

FCC SAR Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2419-1, XT2419-2, XT2419-3, XT2419V
FCC ID : IHDT56AQ4
STANDARD : FCC 47 CFR Part 2 (2.1093)

We, Sporton International Inc. (Shenzhen), 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. (Shenzhen), the test report shall not be reproduced except in full.



Approved by: Si Zhang

Sporton International Inc. (Shenzhen)
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People's Republic of China



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA3D0836	Rev. 01	Initial issue of report.	Feb. 07, 2024



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2419-1, XT2419-2, XT2419-3, XT2419V**, 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	0.21	1.07	1.07	1.58	
		GSM1900	<0.10	1.03	1.02		
	WCDMA	WCDMA V	1.17	1.13	1.24		
		WCDMA IV	1.18	1.21	1.25		
		WCDMA II	1.15	1.14	1.18		
	LTE	LTE Band 71	0.50	1.07	1.07		
		LTE Band 12/17	1.20	1.22	1.22		
		LTE Band 13	1.28	1.09	1.09		
		LTE Band 14	1.11	1.08	1.08		
		LTE Band 26/5	1.21	1.02	1.02		
		LTE Band 66/4	1.27	1.17	1.27		
		LTE Band 25/2	1.26	1.01	1.28		
		LTE Band 30	1.21	1.08	1.22		
		LTE Band 7	1.26	1.23	1.25		
		LTE Band 41/38	1.20	1.02	1.23		
		LTE Band 48	1.16	0.61	1.11		
		5G NR	FR1 n71	0.68	0.97		0.97
			FR1 n12	0.87	0.85		0.85
	FR1 n14		1.06	1.16	1.16		
	FR1 n26/5		1.15	1.04	1.04		
FR1 n70	1.08		1.19	1.23			
FR1 n66	1.09		1.21	1.22			
FR1 n25/2	1.25		1.28	1.27			
FR1 n30	1.23		1.07	1.22			
FR1 n7	1.17		1.22	1.27			
FR1 n41	1.17		1.15	1.28			
FR1 n48	1.26	0.62	1.20				
FR1 n77/78	1.23	0.59	1.16				
DTS	WLAN	2.4GHz WLAN	1.39	0.89	1.35	1.58	
NII		5GHz WLAN	0.37	0.58	1.19	1.58	
DSS	Bluetooth	2.4GHz Bluetooth	0.27	0.26	0.20	1.58	

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
		GSM1900	2.97	3.90
		WCDMA IV	3.16	
		WCDMA II	3.16	
		LTE Band 12/17	2.40	
		LTE Band 66/4	3.18	
		LTE Band 25/2	2.97	
		LTE Band 30	3.03	
		LTE Band 7	2.89	
		LTE Band 41/38	3.17	
		LTE Band 48	3.13	



		FR1 n70	3.14	
		FR1 n66	3.14	
		FR1 n25/2	3.16	
		FR1 n30	2.99	
		FR1 n7	2.90	
		FR1 n41	3.13	
		FR1 n48	2.93	
		FR1 n77/78	3.11	
DTS	WLAN	2.4GHz WLAN	2.86	3.73
NII		5GHz WLAN	2.78	3.90
Date of Testing:			2023/12/18 ~ 2024/1/26	

Remark:

- This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE B2 / B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41.
- This device supports 5G NR n2/n5/n38/n78 and n25/n26/n41/n77. Since the supported frequency span for 5G NR n2/n5/n38/n78 falls completely within the supports frequency span for n25/n26/n41/n77, both 5G NR bands have the same target power, and both 5G NR bands share the same transmission path; therefore, SAR was only assessed for n25/n26/n41/n77.

Declaration of Conformity:

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

Comments and Explanations:

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

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and 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. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory			
Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR01-SZ	CN1256	421272

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

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

3. Guidance Applied

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

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



4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2419-1, XT2419-2, XT2419-3, XT2419V
FCC ID	IHDT56AQ4
IMEI Code	Sample 1: IMEI 1: 355199400020716 IMEI 2: 355199400020724 Sample 2: IMEI 1: 355881470068937 IMEI 2: 355881470068945
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 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 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 802.11ac VHT20/VHT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC: ASK
HW Version	DVT2
SW Version	U2UB34.18
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 WLAN supports WiFi Direct (GC only).
4. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12.
5. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
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. For WLAN transmitter, while the device WLAN is transmitting simultaneously with the WWAN/BT antenna, the device power will be reduced power at head conditions. For WLAN transmitter, while the device WLAN is transmitting simultaneously with the WWAN/BT antenna and Proximity sensors trigger, the device power will be reduced power at body-worn, hotspot and extremity exposure conditions.
8. For some WWAN bands, sensor on power level is higher than hotspot power level, so front/back sensor on SAR can represent hotspot conservatively.
9. This device supports HPUE for LTE Band 41 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.
10. 5G NR n41/n77/n78 supports HPUE mode, HPUE power and SAR testing performed separately.
11. For 5G NR n41/n77/n78 HPUE with higher power, so we chose power class 2 full SAR testing and power class 2 SAR can represent power class 3 SAR.
12. For 5G NR bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
13. There are two samples, the different between them refer to the XT2419-1, XT2419-2, XT2419-3, XT2419V_Operational Description of Product Equality Declaration which is exhibit separately. According to the differences, sample 1 was chosen to perform full SAR testing and sample 2 verified the worst case of sample 1.
14. The four model names are only for different market purpose, and all the others are the same.
15. This device has NFC function and the NFC SAR report will be separately submitted.
16. This device supports 5G NR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.



<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n2	FDD	15	5, 10, 15, 20
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40
	n12	FDD	15	5, 10, 15
	n25	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n30	FDD	15	5, 10
	n66	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n71	FDD	15	5, 10, 15, 20, 25, 30
	n38	TDD	30	10, 15, 20, 30, 40
	n41	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n77	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
n78	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100	
SA	n2	FDD	15	5, 10, 15, 20
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40
	n12	FDD	15	5, 10, 15
	n14	FDD	15	5, 10
	n25	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n26	FDD	15	5, 10, 15, 20
	n30	FDD	15	5, 10
	n66	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n70	FDD	15	5, 10, 15
	n71	FDD	15	5, 10, 15, 20, 25, 30
	n38	TDD	30	10, 15, 20, 30, 40
	n41	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n48	TDD	30	10, 20, 30, 40
	n77	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
n78	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100	

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	IHDT56AQ4																																																														
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 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz																																																														
Channel Bandwidth	LTE Band 2: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz																																																														
uplink modulations used	QPSK / 16QAM / 64QAM / 256QAM																																																														
LTE Voice / Data requirements	Voice and Data																																																														
LTE Release Version	R15, 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">≥ 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	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 4 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	20850	2510	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	21350	2560	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	23060	704	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	23130	711	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		23230		782		23230		782	
H	23255		784.5		23230		782		23230		782	
LTE Band 14												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Channel #		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23305		790.5		23330		793		23330		793	
M	23330		793		23330		793		23330		793	
H	23355		795.5		23330		793		23330		793	
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	26765	821.5	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	26965	841.5	26965	841.5



LTE Band 30												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	27685		2307.5		27710		2310					
M	27710		2310									
H	27735		2312.5									
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580				
M	38000	2595	38000	2595	38000	2595	38000	2595				
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673				
M	133247	675.5	133272	678	133297	680.5	133322	683				
H	133447	695.5	133422	693	133397	690.5	133372	688				
LTE Band 48												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560				
LM	55810	3607	55815	3607.5	55820	3608	55830	3609				
MH	56170	3643	56165	3642.5	56160	3642	56150	3641				
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690				

<For LTE Overlap Bands Description>

1) LTE Bands BW

Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
LTE Band 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 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 12	Yes	Yes	Yes	Yes		
LTE Band 17			Yes	Yes		
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes



2) LTE Bands tune up:

LTE Band	Antenna	DSI2	DSI2 Sim	DSI3	DSI3 Sim	DSI4	DSI6	DSI6 Sim	DSI7
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 2	Ant 0	21.3	21.3	18.8	18.8	24	21.3	21.3	16.3
LTE Band 25	Ant 0	21.3	21.3	18.8	18.8	24	21.3	21.3	16.3
LTE Band 4	Ant 0	20.7	20.7	19.2	19.2	24	20.7	20.7	17.2
LTE Band 66	Ant 0	20.7	20.7	19.2	19.2	24	20.7	20.7	17.2
LTE Band 5	Ant 0	24	24	23.7	23.7	24	24	24	23.7
LTE Band 26	Ant 0	24	24	23.7	23.7	24	24	24	23.7
LTE Band 12	Ant 0	24	24	24	24	24	24	24	24
LTE Band 17	Ant 0	24	24	24	24	24	24	24	24
LTE Band 38	Ant 9	24	24	21.8	21.8	24	24	24	19.3
LTE Band 41	Ant 9	24	24	21.8	21.8	24	24	24	19.3

LTE Band	Antenna	DSI2	DSI2 Sim	DSI3	DSI3 Sim	DSI4	DSI6	DSI6 Sim	DSI7
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 2	Ant 1	19	17.5	19.5	18	23	22.5	21	15
LTE Band 25	Ant 1	19	17.5	19.5	18	23	22.5	21	15
LTE Band 4	Ant 1	18.9	17.4	19.9	18.4	24	21.4	19.9	15.9
LTE Band 66	Ant 1	18.9	17.4	19.9	18.4	24	21.4	19.9	15.9
LTE Band 5	Ant 1	23.2	21.7	24	23.2	24	24	24	21.3
LTE Band 26	Ant 1	23.2	21.7	24	23.2	24	24	24	21.3
LTE Band 12	Ant 1	24	23.5	24	24	24	24	24	23.5
LTE Band 17	Ant 1	24	23.5	24	24	24	24	24	23.5
LTE Band 38	Ant 1	20.9	19.4	23.4	21.9	24	24	24	15.9
LTE Band 41	Ant 1	20.9	19.4	23.4	21.9	24	24	24	15.9

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information														
Operating Frequency Range of each 5G NR transmission band	5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n14: 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n30: 2305 MHz ~ 2315 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70: 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz													
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.													
SCS	FDD: SCS15KHz, TDD: SCS30KHz													
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM													
A-MPR (Additional MPR) disabled for SAR Testing?	Yes													
LTE Anchor Bands for n2	LTE B4/5/7/12/13/14/30/48/66/71													
LTE Anchor Bands for n5	LTE B2/7/30/66													
LTE Anchor Bands for n7	LTE B2/4/5/12/66													
LTE Anchor Bands for n12	LTE B2/66													
LTE Anchor Bands for n25	LTE B7/12/26/66													
LTE Anchor Bands for n30	LTE B2/5/12/14/66													
LTE Anchor Bands for n38	LTE B5/12													
LTE Anchor Bands for n41	LTE B2/4/5/12/25/26/66/71													
LTE Anchor Bands for n66	LTE B2/5/7/12/13/14/30/48/71													
LTE Anchor Bands for n71	LTE B2/7/66													
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/25/30/66													
LTE Anchor Bands for n78	LTE B2/4/5/7/12/13/25/26/66/71													
Transmission (H, M, L) channel numbers and frequencies in each 5G NR band														
NR Band 2														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860						
M	376000	1880	376000	1880	376000	1880	376000	1880						
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900						
NR Band 5														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	165300	826.5	165800	829	166300	831.5	166800	834						
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5						
H	169300	846.5	168800	844	168300	841.5	167800	839						
NR Band 7														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550
NR Band 12														
	Bandwidth 5MHz		Bandwidth 10MHz				Bandwidth 15MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	140300	701.5	140800	704	141300	706.5	141800	709	142300	711.5	142800	714	143300	716.5
M	141500	707.5	141500	707.5	141500	707.5	141500	707.5	141500	707.5	141500	707.5	141500	707.5
H	142700	713.5	142200	711	141700	708.5	141200	706	140700	704	140200	702	141000	705



NR Band 14					
	Bandwidth 5MHz			Bandwidth 10MHz	
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)
L	158100	790.5		158600	793
M	158600	793			
H	159100	795.5			

NR Band 25																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz	
	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	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	373500	1867.5	374000	1870
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895

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

NR Band 30						
	Bandwidth 5MHz			Bandwidth 10MHz		
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)	
L	461500	2307.5		462000	2310	
M	462000	2310				
H	462500	2312.5				

NR Band 66																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz	
	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	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	345500	1727.5	346000	1730
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352500	1762.5	352000	1760

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

NR Band 71												
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133100	665.5	133600	668	134100	670.5	134600	673	135100	675.5	135600	678
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5	136100	680.5	136100	680.5
H	139100	695.5	138600	693	138100	690.5	137600	688	137100	685.5	136600	683

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

NR Band 41																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	500202	2501.01	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	537000	2685	529998	2649.99	528996	2644.98	528000	2640

NR Band 48 SCS15Hz										
	Bandwidth 10MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	637000	3555	637334	3560.01	637668	3565.02	638000	3570	638334	3575.01
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646332	3694.98	646000	3690	645666	3684.99	645332	3679.98	645000	3675



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

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

For <3450 MHz ~ 3550 MHz >

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

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

<For NR Overlap Bands Description>

1) NR Bands BW

Band	Duplex	SCS(KHz)	Bandwidths(BW)
n2	FDD	15	5, 10, 15, 20
n25	FDD	15	5, 10, 15, 20
n5	FDD	15	5, 10, 15, 20
n26	FDD	15	5, 10, 15, 20
n38	TDD	30	10, 15, 20,30,40
n41	TDD	30	10, 15, 20,30,40,50,60,70,80,90,100
n77	TDD	30	10, 15, 20,30,40,50,60,70,80,90,100
n78	TDD	30	10, 15, 20,30,40,50,60,70,80,90,100

2) NR Bands Tune up:

NR Band	Antenna	DSI2	DSI2 Sim	DSI3	DSI3 Sim	DSI4	DSI6	DSI6 Sim	DSI7
		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 n2	Ant 0	20.5	20.5	18	18	24	20.5	20.5	16
5G NR n25	Ant 0	20.5	20.5	18	18	24	20.5	20.5	16
5G NR n5	Ant 0	24	24	24	24	24	24	24	24
5G NR n26	Ant 0	24	24	24	24	24	24	24	24
5G NR n38	Ant 9	22.5	22.5	20	20	24	22.5	22.5	20
5G NR n41	Ant 9	22.5	22.5	20	20	24	22.5	22.5	20

Band	Antenna	DSI2	DSI2 Sim	DSI3	DSI3 Sim	DSI4	DSI6	DSI6 Sim	DSI7
		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 n2	Ant 1	17	15.5	17.5	16	24	21	20	13.5
5G NR n25	Ant 1	17	15.5	17.5	16	24	21	20	13.5
5G NR n5	Ant 1	24	22.5	24	24	24	24	24	21.5
5G NR n26	Ant 1	24	22.5	24	24	24	24	24	21.5



5G NR n38	Ant 1	19	17.5	21	19.5	24	22	21	14
5G NR n41	Ant 1	19	17.5	21	19.5	24	22	21	14
5G NR n77(PC3)27Q/27O	Ant 4	19	17.5	16.5	15	24	20.5	19.5	13.5
5G NR n78(PC3)27Q/27O	Ant 4	19	17.5	16.5	15	24	20.5	19.5	13.5
5G NR n77(PC2)27Q/27O	Ant 4	19	17.5	16.5	15	27	20.5	19.5	13.5
5G NR n78(PC2)27Q/27O	Ant 4	19	17.5	16.5	15	27	20.5	19.5	13.5
5G NR n77(PC3)27Q/27O	ANT 7	17	15.5	18	16.5	24	24	24	14
5G NR n78(PC3)27Q/27O	ANT 7	17	15.5	18	16.5	24	24	24	14
5G NR n77(PC2)27Q/27O	ANT 7	17	15.5	18	16.5	26	25.5	24	14
5G NR n78(PC2)27Q/27O	ANT 7	17	15.5	18	16.5	26	25.5	24	14
5G NR n77(PC3)27Q/27O	ANT 10	23	23	13.5	12.5	23	18.5	17.5	9
5G NR n78(PC3)27Q/27O	ANT 10	23	23	13.5	12.5	23	18.5	17.5	9
5G NR n77(PC2)27Q/27O	ANT 10	25	25	13.5	12.5	25	18.5	17.5	9
5G NR n78(PC2)27Q/27O	ANT 10	25	25	13.5	12.5	25	18.5	17.5	9
5G NR n77(PC3)27O	ANT 8	18.5	17	19	17.5	21	21	21	16.5
5G NR n78(PC3)27O	ANT 8	18.5	17	19	17.5	21	21	21	16.5
5G NR n77(PC2)27O	ANT 8	18.5	17	19	17.5	23	23	23	16.5
5G NR n78(PC2)27O	ANT 8	18.5	17	19	17.5	23	23	23	16.5
5G NR n77(PC3)27Q	ANT 8	18.5	17	19	17.5	20.5	20.5	20.5	16.5
5G NR n78(PC3)27Q	ANT 8	18.5	17	19	17.5	20	20	20	16.5
5G NR n77(PC2)27Q	ANT 8	18.5	17	19	17.5	22.5	22.5	22.5	16.5
5G NR n78(PC2)27Q	ANT 8	18.5	17	19	17.5	22	22	22	16.5

Note: For some bands/antennas at some exposure conditions which cannot be covered were fully tested for RF exposure compliance.

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	Head	Body Worn	Body Worn	Sensor OFF	Extremity	Extremity	Hotspot	Pmax* for Body	Pmax*(4) for Head
		DSI2	DSI2 Sim	DSI3	DSI3 Sim	DSI4	DSI6	DSI6 Sim	DSI7		
GSM850**	ANT 0	37.8	37.8	30.8	30.8	24.0	31.8	31.8	30.8	24.0	24.0
GSM1900**	ANT 0	21.3	21.3	17.7	17.7	21.0	21.3	21.3	16.7	21.0	21.0
WCDMA II	ANT 0	20.7	20.7	17.7	17.7	23.0	20.7	20.7	15.7	23.0	23.0
WCDMA II	ANT 1	15.7	14.2	16.7	15.2	23.0	20.2	18.7	13.2	23.0	23.0
WCDMA IV	ANT 0	20.2	20.2	18.2	18.2	23.0	20.2	20.2	16.7	23.0	23.0
WCDMA IV	ANT 1	16.9	15.4	17.9	16.4	23.0	20.9	19.4	14.4	23.0	23.0
WCDMA V	ANT 0	28.6	28.6	23.5	23.5	23.0	25.6	25.6	23.5	23.0	23.0
WCDMA V	ANT 1	22.5	21.2	23.1	22.5	23.0	26.4	24.9	20.7	23.0	23.0
LTE Band 25/2	ANT 0	20.3	20.3	17.8	17.8	23.0	20.3	20.3	15.3	23.0	23.0
LTE Band 25/2 Other PA	ANT 0	20.3	20.3	17.8	17.8	23.0	20.3	20.3	15.3	23.0	23.0
LTE Band 25/2	ANT 1	18.0	16.5	18.5	17.0	22.0	21.5	20.0	14.0	22.0	22.0
LTE Band 25/2 Other PA	ANT 1	18.0	16.5	18.5	17.0	22.0	21.5	20.0	14.0	22.0	22.0
LTE Band 66/4	ANT 0	19.7	19.7	18.2	18.2	23.0	19.7	19.7	16.2	23.0	23.0
LTE Band 66/4 Other PA	ANT 0	19.7	19.7	18.2	18.2	23.0	19.7	19.7	16.2	23.0	23.0
LTE Band 66/4	ANT 1	17.9	16.4	18.9	17.4	23.0	20.4	18.9	14.9	23.0	23.0
LTE Band 66/4 Other PA	ANT 1	17.9	16.4	18.9	17.4	23.0	20.4	18.9	14.9	23.0	23.0
LTE Band 26/5	ANT 0	28.3	28.3	22.5	22.5	23.0	25.3	25.3	22.5	23.0	23.0
LTE Band 26/5	ANT 1	22.2	20.7	23.9	22.2	23.0	25.4	23.9	20.3	23.0	23.0
LTE Band 7	ANT 1	18.2	16.7	21.2	19.7	23.0	20.7	19.2	13.7	23.0	23.0
LTE Band 7	ANT 9	20.7	20.7	19.7	19.7	23.0	20.7	20.7	19.7	23.0	23.0
LTE Band 12/17	ANT 0	31.0	31.0	23.2	23.2	23.0	24.2	24.2	23.2	23.0	23.0
LTE Band 12/17	ANT 1	23.3	22.5	24.6	23.1	23.0	37.8	36.3	22.5	23.0	23.0
LTE Band 13	ANT 0	29.6	29.6	23.0	23.0	23.0	27.8	27.8	23.0	23.0	23.0
LTE Band 13	ANT 1	22.5	21.1	25.1	23.6	23.0	36.9	35.4	22.1	23.0	23.0
LTE Band 14	ANT 0	29.2	29.2	23.7	23.7	23.0	27.8	27.8	23.7	23.0	23.0
LTE Band 14	ANT 1	22.2	20.7	23.8	21.7	23.0	26.2	25.1	21.2	23.0	23.0
LTE Band 30	ANT 1	18.6	17.1	18.6	17.1	23.0	20.1	18.6	13.1	23.0	23.0
LTE Band 30 Other PA	ANT 1	18.6	17.1	18.6	17.1	23.0	20.1	18.6	13.1	23.0	23.0
LTE Band 30	ANT 9	28.1	28.1	20.7	20.7	23.0	21.2	21.2	19.7	23.0	23.0
LTE Band 30 Other PA	ANT 9	28.1	28.1	20.7	20.7	21.5	21.2	21.2	19.7	21.5	21.5
LTE Band 71	ANT 0	33.3	33.3	23.8	23.8	23.0	27.7	27.7	23.8	23.0	23.0
LTE Band 71	ANT 1	27.1	25.6	27.6	26.1	23.0	31.5	30.0	24.4	23.0	23.0
LTE Band 41/38(PC3)**	ANT 1	17.9	16.4	20.4	18.9	21.0	22.8	21.3	12.9	21.0	21.0
LTE Band 41(PC2)**	ANT 1									20.9	20.9
LTE Band 41/38(PC3)**	ANT 9	21.4	21.4	18.8	18.8	21.4	21.4	21.4	16.3	21.0	21.0
LTE Band 41(PC2)**	ANT 9									21.4	21.4
LTE Band 41(PC3)**	ANT 2	22.6	21.1	17.1	15.6	20.0	24.8	23.3	12.1	20.0	20.0
LTE Band 41(PC2)**	ANT 2									19.4	19.4
LTE Band 41(PC3)**	ANT 5	23.3	21.8	16.8	15.3	21.0	24.5	23.0	13.8	21.0	21.0
LTE Band 41(PC2)**	ANT 5									20.9	20.9
LTE Band 48	ANT 4	21.2	19.7	18.2	16.7	21.0	21.6	20.5	15.2	21.0	21.0
LTE Band 48	ANT 7	14.8	13.3	16.3	14.7	21.0	20.3	18.8	12.3	21.0	21.0
LTE Band 48	ANT 8	18.0	16.5	19.0	17.5	18.5	25.0	23.5	15.5	18.5	18.5
LTE Band 48	ANT 10	36.8	35.3	13.7	12.2	21.0	20.5	19.2	10.2	21.0	21.0
n25/2	ANT 0	19.5	19.5	17.0	17.0	23.0	19.5	19.5	15.0	23.0	23.0
n25/2 Other PA	ANT 0	19.5	19.5	17.0	17.0	23.0	19.5	19.5	15.0	23.0	23.0
n25/2	ANT 1	16.0	14.5	16.5	15.0	23.0	20.0	19.0	12.5	23.0	23.0



n25/2 Other PA	ANT 1	16.0	14.5	16.5	15.0	23.0	20.0	19.0	12.5	23.0	23.0
n26/5	ANT 0	30.3	30.3	23.9	23.9	23.0	38.0	38.0	23.9	23.0	23.0
n26/5	ANT 1	23.5	21.5	24.7	23.3	23.0	35.5	34.0	20.5	23.0	23.0
n7	ANT 1	17.0	15.5	19.5	18.0	23.0	20.0	19.0	13.0	23.0	23.0
n7	ANT 9	21.0	21.0	19.0	19.0	23.0	21.0	21.0	19.0	23.0	23.0
n12	ANT 0	32.0	32.0	24.7	24.7	23.0	37.9	37.9	24.7	23.0	23.0
n12	ANT 1	25.0	23.5	25.3	23.9	23.0	37.8	36.3	22.5	23.0	23.0
n14	ANT 0	29.8	29.8	23.3	23.3	23.0	37.9	37.9	23.3	23.0	23.0
n14	ANT 1	22.0	20.5	23.6	22.0	23.0	37.9	36.4	21.5	23.0	23.0
n30	ANT 1	18.5	17.0	19.0	17.5	23.0	21.0	19.5	13.5	23.0	23.0
n30	ANT 9	29.1	29.1	20.5	20.5	23.0	21.0	21.0	20.0	23.0	23.0
n66	ANT 0	20.0	20.0	17.0	17.0	23.0	20.0	20.0	16.0	23.0	23.0
n66 Other PA	ANT 0	20.0	20.0	17.0	17.0	23.0	20.0	20.0	16.0	23.0	23.0
n66	ANT 1	16.0	14.5	16.5	15.0	23.0	20.0	19.0	13.5	23.0	23.0
n66 Other PA	ANT 1	16.0	14.5	16.5	15.0	23.0	20.0	19.0	13.5	23.0	23.0
n70	ANT 0	21.0	21.0	18.5	18.5	23.0	21.0	21.0	17.0	23.0	23.0
n70	ANT 1	17.0	15.5	16.5	15.0	23.0	21.5	20.5	14.0	23.0	23.0
n71	ANT 0	31.8	31.8	24.3	24.3	23.0	38.1	38.1	24.3	23.0	23.0
n71	ANT 1	26.0	24.5	26.4	24.9	23.0	38.3	36.8	26.4	23.0	23.0
n41/38(PC3)	ANT 1	18.0	16.5	20.0	18.5	26.0	21.0	20.0	13.0	23.0	23.0
n41(PC2)	ANT 1									26.0	26.0
n41/38(PC3)	ANT 9	21.5	21.5	19.0	19.0	26.0	21.5	21.5	19.0	23.0	23.0
n41(PC2)	ANT 9									26.0	26.0
n41(PC3)	ANT 2	22.5	21.0	18.0	17.0	23.0	24.7	23.2	15.5	21.0	21.0
n41(PC2)	ANT 2									23.0	23.0
n41(PC3)	ANT 5	21.5	20.0	15.5	14.0	25.0	24.7	23.5	12.5	23.0	23.0
n41(PC2)	ANT 5									25.0	25.0
n41(PC3)	ANT 6	25.1	23.6	28.2	26.7	23.5	37.7	36.2	25.1	21.5	21.5
n41(PC2)	ANT 6									23.5	23.5
n48	ANT 4	21.0	19.5	17.0	15.5	23.0	19.5	18.0	14.5	23.0	22.0
n48	ANT 7	15.5	14.0	16.0	14.5	23.0	19.0	18.0	12.5	23.0	22.0
n48	ANT 8	17.5	16.0	20.5	19.0	21.5	23.3	21.8	16.0	21.5	20.5
n48	ANT 10	38.5	38.5	14.0	13.0	23.0	19.5	18.5	12.0	23.0	22.0
n77/78(PC3)27Q/27O	ANT 4	18.0	16.5	15.5	14.0	26.0	19.5	18.5	12.5	23.0	19.0
n77/78(PC2)27Q/27O	ANT 4									26.0	22.0
n77/78(PC3)27Q/27O	ANT 7	16.0	14.5	17.0	15.5	25.0	24.5	23.0	13.0	23.0	19.0
n77/78(PC2)27Q/27O	ANT 7									25.0	21.0
n77/78(PC3)27Q/27O	ANT 10	34.9	34.9	12.5	11.5	24.0	17.5	16.5	8.0	22.0	18.0
n77/78(PC2)27Q/27O	ANT 10									24.0	20.0
n77/78 Par27O_(PC3)	ANT 8	17.5	16.0	18.0	16.5	22.0	23.9	22.4	15.5	20.0	16.0
n77/78 Par27O_(PC2)	ANT 8									22.0	18.0
n77Par27Q_(PC3)	ANT 8	18.5	16.0	18.0	16.5	21.5	23.9	22.4	15.5	19.5	15.5
n77Par27Q_(PC2)	ANT 8									21.5	17.5
n78Par27Q_(PC3)	ANT 8	18.5	16.0	18.0	16.5	21.0	23.9	22.4	15.5	19.0	15.0
n78Par27Q_(PC2)	ANT 8									21.0	17.0

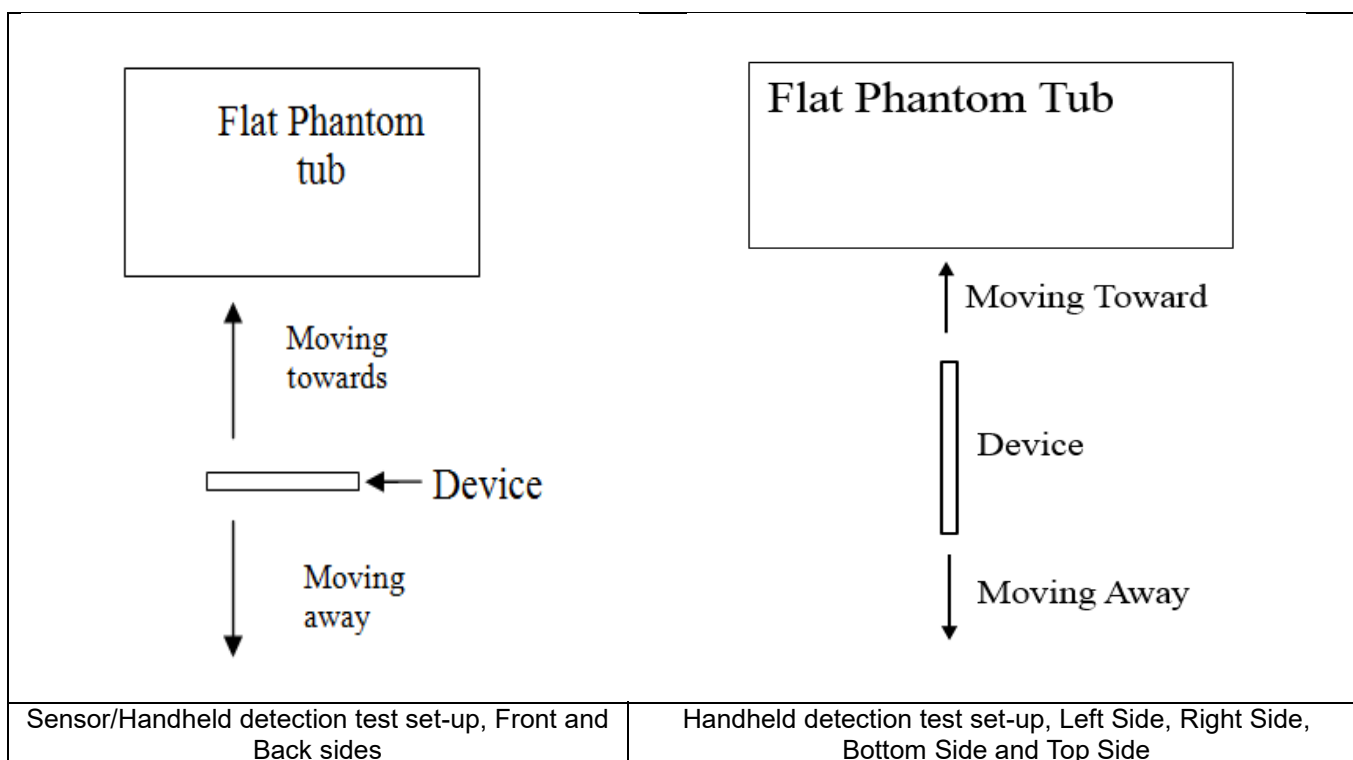
Note:

- 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) When the user is talking a call-in head scenario and the receiver detect mechanism trigger is earpiece on, the maximum power level for head exposure conditions will be reduced and is less than the full power level.

6. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

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



<P-Sensor>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	14	14	21	21

<Handheld for ANT 0&9>

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	7	7	10	10	3	3	13	13

<Handheld for ANT1&4&5&6>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	6	12	12	8	8	9	9

<Handheld for ANT2&3&7&8>

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	4	4	5	5	8	8	8	8

<Handheld for ANT 10>

Proximity Sensor Triggering Distance (mm)		
Position	Back	
	Moving towards	Moving away
Minimum	6	6

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:

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

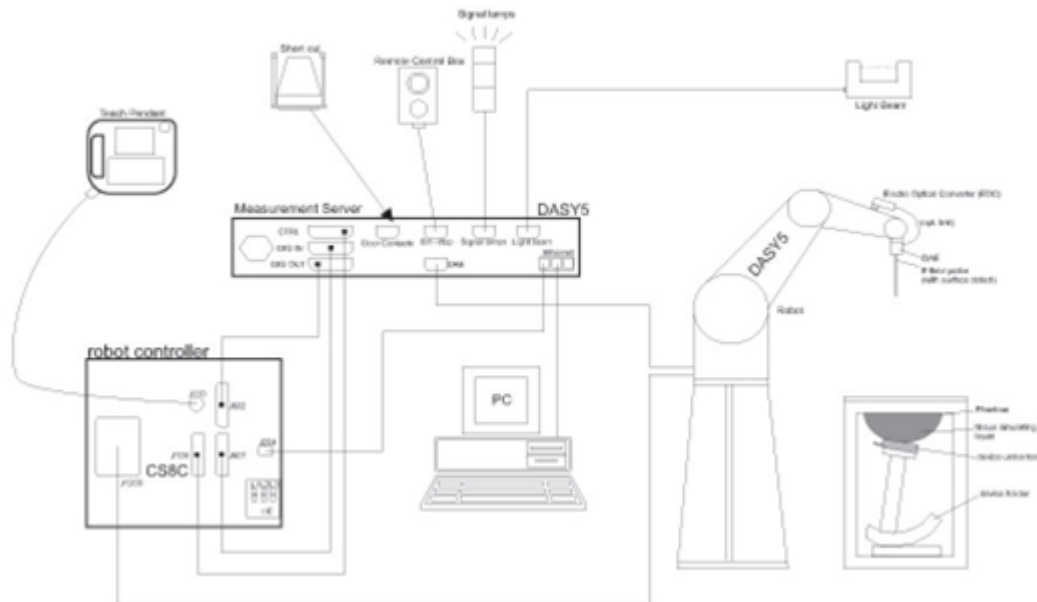
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

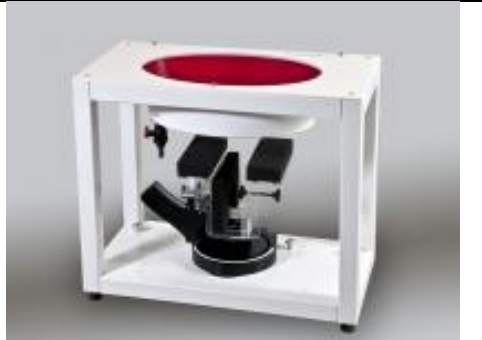
9.3 Phantom

<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	
<p>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.</p> <p>* 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.</p>				

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 DASYS 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	1099	Dec. 15, 2021	Dec. 13, 2024
SPEAG	835MHz System Validation Kit	D835V2	4d162	Dec. 17, 2021	Dec. 15, 2024
SPEAG	1750MHz System Validation Kit	D1750V2	1090	Feb. 24, 2022	Feb. 23, 2025
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	Dec. 20, 2021	Dec. 18, 2024
SPEAG	2300MHz System Validation Kit	D2300V2	1055	Aug. 21, 2023	Aug. 20, 2024
SPEAG	2450MHz System Validation Kit	D2450V2	1040	Apr. 25, 2023	Apr. 24, 2024
SPEAG	2600MHz System Validation Kit	D2600V2	1070	Dec. 20, 2021	Dec. 18, 2024
SPEAG	3500MHz System Validation Kit	D3500V2	1076	May. 09, 2022	May. 08, 2025
SPEAG	3700MHz System Validation Kit	D3700V2	1037	May. 09, 2022	May. 08, 2025
SPEAG	3900MHz System Validation Kit	D3900V2	1048	Mar. 09, 2023	Mar. 08, 2024
SPEAG	5000MHz System Validation Kit	D5GHZV2	1341	Dec. 13, 2021	Dec. 11, 2024
SPEAG	Data Acquisition Electronics	DAE4	1386	Jul. 17, 2023	Jul. 16, 2024
SPEAG	Data Acquisition Electronics	DAE3	393	Apr. 13, 2023	Apr. 12, 2024
SPEAG	Dosimetric E-Field Probe	EX3DV4	3819	Jun. 06, 2023	Jun. 05, 2024
SPEAG	Dosimetric E-Field Probe	EX3DV4	7576	Aug. 23, 2023	Aug. 22, 2024
SPEAG	SAM Twin Phantom	QD 000 P40 CD	1671	NCR	NCR
SPEAG	SAM Twin Phantom	QD 000 P40 CB	TP-1500	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio communication analyzer	MT8820C	6201300653	Jul. 05, 2023	Jul. 04, 2024
Anritsu	Radio communication analyzer	MT8821C	6262314715	Jul. 05, 2023	Jul. 04, 2024
Anritsu	Radio communication analyzer	MT8821C	6272278319	Jul. 05, 2023	Jul. 04, 2024
Agilent	Wireless Communication Test Set	E5515C	MY50267224	Jul. 05, 2023	Jul. 04, 2024
Keysight	Network Analyzer	E5071C	MY46523671	Oct. 16, 2023	Oct. 15, 2024
Speag	Dielectric Assessment KIT	DAK-3.5	1071	Feb. 20, 2023	Feb. 19, 2024
Agilent	Signal Generator	N5181A	MY50145381	Dec. 27, 2022	Dec. 26, 2023
Agilent	Signal Generator	N5181A	MY50145381	Dec. 28, 2023	Dec. 27, 2024
R&S	Signal Generator	SMBV100B	103241	Apr. 06, 2023	Apr. 05, 2024
Anritsu	Power Meter	ML2495A	1349001	Oct. 16, 2023	Oct. 15, 2024
Anritsu	Power Meter	ML2495A	1339473	Dec. 27, 2022	Dec. 26, 2023
Anritsu	Power Meter	ML2495A	1339473	Dec. 28, 2023	Dec. 27, 2024
R&S	Power Sensor	NRP50S	101254	Apr. 06, 2023	Apr. 05, 2024
R&S	Power Sensor	NRP8S	109228	Apr. 06, 2023	Apr. 05, 2024
R&S	CBT BLUETOOTH TESTER	CBT	100963	Dec. 27, 2022	Dec. 26, 2023
R&S	CBT BLUETOOTH TESTER	CBT	100963	Dec. 28, 2023	Dec. 27, 2024
R&S	Spectrum Analyzer	FSP7	100818	Jul. 05, 2023	Jul. 04, 2024
TES	Hygrometer	1310	200505600	Jul. 08, 2023	Jul. 07, 2024
Anymetre	Thermo-Hygrometer	JR593	2015030904	Jul. 08, 2023	Jul. 07, 2024
Anymetre	Thermo-Hygrometer	JR593	2020062101	Jul. 08, 2023	Jul. 07, 2024
AR	Amplifier	5S1G4	0333096	Note 1	
Mini-Circuits	Amplifier	ZVE-3W-83+	599201528	Note 1	
Mini-Circuits	Amplifier	ZVA-183W-S+	726202215	Note 1	
SPEAG	Device Holder	N/A	N/A	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
ET Industries	Dual Directional Coupler	C-058-10	N/A	Note 1	
Weinschel	Attenuator 1	3M-10	N/A	Note 1	
Weinschel	Attenuator 2	3M-20	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.

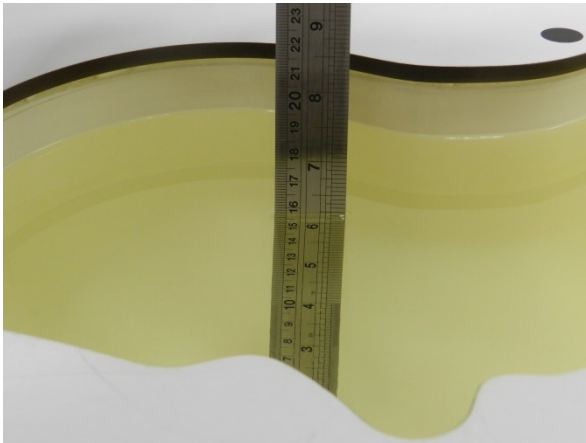


Fig 11.1 Photo of Liquid Height for Head SAR

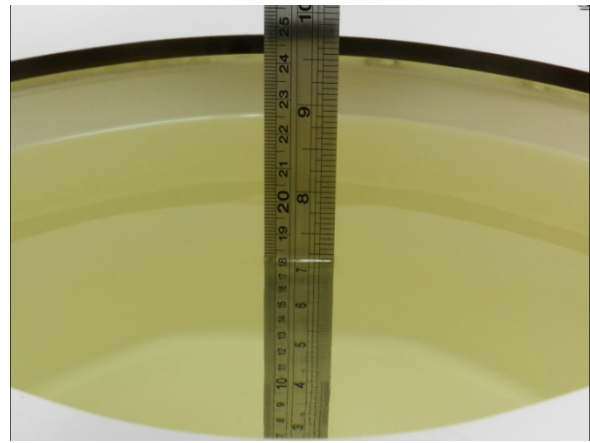


Fig 11.2 Photo of Liquid Height for Body SAR

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	22.3	0.927	43.500	0.89	41.90	4.16	3.82	±5	2023/12/18
750	Head	22.2	0.895	41.004	0.89	41.90	0.56	-2.14	±5	2023/12/20
750	Head	22.3	0.885	40.799	0.89	41.90	-0.56	-2.63	±5	2023/12/22
835	Head	22.5	0.901	41.929	0.90	41.50	0.11	1.03	±5	2023/12/19
835	Head	22.4	0.904	41.212	0.90	41.50	0.44	-0.69	±5	2023/12/23
835	Head	22.2	0.897	40.781	0.90	41.50	-0.33	-1.73	±5	2024/1/1
1750	Head	22.5	1.399	38.836	1.37	40.10	2.12	-3.15	±5	2023/12/23
1750	Head	22.2	1.310	38.143	1.37	40.10	-4.38	-4.88	±5	2023/12/26
1750	Head	22.4	1.407	41.717	1.37	40.10	2.70	4.03	±5	2024/1/3
1900	Head	22.5	1.467	39.859	1.40	40.00	4.79	-0.35	±5	2023/12/24
1900	Head	22.2	1.439	40.038	1.40	40.00	2.79	0.09	±5	2023/12/25
1900	Head	22.1	1.453	39.107	1.40	40.00	3.79	-2.23	±5	2024/1/4
2300	Head	22.2	1.662	38.225	1.67	39.50	-0.48	-3.23	±5	2023/12/20
2300	Head	22.3	1.664	38.851	1.67	39.50	-0.36	-1.64	±5	2023/12/21
2300	Head	22.5	1.710	37.893	1.67	39.50	2.40	-4.07	±5	2023/12/30
2450	Head	22.6	1.829	39.852	1.80	39.20	1.61	1.66	±5	2023/12/21
2450	Head	22.3	1.820	39.753	1.80	39.20	1.11	1.41	±5	2023/12/26
2450	Head	22.4	1.807	37.921	1.80	39.20	0.39	-3.26	±5	2024/1/5
2600	Head	22.4	1.931	38.414	1.96	39.00	-1.48	-1.50	±5	2023/12/22
2600	Head	22.5	2.053	38.335	1.96	39.00	4.74	-1.71	±5	2023/12/26
2600	Head	22.3	2.054	38.328	1.96	39.00	4.80	-1.72	±5	2024/1/7
3500	Head	22.5	2.795	38.151	2.91	37.90	-3.95	0.66	±5	2023/12/28
3500	Head	22.3	2.896	38.203	2.91	37.90	-0.48	0.80	±5	2024/1/2
3500	Head	22.6	2.813	39.758	2.91	37.90	-3.33	4.90	±5	2024/1/10
3700	Head	22.3	3.019	37.827	3.12	37.70	-3.24	0.34	±5	2023/12/29
3700	Head	22.4	3.048	37.958	3.12	37.70	-2.31	0.68	±5	2024/1/4
3700	Head	22.3	2.967	39.530	3.12	37.70	-4.90	4.85	±5	2024/1/12
3900	Head	22.3	3.192	37.536	3.33	37.51	-4.14	0.07	±5	2023/12/30
3900	Head	22.6	3.208	37.743	3.33	37.51	-3.66	0.62	±5	2024/1/6
3900	Head	22.7	3.191	39.349	3.33	37.51	-4.17	4.90	±5	2024/1/14
5250	Head	22.3	4.565	35.648	4.71	35.95	-3.08	-0.84	±5	2023/12/25
5250	Head	22.4	4.580	36.143	4.71	35.95	-2.76	0.54	±5	2024/1/8
5250	Head	22.2	4.576	36.184	4.71	35.95	-2.85	0.65	±5	2024/1/16
5600	Head	22.5	4.947	35.037	5.07	35.50	-2.43	-1.30	±5	2023/12/26
5600	Head	22.1	4.982	35.523	5.07	35.50	-1.74	0.06	±5	2024/1/10
5600	Head	22.4	4.979	35.568	5.07	35.50	-1.79	0.19	±5	2024/1/18
5750	Head	22.3	5.100	34.774	5.22	35.35	-2.30	-1.63	±5	2023/12/26
5750	Head	22.2	5.148	35.308	5.22	35.35	-1.38	-0.12	±5	2024/1/12
5750	Head	22.3	5.147	35.363	5.22	35.35	-1.40	0.04	±5	2024/1/26



12.3 System Performance Check Results

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

<1g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2023/12/18	750	Head	250	1099	7576	1386	2.110	8.540	8.44	-1.17
2023/12/20	750	Head	250	1099	7576	1386	2.230	8.540	8.92	4.45
2023/12/22	750	Head	250	1099	7576	1386	2.220	8.540	8.88	3.98
2023/12/19	835	Head	250	4d162	7576	1386	2.450	9.640	9.8	1.66
2023/12/23	835	Head	250	4d162	7576	1386	2.510	9.640	10.04	4.15
2024/1/1	835	Head	250	4d162	7576	1386	2.520	9.640	10.08	4.56
2023/12/23	1750	Head	250	1090	7576	1386	9.710	37.000	38.84	4.97
2023/12/26	1750	Head	250	1090	7576	1386	9.520	37.000	38.08	2.92
2024/1/3	1750	Head	250	1090	7576	1386	9.160	37.000	36.64	-0.97
2023/12/24	1900	Head	250	5d182	7576	1386	10.300	39.600	41.2	4.04
2023/12/25	1900	Head	250	5d182	7576	1386	9.680	39.600	38.72	-2.22
2024/1/4	1900	Head	250	5d182	7576	1386	9.600	39.600	38.4	-3.03
2023/12/20	2300	Head	250	1055	3819	393	12.100	48.400	48.4	0.00
2023/12/21	2300	Head	250	1055	3819	393	11.500	48.400	46	-4.96
2023/12/30	2300	Head	250	1055	3819	393	12.200	48.400	48.8	0.83
2023/12/21	2450	Head	250	1040	7576	1386	12.600	52.700	50.4	-4.36
2023/12/26	2450	Head	250	1040	7576	1386	13.200	52.700	52.8	0.19
2024/1/5	2450	Head	250	1040	7576	1386	12.800	52.700	51.2	-2.85
2023/12/22	2600	Head	250	1070	7576	1386	13.900	56.200	55.6	-1.07
2023/12/26	2600	Head	250	1070	7576	1386	13.800	56.200	55.2	-1.78
2024/1/7	2600	Head	250	1070	7576	1386	14.400	56.200	57.6	2.49
2023/12/28	3500	Head	100	1076	7576	1386	6.730	66.200	67.3	1.66
2024/1/2	3500	Head	100	1076	7576	1386	6.810	66.200	68.1	2.87
2024/1/10	3500	Head	100	1076	7576	1386	6.840	66.200	68.4	3.32
2023/12/29	3700	Head	100	1037	7576	1386	6.700	66.700	67	0.45
2024/1/4	3700	Head	100	1037	7576	1386	6.760	66.700	67.6	1.35
2024/1/12	3700	Head	100	1037	7576	1386	6.580	66.700	65.8	-1.35
2023/12/30	3900	Head	100	1048	7576	1386	6.900	69.100	69	-0.14
2024/1/6	3900	Head	100	1048	7576	1386	6.830	69.100	68.3	-1.16
2024/1/14	3900	Head	100	1048	7576	1386	6.750	69.100	67.5	-2.32
2023/12/25	5250	Head	100	1341	7576	1386	7.820	80.700	78.2	-3.10
2024/1/8	5250	Head	100	1341	7576	1386	7.850	80.700	78.5	-2.73
2024/1/16	5250	Head	100	1341	7576	1386	7.840	80.700	78.4	-2.85
2023/12/26	5600	Head	100	1341	7576	1386	8.550	84.500	85.5	1.18
2024/1/10	5600	Head	100	1341	7576	1386	8.610	84.500	86.1	1.89
2024/1/18	5600	Head	100	1341	7576	1386	8.500	84.500	85	0.59
2023/12/26	5750	Head	100	1341	7576	1386	8.380	80.600	83.8	3.97
2024/1/12	5750	Head	100	1341	7576	1386	8.070	80.600	80.7	0.12
2024/1/26	5750	Head	100	1341	7576	1386	8.170	80.600	81.7	1.36



<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 (%)
2023/12/18	750	Head	250	1099	7576	1386	1.370	5.650	5.48	-3.01
2023/12/20	750	Head	250	1099	7576	1386	1.430	5.650	5.72	1.24
2023/12/22	750	Head	250	1099	7576	1386	1.480	5.650	5.92	4.78
2023/12/19	835	Head	250	4d162	7576	1386	1.570	6.260	6.28	0.32
2023/12/23	835	Head	250	4d162	7576	1386	1.530	6.260	6.12	-2.24
2024/1/1	835	Head	250	4d162	7576	1386	1.570	6.260	6.28	0.32
2023/12/23	1750	Head	250	1090	7576	1386	5.050	19.500	20.2	3.59
2023/12/26	1750	Head	250	1090	7576	1386	5.080	19.500	20.32	4.21
2024/1/3	1750	Head	250	1090	7576	1386	4.970	19.500	19.88	1.95
2023/12/24	1900	Head	250	5d182	7576	1386	5.290	20.200	21.16	4.75
2023/12/25	1900	Head	250	5d182	7576	1386	5.030	20.200	20.12	-0.40
2024/1/4	1900	Head	250	5d182	7576	1386	5.220	20.200	20.88	3.37
2023/12/20	2300	Head	250	1055	3819	393	5.700	23.700	22.8	-3.80
2023/12/21	2300	Head	250	1055	3819	393	5.870	23.700	23.48	-0.93
2023/12/30	2300	Head	250	1055	3819	393	5.650	23.700	22.6	-4.64
2023/12/21	2450	Head	250	1040	7576	1386	5.930	24.600	23.72	-3.58
2023/12/26	2450	Head	250	1040	7576	1386	5.860	24.600	23.44	-4.72
2024/1/5	2450	Head	250	1040	7576	1386	5.850	24.600	23.4	-4.88
2023/12/22	2600	Head	250	1070	7576	1386	5.910	24.600	23.64	-3.90
2023/12/26	2600	Head	250	1070	7576	1386	6.250	24.600	25	1.63
2024/1/7	2600	Head	250	1070	7576	1386	6.150	24.600	24.6	0.00
2023/12/28	3500	Head	100	1076	7576	1386	2.610	25.500	26.1	2.35
2024/1/2	3500	Head	100	1076	7576	1386	2.530	25.500	25.3	-0.78
2024/1/10	3500	Head	100	1076	7576	1386	2.530	25.500	25.3	-0.78
2023/12/29	3700	Head	100	1037	7576	1386	2.470	24.600	24.7	0.41
2024/1/4	3700	Head	100	1037	7576	1386	2.490	24.600	24.9	1.22
2024/1/12	3700	Head	100	1037	7576	1386	2.420	24.600	24.2	-1.63
2023/12/30	3900	Head	100	1048	7576	1386	2.510	24.100	25.1	4.15
2024/1/6	3900	Head	100	1048	7576	1386	2.420	24.100	24.2	0.41
2024/1/14	3900	Head	100	1048	7576	1386	2.410	24.100	24.1	0.00
2023/12/25	5250	Head	100	1341	7576	1386	2.320	23.100	23.2	0.43
2024/1/8	5250	Head	100	1341	7576	1386	2.230	23.100	22.3	-3.46
2024/1/16	5250	Head	100	1341	7576	1386	2.330	23.100	23.3	0.87
2023/12/26	5600	Head	100	1341	7576	1386	2.330	24.000	23.3	-2.92
2024/1/10	5600	Head	100	1341	7576	1386	2.340	24.000	23.4	-2.50
2024/1/18	5600	Head	100	1341	7576	1386	2.290	24.000	22.9	-4.58
2023/12/26	5750	Head	100	1341	7576	1386	2.180	22.700	21.8	-3.96
2024/1/12	5750	Head	100	1341	7576	1386	2.210	22.700	22.1	-2.64
2024/1/26	5750	Head	100	1341	7576	1386	2.170	22.700	21.7	-4.41

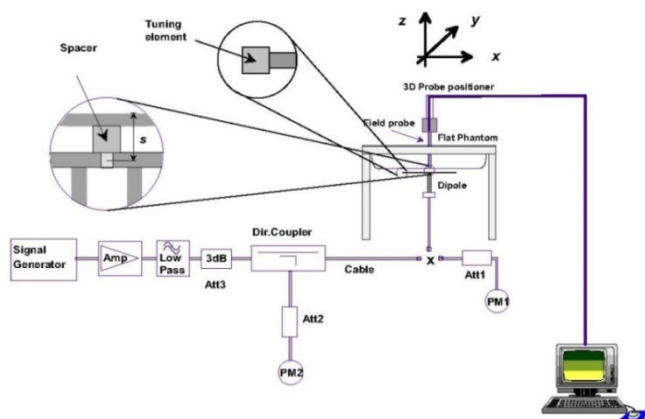


Fig 11.3.1 System Performance Check Setup



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.

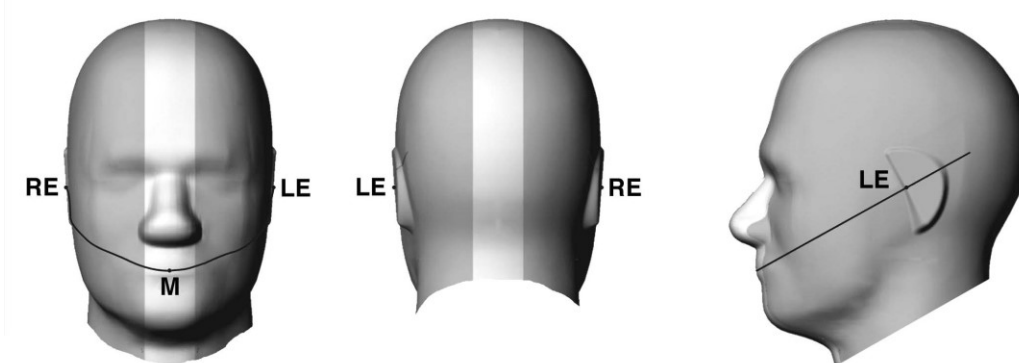


Fig 12.1.1 Front, back, and side views of SAM twin phantom

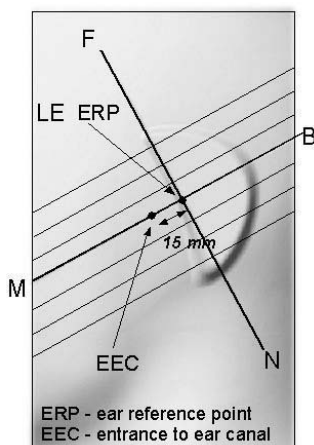


Fig 12.1.2 Close-up side view of phantom showing the ear region.

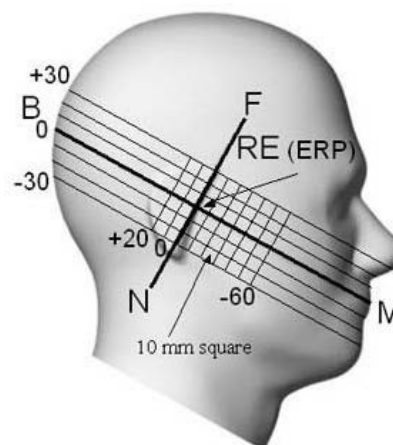


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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.

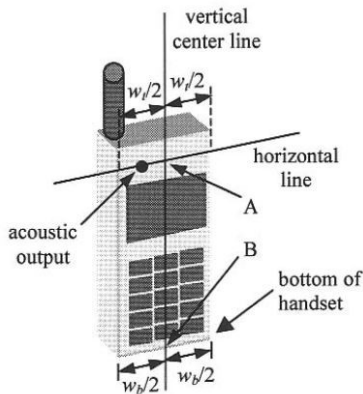


Fig 12.2.1 Handset vertical and horizontal reference lines—“fixed case”

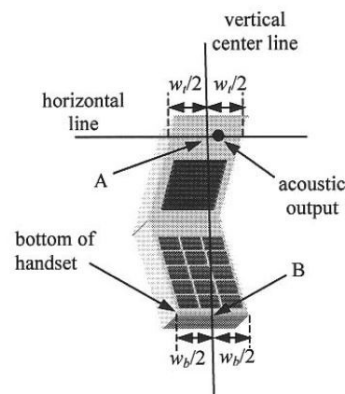


Fig 12.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

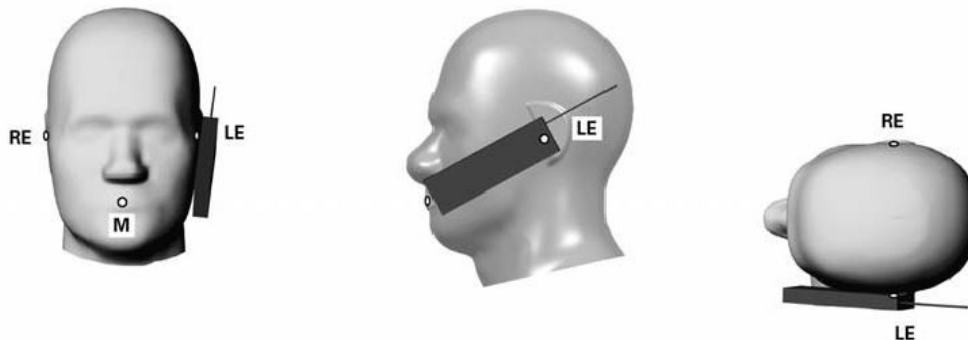


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

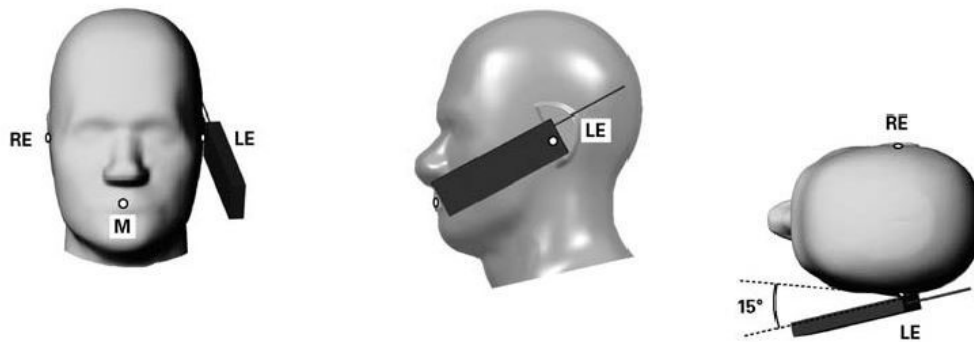


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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.

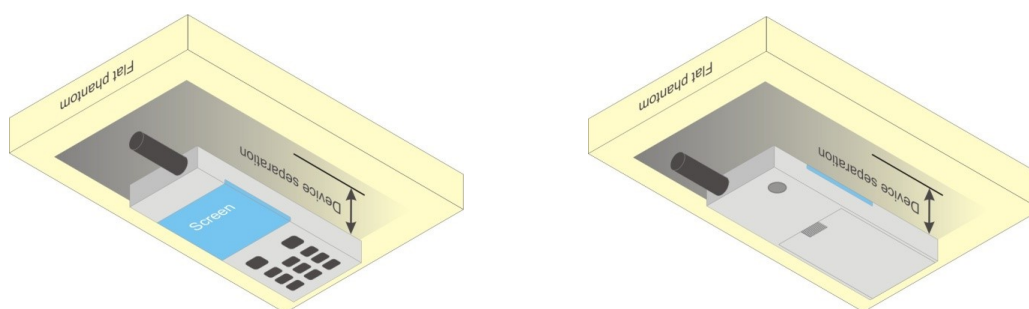


Fig 12.4 Body Worn Position

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.		

