	1.006	0.02	0.339	0.451
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Top Side	10mm	Ant 7	DSI 6	55830	3609	23.76	25.00	1.330	62.9	1.006	-0.13	0.337	0.451
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Top Side	10mm	Ant 7	DSI 6	55830	3609	22.79	24.00	1.321	62.9	1.006	0.17	0.245	0.326
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	641666	3624.99	19.76	21.00	1.330	-	-	0.06	0.165	0.220
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	641666	3624.99	19.61	21.00	1.377	-	-	0	0.185	0.255
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	641666	3624.99	19.76	21.00	1.330	-	-	-0.04	0.604	0.804
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	638000	3570	19.64	21.00	1.368	-	-	-0.15	0.650	0.889
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	645332	3679.98	19.61	21.00	1.377	-	-	0.11	0.581	0.800
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	641666	3624.99	19.61	21.00	1.377	-	-	-0.02	0.618	0.851
58	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	638000	3570	19.56	21.00	1.393	-	-	-0.03	0.659	0.918
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	645332	3679.98	19.56	21.00	1.393	-	-	0.1	0.594	0.828
	FR1 n48	40M	QPSK	100	0	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	641666	3624.99	19.43	21.00	1.435	-	-	0.04	0.512	0.735
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 6	641666	3624.99	19.76	21.00	1.330	-	-	0.13	0.369	0.491
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 6	641666	3624.99	19.61	21.00	1.377	-	-	-0.16	0.391	0.538
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 6	641666	3624.99	19.76	21.00	1.330	-	-	0.06	0.041	0.055
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 6	641666	3624.99	19.61	21.00	1.377	-	-	0.02	0.044	0.061
	FR1 n77 Part 270	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	656000	3840	19.11	20.50	1.377	-	-	-0.13	0.034	0.047
	FR1 n77 Part 270	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	656000	3840	19.06	20.50	1.393	-	-	0.08	0.027	0.038
	FR1 n77 Part 270	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	656000	3840	19.11	20.50	1.377	-	-	0.04	0.245	0.337
	FR1 n77 Part 270	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	656000	3840	19.06	20.50	1.393	-	-	0.16	0.195	0.272



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	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 6	656000	3840	19.11	20.50	1.377	-	-	-0.16	0.076	0.105
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 6	656000	3840	19.06	20.50	1.393	-	-	0.1	0.078	0.109
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 6	656000	3840	19.11	20.50	1.377	-	-	0	0.031	0.043
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 6	656000	3840	19.06	20.50	1.393	-	-	-0.11	0.024	0.033
	FR1 n77 Part 27O HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	656000	3840	22.00	23.50	1.413	50	1.000	-0.06	0.244	0.345
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	633332	3499.98	18.98	20.50	1.419	-	-	0.03	0.181	0.257
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	633332	3499.98	18.92	20.50	1.439	-	-	-0.13	0.218	0.314
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	633332	3499.98	18.98	20.50	1.419	-	-	0.16	0.593	0.842
59	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	633332	3499.98	18.92	20.50	1.439	-	-	-0.07	0.695	1.000
	FR1 n77 Part 27Q	100M	BPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	633332	3499.98	18.82	20.50	1.472	-	-	-0.15	0.592	0.872
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 6	633332	3499.98	18.98	20.50	1.419	-	-	-0.02	0.410	0.582
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 6	633332	3499.98	18.92	20.50	1.439	-	-	-0.09	0.420	0.604
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 6	633332	3499.98	18.98	20.50	1.419	-	-	0.07	0.124	0.176
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 6	633332	3499.98	18.92	20.50	1.439	-	-	-0.09	0.106	0.153
	FR1 n77 Part 27Q HPUE	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	633332	3499.98	21.71	23.50	1.510	50	1.000	-0.16	0.596	0.900
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 6	656000	3840	23.47	25.00	1.422	-	-	0.14	0.051	0.073
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 6	656000	3840	23.31	25.00	1.476	-	-	-0.01	0.042	0.062
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	656000	3840	23.47	25.00	1.422	-	-	-0.12	0.164	0.233
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	656000	3840	23.31	25.00	1.476	-	-	0.07	0.181	0.267
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 6	656000	3840	23.47	25.00	1.422	-	-	0.09	0.056	0.080
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 6	656000	3840	23.31	25.00	1.476	-	-	0.04	0.046	0.068
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI 6	656000	3840	23.47	25.00	1.422	-	-	0.11	0.058	0.082
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI 6	656000	3840	23.31	25.00	1.476	-	-	-0.13	0.053	0.078
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 6	656000	3840	23.47	25.00	1.422	-	-	0.12	0.110	0.156
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 6	656000	3840	23.31	25.00	1.476	-	-	-0.11	0.116	0.171
	FR1 n77 Part 27O HPUE ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	656000	3840	25.41	27.00	1.442	50	1.000	0.17	0.153	0.221
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 6	633332	3499.98	23.40	25.00	1.445	-	-	-0.17	0.118	0.171
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 6	633332	3499.98	23.28	25.00	1.486	-	-	0.11	0.107	0.159
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	633332	3499.98	23.40	25.00	1.445	-	-	-0.05	0.150	0.217
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	633332	3499.98	23.28	25.00	1.486	-	-	-0.01	0.155	0.230
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 6	633332	3499.98	23.40	25.00	1.445	-	-	-0.14	0.030	0.043
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 6	633332	3499.98	23.28	25.00	1.486	-	-	-0.15	0.042	0.062
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI 6	633332	3499.98	23.40	25.00	1.445	-	-	-0.12	0.068	0.098
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI 6	633332	3499.98	23.28	25.00	1.486	-	-	-0.17	0.077	0.114
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 6	633332	3499.98	23.40	25.00	1.445	-	-	0.08	0.126	0.182
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 6	633332	3499.98	23.28	25.00	1.486	-	-	0.01	0.139	0.207
	FR1 n77 Part 27Q HPUE ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	633332	3499.98	25.23	27.00	1.503	50	1.000	0.02	0.124	0.186
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	656000	3840	25.55	26.00	1.109	-	-	-0.06	0.171	0.190
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	656000	3840	25.48	26.00	1.127	-	-	-0.15	0.146	0.165
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	656000	3840	25.55	26.00	1.109	-	-	-0.12	0.127	0.141
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	656000	3840	25.48	26.00	1.127	-	-	-0.16	0.127	0.143
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 6	656000	3840	25.55	26.00	1.109	-	-	-0.03	0.065	0.072
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 6	656000	3840	25.48	26.00	1.127	-	-	0.17	0.076	0.086
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 4	DSI 6	656000	3840	25.55	26.00	1.109	-	-	0.02	0.067	0.074
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 4	DSI 6	656000	3840	25.48	26.00	1.127	-	-	0	0.065	0.073
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 4	DSI 1	656000	3840	25.55	26.00	1.109	-	-	0.18	0.033	0.037
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 4	DSI 1	656000	3840	25.48	26.00	1.127	-	-	-0.11	0.037	0.042
	FR1 n77 Part 27O HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	656000	3840	27.67	29.00	1.358	50	1.000	-0.05	0.140	0.190
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	633332	3499.98	25.69	26.00	1.074	-	-	-0.08	0.052	0.056



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FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	633332	3499.98	25.67	26.00	1.079	-	-	0	0.045	0.049
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	633332	3499.98	25.69	26.00	1.074	-	-	-0.14	0.036	0.039
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	633332	3499.98	25.67	26.00	1.079	-	-	0.01	0.038	0.041
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 6	633332	3499.98	25.69	26.00	1.074	-	-	0.18	0.048	0.052
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI 6	633332	3499.98	25.67	26.00	1.079	-	-	0.02	0.047	0.051
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 4	DSI 6	633332	3499.98	25.69	26.00	1.074	-	-	0.16	0.045	0.048
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 4	DSI 6	633332	3499.98	25.67	26.00	1.079	-	-	0.06	0.039	0.042
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 4	DSI 1	633332	3499.98	25.69	26.00	1.074	-	-	-0.02	0.000	0.000
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 4	DSI 1	633332	3499.98	25.67	26.00	1.079	-	-	0.07	0.000	0.000
FR1 n77 Part 27Q HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	633332	3499.98	27.96	29.00	1.271	50	1.000	-0.17	0.042	0.053
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	656000	3840	23.80	25.00	1.318	-	-	-0.13	0.111	0.146
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	656000	3840	23.76	25.00	1.330	-	-	0	0.097	0.129
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	656000	3840	23.80	25.00	1.318	-	-	-0.04	0.127	0.167
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	656000	3840	23.76	25.00	1.330	-	-	-0.15	0.161	0.214
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 6	656000	3840	23.80	25.00	1.318	-	-	0.13	0.085	0.112
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 6	656000	3840	23.76	25.00	1.330	-	-	0	0.101	0.134
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 6	656000	3840	23.80	25.00	1.318	-	-	-0.12	0.042	0.055
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 6	656000	3840	23.76	25.00	1.330	-	-	0.15	0.058	0.077
FR1 n77 Part 27Q HPUE	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	656000	3840	25.17	27.00	1.524	50	1.000	-0.05	0.105	0.160
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	633332	3499.98	22.69	24.00	1.352	-	-	0.1	0.135	0.183
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	633332	3499.98	22.51	24.00	1.409	-	-	-0.11	0.121	0.171
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	633332	3499.98	22.69	24.00	1.352	-	-	-0.02	0.079	0.107
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	633332	3499.98	22.51	24.00	1.409	-	-	-0.1	0.077	0.109
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 6	633332	3499.98	22.69	24.00	1.352	-	-	-0.05	0.081	0.110
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 6	633332	3499.98	22.51	24.00	1.409	-	-	-0.04	0.064	0.090
FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 6	633332	3499.98	22.69	24.00	1.352	-	-	0.14	0.042	0.057
FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 6	DSI 6	633332	3499.98	22.51	24.00	1.409	-	-	0.03	0.041	0.058
FR1 n77 Part 27Q HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	633332	3499.98	24.51	26.00	1.409	50	1.000	0.16	0.094	0.132



