



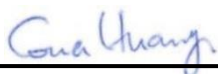
FCC SAR TEST REPORT

FCC ID : A4RG020B
Equipment : Smartphone
Model Name : G020B
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, CA 94043, USA
Standard : FCC 47 CFR Part 2 (2.1093)
ANSI/IEEE C95.1-1992
IEEE 1528-2013

The product was received on Oct. 28, 2019 and testing was started from Oct. 30, 2019 and completed on Dec. 11, 2019. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager

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Table of Contents

1. Statement of Compliance	4
2. Guidance Applied.....	4
3. Equipment Under Test (EUT) Information.....	5
3.1 General Information	5
3.2 Maximum Tune-up Limit.....	6
3.3 General LTE SAR Test and Reporting Considerations.....	16
4. RF Exposure Limits	19
4.1 Uncontrolled Environment.....	19
4.2 Controlled Environment.....	19
5. Specific Absorption Rate (SAR).....	20
5.1 Introduction	20
5.2 SAR Definition.....	20
6. System Description and Setup	21
6.1 E-Field Probe	22
6.2 Data Acquisition Electronics (DAE)	22
6.3 Phantom.....	23
6.4 Device Holder	24
7. Measurement Procedures	25
7.1 Spatial Peak SAR Evaluation.....	25
7.2 Power Reference Measurement.....	26
7.3 Area Scan	26
7.4 Zoom Scan.....	27
7.5 Volume Scan Procedures.....	27
7.6 Power Drift Monitoring.....	27
8. Test Equipment List.....	28
9. System Verification	29
9.1 Tissue Simulating Liquids.....	29
9.2 Tissue Verification	30
9.3 System Performance Check Results.....	32
10. RF Exposure Positions	34
10.1 Ear and handset reference point.....	34
10.2 Definition of the cheek position	35
10.3 Definition of the tilt position	36
10.4 Product Specific Exposure	36
10.5 Body Worn Accessory	37
10.6 Wireless Router.....	37
11. WiFi OFF Conducted RF Output Power (Unit: dBm)	38
12. WiFi ON Conducted RF Output Power (Unit: dBm).....	100
13. LTE Carrier Aggregation combinations	148
14. WWAN OFF & WWAN ON WLAN Conducted Power	151
15. Bluetooth Conducted RF Output Power (Unit: dBm)	158
16. RF Exposure position consideration.....	158
17. SAR Test Results	159
17.1 Head SAR	161
17.2 Hotspot SAR	167
17.3 Body Worn Accessory SAR.....	181
17.4 Product Specific SAR.....	189
17.5 Repeated SAR Measurement	190
18. Simultaneous Transmission Analysis.....	191
18.1 Head Exposure Conditions	192
18.2 Hotspot Exposure Conditions.....	196
18.3 Body-Worn Accessory Exposure Conditions	201
18.4 Product Specific Exposure Conditions	204
19. Uncertainty Assessment	205
20. References.....	205
Appendix A. Plots of System Performance Check	
Appendix B. Plots of High SAR Measurement	
Appendix C. DASY Calibration Certificate	
Appendix D. Test Setup Photos	

History of this test report

Report No.	Version	Description	Issued Date
FA9O2116	01	Initial issue of report	Feb. 05, 2020
FA9O2116	02	Update page 10 and section 11	Feb. 14, 2020



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Google LLC, Smartphone, G020B, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary				Highest Simultaneous Transmission 1g SAR (W/kg)
		Head (Separation 0mm)	Body-worn (Separation 10mm)	Hotspot (Separation 10mm)	Product Specific (Separation 0mm)	
		1g SAR (W/kg)			10g SAR (W/kg)	
Licensed	GSM850	0.41	0.45	0.45		1.59
	GSM1900	0.23	0.69	0.91		
	WCDMA II	0.67	1.17	1.18		
	WCDMA IV	0.34	0.59	0.59		
	WCDMA V	0.24	0.39	0.39		
	CDMA BC0	0.37	0.49	0.47		
	CDMA BC1	0.66	1.12	1.14		
	CDMA BC10	0.34	0.43	0.43		
	LTE Band 7	0.54	1.16	1.16		
	LTE Band 12 / 17	0.16	0.39	0.39		
	LTE Band 13	0.33	0.38	0.38		
	LTE Band 2 / 25	0.69	1.11	1.17		
	LTE Band 5 / 26	0.40	0.50	0.50		
	LTE Band 38	0.35	0.70	0.70		
	LTE Band 41	0.33	0.82	0.82		
	LTE Band 4 / 66	0.43	0.84	0.99		
DTS	2.4GHz WLAN	0.30	0.50	0.50		1.59
NII	5GHz WLAN	0.49	0.97	1.08	2.64	1.59
DSS	Bluetooth	0.51	0.14	0.14		1.54
Date of Testing:		2019/10/30 ~ 2019/12/11				

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body, 4.0 W/kg for Product Specific) 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

Reviewed by: Jason Wang

Report Producer: Wan Liu

2. 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
- FCC KDB 941225 D07 UMPC Mini Tablet v01r02

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Smartphone
Model Name	G020B
FCC ID	A4RG020B
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz CDMA2000 BC0: 824.7 MHz ~ 848.31 MHz CDMA 2000 BC1: 1851.25 MHz ~ 1908.75 MHz CDMA 2000 BC10: 817.9 MHz ~ 823.1 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2472 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
Mode	GSM/GPRS/EGPRS/DTM RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA CDMA2000 : 1xRTT/1xEv-Do(Rev.0)/1xEv-Do(Rev.A) LTE: QPSK, 16QAM, 64QAM WLAN: 802.11a/b/g/n/ac HT20 / HT40 / VHT20 / VHT40 / VHT80 Bluetooth BR/EDR/LE NFC:ASK
GSM / (E)GPRS Dual Transfer mode	Class A – EUT can support Packet Switched and Circuit Switched Network simultaneously.
EUT Stage	Identical Prototype
Remark: 1. This is a Class II permissive change test report and the test plan is included in the operational description.	

3.2 Maximum Tune-up Limit

General Note:

1. For the cellular band is including in 0/1/2/3 transmit antennas, the antenna selection are based on the connection quality condition, and only one antenna will transmit at a time.
2. The device have several power modes which are determined by the exposure conditions with or without simultaneous transmission in head/hotspot/body-worn conditions, the detailed implementation of the detection of the use cases and the power table control is illustrated in the operational description exhibit.
3. When WWAN single transmitting or WWAN off and WiFi/BT is transmitting which is consider as standalone mode, When WWAN and WLAN/BT transmission at the same time which is consider as simultaneous transmission mode.
4. Please find below target values of the maximum level of the production unit, and include a tolerance of +0 / -3 dB.

WLAN OFF						
Band		Maximum Tune Up Power (dBm)	Head Mode		Body-Worn	
			Ant-0 Default power	Ant-1 Power table 3	Ant-0 Default power	Ant-1 Default power
GSM850	GSM (GMSK, 1Tx-slot)	34.0	34.0	NA	34.0	34.0
	GPRS (GMSK, 1Tx-slot)	34.0	34.0	NA	34.0	34.0
	GPRS (GMSK, 2Tx-slot)	32.0	32.0	NA	32.0	32.0
	GPRS (GMSK, 3Tx-slot)	30.0	30.0	NA	30.0	30.0
	GPRS (GMSK, 4Tx-slot)	29.0	29.0	NA	29.0	29.0
	DTM (GMSK, 2Tx-slot)	32.0	32.0	NA	32.0	32.0
	DTM (GMSK, 3Tx-slot)	30.0	30.0	NA	30.0	30.0
	EDGE (8PSK, 1Tx-slot)	28.0	28.0	NA	28.0	28.0
	EDGE (8PSK, 2Tx-slot)	27.0	27.0	NA	27.0	27.0
	EDGE (8PSK, 3Tx-slot)	25.0	25.0	NA	25.0	25.0
	EDGE (8PSK, 4Tx-slot)	23.0	23.0	NA	23.0	23.0
	DTM (8PSK, 2Tx-slot)	27.0	27.0	NA	27.0	27.0
	DTM (8PSK, 3Tx-slot)	25.0	25.0	NA	25.0	25.0
GSM1900	GSM (GMSK, 1Tx-slot)	31.0	31.0	NA	31.0	31.0
	GPRS (GMSK, 1Tx-slot)	31.0	31.0	NA	31.0	31.0
	GPRS (GMSK, 2Tx-slot)	29.5	29.5	NA	29.5	29.5
	GPRS (GMSK, 3Tx-slot)	27.5	27.5	NA	27.5	27.5
	GPRS (GMSK, 4Tx-slot)	26.5	26.5	NA	26.5	26.5
	DTM (GMSK, 2Tx-slot)	29.5	29.5	NA	29.5	29.5
	DTM (GMSK, 3Tx-slot)	27.5	27.5	NA	27.5	27.5
	EDGE (8PSK, 1Tx-slot)	27.0	27.0	NA	27.0	27.0
	EDGE (8PSK, 2Tx-slot)	26.0	26.0	NA	26.0	26.0
	EDGE (8PSK, 3Tx-slot)	25.0	25.0	NA	25.0	25.0
	EDGE (8PSK, 4Tx-slot)	24.0	24.0	NA	24.0	24.0
	DTM (8PSK, 2Tx-slot)	26.0	26.0	NA	26.0	26.0
	DTM (8PSK, 3Tx-slot)	25.0	25.0	NA	25.0	25.0

WLAN OFF					
Band	Maximum Tune Up Power (dBm)	Head Power Mode		Body-Worn	
		Ant-0 Default power	Ant-1 Power table 3	Ant-0 Default power	Ant-1 Default power
WCDMA Band II	25.1	25.1	NA	25.1	25.1
WCDMA Band IV	24.0	24.0	NA	NA	24.0
WCDMA Band V	24.5	24.5	NA	24.5	24.5
CDMA BC0	25.5	25.5	NA	25.5	25.5
CDMA BC1	25.0	25.0	NA	25.0	25.0
CDMA BC10	25.5	25.5	NA	25.5	25.5
LTE 2	25.1	25.1	NA	25.1	25.1
LTE 4	24.5	24.5	NA	24.5	24.5
LTE 5	25.7	25.7	NA	25.7	25.7
LTE 12	25.7	25.7	NA	25.7	25.7
LTE 13	25.3	25.3	NA	25.3	25.3
LTE 17	25.7	25.7	NA	25.7	25.7
LTE 25	25.1	25.1	NA	25.1	25.1
LTE 26	25.7	25.7	NA	25.7	25.7
LTE 66	24.5	24.5	NA	24.5	24.5

WLAN OFF					
Band	Maximum Tune Up Power (dBm)	Head Power Mode		Body-Worn	
		Ant-2 Default power	Ant-3 Power table 3	Ant-2 Default power	Ant-3 Default power
LTE 7	24.5	24.5	NA	24.5	NA
LTE 38	25.7	25.7	NA	25.7	NA
LTE 41	25.0	25.0	NA	25.0	NA

WLAN ON						
Band		Maximum Tune Up Power (dBm)	Head Mode		Body-Worn / Hotspot Mode	
			Ant-0 Default power	Ant-1 Power table 2	Ant-0 Power table 1	Ant-1 Power table 4
GSM850	GSM (GMSK, 1Tx-slot)	34.0	34.0	NA	31.5	NA
	GPRS (GMSK, 1Tx-slot)	34.0	34.0	NA	31.5	NA
	GPRS (GMSK, 2Tx-slot)	32.0	32.0	NA	29.5	NA
	GPRS (GMSK, 3Tx-slot)	30.0	30.0	NA	27.5	NA
	GPRS (GMSK, 4Tx-slot)	29.0	29.0	NA	26.5	NA
	DTM (GMSK, 2Tx-slot)	32.0	32.0	NA	29.5	NA
	DTM (GMSK, 3Tx-slot)	30.0	30.0	NA	27.5	NA
	EDGE (8PSK, 1Tx-slot)	28.0	28.0	NA	25.5	NA
	EDGE (8PSK, 2Tx-slot)	27.0	27.0	NA	24.5	NA
	EDGE (8PSK, 3Tx-slot)	25.0	25.0	NA	22.5	NA
	EDGE (8PSK, 4Tx-slot)	23.0	23.0	NA	20.5	NA
	DTM (8PSK, 2Tx-slot)	27.0	27.0	NA	24.5	NA
	DTM (8PSK, 3Tx-slot)	25.0	25.0	NA	22.5	NA
GSM1900	GSM (GMSK, 1Tx-slot)	31.0	31.0	NA	29.0	NA
	GPRS (GMSK, 1Tx-slot)	31.0	31.0	NA	29.0	NA
	GPRS (GMSK, 2Tx-slot)	29.5	29.5	NA	27.5	NA
	GPRS (GMSK, 3Tx-slot)	27.5	27.5	NA	25.5	NA
	GPRS (GMSK, 4Tx-slot)	26.5	26.5	NA	24.5	NA
	DTM (GMSK, 2Tx-slot)	29.5	29.5	NA	27.5	NA
	DTM (GMSK, 3Tx-slot)	27.5	27.5	NA	25.5	NA
	EDGE (8PSK, 1Tx-slot)	27.0	27.0	NA	25.0	NA
	EDGE (8PSK, 2Tx-slot)	26.0	26.0	NA	24.0	NA
	EDGE (8PSK, 3Tx-slot)	25.0	25.0	NA	23.0	NA
	EDGE (8PSK, 4Tx-slot)	24.0	24.0	NA	22.0	NA
	DTM (8PSK, 2Tx-slot)	26.0	26.0	NA	24.0	NA
	DTM (8PSK, 3Tx-slot)	25.0	25.0	NA	23.0	NA

WLAN ON					
Band	Maximum Tune Up Power (dBm)	Head Power Mode		Body-Worn / Hotspot Mode	
		Ant-0 Default power	Ant-1 Power table 2	Ant-0 Power table 1	Ant-1 Power table 4
WCDMA Band II	25.1	23.2	NA	20.2	NA
WCDMA Band IV	24.0	24.0	NA	20.0	NA
WCDMA Band V	24.5	24.5	NA	22.5	NA
CDMA BC0	25.5	25.5	NA	22.5	NA
CDMA BC1	25.0	22.5	NA	19.5	NA
CDMA BC10	25.5	25.5	NA	22.5	NA
LTE 2	25.1	23.2	NA	20.7	NA
LTE 4	24.5	24.5	NA	20.0	NA
LTE 5	25.7	25.7	NA	22.7	NA
LTE 12	25.7	25.7	NA	24.7	NA
LTE 13	25.3	25.3	NA	23.8	NA
LTE 17	25.7	25.7	NA	24.7	NA
LTE 25	25.1	23.2	NA	20.7	NA
LTE 26	25.7	25.7	NA	22.7	NA
LTE 66	24.5	24.5	NA	20.0	NA

WLAN ON					
Band	Maximum Tune Up Power (dBm)	Head Power Mode		Body-Worn / Hotspot Mode	
		Ant-2 Default power	Ant-3 Power table 2	Ant-2 Power table 1	Ant-3 Power table 4
LTE 7	24.5	23.0	NA	19.5	NA
LTE 38	25.7	25.7	NA	21.7	NA
LTE 41	25.0	25.0	NA	22.0	NA

WLAN 2.4GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11b	1	15.0	14.0	18.0	18.0
	6	15.0	14.0	18.0	18.0
	11	15.0	14.0	16.0	16.0
	12	15.0	14.0	15.0	15.0
	13	7.5	7.5	7.5	7.5
802.11g	1	13.5	13.5	14.0	14.0
	6	15.0	14.0	18.0	18.0
	11	15.0	14.0	15.0	15.0
	12	11.5	11.5	11.5	11.5
	13	-1.0	-1.0	-1.0	-1.0
802.11n HT20	1	15.0	14.0	15.0	15.0
	6	15.0	14.0	18.0	18.0
	11	13.5	13.5	14.0	14.0
	12	12.0	12.0	12.0	12.0
	13	-1.0	-1.0	-1.0	-1.0
802.11ac VHT20	1	15.0	14.0	15.0	15.0
	6	15.0	14.0	18.0	18.0
	11	13.5	13.5	13.5	13.5
	12	12.0	12.0	12.0	12.0
	13	-1.0	-1.0	-1.0	-1.0

WLAN 2.4GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11b	1	13.0	13.0	16.0	18.0	18.0	21.0
	6	13.0	13.0	16.0	18.0	18.0	21.0
	11	13.0	13.0	16.0	16.0	16.0	19.0
	12	13.0	13.0	16.0	15.0	15.0	18.0
	13	7.5	7.5	10.5	7.5	7.5	10.5
802.11g	1	13.0	13.0	16.0	13.5	13.5	16.5
	6	13.0	13.0	16.0	18.0	18.0	21.0
	11	13.0	13.0	16.0	15.0	15.0	18.0
	12	12.0	12.0	15.0	12.0	12.0	15.0
	13	-1.0	-1.0	2.0	-1.0	-1.0	2.0
802.11n HT20	1	13.0	13.0	16.0	14.5	14.5	17.5
	6	13.0	13.0	16.0	18.0	18.0	21.0
	11	13.0	13.0	16.0	13.5	13.5	16.5
	12	12.0	12.0	15.0	12.0	12.0	15.0
	13	-1.0	-1.0	2.0	-1.0	-1.0	2.0
802.11ac VHT20	1	13.0	13.0	16.0	15.0	15.0	18.0
	6	13.0	13.0	16.0	18.0	18.0	21.0
	11	13.0	13.0	16.0	13.5	13.5	16.5
	12	12.0	12.0	15.0	12.0	12.0	15.0
	13	-1.0	-1.0	2.0	-1.0	-1.0	2.0

WLAN 5.2GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11a	36	12.0	12.0	17.5	17.5
	40	12.0	12.0	17.5	17.5
	44	12.0	12.0	17.5	17.5
	48	12.0	12.0	17.5	17.5
802.11n HT20	36	12.0	12.0	17.5	17.5
	40	12.0	12.0	17.5	17.5
	44	12.0	12.0	17.5	17.5
	48	12.0	12.0	17.5	17.5
802.11n HT40	38	11.5	11.5	11.5	11.5
	46	12.0	12.0	17.5	17.5
802.11ac VHT20	36	12.0	12.0	17.5	17.5
	40	12.0	12.0	17.5	17.5
	44	12.0	12.0	17.5	17.5
	48	12.0	12.0	17.5	17.5
802.11ac VHT40	38	12.0	12.0	12.0	12.0
	46	12.0	12.0	17.5	17.5
802.11ac VHT80	42	10.5	10.5	10.5	10.5

WLAN 5.2GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11a	36	12.0	12.0	15.0	17.5	17.5	20.5
	40	12.0	12.0	15.0	17.5	17.5	20.5
	44	12.0	12.0	15.0	17.5	17.5	20.5
	48	12.0	12.0	15.0	17.5	17.5	20.5
802.11n HT20	36	12.0	12.0	15.0	17.5	17.5	20.5
	40	12.0	12.0	15.0	17.5	17.5	20.5
	44	12.0	12.0	15.0	17.5	17.5	20.5
	48	12.0	12.0	15.0	17.5	17.5	20.5
802.11n HT40	38	12.0	12.0	15.0	12.0	12.0	15.0
	46	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT20	36	12.0	12.0	15.0	17.5	17.5	20.5
	40	12.0	12.0	15.0	17.5	17.5	20.5
	44	12.0	12.0	15.0	17.5	17.5	20.5
	48	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT40	38	12.0	12.0	15.0	12.0	12.0	15.0
	46	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT80	42	10.5	10.5	13.5	10.5	10.5	13.5

WLAN 5.3GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11a	52	12.0	12.0	17.5	17.5
	56	12.0	12.0	17.5	17.5
	60	12.0	12.0	17.5	17.5
	64	12.0	12.0	17.5	17.5
802.11n HT20	52	12.0	12.0	17.5	17.5
	56	12.0	12.0	17.5	17.5
	60	12.0	12.0	17.5	17.5
	64	12.0	12.0	17.5	17.5
802.11n HT40	54	12.0	12.0	17.5	17.5
	62	12.0	12.0	13.5	13.5
802.11ac VHT20	52	12.0	12.0	17.5	17.5
	56	12.0	12.0	17.5	17.5
	60	12.0	12.0	17.5	17.5
	64	12.0	12.0	17.5	17.5
802.11ac VHT40	54	12.0	12.0	17.5	17.5
	62	12.0	12.0	13.5	13.5
802.11ac VHT80	58	11.0	11.0	11.0	11.0

WLAN 5.3GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11a	52	12.0	12.0	15.0	17.5	17.5	20.5
	56	12.0	12.0	15.0	17.5	17.5	20.5
	60	12.0	12.0	15.0	17.5	17.5	20.5
	64	12.0	12.0	15.0	17.5	17.5	20.5
802.11n HT20	52	12.0	12.0	15.0	17.5	17.5	20.5
	56	12.0	12.0	15.0	17.5	17.5	20.5
	60	12.0	12.0	15.0	17.5	17.5	20.5
	64	12.0	12.0	15.0	17.5	17.5	20.5
802.11n HT40	54	12.0	12.0	15.0	17.5	17.5	20.5
	62	12.0	12.0	15.0	13.5	13.5	16.5
802.11ac VHT20	52	12.0	12.0	15.0	17.5	17.5	20.5
	56	12.0	12.0	15.0	17.5	17.5	20.5
	60	12.0	12.0	15.0	17.5	17.5	20.5
	64	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT40	54	12.0	12.0	15.0	17.5	17.5	20.5
	62	12.0	12.0	15.0	13.5	13.5	16.5
802.11ac VHT80	58	11.0	11.0	14.0	11.0	11.0	14.0

WLAN 5.6GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11a	100	11.5	14.0	17.5	17.5
	116	11.5	14.0	17.5	17.5
	120	11.5	14.0	17.5	17.5
	124	11.5	14.0	17.5	17.5
	132	11.5	14.0	17.5	17.5
	140	11.5	14.0	17.5	17.5
	144	11.5	14.0	17.5	17.5
802.11n HT20	100	11.5	14.0	17.5	17.5
	116	11.5	14.0	17.5	17.5
	120	11.5	14.0	17.5	17.5
	124	11.5	14.0	17.5	17.5
	132	11.5	14.0	17.5	17.5
	140	11.5	14.0	17.5	17.5
	144	11.5	14.0	17.5	17.5
802.11n HT40	102	11.5	13.0	13.0	13.0
	110	11.5	14.0	17.5	17.5
	118	11.5	14.0	17.5	17.5
	126	11.5	14.0	17.5	17.5
	134	11.5	14.0	17.5	17.5
	142	11.5	14.0	17.5	17.5
	144	11.5	14.0	17.5	17.5
802.11ac VHT20	100	11.5	14.0	17.5	17.5
	116	11.5	14.0	17.5	17.5
	120	11.5	14.0	17.5	17.5
	124	11.5	14.0	17.5	17.5
	132	11.5	14.0	17.5	17.5
	140	11.5	14.0	17.5	17.5
	144	11.5	14.0	17.5	17.5
802.11ac VHT40	102	11.5	13.0	13.0	13.0
	110	11.5	14.0	17.5	17.5
	118	11.5	14.0	17.5	17.5
	126	11.5	14.0	17.5	17.5
	134	11.5	14.0	17.5	17.5
	142	11.5	14.0	17.5	17.5
	144	11.5	14.0	17.5	17.5
802.11ac VHT80	106	10.0	10.0	10.0	10.0
	122	11.5	14.0	17.5	17.5
	138	11.5	14.0	17.5	17.5

WLAN 5.6GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11a	100	12.0	12.0	15.0	17.5	17.5	20.5
	116	12.0	12.0	15.0	17.5	17.5	20.5
	120	12.0	12.0	15.0	17.5	17.5	20.5
	124	12.0	12.0	15.0	17.5	17.5	20.5
	132	12.0	12.0	15.0	17.5	17.5	20.5
	140	12.0	12.0	15.0	17.5	17.5	20.5
802.11n HT20	144	12.0	12.0	15.0	17.5	17.5	20.5
	100	12.0	12.0	15.0	17.5	17.5	20.5
	116	12.0	12.0	15.0	17.5	17.5	20.5
	120	12.0	12.0	15.0	17.5	17.5	20.5
	124	12.0	12.0	15.0	17.5	17.5	20.5
	132	12.0	12.0	15.0	17.5	17.5	20.5
802.11n HT40	140	12.0	12.0	15.0	17.5	17.5	20.5
	144	12.0	12.0	15.0	17.5	17.5	20.5
	102	12.0	12.0	15.0	13.0	13.0	16.0
	110	12.0	12.0	15.0	17.5	17.5	20.5
	118	12.0	12.0	15.0	17.5	17.5	20.5
	126	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT20	134	12.0	12.0	15.0	17.5	17.5	20.5
	142	12.0	12.0	15.0	17.5	17.5	20.5
	100	12.0	12.0	15.0	17.5	17.5	20.5
	116	12.0	12.0	15.0	17.5	17.5	20.5
	120	12.0	12.0	15.0	17.5	17.5	20.5
	124	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT40	132	12.0	12.0	15.0	17.5	17.5	20.5
	140	12.0	12.0	15.0	17.5	17.5	20.5
	144	12.0	12.0	15.0	17.5	17.5	20.5
	102	12.0	12.0	15.0	13.0	13.0	16.0
	110	12.0	12.0	15.0	17.5	17.5	20.5
	118	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT80	126	12.0	12.0	15.0	17.5	17.5	20.5
	134	12.0	12.0	15.0	17.5	17.5	20.5
	142	12.0	12.0	15.0	17.5	17.5	20.5
	106	11.0	11.0	14.0	11.0	11.0	14.0
	122	12.0	12.0	15.0	17.5	17.5	20.5
	138	12.0	12.0	15.0	17.5	17.5	20.5

WLAN 5.8GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11a	149	12.0	12.0	17.5	17.5
	153	12.0	12.0	17.5	17.5
	157	12.0	12.0	17.5	17.5
	161	12.0	12.0	17.5	17.5
	165	12.0	12.0	17.5	17.5
802.11n HT20	149	12.0	12.0	17.5	17.5
	153	12.0	12.0	17.5	17.5
	157	12.0	12.0	17.5	17.5
	161	12.0	12.0	17.5	17.5
	165	12.0	12.0	17.5	17.5
802.11n HT40	151	12.0	12.0	17.5	17.5
	159	12.0	12.0	17.5	17.5
802.11ac VHT20	149	12.0	12.0	17.5	17.5
	153	12.0	12.0	17.5	17.5
	157	12.0	12.0	17.5	17.5
	161	12.0	12.0	17.5	17.5
	165	12.0	12.0	17.5	17.5
802.11ac VHT40	151	12.0	12.0	17.5	17.5
	159	12.0	12.0	17.5	17.5
802.11ac VHT80	155	12.0	12.0	17.5	17.5

WLAN 5.8GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11a	149	12.0	12.0	15.0	17.5	17.5	20.5
	153	12.0	12.0	15.0	17.5	17.5	20.5
	157	12.0	12.0	15.0	17.5	17.5	20.5
	161	12.0	12.0	15.0	17.5	17.5	20.5
	165	12.0	12.0	15.0	17.5	17.5	20.5
802.11n HT20	149	12.0	12.0	15.0	17.5	17.5	20.5
	153	12.0	12.0	15.0	17.5	17.5	20.5
	157	12.0	12.0	15.0	17.5	17.5	20.5
	161	12.0	12.0	15.0	17.5	17.5	20.5
	165	12.0	12.0	15.0	17.5	17.5	20.5
802.11n HT40	151	12.0	12.0	15.0	17.5	17.5	20.5
	159	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT20	149	12.0	12.0	15.0	17.5	17.5	20.5
	153	12.0	12.0	15.0	17.5	17.5	20.5
	157	12.0	12.0	15.0	17.5	17.5	20.5
	161	12.0	12.0	15.0	17.5	17.5	20.5
	165	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT40	151	12.0	12.0	15.0	17.5	17.5	20.5
	159	12.0	12.0	15.0	17.5	17.5	20.5
802.11ac VHT80	155	12.0	12.0	15.0	17.5	17.5	20.5

Mode	2.4G Bluetooth
Bluetooth DH	18.0
Bluetooth 2DH	13.0
Bluetooth 3DH	13.0
Bluetooth LE	10.0
Bluetooth 5.0	10.0

3.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																													
FCC ID	A4RG020B																																																																												
Equipment Name	Smartphone																																																																												
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz																																																																												
Channel Bandwidth	LTE Band 02:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 04:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 05:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 07: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz																																																																												
UE Rel. and Cat.	Rel 11, cat 11																																																																												
uplink modulations used	QPSK / 16QAM / 64QAM																																																																												
LTE Voice / Data requirements	Voice and Data																																																																												
LTE MPR permanently built-in by design	<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</th></tr><tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr><tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr><tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr><tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr></table>							Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3								Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	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
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3																																																																													
Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)																																																																						
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz																																																																							
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																																																						
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																																																						
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																																																																						
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	The device has several different power modes for head / hotspot / body-wron conditions SAR compliance; power selection is determined by the device's positioning and usage scenarios.																																																																												
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to BUREAU VERITAS SAR test report (FCC ID: A4RG020C, Report No.: SA180920C22-2) page 129 to page 132																																																																												
LTE Carrier Aggregation Additional Information	This device supports maximum of 3 carriers in the downlink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.																																																																												

Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829				
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844				
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510				
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560				
LTE Band 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704				
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711				
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #				Freq.(MHz)			
L	23205		779.5		23230				782			
M	23230		782									
H	23255		784.5									
LTE Band 17												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #				Freq. (MHz)			
L	23755		706.5		23780				709			
M	23790		710		23790				710			
H	23825		713.5		23800				711			
LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		



FCC SAR TEST REPORT

Report No. : FA9O2116

H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580				
M	38000	2595	38000	2595	38000	2595	38000	2595				
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
L M	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
H M	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

4. RF Exposure Limits

4.1 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.

4.2 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

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

5. Specific Absorption Rate (SAR)

5.1 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.

5.2 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:

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

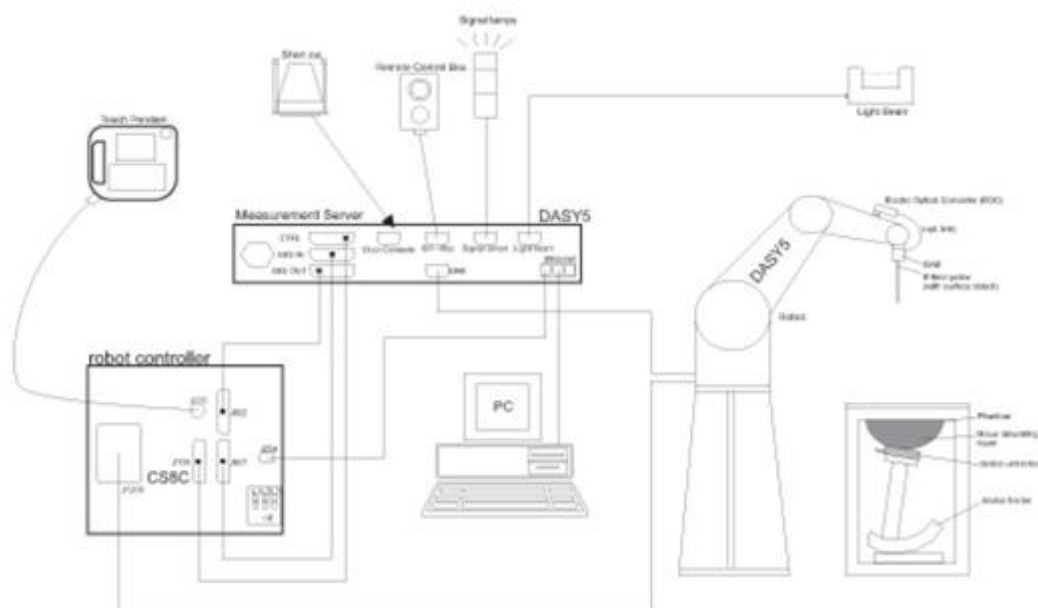
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

6. System Description and Setup

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



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

6.1 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.