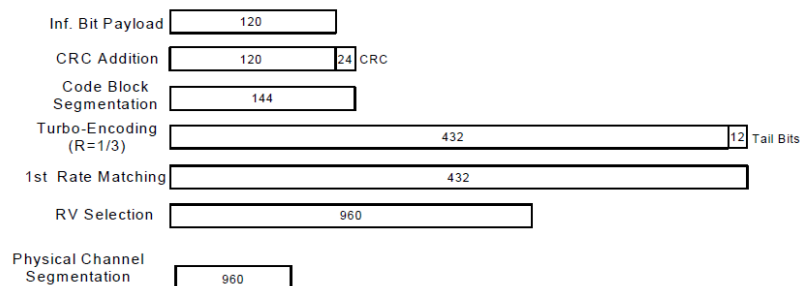


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK) Setup Configuration

HSPA+ 3GPP release 7 (uplink category 7) 16QAM, Setup Configuration:

1. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
2. The RF path losses were compensated into the measurements.
3. A call was established between EUT and Base Station with following setting * :
 - i. Call Configs = 5.2E:HSPA+:UL with 16QAM
 - 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, C11.1.4, quoted from the TS 34.121-1 s5.2E
 - iii. Set Channel Parmns
 - iv. Set Cell Power = -86 dBm
 - v. Set Channel Type = HSPA
 - vi. Set UE Target Power =21 dBm
 - vii. Power Ctrl Mode= All Up Bits
 - viii. Set Manual Uplink DPCH Bc/Bd = Manual
 - ix. Set Manual Uplink DPCH Bc and Bd=15,15(for 34.121-1 v8.10.0 table C11.1.4 sub-test 1)
 - x. Set HSPA Conn DL Channel Levels
 - xi. Set HS-SCCH Configs
 - xii. Set RB Test Mode Setup
 - xiii. Set Common HSUPA Parameters
 - xiv. Set Serving Grant
 - xv. Confirm that E-TFCI is equal to the target E-TFCI of 105 for sub-test 1, and other subtest's E-TFCI
4. The transmitted maximum output power was recorded.

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105

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

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).

Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default.

Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.

Setup Configuration



<WCDMA Conducted Power>

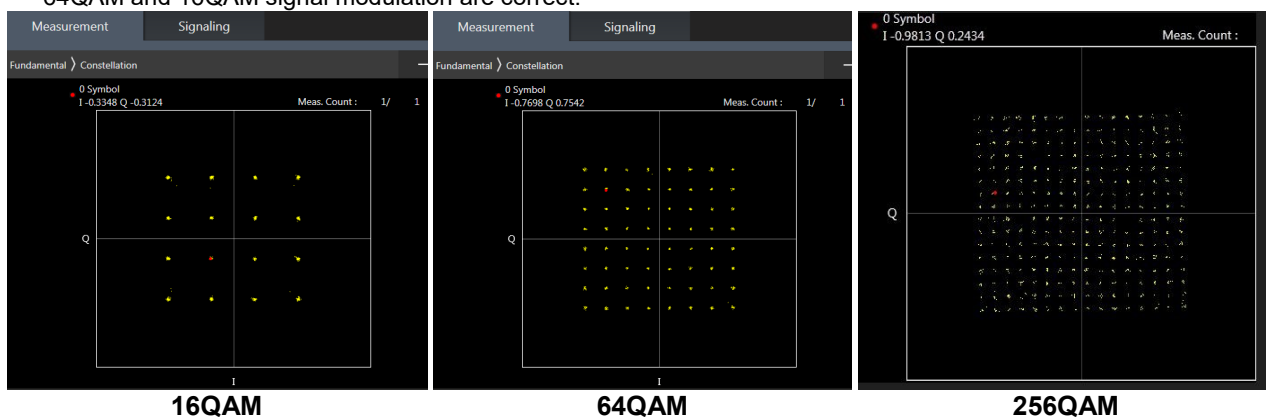
General Note:

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 / HSPA+ 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 / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

<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 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B2 /B4 /B5 / B17 / B38 SAR test was covered by B25 / B66 / B26 / B12 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is \leq the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to May 2017 TCB workshop, for 16QAM and 64QAM, 256QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 256QAM, 64QAM and 16QAM signal modulation are correct.



<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.

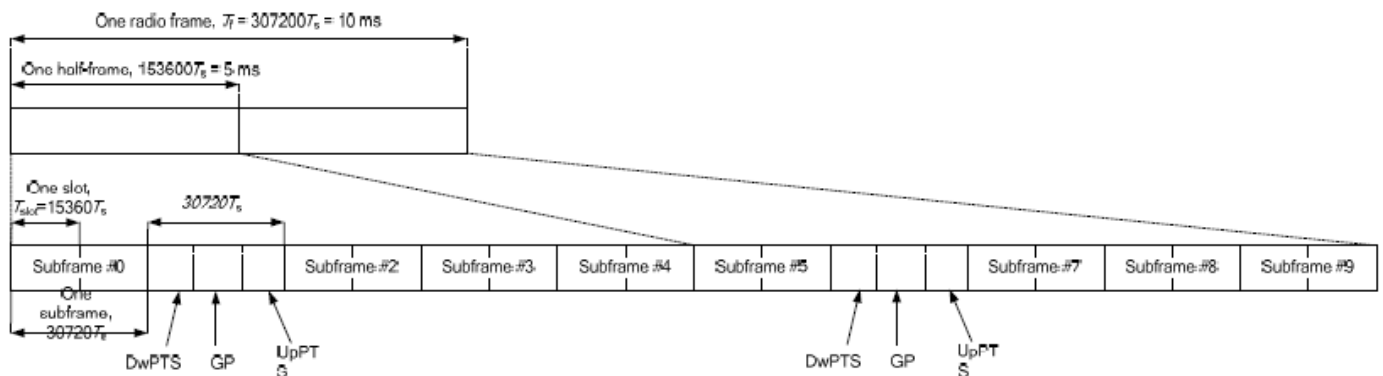


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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:

5. 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.
6. 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.
7. The gray color table is covered by other combinations and no need to verify power.
8. All permutations exist, no restrictions on Pcell & Scell combinations but Only LTE Band 29A is limited to Scell.

2CC Downlink Carrier Aggregation				3CC Downlink Carrier Aggregation				4CC Downlink Carrier Aggregation			
Number	Combination	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset
1	CA_12A-30A	30A	3CC-1	1	CA_12A-30A-66A	30A-66A, 66A, 30A	4CC-1	1	CA_12A-30A-66A-66A	66A, 30A	
2	CA_12A-66A	66A	3CC-2	2	CA_12A-66A-66A	66A-66A, 66A	4CC-1	2	CA_12B-66A-66A	66A	
3	CA_12B		3CC-4	3	CA_12A-66C	66C, 66A	4CC-12	3	CA_13A-48A-48C	48A	
4	CA_13A-48A	48A	3CC-5	4	CA_12B-66A	66A	4CC-2	4	CA_13A-48A-66B	48A	
5	CA_13A-66A	66A	3CC-8	5	CA_13A-48A-48A	48A-48A, 48A		5	CA_13A-48A-66C	48A	
6	CA_14A-30A	30A	3CC-11	6	CA_13A-48A-66A	48A-66A, 66A, 48A		6	CA_13A-48C-66A	66A	
7	CA_14A-66A	66A	3CC-12	7	CA_13A-48C	48C, 48A	4CC-3	7	CA_13A-48D		
8	CA_25A-25A	25A-25A, 25A	3CC-13	8	CA_13A-66A-66A	66A-66A, 66A	4CC-15	8	CA_13A-66A-66B	66A	
9	CA_25A-26A	25A	3CC-13	9	CA_13A-66B	66B, 66A	4CC-8	9	CA_14A-66A-66A-66A	66A	
10	CA_25A-41A	25A-41A, 41A, 25A		10	CA_13A-66C	66C, 66A	4CC-17	10	CA_25A-41D	25A	
11	CA_25A-66A	25A-66A, 66A, 25A	3CC-14	11	CA_14A-30A-66A	30A-66A, 66A, 30A		11	CA_2A-12A-66A-66A	66A, 2A	
12	CA_26A-41A	41A		12	CA_14A-66A-66A	66A-66A, 66A	4CC-9	12	CA_2A-12A-66C	2A	
13	CA_29A-30A	30A	3CC-17	13	CA_25A-25A-26A	25A-25A, 25A		13	CA_2A-12B-66A	66A, 2A	
14	CA_29A-66A	66A	3CC-17	14	CA_25A-25A-66A	25A-66A, 25A-25A, 66A, 25A	4CC-89	14	CA_2A-13A-48C	2A	
15	CA_2A-12A	2A	3CC-19	15	CA_25A-41C	41C, 41A, 25A		15	CA_2A-13A-66A-66A	66A, 2A	
16	CA_2A-13A	2A	3CC-22	16	CA_26A-41C	41C, 41A		16	CA_2A-13A-66B	2A	
17	CA_2A-14A	2A	3CC-24	17	CA_29A-30A-66A	30A-66A, 66A, 30A		17	CA_2A-13A-66C	2A	
18	CA_2A-17A	2A		18	CA_29A-66A-66A	66A-66A, 66A		18	CA_2A-2A-12A-66A	66A, 2A	
19	CA_2A-29A	2A	3CC-26	19	CA_2A-12A-30A	2A-30A, 30A, 2A		19	CA_2A-2A-12B	2A	
20	CA_2A-2A	2A-2A, 2A	3CC-28	20	CA_2A-12A-66A	2A-66A, 66A, 2A	4CC-11	20	CA_2A-2A-13A-66A	66A, 2A	
21	CA_2A-30A	2A-30A, 30A, 2A	3CC-32	21	CA_2A-12B	2A	4CC-13	21	CA_2A-2A-14A-30A	30A, 2A	
22	CA_2A-48A	2A-48A, 48A, 2A	3CC-39	22	CA_2A-13A-48A	2A-48A, 48A, 2A		22	CA_2A-2A-4A-12A	4A, 2A	
23	CA_2A-4A	2A-4A, 4A, 2A	3CC-33	23	CA_2A-13A-66A	2A-66A, 66A, 2A	4CC-15	23	CA_2A-2A-4A-4A	4A, 2A	
24	CA_2A-5A	2A	3CC-34	24	CA_2A-14A-30A	2A-30A, 30A, 2A	4CC-21	24	CA_2A-2A-4A-5A	4A, 2A	
25	CA_2A-66A	2A-66A, 66A, 2A	3CC-35	25	CA_2A-14A-66A	2A-66A, 66A, 2A		25	CA_2A-2A-4A-71A	4A, 2A	
26	CA_2A-71A	2A	3CC-36	26	CA_2A-29A-30A	2A-30A, 30A, 2A		26	CA_2A-2A-5A-66A	66A, 2A	
27	CA_2A-7A	2A-7A, 7A, 2A	3CC-37	27	CA_2A-29A-66A	2A-66A, 66A, 2A		27	CA_2A-2A-5B	2A	
28	CA_2C	2C, 2A	3CC-65	28	CA_2A-2A-12A	2A-2A, 2A	4CC-18	28	CA_2A-2A-66A-66A	66A, 2A	
29	CA_30A-66A	30A-66A, 66A, 30A	3CC-1	29	CA_2A-2A-13A	2A-2A, 2A	4CC-20	29	CA_2A-2A-66A-71A	66A, 2A	
30	CA_41A-41A	41A-41A, 41A		30	CA_2A-2A-14A	2A-2A, 2A	4CC-21	30	CA_2A-2A-66B	2A	
31	CA_41A-48A	41A-48A, 48A, 41A		31	CA_2A-2A-29A	2A-2A, 2A		31	CA_2A-2A-66C	2A	
32	CA_41C	41C, 41A	3CC-68	32	CA_2A-2A-30A	2A-30A, 2A-2A, 30A, 2A	4CC-21	32	CA_2A-2A-7A-12A	7A, 2A	
33	CA_48A-48A	48A-48A, 48A	3CC-5	33	CA_2A-2A-4A	2A-4A, 2A-2A, 4A, 2A	4CC-22	33	CA_2A-2A-7A-66A	7A, 66A, 2A	
34	CA_48A-66A	48A-66A, 66A, 48A	3CC-6	34	CA_2A-2A-5A	2A-2A, 2A	4CC-24	34	CA_2A-48A-48C	48A, 2A	
35	CA_48A-71A	48A	3CC-71	35	CA_2A-2A-66A	2A-66A, 2A-2A, 66A, 2A	4CC-18	35	CA_2A-48A-66A-66A	66A, 48A, 2A	
36	CA_48B	48B, 48A		36	CA_2A-2A-71A	2A-2A, 2A	4CC-25	36	CA_2A-48C-66A	66A, 2A	
37	CA_48C	48C, 48A	3CC-7	37	CA_2A-2A-7A	2A-7A, 2A-2A, 7A, 2A	4CC-32	37	CA_2A-48D	2A	
38	CA_4A-12A	4A	3CC-42	38	CA_2A-30A-66A	30A-66A, 2A-66A, 2A-30A, 66A, 30A, 2A		38	CA_2A-4A-12B	4A, 2A	
39	CA_4A-13A	4A	3CC-43	39	CA_2A-48A-48A	48A-48A, 2A-48A, 48A, 2A		39	CA_2A-4A-4A-12A	4A, 2A	
40	CA_4A-17A	4A		40	CA_2A-48A-66A	48A-66A, 2A-66A, 2A-48A, 66A, 48A, 2A	4CC-35	40	CA_2A-4A-4A-5A	4A, 2A	
41	CA_4A-29A	4A	3CC-44	41	CA_2A-48C	48C, 48A, 2A	4CC-34	41	CA_2A-4A-5B	4A, 2A	
42	CA_4A-30A	4A-30A, 4A, 30A	3CC-45	42	CA_2A-4A-12A	2A-4A, 4A, 2A	4CC-22	42	CA_2A-4A-7A-7A	7A, 4A, 2A	
43	CA_4A-48A	4A-48A, 4A, 48A		43	CA_2A-4A-13A	2A-4A, 4A, 2A		43	CA_2A-4A-7C	4A, 2A	



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44	CA_4A-4A	4A-4A, 4A	3CC-46	44	CA_2A-4A-29A	2A-4A, 4A, 2A		44	CA_2A-5A-48C	2A	
45	CA_4A-5A	4A	3CC-47	45	CA_2A-4A-30A	4A-30A, 2A-4A, 2A-30A, 4A, 30A, 2A		45	CA_2A-5A-5A-66A	66A, 2A	
46	CA_4A-71A	4A	3CC-48	46	CA_2A-4A-4A	4A-4A, 2A-4A, 4A, 2A	4CC-23	46	CA_2A-5A-66A-66A	66A, 2A	
47	CA_4A-7A	4A-7A, 7A, 4A	3CC-49	47	CA_2A-4A-5A	2A-4A, 4A, 2A	4CC-24	47	CA_2A-5A-66B	2A	
48	CA_5A-30A	30A	3CC-50	48	CA_2A-4A-71A	2A-4A, 4A, 2A	4CC-25	48	CA_2A-5A-66C	2A	
49	CA_5A-41A	41A		49	CA_2A-4A-7A	4A-7A, 2A-7A, 2A-4A, 7A, 4A, 2A	4CC-42	49	CA_2A-5A-7A-7A	7A, 2A	
50	CA_5A-48A	48A	3CC-95	50	CA_2A-5A-30A	2A-30A, 30A, 2A		50	CA_2A-5B-66A	66A, 2A	
51	CA_5A-5A		3CC-97	51	CA_2A-5A-48A	2A-48A, 48A, 2A		51	CA_2A-66A-66A-66A	66A, 2A	
52	CA_5A-66A	66A	3CC-97	52	CA_2A-5A-66A	2A-66A, 66A, 2A	4CC-26	52	CA_2A-66A-66A-71A	66A, 2A	
53	CA_5A-7A	7A	3CC-53	53	CA_2A-5A-7A	2A-7A, 7A, 2A	4CC-49	53	CA_2A-66A-66B	66A, 2A	
54	CA_5B		3CC-54	54	CA_2A-5B	2A	4CC-27	54	CA_2A-66C-71A	2A	
55	CA_66A-66A	66A-66A, 66A	3CC-2	55	CA_2A-66A-66A	66A-66A, 2A-66A, 66A, 2A	4CC-11	55	CA_2A-7A-66A-66A	7A, 66A, 2A	
56	CA_66A-71A	66A	3CC-56	56	CA_2A-66A-71A	2A-66A, 66A, 2A	4CC-29	56	CA_2A-7A-7A-13A	7A, 2A	
57	CA_66B	66B, 66A	3CC-9	57	CA_2A-66B	66B, 66A, 2A	4CC-16	57	CA_2A-7A-7A-29A	7A, 2A	
58	CA_66C	66C, 66A	3CC-3	58	CA_2A-66C	66C, 66A, 2A	4CC-12	58	CA_2A-7A-7A-66A	7A, 66A, 2A	
59	CA_7A-12A	7A	3CC-59	59	CA_2A-7A-12A	2A-7A, 7A, 2A	4CC-32	59	CA_2A-7C-13A	2A	
60	CA_7A-13A	7A	3CC-60	60	CA_2A-7A-13A	2A-7A, 7A, 2A	4CC-56	60	CA_2A-7C-66A	66A, 2A	
61	CA_7A-25A	7A-25A, 7A, 25A	3CC-113	61	CA_2A-7A-29A	2A-7A, 7A, 2A	4CC-57	61	CA_2C-66A-66A	66A	
62	CA_7A-29A	7A	3CC-61	62	CA_2A-7A-66A	7A-66A, 2A-7A, 2A-66A, 7A, 66A, 2A	4CC-33	62	CA_48A-48A-66A-66A	66A, 48A	
63	CA_7A-66A	7A-66A, 7A, 66A	3CC-62	63	CA_2A-7A-7A	7A-7A, 2A-7A, 7A, 2A	4CC-42	63	CA_48A-48A-66B	48A	
64	CA_7A-7A	7A-7A, 7A	3CC-63	64	CA_2A-7C	7C, 7A, 2A	4CC-43	64	CA_48A-48A-66C	48A	
65	CA_7B	7B, 7A		65	CA_2C-12A	2C, 2A		65	CA_48A-48C-66A	66A, 48A	
66	CA_7C	7C, 7A	3CC-64	66	CA_2C-66A	2C, 66A, 2A	4CC-61	66	CA_48A-48D	48A	
67				67	CA_30A-66A-66A	66A-66A, 30A-66A, 66A, 30A	4CC-1	67	CA_48C-48C		
68				68	CA_41A-41C	41C, 41A		68	CA_48C-66A-66A	66A	
69				69	CA_41D		4CC-10	69	CA_48C-66B		
70				70	CA_48A-48A-66A	48A-66A, 48A-48A, 66A, 48A	4CC-62	70	CA_48C-66C		
71				71	CA_48A-48A-71A	48A-48A, 48A		71	CA_48D-66A	66A	
72				72	CA_48A-48C	48C, 48A	4CC-3	72	CA_48E		
73				73	CA_48A-66A-66A	66A-66A, 48A-66A, 66A, 48A	4CC-35	73	CA_4A-48D	4A	
74				74	CA_48A-66B	66B, 66A, 48A	4CC-4	74	CA_4A-4A-12B	4A	
75				75	CA_48A-66C	66C, 66A, 48A	4CC-5	75	CA_4A-4A-5B	4A	
76				76	CA_48C-66A	48C, 66A, 48A	4CC-6	76	CA_5A-30A-66A-66A	66A, 30A	
77				77	CA_48C-71A	48C, 48A		77	CA_5A-48A-66A-66A	66A, 48A	
78				78	CA_48D		4CC-7	78	CA_5A-48C-66A	66A	
79				79	CA_4A-12A-30A	4A-30A, 4A, 30A		79	CA_5A-48D		
80				80	CA_4A-12B	4A	4CC-38	80	CA_5A-5A-66A-66A	66A	
81				81	CA_4A-29A-30A	4A-30A, 4A, 30A		81	CA_5A-5A-66B		
82				82	CA_4A-48C	48C, 4A, 48A		82	CA_5A-5A-66C		
83				83	CA_4A-4A-12A	4A-4A, 4A	4CC-39	83	CA_5A-7A-66A-66A	7A, 66A	
84				84	CA_4A-4A-13A	4A-4A, 4A		84	CA_5A-7A-7A-66A	7A, 66A	
85				85	CA_4A-4A-29A	4A-4A, 4A		85	CA_5A-7C-66A	66A	
86				86	CA_4A-4A-5A	4A-4A, 4A	4CC-40	86	CA_5B-66A-66A	66A	
87				87	CA_4A-4A-71A	4A-4A, 4A		87	CA_5B-66B		
88				88	CA_4A-4A-7A	4A-7A, 4A-4A, 7A, 4A		88	CA_5B-66C		
89				89	CA_4A-5A-30A	4A-30A, 4A, 30A		89	CA_7A-25A-25A-66A	7A, 66A, 25A	
90				90	CA_4A-5B	4A	4CC-41	90	CA_7A-7A-13A-66A	7A, 66A	
91				91	CA_4A-7A-12A	4A-7A, 7A, 4A		91	CA_7A-7A-25A-25A	7A, 25A	
92				92	CA_4A-7A-7A	7A-7A, 4A-7A, 7A, 4A	4CC-42	92	CA_7A-7A-25A-66A	7A, 66A, 25A	
93				93	CA_4A-7C	7C, 7A, 4A	4CC-43	93	CA_7A-7A-29A-66A	7A, 66A	
94				94	CA_5A-30A-66A	30A-66A, 66A, 30A	4CC-76	94	CA_7A-7A-66A-66A	7A, 66A	
95				95	CA_5A-48A-66A	48A-66A, 66A, 48A	4CC-77	95	CA_7C-13A-66A	66A	
96				96	CA_5A-48C	48C, 48A	4CC-44	96	CA_7C-66A-66A	66A	
97				97	CA_5A-5A-66A	66A	4CC-45	97			
98				98	CA_5A-66A-66A	66A-66A, 66A	4CC-46	98			
99				99	CA_5A-66B	66B, 66A	4CC-47	99			



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100				100	CA_5A-66C	66C, 66A	4CC-48	100			
101				101	CA_5A-7A-66A	7A-66A, 7A, 66A	4CC-83	101			
102				102	CA_5A-7A-7A	7A-7A, 7A	4CC-84	102			
103				103	CA_5A-7C	7C, 7A	4CC-85	103			
104				104	CA_5B-30A	30A		104			
105				105	CA_5B-66A	66A	4CC-50	105			
106				106	CA_66A-66A-66A	66A-66A, 66A	4CC-9	106			
107				107	CA_66A-66A-71A	66A-66A, 66A	4CC-52	107			
108				108	CA_66A-66B	66B, 66A	4CC-8	108			
109				109	CA_66A-66C	66C, 66A		109			
110				110	CA_66C-71A	66C, 66A	4CC-54	110			
111				111	CA_7A-12A-66A	7A-66A, 7A, 66A		111			
112				112	CA_7A-13A-66A	7A-66A, 7A, 66A	4CC-90	112			
113				113	CA_7A-25A-25A	7A-25A, 25A-25A, 7A, 25A	4CC-89	113			
114				114	CA_7A-25A-66A	7A-66A, 7A-25A, 25A-66A, 7A, 66A, 25A	4CC-89	114			
115				115	CA_7A-29A-66A	7A-66A, 7A, 66A	4CC-93	115			
116				116	CA_7A-66A-66A	7A-66A, 66A-66A, 7A, 66A	4CC-55	116			
117				117	CA_7A-7A-13A	7A-7A, 7A	4CC-56	117			
118				118	CA_7A-7A-25A	7A-7A, 7A-25A, 7A, 25A	4CC-91	118			
119				119	CA_7A-7A-29A	7A-7A, 7A	4CC-93	119			
120				120	CA_7A-7A-66A	7A-7A, 7A-66A, 7A, 66A	4CC-84	120			
121				121	CA_7C-13A	7C, 7A	4CC-59	121			
122				122	CA_7C-29A	7C, 7A		122			
				123	CA_7C-66A	7C, 7A, 66A	4CC-60	123			

LTE Carrier Aggregation Conducted Power (Downlink)

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

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Band 2/4/7/25/30/66/48/41 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 2/4/7/25/30/66/48/41

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	Antenna Tx
5B	Ant 0
	Ant 1
66B	Ant 0
	Ant 1
66C	Ant 0
	Ant 1
7C	Ant 9
	Ant 1
41C	Ant 9
	Ant 1
48C	Ant 4
	Ant 7
	Ant 8
	Ant 10

<Intra-band>

General Note:

- i. The device supports intra-band uplink carrier aggregation for LTE B7/38 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 with other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.
- v. LTE CA_66B, test was covered by CA_66C, therefore, SAR was only assessed for CA_66C.



<Inter-band uplink carrier aggregation consideration>

LTE Uplink CA	2CC Uplink Carrier Aggregation	
	Main Antenna Tx	ASDiv Tx
CA_12A-30A	ANT1+ANT9	ANT0+ANT1
CA_12A-66A	ANT1+ANT0	ANT0+ANT1
CA_13A-66A	ANT1+ANT0	ANT0+ANT1
CA_14A-30A	ANT1+ANT9	ANT0+ANT1
CA_14A-66A	ANT1+ANT0	ANT0+ANT1
CA_2A-12A	ANT0+ANT1	ANT1+ANT0
CA_2A-13A	ANT0+ANT1	ANT1+ANT0
CA_2A-14A	ANT0+ANT1	ANT1+ANT0
CA_2A-4A	ANT0+ANT1	ANT1+ANT0
CA_2A-5A	ANT0+ANT1	ANT1+ANT0
CA_2A-66A	ANT0+ANT1	ANT1+ANT0
CA_4A-12A	ANT0+ANT1	ANT1+ANT0
CA_4A-13A	ANT0+ANT1	ANT1+ANT0
CA_4A-5A	ANT0+ANT1	ANT1+ANT0
CA_5A-30A	ANT1+ANT9	ANT0+ANT1
CA_5A-66A	ANT1+ANT0	ANT0+ANT1
CA_5A-7A	ANT1+ANT9	ANT0+ANT1

General Note:

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

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n2/n5/n7/n12/n25/n30/n66/n71/n38/n41/n77/n78 is NSA mode.
2. 5G NR n2/n5/n7/n12/n14/n25/n26/n30/n66/n70/n71/n38/n41/n48/n77/n78 is SA mode.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-s QPSK and the reported SAR for the DFT-s QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
 - b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
 - c. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
 - d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
 - e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested
 - f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
 - g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. For 5G NR bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
5. 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.
6. 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.
7. 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.
8. 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.
9. 5G NR n77/n78/n41 supports HPUE, HPUE power and SAR testing performed separately.
10. 5G NR n77/n78/n41 HUPE with higher power, 5G NR n77/n78/n41 HUPE SAR can represent power class 3 level SAR.

<3GPP 38.101 MPR for EN-DC>

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

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

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

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

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

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

<EN-DC combination>

ENDC	Main Antenna Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx	
	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX
DC_12A_n25A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_12A_n2A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_12A_n30A	Ant 1	Ant 9	Ant 0	Ant 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_12A_n38A	Ant 1	Ant 9	Ant 0	Ant 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_12A_n41A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_12A_n66A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_12A_n77A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_12A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_12A_n7A	ANT 1	ANT 9	ANT 0	Ant 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_13A_n2A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_13A_n66A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_13A_n77A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_13A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_14A_n2A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_14A_n30A	ANT 1	ANT 9	ANT 0	Ant 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_14A_n66A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_14A_n77A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_25A_n41A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_25A_n77A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_25A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_26A_n25A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_26A_n41A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_26A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_2A_n12A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_2A_n30A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_2A_n41A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_2A_n5A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-



DC_2A_n66A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_2A_n71A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_2A_n77A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_2A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_2A_n7A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_30A_n2A	ANT 9	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_30A_n5A	ANT 9	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_30A_n66A	ANT 9	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_48A_n2A	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8	ANT 1	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 0
DC_48A_n66A	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8	ANT 1	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 0
DC_4A_n2A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_4A_n41A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_4A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_4A_n7A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_5A_n2A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_5A_n30A	ANT 1	ANT 9	ANT 0	Ant 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_5A_n38A	ANT 1	ANT 9	ANT 0	Ant 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_5A_n41A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_5A_n66A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_5A_n77A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_5A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_5A_n7A	ANT 1	ANT 9	ANT 0	Ant 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_66A_n12A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_66A_n25A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_66A_n2A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_66A_n30A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_66A_n41A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_66A_n5A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_66A_n71A	ANT 0	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_66A_n77A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_66A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_66A_n7A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_71A_n2A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_71A_n41A	ANT 1	ANT 9	ANT 0	ANT 1	-	-	-	-	-	-	-	-	-	-	-	-
DC_71A_n66A	Ant 0	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_71A_n78A	ANT 0	ANT 4	ANT 0	ANT 7	ANT 0	ANT 10	ANT 0	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8
DC_7A_n25A	Ant 9	Ant 1	Ant 1	Ant 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_7A_n2A	ANT 9	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_7A_n5A	ANT 9	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_7A_n66A	ANT 9	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_7A_n71A	ANT 9	ANT 1	ANT 1	ANT 0	-	-	-	-	-	-	-	-	-	-	-	-
DC_7A_n77A	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8	ANT 9	ANT 4	ANT 9	ANT 7	ANT 9	ANT 10	ANT 9	ANT 8
DC_7A_n78A	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8	ANT 9	ANT 4	ANT 9	ANT 7	ANT 9	ANT 10	ANT 9	ANT 8
DC_30A_n77A	ANT 9	ANT 4	ANT 9	ANT 7	ANT 9	ANT 10	ANT 9	ANT 8	ANT 1	ANT 4	ANT 1	ANT 7	ANT 1	ANT 10	ANT 1	ANT 8

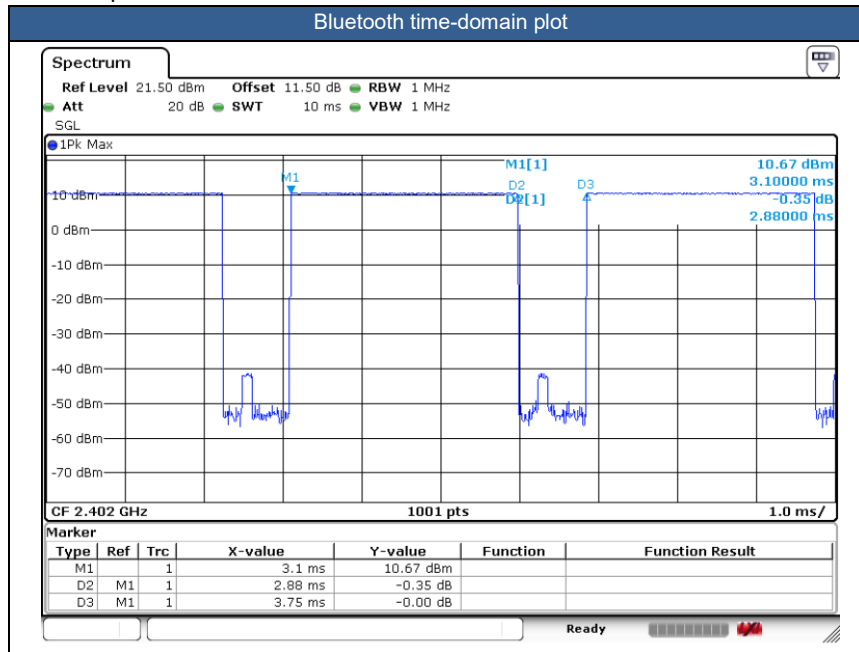
**<WLAN Conducted Power>****General Note:**

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.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 76.80% for ant 6 as following figure, for Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 100%, therefore the actual duty cycle will be scaled up to 83.3% for Bluetooth reported SAR calculation





15. Antenna Location

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

16. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN/BT signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - d. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
 - e. For TDD LTE SAR measurement of power class 3, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
 - f. For TDD LTE SAR measurement of power class 2, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 43.3%/42.9% = 1.009 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
5. For WLAN when transmit simultaneous with WWAN/BT, power reduction will be activated to head exposure condition. For WLAN when transmit simultaneous with WWAN/BT and Proximity sensors trigger, power reduction will be activated to body-worn and extremity exposure conditions.
6. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
 - a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of GSM1900, WCDMA Band II/IV, LTE Band 2/4/7/12/17/25/30/66/38/41/48, 5G NR n2/n7/n25/n30/n66/n38/n41/n78/n77, WLAN2.4/5.2/5.8GHz, therefore product specific 10g SAR is necessary.
 - b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
 - c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.
7. 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.
8. According to Nov. 2017 TCB workshop, when the reported 1gSAR for UL CA configuration is <1.2 W/kg, UL CA 1gSAR is not required for all required test channels (PCC based).
9. LTE B2/4/25/30/66 at ant 0/1, LTE B30 at ant 1/9 and 5G NR n2/n25/n66 at ant0/1 support different PAs for some antennas, and NR bands support Other PA only under ENDC. Some NR bands support different PAs for some antennas,

whether it is the maximum power of Main PA is higher than and very close to the other PA, for RF exposure, after verification all PAs in a same position, so the worst-case PA was chosen to perform full SAR testing to ensure the RF exposure is compliance and other PAs verified the worst case.