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																
60	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	0.08	0.114	0.169
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	-0.01	0.195	0.288
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	0.03	0.171	0.253
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	-0.08	0.095	0.141
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 11+10(11)	Full Power	1	2412	18.10	20.00	1.549	100	1.000	0.03	0.156	0.242
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 11+10(11)	Full Power	11	2462	18.00	19.50	1.413	100	1.000	0.01	0.144	0.203
	WLAN2.4GHz	802.11b 1Mbps	Front	16mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	-0.15	0.048	0.071
	WLAN2.4GHz	802.11b 1Mbps	Back	17mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	0.19	0.098	0.145
61	WLAN2.4GHz	802.11b 1Mbps	Right Side	24mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	0.07	0.035	0.052
	Bluetooth	1Mbps	Front	10mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	0.1	0.111	0.148
	Bluetooth	1Mbps	Back	10mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	-0.01	0.142	0.189
	Bluetooth	1Mbps	Right Side	10mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	0.1	0.105	0.140
	Bluetooth	1Mbps	Top Side	10mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	0.12	0.000	0.000
	Bluetooth	1Mbps	Back	10mm	Ant 11	Full Power	0	2402	8.20	10.00	1.514	76.95	1.083	0.02	0.111	0.182
	Bluetooth	1Mbps	Back	10mm	Ant 11	Full Power	78	2480	8.30	10.00	1.479	76.95	1.083	0.01	0.092	0.147
	Bluetooth	1Mbps	Front	16mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	-0.18	0.008	0.011
	Bluetooth	1Mbps	Back	17mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	0.03	0.016	0.021
	Bluetooth	1Mbps	Right Side	24mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	-0.15	0.006	0.008
	Bluetooth	1Mbps	Front	10mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	-0.17	0.000	0.000
	Bluetooth	1Mbps	Back	10mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	0.09	0.077	0.084
	Bluetooth	1Mbps	Right Side	10mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	0.14	0.000	0.000
	Bluetooth	1Mbps	Top Side	10mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	0.11	0.000	0.000
	Bluetooth	1Mbps	Back	10mm	Ant 10	Full Power	39	2441	9.30	9.50	1.047	76.75	1.085	0.09	0.054	0.061
	Bluetooth	1Mbps	Back	10mm	Ant 10	Full Power	78	2480	7.70	9.50	1.514	76.75	1.085	-0.05	0.043	0.071
5000MHz																
62	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 11+10(10)	Standalone	46	5230	16.19	18.00	1.517	100	1.000	-0.05	0.225	0.341
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 11+10(10)	Standalone	46	5230	16.19	18.00	1.517	100	1.000	0.09	0.770	1.168
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 11+10(10)	Standalone	38	5190	14.72	16.50	1.507	100	1.000	0.14	0.699	1.053
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 11+10(10)	Standalone	46	5230	16.19	18.00	1.517	100	1.000	0.17	0.463	0.702
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 11+10(11)	Full Power	46	5230	18.11	20.00	1.545	100	1.000	0.01	0.107	0.165
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 11+10(11)	Simultaneous	42	5210	11.11	13.00	1.545	100	1.000	0.18	0.251	0.388
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	16mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	0.08	0.246	0.324
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	17mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	0.01	0.874	1.150
63	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	24mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	0.03	0.396	0.521
	WLAN5.8GHz	802.11ax-HE20 MCS0	Front	10mm	Ant 11+10(11)	Full Power	157	5785	11.60	13.50	1.549	100	1.000	0.03	0.000	0.000
	WLAN5.8GHz	802.11ax-HE20 MCS0	Back	10mm	Ant 11+10(11)	Full Power	157	5785	11.60	13.50	1.549	100	1.000	-0.09	0.218	0.338
	WLAN5.8GHz	802.11ax-HE20 MCS0	Back	10mm	Ant 11+10(10)	Full Power	149	5745	10.22	12.00	1.507	100	1.000	-0.15	0.160	0.241
	WLAN5.8GHz	802.11ax-HE20 MCS0	Back	10mm	Ant 11+10(11)	Full Power	165	5825	11.17	13.00	1.524	100	1.000	-0.15	0.186	0.283
	WLAN5.8GHz	802.11ax-HE20 MCS0	Right Side	10mm	Ant 11+10(11)	Full Power	157	5785	11.60	13.50	1.549	100	1.000	0.08	0.129	0.200
	WLAN5.8GHz	802.11ax-HE20 MCS0	Top Side	10mm	Ant 11+10(11)	Full Power	157	5785	11.60	13.50	1.549	100	1.000	0.01	0.045	0.070



16.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
	LTE Band 71	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	133297	680.5	23.84	25.00	1.306	-	-	0.06	0.258	0.337
	LTE Band 71	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 6	133297	680.5	22.67	24.00	1.358	-	-	-0.09	0.228	0.310
64	LTE Band 71	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	133297	680.5	23.84	25.00	1.306	-	-	0.09	0.280	0.366
	LTE Band 71	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 6	133297	680.5	22.67	24.00	1.358	-	-	-0.08	0.242	0.329
	LTE Band 12	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	23095	707.5	24.16	25.00	1.213	-	-	0.07	0.230	0.279
	LTE Band 12	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 6	23095	707.5	22.87	24.00	1.297	-	-	0.18	0.196	0.254
65	LTE Band 12	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	23095	707.5	24.16	25.00	1.213	-	-	0.01	0.254	0.308
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 6	23095	707.5	22.87	24.00	1.297	-	-	-0.1	0.213	0.276
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	23230	782	23.79	25.00	1.321	-	-	-0.15	0.477	0.630
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 6	23230	782	22.84	24.00	1.306	-	-	-0.15	0.355	0.464
66	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	23230	782	23.79	25.00	1.321	-	-	0.18	0.589	0.778
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 6	23230	782	22.84	24.00	1.306	-	-	0.11	0.480	0.627
	LTE Band 14	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	23330	793	23.82	25.00	1.312	-	-	0.18	0.503	0.660
	LTE Band 14	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 6	23330	793	22.86	24.00	1.300	-	-	-0.04	0.409	0.532
67	LTE Band 14	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	23330	793	23.82	25.00	1.312	-	-	0.01	0.596	0.782
	LTE Band 14	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 6	23330	793	22.86	24.00	1.300	-	-	-0.08	0.456	0.593
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	136100	680.5	24.37	25.00	1.156	-	-	-0.07	0.282	0.326
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	136100	680.5	24.17	25.00	1.211	-	-	0.05	0.311	0.376
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	136100	680.5	24.37	25.00	1.156	-	-	-0.11	0.304	0.351
68	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	136100	680.5	24.17	25.00	1.211	-	-	0.09	0.339	0.410
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	158600	793	24.21	25.00	1.199	-	-	0.11	0.500	0.600
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	158600	793	24.18	25.00	1.208	-	-	-0.05	0.475	0.574
69	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	158600	793	24.21	25.00	1.199	-	-	0.06	0.565	0.678
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	158600	793	24.18	25.00	1.208	-	-	-0.08	0.557	0.673
835MHz																				
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 6	4182	836.4	24.11	25.00	1.227	-	-	0.16	0.562	0.690
70	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	4182	836.4	24.11	25.00	1.227	-	-	-0.09	0.630	0.773
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	4132	826.4	24.09	25.00	1.233	-	-	0.01	0.587	0.724
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	4233	846.6	24.10	25.00	1.230	-	-	-0.01	0.626	0.770
	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	26865	831.5	23.87	25.00	1.297	-	-	-0.06	0.490	0.636
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 1	DSI 6	26865	831.5	22.75	24.00	1.334	-	-	-0.04	0.414	0.552
71	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	26865	831.5	23.87	25.00	1.297	-	-	0.14	0.566	0.734
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 1	DSI 6	26865	831.5	22.75	24.00	1.334	-	-	-0.09	0.480	0.640
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	166300	831.5	24.27	25.00	1.183	-	-	0	0.473	0.560
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 6	166300	831.5	24.19	25.00	1.205	-	-	-0.13	0.512	0.617
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	166300	831.5	24.27	25.00	1.183	-	-	-0.01	0.567	0.671
72	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 6	166300	831.5	24.19	25.00	1.205	-	-	0.02	0.620	0.747
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI 1	1413	1732.6	23.07	25.00	1.560	-	-	-0.15	0.345	0.538
73	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	1413	1732.6	23.07	25.00	1.560	-	-	-0.05	0.377	0.588
74	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	132322	1745	22.85	24.50	1.462	-	-	-0.04	0.384	0.561
	LTE Band 66C	20M	QPSK	1	99	-	Front	10mm	Ant 2	DSI 1	132322+132520	1745+1764.8	22.76	24.50	1.493	-	-	0.01	0.355	0.530
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	132322	1745	21.75	23.50	1.496	-	-	-0.15	0.296	0.443
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	132322	1745	22.85	24.50	1.462	-	-	0.11	0.352	0.515
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	132322	1745	21.75	23.50	1.496	-	-	-0.02	0.330	0.494
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 6	132322	1745	23.99	25.00	1.262	-	-	0.17	0.386	0.487
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 6	132322	1745	22.95	24.00	1.274	-	-	-0.1	0.286	0.364
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 6	132322	1745	23.99	25.00	1.262	-	-	0.17	0.388	0.490
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 6	132322	1745	22.95	24.00	1.274	-	-	-0.15	0.310	0.395



