

FCC SAR Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2321-1
FCC ID : IHDT56AJ5
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

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA2D0913-01	Rev. 01	Initial issue of report.	Mar. 08, 2023
FA2D0913-01	Rev. 02	Added 40M bandwidth conducted power for 5GNR n38.	Mar. 29, 2023



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2321-1**, are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 5mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.10	0.78	0.78	1.57
		GSM1900	1.25	1.08	1.10	
	WCDMA	WCDMA II	1.24	0.99	1.26	
		WCDMA IV	1.24	1.24	1.25	
		WCDMA V	0.15	0.67	0.67	
	LTE	LTE Band 7	1.24	1.25	1.26	
		LTE Band 12/17	0.21	0.67	0.67	
		LTE Band 13	0.22	0.65	0.65	
		LTE Band 25/2	1.25	0.99	1.26	
		LTE Band 26/5	0.18	0.99	0.99	
		LTE Band 41/38	1.25	1.25	1.26	
		LTE Band 42	1.25	1.03	1.25	
		LTE Band 48/43/42	1.26	1.00	1.26	
		LTE Band 66/4	1.26	1.23	1.25	
	5G NR	FR1 n5	<0.10	0.70	0.70	
		FR1 n7	1.26	1.25	1.26	
		FR1 n41/n38	1.23	1.25	1.26	
FR1 n66		1.24	1.26	1.26		
FR1 n77/78		1.23	1.20	1.25		
DTS	WLAN	2.4GHz WLAN	1.10	0.37	1.35	1.57
NII		5GHz WLAN	1.19	0.38	0.78	1.57
DSS	Bluetooth	2.4GHz Bluetooth	0.19	0.17	<0.10	1.57



Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	GSM	GSM1900	1.80	3.68
		WCDMA	WCDMA II	
	WCDMA IV		2.34	
	LTE	LTE Band 7	3.13	
		LTE Band 25/2	3.14	
		LTE Band 41/38	3.10	
		LTE Band 42	3.11	
		LTE Band 48/43/42	3.14	
		LTE Band 66/4	2.35	
	5G NR	FR1 n7	3.14	
		FR1 n41/n38	3.12	
		FR1 n66	2.13	
FR1 n77/n78		3.13		
DTS	WLAN	2.4GHz WLAN	3.05	3.68
NII		5GHz WLAN	1.19	3.56
Date of Testing:			2023/1/12 ~ 2023/2/20	

Remark:

- This device supports LTE B2 / B4 / B5 / B17 / B38 / B42(3550 MHz ~ 3600 MHz) / B43 and B25 / B66 / B26 / B12 / B41 / B48. Since the supported frequency span for LTE B2 / B4 / B5 / B17 / B38 / B42 (3550 MHz ~ 3600 MHz)/ B43 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B12 / B41 / B48, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41 / B48.
- This device supports 5GNR n78 / n38 and n77 / n41. Since the supported frequency span for 5GNR n78 / n38 falls completely within the supports frequency span for n77 / n41, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for n77 / n41.

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.

Table with 4 columns: Test Firm, Test Site Location, Sporton Site No., FCC Designation No., FCC Test Firm Registration No.

Table with 2 columns: Applicant, Company Name, Address

Table with 2 columns: Manufacturer, Company Name, Address

3. Guidance Applied

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

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



4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2321-1
FCC ID	IHDT56AJ5
IMEI Code	IMEI1:356909990009534 IMEI2:356909990009542
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3600 MHz LTE Band 43: 3600 MHz ~ 3700 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz WLAN 6GHz U-NII-5: 5925 MHz ~ 6425 MHz WLAN 6GHz U-NII-6: 6425 MHz ~ 6525 MHz WLAN 6GHz U-NII-7: 6525 MHz ~ 6875 MHz WLAN 6GHz U-NII-8: 6875 MHz ~ 7125 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+(16QAM uplink is not supported) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR : CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac/ax VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160



	WLAN 6GHz 802.11a/ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC: ASK
HW Version	DVT2
SW Version	TTZ33.61
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype

Remark:

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
3. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only). WLAN 6GHz has no hotspot function.
4. The 2.4GHz/5GHz/6GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.
5. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12.
6. For dual SIM card mobile has single SIM slots + eSIM (electronic SIM) and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active).
7. The device implements the power management, Hall sensor and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
8. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head. For WLAN when transmit simultaneous with WWAN and Proximity sensors trigger, power reduction will be activated to body-worn and Handheld.
9. For some WWAN bands, sensor on power level is higher than hotspot power level, so front/back sensor on SAR can represent hotspot conservatively.
10. This device implements antenna tuning techniques for several WWAN (cellular) operating modes and frequencies for the purpose of improving antenna efficiency over a broad range of frequencies. Specifically, these techniques are employed in the WCDMA, LTE and 5GNR modes. In this report SAR was measured according to the normally required SAR configurations with the tuner active and worst tune state (auto tune) was used for SAR testing. The detail descriptions of the antenna tuner and supplemental data for additional information can be referred to section 18 and appendix F.
11. This device supports HPUE for LTE Band 41 and 5GNR n41/n77/n78 with class 2 level, HPUE power has been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
12. 5GNR n41/n78 supports UL MIMO, and 5GNR n78 UL MIMO mode only supports CP-OFDM Modulation.
13. 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 test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
14. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
15. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
16. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
17. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
18. SAR and Power density test report for WLAN 6GHz U-NII-5/6/7/8 will be separately submitted. About co-located SAR with WWAN/Bluetooth always chose higher SAR of WLAN5G U-NII-1/2A/2C/3 and U-NII-5/6/7/8.
19. The device support DBS (Dual Band Simultaneous) function, when the device 2.4GHz and 5GHz or 6GHz transmit at the same time the module will limit different output power for simultaneous transmission compliance.
20. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.
21. This device has NFC function and the NFC SAR report will be separately submitted.



<5G NR>

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



4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	IHDT56AJ5																																																														
Equipment Name	Mobile Cellular Phone																																																														
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 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MH LTE Band 42: 3450 MHz ~ 3600 MH LTE Band 43: 3600 MHz ~ 3700 MH LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 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 17: 5MHz, 10MHz LTE Band 25: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 43: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz																																																														
uplink modulations used	QPSK / 16QAM / 64QAM / 256QAM																																																														
LTE Voice / Data requirements	Voice and Data																																																														
LTE Release Version	R16, Cat18																																																														
CA Support	Supported, Uplink and Downlink																																																														
LTE MPR permanently built-in by design	<p>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</p> <table border="1"> <thead> <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> </thead> <tbody> <tr> <td>QPSK</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 2</td> </tr> <tr> <td>64 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 2</td> </tr> <tr> <td>64 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 3</td> </tr> <tr> <td>256 QAM</td> <td colspan="6" style="text-align: center;">≥ 1</td> <td>≤ 5</td> </tr> </tbody> </table>	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	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3	256 QAM	≥ 1						≤ 5
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256 QAM	≥ 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		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	20407	824.7	20415	825.5	20425	826.5	20450	829	20450	829	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844	20600	844	20600	844
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 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	20775	2502.5	20800	2505	20825	2507.5	20850	2510	20825	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560	21375	2562.5	21350	2560
LTE Band 12												
	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	23017	699.7	23025	700.5	23035	701.5	23060	704	23035	701.5	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711	23155	713.5	23130	711
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		782		23230		782	
M	23230		782		23255		784.5		23255		784.5	
H	23255		784.5		23255		784.5		23255		784.5	
LTE Band 17												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23755		706.5		23780		709		23780		709	
M	23790		710		23790		710		23790		710	
H	23825		713.5		23800		711		23800		711	
LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 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	26740	819	26765	821.5
M	26865	831.5	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	26990	844	26965	841.5
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 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	37775	2572.5	37800	2575	37825	2577.5	37850	2580	37825	2577.5	37850	2580
M	38000	2595	38000	2595	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 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 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 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				

<3450 MHz ~ 3550 MHz>

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

<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 2	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 25	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 12	Yes	Yes	Yes	Yes		
LTE Band 17			Yes	Yes		
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			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	Head	Head	Body Worn	Body Worn	Body Worn	Body Worn	Extremity	Extremity	Sensor Off	Default
		DSI 2	DSI 2	DSI 3	DSI 3	DSI 5	DSI 5	DSI 6	DSI 6	DSI4	
		Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 4	Ant 0	21	21	21	21	21	20.1	21	21	21	21
LTE Band 66	Ant 0	21	21	21	21	21	20.1	21	21	21	21
LTE Band 12	Ant 0	24	24	24	24	24	24	24	24	24	24
LTE Band 17	Ant 0	24	24	24	24	24	24	24	24	24	24
LTE Band 5	Ant 0	24	24	24	24	24	24	24	24	24	24
LTE Band 26	Ant 0	24	24	24	24	24	24	24	24	24	24
LTE Band 38	Ant 0	22	22	22	22	22	22	22	22	22	22
LTE Band 41	Ant 0	22	22	22	22	22	22	22	22	22	22
LTE Band 42	Ant 0	22	22	22	22	22	22	22	22	22	22
LTE Band 43	Ant 0	22	22	22	22	22	22	22	22	22	22
LTE Band 48	Ant 0	22	22	22	22	22	22	22	22	22	22

Band	Antenna	Head	Head	Body Worn	Body Worn	Body Worn	Body Worn	Extremity	Extremity	Sensor Off	Default
		DSI 2	DSI 2	DSI 3	DSI 3	DSI 5	DSI 5	DSI 6	DSI 6	DSI4	
		Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 4	Ant 1	23	23	22	22	23	22.5	23	23	23	23
LTE Band 66	Ant 1	23	23	22	22	23	22.5	23	23	23	23
LTE Band 12	Ant 1	23	23	23	23	23	23	23	23	23	23
LTE Band 17	Ant 1	23	23	23	23	23	23	23	23	23	23
LTE Band 5	Ant 1	22	22	22	22	22	22	22	22	22	22
LTE Band 26	Ant 1	22	22	22	22	22	22	22	22	22	22
LTE Band 38	Ant 1	24	24	23.6	23.6	24	23.4	24	24	24	24
LTE Band 41	Ant 1	24	24	23.6	23.6	24	23.4	24	24	24	24
LTE Band 42	Ant 1	24	24	24	24	24	22.7	24	24	24	24
LTE Band 43	Ant 1	24	24	24	24	24	22.7	24	24	24	24
LTE Band 48	Ant 1	24	24	24	24	24	22.7	24	24	24	24

Band	Antenna	Head	Head	Body Worn	Body Worn	Body Worn	Body Worn	Extremity	Extremity	Sensor Off	Default
		DSI 2	DSI 2	DSI 3	DSI 3	DSI 5	DSI 5	DSI 6	DSI 6	DSI4	
		Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 2	Ant 2	19.4	18.7	22	19	22	22	22	22	22	22
LTE Band 25	Ant 2	19.4	18.7	22	19	22	22	22	22	22	22
LTE Band 4	Ant 2	22	21.6	22	22	22	22	22	22	22	22
LTE Band 66	Ant 2	22	21.6	22	22	22	22	22	22	22	22
LTE Band 38	Ant 2	17.4	16.3	21.7	20.9	23	19.9	23.7	23.1	24	24
LTE Band 41	Ant 2	17.4	16.3	21.7	20.9	23	19.9	23.7	23.1	24	24
LTE Band 42	Ant 2	18.2	17.4	22	17.8	22	19.3	22	21.6	22	22
LTE Band 43	Ant 2	18.4	17.9	22	18	22	20	22	21.6	22	22
LTE Band 48	Ant 2	18.4	17.9	22	18	22	20	22	21.6	22	22

Band	Antenna	Head	Head	Body Worn	Body Worn	Body Worn	Body Worn	Extremity	Extremity	Sensor Off	Default
		DSI 2	DSI 2	DSI 3	DSI 3	DSI 5	DSI 5	DSI 6	DSI 6	DSI4	
		Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Standalone Tune-up Limit	Simultaneous Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 2	Ant 3	19	17.8	22.5	20.6	23.2	22.2	23.8	23.4	24	24
LTE Band 25	Ant 3	19	17.8	22.5	20.6	23.2	22.2	23.8	23.4	24	24
LTE Band 4	Ant 3	19.9	19	24	21.2	23.9	20.8	24	24	24	24
LTE Band 66	Ant 3	19.9	19	24	21.2	23.9	20.8	24	24	24	24
LTE Band 38	Ant 3	20.2	19.6	24	24	24	23.9	24	24	24	24
LTE Band 41	Ant 3	20.2	19.6	24	24	24	23.9	24	24	24	24
LTE Band 42	Ant 3	18.8	17.8	21.4	17.4	21.6	17.4	22.6	22	24	24
LTE Band 43	Ant 3	18.9	17.8	21.4	17.4	21.6	17.4	22.7	22	24	24
LTE Band 48	Ant 3	18.9	17.8	21.4	17.4	21.6	17.4	22.7	22	24	24



4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n5	LTE B7
LTE Anchor Bands for n7	LTE B2/5/66
LTE Anchor Bands for n66	LTE B2/5/7
LTE Anchor Bands for n77	LTE B41
LTE Anchor Bands for n78	LTE B2/5/7/38/41/66
LTE Anchor Bands for n41	LTE B5

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band								
NR Band 5								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165300	826.5	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5
H	169300	846.5	168800	844	168300	841.5	167800	839

NR Band 7														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550

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

NR Band 38												
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98

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



NR Band 77																								
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664834	3972.51	664666	3970.02	664500	3967.5	664332	3965.01	664000	3960	663668	3955.02	663332	3950.01	663000	3945	662666	3940.02	662332	3935.01	662000	3930

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



<For NR Overlap Bands Description>

1) NR Bands BW

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
5GNR	N38	TDD	30	10,15,20, 25,30, 40
	N41	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100
	N77	TDD	30	10,15,20, 30, 40, 50, 60, 70, 80, 90, 100
	N78	TDD	30	10,15,20, 30, 40, 50, 60, 70, 80, 90, 100

2) NR Bands Tune up:

Band	Antenna	Head	Head	Body Worn	Body Worn&Hotspot	Body Worn	Body Worn&Hotspot	Extremity	Extremity	Sensor Off	Default
		DSI 2 Standalone	DSI 2 Simultaneous	DSI 3 Standalone	DSI 3 Simultaneous	DSI 5 Standalone	DSI 5 Simultaneous	DSI 6 Standalone	DSI 6 Simultaneous	DSI4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
5G NR n38	Ant 0	23	23	23	20.4	20.4	19.4	23	23	23	23
5G NR n41	Ant 0	23	23	23	20.4	20.4	19.4	23	23	23	23
5G NR n77 PC3	Ant 0	21	21	21	21	21	21	21	21	21	21
5G NR n78 PC3	Ant 0	21	21	21	21	21	21	21	21	21	21
5G NR n77 PC2	Ant 0	24	24	24	24	24	24	24	24	24	24
5G NR n78 PC2	Ant 0	24	24	24	24	24	24	24	24	24	24

Band	Antenna	Head	Head	Body Worn	Body Worn&Hotspot	Body Worn	Body Worn&Hotspot	Extremity	Extremity	Sensor Off	Default
		DSI 2 Standalone	DSI 2 Simultaneous	DSI 3 Standalone	DSI 3 Simultaneous	DSI 5 Standalone	DSI 5 Simultaneous	DSI 6 Standalone	DSI 6 Simultaneous	DSI4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
5G NR n38	Ant 1	24	24	21.7	21.5	22	21.6	23.9	23.9	24	24
5G NR n41	Ant 1	24	24	21.7	21.5	22	21.6	23.9	23.9	24	24
5G NR n77 PC3	Ant 1	24	24	24	24	24	22.1	24	24	24	24
5G NR n78 PC3	Ant 1	24	24	24	24	24	22.1	24	24	24	24
5G NR n77 PC2	Ant 1	27	27	27	27	27	25.1	27	27	27	27
5G NR n78 PC2	Ant 1	27	27	27	27	27	25.1	27	27	27	27

Band	Antenna	Head	Head	Body Worn	Body Worn&Hotspot	Body Worn	Body Worn&Hotspot	Extremity	Extremity	Sensor Off	Default
		DSI 2 Standalone	DSI 2 Simultaneous	DSI 3 Standalone	DSI 3 Simultaneous	DSI 5 Standalone	DSI 5 Simultaneous	DSI 6 Standalone	DSI 6 Simultaneous	DSI4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
5G NR n38	Ant 2	15.4	14.4	19.2	16.8	20.3	17.8	21.7	21.3	24	24
5G NR n41	Ant 2	15.4	14.4	19.2	16.8	20.3	17.8	21.7	21.3	24	24
5G NR n77 PC3	Ant 2	15.9	15.4	19.7	17.1	20.6	18	19.7	19.2	24	24
5G NR n78 PC3	Ant 2	15.9	15.4	19.7	17.1	20.6	18	19.7	19.2	24	24
5G NR n77 PC2	Ant 2	18.9	18.4	22.7	20.1	23.6	21	22.7	22.2	27	27
5G NR n78 PC2	Ant 2	18.9	18.4	22.7	20.1	23.6	21	22.7	22.2	27	27

Band	Antenna	Head	Head	Body Worn	Body Worn&Hotspot	Body Worn	Body Worn&Hotspot	Extremity	Extremity	Sensor Off	Default
		DSI 2 Standalone	DSI 2 Simultaneous	DSI 3 Standalone	DSI 3 Simultaneous	DSI 5 Standalone	DSI 5 Simultaneous	DSI 6 Standalone	DSI 6 Simultaneous	DSI4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
5G NR n38	Ant 3	19.3	18	23.4	22.5	24	22.2	24	23.5	24.5	24.5
5G NR n41	Ant 3	19.3	18	23.4	22.5	24	22.2	24	23.5	24.5	24.5
5G NR n77 PC3	Ant 3	15.1	14.2	19.8	15.5	21.9	16.5	20.7	20.3	24	24
5G NR n78 PC3	Ant 3	15.1	14.2	19.8	15.5	21.9	16.5	20.7	20.3	24	24
5G NR n77 PC2	Ant 3	18.1	17.2	22.8	18.5	24.9	19.5	23.7	23.3	27	27
5G NR n78 PC2	Ant 3	18.1	17.2	22.8	18.5	24.9	19.5	23.7	23.3	27	27

5. Smart Transmit feature for RF Exposure compliance

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

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

This report describes the procedures for the SAR char generation, and the parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit Feature.

<Terminologies in this report>

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

<SAR Characterization>

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

<SAR design target and uncertainty>

Item	Uncertainty dB (k=2)
Total uncertainty	1.5

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

$$SAR_{design_target} < SAR_{regulatory_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$



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

Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

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

Band	Antenna	Head DSI 2 Standalone Power	Head DSI 2 Simultaneous Power	Body Worn open DSI 3 Power	Hotspot open DSI 3 Power	Body Worn close DSI 5 Power	Hotspot close DSI 5 Power	Extremely open DSI 6 Standalone Power	Extremely open DSI 6 Simultaneous Power	Sensor Off DSI4	Pmax
GSM1900	Ant 0	35.2	35.2	24.2	24.2	26.4	25.4	24.2	24.2	24.2	24.2
GSM1900	Ant 1	37.7	37.7	23.7	23.7	26.8	25.8	23.7	23.7	23.7	23.7
GSM1900	Ant 0	32.7	32.7	19.2	19.2	22.2	21.3	19.2	19.2	19.2	19.2
GSM1900	Ant 1	31.9	31.9	20.2	20.2	24.0	21.2	20.2	20.2	20.2	20.2
GSM1900	Ant 2	19.8	18.7	20.2	20.2	21.8	20.8	20.2	20.2	20.2	20.2
GSM1900	Ant 3	18.2	16.4	22.8	19.2	22.3	21.1	24.1	23.6	21.7	21.7
WCDMA II	Ant 2	18.3	17.1	21.5	20.7	23.2	22.0	23.6	23.1	23.0	23.0
WCDMA II	Ant 3	18.9	17.8	22.8	19.7	21.4	20.5	23.5	23.1	23.5	23.5
WCDMA IV	Ant 0	33.5	33.5	21.7	20.4	21.1	19.9	24.1	24.1	22.0	22.0
WCDMA IV	Ant 1	34.7	34.7	22.1	22.1	21.1	20.0	24.8	24.8	23.0	23.0
WCDMA IV	Ant 2	21.9	20.8	23.0	23.0	24.8	22.7	23.0	23.0	23.0	23.0
WCDMA IV	Ant 3	19.3	18.2	22.5	20.0	23.7	21.7	24.7	24.2	23.5	23.5
WCDMA V	Ant 0	32.2	32.2	23.0	23.0	26.4	25.3	23.0	23.0	23.0	23.0
WCDMA V	Ant 1	33.8	33.8	23.0	23.0	25.5	24.5	23.0	23.0	23.0	23.0
LTE Band 12(17)	Ant 0	30.7	30.7	23.0	23.0	27.9	26.9	23.0	23.0	23.0	23.0
LTE Band 12(17)	Ant 1	33.3	33.3	22.0	22.0	27.0	26.0	22.0	22.0	22.0	22.0
LTE Band 13	Ant 0	30.6	30.6	23.0	23.0	26.6	25.6	23.0	23.0	23.0	23.0
LTE Band 13	Ant 1	33.1	33.1	22.0	22.0	25.2	24.2	22.0	22.0	22.0	22.0
LTE Band 66(4)	Ant 0	31.3	31.3	20.4	20.4	20.1	19.1	22.5	22.5	20.0	20.0
LTE Band 66(4)	Ant 1	35.5	35.5	21.0	21.0	22.3	21.5	23.9	23.9	22.0	22.0
LTE Band 66(4)	Ant 2	21.6	20.6	21.0	21.0	24.1	22.8	21.0	21.0	21.0	21.0
LTE Band 66(4)	Ant 3	18.9	18.0	23.5	20.2	22.9	19.8	24.2	23.7	23.0	23.0
LTE Band 25(2)	Ant 2	18.4	17.7	21.8	18.0	21.2	21.5	23.1	22.6	21.0	21.0
LTE Band 25(2)	Ant 3	18.0	16.8	21.5	19.6	22.2	21.2	22.8	22.4	23.0	23.0
LTE Band 26(5)	Ant 0	31.3	31.3	23.0	23.0	23.8	23.0	23.0	23.0	23.0	23.0
LTE Band 26(5)	Ant 1	32.3	32.3	21.0	21.0	24.5	23.5	21.0	21.0	21.0	21.0
LTE Band 7	Ant 0	35.1	35.1	21.9	19.0	21.4	19.7	23.8	23.8	23.0	23.0
LTE Band 7	Ant 1	34.7	34.7	20.4	19.2	21.5	20.5	22.0	22.0	22.0	22.0
LTE Band 7	Ant 2	14.1	13.3	17.2	16.7	18.2	17.3	20.4	19.9	22.0	22.0
LTE Band 7	Ant 3	16.5	15.6	21.8	21.3	23.0	22.9	21.8	21.7	23.0	23.0
LTE Band 41 PC3(38 PC3)	Ant 0	32.3	32.3	20.4	20.4	20.5	19.5	20.4	20.4	20.4	19.0
LTE Band 41 PC2	Ant 0	32.3	32.3	20.4	20.4	20.5	19.5	20.4	20.4	20.4	20.4
LTE Band 41 PC3(38 PC3)	Ant 1	35.1	35.1	20.6	20.6	21.4	20.4	23.1	23.1	22.4	21.0
LTE Band 41 PC2	Ant 1	35.1	35.1	20.6	20.6	21.4	20.4	23.1	23.1	22.4	22.4
LTE Band 41 PC3(38 PC3)	Ant 2	14.4	13.3	18.7	17.9	20.0	16.9	20.7	20.1	22.4	21.0
LTE Band 41 PC2	Ant 2	14.4	13.3	18.7	17.9	20.0	16.9	20.7	20.1	22.4	22.4
LTE Band 41 PC3(38 PC3)	Ant 3	17.2	16.6	21.3	21.1	22.7	20.9	22.8	22.4	22.4	21.0
LTE Band 41 PC2	Ant 3	17.2	16.6	21.3	21.1	22.7	20.9	22.8	22.4	22.4	22.4
LTE Band 42	Ant 0	31.5	31.5	19.0	19.0	23.5	21.3	19.0	19.0	19.0	19.0
LTE Band 42	Ant 1	34.4	34.4	21.0	21.0	23.4	19.7	21.0	21.0	21.0	21.0
LTE Band 42	Ant 2	15.2	14.4	19.0	14.8	19.5	16.3	19.2	18.6	19.0	19.0
LTE Band 42	Ant 3	15.8	14.8	18.4	14.4	18.6	14.4	19.6	19.0	21.0	21.0
LTE Band 48(43)	Ant 0	31.8	31.8	19.0	19.0	27.1	24.9	19.0	19.0	19.0	19.0
LTE Band 48(43)	Ant 1	35.3	35.3	21.0	21.0	24.6	19.7	21.0	21.0	21.0	21.0
LTE Band 48(43)	Ant 2	15.4	14.9	19.0	15.0	19.1	17.0	19.3	18.6	19.0	19.0
LTE Band 48(43)	Ant 3	15.9	14.8	18.4	14.4	18.6	14.4	19.7	19.0	21.0	21.0



5G NR n5	Ant 0	35.1	35.1	23.0	23.0	26.1	25.1	23.0	23.0	23.0	23.0
5G NR n5	Ant 1	34.4	34.4	22.0	22.0	25.7	24.7	22.0	22.0	22.0	22.0
5G NR n7	Ant 0	35.6	35.6	21.5	19.0	20.0	19.2	24.3	24.3	22.0	22.0
5G NR n7	Ant 1	36.5	36.5	20.0	20.0	21.5	20.9	22.9	22.9	23.0	23.0
5G NR n7	Ant 2	14.2	13.1	17.8	14.8	18.8	17.7	21.3	21.0	23.5	23.5
5G NR n7	Ant 3	16.8	15.8	21.8	20.8	22.3	22.8	21.8	21.5	23.0	23.0
5G NR n66	Ant 0	35.3	35.3	22.0	22.0	27.8	26.5	22.0	22.0	22.0	22.0
5G NR n66	Ant 1	36.1	36.1	22.0	22.0	24.7	21.3	24.8	24.8	23.0	23.0
5G NR n66	Ant 2	22.2	21.3	23.0	23.0	25.5	24.0	23.0	23.0	23.0	23.0
5G NR n66	Ant 3	18.5	17.6	21.9	19.1	24.7	19.9	24.6	24.1	23.0	23.0
5G NR n41 PC3 (n38 PC3)	Ant 0	36.8	36.8	22.6	19.4	19.4	18.4	23.9	23.9	22.0	22.0
5G NR n41 PC2	Ant 0	36.8	36.8	22.6	19.4	19.4	18.4	23.9	23.9	22.0	22.0
5G NR n41 PC3 (n38 PC3)	Ant 1	36.1	36.1	20.7	20.5	21.0	20.6	22.9	22.9	23.0	23.0
5G NR n41 PC2	Ant 1	36.1	36.1	20.7	20.5	21.0	20.6	22.9	22.9	23.0	23.0
5G NR n41 PC3 (n38 PC3)	Ant 2	14.4	13.4	18.2	15.8	19.3	16.8	20.7	20.3	23.0	23.0
5G NR n41 PC2	Ant 2	14.4	13.4	18.2	15.8	19.3	16.8	20.7	20.3	23.0	23.0
5G NR n41 PC3 (n38 PC3)	Ant 3	18.3	17.0	22.4	21.5	23.0	21.2	23.0	22.5	23.5	23.5
5G NR n41 PC2	Ant 3	18.3	17.0	22.4	21.5	23.0	21.2	23.0	22.5	23.5	23.5
5G NR n77 PC3(78 PC3)	Ant 0	33.7	33.7	20.0	20.0	25.7	23.4	20.0	20.0	20.0	20.0
5G NR n77 PC2(78 PC2)	Ant 0	33.7	33.7	20.0	20.0	25.7	23.4	20.0	20.0	20.0	20.0
5G NR n77 PC3(78 PC3)	Ant 1	36.4	36.4	24.5	23.0	27.9	21.1	24.8	24.8	23.0	23.0
5G NR n77 PC2(78 PC2)	Ant 1	36.4	36.4	24.5	23.0	27.9	21.1	24.8	24.8	23.0	23.0
5G NR n77 PC3(78 PC3)	Ant 2	14.9	14.4	18.7	16.1	19.6	17.0	18.7	18.2	23.0	23.0
5G NR n77 PC2(78 PC2)	Ant 2	14.9	14.4	18.7	16.1	19.6	17.0	18.7	18.2	23.0	23.0
5G NR n77 PC3(78 PC3)	Ant 3	14.1	13.2	18.8	14.5	20.9	15.5	19.7	19.3	23.0	23.0
5G NR n77 PC2(78 PC2)	Ant 3	14.1	13.2	18.8	14.5	20.9	15.5	19.7	19.3	23.0	23.0

Note:

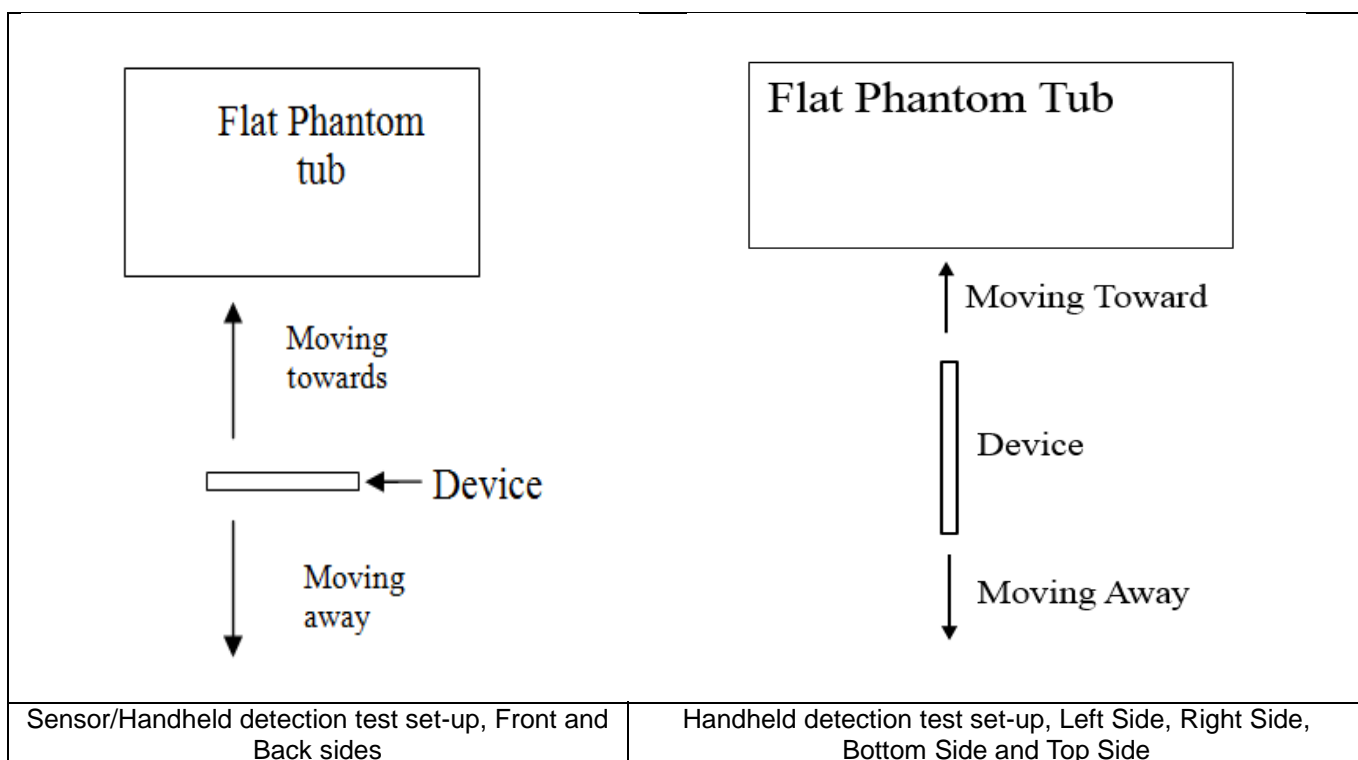
- 1) *P_{max} is used for RF tune up procedure. The maximum allowed output power is equal to P_{max} + 1.0 dB device uncertainty.
- 2) All Plimit power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).
- 3) The max allowed output power is the Plimit + 1.0 dB device uncertainty, and if Plimit is higher than P_{max}, the device output power will be P_{max} instead.
- 4) 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 test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
- 5) The following table is duty cycle and factor used for calculating time average power.