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz – 4 GHz; Linearity: ± 0.2 dB (30 MHz – 4 GHz)	
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 μ W/g – >100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

<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 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

6.2 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.

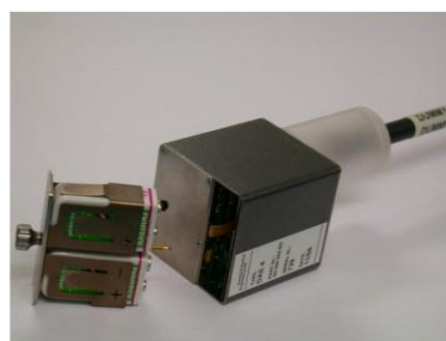


Fig 5.1 Photo of DAE

6.3 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 in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

6.4 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

7. 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

7.1 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

7.2 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.

7.3 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: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

7.4 Zoom Scan

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

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

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

7.5 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.

7.6 Power Drift Monitoring

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

8. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1107	Mar. 08, 2019	Mar. 07, 2020
SPEAG	835MHz System Validation Kit	D835V2	4d167	Mar. 08, 2019	Mar. 07, 2020
SPEAG	1750MHz System Validation Kit	D1750V2	1112	Mar. 07, 2019	Mar. 06, 2020
SPEAG	1900MHz System Validation Kit	D1900V2	5d185	Mar. 07, 2019	Mar. 06, 2020
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Sep. 11, 2018	Sep. 09, 2020
SPEAG	2450MHz System Validation Kit	D2450V2	736	Aug. 31, 2018	Aug. 30, 2020
SPEAG	2600MHz System Validation Kit	D2600V2	1078	Mar. 06, 2019	Mar. 05, 2020
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Sep. 27, 2018	Sep. 26, 2020
SPEAG	Data Acquisition Electronics	DAE4	316	Jan. 03, 2019	Jan. 02, 2020
SPEAG	Data Acquisition Electronics	DAE4	853	Jul. 18, 2019	Jul. 17, 2020
SPEAG	Data Acquisition Electronics	DAE4	1311	Aug. 27, 2019	Aug. 26, 2020
SPEAG	Data Acquisition Electronics	DAE4	1399	Nov. 14, 2019	Nov. 13, 2020
SPEAG	Dosimetric E-Field Probe	ES3DV3	3170	Nov. 21, 2019	Nov. 20, 2020
SPEAG	Dosimetric E-Field Probe	ES3DV3	3124	Jan. 15, 2019	Jan. 14, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	3642	Apr. 29, 2019	Apr. 28, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	3925	Sep. 20, 2019	Sep. 19, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	7346	Apr. 25, 2019	Apr. 24, 2020
RCPTWN	Thermometer	HTC-1	TM685-1	Nov. 19, 2018	Nov. 18, 2019
RCPTWN	Thermometer	HTC-1	TM560-2	Nov. 12, 2019	Nov. 11, 2020
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Apr. 21, 2019	Apr. 20, 2020
Agilent	Wireless Communication Test Set	E5515C	MY50266977	May. 27, 2019	May. 26, 2020
SPEAG	Device Holder	N/A	N/A	N/A	N/A
R&S	Signal Generator	SMA100A	101091	Jul. 03, 2019	Jul. 02, 2020
Agilent	ENA Network Analyzer	E5071C	MY46104758	Sep. 06, 2019	Sep. 05, 2020
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 18, 2019	Sep. 17, 2020
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3169	Sep. 10, 2019	Sep. 09, 2020
Anritsu	Power Meter	ML2495A	1036004	Aug. 08, 2019	Aug. 07, 2020
Anritsu	Power Sensor	MA2411B	1027253	Aug. 08, 2019	Aug. 07, 2020
Anritsu	Power Meter	ML2495A	1419002	May. 29, 2019	May. 28, 2020
Anritsu	Power Sensor	MA2411B	1339124	May. 29, 2019	May. 28, 2020
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 27, 2019	Aug. 26, 2020
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jun. 27, 2019	Jun. 26, 2020
Mini-Circuits	Power Amplifier	ZHL-42W+	321501827	Aug. 12, 2019	Aug. 11, 2020
Mini-Circuits	Power Amplifier	ZHL-42W+	715701915	May. 10, 2019	May. 09, 2020
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

- 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 source.
- 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.
- The justification data of dipole D1900V2, SN : 1399, D2450V2, SN: 736, D5GHzV2, SN: 1006 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.

9. System Verification

9.1 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. 10.1. 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. 10.2.

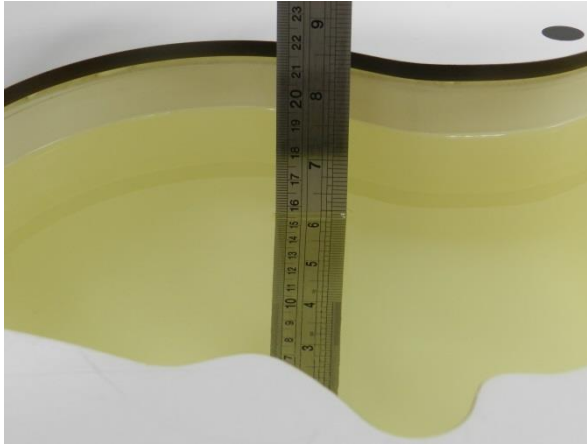


Fig 10.1 Photo of Liquid Height for Head SAR

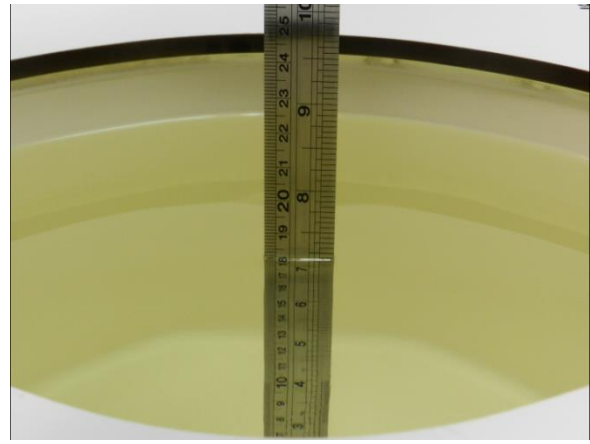


Fig 10.2 Photo of Liquid Height for Body SAR

9.2 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)
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
900	40.3	57.9	0.2	1.4	0.2	0	0.97	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)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	22.7	0.903	43.280	0.89	41.90	1.46	3.29	±5	2019/11/7
750	22.6	0.892	43.294	0.89	41.90	0.22	3.33	±5	2019/11/13
750	22.8	0.890	42.180	0.89	41.90	0.00	0.67	±5	2019/12/9
835	22.3	0.901	42.330	0.90	41.50	0.11	2.00	±5	2019/11/6
835	22.3	0.879	41.605	0.90	41.50	-2.33	0.25	±5	2019/11/14
835	22.3	0.878	42.615	0.90	41.50	-2.44	2.69	±5	2019/11/15
835	22.6	0.908	42.770	0.90	41.50	0.89	3.06	±5	2019/12/9
835	22.4	0.906	42.720	0.90	41.50	0.67	2.94	±5	2019/12/11
1750	22.2	1.389	39.608	1.37	40.10	1.39	-1.23	±5	2019/10/30
1750	22.4	1.365	39.707	1.37	40.10	-0.36	-0.98	±5	2019/11/12
1750	22.1	1.392	39.206	1.37	40.10	1.61	-2.23	±5	2019/12/11
1900	22.2	1.441	38.096	1.40	40.00	2.93	-4.76	±5	2019/10/30
1900	22.3	1.417	40.819	1.40	40.00	1.21	2.05	±5	2019/11/6
1900	22.3	1.435	41.003	1.40	40.00	2.50	2.51	±5	2019/11/10
1900	22.3	1.420	40.841	1.40	40.00	1.43	2.10	±5	2019/11/11
1900	22.4	1.409	40.709	1.40	40.00	0.64	1.77	±5	2019/11/12
1900	22.1	1.402	40.285	1.40	40.00	0.14	0.71	±5	2019/12/11
2450	22.4	1.763	40.036	1.80	39.20	-2.06	2.13	±5	2019/11/16
2450	22.8	1.837	40.174	1.80	39.20	2.06	2.48	±5	2019/12/9
2600	22.7	1.998	39.272	1.96	39.00	1.94	0.70	±5	2019/11/7
2600	22.6	1.944	39.138	1.96	39.00	-0.82	0.35	±5	2019/11/13
2600	22.6	1.953	38.698	1.96	39.00	-0.36	-0.77	±5	2019/12/10
2600	22.6	1.953	39.680	1.96	39.00	-0.36	1.74	±5	2019/12/11
5250	22.4	4.606	37.681	4.71	35.95	-2.21	4.82	±5	2019/11/14
5250	22.5	4.508	37.670	4.71	35.95	-4.29	4.78	±5	2019/11/15
5600	22.4	4.950	37.160	5.07	35.50	-2.37	4.68	±5	2019/11/14
5600	22.5	4.853	37.140	5.07	35.50	-4.28	4.62	±5	2019/11/15
5600	22.6	4.847	37.120	5.07	35.50	-4.40	4.56	±5	2019/11/16
5750	22.4	5.087	36.994	5.22	35.35	-2.55	4.65	±5	2019/11/14
5750	22.6	4.993	36.989	5.22	35.35	-4.35	4.64	±5	2019/11/16

9.3 System Performance Check Results

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

Date	Frequency (MHz)	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 (%)
2019/11/7	750	250	D750V3-1107	ES3DV3 - SN3124	DAE4 Sn316	2.14	8.32	8.56	2.88
2019/11/13	750	250	D750V3-1107	EX3DV4 - SN3925	DAE4 Sn1311	2.20	8.32	8.8	5.77
2019/12/9	750	250	D750V3-1107	EX3DV4 - SN3925	DAE4 Sn1311	2.04	8.32	8.16	-1.92
2019/11/6	835	250	D835V2-4d167	ES3DV3 - SN3124	DAE4 Sn316	2.44	9.50	9.76	2.74
2019/11/14	835	250	D835V2-4d167	EX3DV4 - SN3925	DAE4 Sn1311	2.37	9.50	9.48	-0.21
2019/11/15	835	250	D835V2-4d167	EX3DV4 - SN3925	DAE4 Sn1311	2.36	9.50	9.44	-0.63
2019/12/9	835	250	D835V2-4d167	EX3DV4 - SN7346	DAE4 Sn853	2.47	9.55	9.88	3.46
2019/12/11	835	250	D835V2-4d167	EX3DV4 - SN7346	DAE4 Sn853	2.46	9.55	9.84	3.04
2019/10/30	1750	250	D1750V2-1112	EX3DV4 - SN3642	DAE4 Sn1311	9.72	36.70	38.88	5.94
2019/11/12	1750	250	D1750V2-1112	EX3DV4 - SN3925	DAE4 Sn1311	9.25	36.70	37	0.82
2019/12/11	1750	250	D1750V2-1112	ES3DV3 - SN3170	DAE4 Sn1399	9.24	36.70	36.96	0.71
2019/10/30	1900	250	D1900V2-5d185	EX3DV4 - SN3642	DAE4 Sn1311	10.50	39.40	42	6.60
2019/11/6	1900	250	D1900V2-5d185	ES3DV3 - SN3124	DAE4 Sn316	9.21	39.40	36.84	-6.50
2019/11/10	1900	250	D1900V2-5d185	EX3DV4 - SN3925	DAE4 Sn1311	9.62	39.40	38.48	-2.34
2019/11/11	1900	250	D1900V2-5d185	EX3DV4 - SN3925	DAE4 Sn1311	9.51	39.40	38.04	-3.45
2019/11/12	1900	250	D1900V2-5d185	EX3DV4 - SN3925	DAE4 Sn1311	10.40	39.40	41.6	5.58
2019/12/11	1900	250	D1900V2-5d041	ES3DV3 - SN3170	DAE4 Sn1399	9.81	40.20	39.24	-2.39
2019/11/16	2450	250	D2450V2-736	EX3DV4 - SN3925	DAE4 Sn1311	12.50	52.70	50	-5.12
2019/12/9	2450	250	D2450V2-736	EX3DV4 - SN3925	DAE4 Sn1311	14.30	52.70	57.2	8.54
2019/11/7	2600	250	D2600V2-1078	ES3DV3 - SN3124	DAE4 Sn316	13.60	57.60	54.4	-5.56
2019/11/13	2600	250	D2600V2-1078	EX3DV4 - SN3925	DAE4 Sn1311	14.60	57.60	58.4	1.39
2019/12/10	2600	250	D2600V2-1008	EX3DV4 - SN3925	DAE4 Sn1311	14.70	56.40	58.8	4.26
2019/12/11	2600	250	D2600V2-1008	EX3DV4 - SN3925	DAE4 Sn1311	13.30	56.40	53.2	-5.67
2019/11/14	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN7346	DAE4 Sn853	7.87	80.70	78.7	-2.48
2019/11/15	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN7346	DAE4 Sn853	7.70	80.70	77	-4.58
2019/11/14	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7346	DAE4 Sn853	8.15	83.30	81.5	-2.16
2019/11/15	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7346	DAE4 Sn853	8.35	83.30	83.5	0.24
2019/11/16	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7346	DAE4 Sn853	8.34	83.30	83.4	0.12
2019/11/14	5750	100	D5GHzV2-1006-5750	EX3DV4 - SN7346	DAE4 Sn853	7.78	80.40	77.8	-3.23
2019/11/16	5750	100	D5GHzV2-1006-5750	EX3DV4 - SN7346	DAE4 Sn853	7.56	80.40	75.6	-5.97

Date	Frequency (MHz)	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 (%)
2019/11/15	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN7346	DAE4 Sn853	2.13	23.20	21.3	-8.19
2019/11/15	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7346	DAE4 Sn853	2.31	23.80	23.1	-2.94

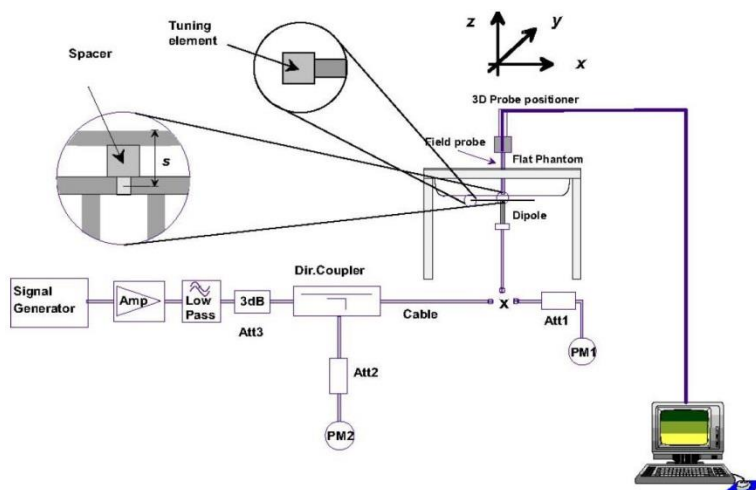


Fig 8.3.1 System Performance Check Setup



Fig 8.3.2 Setup Photo

10. RF Exposure Positions

10.1 Ear and handset reference point

Figure 9.1.1 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 9.1.2. 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 9.1.3). 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 9.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

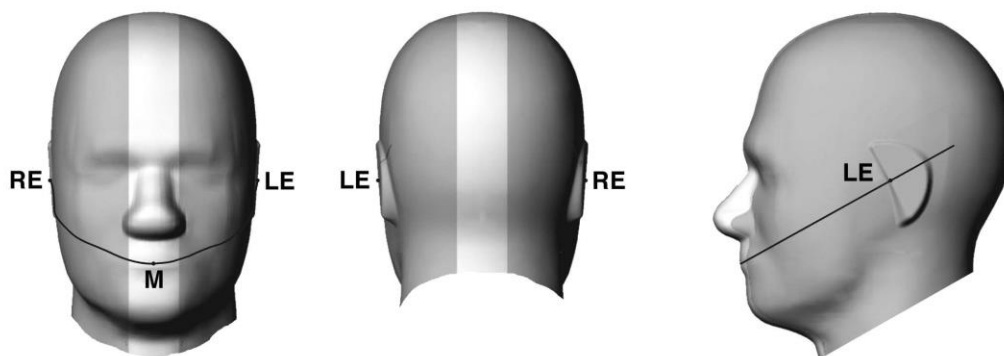


Fig 9.1.1 Front, back, and side views of SAM twin phantom

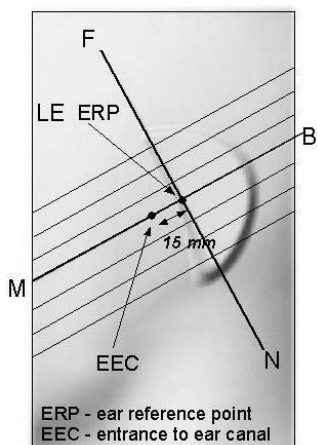


Fig 9.1.2 Close-up side view of phantom showing the ear region.

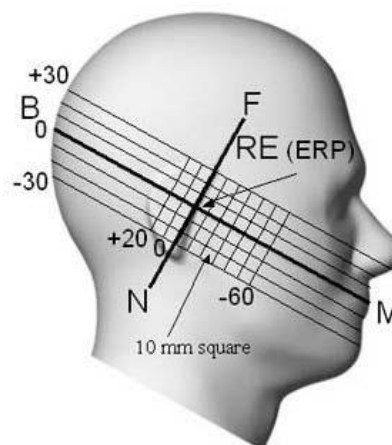


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

10.2 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 9.2.1 and Figure 9.2.2), 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 9.2.1). 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 9.2.2), 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 9.2.3), 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 9.2.3. The actual rotation angles should be documented in the test report.

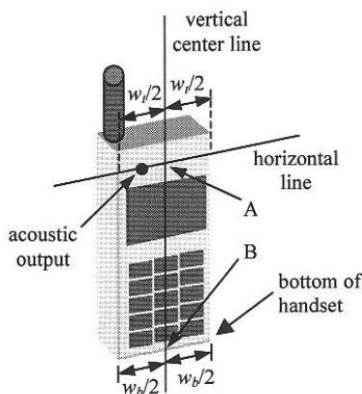


Fig 9.2.1 Handset vertical and horizontal reference lines—"fixed case"

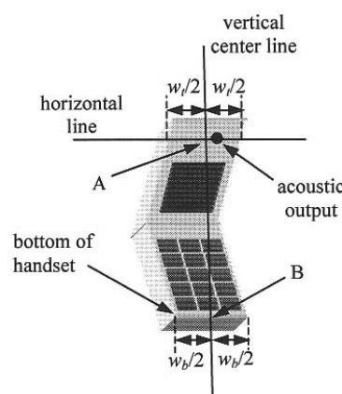


Fig 9.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

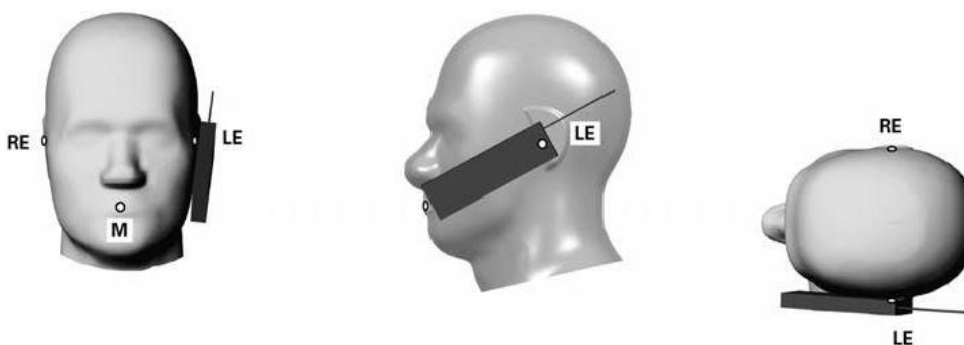


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

10.3 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 9.3.1. 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

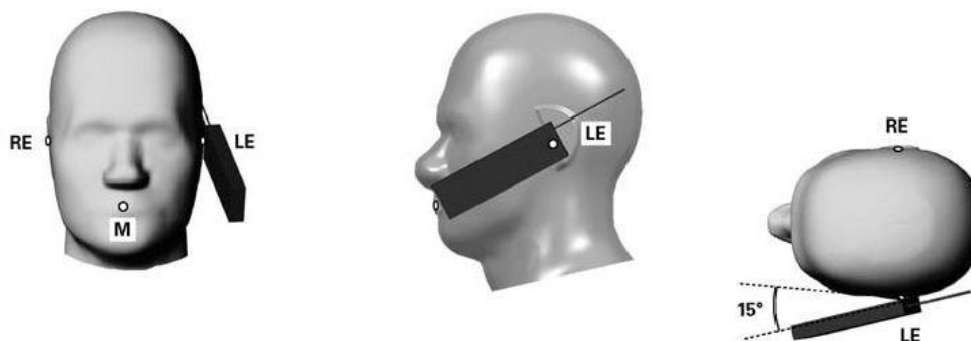


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

10.4 Product Specific Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that 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.

10.5 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 9.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is $> 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.

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

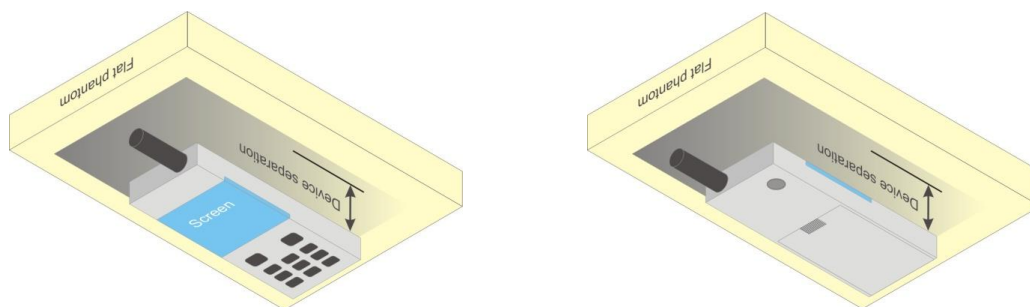


Fig 9.4 Body Worn Position

10.6 Wireless Router

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

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

11. WiFi OFF Conducted RF Output Power (Unit: dBm)

<GSM Conducted Power>

- For DTM multi-slot class mode, the device was linked with base station simulator (Agilent E5515C) and transmit maximum power on maximum number of TX slots, i.e. one CS timeslot, and additional PS timeslots (1 for DTM class 5 and 9, 2 for DTM class 11) in one TDMA frame.
- Agilent E5515C was used to setup the device operated under DTM mode for power measurement and SAR testing. For conducted power, the power of the burst for voice and the power of the bursts for data was reported separately in the table below, and the frame-average power is derived below to determine SAR testing.

$$DTM \text{ frame average power (dBm)} = 10 \cdot \log [\sum (\text{power of each slot, in mW}) / 8]$$

- Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
- Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE / DTM 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. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
- Other configurations of GSM / GPRS / EDGE / DTM 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

Power Selection	Transmit Antenna	GSM850		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		128	189	251		128	189	251	
		Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8	
Head / Hotspot / Near body / Product Specific	Ant 0	GSM 1 Tx slot		33.38	33.29	33.40	34.00	24.38	24.29	24.40	25.00
		GPRS 1 Tx slot		33.39	33.30	33.44	34.00	24.39	24.30	24.44	25.00
		GPRS 2 Tx slots		30.67	30.78	30.84	32.00	24.67	24.78	24.84	26.00
		GPRS 3 Tx slots		28.69	28.79	28.81	30.00	24.43	24.53	24.55	25.74
		GPRS 4 Tx slots		27.41	27.48	27.57	29.00	24.41	24.48	24.57	26.00
		EDGE 1 Tx slot		27.14	27.09	27.17	28.00	18.14	18.09	18.17	19.00
		EDGE 2 Tx slots		26.24	26.22	26.33	27.00	20.24	20.22	20.33	21.00
		EDGE 3 Tx slots		24.10	24.04	24.04	25.00	19.84	19.78	19.78	20.74
		EDGE 4 Tx slots		22.17	22.07	22.18	23.00	19.17	19.07	19.18	20.00
		DTM Multi-slot class 5	GSM 1 Tx slot	30.63	30.71	30.81	32.00	24.59	24.68	24.78	25.98
			GPRS 1 Tx slot	30.59	30.69	30.79	32.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.58	30.69	30.84	32.00	24.58	24.67	24.79	25.98
			GPRS 1 Tx slot	30.63	30.70	30.78	32.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.65	28.71	28.80	30.00	24.42	24.50	24.54	25.74
			GPRS 2 Tx slots	28.69	28.78	28.80	30.00				
		DTM Multi-slot class 5	GSM 1 Tx slot	30.65	30.73	30.82	32.00	22.95	23.00	23.09	24.16
			EDGE 1 Tx slot	26.20	26.16	26.27	27.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.60	30.78	30.75	32.00	22.91	23.04	23.05	24.16
			EDGE 1 Tx slot	26.18	26.16	26.30	27.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.64	28.72	28.80	30.00	21.90	21.91	21.97	23.10
			EDGE 2 Tx slots	24.04	23.95	23.99	25.00				

Power Selection	Transmit Antenna	GSM850		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		128	189	251		128	189	251	
		Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8	
Hotspot / Near body / Product Specific	Ant 1	GSM 1 Tx slot		33.38	33.29	33.40	34.00	24.38	24.29	24.40	25.00
		GPRS 1 Tx slot		33.39	33.30	33.44	34.00	24.39	24.30	24.44	25.00
		GPRS 2 Tx slots		30.67	30.78	30.84	32.00	24.67	24.78	24.84	26.00
		GPRS 3 Tx slots		28.69	28.79	28.81	30.00	24.43	24.53	24.55	25.74
		GPRS 4 Tx slots		27.41	27.48	27.57	29.00	24.41	24.48	24.57	26.00
		EDGE 1 Tx slot		27.14	27.09	27.17	28.00	18.14	18.09	18.17	19.00
		EDGE 2 Tx slots		26.24	26.22	26.33	27.00	20.24	20.22	20.33	21.00
		EDGE 3 Tx slots		24.10	24.04	24.04	25.00	19.84	19.78	19.78	20.74
		EDGE 4 Tx slots		22.17	22.07	22.18	23.00	19.17	19.07	19.18	20.00
		DTM Multi-slot class 5	GSM 1 Tx slot	30.63	30.71	30.81	32.00	24.59	24.68	24.78	25.98
			GPRS 1 Tx slot	30.59	30.69	30.79	32.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.58	30.69	30.84	32.00	24.58	24.67	24.79	25.98
			GPRS 1 Tx slot	30.63	30.70	30.78	32.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.65	28.71	28.80	30.00	24.42	24.50	24.54	25.74
			GPRS 2 Tx slots	28.69	28.78	28.80	30.00				
		DTM Multi-slot class 5	GSM 1 Tx slot	30.65	30.73	30.82	32.00	22.95	23.00	23.09	24.16
			EDGE 1 Tx slot	26.20	26.16	26.27	27.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.60	30.78	30.75	32.00	22.91	23.04	23.05	24.16
			EDGE 1 Tx slot	26.18	26.16	26.30	27.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.64	28.72	28.80	30.00	21.90	21.91	21.97	23.10
			EDGE 2 Tx slots	24.04	23.95	23.99	25.00				

Power Selection	Transmit Antenna	GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		512	661	810		512	661	810	
		Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8	
Head / Hotspot / Near body / Product Specific	Ant 0	GSM 1 Tx slot		29.80	29.71	29.59	31.00	20.80	20.71	20.59	22.00
		GPRS 1 Tx slot		29.82	29.72	29.61	31.00	20.82	20.72	20.61	22.00
		GPRS 2 Tx slots		27.86	27.98	27.89	29.50	21.86	21.98	21.89	23.50
		GPRS 3 Tx slots		25.69	25.60	25.67	27.50	21.43	21.34	21.41	23.24
		GPRS 4 Tx slots		24.85	24.61	24.70	26.50	21.85	21.61	21.70	23.50
		EDGE 1 Tx slot		25.64	25.53	25.67	27.00	16.64	16.53	16.67	18.00
		EDGE 2 Tx slots		24.54	24.26	24.37	26.00	18.54	18.26	18.37	20.00
		EDGE 3 Tx slots		23.43	23.23	23.41	25.00	19.17	18.97	19.15	20.74
		EDGE 4 Tx slots		22.79	22.52	22.62	24.00	19.79	19.52	19.62	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	27.85	27.89	27.81	29.50	21.81	21.87	21.79	23.48
			GPRS 1 Tx slot	27.81	27.90	27.82	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.85	27.97	27.85	29.50	21.78	21.94	21.81	23.48
			GPRS 1 Tx slot	27.76	27.95	27.81	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.60	25.58	25.66	27.50	21.37	21.31	21.41	23.24
			GPRS 2 Tx slots	25.64	25.57	25.67	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	27.85	27.96	27.81	29.50	20.46	20.47	20.39	22.07
			EDGE 1 Tx slot	24.46	24.25	24.34	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.79	27.90	27.85	29.50	20.44	20.41	20.40	22.07
			EDGE 1 Tx slot	24.53	24.19	24.27	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.68	25.60	25.67	27.50	20.02	19.86	19.99	21.74
			EDGE 2 Tx slots	23.36	23.14	23.31	25.00				

Power Selection	Transmit Antenna	GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		512	661	810		512	661	810	
		Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8	
Hotspot / Near body / Product Specific	Ant 1	GSM 1 Tx slot		29.80	29.71	29.59	31.00	20.80	20.71	20.59	22.00
		GPRS 1 Tx slot		29.82	29.72	29.61	31.00	20.82	20.72	20.61	22.00
		GPRS 2 Tx slots		27.86	27.98	27.89	29.50	21.86	21.98	21.89	23.50
		GPRS 3 Tx slots		25.69	25.60	25.67	27.50	21.43	21.34	21.41	23.24
		GPRS 4 Tx slots		24.85	24.61	24.70	26.50	21.85	21.61	21.70	23.50
		EDGE 1 Tx slot		25.64	25.53	25.67	27.00	16.64	16.53	16.67	18.00
		EDGE 2 Tx slots		24.54	24.26	24.37	26.00	18.54	18.26	18.37	20.00
		EDGE 3 Tx slots		23.43	23.23	23.41	25.00	19.17	18.97	19.15	20.74
		EDGE 4 Tx slots		22.79	22.52	22.62	24.00	19.79	19.52	19.62	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	27.85	27.89	27.81	29.50	21.81	21.87	21.79	23.48
			GPRS 1 Tx slot	27.81	27.90	27.82	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.85	27.97	27.85	29.50	21.78	21.94	21.81	23.48
			GPRS 1 Tx slot	27.76	27.95	27.81	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.60	25.58	25.66	27.50	21.37	21.31	21.41	23.24
			GPRS 2 Tx slots	25.64	25.57	25.67	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	27.85	27.96	27.81	29.50	20.46	20.47	20.39	22.07
			EDGE 1 Tx slot	24.46	24.25	24.34	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.79	27.90	27.85	29.50	20.44	20.41	20.40	22.07
			EDGE 1 Tx slot	24.53	24.19	24.27	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.68	25.60	25.67	27.50	20.02	19.86	19.99	21.74
			EDGE 2 Tx slots	23.36	23.14	23.31	25.00				

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5
Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$. Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPCCH, DPDCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases. Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.							