FCC SAR Test Report

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	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	340500	1702.5	23.57	25.00	1.390	-	-	0.01	0.277	0.385
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	340500	1702.5	23.25	25.00	1.496	-	-	0.06	0.249	0.373
75	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	340500	1702.5	23.57	25.00	1.390	-	-	0.01	0.281	0.391
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	340500	1702.5	23.25	25.00	1.496	-	-	0.02	0.218	0.326
	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	349000	1745	23.88	25.50	1.452	-	-	-0.05	0.398	0.578
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	349000	1745	23.86	25.50	1.459	-	-	-0.13	0.401	0.585
76	FR1 n66	30M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	349000	1745	23.88	25.50	1.452	-	-	-0.04	0.471	0.684
	FR1 n66	30M	QPSK	80	40	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	349000	1745	23.86	25.50	1.459	-	-	0.08	0.453	0.661
1900MHz																				
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI 1	9400	1880	21.73	23.50	1.503	-	-	-0.13	0.460	0.691
77	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	9400	1880	21.73	23.50	1.503	-	-	0.06	0.646	0.971
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	9262	1852.4	21.67	23.50	1.524	-	-	0.16	0.616	0.939
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 1	9538	1907.6	21.68	23.50	1.521	-	-	-0.15	0.577	0.877
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	16mm	Ant 2	DSI 6	9400	1880	23.14	25.00	1.535	-	-	0.08	0.214	0.328
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	22mm	Ant 2	DSI 6	9400	1880	23.14	25.00	1.535	-	-	0.01	0.169	0.259
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	17mm	Ant 2	DSI 1	9400	1880	21.73	23.50	1.503	-	-	0.03	0.254	0.382
	LTE Band 25	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	26340	1880	21.62	23.00	1.374	-	-	0.07	0.418	0.574
	LTE Band 25	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	26340	1880	21.45	23.00	1.429	-	-	-0.09	0.349	0.499
78	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	26340	1880	21.62	23.00	1.374	-	-	0.06	0.636	0.874
	LTE Band 2C	20M	QPSK	1	99	-	Back	10mm	Ant 2	DSI 1	18900+19098	1880+1899.8	21.33	23.00	1.469	-	-	0.01	0.582	0.855
	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	26140	1860	21.36	23.00	1.459	-	-	-0.16	0.586	0.855
	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	26590	1905	21.49	23.00	1.416	-	-	-0.18	0.616	0.872
	LTE Band 25	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	26340	1880	21.45	23.00	1.429	-	-	-0.07	0.518	0.740
	LTE Band 25	20M	QPSK	100	0	-	Back	10mm	Ant 2	DSI 1	26340	1880	21.30	23.00	1.479	-	-	-0.1	0.527	0.779
	LTE Band 25	20M	QPSK	1	0	-	Front	16mm	Ant 2	DSI 6	26340	1880	22.98	24.50	1.419	-	-	0.07	0.207	0.294
	LTE Band 25	20M	QPSK	1	0	-	Back	22mm	Ant 2	DSI 6	26340	1880	22.98	24.50	1.419	-	-	0.07	0.166	0.236
	LTE Band 25	20M	QPSK	1	0	-	Back	17mm	Ant 2	DSI 1	26340	1880	21.62	23.00	1.374	-	-	0.07	0.277	0.381
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 6	26340	1880	24.10	25.00	1.230	-	-	0.07	0.360	0.443
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 6	26340	1880	23.15	24.00	1.216	-	-	0.16	0.281	0.342
	LTE Band 25 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 6	26340	1880	24.10	25.00	1.230	-	-	0.13	0.365	0.449
	LTE Band 25 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 6	26340	1880	23.15	24.00	1.216	-	-	-0.18	0.303	0.369
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	376000	1880	24.25	25.00	1.189	-	-	0.14	0.328	0.390
	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	376000	1880	24.00	25.00	1.259	-	-	0.03	0.373	0.470
	FR1 n2 ENDC	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	376000	1880	24.25	25.00	1.189	-	-	0.1	0.361	0.429
79	FR1 n2 ENDC	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	376000	1880	24.00	25.00	1.259	-	-	-0.14	0.378	0.476
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	376500	1882.5	22.08	23.50	1.387	-	-	0.08	0.417	0.578
	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	376500	1882.5	22.01	23.50	1.409	-	-	0.01	0.452	0.637
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	376500	1882.5	22.08	23.50	1.387	-	-	0.03	0.610	0.846
80	FR1 n25	30M	QPSK	80	40	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	376500	1882.5	22.01	23.50	1.409	-	-	0.09	0.670	0.944
	FR1 n25	30M	QPSK	160	0	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	376500	1882.5	21.77	23.50	1.489	-	-	-0.08	0.605	0.901
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Front	16mm	Ant 2	DSI 6	376500	1882.5	23.99	25.50	1.416	-	-	0.1	0.231	0.327
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Back	22mm	Ant 2	DSI 6	376500	1882.5	23.99	25.50	1.416	-	-	-0.18	0.206	0.292
	FR1 n25	30M	QPSK	1	1	DFT-SCS-15KHz	Back	17mm	Ant 2	DSI 1	376500	1882.5	22.08	23.50	1.387	-	-	0.1	0.213	0.295
2300MHz																				
	LTE Band 30	10M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	27710	2310	22.78	24.00	1.324	-	-	-0.17	0.528	0.699
	LTE Band 30	10M	QPSK	25	0	-	Front	10mm	Ant 2	DSI 1	27710	2310	21.80	23.50	1.479	-	-	0.04	0.429	0.635
81	LTE Band 30	10M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	27710	2310	22.78	24.00	1.324	-	-	0.07	0.546	0.723
	LTE Band 30	10M	QPSK	25	0	-	Back	10mm	Ant 2	DSI 1	27710	2310	21.80	23.50	1.479	-	-	-0.08	0.405	0.599
	LTE Band 30	10M	QPSK	1	0	-	Front	16mm	Ant 2	DSI 6	27710	2310	22.78	24.50	1.486	-	-	-0.17	0.257	0.382
	LTE Band 30	10M	QPSK	1	0	-	Back	22mm	Ant 2	DSI 6	27710	2310	22.78	24.50	1.486	-	-	-0.03	0.144	0.214
	LTE Band 30	10M	QPSK	1	0	-	Back	17mm	Ant 2	DSI 1	27710	2310	22.78	24.00	1.324	-	-	0.14	0.231	0.306
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	462000	2310	22.67	24.00	1.358	-	-	-0.03	0.586	0.796
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	462000	2310	22.61	24.00	1.377	-	-	0.14	0.574	0.791
82	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	462000	2310	22.67	24.00	1.358	-	-	-0.08	0.588	0.799
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	462000	2310	22.61	24.00	1.377	-	-	-0.05	0.565	0.778



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	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	16mm	Ant 2	DSI 6	462000	2310	24.08	25.50	1.387	-	-	0.18	0.329	0.456
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	22mm	Ant 2	DSI 6	462000	2310	24.08	25.50	1.387	-	-	0.14	0.173	0.240
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	17mm	Ant 2	DSI 1	462000	2310	22.67	24.00	1.358	-	-	-0.17	0.191	0.259
2600MHz																				
83	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	21100	2535	20.99	22.50	1.416	-	-	0.18	0.475	0.673
	LTE Band 7C	20M	QPSK	1	99	-	Front	10mm	Ant 2	DSI 1	21100+ 21298	2535+ 2554.8	20.85	22.50	1.462	-	-	0.01	0.455	0.665
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	21100	2535	20.82	22.50	1.472	-	-	-0.1	0.400	0.589
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	21100	2535	20.99	22.50	1.416	-	-	0.01	0.411	0.582
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	21100	2535	20.82	22.50	1.472	-	-	0.07	0.294	0.433
	LTE Band 7	20M	QPSK	1	0	-	Front	16mm	Ant 2	DSI 6	21100	2535	22.89	24.50	1.449	-	-	0.01	0.353	0.511
	LTE Band 7	20M	QPSK	1	0	-	Back	22mm	Ant 2	DSI 6	21100	2535	22.89	24.50	1.449	-	-	0.1	0.197	0.285
	LTE Band 7	20M	QPSK	1	0	-	Back	17mm	Ant 2	DSI 1	21100	2535	20.99	22.50	1.416	-	-	-0.17	0.280	0.396
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 6	21100	2535	24.24	25.00	1.191	-	-	-0.03	0.413	0.492
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 6	21100	2535	23.17	24.00	1.211	-	-	-0.03	0.354	0.429
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 6	21100	2535	24.24	25.00	1.191	-	-	0.08	0.295	0.351
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 6	21100	2535	23.17	24.00	1.211	-	-	-0.07	0.237	0.287
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 6	21100	2535	21.62	23.00	1.374	-	-	0.15	0.098	0.135
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 6	21100	2535	20.67	22.00	1.358	-	-	-0.09	0.081	0.110
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 6	21100	2535	21.62	23.00	1.374	-	-	0.11	0.216	0.297
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 6	21100	2535	20.67	22.00	1.358	-	-	-0.05	0.173	0.235
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 8	DSI 6	21100	2535	24.28	25.00	1.180	-	-	0.02	0.406	0.479
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 8	DSI 6	21100	2535	23.20	24.00	1.202	-	-	0.07	0.380	0.457
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 8	DSI 6	21100	2535	24.28	25.00	1.180	-	-	0.16	0.315	0.372
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 8	DSI 6	21100	2535	23.20	24.00	1.202	-	-	0.13	0.327	0.393
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	40620	2593	23.71	25.00	1.346	62.9	1.006	0.01	0.443	0.600
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	39750	2506	23.41	25.00	1.442	62.9	1.006	-0.06	0.461	0.669
84	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	40185	2549.5	23.57	25.00	1.390	62.9	1.006	0.09	0.514	0.719
	LTE Band 38C	20M	QPSK	1	99	-	Front	10mm	Ant 2	DSI 1	37901+ 38099	2321.1+ 2340.9	23.45	25.00	1.429	62.9	1.006	0.01	0.486	0.699
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	41055	2636.5	23.54	25.00	1.400	62.9	1.006	-0.04	0.330	0.465
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	41490	2680	23.54	25.00	1.400	62.9	1.006	-0.09	0.334	0.470
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 1	40620	2593	22.79	24.00	1.321	62.9	1.006	-0.17	0.345	0.459
	LTE Band 41	20M	QPSK	100	0	-	Front	10mm	Ant 2	DSI 1	40620	2593	22.83	24.00	1.309	62.9	1.006	-0.1	0.317	0.418
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 1	40620	2593	23.71	25.00	1.346	62.9	1.006	0.18	0.323	0.437
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 1	40620	2593	22.79	24.00	1.321	62.9	1.006	-0.17	0.239	0.318
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 1	40185	2549.5	25.79	27.00	1.321	42.9	1.009	0.02	0.529	0.705
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 6	40620	2593	24.74	25.00	1.062	62.9	1.006	0.06	0.115	0.123
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 6	40620	2593	23.67	24.00	1.079	62.9	1.006	0.02	0.114	0.124
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 6	40620	2593	24.74	25.00	1.062	62.9	1.006	0.12	0.261	0.279
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 6	40620	2593	23.67	24.00	1.079	62.9	1.006	-0.16	0.255	0.277
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 6	40620	2593	26.73	27.00	1.064	42.9	1.009	0.16	0.263	0.282
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	507000	2535	20.94	22.50	1.432	-	-	0.02	0.494	0.708
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 1	507000	2535	20.85	22.50	1.462	-	-	-0.09	0.466	0.681
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	507000	2535	20.94	22.50	1.432	-	-	0.07	0.432	0.619
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 1	507000	2535	20.85	22.50	1.462	-	-	-0.18	0.416	0.608
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	16mm	Ant 2	DSI 6	507000	2535	23.82	25.50	1.472	-	-	-0.08	0.445	0.655
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	22mm	Ant 2	DSI 6	507000	2535	23.82	25.50	1.472	-	-	0.05	0.232	0.342
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	17mm	Ant 2	DSI 1	507000	2535	19.94	21.50	1.432	-	-	0.06	0.147	0.211
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	507000	2535	23.96	25.00	1.271	-	-	-0.17	0.376	0.478
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 6	507000	2535	23.67	25.00	1.358	-	-	-0.03	0.401	0.545
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	507000	2535	23.96	25.00	1.271	-	-	0.14	0.510	0.648
85	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 6	507000	2535	23.67	25.00	1.358	-	-	-0.03	0.529	0.719
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 1	518598	2592.99	21.17	22.50	1.358	-	-	0.01	0.500	0.679
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 1	518598	2592.99	21.14	22.50	1.368	-	-	0.17	0.476	0.651
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 1	518598	2592.99	21.17	22.50	1.358	-	-	0.16	0.470	0.638
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 1	518598	2592.99	21.14	22.50	1.368	-	-	0.05	0.452	0.618