GSM/FDD/TDD	Duty Cycle	Time average calculation factor(dB)
GSM 1TX	12.50%	-9.0
GSM 2TX	25%	-6.0
GSM 3TX	37.50%	-4.3
GSM 4TX	50%	-3.0
FDD LTE	100%	0.0
TDD LTE	63.30%	-2.0
TDD HPUE	43.30%	-3.6
NR FDD/TDD	100%	0.0
NR TDD only for n41/77/78	50%	-3.0

6. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (5850MHz) and lowest (1750MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensors placed coincident with antenna elements at the top and bottom ends of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back of the device.
3. The output power will reduce to body worn power level when top and bottom sensor pad be detected.
4. The sensors used to detect the proximity of the user's body at the front or back surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s). When front or back body worn condition is detected reduced power will be active.
5. The device employs proximity sensors also can detect the presence of the user's a finger or hand when handheld state at the front/back/top/bottom/left/right sides of the device. When front/back/top/bottom/left/right sides of handheld condition is detected reduced power will be active.
6. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed:



**<Flip-Open Mode>
<P-Sensor>**

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	17	14	16	18

<Handheld for ANT1>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	12	16	10	13	5	8	11	14

<Handheld for ANT2>

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	12	16	14	18	8	13	18	20

<Handheld for ANT 3>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Right Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	12	14	10	12	11	13	15	17

<Handheld for ANT 4+5>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Right Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	13	15	10	13	18	20	14	15

**<Flip-Close Mode>
<P-Sensor>**

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	13	11	15	13



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:

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

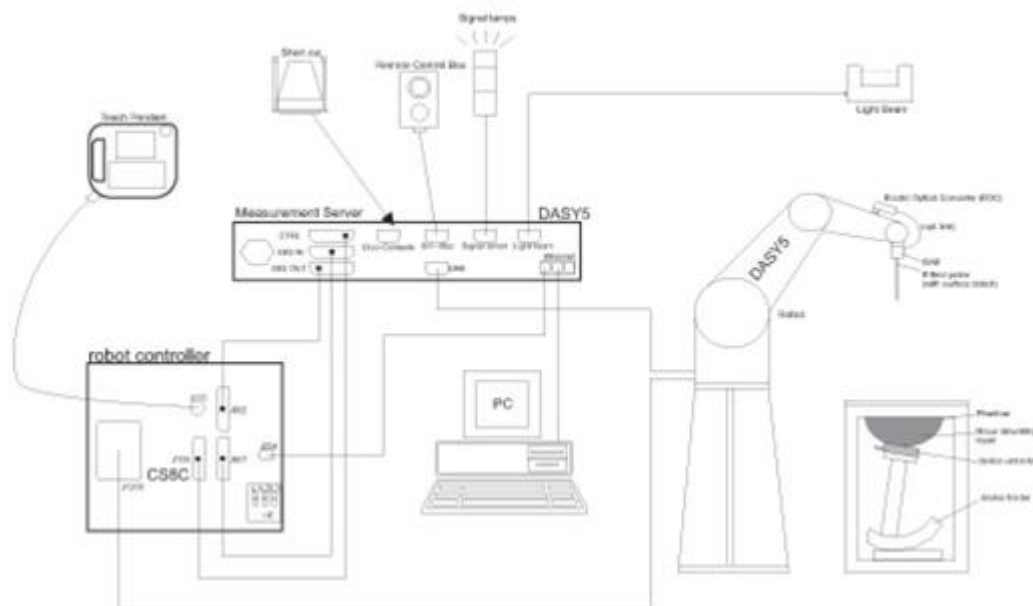
SAR is expressed in units of Watts per kilogram (W/kg)

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

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




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

9.1 E-Field Probe

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

<EX3DV4 Probe>

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

9.2 Data Acquisition Electronics (DAE)

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


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



Photo of DAE

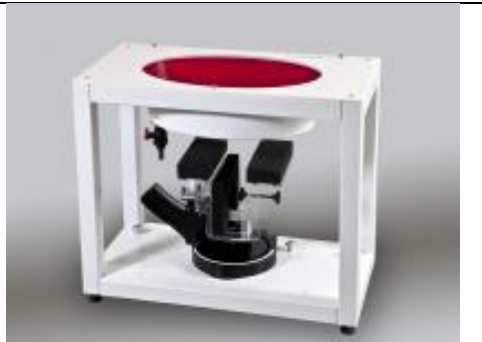
9.3 Phantom

<SAM Twin Phantom>

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

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

<ELI Phantom>

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

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

9.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

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



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

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

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



Mounting Device for Laptops

10. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

<SAR measurement>

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

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

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

10.1 Spatial Peak SAR Evaluation

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

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

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

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values 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 dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ 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: $\Delta x_{Area}, \Delta y_{Area}$	≤ 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: Δx_{Zoom} , Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 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
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <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	2023/2/23
SPEAG	835MHz System Validation Kit	D835V2	4d091	2022/8/19	2023/8/18
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2023/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2021/12/20	2024/12/19
SPEAG	2450MHz System Validation Kit	D2450V2	1040	2020/5/6	2023/5/4
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/24
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2020/11/25	2023/11/23
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2020/11/25	2023/11/23
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2020/5/14	2023/5/12
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2022/9/23	2023/9/22
SPEAG	Data Acquisition Electronics	DAE4	1305	2022/4/27	2023/4/26
SPEAG	Data Acquisition Electronics	DAE4	1279	2022/10/26	2023/10/25
SPEAG	Dosimetric E-Field Probe	EX3DV4	7729	2022/5/30	2023/5/29
SPEAG	Dosimetric E-Field Probe	EX3DV4	7630	2022/3/4	2023/3/3
SPEAG	SAM Twin Phantom	SAM Twin	TP-2024	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2022/7/14	2023/7/13
Agilent	ENA Series Network Analyzer	E5071C	MY46104587	2022/5/24	2023/5/23
SPEAG	Dielectric Probe Kit	DAK-3.5	1144	2022/8/15	2023/8/14
Anritsu	Vector Signal Generator	MG3710A	6201682672	2023/1/5	2024/1/4
Rohde & Schwarz	Power Meter	NRVD	102081	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2022/7/14	2023/7/13
R&S	CBT BLUETOOTH TESTER	CBT	101246	2022/5/24	2023/5/23
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2022/10/12	2023/10/11
TES	DIGITAC THERMOMETER	1310	200505600	2022/7/12	2023/7/11
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/7/20	2023/7/19
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	

Note:

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

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.

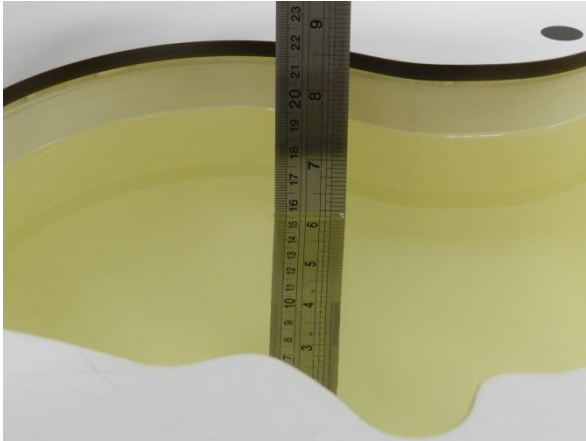


Fig 11.1 Photo of Liquid Height for Head SAR

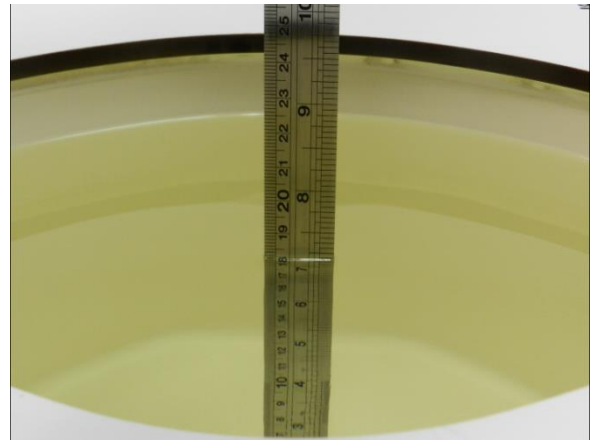


Fig 11.2 Photo of Liquid Height for Body SAR

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)	Tissue Type	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
750	Head	22.7	0.890	42.221	0.89	41.90	0.00	0.77	±5	2023/1/12
835	Head	22.8	0.912	41.888	0.90	41.50	1.33	0.93	±5	2023/1/13
1750	Head	22.7	1.315	40.175	1.37	40.10	-4.01	0.19	±5	2023/1/14
1900	Head	22.9	1.405	40.163	1.40	40.00	0.36	0.41	±5	2023/1/15
2450	Head	22.6	1.742	39.234	1.80	39.20	-3.22	0.09	±5	2023/1/16
2600	Head	22.6	1.941	37.359	1.96	39.00	-0.97	-4.21	±5	2023/1/17
3500	Head	22.7	2.789	39.599	2.91	37.90	-4.16	4.48	±5	2023/1/18
3700	Head	22.7	3.077	38.036	3.12	37.70	-1.38	0.89	±5	2023/1/19
3900	Head	22.9	3.280	37.614	3.32	37.50	-1.20	0.30	±5	2023/1/20
5250	Head	22.9	4.676	36.678	4.71	35.90	-0.72	2.17	±5	2023/1/21
5600	Head	22.9	5.085	36.036	5.07	35.50	0.30	1.51	±5	2023/1/22
5750	Head	22.9	5.256	35.789	5.22	35.40	0.69	1.10	±5	2023/1/23
750	Head	22.7	0.888	42.263	0.89	41.90	-0.22	0.87	±5	2023/1/24
835	Head	22.8	0.911	41.929	0.90	41.50	1.22	1.03	±5	2023/1/25
1750	Head	22.7	1.316	40.207	1.37	40.10	-3.94	0.27	±5	2023/1/26
1900	Head	22.9	1.406	40.193	1.40	40.00	0.43	0.48	±5	2023/1/27
2450	Head	22.6	1.744	39.262	1.80	39.20	-3.11	0.16	±5	2023/1/28
2600	Head	22.6	1.940	37.351	1.96	39.00	-1.02	-4.23	±5	2023/1/29
3500	Head	22.7	2.813	38.734	2.91	37.90	-3.33	2.20	±5	2023/1/31
3700	Head	22.8	2.991	38.381	3.12	37.70	-4.13	1.81	±5	2023/2/1
3900	Head	22.9	3.175	38.057	3.32	37.50	-4.37	1.49	±5	2023/2/2
5250	Head	22.9	4.579	35.731	4.71	35.90	-2.78	-0.47	±5	2023/2/4
5600	Head	22.9	4.954	35.111	5.07	35.50	-2.29	-1.10	±5	2023/2/5
5750	Head	22.9	5.113	34.879	5.22	35.40	-2.05	-1.47	±5	2023/2/7
750	Head	22.7	0.889	42.268	0.89	41.90	-0.11	0.88	±5	2023/2/8
835	Head	22.8	0.929	40.932	0.90	41.50	3.22	-1.37	±5	2023/2/9
1750	Head	22.7	1.363	39.029	1.37	40.10	-0.51	-2.67	±5	2023/2/10
1900	Head	22.9	1.407	40.200	1.40	40.00	0.50	0.50	±5	2023/2/11
2450	Head	22.6	1.854	38.441	1.80	39.20	3.00	-1.94	±5	2023/2/12
2600	Head	22.6	1.934	39.020	1.96	39.00	-1.33	0.05	±5	2023/2/13
3500	Head	22.7	2.810	38.710	2.91	37.90	-3.44	2.14	±5	2023/2/14
3700	Head	22.8	2.988	38.359	3.12	37.70	-4.23	1.75	±5	2023/2/15
3900	Head	22.9	3.171	38.036	3.32	37.50	-4.49	1.43	±5	2023/2/16
5250	Head	22.9	4.573	35.718	4.71	35.90	-2.91	-0.51	±5	2023/2/17
5600	Head	22.9	4.947	35.099	5.07	35.50	-2.43	-1.13	±5	2023/2/18
5750	Head	22.9	5.105	34.867	5.22	35.40	-2.20	-1.51	±5	2023/2/20



12.3 System Performance Check Results

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

<1g SAR>

Table with 11 columns: 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 (%). Rows contain test data from 2023/1/12 to 2023/2/20.

<10g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2023/1/12	750	Head	50	1087	7630	1305	0.283	5.65	5.66	0.18
2023/1/13	835	Head	50	4d091	7630	1305	0.333	6.22	6.66	7.07
2023/1/14	1750	Head	50	1090	7630	1305	1.010	19.50	20.2	3.59
2023/1/15	1900	Head	50	5d182	7630	1305	1.070	20.20	21.4	5.94
2023/1/16	2450	Head	50	1040	7630	1305	1.250	24.00	25	4.17
2023/1/17	2600	Head	50	1061	7630	1305	1.310	25.10	26.2	4.38
2023/1/18	3500	Head	50	1037	7630	1305	1.280	25.40	25.6	0.79
2023/1/19	3700	Head	50	1008	7630	1305	1.290	24.40	25.8	5.74
2023/1/20	3900	Head	50	1048	7729	1279	1.300	24.40	26	6.56
2023/1/21	5250	Head	50	1113	7630	1305	1.200	23.30	24	3.00
2023/1/22	5600	Head	50	1113	7630	1305	1.250	23.70	25	5.49
2023/1/23	5750	Head	50	1113	7630	1305	1.090	23.00	21.8	-5.22
2023/1/24	750	Head	50	1087	7630	1305	0.283	5.65	5.66	0.18
2023/1/25	835	Head	50	4d091	7630	1305	0.332	6.22	6.64	6.75
2023/1/26	1750	Head	50	1090	7630	1305	1.010	19.50	20.2	3.59
2023/1/27	1900	Head	50	5d182	7630	1305	1.060	20.20	21.2	4.95
2023/1/28	2450	Head	50	1040	7630	1305	1.250	24.00	25	4.17
2023/1/29	2600	Head	50	1061	7630	1305	1.310	25.10	26.2	4.38
2023/1/31	3500	Head	50	1037	7630	1305	1.290	25.40	25.8	1.57
2023/2/1	3700	Head	50	1008	7630	1305	1.250	24.40	25	2.46
2023/2/2	3900	Head	50	1048	7729	1279	1.300	24.40	26	6.56
2023/2/4	5250	Head	50	1113	7630	1305	1.170	23.30	23.4	0.43
2023/2/5	5600	Head	50	1113	7630	1305	1.260	23.70	25.2	6.33
2023/2/7	5750	Head	50	1113	7630	1305	1.120	23.00	22.4	-2.61
2023/2/8	750	Head	50	1087	7630	1305	0.287	5.65	5.74	1.59
2023/2/9	835	Head	50	4d091	7630	1305	0.333	6.22	6.66	7.07
2023/2/10	1750	Head	50	1090	7630	1305	1.050	19.50	21	7.69
2023/2/11	1900	Head	50	5d182	7630	1305	1.080	20.20	21.6	6.93
2023/2/12	2450	Head	50	1040	7630	1305	1.270	24.00	25.4	5.83
2023/2/13	2600	Head	50	1061	7630	1305	1.310	25.10	26.2	4.38
2023/2/14	3500	Head	50	1037	7630	1305	1.290	25.40	25.8	1.57
2023/2/15	3700	Head	50	1008	7630	1305	1.260	24.40	25.2	3.28
2023/2/16	3900	Head	50	1048	7729	1279	1.290	24.40	25.8	5.74
2023/2/17	5250	Head	50	1113	7630	1305	1.170	23.30	23.4	0.43
2023/2/18	5600	Head	50	1113	7630	1305	1.250	23.70	25	5.49
2023/2/20	5750	Head	50	1113	7630	1305	1.120	23.00	22.4	-2.61

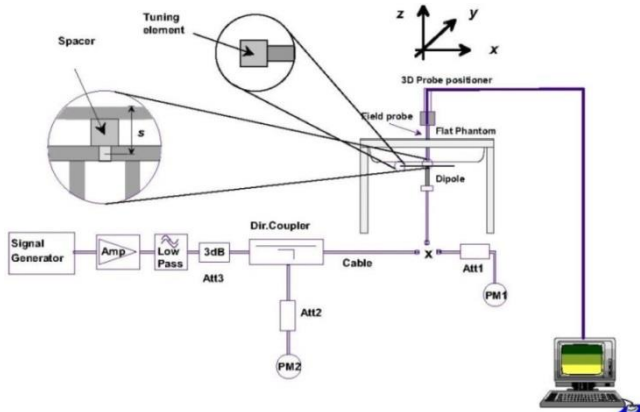


Fig 11.3.1 System Performance Check Setup



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.

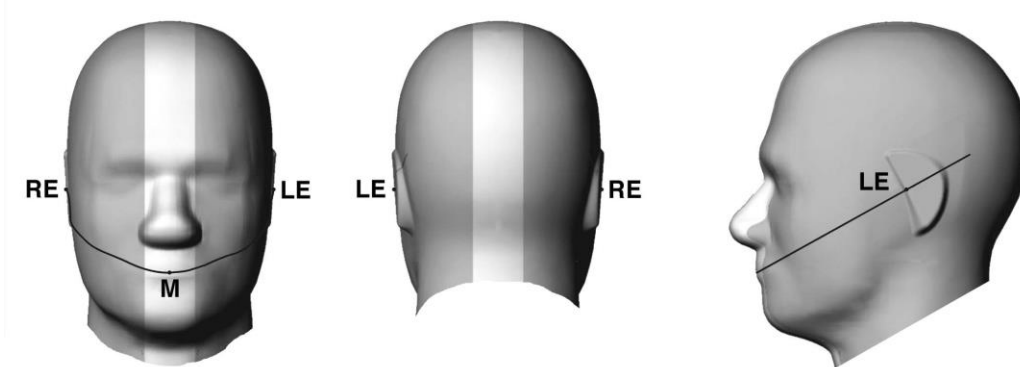


Fig 12.1.1 Front, back, and side views of SAM twin phantom

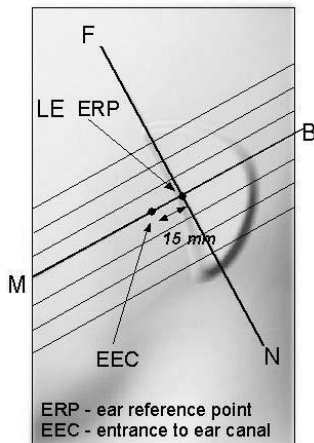


Fig 12.1.2 Close-up side view of phantom showing the ear region.

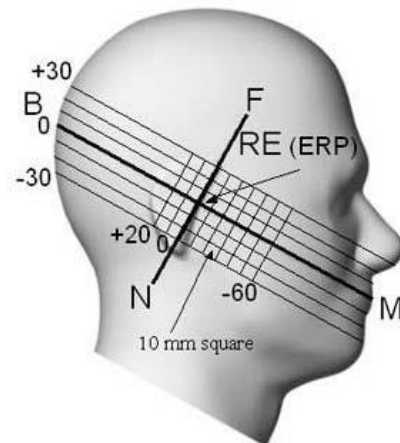


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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.

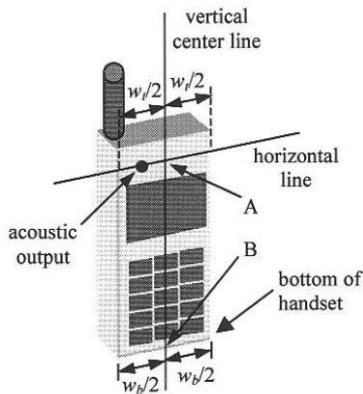


Fig 12.2.1 Handset vertical and horizontal reference lines—“fixed case”

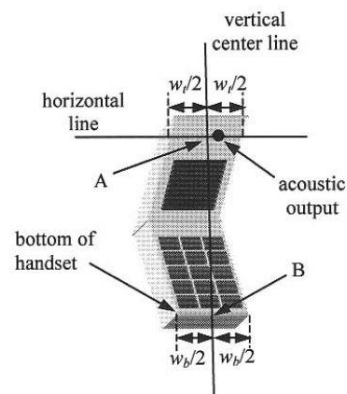


Fig 12.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

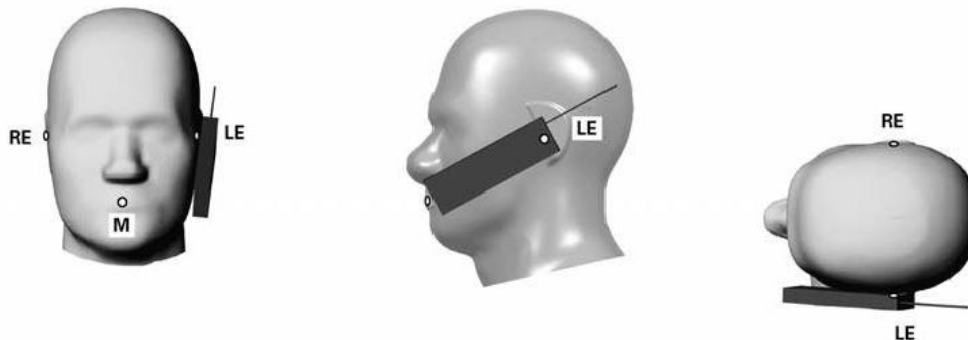


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

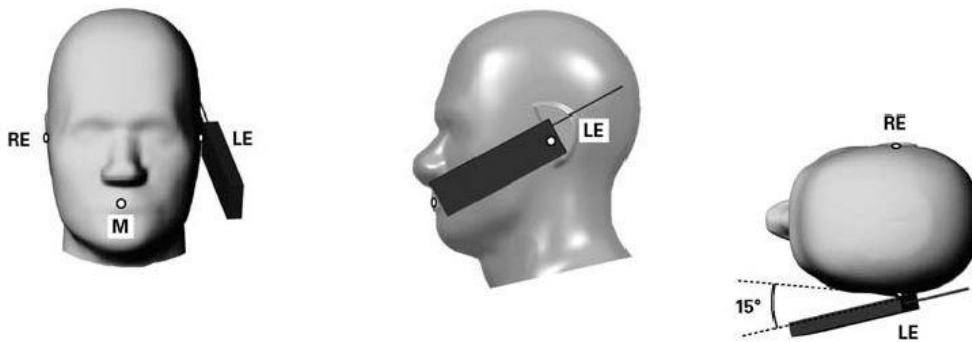


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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 headset attached to the handset.

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

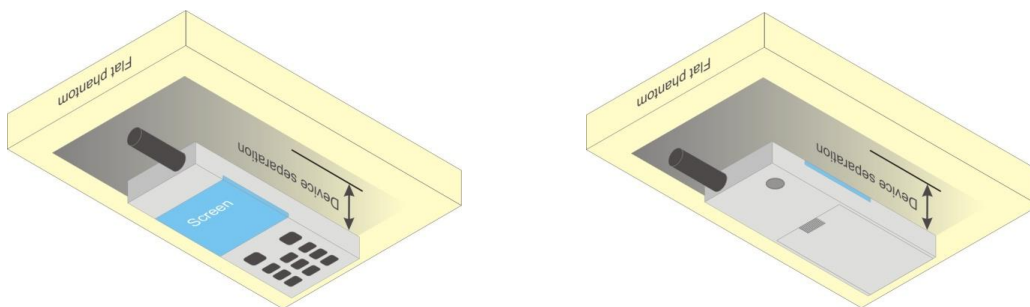


Fig 12.4 Body Worn Position

13.5 Product Specific 10g SAR Exposure

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

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

13.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets ($L \times W \geq 9$ cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined 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.