Setup Configuration

HSUPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_d/\beta_c = 12/15$, $\beta_{hs}/\beta_c = 24/15$. 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, TF1) 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

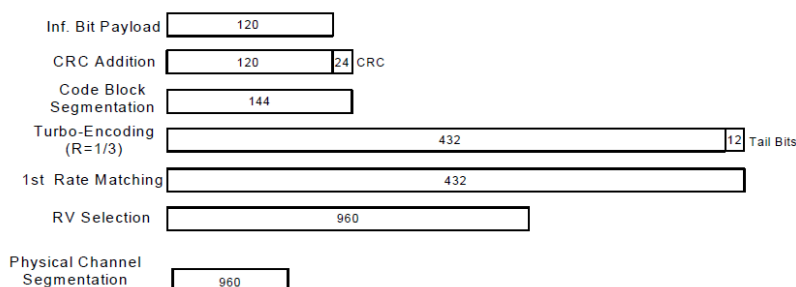
DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set RMC 12.2Kbps + HSDPA mode.
 - ii. Set Cell Power = -25 dBm
 - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - iv. Select HSDPA Uplink Parameters
 - v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - a). Subtest 1: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - vii. Set Ack-Nack Repetition Factor to 3
 - viii. Set CQI Feedback Cycle (k) to 4 ms
 - ix. Set CQI Repetition Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

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

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

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


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

<WCDMA Conducted Power>
General Note:

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

Power Selection	Transmit Antenna	Band		WCDMA II		
		TX Channel		9262	9400	9538
		Rx Channel		9662	9800	9938
		Frequency (MHz)		1852.4	1880	1907.6
Head / Hotspot / Near body / Product Specific	Ant 0	Max Power		25.1		
		3GPP Rel 99	AMR 12.2Kbps	24.65	24.58	24.79
		3GPP Rel 99	RMC 12.2Kbps	24.69	24.59	24.82
		Max Power		24.1		
		3GPP Rel 6	HSDPA Subtest-1	23.66	23.61	23.67
		3GPP Rel 6	HSDPA Subtest-2	23.71	23.61	23.73
		3GPP Rel 6	HSDPA Subtest-3	23.17	23.15	23.18
		3GPP Rel 6	HSDPA Subtest-4	23.19	23.12	23.22
		Max Power		24.1		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.66	23.61	23.62
		3GPP Rel 8	DC-HSDPA Subtest-2	23.71	23.61	23.69
		3GPP Rel 8	DC-HSDPA Subtest-3	23.07	23.13	23.16
		3GPP Rel 8	DC-HSDPA Subtest-4	23.09	23.09	23.19
		Max Power		24.1		
		3GPP Rel 6	HSUPA Subtest-1	23.71	23.64	23.64
		3GPP Rel 6	HSUPA Subtest-2	21.64	21.55	21.54
		3GPP Rel 6	HSUPA Subtest-3	22.60	22.43	22.62
		3GPP Rel 6	HSUPA Subtest-4	21.61	21.48	21.61
		3GPP Rel 6	HSUPA Subtest-5	23.60	23.70	23.70



Power Selection	Transmit Antenna	Band		WCDMA II		
		TX Channel		9262	9400	9538
		Rx Channel		9662	9800	9938
		Frequency (MHz)		1852.4	1880	1907.6
Hotspot / Near body / Product Specific	Ant 1	Max Power		25.1		
		3GPP Rel 99	AMR 12.2Kbps	24.65	24.58	24.79
		3GPP Rel 99	RMC 12.2Kbps	24.69	24.59	24.82
		Max Power		24.1		
		3GPP Rel 6	HSDPA Subtest-1	23.66	23.61	23.67
		3GPP Rel 6	HSDPA Subtest-2	23.71	23.61	23.73
		3GPP Rel 6	HSDPA Subtest-3	23.17	23.15	23.18
		3GPP Rel 6	HSDPA Subtest-4	23.19	23.12	23.22
		Max Power		24.1		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.66	23.61	23.62
		3GPP Rel 8	DC-HSDPA Subtest-2	23.71	23.61	23.69
		3GPP Rel 8	DC-HSDPA Subtest-3	23.07	23.13	23.16
		3GPP Rel 8	DC-HSDPA Subtest-4	23.09	23.09	23.19
		Max Power		24.1		
		3GPP Rel 6	HSUPA Subtest-1	23.71	23.64	23.64
		3GPP Rel 6	HSUPA Subtest-2	21.64	21.55	21.54
		3GPP Rel 6	HSUPA Subtest-3	22.60	22.43	22.62
		3GPP Rel 6	HSUPA Subtest-4	21.61	21.48	21.61
		3GPP Rel 6	HSUPA Subtest-5	23.60	23.70	23.70

Power Selection	Transmit Antenna	Band		WCDMA IV		
		TX Channel		1312	1413	1513
		Rx Channel		1537	1638	1738
		Frequency (MHz)		1712.4	1732.6	1752.6
Head / Hotspot / Near body / Product Specific	Ant 0	Max Power		24		
		3GPP Rel 99	AMR 12.2Kbps	23.28	23.20	23.25
		3GPP Rel 99	RMC 12.2Kbps	23.31	23.25	23.29
		Max Power		23		
		3GPP Rel 6	HSDPA Subtest-1	22.31	22.23	22.27
		3GPP Rel 6	HSDPA Subtest-2	22.35	22.26	22.29
		3GPP Rel 6	HSDPA Subtest-3	21.84	21.75	21.80
		3GPP Rel 6	HSDPA Subtest-4	21.78	21.76	21.78
		Max Power		23		
		3GPP Rel 8	DC-HSDPA Subtest-1	22.22	22.18	22.24
		3GPP Rel 8	DC-HSDPA Subtest-2	22.35	22.25	22.22
		3GPP Rel 8	DC-HSDPA Subtest-3	21.84	21.72	21.71
		3GPP Rel 8	DC-HSDPA Subtest-4	21.70	21.69	21.71
		Max Power		23		
		3GPP Rel 6	HSUPA Subtest-1	22.30	22.21	22.28
		3GPP Rel 6	HSUPA Subtest-2	20.29	20.20	20.29
		3GPP Rel 6	HSUPA Subtest-3	21.31	21.22	21.31
		3GPP Rel 6	HSUPA Subtest-4	20.27	20.25	20.24
		3GPP Rel 6	HSUPA Subtest-5	22.30	22.20	22.30

Power Selection	Transmit Antenna	Band		WCDMA V		
		TX Channel		4132	4182	4233
		Rx Channel		4357	4407	4458
		Frequency (MHz)		826.4	836.4	846.6
Head / Hotspot / Near body / Product Specific	Ant 0	Max Power		24.5		
		3GPP Rel 99	AMR 12.2Kbps	23.80	23.68	23.75
		3GPP Rel 99	RMC 12.2Kbps	23.81	23.70	23.78
		Max Power		23.5		
		3GPP Rel 6	HSDPA Subtest-1	22.78	22.72	22.78
		3GPP Rel 6	HSDPA Subtest-2	22.87	22.74	22.83
		3GPP Rel 6	HSDPA Subtest-3	22.37	22.25	22.35
		3GPP Rel 6	HSDPA Subtest-4	22.36	22.21	22.30
		Max Power		23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	22.62	22.63	22.60
		3GPP Rel 8	DC-HSDPA Subtest-2	22.67	22.65	22.75
		3GPP Rel 8	DC-HSDPA Subtest-3	22.26	22.23	22.18
		3GPP Rel 8	DC-HSDPA Subtest-4	22.16	22.21	22.25
		Max Power		23.5		
		3GPP Rel 6	HSUPA Subtest-1	22.86	22.70	22.80
		3GPP Rel 6	HSUPA Subtest-2	20.86	20.74	20.79
		3GPP Rel 6	HSUPA Subtest-3	21.88	21.72	21.76
		3GPP Rel 6	HSUPA Subtest-4	20.85	20.69	20.76
		3GPP Rel 6	HSUPA Subtest-5	22.80	22.80	22.80

Power Selection	Transmit Antenna	Band		WCDMA IV		
		TX Channel		1312	1413	1513
		Rx Channel		1537	1638	1738
		Frequency (MHz)		1712.4	1732.6	1752.6
Hotspot / Near body / Product Specific	Ant 1	Max Power		24		
		3GPP Rel 99	AMR 12.2Kbps	23.28	23.20	23.25
		3GPP Rel 99	RMC 12.2Kbps	23.31	23.25	23.29
		Max Power		23		
		3GPP Rel 6	HSDPA Subtest-1	22.31	22.23	22.27
		3GPP Rel 6	HSDPA Subtest-2	22.35	22.26	22.29
		3GPP Rel 6	HSDPA Subtest-3	21.84	21.75	21.80
		3GPP Rel 6	HSDPA Subtest-4	21.78	21.76	21.78
		Max Power		23		
		3GPP Rel 8	DC-HSDPA Subtest-1	22.22	22.18	22.24
		3GPP Rel 8	DC-HSDPA Subtest-2	22.35	22.25	22.22
		3GPP Rel 8	DC-HSDPA Subtest-3	21.84	21.72	21.71
		3GPP Rel 8	DC-HSDPA Subtest-4	21.70	21.69	21.71
		Max Power		23		
		3GPP Rel 6	HSUPA Subtest-1	22.30	22.21	22.28
		3GPP Rel 6	HSUPA Subtest-2	20.29	20.20	20.29
		3GPP Rel 6	HSUPA Subtest-3	21.31	21.22	21.31
		3GPP Rel 6	HSUPA Subtest-4	20.27	20.25	20.24
		3GPP Rel 6	HSUPA Subtest-5	22.30	22.20	22.30

Power Selection	Transmit Antenna	Band		WCDMA V		
		TX Channel		4132	4182	4233
		Rx Channel		4357	4407	4458
		Frequency (MHz)		826.4	836.4	846.6
Hotspot / Near body / Product Specific	Ant 1	Max Power		24.5		
		3GPP Rel 99	AMR 12.2Kbps	23.80	23.68	23.75
		3GPP Rel 99	RMC 12.2Kbps	23.81	23.70	23.78
		Max Power		23.5		
		3GPP Rel 6	HSDPA Subtest-1	22.78	22.72	22.78
		3GPP Rel 6	HSDPA Subtest-2	22.87	22.74	22.83
		3GPP Rel 6	HSDPA Subtest-3	22.37	22.25	22.35
		3GPP Rel 6	HSDPA Subtest-4	22.36	22.21	22.30
		Max Power		23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	22.62	22.63	22.60
		3GPP Rel 8	DC-HSDPA Subtest-2	22.67	22.65	22.75
		3GPP Rel 8	DC-HSDPA Subtest-3	22.26	22.23	22.18
		3GPP Rel 8	DC-HSDPA Subtest-4	22.16	22.21	22.25
		Max Power		23.5		
		3GPP Rel 6	HSUPA Subtest-1	22.86	22.70	22.80
		3GPP Rel 6	HSUPA Subtest-2	20.86	20.74	20.79
		3GPP Rel 6	HSUPA Subtest-3	21.88	21.72	21.76
		3GPP Rel 6	HSUPA Subtest-4	20.85	20.69	20.76
		3GPP Rel 6	HSUPA Subtest-5	22.80	22.80	22.80

<CDMA2000 Conducted Power>
General Note:

1. Per KDB 941225 D01v03r01, SAR for head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55.
2. Per KDB 941225 D01v03r01, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
3. Per KDB 941225 D01v03r01, for Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH), with FCH only as the primary mode.

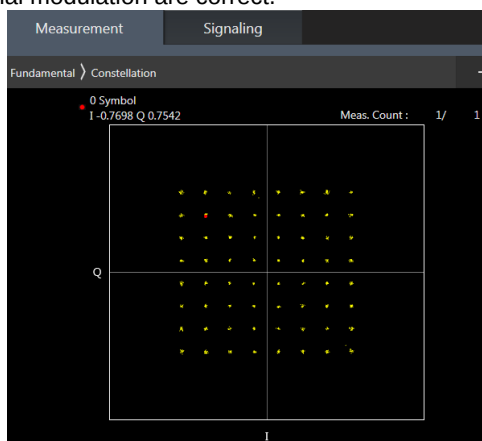
Power Selection	Transmit Antenna	Band	CDMA BC0			CDMA BC1			CDMA BC10		
		TX Channel	1013	384	777	25	600	1175	476	580	684
		Frequency (MHz)	824.7	836.52	848.31	1851.25	1880	1908.75	817.9	820.5	823.1
Head / Hotspot / Near body / Product Specific	Ant 0	Max Power	25.5			25			25.5		
		RC1 SO55	24.65	24.51	24.58	24.27	24.07	24.29	24.50	24.56	24.48
		RC3 SO55	24.67	24.56	24.61	24.32	24.24	24.33	24.60	24.58	24.56
		RC3 SO32 (F+SCH)	24.66	24.54	24.60	24.33	24.24	24.34	24.59	24.57	24.48
		RC3 SO32 (+SCH)	24.65	24.56	24.60	24.29	24.10	24.26	24.58	24.52	24.48
		RTAP 153.6Kbps	24.66	24.58	24.56	24.33	24.25	24.34	24.59	24.56	24.54
		RETAP 4096Bits	24.64	24.49	24.56	24.25	24.17	24.30	24.57	24.56	24.55

Power Selection	Transmit Antenna	Band	CDMA BC0			CDMA BC1			CDMA BC10		
		TX Channel	1013	384	777	25	600	1175	476	580	684
		Frequency (MHz)	824.7	836.52	848.31	1851.25	1880	1908.75	817.9	820.5	823.1
Hotspot / Near body / Product Specific	Ant 1	Max Power	25.5			25			25.5		
		RC1 SO55	24.65	24.51	24.58	24.27	24.07	24.29	24.50	24.56	24.48
		RC3 SO55	24.67	24.56	24.61	24.32	24.24	24.33	24.60	24.58	24.56
		RC3 SO32 (F+SCH)	24.66	24.54	24.60	24.33	24.24	24.34	24.59	24.57	24.48
		RC3 SO32 (+SCH)	24.65	24.56	24.60	24.29	24.10	24.26	24.58	24.52	24.48
		RTAP 153.6Kbps	24.66	24.58	24.56	24.33	24.25	24.34	24.59	24.56	24.54
		RETAP 4096Bits	24.64	24.49	24.56	24.25	24.17	24.30	24.57	24.56	24.55

<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 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 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 B26 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 band 2/4/5 SAR test was covered by Band 25/66/26; 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 2017 TCB workshop, for 64 QAM and 16 QAM 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.



64QAM



16QAM



<LTE Band 2>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				25.1		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	24.92	24.83	24.79
20	QPSK	1	49	24.94	24.89	24.77
20	QPSK	1	99	24.73	24.83	24.66
20	QPSK	50	0	24.01	23.93	23.82
20	QPSK	50	24	24.00	23.96	23.82
20	QPSK	50	50	23.91	23.87	23.77
20	QPSK	100	0	23.95	23.91	23.80
20	16QAM	1	0	24.08	24.09	24.06
20	16QAM	1	49	24.02	24.06	24.09
20	16QAM	1	99	24.07	24.03	24.03
20	16QAM	50	0	23.08	23.00	22.90
20	16QAM	50	24	23.07	23.05	22.93
20	16QAM	50	50	23.01	22.96	22.87
20	16QAM	100	0	23.04	22.96	22.87
20	64QAM	1	0	23.07	23.02	22.99
20	64QAM	1	49	23.04	23.05	23.00
20	64QAM	1	99	23.00	23.04	22.93
20	64QAM	50	0	22.08	22.00	21.91
20	64QAM	50	24	22.10	22.04	21.90
20	64QAM	50	50	22.01	21.97	21.84
20	64QAM	100	0	22.03	21.98	21.87
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	24.87	24.77	24.80
15	QPSK	1	37	24.92	24.87	24.63
15	QPSK	1	74	24.85	24.81	24.67
15	QPSK	36	0	23.99	23.93	23.81
15	QPSK	36	20	23.98	23.95	23.81
15	QPSK	36	39	23.92	23.86	23.77
15	QPSK	75	0	23.93	23.87	23.77
15	16QAM	1	0	24.08	24.02	24.08
15	16QAM	1	37	24.03	24.00	23.92
15	16QAM	1	74	24.01	24.05	24.02
15	16QAM	36	0	23.07	23.00	22.89
15	16QAM	36	20	23.07	23.02	22.89
15	16QAM	36	39	22.99	22.95	22.83
15	16QAM	75	0	23.02	22.96	22.87
15	64QAM	1	0	23.08	22.99	23.04
15	64QAM	1	37	23.04	23.05	22.86
15	64QAM	1	74	23.05	23.02	22.91
15	64QAM	36	0	22.07	22.02	21.89
15	64QAM	36	20	22.10	22.04	21.91
15	64QAM	36	39	22.03	21.99	21.86
15	64QAM	75	0	22.03	21.96	21.83
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	24.91	24.75	24.78
10	QPSK	1	25	21.92	24.90	24.77



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	24.93	24.91	24.70
10	QPSK	25	0	23.99	23.90	23.80
10	QPSK	25	12	23.98	23.92	23.79
10	QPSK	25	25	23.93	23.88	23.76
10	QPSK	50	0	23.98	23.89	23.77
10	16QAM	1	0	24.04	23.98	24.05
10	16QAM	1	25	24.01	24.00	24.09
10	16QAM	1	49	24.02	24.03	24.01
10	16QAM	25	0	23.09	23.00	22.87
10	16QAM	25	12	23.09	23.01	22.89
10	16QAM	25	25	23.02	22.98	22.87
10	16QAM	50	0	23.07	22.98	22.84
10	64QAM	1	0	23.08	23.10	23.02
10	64QAM	1	25	23.02	23.04	23.00
10	64QAM	1	49	23.08	23.06	22.91
10	64QAM	25	0	22.09	22.00	21.86
10	64QAM	25	12	22.08	22.03	21.87
10	64QAM	25	25	22.02	21.99	21.85
10	64QAM	50	0	22.06	22.00	21.87
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	24.85	24.87	24.76
5	QPSK	1	12	24.91	24.90	24.74
5	QPSK	1	24	24.92	24.85	24.73
5	QPSK	12	0	24.00	23.90	23.80
5	QPSK	12	7	23.99	23.92	23.79
5	QPSK	12	13	23.97	23.88	23.76
5	QPSK	25	0	23.95	23.89	23.78
5	16QAM	1	0	24.08	24.02	24.09
5	16QAM	1	12	24.06	24.04	24.09
5	16QAM	1	24	24.05	24.02	24.02
5	16QAM	12	0	23.09	23.00	22.87
5	16QAM	12	7	23.09	23.01	22.90
5	16QAM	12	13	23.05	22.98	22.83
5	16QAM	25	0	23.06	22.98	22.84
5	64QAM	1	0	23.07	23.06	22.97
5	64QAM	1	12	23.04	23.03	22.98
5	64QAM	1	24	23.08	23.10	22.94
5	64QAM	12	0	22.07	22.04	21.89
5	64QAM	12	7	22.04	22.04	21.93
5	64QAM	12	13	22.09	22.02	21.85
5	64QAM	25	0	22.07	21.98	21.86
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	24.88	24.88	24.73
3	QPSK	1	8	24.89	24.86	24.76
3	QPSK	1	14	24.93	24.84	24.73
3	QPSK	8	0	23.90	23.90	23.76
3	QPSK	8	4	24.03	23.95	23.82
3	QPSK	8	7	23.97	23.91	23.79
3	QPSK	15	0	23.96	23.89	23.77
3	16QAM	1	0	24.01	24.02	24.04
3	16QAM	1	8	24.08	24.05	24.09
3	16QAM	1	14	24.04	24.03	24.04
3	16QAM	8	0	23.02	23.03	22.90
3	16QAM	8	4	23.00	23.09	22.93



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	23.09	23.05	22.91
3	16QAM	15	0	23.08	23.00	22.86
3	64QAM	1	0	23.10	23.07	22.99
3	64QAM	1	8	23.10	23.00	23.01
3	64QAM	1	14	23.00	23.04	22.95
3	64QAM	8	0	22.01	22.04	21.88
3	64QAM	8	4	22.04	22.07	21.93
3	64QAM	8	7	22.09	22.03	21.88
3	64QAM	15	0	22.07	21.99	21.87
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	24.84	24.84	24.69
1.4	QPSK	1	3	24.88	24.90	24.77
1.4	QPSK	1	5	24.80	24.81	24.69
1.4	QPSK	3	0	24.85	24.87	24.74
1.4	QPSK	3	1	24.91	24.93	24.76
1.4	QPSK	3	3	24.87	24.87	24.73
1.4	QPSK	6	0	23.85	23.84	23.71
1.4	16QAM	1	0	24.08	24.08	24.00
1.4	16QAM	1	3	24.05	24.05	24.08
1.4	16QAM	1	5	24.09	24.10	23.96
1.4	16QAM	3	0	23.92	23.91	23.82
1.4	16QAM	3	1	23.97	23.97	23.85
1.4	16QAM	3	3	23.90	23.93	23.80
1.4	16QAM	6	0	22.99	23.00	22.87
1.4	64QAM	1	0	23.07	23.08	22.90
1.4	64QAM	1	3	23.05	23.00	23.02
1.4	64QAM	1	5	23.07	23.08	22.92
1.4	64QAM	3	0	23.04	23.07	22.92
1.4	64QAM	3	1	23.09	23.04	22.96
1.4	64QAM	3	3	23.08	23.08	22.94
1.4	64QAM	6	0	21.93	21.92	21.80



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				25.1		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	24.92	24.83	24.79
20	QPSK	1	49	24.94	24.89	24.77
20	QPSK	1	99	24.73	24.83	24.66
20	QPSK	50	0	24.01	23.93	23.82
20	QPSK	50	24	24.00	23.96	23.82
20	QPSK	50	50	23.91	23.87	23.77
20	QPSK	100	0	23.95	23.91	23.80
20	16QAM	1	0	24.08	24.09	24.06
20	16QAM	1	49	24.02	24.06	24.09
20	16QAM	1	99	24.07	24.03	24.03
20	16QAM	50	0	23.08	23.00	22.90
20	16QAM	50	24	23.07	23.05	22.93
20	16QAM	50	50	23.01	22.96	22.87
20	16QAM	100	0	23.04	22.96	22.87
20	64QAM	1	0	23.07	23.02	22.99
20	64QAM	1	49	23.04	23.05	23.00
20	64QAM	1	99	23.00	23.04	22.93
20	64QAM	50	0	22.08	22.00	21.91
20	64QAM	50	24	22.10	22.04	21.90
20	64QAM	50	50	22.01	21.97	21.84
20	64QAM	100	0	22.03	21.98	21.87
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	24.87	24.77	24.80
15	QPSK	1	37	24.92	24.87	24.63
15	QPSK	1	74	24.85	24.81	24.67
15	QPSK	36	0	23.99	23.93	23.81
15	QPSK	36	20	23.98	23.95	23.81
15	QPSK	36	39	23.92	23.86	23.77
15	QPSK	75	0	23.93	23.87	23.77
15	16QAM	1	0	24.08	24.02	24.08
15	16QAM	1	37	24.03	24.00	23.92
15	16QAM	1	74	24.01	24.05	24.02
15	16QAM	36	0	23.07	23.00	22.89
15	16QAM	36	20	23.07	23.02	22.89
15	16QAM	36	39	22.99	22.95	22.83
15	16QAM	75	0	23.02	22.96	22.87
15	64QAM	1	0	23.08	22.99	23.04
15	64QAM	1	37	23.04	23.05	22.86
15	64QAM	1	74	23.05	23.02	22.91
15	64QAM	36	0	22.07	22.02	21.89
15	64QAM	36	20	22.10	22.04	21.91
15	64QAM	36	39	22.03	21.99	21.86
15	64QAM	75	0	22.03	21.96	21.83
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	24.91	24.75	24.78
10	QPSK	1	25	21.92	24.90	24.77



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	24.93	24.91	24.70
10	QPSK	25	0	23.99	23.90	23.80
10	QPSK	25	12	23.98	23.92	23.79
10	QPSK	25	25	23.93	23.88	23.76
10	QPSK	50	0	23.98	23.89	23.77
10	16QAM	1	0	24.04	23.98	24.05
10	16QAM	1	25	24.01	24.00	24.09
10	16QAM	1	49	24.02	24.03	24.01
10	16QAM	25	0	23.09	23.00	22.87
10	16QAM	25	12	23.09	23.01	22.89
10	16QAM	25	25	23.02	22.98	22.87
10	16QAM	50	0	23.07	22.98	22.84
10	64QAM	1	0	23.08	23.10	23.02
10	64QAM	1	25	23.02	23.04	23.00
10	64QAM	1	49	23.08	23.06	22.91
10	64QAM	25	0	22.09	22.00	21.86
10	64QAM	25	12	22.08	22.03	21.87
10	64QAM	25	25	22.02	21.99	21.85
10	64QAM	50	0	22.06	22.00	21.87
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	24.85	24.87	24.76
5	QPSK	1	12	24.91	24.90	24.74
5	QPSK	1	24	24.92	24.85	24.73
5	QPSK	12	0	24.00	23.90	23.80
5	QPSK	12	7	23.99	23.92	23.79
5	QPSK	12	13	23.97	23.88	23.76
5	QPSK	25	0	23.95	23.89	23.78
5	16QAM	1	0	24.08	24.02	24.09
5	16QAM	1	12	24.06	24.04	24.09
5	16QAM	1	24	24.05	24.02	24.02
5	16QAM	12	0	23.09	23.00	22.87
5	16QAM	12	7	23.09	23.01	22.90
5	16QAM	12	13	23.05	22.98	22.83
5	16QAM	25	0	23.06	22.98	22.84
5	64QAM	1	0	23.07	23.06	22.97
5	64QAM	1	12	23.04	23.03	22.98
5	64QAM	1	24	23.08	23.10	22.94
5	64QAM	12	0	22.07	22.04	21.89
5	64QAM	12	7	22.04	22.04	21.93
5	64QAM	12	13	22.09	22.02	21.85
5	64QAM	25	0	22.07	21.98	21.86
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	24.88	24.88	24.73
3	QPSK	1	8	24.89	24.86	24.76
3	QPSK	1	14	24.93	24.84	24.73
3	QPSK	8	0	23.90	23.90	23.76
3	QPSK	8	4	24.03	23.95	23.82
3	QPSK	8	7	23.97	23.91	23.79
3	QPSK	15	0	23.96	23.89	23.77
3	16QAM	1	0	24.01	24.02	24.04
3	16QAM	1	8	24.08	24.05	24.09
3	16QAM	1	14	24.04	24.03	24.04
3	16QAM	8	0	23.02	23.03	22.90
3	16QAM	8	4	23.00	23.09	22.93



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	23.09	23.05	22.91
3	16QAM	15	0	23.08	23.00	22.86
3	64QAM	1	0	23.10	23.07	22.99
3	64QAM	1	8	23.10	23.00	23.01
3	64QAM	1	14	23.00	23.04	22.95
3	64QAM	8	0	22.01	22.04	21.88
3	64QAM	8	4	22.04	22.07	21.93
3	64QAM	8	7	22.09	22.03	21.88
3	64QAM	15	0	22.07	21.99	21.87
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	24.84	24.84	24.69
1.4	QPSK	1	3	24.88	24.90	24.77
1.4	QPSK	1	5	24.80	24.81	24.69
1.4	QPSK	3	0	24.85	24.87	24.74
1.4	QPSK	3	1	24.91	24.93	24.76
1.4	QPSK	3	3	24.87	24.87	24.73
1.4	QPSK	6	0	23.85	23.84	23.71
1.4	16QAM	1	0	24.08	24.08	24.00
1.4	16QAM	1	3	24.05	24.05	24.08
1.4	16QAM	1	5	24.09	24.10	23.96
1.4	16QAM	3	0	23.92	23.91	23.82
1.4	16QAM	3	1	23.97	23.97	23.85
1.4	16QAM	3	3	23.90	23.93	23.80
1.4	16QAM	6	0	22.99	23.00	22.87
1.4	64QAM	1	0	23.07	23.08	22.90
1.4	64QAM	1	3	23.05	23.00	23.02
1.4	64QAM	1	5	23.07	23.08	22.92
1.4	64QAM	3	0	23.04	23.07	22.92
1.4	64QAM	3	1	23.09	23.04	22.96
1.4	64QAM	3	3	23.08	23.08	22.94
1.4	64QAM	6	0	21.93	21.92	21.80



<LTE Band 4>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	23.33	23.41	23.50
20	QPSK	1	49	23.30	23.39	23.57
20	QPSK	1	99	23.30	23.25	23.39
20	QPSK	50	0	22.43	22.46	22.52
20	QPSK	50	24	22.47	22.44	22.55
20	QPSK	50	50	22.43	22.40	22.56
20	QPSK	100	0	22.46	22.44	22.52
20	16QAM	1	0	22.70	22.78	22.78
20	16QAM	1	49	22.65	22.71	22.88
20	16QAM	1	99	22.65	22.58	22.78
20	16QAM	50	0	21.49	21.56	21.60
20	16QAM	50	24	21.60	21.53	21.59
20	16QAM	50	50	21.53	21.51	21.65
20	16QAM	100	0	21.56	21.52	21.60
20	64QAM	1	0	21.65	21.70	21.80
20	64QAM	1	49	21.61	21.67	21.85
20	64QAM	1	99	21.59	21.59	21.74
20	64QAM	50	0	20.58	20.64	20.67
20	64QAM	50	24	20.67	20.63	20.70
20	64QAM	50	50	20.58	20.57	20.69
20	64QAM	100	0	20.63	20.57	20.63
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	23.33	23.41	23.52
15	QPSK	1	37	23.32	23.38	23.55
15	QPSK	1	74	23.33	23.28	23.43
15	QPSK	36	0	22.41	22.43	22.51
15	QPSK	36	20	22.51	22.45	22.63
15	QPSK	36	39	22.43	22.42	22.54
15	QPSK	75	0	22.48	22.46	22.50
15	16QAM	1	0	22.68	22.75	22.84
15	16QAM	1	37	22.65	22.70	22.88
15	16QAM	1	74	22.68	22.61	22.80
15	16QAM	36	0	21.49	21.54	21.65
15	16QAM	36	20	21.60	21.55	21.71
15	16QAM	36	39	21.55	21.48	21.63
15	16QAM	75	0	21.58	21.54	21.60
15	64QAM	1	0	21.70	21.71	21.77
15	64QAM	1	37	21.65	21.67	21.84
15	64QAM	1	74	21.64	21.57	21.73
15	64QAM	36	0	20.55	20.61	20.68
15	64QAM	36	20	20.69	20.62	20.78
15	64QAM	36	39	20.63	20.55	20.68
15	64QAM	75	0	20.63	20.55	20.61
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	23.37	23.42	23.55
10	QPSK	1	25	23.36	23.43	23.56