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	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 1	518598	2592.99	22.21	23.50	1.346	50	1.000	0.09	0.401	0.540
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	16mm	Ant 2	DSI 6	518598	2592.99	24.12	25.50	1.374	-	-	0.13	0.422	0.580
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	22mm	Ant 2	DSI 6	518598	2592.99	24.12	25.50	1.374	-	-	0.03	0.227	0.312
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	16mm	Ant 2	DSI 6	518598	2592.99	26.13	27.50	1.371	50	1.000	0.12	0.308	0.422
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	17mm	Ant 2	DSI 1	518598	2592.99	21.14	22.50	1.368	-	-	0.16	0.160	0.219
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	17mm	Ant 2	DSI 1	518598	2592.99	22.21	23.50	1.346	50	1.000	-0.1	0.168	0.226
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 6	518598	2592.99	23.40	25.00	1.445	-	-	-0.04	0.358	0.517
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 6	518598	2592.99	23.67	25.00	1.358	-	-	0.13	0.400	0.543
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 6	518598	2592.99	23.40	25.00	1.445	-	-	0.12	0.492	0.711
86	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 6	518598	2592.99	23.67	25.00	1.358	-	-	0.05	0.528	0.717
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 6	518598	2592.99	25.82	27.00	1.312	50	1.000	0.07	0.455	0.597
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	518598	2592.99	23.47	25.00	1.422	-	-	0.19	0.108	0.154
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	518598	2592.99	23.38	25.00	1.452	-	-	0.07	0.160	0.232
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	518598	2592.99	23.47	25.00	1.422	-	-	-0.18	0.281	0.400
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	518598	2592.99	23.38	25.00	1.452	-	-	0.03	0.395	0.574
	FR1 n41_HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	518598	2592.99	25.35	27.00	1.462	50	1.000	-0.04	0.340	0.497
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI 6	518598	2592.99	24.05	25.00	1.245	-	-	-0.08	0.357	0.444
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI 6	518598	2592.99	23.72	25.00	1.343	-	-	0.17	0.322	0.432
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI 6	518598	2592.99	24.05	25.00	1.245	-	-	0.18	0.354	0.441
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI 6	518598	2592.99	23.72	25.00	1.343	-	-	-0.04	0.325	0.436
	FR1 n41_HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI 6	518598	2592.99	25.60	27.00	1.380	50	1.000	-0.04	0.255	0.352
3500MHz																				
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 6	42590	3500	21.09	22.00	1.233	62.9	1.006	0.08	0.144	0.179
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 6	42590	3500	20.98	22.00	1.265	62.9	1.006	0.01	0.124	0.158
87	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	42590	3500	21.09	22.00	1.233	62.9	1.006	-0.04	0.486	0.603
	LTE Band 42C	20M	QPSK	1	99	-	Back	10mm	Ant 3	DSI 6	42590+ 42788	3500+ 3519.8	21.01	22.00	1.256	62.9	1.006	0.06	0.423	0.534
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	42590	3500	20.98	22.00	1.265	62.9	1.006	-0.08	0.464	0.590
	LTE Band 48	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 6	55830	3609	21.22	22.00	1.197	62.9	1.006	-0.09	0.116	0.140
	LTE Band 48	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 6	55830	3609	21.16	22.00	1.213	62.9	1.006	0.11	0.109	0.133
88	LTE Band 48	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	55830	3609	21.22	22.00	1.197	62.9	1.006	-0.08	0.662	0.797
	LTE Band 48	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	55340	3560	21.07	22.00	1.239	62.9	1.006	-0.05	0.621	0.774
	LTE Band 48	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	56150	3641	21.09	22.00	1.233	62.9	1.006	-0.08	0.641	0.795
	LTE Band 48	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 6	56640	3690	21.04	22.00	1.247	62.9	1.006	0.16	0.448	0.562
	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	55830	3609	21.16	22.00	1.213	62.9	1.006	0.05	0.494	0.603
	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	55340	3560	20.94	22.00	1.276	62.9	1.006	0.05	0.477	0.613
	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	56150	3641	21.01	22.00	1.256	62.9	1.006	-0.03	0.500	0.632
	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 6	56640	3690	20.93	22.00	1.279	62.9	1.006	-0.15	0.362	0.466
	LTE Band 48	20M	QPSK	100	0	-	Back	10mm	Ant 3	DSI 6	55830	3609	20.95	22.00	1.274	62.9	1.006	0.02	0.553	0.708
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 7	DSI 6	55830	3609	23.76	25.00	1.330	62.9	1.006	-0.04	0.481	0.644
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 7	DSI 6	55340	3560	23.42	25.00	1.439	62.9	1.006	0.01	0.475	0.688
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 7	DSI 6	56150	3641	23.68	25.00	1.355	62.9	1.006	0.03	0.480	0.654
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Front	10mm	Ant 7	DSI 6	56640	3690	23.57	25.00	1.390	62.9	1.006	-0.08	0.470	0.657
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 7	DSI 6	55830	3609	22.79	24.00	1.321	62.9	1.006	-0.05	0.427	0.568
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 7	DSI 6	55340	3560	22.47	24.00	1.422	62.9	1.006	-0.08	0.412	0.590
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 7	DSI 6	56150	3641	22.70	24.00	1.349	62.9	1.006	0.1	0.400	0.543
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Front	10mm	Ant 7	DSI 6	56640	3690	22.77	24.00	1.327	62.9	1.006	-0.18	0.421	0.562
	LTE Band 48 ENDC	20M	QPSK	100	0	-	Front	10mm	Ant 7	DSI 6	55830	3609	22.75	24.00	1.334	62.9	1.006	0.1	0.431	0.578
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 7	DSI 6	55830	3609	23.76	25.00	1.330	62.9	1.006	0	0.547	0.732
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 7	DSI 6	55340	3560	23.42	25.00	1.439	62.9	1.006	0.12	0.501	0.725
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 7	DSI 6	56150	3641	23.68	25.00	1.355	62.9	1.006	0.08	0.521	0.710
	LTE Band 48 ENDC	20M	QPSK	1	0	-	Back	10mm	Ant 7	DSI 6	56640	3690	23.57	25.00	1.390	62.9	1.006	-0.17	0.517	0.723
	LTE Band 48	20M	QPSK	50	0	-	Back	10mm	Ant 7	DSI 6	55830	3609	22.79	24.00	1.321	62.9	1.006	-0.13	0.494	0.657



