

FCC SAR Test Report

APPLICANT : Realme Chongqing Mobile
Telecommunications Corp., Ltd.

EQUIPMENT : Mobile Phone

BRAND NAME : realme

MODEL NAME : RMX3999

FCC ID : 2AUYFRMX3999

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)
1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055
People's Republic of China



Table of Contents

1. Statement of Compliance 4
2. Administration Data 5
3. Guidance Applied 5
4. Equipment Under Test (EUT) Information 6
4.1 General Information 6
4.2 General LTE SAR Test and Reporting Considerations 8
4.3 General 5G NR SAR Test and Reporting Considerations 11
5. RF Exposure Limits 12
5.1 Uncontrolled Environment 12
5.2 Controlled Environment 12
6. Specific Absorption Rate (SAR) 13
6.1 Introduction 13
6.2 SAR Definition 13
7. System Description and Setup 14
7.1 E-Field Probe 15
7.2 Data Acquisition Electronics (DAE) 15
7.3 Phantom 16
7.4 Device Holder 17
8. Measurement Procedures 18
8.1 Spatial Peak SAR Evaluation 18
8.2 Power Reference Measurement 19
8.3 Area Scan 19
8.4 Zoom Scan 20
8.5 Volume Scan Procedures 20
8.6 Power Drift Monitoring 20
9. Test Equipment List 21
10. System Verification 22
10.1 Tissue Simulating Liquids 22
10.2 Tissue Verification 22
10.3 System Performance Check Results 24
11. RF Exposure Positions 26
11.1 Ear and handset reference point 26
11.2 Definition of the cheek position 27
11.3 Definition of the tilt position 28
11.4 Body Worn Accessory 29
11.5 Product Specific 10g SAR Exposure 30
11.6 Wireless Router 30
12. Conducted RF Output Power (Unit: dBm) 31
13. Antenna Location 48
14. SAR Test Results 49
14.1 Head SAR 52
14.2 Hotspot SAR 64
14.3 Body Worn Accessory SAR 76
14.4 Product specific 10g SAR 82
14.5 Repeated SAR Measurement 84
15. Simultaneous Transmission Analysis 85
15.1 Head Exposure Conditions 86
15.2 Hotspot Exposure Conditions 88
15.3 Body-Worn Accessory Exposure Conditions 89
15.4 Product specific 10g SAR Exposure Conditions 90
16. Uncertainty Assessment 91
17. References 92
Appendix A. Plots of System Performance Check
Appendix B. Plots of High SAR Measurement
Appendix C. DASy Calibration Certificate
Appendix D. Test Setup Photos
Appendix E. Conducted RF Output Power Table



Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA3D1301	Rev. 01	Initial issue of report.	Jan. 23, 2024

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Realme Chongqing Mobile Telecommunications Corp., Ltd., Mobile Phone, RMX3999**, are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 15mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.97	0.65	0.30	1.53
		GSM1900	0.90	0.90	0.51	
	WCDMA	WCDMA V	1.03	0.44	0.20	
		WCDMA IV	0.91	0.80	0.43	
		WCDMA II	0.98	0.90	0.46	
	LTE	LTE Band 12/17	1.16	0.17	0.27	
		LTE Band 13	1.10	0.32	0.26	
		LTE Band 5	0.99	0.40	0.20	
		LTE Band 26	1.05	0.33	0.18	
		LTE Band 4	0.69	0.74	0.39	
		LTE Band 66	0.81	0.79	0.42	
		LTE Band 2	0.73	0.86	0.47	
		LTE Band 7	0.93	0.91	0.59	
		LTE Band 38	0.96	1.14	0.59	
	LTE Band 41	1.02	0.91	0.41		
	5G NR	FR1 n5	0.86	0.40	0.19	
		FR1 n66	0.79	0.95	0.58	
FR1 n7		1.03	1.05	0.66		
FR1 n38		0.97	0.96	0.64		
FR1 n41		1.10	1.02	0.60		
DTS	WLAN	2.4GHz WLAN	0.38	0.12	<0.10	1.29
NII		5GHz WLAN	1.14	0.35	0.56	1.53
DSS	Bluetooth	2.4GHz Bluetooth	0.21	<0.10	<0.10	1.53

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	LTE	LTE Band 7	2.77	3.10
		LTE Band 38	2.11	
		LTE Band 41	2.62	
	5G NR	FR1 n7	2.37	
		FR1 n38	2.33	
		FR1 n41	1.92	
NII	WLAN	5GHz WLAN	1.30	3.10
Date of Testing:			2023/12/25 ~ 2024/1/12	

Remark:

- This device supports LTE B17 and B12. Since the supported frequency span for LTE B17 falls completely within the supports frequency span for LTE B12, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B12.

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.
	SAR02-SZ	CN1256	421272

Applicant	
Company Name	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

Manufacturer	
Company Name	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

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 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 Phone
Brand Name	realme
Model Name	RMX3999
FCC ID	2AUYFRMX3999
IMEI Code	IMEI 1: 863155070031032 IMEI 2: 863155070031024
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 66: 1710 MHz ~ 1780 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 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 supported) LTE: QPSK, 16QAM, 64QAM, 256QAM(Downlink) 5G NR : CP-OFDM / DFT-s-OFDM, 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	11
SW Version	realme UI 5.0
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Production Unit
Remark:	
<ol style="list-style-type: none"> This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5G NR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only). This device does not support DTM operation and support GRPS/EGRPS mode up to multi-slot class 12. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by 	

either one SIM at a time (single active). After pre-scan two SIM cards power, we found test result of the SIM1 was the worse, so we chose SIM1 slot to perform all tests.

6. The device implements receiver detect mechanism reduced power for the power management for SAR compliance at different exposure conditions (head, hotspot, body-worn, and extremity). It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G&5G and Wi-Fi antennas accordingly. The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E and the detailed DSI descriptions of below table.

DSI	Trigger Conditions	Antenna No.	Exposure conditions	
DSI1	Receiver off	All Ant	Body Worn/Extremity Standalone	Body Worn/Extremity all Position
DSI2	Receiver on	All Ant	Head Standalone	Head all Position
DSI3	Receiver off WWAN+ WLAN2.4GHz Receiver off WWAN+WLAN 5GHz	All Ant	Hotspot Body-worn / Extremity Simultaneous	Hotspot/ Body Worn/Extremity all Position
DSI4	Receiver on WWAN+ WLAN2.4GHz Receiver on WWAN+WLAN 5GHz	All Ant	Head Simultaneous	Head all Position
DSI5	Receiver off WWAN+WLAN 5GHz+BT	All Ant	Hotspot Body-worn / Extremity Simultaneous	Hotspot/ Body Worn/Extremity all Position
DSI6	Receiver on WWAN+WLAN 5GHz+BT	All Ant	Head Simultaneous	Head all Position

7. For WLAN when transmit, when transmit simultaneously together with WWAN/BT, the device power will be reduced power at head, body worn, and extremity conditions.
8. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
9. For 5G NR EN-DC mode, standalone SAR performed for 5G NR NSA band with the maximum power, EN-DC SAR summed EN-DC mode 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
10. This device has NFC function and the NFC SAR report will be separately submitted.
11. 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	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20
	n66	FDD	15	5, 10, 15, 20
	n38	TDD	30	10, 15, 20
	n41	TDD	30	10, 15, 20, 40, 50, 60, 80, 90, 100
SA	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20
	n66	FDD	15	5, 10, 15, 20
	n38	TDD	30	10, 15, 20
	n41	TDD	30	10, 15, 20, 40, 50, 60, 80, 90, 100

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	2AUYFRMX3999																																																														
Equipment Name	Mobile Phone																																																														
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 66: 1710 MHz ~ 1780 MHz																																																														
Channel Bandwidth	LTE Band 2: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 26: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz																																																														
uplink modulations used	QPSK / 16QAM / 64QAM																																																														
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
Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)																																																								
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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 receiver 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 12.																																																														
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 12.																																																														
LTE Carrier Aggregation Additional Information	1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 2 carriers in the 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	20475	830.5	20500	832		
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	20575	842.5	20550	840		
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	20875	2512.5	20900	2515		
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535		
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560	21325	2557.5	21300	2555		
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	23085	706.5	23110	709		
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	23105	708.5	23080	706		
LTE Band 13														
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz	
	Channel #	Freq.(MHz)			Channel #	Freq.(MHz)			Channel #	Freq.(MHz)			Channel #	Freq.(MHz)
L	23205	779.5			23230	782			23260	785			23290	788
M	23230	782				785				788				791
H	23255	784.5				787.5				790.5				793.5
LTE Band 17														
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz	
	Channel #	Freq.(MHz)			Channel #	Freq.(MHz)			Channel #	Freq.(MHz)			Channel #	Freq.(MHz)
L	23755	706.5			23780	709			23810	712			23840	715
M	23790	710				713				716				719
H	23825	713.5				716.5				719.5				722.5
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	26790	824		
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	26940	838		
LTE Band 38														
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580	37875	2582.5	37900	2585		
M	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595		
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610	38125	2607.5	38100	2605		



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

<For LTE SA Overlap Bands Description>

1) LTE Bands BW

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

2) LTE Bands tune up:

Band	Antenna	DSI 1 Tune-up Limit	DSI 2 Tune-up Limit	DSI 3 Tune-up Limit	DSI 4 Tune-up Limit	DSI 5 Tune-up Limit	DSI 6 Tune-up Limit	Default Tune-up Limit
LTE Band 12	Ant 0	24.5	24.5	24	24.5	24	24.5	24.5
LTE Band 17	Ant 0	24.5	24.5	24	24.5	24	24.5	24.5

Band	Antenna	DSI 1 Tune-up Limit	DSI 2 Tune-up Limit	DSI 3 Tune-up Limit	DSI 4 Tune-up Limit	DSI 5 Tune-up Limit	DSI 6 Tune-up Limit	Default Tune-up Limit
LTE Band 12	Ant 1	24.5	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 17	Ant 1	24.5	24.5	24.5	24.5	24.5	24.5	24.5



4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz
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: QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n5	LTE B7/66
LTE Anchor Bands for n7	LTE B2/4/5/7/66
LTE Anchor Bands for n41	LTE B2/4/66/26/41
LTE Anchor Bands for n66	LTE B2/5/7/66
LTE Anchor Bands for n38	LTE B2/4/5/38/66

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

NR Band 7								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510
M	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560

NR Band 66								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720
M	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770

NR Band 38						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515004	2575.02	515502	2577.51	516000	2580
M	519000	2595	519000	2595	519000	2595
H	522996	2614.98	522498	2612.49	522000	2610

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

5. RF Exposure Limits

5.1 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.

5.2 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.

6. Specific Absorption Rate (SAR)

6.1 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.

6.2 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:

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

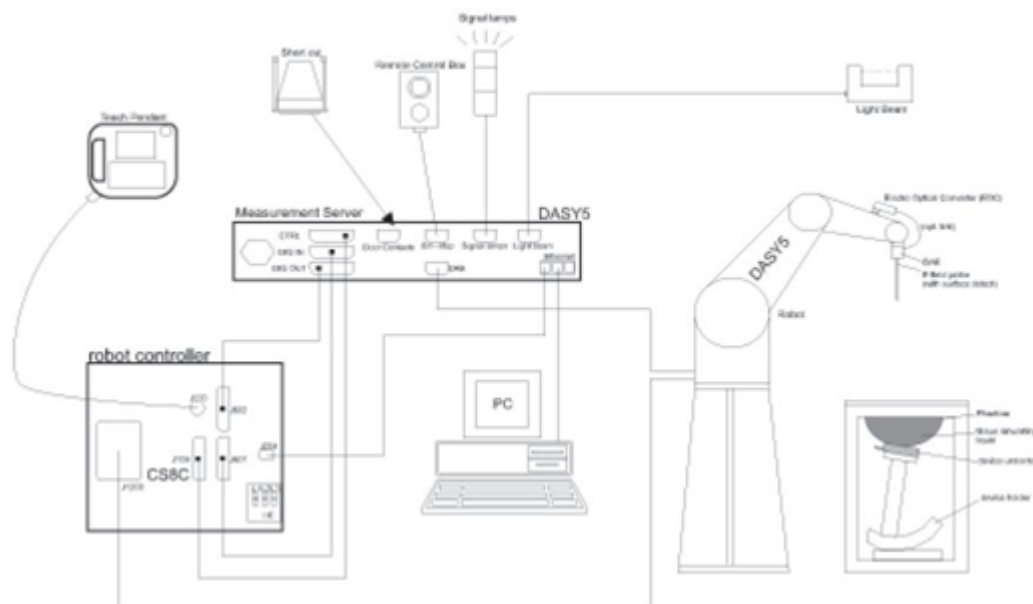
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

7. 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 Win7 and the DASY 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.

7.1 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	

7.2 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

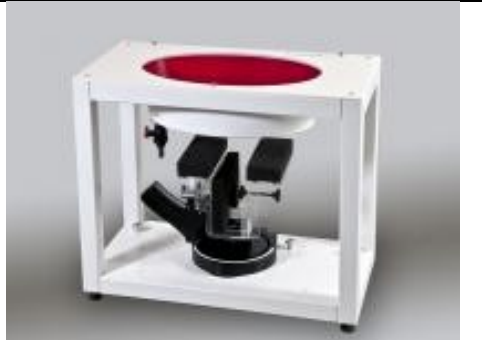
7.3 Phantom

<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.

7.4 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

8. 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

8.1 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

8.2 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.

8.3 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.	

8.4 Zoom Scan

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

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

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

8.5 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.

8.6 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.



9. 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	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	5000MHz System Validation Kit	D5GHzV2	1341	Dec. 13, 2021	Dec. 11, 2024
SPEAG	Data Acquisition Electronics	DAE4	1303	Nov. 20, 2023	Nov. 19, 2024
SPEAG	Dosimetric E-Field Probe	EX3DV4	3819	Jun. 06, 2023	Jun. 05, 2024
SPEAG	SAM Twin Phantom	QD 000 P40 CD	1670	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	6272416846	Apr. 06, 2023	Apr. 05, 2024
Anritsu	Radio communication analyzer	MT8821C	6272416863	Apr. 03, 2023	Apr. 02, 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
Anritsu	Power Sensor	MA2411B	1306099	Oct. 16, 2023	Oct. 15, 2024
Anritsu	Power Meter	ML2495A	1349001	Oct. 16, 2023	Oct. 15, 2024
Anritsu	Power Sensor	MA2411B	1542004	Dec. 28, 2023	Dec. 27, 2024
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. 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
SPEAG	Device Holder	N/A	N/A	N/A	N/A
AR	Amplifier	5S1G4	333096	Note 1	
Mini-Circuits	Amplifier	ZVE-3W-83+	599201528	Note 1	
Mini-Circuits	Amplifier	ZVA-183W-S+	726202215	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
ET Industries	Dual Directional Coupler	C-058-10	N/A	Note 1	
Jinkexinhua	Attenuator	10db-8G	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.

10. System Verification

10.1 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.

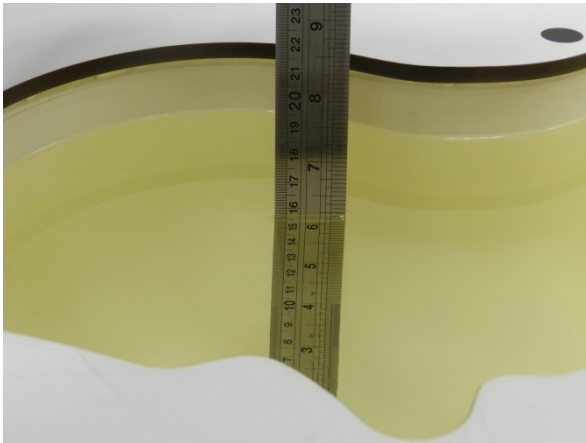


Fig 11.1 Photo of Liquid Height for Head SAR

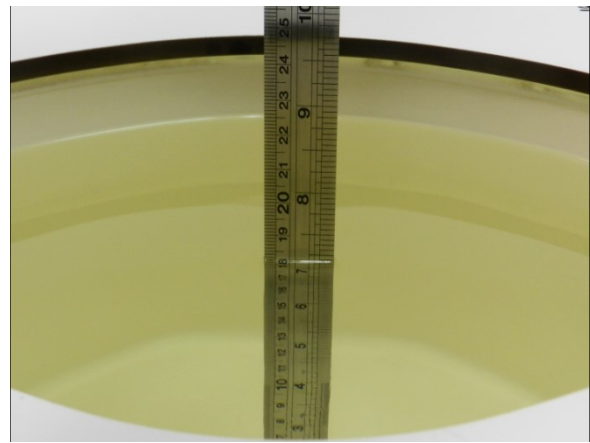


Fig 11.2 Photo of Liquid Height for Body SAR

10.2 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	22.2	0.912	42.087	0.89	41.90	2.47	0.45	±5	2023/12/25
750	Head	22.1	0.892	40.434	0.89	41.90	0.22	-3.50	±5	2023/12/30
835	Head	22.2	0.942	41.846	0.90	41.50	4.67	0.83	±5	2023/12/26
835	Head	22.3	0.938	41.866	0.90	41.50	4.22	0.88	±5	2024/1/4
1750	Head	22.4	1.349	40.211	1.37	40.10	-1.53	0.28	±5	2023/12/29
1750	Head	22.4	1.345	38.363	1.37	40.10	-1.82	-4.33	±5	2024/1/6
1900	Head	22.4	1.433	40.023	1.40	40.00	2.36	0.06	±5	2023/12/31
1900	Head	22.1	1.437	40.992	1.40	40.00	2.64	2.48	±5	2024/1/9
2450	Head	22.2	1.813	39.287	1.80	39.20	0.72	0.22	±5	2024/1/2
2450	Head	22.3	1.790	38.844	1.80	39.20	-0.56	-0.91	±5	2024/1/5
2600	Head	22.4	1.924	39.070	1.96	39.00	-1.84	0.18	±5	2024/1/4
2600	Head	22.2	1.935	39.140	1.96	39.00	-1.28	0.36	±5	2024/1/6
5250	Head	22.2	4.513	35.588	4.71	35.95	-4.18	-1.01	±5	2024/1/7
5250	Head	22.3	4.527	35.458	4.71	35.95	-3.89	-1.37	±5	2024/1/8
5600	Head	22.4	4.910	35.295	5.07	35.50	-3.16	-0.58	±5	2024/1/9
5600	Head	22.5	4.953	35.269	5.07	35.50	-2.31	-0.65	±5	2024/1/10
5750	Head	22.5	5.039	34.631	5.22	35.35	-3.47	-2.03	±5	2024/1/11
5750	Head	22.2	5.093	35.309	5.22	35.35	-2.43	-0.12	±5	2024/1/12

10.3 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 (%)
2023/12/25	750	Head	250	1099	3819	1303	2.130	8.540	8.52	-0.23
2023/12/30	750	Head	250	1099	3819	1303	2.200	8.540	8.8	3.04
2023/12/26	835	Head	250	4d162	3819	1303	2.520	9.640	10.08	4.56
2024/1/4	835	Head	250	4d162	3819	1303	2.380	9.640	9.52	-1.24
2023/12/29	1750	Head	250	1090	3819	1303	9.500	37.000	38	2.70
2024/1/6	1750	Head	250	1090	3819	1303	9.350	37.000	37.4	1.08
2023/12/31	1900	Head	250	5d182	3819	1303	9.600	39.600	38.4	-3.03
2024/1/9	1900	Head	250	5d182	3819	1303	9.870	39.600	39.48	-0.30
2024/1/2	2450	Head	250	1040	3819	1303	13.500	52.700	54	2.47
2024/1/5	2450	Head	250	1040	3819	1303	12.900	52.700	51.6	-2.09
2024/1/4	2600	Head	250	1070	3819	1303	14.600	56.200	58.4	3.91
2024/1/6	2600	Head	250	1070	3819	1303	14.300	56.200	57.2	1.78
2024/1/7	5250	Head	100	1341	3819	1303	7.770	80.700	77.7	-3.72
2024/1/8	5250	Head	100	1341	3819	1303	7.720	80.700	77.2	-4.34
2024/1/9	5600	Head	100	1341	3819	1303	8.660	84.500	86.6	2.49
2024/1/10	5600	Head	100	1341	3819	1303	8.800	84.500	88	4.14
2024/1/11	5750	Head	100	1341	3819	1303	7.840	80.600	78.4	-2.73
2024/1/12	5750	Head	100	1341	3819	1303	7.720	80.600	77.2	-4.22

<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 (%)
2023/12/25	750	Head	250	1099	3819	1303	1.430	5.650	5.72	1.24
2023/12/30	750	Head	250	1099	3819	1303	1.480	5.650	5.92	4.78
2023/12/26	835	Head	250	4d162	3819	1303	1.610	6.260	6.44	2.88
2024/1/4	835	Head	250	4d162	3819	1303	1.500	6.260	6	-4.15
2023/12/29	1750	Head	250	1090	3819	1303	5.060	19.500	20.24	3.79
2024/1/6	1750	Head	250	1090	3819	1303	4.950	19.500	19.8	1.54
2023/12/31	1900	Head	250	5d182	3819	1303	5.150	20.200	20.6	1.98
2024/1/9	1900	Head	250	5d182	3819	1303	5.130	20.200	20.52	1.58
2024/1/2	2450	Head	250	1040	3819	1303	6.140	24.600	24.56	-0.16
2024/1/5	2450	Head	250	1040	3819	1303	5.950	24.600	23.8	-3.25
2024/1/4	2600	Head	250	1070	3819	1303	6.330	24.600	25.32	2.93
2024/1/6	2600	Head	250	1070	3819	1303	6.360	24.600	25.44	3.41
2024/1/7	5250	Head	100	1341	3819	1303	2.240	23.100	22.4	-3.03
2024/1/8	5250	Head	100	1341	3819	1303	2.230	23.100	22.3	-3.46
2024/1/9	5600	Head	100	1341	3819	1303	2.460	24.000	24.6	2.50
2024/1/10	5600	Head	100	1341	3819	1303	2.430	24.000	24.3	1.25
2024/1/11	5750	Head	100	1341	3819	1303	2.220	22.700	22.2	-2.20
2024/1/12	5750	Head	100	1341	3819	1303	2.270	22.700	22.7	0.00

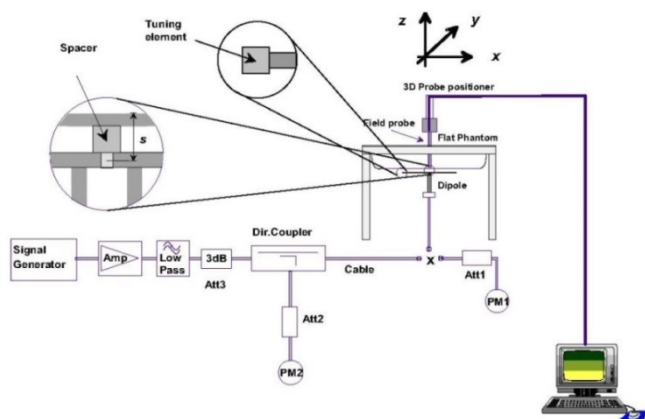


Fig 11.3.1 System Performance Check Setup



Fig 11.3.2 Setup Photo

11. RF Exposure Positions

11.1 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.

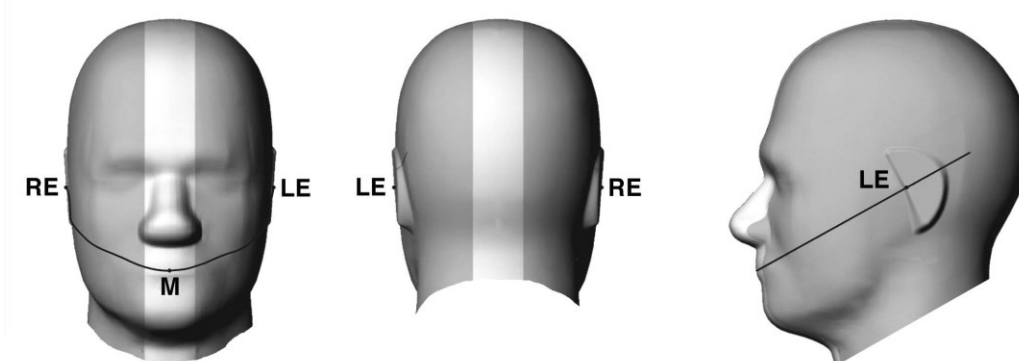


Fig 12.1.1 Front, back, and side views of SAM twin phantom

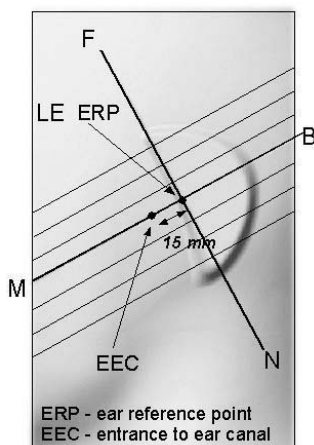


Fig 12.1.2 Close-up side view of phantom showing the ear region.

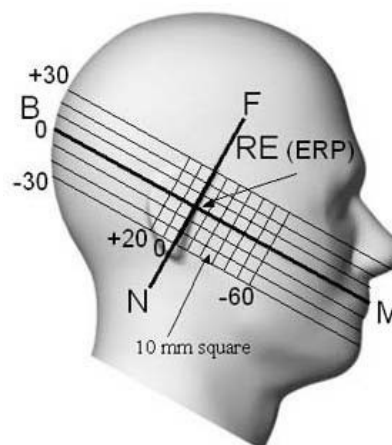


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

11.2 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.

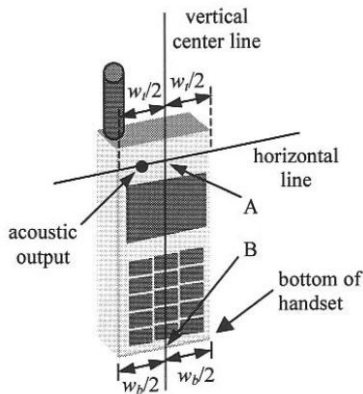


Fig 12.2.1 Handset vertical and horizontal reference lines—“fixed case”

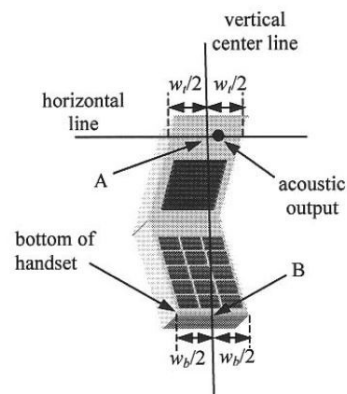


Fig 12.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

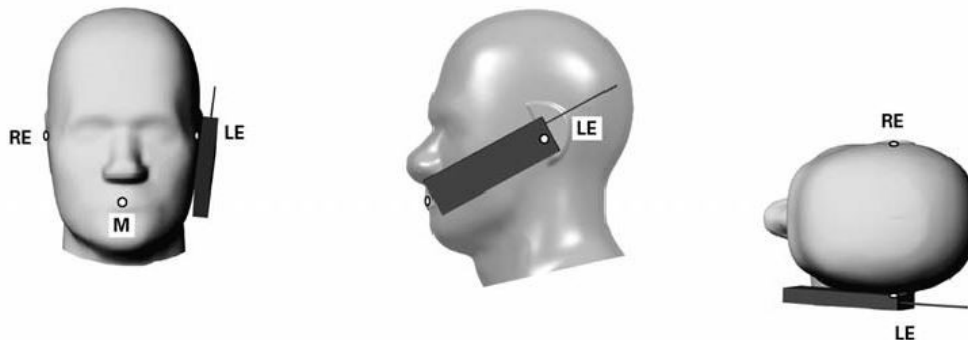


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

11.3 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

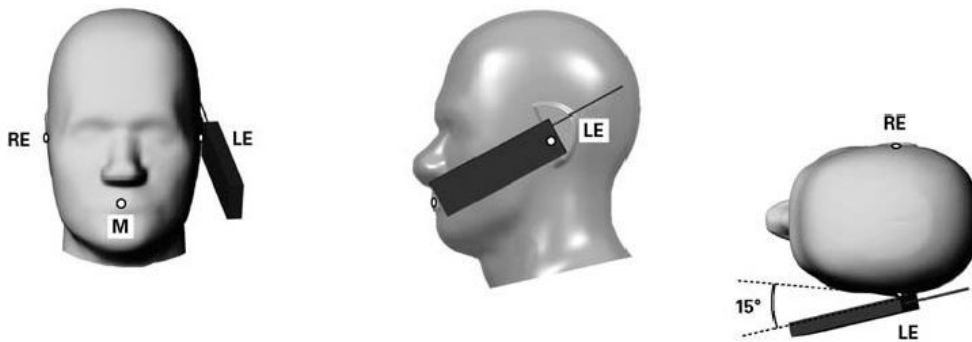


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

11.4 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-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

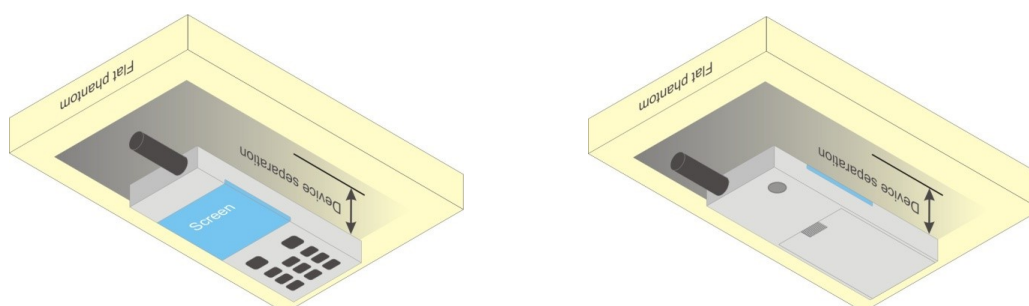


Fig 12.4 Body Worn Position

11.5 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.

11.6 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.

12. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

1. Per KDB 447498 D01, 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 $\leq \frac{1}{4}$ 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_c/β_d	β_{HS} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: $\Delta_{ACK}, \Delta_{NACK}$ 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 $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPDCCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

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

Setup Configuration

HSUPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (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.		

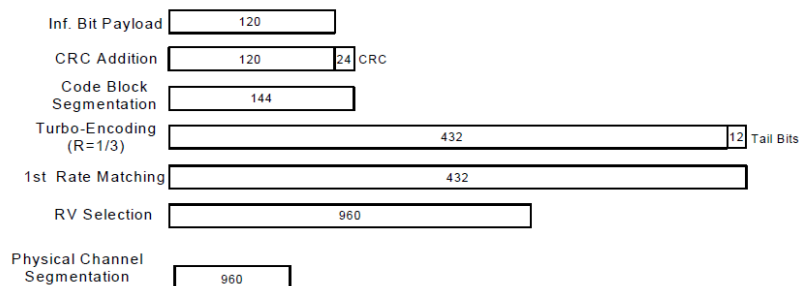


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK) Setup Configuration

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>

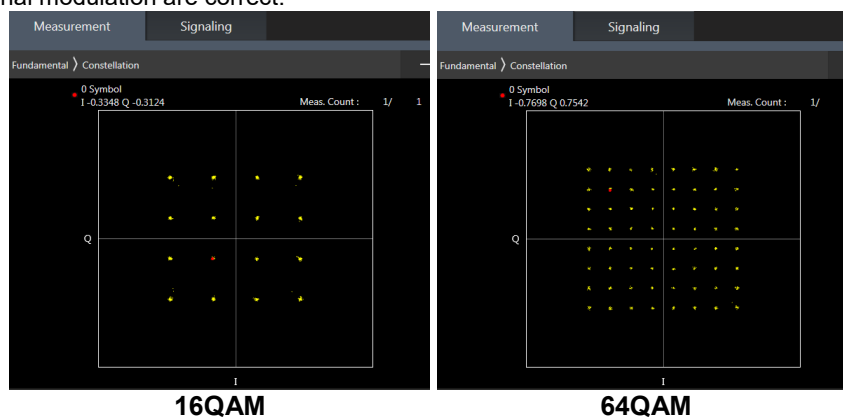
General Note:

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 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 SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B17 SAR test was covered by B12; 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 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 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.