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	23.30	23.32	23.48
10	QPSK	25	0	22.47	22.51	22.64
10	QPSK	25	12	22.41	22.49	22.64
10	QPSK	25	25	22.39	22.41	22.55
10	QPSK	50	0	22.43	22.45	22.63
10	16QAM	1	0	22.74	22.77	22.95
10	16QAM	1	25	22.71	22.76	22.91
10	16QAM	1	49	22.63	22.68	22.82
10	16QAM	25	0	21.56	21.61	21.73
10	16QAM	25	12	21.55	21.58	21.71
10	16QAM	25	25	21.48	21.52	21.64
10	16QAM	50	0	21.49	21.56	21.70
10	64QAM	1	0	21.69	21.74	21.88
10	64QAM	1	25	21.67	21.72	21.88
10	64QAM	1	49	21.57	21.63	21.81
10	64QAM	25	0	20.58	20.64	20.75
10	64QAM	25	12	20.59	20.59	20.78
10	64QAM	25	25	20.50	20.56	20.70
10	64QAM	50	0	20.59	20.62	20.72
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	23.36	23.43	23.56
5	QPSK	1	12	23.37	23.42	23.54
5	QPSK	1	24	23.32	23.37	23.48
5	QPSK	12	0	22.42	22.49	22.58
5	QPSK	12	7	22.48	22.51	22.64
5	QPSK	12	13	22.42	22.46	22.58
5	QPSK	25	0	22.41	22.47	22.58
5	16QAM	1	0	22.73	22.74	22.91
5	16QAM	1	12	22.72	22.78	22.89
5	16QAM	1	24	22.66	22.69	22.82
5	16QAM	12	0	21.52	21.54	21.71
5	16QAM	12	7	21.57	21.61	21.75
5	16QAM	12	13	21.49	21.57	21.67
5	16QAM	25	0	21.53	21.52	21.70
5	64QAM	1	0	21.66	21.67	21.81
5	64QAM	1	12	21.66	21.68	21.84
5	64QAM	1	24	21.59	21.60	21.77
5	64QAM	12	0	20.58	20.65	20.76
5	64QAM	12	7	20.61	20.63	20.78
5	64QAM	12	13	20.60	20.63	20.70
5	64QAM	25	0	20.53	20.55	20.66
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.40	23.43	23.56
3	QPSK	1	8	23.39	23.42	23.54
3	QPSK	1	14	23.34	23.41	23.52
3	QPSK	8	0	22.46	22.48	22.59
3	QPSK	8	4	22.50	22.55	22.63
3	QPSK	8	7	22.46	22.46	22.58
3	QPSK	15	0	22.45	22.47	22.60
3	16QAM	1	0	22.73	22.71	22.88
3	16QAM	1	8	22.72	22.78	22.92
3	16QAM	1	14	22.69	22.72	22.84
3	16QAM	8	0	21.60	21.63	21.76
3	16QAM	8	4	21.62	21.65	21.79



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	21.62	21.61	21.75
3	16QAM	15	0	21.57	21.58	21.74
3	64QAM	1	0	21.67	21.68	21.80
3	64QAM	1	8	21.66	21.70	21.85
3	64QAM	1	14	21.62	21.63	21.77
3	64QAM	8	0	20.61	20.60	20.73
3	64QAM	8	4	20.63	20.67	20.77
3	64QAM	8	7	20.56	20.62	20.72
3	64QAM	15	0	20.57	20.59	20.71
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.32	23.38	23.50
1.4	QPSK	1	3	23.41	23.45	23.56
1.4	QPSK	1	5	23.31	23.35	23.51
1.4	QPSK	3	0	23.38	23.42	23.56
1.4	QPSK	3	1	23.41	23.43	23.56
1.4	QPSK	3	3	23.37	23.42	23.55
1.4	QPSK	6	0	22.41	22.44	22.55
1.4	16QAM	1	0	22.69	22.68	22.84
1.4	16QAM	1	3	22.77	22.80	22.93
1.4	16QAM	1	5	22.71	22.73	22.82
1.4	16QAM	3	0	22.47	22.51	22.64
1.4	16QAM	3	1	22.53	22.55	22.68
1.4	16QAM	3	3	22.49	22.51	22.65
1.4	16QAM	6	0	21.58	21.61	21.72
1.4	64QAM	1	0	21.62	21.67	21.80
1.4	64QAM	1	3	21.67	21.73	21.85
1.4	64QAM	1	5	21.60	21.62	21.78
1.4	64QAM	3	0	21.60	21.63	21.79
1.4	64QAM	3	1	21.65	21.69	21.82
1.4	64QAM	3	3	21.61	21.63	21.77
1.4	64QAM	6	0	20.50	20.51	20.65



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	23.33	23.41	23.50
20	QPSK	1	49	23.30	23.39	23.57
20	QPSK	1	99	23.30	23.25	23.39
20	QPSK	50	0	22.43	22.46	22.52
20	QPSK	50	24	22.47	22.44	22.55
20	QPSK	50	50	22.43	22.40	22.56
20	QPSK	100	0	22.46	22.44	22.52
20	16QAM	1	0	22.70	22.78	22.78
20	16QAM	1	49	22.65	22.71	22.88
20	16QAM	1	99	22.65	22.58	22.78
20	16QAM	50	0	21.49	21.56	21.60
20	16QAM	50	24	21.60	21.53	21.59
20	16QAM	50	50	21.53	21.51	21.65
20	16QAM	100	0	21.56	21.52	21.60
20	64QAM	1	0	21.65	21.70	21.80
20	64QAM	1	49	21.61	21.67	21.85
20	64QAM	1	99	21.59	21.59	21.74
20	64QAM	50	0	20.58	20.64	20.67
20	64QAM	50	24	20.67	20.63	20.70
20	64QAM	50	50	20.58	20.57	20.69
20	64QAM	100	0	20.63	20.57	20.63
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	23.33	23.41	23.52
15	QPSK	1	37	23.32	23.38	23.55
15	QPSK	1	74	23.33	23.28	23.43
15	QPSK	36	0	22.41	22.43	22.51
15	QPSK	36	20	22.51	22.45	22.63
15	QPSK	36	39	22.43	22.42	22.54
15	QPSK	75	0	22.48	22.46	22.50
15	16QAM	1	0	22.68	22.75	22.84
15	16QAM	1	37	22.65	22.70	22.88
15	16QAM	1	74	22.68	22.61	22.80
15	16QAM	36	0	21.49	21.54	21.65
15	16QAM	36	20	21.60	21.55	21.71
15	16QAM	36	39	21.55	21.48	21.63
15	16QAM	75	0	21.58	21.54	21.60
15	64QAM	1	0	21.70	21.71	21.77
15	64QAM	1	37	21.65	21.67	21.84
15	64QAM	1	74	21.64	21.57	21.73
15	64QAM	36	0	20.55	20.61	20.68
15	64QAM	36	20	20.69	20.62	20.78
15	64QAM	36	39	20.63	20.55	20.68
15	64QAM	75	0	20.63	20.55	20.61
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	23.37	23.42	23.55
10	QPSK	1	25	23.36	23.43	23.56



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	23.30	23.32	23.48
10	QPSK	25	0	22.47	22.51	22.64
10	QPSK	25	12	22.41	22.49	22.64
10	QPSK	25	25	22.39	22.41	22.55
10	QPSK	50	0	22.43	22.45	22.63
10	16QAM	1	0	22.74	22.77	22.95
10	16QAM	1	25	22.71	22.76	22.91
10	16QAM	1	49	22.63	22.68	22.82
10	16QAM	25	0	21.56	21.61	21.73
10	16QAM	25	12	21.55	21.58	21.71
10	16QAM	25	25	21.48	21.52	21.64
10	16QAM	50	0	21.49	21.56	21.70
10	64QAM	1	0	21.69	21.74	21.88
10	64QAM	1	25	21.67	21.72	21.88
10	64QAM	1	49	21.57	21.63	21.81
10	64QAM	25	0	20.58	20.64	20.75
10	64QAM	25	12	20.59	20.59	20.78
10	64QAM	25	25	20.50	20.56	20.70
10	64QAM	50	0	20.59	20.62	20.72
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	23.36	23.43	23.56
5	QPSK	1	12	23.37	23.42	23.54
5	QPSK	1	24	23.32	23.37	23.48
5	QPSK	12	0	22.42	22.49	22.58
5	QPSK	12	7	22.48	22.51	22.64
5	QPSK	12	13	22.42	22.46	22.58
5	QPSK	25	0	22.41	22.47	22.58
5	16QAM	1	0	22.73	22.74	22.91
5	16QAM	1	12	22.72	22.78	22.89
5	16QAM	1	24	22.66	22.69	22.82
5	16QAM	12	0	21.52	21.54	21.71
5	16QAM	12	7	21.57	21.61	21.75
5	16QAM	12	13	21.49	21.57	21.67
5	16QAM	25	0	21.53	21.52	21.70
5	64QAM	1	0	21.66	21.67	21.81
5	64QAM	1	12	21.66	21.68	21.84
5	64QAM	1	24	21.59	21.60	21.77
5	64QAM	12	0	20.58	20.65	20.76
5	64QAM	12	7	20.61	20.63	20.78
5	64QAM	12	13	20.60	20.63	20.70
5	64QAM	25	0	20.53	20.55	20.66
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.40	23.43	23.56
3	QPSK	1	8	23.39	23.42	23.54
3	QPSK	1	14	23.34	23.41	23.52
3	QPSK	8	0	22.46	22.48	22.59
3	QPSK	8	4	22.50	22.55	22.63
3	QPSK	8	7	22.46	22.46	22.58
3	QPSK	15	0	22.45	22.47	22.60
3	16QAM	1	0	22.73	22.71	22.88
3	16QAM	1	8	22.72	22.78	22.92
3	16QAM	1	14	22.69	22.72	22.84
3	16QAM	8	0	21.60	21.63	21.76
3	16QAM	8	4	21.62	21.65	21.79



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	21.62	21.61	21.75
3	16QAM	15	0	21.57	21.58	21.74
3	64QAM	1	0	21.67	21.68	21.80
3	64QAM	1	8	21.66	21.70	21.85
3	64QAM	1	14	21.62	21.63	21.77
3	64QAM	8	0	20.61	20.60	20.73
3	64QAM	8	4	20.63	20.67	20.77
3	64QAM	8	7	20.56	20.62	20.72
3	64QAM	15	0	20.57	20.59	20.71
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.32	23.38	23.50
1.4	QPSK	1	3	23.41	23.45	23.56
1.4	QPSK	1	5	23.31	23.35	23.51
1.4	QPSK	3	0	23.38	23.42	23.56
1.4	QPSK	3	1	23.41	23.43	23.56
1.4	QPSK	3	3	23.37	23.42	23.55
1.4	QPSK	6	0	22.41	22.44	22.55
1.4	16QAM	1	0	22.69	22.68	22.84
1.4	16QAM	1	3	22.77	22.80	22.93
1.4	16QAM	1	5	22.71	22.73	22.82
1.4	16QAM	3	0	22.47	22.51	22.64
1.4	16QAM	3	1	22.53	22.55	22.68
1.4	16QAM	3	3	22.49	22.51	22.65
1.4	16QAM	6	0	21.58	21.61	21.72
1.4	64QAM	1	0	21.62	21.67	21.80
1.4	64QAM	1	3	21.67	21.73	21.85
1.4	64QAM	1	5	21.60	21.62	21.78
1.4	64QAM	3	0	21.60	21.63	21.79
1.4	64QAM	3	1	21.65	21.69	21.82
1.4	64QAM	3	3	21.61	21.63	21.77
1.4	64QAM	6	0	20.50	20.51	20.65



<LTE Band 5>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	24.68	24.79	24.79
10	QPSK	1	25	24.74	24.83	24.75
10	QPSK	1	49	24.76	24.77	24.67
10	QPSK	25	0	23.81	23.96	23.85
10	QPSK	25	12	23.79	23.95	23.83
10	QPSK	25	25	23.82	23.87	23.77
10	QPSK	50	0	23.77	23.92	23.82
10	16QAM	1	0	23.95	24.12	24.09
10	16QAM	1	25	24.04	24.17	24.06
10	16QAM	1	49	24.09	24.06	23.91
10	16QAM	25	0	22.83	23.02	22.92
10	16QAM	25	12	22.82	22.99	22.92
10	16QAM	25	25	22.87	22.96	22.85
10	16QAM	50	0	22.82	23.00	22.89
10	64QAM	1	0	22.86	23.07	23.04
10	64QAM	1	25	22.96	23.08	22.98
10	64QAM	1	49	22.99	22.98	22.85
10	64QAM	25	0	21.88	22.07	21.97
10	64QAM	25	12	21.90	22.03	21.94
10	64QAM	25	25	21.89	21.97	21.85
10	64QAM	50	0	21.82	22.01	21.93
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	24.64	24.80	24.75
5	QPSK	1	12	24.62	24.80	24.73
5	QPSK	1	24	24.70	24.81	24.66
5	QPSK	12	0	23.73	23.91	23.79
5	QPSK	12	7	23.82	23.98	23.81
5	QPSK	12	13	23.74	23.89	23.78
5	QPSK	25	0	23.78	23.93	23.78
5	16QAM	1	0	23.98	24.17	24.03
5	16QAM	1	12	23.98	24.18	24.04
5	16QAM	1	24	24.01	24.07	23.93
5	16QAM	12	0	22.74	23.02	22.89
5	16QAM	12	7	22.88	23.01	22.89
5	16QAM	12	13	22.84	22.95	22.84
5	16QAM	25	0	22.85	23.01	22.86
5	64QAM	1	0	22.91	23.12	22.98
5	64QAM	1	12	22.91	23.12	22.97
5	64QAM	1	24	22.95	23.02	22.86
5	64QAM	12	0	21.86	22.08	21.92
5	64QAM	12	7	21.96	22.10	21.93
5	64QAM	12	13	21.88	22.03	21.92
5	64QAM	25	0	21.85	22.00	21.85
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	24.64	24.80	24.70
3	QPSK	1	8	24.62	24.82	24.67



FCC SAR TEST REPORT

Report No. : FA9O2116

3	QPSK	1	14	24.61	24.80	24.65
3	QPSK	8	0	23.66	23.89	23.76
3	QPSK	8	4	23.70	23.90	23.79
3	QPSK	8	7	23.65	23.86	23.73
3	QPSK	15	0	23.66	23.88	23.76
3	16QAM	1	0	23.93	24.17	23.97
3	16QAM	1	8	23.97	24.13	23.97
3	16QAM	1	14	23.93	24.12	23.90
3	16QAM	8	0	22.79	23.01	22.86
3	16QAM	8	4	22.81	23.03	22.90
3	16QAM	8	7	22.77	22.98	22.82
3	16QAM	15	0	22.76	22.99	22.85
3	64QAM	1	0	22.89	23.09	22.93
3	64QAM	1	8	22.88	23.09	22.90
3	64QAM	1	14	22.81	23.04	22.85
3	64QAM	8	0	21.78	22.04	21.87
3	64QAM	8	4	21.81	22.05	21.91
3	64QAM	8	7	21.77	22.02	21.85
3	64QAM	15	0	21.78	22.01	21.85
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	24.59	24.76	24.64
1.4	QPSK	1	3	24.66	24.80	24.67
1.4	QPSK	1	5	24.57	24.77	24.55
1.4	QPSK	3	0	24.62	24.80	24.67
1.4	QPSK	3	1	24.63	24.80	24.69
1.4	QPSK	3	3	24.63	24.81	24.63
1.4	QPSK	6	0	23.64	23.85	23.70
1.4	16QAM	1	0	23.90	24.10	23.88
1.4	16QAM	1	3	24.00	24.15	23.92
1.4	16QAM	1	5	23.88	24.05	23.85
1.4	16QAM	3	0	23.71	23.92	23.71
1.4	16QAM	3	1	23.74	23.94	23.76
1.4	16QAM	3	3	23.68	23.87	23.67
1.4	16QAM	6	0	22.80	23.01	22.83
1.4	64QAM	1	0	22.87	23.06	22.84
1.4	64QAM	1	3	22.91	23.09	22.88
1.4	64QAM	1	5	22.81	22.99	22.79
1.4	64QAM	3	0	22.81	23.01	22.85
1.4	64QAM	3	1	22.86	23.05	22.85
1.4	64QAM	3	3	22.82	22.99	22.80
1.4	64QAM	6	0	21.74	21.94	21.78



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	24.68	24.79	24.79
10	QPSK	1	25	24.74	24.83	24.75
10	QPSK	1	49	24.76	24.77	24.67
10	QPSK	25	0	23.81	23.96	23.85
10	QPSK	25	12	23.79	23.95	23.83
10	QPSK	25	25	23.82	23.87	23.77
10	QPSK	50	0	23.77	23.92	23.82
10	16QAM	1	0	23.95	24.12	24.09
10	16QAM	1	25	24.04	24.17	24.06
10	16QAM	1	49	24.09	24.06	23.91
10	16QAM	25	0	22.83	23.02	22.92
10	16QAM	25	12	22.82	22.99	22.92
10	16QAM	25	25	22.87	22.96	22.85
10	16QAM	50	0	22.82	23.00	22.89
10	64QAM	1	0	22.86	23.07	23.04
10	64QAM	1	25	22.96	23.08	22.98
10	64QAM	1	49	22.99	22.98	22.85
10	64QAM	25	0	21.88	22.07	21.97
10	64QAM	25	12	21.90	22.03	21.94
10	64QAM	25	25	21.89	21.97	21.85
10	64QAM	50	0	21.82	22.01	21.93
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	24.64	24.80	24.75
5	QPSK	1	12	24.62	24.80	24.73
5	QPSK	1	24	24.70	24.81	24.66
5	QPSK	12	0	23.73	23.91	23.79
5	QPSK	12	7	23.82	23.98	23.81
5	QPSK	12	13	23.74	23.89	23.78
5	QPSK	25	0	23.78	23.93	23.78
5	16QAM	1	0	23.98	24.17	24.03
5	16QAM	1	12	23.98	24.18	24.04
5	16QAM	1	24	24.01	24.07	23.93
5	16QAM	12	0	22.74	23.02	22.89
5	16QAM	12	7	22.88	23.01	22.89
5	16QAM	12	13	22.84	22.95	22.84
5	16QAM	25	0	22.85	23.01	22.86
5	64QAM	1	0	22.91	23.12	22.98
5	64QAM	1	12	22.91	23.12	22.97
5	64QAM	1	24	22.95	23.02	22.86
5	64QAM	12	0	21.86	22.08	21.92
5	64QAM	12	7	21.96	22.10	21.93
5	64QAM	12	13	21.88	22.03	21.92
5	64QAM	25	0	21.85	22.00	21.85
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	24.64	24.80	24.70
3	QPSK	1	8	24.62	24.82	24.67



FCC SAR TEST REPORT

Report No. : FA9O2116

3	QPSK	1	14	24.61	24.80	24.65
3	QPSK	8	0	23.66	23.89	23.76
3	QPSK	8	4	23.70	23.90	23.79
3	QPSK	8	7	23.65	23.86	23.73
3	QPSK	15	0	23.66	23.88	23.76
3	16QAM	1	0	23.93	24.17	23.97
3	16QAM	1	8	23.97	24.13	23.97
3	16QAM	1	14	23.93	24.12	23.90
3	16QAM	8	0	22.79	23.01	22.86
3	16QAM	8	4	22.81	23.03	22.90
3	16QAM	8	7	22.77	22.98	22.82
3	16QAM	15	0	22.76	22.99	22.85
3	64QAM	1	0	22.89	23.09	22.93
3	64QAM	1	8	22.88	23.09	22.90
3	64QAM	1	14	22.81	23.04	22.85
3	64QAM	8	0	21.78	22.04	21.87
3	64QAM	8	4	21.81	22.05	21.91
3	64QAM	8	7	21.77	22.02	21.85
3	64QAM	15	0	21.78	22.01	21.85
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	24.59	24.76	24.64
1.4	QPSK	1	3	24.66	24.80	24.67
1.4	QPSK	1	5	24.57	24.77	24.55
1.4	QPSK	3	0	24.62	24.80	24.67
1.4	QPSK	3	1	24.63	24.80	24.69
1.4	QPSK	3	3	24.63	24.81	24.63
1.4	QPSK	6	0	23.64	23.85	23.70
1.4	16QAM	1	0	23.90	24.10	23.88
1.4	16QAM	1	3	24.00	24.15	23.92
1.4	16QAM	1	5	23.88	24.05	23.85
1.4	16QAM	3	0	23.71	23.92	23.71
1.4	16QAM	3	1	23.74	23.94	23.76
1.4	16QAM	3	3	23.68	23.87	23.67
1.4	16QAM	6	0	22.80	23.01	22.83
1.4	64QAM	1	0	22.87	23.06	22.84
1.4	64QAM	1	3	22.91	23.09	22.88
1.4	64QAM	1	5	22.81	22.99	22.79
1.4	64QAM	3	0	22.81	23.01	22.85
1.4	64QAM	3	1	22.86	23.05	22.85
1.4	64QAM	3	3	22.82	22.99	22.80
1.4	64QAM	6	0	21.74	21.94	21.78



<LTE Band 7>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 2		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	23.56	23.59	23.49
20	QPSK	1	49	23.65	23.66	23.58
20	QPSK	1	99	23.71	23.77	23.65
20	QPSK	50	0	22.65	22.68	22.60
20	QPSK	50	24	22.72	22.71	22.67
20	QPSK	50	50	22.74	22.76	22.67
20	QPSK	100	0	22.68	22.67	22.64
20	16QAM	1	0	22.90	22.93	22.84
20	16QAM	1	49	23.00	22.99	22.93
20	16QAM	1	99	23.07	23.07	22.99
20	16QAM	50	0	21.74	21.76	21.67
20	16QAM	50	24	21.79	21.83	21.74
20	16QAM	50	50	21.84	21.84	21.80
20	16QAM	100	0	21.76	21.77	21.73
20	64QAM	1	0	21.84	21.86	21.75
20	64QAM	1	49	21.91	21.92	21.85
20	64QAM	1	99	22.00	21.96	21.88
20	64QAM	50	0	20.75	20.75	20.72
20	64QAM	50	24	20.80	20.84	20.76
20	64QAM	50	50	20.84	20.81	20.79
20	64QAM	100	0	20.78	20.78	20.73
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	23.61	23.63	23.56
15	QPSK	1	37	23.63	23.67	23.61
15	QPSK	1	74	23.74	23.76	23.71
15	QPSK	36	0	22.65	22.68	22.63
15	QPSK	36	20	22.70	22.71	22.68
15	QPSK	36	39	22.71	22.75	22.65
15	QPSK	75	0	22.68	22.68	22.64
15	16QAM	1	0	22.96	23.00	22.92
15	16QAM	1	37	22.98	23.01	22.95
15	16QAM	1	74	23.10	23.13	23.04
15	16QAM	36	0	21.74	21.74	21.72
15	16QAM	36	20	21.80	21.83	21.76
15	16QAM	36	39	21.81	21.82	21.77
15	16QAM	75	0	21.75	21.79	21.73
15	64QAM	1	0	21.91	21.88	21.82
15	64QAM	1	37	21.92	21.94	21.86
15	64QAM	1	74	22.00	22.03	21.96
15	64QAM	36	0	20.78	20.78	20.74
15	64QAM	36	20	20.80	20.83	20.79
15	64QAM	36	39	20.81	20.82	20.79
15	64QAM	75	0	20.78	20.81	20.73
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	23.64	23.62	23.57
10	QPSK	1	25	23.66	23.67	23.59



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	23.68	23.73	23.65
10	QPSK	25	0	22.64	22.65	22.59
10	QPSK	25	12	22.66	22.71	22.64
10	QPSK	25	25	22.67	22.69	22.67
10	QPSK	50	0	22.68	22.70	22.65
10	16QAM	1	0	22.99	22.95	22.91
10	16QAM	1	25	23.01	23.03	22.94
10	16QAM	1	49	23.07	23.08	22.98
10	16QAM	25	0	21.72	21.73	21.68
10	16QAM	25	12	21.77	21.79	21.76
10	16QAM	25	25	21.76	21.77	21.73
10	16QAM	50	0	21.75	21.79	21.75
10	64QAM	1	0	21.85	21.87	21.81
10	64QAM	1	25	21.91	21.95	21.88
10	64QAM	1	49	21.99	21.95	21.91
10	64QAM	25	0	20.75	20.74	20.70
10	64QAM	25	12	20.77	20.80	20.73
10	64QAM	25	25	20.79	20.78	20.75
10	64QAM	50	0	20.75	20.76	20.72
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	23.64	23.62	23.59
5	QPSK	1	12	23.63	23.68	23.60
5	QPSK	1	24	23.65	23.70	23.63
5	QPSK	12	0	22.67	22.69	22.62
5	QPSK	12	7	22.70	22.71	22.67
5	QPSK	12	13	22.66	22.67	22.62
5	QPSK	25	0	22.68	22.69	22.63
5	16QAM	1	0	22.98	22.98	22.93
5	16QAM	1	12	22.98	23.00	22.94
5	16QAM	1	24	23.01	23.02	22.93
5	16QAM	12	0	21.72	21.77	21.69
5	16QAM	12	7	21.77	21.83	21.78
5	16QAM	12	13	21.77	21.79	21.70
5	16QAM	25	0	21.76	21.74	21.70
5	64QAM	1	0	21.87	21.91	21.85
5	64QAM	1	12	21.92	21.94	21.86
5	64QAM	1	24	21.92	21.92	21.84
5	64QAM	12	0	20.80	20.81	20.74
5	64QAM	12	7	20.83	20.84	20.80
5	64QAM	12	13	20.84	20.84	20.75
5	64QAM	25	0	20.74	20.76	20.72



<LTE Band 12>

Power Selection				Head/ Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	24.75	24.83	24.89
10	QPSK	1	25	24.85	24.90	24.92
10	QPSK	1	49	24.95	24.92	24.99
10	QPSK	25	0	23.89	23.95	23.92
10	QPSK	25	12	24.00	24.03	23.95
10	QPSK	25	25	23.97	23.96	23.93
10	QPSK	50	0	23.96	23.97	23.96
10	16QAM	1	0	24.11	24.14	24.22
10	16QAM	1	25	24.19	24.28	24.25
10	16QAM	1	49	24.28	24.25	24.26
10	16QAM	25	0	22.98	23.05	23.02
10	16QAM	25	12	23.12	23.11	23.08
10	16QAM	25	25	23.07	23.08	23.03
10	16QAM	50	0	23.07	23.10	23.04
10	64QAM	1	0	23.00	23.05	23.10
10	64QAM	1	25	23.10	23.17	23.16
10	64QAM	1	49	23.19	23.17	23.20
10	64QAM	25	0	21.98	22.08	22.06
10	64QAM	25	12	22.11	22.11	22.08
10	64QAM	25	25	22.10	22.09	22.03
10	64QAM	50	0	22.11	22.06	22.06
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	24.84	24.88	24.90
5	QPSK	1	12	24.91	24.96	24.97
5	QPSK	1	24	24.89	24.94	24.97
5	QPSK	12	0	23.90	23.96	23.89
5	QPSK	12	7	23.95	24.00	24.00
5	QPSK	12	13	23.91	23.98	23.99
5	QPSK	25	0	23.94	24.01	23.94
5	16QAM	1	0	24.13	24.17	24.19
5	16QAM	1	12	24.24	24.29	24.31
5	16QAM	1	24	24.20	24.26	24.22
5	16QAM	12	0	23.03	23.07	23.02
5	16QAM	12	7	23.04	23.08	23.10
5	16QAM	12	13	23.00	23.10	23.06
5	16QAM	25	0	23.02	23.08	23.02
5	64QAM	1	0	23.04	23.11	23.12
5	64QAM	1	12	23.18	23.19	23.22
5	64QAM	1	24	23.11	23.19	23.17
5	64QAM	12	0	22.07	22.12	22.05
5	64QAM	12	7	22.10	22.17	22.17
5	64QAM	12	13	22.05	22.13	22.14
5	64QAM	25	0	22.01	22.09	22.01
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	24.82	24.94	24.98
3	QPSK	1	8	24.83	24.97	24.98



FCC SAR TEST REPORT

Report No. : FA9O2116

3	QPSK	1	14	24.93	24.95	24.94
3	QPSK	8	0	23.82	23.95	23.99
3	QPSK	8	4	23.84	24.03	24.01
3	QPSK	8	7	23.93	23.98	23.97
3	QPSK	15	0	23.93	23.98	23.97
3	16QAM	1	0	24.14	24.23	24.28
3	16QAM	1	8	24.13	24.29	24.26
3	16QAM	1	14	24.23	24.26	24.20
3	16QAM	8	0	22.93	23.09	23.08
3	16QAM	8	4	22.98	23.13	23.12
3	16QAM	8	7	23.05	23.10	23.07
3	16QAM	15	0	23.03	23.09	23.07
3	64QAM	1	0	23.06	23.18	23.19
3	64QAM	1	8	23.06	23.19	23.20
3	64QAM	1	14	23.14	23.20	23.16
3	64QAM	8	0	21.95	22.11	22.10
3	64QAM	8	4	21.97	22.15	22.14
3	64QAM	8	7	22.05	22.11	22.11
3	64QAM	15	0	22.05	22.09	22.08
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	24.79	24.88	24.90
1.4	QPSK	1	3	24.83	24.95	24.96
1.4	QPSK	1	5	24.75	24.88	24.87
1.4	QPSK	3	0	24.81	24.90	24.91
1.4	QPSK	3	1	24.84	24.95	24.94
1.4	QPSK	3	3	24.80	24.91	24.89
1.4	QPSK	6	0	23.78	23.92	23.91
1.4	16QAM	1	0	24.08	24.19	24.17
1.4	16QAM	1	3	24.16	24.26	24.23
1.4	16QAM	1	5	24.09	24.19	24.09
1.4	16QAM	3	0	23.90	24.01	23.97
1.4	16QAM	3	1	23.92	24.03	24.00
1.4	16QAM	3	3	23.87	23.99	23.96
1.4	16QAM	6	0	22.93	23.08	23.05
1.4	64QAM	1	0	23.02	23.12	23.14
1.4	64QAM	1	3	23.08	23.19	23.19
1.4	64QAM	1	5	23.00	23.11	23.08
1.4	64QAM	3	0	23.02	23.11	23.11
1.4	64QAM	3	1	23.05	23.15	23.15
1.4	64QAM	3	3	23.01	23.12	23.10
1.4	64QAM	6	0	21.86	22.02	22.00