10. When the user is talking a call-in head scenario and the receiver detect mechanism trigger, WLAN5GHz will be switched from antenna 8 to antenna 5, so WLAN5GHz at Antenna 5 was performed SAR testing for Head SAR only and WLAN5GHz at Antenna 8 was performed SAR testing for Body-worn/Hotspot/extremity SAR only.
11. The "DSI 'X' Sim" means Simultaneous Transmission in this report.

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 / HSPA+ 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 / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

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 B4 / B5 / B17 / B38 SAR test was covered by B66 / B26 / B12 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is \leq the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
 - b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
 - c. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - d. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not $\frac{1}{2}$ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
 - e. Smaller bandwidth output power for each RB allocation configuration for this device will not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
 - f. For 5G FR1 n5 /n7/n26/n66/n38/n41/n77 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

WLAN/Bluetooth Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

DSI status description:

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

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

Exposure Condition	DSI	Trigger Conditions
Head SAR	DSI 2	Receiver on
Body worn SAR	DSI 3	Sensor On
Hotspot SAR	DSI 7	Hotspot On
Extremity (Handheld) SAR	DSI 6	Sensor On
Sensor Off SAR	DSI 4	Sensor Off



16.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	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)
750 MHz																					
	LTE Band 71	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	133297	680.5	1	23.32	24.00	1.169	-	-	0.09	0.101	0.118
	LTE Band 71	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	133297	680.5	1	23.32	24.00	1.169	-	-	0.06	0.047	0.055
	LTE Band 71	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	133297	680.5	1	23.32	24.00	1.169	-	-	0.18	0.096	0.112
	LTE Band 71	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	133297	680.5	1	23.32	24.00	1.169	-	-	-0.01	0.053	0.062
	LTE Band 71	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	133297	680.5	1	23.23	23.50	1.064	-	-	-0.02	0.089	0.095
	LTE Band 71	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	133297	680.5	1	23.23	23.50	1.064	-	-	-0.13	0.040	0.043
	LTE Band 71	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	133297	680.5	1	23.23	23.50	1.064	-	-	0.04	0.089	0.095
	LTE Band 71	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	133297	680.5	1	23.23	23.50	1.064	-	-	-0.04	0.049	0.052
01	LTE Band 71	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	133297	680.5	1	23.55	24.00	1.109	-	-	-0.05	0.451	0.500
	LTE Band 71	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	133297	680.5	1	23.55	24.00	1.109	-	-	-0.1	0.426	0.473
	LTE Band 71	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	133297	680.5	1	23.55	24.00	1.109	-	-	0.13	0.298	0.331
	LTE Band 71	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	133297	680.5	1	23.55	24.00	1.109	-	-	-0.04	0.289	0.321
	LTE Band 71	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	133297	680.5	1	23.35	23.50	1.035	-	-	0.16	0.391	0.405
	LTE Band 71	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	133297	680.5	1	23.35	23.50	1.035	-	-	-0.06	0.364	0.377
	LTE Band 71	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	133297	680.5	1	23.35	23.50	1.035	-	-	0	0.243	0.252
	LTE Band 71	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	133297	680.5	1	23.35	23.50	1.035	-	-	-0.04	0.232	0.240
	LTE Band 12	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	1	23.21	24.00	1.199	-	-	0.14	0.138	0.166
	LTE Band 12	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	1	23.21	24.00	1.199	-	-	0.02	0.065	0.078
	LTE Band 12	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	1	23.21	24.00	1.199	-	-	-0.07	0.131	0.157
	LTE Band 12	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 0	DSI 2	23095	707.5	1	23.21	24.00	1.199	-	-	0.04	0.074	0.089
	LTE Band 12	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	1	22.95	23.50	1.135	-	-	0.15	0.157	0.178
	LTE Band 12	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	1	22.95	23.50	1.135	-	-	-0.14	0.080	0.091
	LTE Band 12	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	1	22.95	23.50	1.135	-	-	0.05	0.149	0.169
	LTE Band 12	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 0	DSI 2	23095	707.5	1	22.95	23.50	1.135	-	-	-0.1	0.086	0.098
02	LTE Band 12	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	1	23.35	24.00	1.161	-	-	-0.13	1.030	1.196
	LTE Band 12	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	1	23.35	24.00	1.161	-	-	0.18	0.967	1.123
	LTE Band 12	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 1	DSI 2	23095	707.5	1	23.35	24.00	1.161	-	-	-0.02	0.699	0.812
	LTE Band 12	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 1	DSI 2	23095	707.5	1	23.35	24.00	1.161	-	-	0.11	0.693	0.805
	LTE Band 12	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	1	23.26	23.50	1.057	-	-	-0.08	0.865	0.914
	LTE Band 12	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	1	23.26	23.50	1.057	-	-	0.03	0.806	0.852
	LTE Band 12	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 1	DSI 2	23095	707.5	1	23.26	23.50	1.057	-	-	0.11	0.578	0.611
	LTE Band 12	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 1	DSI 2	23095	707.5	1	23.26	23.50	1.057	-	-	0.12	0.570	0.602
	LTE Band 12	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	1	23.18	23.50	1.076	-	-	0.12	0.835	0.899
	LTE Band 12	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	1	23.18	23.50	1.076	-	-	0.05	0.800	0.861
	LTE Band 12	10M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 2	23095	707.5	1	23.18	23.50	1.076	-	-	0.09	0.543	0.585
	LTE Band 12	10M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 2	23095	707.5	1	23.18	23.50	1.076	-	-	0.16	0.541	0.582
	LTE Band 12	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	23.00	23.50	1.122	-	-	0.18	0.750	0.842
	LTE Band 12	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	23.00	23.50	1.122	-	-	-0.14	0.704	0.790
	LTE Band 12	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	23.00	23.50	1.122	-	-	-0.1	0.491	0.551
	LTE Band 12	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	23.00	23.50	1.122	-	-	0.17	0.479	0.537
	LTE Band 12	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	22.91	23.50	1.146	-	-	-0.17	0.748	0.857
	LTE Band 12	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	22.91	23.50	1.146	-	-	-0.12	0.683	0.782
	LTE Band 12	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	22.91	23.50	1.146	-	-	0.1	0.479	0.549
	LTE Band 12	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	22.91	23.50	1.146	-	-	-0.17	0.461	0.528
	LTE Band 12	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	23095	707.5	1	22.83	23.50	1.167	-	-	0.03	0.749	0.874
	LTE Band 13	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 0	DSI 2	23230	782	1	22.93	24.00	1.279	-	-	0.18	0.218	0.279
	LTE Band 13	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 0	DSI 2	23230	782	1	22.93	24.00	1.279	-	-	0.11	0.106	0.136
	LTE Band 13	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 0	DSI 2	23230	782	1	22.93	24.00	1.279	-	-	-0.17	0.172	0.220
	LTE Band 13	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 0	DSI 2	23230	782	1	22.93	24.00	1.279	-	-	-0.14	0.113	0.145
	LTE Band 13	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 0	DSI 2	23230	782	1	22.71	23.50	1.199	-	-	0.1	0.188	0.226



FCC SAR Test Report

Report No. : FA3D0836

Table with columns for LTE Band, Power, Modulation, Frequency, Time, Location, Antenna, DSI, Power, SAR, and other parameters. Includes rows for bands 13, 14, and FR1 n71.



Table with 21 columns: Test ID, Frequency, Modulation, Power, Duty Cycle, Position, Antenna, Antenna Type, Power Density, SAR, etc. Includes rows for FR1 n71, FR1 n12, and FR1 n14.



835 MHz																					
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	128	824.2	1	30.01	31.00	1.256	-	-	-0.17	0.086	0.108
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	128	824.2	1	30.01	31.00	1.256	-	-	0.03	0.043	0.054
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	128	824.2	1	30.01	31.00	1.256	-	-	0.11	0.063	0.079
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	128	824.2	1	30.01	31.00	1.256	-	-	0.05	0.037	0.046
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	189	836.4	1	29.91	31.00	1.285	-	-	-0.07	0.134	0.172
08	GSM850	-	-	-	-	GPRS (2 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	251	848.8	1	29.86	31.00	1.300	-	-	-0.04	0.158	0.205
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4182	836.4	1	22.94	24.00	1.276	-	-	0.19	0.255	0.325
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	4182	836.4	1	22.94	24.00	1.276	-	-	0.07	0.127	0.162
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	4182	836.4	1	22.94	24.00	1.276	-	-	-0.18	0.194	0.248
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	4182	836.4	1	22.94	24.00	1.276	-	-	-0.18	0.118	0.151
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4132	826.4	1	22.78	24.00	1.324	-	-	0.18	0.217	0.287
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4233	846.6	1	22.93	24.00	1.279	-	-	-0.06	0.274	0.351
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4182	836.4	1	22.54	23.50	1.247	-	-	0.1	0.914	1.140
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4182	836.4	1	22.54	23.50	1.247	-	-	0.09	0.868	1.083
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	4182	836.4	1	22.54	23.50	1.247	-	-	-0.04	0.744	0.928
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	4182	836.4	1	22.54	23.50	1.247	-	-	-0.05	0.712	0.888
09	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4132	826.4	1	22.53	23.50	1.250	-	-	0.14	0.936	1.170
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4233	846.6	1	22.46	23.50	1.271	-	-	-0.18	0.905	1.150
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4132	826.4	1	22.53	23.50	1.250	-	-	0.05	0.885	1.106
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4233	846.6	1	22.46	23.50	1.271	-	-	0.02	0.875	1.112
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	4132	826.4	1	22.53	23.50	1.250	-	-	-0.16	0.742	0.928
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	4233	846.6	1	22.46	23.50	1.271	-	-	-0.17	0.740	0.940
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	4132	826.4	1	22.53	23.50	1.250	-	-	-0.07	0.715	0.894
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	4233	846.6	1	22.46	23.50	1.271	-	-	-0.06	0.712	0.905
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI_2_Sim	4182	836.4	1	21.08	22.20	1.294	-	-	0.11	0.658	0.852
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI_2_Sim	4182	836.4	1	21.08	22.20	1.294	-	-	0.1	0.621	0.804
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI_2_Sim	4182	836.4	1	21.08	22.20	1.294	-	-	0.02	0.531	0.687
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI_2_Sim	4182	836.4	1	21.08	22.20	1.294	-	-	-0.07	0.509	0.659
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI_2_Sim	4132	826.4	1	21.05	22.20	1.303	-	-	-0.18	0.667	0.869
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI_2_Sim	4233	846.6	1	21.04	22.20	1.306	-	-	0.17	0.652	0.852
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI_2_Sim	4132	826.4	1	21.05	22.20	1.303	-	-	0.05	0.626	0.816
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI_2_Sim	4233	846.6	1	21.04	22.20	1.306	-	-	0.09	0.621	0.811
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 0	DSI 2	26965	841.5	1	22.94	24.00	1.276	-	-	-0.12	0.297	0.379
	LTE Band 5B	10M+10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	20575+20476	841.5+831.6	1	22.63	24.00	1.371	-	-	-0.13	0.264	0.362
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 0	DSI 2	26965	841.5	1	22.94	24.00	1.276	-	-	-0.09	0.133	0.170
	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 0	DSI 2	26965	841.5	1	22.94	24.00	1.276	-	-	-0.03	0.210	0.268
	LTE Band 26	15M	QPSK	1	37	-	Left Tilted	0mm	Ant 0	DSI 2	26965	841.5	1	22.94	24.00	1.276	-	-	0.04	0.130	0.166
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 0	DSI 2	26765	821.5	1	22.67	24.00	1.358	-	-	-0.15	0.254	0.345
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	1	22.84	24.00	1.306	-	-	-0.12	0.251	0.328
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 0	DSI 2	26965	841.5	1	22.93	23.50	1.140	-	-	-0.09	0.214	0.244
	LTE Band 26	15M	QPSK	36	20	-	Right Tilted	0mm	Ant 0	DSI 2	26965	841.5	1	22.93	23.50	1.140	-	-	0.04	0.112	0.128
	LTE Band 26	15M	QPSK	36	20	-	Left Cheek	0mm	Ant 0	DSI 2	26965	841.5	1	22.93	23.50	1.140	-	-	0.02	0.165	0.188
	LTE Band 26	15M	QPSK	36	20	-	Left Tilted	0mm	Ant 0	DSI 2	26965	841.5	1	22.93	23.50	1.140	-	-	-0.08	0.107	0.122
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 0	DSI 2	26765	821.5	1	22.63	23.50	1.222	-	-	0.13	0.189	0.231
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	1	22.81	23.50	1.172	-	-	0.15	0.191	0.224
10	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 1	DSI 2	26965	841.5	1	21.65	23.20	1.429	-	-	0.1	0.849	1.213
	LTE Band 5B	10M+10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2	20575+20476	841.5+831.6	1	21.58	23.20	1.452	-	-	-0.1	0.815	1.183
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 1	DSI 2	26965	841.5	1	21.65	23.20	1.429	-	-	-0.05	0.734	1.049
	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 1	DSI 2	26965	841.5	1	21.65	23.20	1.429	-	-	0.17	0.604	0.863
	LTE Band 26	15M	QPSK	1	37	-	Left Tilted	0mm	Ant 1	DSI 2	26965	841.5	1	21.65	23.20	1.429	-	-	0.04	0.541	0.773
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 1	DSI 2	26765	821.5	1	21.60	23.20	1.445	-	-	0.17	0.768	1.110
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 1	DSI 2	26865	831.5	1	21.58	23.20	1.452	-	-	0.07	0.793	1.152
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 1	DSI 2	26765	821.5	1	21.60	23.20	1.445	-	-	0.16	0.751	1.086
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 1	DSI 2	26865	831.5	1	21.58	23.20	1.452	-	-	-0.09	0.724	1.051



	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 1	DSI 2	26765	821.5	1	21.60	23.20	1.445	-	-	-0.18	0.546	0.789
	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 1	DSI 2	26865	831.5	1	21.58	23.20	1.452	-	-	0.17	0.587	0.852
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 1	DSI 2	26965	841.5	1	21.63	23.20	1.435	-	-	-0.07	0.824	1.183
	LTE Band 26	15M	QPSK	36	20	-	Right Tilted	0mm	Ant 1	DSI 2	26965	841.5	1	21.63	23.20	1.435	-	-	-0.01	0.728	1.045
	LTE Band 26	15M	QPSK	36	20	-	Left Cheek	0mm	Ant 1	DSI 2	26965	841.5	1	21.63	23.20	1.435	-	-	-0.01	0.598	0.858
	LTE Band 26	15M	QPSK	36	20	-	Left Tilted	0mm	Ant 1	DSI 2	26965	841.5	1	21.63	23.20	1.435	-	-	-0.13	0.527	0.757
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 1	DSI 2	26765	821.5	1	21.54	23.20	1.466	-	-	-0.09	0.758	1.111
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 1	DSI 2	26865	831.5	1	21.55	23.20	1.462	-	-	-0.02	0.786	1.149
	LTE Band 26	15M	QPSK	36	20	-	Right Tilted	0mm	Ant 1	DSI 2	26765	821.5	1	21.54	23.20	1.466	-	-	-0.05	0.746	1.093
	LTE Band 26	15M	QPSK	36	20	-	Right Tilted	0mm	Ant 1	DSI 2	26865	831.5	1	21.55	23.20	1.462	-	-	-0.06	0.721	1.054
	LTE Band 26	15M	QPSK	36	20	-	Left Cheek	0mm	Ant 1	DSI 2	26765	821.5	1	21.54	23.20	1.466	-	-	0.17	0.534	0.783
	LTE Band 26	15M	QPSK	36	20	-	Left Cheek	0mm	Ant 1	DSI 2	26865	831.5	1	21.55	23.20	1.462	-	-	0.09	0.576	0.842
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 1	DSI 2	26965	841.5	1	21.60	23.20	1.445	-	-	0	0.816	1.179
	LTE Band 26	15M	QPSK	75	0	-	Right Tilted	0mm	Ant 1	DSI 2	26965	841.5	1	21.60	23.20	1.445	-	-	-0.01	0.726	1.049
	LTE Band 26	15M	QPSK	75	0	-	Left Cheek	0mm	Ant 1	DSI 2	26965	841.5	1	21.60	23.20	1.445	-	-	0.06	0.583	0.843
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.29	21.70	1.384	-	-	0.15	0.608	0.841
	LTE Band 5B	10M+10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	20575+20476	841.5+831.6	1	20.26	21.70	1.393	-	-	0.17	0.575	0.801
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.29	21.70	1.384	-	-	0.16	0.530	0.733
	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.29	21.70	1.384	-	-	-0.15	0.444	0.614
	LTE Band 26	15M	QPSK	1	37	-	Left Tilted	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.29	21.70	1.384	-	-	0.19	0.405	0.560
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	26765	821.5	1	20.27	21.70	1.390	-	-	0.16	0.537	0.746
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	26865	831.5	1	20.23	21.70	1.403	-	-	0.13	0.559	0.784
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.28	21.70	1.387	-	-	-0.03	0.591	0.820
	LTE Band 26	15M	QPSK	36	20	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.28	21.70	1.387	-	-	0.18	0.524	0.727
	LTE Band 26	15M	QPSK	36	20	-	Left Cheek	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.28	21.70	1.387	-	-	0.01	0.435	0.603
	LTE Band 26	15M	QPSK	36	20	-	Left Tilted	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.28	21.70	1.387	-	-	0.09	0.396	0.549
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	26765	821.5	1	20.23	21.70	1.403	-	-	0.14	0.539	0.756
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	26865	831.5	1	20.20	21.70	1.413	-	-	0.09	0.548	0.774
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	26965	841.5	1	20.22	21.70	1.406	-	-	-0.02	0.578	0.813
	FR1 n26	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	166300	831.5	1	22.98	24.00	1.265	-	-	0.01	0.145	0.183
	FR1 n26	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	166300	831.5	1	22.98	24.00	1.265	-	-	-0.13	0.083	0.105
	FR1 n26	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	166300	831.5	1	22.98	24.00	1.265	-	-	-0.09	0.104	0.132
	FR1 n26	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	166300	831.5	1	22.98	24.00	1.265	-	-	0.01	0.069	0.087
	FR1 n26	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	166300	831.5	1	22.85	24.00	1.303	-	-	0.17	0.182	0.237
	FR1 n26	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	166300	831.5	1	22.85	24.00	1.303	-	-	-0.01	0.101	0.132
	FR1 n26	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	166300	831.5	1	22.85	24.00	1.303	-	-	-0.09	0.130	0.169
	FR1 n26	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	166300	831.5	1	22.85	24.00	1.303	-	-	0.19	0.087	0.113
11	FR1 n26	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	166300	831.5	1	22.97	24.00	1.268	-	-	-0.05	0.910	1.154
	FR1 n26	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	166300	831.5	1	22.97	24.00	1.268	-	-	-0.02	0.876	1.110
	FR1 n26	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	166300	831.5	1	22.97	24.00	1.268	-	-	-0.06	0.771	0.977
	FR1 n26	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	166300	831.5	1	22.97	24.00	1.268	-	-	0.1	0.733	0.929
	FR1 n26	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	166300	831.5	1	22.89	24.00	1.291	-	-	0.08	0.887	1.145
	FR1 n26	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	166300	831.5	1	22.89	24.00	1.291	-	-	-0.11	0.861	1.112
	FR1 n26	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	166300	831.5	1	22.89	24.00	1.291	-	-	-0.17	0.743	0.959
	FR1 n26	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	166300	831.5	1	22.89	24.00	1.291	-	-	-0.09	0.708	0.914
	FR1 n26	20M	QPSK	100	0	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	166300	831.5	1	22.84	24.00	1.306	-	-	0.02	0.869	1.135
	FR1 n26	20M	QPSK	100	0	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	166300	831.5	1	22.84	24.00	1.306	-	-	0.17	0.857	1.119
	FR1 n26	20M	QPSK	100	0	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	166300	831.5	1	22.84	24.00	1.306	-	-	0.06	0.737	0.963
	FR1 n26	20M	QPSK	100	0	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	166300	831.5	1	22.84	24.00	1.306	-	-	0.18	0.695	0.908
	FR1 n26	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.50	22.50	1.259	-	-	0.06	0.659	0.830
	FR1 n26	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.50	22.50	1.259	-	-	0	0.637	0.802
	FR1 n26	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.50	22.50	1.259	-	-	-0.06	0.533	0.671
	FR1 n26	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.50	22.50	1.259	-	-	0.03	0.512	0.645
	FR1 n26	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.48	22.50	1.265	-	-	-0.13	0.628	0.794
	FR1 n26	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.48	22.50	1.265	-	-	0.15	0.610	0.771
	FR1 n26	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.48	22.50	1.265	-	-	0.15	0.515	0.651



FCC SAR Test Report

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	FR1 n26	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.48	22.50	1.265	-	-	-0.06	0.488	0.617
	FR1 n26	20M	QPSK	100	0	DFT-15	Right Cheek	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.43	22.50	1.279	-	-	-0.03	0.639	0.818
	FR1 n26	20M	QPSK	100	0	DFT-15	Right Tilted	0mm	Ant 1	DSI 2_Sim	166300	831.5	1	21.43	22.50	1.279	-	-	-0.1	0.616	0.788
1750 MHz																					
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	1513	1752.6	1	20.35	21.20	1.216	-	-	0.06	0.125	0.152
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	1513	1752.6	1	20.35	21.20	1.216	-	-	0.03	0.115	0.140
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	1513	1752.6	1	20.35	21.20	1.216	-	-	-0.19	0.145	0.176
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	1513	1752.6	1	20.35	21.20	1.216	-	-	0.15	0.084	0.102
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	1312	1712.4	1	20.17	21.20	1.268	-	-	0.02	0.160	0.203
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	1413	1732.6	1	20.18	21.20	1.265	-	-	-0.16	0.127	0.161
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	1413	1732.6	1	16.68	17.90	1.324	-	-	0.07	0.600	0.795
12	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1413	1732.6	1	16.68	17.90	1.324	-	-	0.17	0.892	1.181
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	1413	1732.6	1	16.68	17.90	1.324	-	-	-0.19	0.447	0.592
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	1413	1732.6	1	16.68	17.90	1.324	-	-	0.07	0.575	0.761
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1312	1712.4	1	16.67	17.90	1.327	-	-	-0.1	0.852	1.131
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1513	1752.6	1	16.65	17.90	1.334	-	-	-0.19	0.833	1.111
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2_Sim	1413	1732.6	1	15.19	16.40	1.321	-	-	0.05	0.435	0.575
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2_Sim	1413	1732.6	1	15.19	16.40	1.321	-	-	-0.15	0.637	0.842
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2_Sim	1413	1732.6	1	15.19	16.40	1.321	-	-	0.13	0.308	0.407
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2_Sim	1413	1732.6	1	15.19	16.40	1.321	-	-	0.17	0.385	0.509
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2_Sim	1312	1712.4	1	15.11	16.40	1.346	-	-	0.07	0.610	0.821
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2_Sim	1513	1752.6	1	15.18	16.40	1.324	-	-	-0.13	0.597	0.791
	LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	132322	1745	1	19.75	20.70	1.245	-	-	0.04	0.104	0.129
	LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	132322	1745	1	19.75	20.70	1.245	-	-	-0.06	0.072	0.090
	LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	132322	1745	1	19.75	20.70	1.245	-	-	0.01	0.121	0.151
	LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	132322	1745	1	19.75	20.70	1.245	-	-	-0.06	0.069	0.086
	LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	132072	1720	1	19.61	20.70	1.285	-	-	-0.08	0.115	0.148
	LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	132572	1770	1	19.74	20.70	1.247	-	-	-0.03	0.123	0.153
	LTE Band 66_Other PA	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	132572	1770	1	19.74	20.70	1.247	-	-	0.02	0.115	0.143
	LTE Band 66C	20M+20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 2	132572+132374	1770+1750.2	1	19.68	20.70	1.265	-	-	0.12	0.105	0.133
	LTE Band 66	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	132322	1745	1	19.74	20.70	1.247	-	-	0.01	0.087	0.109
	LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	132322	1745	1	19.74	20.70	1.247	-	-	0.08	0.060	0.075
	LTE Band 66	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	132322	1745	1	19.74	20.70	1.247	-	-	0.13	0.102	0.127
	LTE Band 66	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	132322	1745	1	19.74	20.70	1.247	-	-	0.19	0.057	0.071
	LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	132322	1745	1	17.95	18.90	1.245	-	-	-0.03	0.786	0.978
13	LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	1	17.95	18.90	1.245	-	-	0.05	1.020	1.269
	LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	2	17.95	18.90	1.245	-	-	0.05	0.846	1.053
	LTE Band 66_Other PA	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	1	17.95	18.90	1.245	-	-	-0.18	0.987	1.228
	LTE Band 66C	20M+20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	132322+132520	1745+1764.8	1	17.71	18.90	1.315	-	-	-0.19	0.910	1.197
	LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	132322	1745	1	17.95	18.90	1.245	-	-	-0.15	0.565	0.703
	LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	132322	1745	1	17.95	18.90	1.245	-	-	0.13	0.676	0.841
	LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	132072	1720	1	17.89	18.90	1.262	-	-	-0.01	0.751	0.948
	LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	132572	1770	1	17.91	18.90	1.256	-	-	-0.15	0.748	0.940
	LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	132072	1720	1	17.89	18.90	1.262	-	-	0.17	0.876	1.105
	LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	132572	1770	1	17.91	18.90	1.256	-	-	-0.16	0.868	1.090
	LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	132072	1720	1	17.89	18.90	1.262	-	-	-0.12	0.637	0.804
	LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	132572	1770	1	17.91	18.90	1.256	-	-	-0.07	0.619	0.777
	LTE Band 66	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	132322	1745	1	17.92	18.90	1.253	-	-	-0.12	0.773	0.969
	LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	1	17.92	18.90	1.253	-	-	0.03	0.967	1.212
	LTE Band 66	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	132322	1745	1	17.92	18.90	1.253	-	-	0.02	0.551	0.690
	LTE Band 66	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	132322	1745	1	17.92	18.90	1.253	-	-	0.18	0.663	0.831
	LTE Band 66	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	132072	1720	1	17.82	18.90	1.282	-	-	0.19	0.738	0.946
	LTE Band 66	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	132572	1770	1	17.88	18.90	1.265	-	-	0.1	0.731	0.925
	LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	132072	1720	1	17.82	18.90	1.282	-	-	-0.19	0.858	1.100
	LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	132572	1770	1	17.88	18.90	1.265	-	-	0.17	0.846	1.070



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Table with columns for Band, Power, Modulation, Frequency, Time, Location, Antenna, Simulation, Power Density, and SAR values. Includes a highlighted cell with value 1.083.