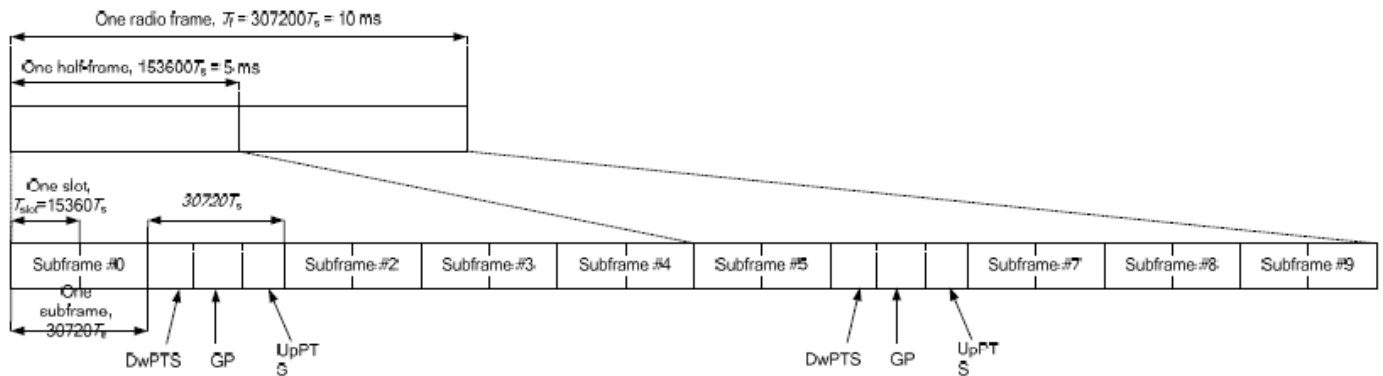


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	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			7680 · Ts			
5	6592 · Ts	4384 · Ts	5120 · Ts	20480 · Ts	4384 · Ts	5120 · 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 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.



<LTE Carrier Aggregation>

General Note:

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

2CC Downlink Carrier Aggregation	
Number	Combination
1	CA_2C
2	CA_7B
3	CA_7C
4	CA_38C
5	CA_41C
6	CA_41A-41A
7	CA_7A-7A
8	CA_5A-41A
9	CA_5A-66A
10	CA_7A-66A
11	CA_2A-2A
12	CA_2A-5A
13	CA_2A-7A
14	CA_2A-12A
15	CA_4A-5A
16	CA_4A-7A
17	CA_5A-7A
18	CA_12A-66A
19	CA_66A-66A
20	CA_4A-4A
21	CA_26A-41A
22	CA_5A-38A
23	CA_2A-4A
24	CA_38A-66A
25	CA_26A-38A
26	CA_2A-66A
27	CA_7A-26A
28	CA_2A-38A

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 two 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 Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	Antenna Tx
CA_7C	Ant 0/1/2
CA_38C	Ant 0/1/2
CA_41C	Ant 0/1/2

<Intra-band>

General Note:

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

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n5/n7 /n66 /n38 /n41 is NSA and SA mode.
2. 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
3. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
4. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
5. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
6. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
7. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
8. For 5G NR EN-DC mode, standalone SAR performed for 5G NR NSA band with the maximum power, EN-DC SAR summed EN-DC mode 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.

<3GPP 38.101 MPR for EN-DC>

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

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

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

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

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

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



<EN-DC combination>

ENDC	LTE TX	NR TX
DC_66A_n5A	Ant0/Ant2	Ant1
DC_7A_n5A	Ant0/Ant2	Ant1
DC_2A_n7A	Ant0	Ant1
		Ant2
DC_4A_n7A	Ant0	Ant1
		Ant2
DC_5A_n7A	Ant0	Ant1
		Ant2
DC_7A_n7A	Ant0	Ant1
		Ant2
DC_66A_n7A	Ant0	Ant1
		Ant2
DC_2A_n66A	Ant0	Ant1
		Ant2
DC_5A_n66A	Ant0	Ant1
		Ant2
DC_7A_n66A	Ant0	Ant1
		Ant2
DC_66A_n66A	Ant0	Ant1
		Ant2
DC_2A_n38A	Ant0	Ant1
		Ant2
DC_4A_n38A	Ant0	Ant1
		Ant2
DC_5A_n38A	Ant0	Ant1
		Ant2
DC_66A_n38A	Ant0	Ant1
		Ant2
DC_38A_n38A	Ant0	Ant1
		Ant2
DC_2A_n41A	Ant0	Ant1
		Ant2
DC_4A_n41A	Ant0	Ant1
		Ant2
DC_26A_n41A	Ant0	Ant1
		Ant2
DC_66A_n41A	Ant0	Ant1
		Ant2
DC_41A_n41A	Ant0	Ant1
		Ant2

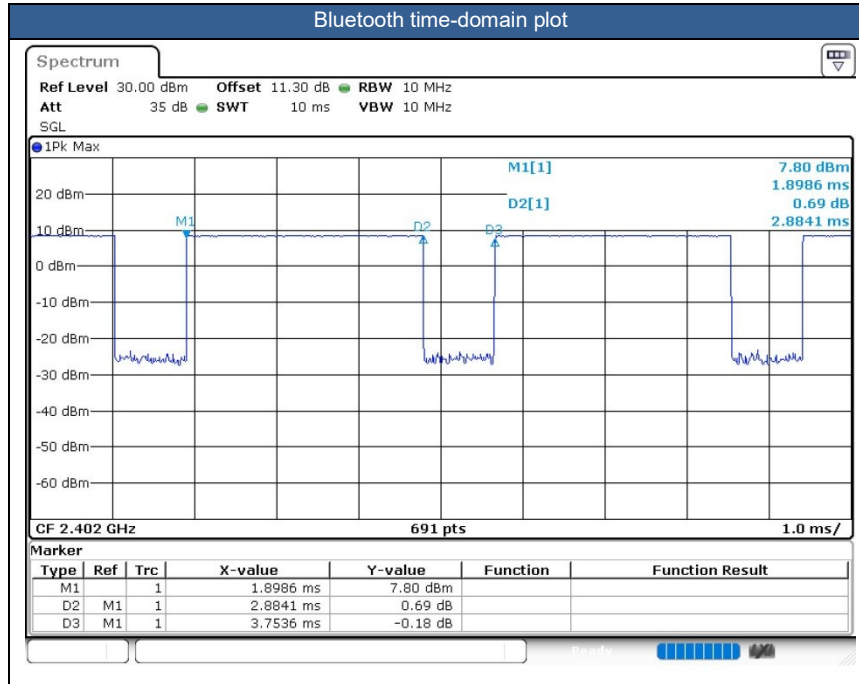
**<WLAN Conducted Power>****General Note:**

1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration. Additional output power measurements were not necessary.
2. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
3. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
4. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
5. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
 - b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

<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 76.84% as following figure, according to Oct. 2016 TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation





13. Antenna Location

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

14. 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/Bluetooth 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.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8 W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The device implements receiver detect mechanism trigger reduced power for the power management for SAR compliance at different exposure conditions (head, hotspot, body, and extremity). It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G&5G and Wi-Fi antennas accordingly. The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E.
5. For WLAN when transmit, when transmit simultaneously together with WWAN/BT, the device power will be reduced power at head, body worn, and extremity conditions.
6. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
7. For 5G NR EN-DC mode, standalone SAR performed for 5G NR NSA band with the maximum power, EN-DC SAR summed EN-DC mode 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
8. 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 1.2 W/kg of LTE Band 7/38/41, 5G NR n7 /n38/n41, 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.
9. 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).
10. The following table "n/a" in the result means the SAR cube is too small to be detected.

UL duty cycle detection mechanism specification:

The device supports the UL duty cycle detection mechanism for LTE TDD & 5G NR (including FR1 SA and FR1 ENDC), the rest RAT will not apply. The main purpose is to distinguish duty cycle of UL symbol and apply the relevant power levels accordingly. The main purpose is to provide enhanced user experience while meeting the SAR compliance for transmission scheduling.

Note:

1. SAR is not required because the average output power is not higher than the Max UL duty cycle configuration.
2. For each band, the SAR evaluation uses the highest Time-average power configuration. Since the simulated base station cannot be configured with an accurate Max UL duty cycle, for the SAR test of LTE TDD & 5G NR bands, the highest Time-average power configuration is triggered by the some test script to test 4G/5G bands to simulate extreme scenarios (Max UL duty cycle).
3. The detail results please referred to Duty cycle_OD.

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 ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is \leq ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is \leq 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 ¼ 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 \leq 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 output power for each RB allocation configuration is $>$ not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is \leq 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is $>$ not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is \leq 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 B17 SAR test was covered by B12; 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 /n38/n41/n66 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.



14.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
	LTE Band 12	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	23.62	24.50	1.225	-	-	0	0.081	0.099
	LTE Band 12	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	23.62	24.50	1.225	-	-	0.03	0.021	0.026
	LTE Band 12	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	23.62	24.50	1.225	-	-	-0.19	0.092	0.113
	LTE Band 12	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 0	DSI 2	23095	707.5	23.62	24.50	1.225	-	-	0.13	0.052	0.064
	LTE Band 12	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.12	23.50	1.374	-	-	0.14	0.054	0.074
	LTE Band 12	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.12	23.50	1.374	-	-	0.05	0.014	0.019
	LTE Band 12	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 0	DSI 2	23095	707.5	22.12	23.50	1.374	-	-	-0.17	0.067	0.092
	LTE Band 12	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 0	DSI 2	23095	707.5	22.12	23.50	1.374	-	-	0.04	0.043	0.059
01	LTE Band 12	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	23.34	24.50	1.306	-	-	0.09	0.887	1.159
	LTE Band 12	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	23.34	24.50	1.306	-	-	0.03	0.742	0.969
	LTE Band 12	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 1	DSI 2	23095	707.5	23.34	24.50	1.306	-	-	0.09	0.523	0.683
	LTE Band 12	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 1	DSI 2	23095	707.5	23.34	24.50	1.306	-	-	0.15	0.504	0.658
	LTE Band 12	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	21.84	23.50	1.466	-	-	0.03	0.569	0.834
	LTE Band 12	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	21.84	23.50	1.466	-	-	-0.1	0.526	0.771
	LTE Band 12	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 1	DSI 2	23095	707.5	21.84	23.50	1.466	-	-	0.17	0.366	0.536
	LTE Band 12	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 1	DSI 2	23095	707.5	21.84	23.50	1.466	-	-	-0.04	0.350	0.513
	LTE Band 12	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	21.83	23.50	1.469	-	-	0	0.553	0.812
	LTE Band 12	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	23095	707.5	21.83	23.50	1.469	-	-	0.05	0.511	0.751
	LTE Band 13	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 0	DSI 2	23230	782	23.54	24.50	1.247	-	-	0.1	0.097	0.121
	LTE Band 13	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 0	DSI 2	23230	782	23.54	24.50	1.247	-	-	0.16	0.026	0.032
	LTE Band 13	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 0	DSI 2	23230	782	23.54	24.50	1.247	-	-	0.04	0.108	0.135
	LTE Band 13	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 0	DSI 2	23230	782	23.54	24.50	1.247	-	-	0.14	0.052	0.065
	LTE Band 13	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 0	DSI 2	23230	782	21.98	23.50	1.419	-	-	-0.18	0.061	0.087
	LTE Band 13	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 0	DSI 2	23230	782	21.98	23.50	1.419	-	-	-0.19	0.016	0.023
	LTE Band 13	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 0	DSI 2	23230	782	21.98	23.50	1.419	-	-	0.05	0.074	0.105
	LTE Band 13	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 0	DSI 2	23230	782	21.98	23.50	1.419	-	-	0.02	0.037	0.053
02	LTE Band 13	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 1	DSI 2	23230	782	22.15	23.50	1.365	-	-	0.04	0.803	1.096
	LTE Band 13	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 1	DSI 2	23230	782	22.15	23.50	1.365	-	-	0.1	0.716	0.977
	LTE Band 13	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 1	DSI 2	23230	782	22.15	23.50	1.365	-	-	-0.19	0.583	0.796
	LTE Band 13	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 1	DSI 2	23230	782	22.15	23.50	1.365	-	-	0.06	0.509	0.695
	LTE Band 13	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 1	DSI 2	23230	782	21.58	23.50	1.556	-	-	0.16	0.698	1.086
	LTE Band 13	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 1	DSI 2	23230	782	21.58	23.50	1.556	-	-	-0.09	0.601	0.935
	LTE Band 13	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 1	DSI 2	23230	782	21.58	23.50	1.556	-	-	0.11	0.491	0.764
	LTE Band 13	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 1	DSI 2	23230	782	21.58	23.50	1.556	-	-	-0.15	0.452	0.703
	LTE Band 13	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	23230	782	21.55	23.50	1.567	-	-	-0.14	0.679	1.064
	LTE Band 13	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	23230	782	21.55	23.50	1.567	-	-	-0.11	0.584	0.915
835MHz																				
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	189	836.4	30.69	32.00	1.352	-	-	-0.09	0.207	0.280
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	189	836.4	30.69	32.00	1.352	-	-	0.15	0.102	0.138
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	189	836.4	30.69	32.00	1.352	-	-	0.07	0.243	0.329
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	189	836.4	30.69	32.00	1.352	-	-	0.15	0.125	0.169
	GSM850	-	-	-	-	GPRS(4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	189	836.4	24.08	24.50	1.102	-	-	0.07	0.743	0.818
	GSM850	-	-	-	-	GPRS(4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	189	836.4	24.08	24.50	1.102	-	-	0.13	0.637	0.701
	GSM850	-	-	-	-	GPRS(4 Tx slots)	Left Cheek	0mm	Ant 1	DSI 2	189	836.4	24.08	24.50	1.102	-	-	-0.02	0.435	0.479
	GSM850	-	-	-	-	GPRS(4 Tx slots)	Left Tilted	0mm	Ant 1	DSI 2	189	836.4	24.08	24.50	1.102	-	-	-0.04	0.458	0.504
	GSM850	-	-	-	-	GPRS(4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	128	824.2	23.73	24.50	1.194	-	-	0.19	0.744	0.888
03	GSM850	-	-	-	-	GPRS(4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	251	848.8	24.07	24.50	1.104	-	-	0.06	0.879	0.970
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	4182	836.4	23.68	24.50	1.208	-	-	-0.19	0.154	0.186
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	4182	836.4	23.68	24.50	1.208	-	-	-0.04	0.067	0.081
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	4182	836.4	23.68	24.50	1.208	-	-	0.19	0.183	0.221



FCC SAR Test Report

Report No. : FA3D1301

	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	4182	836.4	23.68	24.50	1.208	-	-	-0.15	0.094	0.114
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4182	836.4	21.38	22.50	1.294	-	-	-0.15	0.738	0.955
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4182	836.4	21.38	22.50	1.294	-	-	0.03	0.705	0.912
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	4182	836.4	21.38	22.50	1.294	-	-	-0.13	0.528	0.683
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	4182	836.4	21.38	22.50	1.294	-	-	-0.06	0.527	0.682
04	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4132	826.4	21.37	22.50	1.297	-	-	-0.07	0.797	1.034
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	4233	846.6	21.36	22.50	1.300	-	-	0.11	0.706	0.918
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4132	826.4	21.37	22.50	1.297	-	-	0.13	0.732	0.950
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	4233	846.6	21.36	22.50	1.300	-	-	-0.12	0.669	0.870
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	23.39	24.00	1.151	-	-	0	0.108	0.124
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 0	DSI 2	26865	831.5	23.39	24.00	1.151	-	-	-0.18	0.058	0.067
	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 0	DSI 2	26865	831.5	23.39	24.00	1.151	-	-	0.15	0.149	0.171
	LTE Band 26	15M	QPSK	1	37	-	Left Tilted	0mm	Ant 0	DSI 2	26865	831.5	23.39	24.00	1.151	-	-	0.01	0.075	0.086
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 0	DSI 2	26865	831.5	22.27	23.00	1.183	-	-	0.04	0.106	0.125
	LTE Band 26	15M	QPSK	36	20	-	Right Tilted	0mm	Ant 0	DSI 2	26865	831.5	22.27	23.00	1.183	-	-	0.04	0.046	0.054
	LTE Band 26	15M	QPSK	36	20	-	Left Cheek	0mm	Ant 0	DSI 2	26865	831.5	22.27	23.00	1.183	-	-	0.02	0.120	0.142
	LTE Band 26	15M	QPSK	36	20	-	Left Tilted	0mm	Ant 0	DSI 2	26865	831.5	22.27	23.00	1.183	-	-	-0.12	0.061	0.072
05	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 1	DSI 2	26865	831.5	21.84	22.75	1.233	-	-	-0.11	0.849	1.047
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 1	DSI 2	26865	831.5	21.84	22.75	1.233	-	-	0.07	0.817	1.007
	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 1	DSI 2	26865	831.5	21.84	22.75	1.233	-	-	0.03	0.543	0.670
	LTE Band 26	15M	QPSK	1	37	-	Left Tilted	0mm	Ant 1	DSI 2	26865	831.5	21.84	22.75	1.233	-	-	0.09	0.523	0.645
	LTE Band 26	15M	QPSK	36	20	-	Right Cheek	0mm	Ant 1	DSI 2	26865	831.5	21.75	22.75	1.259	-	-	0.01	0.813	1.024
	LTE Band 26	15M	QPSK	36	20	-	Right Tilted	0mm	Ant 1	DSI 2	26865	831.5	21.75	22.75	1.259	-	-	0.18	0.802	1.010
	LTE Band 26	15M	QPSK	36	20	-	Left Cheek	0mm	Ant 1	DSI 2	26865	831.5	21.75	22.75	1.259	-	-	-0.04	0.550	0.692
	LTE Band 26	15M	QPSK	36	20	-	Left Tilted	0mm	Ant 1	DSI 2	26865	831.5	21.75	22.75	1.259	-	-	0.16	0.529	0.666
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 1	DSI 2	26865	831.5	21.68	22.75	1.279	-	-	0.19	0.811	1.038
	LTE Band 26	15M	QPSK	75	0	-	Right Tilted	0mm	Ant 1	DSI 2	26865	831.5	21.68	22.75	1.279	-	-	-0.17	0.808	1.034
	LTE Band 5	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 0	DSI 2	20525	836.5	23.75	24.50	1.189	-	-	0.13	0.166	0.197
	LTE Band 5	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 0	DSI 2	20525	836.5	23.75	24.50	1.189	-	-	-0.02	0.067	0.080
	LTE Band 5	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 0	DSI 2	20525	836.5	23.75	24.50	1.189	-	-	-0.04	0.169	0.201
	LTE Band 5	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 0	DSI 2	20525	836.5	23.75	24.50	1.189	-	-	-0.13	0.082	0.097
	LTE Band 5	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 0	DSI 2	20525	836.5	22.25	23.50	1.334	-	-	0.01	0.114	0.152
	LTE Band 5	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 0	DSI 2	20525	836.5	22.25	23.50	1.334	-	-	0.08	0.047	0.063
	LTE Band 5	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 0	DSI 2	20525	836.5	22.25	23.50	1.334	-	-	0.1	0.117	0.156
	LTE Band 5	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 0	DSI 2	20525	836.5	22.25	23.50	1.334	-	-	0.03	0.058	0.077
06	LTE Band 5	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 1	DSI 2	20525	836.5	21.89	23.00	1.291	-	-	-0.06	0.766	0.989
	LTE Band 5	10M	QPSK	1	25	-	Right Tilted	0mm	Ant 1	DSI 2	20525	836.5	21.89	23.00	1.291	-	-	-0.16	0.643	0.830
	LTE Band 5	10M	QPSK	1	25	-	Left Cheek	0mm	Ant 1	DSI 2	20525	836.5	21.89	23.00	1.291	-	-	0.04	0.555	0.717
	LTE Band 5	10M	QPSK	1	25	-	Left Tilted	0mm	Ant 1	DSI 2	20525	836.5	21.89	23.00	1.291	-	-	0.19	0.525	0.678
	LTE Band 5	10M	QPSK	25	12	-	Right Cheek	0mm	Ant 1	DSI 2	20525	836.5	21.86	23.00	1.300	-	-	-0.14	0.681	0.885
	LTE Band 5	10M	QPSK	25	12	-	Right Tilted	0mm	Ant 1	DSI 2	20525	836.5	21.86	23.00	1.300	-	-	-0.09	0.644	0.837
	LTE Band 5	10M	QPSK	25	12	-	Left Cheek	0mm	Ant 1	DSI 2	20525	836.5	21.86	23.00	1.300	-	-	-0.1	0.554	0.720
	LTE Band 5	10M	QPSK	25	12	-	Left Tilted	0mm	Ant 1	DSI 2	20525	836.5	21.86	23.00	1.300	-	-	-0.16	0.520	0.676
	LTE Band 5	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 2	20525	836.5	21.85	23.00	1.303	-	-	0.04	0.674	0.878
	LTE Band 5	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 2	20525	836.5	21.85	23.00	1.303	-	-	0.1	0.637	0.830
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	22.96	24.20	1.330	-	-	-0.14	0.126	0.168
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	167300	836.5	22.96	24.20	1.330	-	-	-0.12	0.062	0.082
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	167300	836.5	22.96	24.20	1.330	-	-	0.1	0.161	0.214
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	167300	836.5	22.96	24.20	1.330	-	-	0.02	0.086	0.114
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	167300	836.5	22.91	24.20	1.346	-	-	-0.09	0.131	0.176
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	167300	836.5	22.91	24.20	1.346	-	-	0.13	0.065	0.087
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	167300	836.5	22.91	24.20	1.346	-	-	-0.09	0.165	0.222
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	167300	836.5	22.91	24.20	1.346	-	-	-0.03	0.088	0.118
07	FR1 n5	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.28	21.95	1.469	-	-	0.11	0.582	0.855
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.28	21.95	1.469	-	-	0.07	0.567	0.833
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.28	21.95	1.469	-	-	-0.03	0.411	0.604



FCC SAR Test Report

Report No. : FA3D1301

FR1 n5	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.28	21.95	1.469	-	-	0.13	0.399	0.586	
FR1 n5	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.22	21.95	1.489	-	-	0.05	0.571	0.850	
FR1 n5	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.22	21.95	1.489	-	-	-0.1	0.561	0.836	
FR1 n5	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.22	21.95	1.489	-	-	0.16	0.415	0.618	
FR1 n5	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.22	21.95	1.489	-	-	0.16	0.401	0.597	
FR1 n5	20M	QPSK	100	0	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	167300	836.5	20.12	21.95	1.524	-	-	0.04	0.553	0.843	
FR1 n5	20M	QPSK	100	0	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	167300	836.5	20.12	21.95	1.524	-	-	0.02	0.543	0.828	
1750MHz																				
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	1413	1732.6	23.42	24.50	1.282	-	-	0.17	0.065	0.083	
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	1413	1732.6	23.42	24.50	1.282	-	-	-0.14	0.066	0.085	
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	1413	1732.6	23.42	24.50	1.282	-	-	-0.05	0.143	0.183	
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	1413	1732.6	23.42	24.50	1.282	-	-	-0.06	0.053	0.068	
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	1413	1732.6	17.20	18.00	1.202	-	-	-0.18	0.623	0.749	
08	WCDMA IV	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1413	1732.6	17.20	18.00	1.202	-	-	-0.05	0.757	0.910	
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	1413	1732.6	17.20	18.00	1.202	-	-	-0.1	0.330	0.397	
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	1413	1732.6	17.20	18.00	1.202	-	-	0.09	0.415	0.499	
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1312	1712.4	17.14	18.00	1.219	-	-	0.06	0.599	0.730	
WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	1513	1752.6	17.02	18.00	1.253	-	-	0.11	0.621	0.778	
LTE Band 4	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	20175	1732.5	22.77	23.50	1.183	-	-	-0.15	0.056	0.066	
LTE Band 4	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	20175	1732.5	22.77	23.50	1.183	-	-	-0.19	0.059	0.070	
LTE Band 4	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	20175	1732.5	22.77	23.50	1.183	-	-	-0.18	0.099	0.117	
LTE Band 4	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	20175	1732.5	22.77	23.50	1.183	-	-	-0.12	0.037	0.044	
LTE Band 4	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	20175	1732.5	22.24	23.00	1.191	-	-	-0.17	0.058	0.069	
LTE Band 4	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	20175	1732.5	22.24	23.00	1.191	-	-	-0.19	0.061	0.073	
LTE Band 4	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	20175	1732.5	22.24	23.00	1.191	-	-	0.17	0.106	0.126	
LTE Band 4	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	20175	1732.5	22.24	23.00	1.191	-	-	-0.16	0.035	0.042	
LTE Band 4	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	20175	1732.5	16.39	17.00	1.151	-	-	0.01	0.437	0.503	
LTE Band 4	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	20175	1732.5	16.39	17.00	1.151	-	-	-0.13	0.565	0.650	
LTE Band 4	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	20175	1732.5	16.39	17.00	1.151	-	-	0.15	0.323	0.372	
LTE Band 4	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	20175	1732.5	16.39	17.00	1.151	-	-	-0.11	0.425	0.489	
LTE Band 4	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	20175	1732.5	16.35	17.00	1.161	-	-	0.02	0.426	0.495	
09	LTE Band 4	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	20175	1732.5	16.35	17.00	1.161	-	-	0.06	0.593	0.689
LTE Band 4	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	20175	1732.5	16.35	17.00	1.161	-	-	0	0.368	0.427	
LTE Band 4	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	20175	1732.5	16.35	17.00	1.161	-	-	0.13	0.425	0.494	
LTE Band 4	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	20175	1732.5	21.38	22.50	1.294	-	-	0.05	0.117	0.151	
LTE Band 4	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 2	DSI 2	20175	1732.5	21.38	22.50	1.294	-	-	0.02	0.047	0.061	
LTE Band 4	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	20175	1732.5	21.38	22.50	1.294	-	-	0.14	0.057	0.074	
LTE Band 4	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 2	DSI 2	20175	1732.5	21.38	22.50	1.294	-	-	0.02	0.044	0.057	
LTE Band 4	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 2	DSI 2	20175	1732.5	20.92	22.00	1.282	-	-	-0.04	0.126	0.162	
LTE Band 4	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 2	DSI 2	20175	1732.5	20.92	22.00	1.282	-	-	0.02	0.046	0.059	
LTE Band 4	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 2	DSI 2	20175	1732.5	20.92	22.00	1.282	-	-	-0.19	0.053	0.068	
LTE Band 4	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 2	DSI 2	20175	1732.5	20.92	22.00	1.282	-	-	0.06	0.045	0.058	
LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	132322	1745	23.18	24.00	1.208	-	-	0.06	0.105	0.127	
LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	132322	1745	23.18	24.00	1.208	-	-	-0.02	0.109	0.132	
LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	132322	1745	23.18	24.00	1.208	-	-	-0.12	0.162	0.196	
LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	132322	1745	23.18	24.00	1.208	-	-	0.16	0.098	0.118	
LTE Band 66	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	132322	1745	22.20	23.00	1.202	-	-	0.18	0.084	0.101	
LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	132322	1745	22.20	23.00	1.202	-	-	0.1	0.087	0.105	
LTE Band 66	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	132322	1745	22.20	23.00	1.202	-	-	0.16	0.132	0.159	
LTE Band 66	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	132322	1745	22.20	23.00	1.202	-	-	0.02	0.080	0.096	
LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	132322	1745	16.95	17.25	1.072	-	-	0.15	0.478	0.512	
LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	16.95	17.25	1.072	-	-	-0.16	0.698	0.748	
LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	132322	1745	16.95	17.25	1.072	-	-	-0.1	0.384	0.411	
LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	132322	1745	16.95	17.25	1.072	-	-	-0.16	0.471	0.505	
LTE Band 66	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	132322	1745	16.87	17.25	1.091	-	-	0.19	0.481	0.525	
10	LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	16.87	17.25	1.091	-	-	0.12	0.743	0.811



FCC SAR Test Report

Report No. : FA3D1301

LTE Band 66	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	132322	1745	16.87	17.25	1.091	-	-	0.16	0.384	0.419	
LTE Band 66	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	132322	1745	16.87	17.25	1.091	-	-	0.15	0.474	0.517	
LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	132072	1720	16.85	17.25	1.096	-	-	0.05	0.672	0.737	
LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	132572	1770	16.81	17.25	1.107	-	-	-0.04	0.675	0.747	
LTE Band 66	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	132322	1745	16.85	17.25	1.096	-	-	0.02	0.694	0.761	
LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	132322	1745	21.58	22.50	1.236	-	-	0.14	0.186	0.230	
LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 2	DSI 2	132322	1745	21.58	22.50	1.236	-	-	-0.11	0.068	0.084	
LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	132322	1745	21.58	22.50	1.236	-	-	0.08	0.106	0.131	
LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 2	DSI 2	132322	1745	21.58	22.50	1.236	-	-	-0.08	0.066	0.082	
LTE Band 66	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 2	DSI 2	132322	1745	20.58	21.50	1.236	-	-	0.04	0.139	0.172	
LTE Band 66	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 2	DSI 2	132322	1745	20.58	21.50	1.236	-	-	0.11	0.058	0.072	
LTE Band 66	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 2	DSI 2	132322	1745	20.58	21.50	1.236	-	-	-0.07	0.081	0.100	
LTE Band 66	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 2	DSI 2	132322	1745	20.58	21.50	1.236	-	-	-0.09	0.052	0.064	
FR1 n66	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	349000	1745	23.38	24.20	1.208	-	-	-0.06	0.096	0.116	
FR1 n66	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	349000	1745	23.38	24.20	1.208	-	-	0.05	0.099	0.120	
FR1 n66	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	349000	1745	23.38	24.20	1.208	-	-	0.14	0.170	0.205	
FR1 n66	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	349000	1745	23.38	24.20	1.208	-	-	-0.01	0.085	0.103	
FR1 n66	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	349000	1745	23.36	24.20	1.213	-	-	-0.11	0.099	0.120	
FR1 n66	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	349000	1745	23.36	24.20	1.213	-	-	-0.01	0.102	0.124	
FR1 n66	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	349000	1745	23.36	24.20	1.213	-	-	-0.01	0.172	0.209	
FR1 n66	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	349000	1745	23.36	24.20	1.213	-	-	0.15	0.087	0.106	
FR1 n66	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	349000	1745	17.62	18.20	1.143	-	-	0.07	0.647	0.739	
FR1 n66	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	17.62	18.20	1.143	-	-	0.15	0.672	0.768	
FR1 n66	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	17.62	18.20	1.143	-	-	0.04	0.370	0.423	
FR1 n66	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	349000	1745	17.62	18.20	1.143	-	-	0.17	0.468	0.535	
FR1 n66	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	349000	1745	17.58	18.20	1.153	-	-	-0.07	0.653	0.753	
11	FR1 n66	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	17.58	18.20	1.153	-	-	0.19	0.687	0.792
FR1 n66	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	17.58	18.20	1.153	-	-	-0.16	0.375	0.433	
FR1 n66	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	349000	1745	17.58	18.20	1.153	-	-	-0.07	0.472	0.544	
FR1 n66	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	349000	1745	22.08	23.20	1.294	-	-	0.11	0.153	0.198	
FR1 n66	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 2	DSI 2	349000	1745	22.08	23.20	1.294	-	-	0.13	0.061	0.079	
FR1 n66	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	22.08	23.20	1.294	-	-	0.09	0.074	0.096	
FR1 n66	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 2	DSI 2	349000	1745	22.08	23.20	1.294	-	-	0.04	0.056	0.072	
FR1 n66	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	349000	1745	22.04	23.20	1.306	-	-	-0.08	0.155	0.202	
FR1 n66	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 2	DSI 2	349000	1745	22.04	23.20	1.306	-	-	0.14	0.063	0.082	
FR1 n66	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	22.04	23.20	1.306	-	-	0.13	0.077	0.101	
FR1 n66	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 2	DSI 2	349000	1745	22.04	23.20	1.306	-	-	-0.03	0.058	0.076	
1900MHz																				
GSM1900	-	-	-	-	GPRS(2 Tx slots)	Right Cheek	0mm	Ant 0	DSI 2	661	1880	28.07	29.00	1.239	-	-	0.12	0.093	0.115	
GSM1900	-	-	-	-	GPRS(2 Tx slots)	Right Tilted	0mm	Ant 0	DSI 2	661	1880	28.07	29.00	1.239	-	-	-0.03	0.082	0.102	
GSM1900	-	-	-	-	GPRS(2 Tx slots)	Left Cheek	0mm	Ant 0	DSI 2	661	1880	28.07	29.00	1.239	-	-	0.1	0.135	0.167	
GSM1900	-	-	-	-	GPRS(2 Tx slots)	Left Tilted	0mm	Ant 0	DSI 2	661	1880	28.07	29.00	1.239	-	-	-0.06	0.080	0.099	
GSM1900	-	-	-	-	GPRS(4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	661	1880	19.82	20.50	1.169	-	-	-0.08	0.444	0.519	
12	GSM1900	-	-	-	GPRS(4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	661	1880	19.82	20.50	1.169	-	-	-0.01	0.769	0.899	
GSM1900	-	-	-	-	GPRS(4 Tx slots)	Left Cheek	0mm	Ant 1	DSI 2	661	1880	19.82	20.50	1.169	-	-	0.15	0.338	0.395	
GSM1900	-	-	-	-	GPRS(4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	661	1880	19.82	20.50	1.169	-	-	-0.1	0.431	0.504	
GSM1900	-	-	-	-	GPRS(4 Tx slots)	Left Tilted	0mm	Ant 1	DSI 2	512	1850.2	19.72	20.50	1.197	-	-	-0.16	0.531	0.635	
GSM1900	-	-	-	-	GPRS(4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 2	810	1909.8	19.64	20.50	1.219	-	-	0.1	0.585	0.713	
WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 2	9400	1880	23.58	24.50	1.236	-	-	0.06	0.125	0.154	
WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 2	9400	1880	23.58	24.50	1.236	-	-	0.09	0.101	0.125	
WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 2	9400	1880	23.58	24.50	1.236	-	-	0.12	0.171	0.211	
WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 2	9400	1880	23.58	24.50	1.236	-	-	-0.15	0.100	0.124	
WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 2	9400	1880	16.83	17.50	1.167	-	-	-0.19	0.645	0.753	
13	WCDMA II	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9400	1880	16.83	17.50	1.167	-	-	-0.14	0.843	0.984	
WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 2	9400	1880	16.83	17.50	1.167	-	-	0.19	0.345	0.403	
WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 2	9400	1880	16.83	17.50	1.167	-	-	0	0.437	0.510	



FCC SAR Test Report

Report No. : FA3D1301

Table with columns for radio technology (WCDMA II, LTE Band 2, LTE Band 7, LTE Band 7C, LTE Band 38), modulation (QPSK), bandwidth (20M), power (1, 49, 50, 100), antenna position (Right Tilted, Right Cheek, Left Cheek, Left Tilted), antenna height (0mm), antenna type (Ant 0, Ant 1, Ant 2), frequency (DSI 2), and various SAR measurement parameters (e.g., 9262, 1852.4, 16.82, 17.50, 1.169, etc.).