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	24.75	24.83	24.89
10	QPSK	1	25	24.85	24.90	24.92
10	QPSK	1	49	24.95	24.92	24.99
10	QPSK	25	0	23.89	23.95	23.92
10	QPSK	25	12	24.00	24.03	23.95
10	QPSK	25	25	23.97	23.96	23.93
10	QPSK	50	0	23.96	23.97	23.96
10	16QAM	1	0	24.11	24.14	24.22
10	16QAM	1	25	24.19	24.28	24.25
10	16QAM	1	49	24.28	24.25	24.26
10	16QAM	25	0	22.98	23.05	23.02
10	16QAM	25	12	23.12	23.11	23.08
10	16QAM	25	25	23.07	23.08	23.03
10	16QAM	50	0	23.07	23.10	23.04
10	64QAM	1	0	23.00	23.05	23.10
10	64QAM	1	25	23.10	23.17	23.16
10	64QAM	1	49	23.19	23.17	23.20
10	64QAM	25	0	21.98	22.08	22.06
10	64QAM	25	12	22.11	22.11	22.08
10	64QAM	25	25	22.10	22.09	22.03
10	64QAM	50	0	22.11	22.06	22.06
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	24.84	24.88	24.90
5	QPSK	1	12	24.91	24.96	24.97
5	QPSK	1	24	24.89	24.94	24.97
5	QPSK	12	0	23.90	23.96	23.89
5	QPSK	12	7	23.95	24.00	24.00
5	QPSK	12	13	23.91	23.98	23.99
5	QPSK	25	0	23.94	24.01	23.94
5	16QAM	1	0	24.13	24.17	24.19
5	16QAM	1	12	24.24	24.29	24.31
5	16QAM	1	24	24.20	24.26	24.22
5	16QAM	12	0	23.03	23.07	23.02
5	16QAM	12	7	23.04	23.08	23.10
5	16QAM	12	13	23.00	23.10	23.06
5	16QAM	25	0	23.02	23.08	23.02
5	64QAM	1	0	23.04	23.11	23.12
5	64QAM	1	12	23.18	23.19	23.22
5	64QAM	1	24	23.11	23.19	23.17
5	64QAM	12	0	22.07	22.12	22.05
5	64QAM	12	7	22.10	22.17	22.17
5	64QAM	12	13	22.05	22.13	22.14
5	64QAM	25	0	22.01	22.09	22.01
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	24.82	24.94	24.98
3	QPSK	1	8	24.83	24.97	24.98



FCC SAR TEST REPORT

Report No. : FA9O2116

3	QPSK	1	14	24.93	24.95	24.94
3	QPSK	8	0	23.82	23.95	23.99
3	QPSK	8	4	23.84	24.03	24.01
3	QPSK	8	7	23.93	23.98	23.97
3	QPSK	15	0	23.93	23.98	23.97
3	16QAM	1	0	24.14	24.23	24.28
3	16QAM	1	8	24.13	24.29	24.26
3	16QAM	1	14	24.23	24.26	24.20
3	16QAM	8	0	22.93	23.09	23.08
3	16QAM	8	4	22.98	23.13	23.12
3	16QAM	8	7	23.05	23.10	23.07
3	16QAM	15	0	23.03	23.09	23.07
3	64QAM	1	0	23.06	23.18	23.19
3	64QAM	1	8	23.06	23.19	23.20
3	64QAM	1	14	23.14	23.20	23.16
3	64QAM	8	0	21.95	22.11	22.10
3	64QAM	8	4	21.97	22.15	22.14
3	64QAM	8	7	22.05	22.11	22.11
3	64QAM	15	0	22.05	22.09	22.08
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	24.79	24.88	24.90
1.4	QPSK	1	3	24.83	24.95	24.96
1.4	QPSK	1	5	24.75	24.88	24.87
1.4	QPSK	3	0	24.81	24.90	24.91
1.4	QPSK	3	1	24.84	24.95	24.94
1.4	QPSK	3	3	24.80	24.91	24.89
1.4	QPSK	6	0	23.78	23.92	23.91
1.4	16QAM	1	0	24.08	24.19	24.17
1.4	16QAM	1	3	24.16	24.26	24.23
1.4	16QAM	1	5	24.09	24.19	24.09
1.4	16QAM	3	0	23.90	24.01	23.97
1.4	16QAM	3	1	23.92	24.03	24.00
1.4	16QAM	3	3	23.87	23.99	23.96
1.4	16QAM	6	0	22.93	23.08	23.05
1.4	64QAM	1	0	23.02	23.12	23.14
1.4	64QAM	1	3	23.08	23.19	23.19
1.4	64QAM	1	5	23.00	23.11	23.08
1.4	64QAM	3	0	23.02	23.11	23.11
1.4	64QAM	3	1	23.05	23.15	23.15
1.4	64QAM	3	3	23.01	23.12	23.10
1.4	64QAM	6	0	21.86	22.02	22.00



<LTE Band 13>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				25.3		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23230		
Frequency (MHz)				782		
10	QPSK	1	0		24.21	
10	QPSK	1	25		24.33	
10	QPSK	1	49		24.27	
10	QPSK	25	0		23.39	
10	QPSK	25	12		23.37	
10	QPSK	25	25		23.38	
10	QPSK	50	0		23.37	
10	16QAM	1	0		23.50	
10	16QAM	1	25		23.63	
10	16QAM	1	49		23.54	
10	16QAM	25	0		22.47	
10	16QAM	25	12		22.46	
10	16QAM	25	25		22.44	
10	16QAM	50	0		22.46	
10	64QAM	1	0		22.44	
10	64QAM	1	25		22.53	
10	64QAM	1	49		22.47	
10	64QAM	25	0		21.47	
10	64QAM	25	12		21.49	
10	64QAM	25	25		21.45	
10	64QAM	50	0		21.47	
Channel				23205	23230	23255
Frequency (MHz)				779.5	782	784.5
5	QPSK	1	0	24.17	24.24	24.31
5	QPSK	1	12	24.25	24.32	24.27
5	QPSK	1	24	24.31	24.31	24.20
5	QPSK	12	0	23.31	23.37	23.34
5	QPSK	12	7	23.41	23.35	23.40
5	QPSK	12	13	23.37	23.33	23.34
5	QPSK	25	0	23.39	23.32	23.34
5	16QAM	1	0	23.44	23.52	23.63
5	16QAM	1	12	23.56	23.65	23.58
5	16QAM	1	24	23.61	23.60	23.46
5	16QAM	12	0	22.38	22.44	22.39
5	16QAM	12	7	22.47	22.44	22.42
5	16QAM	12	13	22.43	22.40	22.43
5	16QAM	25	0	22.47	22.43	22.44
5	64QAM	1	0	22.36	22.44	22.50
5	64QAM	1	12	22.45	22.51	22.50
5	64QAM	1	24	22.50	22.51	22.36
5	64QAM	12	0	21.43	21.47	21.43
5	64QAM	12	7	21.51	21.51	21.50
5	64QAM	12	13	21.47	21.45	21.47
5	64QAM	25	0	21.47	21.43	21.43



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				25.3		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23230		
Frequency (MHz)				782		
10	QPSK	1	0		24.21	
10	QPSK	1	25		24.33	
10	QPSK	1	49		24.27	
10	QPSK	25	0		23.39	
10	QPSK	25	12		23.37	
10	QPSK	25	25		23.38	
10	QPSK	50	0		23.37	
10	16QAM	1	0		23.50	
10	16QAM	1	25		23.63	
10	16QAM	1	49		23.54	
10	16QAM	25	0		22.47	
10	16QAM	25	12		22.46	
10	16QAM	25	25		22.44	
10	16QAM	50	0		22.46	
10	64QAM	1	0		22.44	
10	64QAM	1	25		22.53	
10	64QAM	1	49		22.47	
10	64QAM	25	0		21.47	
10	64QAM	25	12		21.49	
10	64QAM	25	25		21.45	
10	64QAM	50	0		21.47	
Channel				23205	23230	23255
Frequency (MHz)				779.5	782	784.5
5	QPSK	1	0	24.17	24.24	24.31
5	QPSK	1	12	24.25	24.32	24.27
5	QPSK	1	24	24.31	24.31	24.20
5	QPSK	12	0	23.31	23.37	23.34
5	QPSK	12	7	23.41	23.35	23.40
5	QPSK	12	13	23.37	23.33	23.34
5	QPSK	25	0	23.39	23.32	23.34
5	16QAM	1	0	23.44	23.52	23.63
5	16QAM	1	12	23.56	23.65	23.58
5	16QAM	1	24	23.61	23.60	23.46
5	16QAM	12	0	22.38	22.44	22.39
5	16QAM	12	7	22.47	22.44	22.42
5	16QAM	12	13	22.43	22.40	22.43
5	16QAM	25	0	22.47	22.43	22.44
5	64QAM	1	0	22.36	22.44	22.50
5	64QAM	1	12	22.45	22.51	22.50
5	64QAM	1	24	22.50	22.51	22.36
5	64QAM	12	0	21.43	21.47	21.43
5	64QAM	12	7	21.51	21.51	21.50
5	64QAM	12	13	21.47	21.45	21.47
5	64QAM	25	0	21.47	21.43	21.43



<LTE Band 17>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	24.81	24.89	24.88
10	QPSK	1	25	25.04	24.99	24.97
10	QPSK	1	49	24.94	24.96	24.91
10	QPSK	25	0	24.00	23.99	24.02
10	QPSK	25	12	24.04	24.02	24.03
10	QPSK	25	25	24.03	23.99	23.99
10	QPSK	50	0	24.00	23.99	23.99
10	16QAM	1	0	24.08	24.19	24.17
10	16QAM	1	25	24.31	24.31	24.29
10	16QAM	1	49	24.27	24.24	24.20
10	16QAM	25	0	23.12	23.10	23.11
10	16QAM	25	12	23.14	23.13	23.12
10	16QAM	25	25	23.08	23.08	23.05
10	16QAM	50	0	23.10	23.11	23.08
10	64QAM	1	0	23.02	23.13	23.11
10	64QAM	1	25	23.22	23.22	23.21
10	64QAM	1	49	23.18	23.20	23.14
10	64QAM	25	0	22.08	22.09	22.08
10	64QAM	25	12	22.13	22.12	22.12
10	64QAM	25	25	22.11	22.11	22.07
10	64QAM	50	0	22.11	22.13	22.08
Channel				23755	23790	23825
Frequency (MHz)				706.5	710	713.5
5	QPSK	1	0	24.82	24.97	25.03
5	QPSK	1	12	24.92	24.97	25.02
5	QPSK	1	24	25.03	24.96	24.92
5	QPSK	12	0	23.90	23.99	24.07
5	QPSK	12	7	23.93	24.00	24.05
5	QPSK	12	13	24.03	23.97	24.05
5	QPSK	25	0	24.06	24.00	24.06
5	16QAM	1	0	24.10	24.31	24.36
5	16QAM	1	12	24.22	24.26	24.33
5	16QAM	1	24	24.32	24.29	24.23
5	16QAM	12	0	22.99	23.09	23.15
5	16QAM	12	7	23.01	23.10	23.14
5	16QAM	12	13	23.08	23.08	23.12
5	16QAM	25	0	23.14	23.08	23.15
5	64QAM	1	0	23.04	23.24	23.29
5	64QAM	1	12	23.16	23.20	23.26
5	64QAM	1	24	23.24	23.20	23.21
5	64QAM	12	0	22.05	22.11	22.17
5	64QAM	12	7	22.09	22.14	22.21
5	64QAM	12	13	22.16	22.12	22.21
5	64QAM	25	0	22.11	22.08	22.14



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	24.81	24.89	24.88
10	QPSK	1	25	25.04	24.99	24.97
10	QPSK	1	49	24.94	24.96	24.91
10	QPSK	25	0	24.00	23.99	24.02
10	QPSK	25	12	24.04	24.02	24.03
10	QPSK	25	25	24.03	23.99	23.99
10	QPSK	50	0	24.00	23.99	23.99
10	16QAM	1	0	24.08	24.19	24.17
10	16QAM	1	25	24.31	24.31	24.29
10	16QAM	1	49	24.27	24.24	24.20
10	16QAM	25	0	23.12	23.10	23.11
10	16QAM	25	12	23.14	23.13	23.12
10	16QAM	25	25	23.08	23.08	23.05
10	16QAM	50	0	23.10	23.11	23.08
10	64QAM	1	0	23.02	23.13	23.11
10	64QAM	1	25	23.22	23.22	23.21
10	64QAM	1	49	23.18	23.20	23.14
10	64QAM	25	0	22.08	22.09	22.08
10	64QAM	25	12	22.13	22.12	22.12
10	64QAM	25	25	22.11	22.11	22.07
10	64QAM	50	0	22.11	22.13	22.08
Channel				23755	23790	23825
Frequency (MHz)				706.5	710	713.5
5	QPSK	1	0	24.82	24.97	25.03
5	QPSK	1	12	24.92	24.97	25.02
5	QPSK	1	24	25.03	24.96	24.92
5	QPSK	12	0	23.90	23.99	24.07
5	QPSK	12	7	23.93	24.00	24.05
5	QPSK	12	13	24.03	23.97	24.05
5	QPSK	25	0	24.06	24.00	24.06
5	16QAM	1	0	24.10	24.31	24.36
5	16QAM	1	12	24.22	24.26	24.33
5	16QAM	1	24	24.32	24.29	24.23
5	16QAM	12	0	22.99	23.09	23.15
5	16QAM	12	7	23.01	23.10	23.14
5	16QAM	12	13	23.08	23.08	23.12
5	16QAM	25	0	23.14	23.08	23.15
5	64QAM	1	0	23.04	23.24	23.29
5	64QAM	1	12	23.16	23.20	23.26
5	64QAM	1	24	23.24	23.20	23.21
5	64QAM	12	0	22.05	22.11	22.17
5	64QAM	12	7	22.09	22.14	22.21
5	64QAM	12	13	22.16	22.12	22.21
5	64QAM	25	0	22.11	22.08	22.14



<LTE Band 25>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				25.1		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26140	26340	26590
Frequency (MHz)				1860	1880	1905
20	QPSK	1	0	24.67	24.55	24.75
20	QPSK	1	49	24.66	24.50	24.70
20	QPSK	1	99	24.46	24.53	24.58
20	QPSK	50	0	23.61	23.54	23.62
20	QPSK	50	24	23.61	23.54	23.74
20	QPSK	50	50	23.54	23.50	23.67
20	QPSK	100	0	23.59	23.50	23.72
20	16QAM	1	0	23.83	23.80	23.91
20	16QAM	1	49	23.92	23.79	24.01
20	16QAM	1	99	23.76	23.80	23.86
20	16QAM	50	0	22.72	22.65	22.73
20	16QAM	50	24	22.71	22.66	22.83
20	16QAM	50	50	22.64	22.60	22.78
20	16QAM	100	0	22.65	22.61	22.78
20	64QAM	1	0	22.80	22.79	22.90
20	64QAM	1	49	22.95	22.79	22.95
20	64QAM	1	99	22.76	22.82	22.85
20	64QAM	50	0	21.77	21.70	21.77
20	64QAM	50	24	21.75	21.70	21.89
20	64QAM	50	50	21.69	21.65	21.84
20	64QAM	100	0	21.70	21.64	21.83
Channel				26115	26340	26615
Frequency (MHz)				1857.5	1880	1907.5
15	QPSK	1	0	24.60	24.50	24.68
15	QPSK	1	37	24.67	24.50	24.60
15	QPSK	1	74	24.68	24.42	24.62
15	QPSK	36	0	23.72	23.56	23.75
15	QPSK	36	20	23.73	23.59	23.72
15	QPSK	36	39	23.68	23.52	23.68
15	QPSK	75	0	23.68	23.53	23.73
15	16QAM	1	0	23.95	23.76	23.97
15	16QAM	1	37	23.95	23.84	24.00
15	16QAM	1	74	24.05	23.69	23.92
15	16QAM	36	0	22.79	22.60	22.80
15	16QAM	36	20	22.81	22.65	22.83
15	16QAM	36	39	22.75	22.58	22.77
15	16QAM	75	0	22.76	22.61	22.80
15	64QAM	1	0	22.89	22.77	22.95
15	64QAM	1	37	22.94	22.75	23.03
15	64QAM	1	74	22.96	22.71	22.84
15	64QAM	36	0	21.86	21.70	21.86
15	64QAM	36	20	21.86	21.72	21.88
15	64QAM	36	39	21.77	21.66	21.82
15	64QAM	75	0	21.79	21.63	21.83
Channel				26090	26340	26640
Frequency (MHz)				1855	1880	1910
10	QPSK	1	0	24.64	24.63	24.72
10	QPSK	1	25	24.71	24.55	24.72



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	24.72	24.57	24.66
10	QPSK	25	0	23.66	23.58	23.77
10	QPSK	25	12	23.66	23.59	23.74
10	QPSK	25	25	23.61	23.55	23.70
10	QPSK	50	0	23.63	23.54	23.74
10	16QAM	1	0	23.92	23.87	24.06
10	16QAM	1	25	24.07	23.85	24.03
10	16QAM	1	49	23.97	23.85	23.93
10	16QAM	25	0	22.76	22.68	22.86
10	16QAM	25	12	22.78	22.68	22.82
10	16QAM	25	25	22.68	22.64	22.80
10	16QAM	50	0	22.71	22.64	22.84
10	64QAM	1	0	22.89	22.86	22.98
10	64QAM	1	25	22.98	22.80	22.96
10	64QAM	1	49	22.94	22.80	22.89
10	64QAM	25	0	21.78	21.69	21.86
10	64QAM	25	12	21.77	21.71	21.83
10	64QAM	25	25	21.72	21.65	21.81
10	64QAM	50	0	21.73	21.66	21.85
Channel				26065	26340	26665
Frequency (MHz)				1852.5	1880	1912.5
5	QPSK	1	0	24.64	24.53	24.68
5	QPSK	1	12	24.73	24.53	24.50
5	QPSK	1	24	24.69	24.48	24.64
5	QPSK	12	0	23.75	23.57	23.72
5	QPSK	12	7	23.76	23.58	23.76
5	QPSK	12	13	23.74	23.55	23.72
5	QPSK	25	0	23.72	23.54	23.72
5	16QAM	1	0	23.91	23.81	24.03
5	16QAM	1	12	24.08	23.87	24.10
5	16QAM	1	24	24.10	23.82	23.96
5	16QAM	12	0	22.83	22.66	22.79
5	16QAM	12	7	22.83	22.69	22.87
5	16QAM	12	13	22.81	22.66	22.80
5	16QAM	25	0	22.80	22.65	22.80
5	64QAM	1	0	22.84	22.79	22.91
5	64QAM	1	12	22.97	22.78	23.04
5	64QAM	1	24	22.98	22.72	22.87
5	64QAM	12	0	21.86	21.70	21.85
5	64QAM	12	7	21.89	21.72	21.88
5	64QAM	12	13	21.84	21.67	21.82
5	64QAM	25	0	21.82	21.64	21.80
Channel				26055	26340	26675
Frequency (MHz)				1851.5	1880	1913.5
3	QPSK	1	0	24.57	24.54	24.69
3	QPSK	1	8	24.63	24.55	24.62
3	QPSK	1	14	24.60	24.51	24.60
3	QPSK	8	0	23.69	23.59	23.63
3	QPSK	8	4	23.71	23.62	23.66
3	QPSK	8	7	23.67	23.58	23.65
3	QPSK	15	0	23.64	23.58	23.63
3	16QAM	1	0	23.88	23.81	23.96
3	16QAM	1	8	23.95	23.86	23.90
3	16QAM	1	14	23.89	23.83	23.87
3	16QAM	8	0	22.80	22.72	22.75
3	16QAM	8	4	22.83	22.74	22.76



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	22.78	22.71	22.73
3	16QAM	15	0	22.76	22.68	22.70
3	64QAM	1	0	22.78	22.76	22.90
3	64QAM	1	8	22.88	22.78	22.84
3	64QAM	1	14	22.85	22.77	22.79
3	64QAM	8	0	21.80	21.71	21.72
3	64QAM	8	4	21.82	21.75	21.75
3	64QAM	8	7	21.79	21.71	21.75
3	64QAM	15	0	21.76	21.66	21.71
Channel				26047	26340	26683
Frequency (MHz)				1850.7	1880	1914.3
1.4	QPSK	1	0	24.53	24.49	24.73
1.4	QPSK	1	3	24.57	24.56	24.10
1.4	QPSK	1	5	24.59	24.48	24.72
1.4	QPSK	3	0	24.55	24.53	24.68
1.4	QPSK	3	1	24.61	24.59	24.68
1.4	QPSK	3	3	24.64	24.53	24.62
1.4	QPSK	6	0	23.64	23.52	23.78
1.4	16QAM	1	0	23.83	23.81	23.99
1.4	16QAM	1	3	23.89	23.87	24.09
1.4	16QAM	1	5	23.89	23.77	23.98
1.4	16QAM	3	0	23.62	23.62	23.81
1.4	16QAM	3	1	23.68	23.64	23.86
1.4	16QAM	3	3	23.68	23.61	23.80
1.4	16QAM	6	0	22.77	22.69	22.92
1.4	64QAM	1	0	22.77	22.75	22.95
1.4	64QAM	1	3	22.82	22.81	23.02
1.4	64QAM	1	5	22.79	22.75	22.95
1.4	64QAM	3	0	22.74	22.76	22.97
1.4	64QAM	3	1	22.79	22.81	23.00
1.4	64QAM	3	3	22.83	22.74	22.98
1.4	64QAM	6	0	21.70	21.60	21.87



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				25.1		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26140	26340	26590
Frequency (MHz)				1860	1880	1905
20	QPSK	1	0	24.67	24.55	24.75
20	QPSK	1	49	24.66	24.50	24.70
20	QPSK	1	99	24.46	24.53	24.58
20	QPSK	50	0	23.61	23.54	23.62
20	QPSK	50	24	23.61	23.54	23.74
20	QPSK	50	50	23.54	23.50	23.67
20	QPSK	100	0	23.59	23.50	23.72
20	16QAM	1	0	23.83	23.80	23.91
20	16QAM	1	49	23.92	23.79	24.01
20	16QAM	1	99	23.76	23.80	23.86
20	16QAM	50	0	22.72	22.65	22.73
20	16QAM	50	24	22.71	22.66	22.83
20	16QAM	50	50	22.64	22.60	22.78
20	16QAM	100	0	22.65	22.61	22.78
20	64QAM	1	0	22.80	22.79	22.90
20	64QAM	1	49	22.95	22.79	22.95
20	64QAM	1	99	22.76	22.82	22.85
20	64QAM	50	0	21.77	21.70	21.77
20	64QAM	50	24	21.75	21.70	21.89
20	64QAM	50	50	21.69	21.65	21.84
20	64QAM	100	0	21.70	21.64	21.83
Channel				26115	26340	26615
Frequency (MHz)				1857.5	1880	1907.5
15	QPSK	1	0	24.60	24.50	24.68
15	QPSK	1	37	24.67	24.50	24.60
15	QPSK	1	74	24.68	24.42	24.62
15	QPSK	36	0	23.72	23.56	23.75
15	QPSK	36	20	23.73	23.59	23.72
15	QPSK	36	39	23.68	23.52	23.68
15	QPSK	75	0	23.68	23.53	23.73
15	16QAM	1	0	23.95	23.76	23.97
15	16QAM	1	37	23.95	23.84	24.00
15	16QAM	1	74	24.05	23.69	23.92
15	16QAM	36	0	22.79	22.60	22.80
15	16QAM	36	20	22.81	22.65	22.83
15	16QAM	36	39	22.75	22.58	22.77
15	16QAM	75	0	22.76	22.61	22.80
15	64QAM	1	0	22.89	22.77	22.95
15	64QAM	1	37	22.94	22.75	23.03
15	64QAM	1	74	22.96	22.71	22.84
15	64QAM	36	0	21.86	21.70	21.86
15	64QAM	36	20	21.86	21.72	21.88
15	64QAM	36	39	21.77	21.66	21.82
15	64QAM	75	0	21.79	21.63	21.83
Channel				26090	26340	26640
Frequency (MHz)				1855	1880	1910
10	QPSK	1	0	24.64	24.63	24.72
10	QPSK	1	25	24.71	24.55	24.72



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	24.72	24.57	24.66
10	QPSK	25	0	23.66	23.58	23.77
10	QPSK	25	12	23.66	23.59	23.74
10	QPSK	25	25	23.61	23.55	23.70
10	QPSK	50	0	23.63	23.54	23.74
10	16QAM	1	0	23.92	23.87	24.06
10	16QAM	1	25	24.07	23.85	24.03
10	16QAM	1	49	23.97	23.85	23.93
10	16QAM	25	0	22.76	22.68	22.86
10	16QAM	25	12	22.78	22.68	22.82
10	16QAM	25	25	22.68	22.64	22.80
10	16QAM	50	0	22.71	22.64	22.84
10	64QAM	1	0	22.89	22.86	22.98
10	64QAM	1	25	22.98	22.80	22.96
10	64QAM	1	49	22.94	22.80	22.89
10	64QAM	25	0	21.78	21.69	21.86
10	64QAM	25	12	21.77	21.71	21.83
10	64QAM	25	25	21.72	21.65	21.81
10	64QAM	50	0	21.73	21.66	21.85
Channel				26065	26340	26665
Frequency (MHz)				1852.5	1880	1912.5
5	QPSK	1	0	24.64	24.53	24.68
5	QPSK	1	12	24.73	24.53	24.50
5	QPSK	1	24	24.69	24.48	24.64
5	QPSK	12	0	23.75	23.57	23.72
5	QPSK	12	7	23.76	23.58	23.76
5	QPSK	12	13	23.74	23.55	23.72
5	QPSK	25	0	23.72	23.54	23.72
5	16QAM	1	0	23.91	23.81	24.03
5	16QAM	1	12	24.08	23.87	24.10
5	16QAM	1	24	24.10	23.82	23.96
5	16QAM	12	0	22.83	22.66	22.79
5	16QAM	12	7	22.83	22.69	22.87
5	16QAM	12	13	22.81	22.66	22.80
5	16QAM	25	0	22.80	22.65	22.80
5	64QAM	1	0	22.84	22.79	22.91
5	64QAM	1	12	22.97	22.78	23.04
5	64QAM	1	24	22.98	22.72	22.87
5	64QAM	12	0	21.86	21.70	21.85
5	64QAM	12	7	21.89	21.72	21.88
5	64QAM	12	13	21.84	21.67	21.82
5	64QAM	25	0	21.82	21.64	21.80
Channel				26055	26340	26675
Frequency (MHz)				1851.5	1880	1913.5
3	QPSK	1	0	24.57	24.54	24.69
3	QPSK	1	8	24.63	24.55	24.62
3	QPSK	1	14	24.60	24.51	24.60
3	QPSK	8	0	23.69	23.59	23.63
3	QPSK	8	4	23.71	23.62	23.66
3	QPSK	8	7	23.67	23.58	23.65
3	QPSK	15	0	23.64	23.58	23.63
3	16QAM	1	0	23.88	23.81	23.96
3	16QAM	1	8	23.95	23.86	23.90
3	16QAM	1	14	23.89	23.83	23.87
3	16QAM	8	0	22.80	22.72	22.75
3	16QAM	8	4	22.83	22.74	22.76



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	22.78	22.71	22.73
3	16QAM	15	0	22.76	22.68	22.70
3	64QAM	1	0	22.78	22.76	22.90
3	64QAM	1	8	22.88	22.78	22.84
3	64QAM	1	14	22.85	22.77	22.79
3	64QAM	8	0	21.80	21.71	21.72
3	64QAM	8	4	21.82	21.75	21.75
3	64QAM	8	7	21.79	21.71	21.75
3	64QAM	15	0	21.76	21.66	21.71
Channel				26047	26340	26683
Frequency (MHz)				1850.7	1880	1914.3
1.4	QPSK	1	0	24.53	24.49	24.73
1.4	QPSK	1	3	24.57	24.56	24.10
1.4	QPSK	1	5	24.59	24.48	24.72
1.4	QPSK	3	0	24.55	24.53	24.68
1.4	QPSK	3	1	24.61	24.59	24.68
1.4	QPSK	3	3	24.64	24.53	24.62
1.4	QPSK	6	0	23.64	23.52	23.78
1.4	16QAM	1	0	23.83	23.81	23.99
1.4	16QAM	1	3	23.89	23.87	24.09
1.4	16QAM	1	5	23.89	23.77	23.98
1.4	16QAM	3	0	23.62	23.62	23.81
1.4	16QAM	3	1	23.68	23.64	23.86
1.4	16QAM	3	3	23.68	23.61	23.80
1.4	16QAM	6	0	22.77	22.69	22.92
1.4	64QAM	1	0	22.77	22.75	22.95
1.4	64QAM	1	3	22.82	22.81	23.02
1.4	64QAM	1	5	22.79	22.75	22.95
1.4	64QAM	3	0	22.74	22.76	22.97
1.4	64QAM	3	1	22.79	22.81	23.00
1.4	64QAM	3	3	22.83	22.74	22.98
1.4	64QAM	6	0	21.70	21.60	21.87



<LTE Band 26>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26765	26865	26965
Frequency (MHz)				821.5	831.5	841.5
15	QPSK	1	0	24.69	24.82	24.80
15	QPSK	1	37	24.73	24.81	24.79
15	QPSK	1	74	24.76	24.73	24.73
15	QPSK	36	0	23.80	23.85	23.76
15	QPSK	36	20	23.78	23.87	23.74
15	QPSK	36	39	23.78	23.78	23.78
15	QPSK	75	0	23.73	23.82	23.70
15	16QAM	1	0	23.97	24.10	24.10
15	16QAM	1	37	24.03	24.12	24.08
15	16QAM	1	74	24.05	24.04	23.97
15	16QAM	36	0	22.83	22.90	22.84
15	16QAM	36	20	22.83	22.94	22.80
15	16QAM	36	39	22.89	22.85	22.85
15	16QAM	75	0	22.80	22.87	22.78
15	64QAM	1	0	22.92	23.04	23.06
15	64QAM	1	37	22.98	23.07	23.03
15	64QAM	1	74	23.00	22.97	22.88
15	64QAM	36	0	21.89	21.95	21.88
15	64QAM	36	20	21.89	21.95	21.85
15	64QAM	36	39	21.94	21.93	21.86
15	64QAM	75	0	21.83	21.92	21.80
Channel				26740	26865	26990
Frequency (MHz)				819	831.5	844
10	QPSK	1	0	24.68	24.73	24.80
10	QPSK	1	25	24.72	24.80	24.78
10	QPSK	1	49	24.67	24.74	24.55
10	QPSK	25	0	23.78	23.84	23.83
10	QPSK	25	12	23.79	23.86	23.84
10	QPSK	25	25	23.74	23.78	23.74
10	QPSK	50	0	23.75	23.80	23.79
10	16QAM	1	0	23.89	24.03	24.12
10	16QAM	1	25	24.01	24.11	24.07
10	16QAM	1	49	23.99	24.02	23.95
10	16QAM	25	0	22.86	22.93	22.90
10	16QAM	25	12	22.87	22.94	22.90
10	16QAM	25	25	22.83	22.88	22.82
10	16QAM	50	0	22.83	22.91	22.86
10	64QAM	1	0	22.87	22.96	23.03
10	64QAM	1	25	22.95	23.07	23.00
10	64QAM	1	49	22.93	22.97	22.88
10	64QAM	25	0	21.87	21.94	21.89
10	64QAM	25	12	21.89	21.96	21.90
10	64QAM	25	25	21.80	21.91	21.83
10	64QAM	50	0	21.86	21.94	21.89
Channel				26715	26865	27015
Frequency (MHz)				816.5	831.5	846.5
5	QPSK	1	0	24.65	24.80	24.74
5	QPSK	1	12	24.65	24.81	24.72