<GSM Conducted Power>

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For HSPA+ devices supporting 16 QAM in the uplink, power measurements procedure is according to the configurations in Table C.11.1.4 of 3GPP TS 34.121-1.
4. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_o/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: $\Delta_{ACK}, \Delta_{NACK}$ 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 $\beta_o/\beta_d = 12/15, \beta_{HS}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_o/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} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	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 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

DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set RMC 12.2Kbps + HSDPA mode.
 - ii. Set Cell Power = -25 dBm
 - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - iv. Select HSDPA Uplink Parameters
 - v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - a). Subtest 1: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - vii. Set Ack-Nack Repetition Factor to 3
 - viii. Set CQI Feedback Cycle (k) to 4 ms
 - ix. Set CQI Repetition Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

C.8.1.12 Fixed Reference Channel Definition H-Set 12

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table. Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		

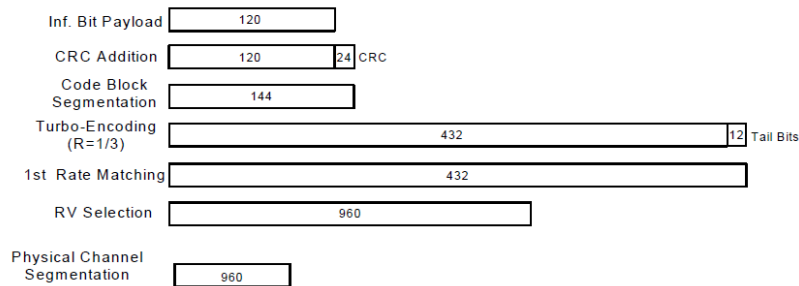


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK) Setup Configuration



<WCDMA Conducted Power>

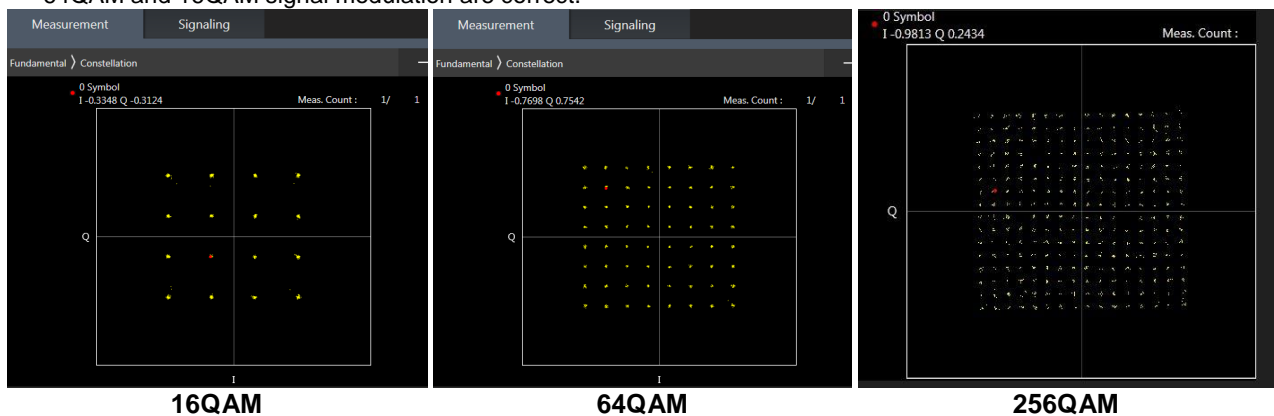
General Note:

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

<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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 / B17 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B2 / B4 /B5 / B17 / B38 / B42 / B43 SAR test was covered by B25 / B66 / B26 / B12 / B41 / B48; 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.



<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

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

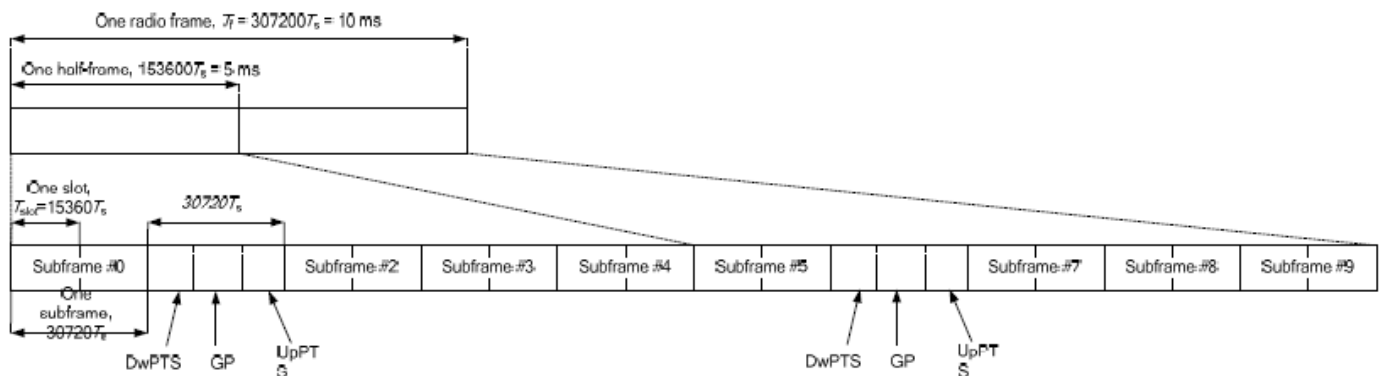


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

For LTE TDD Power class 2

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

For LTE TDD Power class 3

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

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

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



<LTE Carrier Aggregation>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. The gray color table is covered by other combinations and no need to verify power, but Only LTE Band 29/46 is limited to Scell.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation			5CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	CA_2A-4A	3CC-1	1	CA_2A-4A-5A		1	CA_5A-7C-66A	5CC-1	1	CA_5A-7C-66A-66A	
2	CA_2A-5A	3CC-1	2	CA_2A-4A-7A		2	CA_2A-4A-7C		2		
3	CA_2A-66A		3	CA_2A-7A-7A		3			3		
4	CA_2A-7A	3CC-3	4	CA_2A-7C	4CC-2	4			4		
5	CA_2C		5	CA_41D		5			5		
6	CA_38C		6	CA_4A-7C		6			6		
7	CA_41A-41A		7	CA_5A-7A-66A		7			7		
8	CA_41C		8	CA_5A-7C	4CC-1	8			8		
9	CA_4A-5A	3CC-1	9	CA_7A-66A-66A		9			9		
10	CA_4A-7A	3CC-2	10	CA_7C-66A	4CC-1	10			10		
11	CA_5A-41A		11			11			11		
12	CA_5A-66A	3CC-7	12			12			12		
13	CA_5A-7A	3CC-7	13			13			13		
14	CA_66A-66A	3CC-9	14			14			14		
15	CA_66B		15			15			15		
16	CA_66C		16			16			16		
17	CA_7A-32A		17			17			17		
18	CA_7A-66A	3CC-7	18			18			18		
19	CA_7A-7A	3CC-3	19			19			19		
20	CA_7B		20			20			20		
21	CA_7C	3CC-8	21			21			21		

LTE Carrier Aggregation Conducted Power (Downlink)

- i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.
- ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.
- iii. The device supports downlink five carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
- iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.
- v. For inter-band CA, the SCC selected highest bandwidth and near the middle of its transmission band. For SCC DL RB size and offset will base on the PCC corresponding RB allocation.
- vi. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.
- vii. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Band 2/4/7/66/38/41 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

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

4X4 MIMO	Band
	LTE Band 2/4/7/66/38/41



LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	Antenna Tx
CA_38C	Ant0&1&2&3
CA_41C	Ant0&1&2&3
CA_7C	Ant0&1&2&3

<Intra-band>

General Note:

- i. The device supports intra-band uplink carrier aggregation for LTE B7/38/41 with a maximum of two uplink component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.
- ii. The device supports uplink carrier aggregation with a maximum of two uplink component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre the 3GPP requirement.
- iii. According Nov. 2017 TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.
- iv. Additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.



<Inter-band uplink carrier aggregation consideration>

LTE Uplink CA	2CC Uplink Carrier Aggregation	
Inter-band	Main Antenna Tx	ASDiv Tx
CA_2A-66A	Ant2&3	Ant0&1&2&3
CA_2A-7A	Ant2&3	Ant0&1&2&3
CA_4A-5A	Ant0&1&2&3	Ant0&1
CA_4A-7A	Ant0&1&2&3	Ant0&1&2&3
CA_5A-66A	Ant0&1	Ant0&1&2&3
CA_5A-7A	Ant0&1	Ant0&1&2&3
CA_2A-4A	Ant2&3	Ant0&1&2&3

General Note:

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

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n5/n7/n66/n41/n77/n78 is NSA mode.
2. 5G NR n5/n7/n66/n38/n41/n77/n78 is SA mode.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-s QPSK and the reported SAR for the DFT-s QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
 - b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
 - c. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
 - d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
 - e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested
 - f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
 - g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. This device supports HPUE for 5G NR n41/n77/n78 with class 2 level, HPUE power has been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
5. For 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 test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
6. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
7. 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.
8. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
9. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
10. 5G NR n41/n78 supports UL MIMO, and 5G NR n78 UL MIMO mode only supports CP-OFDM Modulation.

<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	$\leq 3.5^1$ $\leq 0.5^2$	$\leq 1.2^1$ $\leq 0.5^2$	$\leq 0.2^1$ 0 ²
	QPSK		≤ 1	0
	16 QAM		≤ 2	≤ 1
	64 QAM		≤ 2.5	
	256 QAM		≤ 4.5	
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM		≤ 3.5	
	256 QAM		≤ 6.5	

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

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

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

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

<EN-DC combination>

ENDC	LTE TX	NR TX
DC_2A_n66A	Ant2&3	Ant0&1&2&3
DC_2A_n78A	Ant2&3	Ant0&1&2&3
DC_2A_n7A	Ant2&3	Ant0&1&2&3
DC_38A_n78A	Ant0&1&2&3	Ant0&1&2&3
DC_41A_n77A	Ant0&1&2&3	Ant0&1&2&3
DC_41A_n78A	Ant0&1&2&3	Ant0&1&2&3
DC_5A_n66A	Ant0&1	Ant0&1&2&3
DC_5A_n78A	Ant0&1	Ant0&1&2&3
DC_5A_n7A	Ant0&1	Ant0&1&2&3
DC_66A_n78A	Ant0&1&2&3	Ant0&1&2&3
DC_66A_n7A	Ant0&1&2&3	Ant0&1&2&3
DC_7A_n5A	Ant0&1&2&3	Ant0&1
DC_7A_n66A	Ant0&1&2&3	Ant0&1&2&3
DC_7A_n78A	Ant0&1&2&3	Ant0&1&2&3
DC_5A_n41A	Ant0&1	Ant0&1&2&3

NR UL MIMO Bands Configuration:

ULMIMO	NR TX	NR TX
n41/ n78	Ant0	Ant1&2&3
	Ant1	Ant2&3
	Ant2	Ant3

<WLAN Conducted Power>

General Note:

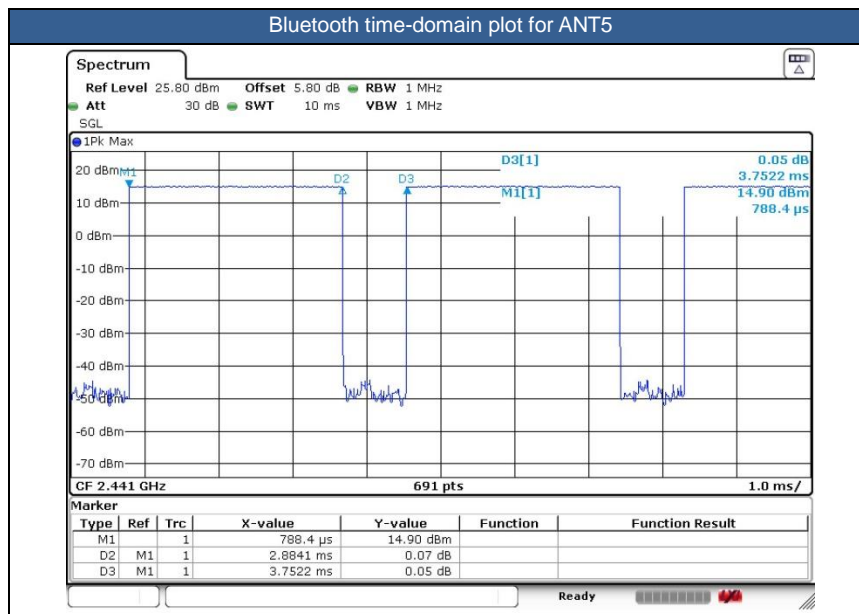
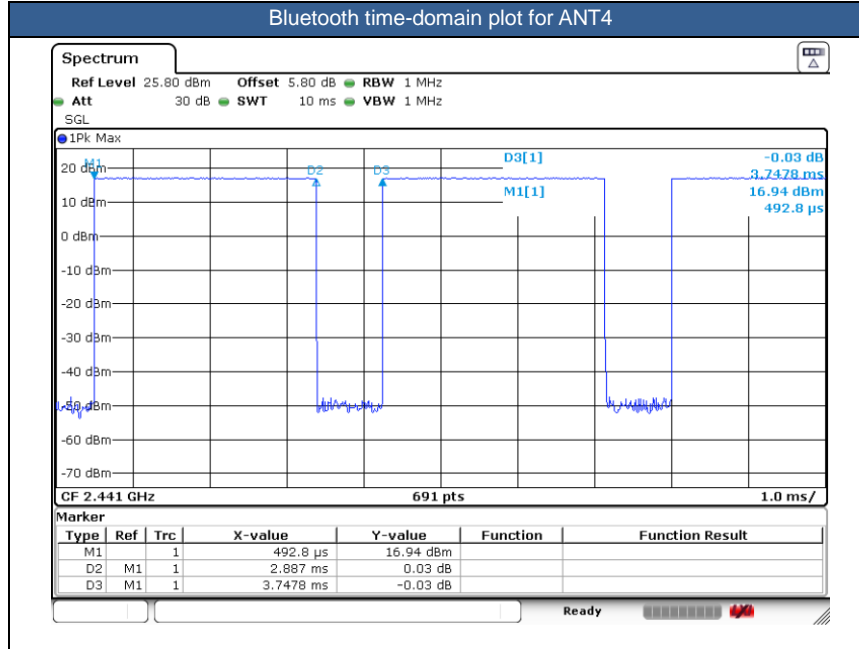
1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default 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. 802.11ax full tone and partial tone supported for WLAN2.4GHz/WLAN5GHz, after verification for the partial tone power level is far less than full tone power level, so we chose full tone power to be measured in this report.
7. The 2.4GHz/5GHz/6GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.



<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 77.03% for ANT4, 76.86% for ANT5 as following figure, Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to the theoretical value of 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 ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The device implements the power management, Hall sensor and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
5. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head and Handheld. For WLAN when transmit simultaneous with WWAN and Proximity sensors trigger, power reduction will be activated to body-worn and Handheld.
6. This device supports HPUE for LTE Band 41 and 5G NR n41/n77 with class 2 level, HPUE power has been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
7. For 5G NR n41/n77/n78 HPUE, 5G NR n41/n77 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
8. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
9. 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.
10. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
11. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
12. Per KDB648474 D04v01r03, when the EUT is in flip open configuration with smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.



- a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of GSM1900, WCDMA Band II/IV, LTE Band 2/4/7/25/66/38/41/42/43/48, 5G NR n7/n38/n66/n41/n77/n78, WLAN2.4/5.2GHz, therefore product specific 10g SAR is necessary.
 - b. WLAN 5.3/5.5GHz/6GHz tested the product specific 10g SAR since it has no hotspot mode.
 - c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.
13. Although the headset SAR is greater than 0.8 W/kg, the headset SAR verified the worst of the non-headset SAR and less than non-headset SAR, so there is no need to be tested other channels.
 14. Although the distance 1gSAR is greater than 0.8 W/kg at body-worn exposure conditions, the distance SAR verified the worst of the non-distance SAR and less than non-distance SAR, so there is no need to be tested other channels.
 15. According to Nov. 2017 TCB workshop, when the reported SAR for UL CA configuration is <1.2 W/kg, UL CA SAR is not required for all required test channels (PCC based).
 16. As long as either sensor was triggered, conducted power of MIMO mode for ant4 and ant5 could be reduced
 17. The EUT has two work states, flip open and flip close, SAR testing have been evaluated two states. For head mode, only flip open mode is performed SAR testing. When it is in flip close configuration since the diagonal dimension is < 160 mm, 10-g extremity SAR tests are not required. When it is in flip open configuration since the diagonal dimension is > 160 mm and < 200 mm. Therefore, 10-g extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Additional SAR tests for 10-g extremity SAR were evaluated per KDB 616217 Section 6.
 18. For Headset SAR and non-Headset SAR always chose higher SAR to do co-located analysis

GSM Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.
2. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

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

**LTE Note:**

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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 / B17 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE B2 / B4 / B5 / B17 / B38 / B42 / B43 SAR test was covered by B25 / B66 / B26 / B12 / B41 / B48; 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/n66/n41 /n77 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

WLAN/Bluetooth Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
6. The 2.4GHz/5GHz/6GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.

DSI status description:

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

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

Exposure Condition	DSI	Trigger conditions
Head SAR-Standalone	DSI 2	Earpiece On
Head SAR-Simultaneous	DSI 2	Earpiece On
Hotspot Mode SAR	DSI 3	Hotspot On_open
Hotspot Mode SAR	DSI 5	Hotspot On_close
Body worn Mode SAR-Standalone	DSI 3	Sensor On_open
Body worn Mode SAR-Simultaneous	DSI 5	Sensor On_close
Body worn Mode SAR-Standalone	DSI 5	Sensor On_close
Body worn Mode SAR-Simultaneous	DSI 5	Sensor On_close
Extremity (Handheld) SAR-Standalone	DSI 6	Sensor On_open
Extremity (Handheld) SAR-Simultaneous	DSI 6	Sensor On_open
Sensor off SAR	DSI 4	Sensor Off_close/open



16.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	
750MHz																			
01	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI2	23095	707.5	22.89	24.00	1.291	0.08	0.162	0.209	
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI2	23095	707.5	21.99	23.00	1.262	0.05	0.088	0.111	
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI2	23095	707.5	22.89	24.00	1.291	0.12	0.102	0.132	
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI2	23095	707.5	21.99	23.00	1.262	-0.05	0.056	0.071	
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI2	23095	707.5	22.89	24.00	1.291	0.04	0.127	0.164	
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI2	23095	707.5	21.99	23.00	1.262	0.01	0.073	0.092	
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI2	23095	707.5	22.89	24.00	1.291	0.06	0.078	0.101	
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI2	23095	707.5	21.99	23.00	1.262	0.07	0.041	0.052	
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI2	23095	707.5	21.70	23.00	1.349	0.01	0.069	0.093	
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI2	23095	707.5	20.71	22.00	1.346	-0.07	0.055	0.074	
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI2	23095	707.5	21.70	23.00	1.349	-0.06	0.046	0.062	
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI2	23095	707.5	20.71	22.00	1.346	-0.15	0.033	0.044	
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI2	23095	707.5	21.70	23.00	1.349	-0.01	0.068	0.092	
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI2	23095	707.5	20.71	22.00	1.346	0.13	0.049	0.066	
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI2	23095	707.5	21.70	23.00	1.349	0.08	0.033	0.045	
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI2	23095	707.5	20.71	22.00	1.346	0.08	0.025	0.034	
02	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI2	23230	782	22.82	24.00	1.312	-0.08	0.164	0.215	
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI2	23230	782	21.87	23.00	1.297	-0.13	0.108	0.140	
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI2	23230	782	22.82	24.00	1.312	-0.14	0.100	0.131	
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI2	23230	782	21.87	23.00	1.297	0.12	0.064	0.083	
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI2	23230	782	22.82	24.00	1.312	0.03	0.129	0.169	
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI2	23230	782	21.87	23.00	1.297	0.08	0.084	0.109	
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI2	23230	782	22.82	24.00	1.312	0.08	0.085	0.112	
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI2	23230	782	21.87	23.00	1.297	0.09	0.040	0.052	
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI2	23230	782	21.31	23.00	1.476	0.06	0.065	0.096	
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI2	23230	782	20.43	22.00	1.435	-0.09	0.046	0.066	
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI2	23230	782	21.31	23.00	1.476	-0.07	0.030	0.044	
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI2	23230	782	20.43	22.00	1.435	0.03	0.021	0.030	
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI2	23230	782	21.31	23.00	1.476	0.07	0.057	0.084	
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI2	23230	782	20.43	22.00	1.435	0.11	0.040	0.057	
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI2	23230	782	21.31	23.00	1.476	-0.13	0.051	0.075	
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI2	23230	782	20.43	22.00	1.435	-0.14	0.036	0.052	
835MHz																			
03	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 0	DSI2	189	836.4	28.92	29.50	1.143	0.01	0.087	0.099	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 0	DSI2	189	836.4	28.92	29.50	1.143	-0.1	0.054	0.062	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 0	DSI2	189	836.4	28.92	29.50	1.143	0.06	0.080	0.091	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 0	DSI2	189	836.4	28.92	29.50	1.143	0.03	0.048	0.055	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 1	DSI2	189	836.4	27.85	29.00	1.303	0.03	0.032	0.042	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 1	DSI2	189	836.4	27.85	29.00	1.303	0.02	0.033	0.043	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 1	DSI2	189	836.4	27.85	29.00	1.303	-0.09	0.039	0.051	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 1	DSI2	189	836.4	27.85	29.00	1.303	-0.05	0.036	0.047	
04	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI2	4182	836.4	23.78	24.00	1.052	-0.05	0.141	0.148	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI2	4182	836.4	23.78	24.00	1.052	0.11	0.080	0.084	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI2	4182	836.4	23.78	24.00	1.052	-0.13	0.109	0.115	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI2	4182	836.4	23.78	24.00	1.052	0.08	0.069	0.073	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI2	4182	836.4	22.49	24.00	1.416	0.03	0.071	0.101	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI2	4182	836.4	22.49	24.00	1.416	0.05	0.055	0.078	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI2	4182	836.4	22.49	24.00	1.416	0.01	0.073	0.103	
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI2	4182	836.4	22.49	24.00	1.416	-0.06	0.048	0.068	
05	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI2	26865	831.5	22.89	24.00	1.291	0.05	0.141	0.182	
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	DSI2	26865	831.5	21.81	23.00	1.315	0.03	0.079	0.104	



FCC SAR Test Report

Report No. : FA2D0913-01

	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI2	26865	831.5	22.89	24.00	1.291	0.06	0.082	0.106
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	DSI2	26865	831.5	21.81	23.00	1.315	0.1	0.044	0.058
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI2	26865	831.5	22.89	24.00	1.291	-0.11	0.112	0.145
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	DSI2	26865	831.5	21.81	23.00	1.315	0.02	0.069	0.091
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI2	26865	831.5	22.89	24.00	1.291	-0.02	0.071	0.092
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	DSI2	26865	831.5	21.81	23.00	1.315	0.09	0.036	0.047
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI2	26865	831.5	21.38	22.00	1.153	0.13	0.075	0.087
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 1	DSI2	26865	831.5	20.32	21.00	1.169	0.08	0.042	0.049
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI2	26865	831.5	21.38	22.00	1.153	0.08	0.066	0.076
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 1	DSI2	26865	831.5	20.32	21.00	1.169	-0.19	0.039	0.046
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI2	26865	831.5	21.38	22.00	1.153	0.09	0.080	0.092
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 1	DSI2	26865	831.5	20.32	21.00	1.169	-0.14	0.052	0.061
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI2	26865	831.5	21.38	22.00	1.153	0.15	0.049	0.057
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 1	DSI2	26865	831.5	20.32	21.00	1.169	0.07	0.026	0.030
06	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI2	167300	836.5	23.27	24.00	1.183	0.08	0.062	0.073
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI2	167300	836.5	23.21	24.00	1.199	-0.04	0.064	0.077
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI2	167300	836.5	23.27	24.00	1.183	0.11	0.045	0.053
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI2	167300	836.5	23.21	24.00	1.199	0.11	0.030	0.036
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI2	167300	836.5	23.27	24.00	1.183	-0.17	0.051	0.060
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI2	167300	836.5	23.21	24.00	1.199	0.04	0.057	0.068
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI2	167300	836.5	23.27	24.00	1.183	0.04	0.044	0.052
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI2	167300	836.5	23.21	24.00	1.199	-0.02	0.031	0.037
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI2	167300	836.5	21.89	23.00	1.291	0.07	0.048	0.062
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI2	167300	836.5	21.81	23.00	1.315	0.05	0.051	0.067
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI2	167300	836.5	21.89	23.00	1.291	0.17	0.033	0.043
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI2	167300	836.5	21.81	23.00	1.315	0.06	0.019	0.025
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI2	167300	836.5	21.89	23.00	1.291	0.01	0.050	0.065
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI2	167300	836.5	21.81	23.00	1.315	0.05	0.055	0.072
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI2	167300	836.5	21.89	23.00	1.291	0.09	0.035	0.045
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI2	167300	836.5	21.81	23.00	1.315	0.06	0.029	0.038
1750MHz																		
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI2	1413	1732.6	21.99	23.00	1.262	-0.08	0.070	0.088
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI2	1413	1732.6	21.99	23.00	1.262	0.12	0.053	0.067
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI2	1413	1732.6	21.99	23.00	1.262	-0.16	0.049	0.062
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI2	1413	1732.6	21.99	23.00	1.262	-0.15	0.032	0.040
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI2	1413	1732.6	22.96	24.00	1.271	-0.08	0.066	0.084
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI2	1413	1732.6	22.96	24.00	1.271	0.12	0.054	0.069
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI2	1413	1732.6	22.96	24.00	1.271	-0.16	0.048	0.061
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI2	1413	1732.6	22.96	24.00	1.271	-0.15	0.036	0.046
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI2	1413	1732.6	21.59	22.90	1.352	-0.08	0.898	1.214
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI2	1312	1712.4	21.56	22.90	1.361	0.01	0.905	1.232
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI2	1513	1752.6	21.53	22.90	1.371	-0.16	0.862	1.182
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI2	1413	1732.6	21.59	22.90	1.352	-0.15	0.891	1.205
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI2	1312	1712.4	21.56	22.90	1.361	-0.16	0.869	1.183
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI2	1513	1752.6	21.53	22.90	1.371	0.06	0.878	1.204
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI2	1413	1732.6	21.59	22.90	1.352	0.15	0.269	0.364
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI2	1413	1732.6	21.59	22.90	1.352	0.02	0.264	0.357
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI2 Simultaneous	1312	1712.4	20.49	21.80	1.352	0.09	0.721	0.975
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI2	1413	1732.6	19.15	20.30	1.303	0.04	0.668	0.871
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI2	1312	1712.4	19.10	20.30	1.318	-0.01	0.646	0.852
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI2	1513	1752.6	19.00	20.30	1.349	0.08	0.628	0.847
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI2	1413	1732.6	19.15	20.30	1.303	-0.16	0.769	1.002
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI2	1312	1712.4	19.10	20.30	1.318	0.04	0.754	0.994
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI2	1513	1752.6	19.00	20.30	1.349	-0.05	0.700	0.944
07	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI2	1413	1732.6	19.15	20.30	1.303	-0.03	0.949	1.237
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI2	1312	1712.4	19.10	20.30	1.318	0.05	0.895	1.180



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	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI2	1513	1752.6	19.00	20.30	1.349	0.09	0.895	1.207
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI2	1413	1732.6	19.15	20.30	1.303	0.05	0.797	1.039
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI2	1312	1712.4	19.10	20.30	1.318	0.18	0.787	1.037
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI2	1513	1752.6	19.00	20.30	1.349	-0.09	0.743	1.002
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	1413	1732.6	18.13	19.20	1.279	0.05	0.769	0.984
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI2	132322	1745	20.36	21.00	1.159	0.04	0.079	0.092
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI2	132322	1745	19.38	20.00	1.153	0.04	0.051	0.059
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI2	132322	1745	20.36	21.00	1.159	0.09	0.049	0.057
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI2	132322	1745	19.38	20.00	1.153	-0.16	0.033	0.038
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI2	132322	1745	20.36	21.00	1.159	-0.15	0.046	0.053
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI2	132322	1745	19.38	20.00	1.153	-0.12	0.030	0.035
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI2	132322	1745	20.36	21.00	1.159	0.05	0.026	0.030
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI2	132322	1745	19.38	20.00	1.153	-0.12	0.019	0.022
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI2	132322	1745	21.83	23.00	1.309	-0.06	0.042	0.055
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI2	132322	1745	20.85	22.00	1.303	-0.08	0.036	0.047
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI2	132322	1745	21.83	23.00	1.309	-0.09	0.038	0.050
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI2	132322	1745	20.85	22.00	1.303	0.04	0.030	0.039
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI2	132322	1745	21.83	23.00	1.309	0.06	0.034	0.045
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI2	132322	1745	20.85	22.00	1.303	0.02	0.026	0.034
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI2	132322	1745	21.83	23.00	1.309	0.12	0.022	0.029
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI2	132322	1745	20.85	22.00	1.303	-0.16	0.016	0.021
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	132322	1745	21.57	22.00	1.104	0.09	0.923	1.019
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	132072	1720	21.43	22.00	1.140	-0.09	0.942	1.074
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	132572	1770	21.51	22.00	1.119	0.06	0.937	1.049
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	132322	1745	20.72	21.00	1.067	0.07	0.792	0.845
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	132072	1720	20.61	21.00	1.094	-0.09	0.746	0.816
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	132572	1770	20.58	21.00	1.102	-0.1	0.744	0.820
	LTE Band 66	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI2	132322	1745	20.65	21.00	1.084	0.08	0.743	0.805
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	132322	1745	21.57	22.00	1.104	0.07	0.905	0.999
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	132072	1720	21.43	22.00	1.140	-0.17	0.920	1.049
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	132572	1770	21.51	22.00	1.119	0.16	0.890	0.996
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI2	132322	1745	20.72	21.00	1.067	0.05	0.738	0.787
	LTE Band 66	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 2	DSI2	132322	1745	20.65	21.00	1.084	-0.08	0.715	0.775
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI2	132322	1745	21.57	22.00	1.104	0.02	0.274	0.303
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI2	132322	1745	20.72	21.00	1.067	0.02	0.172	0.183
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI2	132322	1745	21.57	22.00	1.104	0.05	0.268	0.296
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI2	132322	1745	20.72	21.00	1.067	0.12	0.167	0.178
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2 Simultaneous	132072	1720	20.49	21.60	1.291	0.08	0.766	0.989
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI2	132322	1745	19.08	19.90	1.208	-0.11	0.747	0.902
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI2	132072	1720	18.95	19.90	1.245	-0.18	0.798	0.993
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI2	132572	1770	18.92	19.90	1.253	-0.09	0.760	0.952
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI2	132322	1745	18.93	19.90	1.250	0.11	0.762	0.953
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI2	132072	1720	18.82	19.90	1.282	0.08	0.770	0.987
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI2	132572	1770	18.89	19.90	1.262	0.09	0.736	0.929
	LTE Band 66	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 3	DSI2	132322	1745	18.91	19.90	1.256	0.06	0.754	0.947
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI2	132322	1745	19.08	19.90	1.208	0.01	0.781	0.943
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI2	132072	1720	18.95	19.90	1.245	-0.05	0.781	0.972
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI2	132572	1770	18.92	19.90	1.253	-0.06	0.751	0.941
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI2	132322	1745	18.93	19.90	1.250	-0.04	0.739	0.924
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI2	132072	1720	18.82	19.90	1.282	-0.16	0.726	0.931
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI2	132572	1770	18.89	19.90	1.262	-0.13	0.741	0.935
	LTE Band 66	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 3	DSI2	132322	1745	18.91	19.90	1.256	0.08	0.735	0.923
08	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	132322	1745	19.08	19.90	1.208	-0.11	1.040	1.256
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	132072	1720	18.95	19.90	1.245	0.03	0.967	1.203
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	132572	1770	18.92	19.90	1.253	0.16	0.953	1.194
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	132322	1745	18.93	19.90	1.250	-0.02	0.947	1.184