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	ENDC																			
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 7	DSI 6	55340	3560	22.47	24.00	1.422	62.9	1.006	-0.03	0.487	0.697
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 7	DSI 6	56150	3641	22.70	24.00	1.349	62.9	1.006	0.14	0.475	0.645
	LTE Band 48 ENDC	20M	QPSK	50	0	-	Back	10mm	Ant 7	DSI 6	56640	3690	22.77	24.00	1.327	62.9	1.006	0.11	0.477	0.637
	LTE Band 48 ENDC	20M	QPSK	100	0	-	Back	10mm	Ant 7	DSI 6	55830	3609	22.75	24.00	1.334	62.9	1.006	-0.05	0.452	0.606
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	641666	3624.99	19.76	21.00	1.330	-	-	0.06	0.165	0.220
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	641666	3624.99	19.61	21.00	1.377	-	-	0	0.185	0.255
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	641666	3624.99	19.76	21.00	1.330	-	-	-0.04	0.604	0.804
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	638000	3570	19.64	21.00	1.368	-	-	-0.15	0.650	0.889
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	645332	3679.98	19.61	21.00	1.377	-	-	0.11	0.581	0.800
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	641666	3624.99	19.61	21.00	1.377	-	-	-0.02	0.618	0.851
89	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	638000	3570	19.56	21.00	1.393	-	-	-0.03	0.659	0.918
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	645332	3679.98	19.56	21.00	1.393	-	-	0.1	0.594	0.828
	FR1 n48	40M	QPSK	100	0	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	641666	3624.99	19.43	21.00	1.435	-	-	0.04	0.512	0.735
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	656000	3840	19.11	20.50	1.377	-	-	-0.13	0.034	0.047
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	656000	3840	19.06	20.50	1.393	-	-	0.08	0.027	0.038
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	656000	3840	19.11	20.50	1.377	-	-	0.04	0.245	0.337
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	656000	3840	19.06	20.50	1.393	-	-	0.16	0.195	0.272
	FR1 n77 Part 27O HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	656000	3840	22.00	23.50	1.413	50	1.000	-0.06	0.244	0.345
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	633332	3499.98	18.98	20.50	1.419	-	-	0.03	0.181	0.257
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 6	633332	3499.98	18.92	20.50	1.439	-	-	-0.13	0.218	0.314
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	633332	3499.98	18.98	20.50	1.419	-	-	0.16	0.593	0.842
90	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	633332	3499.98	18.92	20.50	1.439	-	-	-0.07	0.695	1.000
	FR1 n77 Part 27Q	100M	BPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	633332	3499.98	18.82	20.50	1.472	-	-	-0.15	0.592	0.872
	FR1 n77 Part 27Q HPUE	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 6	633332	3499.98	21.71	23.50	1.510	50	1.000	-0.16	0.596	0.900
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 6	656000	3840	23.47	25.00	1.422	-	-	0.14	0.051	0.073
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 6	656000	3840	23.31	25.00	1.476	-	-	-0.01	0.042	0.062
	FR1 n77 Part 27O ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	656000	3840	23.47	25.00	1.422	-	-	-0.12	0.164	0.233
	FR1 n77 Part 27O ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	656000	3840	23.31	25.00	1.476	-	-	0.07	0.181	0.267
	FR1 n77 Part 27O HPUE ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	656000	3840	25.41	27.00	1.442	50	1.000	0.17	0.153	0.221
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 6	633332	3499.98	23.40	25.00	1.445	-	-	-0.17	0.118	0.171
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 6	633332	3499.98	23.28	25.00	1.486	-	-	0.11	0.107	0.159
	FR1 n77 Part 27Q ENDC	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	633332	3499.98	23.40	25.00	1.445	-	-	-0.05	0.150	0.217
	FR1 n77 Part 27Q ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	633332	3499.98	23.28	25.00	1.486	-	-	-0.01	0.155	0.230
	FR1 n77 Part 27Q HPUE ENDC	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 6	633332	3499.98	25.23	27.00	1.503	50	1.000	0.02	0.124	0.186
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	656000	3840	25.55	26.00	1.109	-	-	-0.06	0.171	0.190
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	656000	3840	25.48	26.00	1.127	-	-	-0.15	0.146	0.165
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	656000	3840	25.55	26.00	1.109	-	-	-0.12	0.127	0.141
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	656000	3840	25.48	26.00	1.127	-	-	-0.16	0.127	0.143
	FR1 n77 Part 27O HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	656000	3840	27.67	29.00	1.358	50	1.000	-0.05	0.140	0.190
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	633332	3499.98	25.69	26.00	1.074	-	-	-0.08	0.052	0.056
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	633332	3499.98	25.67	26.00	1.079	-	-	0	0.045	0.049
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	633332	3499.98	25.69	26.00	1.074	-	-	-0.14	0.036	0.039
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 1	633332	3499.98	25.67	26.00	1.079	-	-	0.01	0.038	0.041
	FR1 n77 Part 27Q HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 1	633332	3499.98	27.96	29.00	1.271	50	1.000	-0.17	0.042	0.053
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	656000	3840	23.80	25.00	1.318	-	-	-0.13	0.111	0.146
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	656000	3840	23.76	25.00	1.330	-	-	0	0.097	0.129
	FR1 n77 Part 27O	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	656000	3840	23.80	25.00	1.318	-	-	-0.04	0.127	0.167
	FR1 n77 Part 27O	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	656000	3840	23.76	25.00	1.330	-	-	-0.15	0.161	0.214
	FR1 n77 Part 27O HPUE	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	656000	3840	25.17	27.00	1.524	50	1.000	-0.05	0.105	0.160



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	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	633332	3499.98	22.69	24.00	1.352	-	-	0.1	0.135	0.183
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	633332	3499.98	22.51	24.00	1.409	-	-	-0.11	0.121	0.171
	FR1 n77 Part 27Q	100M	BPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	633332	3499.98	22.69	24.00	1.352	-	-	-0.02	0.079	0.107
	FR1 n77 Part 27Q	100M	BPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 6	633332	3499.98	22.51	24.00	1.409	-	-	-0.1	0.077	0.109
	FR1 n77 Part 27Q HPUE	100M	BPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 6	633332	3499.98	24.51	26.00	1.409	50	1.000	0.16	0.094	0.132

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																
91	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	0.08	0.114	0.169
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	-0.01	0.195	0.288
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 11+10(11)	Full Power	1	2412	18.10	20.00	1.549	100	1.000	0.03	0.156	0.242
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 11+10(11)	Full Power	11	2462	18.00	19.50	1.413	100	1.000	0.01	0.144	0.203
	WLAN2.4GHz	802.11b 1Mbps	Front	16mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	-0.15	0.048	0.071
	WLAN2.4GHz	802.11b 1Mbps	Back	17mm	Ant 11+10(11)	Full Power	6	2437	18.80	20.50	1.479	100	1.000	0.19	0.098	0.145
92	Bluetooth	1Mbps	Front	10mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	0.1	0.111	0.148
	Bluetooth	1Mbps	Back	10mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	-0.01	0.142	0.189
	Bluetooth	1Mbps	Back	10mm	Ant 11	Full Power	0	2402	8.20	10.00	1.514	76.95	1.083	0.02	0.111	0.182
	Bluetooth	1Mbps	Back	10mm	Ant 11	Full Power	78	2480	8.30	10.00	1.479	76.95	1.083	0.01	0.092	0.147
	Bluetooth	1Mbps	Front	16mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	-0.18	0.008	0.011
	Bluetooth	1Mbps	Back	17mm	Ant 11	Full Power	39	2441	9.10	10.00	1.230	76.95	1.083	0.03	0.016	0.021
	Bluetooth	1Mbps	Front	10mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	-0.17	0.000	0.000
	Bluetooth	1Mbps	Back	10mm	Ant 10	Full Power	0	2402	9.50	9.50	1.000	76.75	1.085	0.09	0.077	0.084
	Bluetooth	1Mbps	Back	10mm	Ant 10	Full Power	39	2441	9.30	9.50	1.047	76.75	1.085	0.09	0.054	0.061
	Bluetooth	1Mbps	Back	10mm	Ant 10	Full Power	78	2480	7.70	9.50	1.514	76.75	1.085	-0.05	0.043	0.071
5000MHz																
93	WLAN5.3GHz	802.11n-HT40 MCS0	Front	10mm	Ant 11+10(10)	Standalone	54	5270	16.22	18.00	1.507	100	1.000	-0.08	0.197	0.297
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	10mm	Ant 11+10(10)	Standalone	54	5270	16.22	18.00	1.507	100	1.000	0.05	0.731	1.101
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	10mm	Ant 11+10(10)	Standalone	62	5310	15.70	17.50	1.514	100	1.000	-0.08	0.789	1.194
	WLAN5.3GHz	802.11ac-VHT160 MCS0	Back	10mm	Ant 11+10(11)	Simultaneous	50	5250	11.13	13.00	1.538	100	1.000	0.09	0.255	0.392
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	16mm	Ant 11+10(11)	Full Power	54	5270	18.90	20.50	1.445	100	1.000	-0.15	0.246	0.356
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	17mm	Ant 11+10(11)	Full Power	54	5270	18.90	20.50	1.445	100	1.000	0.11	0.814	1.177
94	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 11+10(11)	Standalone	138	5690	15.13	17.00	1.538	100	1.000	0.19	0.146	0.225
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 11+10(11)	Standalone	138	5690	15.13	17.00	1.538	100	1.000	-0.05	0.736	1.132
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 11+10(10)	Standalone	122	5610	14.09	16.00	1.552	100	1.000	0.07	0.651	1.011
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 11+10(11)	Standalone	106	5530	15.37	17.00	1.455	100	1.000	-0.18	0.665	0.968
	WLAN5.5GHz	802.11ac-VHT160 MCS0	Back	10mm	Ant 11+10(10)	Simultaneous	114	5570	10.32	12.00	1.472	100	1.000	0.06	0.244	0.359
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	16mm	Ant 11+10(10)	Full Power	142	5710	18.67	20.50	1.524	100	1.000	0.03	0.198	0.302
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	17mm	Ant 11+10(10)	Full Power	142	5710	18.67	20.50	1.524	100	1.000	0.01	0.655	0.998
95	WLAN5.8GHz	802.11ax-HE20 MCS0	Front	10mm	Ant 11+10(11)	Full Power	157	5785	11.60	13.50	1.549	100	1.000	0.03	0.000	0.000
	WLAN5.8GHz	802.11ax-HE20 MCS0	Back	10mm	Ant 11+10(11)	Full Power	157	5785	11.60	13.50	1.549	100	1.000	-0.09	0.218	0.338
	WLAN5.8GHz	802.11ax-HE20 MCS0	Back	10mm	Ant 11+10(10)	Full Power	149	5745	10.22	12.00	1.507	100	1.000	-0.15	0.160	0.241
	WLAN5.8GHz	802.11ax-HE20 MCS0	Back	10mm	Ant 11+10(11)	Full Power	165	5825	11.17	13.00	1.524	100	1.000	-0.15	0.186	0.283