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	FR1 n66	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	1	16.42	17.00	1.143	-	-	0.16	0.931	1.064
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	1	16.42	17.00	1.143	-	-	0.04	0.496	0.567
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	349000	1745	1	16.42	17.00	1.143	-	-	-0.02	0.610	0.697
	FR1 n66	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	349000	1745	1	16.39	17.00	1.151	-	-	0.11	0.680	0.783
15	FR1 n66	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	1	16.39	17.00	1.151	-	-	-0.17	0.950	1.093
	FR1 n66_Other PA	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	1	16.39	17.00	1.151	-	-	0.03	0.944	1.086
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	1	16.39	17.00	1.151	-	-	0.04	0.505	0.581
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	349000	1745	1	16.39	17.00	1.151	-	-	-0.19	0.627	0.722
	FR1 n66	40M	QPSK	216	0	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	1	16.37	17.00	1.156	-	-	0.13	0.937	1.083
	FR1 n66	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.92	15.50	1.143	-	-	-0.03	0.489	0.559
	FR1 n66	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.92	15.50	1.143	-	-	0.11	0.660	0.754
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.92	15.50	1.143	-	-	0.03	0.368	0.421
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.92	15.50	1.143	-	-	0.07	0.459	0.525
	FR1 n66	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.88	15.50	1.153	-	-	0.04	0.496	0.572
	FR1 n66	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.88	15.50	1.153	-	-	0.12	0.683	0.788
	FR1 n66_Other PA	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.88	15.50	1.153	-	-	0.05	0.662	0.764
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.88	15.50	1.153	-	-	0	0.377	0.435
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 1	DSI 2_Sim	349000	1745	1	14.88	15.50	1.153	-	-	-0.11	0.462	0.533
1900 MHz																					
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	810	1909.8	1	26.41	28.00	1.442	-	-	0.1	0.031	0.045
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	810	1909.8	1	26.41	28.00	1.442	-	-	0.1	0.021	0.030
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	810	1909.8	1	26.41	28.00	1.442	-	-	-0.09	0.038	0.055
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	810	1909.8	1	26.41	28.00	1.442	-	-	0.14	0.017	0.025
16	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	512	1850.2	1	26.10	28.00	1.549	-	-	-0.14	0.041	0.064
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	661	1880	1	26.02	28.00	1.578	-	-	0.13	0.031	0.049
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	9400	1880	1	21.21	21.70	1.119	-	-	0.06	0.110	0.123
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	9400	1880	1	21.21	21.70	1.119	-	-	0.03	0.108	0.121
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	9400	1880	1	21.21	21.70	1.119	-	-	0.09	0.123	0.138
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	9400	1880	1	21.21	21.70	1.119	-	-	-0.01	0.065	0.073
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	9262	1852.4	1	21.20	21.70	1.122	-	-	-0.04	0.116	0.130
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	9538	1907.6	1	21.17	21.70	1.130	-	-	-0.13	0.104	0.117
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	9262	1852.4	1	15.19	16.70	1.416	-	-	-0.06	0.564	0.799
17	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9262	1852.4	1	15.19	16.70	1.416	-	-	-0.1	0.815	1.154
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	9262	1852.4	1	15.19	16.70	1.416	-	-	0.13	0.391	0.554
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	9262	1852.4	1	15.19	16.70	1.416	-	-	0.03	0.472	0.668
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9400	1880	1	15.06	16.70	1.459	-	-	0.18	0.573	0.836
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9538	1907.6	1	15.18	16.70	1.419	-	-	-0.17	0.606	0.860
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2_Sim	9262	1852.4	1	13.54	15.20	1.466	-	-	0.05	0.406	0.595
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2_Sim	9262	1852.4	1	13.54	15.20	1.466	-	-	-0.09	0.601	0.881
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2_Sim	9262	1852.4	1	13.54	15.20	1.466	-	-	-0.18	0.276	0.404
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2_Sim	9262	1852.4	1	13.54	15.20	1.466	-	-	-0.04	0.336	0.492
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2_Sim	9400	1880	1	13.50	15.20	1.479	-	-	0.11	0.453	0.670
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2_Sim	9538	1907.6	1	13.50	15.20	1.479	-	-	0.11	0.426	0.630
	LTE Band 25	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	26340	1880	1	20.58	21.30	1.180	-	-	0.04	0.089	0.105
	LTE Band 25	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	26340	1880	1	20.58	21.30	1.180	-	-	0.03	0.081	0.096
	LTE Band 25	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	26340	1880	1	20.58	21.30	1.180	-	-	0.19	0.107	0.126
	LTE Band 25	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	26340	1880	1	20.58	21.30	1.180	-	-	-0.01	0.071	0.084
	LTE Band 25	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	26140	1860	1	20.54	21.30	1.191	-	-	-0.03	0.107	0.127
	LTE Band 25_Other PA	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	26140	1860	1	20.54	21.30	1.191	-	-	0.07	0.085	0.101
	LTE Band 25	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	26590	1905	1	20.53	21.30	1.194	-	-	0.02	0.084	0.100
	LTE Band 25	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	26340	1880	1	20.50	21.30	1.202	-	-	-0.02	0.078	0.094
	LTE Band 25	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	26340	1880	1	20.50	21.30	1.202	-	-	-0.18	0.073	0.088
	LTE Band 25	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	26340	1880	1	20.50	21.30	1.202	-	-	0.02	0.084	0.101
	LTE Band 25	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	26340	1880	1	20.50	21.30	1.202	-	-	0.01	0.064	0.077
	LTE Band 25	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	26340	1880	1	18.39	19.00	1.151	-	-	0.07	0.762	0.877
	LTE Band 25	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	26340	1880	1	18.39	19.00	1.151	-	-	0.03	0.937	1.078



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	LTE Band 25	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	26340	1880	1	18.39	19.00	1.151	-	-	-0.17	0.511	0.588
	LTE Band 25	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	26340	1880	1	18.39	19.00	1.151	-	-	0	0.646	0.743
	LTE Band 25	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	26140	1860	1	18.33	19.00	1.167	-	-	-0.18	0.798	0.931
	LTE Band 25	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	26590	1905	1	18.31	19.00	1.172	-	-	0.07	0.758	0.889
18	LTE Band 25	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	26140	1860	1	18.33	19.00	1.167	-	-	-0.11	1.080	1.260
	LTE Band 25_Other PA	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	26140	1860	1	18.33	19.00	1.167	-	-	0.01	0.900	1.050
	LTE Band 25	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	26590	1905	1	18.31	19.00	1.172	-	-	0.15	0.951	1.115
	LTE Band 25	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	26340	1880	1	18.32	19.00	1.169	-	-	-0.04	0.749	0.876
	LTE Band 25	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	26340	1880	1	18.32	19.00	1.169	-	-	-0.18	0.916	1.071
	LTE Band 25	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	26340	1880	1	18.32	19.00	1.169	-	-	-0.07	0.501	0.586
	LTE Band 25	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	26340	1880	1	18.32	19.00	1.169	-	-	0.03	0.658	0.770
	LTE Band 25	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	26140	1860	1	18.29	19.00	1.178	-	-	0.13	0.789	0.929
	LTE Band 25	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	26590	1905	1	18.28	19.00	1.180	-	-	0.13	0.746	0.881
	LTE Band 25	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	26140	1860	1	18.29	19.00	1.178	-	-	0.11	0.938	1.105
	LTE Band 25	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	26590	1905	1	18.28	19.00	1.180	-	-	0.1	0.906	1.069
	LTE Band 25	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 2	26340	1880	1	18.30	19.00	1.175	-	-	0.13	0.738	0.867
	LTE Band 25	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	26340	1880	1	18.30	19.00	1.175	-	-	-0.19	0.874	1.027
	LTE Band 25	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.93	17.50	1.140	-	-	-0.03	0.559	0.637
	LTE Band 25	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.93	17.50	1.140	-	-	0.11	0.673	0.767
	LTE Band 25	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.93	17.50	1.140	-	-	0.14	0.370	0.422
	LTE Band 25	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.93	17.50	1.140	-	-	0.02	0.471	0.537
	LTE Band 25	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	26140	1860	1	16.88	17.50	1.153	-	-	-0.11	0.759	0.875
	LTE Band 25_Other PA	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	26140	1860	1	16.88	17.50	1.153	-	-	0	0.715	0.825
	LTE Band 25	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	26590	1905	1	16.91	17.50	1.146	-	-	0.19	0.669	0.766
	LTE Band 25	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.88	17.50	1.153	-	-	0.01	0.549	0.633
	LTE Band 25	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.88	17.50	1.153	-	-	0.12	0.639	0.737
	LTE Band 25	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.88	17.50	1.153	-	-	0.15	0.359	0.414
	LTE Band 25	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.88	17.50	1.153	-	-	0.15	0.458	0.528
	LTE Band 25	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	26140	1860	1	16.83	17.50	1.167	-	-	0.12	0.631	0.736
	LTE Band 25	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	26590	1905	1	16.85	17.50	1.161	-	-	0.12	0.628	0.729
	LTE Band 25	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	26340	1880	1	16.86	17.50	1.159	-	-	-0.03	0.619	0.717
	FR1 n25	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	376500	1882.5	1	19.45	20.50	1.274	-	-	-0.14	0.074	0.094
	FR1 n25	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	376500	1882.5	1	19.45	20.50	1.274	-	-	-0.17	0.055	0.070
	FR1 n25	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	376500	1882.5	1	19.45	20.50	1.274	-	-	0.11	0.085	0.108
	FR1 n25_Other PA	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	376500	1882.5	1	19.45	20.50	1.274	-	-	-0.18	0.080	0.102
	FR1 n25	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	376500	1882.5	1	19.45	20.50	1.274	-	-	0.12	0.049	0.062
	FR1 n25	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	376500	1882.5	1	19.35	20.50	1.303	-	-	0.1	0.064	0.083
	FR1 n25	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	376500	1882.5	1	19.35	20.50	1.303	-	-	0.18	0.049	0.064
	FR1 n25	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	376500	1882.5	1	19.35	20.50	1.303	-	-	0.08	0.075	0.098
	FR1 n25	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	376500	1882.5	1	19.35	20.50	1.303	-	-	0.1	0.047	0.061
	FR1 n25	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	376500	1882.5	1	15.60	17.00	1.380	-	-	-0.1	0.522	0.721
	FR1 n25	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	376500	1882.5	1	15.60	17.00	1.380	-	-	-0.03	0.881	1.216
	FR1 n25	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	376500	1882.5	1	15.60	17.00	1.380	-	-	-0.03	0.374	0.516
	FR1 n25	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	376500	1882.5	1	15.60	17.00	1.380	-	-	-0.04	0.462	0.638
	FR1 n25	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	376500	1882.5	1	15.57	17.00	1.390	-	-	0.08	0.533	0.741
19	FR1 n25	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	376500	1882.5	1	15.57	17.00	1.390	-	-	0.05	0.897	1.247
	FR1 n25_Other PA	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	376500	1882.5	1	15.57	17.00	1.390	-	-	-0.03	0.850	1.181
	FR1 n25	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	376500	1882.5	1	15.57	17.00	1.390	-	-	-0.12	0.386	0.537
	FR1 n25	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	376500	1882.5	1	15.57	17.00	1.390	-	-	0.07	0.479	0.666
	FR1 n25	40M	QPSK	216	0	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	376500	1882.5	1	15.54	17.00	1.400	-	-	0.01	0.871	1.219
	FR1 n25	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI_2_Sim	376500	1882.5	1	14.09	15.50	1.384	-	-	-0.14	0.384	0.531
	FR1 n25	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI_2_Sim	376500	1882.5	1	14.09	15.50	1.384	-	-	-0.08	0.637	0.881
	FR1 n25	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI_2_Sim	376500	1882.5	1	14.09	15.50	1.384	-	-	0.11	0.268	0.371
	FR1 n25	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI_2_Sim	376500	1882.5	1	14.09	15.50	1.384	-	-	0.15	0.336	0.465
	FR1 n25	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 1	DSI_2_Sim	376500	1882.5	1	14.00	15.50	1.413	-	-	0.19	0.389	0.549
	FR1 n25	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	DSI_2_Sim	376500	1882.5	1	14.00	15.50	1.413	-	-	-0.16	0.621	0.877



FCC SAR Test Report

Report No. : FA3D0836

2600 MHz																					
	FR1 n30	10M	QPSK	25	14	DFT-15	Right Cheek	0mm	Ant 9	DSI 2	462000	2310	1	22.98	24.00	1.265	-	-	0.11	0.170	0.215
	FR1 n30	10M	QPSK	25	14	DFT-15	Right Tilted	0mm	Ant 9	DSI 2	462000	2310	1	22.98	24.00	1.265	-	-	0.04	0.128	0.162
	FR1 n30	10M	QPSK	25	14	DFT-15	Left Cheek	0mm	Ant 9	DSI 2	462000	2310	1	22.98	24.00	1.265	-	-	0.14	0.247	0.312
	FR1 n30	10M	QPSK	25	14	DFT-15	Left Tilted	0mm	Ant 9	DSI 2	462000	2310	1	22.98	24.00	1.265	-	-	0.01	0.073	0.092
	LTE Band 7	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	21100	2535	1	18.48	19.20	1.180	-	-	-0.12	0.755	0.891
22	LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	21100	2535	1	18.48	19.20	1.180	-	-	0.15	1.070	1.263
	LTE Band 7C	20M+ 20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	21100+ 21298	2535+ 2554.8	1	17.86	19.20	1.361	-	-	-0.08	0.854	1.163
	LTE Band 7	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	21100	2535	1	18.48	19.20	1.180	-	-	0.11	0.333	0.393
	LTE Band 7	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	21100	2535	1	18.48	19.20	1.180	-	-	-0.06	0.486	0.574
	LTE Band 7	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	20850	2510	1	18.46	19.20	1.186	-	-	-0.1	0.879	1.042
	LTE Band 7	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	21350	2560	1	18.42	19.20	1.197	-	-	-0.15	0.804	0.962
	LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	20850	2510	1	18.46	19.20	1.186	-	-	0.05	0.963	1.142
	LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	21350	2560	1	18.42	19.20	1.197	-	-	-0.19	0.916	1.096
	LTE Band 7	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	21100	2535	1	18.44	19.20	1.191	-	-	-0.02	0.743	0.885
	LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	21100	2535	1	18.44	19.20	1.191	-	-	-0.1	0.976	1.163
	LTE Band 7	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	21100	2535	1	18.44	19.20	1.191	-	-	0.07	0.328	0.391
	LTE Band 7	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	21100	2535	1	18.44	19.20	1.191	-	-	0.02	0.476	0.567
	LTE Band 7	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	20850	2510	1	18.41	19.20	1.199	-	-	0.05	0.843	1.011
	LTE Band 7	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	21350	2560	1	18.38	19.20	1.208	-	-	-0.15	0.786	0.949
	LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	20850	2510	1	18.41	19.20	1.199	-	-	-0.16	0.948	1.137
	LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	21350	2560	1	18.38	19.20	1.208	-	-	-0.02	0.906	1.094
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 2	21100	2535	1	18.46	19.20	1.186	-	-	-0.1	0.736	0.873
	LTE Band 7	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	21100	2535	1	18.46	19.20	1.186	-	-	0.12	0.959	1.137
	LTE Band 7	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.95	17.70	1.189	-	-	-0.18	0.566	0.673
	LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.95	17.70	1.189	-	-	0.17	0.746	0.887
	LTE Band 7C	20M+ 20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	21100+ 21298	2535+ 2554.8	1	16.80	17.70	1.230	-	-	0.18	0.718	0.883
	LTE Band 7	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.95	17.70	1.189	-	-	0.17	0.288	0.342
	LTE Band 7	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.95	17.70	1.189	-	-	-0.07	0.353	0.420
	LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	20850	2510	1	16.92	17.70	1.197	-	-	-0.16	0.689	0.825
	LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	21350	2560	1	16.90	17.70	1.202	-	-	-0.12	0.651	0.783
	LTE Band 7	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.93	17.70	1.194	-	-	-0.05	0.547	0.653
	LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.93	17.70	1.194	-	-	0.15	0.716	0.855
	LTE Band 7	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.93	17.70	1.194	-	-	-0.05	0.279	0.333
	LTE Band 7	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.93	17.70	1.194	-	-	-0.16	0.341	0.407
	LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	20850	2510	1	16.88	17.70	1.208	-	-	-0.16	0.674	0.814
	LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	21350	2560	1	16.87	17.70	1.211	-	-	0.05	0.646	0.782
	LTE Band 7	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2_Sim	21100	2535	1	16.94	17.70	1.191	-	-	-0.15	0.706	0.841
	LTE Band 7	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 9	DSI 2	21100	2535	1	21.01	21.70	1.172	-	-	-0.16	0.349	0.409
	LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 9	DSI 2	21100	2535	1	21.01	21.70	1.172	-	-	-0.18	0.339	0.397
	LTE Band 7	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	21100	2535	1	21.01	21.70	1.172	-	-	0.09	0.456	0.535
	LTE Band 7	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 9	DSI 2	21100	2535	1	21.01	21.70	1.172	-	-	0.16	0.149	0.175
	LTE Band 7	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	20850	2510	1	21.00	21.70	1.175	-	-	-0.12	0.453	0.532
	LTE Band 7	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	21350	2560	1	20.95	21.70	1.189	-	-	-0.09	0.504	0.599
	LTE Band 7C	20M+ 20M	QPSK	1	0	-	Left Cheek	0mm	Ant 9	DSI 2	21350+ 21152	2560+ 2540.2	1	20.96	21.70	1.186	-	-	-0.05	0.470	0.557
	LTE Band 7	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 9	DSI 2	21100	2535	1	20.97	21.70	1.183	-	-	-0.04	0.289	0.342
	LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 9	DSI 2	21100	2535	1	20.97	21.70	1.183	-	-	0.05	0.281	0.332
	LTE Band 7	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 9	DSI 2	21100	2535	1	20.97	21.70	1.183	-	-	-0.12	0.373	0.441
	LTE Band 7	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 9	DSI 2	21100	2535	1	20.97	21.70	1.183	-	-	-0.19	0.123	0.146
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	40620	2593	1	19.81	20.90	1.285	62.9	1.006	-0.09	0.777	1.005
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	40620	2593	1	19.81	20.90	1.285	62.9	1.006	-0.05	0.900	1.164
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	40620	2593	1	19.81	20.90	1.285	62.9	1.006	0.17	0.409	0.529
	LTE Band 41	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	40620	2593	1	19.81	20.90	1.285	62.9	1.006	-0.04	0.457	0.591
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	39750	2506	1	19.72	20.90	1.312	62.9	1.006	-0.11	0.652	0.861
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	40185	2549.5	1	19.73	20.90	1.309	62.9	1.006	-0.13	0.641	0.844



	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	41055	2636.5	1	19.73	20.90	1.309	62.9	1.006	-0.16	0.730	0.961
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	41490	2680	1	19.78	20.90	1.294	62.9	1.006	0.07	0.734	0.956
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	39750	2506	1	19.72	20.90	1.312	62.9	1.006	0.14	0.821	1.084
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	40185	2549.5	1	19.73	20.90	1.309	62.9	1.006	0.09	0.807	1.063
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	41055	2636.5	1	19.73	20.90	1.309	62.9	1.006	0.07	0.908	1.196
23	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	41490	2680	1	19.78	20.90	1.294	62.9	1.006	0.02	0.924	1.203
	LTE Band 41 PC2	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	41490	2680	1	21.90	22.50	1.148	42.9	1.009	-0.12	0.960	1.112
	LTE Band 41C	20M+ 20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	41490+ 41292	2680+ 2660.2	1	19.69	20.90	1.321	62.9	1.006	-0.13	0.885	1.176
	LTE Band 41C PC2	20M+ 20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	41490+ 41292	2680+ 2660.2	1	21.77	22.50	1.183	42.9	1.009	-0.05	0.856	1.022
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	40620	2593	1	19.78	20.90	1.294	62.9	1.006	-0.05	0.768	1.000
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	40620	2593	1	19.78	20.90	1.294	62.9	1.006	-0.05	0.892	1.161
	LTE Band 41	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	40620	2593	1	19.78	20.90	1.294	62.9	1.006	-0.12	0.406	0.529
	LTE Band 41	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	40620	2593	1	19.78	20.90	1.294	62.9	1.006	-0.02	0.443	0.577
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	39750	2506	1	19.66	20.90	1.330	62.9	1.006	0.17	0.637	0.853
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	40185	2549.5	1	19.66	20.90	1.330	62.9	1.006	0.14	0.619	0.828
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	41055	2636.5	1	19.60	20.90	1.349	62.9	1.006	0.17	0.706	0.958
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	41490	2680	1	19.72	20.90	1.312	62.9	1.006	0.17	0.715	0.944
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	39750	2506	1	19.66	20.90	1.330	62.9	1.006	-0.1	0.806	1.079
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	40185	2549.5	1	19.66	20.90	1.330	62.9	1.006	0.01	0.794	1.063
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	41055	2636.5	1	19.60	20.90	1.349	62.9	1.006	0.06	0.876	1.189
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	41490	2680	1	19.72	20.90	1.312	62.9	1.006	0.02	0.897	1.184
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 2	40620	2593	1	19.70	20.90	1.318	62.9	1.006	-0.16	0.761	1.009
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	40620	2593	1	19.70	20.90	1.318	62.9	1.006	-0.09	0.869	1.152
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.45	19.40	1.245	62.9	1.006	0.08	0.559	0.700
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.45	19.40	1.245	62.9	1.006	-0.18	0.679	0.850
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.45	19.40	1.245	62.9	1.006	-0.17	0.306	0.383
	LTE Band 41	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.45	19.40	1.245	62.9	1.006	0.12	0.335	0.419
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	39750	2506	1	18.41	19.40	1.256	62.9	1.006	-0.16	0.467	0.590
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	40185	2549.5	1	18.44	19.40	1.247	62.9	1.006	0.03	0.446	0.560
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	41055	2636.5	1	18.36	19.40	1.271	62.9	1.006	-0.19	0.526	0.672
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	41490	2680	1	18.36	19.40	1.271	62.9	1.006	0.05	0.531	0.679
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	39750	2506	1	18.41	19.40	1.256	62.9	1.006	-0.17	0.576	0.728
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	40185	2549.5	1	18.44	19.40	1.247	62.9	1.006	0.16	0.554	0.695
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	41055	2636.5	1	18.36	19.40	1.271	62.9	1.006	0.12	0.649	0.830
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	41490	2680	1	18.36	19.40	1.271	62.9	1.006	-0.17	0.667	0.853
	LTE Band 41 PC2	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	41490	2680	1	20.46	21.00	1.132	42.9	1.009	-0.01	0.683	0.780
	LTE Band 41C	20M+ 20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	41490+ 41292	2680+ 2660.2	1	18.30	19.40	1.288	62.9	1.006	-0.06	0.640	0.829
	LTE Band 41C PC2	20M+ 20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	41490+ 41292	2680+ 2660.2	1	20.33	21.00	1.167	42.9	1.009	-0.04	0.669	0.788
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.39	19.40	1.262	62.9	1.006	0.13	0.564	0.716
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.39	19.40	1.262	62.9	1.006	0.14	0.659	0.837
	LTE Band 41	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.39	19.40	1.262	62.9	1.006	-0.13	0.287	0.364
	LTE Band 41	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.39	19.40	1.262	62.9	1.006	0.15	0.314	0.399
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	39750	2506	1	18.35	19.40	1.274	62.9	1.006	0.03	0.451	0.578
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	40185	2549.5	1	18.38	19.40	1.265	62.9	1.006	-0.04	0.438	0.557
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	41055	2636.5	1	18.29	19.40	1.291	62.9	1.006	0	0.500	0.649
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	41490	2680	1	18.31	19.40	1.285	62.9	1.006	-0.11	0.506	0.654
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	39750	2506	1	18.35	19.40	1.274	62.9	1.006	-0.18	0.571	0.732
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	40185	2549.5	1	18.38	19.40	1.265	62.9	1.006	-0.11	0.562	0.715
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	41055	2636.5	1	18.29	19.40	1.291	62.9	1.006	0.14	0.620	0.805
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	41490	2680	1	18.31	19.40	1.285	62.9	1.006	-0.03	0.635	0.821
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.35	19.40	1.274	62.9	1.006	0.14	0.539	0.691
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI_2_Sim	40620	2593	1	18.35	19.40	1.274	62.9	1.006	0.01	0.656	0.840
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	40620	2593	1	22.79	23.00	1.050	62.9	1.006	0.09	0.315	0.333
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 2	DSI 2	40620	2593	1	22.79	23.00	1.050	62.9	1.006	0.09	0.060	0.063
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	40620	2593	1	22.79	23.00	1.050	62.9	1.006	-0.09	0.398	0.420



	LTE Band 41	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 2	DSI 2	40620	2593	1	22.79	23.00	1.050	62.9	1.006	-0.14	0.140	0.148
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	39750	2506	1	22.76	23.00	1.057	62.9	1.006	-0.11	0.243	0.258
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	40185	2549.5	1	22.41	23.00	1.146	62.9	1.006	-0.01	0.314	0.362
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	41055	2636.5	1	21.45	23.00	1.429	62.9	1.006	0.13	0.395	0.568
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	41490	2680	1	21.68	23.00	1.355	62.9	1.006	-0.17	0.342	0.466
	LTE Band 41 PC2	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	41055	2636.5	1	22.03	24.00	1.574	42.9	1.009	-0.12	0.332	0.527
	LTE Band 41C	20M+20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	41055+41253	2636.5+2656.3	1	21.41	23.00	1.442	62.9	1.006	0.01	0.375	0.544
	LTE Band 41C PC2	20M+20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 2	41055+41253	2636.5+2656.3	1	22.01	24.00	1.581	42.9	1.009	0.06	0.342	0.546
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 2	DSI 2	40620	2593	1	22.16	22.50	1.081	62.9	1.006	0.17	0.252	0.274
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 2	DSI 2	40620	2593	1	22.16	22.50	1.081	62.9	1.006	0.19	0.054	0.059
	LTE Band 41	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 2	DSI 2	40620	2593	1	22.16	22.50	1.081	62.9	1.006	0.02	0.317	0.345
	LTE Band 41	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 2	DSI 2	40620	2593	1	22.16	22.50	1.081	62.9	1.006	-0.01	0.112	0.122
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 5	DSI 2	40620	2593	1	23.33	24.00	1.167	62.9	1.006	0.05	0.546	0.641
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 5	DSI 2	40620	2593	1	23.33	24.00	1.167	62.9	1.006	0.02	0.421	0.494
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 5	DSI 2	40620	2593	1	23.33	24.00	1.167	62.9	1.006	-0.08	0.353	0.414
	LTE Band 41	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 5	DSI 2	40620	2593	1	23.33	24.00	1.167	62.9	1.006	0.11	0.329	0.386
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 5	DSI 2	39750	2506	1	22.49	24.00	1.416	62.9	1.006	0.06	0.442	0.630
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 5	DSI 2	40185	2549.5	1	23.30	24.00	1.175	62.9	1.006	0.08	0.467	0.552
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 5	DSI 2	41055	2636.5	1	23.01	24.00	1.256	62.9	1.006	0.05	0.353	0.446
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 5	DSI 2	41490	2680	1	22.62	24.00	1.374	62.9	1.006	-0.06	0.274	0.379
	LTE Band 41 PC2	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 5	DSI 2	40620	2593	1	25.47	25.50	1.007	42.9	1.009	0.17	0.583	0.592
	LTE Band 41C	20M+20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 2	40620+40818	2593+2612.8	1	23.31	24.00	1.172	62.9	1.006	0.03	0.496	0.585
	LTE Band 41C PC2	20M+20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 2	40620+40818	2593+2612.8	1	25.42	25.50	1.019	42.9	1.009	0.12	0.553	0.568
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 5	DSI 2	40620	2593	1	23.22	23.50	1.067	62.9	1.006	-0.13	0.416	0.446
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 5	DSI 2	40620	2593	1	23.22	23.50	1.067	62.9	1.006	-0.09	0.331	0.355
	LTE Band 41	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 5	DSI 2	40620	2593	1	23.22	23.50	1.067	62.9	1.006	-0.04	0.275	0.295
	LTE Band 41	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 5	DSI 2	40620	2593	1	23.22	23.50	1.067	62.9	1.006	0.03	0.261	0.280
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 5	DSI 2	40620	2593	1	23.14	23.50	1.086	62.9	1.006	0.12	0.363	0.397
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 9	DSI 2	40620	2593	1	23.37	24.00	1.156	62.9	1.006	0.19	0.258	0.300
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 9	DSI 2	40620	2593	1	23.37	24.00	1.156	62.9	1.006	0.12	0.237	0.276
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	40620	2593	1	23.37	24.00	1.156	62.9	1.006	0.08	0.392	0.456
	LTE Band 41	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 9	DSI 2	40620	2593	1	23.37	24.00	1.156	62.9	1.006	0.01	0.117	0.136
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	39750	2506	1	23.10	24.00	1.230	62.9	1.006	0.06	0.345	0.427
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	40185	2549.5	1	23.26	24.00	1.186	62.9	1.006	0.05	0.332	0.396
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	41055	2636.5	1	23.03	24.00	1.250	62.9	1.006	-0.06	0.315	0.396
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	41490	2680	1	23.15	24.00	1.216	62.9	1.006	-0.15	0.325	0.398
	LTE Band 41 PC2	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 9	DSI 2	40620	2593	1	25.48	26.00	1.127	42.9	1.009	-0.12	0.401	0.456
	LTE Band 41C	20M+20M	QPSK	1	0	-	Left Cheek	0mm	Ant 9	DSI 2	40620+40818	2593+2612.8	1	23.34	24.00	1.164	62.9	1.006	-0.19	0.369	0.432
	LTE Band 41C PC2	20M+20M	QPSK	1	0	-	Left Cheek	0mm	Ant 9	DSI 2	40620+40818	2593+2612.8	1	25.32	26.00	1.169	42.9	1.009	0.16	0.375	0.443
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 9	DSI 2	40620	2593	1	23.21	23.50	1.069	62.9	1.006	-0.04	0.203	0.218
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 9	DSI 2	40620	2593	1	23.21	23.50	1.069	62.9	1.006	0.1	0.192	0.206
	LTE Band 41	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 9	DSI 2	40620	2593	1	23.21	23.50	1.069	62.9	1.006	0	0.312	0.336
	LTE Band 41	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 9	DSI 2	40620	2593	1	23.21	23.50	1.069	62.9	1.006	0.08	0.097	0.104
24	FR1 n7	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	1	17.03	18.00	1.250	-	-	-0.04	0.644	0.805
	FR1 n7	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	1	17.03	18.00	1.250	-	-	0.09	0.937	1.171
	FR1 n7	40M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	507000	2535	1	17.03	18.00	1.250	-	-	-0.14	0.219	0.274
	FR1 n7	40M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	507000	2535	1	17.03	18.00	1.250	-	-	-0.14	0.346	0.433
	FR1 n7	40M	QPSK	108	54	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	1	16.99	18.00	1.262	-	-	-0.05	0.627	0.791
	FR1 n7	40M	QPSK	108	54	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	1	16.99	18.00	1.262	-	-	0	0.890	1.123
	FR1 n7	40M	QPSK	108	54	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	507000	2535	1	16.99	18.00	1.262	-	-	0.06	0.216	0.273
	FR1 n7	40M	QPSK	108	54	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	507000	2535	1	16.99	18.00	1.262	-	-	0.05	0.339	0.428
	FR1 n7	40M	QPSK	216	0	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	1	16.97	18.00	1.268	-	-	0.03	0.629	0.797
	FR1 n7	40M	QPSK	216	0	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	1	16.97	18.00	1.268	-	-	-0.14	0.886	1.123
	FR1 n7	40M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI_2_Sim	507000	2535	1	15.62	16.50	1.225	-	-	0.13	0.456	0.558
	FR1 n7	40M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI_2_Sim	507000	2535	1	15.62	16.50	1.225	-	-	-0.04	0.676	0.828



FCC SAR Test Report

Report No. : FA3D0836

Table with 22 columns: Model, Power, Modulation, Channels, Frequency, Position, Distance, Antenna, Frequency, Power, Time, SAR1, SAR2, SAR3, SAR4, SAR5, SAR6, SAR7, SAR8, SAR9, SAR10. Rows include FR1 n41 PC2 with various configurations.