FCC SAR Test Report

Report No. : FA3D1301

	LTE Band 38	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	38000	2595	23.39	24.00	1.151	62.9	1.006	0.08	0.119	0.138
	LTE Band 38	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	38000	2595	22.34	23.00	1.164	62.9	1.006	-0.09	0.300	0.351
	LTE Band 38	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	38000	2595	22.34	23.00	1.164	62.9	1.006	-0.13	0.121	0.142
	LTE Band 38	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	38000	2595	22.34	23.00	1.164	62.9	1.006	-0.17	0.146	0.171
	LTE Band 38	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	38000	2595	22.34	23.00	1.164	62.9	1.006	0.12	0.095	0.111
	LTE Band 38	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	38000	2595	17.37	18.00	1.156	62.9	1.006	0.13	0.722	0.840
16	LTE Band 38	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	38000	2595	17.37	18.00	1.156	62.9	1.006	-0.1	0.828	0.963
	LTE Band 38C	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	37901 38099	2585.1 2604.9	16.90	18.00	1.288	62.9	1.006	0.06	0.738	0.956
	LTE Band 38	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	38000	2595	17.37	18.00	1.156	62.9	1.006	0.03	0.378	0.440
	LTE Band 38	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	38000	2595	17.37	18.00	1.156	62.9	1.006	0.19	0.492	0.573
	LTE Band 38	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	38000	2595	17.33	18.00	1.167	62.9	1.006	0.14	0.646	0.759
	LTE Band 38	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	38000	2595	17.33	18.00	1.167	62.9	1.006	0.13	0.817	0.959
	LTE Band 38	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	38000	2595	17.33	18.00	1.167	62.9	1.006	-0.09	0.300	0.352
	LTE Band 38	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	38000	2595	17.33	18.00	1.167	62.9	1.006	-0.17	0.483	0.567
	LTE Band 38	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 2	38000	2595	17.31	18.00	1.172	62.9	1.006	0.13	0.640	0.755
	LTE Band 38	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	38000	2595	17.31	18.00	1.172	62.9	1.006	0.17	0.811	0.957
	LTE Band 38	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	38000	2595	22.08	23.00	1.236	62.9	1.006	-0.1	0.373	0.464
	LTE Band 38C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	37901 38099	2585.1 2604.9	21.90	23.00	1.288	62.9	1.006	0.06	0.338	0.438
	LTE Band 38	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 2	DSI 2	38000	2595	22.08	23.00	1.236	62.9	1.006	0.05	0.047	0.058
	LTE Band 38	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	38000	2595	22.08	23.00	1.236	62.9	1.006	-0.16	0.171	0.213
	LTE Band 38	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 2	DSI 2	38000	2595	22.08	23.00	1.236	62.9	1.006	-0.03	0.041	0.051
	LTE Band 38	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 2	DSI 2	38000	2595	21.63	22.50	1.222	62.9	1.006	0.18	0.367	0.451
	LTE Band 38	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 2	DSI 2	38000	2595	21.63	22.50	1.222	62.9	1.006	-0.18	0.057	0.070
	LTE Band 38	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 2	DSI 2	38000	2595	21.63	22.50	1.222	62.9	1.006	-0.12	0.146	0.179
	LTE Band 38	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 2	DSI 2	38000	2595	21.63	22.50	1.222	62.9	1.006	0.04	0.043	0.053
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.13	0.219	0.252
	LTE Band 41C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 2	41055 41253	2636.5 2656.3	23.28	24.50	1.324	62.9	1.006	0.11	0.188	0.250
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	41055	2636.5	23.91	24.50	1.146	62.9	1.006	0	0.096	0.111
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.08	0.101	0.116
	LTE Band 41	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.17	0.074	0.085
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	41055	2636.5	22.48	23.50	1.265	62.9	1.006	0.09	0.134	0.170
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	41055	2636.5	22.48	23.50	1.265	62.9	1.006	-0.17	0.067	0.085
	LTE Band 41	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	41055	2636.5	22.48	23.50	1.265	62.9	1.006	-0.13	0.072	0.092
	LTE Band 41	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	41055	2636.5	22.48	23.50	1.265	62.9	1.006	-0.17	0.052	0.066
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 2	41055	2636.5	17.36	18.00	1.159	62.9	1.006	-0.01	0.377	0.440
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 2	41055	2636.5	17.36	18.00	1.159	62.9	1.006	-0.07	0.484	0.564
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 2	41055	2636.5	17.36	18.00	1.159	62.9	1.006	-0.13	0.157	0.184
	LTE Band 41	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 2	41055	2636.5	17.36	18.00	1.159	62.9	1.006	-0.05	0.222	0.259
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 1	DSI 2	41055	2636.5	17.28	18.00	1.180	62.9	1.006	0.19	0.397	0.471
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	41055	2636.5	17.28	18.00	1.180	62.9	1.006	-0.17	0.591	0.702
	LTE Band 41	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 1	DSI 2	41055	2636.5	17.28	18.00	1.180	62.9	1.006	-0.09	0.162	0.192
	LTE Band 41	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 1	DSI 2	41055	2636.5	17.28	18.00	1.180	62.9	1.006	-0.07	0.227	0.269
17	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	39750	2506	17.23	18.00	1.194	62.9	1.006	0.15	0.848	1.019
	LTE Band 41C	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 2	39750 39948	2506 2525.8	17.26	18.00	1.186	62.9	1.006	0.03	0.820	0.978
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	40185	2549.5	17.23	18.00	1.194	62.9	1.006	0.12	0.724	0.870
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	40620	2593	17.24	18.00	1.191	62.9	1.006	0.15	0.620	0.743
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 1	DSI 2	41490	2680	17.24	18.00	1.191	62.9	1.006	0.13	0.568	0.681
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 2	41055	2636.5	17.27	18.00	1.183	62.9	1.006	0.16	0.442	0.526
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	40185	2549.5	22.85	23.50	1.161	62.9	1.006	-0.02	0.518	0.605
	LTE Band 41	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 2	DSI 2	40185	2549.5	22.85	23.50	1.161	62.9	1.006	0.02	0.132	0.154
	LTE Band 41	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	40185	2549.5	22.85	23.50	1.161	62.9	1.006	0.07	0.192	0.224
	LTE Band 41	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 2	DSI 2	40185	2549.5	22.85	23.50	1.161	62.9	1.006	-0.1	0.093	0.109
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	39750	2506	22.67	23.50	1.211	62.9	1.006	0.12	0.547	0.666
	LTE Band 41C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 2	39750 39948	2506 2525.8	22.48	23.50	1.265	62.9	1.006	-0.05	0.518	0.659
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	40620	2593	22.55	23.50	1.245	62.9	1.006	0.01	0.383	0.480



FCC SAR Test Report

Report No. : FA3D1301

	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	41055	2636.5	22.31	23.50	1.315	62.9	1.006	0.11	0.371	0.491
	LTE Band 41	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	41490	2680	22.25	23.50	1.334	62.9	1.006	0.05	0.400	0.537
	LTE Band 41	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 2	DSI 2	40185	2549.5	21.66	22.00	1.081	62.9	1.006	-0.1	0.352	0.383
	LTE Band 41	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 2	DSI 2	40185	2549.5	21.66	22.00	1.081	62.9	1.006	0.06	0.094	0.102
	LTE Band 41	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 2	DSI 2	40185	2549.5	21.66	22.00	1.081	62.9	1.006	-0.13	0.134	0.146
	LTE Band 41	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 2	DSI 2	40185	2549.5	21.66	22.00	1.081	62.9	1.006	-0.1	0.066	0.072
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 2	40185	2549.5	21.61	22.00	1.094	62.9	1.006	-0.08	0.346	0.381
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	507000	2535	23.25	23.70	1.109	-	-	0.06	0.442	0.490
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	507000	2535	23.25	23.70	1.109	-	-	0.14	0.257	0.285
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	507000	2535	23.25	23.70	1.109	-	-	-0.13	0.296	0.328
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	507000	2535	23.25	23.70	1.109	-	-	0.15	0.206	0.228
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 0	DSI 2	507000	2535	23.14	23.70	1.138	-	-	0.14	0.437	0.497
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 0	DSI 2	507000	2535	23.14	23.70	1.138	-	-	-0.19	0.261	0.297
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 0	DSI 2	507000	2535	23.14	23.70	1.138	-	-	0.15	0.299	0.340
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 0	DSI 2	507000	2535	23.14	23.70	1.138	-	-	-0.14	0.211	0.240
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	15.18	15.70	1.127	-	-	-0.01	0.688	0.776
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	15.18	15.70	1.127	-	-	-0.01	0.844	0.951
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	507000	2535	15.18	15.70	1.127	-	-	-0.17	0.334	0.376
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	507000	2535	15.18	15.70	1.127	-	-	-0.02	0.443	0.499
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	502000	2510	15.15	15.70	1.135	-	-	0.08	0.820	0.931
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	512000	2560	15.05	15.70	1.161	-	-	0.19	0.811	0.942
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	15.11	15.70	1.146	-	-	-0.02	0.716	0.820
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	15.11	15.70	1.146	-	-	-0.14	0.863	0.989
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	507000	2535	15.11	15.70	1.146	-	-	0.06	0.337	0.386
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	507000	2535	15.11	15.70	1.146	-	-	-0.19	0.446	0.511
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	502000	2510	15.08	15.70	1.153	-	-	0.01	0.658	0.759
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	512000	2560	15.02	15.70	1.169	-	-	0.05	0.633	0.740
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	502000	2510	15.08	15.70	1.153	-	-	0.16	0.830	0.957
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	512000	2560	15.02	15.70	1.169	-	-	-0.05	0.806	0.943
	FR1 n7	20M	QPSK	100	0	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	15.04	15.70	1.164	-	-	0.14	0.815	0.949
	FR1 n7	20M	QPSK	100	0	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	15.04	15.70	1.164	-	-	0.18	0.830	0.966
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	507000	2535	21.78	23.20	1.387	-	-	0.1	0.521	0.722
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 2	DSI 2	507000	2535	21.78	23.20	1.387	-	-	0.01	0.121	0.168
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 2	DSI 2	507000	2535	21.78	23.20	1.387	-	-	-0.1	0.214	0.297
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 2	DSI 2	507000	2535	21.78	23.20	1.387	-	-	0.14	0.096	0.133
18	FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	507000	2535	21.73	23.20	1.403	-	-	-0.12	0.736	1.032
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 2	DSI 2	507000	2535	21.73	23.20	1.403	-	-	0.02	0.125	0.175
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 2	DSI 2	507000	2535	21.73	23.20	1.403	-	-	0.1	0.217	0.304
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 2	DSI 2	507000	2535	21.73	23.20	1.403	-	-	0	0.101	0.142
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	502000	2510	21.70	23.20	1.413	-	-	0.05	0.684	0.966
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	512000	2560	21.68	23.20	1.419	-	-	-0.04	0.704	0.999
	FR1 n7	20M	QPSK	100	0	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	507000	2535	20.70	22.20	1.413	-	-	0.05	0.518	0.732
	FR1 n38	20M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 0	DSI 2	519000	2595	23.34	24.20	1.219	-	-	-0.08	0.452	0.551
	FR1 n38	20M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 0	DSI 2	519000	2595	23.34	24.20	1.219	-	-	-0.19	0.248	0.302
	FR1 n38	20M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 0	DSI 2	519000	2595	23.34	24.20	1.219	-	-	0.03	0.262	0.319
	FR1 n38	20M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 0	DSI 2	519000	2595	23.34	24.20	1.219	-	-	-0.13	0.191	0.233
	FR1 n38	20M	QPSK	25	13	DFT-30	Right Cheek	0mm	Ant 0	DSI 2	519000	2595	23.30	24.20	1.230	-	-	0.15	0.446	0.549
	FR1 n38	20M	QPSK	25	13	DFT-30	Right Tilted	0mm	Ant 0	DSI 2	519000	2595	23.30	24.20	1.230	-	-	0	0.238	0.293
	FR1 n38	20M	QPSK	25	13	DFT-30	Left Cheek	0mm	Ant 0	DSI 2	519000	2595	23.30	24.20	1.230	-	-	-0.1	0.245	0.301
	FR1 n38	20M	QPSK	25	13	DFT-30	Left Tilted	0mm	Ant 0	DSI 2	519000	2595	23.30	24.20	1.230	-	-	0.08	0.198	0.244
	FR1 n38	20M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	519000	2595	15.04	15.70	1.164	-	-	-0.19	0.821	0.956
19	FR1 n38	20M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	519000	2595	15.04	15.70	1.164	-	-	0.07	0.832	0.969
	FR1 n38	20M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 1	DSI 2	519000	2595	15.04	15.70	1.164	-	-	0.16	0.300	0.349
	FR1 n38	20M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 1	DSI 2	519000	2595	15.04	15.70	1.164	-	-	-0.15	0.396	0.461
	FR1 n38	20M	QPSK	25	13	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	519000	2595	14.97	15.70	1.183	-	-	-0.18	0.711	0.841
	FR1 n38	20M	QPSK	25	13	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	519000	2595	14.97	15.70	1.183	-	-	0.16	0.721	0.853



FCC SAR Test Report

Report No. : FA3D1301

	FR1 n38	20M	QPSK	25	13	DFT-30	Left Cheek	0mm	Ant 1	DSI 2	519000	2595	14.97	15.70	1.183	-	-	-0.16	0.298	0.353
	FR1 n38	20M	QPSK	25	13	DFT-30	Left Tilted	0mm	Ant 1	DSI 2	519000	2595	14.97	15.70	1.183	-	-	-0.14	0.401	0.474
	FR1 n38	20M	QPSK	50	0	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	519000	2595	14.88	15.70	1.208	-	-	0.11	0.705	0.852
	FR1 n38	20M	QPSK	50	0	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	519000	2595	14.88	15.70	1.208	-	-	-0.05	0.713	0.861
	FR1 n38	20M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	519000	2595	20.68	22.20	1.419	-	-	-0.11	0.585	0.830
	FR1 n38	20M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 2	DSI 2	519000	2595	20.68	22.20	1.419	-	-	0.03	0.064	0.091
	FR1 n38	20M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	519000	2595	20.68	22.20	1.419	-	-	-0.15	0.187	0.265
	FR1 n38	20M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 2	DSI 2	519000	2595	20.68	22.20	1.419	-	-	0.09	0.037	0.053
	FR1 n38	20M	QPSK	25	13	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	519000	2595	20.65	22.20	1.429	-	-	-0.14	0.430	0.614
	FR1 n38	20M	QPSK	25	13	DFT-30	Right Tilted	0mm	Ant 2	DSI 2	519000	2595	20.65	22.20	1.429	-	-	-0.03	0.065	0.093
	FR1 n38	20M	QPSK	25	13	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	519000	2595	20.65	22.20	1.429	-	-	-0.02	0.178	0.254
	FR1 n38	20M	QPSK	25	13	DFT-30	Left Tilted	0mm	Ant 2	DSI 2	519000	2595	20.65	22.20	1.429	-	-	0.08	0.040	0.057
	FR1 n38	20M	QPSK	50	0	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	519000	2595	20.62	22.20	1.439	-	-	0.05	0.425	0.611
	FR1 n41	100M	QPSK	1	137	DFT-30	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	23.46	24.20	1.186	-	-	-0.15	0.507	0.601
	FR1 n41	100M	QPSK	1	137	DFT-30	Right Tilted	0mm	Ant 0	DSI 2	518598	2592.99	23.46	24.20	1.186	-	-	0.01	0.259	0.307
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	23.46	24.20	1.186	-	-	0.03	0.279	0.331
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Tilted	0mm	Ant 0	DSI 2	518598	2592.99	23.46	24.20	1.186	-	-	0.09	0.222	0.263
	FR1 n41	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	23.32	24.20	1.225	-	-	-0.03	0.516	0.632
	FR1 n41	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 0	DSI 2	518598	2592.99	23.32	24.20	1.225	-	-	-0.02	0.262	0.321
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 0	DSI 2	518598	2592.99	23.32	24.20	1.225	-	-	-0.14	0.282	0.345
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 0	DSI 2	518598	2592.99	23.32	24.20	1.225	-	-	0.03	0.227	0.278
	FR1 n41	100M	QPSK	270	0	DFT-30	Right Cheek	0mm	Ant 0	DSI 2	518598	2592.99	22.19	23.20	1.262	-	-	0.08	0.495	0.625
	FR1 n41	100M	QPSK	1	137	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	15.57	16.45	1.225	-	-	0.06	0.784	0.960
	FR1 n41	100M	QPSK	1	137	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	15.57	16.45	1.225	-	-	-0.03	0.873	1.069
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Cheek	0mm	Ant 1	DSI 2	518598	2592.99	15.57	16.45	1.225	-	-	-0.09	0.339	0.415
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Tilted	0mm	Ant 1	DSI 2	518598	2592.99	15.57	16.45	1.225	-	-	-0.07	0.452	0.554
	FR1 n41	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	15.53	16.45	1.236	-	-	-0.16	0.794	0.981
20	FR1 n41	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	15.53	16.45	1.236	-	-	0.07	0.890	1.100
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 1	DSI 2	518598	2592.99	15.53	16.45	1.236	-	-	0.05	0.342	0.423
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 1	DSI 2	518598	2592.99	15.53	16.45	1.236	-	-	0.15	0.458	0.566
	FR1 n41	100M	QPSK	270	0	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	15.47	16.45	1.253	-	-	0.12	0.768	0.962
	FR1 n41	100M	QPSK	270	0	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	15.47	16.45	1.253	-	-	0.08	0.822	1.030
	FR1 n41	100M	QPSK	1	137	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	21.18	22.70	1.419	-	-	-0.02	0.494	0.701
	FR1 n41	100M	QPSK	1	137	DFT-30	Right Tilted	0mm	Ant 2	DSI 2	518598	2592.99	21.18	22.70	1.419	-	-	-0.03	0.084	0.119
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	518598	2592.99	21.18	22.70	1.419	-	-	-0.04	0.205	0.291
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Tilted	0mm	Ant 2	DSI 2	518598	2592.99	21.18	22.70	1.419	-	-	-0.17	0.043	0.061
	FR1 n41	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	21.15	22.70	1.429	-	-	-0.04	0.673	0.962
	FR1 n41	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 2	DSI 2	518598	2592.99	21.15	22.70	1.429	-	-	0.1	0.087	0.124
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	518598	2592.99	21.15	22.70	1.429	-	-	0.19	0.211	0.301
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 2	DSI 2	518598	2592.99	21.15	22.70	1.429	-	-	0.11	0.048	0.069
	FR1 n41	100M	QPSK	270	0	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	20.56	22.20	1.459	-	-	0	0.487	0.710



<ENDC 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), Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Duty Cycle %, Duty Cycle Scaling Factor, Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Rows are grouped by frequency bands: 835MHz, 1750MHz, and LTE Band 66.



FCC SAR Test Report

Report No. : FA3D1301

LTE Band 66	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 2	DSI 2	132322	1745	20.58	21.50	1.236	-	-	-0.09	0.052	0.064
FR1 n66	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	349000	1745	16.52	17.20	1.169	-	-	0.12	0.514	0.601
FR1 n66	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	16.52	17.20	1.169	-	-	0.01	0.534	0.625
FR1 n66	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	16.52	17.20	1.169	-	-	-0.17	0.294	0.344
FR1 n66	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	349000	1745	16.52	17.20	1.169	-	-	0.12	0.372	0.435
FR1 n66	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	349000	1745	16.47	17.20	1.183	-	-	-0.09	0.519	0.614
FR1 n66	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	349000	1745	16.47	17.20	1.183	-	-	-0.11	0.623	0.737
FR1 n66	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	349000	1745	16.47	17.20	1.183	-	-	-0.04	0.298	0.353
FR1 n66	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	349000	1745	16.47	17.20	1.183	-	-	0.07	0.375	0.444
FR1 n66	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	349000	1745	21.03	22.20	1.309	-	-	-0.07	0.122	0.160
FR1 n66	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 2	DSI 2	349000	1745	21.03	22.20	1.309	-	-	0.01	0.048	0.063
FR1 n66	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	21.03	22.20	1.309	-	-	-0.11	0.059	0.077
FR1 n66	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 2	DSI 2	349000	1745	21.03	22.20	1.309	-	-	-0.1	0.044	0.058
FR1 n66	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	349000	1745	21.01	22.20	1.315	-	-	0.03	0.123	0.162
FR1 n66	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 2	DSI 2	349000	1745	21.01	22.20	1.315	-	-	-0.06	0.050	0.066
FR1 n66	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 2	DSI 2	349000	1745	21.01	22.20	1.315	-	-	0.08	0.061	0.080
FR1 n66	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 2	DSI 2	349000	1745	21.01	22.20	1.315	-	-	0.12	0.046	0.061
1900MHz																			
LTE Band 2	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	18900	1880	22.39	23.50	1.291	-	-	0.15	0.099	0.128
LTE Band 2	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	18900	1880	22.39	23.50	1.291	-	-	-0.17	0.084	0.108
LTE Band 2	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	18900	1880	22.39	23.50	1.291	-	-	0.06	0.132	0.170
LTE Band 2	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	18900	1880	22.39	23.50	1.291	-	-	-0.02	0.080	0.103
LTE Band 2	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	18900	1880	21.79	23.00	1.321	-	-	0.17	0.095	0.126
LTE Band 2	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	18900	1880	21.79	23.00	1.321	-	-	0.15	0.076	0.100
LTE Band 2	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	18900	1880	21.79	23.00	1.321	-	-	0.01	0.127	0.168
LTE Band 2	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	18900	1880	21.79	23.00	1.321	-	-	0.19	0.073	0.096
2600MHz																			
LTE Band 7	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	21100	2535	22.78	23.50	1.180	-	-	0.07	0.386	0.456
LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	21100	2535	22.78	23.50	1.180	-	-	-0.1	0.215	0.254
LTE Band 7	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	21100	2535	22.78	23.50	1.180	-	-	-0.13	0.223	0.263
LTE Band 7	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	21100	2535	22.78	23.50	1.180	-	-	0.03	0.172	0.203
LTE Band 7 Other PA	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	21100	2535	22.58	23.50	1.236	-	-	0.14	0.426	0.527
LTE Band 7	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	21100	2535	22.27	23.00	1.183	-	-	-0.16	0.354	0.419
LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	21100	2535	22.27	23.00	1.183	-	-	0.16	0.201	0.238
LTE Band 7	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	21100	2535	22.27	23.00	1.183	-	-	-0.12	0.208	0.246
LTE Band 7	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	21100	2535	22.27	23.00	1.183	-	-	-0.19	0.148	0.175
LTE Band 7	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 2	DSI 2	21100	2535	19.73	20.00	1.064	-	-	0.03	0.271	0.288
LTE Band 7	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 2	DSI 2	21100	2535	19.73	20.00	1.064	-	-	0.04	0.049	0.052
LTE Band 7	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 2	DSI 2	21100	2535	19.73	20.00	1.064	-	-	0.13	0.107	0.114
LTE Band 7	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 2	DSI 2	21100	2535	19.73	20.00	1.064	-	-	0.11	0.042	0.045
LTE Band 7	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 2	DSI 2	21100	2535	19.69	20.00	1.074	-	-	-0.06	0.270	0.290
LTE Band 7	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 2	DSI 2	21100	2535	19.69	20.00	1.074	-	-	-0.06	0.049	0.053
LTE Band 7	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 2	DSI 2	21100	2535	19.69	20.00	1.074	-	-	0.1	0.107	0.115
LTE Band 7	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 2	DSI 2	21100	2535	19.69	20.00	1.074	-	-	0.13	0.042	0.045
LTE Band 38 Other PA	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	38000	2595	23.39	24.00	1.151	62.9	1.006	0.1	0.300	0.347
LTE Band 38 Other PA	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	38000	2595	23.39	24.00	1.151	62.9	1.006	0.18	0.127	0.147
LTE Band 38 Other PA	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	38000	2595	23.39	24.00	1.151	62.9	1.006	0.15	0.160	0.185
LTE Band 38 Other PA	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	38000	2595	23.39	24.00	1.151	62.9	1.006	0.06	0.109	0.126
LTE Band 38 Other PA	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	38000	2595	22.34	24.00	1.466	62.9	1.006	0.07	0.238	0.351
LTE Band 38 Other PA	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	38000	2595	22.34	24.00	1.466	62.9	1.006	-0.03	0.101	0.149
LTE Band 38 Other PA	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	38000	2595	22.34	24.00	1.466	62.9	1.006	0.15	0.127	0.187
LTE Band 38 Other PA	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	38000	2595	22.34	24.00	1.466	62.9	1.006	-0.16	0.087	0.128
LTE Band 41 Other PA	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 2	41055	2636.5	23.91	24.50	1.146	62.9	1.006	0.07	0.324	0.373
LTE Band 41 Other PA	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 2	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.07	0.126	0.145
LTE Band 41 Other PA	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 2	41055	2636.5	23.91	24.50	1.146	62.9	1.006	0.02	0.151	0.174
LTE Band 41 Other PA	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 2	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.13	0.125	0.144