FCC SAR TEST REPORT

Report No. : FA902116

5	QPSK	1	24	24.71	24.78	24.67
5	QPSK	12	0	23.68	23.83	23.76
5	QPSK	12	7	23.71	23.87	23.80
5	QPSK	12	13	23.74	23.81	23.75
5	QPSK	25	0	23.76	23.83	23.77
5	16QAM	1	0	23.87	24.10	24.07
5	16QAM	1	12	23.90	24.10	24.02
5	16QAM	1	24	23.99	24.08	23.94
5	16QAM	12	0	22.78	22.92	22.82
5	16QAM	12	7	22.81	22.93	22.86
5	16QAM	12	13	22.81	22.87	22.79
5	16QAM	25	0	22.85	22.88	22.83
5	64QAM	1	0	22.87	23.04	22.99
5	64QAM	1	12	22.88	23.06	22.98
5	64QAM	1	24	22.94	23.01	22.88
5	64QAM	12	0	21.81	22.00	21.89
5	64QAM	12	7	21.84	21.97	21.91
5	64QAM	12	13	21.89	21.95	21.85
5	64QAM	25	0	21.85	21.88	21.86
Channel				26705	26865	27025
Frequency (MHz)				815.5	831.5	847.5
3	QPSK	1	0	24.67	24.81	24.75
3	QPSK	1	8	24.63	24.80	24.70
3	QPSK	1	14	24.63	24.78	24.61
3	QPSK	8	0	23.67	23.79	23.76
3	QPSK	8	4	23.69	23.85	23.74
3	QPSK	8	7	23.66	23.80	23.73
3	QPSK	15	0	23.68	23.80	23.73
3	16QAM	1	0	23.87	24.08	24.00
3	16QAM	1	8	23.87	24.09	23.97
3	16QAM	1	14	23.88	24.04	23.90
3	16QAM	8	0	22.77	22.93	22.80
3	16QAM	8	4	22.80	22.94	22.86
3	16QAM	8	7	22.80	22.91	22.80
3	16QAM	15	0	22.77	22.91	22.80
3	64QAM	1	0	22.85	23.02	22.93
3	64QAM	1	8	22.85	23.03	22.89
3	64QAM	1	14	22.86	23.03	22.85
3	64QAM	8	0	21.77	21.94	21.83
3	64QAM	8	4	21.83	21.99	21.89
3	64QAM	8	7	21.79	21.94	21.82
3	64QAM	15	0	21.79	21.90	21.83
Channel				26697	26865	27033
Frequency (MHz)				814.7	831.5	848.3
1.4	QPSK	1	0	24.60	24.71	24.63
1.4	QPSK	1	3	24.68	24.80	24.61
1.4	QPSK	1	5	24.58	24.72	24.33
1.4	QPSK	3	0	24.61	24.77	24.68
1.4	QPSK	3	1	24.59	24.81	24.64
1.4	QPSK	3	3	24.64	24.76	24.56
1.4	QPSK	6	0	23.64	23.76	23.67
1.4	16QAM	1	0	23.82	24.02	23.90
1.4	16QAM	1	3	23.89	24.10	23.89
1.4	16QAM	1	5	23.81	24.03	23.81
1.4	16QAM	3	0	23.66	23.85	23.67
1.4	16QAM	3	1	23.68	23.87	23.74



FCC SAR TEST REPORT

Report No. : FA9O2116

1.4	16QAM	3	3	23.64	23.82	23.59
1.4	16QAM	6	0	22.78	22.92	22.80
1.4	64QAM	1	0	22.82	22.98	22.86
1.4	64QAM	1	3	22.86	23.04	22.92
1.4	64QAM	1	5	22.80	22.98	22.82
1.4	64QAM	3	0	22.79	22.99	22.82
1.4	64QAM	3	1	22.85	23.01	22.87
1.4	64QAM	3	3	22.82	22.98	22.84
1.4	64QAM	6	0	21.72	21.84	21.75



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26765	26865	26965
Frequency (MHz)				821.5	831.5	841.5
15	QPSK	1	0	24.69	24.82	24.80
15	QPSK	1	37	24.73	24.81	24.79
15	QPSK	1	74	24.76	24.73	24.73
15	QPSK	36	0	23.80	23.85	23.76
15	QPSK	36	20	23.78	23.87	23.74
15	QPSK	36	39	23.78	23.78	23.78
15	QPSK	75	0	23.73	23.82	23.70
15	16QAM	1	0	23.97	24.10	24.10
15	16QAM	1	37	24.03	24.12	24.08
15	16QAM	1	74	24.05	24.04	23.97
15	16QAM	36	0	22.83	22.90	22.84
15	16QAM	36	20	22.83	22.94	22.80
15	16QAM	36	39	22.89	22.85	22.85
15	16QAM	75	0	22.80	22.87	22.78
15	64QAM	1	0	22.92	23.04	23.06
15	64QAM	1	37	22.98	23.07	23.03
15	64QAM	1	74	23.00	22.97	22.88
15	64QAM	36	0	21.89	21.95	21.88
15	64QAM	36	20	21.89	21.95	21.85
15	64QAM	36	39	21.94	21.93	21.86
15	64QAM	75	0	21.83	21.92	21.80
Channel				26740	26865	26990
Frequency (MHz)				819	831.5	844
10	QPSK	1	0	24.68	24.73	24.80
10	QPSK	1	25	24.72	24.80	24.78
10	QPSK	1	49	24.67	24.74	24.55
10	QPSK	25	0	23.78	23.84	23.83
10	QPSK	25	12	23.79	23.86	23.84
10	QPSK	25	25	23.74	23.78	23.74
10	QPSK	50	0	23.75	23.80	23.79
10	16QAM	1	0	23.89	24.03	24.12
10	16QAM	1	25	24.01	24.11	24.07
10	16QAM	1	49	23.99	24.02	23.95
10	16QAM	25	0	22.86	22.93	22.90
10	16QAM	25	12	22.87	22.94	22.90
10	16QAM	25	25	22.83	22.88	22.82
10	16QAM	50	0	22.83	22.91	22.86
10	64QAM	1	0	22.87	22.96	23.03
10	64QAM	1	25	22.95	23.07	23.00
10	64QAM	1	49	22.93	22.97	22.88
10	64QAM	25	0	21.87	21.94	21.89
10	64QAM	25	12	21.89	21.96	21.90
10	64QAM	25	25	21.80	21.91	21.83
10	64QAM	50	0	21.86	21.94	21.89
Channel				26715	26865	27015
Frequency (MHz)				816.5	831.5	846.5
5	QPSK	1	0	24.65	24.80	24.74
5	QPSK	1	12	24.65	24.81	24.72



FCC SAR TEST REPORT

Report No. : FA902116

5	QPSK	1	24	24.71	24.78	24.67
5	QPSK	12	0	23.68	23.83	23.76
5	QPSK	12	7	23.71	23.87	23.80
5	QPSK	12	13	23.74	23.81	23.75
5	QPSK	25	0	23.76	23.83	23.77
5	16QAM	1	0	23.87	24.10	24.07
5	16QAM	1	12	23.90	24.10	24.02
5	16QAM	1	24	23.99	24.08	23.94
5	16QAM	12	0	22.78	22.92	22.82
5	16QAM	12	7	22.81	22.93	22.86
5	16QAM	12	13	22.81	22.87	22.79
5	16QAM	25	0	22.85	22.88	22.83
5	64QAM	1	0	22.87	23.04	22.99
5	64QAM	1	12	22.88	23.06	22.98
5	64QAM	1	24	22.94	23.01	22.88
5	64QAM	12	0	21.81	22.00	21.89
5	64QAM	12	7	21.84	21.97	21.91
5	64QAM	12	13	21.89	21.95	21.85
5	64QAM	25	0	21.85	21.88	21.86
Channel				26705	26865	27025
Frequency (MHz)				815.5	831.5	847.5
3	QPSK	1	0	24.67	24.81	24.75
3	QPSK	1	8	24.63	24.80	24.70
3	QPSK	1	14	24.63	24.78	24.61
3	QPSK	8	0	23.67	23.79	23.76
3	QPSK	8	4	23.69	23.85	23.74
3	QPSK	8	7	23.66	23.80	23.73
3	QPSK	15	0	23.68	23.80	23.73
3	16QAM	1	0	23.87	24.08	24.00
3	16QAM	1	8	23.87	24.09	23.97
3	16QAM	1	14	23.88	24.04	23.90
3	16QAM	8	0	22.77	22.93	22.80
3	16QAM	8	4	22.80	22.94	22.86
3	16QAM	8	7	22.80	22.91	22.80
3	16QAM	15	0	22.77	22.91	22.80
3	64QAM	1	0	22.85	23.02	22.93
3	64QAM	1	8	22.85	23.03	22.89
3	64QAM	1	14	22.86	23.03	22.85
3	64QAM	8	0	21.77	21.94	21.83
3	64QAM	8	4	21.83	21.99	21.89
3	64QAM	8	7	21.79	21.94	21.82
3	64QAM	15	0	21.79	21.90	21.83
Channel				26697	26865	27033
Frequency (MHz)				814.7	831.5	848.3
1.4	QPSK	1	0	24.60	24.71	24.63
1.4	QPSK	1	3	24.68	24.80	24.61
1.4	QPSK	1	5	24.58	24.72	24.33
1.4	QPSK	3	0	24.61	24.77	24.68
1.4	QPSK	3	1	24.59	24.81	24.64
1.4	QPSK	3	3	24.64	24.76	24.56
1.4	QPSK	6	0	23.64	23.76	23.67
1.4	16QAM	1	0	23.82	24.02	23.90
1.4	16QAM	1	3	23.89	24.10	23.89
1.4	16QAM	1	5	23.81	24.03	23.81
1.4	16QAM	3	0	23.66	23.85	23.67
1.4	16QAM	3	1	23.68	23.87	23.74



FCC SAR TEST REPORT

Report No. : FA9O2116

1.4	16QAM	3	3	23.64	23.82	23.59
1.4	16QAM	6	0	22.78	22.92	22.80
1.4	64QAM	1	0	22.82	22.98	22.86
1.4	64QAM	1	3	22.86	23.04	22.92
1.4	64QAM	1	5	22.80	22.98	22.82
1.4	64QAM	3	0	22.79	22.99	22.82
1.4	64QAM	3	1	22.85	23.01	22.87
1.4	64QAM	3	3	22.82	22.98	22.84
1.4	64QAM	6	0	21.72	21.84	21.75



<LTE Band 66>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				132072	132322	132572
Frequency (MHz)				1720	1745	1770
20	QPSK	1	0	23.46	23.50	23.51
20	QPSK	1	49	23.45	23.50	23.48
20	QPSK	1	99	23.25	23.31	23.29
20	QPSK	50	0	22.38	22.39	22.40
20	QPSK	50	24	22.35	22.36	22.35
20	QPSK	50	50	22.31	22.37	22.35
20	QPSK	100	0	22.36	22.37	22.38
20	16QAM	1	0	22.75	22.84	22.80
20	16QAM	1	49	22.79	22.86	22.81
20	16QAM	1	99	22.59	22.63	22.62
20	16QAM	50	0	21.46	21.50	21.49
20	16QAM	50	24	21.45	21.47	21.45
20	16QAM	50	50	21.39	21.47	21.44
20	16QAM	100	0	21.43	21.46	21.46
20	64QAM	1	0	21.70	21.77	21.78
20	64QAM	1	49	21.76	21.80	21.79
20	64QAM	1	99	21.56	21.60	21.58
20	64QAM	50	0	20.54	20.57	20.57
20	64QAM	50	24	20.53	20.55	20.51
20	64QAM	50	50	20.47	20.49	20.46
20	64QAM	100	0	20.50	20.53	20.52
Channel				132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5
15	QPSK	1	0	23.41	23.47	23.46
15	QPSK	1	37	23.46	23.50	23.49
15	QPSK	1	74	23.33	23.35	23.32
15	QPSK	36	0	22.35	22.37	22.32
15	QPSK	36	20	22.43	22.46	22.40
15	QPSK	36	39	22.28	22.31	22.28
15	QPSK	75	0	22.34	22.36	22.35
15	16QAM	1	0	22.79	22.82	22.75
15	16QAM	1	37	22.81	22.86	22.81
15	16QAM	1	74	22.66	22.72	22.66
15	16QAM	36	0	21.43	21.47	21.44
15	16QAM	36	20	21.52	21.50	21.49
15	16QAM	36	39	21.35	21.37	21.34
15	16QAM	75	0	21.43	21.45	21.41
15	64QAM	1	0	21.72	21.78	21.70
15	64QAM	1	37	21.76	21.80	21.75
15	64QAM	1	74	21.60	21.64	21.58
15	64QAM	36	0	20.50	20.49	20.50
15	64QAM	36	20	20.57	20.60	20.58
15	64QAM	36	39	20.47	20.47	20.43
15	64QAM	75	0	20.43	20.45	20.46
Channel				132022	132322	132622
Frequency (MHz)				1715	1745	1775
10	QPSK	1	0	23.40	23.47	23.43
10	QPSK	1	25	23.42	23.46	23.42



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	23.30	23.37	23.30
10	QPSK	25	0	22.44	22.41	22.41
10	QPSK	25	12	22.40	22.41	22.42
10	QPSK	25	25	22.38	22.37	22.37
10	QPSK	50	0	22.38	22.40	22.37
10	16QAM	1	0	22.74	22.83	22.78
10	16QAM	1	25	22.79	22.82	22.78
10	16QAM	1	49	22.63	22.71	22.65
10	16QAM	25	0	21.53	21.51	21.48
10	16QAM	25	12	21.49	21.51	21.46
10	16QAM	25	25	21.44	21.45	21.46
10	16QAM	50	0	21.47	21.49	21.47
10	64QAM	1	0	21.72	21.74	21.70
10	64QAM	1	25	21.68	21.75	21.68
10	64QAM	1	49	21.59	21.61	21.57
10	64QAM	25	0	20.54	20.53	20.51
10	64QAM	25	12	20.54	20.53	20.51
10	64QAM	25	25	20.51	20.50	20.46
10	64QAM	50	0	20.54	20.51	20.47
Channel				131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5
5	QPSK	1	0	23.27	23.32	23.27
5	QPSK	1	12	23.41	23.45	23.40
5	QPSK	1	24	23.22	23.23	23.19
5	QPSK	12	0	22.39	22.42	22.34
5	QPSK	12	7	22.47	22.46	22.44
5	QPSK	12	13	22.39	22.36	22.32
5	QPSK	25	0	22.39	22.39	22.36
5	16QAM	1	0	22.60	22.66	22.60
5	16QAM	1	12	22.77	22.82	22.75
5	16QAM	1	24	22.58	22.63	22.52
5	16QAM	12	0	21.46	21.47	21.42
5	16QAM	12	7	21.57	21.56	21.53
5	16QAM	12	13	21.46	21.44	21.41
5	16QAM	25	0	21.48	21.49	21.42
5	64QAM	1	0	21.51	21.60	21.54
5	64QAM	1	12	21.68	21.73	21.66
5	64QAM	1	24	21.47	21.54	21.46
5	64QAM	12	0	20.55	20.53	20.49
5	64QAM	12	7	20.63	20.61	20.57
5	64QAM	12	13	20.51	20.51	20.45
5	64QAM	25	0	20.47	20.51	20.45
Channel				131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5
3	QPSK	1	0	23.33	23.35	23.31
3	QPSK	1	8	23.41	23.47	23.41
3	QPSK	1	14	23.30	23.34	23.26
3	QPSK	8	0	22.47	22.49	22.41
3	QPSK	8	4	22.51	22.48	22.44
3	QPSK	8	7	22.43	22.46	22.37
3	QPSK	15	0	22.44	22.47	22.37
3	16QAM	1	0	22.65	22.67	22.61
3	16QAM	1	8	22.80	22.83	22.73
3	16QAM	1	14	22.59	22.63	22.55
3	16QAM	8	0	21.61	21.56	21.54
3	16QAM	8	4	21.64	21.62	21.59



FCC SAR TEST REPORT

Report No. : FA902116

3	16QAM	8	7	21.60	21.59	21.53
3	16QAM	15	0	21.54	21.55	21.49
3	64QAM	1	0	21.54	21.59	21.55
3	64QAM	1	8	21.71	21.73	21.67
3	64QAM	1	14	21.54	21.60	21.52
3	64QAM	8	0	20.59	20.59	20.52
3	64QAM	8	4	20.66	20.63	20.58
3	64QAM	8	7	20.56	20.57	20.49
3	64QAM	15	0	20.55	20.53	20.49
Channel				131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3
1.4	QPSK	1	0	23.34	23.38	23.32
1.4	QPSK	1	3	23.45	23.49	23.43
1.4	QPSK	1	5	23.35	23.37	23.33
1.4	QPSK	3	0	23.38	23.45	23.38
1.4	QPSK	3	1	23.44	23.49	23.42
1.4	QPSK	3	3	23.41	23.43	23.40
1.4	QPSK	6	0	22.45	22.44	22.38
1.4	16QAM	1	0	22.69	22.73	22.63
1.4	16QAM	1	3	22.79	22.81	22.75
1.4	16QAM	1	5	22.63	22.75	22.62
1.4	16QAM	3	0	22.53	22.52	22.47
1.4	16QAM	3	1	22.56	22.59	22.53
1.4	16QAM	3	3	22.45	22.53	22.46
1.4	16QAM	6	0	21.59	21.60	21.55
1.4	64QAM	1	0	21.64	21.62	21.59
1.4	64QAM	1	3	21.69	21.73	21.67
1.4	64QAM	1	5	21.61	21.63	21.57
1.4	64QAM	3	0	21.60	21.65	21.60
1.4	64QAM	3	1	21.67	21.74	21.66
1.4	64QAM	3	3	21.61	21.64	21.59
1.4	64QAM	6	0	20.50	20.51	20.49



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 1		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				132072	132322	132572
Frequency (MHz)				1720	1745	1770
20	QPSK	1	0	23.46	23.50	23.51
20	QPSK	1	49	23.45	23.50	23.48
20	QPSK	1	99	23.25	23.31	23.29
20	QPSK	50	0	22.38	22.39	22.40
20	QPSK	50	24	22.35	22.36	22.35
20	QPSK	50	50	22.31	22.37	22.35
20	QPSK	100	0	22.36	22.37	22.38
20	16QAM	1	0	22.75	22.84	22.80
20	16QAM	1	49	22.79	22.86	22.81
20	16QAM	1	99	22.59	22.63	22.62
20	16QAM	50	0	21.46	21.50	21.49
20	16QAM	50	24	21.45	21.47	21.45
20	16QAM	50	50	21.39	21.47	21.44
20	16QAM	100	0	21.43	21.46	21.46
20	64QAM	1	0	21.70	21.77	21.78
20	64QAM	1	49	21.76	21.80	21.79
20	64QAM	1	99	21.56	21.60	21.58
20	64QAM	50	0	20.54	20.57	20.57
20	64QAM	50	24	20.53	20.55	20.51
20	64QAM	50	50	20.47	20.49	20.46
20	64QAM	100	0	20.50	20.53	20.52
Channel				132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5
15	QPSK	1	0	23.41	23.47	23.46
15	QPSK	1	37	23.46	23.50	23.49
15	QPSK	1	74	23.33	23.35	23.32
15	QPSK	36	0	22.35	22.37	22.32
15	QPSK	36	20	22.43	22.46	22.40
15	QPSK	36	39	22.28	22.31	22.28
15	QPSK	75	0	22.34	22.36	22.35
15	16QAM	1	0	22.79	22.82	22.75
15	16QAM	1	37	22.81	22.86	22.81
15	16QAM	1	74	22.66	22.72	22.66
15	16QAM	36	0	21.43	21.47	21.44
15	16QAM	36	20	21.52	21.50	21.49
15	16QAM	36	39	21.35	21.37	21.34
15	16QAM	75	0	21.43	21.45	21.41
15	64QAM	1	0	21.72	21.78	21.70
15	64QAM	1	37	21.76	21.80	21.75
15	64QAM	1	74	21.60	21.64	21.58
15	64QAM	36	0	20.50	20.49	20.50
15	64QAM	36	20	20.57	20.60	20.58
15	64QAM	36	39	20.47	20.47	20.43
15	64QAM	75	0	20.43	20.45	20.46
Channel				132022	132322	132622
Frequency (MHz)				1715	1745	1775
10	QPSK	1	0	23.40	23.47	23.43
10	QPSK	1	25	23.42	23.46	23.42



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	23.30	23.37	23.30
10	QPSK	25	0	22.44	22.41	22.41
10	QPSK	25	12	22.40	22.41	22.42
10	QPSK	25	25	22.38	22.37	22.37
10	QPSK	50	0	22.38	22.40	22.37
10	16QAM	1	0	22.74	22.83	22.78
10	16QAM	1	25	22.79	22.82	22.78
10	16QAM	1	49	22.63	22.71	22.65
10	16QAM	25	0	21.53	21.51	21.48
10	16QAM	25	12	21.49	21.51	21.46
10	16QAM	25	25	21.44	21.45	21.46
10	16QAM	50	0	21.47	21.49	21.47
10	64QAM	1	0	21.72	21.74	21.70
10	64QAM	1	25	21.68	21.75	21.68
10	64QAM	1	49	21.59	21.61	21.57
10	64QAM	25	0	20.54	20.53	20.51
10	64QAM	25	12	20.54	20.53	20.51
10	64QAM	25	25	20.51	20.50	20.46
10	64QAM	50	0	20.54	20.51	20.47
Channel				131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5
5	QPSK	1	0	23.27	23.32	23.27
5	QPSK	1	12	23.41	23.45	23.40
5	QPSK	1	24	23.22	23.23	23.19
5	QPSK	12	0	22.39	22.42	22.34
5	QPSK	12	7	22.47	22.46	22.44
5	QPSK	12	13	22.39	22.36	22.32
5	QPSK	25	0	22.39	22.39	22.36
5	16QAM	1	0	22.60	22.66	22.60
5	16QAM	1	12	22.77	22.82	22.75
5	16QAM	1	24	22.58	22.63	22.52
5	16QAM	12	0	21.46	21.47	21.42
5	16QAM	12	7	21.57	21.56	21.53
5	16QAM	12	13	21.46	21.44	21.41
5	16QAM	25	0	21.48	21.49	21.42
5	64QAM	1	0	21.51	21.60	21.54
5	64QAM	1	12	21.68	21.73	21.66
5	64QAM	1	24	21.47	21.54	21.46
5	64QAM	12	0	20.55	20.53	20.49
5	64QAM	12	7	20.63	20.61	20.57
5	64QAM	12	13	20.51	20.51	20.45
5	64QAM	25	0	20.47	20.51	20.45
Channel				131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5
3	QPSK	1	0	23.33	23.35	23.31
3	QPSK	1	8	23.41	23.47	23.41
3	QPSK	1	14	23.30	23.34	23.26
3	QPSK	8	0	22.47	22.49	22.41
3	QPSK	8	4	22.51	22.48	22.44
3	QPSK	8	7	22.43	22.46	22.37
3	QPSK	15	0	22.44	22.47	22.37
3	16QAM	1	0	22.65	22.67	22.61
3	16QAM	1	8	22.80	22.83	22.73
3	16QAM	1	14	22.59	22.63	22.55
3	16QAM	8	0	21.61	21.56	21.54
3	16QAM	8	4	21.64	21.62	21.59



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	21.60	21.59	21.53
3	16QAM	15	0	21.54	21.55	21.49
3	64QAM	1	0	21.54	21.59	21.55
3	64QAM	1	8	21.71	21.73	21.67
3	64QAM	1	14	21.54	21.60	21.52
3	64QAM	8	0	20.59	20.59	20.52
3	64QAM	8	4	20.66	20.63	20.58
3	64QAM	8	7	20.56	20.57	20.49
3	64QAM	15	0	20.55	20.53	20.49
Channel				131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3
1.4	QPSK	1	0	23.34	23.38	23.32
1.4	QPSK	1	3	23.45	23.49	23.43
1.4	QPSK	1	5	23.35	23.37	23.33
1.4	QPSK	3	0	23.38	23.45	23.38
1.4	QPSK	3	1	23.44	23.49	23.42
1.4	QPSK	3	3	23.41	23.43	23.40
1.4	QPSK	6	0	22.45	22.44	22.38
1.4	16QAM	1	0	22.69	22.73	22.63
1.4	16QAM	1	3	22.79	22.81	22.75
1.4	16QAM	1	5	22.63	22.75	22.62
1.4	16QAM	3	0	22.53	22.52	22.47
1.4	16QAM	3	1	22.56	22.59	22.53
1.4	16QAM	3	3	22.45	22.53	22.46
1.4	16QAM	6	0	21.59	21.60	21.55
1.4	64QAM	1	0	21.64	21.62	21.59
1.4	64QAM	1	3	21.69	21.73	21.67
1.4	64QAM	1	5	21.61	21.63	21.57
1.4	64QAM	3	0	21.60	21.65	21.60
1.4	64QAM	3	1	21.67	21.74	21.66
1.4	64QAM	3	3	21.61	21.64	21.59
1.4	64QAM	6	0	20.50	20.51	20.49

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

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

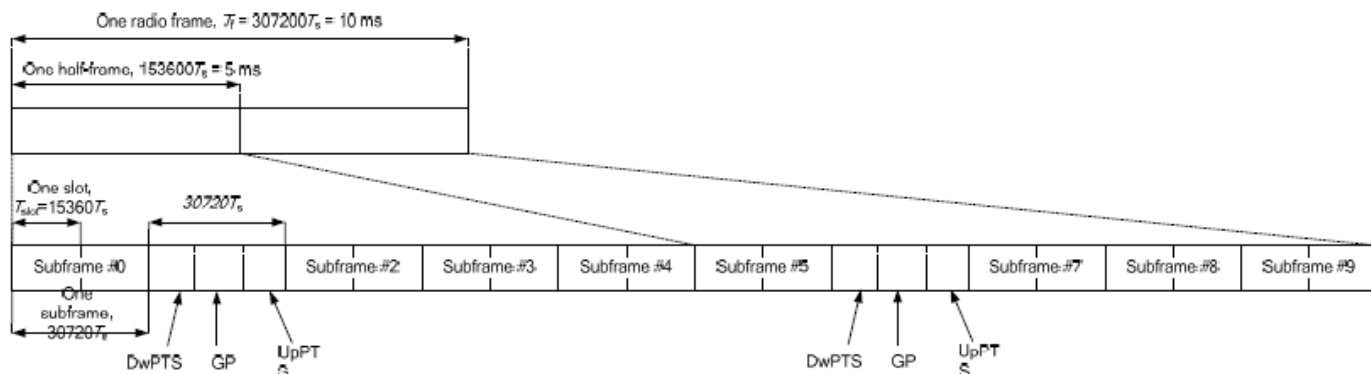


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is:
 $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is:
 $(3+0.143)/5 = 62.9\%$
- For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
- The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE Band 41
- The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1, for Power Class 3 operation is 63.3% using UL-DL configuration 0. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR among all exposure condition



<LTE Band 38>

Power Selection				Head / Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 2		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				37850	38000	38150
Frequency (MHz)				2580	2595	2610
20	QPSK	1	0	24.69	24.80	24.81
20	QPSK	1	49	24.75	24.86	24.85
20	QPSK	1	99	24.89	24.90	24.95
20	QPSK	50	0	23.81	23.91	23.92
20	QPSK	50	24	23.91	23.95	23.95
20	QPSK	50	50	23.93	23.95	23.96
20	QPSK	100	0	23.90	23.90	23.91
20	16QAM	1	0	23.84	23.93	23.92
20	16QAM	1	49	23.86	23.98	23.96
20	16QAM	1	99	23.98	24.01	24.02
20	16QAM	50	0	22.85	22.98	22.95
20	16QAM	50	24	22.99	23.00	23.00
20	16QAM	50	50	23.00	23.02	23.02
20	16QAM	100	0	22.97	22.99	22.98
20	64QAM	1	0	22.55	22.66	22.66
20	64QAM	1	49	22.59	22.67	22.70
20	64QAM	1	99	22.69	22.74	22.74
20	64QAM	50	0	21.85	21.96	21.96
20	64QAM	50	24	21.97	21.98	21.98
20	64QAM	50	50	21.98	22.00	22.01
20	64QAM	100	0	21.97	21.99	21.98
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	24.76	24.83	24.85
15	QPSK	1	37	24.77	24.86	24.87
15	QPSK	1	74	24.91	24.92	24.94
15	QPSK	36	0	23.78	23.88	23.87
15	QPSK	36	20	23.80	23.92	23.93
15	QPSK	36	39	23.88	23.90	23.93
15	QPSK	75	0	23.90	23.90	23.92
15	16QAM	1	0	23.85	23.94	23.96
15	16QAM	1	37	23.85	23.95	23.96
15	16QAM	1	74	24.02	24.05	24.06
15	16QAM	36	0	22.79	22.88	22.88
15	16QAM	36	20	22.85	22.97	22.94
15	16QAM	36	39	22.91	22.95	22.96
15	16QAM	75	0	22.98	22.98	22.99
15	64QAM	1	0	22.59	22.68	22.69
15	64QAM	1	37	22.59	22.71	22.71
15	64QAM	1	74	22.76	22.78	22.79
15	64QAM	36	0	21.82	21.91	21.92
15	64QAM	36	20	21.84	21.96	21.97
15	64QAM	36	39	21.95	21.95	21.96
15	64QAM	75	0	21.98	21.97	21.99
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	24.75	24.83	24.83
10	QPSK	1	25	24.75	24.84	24.86



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	24.82	24.92	24.94
10	QPSK	25	0	23.74	23.86	23.87
10	QPSK	25	12	23.75	23.88	23.91
10	QPSK	25	25	23.80	23.79	23.93
10	QPSK	50	0	23.79	23.91	23.92
10	16QAM	1	0	23.85	23.78	23.96
10	16QAM	1	25	23.85	23.96	23.98
10	16QAM	1	49	23.89	24.01	24.03
10	16QAM	25	0	22.82	22.95	22.94
10	16QAM	25	12	22.85	22.95	23.00
10	16QAM	25	25	22.85	22.98	23.01
10	16QAM	50	0	22.85	22.98	22.99
10	64QAM	1	0	22.58	22.68	22.69
10	64QAM	1	25	22.60	22.70	22.71
10	64QAM	1	49	22.61	22.73	22.75
10	64QAM	25	0	21.86	21.96	21.99
10	64QAM	25	12	21.89	21.99	22.02
10	64QAM	25	25	21.88	21.99	22.02
10	64QAM	50	0	21.82	21.95	21.97
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	24.69	24.80	24.84
5	QPSK	1	12	24.72	24.84	24.86
5	QPSK	1	24	24.72	24.83	24.84
5	QPSK	12	0	23.72	23.87	23.89
5	QPSK	12	7	23.75	23.89	23.91
5	QPSK	12	13	23.74	23.90	23.93
5	QPSK	25	0	23.74	23.88	23.91
5	16QAM	1	0	23.82	23.92	23.94
5	16QAM	1	12	23.83	23.97	23.99
5	16QAM	1	24	23.88	24.00	24.01
5	16QAM	12	0	22.75	22.88	22.90
5	16QAM	12	7	22.79	22.90	22.96
5	16QAM	12	13	22.80	22.91	22.94
5	16QAM	25	0	22.83	22.94	22.97
5	64QAM	1	0	22.54	22.64	22.67
5	64QAM	1	12	22.57	22.68	22.70
5	64QAM	1	24	22.60	22.71	22.74
5	64QAM	12	0	21.80	21.89	21.94
5	64QAM	12	7	21.83	21.95	21.99
5	64QAM	12	13	21.82	21.96	21.97
5	64QAM	25	0	21.84	21.98	22.00