3000~4000 MHz

Table with 22 columns: Band, Power, Modulation, Channels, Frequency, Position, Distance, Antenna, Frequency, Power, Time, SAR1, SAR2, SAR3, SAR4, SAR5, SAR6, SAR7, SAR8, SAR9, SAR10. Rows include LTE Band 48 and LTE Band 48C configurations.



FCC SAR Test Report

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LTE Band 48	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 4	DSI 2	56640	3690	1	22.91	23.50	1.146	62.9	1.006	0.12	0.879	1.013
LTE Band 48	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 2	55830	3609	1	22.81	23.50	1.172	62.9	1.006	0.02	0.859	1.013
LTE Band 48	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.78	22.70	1.236	62.9	1.006	0.01	0.637	0.792
LTE Band 48	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.78	22.70	1.236	62.9	1.006	0.12	0.260	0.323
LTE Band 48	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.78	22.70	1.236	62.9	1.006	0.15	0.126	0.157
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.78	22.70	1.236	62.9	1.006	0.12	0.098	0.122
LTE Band 48	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	55340	3560	1	21.75	22.70	1.245	62.9	1.006	0.15	0.606	0.759
LTE Band 48	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	56150	3641	1	21.67	22.70	1.268	62.9	1.006	0.14	0.626	0.798
LTE Band 48	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	56640	3690	1	21.72	22.70	1.253	62.9	1.006	0.07	0.649	0.818
LTE Band 48C	20M+20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	56640+56442	3690+3670.2	1	21.62	22.70	1.282	62.9	1.006	-0.08	0.628	0.810
LTE Band 48	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.67	22.70	1.268	62.9	1.006	-0.02	0.612	0.780
LTE Band 48	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.67	22.70	1.268	62.9	1.006	0.14	0.254	0.324
LTE Band 48	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.67	22.70	1.268	62.9	1.006	-0.01	0.122	0.156
LTE Band 48	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.67	22.70	1.268	62.9	1.006	-0.15	0.093	0.119
LTE Band 48	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	55340	3560	1	21.65	22.70	1.274	62.9	1.006	0.11	0.581	0.744
LTE Band 48	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	56150	3641	1	21.54	22.70	1.306	62.9	1.006	-0.17	0.600	0.788
LTE Band 48	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	56640	3690	1	21.63	22.70	1.279	62.9	1.006	-0.17	0.624	0.803
LTE Band 48	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI_2_Sim	55830	3609	1	21.64	22.70	1.276	62.9	1.006	0.13	0.617	0.792
LTE Band 48	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 7	DSI 2	55830	3609	1	17.20	17.80	1.148	62.9	1.006	-0.12	0.361	0.417
LTE Band 48	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 7	DSI 2	55830	3609	1	17.20	17.80	1.148	62.9	1.006	0.19	0.531	0.613
LTE Band 48	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 7	DSI 2	55830	3609	1	17.20	17.80	1.148	62.9	1.006	-0.15	0.509	0.588
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 7	DSI 2	55830	3609	1	17.20	17.80	1.148	62.9	1.006	0.14	0.871	1.006
LTE Band 48	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 7	DSI 2	55340	3560	1	17.06	17.80	1.186	62.9	1.006	-0.17	0.496	0.592
LTE Band 48	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 7	DSI 2	56150	3641	1	17.13	17.80	1.167	62.9	1.006	0.07	0.510	0.599
LTE Band 48	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 7	DSI 2	56640	3690	1	17.11	17.80	1.172	62.9	1.006	-0.08	0.499	0.588
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 7	DSI 2	55340	3560	1	17.06	17.80	1.186	62.9	1.006	-0.04	0.921	1.099
LTE Band 48C	20M+20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	DSI 2	55340+55538	3560+3579.8	1	17.05	17.80	1.189	62.9	1.006	-0.14	0.900	1.076
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 7	DSI 2	56150	3641	1	17.13	17.80	1.167	62.9	1.006	0	0.894	1.049
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 7	DSI 2	56640	3690	1	17.11	17.80	1.172	62.9	1.006	0.04	0.868	1.024
LTE Band 48	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 7	DSI 2	55830	3609	1	17.16	17.80	1.159	62.9	1.006	-0.15	0.335	0.391
LTE Band 48	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 7	DSI 2	55830	3609	1	17.16	17.80	1.159	62.9	1.006	0.01	0.518	0.604
LTE Band 48	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 7	DSI 2	55830	3609	1	17.16	17.80	1.159	62.9	1.006	0.05	0.481	0.561
LTE Band 48	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 7	DSI 2	55830	3609	1	17.16	17.80	1.159	62.9	1.006	-0.03	0.819	0.955
LTE Band 48	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 7	DSI 2	55340	3560	1	17.09	17.80	1.178	62.9	1.006	0.18	0.471	0.558
LTE Band 48	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 7	DSI 2	56150	3641	1	17.11	17.80	1.172	62.9	1.006	0.11	0.496	0.585
LTE Band 48	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 7	DSI 2	56640	3690	1	17.11	17.80	1.172	62.9	1.006	0	0.481	0.567
LTE Band 48	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 7	DSI 2	55340	3560	1	17.09	17.80	1.178	62.9	1.006	0.13	0.826	0.979
LTE Band 48	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 7	DSI 2	56150	3641	1	17.11	17.80	1.172	62.9	1.006	-0.05	0.802	0.946
LTE Band 48	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 7	DSI 2	56640	3690	1	17.11	17.80	1.172	62.9	1.006	-0.18	0.793	0.935
LTE Band 48	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 7	DSI 2	55830	3609	1	17.13	17.80	1.167	62.9	1.006	-0.04	0.489	0.574
LTE Band 48	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 7	DSI 2	55830	3609	1	17.13	17.80	1.167	62.9	1.006	-0.19	0.805	0.945
LTE Band 48	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 7	DSI_2_Sim	55830	3609	1	15.70	16.30	1.148	62.9	1.006	-0.17	0.281	0.325
LTE Band 48	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 7	DSI_2_Sim	55830	3609	1	15.70	16.30	1.148	62.9	1.006	-0.01	0.415	0.479
LTE Band 48	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 7	DSI_2_Sim	55830	3609	1	15.70	16.30	1.148	62.9	1.006	-0.14	0.406	0.469
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 7	DSI_2_Sim	55830	3609	1	15.70	16.30	1.148	62.9	1.006	0.01	0.621	0.717
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 7	DSI_2_Sim	55340	3560	1	15.57	16.30	1.183	62.9	1.006	-0.15	0.648	0.771
LTE Band 48C	20M+20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	DSI_2_Sim	55340+55538	3560+3579.8	1	15.49	16.30	1.205	62.9	1.006	-0.03	0.622	0.754
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 7	DSI_2_Sim	56150	3641	1	15.61	16.30	1.172	62.9	1.006	-0.01	0.626	0.738
LTE Band 48	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 7	DSI_2_Sim	56640	3690	1	15.60	16.30	1.175	62.9	1.006	0.07	0.617	0.729
LTE Band 48	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 7	DSI_2_Sim	55830	3609	1	15.63	16.30	1.167	62.9	1.006	0.05	0.271	0.318
LTE Band 48	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 7	DSI_2_Sim	55830	3609	1	15.63	16.30	1.167	62.9	1.006	-0.09	0.401	0.471
LTE Band 48	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 7	DSI_2_Sim	55830	3609	1	15.63	16.30	1.167	62.9	1.006	-0.02	0.389	0.457
LTE Band 48	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 7	DSI_2_Sim	55830	3609	1	15.63	16.30	1.167	62.9	1.006	0.02	0.576	0.676
LTE Band 48	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 7	DSI_2_Sim	55340	3560	1	15.60	16.30	1.175	62.9	1.006	-0.07	0.581	0.687
LTE Band 48	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 7	DSI_2_Sim	56150	3641	1	15.60	16.30	1.175	62.9	1.006	-0.16	0.536	0.634



Table with columns for LTE Band, Power, Modulation, Frequency, Power Spectral Density, Location, Antenna, Frequency Range, Power, SAR, etc.



FCC SAR Test Report

Report No. : FA3D0836

Table with 21 columns: FR1 n48, 40M, QPSK, 1, 1, DFT-30, Left Cheek, 0mm, Ant 4, DSI 2, 641666, 3624.99, 1, 21.00, 22.00, 1.259, -, -, 0.14, 0.154, 0.194. Contains 50 rows of test data.



FCC SAR Test Report

Report No. : FA3D0836

	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	641666	3624.99	1	13.70	15.00	1.349	-	-	-0.11	0.606	0.817
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	638000	3570	1	13.67	15.00	1.358	-	-	0.03	0.537	0.729
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	645332	3679.98	1	13.61	15.00	1.377	-	-	-0.15	0.521	0.718
	FR1 n48	40M	QPSK	100	0	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	641666	3624.99	1	13.69	15.00	1.352	-	-	0.16	0.589	0.796
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	DSI 2	641666	3624.99	1	17.60	18.50	1.230	-	-	-0.06	0.258	0.317
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	DSI 2	641666	3624.99	1	17.60	18.50	1.230	-	-	0.17	0.177	0.218
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	641666	3624.99	1	17.60	18.50	1.230	-	-	-0.06	0.916	1.127
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	641666	3624.99	1	17.60	18.50	1.230	-	-	0.17	0.529	0.651
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	638000	3570	1	17.53	18.50	1.250	-	-	-0.07	0.814	1.018
27	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	645332	3679.98	1	17.55	18.50	1.245	-	-	0.02	1.010	1.257
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	645332	3679.98	2	17.55	18.50	1.245	-	-	0.03	0.967	1.203
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	638000	3570	1	17.53	18.50	1.250	-	-	0.03	0.490	0.613
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	645332	3679.98	1	17.55	18.50	1.245	-	-	0.03	0.674	0.839
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 8	DSI 2	641666	3624.99	1	17.59	18.50	1.233	-	-	-0.02	0.226	0.279
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 8	DSI 2	641666	3624.99	1	17.59	18.50	1.233	-	-	-0.05	0.170	0.210
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	641666	3624.99	1	17.59	18.50	1.233	-	-	-0.07	0.897	1.106
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	641666	3624.99	1	17.59	18.50	1.233	-	-	-0.09	0.506	0.624
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	638000	3570	1	17.49	18.50	1.262	-	-	-0.18	0.801	1.011
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	645332	3679.98	1	17.47	18.50	1.268	-	-	-0.14	0.961	1.218
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	638000	3570	1	17.49	18.50	1.262	-	-	0.03	0.466	0.588
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	645332	3679.98	1	17.47	18.50	1.268	-	-	-0.16	0.643	0.815
	FR1 n48	40M	QPSK	100	0	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	641666	3624.99	1	17.54	18.50	1.247	-	-	0.19	0.889	1.109
	FR1 n48	40M	QPSK	100	0	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	641666	3624.99	1	17.54	18.50	1.247	-	-	0.15	0.503	0.627
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.12	17.00	1.225	-	-	0.06	0.191	0.234
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.12	17.00	1.225	-	-	0.01	0.129	0.158
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.12	17.00	1.225	-	-	-0.02	0.651	0.797
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.12	17.00	1.225	-	-	-0.08	0.386	0.473
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	638000	3570	1	16.07	17.00	1.239	-	-	0.05	0.581	0.720
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	645332	3679.98	1	16.10	17.00	1.230	-	-	0.13	0.689	0.848
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.06	17.00	1.242	-	-	0.01	0.182	0.226
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.06	17.00	1.242	-	-	-0.05	0.120	0.149
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.06	17.00	1.242	-	-	-0.16	0.626	0.777
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.06	17.00	1.242	-	-	-0.17	0.362	0.449
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	638000	3570	1	16.00	17.00	1.259	-	-	0.08	0.559	0.704
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	645332	3679.98	1	16.03	17.00	1.250	-	-	0.02	0.651	0.814
	FR1 n48	40M	QPSK	100	0	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	641666	3624.99	1	16.07	17.00	1.239	-	-	0.17	0.609	0.754
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 10	DSI 2	641666	3624.99	1	22.07	23.00	1.239	-	-	-0.12	0.013	0.016
	FR1 n48	40M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 10	DSI 2	641666	3624.99	1	22.07	23.00	1.239	-	-	-0.03	0.008	0.010
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 10	DSI 2	641666	3624.99	1	22.07	23.00	1.239	-	-	0.15	0.018	0.022
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 10	DSI 2	641666	3624.99	1	22.07	23.00	1.239	-	-	-0.04	0.012	0.015
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 10	DSI 2	638000	3570	1	22.01	23.00	1.256	-	-	0.13	0.019	0.024
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 10	DSI 2	645332	3679.98	1	21.96	23.00	1.271	-	-	0.06	0.022	0.028
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Cheek	0mm	Ant 10	DSI 2	641666	3624.99	1	22.02	23.00	1.253	-	-	0	0.012	0.015
	FR1 n48	40M	QPSK	50	28	DFT-30	Right Tilted	0mm	Ant 10	DSI 2	641666	3624.99	1	22.02	23.00	1.253	-	-	0.17	0.007	0.009
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Cheek	0mm	Ant 10	DSI 2	641666	3624.99	1	22.02	23.00	1.253	-	-	0.19	0.016	0.020
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Tilted	0mm	Ant 10	DSI 2	641666	3624.99	1	22.02	23.00	1.253	-	-	0	0.010	0.013
	FR1 n77 Part270 PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	1	18.28	19.00	1.180	-	-	0.08	0.602	0.711
	FR1 n77 Part270 PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	DSI 2	656000	3840	1	18.28	19.00	1.180	-	-	0.15	0.251	0.296
	FR1 n77 Part270 PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 4	DSI 2	656000	3840	1	18.28	19.00	1.180	-	-	-0.12	0.133	0.157
	FR1 n77 Part270 PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 4	DSI 2	656000	3840	1	18.28	19.00	1.180	-	-	-0.07	0.093	0.110
	FR1 n77 Part270 PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	1	18.26	19.00	1.186	-	-	-0.05	0.586	0.695
	FR1 n77 Part270 PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 4	DSI 2	656000	3840	1	18.26	19.00	1.186	-	-	-0.02	0.225	0.267
	FR1 n77 Part270 PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 4	DSI 2	656000	3840	1	18.26	19.00	1.186	-	-	0.1	0.127	0.151
	FR1 n77 Part270 PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 4	DSI 2	656000	3840	1	18.26	19.00	1.186	-	-	0.07	0.091	0.108
	FR1 n77 Part270 PC2	100M	QPSK	270	0	DFT-30	Right Cheek	0mm	Ant 4	DSI 2	656000	3840	1	18.23	19.00	1.194	-	-	-0.1	0.591	0.706
	FR1 n77 Part270 PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.75	17.50	1.189	-	-	-0.03	0.454	0.540



FR1 n77 Part270 PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.75	17.50	1.189	-	-	0.14	0.182	0.216
FR1 n77 Part270 PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.75	17.50	1.189	-	-	0.05	0.093	0.111
FR1 n77 Part270 PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.75	17.50	1.189	-	-	-0.11	0.067	0.080
FR1 n77 Part270 PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.71	17.50	1.199	-	-	-0.11	0.437	0.524
FR1 n77 Part270 PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.71	17.50	1.199	-	-	0.19	0.170	0.204
FR1 n77 Part270 PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.71	17.50	1.199	-	-	0.02	0.091	0.109
FR1 n77 Part270 PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.71	17.50	1.199	-	-	0.14	0.066	0.079
FR1 n77 Part270 PC2	100M	QPSK	270	0	DFT-30	Right Cheek	0mm	Ant 4	DSI 2_Sim	656000	3840	1	16.65	17.50	1.216	-	-	-0.04	0.443	0.539
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	DSI 2	633332	3499.98	1	18.23	19.00	1.194	-	-	-0.12	0.833	0.995
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	DSI 2	633332	3499.98	1	18.23	19.00	1.194	-	-	-0.07	0.305	0.364
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 4	DSI 2	633332	3499.98	1	18.23	19.00	1.194	-	-	-0.13	0.175	0.209
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 4	DSI 2	633332	3499.98	1	18.23	19.00	1.194	-	-	-0.12	0.113	0.135
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 4	DSI 2	633332	3499.98	1	18.21	19.00	1.199	-	-	-0.17	0.815	0.978
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 4	DSI 2	633332	3499.98	1	18.21	19.00	1.199	-	-	-0.01	0.298	0.357
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 4	DSI 2	633332	3499.98	1	18.21	19.00	1.199	-	-	-0.14	0.160	0.192
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 4	DSI 2	633332	3499.98	1	18.21	19.00	1.199	-	-	0.12	0.102	0.122
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Right Cheek	0mm	Ant 4	DSI 2	633332	3499.98	1	18.17	19.00	1.211	-	-	-0.13	0.813	0.984
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 4	DSI 2_Sim	633332	3499.98	1	16.71	17.50	1.199	-	-	0.07	0.606	0.727
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 4	DSI 2_Sim	633332	3499.98	1	16.71	17.50	1.199	-	-	0.04	0.222	0.266
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 4	DSI 2_Sim	633332	3499.98	1	16.71	17.50	1.199	-	-	-0.15	0.125	0.150
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 4	DSI 2_Sim	633332	3499.98	1	16.71	17.50	1.199	-	-	-0.13	0.082	0.098
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 4	DSI 2_Sim	633332	3499.98	1	16.69	17.50	1.205	-	-	-0.02	0.581	0.700
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 4	DSI 2_Sim	633332	3499.98	1	16.69	17.50	1.205	-	-	0.01	0.209	0.252
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 4	DSI 2_Sim	633332	3499.98	1	16.69	17.50	1.205	-	-	0.16	0.124	0.149
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 4	DSI 2_Sim	633332	3499.98	1	16.69	17.50	1.205	-	-	0.02	0.076	0.092
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 7	DSI 2	656000	3840	1	15.58	17.00	1.387	-	-	0.13	0.368	0.510
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 7	DSI 2	656000	3840	1	15.58	17.00	1.387	-	-	-0.06	0.526	0.729
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 7	DSI 2	656000	3840	1	15.58	17.00	1.387	-	-	0.03	0.472	0.655
28 FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 7	DSI 2	656000	3840	1	15.58	17.00	1.387	-	-	0	0.889	1.233
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 7	DSI 2	656000	3840	1	15.53	17.00	1.403	-	-	-0.19	0.346	0.485
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 7	DSI 2	656000	3840	1	15.53	17.00	1.403	-	-	0.01	0.506	0.710
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 7	DSI 2	656000	3840	1	15.53	17.00	1.403	-	-	0.14	0.446	0.626
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 7	DSI 2	656000	3840	1	15.53	17.00	1.403	-	-	-0.08	0.846	1.187
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Right Cheek	0mm	Ant 7	DSI 2	656000	3840	1	15.47	17.00	1.422	-	-	0.07	0.351	0.499
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Right Tilted	0mm	Ant 7	DSI 2	656000	3840	1	15.47	17.00	1.422	-	-	0.08	0.513	0.730
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Cheek	0mm	Ant 7	DSI 2	656000	3840	1	15.47	17.00	1.422	-	-	-0.11	0.440	0.626
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Tilted	0mm	Ant 7	DSI 2	656000	3840	1	15.47	17.00	1.422	-	-	0.11	0.838	1.192
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.10	15.50	1.380	-	-	-0.12	0.275	0.380
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.10	15.50	1.380	-	-	-0.08	0.400	0.552
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.10	15.50	1.380	-	-	-0.1	0.349	0.482
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.10	15.50	1.380	-	-	0.18	0.637	0.879
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.08	15.50	1.387	-	-	-0.09	0.245	0.340
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.08	15.50	1.387	-	-	0.09	0.358	0.496
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.08	15.50	1.387	-	-	0.14	0.316	0.438
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.08	15.50	1.387	-	-	-0.14	0.609	0.845
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Right Tilted	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.02	15.50	1.406	-	-	-0.06	0.351	0.494
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Cheek	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.02	15.50	1.406	-	-	0.03	0.308	0.433
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	656000	3840	1	14.02	15.50	1.406	-	-	0.06	0.589	0.828
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 7	DSI 2	633332	3499.98	1	15.52	17.00	1.406	-	-	0.08	0.378	0.531
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 7	DSI 2	633332	3499.98	1	15.52	17.00	1.406	-	-	0.05	0.489	0.688
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 7	DSI 2	633332	3499.98	1	15.52	17.00	1.406	-	-	0.18	0.467	0.657
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 7	DSI 2	633332	3499.98	1	15.52	17.00	1.406	-	-	-0.15	0.834	1.173
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 7	DSI 2	633332	3499.98	1	15.45	17.00	1.429	-	-	0.03	0.419	0.599
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 7	DSI 2	633332	3499.98	1	15.45	17.00	1.429	-	-	0.11	0.513	0.733
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 7	DSI 2	633332	3499.98	1	15.45	17.00	1.429	-	-	0.07	0.486	0.694
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 7	DSI 2	633332	3499.98	1	15.45	17.00	1.429	-	-	0	0.847	1.210



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FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Tilted	0mm	Ant 7	DSI 2	633332	3499.98	1	15.32	17.00	1.472	-	-	0.18	0.811	1.194
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	14.05	15.50	1.396	-	-	-0.12	0.251	0.350
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	14.05	15.50	1.396	-	-	0.12	0.377	0.526
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	14.05	15.50	1.396	-	-	-0.09	0.368	0.514
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	14.05	15.50	1.396	-	-	-0.17	0.602	0.841
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	14.00	15.50	1.413	-	-	-0.04	0.289	0.408
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	14.00	15.50	1.413	-	-	0.03	0.381	0.538
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	14.00	15.50	1.413	-	-	0.02	0.356	0.503
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	14.00	15.50	1.413	-	-	-0.04	0.611	0.863
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Tilted	0mm	Ant 7	DSI 2_Sim	633332	3499.98	1	13.91	15.50	1.442	-	-	-0.03	0.575	0.829
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	DSI 2	656000	3840	1	17.15	18.50	1.365	-	-	0.19	0.268	0.366
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	DSI 2	656000	3840	1	17.15	18.50	1.365	-	-	0.01	0.240	0.327
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	656000	3840	1	17.15	18.50	1.365	-	-	-0.07	0.901	1.229
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	656000	3840	1	17.15	18.50	1.365	-	-	0.05	0.659	0.899
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 8	DSI 2	656000	3840	1	17.14	18.50	1.368	-	-	0.15	0.243	0.332
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 8	DSI 2	656000	3840	1	17.14	18.50	1.368	-	-	0.17	0.231	0.316
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	656000	3840	1	17.14	18.50	1.368	-	-	-0.12	0.857	1.172
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	656000	3840	1	17.14	18.50	1.368	-	-	-0.11	0.621	0.849
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	656000	3840	1	17.13	18.50	1.371	-	-	-0.16	0.837	1.147
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	656000	3840	1	17.13	18.50	1.371	-	-	-0.02	0.618	0.847
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.68	17.00	1.355	-	-	0.16	0.201	0.272
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.68	17.00	1.355	-	-	-0.15	0.182	0.247
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.68	17.00	1.355	-	-	0.14	0.631	0.855
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.68	17.00	1.355	-	-	0.08	0.462	0.626
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.65	17.00	1.365	-	-	-0.13	0.196	0.267
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.65	17.00	1.365	-	-	-0.19	0.172	0.235
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.65	17.00	1.365	-	-	0.13	0.626	0.854
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.65	17.00	1.365	-	-	0.07	0.459	0.626
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.60	17.00	1.380	-	-	-0.03	0.593	0.819
FR1 n77 Part27Q PC2	100M	QPSK	270	0	DFT-30	Left Tilted	0mm	Ant 8	DSI 2_Sim	656000	3840	1	15.60	17.00	1.380	-	-	0.13	0.438	0.605
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	DSI 2	633332	3499.98	1	17.03	18.50	1.403	-	-	-0.04	0.206	0.289
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	DSI 2	633332	3499.98	1	17.03	18.50	1.403	-	-	0.1	0.179	0.251
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	633332	3499.98	1	17.03	18.50	1.403	-	-	-0.02	0.647	0.908
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	633332	3499.98	1	17.03	18.50	1.403	-	-	-0.14	0.432	0.606
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 8	DSI 2	633332	3499.98	1	17.00	18.50	1.413	-	-	0.19	0.196	0.277
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 8	DSI 2	633332	3499.98	1	17.00	18.50	1.413	-	-	0.15	0.168	0.237
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	633332	3499.98	1	17.00	18.50	1.413	-	-	0.14	0.628	0.887
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 8	DSI 2	633332	3499.98	1	17.00	18.50	1.413	-	-	-0.05	0.410	0.579
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	633332	3499.98	1	16.96	18.50	1.426	-	-	0	0.618	0.881
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 8	DSI 2_Sim	633332	3499.98	1	15.64	17.00	1.368	-	-	-0.03	0.151	0.207
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 8	DSI 2_Sim	633332	3499.98	1	15.64	17.00	1.368	-	-	0.14	0.126	0.172
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	633332	3499.98	1	15.64	17.00	1.368	-	-	-0.04	0.462	0.632
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 8	DSI 2_Sim	633332	3499.98	1	15.64	17.00	1.368	-	-	0	0.321	0.439
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 8	DSI 2_Sim	633332	3499.98	1	15.54	17.00	1.400	-	-	0.19	0.142	0.199
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 8	DSI 2_Sim	633332	3499.98	1	15.54	17.00	1.400	-	-	0.01	0.119	0.167
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 8	DSI 2_Sim	633332	3499.98	1	15.54	17.00	1.400	-	-	-0.11	0.445	0.623
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 8	DSI 2_Sim	633332	3499.98	1	15.54	17.00	1.400	-	-	0.19	0.290	0.406
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 10	DSI 2	656000	3840	1	19.75	21.00	1.334	-	-	-0.03	0.019	0.025
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 10	DSI 2	656000	3840	1	19.75	21.00	1.334	-	-	0.13	0.008	0.011
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 10	DSI 2	656000	3840	1	19.75	21.00	1.334	-	-	-0.04	0.026	0.035
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 10	DSI 2	656000	3840	1	19.75	21.00	1.334	-	-	-0.15	0.016	0.021
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 10	DSI 2	656000	3840	1	19.71	21.00	1.346	-	-	-0.14	0.021	0.028
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 10	DSI 2	656000	3840	1	19.71	21.00	1.346	-	-	0.16	0.011	0.015
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 10	DSI 2	656000	3840	1	19.71	21.00	1.346	-	-	0.05	0.029	0.039
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 10	DSI 2	656000	3840	1	19.71	21.00	1.346	-	-	-0.15	0.017	0.023
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 10	DSI 2	633332	3499.98	1	19.83	21.00	1.309	-	-	0.01	0.017	0.022



FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 10	DSI 2	633332	3499.98	1	19.83	21.00	1.309	-	-	-0.01	0.011	0.014
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 10	DSI 2	633332	3499.98	1	19.83	21.00	1.309	-	-	-0.11	0.028	0.037
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 10	DSI 2	633332	3499.98	1	19.83	21.00	1.309	-	-	0.11	0.015	0.020
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 10	DSI 2	633332	3499.98	1	19.79	21.00	1.321	-	-	0.05	0.014	0.018
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 10	DSI 2	633332	3499.98	1	19.79	21.00	1.321	-	-	-0.13	0.009	0.012
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 10	DSI 2	633332	3499.98	1	19.79	21.00	1.321	-	-	-0.06	0.024	0.032
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 10	DSI 2	633332	3499.98	1	19.79	21.00	1.321	-	-	0.02	0.013	0.017

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	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)	
Bluetooth/WLAN 2.4GHz																		
	Bluetooth	DH5 1Mbps	Right Cheek	0mm	Ant 3	Full	78	2480	1	12.80	14.00	1.318	76.80	1.302	-0.19	0.095	0.163	
	Bluetooth	DH5 1Mbps	Right Tilted	0mm	Ant 3	Full	78	2480	1	12.80	14.00	1.318	76.80	1.302	0	0.099	0.170	
29	Bluetooth	DH5 1Mbps	Left Cheek	0mm	Ant 3	Full	78	2480	1	12.80	14.00	1.318	76.80	1.302	-0.18	0.157	0.269	
	Bluetooth	DH5 1Mbps	Left Tilted	0mm	Ant 3	Full	78	2480	1	12.80	14.00	1.318	76.80	1.302	-0.19	0.145	0.249	
	Bluetooth	DH5 1Mbps	Left Cheek	0mm	Ant 3	Full	0	2402	1	10.60	12.00	1.380	76.80	1.302	0.05	0.132	0.237	
	Bluetooth	DH5 1Mbps	Left Cheek	0mm	Ant 3	Full	39	2441	1	12.20	14.00	1.514	76.80	1.302	0.17	0.122	0.240	
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	Standalone	1	2412	1	16.85	18.50	1.462	98.65	1.014	-0.17	0.420	0.623	
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	Standalone	1	2412	1	16.85	18.50	1.462	98.65	1.014	-0.1	0.510	0.756	
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Standalone	1	2412	1	16.85	18.50	1.462	98.65	1.014	0.13	0.740	1.097	
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	Standalone	1	2412	1	16.85	18.50	1.462	98.65	1.014	-0.13	0.680	1.008	
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Standalone	6	2437	1	16.53	18.50	1.574	98.65	1.014	-0.04	0.811	1.294	
30	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Standalone	11	2462	1	16.83	18.50	1.469	98.65	1.014	-0.07	0.933	1.390	
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Standalone	11	2462	2	16.83	18.50	1.469	98.65	1.014	0.01	0.916	1.364	
	WLAN2.4GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3	Standalone	6	2437	1	16.80	18.50	1.479	93.00	1.075	0.03	0.731	1.162	
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	Standalone	6	2437	1	16.53	18.50	1.574	98.65	1.014	0.11	0.580	0.926	
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	Standalone	11	2462	1	16.83	18.50	1.469	98.65	1.014	-0.14	0.850	1.266	
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	Simultaneous	1	2412	1	13.84	15.50	1.466	98.65	1.014	-0.17	0.201	0.299	
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	Simultaneous	1	2412	1	13.84	15.50	1.466	98.65	1.014	-0.1	0.216	0.321	
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Simultaneous	1	2412	1	13.84	15.50	1.466	98.65	1.014	0.13	0.371	0.551	
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	Simultaneous	1	2412	1	13.84	15.50	1.466	98.65	1.014	-0.13	0.341	0.507	
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Simultaneous	6	2437	1	13.56	15.50	1.563	98.65	1.014	-0.04	0.411	0.651	
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Simultaneous	11	2462	1	13.61	15.50	1.545	98.65	1.014	-0.07	0.435	0.682	
WLAN 5GHz																		
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5	Full	54	5270	1	20.41	22.00	1.442	96.32	1.038	0.17	0.099	0.148	
31	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Full	54	5270	1	20.41	22.00	1.442	96.32	1.038	-0.04	0.205	0.307	
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5	Full	54	5270	1	20.41	22.00	1.442	96.32	1.038	0.1	0.070	0.105	
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5	Full	54	5270	1	20.41	22.00	1.442	96.32	1.038	0.16	0.103	0.154	
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Full	62	5310	1	16.41	18.00	1.442	96.32	1.038	0.16	0.185	0.277	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5	Full	110	5550	1	19.75	21.00	1.334	96.32	1.038	0.19	0.097	0.134	
32	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Full	110	5550	1	19.75	21.00	1.334	96.32	1.038	0.17	0.270	0.374	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Full	110	5550	2	19.75	21.00	1.334	96.32	1.038	0.06	0.150	0.208	
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5	Full	110	5550	1	19.75	21.00	1.334	96.32	1.038	0.16	0.065	0.090	
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5	Full	110	5550	1	19.75	21.00	1.334	96.32	1.038	-0.11	0.100	0.138	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Full	102	5510	1	19.02	20.50	1.406	96.32	1.038	-0.12	0.211	0.308	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Full	134	5670	1	19.08	20.50	1.387	96.32	1.038	-0.12	0.260	0.374	
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5	Full	159	5795	1	20.11	22.00	1.545	96.32	1.038	-0.06	0.055	0.088	
33	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Full	159	5795	1	20.11	22.00	1.545	96.32	1.038	0.06	0.127	0.204	
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5	Full	159	5795	1	20.11	22.00	1.545	96.32	1.038	-0.04	0.051	0.082	
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5	Full	159	5795	1	20.11	22.00	1.545	96.32	1.038	0.12	0.060	0.096	
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Full	151	5755	1	19.88	21.50	1.452	96.32	1.038	0.09	0.113	0.170	



16.2 Hotspot SAR

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Mode, Test Position, Gap (mm), Antenna, Power State, Ch., Freq. (MHz), Sample, 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). Includes rows for 750 MHz and various LTE bands (71, 12, 13) with SAR values.