	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	132072	1720	18.82	19.90	1.282	0.04	0.952	1.221
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	132572	1770	18.89	19.90	1.262	0.02	0.938	1.184
	LTE Band 66	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI2	132322	1745	18.91	19.90	1.256	-0.01	0.939	1.179
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	132322	1745	19.08	19.90	1.208	-0.04	0.829	1.001
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	132072	1720	18.95	19.90	1.245	-0.15	0.859	1.069
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	132572	1770	18.92	19.90	1.253	-0.02	0.803	1.006
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	132322	1745	18.93	19.90	1.250	0.1	0.811	1.014
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	132072	1720	18.82	19.90	1.282	-0.05	0.824	1.057
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	132572	1770	18.89	19.90	1.262	-0.11	0.792	0.999
	LTE Band 66	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 3	DSI2	132322	1745	18.91	19.90	1.256	0.04	0.821	1.031
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	132322	1745	18.04	19.00	1.247	0.08	0.789	0.984
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI2	349000	1745	22.35	23.00	1.161	0.01	0.050	0.058
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI2	349000	1745	22.29	23.00	1.178	0.07	0.038	0.045
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI2	349000	1745	22.35	23.00	1.161	-0.02	0.042	0.049
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI2	349000	1745	22.29	23.00	1.178	0.15	0.031	0.037
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI2	349000	1745	22.35	23.00	1.161	0.05	0.030	0.035
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI2	349000	1745	22.29	23.00	1.178	0.08	0.024	0.028
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI2	349000	1745	22.35	23.00	1.161	0.12	0.029	0.034
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI2	349000	1745	22.29	23.00	1.178	-0.12	0.018	0.021
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI2	349000	1745	22.54	24.00	1.400	0.02	0.044	0.062
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI2	349000	1745	22.50	24.00	1.413	0.04	0.042	0.059
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI2	349000	1745	22.54	24.00	1.400	-0.16	0.033	0.046
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI2	349000	1745	22.50	24.00	1.413	0.15	0.026	0.037
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI2	349000	1745	22.54	24.00	1.400	0.08	0.022	0.031
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI2	349000	1745	22.50	24.00	1.413	0.07	0.016	0.023
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI2	349000	1745	22.54	24.00	1.400	0.03	0.020	0.028
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI2	349000	1745	22.50	24.00	1.413	0.14	0.015	0.021
09	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI2	349000	1745	22.04	23.20	1.306	0.03	0.948	1.238
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI2	349000	1745	21.97	23.20	1.327	-0.06	0.916	1.216
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI2	349000	1745	21.86	23.00	1.300	-0.16	0.822	1.069
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI2	349000	1745	22.04	23.20	1.306	0.07	0.904	1.181
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI2	349000	1745	21.97	23.20	1.327	0.06	0.874	1.160
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI2	349000	1745	21.86	23.00	1.300	0.02	0.782	1.017
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI2	349000	1745	22.04	23.20	1.306	0.03	0.338	0.441
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI2	349000	1745	21.97	23.20	1.327	-0.12	0.315	0.418
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI2	349000	1745	22.04	23.20	1.306	0.03	0.319	0.417
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI2	349000	1745	21.97	23.20	1.327	-0.07	0.298	0.396
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI2 Simultaneous	349000	1745	21.10	22.30	1.318	0.08	0.747	0.985
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI2	349000	1745	18.62	19.50	1.225	0.14	0.744	0.911
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI2	349000	1745	18.50	19.50	1.259	0.05	0.723	0.910
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI2	349000	1745	18.46	19.50	1.271	0.04	0.701	0.891
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI2	349000	1745	18.62	19.50	1.225	-0.1	0.826	1.012
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI2	349000	1745	18.50	19.50	1.259	-0.09	0.804	1.012
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI2	349000	1745	18.46	19.50	1.271	0.06	0.783	0.995
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI2	349000	1745	18.62	19.50	1.225	0.07	1.010	1.237
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI2	349000	1745	18.50	19.50	1.259	0.02	0.942	1.186
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI2	349000	1745	18.46	19.50	1.271	0.03	0.929	1.180
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI2	349000	1745	18.62	19.50	1.225	-0.03	0.894	1.095
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI2	349000	1745	18.50	19.50	1.259	0.08	0.812	1.022
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI2	349000	1745	18.46	19.50	1.271	-0.14	0.800	1.016
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	349000	1745	17.58	18.60	1.265	0.08	0.781	0.988
1900MHz																		
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 0	DSI2	661	1880	23.07	24.50	1.390	0.02	0.040	0.056
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 0	DSI2	661	1880	23.07	24.50	1.390	-0.04	0.033	0.046
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 0	DSI2	661	1880	23.07	24.50	1.390	0.15	0.036	0.050



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	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 0	DSI2	661	1880	23.07	24.50	1.390	-0.1	0.028	0.039
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 1	DSI2	661	1880	23.69	25.50	1.517	0.02	0.056	0.085
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 1	DSI2	661	1880	23.69	25.50	1.517	-0.04	0.042	0.064
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 1	DSI2	661	1880	23.69	25.50	1.517	0.15	0.039	0.059
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 1	DSI2	661	1880	23.69	25.50	1.517	-0.1	0.030	0.046
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 2	DSI2	661	1880	23.85	25.10	1.334	0.02	0.842	1.123
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 2	DSI2	512	1850.2	23.74	25.10	1.368	0.13	0.794	1.086
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 2	DSI2	810	1909.8	23.81	25.10	1.346	0.18	0.773	1.040
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 2	DSI2	661	1880	23.85	25.10	1.334	0.08	0.833	1.111
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 2	DSI2	512	1850.2	23.74	25.10	1.368	0.02	0.802	1.097
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 2	DSI2	810	1909.8	23.81	25.10	1.346	0.07	0.927	1.248
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 2	DSI2	661	1880	23.85	25.10	1.334	0.15	0.244	0.325
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 2	DSI2	661	1880	23.85	25.10	1.334	-0.1	0.255	0.340
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 2	DSI2 Simultaneous	810	1909.8	22.80	24.00	1.318	0.06	0.755	0.995
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 3	DSI2	661	1880	22.09	23.50	1.384	0.01	0.652	0.902
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 3	DSI2	512	1850.2	22.00	23.50	1.413	0.02	0.602	0.850
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 3	DSI2	810	1909.8	21.96	23.50	1.426	0.07	0.621	0.885
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 3	DSI2	661	1880	22.09	23.50	1.384	0.08	0.624	0.863
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 3	DSI2	512	1850.2	22.00	23.50	1.413	-0.14	0.608	0.859
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 3	DSI2	810	1909.8	21.96	23.50	1.426	0.06	0.607	0.865
10	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 3	DSI2	661	1880	22.09	23.50	1.384	0.03	0.903	1.249
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 3	DSI2	512	1850.2	22.00	23.50	1.413	0.03	0.864	1.220
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 3	DSI2	810	1909.8	21.96	23.50	1.426	0.09	0.872	1.243
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 3	DSI2	661	1880	22.09	23.50	1.384	0.02	0.691	0.956
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 3	DSI2	512	1850.2	22.00	23.50	1.413	0.08	0.697	0.985
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 3	DSI2	810	1909.8	21.96	23.50	1.426	-0.04	0.624	0.890
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	661	1880	20.42	21.70	1.343	0.08	0.733	0.984
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI2	9400	1880	17.94	19.30	1.368	0.11	0.833	1.139
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI2	9262	1852.4	17.87	19.30	1.390	-0.11	0.839	1.166
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI2	9538	1907.6	17.92	19.30	1.374	0.12	0.870	1.195
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI2	9400	1880	17.94	19.30	1.368	-0.06	0.879	1.202
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI2	9262	1852.4	17.87	19.30	1.390	0.04	0.890	1.237
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI2	9538	1907.6	17.92	19.30	1.374	0.15	0.904	1.242
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI2	9400	1880	17.94	19.30	1.368	-0.05	0.226	0.309
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI2	9400	1880	17.94	19.30	1.368	0.1	0.253	0.346
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI2 Simultaneous	9538	1907.6	16.83	18.10	1.340	0.08	0.729	0.977
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI2	9400	1880	18.64	19.90	1.337	0.13	0.676	0.904
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI2	9262	1852.4	18.51	19.90	1.377	-0.12	0.617	0.850
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI2	9538	1907.6	18.58	19.90	1.355	0.19	0.601	0.814
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI2	9400	1880	18.64	19.90	1.337	0.16	0.705	0.942
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI2	9262	1852.4	18.51	19.90	1.377	-0.03	0.656	0.903
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI2	9538	1907.6	18.58	19.90	1.355	-0.05	0.640	0.867
11	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI2	9400	1880	18.64	19.90	1.337	0.06	0.930	1.243
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI2	9262	1852.4	18.51	19.90	1.377	-0.18	0.900	1.239
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI2	9538	1907.6	18.58	19.90	1.355	0.05	0.903	1.224
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI2	9400	1880	18.64	19.90	1.337	0.04	0.802	1.072
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI2	9262	1852.4	18.51	19.90	1.377	0.19	0.728	1.003
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI2	9538	1907.6	18.58	19.90	1.355	-0.14	0.741	1.004
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	9400	1880	17.53	18.80	1.340	0.05	0.733	0.982
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	26340	1880	18.79	19.40	1.151	0.06	0.908	1.045
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	26140	1860	18.58	19.40	1.208	0.16	0.806	0.973
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	26590	1905	18.77	19.40	1.156	0.08	0.870	1.006
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	26340	1880	18.62	19.40	1.197	0.02	0.818	0.979
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	26140	1860	18.51	19.40	1.227	-0.05	0.780	0.957
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	26590	1905	18.61	19.40	1.199	0.03	0.823	0.987



	LTE Band 25	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI2	26340	1880	18.61	19.40	1.199	-0.16	0.807	0.968
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	26340	1880	18.79	19.40	1.151	0.03	0.946	1.089
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	26140	1860	18.58	19.40	1.208	-0.08	0.956	1.155
12	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	26590	1905	18.77	19.40	1.156	0.01	1.080	1.249
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI2	26340	1880	18.62	19.40	1.197	0.04	0.917	1.097
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI2	26140	1860	18.51	19.40	1.227	-0.02	0.934	1.146
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI2	26590	1905	18.61	19.40	1.199	0.06	0.945	1.134
	LTE Band 25	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 2	DSI2	26340	1880	18.61	19.40	1.199	0.09	0.936	1.123
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI2	26340	1880	18.79	19.40	1.151	0.02	0.260	0.299
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI2	26340	1880	18.62	19.40	1.197	-0.07	0.181	0.217
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI2	26340	1880	18.79	19.40	1.151	-0.17	0.301	0.346
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI2	26340	1880	18.62	19.40	1.197	-0.06	0.208	0.249
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2 Simultaneous	26590	1905	17.73	18.70	1.250	0.04	0.788	0.985
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI2	26340	1880	17.81	19.00	1.315	0.06	0.677	0.890
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI2	26140	1860	17.64	19.00	1.368	0.1	0.712	0.974
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI2	26590	1905	17.74	19.00	1.337	-0.07	0.684	0.914
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI2	26340	1880	17.78	19.00	1.324	0.02	0.635	0.841
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI2	26140	1860	17.55	19.00	1.396	-0.18	0.603	0.842
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI2	26590	1905	17.63	19.00	1.371	0.08	0.610	0.836
	LTE Band 25	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 3	DSI2	26340	1880	17.76	19.00	1.330	0.04	0.631	0.840
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI2	26340	1880	17.81	19.00	1.315	-0.11	0.673	0.885
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI2	26140	1860	17.64	19.00	1.368	0.09	0.723	0.989
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI2	26590	1905	17.74	19.00	1.337	-0.06	0.656	0.877
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI2	26340	1880	17.78	19.00	1.324	0.02	0.645	0.854
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI2	26140	1860	17.55	19.00	1.396	-0.17	0.628	0.877
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI2	26590	1905	17.63	19.00	1.371	0.08	0.610	0.836
	LTE Band 25	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 3	DSI2	26340	1880	17.76	19.00	1.330	0.06	0.642	0.854
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	26340	1880	17.81	19.00	1.315	-0.1	0.859	1.130
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	26140	1860	17.64	19.00	1.368	0.03	0.828	1.132
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	26590	1905	17.74	19.00	1.337	0.01	0.933	1.247
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	26340	1880	17.78	19.00	1.324	0.14	0.772	1.022
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	26140	1860	17.55	19.00	1.396	0.08	0.757	1.057
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	26590	1905	17.63	19.00	1.371	0.16	0.814	1.116
	LTE Band 25	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI2	26340	1880	17.76	19.00	1.330	0.03	0.756	1.006
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	26340	1880	17.81	19.00	1.315	-0.17	0.751	0.988
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	26140	1860	17.64	19.00	1.368	0.14	0.699	0.956
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	26590	1905	17.74	19.00	1.337	-0.17	0.742	0.992
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	26340	1880	17.78	19.00	1.324	0.05	0.691	0.915
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	26140	1860	17.55	19.00	1.396	0.08	0.652	0.910
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	26590	1905	17.63	19.00	1.371	0.08	0.656	0.899
	LTE Band 25	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 3	DSI2	26340	1880	17.76	19.00	1.330	-0.1	0.684	0.910
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	26590	1905	16.62	17.80	1.312	0.08	0.755	0.991



FCC SAR Test Report

Report No. : FA2D0913-01

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI2	21100	2535	23.24	24.00	1.191	-	-	0.01	0.065	0.077
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI2	21100	2535	22.37	23.00	1.156	-	-	-0.14	0.042	0.049
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI2	21100	2535	23.24	24.00	1.191	-	-	-0.16	0.052	0.062
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI2	21100	2535	22.37	23.00	1.156	-	-	-0.03	0.048	0.055
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI2	21100	2535	23.24	24.00	1.191	-	-	-0.15	0.047	0.056
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI2	21100	2535	22.37	23.00	1.156	-	-	0.08	0.030	0.035
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI2	21100	2535	23.24	24.00	1.191	-	-	0.02	0.038	0.045
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI2	21100	2535	22.37	23.00	1.156	-	-	0.13	0.031	0.036
	LTE Band 7C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	DSI2	21100+21298	2535+2554.8	23.17	24.00	1.211	-	-	0.02	0.060	0.073
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI2	21100	2535	22.30	23.00	1.175	-	-	-0.06	0.044	0.052
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI2	21100	2535	21.39	22.00	1.151	-	-	-0.02	0.038	0.044
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI2	21100	2535	22.30	23.00	1.175	-	-	0.11	0.036	0.042
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI2	21100	2535	21.39	22.00	1.151	-	-	-0.03	0.027	0.031
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI2	21100	2535	22.30	23.00	1.175	-	-	0.01	0.057	0.067
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI2	21100	2535	21.39	22.00	1.151	-	-	0.01	0.042	0.048
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI2	21100	2535	22.30	23.00	1.175	-	-	0.18	0.036	0.042
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI2	21100	2535	21.39	22.00	1.151	-	-	0.17	0.029	0.033
	LTE Band 7C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 1	DSI2	21100+21298	2535+2554.8	22.24	23.00	1.191	-	-	0.03	0.052	0.062
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	21100	2535	14.36	15.10	1.186	-	-	0.04	0.919	1.090
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	20850	2510	14.20	15.10	1.230	-	-	-0.09	0.891	1.096
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI2	21350	2560	14.29	15.10	1.205	-	-	-0.17	0.833	1.004
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	21100	2535	14.33	15.10	1.194	-	-	0.17	0.876	1.046
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	20850	2510	14.06	15.10	1.271	-	-	-0.12	0.846	1.075
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI2	21350	2560	14.14	15.10	1.247	-	-	-0.03	0.854	1.065
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI2	21100	2535	14.32	15.10	1.197	-	-	0.16	0.829	0.992
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	21100	2535	14.36	15.10	1.186	-	-	-0.04	1.040	1.233
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	20850	2510	14.20	15.10	1.230	-	-	0.05	1.000	1.230
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2	21350	2560	14.29	15.10	1.205	-	-	0.05	0.943	1.136
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI2	21100	2535	14.33	15.10	1.194	-	-	0.05	0.946	1.130
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI2	20850	2510	14.06	15.10	1.271	-	-	-0.17	0.917	1.165
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI2	21350	2560	14.14	15.10	1.247	-	-	0.08	0.913	1.139
	LTE Band 7	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 2	DSI2	21100	2535	14.32	15.10	1.197	-	-	0.07	0.926	1.108
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI2	21100	2535	14.36	15.10	1.186	-	-	0.11	0.313	0.371
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI2	21100	2535	14.33	15.10	1.194	-	-	0.05	0.203	0.242
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI2	21100	2535	14.36	15.10	1.186	-	-	-0.07	0.358	0.425
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI2	21100	2535	14.33	15.10	1.194	-	-	-0.18	0.228	0.272
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI2 Simultaneous	21100	2535	13.27	14.30	1.268	-	-	0.06	0.781	0.990
	LTE Band 7C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 2	DSI2	21100+21298	2535+2554.8	14.28	15.10	1.208	-	-	0.03	0.950	1.147
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI2	21100	2535	16.54	17.50	1.247	-	-	-0.16	0.511	0.637
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI2	21100	2535	16.50	17.50	1.259	-	-	0.02	0.505	0.636
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI2	21100	2535	16.54	17.50	1.247	-	-	0.07	0.325	0.405
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI2	21100	2535	16.50	17.50	1.259	-	-	-0.06	0.309	0.389
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	21100	2535	16.54	17.50	1.247	-	-	0.04	0.974	1.215
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	20850	2510	16.44	17.50	1.276	-	-	0.04	0.943	1.204
13	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	21350	2560	16.46	17.50	1.271	-	-	0.09	0.977	1.241
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	21100	2535	16.50	17.50	1.259	-	-	0.08	0.828	1.042
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	20850	2510	16.38	17.50	1.294	-	-	-0.02	0.809	1.047
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	21350	2560	16.44	17.50	1.276	-	-	-0.16	0.831	1.061
	LTE Band 7	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI2	21100	2535	16.47	17.50	1.268	-	-	0.04	0.822	1.042
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	21100	2535	16.54	17.50	1.247	-	-	-0.1	0.655	0.817
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	20850	2510	16.44	17.50	1.276	-	-	0.01	0.670	0.855
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	21350	2560	16.46	17.50	1.271	-	-	-0.09	0.671	0.853
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	21100	2535	16.50	17.50	1.259	-	-	0.11	0.617	0.777



FCC SAR Test Report

Report No. : FA2D0913-01

Table with columns for LTE Band, Modulation, Power, Frequency, SAR values, and location details. Contains multiple rows of test data for various bands and configurations.



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Report No. : FA2D0913-01

	LTE Band 41C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 2	DSI2	40620+40818	2593+2612.8	15.96	17.40	1.393	62.9	1.006	0.06	0.842	1.180
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 2	DSI2	40620+40818	2593+2612.8	17.60	19.00	1.380	42.9	1.009	0.04	0.838	1.167
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI2	40620	2593	19.61	20.20	1.146	62.9	1.006	0.06	0.411	0.474
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI2	40620	2593	19.58	20.20	1.153	62.9	1.006	0.11	0.327	0.379
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI2	40620	2593	19.61	20.20	1.146	62.9	1.006	0.05	0.328	0.378
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI2	40620	2593	19.58	20.20	1.153	62.9	1.006	0.13	0.259	0.301
14	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	40620	2593	19.61	20.20	1.146	62.9	1.006	0.06	1.080	1.245
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	39750	2506	19.57	20.20	1.156	62.9	1.006	-0.05	0.905	1.053
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	40185	2549.5	19.55	20.20	1.161	62.9	1.006	-0.02	0.937	1.095
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	41055	2636.5	19.46	20.20	1.186	62.9	1.006	0.08	0.990	1.181
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	41490	2680	19.41	20.20	1.199	62.9	1.006	0.06	1.010	1.219
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	40620	2593	19.58	20.20	1.153	62.9	1.006	-0.01	0.937	1.087
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	39750	2506	19.41	20.20	1.199	62.9	1.006	0.09	0.925	1.116
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	40185	2549.5	19.45	20.20	1.189	62.9	1.006	-0.15	0.957	1.144
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	41055	2636.5	19.38	20.20	1.208	62.9	1.006	-0.02	0.914	1.111
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI2	41490	2680	19.38	20.20	1.208	62.9	1.006	0.07	0.938	1.140
	LTE Band 41	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI2	40620	2593	19.55	20.20	1.161	62.9	1.006	0.11	0.936	1.094
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	40620	2593	19.61	20.20	1.146	62.9	1.006	-0.09	0.667	0.769
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	39750	2506	19.57	20.20	1.156	62.9	1.006	-0.14	0.666	0.775
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	40185	2549.5	19.55	20.20	1.161	62.9	1.006	-0.15	0.614	0.717
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	41055	2636.5	19.46	20.20	1.186	62.9	1.006	0.08	0.672	0.802
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2	41490	2680	19.41	20.20	1.199	62.9	1.006	0.1	0.657	0.793
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	40620	2593	19.58	20.20	1.153	62.9	1.006	-0.05	0.626	0.726
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	39750	2506	19.41	20.20	1.199	62.9	1.006	0.07	0.664	0.801
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	40185	2549.5	19.45	20.20	1.189	62.9	1.006	0.06	0.618	0.739
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	41055	2636.5	19.38	20.20	1.208	62.9	1.006	0.16	0.651	0.791
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	41490	2680	19.38	20.20	1.208	62.9	1.006	0.05	0.614	0.746
	LTE Band 41	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 3	DSI2	40620	2593	19.55	20.20	1.161	62.9	1.006	0.04	0.629	0.735
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2	40620	2593	21.29	21.80	1.125	42.9	1.009	0.04	1.070	1.214
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	40620	2593	18.66	19.60	1.242	62.9	1.006	0.06	0.788	0.984
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	40620	2593	20.25	21.20	1.245	42.9	1.009	0.05	0.781	0.981
	LTE Band 41C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 3	DSI2	40620+40818	2593+2612.8	19.37	20.20	1.211	62.9	1.006	0.03	0.950	1.157
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 3	DSI2	40620+40818	2593+2612.8	21.14	21.80	1.164	42.9	1.009	0.01	0.943	1.108
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI2	507000	2535	21.96	23.00	1.271	-	-	0.06	0.038	0.048
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI2	507000	2535	21.90	23.00	1.288	-	-	0.01	0.042	0.054
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI2	507000	2535	21.96	23.00	1.271	-	-	0.15	0.032	0.041
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI2	507000	2535	21.90	23.00	1.288	-	-	0.08	0.036	0.046
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI2	507000	2535	21.96	23.00	1.271	-	-	0.16	0.026	0.033
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI2	507000	2535	21.90	23.00	1.288	-	-	-0.13	0.031	0.040
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI2	507000	2535	21.96	23.00	1.271	-	-	-0.18	0.021	0.027
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI2	507000	2535	21.90	23.00	1.288	-	-	0.05	0.029	0.037
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI2	507000	2535	22.93	24.00	1.279	-	-	0.05	0.016	0.020
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI2	507000	2535	22.87	24.00	1.297	-	-	-0.18	0.029	0.038
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI2	507000	2535	22.93	24.00	1.279	-	-	-0.11	0.021	0.027
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI2	507000	2535	22.87	24.00	1.297	-	-	0.12	0.030	0.039
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI2	507000	2535	22.93	24.00	1.279	-	-	-0.09	0.036	0.046
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI2	507000	2535	22.87	24.00	1.297	-	-	0.04	0.043	0.056
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI2	507000	2535	22.93	24.00	1.279	-	-	0.19	0.025	0.032
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI2	507000	2535	22.87	24.00	1.297	-	-	-0.17	0.033	0.043
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI2	507000	2535	13.81	15.20	1.377	-	-	0.03	0.853	1.175
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI2	507000	2535	13.75	15.20	1.396	-	-	0.09	0.791	1.105
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI2	507000	2535	13.68	15.20	1.419	-	-	0.08	0.748	1.061
15	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI2	507000	2535	13.81	15.20	1.377	-	-	-0.02	0.914	1.259
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI2	507000	2535	13.75	15.20	1.396	-	-	0.16	0.881	1.230
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI2	507000	2535	13.68	15.20	1.419	-	-	0.17	0.852	1.209
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI2	507000	2535	13.81	15.20	1.377	-	-	-0.19	0.355	0.489



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	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI2	507000	2535	13.75	15.20	1.396	-	-	0.18	0.290	0.405
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI2	507000	2535	13.81	15.20	1.377	-	-	0.15	0.400	0.551
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI2	507000	2535	13.75	15.20	1.396	-	-	0.03	0.326	0.455
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI2 Simultaneous	507000	2535	12.82	14.10	1.343	-	-	0.08	0.731	0.982
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI2	507000	2535	16.84	17.80	1.247	-	-	0.14	0.413	0.515
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI2	507000	2535	16.64	17.80	1.306	-	-	-0.1	0.425	0.555
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI2	507000	2535	16.84	17.80	1.247	-	-	-0.05	0.523	0.652
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI2	507000	2535	16.64	17.80	1.306	-	-	0.08	0.333	0.435
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI2	507000	2535	16.84	17.80	1.247	-	-	-0.02	0.996	1.242
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI2	507000	2535	16.64	17.80	1.306	-	-	0.02	0.950	1.241
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI2	507000	2535	16.68	17.80	1.294	-	-	-0.13	0.908	1.175
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI2	507000	2535	16.84	17.80	1.247	-	-	-0.13	0.645	0.805
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI2	507000	2535	16.64	17.80	1.306	-	-	0.03	0.676	0.883
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI2	507000	2535	16.68	17.80	1.294	-	-	0.04	0.622	0.805
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI2 Simultaneous	507000	2535	15.80	16.80	1.259	-	-	0.05	0.774	0.974
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI2	518598	2592.99	21.86	23.00	1.300	-	-	0.1	0.024	0.031
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI2	518598	2592.99	21.78	23.00	1.324	-	-	0.01	0.031	0.041
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI2	518598	2592.99	21.86	23.00	1.300	-	-	0.05	0.019	0.025
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI2	518598	2592.99	21.78	23.00	1.324	-	-	0.07	0.026	0.034
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI2	518598	2592.99	21.86	23.00	1.300	-	-	0.06	0.018	0.023
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI2	518598	2592.99	21.78	23.00	1.324	-	-	0.04	0.022	0.029
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI2	518598	2592.99	21.86	23.00	1.300	-	-	-0.14	0.016	0.021
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI2	518598	2592.99	21.78	23.00	1.324	-	-	-0.13	0.029	0.038
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI2	518598	2592.99	24.86	26.00	1.300	50	1.000	0.07	0.030	0.039
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI2	518598	2592.99	22.97	24.00	1.268	-	-	0.04	0.016	0.020
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI2	518598	2592.99	22.91	24.00	1.285	-	-	0.07	0.021	0.027
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI2	518598	2592.99	22.97	24.00	1.268	-	-	0.04	0.010	0.013
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI2	518598	2592.99	22.91	24.00	1.285	-	-	0.12	0.019	0.024
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI2	518598	2592.99	22.97	24.00	1.268	-	-	0.09	0.042	0.053
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI2	518598	2592.99	22.91	24.00	1.285	-	-	0.02	0.047	0.060
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI2	518598	2592.99	22.97	24.00	1.268	-	-	0.05	0.033	0.042
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI2	518598	2592.99	22.91	24.00	1.285	-	-	0.07	0.039	0.050
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI2	518598	2592.99	25.96	27.00	1.271	50	1.000	0.06	0.045	0.057
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI2	518598	2592.99	14.25	15.40	1.303	-	-	-0.18	0.864	1.126
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI2	518598	2592.99	14.16	15.40	1.330	-	-	-0.17	0.816	1.086
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI2	518598	2592.99	14.11	15.40	1.346	-	-	0.09	0.808	1.087
16	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2	518598	2592.99	14.25	15.40	1.303	-	-	0.02	0.945	1.231
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2	518598	2592.99	14.16	15.40	1.330	-	-	0.06	0.850	1.131
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2	518598	2592.99	14.11	15.40	1.346	-	-	0.18	0.875	1.178
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI2	518598	2592.99	14.25	15.40	1.303	-	-	0.03	0.359	0.468
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI2	518598	2592.99	14.16	15.40	1.330	-	-	0.15	0.336	0.447
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI2	518598	2592.99	14.25	15.40	1.303	-	-	0.17	0.389	0.507
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI2	518598	2592.99	14.16	15.40	1.330	-	-	0.04	0.370	0.492
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2 Simultaneous	518598	2592.99	13.22	14.40	1.312	-	-	0.09	0.755	0.991
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2	518598	2592.99	17.25	18.40	1.303	50	1.000	0.03	0.918	1.196
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2 Simultaneous	518598	2592.99	16.37	17.40	1.268	50	1.000	0.09	0.733	0.929
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI2	518598	2592.99	18.10	19.30	1.318	-	-	0.12	0.339	0.447
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI2	518598	2592.99	18.02	19.30	1.343	-	-	0.05	0.382	0.513
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI2	518598	2592.99	18.10	19.30	1.318	-	-	0.02	0.271	0.357
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI2	518598	2592.99	18.02	19.30	1.343	-	-	-0.1	0.314	0.422
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI2	518598	2592.99	18.10	19.30	1.318	-	-	0.06	0.894	1.179
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI2	518598	2592.99	18.02	19.30	1.343	-	-	-0.05	0.910	1.222
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI2	518598	2592.99	17.98	19.30	1.355	-	-	0.04	0.881	1.194
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI2	518598	2592.99	18.10	19.30	1.318	-	-	0.07	0.667	0.879
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI2	518598	2592.99	18.02	19.30	1.343	-	-	-0.12	0.675	0.906
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI2	518598	2592.99	17.98	19.30	1.355	-	-	0.02	0.642	0.870
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI2	518598	2592.99	17.07	18.00	1.239	-	-	0.05	0.744	0.922



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Table with columns for test parameters (FR1 n41 HPUE, 100M, QPSK, 135, 69, DFT-SCS-30KHz, Left Cheek, 0mm, Ant 3, DSI2, 518598, 2592.99, 21.00, 22.30, 1.349, 50, 1.000, -0.06, 0.900, 1.214) and a large section for 3500MHz LTE Band 42 Part27Q tests with various configurations and SAR values.