FCC SAR Test Report

Report No. : FA3D1301

LTE Band 41 Other PA	20M	QPSK	50	24	-	Right Cheek	0mm	Ant 0	DSI 2	41055	2636.5	22.48	23.50	1.265	62.9	1.006	-0.04	0.257	0.327
LTE Band 41 Other PA	20M	QPSK	50	24	-	Right Tilted	0mm	Ant 0	DSI 2	41055	2636.5	22.48	23.50	1.265	62.9	1.006	0.03	0.100	0.127
LTE Band 41 Other PA	20M	QPSK	50	24	-	Left Cheek	0mm	Ant 0	DSI 2	41055	2636.5	22.48	23.50	1.265	62.9	1.006	-0.09	0.120	0.153
LTE Band 41 Other PA	20M	QPSK	50	24	-	Left Tilted	0mm	Ant 0	DSI 2	41055	2636.5	22.48	23.50	1.265	62.9	1.006	0.18	0.099	0.126
FR1 n7	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	14.15	14.70	1.135	-	-	0.18	0.546	0.620
FR1 n7	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	14.15	14.70	1.135	-	-	0.07	0.650	0.738
FR1 n7	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	507000	2535	14.15	14.70	1.135	-	-	0.18	0.265	0.301
FR1 n7	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	507000	2535	14.15	14.70	1.135	-	-	-0.09	0.352	0.400
FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 1	DSI 2	507000	2535	14.11	14.70	1.146	-	-	-0.01	0.569	0.652
FR1 n7	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 1	DSI 2	507000	2535	14.11	14.70	1.146	-	-	-0.06	0.649	0.743
FR1 n7	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 1	DSI 2	507000	2535	14.11	14.70	1.146	-	-	0	0.268	0.307
FR1 n7	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 1	DSI 2	507000	2535	14.11	14.70	1.146	-	-	-0.06	0.354	0.406
FR1 n7	20M	QPSK	1	1	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	507000	2535	20.75	22.20	1.396	-	-	0.1	0.414	0.578
FR1 n7	20M	QPSK	1	1	DFT-15	Right Tilted	0mm	Ant 2	DSI 2	507000	2535	20.75	22.20	1.396	-	-	0.12	0.096	0.134
FR1 n7	20M	QPSK	1	1	DFT-15	Left Cheek	0mm	Ant 2	DSI 2	507000	2535	20.75	22.20	1.396	-	-	-0.01	0.170	0.237
FR1 n7	20M	QPSK	1	1	DFT-15	Left Tilted	0mm	Ant 2	DSI 2	507000	2535	20.75	22.20	1.396	-	-	0.11	0.076	0.106
FR1 n7	20M	QPSK	50	28	DFT-15	Right Cheek	0mm	Ant 2	DSI 2	507000	2535	20.74	22.20	1.400	-	-	0.02	0.532	0.745
FR1 n7	20M	QPSK	50	28	DFT-15	Right Tilted	0mm	Ant 2	DSI 2	507000	2535	20.74	22.20	1.400	-	-	0.05	0.099	0.139
FR1 n7	20M	QPSK	50	28	DFT-15	Left Cheek	0mm	Ant 2	DSI 2	507000	2535	20.74	22.20	1.400	-	-	-0.05	0.172	0.241
FR1 n7	20M	QPSK	50	28	DFT-15	Left Tilted	0mm	Ant 2	DSI 2	507000	2535	20.74	22.20	1.400	-	-	-0.07	0.080	0.112
FR1 n38	20M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	519000	2595	13.37	14.20	1.211	-	-	-0.11	0.581	0.703
FR1 n38	20M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	519000	2595	13.37	14.20	1.211	-	-	0.07	0.587	0.711
FR1 n38	20M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 1	DSI 2	519000	2595	13.37	14.20	1.211	-	-	0.05	0.212	0.257
FR1 n38	20M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 1	DSI 2	519000	2595	13.37	14.20	1.211	-	-	0.08	0.281	0.340
FR1 n38	20M	QPSK	25	13	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	519000	2595	13.29	14.20	1.233	-	-	0.06	0.504	0.621
FR1 n38	20M	QPSK	25	13	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	519000	2595	13.29	14.20	1.233	-	-	-0.12	0.511	0.630
FR1 n38	20M	QPSK	25	13	DFT-30	Left Cheek	0mm	Ant 1	DSI 2	519000	2595	13.29	14.20	1.233	-	-	-0.02	0.211	0.260
FR1 n38	20M	QPSK	25	13	DFT-30	Left Tilted	0mm	Ant 1	DSI 2	519000	2595	13.29	14.20	1.233	-	-	0.03	0.284	0.350
FR1 n38	20M	QPSK	1	1	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	519000	2595	19.69	21.20	1.416	-	-	-0.06	0.415	0.588
FR1 n38	20M	QPSK	1	1	DFT-30	Right Tilted	0mm	Ant 2	DSI 2	519000	2595	19.69	21.20	1.416	-	-	0.01	0.051	0.072
FR1 n38	20M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	519000	2595	19.69	21.20	1.416	-	-	-0.02	0.149	0.211
FR1 n38	20M	QPSK	1	1	DFT-30	Left Tilted	0mm	Ant 2	DSI 2	519000	2595	19.69	21.20	1.416	-	-	-	n/a	n/a
FR1 n38	20M	QPSK	25	13	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	519000	2595	19.66	21.20	1.426	-	-	-0.05	0.342	0.488
FR1 n38	20M	QPSK	25	13	DFT-30	Right Tilted	0mm	Ant 2	DSI 2	519000	2595	19.66	21.20	1.426	-	-	-0.09	0.052	0.074
FR1 n38	20M	QPSK	25	13	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	519000	2595	19.66	21.20	1.426	-	-	-0.09	0.141	0.201
FR1 n38	20M	QPSK	25	13	DFT-30	Left Tilted	0mm	Ant 2	DSI 2	519000	2595	19.66	21.20	1.426	-	-	0.19	0.032	0.046
FR1 n41	100M	QPSK	1	137	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	13.52	14.45	1.239	-	-	-0.07	0.495	0.613
FR1 n41	100M	QPSK	1	137	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	13.52	14.45	1.239	-	-	0.11	0.550	0.681
FR1 n41	100M	QPSK	1	137	DFT-30	Left Cheek	0mm	Ant 1	DSI 2	518598	2592.99	13.52	14.45	1.239	-	-	0.15	0.214	0.265
FR1 n41	100M	QPSK	1	137	DFT-30	Left Tilted	0mm	Ant 1	DSI 2	518598	2592.99	13.52	14.45	1.239	-	-	-0.19	0.285	0.353
FR1 n41	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 1	DSI 2	518598	2592.99	13.45	14.45	1.259	-	-	-0.03	0.501	0.631
FR1 n41	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 1	DSI 2	518598	2592.99	13.45	14.45	1.259	-	-	0.06	0.583	0.734
FR1 n41	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 1	DSI 2	518598	2592.99	13.45	14.45	1.259	-	-	0.07	0.216	0.272
FR1 n41	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 1	DSI 2	518598	2592.99	13.45	14.45	1.259	-	-	-0.16	0.289	0.364
FR1 n41	100M	QPSK	1	137	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	20.11	21.70	1.442	-	-	-0.03	0.392	0.565
FR1 n41	100M	QPSK	1	137	DFT-30	Right Tilted	0mm	Ant 2	DSI 2	518598	2592.99	20.11	21.70	1.442	-	-	0.08	0.067	0.097
FR1 n41	100M	QPSK	1	137	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	518598	2592.99	20.11	21.70	1.442	-	-	-0.05	0.163	0.235
FR1 n41	100M	QPSK	1	137	DFT-30	Left Tilted	0mm	Ant 2	DSI 2	518598	2592.99	20.11	21.70	1.442	-	-	-0.07	0.034	0.049
FR1 n41	100M	QPSK	135	69	DFT-30	Right Cheek	0mm	Ant 2	DSI 2	518598	2592.99	20.07	21.70	1.455	-	-	-0.17	0.493	0.718
FR1 n41	100M	QPSK	135	69	DFT-30	Right Tilted	0mm	Ant 2	DSI 2	518598	2592.99	20.07	21.70	1.455	-	-	-0.05	0.069	0.100
FR1 n41	100M	QPSK	135	69	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	518598	2592.99	20.07	21.70	1.455	-	-	0.1	0.168	0.245
FR1 n41	100M	QPSK	135	69	DFT-30	Left Tilted	0mm	Ant 2	DSI 2	518598	2592.99	20.07	21.70	1.455	-	-	0.12	0.038	0.055



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	Bluetooth	DH5 1Mbps	Right Cheek	0mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	-0.11	0.027	0.046
	Bluetooth	DH5 1Mbps	Right Tilted	0mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	-0.1	0.024	0.042
21	Bluetooth	DH5 1Mbps	Left Cheek	0mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	0.03	0.124	0.213
	Bluetooth	DH5 1Mbps	Left Tilted	0mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	0.14	0.083	0.142
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 8	Standalone	1	2412	15.81	17.50	1.476	100	1.000	-0.14	0.074	0.109
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	Standalone	1	2412	15.81	17.50	1.476	100	1.000	-0.1	0.082	0.121
22	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8	Standalone	1	2412	15.81	17.50	1.476	100	1.000	-0.18	0.260	0.384
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8	Standalone	1	2412	15.81	17.50	1.476	100	1.000	0.08	0.157	0.232
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 8	Simultaneous	1	2412	12.71	14.50	1.510	100	1.000	0.01	0.011	0.017
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	Simultaneous	1	2412	12.71	14.50	1.510	100	1.000	-0.07	0.041	0.062
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8	Simultaneous	1	2412	12.71	14.50	1.510	100	1.000	0.07	0.110	0.166
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8	Simultaneous	1	2412	12.71	14.50	1.510	100	1.000	-0.08	0.075	0.113
5000MHz-6000MHz																
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 8	Standalone	62	5310	13.11	15.00	1.544	94.77	1.055	-0.03	0.180	0.293
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 8	Standalone	62	5310	13.11	15.00	1.544	94.77	1.055	-0.19	0.183	0.298
23	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Standalone	62	5310	13.11	15.00	1.544	94.77	1.055	0.19	0.634	1.033
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 8	Standalone	62	5310	13.11	15.00	1.544	94.77	1.055	0.04	0.448	0.730
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Standalone	54	5270	13.04	15.00	1.569	94.77	1.055	0.03	0.527	0.872
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 8	Simultaneous	62	5310	10.05	12.00	1.566	94.77	1.055	-0.13	0.086	0.142
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 8	Simultaneous	62	5310	10.05	12.00	1.566	94.77	1.055	0.14	0.101	0.167
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Simultaneous	62	5310	10.05	12.00	1.566	94.77	1.055	-0.19	0.299	0.494
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 8	Simultaneous	62	5310	10.05	12.00	1.566	94.77	1.055	-0.19	0.198	0.327
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 8	Standalone	110	5550	12.20	14.00	1.512	94.77	1.055	-0.12	0.145	0.231
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 8	Standalone	110	5550	12.20	14.00	1.512	94.77	1.055	0.15	0.144	0.230
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Standalone	110	5550	12.20	14.00	1.512	94.77	1.055	-0.17	0.647	1.032
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 8	Standalone	110	5550	12.20	14.00	1.512	94.77	1.055	0.1	0.309	0.493
24	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Standalone	102	5510	12.18	14.00	1.519	94.77	1.055	-0.06	0.710	1.138
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 8	Simultaneous	110	5550	9.20	11.00	1.512	94.77	1.055	0.06	0.077	0.123
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 8	Simultaneous	110	5550	9.20	11.00	1.512	94.77	1.055	-0.12	0.073	0.116
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Simultaneous	110	5550	9.20	11.00	1.512	94.77	1.055	0.15	0.328	0.523
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 8	Simultaneous	110	5550	9.20	11.00	1.512	94.77	1.055	-0.18	0.165	0.263
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 8	Standalone	159	5795	12.64	14.50	1.533	94.77	1.055	0.19	0.145	0.235
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 8	Standalone	159	5795	12.64	14.50	1.533	94.77	1.055	0.15	0.128	0.207
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Standalone	159	5795	12.64	14.50	1.533	94.77	1.055	-0.12	0.615	0.995
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 8	Standalone	159	5795	12.64	14.50	1.533	94.77	1.055	0.13	0.287	0.464
25	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Standalone	151	5755	12.57	14.50	1.558	94.77	1.055	0.12	0.648	1.065
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 8	Simultaneous	159	5795	9.67	11.50	1.523	94.77	1.055	0.08	0.066	0.106
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 8	Simultaneous	159	5795	9.67	11.50	1.523	94.77	1.055	0	0.070	0.112
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 8	Simultaneous	159	5795	9.67	11.50	1.523	94.77	1.055	-0.05	0.296	0.476
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 8	Simultaneous	159	5795	9.67	11.50	1.523	94.77	1.055	-0.05	0.145	0.233



14.2 Hotspot SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
	LTE Band 12	10M	QPSK	1	25	-	Front	10mm	Ant 0	DSI 3/5	23095	707.5	23.11	24.00	1.227	-	-	0.14	0.104	0.128
26	LTE Band 12	10M	QPSK	1	25	-	Back	10mm	Ant 0	DSI 3/5	23095	707.5	23.11	24.00	1.227	-	-	-0.01	0.140	0.172
	LTE Band 12	10M	QPSK	1	25	-	Left Side	10mm	Ant 0	DSI 3/5	23095	707.5	23.11	24.00	1.227	-	-	-0.13	0.136	0.167
	LTE Band 12	10M	QPSK	1	25	-	Right Side	10mm	Ant 0	DSI 3/5	23095	707.5	23.11	24.00	1.227	-	-	0.05	0.109	0.134
	LTE Band 12	10M	QPSK	1	25	-	Bottom Side	10mm	Ant 0	DSI 3/5	23095	707.5	23.11	24.00	1.227	-	-	-0.09	0.077	0.095
	LTE Band 12	10M	QPSK	25	12	-	Front	10mm	Ant 0	DSI 3/5	23095	707.5	22.09	23.50	1.384	-	-	0.1	0.092	0.127
	LTE Band 12	10M	QPSK	25	12	-	Back	10mm	Ant 0	DSI 3/5	23095	707.5	22.09	23.50	1.384	-	-	0.08	0.123	0.170
	LTE Band 12	10M	QPSK	25	12	-	Left Side	10mm	Ant 0	DSI 3/5	23095	707.5	22.09	23.50	1.384	-	-	-0.13	0.118	0.163
	LTE Band 12	10M	QPSK	25	12	-	Right Side	10mm	Ant 0	DSI 3/5	23095	707.5	22.09	23.50	1.384	-	-	0.19	0.096	0.133
	LTE Band 12	10M	QPSK	25	12	-	Bottom Side	10mm	Ant 0	DSI 3/5	23095	707.5	22.09	23.50	1.384	-	-	0.05	0.065	0.090
	LTE Band 12	10M	QPSK	1	25	-	Front	10mm	Ant 1	DSI 3/5	23095	707.5	23.34	24.50	1.306	-	-	-0.01	0.096	0.125
	LTE Band 12	10M	QPSK	1	25	-	Back	10mm	Ant 1	DSI 3/5	23095	707.5	23.34	24.50	1.306	-	-	0.17	0.120	0.157
	LTE Band 12	10M	QPSK	1	25	-	Left Side	10mm	Ant 1	DSI 3/5	23095	707.5	23.34	24.50	1.306	-	-	-0.05	0.085	0.111
	LTE Band 12	10M	QPSK	1	25	-	Top Side	10mm	Ant 1	DSI 3/5	23095	707.5	23.34	24.50	1.306	-	-	-0.12	0.100	0.131
	LTE Band 12	10M	QPSK	25	12	-	Front	10mm	Ant 1	DSI 3/5	23095	707.5	21.84	23.50	1.466	-	-	0	0.070	0.103
	LTE Band 12	10M	QPSK	25	12	-	Back	10mm	Ant 1	DSI 3/5	23095	707.5	21.84	23.50	1.466	-	-	-0.06	0.093	0.136
	LTE Band 12	10M	QPSK	25	12	-	Left Side	10mm	Ant 1	DSI 3/5	23095	707.5	21.84	23.50	1.466	-	-	-0.14	0.064	0.094
	LTE Band 12	10M	QPSK	25	12	-	Top Side	10mm	Ant 1	DSI 3/5	23095	707.5	21.84	23.50	1.466	-	-	0.14	0.074	0.108
	LTE Band 13	10M	QPSK	1	25	-	Front	10mm	Ant 0	DSI 3/5	23230	782	23.54	24.50	1.247	-	-	-0.19	0.094	0.117
	LTE Band 13	10M	QPSK	1	25	-	Back	10mm	Ant 0	DSI 3/5	23230	782	23.54	24.50	1.247	-	-	0.05	0.198	0.247
	LTE Band 13	10M	QPSK	1	25	-	Left Side	10mm	Ant 0	DSI 3/5	23230	782	23.54	24.50	1.247	-	-	0.13	0.184	0.230
	LTE Band 13	10M	QPSK	1	25	-	Right Side	10mm	Ant 0	DSI 3/5	23230	782	23.54	24.50	1.247	-	-	0.13	0.112	0.140
	LTE Band 13	10M	QPSK	1	25	-	Bottom Side	10mm	Ant 0	DSI 3/5	23230	782	23.54	24.50	1.247	-	-	0.06	0.071	0.089
	LTE Band 13	10M	QPSK	25	12	-	Front	10mm	Ant 0	DSI 3/5	23230	782	21.98	23.50	1.419	-	-	-0.15	0.066	0.094
	LTE Band 13	10M	QPSK	25	12	-	Back	10mm	Ant 0	DSI 3/5	23230	782	21.98	23.50	1.419	-	-	-0.16	0.123	0.175
	LTE Band 13	10M	QPSK	25	12	-	Left Side	10mm	Ant 0	DSI 3/5	23230	782	21.98	23.50	1.419	-	-	0.08	0.121	0.172
	LTE Band 13	10M	QPSK	25	12	-	Right Side	10mm	Ant 0	DSI 3/5	23230	782	21.98	23.50	1.419	-	-	0.08	0.095	0.135
	LTE Band 13	10M	QPSK	25	12	-	Bottom Side	10mm	Ant 0	DSI 3/5	23230	782	21.98	23.50	1.419	-	-	-0.17	0.061	0.087
	LTE Band 13	10M	QPSK	1	25	-	Front	10mm	Ant 1	DSI 3/5	23230	782	23.11	24.50	1.377	-	-	0.18	0.124	0.171
27	LTE Band 13	10M	QPSK	1	25	-	Back	10mm	Ant 1	DSI 3/5	23230	782	23.11	24.50	1.377	-	-	-0.07	0.230	0.317
	LTE Band 13	10M	QPSK	1	25	-	Left Side	10mm	Ant 1	DSI 3/5	23230	782	23.11	24.50	1.377	-	-	0.05	0.119	0.164
	LTE Band 13	10M	QPSK	1	25	-	Top Side	10mm	Ant 1	DSI 3/5	23230	782	23.11	24.50	1.377	-	-	-0.14	0.143	0.197
	LTE Band 13	10M	QPSK	25	12	-	Front	10mm	Ant 1	DSI 3/5	23230	782	21.58	23.50	1.556	-	-	0.06	0.087	0.135
	LTE Band 13	10M	QPSK	25	12	-	Back	10mm	Ant 1	DSI 3/5	23230	782	21.58	23.50	1.556	-	-	-0.12	0.146	0.227
	LTE Band 13	10M	QPSK	25	12	-	Left Side	10mm	Ant 1	DSI 3/5	23230	782	21.58	23.50	1.556	-	-	0.14	0.085	0.132
	LTE Band 13	10M	QPSK	25	12	-	Top Side	10mm	Ant 1	DSI 3/5	23230	782	21.58	23.50	1.556	-	-	0.11	0.100	0.156
835MHz																				
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Front	10mm	Ant 0	DSI 3/5	189	836.4	30.69	32.00	1.352	-	-	0.01	0.230	0.311
28	GSM850	-	-	-	-	GPRS(2 Tx slots)	Back	10mm	Ant 0	DSI 3/5	189	836.4	30.69	32.00	1.352	-	-	0.11	0.477	0.645
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Left Side	10mm	Ant 0	DSI 3/5	189	836.4	30.69	32.00	1.352	-	-	0.06	0.267	0.361
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Right Side	10mm	Ant 0	DSI 3/5	189	836.4	30.69	32.00	1.352	-	-	-0.1	0.140	0.189
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Bottom Side	10mm	Ant 0	DSI 3/5	189	836.4	30.69	32.00	1.352	-	-	-0.12	0.347	0.469
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Front	10mm	Ant 1	DSI 3/5	189	836.4	30.22	32.00	1.507	-	-	0.02	0.229	0.345
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Back	10mm	Ant 1	DSI 3/5	189	836.4	30.22	32.00	1.507	-	-	0.15	0.380	0.573
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Left Side	10mm	Ant 1	DSI 3/5	189	836.4	30.22	32.00	1.507	-	-	-0.08	0.139	0.209
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Top Side	10mm	Ant 1	DSI 3/5	189	836.4	30.22	32.00	1.507	-	-	-0.1	0.299	0.450
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 3/5	4182	836.4	22.60	23.50	1.230	-	-	0.03	0.100	0.123
29	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 3/5	4182	836.4	22.60	23.50	1.230	-	-	-0.08	0.359	0.442
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 3/5	4182	836.4	22.60	23.50	1.230	-	-	0.08	0.091	0.112
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 3/5	4182	836.4	22.60	23.50	1.230	-	-	0.04	0.062	0.076
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 3/5	4182	836.4	22.60	23.50	1.230	-	-	0.18	0.234	0.288



	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 3/5	4182	836.4	20.91	22.00	1.285	-	-	-0.01	0.098	0.126
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 3/5	4182	836.4	20.91	22.00	1.285	-	-	0.16	0.157	0.202
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 3/5	4182	836.4	20.91	22.00	1.285	-	-	0.04	0.058	0.075
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 3/5	4182	836.4	20.91	22.00	1.285	-	-	0.1	0.134	0.172
30	LTE Band 26	15M	QPSK	1	37	-	Front	10mm	Ant 0	DSI 3/5	26865	831.5	23.39	24.00	1.151	-	-	0.16	0.128	0.147
	LTE Band 26	15M	QPSK	1	37	-	Back	10mm	Ant 0	DSI 3/5	26865	831.5	23.39	24.00	1.151	-	-	0.08	0.284	0.327
	LTE Band 26	15M	QPSK	1	37	-	Left Side	10mm	Ant 0	DSI 3/5	26865	831.5	23.39	24.00	1.151	-	-	0.04	0.157	0.181
	LTE Band 26	15M	QPSK	1	37	-	Right Side	10mm	Ant 0	DSI 3/5	26865	831.5	23.39	24.00	1.151	-	-	0.15	0.097	0.112
	LTE Band 26	15M	QPSK	1	37	-	Bottom Side	10mm	Ant 0	DSI 3/5	26865	831.5	23.39	24.00	1.151	-	-	-0.16	0.173	0.199
	LTE Band 26	15M	QPSK	36	20	-	Front	10mm	Ant 0	DSI 3/5	26865	831.5	22.27	23.00	1.183	-	-	0.17	0.107	0.127
	LTE Band 26	15M	QPSK	36	20	-	Back	10mm	Ant 0	DSI 3/5	26865	831.5	22.27	23.00	1.183	-	-	-0.18	0.188	0.222
	LTE Band 26	15M	QPSK	36	20	-	Left Side	10mm	Ant 0	DSI 3/5	26865	831.5	22.27	23.00	1.183	-	-	-0.07	0.127	0.150
	LTE Band 26	15M	QPSK	36	20	-	Right Side	10mm	Ant 0	DSI 3/5	26865	831.5	22.27	23.00	1.183	-	-	-0.11	0.079	0.093
	LTE Band 26	15M	QPSK	36	20	-	Bottom Side	10mm	Ant 0	DSI 3/5	26865	831.5	22.27	23.00	1.183	-	-	-0.14	0.149	0.176
	LTE Band 26	15M	QPSK	1	37	-	Front	10mm	Ant 1	DSI 3/5	26865	831.5	23.12	24.00	1.225	-	-	-0.08	0.131	0.160
	LTE Band 26	15M	QPSK	1	37	-	Back	10mm	Ant 1	DSI 3/5	26865	831.5	23.12	24.00	1.225	-	-	-0.16	0.216	0.265
	LTE Band 26	15M	QPSK	1	37	-	Left Side	10mm	Ant 1	DSI 3/5	26865	831.5	23.12	24.00	1.225	-	-	0.06	0.086	0.105
	LTE Band 26	15M	QPSK	1	37	-	Top Side	10mm	Ant 1	DSI 3/5	26865	831.5	23.12	24.00	1.225	-	-	0.03	0.185	0.227
	LTE Band 26	15M	QPSK	36	20	-	Front	10mm	Ant 1	DSI 3/5	26865	831.5	22.01	23.00	1.256	-	-	-0.18	0.108	0.136
	LTE Band 26	15M	QPSK	36	20	-	Back	10mm	Ant 1	DSI 3/5	26865	831.5	22.01	23.00	1.256	-	-	-0.17	0.176	0.221
	LTE Band 26	15M	QPSK	36	20	-	Left Side	10mm	Ant 1	DSI 3/5	26865	831.5	22.01	23.00	1.256	-	-	0.04	0.071	0.089
	LTE Band 26	15M	QPSK	36	20	-	Top Side	10mm	Ant 1	DSI 3/5	26865	831.5	22.01	23.00	1.256	-	-	-0.11	0.147	0.185
31	LTE Band 5	10M	QPSK	1	25	-	Front	10mm	Ant 0	DSI 3/5	20525	836.5	23.75	24.50	1.189	-	-	0.09	0.151	0.179
	LTE Band 5	10M	QPSK	1	25	-	Back	10mm	Ant 0	DSI 3/5	20525	836.5	23.75	24.50	1.189	-	-	0.16	0.332	0.395
	LTE Band 5	10M	QPSK	1	25	-	Left Side	10mm	Ant 0	DSI 3/5	20525	836.5	23.75	24.50	1.189	-	-	-0.19	0.154	0.183
	LTE Band 5	10M	QPSK	1	25	-	Right Side	10mm	Ant 0	DSI 3/5	20525	836.5	23.75	24.50	1.189	-	-	0.11	0.096	0.114
	LTE Band 5	10M	QPSK	1	25	-	Bottom Side	10mm	Ant 0	DSI 3/5	20525	836.5	23.75	24.50	1.189	-	-	0.07	0.233	0.277
	LTE Band 5	10M	QPSK	25	12	-	Front	10mm	Ant 0	DSI 3/5	20525	836.5	22.25	23.50	1.334	-	-	0.13	0.104	0.139
	LTE Band 5	10M	QPSK	25	12	-	Back	10mm	Ant 0	DSI 3/5	20525	836.5	22.25	23.50	1.334	-	-	0.03	0.198	0.264
	LTE Band 5	10M	QPSK	25	12	-	Left Side	10mm	Ant 0	DSI 3/5	20525	836.5	22.25	23.50	1.334	-	-	-0.08	0.115	0.153
	LTE Band 5	10M	QPSK	25	12	-	Right Side	10mm	Ant 0	DSI 3/5	20525	836.5	22.25	23.50	1.334	-	-	0.17	0.068	0.091
	LTE Band 5	10M	QPSK	25	12	-	Bottom Side	10mm	Ant 0	DSI 3/5	20525	836.5	22.25	23.50	1.334	-	-	0.14	0.163	0.217
	LTE Band 5	10M	QPSK	1	25	-	Front	10mm	Ant 1	DSI 3/5	20525	836.5	23.58	24.50	1.236	-	-	0.08	0.156	0.193
	LTE Band 5	10M	QPSK	1	25	-	Back	10mm	Ant 1	DSI 3/5	20525	836.5	23.58	24.50	1.236	-	-	-0.04	0.243	0.300
	LTE Band 5	10M	QPSK	1	25	-	Left Side	10mm	Ant 1	DSI 3/5	20525	836.5	23.58	24.50	1.236	-	-	0.02	0.092	0.114
	LTE Band 5	10M	QPSK	1	25	-	Top Side	10mm	Ant 1	DSI 3/5	20525	836.5	23.58	24.50	1.236	-	-	-0.12	0.235	0.290
	LTE Band 5	10M	QPSK	25	12	-	Front	10mm	Ant 1	DSI 3/5	20525	836.5	21.99	23.50	1.416	-	-	0.03	0.109	0.154
	LTE Band 5	10M	QPSK	25	12	-	Back	10mm	Ant 1	DSI 3/5	20525	836.5	21.99	23.50	1.416	-	-	-0.11	0.166	0.235
LTE Band 5	10M	QPSK	25	12	-	Left Side	10mm	Ant 1	DSI 3/5	20525	836.5	21.99	23.50	1.416	-	-	0.01	0.065	0.092	
LTE Band 5	10M	QPSK	25	12	-	Top Side	10mm	Ant 1	DSI 3/5	20525	836.5	21.99	23.50	1.416	-	-	0.18	0.165	0.234	
32	FR1 n5	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 0	DSI 3/5	167300	836.5	22.96	24.20	1.330	-	-	0.13	0.136	0.181
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 0	DSI 3/5	167300	836.5	22.96	24.20	1.330	-	-	-0.08	0.254	0.338
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 0	DSI 3/5	167300	836.5	22.96	24.20	1.330	-	-	-0.14	0.154	0.205
	FR1 n5	20M	QPSK	1	1	DFT-15	Right Side	10mm	Ant 0	DSI 3/5	167300	836.5	22.96	24.20	1.330	-	-	0.06	0.091	0.121
	FR1 n5	20M	QPSK	1	1	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	167300	836.5	22.96	24.20	1.330	-	-	0.1	0.198	0.263
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 0	DSI 3/5	167300	836.5	22.91	24.20	1.346	-	-	-0.03	0.142	0.191
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 0	DSI 3/5	167300	836.5	22.91	24.20	1.346	-	-	-0.09	0.300	0.404
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 0	DSI 3/5	167300	836.5	22.91	24.20	1.346	-	-	-0.06	0.157	0.211
	FR1 n5	20M	QPSK	50	28	DFT-15	Right Side	10mm	Ant 0	DSI 3/5	167300	836.5	22.91	24.20	1.346	-	-	0.12	0.093	0.125
	FR1 n5	20M	QPSK	50	28	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	167300	836.5	22.91	24.20	1.346	-	-	0.06	0.216	0.291
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 1	DSI 3/5	167300	836.5	22.74	24.20	1.400	-	-	-0.16	0.157	0.220
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 1	DSI 3/5	167300	836.5	22.74	24.20	1.400	-	-	-0.03	0.259	0.362
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	167300	836.5	22.74	24.20	1.400	-	-	-0.11	0.103	0.144
	FR1 n5	20M	QPSK	1	1	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	167300	836.5	22.74	24.20	1.400	-	-	-0.15	0.242	0.339
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 1	DSI 3/5	167300	836.5	22.65	24.20	1.429	-	-	0.02	0.154	0.220
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 1	DSI 3/5	167300	836.5	22.65	24.20	1.429	-	-	-0.04	0.246	0.352



FCC SAR Test Report

Report No. : FA3D1301

	FR1 n5	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	167300	836.5	22.65	24.20	1.429	-	-	0.17	0.099	0.141
	FR1 n5	20M	QPSK	50	28	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	167300	836.5	22.65	24.20	1.429	-	-	-0.03	0.221	0.316
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 3/5	1413	1732.6	20.45	21.50	1.274	-	-	-0.12	0.290	0.369
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 3/5	1413	1732.6	20.45	21.50	1.274	-	-	0.12	0.517	0.658
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 3/5	1413	1732.6	20.45	21.50	1.274	-	-	-0.12	0.068	0.087
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 3/5	1413	1732.6	20.45	21.50	1.274	-	-	0.06	0.106	0.135
33	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 3/5	1413	1732.6	20.45	21.50	1.274	-	-	-0.16	0.625	0.796
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 3/5	1413	1732.6	19.21	20.00	1.199	-	-	0.04	0.196	0.235
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 3/5	1413	1732.6	19.21	20.00	1.199	-	-	0.19	0.266	0.319
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 3/5	1413	1732.6	19.21	20.00	1.199	-	-	0.06	0.024	0.029
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 3/5	1413	1732.6	19.21	20.00	1.199	-	-	0.19	0.320	0.384
	LTE Band 4	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	20175	1732.5	20.03	20.75	1.180	-	-	0.11	0.321	0.379
	LTE Band 4	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	20175	1732.5	20.03	20.75	1.180	-	-	0.16	0.497	0.587
	LTE Band 4	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	20175	1732.5	20.03	20.75	1.180	-	-	0.12	0.079	0.093
	LTE Band 4	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	20175	1732.5	20.03	20.75	1.180	-	-	0.02	0.116	0.137
34	LTE Band 4	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	20175	1732.5	20.03	20.75	1.180	-	-	-0.02	0.626	0.739
	LTE Band 4	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	20175	1732.5	20.00	20.75	1.189	-	-	-0.04	0.279	0.332
	LTE Band 4	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	20175	1732.5	20.00	20.75	1.189	-	-	0.08	0.494	0.587
	LTE Band 4	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	20175	1732.5	20.00	20.75	1.189	-	-	0.19	0.077	0.092
	LTE Band 4	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	20175	1732.5	20.00	20.75	1.189	-	-	-0.08	0.114	0.135
	LTE Band 4	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	20175	1732.5	20.00	20.75	1.189	-	-	0.15	0.605	0.719
	LTE Band 4	20M	QPSK	1	49	-	Front	10mm	Ant 1	DSI 3/5	20175	1732.5	19.42	20.00	1.143	-	-	-0.07	0.235	0.269
	LTE Band 4	20M	QPSK	1	49	-	Back	10mm	Ant 1	DSI 3/5	20175	1732.5	19.42	20.00	1.143	-	-	0	0.319	0.365
	LTE Band 4	20M	QPSK	1	49	-	Left Side	10mm	Ant 1	DSI 3/5	20175	1732.5	19.42	20.00	1.143	-	-	0.17	0.044	0.050
	LTE Band 4	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	20175	1732.5	19.42	20.00	1.143	-	-	0.04	0.401	0.458
	LTE Band 4	20M	QPSK	50	24	-	Front	10mm	Ant 1	DSI 3/5	20175	1732.5	19.41	20.00	1.146	-	-	-0.07	0.241	0.276
	LTE Band 4	20M	QPSK	50	24	-	Back	10mm	Ant 1	DSI 3/5	20175	1732.5	19.41	20.00	1.146	-	-	-0.16	0.322	0.369
	LTE Band 4	20M	QPSK	50	24	-	Left Side	10mm	Ant 1	DSI 3/5	20175	1732.5	19.41	20.00	1.146	-	-	0.04	0.044	0.050
	LTE Band 4	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	20175	1732.5	19.41	20.00	1.146	-	-	0.03	0.402	0.460
	LTE Band 4	20M	QPSK	1	49	-	Front	10mm	Ant 2	DSI 3/5	20175	1732.5	20.83	22.00	1.309	-	-	0.01	0.019	0.025
	LTE Band 4	20M	QPSK	1	49	-	Back	10mm	Ant 2	DSI 3/5	20175	1732.5	20.83	22.00	1.309	-	-	0.04	0.054	0.071
	LTE Band 4	20M	QPSK	1	49	-	Left Side	10mm	Ant 2	DSI 3/5	20175	1732.5	20.83	22.00	1.309	-	-	0.04	0.058	0.076
	LTE Band 4	20M	QPSK	50	24	-	Front	10mm	Ant 2	DSI 3/5	20175	1732.5	20.39	22.00	1.449	-	-	0.04	0.017	0.025
	LTE Band 4	20M	QPSK	50	24	-	Back	10mm	Ant 2	DSI 3/5	20175	1732.5	20.39	22.00	1.449	-	-	0.04	0.053	0.077
	LTE Band 4	20M	QPSK	50	24	-	Left Side	10mm	Ant 2	DSI 3/5	20175	1732.5	20.39	22.00	1.449	-	-	-0.1	0.056	0.081
	LTE Band 66	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	132322	1745	19.70	20.50	1.202	-	-	0.05	0.290	0.349
	LTE Band 66	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	132322	1745	19.70	20.50	1.202	-	-	0.08	0.500	0.601
	LTE Band 66	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	132322	1745	19.70	20.50	1.202	-	-	0.1	0.058	0.070
	LTE Band 66	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	132322	1745	19.70	20.50	1.202	-	-	0.08	0.109	0.131
	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	132322	1745	19.70	20.50	1.202	-	-	-0.05	0.603	0.725
	LTE Band 66	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	132322	1745	19.64	20.50	1.219	-	-	-0.18	0.292	0.356
	LTE Band 66	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	132322	1745	19.64	20.50	1.219	-	-	0.07	0.507	0.618
	LTE Band 66	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	132322	1745	19.64	20.50	1.219	-	-	-0.11	0.059	0.072
	LTE Band 66	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	132322	1745	19.64	20.50	1.219	-	-	-0.01	0.110	0.134
35	LTE Band 66	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	132322	1745	19.64	20.50	1.219	-	-	-0.16	0.644	0.785
	LTE Band 66	20M	QPSK	1	49	-	Front	10mm	Ant 1	DSI 3/5	132322	1745	18.81	19.00	1.045	-	-	-0.12	0.199	0.208
	LTE Band 66	20M	QPSK	1	49	-	Back	10mm	Ant 1	DSI 3/5	132322	1745	18.81	19.00	1.045	-	-	-0.12	0.261	0.273
	LTE Band 66	20M	QPSK	1	49	-	Left Side	10mm	Ant 1	DSI 3/5	132322	1745	18.81	19.00	1.045	-	-	0.08	0.037	0.039
	LTE Band 66	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	132322	1745	18.81	19.00	1.045	-	-	0.15	0.306	0.320
	LTE Band 66	20M	QPSK	50	24	-	Front	10mm	Ant 1	DSI 3/5	132322	1745	18.77	19.00	1.054	-	-	0.07	0.199	0.210
	LTE Band 66	20M	QPSK	50	24	-	Back	10mm	Ant 1	DSI 3/5	132322	1745	18.77	19.00	1.054	-	-	0.19	0.270	0.285
	LTE Band 66	20M	QPSK	50	24	-	Left Side	10mm	Ant 1	DSI 3/5	132322	1745	18.77	19.00	1.054	-	-	0.04	0.038	0.040
	LTE Band 66	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	132322	1745	18.77	19.00	1.054	-	-	0.11	0.385	0.406
	LTE Band 66	20M	QPSK	1	49	-	Front	10mm	Ant 2	DSI 3/5	132322	1745	20.12	21.00	1.225	-	-	0.07	0.017	0.021
	LTE Band 66	20M	QPSK	1	49	-	Back	10mm	Ant 2	DSI 3/5	132322	1745	20.12	21.00	1.225	-	-	0.14	0.057	0.070