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Table with columns for Band, Power, Modulation, Frequency, Time, SAR, Location, Antenna, etc. Rows include LTE Bands 13-14 and FR1 n71-n12.



40	FR1 n14	10M	QPSK	1	1	DFT-15	Front	5mm	Ant 0	DSI7	158600	793	1	22.93	24.00	1.279	-	-	-0.19	0.700	0.896	
	FR1 n14	10M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	DSI7	158600	793	1	22.93	24.00	1.279	-	-	0.05	0.910	1.164	
	FR1 n14	10M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 0	DSI7	158600	793	1	22.93	24.00	1.279	-	-	-0.08	0.195	0.249	
	FR1 n14	10M	QPSK	1	1	DFT-15	Bottom Side	5mm	Ant 0	DSI7	158600	793	1	22.93	24.00	1.279	-	-	-0.07	0.775	0.992	
	FR1 n14	10M	QPSK	25	14	DFT-15	Front	5mm	Ant 0	DSI7	158600	793	1	22.85	24.00	1.303	-	-	-0.12	0.657	0.856	
	FR1 n14	10M	QPSK	25	14	DFT-15	Back	5mm	Ant 0	DSI7	158600	793	1	22.85	24.00	1.303	-	-	0.17	0.806	1.050	
	FR1 n14	10M	QPSK	25	14	DFT-15	Left Side	5mm	Ant 0	DSI7	158600	793	1	22.85	24.00	1.303	-	-	0.08	0.176	0.229	
	FR1 n14	10M	QPSK	25	14	DFT-15	Bottom Side	5mm	Ant 0	DSI7	158600	793	1	22.85	24.00	1.303	-	-	-0.19	0.703	0.916	
	FR1 n14	10M	QPSK	50	0	DFT-15	Front	5mm	Ant 0	DSI7	158600	793	1	22.84	24.00	1.306	-	-	-0.05	0.633	0.827	
	FR1 n14	10M	QPSK	50	0	DFT-15	Back	5mm	Ant 0	DSI7	158600	793	1	22.84	24.00	1.306	-	-	0.09	0.796	1.040	
	FR1 n14	10M	QPSK	50	0	DFT-15	Bottom Side	5mm	Ant 0	DSI7	158600	793	1	22.84	24.00	1.306	-	-	0.14	0.689	0.900	
	FR1 n14	10M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	DSI7	158600	793	1	21.14	22.50	1.368	-	-	0.02	0.232	0.317	
	FR1 n14	10M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	DSI7	158600	793	1	21.14	22.50	1.368	-	-	-0.1	0.428	0.585	
	FR1 n14	10M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 1	DSI7	158600	793	1	21.14	22.50	1.368	-	-	-0.17	0.096	0.131	
	FR1 n14	10M	QPSK	1	1	DFT-15	Top Side	5mm	Ant 1	DSI7	158600	793	1	21.14	22.50	1.368	-	-	0.08	0.354	0.484	
	FR1 n14	10M	QPSK	25	14	DFT-15	Front	5mm	Ant 1	DSI7	158600	793	1	21.13	22.50	1.371	-	-	-0.03	0.224	0.307	
FR1 n14	10M	QPSK	25	14	DFT-15	Back	5mm	Ant 1	DSI7	158600	793	1	21.13	22.50	1.371	-	-	-0.05	0.420	0.576		
FR1 n14	10M	QPSK	25	14	DFT-15	Left Side	5mm	Ant 1	DSI7	158600	793	1	21.13	22.50	1.371	-	-	0.16	0.095	0.130		
FR1 n14	10M	QPSK	25	14	DFT-15	Top Side	5mm	Ant 1	DSI7	158600	793	1	21.13	22.50	1.371	-	-	0	0.346	0.474		
835 MHz																						
41	GSM850	-	-	-	-	GPRS (2 Tx slots)	Front	5mm	Ant 0	DSI7	128	824.2	1	30.01	31.00	1.256	-	-	-0.11	0.816	1.025	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 0	DSI7	128	824.2	1	30.01	31.00	1.256	-	-	0.05	0.838	1.053	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Left Side	5mm	Ant 0	DSI7	128	824.2	1	30.01	31.00	1.256	-	-	-0.17	0.077	0.097	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	5mm	Ant 0	DSI7	128	824.2	1	30.01	31.00	1.256	-	-	-0.11	0.794	0.997	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	5mm	Ant 0	DSI7	189	836.4	1	29.91	31.00	1.285	-	-	0.17	0.811	1.042	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	5mm	Ant 0	DSI7	251	848.8	1	29.86	31.00	1.300	-	-	0.05	0.774	1.006	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Front	5mm	Ant 0	DSI7	189	836.4	1	29.91	31.00	1.285	-	-	0.13	0.821	1.055	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Front	5mm	Ant 0	DSI7	251	848.8	1	29.86	31.00	1.300	-	-	0.15	0.804	1.045	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 0	DSI7	189	836.4	1	29.91	31.00	1.285	-	-	-0.19	0.836	1.074	
	GSM850	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 0	DSI7	251	848.8	1	29.86	31.00	1.300	-	-	0.09	0.816	1.061	
	42	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI7	4182	836.4	1	22.94	24.00	1.276	-	-	-0.17	0.802	1.024
		WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	4182	836.4	1	22.94	24.00	1.276	-	-	-0.15	0.882	1.126
		WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	DSI7	4182	836.4	1	22.94	24.00	1.276	-	-	-0.03	0.127	0.162
		WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	4182	836.4	1	22.94	24.00	1.276	-	-	0.16	0.774	0.988
		WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	4132	826.4	1	22.78	24.00	1.324	-	-	-0.13	0.786	1.041
		WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	4233	846.6	1	22.93	24.00	1.279	-	-	-0.18	0.747	0.956
WCDMA V		-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI7	4132	826.4	1	22.78	24.00	1.324	-	-	-0.01	0.736	0.975	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI7	4233	846.6	1	22.93	24.00	1.279	-	-	-0.11	0.793	1.015	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	4132	826.4	1	22.78	24.00	1.324	-	-	0.02	0.842	1.115	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	4233	846.6	1	22.93	24.00	1.279	-	-	-0.14	0.855	1.094	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI7	4182	836.4	1	20.72	21.70	1.253	-	-	0.04	0.316	0.396	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI7	4182	836.4	1	20.72	21.70	1.253	-	-	-0.07	0.438	0.549	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	DSI7	4182	836.4	1	20.72	21.70	1.253	-	-	-0.19	0.102	0.128	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI7	4182	836.4	1	20.72	21.70	1.253	-	-	-0.16	0.335	0.420	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI7	4132	826.4	1	20.70	21.70	1.259	-	-	0.03	0.456	0.574	
WCDMA V		-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI7	4233	846.6	1	20.69	21.70	1.262	-	-	-0.12	0.449	0.567	
43	LTE Band 26	15M	QPSK	1	37	-	Front	5mm	Ant 0	DSI7	26965	841.5	1	22.74	23.50	1.191	-	-	-0.19	0.732	0.872	
	LTE Band 26	15M	QPSK	1	37	-	Back	5mm	Ant 0	DSI7	26965	841.5	1	22.74	23.50	1.191	-	-	-0.04	0.852	1.015	
	LTE Band 5B	10M+10M	QPSK	1	0	-	Back	5mm	Ant 0	DSI7	20575+20476	841.5+831.6	1	22.43	23.50	1.279	-	-	0.19	0.740	0.947	
	LTE Band 26	15M	QPSK	1	37	-	Left Side	5mm	Ant 0	DSI7	26965	841.5	1	22.74	23.50	1.191	-	-	-0.11	0.110	0.131	
	LTE Band 26	15M	QPSK	1	37	-	Bottom Side	5mm	Ant 0	DSI7	26965	841.5	1	22.74	23.50	1.191	-	-	0.19	0.711	0.847	
	LTE Band 26	15M	QPSK	1	37	-	Bottom Side	5mm	Ant 0	DSI7	26765	821.5	1	22.47	23.50	1.268	-	-	-0.07	0.756	0.958	
	LTE Band 26	15M	QPSK	1	37	-	Bottom Side	5mm	Ant 0	DSI7	26865	831.5	1	22.64	23.50	1.219	-	-	0.09	0.620	0.756	
	LTE Band 26	15M	QPSK	1	37	-	Front	5mm	Ant 0	DSI7	26765	821.5	1	22.47	23.50	1.268	-	-	0.19	0.587	0.744	
	LTE Band 26	15M	QPSK	1	37	-	Front	5mm	Ant 0	DSI7	26865	831.5	1	22.64	23.50	1.219	-	-	0.01	0.631	0.769	
LTE Band 26	15M	QPSK	1	37	-	Back	5mm	Ant 0	DSI7	26765	821.5	1	22.47	23.50	1.268	-	-	-0.06	0.671	0.851		

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	LTE Band 26	15M	QPSK	1	37	-	Back	5mm	Ant 0	DSI7	26865	831.5	1	22.64	23.50	1.219	-	-	-0.08	0.748	0.912
	LTE Band 26	15M	QPSK	36	20	-	Front	5mm	Ant 0	DSI7	26965	841.5	1	22.73	23.30	1.140	-	-	0.13	0.716	0.816
	LTE Band 26	15M	QPSK	36	20	-	Back	5mm	Ant 0	DSI7	26965	841.5	1	22.73	23.30	1.140	-	-	0.03	0.837	0.954
	LTE Band 26	15M	QPSK	36	20	-	Left Side	5mm	Ant 0	DSI7	26965	841.5	1	22.73	23.30	1.140	-	-	-0.05	0.106	0.121
	LTE Band 26	15M	QPSK	36	20	-	Bottom Side	5mm	Ant 0	DSI7	26965	841.5	1	22.73	23.30	1.140	-	-	0.06	0.708	0.807
	LTE Band 26	15M	QPSK	36	20	-	Bottom Side	5mm	Ant 0	DSI7	26765	821.5	1	22.43	23.30	1.222	-	-	0.11	0.743	0.908
	LTE Band 26	15M	QPSK	36	20	-	Bottom Side	5mm	Ant 0	DSI7	26865	831.5	1	22.61	23.30	1.172	-	-	-0.13	0.619	0.726
	LTE Band 26	15M	QPSK	36	20	-	Front	5mm	Ant 0	DSI7	26765	821.5	1	22.43	23.30	1.222	-	-	0.14	0.576	0.704
	LTE Band 26	15M	QPSK	36	20	-	Front	5mm	Ant 0	DSI7	26865	831.5	1	22.61	23.30	1.172	-	-	-0.08	0.628	0.736
	LTE Band 26	15M	QPSK	36	20	-	Back	5mm	Ant 0	DSI7	26765	821.5	1	22.43	23.30	1.222	-	-	-0.06	0.667	0.815
	LTE Band 26	15M	QPSK	36	20	-	Back	5mm	Ant 0	DSI7	26865	831.5	1	22.61	23.30	1.172	-	-	0.07	0.738	0.865
	LTE Band 26	15M	QPSK	75	0	-	Front	5mm	Ant 0	DSI7	26965	841.5	1	22.60	23.30	1.175	-	-	0.16	0.710	0.834
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 0	DSI7	26965	841.5	1	22.60	23.30	1.175	-	-	-0.04	0.826	0.970
	LTE Band 26	15M	QPSK	75	0	-	Bottom Side	5mm	Ant 0	DSI7	26965	841.5	1	22.60	23.30	1.175	-	-	0.11	0.689	0.810
	LTE Band 26	15M	QPSK	1	37	-	Front	5mm	Ant 1	DSI7	26965	841.5	1	20.16	21.30	1.300	-	-	-0.02	0.321	0.417
	LTE Band 26	15M	QPSK	1	37	-	Back	5mm	Ant 1	DSI7	26965	841.5	1	20.16	21.30	1.300	-	-	-0.13	0.440	0.572
	LTE Band 5B	10M+10M	QPSK	1	0	-	Back	5mm	Ant 1	DSI7	20575+20476	841.5+831.6	1	19.69	21.30	1.449	-	-	0.16	0.390	0.565
	LTE Band 26	15M	QPSK	1	37	-	Left Side	5mm	Ant 1	DSI7	26965	841.5	1	20.16	21.30	1.300	-	-	0.13	0.092	0.120
	LTE Band 26	15M	QPSK	1	37	-	Top Side	5mm	Ant 1	DSI7	26965	841.5	1	20.16	21.30	1.300	-	-	-0.02	0.386	0.502
	LTE Band 26	15M	QPSK	1	37	-	Back	5mm	Ant 1	DSI7	26765	821.5	1	20.10	21.30	1.318	-	-	-0.18	0.411	0.542
	LTE Band 26	15M	QPSK	1	37	-	Back	5mm	Ant 1	DSI7	26865	831.5	1	20.15	21.30	1.303	-	-	0.15	0.393	0.512
	LTE Band 26	15M	QPSK	36	20	-	Front	5mm	Ant 1	DSI7	26965	841.5	1	20.12	21.30	1.312	-	-	-0.01	0.319	0.419
	LTE Band 26	15M	QPSK	36	20	-	Back	5mm	Ant 1	DSI7	26965	841.5	1	20.12	21.30	1.312	-	-	-0.19	0.407	0.534
	LTE Band 26	15M	QPSK	36	20	-	Left Side	5mm	Ant 1	DSI7	26965	841.5	1	20.12	21.30	1.312	-	-	0.07	0.087	0.114
	LTE Band 26	15M	QPSK	36	20	-	Top Side	5mm	Ant 1	DSI7	26965	841.5	1	20.12	21.30	1.312	-	-	0.07	0.374	0.491
	FR1 n26	20M	QPSK	1	1	DFT-15	Front	5mm	Ant 0	DSI7	166300	831.5	1	22.98	24.00	1.265	-	-	0.14	0.727	0.919
44	FR1 n26	20M	QPSK	1	1	DFT-15	Back	5mm	Ant 0	DSI7	166300	831.5	1	22.98	24.00	1.265	-	-	0	0.825	1.043
	FR1 n26	20M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 0	DSI7	166300	831.5	1	22.98	24.00	1.265	-	-	-0.03	0.139	0.176
	FR1 n26	20M	QPSK	1	1	DFT-15	Bottom Side	5mm	Ant 0	DSI7	166300	831.5	1	22.98	24.00	1.265	-	-	-0.15	0.677	0.856
	FR1 n26	20M	QPSK	50	28	DFT-15	Front	5mm	Ant 0	DSI7	166300	831.5	1	22.85	24.00	1.303	-	-	-0.18	0.706	0.920
	FR1 n26	20M	QPSK	50	28	DFT-15	Back	5mm	Ant 0	DSI7	166300	831.5	1	22.85	24.00	1.303	-	-	0.13	0.794	1.035
	FR1 n26	20M	QPSK	50	28	DFT-15	Left Side	5mm	Ant 0	DSI7	166300	831.5	1	22.85	24.00	1.303	-	-	0.14	0.128	0.167
	FR1 n26	20M	QPSK	50	28	DFT-15	Bottom Side	5mm	Ant 0	DSI7	166300	831.5	1	22.85	24.00	1.303	-	-	0.04	0.656	0.855
	FR1 n26	20M	QPSK	100	0	DFT-15	Front	5mm	Ant 0	DSI7	166300	831.5	1	22.79	24.00	1.321	-	-	0.03	0.687	0.908
	FR1 n26	20M	QPSK	100	0	DFT-15	Back	5mm	Ant 0	DSI7	166300	831.5	1	22.79	24.00	1.321	-	-	0.08	0.786	1.039
	FR1 n26	20M	QPSK	100	0	DFT-15	Bottom Side	5mm	Ant 0	DSI7	166300	831.5	1	22.79	24.00	1.321	-	-	0.09	0.633	0.836
	FR1 n26	20M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	DSI7	166300	831.5	1	20.52	21.50	1.253	-	-	-0.12	0.302	0.378
	FR1 n26	20M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	DSI7	166300	831.5	1	20.52	21.50	1.253	-	-	-0.16	0.460	0.576
	FR1 n26	20M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 1	DSI7	166300	831.5	1	20.52	21.50	1.253	-	-	0.1	0.110	0.138
	FR1 n26	20M	QPSK	1	1	DFT-15	Top Side	5mm	Ant 1	DSI7	166300	831.5	1	20.52	21.50	1.253	-	-	-0.04	0.446	0.559
	FR1 n26	20M	QPSK	50	28	DFT-15	Front	5mm	Ant 1	DSI7	166300	831.5	1	20.47	21.50	1.268	-	-	0.1	0.296	0.375
	FR1 n26	20M	QPSK	50	28	DFT-15	Back	5mm	Ant 1	DSI7	166300	831.5	1	20.47	21.50	1.268	-	-	0.19	0.446	0.565
	FR1 n26	20M	QPSK	50	28	DFT-15	Left Side	5mm	Ant 1	DSI7	166300	831.5	1	20.47	21.50	1.268	-	-	0	0.103	0.131
	FR1 n26	20M	QPSK	50	28	DFT-15	Top Side	5mm	Ant 1	DSI7	166300	831.5	1	20.47	21.50	1.268	-	-	0.04	0.426	0.540
										1750 MHz											
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI7	1513	1752.6	1	16.77	17.70	1.239	-	-	0.07	0.509	0.631
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	1513	1752.6	1	16.77	17.70	1.239	-	-	0.07	0.736	0.912
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	DSI7	1513	1752.6	1	16.77	17.70	1.239	-	-	0.18	0.066	0.082
45	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	1513	1752.6	1	16.77	17.70	1.239	-	-	-0.09	0.980	1.214
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	1312	1712.4	1	16.73	17.70	1.250	-	-	-0.01	0.846	1.058
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	1413	1732.6	1	16.75	17.70	1.245	-	-	0.16	0.856	1.065
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	1312	1712.4	1	16.73	17.70	1.250	-	-	0.04	0.724	0.905
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	1413	1732.6	1	16.75	17.70	1.245	-	-	0	0.687	0.855
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI7	1413	1732.6	1	14.18	15.40	1.324	-	-	0.18	0.231	0.306
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI7	1413	1732.6	1	14.18	15.40	1.324	-	-	0.13	0.354	0.469
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	DSI7	1413	1732.6	1	14.18	15.40	1.324	-	-	0.06	0.056	0.074



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	FR1 n66	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 0	DSI7	349000	1745	1	16.06	17.00	1.242	-	-	0.02	0.756	0.939
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Side	5mm	Ant 0	DSI7	349000	1745	1	16.06	17.00	1.242	-	-	0.02	0.061	0.076
48	FR1 n66	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	DSI7	349000	1745	1	16.06	17.00	1.242	-	-	-0.04	0.977	1.213
	FR1 n66_Other PA	40M	QPSK	108	54	DFT-15	Bottom Side	5mm	Ant 0	DSI7	349000	1745	1	16.11	17.00	1.227	-	-	0	0.940	1.154
	FR1 n66	40M	QPSK	216	0	DFT-15	Back	5mm	Ant 0	DSI7	349000	1745	1	16.10	17.00	1.230	-	-	0.1	0.748	0.920
	FR1 n66	40M	QPSK	216	0	DFT-15	Bottom Side	5mm	Ant 0	DSI7	349000	1745	1	16.10	17.00	1.230	-	-	-0.18	0.921	1.133
	FR1 n66	40M	QPSK	1	1	DFT-15	Front	5mm	Ant 1	DSI7	349000	1745	1	13.82	14.50	1.169	-	-	-0.08	0.287	0.336
	FR1 n66	40M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	DSI7	349000	1745	1	13.82	14.50	1.169	-	-	-0.11	0.423	0.495
	FR1 n66	40M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 1	DSI7	349000	1745	1	13.82	14.50	1.169	-	-	0.15	0.051	0.060
	FR1 n66	40M	QPSK	1	1	DFT-15	Top Side	5mm	Ant 1	DSI7	349000	1745	1	13.82	14.50	1.169	-	-	0.17	0.494	0.578
	FR1 n66	40M	QPSK	108	54	DFT-15	Front	5mm	Ant 1	DSI7	349000	1745	1	13.78	14.50	1.180	-	-	0.12	0.294	0.347
	FR1 n66	40M	QPSK	108	54	DFT-15	Back	5mm	Ant 1	DSI7	349000	1745	1	13.78	14.50	1.180	-	-	0.13	0.436	0.515
	FR1 n66	40M	QPSK	108	54	DFT-15	Left Side	5mm	Ant 1	DSI7	349000	1745	1	13.78	14.50	1.180	-	-	-0.1	0.056	0.066
	FR1 n66	40M	QPSK	108	54	DFT-15	Top Side	5mm	Ant 1	DSI7	349000	1745	1	13.78	14.50	1.180	-	-	0.07	0.504	0.595
	FR1 n66_Other PA	40M	QPSK	108	54	DFT-15	Top Side	5mm	Ant 1	DSI7	349000	1745	1	13.78	14.50	1.180	-	-	-0.18	0.488	0.576
1900 MHz																					
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Front	5mm	Ant 0	DSI7	810	1909.8	1	22.21	23.70	1.409	-	-	0.09	0.304	0.428
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Back	5mm	Ant 0	DSI7	810	1909.8	1	22.21	23.70	1.409	-	-	-0.1	0.384	0.541
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Left Side	5mm	Ant 0	DSI7	810	1909.8	1	22.21	23.70	1.409	-	-	0.13	0.019	0.027
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	5mm	Ant 0	DSI7	810	1909.8	1	22.21	23.70	1.409	-	-	-0.03	0.612	0.862
49	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	5mm	Ant 0	DSI7	512	1850.2	1	22.01	23.70	1.476	-	-	-0.08	0.695	1.026
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	5mm	Ant 0	DSI7	661	1880	1	21.88	23.70	1.521	-	-	0.19	0.659	1.002
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	DSI7	9400	1880	1	15.80	16.70	1.230	-	-	-0.03	0.515	0.634
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	9400	1880	1	15.80	16.70	1.230	-	-	0.05	0.761	0.936
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	DSI7	9400	1880	1	15.80	16.70	1.230	-	-	0.06	0.045	0.055
50	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	9400	1880	1	15.80	16.70	1.230	-	-	0.17	0.925	1.138
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	9262	1852.4	1	15.72	16.70	1.253	-	-	-0.05	0.811	1.016
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	DSI7	9538	1907.6	1	15.72	16.70	1.253	-	-	0.05	0.809	1.014
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	9262	1852.4	1	15.72	16.70	1.253	-	-	-0.11	0.739	0.926
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI7	9538	1907.6	1	15.72	16.70	1.253	-	-	0.14	0.697	0.873
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	DSI7	9262	1852.4	1	12.63	14.20	1.435	-	-	-0.16	0.245	0.352
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	DSI7	9262	1852.4	1	12.63	14.20	1.435	-	-	0.16	0.390	0.560
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	DSI7	9262	1852.4	1	12.63	14.20	1.435	-	-	0.07	0.046	0.066
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI7	9262	1852.4	1	12.63	14.20	1.435	-	-	-0.03	0.415	0.596
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI7	9400	1880	1	12.58	14.20	1.452	-	-	-0.11	0.405	0.588
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	DSI7	9538	1907.6	1	12.50	14.20	1.479	-	-	-0.08	0.396	0.586
	LTE Band 25	20M	QPSK	1	49	-	Front	5mm	Ant 0	DSI7	26340	1880	1	15.48	16.30	1.208	-	-	0.1	0.441	0.533
	LTE Band 25	20M	QPSK	1	49	-	Back	5mm	Ant 0	DSI7	26340	1880	1	15.48	16.30	1.208	-	-	-0.14	0.667	0.806
	LTE Band 25	20M	QPSK	1	49	-	Left Side	5mm	Ant 0	DSI7	26340	1880	1	15.48	16.30	1.208	-	-	0.14	0.042	0.051
	LTE Band 25	20M	QPSK	1	49	-	Bottom Side	5mm	Ant 0	DSI7	26340	1880	1	15.48	16.30	1.208	-	-	0.17	0.786	0.949
51	LTE Band 25	20M	QPSK	1	49	-	Bottom Side	5mm	Ant 0	DSI7	26140	1860	1	15.35	16.30	1.245	-	-	0.16	0.808	1.006
	LTE Band 25_Other PA	20M	QPSK	1	49	-	Bottom Side	5mm	Ant 0	DSI7	26140	1860	1	15.35	16.30	1.245	-	-	-0.13	0.771	0.960
	LTE Band 25	20M	QPSK	1	49	-	Bottom Side	5mm	Ant 0	DSI7	26590	1905	1	15.36	16.30	1.242	-	-	-0.06	0.732	0.909
	LTE Band 25	20M	QPSK	1	49	-	Back	5mm	Ant 0	DSI7	26140	1860	1	15.35	16.30	1.245	-	-	-0.06	0.679	0.845
	LTE Band 25	20M	QPSK	1	49	-	Back	5mm	Ant 0	DSI7	26590	1905	1	15.36	16.30	1.242	-	-	-0.18	0.574	0.713
	LTE Band 25	20M	QPSK	50	24	-	Front	5mm	Ant 0	DSI7	26340	1880	1	15.45	16.30	1.216	-	-	-0.13	0.436	0.530
	LTE Band 25	20M	QPSK	50	24	-	Back	5mm	Ant 0	DSI7	26340	1880	1	15.45	16.30	1.216	-	-	0.19	0.658	0.800
	LTE Band 25	20M	QPSK	50	24	-	Left Side	5mm	Ant 0	DSI7	26340	1880	1	15.45	16.30	1.216	-	-	-0.11	0.041	0.050
	LTE Band 25	20M	QPSK	50	24	-	Bottom Side	5mm	Ant 0	DSI7	26340	1880	1	15.45	16.30	1.216	-	-	-0.12	0.780	0.949
	LTE Band 25	20M	QPSK	50	24	-	Bottom Side	5mm	Ant 0	DSI7	26140	1860	1	15.27	16.30	1.268	-	-	0.01	0.789	1.000
	LTE Band 25	20M	QPSK	50	24	-	Bottom Side	5mm	Ant 0	DSI7	26590	1905	1	15.31	16.30	1.256	-	-	0.16	0.718	0.902
	LTE Band 25	20M	QPSK	50	24	-	Back	5mm	Ant 0	DSI7	26140	1860	1	15.27	16.30	1.268	-	-	-0.02	0.655	0.830
	LTE Band 25	20M	QPSK	50	24	-	Back	5mm	Ant 0	DSI7	26590	1905	1	15.31	16.30	1.256	-	-	-0.02	0.556	0.698
	LTE Band 25	20M	QPSK	100	0	-	Back	5mm	Ant 0	DSI7	26340	1880	1	15.40	16.30	1.230	-	-	0.18	0.655	0.806
	LTE Band 25	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	DSI7	26340	1880	1	15.40	16.30	1.230	-	-	-0.05	0.777	0.956
	LTE Band 25	20M	QPSK	1	49	-	Front	5mm	Ant 1	DSI7	26340	1880	1	13.88	15.00	1.294	-	-	0.08	0.295	0.382



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Table with columns for Band, Power, Modulation, Frequency, Time, Location, Distance, Antenna, Power Density, etc. Includes rows for LTE Band 25, FR1 n25, and 2300 MHz.