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Table with columns: LTE Band, Modulation, Power, Frequency, Location, Antenna, SAR Type, Frequency, Power, SAR, etc. Row 18 is highlighted in yellow.



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	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	55830	3609	17.51	18.90	1.377	62.9	1.006	0.04	0.869	1.204
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	55340	3560	17.46	18.90	1.393	62.9	1.006	-0.07	0.885	1.240
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	56150	3641	17.49	18.90	1.384	62.9	1.006	0.05	0.849	1.182
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI2	56640	3690	17.34	18.90	1.432	62.9	1.006	0.11	0.839	1.209
	LTE Band 48	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 3	DSI2	55830	3609	17.44	18.90	1.400	62.9	1.006	0.03	0.804	1.132
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI2 Simultaneous	55830	3609	16.51	17.80	1.346	62.9	1.006	0.09	0.729	0.987
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI2	656000	3840	20.43	21.00	1.140	-	-	0.06	0.020	0.023
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSI2	656000	3840	20.38	21.00	1.153	-	-	0.13	0.013	0.015
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI2	656000	3840	20.43	21.00	1.140	-	-	0.09	0.015	0.017
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSI2	656000	3840	20.38	21.00	1.153	-	-	0.06	0.009	0.010
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI2	656000	3840	20.43	21.00	1.140	-	-	0.06	0.041	0.047
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI2	656000	3840	20.38	21.00	1.153	-	-	0.07	0.040	0.046
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI2	656000	3840	20.43	21.00	1.140	-	-	0.05	0.035	0.040
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSI2	656000	3840	20.38	21.00	1.153	-	-	-0.09	0.031	0.036
	FR1 n77_Part27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSI2	656000	3840	23.42	24.00	1.143	50	1.000	0.04	0.039	0.045
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI2	656000	3840	23.24	24.00	1.191	-	-	-0.17	0.037	0.044
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI2	656000	3840	23.19	24.00	1.205	-	-	0.08	0.033	0.040
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI2	656000	3840	23.24	24.00	1.191	-	-	0.05	0.034	0.041
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI2	656000	3840	23.19	24.00	1.205	-	-	-0.11	0.028	0.034
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI2	656000	3840	23.24	24.00	1.191	-	-	-0.11	0.040	0.048
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI2	656000	3840	23.19	24.00	1.205	-	-	0.01	0.047	0.057
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI2	656000	3840	23.24	24.00	1.191	-	-	-0.17	0.038	0.045
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI2	656000	3840	23.19	24.00	1.205	-	-	-0.13	0.040	0.048
	FR1 n77_Part27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI2	656000	3840	26.12	27.00	1.225	50	1.000	0.05	0.045	0.055
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI2	656000	3840	15.16	15.90	1.186	-	-	0.07	0.833	0.988
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI2	656000	3840	15.08	15.90	1.208	-	-	-0.14	0.872	1.053
	FR1 n77_Part27O	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI2	656000	3840	15.03	15.90	1.222	-	-	0.03	0.894	1.092
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2	656000	3840	15.16	15.90	1.186	-	-	-0.04	1.000	1.186
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2	656000	3840	15.08	15.90	1.208	-	-	-0.01	1.010	1.220
	FR1 n77_Part27O	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2	656000	3840	15.03	15.90	1.222	-	-	-0.17	0.946	1.156
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI2	656000	3840	15.16	15.90	1.186	-	-	0.11	0.464	0.550
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI2	656000	3840	15.08	15.90	1.208	-	-	0.07	0.471	0.569
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI2	656000	3840	15.16	15.90	1.186	-	-	0.08	0.627	0.743
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI2	656000	3840	15.08	15.90	1.208	-	-	0.15	0.625	0.755
	FR1 n77_Part27O HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2	656000	3840	17.61	18.90	1.346	50	1.000	0.03	0.900	1.211
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI2 Simultaneous	656000	3840	14.13	15.40	1.340	-	-	0.12	0.814	1.090
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI2	656000	3840	14.25	15.10	1.216	-	-	0.1	0.259	0.315
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI2	656000	3840	14.20	15.10	1.230	-	-	0.1	0.222	0.273
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI2	656000	3840	14.25	15.10	1.216	-	-	0.03	0.311	0.378
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI2	656000	3840	14.20	15.10	1.230	-	-	0.05	0.277	0.341
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI2	656000	3840	14.25	15.10	1.216	-	-	0.14	0.720	0.876
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI2	656000	3840	14.20	15.10	1.230	-	-	0.03	0.705	0.867
	FR1 n77_Part27O	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI2	656000	3840	14.13	15.10	1.250	-	-	0.04	0.698	0.873
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI2	656000	3840	14.25	15.10	1.216	-	-	-0.03	1.000	1.216
	FR1 n77_Part27O	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI2	656000	3840	14.20	15.10	1.230	-	-	0.03	0.988	1.216
	FR1 n77_Part27O	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI2	656000	3840	14.13	15.10	1.250	-	-	-0.08	0.936	1.170
19	FR1 n77_Part27O HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI2	656000	3840	17.41	18.10	1.172	50	1.000	-0.04	1.050	1.231
	FR1 n77_Part27O	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI2 Simultaneous	656000	3840	13.26	14.20	1.242	-	-	0.04	0.786	0.976



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
WLAN/BT																
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+5(4)	Standalone	11	2462	16.45	18.00	1.429	100	1.000	0.03	0.709	1.013
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+5(4)	Standalone	6	2437	16.28	18.00	1.486	100	1.000	0.01	0.634	0.942
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4+5(4)	Standalone	11	2462	16.45	18.00	1.429	100	1.000	-0.02	0.120	0.171
20	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+5(4)	Standalone	11	2462	16.45	18.00	1.429	100	1.000	-0.05	0.772	1.103
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+5(4)	Standalone	6	2437	16.28	18.00	1.486	100	1.000	0.06	0.679	1.009
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+5(4)	Standalone	11	2462	16.45	18.00	1.429	100	1.000	0.04	0.172	0.246
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+5(4)	DBS only	11	2462	13.92	15.50	1.439	100	1.000	0.03	0.365	0.525
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4+5(4)	DBS only	11	2462	13.92	15.50	1.439	100	1.000	0.01	0.096	0.138
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+5(4)	DBS only	11	2462	13.92	15.50	1.439	100	1.000	0.07	0.430	0.619
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+5(4)	DBS only	11	2462	13.92	15.50	1.439	100	1.000	0.02	0.102	0.147
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	10.91	12.50	1.442	100	1.000	0.05	0.123	0.177
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	10.91	12.50	1.442	100	1.000	0.04	0.099	0.143
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	10.91	12.50	1.442	100	1.000	0.03	0.215	0.310
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	10.91	12.50	1.442	100	1.000	0.01	0.085	0.123
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+5(4)	WWAN+DBS	11	2462	7.89	9.50	1.449	100	1.000	0.03	0.070	0.101
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4+5(4)	WWAN+DBS	11	2462	7.89	9.50	1.449	100	1.000	0.01	0.054	0.078
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+5(4)	WWAN+DBS	11	2462	7.89	9.50	1.449	100	1.000	0.08	0.107	0.155
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+5(4)	WWAN+DBS	11	2462	7.89	9.50	1.449	100	1.000	0.06	0.093	0.135
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 4	Full power	39	2441	11.57	12.00	1.104	77.03	1.081	0.01	0.151	0.180
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4	Full power	39	2441	11.57	12.00	1.104	77.03	1.081	0.03	0.090	0.107
21	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4	Full power	39	2441	11.57	12.00	1.104	77.03	1.081	-0.06	0.156	0.186
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	Full power	39	2441	11.57	12.00	1.104	77.03	1.081	0.02	0.033	0.039
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 5	Full power	39	2441	8.53	9.00	1.114	76.86	1.084	0.02	0.029	0.035
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 5	Full power	39	2441	8.53	9.00	1.114	76.86	1.084	0.01	0.006	0.007
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 5	Full power	39	2441	8.53	9.00	1.114	76.86	1.084	0.05	0.062	0.075
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 5	Full power	39	2441	8.53	9.00	1.114	76.86	1.084	-0.03	0.003	0.004
	WLAN 5.3GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+5(4)	Full power	56	5280	18.89	20.50	1.449	99.32	1.007	0.06	0.771	1.125
	WLAN 5.3GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+5(4)	Full power	52	5260	19.08	20.50	1.387	99.32	1.007	0.03	0.765	1.068
	WLAN 5.3GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+5(4)	Full power	56	5280	18.89	20.50	1.449	99.32	1.007	0.01	0.591	0.862
	WLAN 5.3GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+5(4)	Full power	52	5260	19.08	20.50	1.387	99.32	1.007	0.05	0.588	0.821
22	WLAN 5.3GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+5(4)	Full power	56	5280	18.89	20.50	1.449	99.32	1.007	0.07	0.816	1.190
	WLAN 5.3GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+5(4)	Full power	52	5260	19.08	20.50	1.387	99.32	1.007	0.03	0.802	1.120
	WLAN 5.3GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+5(4)	Full power	56	5280	18.89	20.50	1.449	99.32	1.007	0.02	0.456	0.665
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(5)	DBS only	58	5290	16.79	18.50	1.483	100	1.000	0.03	0.423	0.627
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(5)	DBS only	58	5290	16.79	18.50	1.483	100	1.000	0.01	0.356	0.528
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(5)	DBS only	58	5290	16.79	18.50	1.483	100	1.000	-0.03	0.512	0.759
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(5)	DBS only	58	5290	16.79	18.50	1.483	100	1.000	0.05	0.256	0.380
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(5)	WWAN+ non DBS	58	5290	13.75	15.50	1.496	100	1.000	0.03	0.156	0.233
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(5)	WWAN+ non DBS	58	5290	13.75	15.50	1.496	100	1.000	0.04	0.101	0.151
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(5)	WWAN+ non DBS	58	5290	13.75	15.50	1.496	100	1.000	0.01	0.253	0.379
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(5)	WWAN+ non DBS	58	5290	13.75	15.50	1.496	100	1.000	0.03	0.123	0.184
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(5)	WWAN+DBS	58	5290	10.78	12.50	1.486	100	1.000	0.03	0.075	0.111
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(5)	WWAN+DBS	58	5290	10.78	12.50	1.486	100	1.000	0.04	0.053	0.079
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(5)	WWAN+DBS	58	5290	10.78	12.50	1.486	100	1.000	0.02	0.126	0.187
	WLAN 5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(5)	WWAN+DBS	58	5290	10.78	12.50	1.486	100	1.000	0.06	0.110	0.163
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(5)	Standalone	138	5690	16.52	18.00	1.406	100	1.000	0.03	0.285	0.401
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(5)	Standalone	138	5690	16.52	18.00	1.406	100	1.000	0.01	0.187	0.263
23	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(5)	Standalone	138	5690	16.52	18.00	1.406	100	1.000	-0.03	0.815	1.146
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(5)	Standalone	122	5610	15.83	17.50	1.469	100	1.000	-0.05	0.720	1.058
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(5)	Standalone	138	5690	16.52	18.00	1.406	100	1.000	0.01	0.528	0.742
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(4)	DBS only	138	5690	13.85	15.50	1.462	100	1.000	0.02	0.403	0.589



FCC SAR Test Report

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	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(4)	DBS only	138	5690	13.85	15.50	1.462	100	1.000	0.04	0.333	0.487
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(4)	DBS only	138	5690	13.85	15.50	1.462	100	1.000	0.03	0.521	0.762
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(4)	DBS only	138	5690	13.85	15.50	1.462	100	1.000	0.05	0.275	0.402
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(5)	WWAN+ non DBS	138	5690	11.45	13.00	1.429	100	1.000	0.03	0.142	0.203
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(5)	WWAN+ non DBS	138	5690	11.45	13.00	1.429	100	1.000	-0.03	0.093	0.133
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(5)	WWAN+ non DBS	138	5690	11.45	13.00	1.429	100	1.000	0.01	0.265	0.379
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(5)	WWAN+ non DBS	138	5690	11.45	13.00	1.429	100	1.000	0.04	0.132	0.189
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(5)	WWAN+DBS	138	5690	8.42	10.00	1.439	100	1.000	0.03	0.081	0.117
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(5)	WWAN+DBS	138	5690	8.42	10.00	1.439	100	1.000	0.01	0.059	0.085
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(5)	WWAN+DBS	138	5690	8.42	10.00	1.439	100	1.000	0.05	0.135	0.194
	WLAN 5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(5)	WWAN+DBS	138	5690	8.42	10.00	1.439	100	1.000	0.04	0.116	0.167
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(4)	Standalone	155	5775	16.12	17.50	1.374	100	1.000	-0.05	0.231	0.317
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(4)	Standalone	155	5775	16.12	17.50	1.374	100	1.000	0.01	0.154	0.212
24	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(4)	Standalone	155	5775	16.12	17.50	1.374	100	1.000	0.03	0.813	1.117
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(4)	Standalone	155	5775	16.12	17.50	1.374	100	1.000	0.01	0.405	0.556
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(4)	DBS only	155	5775	14.16	15.50	1.361	100	1.000	0.03	0.389	0.530
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(4)	DBS only	155	5775	14.16	15.50	1.361	100	1.000	0.04	0.241	0.328
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(4)	DBS only	155	5775	14.16	15.50	1.361	100	1.000	0.05	0.510	0.694
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(4)	DBS only	155	5775	14.16	15.50	1.361	100	1.000	0.02	0.220	0.300
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(4)	WWAN+ non DBS	155	5775	11.21	13.00	1.510	100	1.000	-0.03	0.196	0.296
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(4)	WWAN+ non DBS	155	5775	11.21	13.00	1.510	100	1.000	0.01	0.134	0.202
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(4)	WWAN+ non DBS	155	5775	11.21	13.00	1.510	100	1.000	-0.03	0.255	0.385
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(4)	WWAN+ non DBS	155	5775	11.21	13.00	1.510	100	1.000	0.05	0.115	0.174
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5(4)	WWAN+DBS	155	5775	8.13	10.00	1.538	100	1.000	0.03	0.077	0.118
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5(4)	WWAN+DBS	155	5775	8.13	10.00	1.538	100	1.000	0.04	0.052	0.080
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5(4)	WWAN+DBS	155	5775	8.13	10.00	1.538	100	1.000	0.02	0.127	0.195
	WLAN 5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5(4)	WWAN+DBS	155	5775	8.13	10.00	1.538	100	1.000	0.05	0.109	0.168



16.2 Hotspot SAR

Open

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB Offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	EUT Flip State	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																						
25	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	DSI3	23095	707.5	open	22.89	24.00	1.291	-	-	0.16	0.343	0.443	
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	DSI3	23095	707.5	open	21.99	23.00	1.262	-	-	0.05	0.193	0.244	
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	DSI3	23095	707.5	open	22.89	24.00	1.291	-	-	0.04	0.522	0.674	
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	DSI3	23095	707.5	open	21.99	23.00	1.262	-	-	0.09	0.287	0.362	
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI3	23095	707.5	open	22.89	24.00	1.291	-	-	-0.07	0.096	0.124	
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	DSI3	23095	707.5	open	21.99	23.00	1.262	-	-	-0.14	0.053	0.067	
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI3	23095	707.5	open	22.89	24.00	1.291	-	-	-0.03	0.343	0.443	
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	DSI3	23095	707.5	open	21.99	23.00	1.262	-	-	-0.13	0.188	0.237	
	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	23095	707.5	open	22.89	24.00	1.291	-	-	0.05	0.447	0.577	
	LTE Band 12	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	DSI3	23095	707.5	open	21.99	23.00	1.262	-	-	-0.17	0.243	0.307	
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 1	DSI3	23095	707.5	open	21.70	23.00	1.349	-	-	-0.01	0.230	0.310	
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 1	DSI3	23095	707.5	open	20.71	22.00	1.346	-	-	-0.04	0.133	0.179	
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	23095	707.5	open	21.70	23.00	1.349	-	-	-0.06	0.400	0.540	
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 1	DSI3	23095	707.5	open	20.71	22.00	1.346	-	-	-0.06	0.204	0.275	
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI3	23095	707.5	open	21.70	23.00	1.349	-	-	-0.1	0.142	0.192	
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	DSI3	23095	707.5	open	20.71	22.00	1.346	-	-	-0.14	0.080	0.108	
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI3	23095	707.5	open	21.70	23.00	1.349	-	-	0.08	0.045	0.061	
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	DSI3	23095	707.5	open	20.71	22.00	1.346	-	-	-0.11	0.044	0.059	
	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	23095	707.5	open	21.70	23.00	1.349	-	-	0.02	0.372	0.502	
	LTE Band 12	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 1	DSI3	23095	707.5	open	20.71	22.00	1.346	-	-	0.07	0.205	0.276	
	26	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	DSI3	23230	782	open	22.82	24.00	1.312	-	-	0.06	0.252	0.331
		LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 0	DSI3	23230	782	open	21.87	23.00	1.297	-	-	0.04	0.143	0.185
		LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	DSI3	23230	782	open	22.82	24.00	1.312	-	-	0.08	0.402	0.528
		LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 0	DSI3	23230	782	open	21.87	23.00	1.297	-	-	-0.06	0.225	0.292
		LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI3	23230	782	open	22.82	24.00	1.312	-	-	0.01	0.058	0.076
LTE Band 13		10M	QPSK	25	0	-	Left Side	5mm	Ant 0	DSI3	23230	782	open	21.87	23.00	1.297	-	-	0.09	0.032	0.042	
LTE Band 13		10M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI3	23230	782	open	22.82	24.00	1.312	-	-	-0.06	0.209	0.274	
LTE Band 13		10M	QPSK	25	0	-	Right Side	5mm	Ant 0	DSI3	23230	782	open	21.87	23.00	1.297	-	-	0.06	0.118	0.153	
LTE Band 13		10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	23230	782	open	22.82	24.00	1.312	-	-	-0.18	0.291	0.382	
LTE Band 13		10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	DSI3	23230	782	open	21.87	23.00	1.297	-	-	0.15	0.156	0.202	
LTE Band 13		10M	QPSK	1	0	-	Front	5mm	Ant 1	DSI3	23230	782	open	21.31	23.00	1.476	-	-	-0.18	0.264	0.390	
LTE Band 13		10M	QPSK	25	0	-	Front	5mm	Ant 1	DSI3	23230	782	open	20.43	22.00	1.435	-	-	-0.07	0.144	0.207	
LTE Band 13		10M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	23230	782	open	21.31	23.00	1.476	-	-	-0.01	0.438	0.646	
LTE Band 13		10M	QPSK	25	0	-	Back	5mm	Ant 1	DSI3	23230	782	open	20.43	22.00	1.435	-	-	-0.11	0.240	0.345	
LTE Band 13		10M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI3	23230	782	open	21.31	23.00	1.476	-	-	-0.04	0.156	0.230	
LTE Band 13		10M	QPSK	25	0	-	Left Side	5mm	Ant 1	DSI3	23230	782	open	20.43	22.00	1.435	-	-	0.07	0.089	0.128	
LTE Band 13		10M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI3	23230	782	open	21.31	23.00	1.476	-	-	-0.05	0.041	0.061	
LTE Band 13		10M	QPSK	25	0	-	Right Side	5mm	Ant 1	DSI3	23230	782	open	20.43	22.00	1.435	-	-	0.06	0.040	0.057	
LTE Band 13		10M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	23230	782	open	21.31	23.00	1.476	-	-	0.09	0.348	0.514	
LTE Band 13		10M	QPSK	25	0	-	Bottom Side	5mm	Ant 1	DSI3	23230	782	open	20.43	22.00	1.435	-	-	0.16	0.192	0.276	
835MHz																						
27		GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	5mm	Ant 0	DSI3	189	836.4	open	28.92	29.50	1.143	-	-	0.02	0.401	0.458
		GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	5mm	Ant 0	DSI3	189	836.4	open	28.92	29.50	1.143	-	-	-0.05	0.678	0.775
		GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Side	5mm	Ant 0	DSI3	189	836.4	open	28.92	29.50	1.143	-	-	0.05	0.058	0.066
		GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Side	5mm	Ant 0	DSI3	189	836.4	open	28.92	29.50	1.143	-	-	0.03	0.202	0.231
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	5mm	Ant 0	DSI3	189	836.4	open	28.92	29.50	1.143	-	-	0.08	0.391	0.447	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	5mm	Ant 1	DSI3	189	836.4	open	27.85	29.00	1.303	-	-	0.04	0.309	0.403	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	5mm	Ant 1	DSI3	189	836.4	open	27.85	29.00	1.303	-	-	-0.08	0.565	0.736	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Side	5mm	Ant 1	DSI3	189	836.4	open	27.85	29.00	1.303	-	-	0.02	0.143	0.186	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Side	5mm	Ant 1	DSI3	189	836.4	open	27.85	29.00	1.303	-	-	-0.01	0.052	0.068	
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	5mm	Ant 1	DSI3	189	836.4	open	27.85	29.00	1.303	-	-	0.08	0.460	0.599	



	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI3	4182	836.4	open	23.78	24.00	1.052	-	-	-0.13	0.398	0.419
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI3	4182	836.4	open	23.78	24.00	1.052	-	-	0.02	0.588	0.619
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	DSI3	4182	836.4	open	23.78	24.00	1.052	-	-	0.09	0.057	0.060
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	DSI3	4182	836.4	open	23.78	24.00	1.052	-	-	0.08	0.224	0.236
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI3	4182	836.4	open	23.78	24.00	1.052	-	-	0.02	0.457	0.481
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI3	4182	836.4	open	22.49	24.00	1.416	-	-	0.06	0.301	0.426
28	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI3	4182	836.4	open	22.49	24.00	1.416	-	-	-0.08	0.472	0.668
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	DSI3	4182	836.4	open	22.49	24.00	1.416	-	-	-0.17	0.152	0.215
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 1	DSI3	4182	836.4	open	22.49	24.00	1.416	-	-	-0.12	0.063	0.089
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	DSI3	4182	836.4	open	22.49	24.00	1.416	-	-	0.02	0.311	0.440
1750MHz																					
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 0	DSI3	26865	831.5	open	22.89	24.00	1.291	-	-	0.07	0.465	0.600
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 0	DSI3	26865	831.5	open	21.81	23.00	1.315	-	-	0.01	0.268	0.352
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	DSI3	26865	831.5	open	22.89	24.00	1.291	-	-	0.04	0.739	0.954
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 0	DSI3	26865	831.5	open	21.81	23.00	1.315	-	-	0.06	0.583	0.767
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 0	DSI3	26865	831.5	open	21.76	23.00	1.330	-	-	0.03	0.572	0.761
	LTE Band 26	15M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI3	26865	831.5	open	22.89	24.00	1.291	-	-	0.03	0.070	0.090
	LTE Band 26	15M	QPSK	36	0	-	Left Side	5mm	Ant 0	DSI3	26865	831.5	open	21.81	23.00	1.315	-	-	-0.13	0.052	0.068
	LTE Band 26	15M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI3	26865	831.5	open	22.89	24.00	1.291	-	-	0.02	0.287	0.371
	LTE Band 26	15M	QPSK	36	0	-	Right Side	5mm	Ant 0	DSI3	26865	831.5	open	21.81	23.00	1.315	-	-	-0.18	0.166	0.218
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	26865	831.5	open	22.89	24.00	1.291	-	-	0.02	0.617	0.797
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	5mm	Ant 0	DSI3	26865	831.5	open	21.81	23.00	1.315	-	-	0.01	0.441	0.580
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	DSI3	26865	831.5	open	21.38	22.00	1.153	-	-	0.04	0.247	0.285
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 1	DSI3	26865	831.5	open	20.32	21.00	1.169	-	-	0.07	0.140	0.164
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	26865	831.5	open	21.38	22.00	1.153	-	-	0.07	0.482	0.556
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 1	DSI3	26865	831.5	open	20.32	21.00	1.169	-	-	0.04	0.270	0.316
	LTE Band 26	15M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI3	26865	831.5	open	21.38	22.00	1.153	-	-	-0.02	0.159	0.183
	LTE Band 26	15M	QPSK	36	0	-	Left Side	5mm	Ant 1	DSI3	26865	831.5	open	20.32	21.00	1.169	-	-	-0.16	0.090	0.105
	LTE Band 26	15M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI3	26865	831.5	open	21.38	22.00	1.153	-	-	0.06	0.039	0.045
	LTE Band 26	15M	QPSK	36	0	-	Right Side	5mm	Ant 1	DSI3	26865	831.5	open	20.32	21.00	1.169	-	-	-0.03	0.039	0.046
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	26865	831.5	open	21.38	22.00	1.153	-	-	0.08	0.431	0.497
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	5mm	Ant 1	DSI3	26865	831.5	open	20.32	21.00	1.169	-	-	-0.03	0.168	0.196
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI3	167300	836.5	open	23.27	24.00	1.183	-	-	0.08	0.305	0.361
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	DSI3	167300	836.5	open	23.21	24.00	1.199	-	-	0.06	0.319	0.383
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI3	167300	836.5	open	23.27	24.00	1.183	-	-	0.18	0.464	0.549
29	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	DSI3	167300	836.5	open	23.21	24.00	1.199	-	-	-0.08	0.581	0.697
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI3	167300	836.5	open	23.27	24.00	1.183	-	-	0.07	0.066	0.078
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 0	DSI3	167300	836.5	open	23.21	24.00	1.199	-	-	-0.07	0.032	0.038
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI3	167300	836.5	open	23.27	24.00	1.183	-	-	-0.09	0.173	0.205
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 0	DSI3	167300	836.5	open	23.21	24.00	1.199	-	-	-0.19	0.213	0.255
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI3	167300	836.5	open	23.27	24.00	1.183	-	-	-0.15	0.467	0.552
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	DSI3	167300	836.5	open	23.21	24.00	1.199	-	-	-0.15	0.481	0.577
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI3	167300	836.5	open	21.89	23.00	1.291	-	-	-0.04	0.262	0.338
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	DSI3	167300	836.5	open	21.81	23.00	1.315	-	-	0.13	0.236	0.310
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI3	167300	836.5	open	21.89	23.00	1.291	-	-	-0.18	0.388	0.501
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	DSI3	167300	836.5	open	21.81	23.00	1.315	-	-	0.06	0.418	0.550
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI3	167300	836.5	open	21.89	23.00	1.291	-	-	0.06	0.118	0.152
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 1	DSI3	167300	836.5	open	21.81	23.00	1.315	-	-	-0.06	0.162	0.213
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI3	167300	836.5	open	21.89	23.00	1.291	-	-	0.04	0.053	0.068
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 1	DSI3	167300	836.5	open	21.81	23.00	1.315	-	-	-0.13	0.026	0.034
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	DSI3	167300	836.5	open	21.89	23.00	1.291	-	-	-0.07	0.289	0.373
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 1	DSI3	167300	836.5	open	21.81	23.00	1.315	-	-	-0.09	0.311	0.409
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI3	1413	1732.6	open	20.58	21.40	1.208	-	-	0.09	0.644	0.778
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI3	1413	1732.6	open	20.58	21.40	1.208	-	-	0.04	0.933	1.127
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI3	1312	1712.4	open	20.32	21.40	1.282	-	-	-0.16	0.931	1.194
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI3	1513	1752.6	open	20.40	21.40	1.259	-	-	-0.18	0.882	1.110
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	DSI3	1413	1732.6	open	20.58	21.40	1.208	-	-	0.16	0.034	0.041



Table with 21 columns: Device Model, Power, Modulation, Channels, Frequency, Bandwidth, Position, Height, Antenna, Frequency Range, Power Spectral Density, Exposure Time, Specific Absorption Rate (SAR) values for different locations (Left Side, Right Side, Top Side, Bottom Side, Front, Back).