FCC SAR Test Report

Report No. : FA3D1301

	LTE Band 66	20M	QPSK	1	49	-	Left Side	10mm	Ant 2	DSI 3/5	132322	1745	20.12	21.00	1.225	-	-	0.11	0.062	0.076
	LTE Band 66	20M	QPSK	50	24	-	Front	10mm	Ant 2	DSI 3/5	132322	1745	20.10	21.00	1.230	-	-	0.11	0.016	0.020
	LTE Band 66	20M	QPSK	50	24	-	Back	10mm	Ant 2	DSI 3/5	132322	1745	20.10	21.00	1.230	-	-	0.01	0.055	0.068
	LTE Band 66	20M	QPSK	50	24	-	Left Side	10mm	Ant 2	DSI 3/5	132322	1745	20.10	21.00	1.230	-	-	-0.12	0.057	0.070
	FR1 n66	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 0	DSI 3/5	349000	1745	20.90	21.70	1.202	-	-	-0.08	0.349	0.420
	FR1 n66	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 0	DSI 3/5	349000	1745	20.90	21.70	1.202	-	-	0.09	0.656	0.789
	FR1 n66	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 0	DSI 3/5	349000	1745	20.90	21.70	1.202	-	-	0.19	0.084	0.101
	FR1 n66	20M	QPSK	1	1	DFT-15	Right Side	10mm	Ant 0	DSI 3/5	349000	1745	20.90	21.70	1.202	-	-	0.16	0.133	0.160
	FR1 n66	20M	QPSK	1	1	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	349000	1745	20.90	21.70	1.202	-	-	-0.15	0.765	0.920
	FR1 n66	20M	QPSK	1	1	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	344000	1720	20.85	21.70	1.216	-	-	-0.12	0.745	0.906
	FR1 n66	20M	QPSK	1	1	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	354000	1770	20.83	21.70	1.222	-	-	0.08	0.731	0.893
	FR1 n66	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 0	DSI 3/5	349000	1745	20.88	21.70	1.208	-	-	-0.03	0.350	0.423
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 0	DSI 3/5	349000	1745	20.88	21.70	1.208	-	-	-0.06	0.670	0.809
	FR1 n66	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 0	DSI 3/5	349000	1745	20.88	21.70	1.208	-	-	-0.18	0.090	0.109
	FR1 n66	20M	QPSK	50	28	DFT-15	Right Side	10mm	Ant 0	DSI 3/5	349000	1745	20.88	21.70	1.208	-	-	0.11	0.138	0.167
36	FR1 n66	20M	QPSK	50	28	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	349000	1745	20.88	21.70	1.208	-	-	-0.11	0.783	0.946
	FR1 n66	20M	QPSK	50	28	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	344000	1720	20.82	21.70	1.225	-	-	0.18	0.747	0.915
	FR1 n66	20M	QPSK	50	28	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	354000	1770	20.80	21.70	1.230	-	-	0.13	0.743	0.914
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 0	DSI 3/5	344000	1720	20.82	21.70	1.225	-	-	0	0.578	0.708
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 0	DSI 3/5	354000	1770	20.80	21.70	1.230	-	-	-0.1	0.644	0.792
	FR1 n66	20M	QPSK	100	0	DFT-15	Back	10mm	Ant 0	DSI 3/5	349000	1745	20.73	21.70	1.250	-	-	0.08	0.647	0.809
	FR1 n66	20M	QPSK	100	0	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	349000	1745	20.73	21.70	1.250	-	-	-0.19	0.750	0.938
	FR1 n66	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 1	DSI 3/5	349000	1745	20.11	20.70	1.146	-	-	-0.12	0.234	0.268
	FR1 n66	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 1	DSI 3/5	349000	1745	20.11	20.70	1.146	-	-	0.11	0.313	0.359
	FR1 n66	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	349000	1745	20.11	20.70	1.146	-	-	-0.02	0.046	0.053
	FR1 n66	20M	QPSK	1	1	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	349000	1745	20.11	20.70	1.146	-	-	0.14	0.413	0.473
	FR1 n66	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 1	DSI 3/5	349000	1745	20.07	20.70	1.156	-	-	-0.13	0.245	0.283
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 1	DSI 3/5	349000	1745	20.07	20.70	1.156	-	-	0.17	0.325	0.376
	FR1 n66	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	349000	1745	20.07	20.70	1.156	-	-	0.17	0.047	0.054
	FR1 n66	20M	QPSK	50	28	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	349000	1745	20.07	20.70	1.156	-	-	0.12	0.435	0.503
	FR1 n66	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 2	DSI 3/5	349000	1745	22.08	23.20	1.294	-	-	0.09	0.022	0.028
	FR1 n66	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 2	DSI 3/5	349000	1745	22.08	23.20	1.294	-	-	-0.03	0.067	0.087
	FR1 n66	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 2	DSI 3/5	349000	1745	22.08	23.20	1.294	-	-	0.03	0.070	0.091
	FR1 n66	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 2	DSI 3/5	349000	1745	22.04	23.20	1.306	-	-	0.09	0.023	0.030
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 2	DSI 3/5	349000	1745	22.04	23.20	1.306	-	-	-0.16	0.068	0.089
	FR1 n66	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 2	DSI 3/5	349000	1745	22.04	23.20	1.306	-	-	-0.19	0.088	0.115
1900MHz																				
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Front	10mm	Ant 0	DSI 3/5	661	1880	24.15	25.00	1.216	-	-	0.05	0.362	0.440
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Back	10mm	Ant 0	DSI 3/5	661	1880	24.15	25.00	1.216	-	-	0.15	0.579	0.704
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Left Side	10mm	Ant 0	DSI 3/5	661	1880	24.15	25.00	1.216	-	-	0.11	0.081	0.099
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Right Side	10mm	Ant 0	DSI 3/5	661	1880	24.15	25.00	1.216	-	-	0.18	0.147	0.179
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Bottom Side	10mm	Ant 0	DSI 3/5	661	1880	24.15	25.00	1.216	-	-	-0.08	0.696	0.846
37	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Bottom Side	10mm	Ant 0	DSI 3/5	512	1850.2	23.92	25.00	1.282	-	-	0.08	0.702	0.900
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Bottom Side	10mm	Ant 0	DSI 3/5	810	1909.8	23.91	25.00	1.285	-	-	-0.1	0.695	0.893
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Front	10mm	Ant 1	DSI 3/5	661	1880	21.82	22.50	1.169	-	-	0.03	0.209	0.244
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Back	10mm	Ant 1	DSI 3/5	661	1880	21.82	22.50	1.169	-	-	0.01	0.325	0.380
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Left Side	10mm	Ant 1	DSI 3/5	661	1880	21.82	22.50	1.169	-	-	0.05	0.054	0.063
	GSM1900	-	-	-	-	GPRS(4 Tx slots)	Top Side	10mm	Ant 1	DSI 3/5	661	1880	21.82	22.50	1.169	-	-	0.09	0.499	0.584
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 3/5	9400	1880	20.70	21.50	1.202	-	-	-0.13	0.316	0.380
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 3/5	9400	1880	20.70	21.50	1.202	-	-	-0.06	0.510	0.613
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 3/5	9400	1880	20.70	21.50	1.202	-	-	-0.07	0.078	0.094
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 3/5	9400	1880	20.70	21.50	1.202	-	-	-0.14	0.142	0.171
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 3/5	9400	1880	20.70	21.50	1.202	-	-	0.18	0.715	0.860
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 3/5	9662	1852.4	20.68	21.50	1.208	-	-	0.03	0.666	0.804
38	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 3/5	9538	1907.6	20.59	21.50	1.233	-	-	0.1	0.730	0.900
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 3/5	9400	1880	19.30	20.00	1.175	-	-	0.03	0.239	0.281



	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 3/5	9400	1880	19.30	20.00	1.175	-	-	-0.19	0.365	0.429
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 3/5	9400	1880	19.30	20.00	1.175	-	-	0.03	0.051	0.060
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 3/5	9400	1880	19.30	20.00	1.175	-	-	-0.18	0.538	0.632
	LTE Band 2	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	18900	1880	19.91	21.00	1.285	-	-	0.08	0.280	0.360
	LTE Band 2	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	18900	1880	19.91	21.00	1.285	-	-	0.03	0.489	0.629
	LTE Band 2	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	18900	1880	19.91	21.00	1.285	-	-	-0.06	0.063	0.081
	LTE Band 2	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	18900	1880	19.91	21.00	1.285	-	-	0.14	0.135	0.174
	LTE Band 2	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	18900	1880	19.91	21.00	1.285	-	-	-0.17	0.634	0.815
	LTE Band 2	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	18700	1860	19.77	21.00	1.327	-	-	0.07	0.616	0.818
	LTE Band 2	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	19100	1900	19.90	21.00	1.288	-	-	-0.01	0.629	0.810
	LTE Band 2	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	18900	1880	19.79	21.00	1.321	-	-	-0.18	0.288	0.381
	LTE Band 2	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	18900	1880	19.79	21.00	1.321	-	-	0.17	0.503	0.665
	LTE Band 2	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	18900	1880	19.79	21.00	1.321	-	-	0.14	0.065	0.086
	LTE Band 2	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	18900	1880	19.79	21.00	1.321	-	-	0.15	0.140	0.185
	LTE Band 2	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	18900	1880	19.79	21.00	1.321	-	-	-0.04	0.635	0.839
	LTE Band 2	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	18700	1860	19.77	21.00	1.327	-	-	-0.01	0.636	0.844
39	LTE Band 2	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	19100	1900	19.76	21.00	1.330	-	-	0.08	0.648	0.862
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 0	DSI 3/5	18900	1880	19.75	21.00	1.334	-	-	0.03	0.615	0.820
	LTE Band 2	20M	QPSK	1	49	-	Front	10mm	Ant 1	DSI 3/5	18900	1880	18.42	19.00	1.143	-	-	-0.12	0.199	0.227
	LTE Band 2	20M	QPSK	1	49	-	Back	10mm	Ant 1	DSI 3/5	18900	1880	18.42	19.00	1.143	-	-	-0.02	0.295	0.337
	LTE Band 2	20M	QPSK	1	49	-	Left Side	10mm	Ant 1	DSI 3/5	18900	1880	18.42	19.00	1.143	-	-	0.14	0.042	0.048
	LTE Band 2	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	18900	1880	18.42	19.00	1.143	-	-	-0.18	0.420	0.480
	LTE Band 2	20M	QPSK	50	24	-	Front	10mm	Ant 1	DSI 3/5	18900	1880	18.39	19.00	1.151	-	-	-0.06	0.205	0.236
	LTE Band 2	20M	QPSK	50	24	-	Back	10mm	Ant 1	DSI 3/5	18900	1880	18.39	19.00	1.151	-	-	-0.04	0.302	0.348
	LTE Band 2	20M	QPSK	50	24	-	Left Side	10mm	Ant 1	DSI 3/5	18900	1880	18.39	19.00	1.151	-	-	0.04	0.045	0.052
	LTE Band 2	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	18900	1880	18.39	19.00	1.151	-	-	-0.14	0.440	0.506
2600MHz																				
	LTE Band 7	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	21100	2535	20.83	21.50	1.167	-	-	-0.04	0.314	0.366
	LTE Band 7	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	21100	2535	20.83	21.50	1.167	-	-	-0.17	0.442	0.516
	LTE Band 7	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	21100	2535	20.83	21.50	1.167	-	-	0.1	0.065	0.076
	LTE Band 7	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	21100	2535	20.83	21.50	1.167	-	-	0.08	0.338	0.394
	LTE Band 7	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	21100	2535	20.83	21.50	1.167	-	-	0.11	0.283	0.330
	LTE Band 7	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	21100	2535	20.69	21.50	1.205	-	-	-0.19	0.311	0.375
	LTE Band 7	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	21100	2535	20.69	21.50	1.205	-	-	-0.18	0.463	0.558
	LTE Band 7C	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 3/5	21100 21298	2535 2554.8	20.62	21.50	1.225	-	-	0.03	0.264	0.323
	LTE Band 7	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	21100	2535	20.69	21.50	1.205	-	-	-0.15	0.068	0.082
	LTE Band 7	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	21100	2535	20.69	21.50	1.205	-	-	-0.07	0.338	0.407
	LTE Band 7	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	21100	2535	20.69	21.50	1.205	-	-	0.15	0.292	0.352
	LTE Band 7	20M	QPSK	1	49	-	Front	10mm	Ant 1	DSI 3/5	21350	2560	17.77	18.00	1.054	-	-	0.07	0.256	0.270
	LTE Band 7	20M	QPSK	1	49	-	Back	10mm	Ant 1	DSI 3/5	21350	2560	17.77	18.00	1.054	-	-	-0.18	0.572	0.603
	LTE Band 7	20M	QPSK	1	49	-	Left Side	10mm	Ant 1	DSI 3/5	21350	2560	17.77	18.00	1.054	-	-	-0.08	0.109	0.115
	LTE Band 7	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	21350	2560	17.77	18.00	1.054	-	-	-0.06	0.767	0.808
	LTE Band 7	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	20850	2510	17.71	18.00	1.069	-	-	-0.05	0.749	0.801
	LTE Band 7	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	21100	2535	17.73	18.00	1.064	-	-	-0.18	0.813	0.865
	LTE Band 7	20M	QPSK	50	24	-	Front	10mm	Ant 1	DSI 3/5	21350	2560	17.72	18.00	1.067	-	-	-0.11	0.263	0.281
	LTE Band 7	20M	QPSK	50	24	-	Back	10mm	Ant 1	DSI 3/5	21350	2560	17.72	18.00	1.067	-	-	-0.02	0.610	0.651
	LTE Band 7	20M	QPSK	50	24	-	Left Side	10mm	Ant 1	DSI 3/5	21350	2560	17.72	18.00	1.067	-	-	0.08	0.110	0.117
	LTE Band 7	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	21350	2560	17.72	18.00	1.067	-	-	-0.15	0.838	0.894
	LTE Band 7	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	20850	2510	17.68	18.00	1.076	-	-	-0.07	0.825	0.888
40	LTE Band 7	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	21100	2535	17.66	18.00	1.081	-	-	-0.11	0.837	0.905
	LTE Band 7C	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 3/5	21100 21298	2535 2554.8	17.23	18.00	1.194	-	-	0.03	0.750	0.895
	LTE Band 7	20M	QPSK	100	0	-	Top Side	10mm	Ant 1	DSI 3/5	21350	2560	17.63	18.00	1.089	-	-	0.14	0.810	0.882
	LTE Band 7	20M	QPSK	1	49	-	Front	10mm	Ant 2	DSI 3/5	21100	2535	16.67	17.00	1.079	-	-	-0.04	0.045	0.049
	LTE Band 7	20M	QPSK	1	49	-	Back	10mm	Ant 2	DSI 3/5	21100	2535	16.67	17.00	1.079	-	-	0.06	0.143	0.154
	LTE Band 7	20M	QPSK	1	49	-	Left Side	10mm	Ant 2	DSI 3/5	21100	2535	16.67	17.00	1.079	-	-	0.11	0.167	0.180



FCC SAR Test Report

Report No. : FA3D1301

	LTE Band 7	20M	QPSK	50	24	-	Front	10mm	Ant 2	DSI 3/5	21100	2535	16.65	17.00	1.084	-	-	-0.18	0.046	0.050
	LTE Band 7	20M	QPSK	50	24	-	Back	10mm	Ant 2	DSI 3/5	21100	2535	16.65	17.00	1.084	-	-	-0.1	0.143	0.155
	LTE Band 7	20M	QPSK	50	24	-	Left Side	10mm	Ant 2	DSI 3/5	21100	2535	16.65	17.00	1.084	-	-	-0.09	0.176	0.191
	LTE Band 7C	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 3/5	21100 21298	2535 2554.8	16.48	17.00	1.127	-	-	0.1	0.168	0.189
	LTE Band 38	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	38000	2595	23.39	24.00	1.151	62.9	1.006	-0.17	0.340	0.394
	LTE Band 38	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	38000	2595	23.39	24.00	1.151	62.9	1.006	-0.13	0.529	0.612
	LTE Band 38C	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 3/5	37901 38099	2585.1 2604.9	22.69	24.00	1.352	62.9	1.006	-0.02	0.441	0.600
	LTE Band 38	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	38000	2595	23.39	24.00	1.151	62.9	1.006	0.13	0.071	0.082
	LTE Band 38	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	38000	2595	23.39	24.00	1.151	62.9	1.006	-0.08	0.360	0.417
	LTE Band 38	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	38000	2595	23.39	24.00	1.151	62.9	1.006	0.07	0.302	0.350
	LTE Band 38	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	38000	2595	22.34	23.00	1.164	62.9	1.006	-0.11	0.277	0.324
	LTE Band 38	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	38000	2595	22.34	23.00	1.164	62.9	1.006	-0.18	0.440	0.515
	LTE Band 38	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	38000	2595	22.34	23.00	1.164	62.9	1.006	-0.06	0.057	0.067
	LTE Band 38	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	38000	2595	22.34	23.00	1.164	62.9	1.006	0.02	0.319	0.374
	LTE Band 38	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	38000	2595	22.34	23.00	1.164	62.9	1.006	-0.1	0.235	0.275
	LTE Band 38	20M	QPSK	1	49	-	Front	10mm	Ant 1	DSI 3/5	38000	2595	19.69	20.50	1.205	62.9	1.006	0	0.276	0.335
	LTE Band 38	20M	QPSK	1	49	-	Back	10mm	Ant 1	DSI 3/5	38000	2595	19.69	20.50	1.205	62.9	1.006	-0.12	0.733	0.889
	LTE Band 38	20M	QPSK	1	49	-	Left Side	10mm	Ant 1	DSI 3/5	38000	2595	19.69	20.50	1.205	62.9	1.006	-0.04	0.111	0.135
41	LTE Band 38	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	38000	2595	19.69	20.50	1.205	62.9	1.006	0.19	0.940	1.140
	LTE Band 38C	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 3/5	37901 38099	2585.1 2604.9	19.33	20.50	1.309	62.9	1.006	-0.03	0.853	1.123
	LTE Band 38	20M	QPSK	50	24	-	Front	10mm	Ant 1	DSI 3/5	38000	2595	19.64	20.50	1.219	62.9	1.006	-0.09	0.248	0.304
	LTE Band 38	20M	QPSK	50	24	-	Back	10mm	Ant 1	DSI 3/5	38000	2595	19.64	20.50	1.219	62.9	1.006	-0.01	0.722	0.885
	LTE Band 38	20M	QPSK	50	24	-	Left Side	10mm	Ant 1	DSI 3/5	38000	2595	19.64	20.50	1.219	62.9	1.006	-0.19	0.108	0.133
	LTE Band 38	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	38000	2595	19.64	20.50	1.219	62.9	1.006	-0.15	0.697	0.855
	LTE Band 38	20M	QPSK	100	0	-	Back	10mm	Ant 1	DSI 3/5	38000	2595	19.59	20.50	1.233	62.9	1.006	0.04	0.636	0.790
	LTE Band 38	20M	QPSK	100	0	-	Top Side	10mm	Ant 1	DSI 3/5	38000	2595	19.59	20.50	1.233	62.9	1.006	0.08	0.699	0.867
	LTE Band 38	20M	QPSK	1	49	-	Front	10mm	Ant 2	DSI 3/5	38000	2595	18.63	19.50	1.222	62.9	1.006	-0.04	0.066	0.081
	LTE Band 38	20M	QPSK	1	49	-	Back	10mm	Ant 2	DSI 3/5	38000	2595	18.63	19.50	1.222	62.9	1.006	0.1	0.190	0.234
	LTE Band 38	20M	QPSK	1	49	-	Left Side	10mm	Ant 2	DSI 3/5	38000	2595	18.63	19.50	1.222	62.9	1.006	-0.18	0.210	0.258
	LTE Band 38	20M	QPSK	50	24	-	Front	10mm	Ant 2	DSI 3/5	38000	2595	18.57	19.50	1.239	62.9	1.006	-0.06	0.076	0.095
	LTE Band 38	20M	QPSK	50	24	-	Back	10mm	Ant 2	DSI 3/5	38000	2595	18.57	19.50	1.239	62.9	1.006	0.06	0.195	0.243
	LTE Band 38	20M	QPSK	50	24	-	Left Side	10mm	Ant 2	DSI 3/5	38000	2595	18.57	19.50	1.239	62.9	1.006	-0.11	0.227	0.283
	LTE Band 38C	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 3/5	37901 38099	2585.1 2604.9	18.36	19.50	1.300	62.9	1.006	0.02	0.174	0.228
	LTE Band 41	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	41055	2636.5	23.91	24.50	1.146	62.9	1.006	0.03	0.315	0.363
	LTE Band 41	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.01	0.393	0.453
	LTE Band 41C	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 3/5	41055 41253	2636.5 2656.3	23.28	24.50	1.324	62.9	1.006	0.04	0.214	0.285
	LTE Band 41	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.03	0.072	0.083
	LTE Band 41	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.02	0.303	0.349
	LTE Band 41	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.02	0.314	0.362
	LTE Band 41	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	41055	2636.5	22.48	23.50	1.265	62.9	1.006	0.11	0.231	0.294
	LTE Band 41	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	41055	2636.5	22.48	23.50	1.265	62.9	1.006	-0.16	0.320	0.407
	LTE Band 41	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	41055	2636.5	22.48	23.50	1.265	62.9	1.006	0.07	0.049	0.062
	LTE Band 41	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	41055	2636.5	22.48	23.50	1.265	62.9	1.006	-0.13	0.259	0.330
	LTE Band 41	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	41055	2636.5	22.48	23.50	1.265	62.9	1.006	-0.02	0.223	0.284
	LTE Band 41	20M	QPSK	1	49	-	Front	10mm	Ant 1	DSI 3/5	41055	2636.5	19.86	20.25	1.094	62.9	1.006	-0.03	0.225	0.247
	LTE Band 41	20M	QPSK	1	49	-	Back	10mm	Ant 1	DSI 3/5	41055	2636.5	19.86	20.25	1.094	62.9	1.006	-0.17	0.531	0.584
	LTE Band 41	20M	QPSK	1	49	-	Left Side	10mm	Ant 1	DSI 3/5	41055	2636.5	19.86	20.25	1.094	62.9	1.006	-0.08	0.097	0.107
	LTE Band 41	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	41055	2636.5	19.86	20.25	1.094	62.9	1.006	0.19	0.795	0.875
	LTE Band 41	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	39750	2506	19.65	20.25	1.148	62.9	1.006	0.1	0.780	0.901
	LTE Band 41	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	40185	2549.5	19.75	20.25	1.122	62.9	1.006	-0.09	0.776	0.876
	LTE Band 41	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	40620	2593	19.56	20.25	1.172	62.9	1.006	0.05	0.582	0.687
	LTE Band 41	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	41490	2680	19.76	20.25	1.119	62.9	1.006	0.16	0.372	0.418
	LTE Band 41	20M	QPSK	50	24	-	Front	10mm	Ant 1	DSI 3/5	41055	2636.5	19.78	20.25	1.114	62.9	1.006	0.05	0.231	0.259
	LTE Band 41	20M	QPSK	50	24	-	Back	10mm	Ant 1	DSI 3/5	41055	2636.5	19.78	20.25	1.114	62.9	1.006	0.17	0.534	0.599
	LTE Band 41	20M	QPSK	50	24	-	Left Side	10mm	Ant 1	DSI 3/5	41055	2636.5	19.78	20.25	1.114	62.9	1.006	0.01	0.104	0.117



FCC SAR Test Report

Report No. : FA3D1301

	LTE Band 41	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	41055	2636.5	19.78	20.25	1.114	62.9	1.006	-0.09	0.796	0.892
	LTE Band 41	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	39750	2506	19.73	20.25	1.127	62.9	1.006	-0.12	0.799	0.906
42	LTE Band 41	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	40185	2549.5	19.73	20.25	1.127	62.9	1.006	0.16	0.805	0.913
	LTE Band 41C	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 3/5	40185 40383	2549.5 2569.3	19.59	20.25	1.164	62.9	1.006	0.03	0.773	0.905
	LTE Band 41	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	40620	2593	19.74	20.25	1.125	62.9	1.006	0.04	0.672	0.760
	LTE Band 41	20M	QPSK	50	24	-	Top Side	10mm	Ant 1	DSI 3/5	41490	2680	19.74	20.25	1.125	62.9	1.006	0.19	0.371	0.420
	LTE Band 41	20M	QPSK	100	0	-	Top Side	10mm	Ant 1	DSI 3/5	41055	2636.5	19.77	20.25	1.117	62.9	1.006	0.09	0.755	0.848
	LTE Band 41	20M	QPSK	1	49	-	Front	10mm	Ant 2	DSI 3/5	40185	2549.5	19.07	19.50	1.104	62.9	1.006	-0.1	0.053	0.059
	LTE Band 41	20M	QPSK	1	49	-	Back	10mm	Ant 2	DSI 3/5	40185	2549.5	19.07	19.50	1.104	62.9	1.006	-0.02	0.189	0.210
	LTE Band 41	20M	QPSK	1	49	-	Left Side	10mm	Ant 2	DSI 3/5	40185	2549.5	19.07	19.50	1.104	62.9	1.006	0.18	0.202	0.224
	LTE Band 41C	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 3/5	40185 40383	2549.5 2569.3	18.68	19.50	1.208	62.9	1.006	0.04	0.141	0.171
	LTE Band 41	20M	QPSK	50	24	-	Front	10mm	Ant 2	DSI 3/5	40185	2549.5	18.98	19.50	1.127	62.9	1.006	0.13	0.047	0.053
	LTE Band 41	20M	QPSK	50	24	-	Back	10mm	Ant 2	DSI 3/5	40185	2549.5	18.98	19.50	1.127	62.9	1.006	0.16	0.178	0.202
	LTE Band 41	20M	QPSK	50	24	-	Left Side	10mm	Ant 2	DSI 3/5	40185	2549.5	18.98	19.50	1.127	62.9	1.006	0.08	0.196	0.222
	FR1 n7	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 0	DSI 3/5	507000	2535	21.67	22.20	1.130	-	-	-0.04	0.413	0.467
	FR1 n7	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 0	DSI 3/5	507000	2535	21.67	22.20	1.130	-	-	-0.11	0.578	0.653
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 0	DSI 3/5	507000	2535	21.67	22.20	1.130	-	-	0.14	0.094	0.106
	FR1 n7	20M	QPSK	1	1	DFT-15	Right Side	10mm	Ant 0	DSI 3/5	507000	2535	21.67	22.20	1.130	-	-	-0.18	0.447	0.505
	FR1 n7	20M	QPSK	1	1	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	507000	2535	21.67	22.20	1.130	-	-	-0.07	0.360	0.407
	FR1 n7	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 0	DSI 3/5	507000	2535	21.63	22.20	1.140	-	-	0.02	0.415	0.473
	FR1 n7	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 0	DSI 3/5	507000	2535	21.63	22.20	1.140	-	-	-0.03	0.583	0.665
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 0	DSI 3/5	507000	2535	21.63	22.20	1.140	-	-	0.1	0.100	0.114
	FR1 n7	20M	QPSK	50	28	DFT-15	Right Side	10mm	Ant 0	DSI 3/5	507000	2535	21.63	22.20	1.140	-	-	0.05	0.455	0.519
	FR1 n7	20M	QPSK	50	28	DFT-15	Bottom Side	10mm	Ant 0	DSI 3/5	507000	2535	21.63	22.20	1.140	-	-	-0.07	0.366	0.417
	FR1 n7	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 1	DSI 3/5	507000	2535	18.20	18.70	1.122	-	-	0.08	0.268	0.301
	FR1 n7	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 1	DSI 3/5	507000	2535	18.20	18.70	1.122	-	-	-0.02	0.617	0.692
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	507000	2535	18.20	18.70	1.122	-	-	-0.07	0.114	0.128
	FR1 n7	20M	QPSK	1	1	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	507000	2535	18.20	18.70	1.122	-	-	0.07	0.885	0.993
	FR1 n7	20M	QPSK	1	1	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	502000	2510	18.16	18.70	1.132	-	-	-0.14	0.807	0.914
	FR1 n7	20M	QPSK	1	1	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	512000	2560	18.02	18.70	1.169	-	-	-0.04	0.828	0.968
	FR1 n7	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 1	DSI 3/5	507000	2535	18.15	18.70	1.135	-	-	-0.08	0.273	0.310
	FR1 n7	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 1	DSI 3/5	507000	2535	18.15	18.70	1.135	-	-	-0.08	0.619	0.703
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	507000	2535	18.15	18.70	1.135	-	-	-0.06	0.135	0.153
43	FR1 n7	20M	QPSK	50	28	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	507000	2535	18.15	18.70	1.135	-	-	-0.01	0.924	1.049
	FR1 n7	20M	QPSK	50	28	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	502000	2510	18.08	18.70	1.153	-	-	-0.18	0.871	1.005
	FR1 n7	20M	QPSK	50	28	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	512000	2560	18.00	18.70	1.175	-	-	-0.17	0.864	1.015
	FR1 n7	20M	QPSK	100	0	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	507000	2535	18.08	18.70	1.153	-	-	0.16	0.885	1.021
	FR1 n7	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 2	DSI 3/5	507000	2535	19.30	20.70	1.380	-	-	-0.17	0.084	0.116
	FR1 n7	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 2	DSI 3/5	507000	2535	19.30	20.70	1.380	-	-	-0.1	0.236	0.326
	FR1 n7	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 2	DSI 3/5	507000	2535	19.30	20.70	1.380	-	-	0.08	0.310	0.428
	FR1 n7	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 2	DSI 3/5	507000	2535	19.27	20.70	1.390	-	-	0.14	0.090	0.125
	FR1 n7	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 2	DSI 3/5	507000	2535	19.27	20.70	1.390	-	-	0.09	0.261	0.363
	FR1 n7	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 2	DSI 3/5	507000	2535	19.27	20.70	1.390	-	-	0.17	0.346	0.481
	FR1 n38	20M	QPSK	1	1	DFT-30	Front	10mm	Ant 0	DSI 3/5	519000	2595	21.85	22.70	1.216	-	-	-0.11	0.380	0.462
	FR1 n38	20M	QPSK	1	1	DFT-30	Back	10mm	Ant 0	DSI 3/5	519000	2595	21.85	22.70	1.216	-	-	0.08	0.587	0.714
	FR1 n38	20M	QPSK	1	1	DFT-30	Left Side	10mm	Ant 0	DSI 3/5	519000	2595	21.85	22.70	1.216	-	-	-0.03	0.084	0.102
	FR1 n38	20M	QPSK	1	1	DFT-30	Right Side	10mm	Ant 0	DSI 3/5	519000	2595	21.85	22.70	1.216	-	-	0.07	0.424	0.516
	FR1 n38	20M	QPSK	1	1	DFT-30	Bottom Side	10mm	Ant 0	DSI 3/5	519000	2595	21.85	22.70	1.216	-	-	-0.18	0.349	0.424
	FR1 n38	20M	QPSK	25	13	DFT-30	Front	10mm	Ant 0	DSI 3/5	519000	2595	21.83	22.70	1.222	-	-	0.05	0.371	0.453
	FR1 n38	20M	QPSK	25	13	DFT-30	Back	10mm	Ant 0	DSI 3/5	519000	2595	21.83	22.70	1.222	-	-	-0.08	0.575	0.703
	FR1 n38	20M	QPSK	25	13	DFT-30	Left Side	10mm	Ant 0	DSI 3/5	519000	2595	21.83	22.70	1.222	-	-	-0.14	0.079	0.097
	FR1 n38	20M	QPSK	25	13	DFT-30	Right Side	10mm	Ant 0	DSI 3/5	519000	2595	21.83	22.70	1.222	-	-	-0.05	0.418	0.511
	FR1 n38	20M	QPSK	25	13	DFT-30	Bottom Side	10mm	Ant 0	DSI 3/5	519000	2595	21.83	22.70	1.222	-	-	-0.19	0.342	0.418
	FR1 n38	20M	QPSK	1	1	DFT-30	Front	10mm	Ant 1	DSI 3/5	519000	2595	17.48	18.20	1.180	-	-	-0.03	0.227	0.268
	FR1 n38	20M	QPSK	1	1	DFT-30	Back	10mm	Ant 1	DSI 3/5	519000	2595	17.48	18.20	1.180	-	-	0.11	0.684	0.807