16.4 Product specific 10g SAR

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
5000MHz																
96	WLAN5.2GHz	802.11n-HT40 MCS0	Front	0mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	0.1	0.795	1.046
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	-0.09	1.08	1.420
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	0.04	0.767	1.009
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	-0.01	0.122	0.160
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 11+10(11)	Simultaneous	42	5210	11.11	13.00	1.545	100	1.000	0.01	0.188	0.291
97	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 11+10(11)	Full Power	54	5270	18.90	20.50	1.445	100	1.000	-0.09	1.26	1.821
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 11+10(11)	Full Power	54	5270	18.90	20.50	1.445	100	1.000	-0.08	1.71	2.472
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 11+10(11)	Full Power	54	5270	18.90	20.50	1.445	100	1.000	0.12	1.22	1.763
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 11+10(11)	Full Power	54	5270	18.90	20.50	1.445	100	1.000	0.03	0.192	0.278
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 11+10(10)	Full Power	62	5310	15.70	17.50	1.514	100	1.000	0.01	0.907	1.373
	WLAN5.3GHz	802.11ac-VHT160 MCS0	Back	0mm	Ant 11+10(11)	Simultaneous	50	5250	11.13	13.00	1.538	100	1.000	0.18	0.290	0.446
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 11+10(10)	Full Power	142	5710	18.67	20.50	1.524	100	1.000	0.16	0.276	0.421
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 11+10(10)	Full Power	142	5710	18.67	20.50	1.524	100	1.000	-0.1	1.07	1.631
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 11+10(10)	Full Power	142	5710	18.67	20.50	1.524	100	1.000	0.18	0.739	1.126
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 11+10(10)	Full Power	142	5710	18.67	20.50	1.524	100	1.000	-0.1	0.068	0.104
98	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 11+10(10)	Full Power	102	5510	16.30	18.00	1.479	100	1.000	0.01	0.755	1.117
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 11+10(10)	Full Power	110	5550	18.58	20.50	1.556	100	1.000	-0.15	1.17	1.820
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 11+10(10)	Full Power	134	5670	18.73	20.50	1.503	100	1.000	-0.03	1.26	1.894
	WLAN5.5GHz	802.11ac-VHT160 MCS0	Back	0mm	Ant 11+10(10)	Simultaneous	114	5570	10.32	12.00	1.472	100	1.000	0.06	0.225	0.331
	WLAN5.5GHz	802.11ac-VHT160 MCS0	Back	0mm	Ant 11+10(10)	Simultaneous	114	5570	10.32	12.00	1.472	100	1.000	0.06	0.225	0.331

16.5 Repeated SAR Measurement

<1g>

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)	Ratio	Reported 1g SAR (W/kg)
1st	WLAN5.2GHz	802.11n-HT40 MCS0	Back	17mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	0.01	0.874	1	1.150
2nd	WLAN5.2GHz	802.11n-HT40 MCS0	Back	17mm	Ant 11+10(11)	Full Power	46	5230	18.31	19.50	1.315	100	1.000	0.02	0.851	1.027	1.119
1st	WLAN5.3GHz	802.11n-HT40 MCS0	Back	17mm	Ant 11+10(11)	Full Power	54	5270	18.90	20.50	1.445	100	1.000	0.11	0.814	1	1.177
2nd	WLAN5.3GHz	802.11n-HT40 MCS0	Back	17mm	Ant 11+10(11)	Full Power	54	5270	18.90	20.50	1.445	100	1.000	0.02	0.799	1.019	1.155

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.



16.6 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/n77/n78. 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 2		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	19.00	20.60
Reported 1g SAR (W/kg)	0.906	0.865
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	50.28	49.72
Linearity SAR (W/kg)	0.896	
% deviation from expected linearity		-3.44%
LTE B41-Linearity Data for Body-worn Ant 2		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.719	0.705
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR (W/kg)	0.779	
% deviation from expected linearity		-9.56%
LTE B41-Linearity Data for Hotspot Ant 2		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	1.032	1.012
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR (W/kg)	1.119	
% deviation from expected linearity		-9.55%
LTE B41-Linearity Data for Head Ant 6		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.103	0.118
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR (W/kg)	0.112	
% deviation from expected linearity		5.67%
LTE B41-Linearity Data for Body-worn Ant 6		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.279	0.282
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR (W/kg)	0.302	
% deviation from expected linearity		-6.77%
LTE B41-Linearity Data for Hotspot Ant 6		
	LTE B41 (Power Class 3)	LTE B41 (Power Class 2)



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Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.279	0.282
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR (W/kg)	0.302	
% deviation from expected linearity		-6.77%

FR1 n41(HPUE)-Linearity Data for Head Ant 2			FR1 n41(HPUE)-Linearity Data for Head Ant 5		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	16.50	19.50	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.974	0.964	Reported 1g SAR (W/kg)	0.310	0.249
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	44.67	44.56	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.972		Linearity SAR (W/kg)	0.246	
% deviation from expected linearity		-0.79%	% deviation from expected linearity		1.36%
FR1 n41(HPUE)-Linearity Data for Body-worn Ant 2			FR1 n41(HPUE)-Linearity Data for Body-worn Ant 5		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	20.50	23.50	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.553	0.540	Reported 1g SAR (W/kg)	0.717	0.592
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	112.20	111.94	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.552		Linearity SAR (W/kg)	0.568	
% deviation from expected linearity		-2.12%	% deviation from expected linearity		4.19%
FR1 n41(HPUE)-Linearity Data for Hotspot Ant 2			FR1 n41(HPUE)-Linearity Data for Hotspot Ant 5		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	22.50	25.50	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	1.016	0.939	Reported 1g SAR (W/kg)	0.717	0.592
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	177.83	177.41	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	1.014		Linearity SAR (W/kg)	0.568	
% deviation from expected linearity		-7.36%	% deviation from expected linearity		4.19%

FR1 n41(HPUE)-Linearity Data for Head Ant 6			FR1 n41(HPUE)-Linearity Data for Head Ant 8		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	27.00	Maximum Tune up Power (dBm)	22.00	25.00
Reported 1g SAR (W/kg)	0.099	0.072	Reported 1g SAR (W/kg)	0.814	0.859
Duty Cycle	100.00%	50.00%	Duty Cycle	85.90%	50.00%
Frame Averaged (mW)	316.23	250.59	Frame Averaged (mW)	136.14	158.11
Linearity SAR (W/kg)	0.078		Linearity SAR (W/kg)	0.945	
% deviation from expected linearity		-8.22%	% deviation from expected linearity		-9.14%
FR1 n41(HPUE)-Linearity Data for Body-worn Ant 6			FR1 n41(HPUE)-Linearity Data for Body-worn Ant 8		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	27.00	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.574	0.497	Reported 1g SAR (W/kg)	0.444	0.352
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	316.23	250.59	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.455		Linearity SAR (W/kg)	0.352	
% deviation from expected linearity		9.26%	% deviation from expected linearity		0.04%
FR1 n41(HPUE)-Linearity Data for Hotspot Ant 6			FR1 n41(HPUE)-Linearity Data for Hotspot Ant 8		



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	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	27.00	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.574	0.497	Reported 1g SAR (W/kg)	0.548	0.464
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	316.23	250.59	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.455		Linearity SAR (W/kg)	0.434	
% deviation from expected linearity		9.26%	% deviation from expected linearity		6.85%

FR1 n77 Part 270(HPUE)-Linearity Data for Head Ant 3			FR1 n77 Part 270(HPUE)-Linearity Data for Head Ant 7		
	FR1 n77 Part 270 (Power Class 3)	FR1 n77 Part 270 (Power Class 2)		FR1 n77 Part 270 (Power Class 3)	FR1 n77 Part 270 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	18.00	21.00
Reported 1g SAR (W/kg)	0.098	0.103	Reported 1g SAR (W/kg)	0.584	0.548
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	89.13	88.91	Frame Averaged (mW)	63.10	62.95
Linearity SAR (W/kg)	0.098		Linearity SAR (W/kg)	0.583	
% deviation from expected linearity		5.35%	% deviation from expected linearity		-5.94%
FR1 n77 Part 270(HPUE)-Linearity Data for Body-worn Ant 3			FR1 n77 Part 270(HPUE)-Linearity Data for Body-worn Ant 7		
	FR1 n77 Part 270 (Power Class 3)	FR1 n77 Part 270 (Power Class 2)		FR1 n77 Part 270 (Power Class 3)	FR1 n77 Part 270 (Power Class 2)
Maximum Tune up Power (dBm)	20.50	23.50	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.337	0.345	Reported 1g SAR (W/kg)	0.267	0.221
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	112.20	111.94	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.336		Linearity SAR (W/kg)	0.212	
% deviation from expected linearity		2.62%	% deviation from expected linearity		4.45%
FR1 n77 Part 270(HPUE)-Linearity Data for Hotspot Ant 3			FR1 n77 Part 270(HPUE)-Linearity Data for Hotspot Ant 7		
	FR1 n77 Part 270 (Power Class 3)	FR1 n77 Part 270 (Power Class 2)		FR1 n77 Part 270 (Power Class 3)	FR1 n77 Part 270 (Power Class 2)
Maximum Tune up Power (dBm)	20.50	23.50	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.337	0.345	Reported 1g SAR (W/kg)	0.267	0.221
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	112.20	111.94	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.336		Linearity SAR (W/kg)	0.212	
% deviation from expected linearity		2.62%	% deviation from expected linearity		4.45%