FCC SAR Test Report

Report No. : FA2D0913-01

Table with columns for LTE Band 66, GSM1900, and WCDMA II. Includes parameters like Modulation, Power, Frequency, and SAR values. A yellow highlight is present at row 33, column 19 (value 1.077).



FCC SAR Test Report

Report No. : FA2D0913-01

Table with columns for Frequency, Modulation, Power, and SAR values. Includes sections for WCDMA II and LTE Band 25.



FCC SAR Test Report

Report No. : FA2D0913-01

	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI3	21100	2535	open	18.90	20.00	1.288	-	-	0.06	0.304	0.392
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	21100	2535	open	18.94	20.00	1.276	-	-	0.04	0.972	1.241
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	20850	2510	open	18.90	20.00	1.288	-	-	0.02	0.923	1.189
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	21350	2560	open	18.88	20.00	1.294	-	-	0.15	0.944	1.222
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	21100	2535	open	18.90	20.00	1.288	-	-	0.08	0.951	1.225
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	20850	2510	open	18.89	20.00	1.291	-	-	0.18	0.935	1.207
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	21350	2560	open	18.88	20.00	1.294	-	-	-0.01	0.926	1.198
	LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI3	21100	2535	open	18.88	20.00	1.294	-	-	0.05	0.920	1.191
	LTE Band 7C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	DSI3	21100+21298	2535+2554.8	open	18.86	20.00	1.300	-	-	0.03	0.913	1.187
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI3	21100	2535	open	18.90	20.20	1.349	-	-	0.13	0.449	0.606
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI3	21100	2535	open	18.88	20.20	1.355	-	-	0.03	0.435	0.590
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	21100	2535	open	18.90	20.20	1.349	-	-	0.04	0.785	1.059
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	20850	2510	open	18.85	20.20	1.365	-	-	0.19	0.745	1.017
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	21350	2560	open	18.81	20.20	1.377	-	-	0.08	0.773	1.065
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	21100	2535	open	18.88	20.20	1.355	-	-	0.16	0.716	0.970
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	20850	2510	open	18.85	20.20	1.365	-	-	0.07	0.737	1.006
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	21350	2560	open	18.79	20.20	1.384	-	-	0.07	0.729	1.009
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 1	DSI3	21100	2535	open	18.79	20.20	1.384	-	-	0.05	0.724	1.002
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI3	21100	2535	open	18.90	20.20	1.349	-	-	0.05	0.278	0.375
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI3	21100	2535	open	18.88	20.20	1.355	-	-	0.08	0.257	0.348
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI3	21100	2535	open	18.90	20.20	1.349	-	-	0.09	0.029	0.039
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI3	21100	2535	open	18.88	20.20	1.355	-	-	0.01	0.018	0.024
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	21100	2535	open	18.90	20.20	1.349	-	-	0.07	0.876	1.182
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	20850	2510	open	18.85	20.20	1.365	-	-	0.03	0.894	1.220
34	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	21350	2560	open	18.81	20.20	1.377	-	-	-0.06	0.905	1.246
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	21100	2535	open	18.88	20.20	1.355	-	-	0.04	0.881	1.194
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	20850	2510	open	18.85	20.20	1.365	-	-	0.04	0.849	1.159
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	21350	2560	open	18.79	20.20	1.384	-	-	0.07	0.865	1.197
	LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 1	DSI3	21100	2535	open	18.79	20.20	1.384	-	-	0.18	0.849	1.175
	LTE Band 7C	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	21350+21152	2560+2540.2	open	18.73	20.20	1.403	-	-	0.02	0.843	1.183
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSI3	21100	2535	open	16.42	17.70	1.343	-	-	0.02	0.548	0.736
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSI3	21100	2535	open	16.38	17.70	1.355	-	-	0.07	0.527	0.714
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	21100	2535	open	16.42	17.70	1.343	-	-	-0.1	0.726	0.975
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	20850	2510	open	16.39	17.70	1.352	-	-	0.06	0.709	0.959
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	21350	2560	open	16.35	17.70	1.365	-	-	0.03	0.692	0.944
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	21100	2535	open	16.38	17.70	1.355	-	-	0.04	0.681	0.923
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	20850	2510	open	16.30	17.70	1.380	-	-	0.06	0.670	0.925
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	21350	2560	open	16.36	17.70	1.361	-	-	0.01	0.654	0.890
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 2	DSI3	21100	2535	open	16.35	17.70	1.365	-	-	-0.04	0.668	0.912
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI3	21100	2535	open	16.42	17.70	1.343	-	-	0.09	0.085	0.114
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI3	21100	2535	open	16.38	17.70	1.355	-	-	0.18	0.071	0.096
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DSI3	21100	2535	open	16.42	17.70	1.343	-	-	0.03	0.234	0.314
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DSI3	21100	2535	open	16.38	17.70	1.355	-	-	0.19	0.193	0.262
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	21100	2535	open	16.42	17.70	1.343	-	-	0.04	0.640	0.859
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	20850	2510	open	16.39	17.70	1.352	-	-	0.04	0.634	0.857
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	21350	2560	open	16.35	17.70	1.365	-	-	0.01	0.630	0.860
	LTE Band 7	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	21100	2535	open	16.38	17.70	1.355	-	-	0.07	0.615	0.833
	LTE Band 7	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	20850	2510	open	16.30	17.70	1.380	-	-	0.06	0.643	0.888
	LTE Band 7	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	21350	2560	open	16.36	17.70	1.361	-	-	-0.06	0.630	0.858
	LTE Band 7	20M	QPSK	100	0	-	Top Side	5mm	Ant 2	DSI3	21100	2535	open	16.35	17.70	1.365	-	-	0.04	0.618	0.843
	LTE Band 7C	20M	QPSK	1	99	-	Back	5mm	Ant 2	DSI3	21100+21298	2535+2554.8	open	16.34	17.70	1.368	-	-	0.01	0.701	0.959
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI3	21100	2535	open	21.20	22.30	1.288	-	-	0.05	0.530	0.683
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 3	DSI3	21100	2535	open	21.16	22.30	1.300	-	-	0.01	0.509	0.662
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	21100	2535	open	21.20	22.30	1.288	-	-	0.06	0.734	0.946
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	20850	2510	open	21.15	22.30	1.303	-	-	0.04	0.742	0.967
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	21350	2560	open	21.17	22.30	1.297	-	-	0.03	0.761	0.987
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	21100	2535	open	21.16	22.30	1.300	-	-	-0.07	0.753	0.979



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	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	20850	2510	open	20.99	22.30	1.352	-	-	0.07	0.710	0.960
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	21350	2560	open	21.04	22.30	1.337	-	-	0.07	0.716	0.957
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 3	DSI3	21100	2535	open	21.10	22.30	1.318	-	-	-0.08	0.709	0.935
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 3	DSI3	21100	2535	open	21.20	22.30	1.288	-	-	-0.19	0.061	0.079
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 3	DSI3	21100	2535	open	21.16	22.30	1.300	-	-	0.14	0.038	0.049
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 3	DSI3	21100	2535	open	21.20	22.30	1.288	-	-	-0.17	0.364	0.469
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 3	DSI3	21100	2535	open	21.16	22.30	1.300	-	-	-0.17	0.328	0.426
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	21100	2535	open	21.20	22.30	1.288	-	-	0.16	0.653	0.841
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	20850	2510	open	21.15	22.30	1.303	-	-	0.03	0.623	0.812
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	21350	2560	open	21.17	22.30	1.297	-	-	0.01	0.615	0.798
	LTE Band 7	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	21100	2535	open	21.16	22.30	1.300	-	-	0.16	0.633	0.823
	LTE Band 7	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	20850	2510	open	20.99	22.30	1.352	-	-	0.01	0.601	0.813
	LTE Band 7	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	21350	2560	open	21.04	22.30	1.337	-	-	-0.02	0.610	0.815
	LTE Band 7	20M	QPSK	100	0	-	Top Side	5mm	Ant 3	DSI3	21100	2535	open	21.10	22.30	1.318	-	-	0.06	0.611	0.805
	LTE Band 7C	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	21350+21152	2560+2540.2	open	21.08	22.30	1.324	-	-	0.03	0.723	0.957
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI3	40620	2593	open	20.77	22.00	1.327	62.9	1.006	-0.13	0.268	0.358
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI3	40620	2593	open	19.74	21.00	1.337	62.9	1.006	0.11	0.222	0.299
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI3	40620	2593	open	20.77	22.00	1.327	62.9	1.006	-0.09	0.423	0.565
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI3	40620	2593	open	19.74	21.00	1.337	62.9	1.006	0.07	0.350	0.471
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI3	40620	2593	open	20.77	22.00	1.327	62.9	1.006	-0.02	0.052	0.069
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI3	40620	2593	open	19.74	21.00	1.337	62.9	1.006	-0.18	0.048	0.065
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI3	40620	2593	open	20.77	22.00	1.327	62.9	1.006	0.02	0.390	0.521
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI3	40620	2593	open	19.74	21.00	1.337	62.9	1.006	0.09	0.309	0.415
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	40620	2593	open	20.77	22.00	1.327	62.9	1.006	0.04	0.599	0.800
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	39750	2506	open	20.58	22.00	1.387	62.9	1.006	0.03	0.560	0.781
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	40185	2549.5	open	20.65	22.00	1.365	62.9	1.006	0.04	0.575	0.789
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	41055	2636.5	open	20.71	22.00	1.346	62.9	1.006	-0.02	0.583	0.789
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	41490	2680	open	20.63	22.00	1.371	62.9	1.006	0.03	0.549	0.757
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	40620	2593	open	19.74	21.00	1.337	62.9	1.006	0.05	0.468	0.629
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	39750	2506	open	19.62	21.00	1.374	62.9	1.006	0.03	0.460	0.636
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	40185	2549.5	open	19.62	21.00	1.374	62.9	1.006	-0.02	0.452	0.625
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	41055	2636.5	open	19.64	21.00	1.368	62.9	1.006	0.04	0.438	0.603
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	41490	2680	open	19.69	21.00	1.352	62.9	1.006	0.01	0.457	0.622
	LTE Band 41	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI3	40620	2593	open	19.66	21.00	1.361	62.9	1.006	0.09	0.436	0.597
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	40620	2593	open	23.76	25.00	1.330	42.9	1.009	0.05	0.778	1.044
	LTE Band 41C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	DSI3	40620+40818	2593+2612.8	open	20.73	22.00	1.340	62.9	1.006	0.03	0.568	0.766
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	DSI3	40620+40818	2593+2612.8	open	23.69	25.00	1.352	42.9	1.009	0.02	0.752	1.026
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI3	40620	2593	open	22.69	23.60	1.233	62.9	1.006	-0.18	0.456	0.566
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI3	40620	2593	open	21.64	23.00	1.368	62.9	1.006	-0.1	0.394	0.542
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	40620	2593	open	22.69	23.60	1.233	62.9	1.006	0.09	0.878	1.089
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	39750	2506	open	22.54	23.60	1.276	62.9	1.006	0.05	0.844	1.084
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	40185	2549.5	open	22.62	23.60	1.253	62.9	1.006	-0.16	0.893	1.126
35	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	41055	2636.5	open	22.51	23.60	1.285	62.9	1.006	-0.09	0.964	1.246
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	41490	2680	open	22.48	23.60	1.294	62.9	1.006	0.05	0.929	1.210
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	40620	2593	open	21.64	23.00	1.368	62.9	1.006	0.03	0.707	0.973
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	39750	2506	open	21.54	23.00	1.400	62.9	1.006	0.04	0.684	0.963
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	40185	2549.5	open	21.57	23.00	1.390	62.9	1.006	-0.09	0.717	1.003
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	41055	2636.5	open	21.55	23.00	1.396	62.9	1.006	-0.14	0.711	0.999
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	41490	2680	open	21.44	23.00	1.432	62.9	1.006	-0.15	0.739	1.065
	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 1	DSI3	40620	2593	open	21.58	23.00	1.387	62.9	1.006	0.07	0.692	0.965
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI3	40620	2593	open	22.69	23.60	1.233	62.9	1.006	0.02	0.378	0.469
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI3	40620	2593	open	21.64	23.00	1.368	62.9	1.006	0.08	0.208	0.286
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI3	40620	2593	open	22.69	23.60	1.233	62.9	1.006	-0.07	0.030	0.037
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI3	40620	2593	open	21.64	23.00	1.368	62.9	1.006	0.16	0.025	0.034
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	40620	2593	open	22.69	23.60	1.233	62.9	1.006	-0.1	0.857	1.063
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	39750	2506	open	22.54	23.60	1.276	62.9	1.006	0.08	0.836	1.074
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	40185	2549.5	open	22.62	23.60	1.253	62.9	1.006	0.07	0.835	1.053



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LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	41055	2636.5	open	22.51	23.60	1.285	62.9	1.006	0.08	0.823	1.064
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	41490	2680	open	22.48	23.60	1.294	62.9	1.006	-0.14	0.815	1.061
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	40620	2593	open	21.64	23.00	1.368	62.9	1.006	-0.15	0.689	0.948
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	39750	2506	open	21.54	23.00	1.400	62.9	1.006	0.07	0.631	0.888
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	40185	2549.5	open	21.57	23.00	1.390	62.9	1.006	0.05	0.698	0.976
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	41055	2636.5	open	21.55	23.00	1.396	62.9	1.006	-0.12	0.681	0.957
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	41490	2680	open	21.44	23.00	1.432	62.9	1.006	0.08	0.653	0.941
LTE Band 41	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 1	DSI3	40620	2593	open	21.58	23.00	1.387	62.9	1.006	-0.17	0.692	0.965
LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	41055	2636.5	open	23.94	25.20	1.337	42.9	1.009	0.09	0.922	1.243
LTE Band 41C	20M	QPSK	1	99	-	Back	5mm	Ant 1	DSI3	41055+41253	2636.5+2656.3	open	22.49	23.60	1.291	62.9	1.006	0.02	0.915	1.189
LTE Band 41C HPUE	20M	QPSK	1	99	-	Back	5mm	Ant 1	DSI3	41055+41253	2636.5+2656.3	open	23.89	25.20	1.352	42.9	1.009	0.05	0.866	1.181
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSI3	40620	2593	open	19.95	20.90	1.245	62.9	1.006	-0.16	0.419	0.525
LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSI3	40620	2593	open	19.90	20.90	1.259	62.9	1.006	0.06	0.402	0.509
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	40620	2593	open	19.95	20.90	1.245	62.9	1.006	-0.09	0.792	0.992
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	39750	2506	open	19.90	20.90	1.259	62.9	1.006	0.18	0.772	0.978
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	40185	2549.5	open	19.92	20.90	1.253	62.9	1.006	0.03	0.721	0.909
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	41055	2636.5	open	19.87	20.90	1.268	62.9	1.006	0.19	0.746	0.951
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	41490	2680	open	19.85	20.90	1.274	62.9	1.006	0.11	0.738	0.945
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	40620	2593	open	19.90	20.90	1.259	62.9	1.006	-0.11	0.740	0.937
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	39750	2506	open	19.89	20.90	1.262	62.9	1.006	0.02	0.756	0.960
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	40185	2549.5	open	19.82	20.90	1.282	62.9	1.006	0.05	0.736	0.949
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	41055	2636.5	open	19.83	20.90	1.279	62.9	1.006	-0.13	0.739	0.951
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	41490	2680	open	19.84	20.90	1.276	62.9	1.006	0.08	0.722	0.927
LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 2	DSI3	40620	2593	open	19.88	20.90	1.265	62.9	1.006	-0.07	0.747	0.950
LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI3	40620	2593	open	19.95	20.90	1.245	62.9	1.006	0.07	0.137	0.172
LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI3	40620	2593	open	19.90	20.90	1.259	62.9	1.006	-0.06	0.129	0.163
LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DSI3	40620	2593	open	19.95	20.90	1.245	62.9	1.006	0.01	0.015	0.019
LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DSI3	40620	2593	open	19.90	20.90	1.259	62.9	1.006	0.02	0.010	0.013
LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	40620	2593	open	19.95	20.90	1.245	62.9	1.006	0.06	0.643	0.805
LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	39750	2506	open	19.90	20.90	1.259	62.9	1.006	-0.19	0.584	0.740
LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	40185	2549.5	open	19.92	20.90	1.253	62.9	1.006	0.12	0.616	0.777
LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	41055	2636.5	open	19.87	20.90	1.268	62.9	1.006	0.1	0.612	0.780
LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	41490	2680	open	19.85	20.90	1.274	62.9	1.006	0.01	0.618	0.792
LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	40620	2593	open	19.90	20.90	1.259	62.9	1.006	0.04	0.607	0.769
LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	39750	2506	open	19.89	20.90	1.262	62.9	1.006	-0.07	0.584	0.741
LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	40185	2549.5	open	19.82	20.90	1.282	62.9	1.006	0.06	0.601	0.775
LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	41055	2636.5	open	19.83	20.90	1.279	62.9	1.006	0.16	0.599	0.771
LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	41490	2680	open	19.84	20.90	1.276	62.9	1.006	-0.17	0.596	0.765
LTE Band 41	20M	QPSK	100	0	-	Top Side	5mm	Ant 2	DSI3	40620	2593	open	19.88	20.90	1.265	62.9	1.006	-0.1	0.584	0.743
LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	40620	2593	open	21.29	22.50	1.321	42.9	1.009	0.01	0.721	0.961
LTE Band 41	20M	QPSK	1	99	-	Back	5mm	Ant 2	DSI3	40620+40818	2593+2612.8	open	19.84	20.90	1.276	62.9	1.006	0.03	0.751	0.964
LTE Band 41C HPUE	20M	QPSK	1	99	-	Back	5mm	Ant 2	DSI3	40620+40818	2593+2612.8	open	21.20	22.50	1.349	42.9	1.009	0.04	0.703	0.957
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI3	40620	2593	open	23.26	24.00	1.186	62.9	1.006	0.02	0.375	0.447
LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 3	DSI3	40620	2593	open	22.80	23.00	1.047	62.9	1.006	0.05	0.274	0.289
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	40620	2593	open	23.26	24.00	1.186	62.9	1.006	0.05	0.732	0.873
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	39750	2506	open	22.99	24.00	1.262	62.9	1.006	-0.04	0.720	0.914
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	40185	2549.5	open	23.15	24.00	1.216	62.9	1.006	-0.05	0.738	0.903
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	41055	2636.5	open	23.13	24.00	1.222	62.9	1.006	0.13	0.719	0.884
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	41490	2680	open	22.99	24.00	1.262	62.9	1.006	-0.04	0.747	0.948
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	40620	2593	open	22.80	23.00	1.047	62.9	1.006	-0.02	0.545	0.574
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	39750	2506	open	22.66	23.00	1.081	62.9	1.006	-0.18	0.585	0.636
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	40185	2549.5	open	22.72	23.00	1.067	62.9	1.006	0.04	0.527	0.565
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	41055	2636.5	open	22.69	23.00	1.074	62.9	1.006	-0.15	0.573	0.619
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	41490	2680	open	22.55	23.00	1.109	62.9	1.006	-0.03	0.602	0.672
LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 3	DSI3	40620	2593	open	22.75	23.00	1.059	62.9	1.006	-0.15	0.541	0.576
LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 3	DSI3	40620	2593	open	23.26	24.00	1.186	62.9	1.006	-0.05	0.031	0.037
LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 3	DSI3	40620	2593	open	22.80	23.00	1.047	62.9	1.006	0.07	0.027	0.028



FCC SAR Test Report

Report No. : FA2D0913-01

	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 0	DSI3	518598	2592.99	open	19.22	20.40	1.312	-	-	-0.1	0.613	0.804
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 0	DSI3	518598	2592.99	open	19.36	20.40	1.271	-	-	-0.06	0.038	0.048
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 0	DSI3	518598	2592.99	open	19.33	20.40	1.279	-	-	-0.04	0.021	0.027
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 0	DSI3	518598	2592.99	open	19.36	20.40	1.271	-	-	0.07	0.452	0.574
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 0	DSI3	518598	2592.99	open	19.33	20.40	1.279	-	-	-0.15	0.610	0.780
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI3	518598	2592.99	open	19.36	20.40	1.271	-	-	0.18	0.919	1.168
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI3	518598	2592.99	open	19.33	20.40	1.279	-	-	0.01	0.960	1.228
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI3	518598	2592.99	open	19.22	20.40	1.312	-	-	-0.19	0.812	1.066
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI3	518598	2592.99	open	22.36	23.40	1.271	50	1.000	-0.02	0.921	1.170
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	DSI3	518598	2592.99	open	20.44	21.50	1.276	-	-	0.08	0.451	0.576
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 1	DSI3	518598	2592.99	open	20.39	21.50	1.291	-	-	0.07	0.426	0.550
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	518598	2592.99	open	20.44	21.50	1.276	-	-	0.07	0.877	1.119
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	518598	2592.99	open	20.39	21.50	1.291	-	-	0.03	0.852	1.100
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	518598	2592.99	open	20.35	21.50	1.303	-	-	0.04	0.795	1.036
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 1	DSI3	518598	2592.99	open	20.44	21.50	1.276	-	-	0.06	0.210	0.268
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 1	DSI3	518598	2592.99	open	20.39	21.50	1.291	-	-	0.06	0.199	0.257
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 1	DSI3	518598	2592.99	open	20.44	21.50	1.276	-	-	0.02	0.022	0.028
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 1	DSI3	518598	2592.99	open	20.39	21.50	1.291	-	-	0.04	0.022	0.028
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	DSI3	518598	2592.99	open	20.44	21.50	1.276	-	-	-0.02	0.925	1.181
37	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	DSI3	518598	2592.99	open	20.39	21.50	1.291	-	-	0.07	0.965	1.246
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	DSI3	518598	2592.99	open	20.35	21.50	1.303	-	-	0.03	0.867	1.130
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	DSI3	518598	2592.99	open	23.50	24.50	1.259	50	1.000	0.03	0.970	1.221
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI3	518598	2592.99	open	15.80	16.80	1.259	-	-	0.13	0.420	0.529
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI3	518598	2592.99	open	15.73	16.80	1.279	-	-	0.08	0.474	0.606
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI3	518598	2592.99	open	15.80	16.80	1.259	-	-	0.05	0.506	0.637
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI3	518598	2592.99	open	15.73	16.80	1.279	-	-	-0.1	0.489	0.626
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI3	518598	2592.99	open	15.80	16.80	1.259	-	-	-0.16	0.158	0.199
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI3	518598	2592.99	open	15.73	16.80	1.279	-	-	-0.17	0.151	0.193
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI3	518598	2592.99	open	15.80	16.80	1.259	-	-	0.03	0.030	0.038
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI3	518598	2592.99	open	15.73	16.80	1.279	-	-	0.09	0.032	0.041
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI3	518598	2592.99	open	15.80	16.80	1.259	-	-	0.03	0.782	0.984
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI3	518598	2592.99	open	15.73	16.80	1.279	-	-	0.07	0.760	0.972
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI3	518598	2592.99	open	15.69	16.80	1.291	-	-	-0.11	0.750	0.968
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI3	518598	2592.99	open	18.83	19.80	1.250	50	1.000	-0.01	0.791	0.989
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI3	518598	2592.99	open	21.19	22.50	1.352	-	-	0.02	0.689	0.932
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI3	518598	2592.99	open	21.07	22.50	1.390	-	-	-0.08	0.713	0.991
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI3	518598	2592.99	open	21.05	22.50	1.396	-	-	0.03	0.654	0.913
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI3	518598	2592.99	open	21.19	22.50	1.352	-	-	-0.05	0.643	0.869
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI3	518598	2592.99	open	21.07	22.50	1.390	-	-	0.07	0.649	0.902
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI3	518598	2592.99	open	21.05	22.50	1.396	-	-	0.13	0.677	0.945
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 3	DSI3	518598	2592.99	open	21.19	22.50	1.352	-	-	0.05	0.047	0.064
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 3	DSI3	518598	2592.99	open	21.07	22.50	1.390	-	-	0.08	0.049	0.068
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 3	DSI3	518598	2592.99	open	21.19	22.50	1.352	-	-	0.17	0.412	0.557
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 3	DSI3	518598	2592.99	open	21.07	22.50	1.390	-	-	-0.03	0.458	0.637
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 3	DSI3	518598	2592.99	open	21.19	22.50	1.352	-	-	0.05	0.595	0.804
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 3	DSI3	518598	2592.99	open	21.07	22.50	1.390	-	-	-0.18	0.521	0.724
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 3	DSI3	518598	2592.99	open	21.05	22.50	1.396	-	-	0.09	0.590	0.824
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI3	518598	2592.99	open	24.12	25.50	1.374	50	1.000	-0.08	0.698	0.959
3500MHz																					
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI3	42590	3500	open	20.74	22.00	1.337	62.9	1.006	-0.11	0.174	0.234
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI3	42590	3500	open	19.74	21.00	1.337	62.9	1.006	-0.14	0.109	0.147
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI3	42590	3500	open	20.74	22.00	1.337	62.9	1.006	0.08	0.199	0.268
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI3	42590	3500	open	19.74	21.00	1.337	62.9	1.006	-0.18	0.143	0.192
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI3	42590	3500	open	20.74	22.00	1.337	62.9	1.006	-0.15	0.031	0.042
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI3	42590	3500	open	19.74	21.00	1.337	62.9	1.006	0.1	0.054	0.073
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI3	42590	3500	open	20.74	22.00	1.337	62.9	1.006	0.08	0.053	0.071
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI3	42590	3500	open	19.74	21.00	1.337	62.9	1.006	0.04	0.066	0.089
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	42590	3500	open	20.74	22.00	1.337	62.9	1.006	0.05	0.347	0.467