FCC SAR Test Report

Report No. : FA3D1301

	FR1 n38	20M	QPSK	1	1	DFT-30	Left Side	10mm	Ant 1	DSI 3/5	519000	2595	17.48	18.20	1.180	-	-	0.13	0.103	0.122
44	FR1 n38	20M	QPSK	1	1	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	519000	2595	17.48	18.20	1.180	-	-	-0.17	0.817	0.964
	FR1 n38	20M	QPSK	25	13	DFT-30	Front	10mm	Ant 1	DSI 3/5	519000	2595	17.46	18.20	1.186	-	-	0.15	0.216	0.256
	FR1 n38	20M	QPSK	25	13	DFT-30	Back	10mm	Ant 1	DSI 3/5	519000	2595	17.46	18.20	1.186	-	-	-0.07	0.569	0.675
	FR1 n38	20M	QPSK	25	13	DFT-30	Left Side	10mm	Ant 1	DSI 3/5	519000	2595	17.46	18.20	1.186	-	-	-0.02	0.094	0.111
	FR1 n38	20M	QPSK	25	13	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	519000	2595	17.46	18.20	1.186	-	-	0.14	0.604	0.716
	FR1 n38	20M	QPSK	50	0	DFT-30	Back	10mm	Ant 1	DSI 3/5	519000	2595	17.39	18.20	1.205	-	-	0.05	0.564	0.680
	FR1 n38	20M	QPSK	50	0	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	519000	2595	17.39	18.20	1.205	-	-	0.07	0.614	0.740
	FR1 n38	20M	QPSK	1	1	DFT-30	Front	10mm	Ant 2	DSI 3/5	519000	2595	17.70	19.20	1.413	-	-	0.05	0.072	0.102
	FR1 n38	20M	QPSK	1	1	DFT-30	Back	10mm	Ant 2	DSI 3/5	519000	2595	17.70	19.20	1.413	-	-	0.04	0.252	0.356
	FR1 n38	20M	QPSK	1	1	DFT-30	Left Side	10mm	Ant 2	DSI 3/5	519000	2595	17.70	19.20	1.413	-	-	0.01	0.274	0.387
	FR1 n38	20M	QPSK	25	13	DFT-30	Front	10mm	Ant 2	DSI 3/5	519000	2595	17.67	19.20	1.422	-	-	0.1	0.063	0.090
	FR1 n38	20M	QPSK	25	13	DFT-30	Back	10mm	Ant 2	DSI 3/5	519000	2595	17.67	19.20	1.422	-	-	0.12	0.250	0.356
	FR1 n38	20M	QPSK	25	13	DFT-30	Left Side	10mm	Ant 2	DSI 3/5	519000	2595	17.67	19.20	1.422	-	-	0.04	0.261	0.371
	FR1 n41	100M	QPSK	1	137	DFT-30	Front	10mm	Ant 0	DSI 3/5	518598	2592.99	20.01	20.95	1.242	-	-	0.11	0.261	0.324
	FR1 n41	100M	QPSK	1	137	DFT-30	Back	10mm	Ant 0	DSI 3/5	518598	2592.99	20.01	20.95	1.242	-	-	0.04	0.307	0.381
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Side	10mm	Ant 0	DSI 3/5	518598	2592.99	20.01	20.95	1.242	-	-	0.04	0.054	0.067
	FR1 n41	100M	QPSK	1	137	DFT-30	Right Side	10mm	Ant 0	DSI 3/5	518598	2592.99	20.01	20.95	1.242	-	-	0.04	0.275	0.341
	FR1 n41	100M	QPSK	1	137	DFT-30	Bottom Side	10mm	Ant 0	DSI 3/5	518598	2592.99	20.01	20.95	1.242	-	-	-0.06	0.218	0.271
	FR1 n41	100M	QPSK	135	69	DFT-30	Front	10mm	Ant 0	DSI 3/5	518598	2592.99	19.91	20.95	1.271	-	-	-0.16	0.263	0.334
	FR1 n41	100M	QPSK	135	69	DFT-30	Back	10mm	Ant 0	DSI 3/5	518598	2592.99	19.91	20.95	1.271	-	-	-0.14	0.320	0.407
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Side	10mm	Ant 0	DSI 3/5	518598	2592.99	19.91	20.95	1.271	-	-	0	0.056	0.071
	FR1 n41	100M	QPSK	135	69	DFT-30	Right Side	10mm	Ant 0	DSI 3/5	518598	2592.99	19.91	20.95	1.271	-	-	0.15	0.280	0.356
	FR1 n41	100M	QPSK	135	69	DFT-30	Bottom Side	10mm	Ant 0	DSI 3/5	518598	2592.99	19.91	20.95	1.271	-	-	-0.11	0.220	0.280
	FR1 n41	100M	QPSK	1	137	DFT-30	Front	10mm	Ant 1	DSI 3/5	518598	2592.99	17.55	18.45	1.230	-	-	-0.09	0.260	0.320
	FR1 n41	100M	QPSK	1	137	DFT-30	Back	10mm	Ant 1	DSI 3/5	518598	2592.99	17.55	18.45	1.230	-	-	0.09	0.621	0.764
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Side	10mm	Ant 1	DSI 3/5	518598	2592.99	17.55	18.45	1.230	-	-	-0.01	0.112	0.138
45	FR1 n41	100M	QPSK	1	137	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	518598	2592.99	17.55	18.45	1.230	-	-	0.06	0.827	1.017
	FR1 n41	100M	QPSK	135	69	DFT-30	Front	10mm	Ant 1	DSI 3/5	518598	2592.99	17.48	18.45	1.250	-	-	0.15	0.253	0.316
	FR1 n41	100M	QPSK	135	69	DFT-30	Back	10mm	Ant 1	DSI 3/5	518598	2592.99	17.48	18.45	1.250	-	-	0.04	0.608	0.760
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Side	10mm	Ant 1	DSI 3/5	518598	2592.99	17.48	18.45	1.250	-	-	0.1	0.107	0.134
	FR1 n41	100M	QPSK	135	69	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	518598	2592.99	17.48	18.45	1.250	-	-	-0.19	0.807	1.009
	FR1 n41	100M	QPSK	270	0	DFT-30	Back	10mm	Ant 1	DSI 3/5	518598	2592.99	17.38	18.45	1.279	-	-	0	0.595	0.761
	FR1 n41	100M	QPSK	270	0	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	518598	2592.99	17.38	18.45	1.279	-	-	-0.08	0.786	1.006
	FR1 n41	100M	QPSK	1	137	DFT-30	Front	10mm	Ant 2	DSI 3/5	518598	2592.99	16.68	18.45	1.503	-	-	-0.01	0.051	0.077
	FR1 n41	100M	QPSK	1	137	DFT-30	Back	10mm	Ant 2	DSI 3/5	518598	2592.99	16.68	18.45	1.503	-	-	0.04	0.137	0.206
	FR1 n41	100M	QPSK	1	137	DFT-30	Left Side	10mm	Ant 2	DSI 3/5	518598	2592.99	16.68	18.45	1.503	-	-	-0.14	0.195	0.293
	FR1 n41	100M	QPSK	135	69	DFT-30	Front	10mm	Ant 2	DSI 3/5	518598	2592.99	16.64	18.45	1.517	-	-	-0.16	0.056	0.085
	FR1 n41	100M	QPSK	135	69	DFT-30	Back	10mm	Ant 2	DSI 3/5	518598	2592.99	16.64	18.45	1.517	-	-	-0.01	0.146	0.221
	FR1 n41	100M	QPSK	135	69	DFT-30	Left Side	10mm	Ant 2	DSI 3/5	518598	2592.99	16.64	18.45	1.517	-	-	-0.03	0.206	0.313



<ENDC SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
835MHz																				
	LTE Band 26	15M	QPSK	1	37	-	Front	10mm	Ant 0	DSI 3/5	26865	831.5	20.33	21.00	1.167	-	-	-0.11	0.069	0.081
	LTE Band 26	15M	QPSK	1	37	-	Back	10mm	Ant 0	DSI 3/5	26865	831.5	20.33	21.00	1.167	-	-	0.12	0.123	0.144
	LTE Band 26	15M	QPSK	1	37	-	Left Side	10mm	Ant 0	DSI 3/5	26865	831.5	20.33	21.00	1.167	-	-	0.01	0.074	0.086
	LTE Band 26	15M	QPSK	1	37	-	Right Side	10mm	Ant 0	DSI 3/5	26865	831.5	20.33	21.00	1.167	-	-	-0.09	0.045	0.053
	LTE Band 26	15M	QPSK	1	37	-	Bottom Side	10mm	Ant 0	DSI 3/5	26865	831.5	20.33	21.00	1.167	-	-	0.16	0.107	0.125
	LTE Band 26	15M	QPSK	36	20	-	Front	10mm	Ant 0	DSI 3/5	26865	831.5	20.32	21.00	1.169	-	-	0.15	0.062	0.073
	LTE Band 26	15M	QPSK	36	20	-	Back	10mm	Ant 0	DSI 3/5	26865	831.5	20.32	21.00	1.169	-	-	-0.03	0.115	0.134
	LTE Band 26	15M	QPSK	36	20	-	Left Side	10mm	Ant 0	DSI 3/5	26865	831.5	20.32	21.00	1.169	-	-	0.17	0.071	0.083
	LTE Band 26	15M	QPSK	36	20	-	Right Side	10mm	Ant 0	DSI 3/5	26865	831.5	20.32	21.00	1.169	-	-	-0.09	0.041	0.048
	LTE Band 26	15M	QPSK	36	20	-	Bottom Side	10mm	Ant 0	DSI 3/5	26865	831.5	20.32	21.00	1.169	-	-	-0.06	0.091	0.106
	LTE Band 5	10M	QPSK	1	25	-	Front	10mm	Ant 0	DSI 3/5	20525	836.5	20.83	21.50	1.167	-	-	0.16	0.076	0.089
	LTE Band 5	10M	QPSK	1	25	-	Back	10mm	Ant 0	DSI 3/5	20525	836.5	20.83	21.50	1.167	-	-	0.01	0.153	0.179
	LTE Band 5	10M	QPSK	1	25	-	Left Side	10mm	Ant 0	DSI 3/5	20525	836.5	20.83	21.50	1.167	-	-	0.15	0.076	0.089
	LTE Band 5	10M	QPSK	1	25	-	Right Side	10mm	Ant 0	DSI 3/5	20525	836.5	20.83	21.50	1.167	-	-	-0.06	0.047	0.055
	LTE Band 5	10M	QPSK	1	25	-	Bottom Side	10mm	Ant 0	DSI 3/5	20525	836.5	20.83	21.50	1.167	-	-	0.03	0.109	0.127
	LTE Band 5	10M	QPSK	25	12	-	Front	10mm	Ant 0	DSI 3/5	20525	836.5	20.78	21.50	1.180	-	-	-0.01	0.073	0.086
	LTE Band 5	10M	QPSK	25	12	-	Back	10mm	Ant 0	DSI 3/5	20525	836.5	20.78	21.50	1.180	-	-	0.14	0.151	0.178
	LTE Band 5	10M	QPSK	25	12	-	Left Side	10mm	Ant 0	DSI 3/5	20525	836.5	20.78	21.50	1.180	-	-	0.08	0.071	0.084
	LTE Band 5	10M	QPSK	25	12	-	Right Side	10mm	Ant 0	DSI 3/5	20525	836.5	20.78	21.50	1.180	-	-	0.17	0.043	0.051
	LTE Band 5	10M	QPSK	25	12	-	Bottom Side	10mm	Ant 0	DSI 3/5	20525	836.5	20.78	21.50	1.180	-	-	-0.12	0.101	0.119
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 1	DSI 3/5	167300	836.5	21.69	23.20	1.416	-	-	-0.09	0.119	0.168
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 1	DSI 3/5	167300	836.5	21.69	23.20	1.416	-	-	-0.14	0.206	0.292
	FR1 n5	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	167300	836.5	21.69	23.20	1.416	-	-	0.02	0.079	0.112
	FR1 n5	20M	QPSK	1	1	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	167300	836.5	21.69	23.20	1.416	-	-	-0.05	0.185	0.262
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 1	DSI 3/5	167300	836.5	21.65	23.20	1.429	-	-	-0.15	0.122	0.174
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 1	DSI 3/5	167300	836.5	21.65	23.20	1.429	-	-	-0.13	0.195	0.279
	FR1 n5	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	167300	836.5	21.65	23.20	1.429	-	-	-0.16	0.079	0.113
	FR1 n5	20M	QPSK	50	28	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	167300	836.5	21.65	23.20	1.429	-	-	0.06	0.190	0.271
1750MHz																				
	LTE Band 4 Other PA	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	20175	1732.5	17.35	18.00	1.161	-	-	0.07	0.160	0.186
	LTE Band 4 Other PA	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	20175	1732.5	17.35	18.00	1.161	-	-	0.06	0.286	0.332
	LTE Band 4 Other PA	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	20175	1732.5	17.35	18.00	1.161	-	-	-	n/a	n/a
	LTE Band 4 Other PA	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	20175	1732.5	17.35	18.00	1.161	-	-	0.08	0.072	0.084
	LTE Band 4 Other PA	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	20175	1732.5	17.35	18.00	1.161	-	-	0.16	0.312	0.362
	LTE Band 4 Other PA(4A-n7A)	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	20175	1732.5	17.42	18.00	1.143	-	-	0.04	0.326	0.373
	LTE Band 4 Other PA	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	20175	1732.5	17.32	18.00	1.169	-	-	0.09	0.152	0.178
	LTE Band 4 Other PA	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	20175	1732.5	17.32	18.00	1.169	-	-	-0.05	0.279	0.326
	LTE Band 4 Other PA	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	20175	1732.5	17.32	18.00	1.169	-	-	-	n/a	n/a
	LTE Band 4 Other PA	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	20175	1732.5	17.32	18.00	1.169	-	-	-0.02	0.071	0.083
	LTE Band 4 Other PA	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	20175	1732.5	17.32	18.00	1.169	-	-	0.07	0.308	0.360
	LTE Band 66	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	132322	1745	16.04	17.25	1.321	-	-	-0.16	0.127	0.168
	LTE Band 66	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	132322	1745	16.04	17.25	1.321	-	-	-0.09	0.235	0.311
	LTE Band 66	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	132322	1745	16.04	17.25	1.321	-	-	-	n/a	n/a
	LTE Band 66	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	132322	1745	16.04	17.25	1.321	-	-	-0.13	0.056	0.074
	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	132322	1745	16.04	17.25	1.321	-	-	-0.07	0.294	0.388
	LTE Band 66 Other PA(66A-n7A)	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	132322	1745	15.98	17.25	1.340	-	-	0.18	0.283	0.379
	LTE Band 66 Other PA(66A-n38A)	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	132322	1745	16.05	17.25	1.318	-	-	-0.16	0.294	0.388
	LTE Band 66	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	132322	1745	16.01	17.25	1.330	-	-	0.06	0.126	0.168
	LTE Band 66	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	132322	1745	16.01	17.25	1.330	-	-	-0.17	0.234	0.311
	LTE Band 66	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	132322	1745	16.01	17.25	1.330	-	-	-	n/a	n/a
	LTE Band 66	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	132322	1745	16.01	17.25	1.330	-	-	0.11	0.056	0.075
	LTE Band 66	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	132322	1745	16.01	17.25	1.330	-	-	0.06	0.280	0.373
	LTE Band 66	20M	QPSK	1	49	-	Front	10mm	Ant 2	DSI 3/5	132322	1745	16.97	18.00	1.268	-	-	0.17	0.019	0.024



LTE Band 66	20M	QPSK	1	49	-	Back	10mm	Ant 2	DSI 3/5	132322	1745	16.97	18.00	1.268	-	-	-0.02	0.037	0.047
LTE Band 66	20M	QPSK	1	49	-	Left Side	10mm	Ant 2	DSI 3/5	132322	1745	16.97	18.00	1.268	-	-	0.02	0.044	0.056
LTE Band 66	20M	QPSK	50	24	-	Front	10mm	Ant 2	DSI 3/5	132322	1745	16.93	18.00	1.279	-	-	-0.1	0.018	0.023
LTE Band 66	20M	QPSK	50	24	-	Back	10mm	Ant 2	DSI 3/5	132322	1745	16.93	18.00	1.279	-	-	-0.17	0.036	0.046
LTE Band 66	20M	QPSK	50	24	-	Left Side	10mm	Ant 2	DSI 3/5	132322	1745	16.93	18.00	1.279	-	-	-0.16	0.044	0.056
FR1 n66	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 1	DSI 3/5	349000	1745	17.50	18.45	1.245	-	-	0.17	0.132	0.164
FR1 n66	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 1	DSI 3/5	349000	1745	17.50	18.45	1.245	-	-	0.14	0.176	0.219
FR1 n66	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	349000	1745	17.50	18.45	1.245	-	-	-0.16	0.026	0.032
FR1 n66	20M	QPSK	1	1	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	349000	1745	17.50	18.45	1.245	-	-	-0.05	0.232	0.289
FR1 n66	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 1	DSI 3/5	349000	1745	17.46	18.45	1.256	-	-	0.1	0.138	0.173
FR1 n66	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 1	DSI 3/5	349000	1745	17.46	18.45	1.256	-	-	0.01	0.183	0.230
FR1 n66	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	349000	1745	17.46	18.45	1.256	-	-	0.04	0.026	0.033
FR1 n66	20M	QPSK	50	28	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	349000	1745	17.46	18.45	1.256	-	-	0	0.245	0.308
FR1 n66	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 2	DSI 3/5	349000	1745	19.02	20.20	1.312	-	-	0.11	0.006	0.008
FR1 n66	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 2	DSI 3/5	349000	1745	19.02	20.20	1.312	-	-	0.04	0.034	0.045
FR1 n66	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 2	DSI 3/5	349000	1745	19.02	20.20	1.312	-	-	-0.17	0.035	0.046
FR1 n66	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 2	DSI 3/5	349000	1745	18.98	20.20	1.324	-	-	-0.02	0.005	0.007
FR1 n66	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 2	DSI 3/5	349000	1745	18.98	20.20	1.324	-	-	0.04	0.034	0.045
FR1 n66	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 2	DSI 3/5	349000	1745	18.98	20.20	1.324	-	-	-0.03	0.044	0.058
1900MHz																			
LTE Band 2	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	18900	1880	16.74	18.25	1.416	-	-	-0.09	0.143	0.202
LTE Band 2	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	18900	1880	16.74	18.25	1.416	-	-	-0.03	0.246	0.348
LTE Band 2	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	18900	1880	16.74	18.25	1.416	-	-	-	n/a	n/a
LTE Band 2	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	18900	1880	16.74	18.25	1.416	-	-	-0.06	0.065	0.092
LTE Band 2	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	18900	1880	16.74	18.25	1.416	-	-	0.12	0.336	0.476
LTE Band 2	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	18900	1880	16.66	18.25	1.442	-	-	0.08	0.142	0.205
LTE Band 2	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	18900	1880	16.66	18.25	1.442	-	-	-0.12	0.245	0.353
LTE Band 2	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	18900	1880	16.66	18.25	1.442	-	-	-	n/a	n/a
LTE Band 2	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	18900	1880	16.66	18.25	1.442	-	-	0.09	0.065	0.094
LTE Band 2	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	18900	1880	16.66	18.25	1.442	-	-	-0.16	0.334	0.482
2600MHz																			
LTE Band 7	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	21100	2535	17.70	18.50	1.202	-	-	-0.16	0.132	0.159
LTE Band 7	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	21100	2535	17.70	18.50	1.202	-	-	-0.1	0.193	0.232
LTE Band 7	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	21100	2535	17.70	18.50	1.202	-	-	0.15	0.036	0.043
LTE Band 7	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	21100	2535	17.70	18.50	1.202	-	-	0.11	0.154	0.185
LTE Band 7	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	21100	2535	17.70	18.50	1.202	-	-	-0.05	0.118	0.142
LTE Band 7 Other PA	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	21100	2535	17.56	18.50	1.242	-	-	0.08	0.192	0.238
LTE Band 7	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	21100	2535	17.63	18.50	1.222	-	-	0.1	0.131	0.160
LTE Band 7	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	21100	2535	17.63	18.50	1.222	-	-	-0.05	0.192	0.235
LTE Band 7	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	21100	2535	17.63	18.50	1.222	-	-	0	0.036	0.044
LTE Band 7	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	21100	2535	17.63	18.50	1.222	-	-	-0.11	0.153	0.187
LTE Band 7	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	21100	2535	17.63	18.50	1.222	-	-	-0.06	0.117	0.143
LTE Band 7	20M	QPSK	1	49	-	Front	10mm	Ant 2	DSI 3/5	21100	2535	13.65	14.25	1.148	-	-	-	n/a	n/a
LTE Band 7	20M	QPSK	1	49	-	Back	10mm	Ant 2	DSI 3/5	21100	2535	13.65	14.25	1.148	-	-	-0.06	0.062	0.071
LTE Band 7	20M	QPSK	1	49	-	Left Side	10mm	Ant 2	DSI 3/5	21100	2535	13.65	14.25	1.148	-	-	-0.06	0.067	0.077
LTE Band 7	20M	QPSK	50	24	-	Front	10mm	Ant 2	DSI 3/5	21100	2535	13.60	14.25	1.161	-	-	-	n/a	n/a
LTE Band 7	20M	QPSK	50	24	-	Back	10mm	Ant 2	DSI 3/5	21100	2535	13.60	14.25	1.161	-	-	0.09	0.062	0.072
LTE Band 7	20M	QPSK	50	24	-	Left Side	10mm	Ant 2	DSI 3/5	21100	2535	13.60	14.25	1.161	-	-	-0.06	0.067	0.078
LTE Band 38 Other PA	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	38000	2595	20.25	21.25	1.259	62.9	1.006	-0.01	0.170	0.215
LTE Band 38 Other PA	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	38000	2595	20.25	21.25	1.259	62.9	1.006	-0.17	0.241	0.305
LTE Band 38 Other PA	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	38000	2595	20.25	21.25	1.259	62.9	1.006	-0.11	0.046	0.058
LTE Band 38 Other PA	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	38000	2595	20.25	21.25	1.259	62.9	1.006	0.09	0.184	0.233
LTE Band 38 Other PA	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	38000	2595	20.25	21.25	1.259	62.9	1.006	-0.16	0.122	0.155
LTE Band 38 Other PA	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	38000	2595	20.20	21.25	1.274	62.9	1.006	0.15	0.169	0.217
LTE Band 38 Other PA	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	38000	2595	20.20	21.25	1.274	62.9	1.006	-0.11	0.240	0.307
LTE Band 38 Other PA	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	38000	2595	20.20	21.25	1.274	62.9	1.006	0.16	0.046	0.059
LTE Band 38 Other PA	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	38000	2595	20.20	21.25	1.274	62.9	1.006	0.19	0.183	0.234



FCC SAR Test Report

Report No. : FA3D1301

LTE Band 38 Other PA	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	38000	2595	20.20	21.25	1.274	62.9	1.006	-0.07	0.121	0.155
LTE Band 41 Other PA	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 3/5	41055	2636.5	20.85	21.50	1.161	62.9	1.006	0.12	0.137	0.160
LTE Band 41 Other PA	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 3/5	41055	2636.5	20.85	21.50	1.161	62.9	1.006	-0.19	0.200	0.234
LTE Band 41 Other PA	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 3/5	41055	2636.5	20.85	21.50	1.161	62.9	1.006	-	n/a	n/a
LTE Band 41 Other PA	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 3/5	41055	2636.5	20.85	21.50	1.161	62.9	1.006	0	0.151	0.176
LTE Band 41 Other PA	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 3/5	41055	2636.5	20.85	21.50	1.161	62.9	1.006	0	0.120	0.140
LTE Band 41 Other PA	20M	QPSK	50	24	-	Front	10mm	Ant 0	DSI 3/5	41055	2636.5	20.39	21.50	1.291	62.9	1.006	-0.11	0.136	0.177
LTE Band 41 Other PA	20M	QPSK	50	24	-	Back	10mm	Ant 0	DSI 3/5	41055	2636.5	20.39	21.50	1.291	62.9	1.006	0.07	0.199	0.258
LTE Band 41 Other PA	20M	QPSK	50	24	-	Left Side	10mm	Ant 0	DSI 3/5	41055	2636.5	20.39	21.50	1.291	62.9	1.006	-	n/a	n/a
LTE Band 41 Other PA	20M	QPSK	50	24	-	Right Side	10mm	Ant 0	DSI 3/5	41055	2636.5	20.39	21.50	1.291	62.9	1.006	-0.14	0.150	0.195
LTE Band 41 Other PA	20M	QPSK	50	24	-	Bottom Side	10mm	Ant 0	DSI 3/5	41055	2636.5	20.39	21.50	1.291	62.9	1.006	0.18	0.119	0.155
FR1 n7	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 1	DSI 3/5	507000	2535	16.15	16.95	1.202	-	-	0.12	0.169	0.203
FR1 n7	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 1	DSI 3/5	507000	2535	16.15	16.95	1.202	-	-	0.11	0.389	0.468
FR1 n7	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	507000	2535	16.15	16.95	1.202	-	-	-0.11	0.072	0.087
FR1 n7	20M	QPSK	1	1	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	507000	2535	16.15	16.95	1.202	-	-	0.07	0.558	0.671
FR1 n7	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 1	DSI 3/5	507000	2535	16.11	16.95	1.213	-	-	-0.16	0.166	0.201
FR1 n7	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 1	DSI 3/5	507000	2535	16.11	16.95	1.213	-	-	0.09	0.391	0.474
FR1 n7	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 1	DSI 3/5	507000	2535	16.11	16.95	1.213	-	-	-0.17	0.085	0.103
FR1 n7	20M	QPSK	50	28	DFT-15	Top Side	10mm	Ant 1	DSI 3/5	507000	2535	16.11	16.95	1.213	-	-	-0.07	0.583	0.707
FR1 n7	20M	QPSK	1	1	DFT-15	Front	10mm	Ant 2	DSI 3/5	507000	2535	16.18	17.95	1.503	-	-	0.01	0.042	0.063
FR1 n7	20M	QPSK	1	1	DFT-15	Back	10mm	Ant 2	DSI 3/5	507000	2535	16.18	17.95	1.503	-	-	0.08	0.118	0.177
FR1 n7	20M	QPSK	1	1	DFT-15	Left Side	10mm	Ant 2	DSI 3/5	507000	2535	16.18	17.95	1.503	-	-	0.08	0.155	0.233
FR1 n7	20M	QPSK	50	28	DFT-15	Front	10mm	Ant 2	DSI 3/5	507000	2535	16.14	17.95	1.517	-	-	-0.12	0.045	0.068
FR1 n7	20M	QPSK	50	28	DFT-15	Back	10mm	Ant 2	DSI 3/5	507000	2535	16.14	17.95	1.517	-	-	0.09	0.131	0.199
FR1 n7	20M	QPSK	50	28	DFT-15	Left Side	10mm	Ant 2	DSI 3/5	507000	2535	16.14	17.95	1.517	-	-	0.04	0.173	0.262
FR1 n38	20M	QPSK	1	1	DFT-30	Front	10mm	Ant 1	DSI 3/5	519000	2595	15.83	16.70	1.222	-	-	-0.18	0.146	0.178
FR1 n38	20M	QPSK	1	1	DFT-30	Back	10mm	Ant 1	DSI 3/5	519000	2595	15.83	16.70	1.222	-	-	0.16	0.484	0.591
FR1 n38	20M	QPSK	1	1	DFT-30	Left Side	10mm	Ant 1	DSI 3/5	519000	2595	15.83	16.70	1.222	-	-	-0.11	0.073	0.089
FR1 n38	20M	QPSK	1	1	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	519000	2595	15.83	16.70	1.222	-	-	0.01	0.528	0.645
FR1 n38	20M	QPSK	25	13	DFT-30	Front	10mm	Ant 1	DSI 3/5	519000	2595	15.80	16.70	1.230	-	-	0.17	0.153	0.188
FR1 n38	20M	QPSK	25	13	DFT-30	Back	10mm	Ant 1	DSI 3/5	519000	2595	15.80	16.70	1.230	-	-	-0.02	0.403	0.496
FR1 n38	20M	QPSK	25	13	DFT-30	Left Side	10mm	Ant 1	DSI 3/5	519000	2595	15.80	16.70	1.230	-	-	0.07	0.067	0.082
FR1 n38	20M	QPSK	25	13	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	519000	2595	15.80	16.70	1.230	-	-	-0.04	0.521	0.641
FR1 n38	20M	QPSK	1	1	DFT-30	Front	10mm	Ant 2	DSI 3/5	519000	2595	14.55	16.20	1.462	-	-	-0.07	0.031	0.045
FR1 n38	20M	QPSK	1	1	DFT-30	Back	10mm	Ant 2	DSI 3/5	519000	2595	14.55	16.20	1.462	-	-	0.15	0.126	0.184
FR1 n38	20M	QPSK	1	1	DFT-30	Left Side	10mm	Ant 2	DSI 3/5	519000	2595	14.55	16.20	1.462	-	-	-0.18	0.137	0.200
FR1 n38	20M	QPSK	25	13	DFT-30	Front	10mm	Ant 2	DSI 3/5	519000	2595	14.50	16.20	1.479	-	-	-0.01	0.032	0.047
FR1 n38	20M	QPSK	25	13	DFT-30	Back	10mm	Ant 2	DSI 3/5	519000	2595	14.50	16.20	1.479	-	-	-0.19	0.125	0.185
FR1 n38	20M	QPSK	25	13	DFT-30	Left Side	10mm	Ant 2	DSI 3/5	519000	2595	14.50	16.20	1.479	-	-	0.19	0.131	0.194
FR1 n41	100M	QPSK	1	137	DFT-30	Front	10mm	Ant 1	DSI 3/5	518598	2592.99	15.47	16.20	1.183	-	-	-0.16	0.158	0.187
FR1 n41	100M	QPSK	1	137	DFT-30	Back	10mm	Ant 1	DSI 3/5	518598	2592.99	15.47	16.20	1.183	-	-	-0.06	0.386	0.457
FR1 n41	100M	QPSK	1	137	DFT-30	Left Side	10mm	Ant 1	DSI 3/5	518598	2592.99	15.47	16.20	1.183	-	-	0.18	0.064	0.076
FR1 n41	100M	QPSK	1	137	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	518598	2592.99	15.47	16.20	1.183	-	-	-0.01	0.522	0.618
FR1 n41	100M	QPSK	135	69	DFT-30	Front	10mm	Ant 1	DSI 3/5	518598	2592.99	15.40	16.20	1.202	-	-	0.04	0.160	0.192
FR1 n41	100M	QPSK	135	69	DFT-30	Back	10mm	Ant 1	DSI 3/5	518598	2592.99	15.40	16.20	1.202	-	-	-0.18	0.390	0.469
FR1 n41	100M	QPSK	135	69	DFT-30	Left Side	10mm	Ant 1	DSI 3/5	518598	2592.99	15.40	16.20	1.202	-	-	-0.18	0.068	0.082
FR1 n41	100M	QPSK	135	69	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	518598	2592.99	15.40	16.20	1.202	-	-	-0.05	0.509	0.612
FR1 n41	100M	QPSK	270	0	DFT-30	Top Side	10mm	Ant 1	DSI 3/5	518598	2592.99	15.27	16.20	1.239	-	-	0.05	0.481	0.596
FR1 n41	100M	QPSK	1	137	DFT-30	Front	10mm	Ant 2	DSI 3/5	518598	2592.99	13.71	15.45	1.493	-	-	-0.04	0.026	0.039
FR1 n41	100M	QPSK	1	137	DFT-30	Back	10mm	Ant 2	DSI 3/5	518598	2592.99	13.71	15.45	1.493	-	-	0.19	0.069	0.103
FR1 n41	100M	QPSK	1	137	DFT-30	Left Side	10mm	Ant 2	DSI 3/5	518598	2592.99	13.71	15.45	1.493	-	-	0.14	0.098	0.146
FR1 n41	100M	QPSK	135	69	DFT-30	Front	10mm	Ant 2	DSI 3/5	518598	2592.99	13.62	15.45	1.524	-	-	-0.05	0.028	0.043
FR1 n41	100M	QPSK	135	69	DFT-30	Back	10mm	Ant 2	DSI 3/5	518598	2592.99	13.62	15.45	1.524	-	-	-0.13	0.073	0.111
FR1 n41	100M	QPSK	135	69	DFT-30	Left Side	10mm	Ant 2	DSI 3/5	518598	2592.99	13.62	15.45	1.524	-	-	-0.12	0.103	0.157