FR1 n77 Part 270(HPUE)-Linearity Data for Head Ant 4			FR1 n77 Part 270(HPUE)-Linearity Data for Head Ant 6		
	FR1 n77 Part 270 (Power Class 3)	FR1 n77 Part 270 (Power Class 2)		FR1 n77 Part 270 (Power Class 3)	FR1 n77 Part 270 (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.060	0.063	Reported 1g SAR (W/kg)	0.111	0.096
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	398.11	397.16	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.060		Linearity SAR (W/kg)	0.088	
% deviation from expected linearity		5.25%	% deviation from expected linearity		9.14%
FR1 n77 Part 270(HPUE)-Linearity Data for Body-worn Ant 4			FR1 n77 Part 270(HPUE)-Linearity Data for Body-worn Ant 6		



	FR1 n77 Part 27O (Power Class 3)	FR1 n77 Part 27O (Power Class 2)		FR1 n77 Part 27O (Power Class 3)	FR1 n77 Part 27O (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.190	0.190	Reported 1g SAR (W/kg)	0.214	0.160
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	398.11	397.16	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.190		Linearity SAR (W/kg)	0.170	
% deviation from expected linearity		0.24%	% deviation from expected linearity		-5.65%
FR1 n77 Part 27O(HPUE)-Linearity Data for Hotspot Ant 4			FR1 n77 Part 27O(HPUE)-Linearity Data for Hotspot Ant 6		
	FR1 n77 Part 27O (Power Class 3)	FR1 n77 Part 27O (Power Class 2)		FR1 n77 Part 27O (Power Class 3)	FR1 n77 Part 27O (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.190	0.190	Reported 1g SAR (W/kg)	0.214	0.160
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	398.11	397.16	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.190		Linearity SAR (W/kg)	0.170	
% deviation from expected linearity		0.24%	% deviation from expected linearity		-5.65%
FR1 n77 Part 27Q(HPUE)-Linearity Data for Head Ant 3			FR1 n77 Part 27Q(HPUE)-Linearity Data for Head Ant 7		
	FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)		FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	18.00	21.00
Reported 1g SAR (W/kg)	0.804	0.752	Reported 1g SAR (W/kg)	0.929	0.864
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	89.13	88.91	Frame Averaged (mW)	63.10	62.95
Linearity SAR (W/kg)	0.802		Linearity SAR (W/kg)	0.927	
% deviation from expected linearity		-6.25%	% deviation from expected linearity		-6.78%
FR1 n77 Part 27Q(HPUE)-Linearity Data for Body-worn Ant 3			FR1 n77 Part 27Q(HPUE)-Linearity Data for Body-worn Ant 7		
	FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)		FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)
Maximum Tune up Power (dBm)	20.50	23.50	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	1.000	0.900	Reported 1g SAR (W/kg)	0.230	0.186
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	112.20	111.94	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.998		Linearity SAR (W/kg)	0.182	
% deviation from expected linearity		-9.79%	% deviation from expected linearity		2.05%
FR1 n77 Part 27Q(HPUE)-Linearity Data for Hotspot Ant 3			FR1 n77 Part 27Q(HPUE)-Linearity Data for Hotspot Ant 7		
	FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)		FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)
Maximum Tune up Power (dBm)	20.50	23.50	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	1.000	0.900	Reported 1g SAR (W/kg)	0.230	0.186
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	112.20	111.94	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.998		Linearity SAR (W/kg)	0.182	
% deviation from expected linearity		-9.79%	% deviation from expected linearity		2.05%

FR1 n77 Part 27Q(HPUE)-Linearity Data for Head Ant 4			FR1 n77 Part 27Q(HPUE)-Linearity Data for Head Ant 6		
	FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)		FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	24.00	26.00
Reported 1g SAR (W/kg)	0.112	0.102	Reported 1g SAR (W/kg)	0.055	0.042
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	398.11	397.16	Frame Averaged (mW)	251.19	199.05
Linearity SAR (W/kg)	0.112		Linearity SAR (W/kg)	0.044	
% deviation from expected linearity		-8.71%	% deviation from expected linearity		-3.64%
FR1 n77 Part 27Q(HPUE)-Linearity Data for Body-worn Ant 4			FR1 n77 Part 27Q(HPUE)-Linearity Data for Body-worn Ant 6		
	FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)		FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	24.00	26.00
Reported 1g SAR (W/kg)	0.056	0.053	Reported 1g SAR (W/kg)	0.183	0.132
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	398.11	397.16	Frame Averaged (mW)	251.19	199.05
Linearity SAR (W/kg)	0.056		Linearity SAR (W/kg)	0.145	
% deviation from expected linearity		-5.13%	% deviation from expected linearity		-8.98%
FR1 n77 Part 27Q(HPUE)-Linearity Data for Hotspot Ant 4			FR1 n77 Part 27Q(HPUE)-Linearity Data for Hotspot Ant 6		
	FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)		FR1 n77 Part 27Q (Power Class 3)	FR1 n77 Part 27Q (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	24.00	26.00
Reported 1g SAR (W/kg)	0.056	0.053	Reported 1g SAR (W/kg)	0.183	0.132
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	398.11	397.16	Frame Averaged (mW)	251.19	199.05
Linearity SAR (W/kg)	0.056		Linearity SAR (W/kg)	0.145	
% deviation from expected linearity		-5.13%	% deviation from expected linearity		-8.98%

Sensor off

FR1 n41(HPUE)-Linearity Data for Body-worn Ant 2		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	25.50	27.50
Reported 1g SAR (W/kg)	0.580	0.422
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	354.81	281.17
Linearity SAR (W/kg)	0.460	
% deviation from expected linearity		-8.18%
FR1 n41(HPUE)-Linearity Data for Hotspot Ant 2		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	25.50	27.50
Reported 1g SAR (W/kg)	0.780	0.664
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	354.81	281.17
Linearity SAR (W/kg)	0.618	
% deviation from expected linearity		7.42%

17. 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.	5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
6.	6GHz WLAN + Bluetooth	Yes	Yes		Yes
7.	WWAN +5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
8.	WWAN +6GHz WLAN + Bluetooth	Yes	Yes		Yes
9.	WWAN + 2.4GHz WLAN+ NFC				Yes
10.	WWAN + 5GHz WLAN+ NFC				Yes
11.	WWAN + 6GHz WLAN+ NFC				Yes
12.	WWAN + Bluetooth+ NFC				Yes
13.	5GHz WLAN + Bluetooth+ NFC				Yes
14.	6GHz WLAN + Bluetooth+ NFC				Yes
15.	WWAN +5GHz WLAN + Bluetooth+ NFC				Yes
16.	WWAN +6GHz WLAN + Bluetooth+ NFC				Yes

General Note:

- This device supports VoIP in WCDMA, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- WWAN above includes 5G NR bands and EN-DC combination.
- EUT will choose each WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- 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.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- 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.
- The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
- According to the EUT characteristic, WLAN 5GHz/6GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz/6GHz and WLAN 2.4GHz can't transmit simultaneously.
- According to the EUT characteristic, WLAN 2.4GHz and Bluetooth can't transmit simultaneously.
- NFC can transmit simultaneously with other Radios in extremity exposure condition.
- 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.
- For sensor off, always choose the highest SAR among the selected 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.
- The maximum SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.

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

In 5G NR + LTE + WLAN + BT simultaneous transmission, 5G NR and LTE transmission are managed and controlled by 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 $A \leq 1.0$; 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 $B \leq 1.0$.

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

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

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

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

If $A + C \leq 1.0$ and $B + C \leq 1.0$ can be proven, then " $x\% * A + (100-x)\% * B + C \leq 1.0$ ". 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. $(100-x)\% * B + C \leq 1.0$, and

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

Note iii. is covered in Part 2 report; i. and ii. should be addressed in Part 1 report.

Above analysis is also apply to LTE inter-band uplink CA, LTE1 + LTE2 + 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 LTE + WLAN + BT < 1.

17.2 MIMO SAR Test condition and verification

General Note:

- Smart Transmit EFS v20 (or lower) uses SISO Plimit to calculate RF exposure from MIMO transmission scenario. Therefore, if MIMO is supported for WWAN technologies (including 5G sub6 NR), below procedure should be performed for validity of Smart Transmit operation:
 - Below procedure should also be performed for Smart Transmit EFS v21 (or higher) if MIMO Plimit is not populated in the EFS but MIMO operation is supported for antennas belonging to the same antenna group (refer to Section 4.2.5 of Qualcomm's document 80-W2112-4).
- Measure SAR for supported MIMO scenarios in FTM mode with each of the MIMO antennas set to transmit continuously at $P_{test} = \text{minimum } \{P_{limit}(i), P_{max}(i); i=1 \text{ to } n \text{ MIMO antennas}\}$, where $P_{limit}(i)$ is the power level entered in the Smart Transmit EFS for antenna i under the corresponding tech/band/DSI. For Smart Transmit to ensure the compliance in MIMO transmission scenario, the below criteria should be met for measured MIMO SAR (i.e., highest peak spatial-average SAR from the measurement):

$$\text{reported } SAR_{MIMO} = \text{Measured MIMO } SAR_{MIMO} \text{ at } (P_{test} + \text{device total uncertainty}) \leq \text{calc. SAR}$$

$$\text{Where } \text{calc. SAR} = \sum_{i=1}^n \left[SAR_{design_target} * 10^{\left(\frac{\text{total uncertainty} + P_{test} - P_{limit}(i) - \text{backoff}(i)}{10} \right)} \right]$$