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	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	42590	3500	open	19.74	21.00	1.337	62.9	1.006	-0.13	0.211	0.284
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI3	42590	3500	open	23.71	24.00	1.069	62.9	1.006	-0.17	0.293	0.315
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI3	42590	3500	open	22.65	23.00	1.084	62.9	1.006	0.08	0.168	0.183
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	42590	3500	open	23.71	24.00	1.069	62.9	1.006	0.09	0.481	0.517
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	42590	3500	open	22.65	23.00	1.084	62.9	1.006	-0.16	0.412	0.449
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI3	42590	3500	open	23.71	24.00	1.069	62.9	1.006	0.14	0.146	0.157
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI3	42590	3500	open	22.65	23.00	1.084	62.9	1.006	-0.17	0.092	0.100
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI3	42590	3500	open	23.71	24.00	1.069	62.9	1.006	0.13	0.034	0.037
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI3	42590	3500	open	22.65	23.00	1.084	62.9	1.006	0.11	0.048	0.052
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	42590	3500	open	23.71	24.00	1.069	62.9	1.006	-0.12	0.915	0.984
38	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	42190	3460	open	23.66	24.00	1.081	62.9	1.006	0.08	0.949	1.032
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	42990	3540	open	23.59	24.00	1.099	62.9	1.006	0.13	0.906	1.002
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	42590	3500	open	22.65	23.00	1.084	62.9	1.006	0.07	0.739	0.806
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	42190	3460	open	22.57	23.00	1.104	62.9	1.006	0.03	0.721	0.801
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	42990	3540	open	22.53	23.00	1.114	62.9	1.006	0.04	0.730	0.818
	LTE Band 42 Part27Q	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 1	DSI3	42590	3500	open	22.58	23.00	1.102	62.9	1.006	0.15	0.724	0.802
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSI3	42590	3500	open	16.50	17.80	1.349	62.9	1.006	0.08	0.242	0.328
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSI3	42590	3500	open	16.44	17.80	1.368	62.9	1.006	-0.05	0.160	0.220
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	42590	3500	open	16.50	17.80	1.349	62.9	1.006	-0.05	0.309	0.419
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	42590	3500	open	16.44	17.80	1.368	62.9	1.006	0.01	0.235	0.323
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI3	42590	3500	open	16.50	17.80	1.349	62.9	1.006	0.02	0.043	0.058
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI3	42590	3500	open	16.44	17.80	1.368	62.9	1.006	0.02	0.025	0.034
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DSI3	42590	3500	open	16.50	17.80	1.349	62.9	1.006	0.08	0.023	0.031
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DSI3	42590	3500	open	16.44	17.80	1.368	62.9	1.006	-0.05	0.024	0.033
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	42590	3500	open	16.50	17.80	1.349	62.9	1.006	0.04	0.690	0.936
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	42190	3460	open	16.42	17.80	1.374	62.9	1.006	-0.08	0.677	0.936
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	42990	3540	open	16.48	17.80	1.355	62.9	1.006	0.03	0.720	0.982
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	42590	3500	open	16.44	17.80	1.368	62.9	1.006	0.14	0.638	0.878
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	42190	3460	open	16.33	17.80	1.403	62.9	1.006	-0.1	0.681	0.961
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	42990	3540	open	16.39	17.80	1.384	62.9	1.006	0.04	0.637	0.887
	LTE Band 42 Part27Q	20M	QPSK	100	0	-	Top Side	5mm	Ant 2	DSI3	42590	3500	open	16.40	17.80	1.380	62.9	1.006	0.03	0.650	0.903
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI3	42590	3500	open	16.41	17.40	1.256	62.9	1.006	-0.04	0.261	0.330
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Front	5mm	Ant 3	DSI3	42590	3500	open	16.37	17.40	1.268	62.9	1.006	0.08	0.235	0.300
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	42590	3500	open	16.41	17.40	1.256	62.9	1.006	0.02	0.458	0.579
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	42590	3500	open	16.37	17.40	1.268	62.9	1.006	0.05	0.439	0.560
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 3	DSI3	42590	3500	open	16.41	17.40	1.256	62.9	1.006	0.12	0.009	0.011
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Left Side	5mm	Ant 3	DSI3	42590	3500	open	16.37	17.40	1.268	62.9	1.006	0.05	0.007	0.009
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 3	DSI3	42590	3500	open	16.41	17.40	1.256	62.9	1.006	-0.05	0.062	0.078
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 3	DSI3	42590	3500	open	16.37	17.40	1.268	62.9	1.006	0.05	0.032	0.041
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	42590	3500	open	16.41	17.40	1.256	62.9	1.006	0.09	0.787	0.994
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	42190	3460	open	16.38	17.40	1.265	62.9	1.006	-0.15	0.771	0.981
	LTE Band 42 Part27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	42990	3540	open	16.36	17.40	1.271	62.9	1.006	-0.16	0.767	0.980
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	42590	3500	open	16.37	17.40	1.268	62.9	1.006	-0.12	0.753	0.960
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	42190	3460	open	16.29	17.40	1.291	62.9	1.006	0.17	0.749	0.973
	LTE Band 42 Part27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	42990	3540	open	16.34	17.40	1.276	62.9	1.006	0.02	0.738	0.948
	LTE Band 42 Part27Q	20M	QPSK	100	0	-	Top Side	5mm	Ant 3	DSI3	42590	3500	open	16.34	17.40	1.276	62.9	1.006	0.09	0.725	0.931
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI3	55830	3609	open	20.84	22.00	1.306	62.9	1.006	0.09	0.040	0.053
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI3	55830	3609	open	20.64	21.00	1.086	62.9	1.006	0.08	0.031	0.034
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI3	55830	3609	open	20.84	22.00	1.306	62.9	1.006	0.13	0.145	0.191
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI3	55830	3609	open	20.64	21.00	1.086	62.9	1.006	0.06	0.115	0.126
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI3	55830	3609	open	20.84	22.00	1.306	62.9	1.006	0.03	0.045	0.059
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI3	55830	3609	open	20.64	21.00	1.086	62.9	1.006	0.01	0.031	0.034
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI3	55830	3609	open	20.84	22.00	1.306	62.9	1.006	0.02	0.049	0.064
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI3	55830	3609	open	20.64	21.00	1.086	62.9	1.006	0.16	0.040	0.044
	LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI3	55830	3609	open	20.84	22.00	1.306	62.9	1.006	0.02	0.155	0.204
	LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI3	55830	3609	open	20.64	21.00	1.086	62.9	1.006	-0.16	0.130	0.142
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI3	55830	3609	open	23.88	24.00	1.028	62.9	1.006	-0.04	0.258	0.267



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LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI3	55830	3609	open	23.74	24.00	1.062	62.9	1.006	-0.14	0.188	0.201
LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	55830	3609	open	23.88	24.00	1.028	62.9	1.006	0.06	0.372	0.385
LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	55830	3609	open	23.74	24.00	1.062	62.9	1.006	0.08	0.340	0.363
LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI3	55830	3609	open	23.88	24.00	1.028	62.9	1.006	0.08	0.134	0.139
LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI3	55830	3609	open	23.74	24.00	1.062	62.9	1.006	0.07	0.083	0.089
LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI3	55830	3609	open	23.88	24.00	1.028	62.9	1.006	0.06	0.025	0.026
LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI3	55830	3609	open	23.74	24.00	1.062	62.9	1.006	0.09	0.018	0.019
LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	55830	3609	open	23.88	24.00	1.028	62.9	1.006	0.17	0.741	0.766
LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	55340	3560	open	23.72	24.00	1.067	62.9	1.006	0.02	0.734	0.788
LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	56150	3641	open	23.79	24.00	1.050	62.9	1.006	0.04	0.734	0.775
LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI3	56640	3690	open	23.66	24.00	1.081	62.9	1.006	0.03	0.800	0.870
LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	55830	3609	open	23.74	24.00	1.062	62.9	1.006	0.08	0.630	0.673
LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	55340	3560	open	23.64	24.00	1.086	62.9	1.006	0.16	0.616	0.673
LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	56150	3641	open	23.57	24.00	1.104	62.9	1.006	0.05	0.656	0.729
LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI3	56640	3690	open	23.53	24.00	1.114	62.9	1.006	-0.05	0.645	0.723
LTE Band 48	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 1	DSI3	55830	3609	open	23.68	24.00	1.076	62.9	1.006	-0.04	0.654	0.708
LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSI3	55830	3609	open	16.60	18.00	1.380	62.9	1.006	0.1	0.234	0.325
LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSI3	55830	3609	open	16.53	18.00	1.403	62.9	1.006	-0.17	0.198	0.279
LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	55830	3609	open	16.60	18.00	1.380	62.9	1.006	0.19	0.303	0.421
LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	55830	3609	open	16.53	18.00	1.403	62.9	1.006	0.07	0.303	0.428
LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI3	55830	3609	open	16.60	18.00	1.380	62.9	1.006	0.05	0.033	0.046
LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI3	55830	3609	open	16.53	18.00	1.403	62.9	1.006	-0.18	0.029	0.041
LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DSI3	55830	3609	open	16.60	18.00	1.380	62.9	1.006	0.08	0.026	0.036
LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DSI3	55830	3609	open	16.53	18.00	1.403	62.9	1.006	0.06	0.022	0.031
LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	55830	3609	open	16.60	18.00	1.380	62.9	1.006	-0.12	0.643	0.893
LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	55340	3560	open	16.52	18.00	1.406	62.9	1.006	0.07	0.637	0.901
LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	56150	3641	open	16.49	18.00	1.416	62.9	1.006	0.15	0.672	0.957
LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 2	DSI3	56640	3690	open	16.55	18.00	1.396	62.9	1.006	0.08	0.701	0.985
LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	55830	3609	open	16.53	18.00	1.403	62.9	1.006	-0.06	0.650	0.917
LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	55340	3560	open	16.45	18.00	1.429	62.9	1.006	0.07	0.638	0.917
LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	56150	3641	open	16.38	18.00	1.452	62.9	1.006	0.03	0.614	0.897
LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 2	DSI3	56640	3690	open	16.52	18.00	1.406	62.9	1.006	-0.15	0.643	0.910
LTE Band 48	20M	QPSK	100	0	-	Top Side	5mm	Ant 2	DSI3	55830	3609	open	16.49	18.00	1.416	62.9	1.006	0.04	0.638	0.909
LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI3	55830	3609	open	16.62	17.40	1.197	62.9	1.006	0.02	0.233	0.281
LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 3	DSI3	55830	3609	open	16.56	17.40	1.213	62.9	1.006	-0.14	0.203	0.248
LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI3	55830	3609	open	16.62	17.40	1.197	62.9	1.006	0.16	0.332	0.400
LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI3	55830	3609	open	16.56	17.40	1.213	62.9	1.006	0.05	0.278	0.339
LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 3	DSI3	55830	3609	open	16.62	17.40	1.197	62.9	1.006	0.1	0.005	0.006
LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 3	DSI3	55830	3609	open	16.56	17.40	1.213	62.9	1.006	0.03	0.004	0.005
LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 3	DSI3	55830	3609	open	16.62	17.40	1.197	62.9	1.006	-0.05	0.065	0.078
LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 3	DSI3	55830	3609	open	16.56	17.40	1.213	62.9	1.006	0.08	0.051	0.062
LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	55830	3609	open	16.62	17.40	1.197	62.9	1.006	0.08	0.710	0.855
LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	55340	3560	open	16.50	17.40	1.230	62.9	1.006	-0.05	0.690	0.854
LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	56150	3641	open	16.43	17.40	1.250	62.9	1.006	-0.16	0.674	0.848
LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 3	DSI3	56640	3690	open	16.61	17.40	1.199	62.9	1.006	-0.03	0.718	0.866
LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	55830	3609	open	16.56	17.40	1.213	62.9	1.006	0.03	0.678	0.828
LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	55340	3560	open	16.52	17.40	1.225	62.9	1.006	-0.02	0.665	0.819
LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	56150	3641	open	16.44	17.40	1.247	62.9	1.006	0.04	0.650	0.816
LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 3	DSI3	56640	3690	open	16.54	17.40	1.219	62.9	1.006	0.07	0.600	0.736
LTE Band 48	20M	QPSK	100	0	-	Top Side	5mm	Ant 3	DSI3	55830	3609	open	16.53	17.40	1.222	62.9	1.006	0.04	0.596	0.733
FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	DSI3	656000	3840	open	20.43	21.00	1.140	-	-	0.03	0.205	0.234
FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 0	DSI3	656000	3840	open	20.38	21.00	1.153	-	-	-0.05	0.189	0.218
FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	DSI3	656000	3840	open	20.43	21.00	1.140	-	-	0.04	0.251	0.286
FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	DSI3	656000	3840	open	20.38	21.00	1.153	-	-	0.02	0.221	0.255
FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 0	DSI3	656000	3840	open	20.43	21.00	1.140	-	-	0.03	0.043	0.049
FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 0	DSI3	656000	3840	open	20.38	21.00	1.153	-	-	0.02	0.046	0.053
FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 0	DSI3	656000	3840	open	20.43	21.00	1.140	-	-	0.01	0.057	0.065



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	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 0	DSI3	656000	3840	open	20.38	21.00	1.153	-	-	-0.16	0.060	0.069
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI3	656000	3840	open	20.43	21.00	1.140	-	-	0.01	0.287	0.327
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI3	656000	3840	open	20.38	21.00	1.153	-	-	0.14	0.248	0.286
	FR1 n77_Part270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	DSI3	656000	3840	open	23.42	24.00	1.143	50	1.000	0.02	0.301	0.344
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	DSI3	656000	3840	open	22.79	24.00	1.321	-	-	0.12	0.233	0.308
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 1	DSI3	656000	3840	open	22.72	24.00	1.343	-	-	0.08	0.174	0.234
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	656000	3840	open	22.79	24.00	1.321	-	-	-0.04	0.302	0.399
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	656000	3840	open	22.72	24.00	1.343	-	-	0.01	0.261	0.350
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 1	DSI3	656000	3840	open	22.79	24.00	1.321	-	-	0.17	0.094	0.124
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 1	DSI3	656000	3840	open	22.72	24.00	1.343	-	-	0.16	0.162	0.218
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 1	DSI3	656000	3840	open	22.79	24.00	1.321	-	-	-0.19	0.031	0.041
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 1	DSI3	656000	3840	open	22.72	24.00	1.343	-	-	0.07	0.035	0.047
39	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	DSI3	656000	3840	open	22.79	24.00	1.321	-	-	0.03	0.910	1.202
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	DSI3	656000	3840	open	22.72	24.00	1.343	-	-	0.14	0.880	1.182
	FR1 n77_Part270	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	DSI3	656000	3840	open	21.63	23.00	1.371	-	-	-0.17	0.791	1.084
	FR1 n77_Part270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 1	DSI3	656000	3840	open	25.80	27.00	1.318	50	1.000	0.07	0.901	1.188
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI3	656000	3840	open	15.66	17.10	1.393	-	-	-0.02	0.314	0.437
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	DSI3	656000	3840	open	15.52	17.10	1.439	-	-	0.17	0.249	0.358
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI3	656000	3840	open	15.66	17.10	1.393	-	-	0.08	0.389	0.542
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI3	656000	3840	open	15.52	17.10	1.439	-	-	0.14	0.281	0.404
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI3	656000	3840	open	15.66	17.10	1.393	-	-	0.06	0.052	0.072
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI3	656000	3840	open	15.52	17.10	1.439	-	-	-0.06	0.050	0.072
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI3	656000	3840	open	15.66	17.10	1.393	-	-	0.04	0.022	0.031
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	DSI3	656000	3840	open	15.52	17.10	1.439	-	-	-0.05	0.022	0.032
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI3	656000	3840	open	15.66	17.10	1.393	-	-	-0.08	0.712	0.992
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI3	656000	3840	open	15.52	17.10	1.439	-	-	-0.13	0.673	0.968
	FR1 n77_Part270	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI3	656000	3840	open	15.40	17.10	1.479	-	-	0.17	0.653	0.966
	FR1 n77_Part270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 2	DSI3	656000	3840	open	18.67	20.10	1.390	50	1.000	-0.01	0.679	0.944
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI3	656000	3840	open	14.52	15.50	1.253	-	-	-0.17	0.253	0.317
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 3	DSI3	656000	3840	open	14.46	15.50	1.271	-	-	0.03	0.221	0.281
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI3	656000	3840	open	14.52	15.50	1.253	-	-	-0.16	0.318	0.398
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 3	DSI3	656000	3840	open	14.46	15.50	1.271	-	-	-0.15	0.272	0.346
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 3	DSI3	656000	3840	open	14.52	15.50	1.253	-	-	0.1	0.008	0.010
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 3	DSI3	656000	3840	open	14.46	15.50	1.271	-	-	0.03	0.006	0.008
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 3	DSI3	656000	3840	open	14.52	15.50	1.253	-	-	0.07	0.081	0.102
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 3	DSI3	656000	3840	open	14.46	15.50	1.271	-	-	-0.08	0.085	0.108
	FR1 n77_Part270	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 3	DSI3	656000	3840	open	14.52	15.50	1.253	-	-	-0.14	0.770	0.965
	FR1 n77_Part270	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 3	DSI3	656000	3840	open	14.46	15.50	1.271	-	-	-0.05	0.701	0.891
	FR1 n77_Part270	100M	QPSK	270	0	DFT-SCS-30KHz	Top Side	5mm	Ant 3	DSI3	656000	3840	open	14.35	15.50	1.303	-	-	-0.09	0.708	0.923
	FR1 n77_Part270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 3	DSI3	656000	3840	open	17.60	18.50	1.230	50	1.000	0.09	0.791	0.973

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
WLAN/BT																	
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	open	10.41	12.00	1.442	100	1.000	0.05	0.089	0.128
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	open	10.41	12.00	1.442	100	1.000	-0.13	0.073	0.105
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	open	10.41	12.00	1.442	100	1.000	0.07	0.163	0.235
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	open	10.41	12.00	1.442	100	1.000	-0.05	0.151	0.218
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 4+5(4)	WWAN+ non DBS	11	2462	open	10.41	12.00	1.442	100	1.000	0.09	0.024	0.035
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 4+5(4)	WWAN+DBS	11	2462	open	7.43	9.00	1.435	100	1.000	0.04	0.023	0.033
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 4+5(4)	WWAN+DBS	11	2462	open	7.43	9.00	1.435	100	1.000	0.09	0.016	0.023
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 4+5(4)	WWAN+DBS	11	2462	open	7.43	9.00	1.435	100	1.000	0.08	0.099	0.142
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 4+5(4)	WWAN+DBS	11	2462	open	7.43	9.00	1.435	100	1.000	0.01	0.085	0.122
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 4+5(4)	WWAN+DBS	11	2462	open	7.43	9.00	1.435	100	1.000	0.03	0.010	0.014
	Bluetooth	1Mbps	Front	5mm	Ant 4	Full power	39	2441	open	11.57	12.00	1.104	77.03	1.081	0.08	0.069	0.082
	Bluetooth	1Mbps	Back	5mm	Ant 4	Full power	39	2441	open	11.57	12.00	1.104	77.03	1.081	-0.05	0.064	0.076
40	Bluetooth	1Mbps	Left Side	5mm	Ant 4	Full power	39	2441	open	11.57	12.00	1.104	77.03	1.081	0.03	0.145	0.173



	Bluetooth	1Mbps	Right Side	5mm	Ant 4	Full power	39	2441	open	11.57	12.00	1.104	77.03	1.081	0.07	0.060	0.072
	Bluetooth	1Mbps	Top Side	5mm	Ant 4	Full power	39	2441	open	11.57	12.00	1.104	77.03	1.081	-0.1	0.015	0.018
	Bluetooth	1Mbps	Front	5mm	Ant 5	Full power	39	2441	open	8.53	9.00	1.114	76.86	1.084	0.14	0.047	0.057
	Bluetooth	1Mbps	Back	5mm	Ant 5	Full power	39	2441	open	8.53	9.00	1.114	76.86	1.084	-0.12	0.025	0.030
	Bluetooth	1Mbps	Left Side	5mm	Ant 5	Full power	39	2441	open	8.53	9.00	1.114	76.86	1.084	0.01	0.030	0.036
	Bluetooth	1Mbps	Right Side	5mm	Ant 5	Full power	39	2441	open	8.53	9.00	1.114	76.86	1.084	-0.14	0.092	0.111
	Bluetooth	1Mbps	Top Side	5mm	Ant 5	Full power	39	2441	open	8.53	9.00	1.114	76.86	1.084	-0.12	0.007	0.008
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5(4)	WWAN+ non DBS	42	5210	open	12.35	14.00	1.462	100	1.000	0.04	0.054	0.079
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5(4)	WWAN+ non DBS	42	5210	open	12.35	14.00	1.462	100	1.000	0.07	0.064	0.094
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5(4)	WWAN+ non DBS	42	5210	open	12.35	14.00	1.462	100	1.000	0.08	0.167	0.244
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5(4)	WWAN+ non DBS	42	5210	open	12.35	14.00	1.462	100	1.000	0.03	0.106	0.155
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5(4)	WWAN+ non DBS	42	5210	open	12.35	14.00	1.462	100	1.000	0.12	0.064	0.094
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5(4)	WWAN+DBS	42	5210	open	9.37	11.00	1.455	100	1.000	-0.03	0.027	0.039
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5(4)	WWAN+DBS	42	5210	open	9.37	11.00	1.455	100	1.000	0.01	0.031	0.045
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5(4)	WWAN+DBS	42	5210	open	9.37	11.00	1.455	100	1.000	-0.14	0.082	0.119
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5(4)	WWAN+DBS	42	5210	open	9.37	11.00	1.455	100	1.000	0.05	0.052	0.076
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5(4)	WWAN+DBS	42	5210	open	9.37	11.00	1.455	100	1.000	0.09	0.031	0.045
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5(5)	WWAN+ non DBS	155	5775	open	15.23	17.00	1.503	100	1.000	0.03	0.173	0.260
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5(5)	WWAN+ non DBS	155	5775	open	15.23	17.00	1.503	100	1.000	0.01	0.110	0.165
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5(5)	WWAN+ non DBS	155	5775	open	15.23	17.00	1.503	100	1.000	0.1	0.197	0.296
41	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5(5)	WWAN+ non DBS	155	5775	open	15.23	17.00	1.503	100	1.000	0.07	0.253	0.380
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5(5)	WWAN+ non DBS	155	5775	open	15.23	17.00	1.503	100	1.000	-0.14	0.066	0.099
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5(5)	WWAN+DBS	155	5775	open	12.25	14.00	1.496	100	1.000	0.06	0.079	0.118
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5(5)	WWAN+DBS	155	5775	open	12.25	14.00	1.496	100	1.000	0.04	0.050	0.075
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5(5)	WWAN+DBS	155	5775	open	12.25	14.00	1.496	100	1.000	0.09	0.090	0.135
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5(5)	WWAN+DBS	155	5775	open	12.25	14.00	1.496	100	1.000	-0.08	0.116	0.174
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5(5)	WWAN+DBS	155	5775	open	12.25	14.00	1.496	100	1.000	0.01	0.030	0.045



Close

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Mode, Test Position, Gap (mm), Antenna, Power State, Ch., Freq. (MHz), EUT Flip State, 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). Rows are grouped by frequency bands: 750MHz, 835MHz, and WCDMA V.



FCC SAR Test Report

Report No. : FA2D0913-01

Table with multiple columns containing test results for WCDMA IV and FR1 n66 across various antenna configurations and parameters.



FCC SAR Test Report

Report No. : FA2D0913-01

FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 3	DS15	349000	1745	close	19.96	20.90	1.242	-	-	0.13	0.244	0.303
FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 3	DS15	349000	1745	close	20.04	20.90	1.219	-	-	0.07	0.098	0.119
FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 3	DS15	349000	1745	close	19.96	20.90	1.242	-	-	-0.09	0.114	0.142
FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 3	DS15	349000	1745	close	20.04	20.90	1.219	-	-	0.06	0.524	0.639
FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 3	DS15	349000	1745	close	19.96	20.90	1.242	-	-	0.08	0.453	0.562
FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 3	DS15	349000	1745	close	20.04	20.90	1.219	-	-	-0.08	0.802	0.978
FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 3	DS15	349000	1745	close	19.96	20.90	1.242	-	-	-0.03	0.711	0.883
FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 3	DS15	349000	1745	close	19.89	20.90	1.262	-	-	0.01	0.609	0.768
LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 0	DS15	132322	1745	close	18.93	20.10	1.309	-	-	-0.16	0.041	0.054
LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 0	DS15	132322	1745	close	18.90	20.00	1.288	-	-	0.04	0.027	0.035
LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	DS15	132322	1745	close	18.93	20.10	1.309	-	-	-0.05	0.623	0.816
LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	DS15	132072	1720	close	18.91	20.10	1.315	-	-	0.05	0.606	0.797
LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	DS15	132572	1770	close	18.87	20.10	1.327	-	-	0.19	0.599	0.795
LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	DS15	132322	1745	close	18.90	20.00	1.288	-	-	0.07	0.588	0.757
LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 0	DS15	132322	1745	close	18.88	20.00	1.294	-	-	0.06	0.599	0.775
LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DS15	132322	1745	close	18.93	20.10	1.309	-	-	-0.03	0.001	0.001
LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DS15	132322	1745	close	18.90	20.00	1.288	-	-	-0.04	0.001	0.001
LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DS15	132322	1745	close	18.93	20.10	1.309	-	-	0.12	0.145	0.190
LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DS15	132322	1745	close	18.90	20.00	1.288	-	-	-0.07	0.086	0.111
LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DS15	132322	1745	close	18.93	20.10	1.309	-	-	-0.01	0.752	0.985
LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DS15	132072	1720	close	18.91	20.10	1.315	-	-	-0.03	0.669	0.880
LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DS15	132572	1770	close	18.87	20.10	1.327	-	-	0.19	0.689	0.915
LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DS15	132322	1745	close	18.90	20.00	1.288	-	-	0.15	0.677	0.872
LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DS15	132072	1720	close	18.76	20.00	1.330	-	-	0.03	0.659	0.877
LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DS15	132572	1770	close	18.78	20.00	1.324	-	-	-0.13	0.688	0.911
LTE Band 66	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DS15	132322	1745	close	18.88	20.00	1.294	-	-	-0.1	0.668	0.865
LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	DS15	132322	1745	close	21.09	22.50	1.384	-	-	0.06	0.139	0.192
LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 1	DS15	132322	1745	close	20.85	22.00	1.303	-	-	0.05	0.081	0.106
LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	DS15	132322	1745	close	21.09	22.50	1.384	-	-	-0.14	0.659	0.912
LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	DS15	132072	1720	close	21.06	22.50	1.393	-	-	0.01	0.681	0.949
LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	DS15	132572	1770	close	21.06	22.50	1.393	-	-	0.05	0.659	0.918
LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 1	DS15	132322	1745	close	20.85	22.00	1.303	-	-	-0.06	0.611	0.796
LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 1	DS15	132322	1745	close	20.77	22.00	1.327	-	-	0.09	0.601	0.798
LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DS15	132322	1745	close	21.09	22.50	1.384	-	-	0.09	0.313	0.433
LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DS15	132322	1745	close	20.85	22.00	1.303	-	-	0.09	0.179	0.233
LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DS15	132322	1745	close	21.09	22.50	1.384	-	-	0.03	0.061	0.084
LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DS15	132322	1745	close	20.85	22.00	1.303	-	-	-0.07	0.036	0.047
LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DS15	132322	1745	close	21.09	22.50	1.384	-	-	-0.11	0.710	0.982
LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DS15	132072	1720	close	21.06	22.50	1.393	-	-	0.07	0.604	0.841
LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DS15	132572	1770	close	21.06	22.50	1.393	-	-	-0.05	0.653	0.910
LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DS15	132322	1745	close	20.85	22.00	1.303	-	-	-0.07	0.566	0.738
LTE Band 66	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 1	DS15	132322	1745	close	20.77	22.00	1.327	-	-	-0.06	0.513	0.681
LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 2	DS15	132322	1745	close	21.57	22.00	1.104	-	-	0.16	0.322	0.356
LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 2	DS15	132322	1745	close	20.72	21.00	1.067	-	-	0.04	0.211	0.225
LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 2	DS15	132322	1745	close	21.57	22.00	1.104	-	-	0.06	0.109	0.120
LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 2	DS15	132322	1745	close	20.72	21.00	1.067	-	-	-0.12	0.064	0.068
LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DS15	132322	1745	close	21.57	22.00	1.104	-	-	-0.17	0.094	0.104
LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DS15	132322	1745	close	20.72	21.00	1.067	-	-	0.14	0.067	0.071
LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DS15	132322	1745	close	21.57	22.00	1.104	-	-	0.02	0.235	0.259
LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DS15	132322	1745	close	20.72	21.00	1.067	-	-	-0.11	0.148	0.158
LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DS15	132322	1745	close	21.57	22.00	1.104	-	-	0.1	0.566	0.625
LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DS15	132322	1745	close	20.72	21.00	1.067	-	-	-0.11	0.449	0.479
LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 3	DS15	132322	1745	close	19.95	20.80	1.216	-	-	0.06	0.406	0.494
LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 3	DS15	132322	1745	close	19.88	20.80	1.236	-	-	-0.04	0.258	0.319
LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 3	DS15	132322	1745	close	19.95	20.80	1.216	-	-	0.09	0.132	0.161
LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 3	DS15	132322	1745	close	19.88	20.80	1.236	-	-	0.07	0.082	0.101
LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 3	DS15	132322	1745	close	19.95	20.80	1.216	-	-	-0.07	0.099	0.120



FCC SAR Test Report

Report No. : FA2D0913-01

Table with columns for LTE Band 66, GSM1900, WCDMA II, and LTE Band 25. Includes parameters like 20M, QPSK, 50, 0, - and various antenna configurations (Left Side, Right Side, Bottom Side, Front, Back). A yellow highlight is present on row 43, column 20, with value 0.994.