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scalling Factor	Duty Cycle %	Duty Cycle Scalling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	Bluetooth	DH5 1Mbps	Front	10mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	-0.03	0.014	0.024
46	Bluetooth	DH5 1Mbps	Back	10mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	-0.05	0.040	0.069
	Bluetooth	DH5 1Mbps	Right Side	10mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	0	0.034	0.059
	Bluetooth	DH5 1Mbps	Top Side	10mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	0	0.010	0.017
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 8	Hotspot on	1	2412	15.81	17.50	1.476	100	1.000	0.04	0.044	0.065
47	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 8	Hotspot on	1	2412	15.81	17.50	1.476	100	1.000	-0.06	0.079	0.116
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 8	Hotspot on	1	2412	15.81	17.50	1.476	100	1.000	-0.19	0.060	0.089
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 8	Hotspot on	1	2412	15.81	17.50	1.476	100	1.000	0	0.047	0.069
5000MHz-6000MHz																
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 8	Hotspot on	38	5190	11.11	13.00	1.545	94.77	1.055	0.06	0.083	0.135
48	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 8	Hotspot on	38	5190	11.11	13.00	1.545	94.77	1.055	0.04	0.152	0.248
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 8	Hotspot on	38	5190	11.11	13.00	1.545	94.77	1.055	0.13	0.135	0.220
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 8	Hotspot on	38	5190	11.11	13.00	1.545	94.77	1.055	0.05	0.149	0.243
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	10mm	Ant 8	Hotspot on	159	5795	12.64	14.50	1.533	94.77	1.055	-0.1	0.146	0.236
49	WLAN5.8GHz	802.11n-HT40 MCS0	Back	10mm	Ant 8	Hotspot on	159	5795	12.64	14.50	1.533	94.77	1.055	0.08	0.217	0.351
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 8	Hotspot on	159	5795	12.64	14.50	1.533	94.77	1.055	-0.11	0.164	0.265
	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 8	Hotspot on	159	5795	12.64	14.50	1.533	94.77	1.055	-0.04	0.204	0.330



14.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
50	LTE Band 12	10M	QPSK	1	25	-	Front	15mm	Ant 0	DSI 1	23095	707.5	23.62	24.50	1.225	-	-	-0.19	0.128	0.157
	LTE Band 12	10M	QPSK	1	25	-	Back	15mm	Ant 0	DSI 1	23095	707.5	23.62	24.50	1.225	-	-	-0.14	0.216	0.265
	LTE Band 12	10M	QPSK	25	12	-	Front	15mm	Ant 0	DSI 1	23095	707.5	22.12	23.50	1.374	-	-	-0.18	0.092	0.126
	LTE Band 12	10M	QPSK	25	12	-	Back	15mm	Ant 0	DSI 1	23095	707.5	22.12	23.50	1.374	-	-	0.1	0.127	0.175
	LTE Band 12	10M	QPSK	1	25	-	Front	15mm	Ant 1	DSI 1	23095	707.5	23.34	24.50	1.306	-	-	-0.19	0.100	0.131
	LTE Band 12	10M	QPSK	1	25	-	Back	15mm	Ant 1	DSI 1	23095	707.5	23.34	24.50	1.306	-	-	0.03	0.123	0.161
	LTE Band 12	10M	QPSK	25	12	-	Front	15mm	Ant 1	DSI 1	23095	707.5	21.84	23.50	1.466	-	-	-0.11	0.073	0.107
	LTE Band 12	10M	QPSK	25	12	-	Back	15mm	Ant 1	DSI 1	23095	707.5	21.84	23.50	1.466	-	-	-0.17	0.093	0.136
51	LTE Band 13	10M	QPSK	1	25	-	Front	15mm	Ant 0	DSI 1	23230	782	23.54	24.50	1.247	-	-	0.01	0.088	0.110
	LTE Band 13	10M	QPSK	1	25	-	Back	15mm	Ant 0	DSI 1	23230	782	23.54	24.50	1.247	-	-	0.04	0.088	0.110
	LTE Band 13	10M	QPSK	25	12	-	Front	15mm	Ant 0	DSI 1	23230	782	21.98	23.50	1.419	-	-	0.15	0.065	0.092
	LTE Band 13	10M	QPSK	25	12	-	Back	15mm	Ant 0	DSI 1	23230	782	21.98	23.50	1.419	-	-	-0.03	0.077	0.109
	LTE Band 13	10M	QPSK	1	25	-	Front	15mm	Ant 1	DSI 1	23230	782	23.11	24.50	1.377	-	-	0.12	0.112	0.154
	LTE Band 13	10M	QPSK	1	25	-	Back	15mm	Ant 1	DSI 1	23230	782	23.11	24.50	1.377	-	-	-0.1	0.190	0.262
	LTE Band 13	10M	QPSK	25	12	-	Front	15mm	Ant 1	DSI 1	23230	782	21.58	23.50	1.556	-	-	0.16	0.078	0.121
	LTE Band 13	10M	QPSK	25	12	-	Back	15mm	Ant 1	DSI 1	23230	782	21.58	23.50	1.556	-	-	-0.05	0.100	0.156
835MHz																				
52	GSM850	-	-	-	-	GPRS(2 Tx slots)	Front	15mm	Ant 0	DSI 1	189	836.4	30.69	32.00	1.352	-	-	-0.06	0.193	0.261
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Back	15mm	Ant 0	DSI 1	189	836.4	30.69	32.00	1.352	-	-	-0.01	0.219	0.296
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Front	15mm	Ant 1	DSI 1	189	836.4	30.22	32.00	1.507	-	-	0.07	0.160	0.241
	GSM850	-	-	-	-	GPRS(2 Tx slots)	Back	15mm	Ant 1	DSI 1	189	836.4	30.22	32.00	1.507	-	-	-0.12	0.181	0.273
53	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 1	4182	836.4	23.68	24.50	1.208	-	-	0.02	0.014	0.017
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 1	4182	836.4	23.68	24.50	1.208	-	-	0.08	0.022	0.027
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 1	4182	836.4	21.90	23.00	1.288	-	-	0.02	0.066	0.085
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 1	4182	836.4	21.90	23.00	1.288	-	-	0.17	0.151	0.195
	LTE Band 26	15M	QPSK	1	37	-	Front	15mm	Ant 0	DSI 1	26865	831.5	23.39	24.00	1.151	-	-	-0.15	0.118	0.136
54	LTE Band 26	15M	QPSK	1	37	-	Back	15mm	Ant 0	DSI 1	26865	831.5	23.39	24.00	1.151	-	-	-0.13	0.159	0.183
	LTE Band 26	15M	QPSK	36	20	-	Front	15mm	Ant 0	DSI 1	26865	831.5	22.27	23.00	1.183	-	-	0.15	0.095	0.112
	LTE Band 26	15M	QPSK	36	20	-	Back	15mm	Ant 0	DSI 1	26865	831.5	22.27	23.00	1.183	-	-	0.07	0.118	0.140
	LTE Band 26	15M	QPSK	1	37	-	Front	15mm	Ant 1	DSI 1	26865	831.5	23.12	24.00	1.225	-	-	-0.04	0.090	0.110
	LTE Band 26	15M	QPSK	1	37	-	Back	15mm	Ant 1	DSI 1	26865	831.5	23.12	24.00	1.225	-	-	0.05	0.104	0.127
	LTE Band 26	15M	QPSK	36	20	-	Front	15mm	Ant 1	DSI 1	26865	831.5	22.01	23.00	1.256	-	-	-0.09	0.074	0.093
	LTE Band 26	15M	QPSK	36	20	-	Back	15mm	Ant 1	DSI 1	26865	831.5	22.01	23.00	1.256	-	-	0.09	0.086	0.108
	LTE Band 5	10M	QPSK	1	25	-	Front	15mm	Ant 0	DSI 1	20525	836.5	23.75	24.50	1.189	-	-	0.06	0.122	0.145
55	LTE Band 5	10M	QPSK	1	25	-	Back	15mm	Ant 0	DSI 1	20525	836.5	23.75	24.50	1.189	-	-	0.03	0.172	0.204
	LTE Band 5	10M	QPSK	25	12	-	Front	15mm	Ant 0	DSI 1	20525	836.5	22.25	23.50	1.334	-	-	0.13	0.085	0.113
	LTE Band 5	10M	QPSK	25	12	-	Back	15mm	Ant 0	DSI 1	20525	836.5	22.25	23.50	1.334	-	-	-0.04	0.104	0.139
	LTE Band 5	10M	QPSK	1	25	-	Front	15mm	Ant 1	DSI 1	20525	836.5	23.58	24.50	1.236	-	-	0.04	0.108	0.133
	LTE Band 5	10M	QPSK	1	25	-	Back	15mm	Ant 1	DSI 1	20525	836.5	23.58	24.50	1.236	-	-	-0.1	0.121	0.150
	LTE Band 5	10M	QPSK	25	12	-	Front	15mm	Ant 1	DSI 1	20525	836.5	21.99	23.50	1.416	-	-	-0.02	0.075	0.106
	LTE Band 5	10M	QPSK	25	12	-	Back	15mm	Ant 1	DSI 1	20525	836.5	21.99	23.50	1.416	-	-	-0.02	0.087	0.123
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 0	DSI 1	167300	836.5	22.96	24.20	1.330	-	-	-0.11	0.122	0.162
56	FR1 n5	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 0	DSI 1	167300	836.5	22.96	24.20	1.330	-	-	-0.15	0.133	0.177
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 0	DSI 1	167300	836.5	22.91	24.20	1.346	-	-	0	0.125	0.168
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 0	DSI 1	167300	836.5	22.91	24.20	1.346	-	-	0.09	0.142	0.191
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 1	DSI 1	167300	836.5	22.74	24.20	1.400	-	-	0.09	0.109	0.153
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 1	DSI 1	167300	836.5	22.74	24.20	1.400	-	-	-0.12	0.123	0.172
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 1	DSI 1	167300	836.5	22.65	24.20	1.429	-	-	0.13	0.110	0.157
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 1	DSI 1	167300	836.5	22.65	24.20	1.429	-	-	-0.15	0.126	0.180
	1750MHz																			



	WCDMA IV	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 1	1413	1732.6	21.44	22.50	1.276	-	-	-0.05	0.233	0.297	
57	WCDMA IV	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 1	1413	1732.6	21.44	22.50	1.276	-	-	-0.19	0.334	0.426	
	WCDMA IV	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 1	1413	1732.6	20.22	21.00	1.197	-	-	0.08	0.040	0.048	
	WCDMA IV	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 1	1413	1732.6	20.22	21.00	1.197	-	-	0.12	0.049	0.059	
	LTE Band 4	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	20175	1732.5	21.03	21.75	1.180	-	-	0.18	0.227	0.268
	LTE Band 4	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	20175	1732.5	21.03	21.75	1.180	-	-	-0.05	0.308	0.364
	LTE Band 4	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	20175	1732.5	20.99	21.75	1.191	-	-	0.01	0.229	0.273
58	LTE Band 4	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	20175	1732.5	20.99	21.75	1.191	-	-	0.06	0.324	0.386
	LTE Band 4	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 1	20175	1732.5	20.41	21.00	1.146	-	-	0.18	0.148	0.170
	LTE Band 4	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 1	20175	1732.5	20.41	21.00	1.146	-	-	0.17	0.181	0.207
	LTE Band 4	20M	QPSK	50	24	-	Front	15mm	Ant 1	DSI 1	20175	1732.5	20.40	21.00	1.148	-	-	0.15	0.151	0.173
	LTE Band 4	20M	QPSK	50	24	-	Back	15mm	Ant 1	DSI 1	20175	1732.5	20.40	21.00	1.148	-	-	-0.05	0.187	0.215
	LTE Band 4	20M	QPSK	1	49	-	Front	15mm	Ant 2	DSI 1	20175	1732.5	21.38	22.50	1.294	-	-	-0.05	0.015	0.019
	LTE Band 4	20M	QPSK	1	49	-	Back	15mm	Ant 2	DSI 1	20175	1732.5	21.38	22.50	1.294	-	-	0.18	0.031	0.040
	LTE Band 4	20M	QPSK	50	24	-	Front	15mm	Ant 2	DSI 1	20175	1732.5	20.92	22.00	1.282	-	-	0.02	0.011	0.014
	LTE Band 4	20M	QPSK	50	24	-	Back	15mm	Ant 2	DSI 1	20175	1732.5	20.92	22.00	1.282	-	-	0.18	0.020	0.026
	LTE Band 66	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	132322	1745	20.76	21.50	1.186	-	-	-0.06	0.227	0.269
	LTE Band 66	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	132322	1745	20.76	21.50	1.186	-	-	-0.13	0.336	0.398
	LTE Band 66	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	132322	1745	20.66	21.50	1.213	-	-	-0.05	0.226	0.274
59	LTE Band 66	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	132322	1745	20.66	21.50	1.213	-	-	0.02	0.342	0.415
	LTE Band 66	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 1	132322	1745	19.82	20.00	1.042	-	-	-0.11	0.126	0.131
	LTE Band 66	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 1	132322	1745	19.82	20.00	1.042	-	-	0.18	0.171	0.178
	LTE Band 66	20M	QPSK	50	24	-	Front	15mm	Ant 1	DSI 1	132322	1745	19.71	20.00	1.069	-	-	0.16	0.125	0.134
	LTE Band 66	20M	QPSK	50	24	-	Back	15mm	Ant 1	DSI 1	132322	1745	19.71	20.00	1.069	-	-	0.07	0.176	0.188
	LTE Band 66	20M	QPSK	1	49	-	Front	15mm	Ant 2	DSI 1	132322	1745	21.07	22.00	1.239	-	-	0.18	0.022	0.027
	LTE Band 66	20M	QPSK	1	49	-	Back	15mm	Ant 2	DSI 1	132322	1745	21.07	22.00	1.239	-	-	-0.18	0.034	0.042
	LTE Band 66	20M	QPSK	50	24	-	Front	15mm	Ant 2	DSI 1	132322	1745	20.58	21.50	1.236	-	-	-0.19	0.015	0.019
	LTE Band 66	20M	QPSK	50	24	-	Back	15mm	Ant 2	DSI 1	132322	1745	20.58	21.50	1.236	-	-	0.09	0.026	0.032
	FR1 n66	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 0	DSI 1	349000	1745	21.90	22.70	1.202	-	-	0.1	0.264	0.317
	FR1 n66	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 0	DSI 1	349000	1745	21.90	22.70	1.202	-	-	0.17	0.422	0.507
	FR1 n66	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 0	DSI 1	349000	1745	21.87	22.70	1.211	-	-	-0.02	0.271	0.328
60	FR1 n66	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 0	DSI 1	349000	1745	21.87	22.70	1.211	-	-	0.14	0.476	0.576
	FR1 n66	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 1	DSI 1	349000	1745	21.08	21.70	1.153	-	-	-0.19	0.151	0.174
	FR1 n66	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 1	DSI 1	349000	1745	21.08	21.70	1.153	-	-	-0.11	0.189	0.218
	FR1 n66	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 1	DSI 1	349000	1745	21.05	21.70	1.161	-	-	-0.18	0.162	0.188
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 1	DSI 1	349000	1745	21.05	21.70	1.161	-	-	0.06	0.192	0.223
	FR1 n66	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 2	DSI 1	349000	1745	22.08	23.20	1.294	-	-	0.1	0.019	0.025
	FR1 n66	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 2	DSI 1	349000	1745	22.08	23.20	1.294	-	-	-0.18	0.041	0.053
	FR1 n66	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 2	DSI 1	349000	1745	22.04	23.20	1.306	-	-	0.07	0.014	0.018
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 2	DSI 1	349000	1745	22.04	23.20	1.306	-	-	0.12	0.032	0.042
1900MHz																				
	GSM1900	-	-	-	GPRS(2 Tx slots)	Front	15mm	Ant 0	DSI 1	661	1880	28.07	29.00	1.239	-	-	0.09	0.228	0.282	
61	GSM1900	-	-	-	GPRS(2 Tx slots)	Back	15mm	Ant 0	DSI 1	661	1880	28.07	29.00	1.239	-	-	0.14	0.413	0.512	
	GSM1900	-	-	-	GPRS(4 Tx slots)	Front	15mm	Ant 1	DSI 1	661	1880	22.52	23.25	1.183	-	-	0.07	0.129	0.153	
	GSM1900	-	-	-	GPRS(4 Tx slots)	Back	15mm	Ant 1	DSI 1	661	1880	22.52	23.25	1.183	-	-	0.12	0.184	0.218	
	WCDMA II	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 1	9400	1880	21.67	22.50	1.211	-	-	-0.06	0.221	0.268	
62	WCDMA II	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 1	9400	1880	21.67	22.50	1.211	-	-	-0.18	0.380	0.460	
	WCDMA II	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 1	9400	1880	20.02	20.75	1.183	-	-	0.07	0.103	0.122	
	WCDMA II	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 1	9400	1880	20.02	20.75	1.183	-	-	-0.07	0.117	0.138	
	LTE Band 2	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	18900	1880	20.91	22.00	1.285	-	-	0.12	0.213	0.274
	LTE Band 2	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	18900	1880	20.91	22.00	1.285	-	-	-0.15	0.328	0.422
	LTE Band 2	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	18900	1880	20.88	22.00	1.294	-	-	-0.01	0.217	0.281
63	LTE Band 2	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	18900	1880	20.88	22.00	1.294	-	-	0.02	0.359	0.465
	LTE Band 2	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 1	18900	1880	19.33	20.00	1.167	-	-	0.1	0.130	0.152
	LTE Band 2	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 1	18900	1880	19.33	20.00	1.167	-	-	0.17	0.184	0.215
	LTE Band 2	20M	QPSK	50	24	-	Front	15mm	Ant 1	DSI 1	18900	1880	19.27	20.00	1.183	-	-	0.1	0.130	0.154



FCC SAR Test Report

Report No. : FA3D1301

	LTE Band 2	20M	QPSK	50	24	-	Back	15mm	Ant 1	DSI 1	18900	1880	19.27	20.00	1.183	-	-	-0.16	0.190	0.225
2600MHz																				
	LTE Band 7	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	21100	2535	21.88	22.50	1.153	-	-	0.08	0.264	0.305
	LTE Band 7	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	21100	2535	21.88	22.50	1.153	-	-	0.17	0.316	0.364
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 1	21100 21298	2535 2554.8	21.66	22.50	1.213	-	-	0.03	0.157	0.191
	LTE Band 7	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	21100	2535	21.82	22.50	1.169	-	-	0.01	0.257	0.301
	LTE Band 7	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	21100	2535	21.82	22.50	1.169	-	-	-0.09	0.306	0.358
	LTE Band 7	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 1	21350	2560	19.86	20.50	1.159	-	-	0.06	0.212	0.246
	LTE Band 7	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 1	21350	2560	19.86	20.50	1.159	-	-	-0.09	0.342	0.396
	LTE Band 7	20M	QPSK	50	24	-	Front	15mm	Ant 1	DSI 1	21350	2560	19.84	20.50	1.164	-	-	0.01	0.215	0.250
64	LTE Band 7	20M	QPSK	50	24	-	Back	15mm	Ant 1	DSI 1	21350	2560	19.84	20.50	1.164	-	-	-0.03	0.508	0.591
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 1	21350 21152	2560 2540.2	19.68	20.50	1.208	-	-	-0.01	0.325	0.393
	LTE Band 7	20M	QPSK	1	49	-	Front	15mm	Ant 2	DSI 1	21100	2535	17.88	18.00	1.028	-	-	0.03	0.015	0.015
	LTE Band 7	20M	QPSK	1	49	-	Back	15mm	Ant 2	DSI 1	21100	2535	17.88	18.00	1.028	-	-	-0.1	0.076	0.078
	LTE Band 7	20M	QPSK	50	24	-	Front	15mm	Ant 2	DSI 1	21100	2535	17.78	18.00	1.052	-	-	0.01	0.012	0.013
	LTE Band 7	20M	QPSK	50	24	-	Back	15mm	Ant 2	DSI 1	21100	2535	17.78	18.00	1.052	-	-	-0.03	0.078	0.082
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 1	21100 21298	2535 2554.8	17.68	18.00	1.076	-	-	0.05	0.072	0.078
	LTE Band 38	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	38000	2595	23.39	24.00	1.151	62.9	1.006	-0.01	0.209	0.242
	LTE Band 38	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	38000	2595	23.39	24.00	1.151	62.9	1.006	-0.06	0.300	0.347
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 1	37901 38099	2585.1 2604.9	22.69	24.00	1.352	62.9	1.006	-0.04	0.100	0.136
	LTE Band 38	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	38000	2595	22.34	23.00	1.164	62.9	1.006	0.12	0.171	0.200
	LTE Band 38	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	38000	2595	22.34	23.00	1.164	62.9	1.006	-0.02	0.246	0.288
	LTE Band 38	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 1	38000	2595	22.53	23.25	1.180	62.9	1.006	-0.16	0.208	0.247
	LTE Band 38	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 1	38000	2595	22.53	23.25	1.180	62.9	1.006	-0.02	0.484	0.575
	LTE Band 38	20M	QPSK	50	24	-	Front	15mm	Ant 1	DSI 1	38000	2595	22.20	23.00	1.202	62.9	1.006	-0.16	0.231	0.279
65	LTE Band 38	20M	QPSK	50	24	-	Back	15mm	Ant 1	DSI 1	38000	2595	22.20	23.00	1.202	62.9	1.006	-0.18	0.487	0.589
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 1	37901 38099	2585.1 2604.9	22.09	23.25	1.306	62.9	1.006	0.04	0.241	0.317
	LTE Band 38	20M	QPSK	1	49	-	Front	15mm	Ant 2	DSI 1	38000	2595	19.69	20.50	1.205	62.9	1.006	0.02	0.030	0.036
	LTE Band 38	20M	QPSK	1	49	-	Back	15mm	Ant 2	DSI 1	38000	2595	19.69	20.50	1.205	62.9	1.006	0.07	0.095	0.116
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 1	37901 38099	2585.1 2604.9	19.38	20.50	1.294	62.9	1.006	0.02	0.059	0.077
	LTE Band 38	20M	QPSK	50	24	-	Front	15mm	Ant 2	DSI 1	38000	2595	19.66	20.50	1.213	62.9	1.006	-0.19	0.025	0.031
	LTE Band 38	20M	QPSK	50	24	-	Back	15mm	Ant 2	DSI 1	38000	2595	19.66	20.50	1.213	62.9	1.006	-0.09	0.090	0.110
	LTE Band 41	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	41055	2636.5	23.91	24.50	1.146	62.9	1.006	-0.17	0.198	0.228
	LTE Band 41	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	41055	2636.5	23.91	24.50	1.146	62.9	1.006	0.11	0.247	0.285
	LTE Band 41C	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 1	41055 41253	2636.5 2656.3	23.28	24.50	1.324	62.9	1.006	-0.01	0.134	0.179
	LTE Band 41	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	41055	2636.5	22.48	23.50	1.265	62.9	1.006	0.08	0.135	0.172
	LTE Band 41	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	41055	2636.5	22.48	23.50	1.265	62.9	1.006	0.19	0.176	0.224
	LTE Band 41	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 1	41055	2636.5	22.29	22.75	1.112	62.9	1.006	0.01	0.189	0.211
66	LTE Band 41	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 1	41055	2636.5	22.29	22.75	1.112	62.9	1.006	-0.03	0.370	0.414
	LTE Band 41C	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 1	40185 40383	2549.5 2569.3	21.82	22.75	1.239	62.9	1.006	0.08	0.237	0.295
	LTE Band 41	20M	QPSK	50	24	-	Front	15mm	Ant 1	DSI 1	41055	2636.5	22.02	22.75	1.183	62.9	1.006	0.15	0.149	0.178
	LTE Band 41	20M	QPSK	50	24	-	Back	15mm	Ant 1	DSI 1	41055	2636.5	22.02	22.75	1.183	62.9	1.006	-0.03	0.341	0.406
	LTE Band 41	20M	QPSK	1	49	-	Front	15mm	Ant 2	DSI 1	40185	2549.5	20.05	20.50	1.109	62.9	1.006	0.09	0.031	0.035
	LTE Band 41	20M	QPSK	1	49	-	Back	15mm	Ant 2	DSI 1	40185	2549.5	20.05	20.50	1.109	62.9	1.006	-0.04	0.095	0.106
	LTE Band 41	20M	QPSK	50	24	-	Front	15mm	Ant 2	DSI 1	40185	2549.5	19.95	20.50	1.135	62.9	1.006	0.1	0.035	0.040
	LTE Band 41	20M	QPSK	50	24	-	Back	15mm	Ant 2	DSI 1	40185	2549.5	19.95	20.50	1.135	62.9	1.006	0.09	0.097	0.111
	LTE Band 41C	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 1	40185 40383	2549.5 2569.3	19.71	20.50	1.199	62.9	1.006	0.05	0.059	0.071
	FR1 n7	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 0	DSI 1	507000	2535	22.33	22.95	1.153	-	-	0.02	0.294	0.339
	FR1 n7	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 0	DSI 1	507000	2535	22.33	22.95	1.153	-	-	-0.06	0.388	0.448
	FR1 n7	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 0	DSI 1	507000	2535	22.23	22.95	1.180	-	-	-0.14	0.301	0.355
	FR1 n7	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 0	DSI 1	507000	2535	22.23	22.95	1.180	-	-	-0.1	0.391	0.462
	FR1 n7	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 1	DSI 1	507000	2535	19.70	20.45	1.189	-	-	0.16	0.194	0.231
	FR1 n7	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 1	DSI 1	507000	2535	19.70	20.45	1.189	-	-	0.01	0.438	0.521
	FR1 n7	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 1	DSI 1	507000	2535	19.66	20.45	1.199	-	-	-0.06	0.201	0.241