Here,

- n is number of MIMO antennas (in case of 2x2MIMO, $n=2$).
 - $P_{limit}(i)$ is EFS P_{limit} for antenna $i \in$ MIMO for a given tech/band/DSI. P_{limit} corresponds to SAR_{design_target} .
 - $\text{backoff}(i)$ is backoff from SAR_{design_target} used for the i th antenna's P_{limit} to meet TER with external radios (i.e., radios outside of Smart Transmit control). If EFS P_{limit} of antenna i corresponds to SAR_{design_target} , then $\text{backoff}(i) = 0$ in the above equation.
 - P_{test} (i.e., power level used for MIMO SAR measurement, $\text{MIMO.SAR} @ P_{test}$) = $\min \{P_{limit}(i), P_{max}(i), i = 1 \text{ to } n \text{ MIMO antenna}\}$. To further clarify, $P_{test} = \min \{P_{limit}(i), SISO.P_{max}(i), MIMO.P_{max}, i = 1 \text{ to } n \text{ antenna} \in \text{MIMO}\}$, where, P_{limit} corresponds to SAR_{design_target} ; $SISO.P_{max}$ and $MIMO.P_{max}$ correspond to the maximum output power (nominal levels without device uncertainty) that device is capable; here, P_{test} is nominal power level, not measured level.
- If the $\text{reported } SAR_{MIMO}$ does not meet the above condition, then $P_{limit}(i)$ for each of the MIMO antenna in the Smart Transmit EFS should be reduced by $10 * \log_{10}[\text{reported } SAR_{MIMO} / \text{calc. SAR}]$ dB.
 - Per Qualcomm's document guideline, FR1 MIMO Plimit is not populated in the EFS file, but MIMO operation is supported for antennas belonging to the same antenna group, the detail FR1 MIMO analysis results please referred to appendix G.

17.3 Head Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	1+2	1+3+5	1+3+6	1+4+5	1+4+6
		WWAN	WLAN2.4GHz Ant 11+10	WLAN5GHz Ant 11+10	WLAN6GHz Ant 11+10	Bluetooth Ant 11	Bluetooth Ant 10	Summed	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
All Bands (Ant1&2&3&4&5&6&7&8)	Right Cheek	1.058	0.114	0.246	0.203	0.005	0.001	1.17	1.31	1.31	1.27	1.26
	Right Tilted	0.825	0.086	0.167	0.069	0.004	0.001	0.91	1.00	0.99	0.90	0.90
	Left Cheek	0.956	0.301	0.379	0.493	0.013	0.002	1.26	1.35	1.34	1.46	1.45
	Left Tilted	0.848	0.175	0.476	0.179	0.005	0.001	1.02	1.33	1.33	1.03	1.03

17.4 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2	1+3+4	1+3+5
		WWAN	WLAN2.4GHz Ant 11+10	WLAN5GHz Ant 11+10	Bluetooth Ant 11	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 Bnads(Ant1&2&3&4&5&6&7&8)	Front	0.796	0.169	0.341	0.148		0.97	1.29	1.14
	Back	1.000	0.288	0.388	0.189	0.084	1.29	1.58	1.47
	Left side	1.060					1.06	1.06	1.06
	Right side	0.547	0.253	0.388	0.140		0.80	1.08	0.94
	Top side	0.848	0.141	0.131			0.99	0.98	0.98
	Bottom side	0.558					0.56	0.56	0.56

<Sensor off>

WWAN Band	Exposure Position	1	2	3	4	1+2	1+3+4
		WWAN	WLAN2.4GHz Ant 11+10	WLAN5GHz Ant 11+10	Bluetooth Ant 11	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)
WCDMA II Ant 2	Front	0.328	0.071	0.324	0.011	0.40	0.66
	Back	0.382	0.145	1.150	0.021	0.53	1.55
	Left side	0.196				0.20	0.20
	Right side		0.052	0.521	0.008	0.05	0.53
	Top side	0.758	0.141	0.165		0.90	0.92
LTE Band 25 Ant 2	Front	0.294	0.071	0.324	0.011	0.37	0.63
	Back	0.381	0.145	1.150	0.021	0.53	1.55
	Left side	0.194				0.19	0.19
	Right side		0.052	0.521	0.008	0.05	0.53
	Top side	0.548	0.141	0.165		0.69	0.71
LTE Band 30 Ant 2	Front	0.382	0.071	0.324	0.011	0.45	0.72
	Back	0.306	0.145	1.150	0.021	0.45	1.48
	Left side	0.364				0.36	0.36
	Right side		0.052	0.521	0.008	0.05	0.53
	Top side	0.666	0.141	0.165		0.81	0.83
LTE Band 7 Ant 2	Front	0.511	0.071	0.324	0.011	0.58	0.85
	Back	0.396	0.145	1.150	0.021	0.54	1.57
	Left side	0.590				0.59	0.59
	Right side		0.052	0.521	0.008	0.05	0.53
	Top side	0.623	0.141	0.165		0.76	0.79
FR1 n25 Ant 2	Front	0.327	0.071	0.324	0.011	0.40	0.66
	Back	0.295	0.145	1.150	0.021	0.44	1.47
	Left side	0.227				0.23	0.23
	Right side		0.052	0.521	0.008	0.05	0.53
	Top side	0.599	0.141	0.165		0.74	0.76



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FR1 n30 Ant 2	Front	0.456	0.071	0.324	0.011	0.53	0.79
	Back	0.259	0.145	1.150	0.021	0.40	1.43
	Left side	0.444				0.44	0.44
	Right side		0.052	0.521	0.008	0.05	0.53
	Top side	0.703	0.141	0.165		0.84	0.87
FR1 n7 Ant 2	Front	0.655	0.071	0.324	0.011	0.73	0.99
	Back	0.342	0.145	1.150	0.021	0.49	1.51
	Left side	0.879				0.88	0.88
	Right side		0.052	0.521	0.008	0.05	0.53
	Top side	0.702		0.165		0.70	0.87
FR1 n41 Ant 2	Front	0.580	0.071	0.324	0.011	0.65	0.92
	Back	0.312	0.145	1.150	0.021	0.46	1.48
	Left side	0.780				0.78	0.78
	Right side		0.052	0.521	0.008	0.05	0.53
	Top side	0.503		0.165		0.50	0.67

17.5 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	1+2	1+3+5	1+3+6	1+4+5	1+4+6
		WWAN	WLAN2.4GHz Ant 11+10	WLAN5GHz Ant 11+10	WLAN6GHz Ant 11+10	Bluetooth Ant 11	Bluetooth Ant 10	Summed	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
All Bands(Ant1&2&3&4&5&6&7&8)	Front	0.796	0.169	0.297	0.034	0.148		0.97	1.24	1.09	0.98	0.83
	Back	1.000	0.288	0.392	0.348	0.189	0.084	1.29	1.58	1.48	1.54	1.43

<Sensor off>

WWAN Band	Exposure Position	1	2	3	4	5	1+2	1+3+5	1+4+5
		WWAN	WLAN2.4GHz Ant 11+10	WLAN5GHz Ant 11+10	WLAN6GHz Ant 11+10	Bluetooth Ant 11	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)
WCDMA II Ant 2	Front	0.328	0.071	0.356	0.034	0.011	0.40	0.70	0.37
	Back	0.382	0.145	1.177	0.530	0.021	0.53	1.58	0.93
LTE Band 25 Ant 2	Front	0.294	0.071	0.356	0.034	0.011	0.37	0.66	0.34
	Back	0.381	0.145	1.177	0.530	0.021	0.53	1.58	0.93
LTE Band 30 Ant 2	Front	0.382	0.071	0.356	0.034	0.011	0.45	0.75	0.43
	Back	0.306	0.145	1.177	0.530	0.021	0.45	1.50	0.86
LTE Band 7 Ant 2	Front	0.511	0.071	0.356	0.034	0.011	0.58	0.88	0.56
	Back	0.396	0.145	1.177	0.530	0.021	0.54	1.59	0.95
FR1 n25 Ant 2	Front	0.327	0.071	0.356	0.034	0.011	0.40	0.69	0.37
	Back	0.295	0.145	1.177	0.530	0.021	0.44	1.49	0.85
FR1 n30 Ant 2	Front	0.456	0.071	0.356	0.034	0.011	0.53	0.82	0.50
	Back	0.259	0.145	1.177	0.530	0.021	0.40	1.46	0.81
FR1 n7 Ant 2	Front	0.655	0.071	0.356	0.034	0.011	0.73	1.02	0.70
	Back	0.211	0.145	1.177	0.530	0.021	0.36	1.41	0.76
FR1 n41 Ant 2	Front	0.580	0.071	0.356	0.034	0.011	0.65	0.95	0.63
	Back	0.226	0.145	1.177	0.530	0.021	0.37	1.42	0.78

17.6 Product specific 10g SAR Exposure Conditions

Remark:

- 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.

Exposure Position	1	2	3	1+3	2+3
	WLAN5GHz Ant 11+10	WLAN6GHz Ant 11+10	NFC	Summed	Summed
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
Front	0.446	0.333	0.001	0.45	0.33
Back	0.446	0.333	0.007	0.45	0.34
Left side			0.001	0.00	0.00
Right side	0.446	0.333	0.001	0.45	0.33
Top side	0.278	0.333	0.001	0.28	0.33
Bottom side			0.001	0.00	0.00

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18. Uncertainty Assessment

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

19. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
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- [4] SPEAG DASY System Handbook
- [5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
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- [10] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
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- [13] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.
- [14] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015

Appendixes

Please refer to separated files for the following appendixes

Appendix A. Plots of System Performance Check

Appendix B. Plots of High SAR 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. Verify MIMO SAR analysis results

Appendix H. Power reduction mechanism verification

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