FCC SAR Test Report

Report No. : FA2D0913-01

	LTE Band 25	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI5	26340	1880	close	21.52	22.00	1.117	-	-	-0.13	0.214	0.239
	LTE Band 25	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI5	26340	1880	close	21.15	21.50	1.084	-	-	0.01	0.126	0.137
	LTE Band 25	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DSI5	26340	1880	close	21.52	22.00	1.117	-	-	0.07	0.261	0.292
	LTE Band 25	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DSI5	26340	1880	close	21.15	21.50	1.084	-	-	-0.19	0.150	0.163
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	26340	1880	close	21.52	22.00	1.117	-	-	0.17	0.721	0.805
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	26140	1860	close	21.43	22.00	1.140	-	-	0.09	0.600	0.684
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	26590	1905	close	21.47	22.00	1.130	-	-	-0.17	0.663	0.749
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSI5	26340	1880	close	21.15	21.50	1.084	-	-	0.11	0.699	0.758
	LTE Band 25	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 2	DSI5	26340	1880	close	21.13	21.50	1.089	-	-	-0.17	0.681	0.742
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI5	26340	1880	close	20.76	22.20	1.393	-	-	-0.15	0.594	0.828
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI5	26140	1860	close	20.60	22.20	1.445	-	-	0.03	0.564	0.815
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI5	26590	1905	close	20.72	22.20	1.406	-	-	-0.16	0.575	0.808
	LTE Band 25	20M	QPSK	50	0	-	Front	5mm	Ant 3	DSI5	26340	1880	close	20.70	22.20	1.413	-	-	0.06	0.551	0.778
	LTE Band 25	20M	QPSK	100	0	-	Front	5mm	Ant 3	DSI5	26340	1880	close	20.59	22.20	1.449	-	-	-0.15	0.541	0.784
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSI5	26340	1880	close	20.76	22.20	1.393	-	-	0.13	0.090	0.125
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSI5	26340	1880	close	20.70	22.20	1.413	-	-	-0.11	0.050	0.071
	LTE Band 25	20M	QPSK	1	0	-	Left Side	5mm	Ant 3	DSI5	26340	1880	close	20.76	22.20	1.393	-	-	-0.04	0.200	0.279
	LTE Band 25	20M	QPSK	50	0	-	Left Side	5mm	Ant 3	DSI5	26340	1880	close	20.70	22.20	1.413	-	-	0.05	0.123	0.174
	LTE Band 25	20M	QPSK	1	0	-	Right Side	5mm	Ant 3	DSI5	26340	1880	close	20.76	22.20	1.393	-	-	0.04	0.186	0.259
	LTE Band 25	20M	QPSK	50	0	-	Right Side	5mm	Ant 3	DSI5	26340	1880	close	20.70	22.20	1.413	-	-	0.08	0.110	0.155
44	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 3	DSI5	26340	1880	close	20.76	22.20	1.393	-	-	-0.01	0.713	0.993
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 3	DSI5	26140	1860	close	20.60	22.20	1.445	-	-	-0.16	0.663	0.958
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 3	DSI5	26590	1905	close	20.72	22.20	1.406	-	-	0.04	0.677	0.952
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 3	DSI5	26340	1880	close	20.70	22.20	1.413	-	-	0.04	0.659	0.931
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 3	DSI5	26140	1860	close	20.52	22.20	1.472	-	-	0.07	0.644	0.948
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 3	DSI5	26590	1905	close	20.69	22.20	1.416	-	-	0.16	0.651	0.922
	LTE Band 25	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 3	DSI5	26340	1880	close	20.59	22.20	1.449	-	-	0.14	0.623	0.903
2600MHz																					
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSI5	21100	2535	close	19.55	20.70	1.303	-	-	-0.03	0.045	0.059
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSI5	21100	2535	close	19.39	20.70	1.352	-	-	-0.01	0.032	0.043
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI5	21100	2535	close	19.55	20.70	1.303	-	-	-0.16	0.616	0.803
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI5	20850	2510	close	19.47	20.70	1.327	-	-	0.19	0.607	0.806
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI5	21350	2560	close	19.45	20.70	1.334	-	-	-0.13	0.603	0.804
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI5	21100	2535	close	19.39	20.70	1.352	-	-	0.03	0.611	0.826
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI5	20850	2510	close	19.37	20.70	1.358	-	-	0.04	0.603	0.819
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSI5	21350	2560	close	19.30	20.70	1.380	-	-	-0.08	0.607	0.838
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 0	DSI5	21100	2535	close	19.34	20.70	1.368	-	-	0.02	0.599	0.819
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSI5	21100	2535	close	19.55	20.70	1.303	-	-	0.18	0.022	0.029
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSI5	21100	2535	close	19.39	20.70	1.352	-	-	0.08	0.017	0.023
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSI5	21100	2535	close	19.55	20.70	1.303	-	-	0.19	0.390	0.508
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSI5	21100	2535	close	19.39	20.70	1.352	-	-	-0.03	0.262	0.354
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI5	21100	2535	close	19.55	20.70	1.303	-	-	-0.01	0.758	0.988
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI5	20850	2510	close	19.47	20.70	1.327	-	-	-0.12	0.680	0.903
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI5	21350	2560	close	19.45	20.70	1.334	-	-	0.08	0.698	0.931
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI5	21100	2535	close	19.39	20.70	1.352	-	-	-0.07	0.677	0.915
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI5	20850	2510	close	19.37	20.70	1.358	-	-	0.03	0.639	0.868
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI5	21350	2560	close	19.30	20.70	1.380	-	-	0.06	0.701	0.968
	LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI5	21100	2535	close	19.34	20.70	1.368	-	-	0.02	0.688	0.941
	LTE Band 7C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	DSI5	21100+ 21298	2535+ 2554.8	close	19.43	20.70	1.340	-	-	0.09	0.711	0.953
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI5	21100	2535	close	20.04	21.50	1.400	-	-	-0.01	0.149	0.209
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI5	21100	2535	close	19.97	21.50	1.422	-	-	0.08	0.086	0.122
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	21100	2535	close	20.04	21.50	1.400	-	-	0.13	0.553	0.774
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI5	21100	2535	close	19.97	21.50	1.422	-	-	-0.15	0.469	0.667
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI5	21100	2535	close	20.04	21.50	1.400	-	-	0.16	0.194	0.272
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI5	21100	2535	close	19.97	21.50	1.422	-	-	0.03	0.127	0.181
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI5	21100	2535	close	20.04	21.50	1.400	-	-	0.04	0.023	0.032
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI5	21100	2535	close	19.97	21.50	1.422	-	-	0.03	0.016	0.023



LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSi5	21100	2535	close	20.04	21.50	1.400	-	-	0.12	0.656	0.918
LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSi5	20850	2510	close	19.86	21.50	1.459	-	-	0.05	0.596	0.869
LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSi5	21350	2560	close	19.99	21.50	1.416	-	-	-0.09	0.701	0.992
LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSi5	21100	2535	close	19.97	21.50	1.422	-	-	0.03	0.539	0.767
LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 1	DSi5	21100	2535	close	19.92	21.50	1.439	-	-	0.02	0.514	0.740
LTE Band 7C	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSi5	21350+21152	2560+2540.2	close	19.83	21.50	1.469	-	-	0.06	0.655	0.962
LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSi5	21100	2535	close	17.01	18.30	1.346	-	-	0.13	0.626	0.843
LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSi5	20850	2510	close	16.94	18.30	1.368	-	-	-0.14	0.603	0.825
LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSi5	21350	2560	close	16.89	18.30	1.384	-	-	0.01	0.704	0.974
LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSi5	21100	2535	close	16.85	18.30	1.396	-	-	0.18	0.601	0.839
LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSi5	20850	2510	close	16.72	18.30	1.439	-	-	0.03	0.599	0.862
LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSi5	21350	2560	close	16.83	18.30	1.403	-	-	-0.17	0.581	0.815
LTE Band 7	20M	QPSK	100	0	-	Front	5mm	Ant 2	DSi5	21100	2535	close	16.81	18.30	1.409	-	-	0.17	0.569	0.802
LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSi5	21100	2535	close	17.01	18.30	1.346	-	-	0.03	0.182	0.245
LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSi5	21100	2535	close	16.85	18.30	1.396	-	-	0.05	0.115	0.161
LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSi5	21100	2535	close	17.01	18.30	1.346	-	-	-0.17	0.067	0.090
LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSi5	21100	2535	close	16.85	18.30	1.396	-	-	0.02	0.044	0.061
LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DSi5	21100	2535	close	17.01	18.30	1.346	-	-	-0.19	0.218	0.293
LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DSi5	21100	2535	close	16.85	18.30	1.396	-	-	0.04	0.139	0.194
LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSi5	21100	2535	close	17.01	18.30	1.346	-	-	-0.11	0.670	0.902
LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSi5	20850	2510	close	16.94	18.30	1.368	-	-	0.04	0.626	0.856
LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSi5	21350	2560	close	16.89	18.30	1.384	-	-	-0.05	0.654	0.905
LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSi5	21100	2535	close	16.85	18.30	1.396	-	-	0.16	0.633	0.884
LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSi5	20850	2510	close	16.72	18.30	1.439	-	-	0.07	0.621	0.893
LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSi5	21350	2560	close	16.83	18.30	1.403	-	-	0.08	0.619	0.868
LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 2	DSi5	21100	2535	close	16.81	18.30	1.409	-	-	-0.17	0.617	0.870
LTE Band 7C	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSi5	21350+21152	2560+2540.2	close	16.80	18.30	1.413	-	-	0.06	0.669	0.945
LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSi5	21100	2535	close	22.82	23.90	1.282	-	-	-0.18	0.673	0.863
LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSi5	20850	2510	close	22.76	23.90	1.300	-	-	-0.05	0.752	0.978
LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSi5	21350	2560	close	22.72	23.90	1.312	-	-	-0.08	0.662	0.869
LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 3	DSi5	21100	2535	close	22.52	23.00	1.117	-	-	0.18	0.601	0.671
LTE Band 7	20M	QPSK	100	0	-	Front	5mm	Ant 3	DSi5	21100	2535	close	22.47	23.00	1.130	-	-	0.1	0.591	0.668
LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 3	DSi5	21100	2535	close	22.82	23.90	1.282	-	-	0.03	0.174	0.223
LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 3	DSi5	21100	2535	close	22.52	23.00	1.117	-	-	-0.13	0.111	0.124
LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 3	DSi5	21100	2535	close	22.82	23.90	1.282	-	-	0.04	0.067	0.086
LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 3	DSi5	21100	2535	close	22.52	23.00	1.117	-	-	0.01	0.044	0.049
LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 3	DSi5	21100	2535	close	22.82	23.90	1.282	-	-	-0.18	0.204	0.262
LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 3	DSi5	21100	2535	close	22.52	23.00	1.117	-	-	0.12	0.129	0.144
LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 3	DSi5	21100	2535	close	22.82	23.90	1.282	-	-	0.17	0.701	0.899
LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 3	DSi5	20850	2510	close	22.76	23.90	1.300	-	-	-0.15	0.656	0.853
LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 3	DSi5	21350	2560	close	22.72	23.90	1.312	-	-	0.07	0.650	0.853
LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 3	DSi5	21100	2535	close	22.52	23.00	1.117	-	-	-0.12	0.661	0.738
LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 3	DSi5	21100	2535	close	22.47	23.00	1.130	-	-	-0.06	0.635	0.717
LTE Band 7C	20M	QPSK	1	99	-	Front	5mm	Ant 3	DSi5	20850+21048	2510+2529.8	close	22.66	23.90	1.330	-	-	0.06	0.711	0.946
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 0	DSi5	40620	2593	close	20.77	22.00	1.327	62.9	1.006	0.03	0.017	0.023
LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 0	DSi5	40620	2593	close	19.74	21.00	1.337	62.9	1.006	0.15	0.001	0.001
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSi5	40620	2593	close	20.77	22.00	1.327	62.9	1.006	0.09	0.445	0.594
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	DSi5	40620	2593	close	19.74	21.00	1.337	62.9	1.006	0.13	0.438	0.589
LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	DSi5	40620	2593	close	20.77	22.00	1.327	62.9	1.006	0.06	0.001	0.001
LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	DSi5	40620	2593	close	19.74	21.00	1.337	62.9	1.006	-0.03	0.001	0.001
LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	DSi5	40620	2593	close	20.77	22.00	1.327	62.9	1.006	0.11	0.390	0.521
LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	DSi5	40620	2593	close	19.74	21.00	1.337	62.9	1.006	0.09	0.359	0.483
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSi5	40620	2593	close	20.77	22.00	1.327	62.9	1.006	0.13	0.645	0.861
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSi5	39750	2506	close	20.58	22.00	1.387	62.9	1.006	0.13	0.609	0.850
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSi5	40185	2549.5	close	20.65	22.00	1.365	62.9	1.006	0.13	0.611	0.839
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSi5	41055	2636.5	close	20.71	22.00	1.346	62.9	1.006	0.13	0.597	0.808
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSi5	41490	2680	close	19.69	21.00	1.352	62.9	1.006	-0.18	0.511	0.695



LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI5	39750	2506	close	19.62	21.00	1.374	62.9	1.006	0.09	0.478	0.661
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI5	40185	2549.5	close	19.62	21.00	1.374	62.9	1.006	0.01	0.488	0.675
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	DSI5	41055	2636.5	close	19.64	21.00	1.368	62.9	1.006	0.06	0.493	0.678
LTE Band 41	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI5	40620	2593	close	19.66	21.00	1.361	62.9	1.006	-0.18	0.509	0.697
LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	DSI5	40620	2593	close	23.76	24.10	1.081	42.9	1.009	0.19	0.809	0.883
LTE Band 41C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	DSI5	40620+40818	2593+2612.8	close	20.73	22.00	1.340	62.9	1.006	0.13	0.633	0.853
LTE Band 41C HPUE	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	DSI5	40620+40818	2593+2612.8	close	23.69	24.10	1.099	42.9	1.009	0.19	0.791	0.877
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	DSI5	40620	2593	close	22.69	23.40	1.178	62.9	1.006	0.15	0.098	0.116
LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	DSI5	40620	2593	close	21.64	23.00	1.368	62.9	1.006	-0.03	0.079	0.109
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	40620	2593	close	22.69	23.40	1.178	62.9	1.006	0.02	0.732	0.867
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	39750	2506	close	22.54	23.40	1.219	62.9	1.006	0.06	0.609	0.747
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	40185	2549.5	close	22.62	23.40	1.197	62.9	1.006	-0.05	0.611	0.736
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	41055	2636.5	close	22.51	23.40	1.227	62.9	1.006	-0.07	0.750	0.926
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	41490	2680	close	22.48	23.40	1.236	62.9	1.006	0.01	0.802	0.997
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI5	40620	2593	close	21.64	23.00	1.368	62.9	1.006	0.02	0.651	0.896
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI5	39750	2506	close	21.54	23.00	1.400	62.9	1.006	0.09	0.629	0.886
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI5	40185	2549.5	close	21.57	23.00	1.390	62.9	1.006	0.01	0.633	0.885
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI5	41055	2636.5	close	21.55	23.00	1.396	62.9	1.006	0.08	0.677	0.951
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI5	41490	2680	close	21.44	23.00	1.432	62.9	1.006	0.05	0.651	0.938
LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 1	DSI5	40620	2593	close	21.58	23.00	1.387	62.9	1.006	-0.18	0.599	0.836
LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	DSI5	40620	2593	close	22.69	23.40	1.178	62.9	1.006	-0.18	0.216	0.256
LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	DSI5	40620	2593	close	21.64	23.00	1.368	62.9	1.006	0.03	0.147	0.202
LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	DSI5	40620	2593	close	22.69	23.40	1.178	62.9	1.006	0.19	0.011	0.013
LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	DSI5	40620	2593	close	21.64	23.00	1.368	62.9	1.006	0.08	0.001	0.001
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 1	DSI5	40620	2593	close	22.69	23.40	1.178	62.9	1.006	0.05	0.501	0.594
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 1	DSI5	40620	2593	close	21.64	23.00	1.368	62.9	1.006	-0.18	0.423	0.582
LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	41490	2680	close	24.10	25.00	1.230	42.9	1.009	-0.09	0.811	1.007
LTE Band 41C	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	41490+41292	2680+2660.2	close	22.46	23.40	1.242	62.9	1.006	0.01	0.771	0.963
LTE Band 41C HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI5	41490+41292	2680+2660.2	close	23.99	25.00	1.262	42.9	1.009	-0.09	0.781	0.994
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 2	DSI5	40620	2593	close	18.46	19.90	1.393	62.9	1.006	0.04	0.310	0.434
LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 2	DSI5	40620	2593	close	18.37	19.90	1.422	62.9	1.006	-0.03	0.258	0.369
LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI5	40620	2593	close	18.46	19.90	1.393	62.9	1.006	0.16	0.198	0.278
LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI5	40620	2593	close	18.37	19.90	1.422	62.9	1.006	0.09	0.144	0.206
LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI5	40620	2593	close	18.46	19.90	1.393	62.9	1.006	-0.03	0.158	0.221
LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI5	40620	2593	close	18.37	19.90	1.422	62.9	1.006	0.05	0.107	0.153
LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	DSI5	40620	2593	close	18.46	19.90	1.393	62.9	1.006	0.02	0.001	0.001
LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	DSI5	40620	2593	close	18.37	19.90	1.422	62.9	1.006	-0.14	0.001	0.001
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	40620	2593	close	18.46	19.90	1.393	62.9	1.006	-0.17	0.704	0.987
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	39750	2506	close	18.31	19.90	1.442	62.9	1.006	0.08	0.558	0.810
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	40185	2549.5	close	18.24	19.90	1.466	62.9	1.006	0.05	0.606	0.893
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	41055	2636.5	close	18.33	19.90	1.435	62.9	1.006	0.11	0.646	0.933
LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	41490	2680	close	18.23	19.90	1.469	62.9	1.006	0.02	0.613	0.906
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSI5	40620	2593	close	18.37	19.90	1.422	62.9	1.006	0.08	0.672	0.962
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSI5	39750	2506	close	18.14	19.90	1.500	62.9	1.006	0.05	0.631	0.952
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSI5	40185	2549.5	close	18.12	19.90	1.507	62.9	1.006	0.08	0.601	0.911
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSI5	41055	2636.5	close	18.27	19.90	1.455	62.9	1.006	-0.02	0.574	0.840
LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	DSI5	41490	2680	close	18.20	19.90	1.479	62.9	1.006	-0.06	0.597	0.888
LTE Band 41	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 2	DSI5	40620	2593	close	18.35	19.90	1.429	62.9	1.006	-0.17	0.601	0.864
LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	DSI5	40620	2593	close	19.74	21.50	1.500	42.9	1.009	0.02	0.646	0.978
LTE Band 41C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 2	DSI5	40620+40818	2593+2612.8	close	18.31	19.90	1.442	62.9	1.006	-0.17	0.659	0.956
LTE Band 41C HPUE	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 2	DSI5	40620+40818	2593+2612.8	close	19.63	21.50	1.538	42.9	1.009	0.02	0.629	0.976
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI5	40620	2593	close	23.22	23.90	1.169	62.9	1.006	0.03	0.540	0.635
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI5	39750	2506	close	22.93	23.90	1.250	62.9	1.006	0.08	0.610	0.767
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI5	40185	2549.5	close	23.08	23.90	1.208	62.9	1.006	0.07	0.545	0.662
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI5	41055	2636.5	close	23.05	23.90	1.216	62.9	1.006	-0.05	0.559	0.684
LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 3	DSI5	41490	2680	close	22.95	23.90	1.245	62.9	1.006	0.12	0.562	0.704



FCC SAR Test Report

Report No. : FA2D0913-01

Table with columns for Band, Power, Modulation, Frequency, Duty Cycle, Exposure Time, Position, Distance, Antenna, Frequency, Power, SAR, etc. Rows include LTE Band 41 and FR1 n7 configurations.



FCC SAR Test Report

Report No. : FA2D0913-01

Table with columns: LTE Band 48, 20M, QPSK, 1, 0, -, Front, 5mm, Ant 0, DSI5, 55830, 3609, close, 20.84, 22.00, 1.306, 62.9, 1.006, -0.16, 0.102, 0.134. Row 45 is highlighted with a yellow background.



FCC SAR Test Report

Report No. : FA2D0913-01

Table with columns for LTE Band, Power, Modulation, Frequency, Time, Location, Antenna, SAR, etc. containing multiple rows of test data.



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	
WLAN/BT																		
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 4+5(4)	WWAN +non DBS	11	2462	close	10.41	12.00	1.442	100	1.000	0.03	0.097	0.140	
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 4+5(4)	WWAN +non DBS	11	2462	close	10.41	12.00	1.442	100	1.000	-0.05	0.092	0.133	
46	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 4+5(4)	WWAN +non DBS	11	2462	close	10.41	12.00	1.442	100	1.000	0.02	0.253	0.365	
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 4+5(4)	WWAN +non DBS	11	2462	close	10.41	12.00	1.442	100	1.000	0.02	0.236	0.340	
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 4+5(4)	WWAN +non DBS	11	2462	close	10.41	12.00	1.442	100	1.000	-0.09	0.001	0.001	
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	5mm	Ant 4+5(4)	WWAN +non DBS	11	2462	close	10.41	12.00	1.442	100	1.000	-0.09	0.038	0.055	
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 4+5(4)	WWAN +DBS	11	2462	close	7.43	9.00	1.435	100	1.000	-0.02	0.050	0.071	
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 4+5(4)	WWAN +DBS	11	2462	close	7.43	9.00	1.435	100	1.000	-0.07	0.046	0.066	
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 4+5(4)	WWAN +DBS	11	2462	close	7.43	9.00	1.435	100	1.000	0.16	0.129	0.185	
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 4+5(4)	WWAN +DBS	11	2462	close	7.43	9.00	1.435	100	1.000	-0.18	0.121	0.174	
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 4+5(4)	WWAN +DBS	11	2462	close	7.43	9.00	1.435	100	1.000	-0.04	0.001	0.001	
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	5mm	Ant 4+5(4)	WWAN +DBS	11	2462	close	7.43	9.00	1.435	100	1.000	-0.06	0.021	0.030	
	Bluetooth	1Mbps	Front	5mm	Ant 4	Full Power	39	2441	close	11.57	12.00	1.104	77.03	1.081	0.13	0.071	0.085	
	Bluetooth	1Mbps	Back	5mm	Ant 4	Full Power	39	2441	close	11.57	12.00	1.104	77.03	1.081	0.1	0.058	0.069	
	Bluetooth	1Mbps	Left Side	5mm	Ant 4	Full Power	39	2441	close	11.57	12.00	1.104	77.03	1.081	-0.1	0.111	0.132	
	Bluetooth	1Mbps	Right Side	5mm	Ant 4	Full Power	39	2441	close	11.57	12.00	1.104	77.03	1.081	-0.07	0.001	0.001	
	Bluetooth	1Mbps	Top Side	5mm	Ant 4	Full Power	39	2441	close	11.57	12.00	1.104	77.03	1.081	0.05	0.001	0.001	
	Bluetooth	1Mbps	Bottom Side	5mm	Ant 4	Full Power	39	2441	close	11.57	12.00	1.104	77.03	1.081	0.01	0.001	0.001	
	Bluetooth	1Mbps	Front	5mm	Ant 5	Full Power	39	2441	close	8.53	9.00	1.114	76.86	1.084	0.04	0.020	0.024	
	Bluetooth	1Mbps	Back	5mm	Ant 5	Full Power	39	2441	close	8.53	9.00	1.114	76.86	1.084	0.05	0.001	0.001	
	Bluetooth	1Mbps	Left Side	5mm	Ant 5	Full Power	39	2441	close	8.53	9.00	1.114	76.86	1.084	0.08	0.001	0.001	
	Bluetooth	1Mbps	Right Side	5mm	Ant 5	Full Power	39	2441	close	8.53	9.00	1.114	76.86	1.084	0.11	0.091	0.110	
	Bluetooth	1Mbps	Top Side	5mm	Ant 5	Full Power	39	2441	close	8.53	9.00	1.114	76.86	1.084	0.02	0.001	0.001	
	Bluetooth	1Mbps	Bottom Side	5mm	Ant 5	Full Power	39	2441	close	8.53	9.00	1.114	76.86	1.084	0.06	0.001	0.001	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5(4)	WWAN +non DBS	42	5210	close	12.35	14.00	1.462	100	1.000	-0.15	0.085	0.124	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5(4)	WWAN +non DBS	42	5210	close	12.35	14.00	1.462	100	1.000	0.09	0.038	0.056	
47	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5(4)	WWAN +non DBS	42	5210	close	12.35	14.00	1.462	100	1.000	-0.07	0.229	0.335	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5(4)	WWAN +non DBS	42	5210	close	12.35	14.00	1.462	100	1.000	-0.08	0.139	0.203	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5(4)	WWAN +non DBS	42	5210	close	12.35	14.00	1.462	100	1.000	0.08	0.001	0.001	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 4+5(4)	WWAN +non DBS	42	5210	close	12.35	14.00	1.462	100	1.000	0.07	0.041	0.060	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5(4)	WWAN +DBS	42	5210	close	9.37	11.00	1.455	100	1.000	0.04	0.041	0.060	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5(4)	WWAN +DBS	42	5210	close	9.37	11.00	1.455	100	1.000	-0.02	0.018	0.026	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5(4)	WWAN +DBS	42	5210	close	9.37	11.00	1.455	100	1.000	0.05	0.111	0.162	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5(4)	WWAN +DBS	42	5210	close	9.37	11.00	1.455	100	1.000	-0.03	0.068	0.099	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5(4)	WWAN +DBS	42	5210	close	9.37	11.00	1.455	100	1.000	-0.04	0.001	0.001	
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 4+5(4)	WWAN +DBS	42	5210	close	9.37	11.00	1.455	100	1.000	0.04	0.015	0.022	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5(5)	WWAN +non DBS	155	5775	close	15.23	17.00	1.503	100	1.000	0.12	0.105	0.158	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5(5)	WWAN +non DBS	155	5775	close	15.23	17.00	1.503	100	1.000	0.08	0.042	0.063	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5(5)	WWAN +non DBS	155	5775	close	15.23	17.00	1.503	100	1.000	0.01	0.245	0.368	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5(5)	WWAN +non DBS	155	5775	close	15.23	17.00	1.503	100	1.000	-0.17	0.241	0.362	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5(5)	WWAN +non DBS	155	5775	close	15.23	17.00	1.503	100	1.000	0.07	0.001	0.002	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 4+5(5)	WWAN +non DBS	155	5775	close	15.23	17.00	1.503	100	1.000	0.17	0.041	0.062	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4+5(5)	WWAN +DBS	155	5775	close	12.25	14.00	1.496	100	1.000	0.04	0.041	0.061	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4+5(5)	WWAN +DBS	155	5775	close	12.25	14.00	1.496	100	1.000	-0.1	0.019	0.028	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4+5(5)	WWAN +DBS	155	5775	close	12.25	14.00	1.496	100	1.000	0.07	0.121	0.181	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4+5(5)	WWAN +DBS	155	5775	close	12.25	14.00	1.496	100	1.000	0.03	0.099	0.148	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4+5(5)	WWAN +DBS	155	5775	close	12.25	14.00	1.496	100	1.000	0.04	0.001	0.001	
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 4+5(5)	WWAN +DBS	155	5775	close	12.25	14.00	1.496	100	1.000	0.04	0.018	0.027	



FCC SAR Test Report

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Table with 22 columns: LTE Band 66, 20M, QPSK, 50, 0, -, Back, 5mm, Ant 0, -, DSI3, 132072, 1720, open, 19.24, 20.00, 1.191, -, -, 0.15, 0.736, 0.877. This table contains 46 rows of test data for various antenna configurations.

1900MHz

Table with 22 columns: GSM1900, -, -, -, -, GPRS (3 Tx slots), Front, 5mm, Ant 0, -, DSI3, 661, 1880, open, 23.07, 24.50, 1.390, -, -, 0.1, 0.289, 0.402. This table contains 16 rows of test data for GSM1900 configurations.