67	FR1 n7	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 1	DSI 1	507000	2535	19.66	20.45	1.199	-	-	0.14	0.553	0.663
	FR1 n7	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 2	DSI 1	507000	2535	20.30	21.95	1.462	-	-	0.01	0.055	0.080
	FR1 n7	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 2	DSI 1	507000	2535	20.30	21.95	1.462	-	-	0.07	0.129	0.189
	FR1 n7	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 2	DSI 1	507000	2535	20.27	21.95	1.472	-	-	-0.13	0.060	0.088
	FR1 n7	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 2	DSI 1	507000	2535	20.27	21.95	1.472	-	-	0.04	0.136	0.200
	FR1 n38	20M	QPSK	1	1	DFT-30	Front	15mm	Ant 0	DSI 1	519000	2595	22.85	23.70	1.216	-	-	0.17	0.261	0.317
	FR1 n38	20M	QPSK	1	1	DFT-30	Back	15mm	Ant 0	DSI 1	519000	2595	22.85	23.70	1.216	-	-	-0.09	0.388	0.472
	FR1 n38	20M	QPSK	25	13	DFT-30	Front	15mm	Ant 0	DSI 1	519000	2595	22.82	23.70	1.225	-	-	-0.09	0.186	0.228
	FR1 n38	20M	QPSK	25	13	DFT-30	Back	15mm	Ant 0	DSI 1	519000	2595	22.82	23.70	1.225	-	-	0.13	0.291	0.356
	FR1 n38	20M	QPSK	1	1	DFT-30	Front	15mm	Ant 1	DSI 1	519000	2595	20.48	21.20	1.180	-	-	-0.14	0.241	0.284
68	FR1 n38	20M	QPSK	1	1	DFT-30	Back	15mm	Ant 1	DSI 1	519000	2595	20.48	21.20	1.180	-	-	0.09	0.545	0.643
	FR1 n38	20M	QPSK	25	13	DFT-30	Front	15mm	Ant 1	DSI 1	519000	2595	20.44	21.20	1.191	-	-	0.05	0.231	0.275
	FR1 n38	20M	QPSK	25	13	DFT-30	Back	15mm	Ant 1	DSI 1	519000	2595	20.44	21.20	1.191	-	-	-0.04	0.530	0.631
	FR1 n38	20M	QPSK	1	1	DFT-30	Front	15mm	Ant 2	DSI 1	519000	2595	18.68	20.20	1.419	-	-	0.04	0.037	0.053
	FR1 n38	20M	QPSK	1	1	DFT-30	Back	15mm	Ant 2	DSI 1	519000	2595	18.68	20.20	1.419	-	-	-0.18	0.094	0.133
	FR1 n38	20M	QPSK	25	13	DFT-30	Front	15mm	Ant 2	DSI 1	519000	2595	18.65	20.20	1.429	-	-	0.18	0.040	0.057
	FR1 n38	20M	QPSK	25	13	DFT-30	Back	15mm	Ant 2	DSI 1	519000	2595	18.65	20.20	1.429	-	-	0.15	0.096	0.137
	FR1 n41	100M	QPSK	1	137	DFT-30	Front	15mm	Ant 0	DSI 1	518598	2592.99	21.01	21.95	1.242	-	-	0.17	0.191	0.237
	FR1 n41	100M	QPSK	1	137	DFT-30	Back	15mm	Ant 0	DSI 1	518598	2592.99	21.01	21.95	1.242	-	-	0.19	0.248	0.308
	FR1 n41	100M	QPSK	135	69	DFT-30	Front	15mm	Ant 0	DSI 1	518598	2592.99	20.89	21.95	1.276	-	-	0.02	0.195	0.249
	FR1 n41	100M	QPSK	135	69	DFT-30	Back	15mm	Ant 0	DSI 1	518598	2592.99	20.89	21.95	1.276	-	-	-0.16	0.253	0.323
	FR1 n41	100M	QPSK	1	137	DFT-30	Front	15mm	Ant 1	DSI 1	518598	2592.99	19.05	19.95	1.230	-	-	-0.05	0.167	0.205
	FR1 n41	100M	QPSK	1	137	DFT-30	Back	15mm	Ant 1	DSI 1	518598	2592.99	19.05	19.95	1.230	-	-	-0.02	0.383	0.471
	FR1 n41	100M	QPSK	135	69	DFT-30	Front	15mm	Ant 1	DSI 1	518598	2592.99	19.00	19.95	1.245	-	-	0.03	0.168	0.209
69	FR1 n41	100M	QPSK	135	69	DFT-30	Back	15mm	Ant 1	DSI 1	518598	2592.99	19.00	19.95	1.245	-	-	0.01	0.478	0.595
	FR1 n41	100M	QPSK	1	137	DFT-30	Front	15mm	Ant 2	DSI 1	518598	2592.99	17.68	19.45	1.503	-	-	0.14	0.030	0.045
	FR1 n41	100M	QPSK	1	137	DFT-30	Back	15mm	Ant 2	DSI 1	518598	2592.99	17.68	19.45	1.503	-	-	-0.16	0.071	0.107
	FR1 n41	100M	QPSK	135	69	DFT-30	Front	15mm	Ant 2	DSI 1	518598	2592.99	17.65	19.45	1.514	-	-	0.06	0.035	0.053
	FR1 n41	100M	QPSK	135	69	DFT-30	Back	15mm	Ant 2	DSI 1	518598	2592.99	17.65	19.45	1.514	-	-	-0.19	0.075	0.114



<ENDC SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
835MHz																				
	LTE Band 26	15M	QPSK	1	37	-	Front	15mm	Ant 0	DSI 1	26865	831.5	21.83	22.50	1.167	-	-	-0.06	0.086	0.100
	LTE Band 26	15M	QPSK	1	37	-	Back	15mm	Ant 0	DSI 1	26865	831.5	21.83	22.50	1.167	-	-	0.11	0.108	0.126
	LTE Band 26	15M	QPSK	36	20	-	Front	15mm	Ant 0	DSI 1	26865	831.5	21.82	22.50	1.169	-	-	-0.05	0.080	0.094
	LTE Band 26	15M	QPSK	36	20	-	Back	15mm	Ant 0	DSI 1	26865	831.5	21.82	22.50	1.169	-	-	0.02	0.104	0.122
	LTE Band 5	10M	QPSK	1	25	-	Front	15mm	Ant 0	DSI 1	20525	836.5	21.84	22.75	1.233	-	-	-0.13	0.081	0.100
	LTE Band 5	10M	QPSK	1	25	-	Back	15mm	Ant 0	DSI 1	20525	836.5	21.84	22.75	1.233	-	-	0.18	0.109	0.134
	LTE Band 5	10M	QPSK	25	12	-	Front	15mm	Ant 0	DSI 1	20525	836.5	21.81	22.75	1.242	-	-	0.08	0.082	0.102
	LTE Band 5	10M	QPSK	25	12	-	Back	15mm	Ant 0	DSI 1	20525	836.5	21.81	22.75	1.242	-	-	-0.07	0.104	0.129
	FR1 n5	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 1	DSI 1	167300	836.5	22.74	24.20	1.400	-	-	0.09	0.109	0.153
	FR1 n5	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 1	DSI 1	167300	836.5	22.74	24.20	1.400	-	-	-0.12	0.123	0.172
	FR1 n5	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 1	DSI 1	167300	836.5	22.65	24.20	1.429	-	-	0.13	0.110	0.157
	FR1 n5	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 1	DSI 1	167300	836.5	22.65	24.20	1.429	-	-	-0.15	0.126	0.180
1750MHz																				
	LTE Band 4 Other PA	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	20175	1732.5	18.86	19.50	1.159	-	-	-0.14	0.136	0.158
	LTE Band 4 Other PA	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	20175	1732.5	18.86	19.50	1.159	-	-	-0.12	0.232	0.269
	LTE Band 4 Other PA(4A-n7A)	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	20175	1732.5	18.93	19.50	1.140	-	-	0.02	0.235	0.268
	LTE Band 4 Other PA	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	20175	1732.5	18.85	19.50	1.161	-	-	-0.04	0.140	0.163
	LTE Band 4 Other PA	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	20175	1732.5	18.85	19.50	1.161	-	-	-0.07	0.231	0.268
	LTE Band 4 Other PA(4A-n7A)	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	20175	1732.5	18.91	19.50	1.146	-	-	-0.13	0.233	0.267
	LTE Band 66	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	132322	1745	17.60	18.50	1.230	-	-	0.1	0.107	0.132
	LTE Band 66	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	132322	1745	17.60	18.50	1.230	-	-	0.01	0.171	0.210
	LTE Band 66 Other PA(66A-n7A)	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	132322	1745	17.52	18.50	1.253	-	-	0.08	0.136	0.170
	LTE Band 66 Other PA(66A-n38A)	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	132322	1745	17.50	18.50	1.259	-	-	0.05	0.137	0.172
	LTE Band 66	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	132322	1745	17.56	18.50	1.242	-	-	-0.06	0.103	0.128
	LTE Band 66	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	132322	1745	17.56	18.50	1.242	-	-	0.11	0.165	0.205
	LTE Band 66	20M	QPSK	1	49	-	Front	15mm	Ant 2	DSI 1	132322	1745	18.53	19.50	1.250	-	-	-0.11	0.111	0.139
	LTE Band 66	20M	QPSK	1	49	-	Back	15mm	Ant 2	DSI 1	132322	1745	18.53	19.50	1.250	-	-	-0.12	0.195	0.244
	LTE Band 66	20M	QPSK	50	24	-	Front	15mm	Ant 2	DSI 1	132322	1745	18.48	19.50	1.265	-	-	-0.15	0.107	0.135
	LTE Band 66	20M	QPSK	50	24	-	Back	15mm	Ant 2	DSI 1	132322	1745	18.48	19.50	1.265	-	-	-0.05	0.198	0.250
	FR1 n66	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 1	DSI 1	349000	1745	19.05	19.70	1.161	-	-	0.17	0.095	0.110
	FR1 n66	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 1	DSI 1	349000	1745	19.05	19.70	1.161	-	-	-0.02	0.119	0.138
	FR1 n66	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 1	DSI 1	349000	1745	19.01	19.70	1.172	-	-	-0.05	0.102	0.120
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 1	DSI 1	349000	1745	19.01	19.70	1.172	-	-	-0.15	0.121	0.142
	FR1 n66	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 2	DSI 1	349000	1745	21.03	22.20	1.309	-	-	-0.18	0.015	0.020
	FR1 n66	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 2	DSI 1	349000	1745	21.03	22.20	1.309	-	-	0.08	0.037	0.048
	FR1 n66	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 2	DSI 1	349000	1745	21.01	22.20	1.315	-	-	-0.07	0.013	0.017
	FR1 n66	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 2	DSI 1	349000	1745	21.01	22.20	1.315	-	-	-0.02	0.034	0.045
1900MHz																				
	LTE Band 2	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	18900	1880	18.25	19.50	1.334	-	-	0.05	0.087	0.116
	LTE Band 2	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	18900	1880	18.25	19.50	1.334	-	-	0.01	0.167	0.223
	LTE Band 2	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	18900	1880	18.23	19.50	1.340	-	-	0.08	0.086	0.115
	LTE Band 2	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	18900	1880	18.23	19.50	1.340	-	-	-0.16	0.165	0.221
2600MHz																				
	LTE Band 7	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	21100	2535	19.22	20.00	1.197	-	-	0.04	0.082	0.098
	LTE Band 7	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	21100	2535	19.22	20.00	1.197	-	-	0.06	0.133	0.159
	LTE Band 7 Other PA	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	21100	2535	19.07	20.00	1.239	-	-	0.11	0.088	0.109
	LTE Band 7	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	21100	2535	19.20	20.00	1.202	-	-	-0.14	0.077	0.093
	LTE Band 7	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	21100	2535	19.20	20.00	1.202	-	-	-0.15	0.130	0.156
	LTE Band 7	20M	QPSK	1	49	-	Front	15mm	Ant 2	DSI 1	21100	2535	15.18	15.50	1.076	-	-	-	n/a	n/a
	LTE Band 7	20M	QPSK	1	49	-	Back	15mm	Ant 2	DSI 1	21100	2535	15.18	15.50	1.076	-	-	0.16	0.026	0.028
	LTE Band 7	20M	QPSK	50	24	-	Front	15mm	Ant 2	DSI 1	21100	2535	15.16	15.50	1.081	-	-	0.07	0.027	0.029



LTE Band 7	20M	QPSK	50	24	-	Back	15mm	Ant 2	DSI 1	21100	2535	15.16	15.50	1.081	-	-	0.14	0.025	0.027
LTE Band 38 Other PA	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	38000	2595	21.79	22.75	1.247	62.9	1.006	0.02	0.076	0.095
LTE Band 38 Other PA	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	38000	2595	21.79	22.75	1.247	62.9	1.006	0.01	0.127	0.159
LTE Band 38 Other PA	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	38000	2595	21.76	22.75	1.256	62.9	1.006	0.15	0.066	0.083
LTE Band 38 Other PA	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	38000	2595	21.76	22.75	1.256	62.9	1.006	0.1	0.131	0.166
LTE Band 41 Other PA	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 1	41055	2636.5	22.36	23.00	1.159	62.9	1.006	0.11	0.087	0.101
LTE Band 41 Other PA	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 1	41055	2636.5	22.36	23.00	1.159	62.9	1.006	0.17	0.157	0.183
LTE Band 41 Other PA	20M	QPSK	50	24	-	Front	15mm	Ant 0	DSI 1	41055	2636.5	21.96	23.00	1.271	62.9	1.006	-0.08	0.081	0.104
LTE Band 41 Other PA	20M	QPSK	50	24	-	Back	15mm	Ant 0	DSI 1	41055	2636.5	21.96	23.00	1.271	62.9	1.006	-0.11	0.142	0.182
FR1 n7	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 1	DSI 1	507000	2535	18.17	18.95	1.197	-	-	0.06	0.137	0.164
FR1 n7	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 1	DSI 1	507000	2535	18.17	18.95	1.197	-	-	0	0.310	0.371
FR1 n7	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 1	DSI 1	507000	2535	18.12	18.95	1.211	-	-	0.15	0.142	0.172
FR1 n7	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 1	DSI 1	507000	2535	18.12	18.95	1.211	-	-	-0.04	0.391	0.473
FR1 n7	20M	QPSK	1	1	DFT-15	Front	15mm	Ant 2	DSI 1	507000	2535	18.22	19.95	1.489	-	-	-0.16	0.035	0.052
FR1 n7	20M	QPSK	1	1	DFT-15	Back	15mm	Ant 2	DSI 1	507000	2535	18.22	19.95	1.489	-	-	-0.02	0.081	0.121
FR1 n7	20M	QPSK	50	28	DFT-15	Front	15mm	Ant 2	DSI 1	507000	2535	18.17	19.95	1.507	-	-	-0.03	0.032	0.048
FR1 n7	20M	QPSK	50	28	DFT-15	Back	15mm	Ant 2	DSI 1	507000	2535	18.17	19.95	1.507	-	-	0.17	0.086	0.130
FR1 n38	20M	QPSK	1	1	DFT-30	Front	15mm	Ant 1	DSI 1	519000	2595	18.38	19.20	1.208	-	-	-0.16	0.126	0.152
FR1 n38	20M	QPSK	1	1	DFT-30	Back	15mm	Ant 1	DSI 1	519000	2595	18.38	19.20	1.208	-	-	-0.03	0.344	0.415
FR1 n38	20M	QPSK	25	13	DFT-30	Front	15mm	Ant 1	DSI 1	519000	2595	18.35	19.20	1.216	-	-	-0.05	0.146	0.178
FR1 n38	20M	QPSK	25	13	DFT-30	Back	15mm	Ant 1	DSI 1	519000	2595	18.35	19.20	1.216	-	-	-0.03	0.334	0.406
FR1 n38	20M	QPSK	1	1	DFT-30	Front	15mm	Ant 2	DSI 1	519000	2595	16.54	18.20	1.466	-	-	0.02	0.023	0.034
FR1 n38	20M	QPSK	1	1	DFT-30	Back	15mm	Ant 2	DSI 1	519000	2595	16.54	18.20	1.466	-	-	0.15	0.059	0.086
FR1 n38	20M	QPSK	25	13	DFT-30	Front	15mm	Ant 2	DSI 1	519000	2595	16.49	18.20	1.483	-	-	-0.02	0.025	0.037
FR1 n38	20M	QPSK	25	13	DFT-30	Back	15mm	Ant 2	DSI 1	519000	2595	16.49	18.20	1.483	-	-	0.14	0.061	0.090
FR1 n41	100M	QPSK	1	137	DFT-30	Front	15mm	Ant 1	DSI 1	518598	2592.99	17.04	17.95	1.233	-	-	-0.13	0.105	0.129
FR1 n41	100M	QPSK	1	137	DFT-30	Back	15mm	Ant 1	DSI 1	518598	2592.99	17.04	17.95	1.233	-	-	0.12	0.242	0.298
FR1 n41	100M	QPSK	135	69	DFT-30	Front	15mm	Ant 1	DSI 1	518598	2592.99	16.97	17.95	1.253	-	-	0.16	0.106	0.133
FR1 n41	100M	QPSK	135	69	DFT-30	Back	15mm	Ant 1	DSI 1	518598	2592.99	16.97	17.95	1.253	-	-	-0.08	0.302	0.378
FR1 n41	100M	QPSK	1	137	DFT-30	Front	15mm	Ant 2	DSI 1	518598	2592.99	15.72	17.45	1.489	-	-	0.11	0.019	0.028
FR1 n41	100M	QPSK	1	137	DFT-30	Back	15mm	Ant 2	DSI 1	518598	2592.99	15.72	17.45	1.489	-	-	0.14	0.045	0.067
FR1 n41	100M	QPSK	135	69	DFT-30	Front	15mm	Ant 2	DSI 1	518598	2592.99	15.68	17.45	1.503	-	-	0.11	0.018	0.027
FR1 n41	100M	QPSK	135	69	DFT-30	Back	15mm	Ant 2	DSI 1	518598	2592.99	15.68	17.45	1.503	-	-	0.08	0.047	0.071

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	Bluetooth	DH5 1Mbps	Front	15mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	0.02	0.009	0.015
70	Bluetooth	DH5 1Mbps	Back	15mm	Ant 8	Full	0	2402	12.80	14.00	1.318	76.84	1.301	0.01	0.017	0.029
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 8	Standalone	1	2412	18.40	20.00	1.445	100	1.000	-0.13	0.030	0.043
71	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 8	Standalone	1	2412	18.40	20.00	1.445	100	1.000	0.08	0.053	0.076
5000MHz-6000MHz																
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	15mm	Ant 8	Standalone	54	5270	15.01	17.00	1.581	94.77	1.055	0.13	0.179	0.299
72	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 8	Standalone	54	5270	15.01	17.00	1.581	94.77	1.055	0.04	0.263	0.439
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 8	Standalone	110	5550	15.73	17.50	1.502	94.77	1.055	-0.03	0.232	0.368
73	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 8	Standalone	110	5550	15.73	17.50	1.502	94.77	1.055	0.06	0.350	0.555
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	15mm	Ant 8	Standalone	159	5795	15.68	17.50	1.519	94.77	1.055	-0.12	0.185	0.297
74	WLAN5.8GHz	802.11n-HT40 MCS0	Back	15mm	Ant 8	Standalone	159	5795	15.68	17.50	1.519	94.77	1.055	-0.1	0.242	0.388



14.4 Product specific 10g SAR

Table with 20 columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Mode, Test Position, Gap (mm), Antenna, Power State, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Duty Cycle %, Duty Cycle Scaling Factor, Power Drift (dB), Measured 10g SAR (W/kg), Reported 10g SAR (W/kg). The table contains multiple rows of test data for various bands (LTE, FR1) and modulation schemes (QPSK, DFT-15, DFT-30).



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
5000MHz-6000MHz																
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 8	Standalone	54	5270	15.01	17.00	1.581	94.77	1.055	0.18	0.670	1.118
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 8	Standalone	54	5270	15.01	17.00	1.581	94.77	1.055	0.06	0.497	0.829
81	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 8	Standalone	54	5270	15.01	17.00	1.581	94.77	1.055	0.12	0.779	1.300
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 8	Standalone	54	5270	15.01	17.00	1.581	94.77	1.055	0.17	0.689	1.149
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 8	Standalone	110	5550	15.73	17.50	1.502	94.77	1.055	-0.02	0.688	1.090
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 8	Standalone	110	5550	15.73	17.50	1.502	94.77	1.055	0.1	0.603	0.955
82	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 8	Standalone	110	5550	15.73	17.50	1.502	94.77	1.055	-0.08	0.717	1.136
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 8	Standalone	110	5550	15.73	17.50	1.502	94.77	1.055	-0.17	0.712	1.128

14.5 Repeated SAR Measurement

<1g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 12	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	23.34	24.50	1.306	-	-	0.09	0.887	1	1.159
2nd	LTE Band 12	10M	QPSK	1	25	-	Right Cheek	0mm	Ant 1	DSI 2	23095	707.5	23.34	24.50	1.306	-	-	0.05	0.853	1.040	1.114
1st	GSM850	-	-	-	-	GPRS(4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	251	848.8	24.07	24.50	1.104	-	-	0.06	0.879	1	0.970
2nd	GSM850	-	-	-	-	GPRS(4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 2	251	848.8	24.07	24.50	1.104	-	-	-0.04	0.862	1.020	0.952
1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9400	1880	16.83	17.50	1.167	-	-	-0.14	0.843	1	0.984
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 2	9400	1880	16.83	17.50	1.167	-	-	0.04	0.811	1.039	0.946
1st	LTE Band 38	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	38000	2595	19.69	20.50	1.205	62.9	1.006	0.19	0.940	1	1.140
2nd	LTE Band 38	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 3/5	38000	2595	19.69	20.50	1.205	62.9	1.006	0.19	0.920	1.022	1.115

<10g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	LTE Band 7	20M	QPSK	50	24	Top Side	0mm	Ant 1	DSI 1	20850	2510	19.78	20.50	1.180	-0.07	2.350	1	2.774
2nd	LTE Band 7	20M	QPSK	50	24	Top Side	0mm	Ant 1	DSI 1	20850	2510	19.78	20.50	1.180	0.05	2.110	1.114	2.490

General Note:

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

15. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	WLAN 5GHz + Bluetooth	Yes	Yes	Yes	Yes
5.	WWAN + WLAN 5GHz + Bluetooth	Yes	Yes	Yes	Yes
6.	WWAN + WLAN2.4GHz+NFC				Yes
7.	WWAN + WLAN5GHz+NFC				Yes
8.	WWAN + Bluetooth+NFC				Yes
9.	WLAN 5GHz + Bluetooth+NFC				Yes
10.	WWAN + WLAN 5GHz + Bluetooth+NFC				Yes

General Note:

- This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5G NR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- WWAN above includes 5G NR bands and EN-DC combination.
- EUT will choose each GSM, WCDMA, LTE and 5G NR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- For 5G NR EN-DC mode, standalone SAR performed for 5G NR NSA band with the maximum power, EN-DC SAR summed EN-DC mode 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
- The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
- According to the EUT characteristic, WLAN 2.4GHz and Bluetooth cannot transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz cannot transmit simultaneously.
- NFC can transmit simultaneously with other Radios in extremity exposure condition.
- When stand-alone SAR is not required for a transmitter or antenna, its SAR is considered zero in the SAR summing process to assess Multi-band transmission SAR compliance.
- The maximum SAR summation is calculated based on the same configuration and test position.
- For standalone WWAN, always choose the highest SAR among the selected WWAN bands within the selected antenna for each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each band.
- When EN-DC SAR co-located with WLAN/Bluetooth, chose the worst SAR among the selected LTE bands within the selected antenna per each test position and also the worst SAR of the selected 5G NR Bands within the selected antenna to do co-located with WLAN/Bluetooth. This is the worst co-located analysis and can represent each LTE bands and each 5G NR bands.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.



15.1 Head Exposure Conditions

WWAN Band	Exposure Position	1	4	5	1+5	4+5
		WWAN	WLAN5GHz Ant 8	Bluetooth Ant 8	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 0	Right Cheek	0.632	0.293	0.046	0.68	0.34
	Right Tilted	0.321	0.298	0.042	0.36	0.34
	Left Cheek	0.345	1.138	0.213	0.56	1.35
	Left Tilted	0.278	0.730	0.142	0.42	0.87
Ant 1	Right Cheek	1.159	0.293	0.046	1.21	0.34
	Right Tilted	1.100	0.298	0.042	1.14	0.34
	Left Cheek	0.796	1.138	0.213	1.01	1.35
	Left Tilted	0.703	0.730	0.142	0.85	0.87
Ant 2	Right Cheek	1.032	0.293	0.046	1.08	0.34
	Right Tilted	0.193	0.298	0.042	0.24	0.34
	Left Cheek	0.304	1.138	0.213	0.52	1.35
	Left Tilted	0.142	0.730	0.142	0.28	0.87

WWAN Band	Exposure Position	1	3	4	1+3	1+4
		WWAN	WLAN2.4GHz Ant 8	WLAN5GHz Ant 8	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 0	Right Cheek	0.632	0.017	0.142	0.65	0.77
	Right Tilted	0.321	0.062	0.167	0.38	0.49
	Left Cheek	0.345	0.166	0.523	0.51	0.87
	Left Tilted	0.278	0.113	0.327	0.39	0.61
Ant 1	Right Cheek	1.159	0.017	0.142	1.18	1.30
	Right Tilted	1.100	0.062	0.167	1.16	1.27
	Left Cheek	0.796	0.166	0.523	0.96	1.32
	Left Tilted	0.703	0.113	0.327	0.82	1.03
Ant 2	Right Cheek	1.032	0.017	0.142	1.05	1.17
	Right Tilted	0.193	0.062	0.167	0.26	0.36
	Left Cheek	0.304	0.166	0.523	0.47	0.83
	Left Tilted	0.142	0.113	0.327	0.26	0.47

WWAN Band	Exposure Position	1	4	5	1+4+5
		WWAN	WLAN5GHz Ant 8	Bluetooth Ant 8	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 0	Right Cheek	0.632	0.142	0.046	0.82
	Right Tilted	0.321	0.167	0.042	0.53
	Left Cheek	0.345	0.523	0.213	1.08
	Left Tilted	0.278	0.327	0.142	0.75
Ant 1	Right Cheek	1.159	0.142	0.046	1.35
	Right Tilted	1.100	0.167	0.042	1.31
	Left Cheek	0.796	0.523	0.213	1.53
	Left Tilted	0.703	0.327	0.142	1.17
Ant 2	Right Cheek	1.032	0.142	0.046	1.22
	Right Tilted	0.193	0.167	0.042	0.40
	Left Cheek	0.304	0.523	0.213	1.04
	Left Tilted	0.142	0.327	0.142	0.61



<ENDC>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5	1+2+4+5
			WWAN	FR1	WLAN2.4GHz Ant 8	WLAN5GHz Ant 8	Bluetooth Ant 8	Summed	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
All Band LTE Ant 0	All Band FR1 Ant 1	Right Cheek	0.527	0.703	0.017	0.142	0.046	1.25	1.37	1.28	1.42
		Right Tilted	0.254	0.743	0.062	0.167	0.042	1.06	1.16	1.04	1.21
		Left Cheek	0.263	0.486	0.166	0.523	0.213	0.92	1.27	0.96	1.49
		Left Tilted	0.203	0.472	0.113	0.327	0.142	0.79	1.00	0.82	1.14
All Band LTE Ant 0	All Band FR1 Ant 2	Right Cheek	0.527	0.745	0.017	0.142	0.046	1.29	1.41	1.32	1.46
		Right Tilted	0.254	0.139	0.062	0.167	0.042	0.46	0.56	0.44	0.60
		Left Cheek	0.263	0.245	0.166	0.523	0.213	0.67	1.03	0.72	1.24
		Left Tilted	0.203	0.112	0.113	0.327	0.142	0.43	0.64	0.46	0.78
All Band LTE Ant 2	All Band FR1 Ant 1	Right Cheek	0.290	0.703	0.017	0.142	0.046	1.01	1.14	1.04	1.18
		Right Tilted	0.084	0.743	0.062	0.167	0.042	0.89	0.99	0.87	1.04
		Left Cheek	0.131	0.486	0.166	0.523	0.213	0.78	1.14	0.83	1.35
		Left Tilted	0.082	0.472	0.113	0.327	0.142	0.67	0.88	0.70	1.02



15.2 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	3	4	5	1+3	1+4	1+5	4+5	1+4+5
		WWAN	WLAN2.4GHz Ant 8	WLAN5GHz Ant 8	Bluetooth Ant 8	Summed	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 0	Front	0.473	0.065	0.236	0.024	0.54	0.71	0.50	0.26	0.73
	Back	0.809	0.116	0.351	0.069	0.93	1.16	0.88	0.42	1.23
	Left side	0.361				0.36	0.36	0.36	0.00	0.36
	Right side	0.519	0.089	0.265	0.059	0.61	0.78	0.58	0.32	0.84
	Top side		0.069	0.330	0.017	0.07	0.33	0.02	0.35	0.35
	Bottom side	0.946				0.95	0.95	0.95	0.00	0.95
Ant 1	Front	0.345	0.065	0.236	0.024	0.41	0.58	0.37	0.26	0.61
	Back	0.889	0.116	0.351	0.069	1.01	1.24	0.96	0.42	1.31
	Left side	0.209				0.21	0.21	0.21	0.00	0.21
	Right side		0.089	0.265	0.059	0.09	0.27	0.06	0.32	0.32
	Top side	1.140	0.069	0.330	0.017	1.21	1.47	1.16	0.35	1.49
	Bottom side					0.00	0.00	0.00	0.00	0.00
Ant 2	Front	0.125	0.065	0.236	0.024	0.19	0.36	0.15	0.26	0.39
	Back	0.363	0.116	0.351	0.069	0.48	0.71	0.43	0.42	0.78
	Left side	0.481				0.48	0.48	0.48	0.00	0.48

<ENDC>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5	1+2+4+5
			WWAN	FR1	WLAN2.4GHz Ant 8	WLAN5GHz Ant 8	Bluetooth Ant 8	Summed	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
All Band LTE Ant 0	All Band FR1 Ant 1	Front	0.217	0.203	0.065	0.236	0.024	0.49	0.66	0.44	0.68
		Back	0.353	0.591	0.116	0.351	0.069	1.06	1.30	1.01	1.36
		Left side	0.089	0.113				0.20	0.20	0.20	0.20
		Right side	0.234		0.089	0.265	0.059	0.32	0.50	0.29	0.56
		Top side		0.707	0.069	0.330	0.017	0.78	1.04	0.72	1.05
		Bottom side	0.482					0.48	0.48	0.48	0.48
All Band LTE Ant 0	All Band FR1 Ant 2	Front	0.217	0.068	0.065	0.236	0.024	0.35	0.52	0.31	0.55
		Back	0.353	0.199	0.116	0.351	0.069	0.67	0.90	0.62	0.97
		Left side	0.089	0.262				0.35	0.35	0.35	0.35
		Right side	0.234		0.089	0.265	0.059	0.32	0.50	0.29	0.56
		Top side			0.069	0.330	0.017	0.07	0.33	0.02	0.35
		Bottom side	0.482					0.48	0.48	0.48	0.48
All Band LTE Ant 2	All Band FR1 Ant 1	Front	0.024	0.203	0.065	0.236	0.024	0.29	0.46	0.25	0.49
		Back	0.072	0.591	0.116	0.351	0.069	0.78	1.01	0.73	1.08
		Left side	0.078	0.113				0.19	0.19	0.19	0.19
		Right side			0.089	0.265	0.059	0.09	0.27	0.06	0.32
		Top side		0.707	0.069	0.330	0.017	0.78	1.04	0.72	1.05
		Bottom side						0.00	0.00	0.00	0.00



15.3 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	3	4	5	1+3	1+4	1+5	1+4+5	5+4
		WWAN	WLAN2.4GHz Ant 8	WLAN5GHz Ant 8	Bluetooth Ant 8	Summed	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
Ant 0	Front	0.355	0.043	0.368	0.015	0.40	0.72	0.37	0.74	0.38
	Back	0.576	0.076	0.555	0.029	0.65	1.13	0.61	1.16	0.58
Ant 1	Front	0.284	0.043	0.368	0.015	0.33	0.65	0.30	0.67	0.38
	Back	0.663	0.076	0.555	0.029	0.74	1.22	0.69	1.25	0.58
Ant 2	Front	0.088	0.043	0.368	0.015	0.13	0.46	0.10	0.47	0.38
	Back	0.200	0.076	0.555	0.029	0.28	0.76	0.23	0.78	0.58

<ENDC>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5	1+2+4+5
			WWAN	FR1	WLAN2.4GHz Ant 8	WLAN5GHz Ant 8	Bluetooth Ant 8	Summed	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
All Band LTE Ant 0	All Band FR1 Ant 1	Front	0.163	0.178	0.043	0.368	0.015	0.38	0.71	0.36	0.72
		Back	0.269	0.473	0.076	0.555	0.029	0.82	1.30	0.77	1.33
All Band LTE Ant 0	All Band FR1 Ant 2	Front	0.163	0.052	0.043	0.368	0.015	0.26	0.58	0.23	0.60
		Back	0.269	0.130	0.076	0.555	0.029	0.48	0.95	0.43	0.98
All Band LTE Ant 2	All Band FR1 Ant 1	Front	0.139	0.178	0.043	0.368	0.015	0.36	0.69	0.33	0.70
		Back	0.250	0.473	0.076	0.555	0.029	0.80	1.28	0.75	1.31

15.4 Product specific 10g SAR Exposure Conditions

Remark:

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

WWAN Band	Exposure Position	1	4	6	1+4+6
		WWAN	WLAN5GHz Ant 8	NFC	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
ant 0	Front		1.118		1.12
	Back		0.955	0.009	0.96
	Left side				0.00
	Right side		1.300		1.30
	Top side		1.149	0.001	1.15
	Bottom side				0.00
ant 1	Front		1.118		1.12
	Back	2.136	0.955	0.009	3.10
	Left side				0.00
	Right side		1.300		1.30
	Top side	1.917	1.149	0.001	3.07
	Bottom side				0.00
ant 2	Front		1.118		1.12
	Back		0.955	0.009	0.96
	Left side				0.00
	Right side		1.300		1.30
	Top side		1.149	0.001	1.15
	Bottom side				0.00

Test Engineer : Hank Huang, Kevin Xu, David Dai, Bin He



16. Uncertainty Assessment

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

17. References

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