<LTE Band 41>

Power Selection				Head / Hotspot / Near body / Product Specific				
Transmit Antenna				Ant 2				
Max. Power				25				
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				39750	40185	40620	41055	41490
Frequency (MHz)				2506	2549.5	2593	2636.5	2680
20	QPSK	1	0	24.00	24.12	24.17	24.18	24.24
20	QPSK	1	49	23.93	23.97	24.08	24.12	24.18
20	QPSK	1	99	23.96	24.11	24.13	24.13	24.17
20	QPSK	50	0	23.07	23.11	23.19	23.22	23.29
20	QPSK	50	24	23.06	23.10	23.18	23.20	23.28
20	QPSK	50	50	23.00	23.09	23.17	23.19	23.21
20	QPSK	100	0	23.04	23.18	23.17	23.19	23.24
20	16QAM	1	0	23.11	23.18	23.28	23.29	23.39
20	16QAM	1	49	23.05	23.09	23.19	23.24	23.28
20	16QAM	1	99	23.04	23.18	23.20	23.23	23.27
20	16QAM	50	0	22.12	22.19	22.27	22.32	22.34
20	16QAM	50	24	22.12	22.27	22.25	22.30	22.35
20	16QAM	50	50	22.08	22.22	22.25	22.27	22.32
20	16QAM	100	0	22.12	22.25	22.26	22.27	22.31
20	64QAM	1	0	21.84	21.91	22.00	22.02	22.11
20	64QAM	1	49	21.77	21.80	21.93	21.96	22.01
20	64QAM	1	99	21.77	21.94	21.94	21.96	22.02
20	64QAM	50	0	21.12	21.17	21.25	21.28	21.36
20	64QAM	50	24	21.10	21.24	21.25	21.26	21.35
20	64QAM	50	50	21.08	21.22	21.22	21.26	21.30
20	64QAM	100	0	21.09	21.25	21.24	21.27	21.33
Channel				39725	40173	40620	41068	41515
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5
15	QPSK	1	0	24.03	24.07	24.19	24.19	24.20
15	QPSK	1	37	23.97	24.00	24.09	24.14	24.19
15	QPSK	1	74	24.01	24.16	24.16	24.20	24.18
15	QPSK	36	0	23.02	23.06	23.16	23.19	23.24
15	QPSK	36	20	23.05	23.06	23.17	23.21	23.25
15	QPSK	36	39	22.98	23.13	23.15	23.16	23.19
15	QPSK	75	0	23.01	23.16	23.18	23.19	23.25
15	16QAM	1	0	23.12	23.15	23.27	23.32	23.37
15	16QAM	1	37	23.08	23.08	23.20	23.24	23.29
15	16QAM	1	74	23.08	23.24	23.25	23.25	23.29
15	16QAM	36	0	22.03	22.08	22.20	22.22	22.27
15	16QAM	36	20	22.10	22.07	22.21	22.21	22.29
15	16QAM	36	39	22.03	22.15	22.17	22.20	22.25
15	16QAM	75	0	22.10	22.25	22.25	22.26	22.31
15	64QAM	1	0	21.85	21.88	22.02	22.03	22.10
15	64QAM	1	37	21.80	21.82	21.96	21.98	22.00
15	64QAM	1	74	21.81	21.96	21.97	21.99	22.02
15	64QAM	36	0	21.07	21.10	21.22	21.23	21.32
15	64QAM	36	20	21.10	21.12	21.22	21.26	21.30
15	64QAM	36	39	21.03	21.18	21.19	21.22	21.27
15	64QAM	75	0	21.08	21.21	21.25	21.25	21.30
Channel				39700	40160	40620	41080	41540
Frequency (MHz)				2501	2547	2593	2639	2685
10	QPSK	1	0	23.94	24.00	24.13	24.10	24.21
10	QPSK	1	25	23.86	23.96	24.04	24.02	24.12



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	23.91	24.11	24.08	24.09	24.17
10	QPSK	25	0	23.00	23.01	23.14	23.12	23.29
10	QPSK	25	12	23.06	23.16	23.18	23.12	23.20
10	QPSK	25	25	22.91	23.08	23.07	23.14	23.15
10	QPSK	50	0	22.99	23.12	23.14	23.09	23.19
10	16QAM	1	0	23.09	23.14	23.19	23.23	23.29
10	16QAM	1	25	23.02	23.05	23.14	23.16	23.27
10	16QAM	1	49	23.03	23.14	23.14	23.20	23.20
10	16QAM	25	0	22.11	22.17	22.26	22.23	22.26
10	16QAM	25	12	22.10	22.23	22.20	22.22	22.34
10	16QAM	25	25	22.02	22.21	22.15	22.26	22.26
10	16QAM	50	0	22.10	22.16	22.24	22.18	22.27
10	64QAM	1	0	21.82	21.88	21.96	21.92	22.10
10	64QAM	1	25	21.71	21.71	21.86	21.91	22.01
10	64QAM	1	49	21.67	21.92	21.87	21.94	21.92
10	64QAM	25	0	21.09	21.10	21.22	21.27	21.28
10	64QAM	25	12	21.10	21.22	21.17	21.24	21.33
10	64QAM	25	25	21.00	21.22	21.22	21.20	21.28
10	64QAM	50	0	21.08	21.17	21.21	21.19	21.33
Channel				39675	40148	40620	41093	41565
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5
5	QPSK	1	0	23.95	24.01	24.13	24.16	24.20
5	QPSK	1	12	23.96	24.02	24.15	24.18	24.20
5	QPSK	1	24	23.88	23.96	24.08	24.11	24.15
5	QPSK	12	0	23.03	23.05	23.19	23.18	23.26
5	QPSK	12	7	23.00	23.08	23.19	23.20	23.25
5	QPSK	12	13	23.01	23.05	23.13	23.16	23.23
5	QPSK	25	0	22.99	23.07	23.16	23.17	23.24
5	16QAM	1	0	23.03	23.10	23.20	23.26	23.31
5	16QAM	1	12	23.06	23.11	23.25	23.28	23.35
5	16QAM	1	24	23.04	23.09	23.23	23.26	23.32
5	16QAM	12	0	22.02	22.08	22.18	22.23	22.29
5	16QAM	12	7	22.04	22.10	22.20	22.24	22.29
5	16QAM	12	13	22.01	22.06	22.19	22.24	22.28
5	16QAM	25	0	22.08	22.14	22.26	22.29	22.32
5	64QAM	1	0	21.75	21.84	21.97	22.02	22.08
5	64QAM	1	12	21.79	21.86	22.00	22.01	22.09
5	64QAM	1	24	21.76	21.84	21.98	22.00	22.05
5	64QAM	12	0	21.05	21.11	21.22	21.26	21.29
5	64QAM	12	7	21.06	21.15	21.25	21.27	21.34
5	64QAM	12	13	21.04	21.11	21.20	21.27	21.30
5	64QAM	25	0	21.11	21.16	21.26	21.31	21.36

12. WiFi ON Conducted RF Output Power (Unit: dBm)

<GSM Conducted Power>

- For DTM multi-slot class mode, the device was linked with base station simulator (Agilent E5515C) and transmit maximum power on maximum number of TX slots, i.e. one CS timeslot, and additional PS timeslots (1 for DTM class 5 and 9, 2 for DTM class 11) in one TDMA frame.
- Agilent E5515C was used to setup the device operated under DTM mode for power measurement and SAR testing. For conducted power, the power of the burst for voice and the power of the bursts for data was reported separately in the table below, and the frame-average power is derived below to determine SAR testing.

$$DTM \text{ frame average power (dBm)} = 10 \cdot \log [\sum (\text{power of each slot, in mW}) / 8]$$

- Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
- Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE / DTM 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. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
- Other configurations of GSM / GPRS / EDGE / DTM 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

Power Selection	Transmit Antenna	GSM850		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		128	189	251		128	189	251	
		Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8	
Head	Ant 0	GSM 1 Tx slot		33.38	33.29	33.40	34.00	24.38	24.29	24.40	25.00
		GPRS 1 Tx slot		33.39	33.30	33.44	34.00	24.39	24.30	24.44	25.00
		GPRS 2 Tx slots		30.67	30.78	30.84	32.00	24.67	24.78	24.84	26.00
		GPRS 3 Tx slots		28.69	28.79	28.81	30.00	24.43	24.53	24.55	25.74
		GPRS 4 Tx slots		27.41	27.48	27.57	29.00	24.41	24.48	24.57	26.00
		EDGE 1 Tx slot		27.14	27.09	27.17	28.00	18.14	18.09	18.17	19.00
		EDGE 2 Tx slots		26.24	26.22	26.33	27.00	20.24	20.22	20.33	21.00
		EDGE 3 Tx slots		24.10	24.04	24.04	25.00	19.84	19.78	19.78	20.74
		EDGE 4 Tx slots		22.17	22.07	22.18	23.00	19.17	19.07	19.18	20.00
		DTM Multi-slot class 5	GSM 1 Tx slot	30.63	30.71	30.81	32.00	24.59	24.68	24.78	25.98
			GPRS 1 Tx slot	30.59	30.69	30.79	32.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.58	30.69	30.84	32.00	24.58	24.67	24.79	25.98
			GPRS 1 Tx slot	30.63	30.70	30.78	32.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.65	28.71	28.80	30.00	24.42	24.50	24.54	25.74
			GPRS 2 Tx slots	28.69	28.78	28.80	30.00				
		DTM Multi-slot class 5	GSM 1 Tx slot	30.65	30.73	30.82	32.00	22.95	23.00	23.09	24.16
			EDGE 1 Tx slot	26.20	26.16	26.27	27.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.60	30.78	30.75	32.00	22.91	23.04	23.05	24.16
			EDGE 1 Tx slot	26.18	26.16	26.30	27.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.64	28.72	28.80	30.00	21.90	21.91	21.97	23.10
			EDGE 2 Tx slots	24.04	23.95	23.99	25.00				

Power Selection	Transmit Antenna	GSM850		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		128	189	251		128	189	251	
		Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8	
Hotspot / Near body / Product Specific	Ant 0	GSM 1 Tx slot		29.80	29.89	29.95	31.50	20.80	20.89	20.95	22.50
		GPRS 1 Tx slot		29.84	29.93	29.99	31.50	20.84	20.93	20.99	22.50
		GPRS 2 Tx slots		28.16	28.17	28.19	29.50	22.16	22.17	22.19	23.50
		GPRS 3 Tx slots		26.40	26.36	26.40	27.50	22.14	22.10	22.14	23.24
		GPRS 4 Tx slots		25.58	25.54	25.55	26.50	22.58	22.54	22.55	23.50
		EDGE 1 Tx slot		24.68	24.56	24.49	25.50	15.68	15.56	15.49	16.50
		EDGE 2 Tx slots		23.50	23.39	23.59	24.50	17.50	17.39	17.59	18.50
		EDGE 3 Tx slots		20.93	20.78	20.85	22.50	16.67	16.52	16.59	18.24
		EDGE 4 Tx slots		19.47	19.40	19.50	20.50	16.47	16.40	16.50	17.50
		DTM Multi-slot class 5	GSM 1 Tx slot	28.11	28.14	28.19	29.50	22.09	22.08	22.16	23.48
			GPRS 1 Tx slot	28.11	28.07	28.17	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.14	28.17	28.13	29.50	22.12	22.15	22.12	23.48
			GPRS 1 Tx slot	28.15	28.17	28.15	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	26.34	26.29	26.32	27.50	22.07	22.06	22.09	23.24
			GPRS 2 Tx slots	26.32	26.33	26.37	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	28.10	28.11	28.09	29.50	20.34	20.33	20.38	21.66
			EDGE 1 Tx slot	23.43	23.36	23.59	24.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.06	28.07	28.12	29.50	20.31	20.31	20.38	21.66
			EDGE 1 Tx slot	23.40	23.38	23.50	24.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	26.40	26.30	26.38	27.50	19.31	19.18	19.27	20.60
			EDGE 2 Tx slots	20.91	20.72	20.83	22.50				

Power Selection	Transmit Antenna	GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		512	661	810		512	661	810	
		Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8	
Head	Ant 0	GSM 1 Tx slot		29.80	29.71	29.59	31.00	20.80	20.71	20.59	22.00
		GPRS 1 Tx slot		29.82	29.72	29.61	31.00	20.82	20.72	20.61	22.00
		GPRS 2 Tx slots		27.86	27.98	27.89	29.50	21.86	21.98	21.89	23.50
		GPRS 3 Tx slots		25.69	25.60	25.67	27.50	21.43	21.34	21.41	23.24
		GPRS 4 Tx slots		24.85	24.61	24.70	26.50	21.85	21.61	21.70	23.50
		EDGE 1 Tx slot		25.64	25.53	25.67	27.00	16.64	16.53	16.67	18.00
		EDGE 2 Tx slots		24.54	24.26	24.37	26.00	18.54	18.26	18.37	20.00
		EDGE 3 Tx slots		23.43	23.23	23.41	25.00	19.17	18.97	19.15	20.74
		EDGE 4 Tx slots		22.79	22.52	22.62	24.00	19.79	19.52	19.62	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	27.85	27.89	27.81	29.50	21.81	21.87	21.79	23.48
			GPRS 1 Tx slot	27.81	27.90	27.82	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.85	27.97	27.85	29.50	21.78	21.94	21.81	23.48
			GPRS 1 Tx slot	27.76	27.95	27.81	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.60	25.58	25.66	27.50	21.37	21.31	21.41	23.24
			GPRS 2 Tx slots	25.64	25.57	25.67	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	27.85	27.96	27.81	29.50	20.46	20.47	20.39	22.07
			EDGE 1 Tx slot	24.46	24.25	24.34	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.79	27.90	27.85	29.50	20.44	20.41	20.40	22.07
			EDGE 1 Tx slot	24.53	24.19	24.27	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.68	25.60	25.67	27.50	20.02	19.86	19.99	21.74
			EDGE 2 Tx slots	23.36	23.14	23.31	25.00				

Power Selection	Transmit Antenna	GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		512	661	810		512	661	810	
		Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8	
Hotspot / Near body / Product Specific	Ant 0	GSM 1 Tx slot		27.78	27.60	27.79	29.00	18.78	18.60	18.79	20.00
		GPRS 1 Tx slot		27.82	27.67	27.85	29.00	18.82	18.67	18.85	20.00
		GPRS 2 Tx slots		26.36	26.27	26.31	27.50	20.36	20.27	20.31	21.50
		GPRS 3 Tx slots		24.29	24.32	24.29	25.50	20.03	20.06	20.03	21.24
		GPRS 4 Tx slots		23.41	23.35	23.45	24.50	20.41	20.35	20.45	21.50
		EDGE 1 Tx slot		24.12	24.02	24.00	25.00	15.12	15.02	15.00	16.00
		EDGE 2 Tx slots		22.92	22.62	22.64	24.00	16.92	16.62	16.64	18.00
		EDGE 3 Tx slots		21.88	21.61	21.52	23.00	17.62	17.35	17.26	18.74
		EDGE 4 Tx slots		21.00	20.65	20.70	22.00	18.00	17.65	17.70	19.00
		DTM Multi-slot class 5	GSM 1 Tx slot	26.33	26.22	26.22	27.50	20.31	20.19	20.22	21.48
			GPRS 1 Tx slot	26.34	26.20	26.27	27.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	26.30	26.20	26.21	27.50	20.28	20.17	20.23	21.48
			GPRS 1 Tx slot	26.31	26.18	26.29	27.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	24.25	24.29	24.25	25.50	19.97	19.99	19.95	21.24
			GPRS 2 Tx slots	24.22	24.23	24.19	25.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	26.28	26.17	26.28	27.50	18.88	18.71	18.81	20.07
			EDGE 1 Tx slot	22.88	22.55	22.64	24.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	26.32	26.18	26.29	27.50	18.91	18.72	18.80	20.07
			EDGE 1 Tx slot	22.86	22.57	22.57	24.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	24.22	24.27	24.24	25.50	18.52	18.38	18.34	19.74
			EDGE 2 Tx slots	21.83	21.52	21.46	23.00				

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

- e. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- f. The RF path losses were compensated into the measurements.
- g. A call was established between EUT and Base Station with following setting:
 - xii. Set Gain Factors (β_c and β_d) and parameters were set according to each
 - xiii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - xiv. Set RMC 12.2Kbps + HSDPA mode.
 - xv. Set Cell Power = -86 dBm
 - xvi. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
 - xvii. Select HSDPA Uplink Parameters
 - xviii. Set Delta ACK, Delta NACK and Delta CQI = 8
 - xix. Set Ack-Nack Repetition Factor to 3
 - xx. Set CQI Feedback Cycle (k) to 4 ms
 - xxi. Set CQI Repetition Factor to 2
 - xxii. Power Ctrl Mode = All Up bits
- h. The transmitted maximum output power was recorded.

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

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

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

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

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

- e. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- f. The RF path losses were compensated into the measurements.
- g. A call was established between EUT and Base Station with following setting * :
 - ix. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - x. 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
 - xi. Set Cell Power = -86 dBm
 - xii. Set Channel Type = 12.2k + HSPA
 - xiii. Set UE Target Power
 - xiv. Power Ctrl Mode= Alternating bits
 - xv. Set and observe the E-TFCI
 - xvi. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- h. The transmitted maximum output power was recorded.

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

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

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) 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

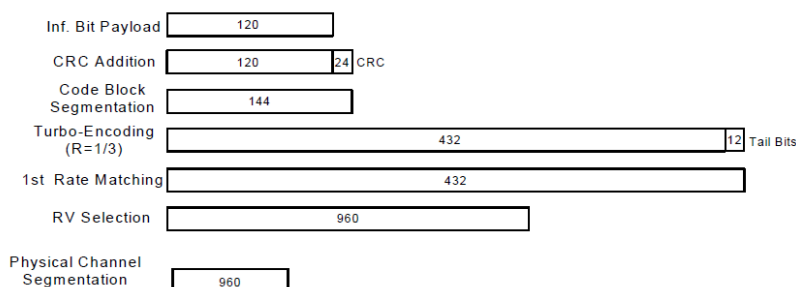
DC-HSDPA 3GPP release 8 Setup Configuration:

- e. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
- f. The RF path losses were compensated into the measurements.
- g. A call was established between EUT and Base Station with following setting:
 - xi. Set RMC 12.2Kbps + HSDPA mode.
 - xii. Set Cell Power = -25 dBm
 - xiii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - xiv. Select HSDPA Uplink Parameters
 - xv. 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: $\beta_c/\beta_d=15/4$
 - xvi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - xvii. Set Ack-Nack Repetition Factor to 3
 - xviii. Set CQI Feedback Cycle (k) to 4 ms
 - xix. Set CQI Repetition Factor to 2
 - xx. Power Ctrl Mode = All Up bits
- h. The transmitted maximum output power was recorded.

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

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

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


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

<WCDMA Conducted Power>
General Note:

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

Power Selection	Transmit Antenna	Band		WCDMA II			WCDMA IV			WCDMA V		
		TX Channel		9262	9400	9538	1312	1413	1513	4132	4182	4233
		Rx Channel		9662	9800	9938	1537	1638	1738	4357	4407	4458
		Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6
Head	Ant 0	Max Power		23.2			24			24.5		
		3GPP Rel 99	AMR 12.2Kbps	22.51	22.58	22.64	23.28	23.20	23.25	23.80	23.68	23.75
		3GPP Rel 99	RMC 12.2Kbps	22.56	22.61	22.69	23.31	23.25	23.29	23.81	23.70	23.78
		Max Power		22.2			23			23.5		
		3GPP Rel 6	HSDPA Subtest-1	21.56	21.60	21.75	22.31	22.23	22.27	22.78	22.72	22.78
		3GPP Rel 6	HSDPA Subtest-2	21.60	21.60	21.72	22.35	22.26	22.29	22.87	22.74	22.83
		3GPP Rel 6	HSDPA Subtest-3	21.10	21.14	21.27	21.84	21.75	21.80	22.37	22.25	22.35
		3GPP Rel 6	HSDPA Subtest-4	21.10	21.16	21.23	21.78	21.76	21.78	22.36	22.21	22.30
		Max Power		22.2			23			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	21.49	21.50	21.75	22.22	22.18	22.24	22.62	22.63	22.60
		3GPP Rel 8	DC-HSDPA Subtest-2	21.56	21.51	21.71	22.35	22.25	22.22	22.67	22.65	22.75
		3GPP Rel 8	DC-HSDPA Subtest-3	21.06	21.07	21.20	21.84	21.72	21.71	22.26	22.23	22.18
		3GPP Rel 8	DC-HSDPA Subtest-4	21.01	21.08	21.23	21.70	21.69	21.71	22.16	22.21	22.25
		Max Power		22.2			23			23.5		
		3GPP Rel 6	HSUPA Subtest-1	21.59	21.61	21.73	22.30	22.21	22.28	22.86	22.70	22.80
		3GPP Rel 6	HSUPA Subtest-2	19.65	19.54	19.71	20.29	20.20	20.29	20.86	20.74	20.79
		3GPP Rel 6	HSUPA Subtest-3	20.66	20.65	20.75	21.31	21.22	21.31	21.88	21.72	21.76
		3GPP Rel 6	HSUPA Subtest-4	19.59	19.66	19.71	20.27	20.25	20.24	20.85	20.69	20.76
		3GPP Rel 6	HSUPA Subtest-5	21.70	21.70	21.70	22.30	22.20	22.30	22.80	22.80	22.80

Power Selection	Transmit Antenna	Band		WCDMA II			WCDMA IV			WCDMA V		
		TX Channel		9262	9400	9538	1312	1413	1513	4132	4182	4233
		Rx Channel		9662	9800	9938	1537	1638	1738	4357	4407	4458
		Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6
Hotspot / Near body / Product Specific	Ant 0	Max Power		20.2			20			22.5		
		3GPP Rel 99	AMR 12.2Kbps	19.57	19.48	19.58	19.47	19.35	19.45	21.98	21.95	21.99
		3GPP Rel 99	RMC 12.2Kbps	19.60	19.49	19.63	19.50	19.43	19.46	22.02	22.04	21.89
		Max Power		19.2			19			21.5		
		3GPP Rel 6	HSDPA Subtest-1	18.57	18.52	18.59	18.50	18.39	18.46	21.05	20.99	21.00
		3GPP Rel 6	HSDPA Subtest-2	18.58	18.54	18.69	18.45	18.43	18.49	21.10	21.01	21.08
		3GPP Rel 6	HSDPA Subtest-3	18.14	18.07	18.14	17.95	17.93	17.96	20.60	20.49	20.60
		3GPP Rel 6	HSDPA Subtest-4	18.09	18.03	18.15	18.01	17.91	17.97	20.61	20.50	20.56
		Max Power		19.2			19			21.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	18.49	18.46	18.56	18.42	18.38	18.44	21.02	20.94	21.14
		3GPP Rel 8	DC-HSDPA Subtest-2	18.54	18.51	18.64	18.43	18.34	18.45	21.20	20.96	21.07
		3GPP Rel 8	DC-HSDPA Subtest-3	18.09	18.06	18.14	17.86	17.86	17.93	20.58	20.50	20.63
		3GPP Rel 8	DC-HSDPA Subtest-4	18.07	17.98	18.12	18.01	17.86	17.93	20.68	20.48	20.52
		Max Power		19.2			19			21.5		
		3GPP Rel 6	HSUPA Subtest-1	18.60	18.53	18.59	18.48	18.42	18.42	21.06	20.93	21.01
		3GPP Rel 6	HSUPA Subtest-2	16.67	16.58	16.61	16.47	16.41	16.46	19.10	18.99	19.03
		3GPP Rel 6	HSUPA Subtest-3	17.64	17.48	17.66	17.48	17.38	17.50	20.10	19.99	20.03
		3GPP Rel 6	HSUPA Subtest-4	16.55	16.48	16.56	16.49	16.42	16.40	19.08	18.99	19.07
		3GPP Rel 6	HSUPA Subtest-5	18.60	18.60	18.60	18.50	18.40	18.40	21.10	21.00	21.10

<CDMA2000 Conducted Power>
General Note:

1. Per KDB 941225 D01v03r01, SAR for head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55.
2. Per KDB 941225 D01v03r01, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
3. Per KDB 941225 D01v03r01, for Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH), with FCH only as the primary mode.

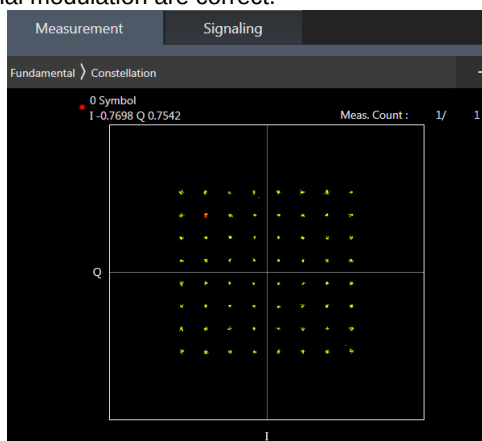
Power Selection	Transmit Antenna	Band	CDMA BC0			CDMA BC1			CDMA BC10		
		TX Channel	1013	384	777	25	600	1175	476	580	684
		Frequency (MHz)	824.7	836.52	848.31	1851.25	1880	1908.75	817.9	820.5	823.1
Head	Ant 0	Max Power	25.5			22.5			25.5		
		RC1 SO55	24.65	24.51	24.58	21.65	21.52	21.63	24.50	24.56	24.48
		RC3 SO55	24.67	24.56	24.61	21.69	21.52	21.63	24.60	24.58	24.56
		RC3 SO32 (F+SCH)	24.66	24.54	24.60	21.67	21.51	21.63	24.59	24.57	24.48
		RC3 SO32 (+SCH)	24.65	24.56	24.60	21.67	21.44	21.57	24.58	24.52	24.48
		RTAP 153.6Kbps	24.66	24.58	24.56	21.70	21.55	21.67	24.59	24.56	24.54
		RETAP 4096Bits	24.64	24.49	24.56	21.65	21.48	21.61	24.57	24.56	24.55

Power Selection	Transmit Antenna	Band	CDMA BC0			CDMA BC1			CDMA BC10		
		TX Channel	1013	384	777	25	600	1175	476	580	684
		Frequency (MHz)	824.7	836.52	848.31	1851.25	1880	1908.75	817.9	820.5	823.1
Hotspot / Near body / Product Specific	Ant 0	Max Power	22.5			19.5			22.5		
		RC1 SO55	21.79	21.72	21.85	18.69	18.51	18.55	21.79	21.78	21.70
		RC3 SO55	21.81	21.73	21.86	18.69	18.51	18.62	21.81	21.79	21.73
		RC3 SO32 (F+SCH)	21.77	21.78	21.77	18.69	18.52	18.62	21.81	21.78	21.76
		RC3 SO32 (+SCH)	21.76	21.63	21.77	18.61	18.51	18.55	21.77	21.70	21.76
		RTAP 153.6Kbps	21.74	21.75	21.74	18.72	18.57	18.66	21.82	21.79	21.79
		RETAP 4096Bits	21.80	21.71	21.76	18.64	18.50	18.60	21.70	21.70	21.72

<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 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 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 B26 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 band 2/4/5/17 SAR test was covered by Band 25/66/26/12; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - c. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - d. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM 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.