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	FR1 n30	10M	QPSK	1	1	DFT-15	Top Side	5mm	Ant 1	DSI7	462000	2310	1	12.65	14.50	1.531	-	-	0.02	0.391	0.599
	FR1 n30	10M	QPSK	25	14	DFT-15	Front	5mm	Ant 1	DSI7	462000	2310	1	12.58	14.50	1.556	-	-	0.19	0.078	0.121
	FR1 n30	10M	QPSK	25	14	DFT-15	Back	5mm	Ant 1	DSI7	462000	2310	1	12.58	14.50	1.556	-	-	-0.12	0.209	0.325
	FR1 n30	10M	QPSK	25	14	DFT-15	Left Side	5mm	Ant 1	DSI7	462000	2310	1	12.58	14.50	1.556	-	-	0.08	0.079	0.123
	FR1 n30	10M	QPSK	25	14	DFT-15	Top Side	5mm	Ant 1	DSI7	462000	2310	1	12.58	14.50	1.556	-	-	-0.07	0.378	0.588
	FR1 n30	10M	QPSK	1	1	DFT-15	Front	5mm	Ant 9	DSI7	462000	2310	1	20.00	21.00	1.259	-	-	-0.11	0.781	0.983
	FR1 n30	10M	QPSK	1	1	DFT-15	Back	5mm	Ant 9	DSI7	462000	2310	1	20.00	21.00	1.259	-	-	0.1	0.829	1.044
	FR1 n30	10M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 9	DSI7	462000	2310	1	20.00	21.00	1.259	-	-	0.06	0.483	0.608
54	FR1 n30	10M	QPSK	1	1	DFT-15	Bottom Side	5mm	Ant 9	DSI7	462000	2310	1	20.00	21.00	1.259	-	-	0.12	0.847	1.066
	FR1 n30	10M	QPSK	25	14	DFT-15	Front	5mm	Ant 9	DSI7	462000	2310	1	19.97	21.00	1.268	-	-	0.04	0.767	0.972
	FR1 n30	10M	QPSK	25	14	DFT-15	Back	5mm	Ant 9	DSI7	462000	2310	1	19.97	21.00	1.268	-	-	-0.19	0.818	1.037
	FR1 n30	10M	QPSK	25	14	DFT-15	Left Side	5mm	Ant 9	DSI7	462000	2310	1	19.97	21.00	1.268	-	-	-0.13	0.475	0.602
	FR1 n30	10M	QPSK	25	14	DFT-15	Bottom Side	5mm	Ant 9	DSI7	462000	2310	1	19.97	21.00	1.268	-	-	-0.07	0.834	1.057
	FR1 n30	10M	QPSK	50	0	DFT-15	Front	5mm	Ant 9	DSI7	462000	2310	1	19.89	21.00	1.291	-	-	0.08	0.757	0.977
	FR1 n30	10M	QPSK	50	0	DFT-15	Back	5mm	Ant 9	DSI7	462000	2310	1	19.89	21.00	1.291	-	-	-0.18	0.810	1.046
	FR1 n30	10M	QPSK	50	0	DFT-15	Bottom Side	5mm	Ant 9	DSI7	462000	2310	1	19.89	21.00	1.291	-	-	-0.11	0.812	1.048
2600 MHz																					
	LTE Band 7	20M	QPSK	1	49	-	Front	5mm	Ant 1	DSI7	21100	2535	1	14.07	14.70	1.156	-	-	-0.04	0.134	0.155
	LTE Band 7	20M	QPSK	1	49	-	Back	5mm	Ant 1	DSI7	21100	2535	1	14.07	14.70	1.156	-	-	0.15	0.239	0.276
	LTE Band 7	20M	QPSK	1	49	-	Left Side	5mm	Ant 1	DSI7	21100	2535	1	14.07	14.70	1.156	-	-	-0.14	0.115	0.133
	LTE Band 7	20M	QPSK	1	49	-	Top Side	5mm	Ant 1	DSI7	21100	2535	1	14.07	14.70	1.156	-	-	0.15	0.429	0.496
	LTE Band 7	20M	QPSK	1	49	-	Top Side	5mm	Ant 1	DSI7	20850	2510	1	13.96	14.70	1.186	-	-	0.08	0.437	0.518
	LTE Band 7	20M	QPSK	1	49	-	Top Side	5mm	Ant 1	DSI7	21350	2560	1	13.93	14.70	1.194	-	-	0.02	0.454	0.542
	LTE Band 7C	20M+20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DSI7	21350+21152	2560+2540.2	1	13.77	14.70	1.239	-	-	-0.09	0.420	0.520
	LTE Band 7	20M	QPSK	50	24	-	Front	5mm	Ant 1	DSI7	21100	2535	1	14.03	14.70	1.167	-	-	-0.04	0.132	0.154
	LTE Band 7	20M	QPSK	50	24	-	Back	5mm	Ant 1	DSI7	21100	2535	1	14.03	14.70	1.167	-	-	-0.19	0.234	0.273
	LTE Band 7	20M	QPSK	50	24	-	Left Side	5mm	Ant 1	DSI7	21100	2535	1	14.03	14.70	1.167	-	-	-0.06	0.112	0.131
	LTE Band 7	20M	QPSK	50	24	-	Top Side	5mm	Ant 1	DSI7	21100	2535	1	14.03	14.70	1.167	-	-	0.19	0.416	0.485
	LTE Band 7	20M	QPSK	1	49	-	Front	5mm	Ant 9	DSI7	21100	2535	1	20.05	20.70	1.161	-	-	-0.13	0.875	1.016
	LTE Band 7	20M	QPSK	1	49	-	Back	5mm	Ant 9	DSI7	21100	2535	1	20.05	20.70	1.161	-	-	0.09	0.906	1.052
	LTE Band 7	20M	QPSK	1	49	-	Left Side	5mm	Ant 9	DSI7	21100	2535	1	20.05	20.70	1.161	-	-	0.08	0.454	0.527
	LTE Band 7	20M	QPSK	1	49	-	Bottom Side	5mm	Ant 9	DSI7	21100	2535	1	20.05	20.70	1.161	-	-	-0.05	0.967	1.123
	LTE Band 7	20M	QPSK	1	49	-	Bottom Side	5mm	Ant 9	DSI7	20850	2510	1	20.04	20.70	1.164	-	-	-0.14	0.910	1.059
55	LTE Band 7	20M	QPSK	1	49	-	Bottom Side	5mm	Ant 9	DSI7	21350	2560	1	19.94	20.70	1.191	-	-	0.13	1.030	1.227
	LTE Band 7	20M	QPSK	1	49	-	Bottom Side	5mm	Ant 9	DSI7	21350	2560	2	19.94	20.70	1.191	-	-	0.06	1.020	1.215
	LTE Band 7C	20M+20M	QPSK	1	0	-	Bottom Side	5mm	Ant 9	DSI7	21350+21152	2560+2540.2	1	20.02	20.70	1.169	-	-	0.13	0.970	1.134
	LTE Band 7	20M	QPSK	1	49	-	Front	5mm	Ant 9	DSI7	20850	2510	1	20.04	20.70	1.164	-	-	-0.06	0.836	0.973
	LTE Band 7	20M	QPSK	1	49	-	Front	5mm	Ant 9	DSI7	21350	2560	1	19.94	20.70	1.191	-	-	0.16	0.908	1.082
	LTE Band 7	20M	QPSK	1	49	-	Back	5mm	Ant 9	DSI7	20850	2510	1	20.04	20.70	1.164	-	-	-0.16	0.884	1.029
	LTE Band 7	20M	QPSK	1	49	-	Back	5mm	Ant 9	DSI7	21350	2560	1	19.94	20.70	1.191	-	-	-0.18	0.945	1.126
	LTE Band 7	20M	QPSK	50	24	-	Front	5mm	Ant 9	DSI7	21100	2535	1	20.02	20.70	1.169	-	-	0.02	0.851	0.995
	LTE Band 7	20M	QPSK	50	24	-	Back	5mm	Ant 9	DSI7	21100	2535	1	20.02	20.70	1.169	-	-	-0.08	0.894	1.046
	LTE Band 7	20M	QPSK	50	24	-	Left Side	5mm	Ant 9	DSI7	21100	2535	1	20.02	20.70	1.169	-	-	0.12	0.448	0.524
	LTE Band 7	20M	QPSK	50	24	-	Bottom Side	5mm	Ant 9	DSI7	21100	2535	1	20.02	20.70	1.169	-	-	-0.17	0.961	1.124
	LTE Band 7	20M	QPSK	50	24	-	Bottom Side	5mm	Ant 9	DSI7	21100	2535	1	19.97	20.70	1.183	-	-	-0.1	0.894	1.058
	LTE Band 7	20M	QPSK	50	24	-	Bottom Side	5mm	Ant 9	DSI7	21100	2535	1	19.87	20.70	1.211	-	-	-0.07	0.986	1.194
	LTE Band 7	20M	QPSK	50	24	-	Front	5mm	Ant 9	DSI7	21100	2535	1	19.97	20.70	1.183	-	-	0.02	0.817	0.967
	LTE Band 7	20M	QPSK	50	24	-	Front	5mm	Ant 9	DSI7	21100	2535	1	19.87	20.70	1.211	-	-	0.02	0.861	1.042
	LTE Band 7	20M	QPSK	50	24	-	Back	5mm	Ant 9	DSI7	21100	2535	1	19.97	20.70	1.183	-	-	-0.19	0.866	1.025
	LTE Band 7	20M	QPSK	50	24	-	Back	5mm	Ant 9	DSI7	21100	2535	1	19.87	20.70	1.211	-	-	0.05	0.920	1.114
	LTE Band 7	20M	QPSK	100	0	-	Front	5mm	Ant 9	DSI7	21100	2535	1	19.93	20.70	1.194	-	-	0	0.837	0.999
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 9	DSI7	21100	2535	1	19.93	20.70	1.194	-	-	0.07	0.887	1.059
	LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 9	DSI7	21100	2535	1	19.93	20.70	1.194	-	-	-0.19	0.944	1.127
	LTE Band 41	20M	QPSK	1	49	-	Front	5mm	Ant 1	DSI7	40620	2593	1	15.22	15.90	1.169	62.9	1.006	0.18	0.105	0.124
	LTE Band 41	20M	QPSK	1	49	-	Back	5mm	Ant 1	DSI7	40620	2593	1	15.22	15.90	1.169	62.9	1.006	0.05	0.209	0.246



FCC SAR Test Report

Report No. : FA3D0836

Table with columns for LTE Band, Power, Modulation, Frequency, Time, Location, Antenna, Frequency, Power, Time, and various SAR metrics (E1, E2, E3, E4).



Table with columns for Band, Power, Modulation, Frequency, Duty Cycle, Position, Dimensions, Antenna, Model, Power Density, and SAR values. Includes rows for LTE Band 41 and FR1 n7.



	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 2	DSI7	518598	2592.99	1	15.10	16.50	1.380	-	-	-0.02	0.056	0.077
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 2	DSI7	518598	2592.99	1	15.05	16.50	1.396	-	-	-0.14	0.139	0.194
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 2	DSI7	518598	2592.99	1	15.05	16.50	1.396	-	-	0.19	0.440	0.614
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 2	DSI7	518598	2592.99	1	15.05	16.50	1.396	-	-	-0.12	0.410	0.573
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 2	DSI7	518598	2592.99	1	15.05	16.50	1.396	-	-	0.14	0.042	0.059
	FR1 n41 PC2	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 2	DSI7	518598	2592.99	1	15.02	16.50	1.406	-	-	0.13	0.425	0.598
	FR1 n41 PC2	100M	QPSK	270	0	DFT-30	Right Side	5mm	Ant 2	DSI7	518598	2592.99	1	15.02	16.50	1.406	-	-	-0.04	0.402	0.565
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 5	DSI7	518598	2592.99	1	12.20	13.50	1.349	-	-	0.16	0.068	0.092
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 5	DSI7	518598	2592.99	1	12.20	13.50	1.349	-	-	0.16	0.430	0.580
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 5	DSI7	518598	2592.99	1	12.20	13.50	1.349	-	-	0.07	0.132	0.178
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 5	DSI7	518598	2592.99	1	12.18	13.50	1.355	-	-	0.15	0.058	0.079
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 5	DSI7	518598	2592.99	1	12.18	13.50	1.355	-	-	-0.11	0.419	0.568
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 5	DSI7	518598	2592.99	1	12.18	13.50	1.355	-	-	0	0.111	0.150
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 6	DSI7	518598	2592.99	1	22.98	24.50	1.419	-	-	-0.18	0.112	0.159
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 6	DSI7	518598	2592.99	1	22.98	24.50	1.419	-	-	0.14	0.267	0.379
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 6	DSI7	518598	2592.99	1	22.98	24.50	1.419	-	-	0.11	0.215	0.305
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 6	DSI7	518598	2592.99	1	22.98	24.50	1.419	-	-	0.14	0.056	0.079
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 6	DSI7	518598	2592.99	1	22.67	24.50	1.524	-	-	-0.11	0.105	0.160
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 6	DSI7	518598	2592.99	1	22.67	24.50	1.524	-	-	-0.19	0.181	0.276
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 6	DSI7	518598	2592.99	1	22.67	24.50	1.524	-	-	0.06	0.143	0.218
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 6	DSI7	518598	2592.99	1	22.67	24.50	1.524	-	-	0.06	0.048	0.073
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 9	DSI7	518598	2592.99	1	19.19	20.00	1.205	-	-	0	0.845	1.018
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 9	DSI7	518598	2592.99	1	19.19	20.00	1.205	-	-	-0.15	0.938	1.130
	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 9	DSI7	518598	2592.99	1	19.19	20.00	1.205	-	-	-0.19	0.461	0.556
58	FR1 n41 PC2	100M	QPSK	1	1	DFT-30	Bottom Side	5mm	Ant 9	DSI7	518598	2592.99	1	19.19	20.00	1.205	-	-	-0.03	0.951	1.146
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 9	DSI7	518598	2592.99	1	19.16	20.00	1.213	-	-	0.14	0.839	1.018
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 9	DSI7	518598	2592.99	1	19.16	20.00	1.213	-	-	0.12	0.901	1.093
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 9	DSI7	518598	2592.99	1	19.16	20.00	1.213	-	-	-0.1	0.415	0.504
	FR1 n41 PC2	100M	QPSK	135	69	DFT-30	Bottom Side	5mm	Ant 9	DSI7	518598	2592.99	1	19.16	20.00	1.213	-	-	-0.04	0.920	1.116
	FR1 n41 PC2	100M	QPSK	270	0	DFT-30	Front	5mm	Ant 9	DSI7	518598	2592.99	1	19.10	20.00	1.230	-	-	-0.03	0.815	1.003
	FR1 n41 PC2	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 9	DSI7	518598	2592.99	1	19.10	20.00	1.230	-	-	-0.03	0.880	1.083
	FR1 n41 PC2	100M	QPSK	270	0	DFT-30	Bottom Side	5mm	Ant 9	DSI7	518598	2592.99	1	19.10	20.00	1.230	-	-	0.08	0.895	1.101

3000~4000 MHz

	LTE Band 48	20M	QPSK	1	49	-	Front	5mm	Ant 4	DSI7	55830	3609	1	17.62	18.20	1.143	62.9	1.006	0.01	0.129	0.148
	LTE Band 48	20M	QPSK	1	49	-	Back	5mm	Ant 4	DSI7	55830	3609	1	17.62	18.20	1.143	62.9	1.006	-0.07	0.481	0.553
	LTE Band 48C	20M+20M	QPSK	1	0	-	Back	5mm	Ant 4	DSI7	55830+56028	3609+3628.8	1	17.48	18.20	1.180	62.9	1.006	-0.04	0.455	0.540
	LTE Band 48	20M	QPSK	1	49	-	Left Side	5mm	Ant 4	DSI7	55830	3609	1	17.62	18.20	1.143	62.9	1.006	0.09	0.471	0.542
	LTE Band 48	20M	QPSK	1	49	-	Top Side	5mm	Ant 4	DSI7	55830	3609	1	17.62	18.20	1.143	62.9	1.006	0.08	0.044	0.051
	LTE Band 48	20M	QPSK	1	49	-	Back	5mm	Ant 4	DSI7	55340	3560	1	17.53	18.20	1.167	62.9	1.006	0.02	0.453	0.532
	LTE Band 48	20M	QPSK	1	49	-	Back	5mm	Ant 4	DSI7	56150	3641	1	17.55	18.20	1.161	62.9	1.006	0.14	0.464	0.542
	LTE Band 48	20M	QPSK	1	49	-	Back	5mm	Ant 4	DSI7	56640	3690	1	17.57	18.20	1.156	62.9	1.006	-0.06	0.452	0.526
	LTE Band 48	20M	QPSK	50	24	-	Front	5mm	Ant 4	DSI7	55830	3609	1	17.55	18.20	1.161	62.9	1.006	0.07	0.121	0.141
	LTE Band 48	20M	QPSK	50	24	-	Back	5mm	Ant 4	DSI7	55830	3609	1	17.55	18.20	1.161	62.9	1.006	-0.18	0.455	0.532
	LTE Band 48	20M	QPSK	50	24	-	Left Side	5mm	Ant 4	DSI7	55830	3609	1	17.55	18.20	1.161	62.9	1.006	-0.01	0.435	0.508
	LTE Band 48	20M	QPSK	50	24	-	Top Side	5mm	Ant 4	DSI7	55830	3609	1	17.55	18.20	1.161	62.9	1.006	-0.17	0.042	0.049
	LTE Band 48	20M	QPSK	1	49	-	Front	5mm	Ant 7	DSI7	55830	3609	1	14.50	15.30	1.202	62.9	1.006	-0.05	0.129	0.156
	LTE Band 48	20M	QPSK	1	49	-	Back	5mm	Ant 7	DSI7	55830	3609	1	14.50	15.30	1.202	62.9	1.006	-0.17	0.364	0.440
	LTE Band 48	20M	QPSK	1	49	-	Right Side	5mm	Ant 7	DSI7	55830	3609	1	14.50	15.30	1.202	62.9	1.006	0.07	0.080	0.097
	LTE Band 48	20M	QPSK	1	49	-	Top Side	5mm	Ant 7	DSI7	55830	3609	1	14.50	15.30	1.202	62.9	1.006	0.12	0.431	0.521
	LTE Band 48	20M	QPSK	1	49	-	Top Side	5mm	Ant 7	DSI7	55340	3560	1	14.45	15.30	1.216	62.9	1.006	-0.09	0.416	0.509
	LTE Band 48	20M	QPSK	1	49	-	Top Side	5mm	Ant 7	DSI7	56150	3641	1	14.43	15.30	1.222	62.9	1.006	0.02	0.444	0.546
	LTE Band 48C	20M+20M	QPSK	1	0	-	Top Side	5mm	Ant 7	DSI7	56150+56348	3641+3660.8	1	14.45	15.30	1.216	62.9	1.006	-0.14	0.428	0.524
	LTE Band 48	20M	QPSK	1	49	-	Top Side	5mm	Ant 7	DSI7	56640	3690	1	14.44	15.30	1.219	62.9	1.006	0.02	0.391	0.479
	LTE Band 48	20M	QPSK	50	24	-	Front	5mm	Ant 7	DSI7	55830	3609	1	14.45	15.30	1.216	62.9	1.006	-0.06	0.124	0.152
	LTE Band 48	20M	QPSK	50	24	-	Back	5mm	Ant 7	DSI7	55830	3609	1	14.45	15.30	1.216	62.9	1.006	-0.02	0.354	0.433
	LTE Band 48	20M	QPSK	50	24	-	Right Side	5mm	Ant 7	DSI7	55830	3609	1	14.45	15.30	1.216	62.9	1.006	0.13	0.070	0.086



FCC SAR Test Report

Report No. : FA3D0836

Table with columns for LTE/FR1 bands, frequencies, power, modulation, and SAR values. Includes rows for LTE Band 48, LTE Band 48C, and FR1 n48.



FCC SAR Test Report

Report No. : FA3D0836

	FR1 n48	40M	QPSK	50	28	DFT-30	Top Side	5mm	Ant 8	DSI7	641666	3624.99	1	15.97	17.00	1.268	-	-	-0.13	0.241	0.306
	FR1 n48	40M	QPSK	100	0	DFT-30	Back	5mm	Ant 8	DSI7	641666	3624.99	1	15.95	17.00	1.274	-	-	0	0.477	0.607
	FR1 n48	40M	QPSK	1	1	DFT-30	Front	5mm	Ant 10	DSI7	641666	3624.99	1	12.00	13.00	1.259	-	-	0	0.032	0.040
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 10	DSI7	641666	3624.99	1	12.00	13.00	1.259	-	-	0.19	0.464	0.584
	FR1 n48	40M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 10	DSI7	641666	3624.99	1	12.00	13.00	1.259	-	-	-0.08	0.024	0.030
	FR1 n48	40M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 10	DSI7	641666	3624.99	1	12.00	13.00	1.259	-	-	0.13	0.016	0.020
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 10	DSI7	638000	3570	1	11.93	13.00	1.279	-	-	0.07	0.421	0.539
	FR1 n48	40M	QPSK	1	1	DFT-30	Back	5mm	Ant 10	DSI7	645332	3679.98	1	11.95	13.00	1.274	-	-	-0.15	0.452	0.576
	FR1 n48	40M	QPSK	50	28	DFT-30	Front	5mm	Ant 10	DSI7	641666	3624.99	1	11.97	13.00	1.268	-	-	0.07	0.030	0.038
	FR1 n48	40M	QPSK	50	28	DFT-30	Back	5mm	Ant 10	DSI7	641666	3624.99	1	11.97	13.00	1.268	-	-	0.04	0.453	0.574
	FR1 n48	40M	QPSK	50	28	DFT-30	Left Side	5mm	Ant 10	DSI7	641666	3624.99	1	11.97	13.00	1.268	-	-	0.01	0.023	0.029
	FR1 n48	40M	QPSK	50	28	DFT-30	Top Side	5mm	Ant 10	DSI7	641666	3624.99	1	11.97	13.00	1.268	-	-	0.02	0.014	0.018
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 4	DSI7	656000	3840	1	12.75	13.50	1.189	-	-	-0.12	0.063	0.075
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	DSI7	656000	3840	1	12.75	13.50	1.189	-	-	0.16	0.403	0.479
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 4	DSI7	656000	3840	1	12.75	13.50	1.189	-	-	-0.06	0.209	0.248
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 4	DSI7	656000	3840	1	12.75	13.50	1.189	-	-	-0.13	0.032	0.038
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 4	DSI7	656000	3840	1	12.68	13.50	1.208	-	-	0.04	0.057	0.069
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 4	DSI7	656000	3840	1	12.68	13.50	1.208	-	-	-0.13	0.387	0.467
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 4	DSI7	656000	3840	1	12.68	13.50	1.208	-	-	-0.07	0.205	0.248
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 4	DSI7	656000	3840	1	12.68	13.50	1.208	-	-	-0.15	0.028	0.034
	FR1 n77 Part27O PC2	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 4	DSI7	656000	3840	1	12.65	13.50	1.216	-	-	-0.04	0.382	0.465
	FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 4	DSI7	633332	3499.98	1	12.62	13.50	1.225	-	-	0.07	0.116	0.142
	FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 4	DSI7	633332	3499.98	1	12.62	13.50	1.225	-	-	0.03	0.464	0.568
	FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 4	DSI7	633332	3499.98	1	12.62	13.50	1.225	-	-	0	0.429	0.525
	FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 4	DSI7	633332	3499.98	1	12.62	13.50	1.225	-	-	-0.19	0.039	0.048
	FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 4	DSI7	633332	3499.98	1	12.57	13.50	1.239	-	-	-0.09	0.092	0.114
	FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 4	DSI7	633332	3499.98	1	12.57	13.50	1.239	-	-	-0.07	0.443	0.549
	FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 4	DSI7	633332	3499.98	1	12.57	13.50	1.239	-	-	-0.07	0.412	0.510
	FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 4	DSI7	633332	3499.98	1	12.57	13.50	1.239	-	-	-0.03	0.035	0.043
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 7	DSI7	656000	3840	1	13.10	14.00	1.230	-	-	-0.15	0.114	0.140
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 7	DSI7	656000	3840	1	13.10	14.00	1.230	-	-	0.16	0.239	0.294
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 7	DSI7	656000	3840	1	13.10	14.00	1.230	-	-	0.03	0.059	0.073
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 7	DSI7	656000	3840	1	13.10	14.00	1.230	-	-	0.05	0.378	0.465
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 7	DSI7	656000	3840	1	13.09	14.00	1.233	-	-	0.11	0.111	0.137
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 7	DSI7	656000	3840	1	13.09	14.00	1.233	-	-	-0.13	0.235	0.290
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 7	DSI7	656000	3840	1	13.09	14.00	1.233	-	-	-0.04	0.053	0.065
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 7	DSI7	656000	3840	1	13.09	14.00	1.233	-	-	0.19	0.342	0.422
	FR1 n77 Part27O PC2	100M	QPSK	270	0	DFT-30	Top Side	5mm	Ant 7	DSI7	656000	3840	1	12.99	14.00	1.262	-	-	0.09	0.351	0.443
	FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 7	DSI7	633332	3499.98	1	12.75	14.00	1.334	-	-	-0.11	0.129	0.172
	FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 7	DSI7	633332	3499.98	1	12.75	14.00	1.334	-	-	-0.06	0.244	0.325
	FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 7	DSI7	633332	3499.98	1	12.75	14.00	1.334	-	-	0.19	0.052	0.069
	FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 7	DSI7	633332	3499.98	1	12.75	14.00	1.334	-	-	0.13	0.371	0.495
	FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 7	DSI7	633332	3499.98	1	12.72	14.00	1.343	-	-	0.02	0.139	0.187
	FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 7	DSI7	633332	3499.98	1	12.72	14.00	1.343	-	-	0.14	0.314	0.422
	FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 7	DSI7	633332	3499.98	1	12.72	14.00	1.343	-	-	-0.08	0.056	0.075
	FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 7	DSI7	633332	3499.98	1	12.72	14.00	1.343	-	-	0.04	0.401	0.538
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	DSI7	656000	3840	1	15.00	16.50	1.413	-	-	-0.06	0.252	0.356
61	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	DSI7	656000	3840	1	15.00	16.50	1.413	-	-	-0.01	0.414	0.585
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 8	DSI7	656000	3840	1	15.00	16.50	1.413	-	-	0.16	0.401	0.566
	FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 8	DSI7	656000	3840	1	15.00	16.50	1.413	-	-	-0.17	0.299	0.422
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 8	DSI7	656000	3840	1	14.93	16.50	1.435	-	-	0.15	0.225	0.323
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 8	DSI7	656000	3840	1	14.93	16.50	1.435	-	-	0	0.396	0.568
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 8	DSI7	656000	3840	1	14.93	16.50	1.435	-	-	0.12	0.373	0.535
	FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 8	DSI7	656000	3840	1	14.93	16.50	1.435	-	-	0.01	0.254	0.365
	FR1 n77 Part27O PC2	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 8	DSI7	656000	3840	1	14.90	16.50	1.445	-	-	-0.08	0.387	0.559
	FR1 n77 Part27O PC2	100M	QPSK	270	0	DFT-30	Right Side	5mm	Ant 8	DSI7	656000	3840	1	14.90	16.50	1.445	-	-	-0.02	0.358	0.517



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FR1 n77 Part27O PC2	100M	QPSK	270	0	DFT-30	Top Side	5mm	Ant 8	DSI7	656000	3840	1	14.90	16.50	1.445	-	-	-0.08	0.251	0.363
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 8	DSI7	633332	3499.98	1	14.95	16.50	1.429	-	-	-0.04	0.187	0.267
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 8	DSI7	633332	3499.98	1	14.95	16.50	1.429	-	-	0.08	0.375	0.536
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 8	DSI7	633332	3499.98	1	14.95	16.50	1.429	-	-	-0.18	0.368	0.526
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 8	DSI7	633332	3499.98	1	14.95	16.50	1.429	-	-	0.18	0.178	0.254
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 8	DSI7	633332	3499.98	1	14.89	16.50	1.449	-	-	-0.14	0.196	0.284
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 8	DSI7	633332	3499.98	1	14.89	16.50	1.449	-	-	0.15	0.387	0.561
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Right Side	5mm	Ant 8	DSI7	633332	3499.98	1	14.89	16.50	1.449	-	-	0	0.374	0.542
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 8	DSI7	633332	3499.98	1	14.89	16.50	1.449	-	-	-0.06	0.181	0.262
FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 10	DSI7	656000	3840	1	7.70	9.00	1.349	-	-	0.11	0.020	0.027
FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 10	DSI7	656000	3840	1	7.70	9.00	1.349	-	-	-0.09	0.375	0.506
FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 10	DSI7	656000	3840	1	7.70	9.00	1.349	-	-	0.15	0.018	0.024
FR1 n77 Part27O PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 10	DSI7	656000	3840	1	7.70	9.00	1.349	-	-	-0.13	0.011	0.015
FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 10	DSI7	656000	3840	1	7.66	9.00	1.361	-	-	0.11	0.022	0.030
FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 10	DSI7	656000	3840	1	7.66	9.00	1.361	-	-	-0.17	0.399	0.543
FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 10	DSI7	656000	3840	1	7.66	9.00	1.361	-	-	-0.06	0.019	0.026
FR1 n77 Part27O PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 10	DSI7	656000	3840	1	7.66	9.00	1.361	-	-	-0.09	0.012	0.016
FR1 n77 Part27O PC2	100M	QPSK	270	0	DFT-30	Back	5mm	Ant 10	DSI7	656000	3840	1	7.62	9.00	1.374	-	-	0.1	0.381	0.524
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Front	5mm	Ant 10	DSI7	633332	3499.98	1	7.68	9.00	1.355	-	-	-0.12	0.022	0.030
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Back	5mm	Ant 10	DSI7	633332	3499.98	1	7.68	9.00	1.355	-	-	0.13	0.388	0.526
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Left Side	5mm	Ant 10	DSI7	633332	3499.98	1	7.68	9.00	1.355	-	-	0.15	0.017	0.023
FR1 n77 Part27Q PC2	100M	QPSK	1	1	DFT-30	Top Side	5mm	Ant 10	DSI7	633332	3499.98	1	7.68	9.00	1.355	-	-	-0.13	0.013	0.018
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Front	5mm	Ant 10	DSI7	633332	3499.98	1	7.63	9.00	1.371	-	-	-0.09	0.021	0.029
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Back	5mm	Ant 10	DSI7	633332	3499.98	1	7.63	9.00	1.371	-	-	0.06	0.385	0.528
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Left Side	5mm	Ant 10	DSI7	633332	3499.98	1	7.63	9.00	1.371	-	-	-0.08	0.015	0.021
FR1 n77 Part27Q PC2	100M	QPSK	135	69	DFT-30	Top Side	5mm	Ant 10	DSI7	633332	3499.98	1	7.63	9.00	1.371	-	-	-0.17	0.012	0.016