64QAM



16QAM



<LTE Band 2>

Power Selection				Head			Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				23.2			20.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100	18700	18900	19100
Frequency (MHz)				1860	1880	1900	1860	1880	1900
20	QPSK	1	0	22.92	22.81	22.78	20.40	20.27	20.30
20	QPSK	1	49	22.93	22.87	22.76	20.44	20.37	20.28
20	QPSK	1	99	22.75	22.81	22.68	20.22	20.29	20.18
20	QPSK	50	0	22.99	22.93	22.86	20.50	20.41	20.35
20	QPSK	50	24	22.99	22.95	22.83	20.51	20.45	20.36
20	QPSK	50	50	22.95	22.89	22.80	20.42	20.37	20.30
20	QPSK	100	0	22.97	22.92	22.82	20.44	20.40	20.32
20	16QAM	1	0	23.20	23.14	23.12	20.69	20.63	20.66
20	16QAM	1	49	23.16	23.14	23.10	20.70	20.65	20.57
20	16QAM	1	99	23.08	23.15	23.00	20.54	20.68	20.56
20	16QAM	50	0	23.05	23.01	22.93	20.59	20.50	20.43
20	16QAM	50	24	23.09	23.00	22.90	20.61	20.53	20.45
20	16QAM	50	50	23.01	22.93	22.86	20.55	20.47	20.37
20	16QAM	100	0	23.01	22.96	22.88	20.55	20.48	20.41
20	64QAM	1	0	23.13	23.02	22.99	20.66	20.58	20.52
20	64QAM	1	49	23.18	23.13	22.99	20.69	20.63	20.50
20	64QAM	1	99	22.99	23.03	22.95	20.51	20.56	20.49
20	64QAM	50	0	22.14	22.16	22.13	20.61	20.52	20.45
20	64QAM	50	24	22.00	22.10	22.15	20.61	20.55	20.48
20	64QAM	50	50	22.13	22.12	22.18	20.54	20.49	20.40
20	64QAM	100	0	22.06	22.13	22.14	20.56	20.48	20.42
Channel				18675	18900	19125	18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5	1857.5	1880	1902.5
15	QPSK	1	0	22.84	22.80	22.83	20.37	20.28	20.34
15	QPSK	1	37	22.92	22.86	22.65	20.44	20.39	20.16
15	QPSK	1	74	22.83	22.80	22.68	20.35	20.32	20.22
15	QPSK	36	0	22.99	22.90	22.81	20.51	20.42	20.34
15	QPSK	36	20	23.00	22.94	22.82	20.52	20.48	20.38
15	QPSK	36	39	22.94	22.87	22.80	20.45	20.39	20.31
15	QPSK	75	0	22.97	22.88	22.80	20.49	20.40	20.30
15	16QAM	1	0	23.14	23.10	23.02	20.69	20.62	20.62
15	16QAM	1	37	23.14	23.19	22.96	20.67	20.55	20.43
15	16QAM	1	74	23.16	23.14	22.99	20.64	20.69	20.55
15	16QAM	36	0	23.07	22.97	22.89	20.61	20.50	20.42
15	16QAM	36	20	23.09	23.02	22.90	20.64	20.54	20.43
15	16QAM	36	39	22.99	22.94	22.86	20.55	20.49	20.39
15	16QAM	75	0	23.04	22.95	22.88	20.58	20.50	20.41
15	64QAM	1	0	23.10	23.00	23.06	20.61	20.59	20.56
15	64QAM	1	37	23.16	23.09	22.88	20.68	20.63	20.45
15	64QAM	1	74	23.06	23.00	22.94	20.60	20.57	20.46
15	64QAM	36	0	22.15	22.10	22.16	20.63	20.56	20.43
15	64QAM	36	20	22.16	22.13	22.13	20.63	20.58	20.48
15	64QAM	36	39	22.15	22.12	22.15	20.59	20.53	20.44
15	64QAM	75	0	22.14	22.14	22.17	20.55	20.51	20.43
Channel				18650	18900	19150	18650	18900	19150
Frequency (MHz)				1855	1880	1905	1855	1880	1905
10	QPSK	1	0	22.98	22.99	22.79	20.49	20.49	20.32
10	QPSK	1	25	22.97	22.89	22.78	20.49	20.43	20.32



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	22.96	22.88	22.72	20.47	20.42	20.24
10	QPSK	25	0	23.03	22.92	22.82	20.55	20.45	20.35
10	QPSK	25	12	23.01	22.94	22.86	20.54	20.47	20.36
10	QPSK	25	25	22.97	22.90	22.79	20.48	20.43	20.33
10	QPSK	50	0	22.98	22.93	22.81	20.52	20.43	20.34
10	16QAM	1	0	23.15	23.14	23.16	20.66	20.65	20.68
10	16QAM	1	25	23.13	23.13	23.10	20.64	20.62	20.62
10	16QAM	1	49	23.15	23.18	23.02	20.63	20.67	20.61
10	16QAM	25	0	23.10	23.01	22.91	20.63	20.56	20.44
10	16QAM	25	12	23.11	23.03	22.93	20.64	20.57	20.44
10	16QAM	25	25	23.04	22.99	22.84	20.58	20.54	20.41
10	16QAM	50	0	23.08	23.01	22.89	20.61	20.53	20.43
10	64QAM	1	0	23.19	23.06	23.03	20.64	20.69	20.59
10	64QAM	1	25	23.16	23.13	23.03	20.63	20.69	20.55
10	64QAM	1	49	23.16	23.13	22.98	20.61	20.69	20.48
10	64QAM	25	0	22.15	22.16	22.13	20.65	20.57	20.46
10	64QAM	25	12	22.00	22.18	22.12	20.67	20.61	20.48
10	64QAM	25	25	22.12	22.14	22.10	20.58	20.53	20.42
10	64QAM	50	0	22.16	22.13	22.00	20.62	20.57	20.45
Channel				18625	18900	19175	18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5	1852.5	1880	1907.5
5	QPSK	1	0	22.88	22.87	22.77	20.41	20.43	20.29
5	QPSK	1	12	22.97	22.90	22.74	20.51	20.42	20.28
5	QPSK	1	24	22.91	22.84	22.72	20.43	20.37	20.26
5	QPSK	12	0	23.02	22.94	22.84	20.55	20.46	20.32
5	QPSK	12	7	23.06	22.93	22.83	20.56	20.46	20.37
5	QPSK	12	13	22.97	22.89	22.81	20.51	20.43	20.30
5	QPSK	25	0	23.00	22.89	22.81	20.52	20.42	20.31
5	16QAM	1	0	23.15	23.16	23.03	20.65	20.61	20.58
5	16QAM	1	12	23.13	23.14	23.08	20.69	20.69	20.65
5	16QAM	1	24	23.17	23.15	23.01	20.63	20.66	20.56
5	16QAM	12	0	23.09	23.01	22.85	20.64	20.56	20.38
5	16QAM	12	7	23.10	23.01	22.91	20.65	20.55	20.45
5	16QAM	12	13	23.07	23.01	22.85	20.61	20.53	20.38
5	16QAM	25	0	23.08	22.99	22.85	20.60	20.52	20.41
5	64QAM	1	0	23.11	23.12	23.00	20.66	20.68	20.55
5	64QAM	1	12	23.00	23.13	22.98	20.62	20.68	20.54
5	64QAM	1	24	23.13	23.05	22.95	20.69	20.64	20.49
5	64QAM	12	0	22.15	22.14	22.00	20.69	20.60	20.44
5	64QAM	12	7	22.13	22.14	22.13	20.65	20.63	20.49
5	64QAM	12	13	22.15	22.16	22.13	20.64	20.55	20.44
5	64QAM	25	0	22.16	22.10	22.15	20.62	20.53	20.41
Channel				18615	18900	19185	18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5	1851.5	1880	1908.5
3	QPSK	1	0	22.88	22.86	22.75	20.42	20.42	20.27
3	QPSK	1	8	22.89	22.88	22.75	20.41	20.44	20.30
3	QPSK	1	14	22.95	22.86	22.70	20.47	20.39	20.25
3	QPSK	8	0	22.94	22.92	22.82	20.43	20.48	20.36
3	QPSK	8	4	23.06	22.97	22.82	20.59	20.49	20.38
3	QPSK	8	7	23.01	22.92	22.77	20.54	20.47	20.30
3	QPSK	15	0	23.02	22.91	22.80	20.56	20.45	20.31
3	16QAM	1	0	23.14	23.18	23.02	20.64	20.64	20.60
3	16QAM	1	8	23.15	23.15	23.05	20.65	20.67	20.62
3	16QAM	1	14	23.12	23.18	22.99	20.69	20.69	20.58
3	16QAM	8	0	23.03	23.04	22.91	20.60	20.60	20.44
3	16QAM	8	4	23.17	23.08	22.93	20.64	20.65	20.49



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	23.14	23.06	22.90	20.66	20.59	20.46
3	16QAM	15	0	23.09	23.00	22.87	20.64	20.54	20.42
3	64QAM	1	0	23.13	23.12	22.97	20.66	20.66	20.52
3	64QAM	1	8	23.11	23.13	22.99	20.68	20.67	20.52
3	64QAM	1	14	23.17	23.10	22.95	20.63	20.64	20.48
3	64QAM	8	0	22.10	22.00	22.13	20.62	20.60	20.47
3	64QAM	8	4	22.16	22.17	22.15	20.65	20.63	20.51
3	64QAM	8	7	22.15	22.10	22.14	20.66	20.60	20.45
3	64QAM	15	0	22.16	22.18	22.16	20.64	20.56	20.44
Channel				18607	18900	19193	18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3	1850.7	1880	1909.3
1.4	QPSK	1	0	22.84	22.82	22.67	20.36	20.36	20.20
1.4	QPSK	1	3	22.89	22.90	22.76	20.42	20.43	20.27
1.4	QPSK	1	5	22.83	22.83	22.67	20.35	20.37	20.20
1.4	QPSK	3	0	22.85	22.84	22.72	20.38	20.43	20.25
1.4	QPSK	3	1	22.92	22.90	22.74	20.43	20.45	20.29
1.4	QPSK	3	3	22.85	22.86	22.72	20.41	20.40	20.23
1.4	QPSK	6	0	22.83	22.84	22.72	20.39	20.40	20.24
1.4	16QAM	1	0	23.15	23.18	23.00	20.62	20.69	20.56
1.4	16QAM	1	3	23.15	23.15	23.03	20.68	20.65	20.64
1.4	16QAM	1	5	23.14	23.16	22.93	20.67	20.64	20.56
1.4	16QAM	3	0	22.93	22.95	22.78	20.44	20.50	20.33
1.4	16QAM	3	1	23.01	23.00	22.82	20.53	20.56	20.41
1.4	16QAM	3	3	22.94	22.95	22.75	20.42	20.50	20.34
1.4	16QAM	6	0	22.98	22.98	22.87	20.57	20.54	20.39
1.4	64QAM	1	0	23.03	23.03	22.94	20.59	20.62	20.47
1.4	64QAM	1	3	23.11	23.11	22.96	20.66	20.65	20.52
1.4	64QAM	1	5	23.02	23.02	22.89	20.60	20.58	20.45
1.4	64QAM	3	0	23.02	23.05	22.92	20.60	20.62	20.47
1.4	64QAM	3	1	23.09	23.11	22.96	20.67	20.66	20.48
1.4	64QAM	3	3	23.05	23.07	22.89	20.60	20.60	20.45
1.4	64QAM	6	0	22.10	22.14	22.00	20.48	20.48	20.35



<LTE Band 4>

Power Selection				Head			Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				24.5			20		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300	20050	20175	20300
Frequency (MHz)				1720	1732.5	1745	1720	1732.5	1745
20	QPSK	1	0	23.33	23.41	23.50	18.89	18.97	19.04
20	QPSK	1	49	23.30	23.39	23.57	18.87	18.91	19.09
20	QPSK	1	99	23.30	23.25	23.39	18.84	18.80	18.97
20	QPSK	50	0	22.43	22.46	22.52	18.95	18.99	19.06
20	QPSK	50	24	22.47	22.44	22.55	19.03	18.98	19.09
20	QPSK	50	50	22.43	22.40	22.56	18.96	18.92	19.08
20	QPSK	100	0	22.46	22.44	22.52	18.99	18.97	19.03
20	16QAM	1	0	22.70	22.78	22.78	19.24	19.32	19.39
20	16QAM	1	49	22.65	22.71	22.88	19.21	19.26	19.47
20	16QAM	1	99	22.65	22.58	22.78	19.24	19.18	19.33
20	16QAM	50	0	21.49	21.56	21.60	19.04	19.09	19.17
20	16QAM	50	24	21.60	21.53	21.59	19.11	19.07	19.13
20	16QAM	50	50	21.53	21.51	21.65	19.08	19.02	19.21
20	16QAM	100	0	21.56	21.52	21.60	19.08	19.03	19.12
20	64QAM	1	0	21.65	21.70	21.80	19.12	19.17	19.25
20	64QAM	1	49	21.61	21.67	21.85	19.12	19.16	19.34
20	64QAM	1	99	21.59	21.59	21.74	19.08	19.02	19.24
20	64QAM	50	0	20.58	20.64	20.67	19.03	19.09	19.17
20	64QAM	50	24	20.67	20.63	20.70	19.13	19.08	19.15
20	64QAM	50	50	20.58	20.57	20.69	19.07	19.03	19.21
20	64QAM	100	0	20.63	20.57	20.63	19.07	19.07	19.12
Channel				20025	20175	20325	20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5	1717.5	1732.5	1747.5
15	QPSK	1	0	23.33	23.41	23.52	18.93	18.98	19.03
15	QPSK	1	37	23.32	23.38	23.55	18.90	18.94	19.04
15	QPSK	1	74	23.33	23.28	23.43	18.90	18.85	18.92
15	QPSK	36	0	22.41	22.43	22.51	18.93	19.01	19.00
15	QPSK	36	20	22.51	22.45	22.63	19.02	18.99	19.16
15	QPSK	36	39	22.43	22.42	22.54	18.96	18.94	19.00
15	QPSK	75	0	22.48	22.46	22.50	19.01	18.98	19.05
15	16QAM	1	0	22.68	22.75	22.84	19.29	19.33	19.26
15	16QAM	1	37	22.65	22.70	22.88	19.19	19.24	19.46
15	16QAM	1	74	22.68	22.61	22.80	19.23	19.10	19.20
15	16QAM	36	0	21.49	21.54	21.65	19.02	19.09	19.05
15	16QAM	36	20	21.60	21.55	21.71	19.16	19.08	19.18
15	16QAM	36	39	21.55	21.48	21.63	19.09	19.02	19.09
15	16QAM	75	0	21.58	21.54	21.60	19.09	19.08	19.04
15	64QAM	1	0	21.70	21.71	21.77	19.14	19.24	19.19
15	64QAM	1	37	21.65	21.67	21.84	19.16	19.18	19.27
15	64QAM	1	74	21.64	21.57	21.73	19.14	19.10	19.14
15	64QAM	36	0	20.55	20.61	20.68	19.04	19.11	19.09
15	64QAM	36	20	20.69	20.62	20.78	19.18	19.12	19.19
15	64QAM	36	39	20.63	20.55	20.68	19.12	19.08	19.13
15	64QAM	75	0	20.63	20.55	20.61	19.09	19.06	19.02
Channel				20000	20175	20350	20000	20175	20350
Frequency (MHz)				1715	1732.5	1750	1715	1732.5	1750
10	QPSK	1	0	23.37	23.42	23.55	18.98	19.01	19.10
10	QPSK	1	25	23.36	23.43	23.56	18.95	18.98	19.03



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	23.30	23.32	23.48	18.86	18.91	18.97
10	QPSK	25	0	22.47	22.51	22.64	18.96	19.00	19.08
10	QPSK	25	12	22.41	22.49	22.64	18.97	19.05	19.08
10	QPSK	25	25	22.39	22.41	22.55	18.96	18.95	19.06
10	QPSK	50	0	22.43	22.45	22.63	18.99	18.99	19.06
10	16QAM	1	0	22.74	22.77	22.95	19.31	19.37	19.39
10	16QAM	1	25	22.71	22.76	22.91	19.30	19.31	19.38
10	16QAM	1	49	22.63	22.68	22.82	19.17	19.18	19.25
10	16QAM	25	0	21.56	21.61	21.73	19.04	19.10	19.17
10	16QAM	25	12	21.55	21.58	21.71	19.09	19.12	19.19
10	16QAM	25	25	21.48	21.52	21.64	19.04	19.07	19.12
10	16QAM	50	0	21.49	21.56	21.70	19.04	19.08	19.15
10	64QAM	1	0	21.69	21.74	21.88	19.19	19.25	19.28
10	64QAM	1	25	21.67	21.72	21.88	19.17	19.22	19.27
10	64QAM	1	49	21.57	21.63	21.81	19.09	19.14	19.21
10	64QAM	25	0	20.58	20.64	20.75	19.10	19.13	19.19
10	64QAM	25	12	20.59	20.59	20.78	19.10	19.14	19.19
10	64QAM	25	25	20.50	20.56	20.70	19.03	19.06	19.15
10	64QAM	50	0	20.59	20.62	20.72	19.04	19.08	19.15
Channel				19975	20175	20375	19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5	1712.5	1732.5	1752.5
5	QPSK	1	0	23.36	23.43	23.56	18.93	18.95	19.02
5	QPSK	1	12	23.37	23.42	23.54	18.97	18.97	19.01
5	QPSK	1	24	23.32	23.37	23.48	18.88	18.92	18.95
5	QPSK	12	0	22.42	22.49	22.58	18.97	19.04	19.07
5	QPSK	12	7	22.48	22.51	22.64	19.00	19.06	19.09
5	QPSK	12	13	22.42	22.46	22.58	18.94	18.96	19.05
5	QPSK	25	0	22.41	22.47	22.58	18.94	19.02	19.05
5	16QAM	1	0	22.73	22.74	22.91	19.28	19.31	19.26
5	16QAM	1	12	22.72	22.78	22.89	19.31	19.30	19.31
5	16QAM	1	24	22.66	22.69	22.82	19.18	19.23	19.26
5	16QAM	12	0	21.52	21.54	21.71	19.03	19.09	19.13
5	16QAM	12	7	21.57	21.61	21.75	19.09	19.11	19.18
5	16QAM	12	13	21.49	21.57	21.67	19.02	19.05	19.12
5	16QAM	25	0	21.53	21.52	21.70	19.06	19.09	19.13
5	64QAM	1	0	21.66	21.67	21.81	19.16	19.18	19.29
5	64QAM	1	12	21.66	21.68	21.84	19.19	19.22	19.28
5	64QAM	1	24	21.59	21.60	21.77	19.14	19.18	19.21
5	64QAM	12	0	20.58	20.65	20.76	19.13	19.14	19.18
5	64QAM	12	7	20.61	20.63	20.78	19.12	19.15	19.22
5	64QAM	12	13	20.60	20.63	20.70	19.05	19.15	19.16
5	64QAM	25	0	20.53	20.55	20.66	19.05	19.11	19.11
Channel				19965	20175	20385	19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5	1711.5	1732.5	1753.5
3	QPSK	1	0	23.40	23.43	23.56	18.93	18.98	19.01
3	QPSK	1	8	23.39	23.42	23.54	18.95	18.98	19.01
3	QPSK	1	14	23.34	23.41	23.52	18.93	18.96	18.99
3	QPSK	8	0	22.46	22.48	22.59	18.98	19.03	19.05
3	QPSK	8	4	22.50	22.55	22.63	19.01	19.04	19.09
3	QPSK	8	7	22.46	22.46	22.58	18.96	19.01	19.06
3	QPSK	15	0	22.45	22.47	22.60	18.98	18.99	19.06
3	16QAM	1	0	22.73	22.71	22.88	19.26	19.32	19.30
3	16QAM	1	8	22.72	22.78	22.92	19.30	19.31	19.31
3	16QAM	1	14	22.69	22.72	22.84	19.27	19.24	19.28
3	16QAM	8	0	21.60	21.63	21.76	19.10	19.14	19.17
3	16QAM	8	4	21.62	21.65	21.79	19.13	19.17	19.19



FCC SAR TEST REPORT

Report No. : FA902116

3	16QAM	8	7	21.62	21.61	21.75	19.11	19.14	19.17
3	16QAM	15	0	21.57	21.58	21.74	19.08	19.13	19.13
3	64QAM	1	0	21.67	21.68	21.80	19.17	19.22	19.24
3	64QAM	1	8	21.66	21.70	21.85	19.19	19.25	19.25
3	64QAM	1	14	21.62	21.63	21.77	19.14	19.21	19.21
3	64QAM	8	0	20.61	20.60	20.73	19.12	19.15	19.17
3	64QAM	8	4	20.63	20.67	20.77	19.14	19.18	19.20
3	64QAM	8	7	20.56	20.62	20.72	19.11	19.13	19.17
3	64QAM	15	0	20.57	20.59	20.71	19.10	19.14	19.13
Channel				19957	20175	20393	19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3	1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.32	23.38	23.50	18.87	18.91	18.92
1.4	QPSK	1	3	23.41	23.45	23.56	18.92	18.97	19.02
1.4	QPSK	1	5	23.31	23.35	23.51	18.83	18.89	18.90
1.4	QPSK	3	0	23.38	23.42	23.56	18.90	18.94	19.00
1.4	QPSK	3	1	23.41	23.43	23.56	18.94	18.97	19.04
1.4	QPSK	3	3	23.37	23.42	23.55	18.90	18.94	18.98
1.4	QPSK	6	0	22.41	22.44	22.55	18.91	18.93	18.99
1.4	16QAM	1	0	22.69	22.68	22.84	19.15	19.22	19.23
1.4	16QAM	1	3	22.77	22.80	22.93	19.24	19.29	19.30
1.4	16QAM	1	5	22.71	22.73	22.82	19.18	19.19	19.19
1.4	16QAM	3	0	22.47	22.51	22.64	19.01	19.01	19.06
1.4	16QAM	3	1	22.53	22.55	22.68	19.05	19.07	19.10
1.4	16QAM	3	3	22.49	22.51	22.65	19.00	19.01	19.02
1.4	16QAM	6	0	21.58	21.61	21.72	19.06	19.10	19.12
1.4	64QAM	1	0	21.62	21.67	21.80	19.10	19.16	19.20
1.4	64QAM	1	3	21.67	21.73	21.85	19.16	19.21	19.23
1.4	64QAM	1	5	21.60	21.62	21.78	19.05	19.11	19.19
1.4	64QAM	3	0	21.60	21.63	21.79	19.10	19.13	19.17
1.4	64QAM	3	1	21.65	21.69	21.82	19.16	19.18	19.24
1.4	64QAM	3	3	21.61	21.63	21.77	19.09	19.16	19.20
1.4	64QAM	6	0	20.50	20.51	20.65	19.01	19.01	19.07



<LTE Band 5>

Power Selection				Head			Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				25.7			22.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20450	20525	20600	20450	20525	20600
Frequency (MHz)				829	836.5	844	829	836.5	844
10	QPSK	1	0	24.68	24.79	24.79	21.68	21.86	21.87
10	QPSK	1	25	24.74	24.83	24.75	21.78	21.90	21.81
10	QPSK	1	49	24.76	24.77	24.67	21.81	21.84	21.73
10	QPSK	25	0	23.81	23.96	23.85	21.85	21.95	21.89
10	QPSK	25	12	23.79	23.95	23.83	21.87	21.98	21.85
10	QPSK	25	25	23.82	23.87	23.77	21.89	21.92	21.80
10	QPSK	50	0	23.77	23.92	23.82	21.82	21.94	21.86
10	16QAM	1	0	23.95	24.12	24.09	22.06	22.19	22.21
10	16QAM	1	25	24.04	24.17	24.06	22.17	22.25	22.15
10	16QAM	1	49	24.09	24.06	23.91	22.16	22.13	22.07
10	16QAM	25	0	22.83	23.02	22.92	21.95	22.03	21.94
10	16QAM	25	12	22.82	22.99	22.92	21.94	22.07	21.93
10	16QAM	25	25	22.87	22.96	22.85	22.01	21.99	21.87
10	16QAM	50	0	22.82	23.00	22.89	21.93	22.01	21.94
10	64QAM	1	0	22.86	23.07	23.04	22.02	22.13	22.11
10	64QAM	1	25	22.96	23.08	22.98	22.02	22.23	22.13
10	64QAM	1	49	22.99	22.98	22.85	22.10	22.12	22.02
10	64QAM	25	0	21.88	22.07	21.97	21.93	22.12	21.98
10	64QAM	25	12	21.90	22.03	21.94	21.95	22.08	22.00
10	64QAM	25	25	21.89	21.97	21.85	21.97	22.04	21.93
10	64QAM	50	0	21.82	22.01	21.93	21.92	22.05	21.98
Channel				20425	20525	20625	20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5	826.5	836.5	846.5
5	QPSK	1	0	24.64	24.80	24.75	21.69	21.89	21.78
5	QPSK	1	12	24.62	24.80	24.73	21.68	21.89	21.76
5	QPSK	1	24	24.70	24.81	24.66	21.74	21.84	21.70
5	QPSK	12	0	23.73	23.91	23.79	21.75	21.94	21.81
5	QPSK	12	7	23.82	23.98	23.81	21.85	21.97	21.83
5	QPSK	12	13	23.74	23.89	23.78	21.81	21.90	21.80
5	QPSK	25	0	23.78	23.93	23.78	21.80	21.90	21.78
5	16QAM	1	0	23.98	24.17	24.03	22.01	22.12	22.11
5	16QAM	1	12	23.98	24.18	24.04	22.05	22.22	22.10
5	16QAM	1	24	24.01	24.07	23.93	22.14	22.20	22.05
5	16QAM	12	0	22.74	23.02	22.89	21.84	22.01	21.89
5	16QAM	12	7	22.88	23.01	22.89	21.97	22.04	21.91
5	16QAM	12	13	22.84	22.95	22.84	21.91	22.00	21.85
5	16QAM	25	0	22.85	23.01	22.86	21.92	22.00	21.89
5	64QAM	1	0	22.91	23.12	22.98	21.95	22.19	22.05
5	64QAM	1	12	22.91	23.12	22.97	21.95	22.18	22.04
5	64QAM	1	24	22.95	23.02	22.86	21.98	22.14	21.96
5	64QAM	12	0	21.86	22.08	21.92	21.85	22.09	21.96
5	64QAM	12	7	21.96	22.10	21.93	21.98	22.13	22.00
5	64QAM	12	13	21.88	22.03	21.92	21.91	22.06	21.94
5	64QAM	25	0	21.85	22.00	21.85	21.90	22.03	21.92
Channel				20415	20525	20635	20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5	825.5	836.5	847.5
3	QPSK	1	0	24.64	24.80	24.70	21.71	21.91	21.77
3	QPSK	1	8	24.62	24.82	24.67	21.70	21.88	21.75



FCC SAR TEST REPORT

Report No. : FA9O2116

3	QPSK	1	14	24.61	24.80	24.65	21.67	21.84	21.73
3	QPSK	8	0	23.66	23.89	23.76	21.75	21.95	21.78
3	QPSK	8	4	23.70	23.90	23.79	21.79	21.94	21.80
3	QPSK	8	7	23.65	23.86	23.73	21.75	21.93	21.79
3	QPSK	15	0	23.66	23.88	23.76	21.71	21.90	21.79
3	16QAM	1	0	23.93	24.17	23.97	22.06	22.23	22.08
3	16QAM	1	8	23.97	24.13	23.97	22.05	22.24	22.11
3	16QAM	1	14	23.93	24.12	23.90	22.04	22.19	22.03
3	16QAM	8	0	22.79	23.01	22.86	21.87	22.08	21.92
3	16QAM	8	4	22.81	23.03	22.90	21.90	22.07	21.93
3	16QAM	8	7	22.77	22.98	22.82	21.87	22.01	21.89
3	16QAM	15	0	22.76	22.99	22.85	21.84	22.02	21.88
3	64QAM	1	0	22.89	23.09	22.93	21.96	22.18	22.03
3	64QAM	1	8	22.88	23.09	22.90	21.96	22.17	22.02
3	64QAM	1	14	22.81	23.04	22.85	21.92	22.13	22.00
3	64QAM	8	0	21.78	22.04	21.87	21.89	22.08	21.94
3	64QAM	8	4	21.81	22.05	21.91	21.91	22.10	21.95
3	64QAM	8	7	21.77	22.02	21.85	21.85	22.07	21.92
3	64QAM	15	0	21.78	22.01	21.85	21.81	22.03	21.90
Channel				20407	20525	20643	20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3	824.7	836.5	848.3
1.4	QPSK	1	0	24.59	24.76	24.64	21.66	21.82	21.68
1.4	QPSK	1	3	24.66	24.80	24.67	21.73	21.90	21.75
1.4	QPSK	1	5	24.57	24.77	24.55	21.66	21.81	21.67
1.4	QPSK	3	0	24.62	24.80	24.67	21.68	21.86	21.73
1.4	QPSK	3	1	24.63	24.80	24.69	21.72	21.89	21.76
1.4	QPSK	3	3	24.63	24.81	24.63	21.68	21.84	21.72
1.4	QPSK	6	0	23.64	23.85	23.70	21.67	21.86	21.74
1.4	16QAM	1	0	23.90	24.10	23.88	21.99	22.17	22.03
1.4	16QAM	1	3	24.00	24.15	23.92	22.10	22.20	21.96
1.4	16QAM	1	5	23.88	24.05	23.85	22.00	22.10	21.99
1.4	16QAM	3	0	23.71	23.92	23.71	21.79	21.95	21.82
1.4	16QAM	3	1	23.74	23.94	23.76	21.80	21.93	21.85
1.4	16QAM	3	3	23.68	23.87	23.67	21.77	21.95	21.79
1.4	16QAM	6	0	22.80	23.01	22.83	21.84	21.97	21.87
1.4	64QAM	1	0	22.87	23.06	22.84	21.92	22.01	21.94
1.4	64QAM	1	3	22.91	23.09	22.88	21.97	22.07	22.02
1.4	64QAM	1	5	22.81	22.99	22.79	21.88	22.09	21.92
1.4	64QAM	3	0	22.81	23.01	22.85	21.89	22.10	21.94
1.4	64QAM	3	1	22.86	23.05	22.85	21.93	22.14	22.00
1.4	64QAM	3	3	22.82	22.99	22.80	21.89	22.12	21.97
1.4	64QAM	6	0	21.74	21.94	21.78	21.76	21.88	21.82



<LTE Band 7>

Power Selection				Head		
Transmit Antenna				Ant 2		
Max. Power				23		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	21.98	21.98	21.92
20	QPSK	1	49	22.02	22.04	21.95
20	QPSK	1	99	22.13	22.15	22.06
20	QPSK	50	0	22.08	22.10	22.01
20	QPSK	50	24	22.13	22.15	22.08
20	QPSK	50	50	22.15	22.16	22.08
20	QPSK	100	0	22.12	22.12	22.05
20	16QAM	1	0	22.36	22.34	22.28
20	16QAM	1	49	22.43	22.42	22.36
20	16QAM	1	99	22.42	22.48	22.45
20	16QAM	50	0	21.69	21.66	21.62
20	16QAM	50	24	21.70	21.71	21.65
20	16QAM	50	50	21.72	21.78	21.68
20	16QAM	100	0	21.71	21.69	21.64
20	64QAM	1	0	21.74	21.75	21.65
20	64QAM	1	49	21.84	21.81	21.77
20	64QAM	1	99	21.91	21.92	21.87
20	64QAM	50	0	20.67	20.65	20.62
20	64QAM	50	24	20.70	20.74	20.70
20	64QAM	50	50	20.75	20.77	20.72
20	64QAM	100	0	20.71	20.71	20.66
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	22.04	22.03	21.98
15	QPSK	1	37	22.05	22.08	21.99
15	QPSK	1	74	22.16	22.16	22.10
15	QPSK	36	0	22.08	22.10	22.03
15	QPSK	36	20	22.15	22.14	22.10
15	QPSK	36	39	22.16	22.18	22.09
15	QPSK	75	0	22.13	22.13	22.06
15	16QAM	1	0	22.41	22.39	22.35
15	16QAM	1	37	22.42	22.44	22.37
15	16QAM	1	74	22.46	22.44	22.45
15	16QAM	36	0	21.68	21.69	21.64
15	16QAM	36	20	21.77	21.76	21.67
15	16QAM	36	39	21.76	21.75	21.70
15	16QAM	75	0	21.70	21.72	21.67
15	64QAM	1	0	21.79	21.79	21.77
15	64QAM	1	37	21.86	21.86	21.76
15	64QAM	1	74	21.96	21.96	21.85
15	64QAM	36	0	20.72	20.73	20.67
15	64QAM	36	20	20.74	20.78	20.70
15	64QAM	36	39	20.75	20.78	20.72
15	64QAM	75	0	20.73	20.72	20.67
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	22.01	22.02	21.93
10	QPSK	1	25	22.06	22.07	21.98



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	22.10	22.11	22.02
10	QPSK	25	0	22.07	22.06	21.98
10	QPSK	25	12	22.11	22.14	22.06
10	QPSK	25	25	22.11	22.15	22.03
10	QPSK	50	0	22.10	22.10	22.02
10	16QAM	1	0	22.34	22.34	22.31
10	16QAM	1	25	22.40	22.40	22.36
10	16QAM	1	49	22.45	22.47	22.39
10	16QAM	25	0	21.65	21.68	21.63
10	16QAM	25	12	21.67	21.71	21.63
10	16QAM	25	25	21.72	21.69	21.63
10	16QAM	50	0	21.68	21.71	21.63
10	64QAM	1	0	21.76	21.82	21.77
10	64QAM	1	25	21.82	21.89	21.76
10	64QAM	1	49	21.93	21.95	21.88
10	64QAM	25	0	20.66	20.68	20.62
10	64QAM	25	12	20.67	20.71	20.65
10	64QAM	25	25	20.72	20.69	20.68
10	64QAM	50	0	20.67	20.66	20.64
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	21.98	22.01	21.95
5	QPSK	1	12	22.03	22.06	21.98
5	QPSK	1	24	22.05	22.07	21.98
5	QPSK	12	0	22.04	22.10	22.01
5	QPSK	12	7	22.10	22.11	22.03
5	QPSK	12	13	22.10	22.13	22.04
5	QPSK	25	0	22.08	22.10	22.00
5	16QAM	1	0	22.36	22.39	22.30
5	16QAM	1	12	22.41	22.41	22.36
5	16QAM	1	24	22.42	22.44	22.36
5	16QAM	12	0	21.65	21.67	21.62
5	16QAM	12	7	21.71	21.68	21.69
5	16QAM	12	13	21.69	21.74	21.62
5	16QAM	25	0	21.65	21.68	21.60
5	64QAM	1	0	21.77	21.82	21.75
5	64QAM	1	12	21.81	21.83	21.80
5	64QAM	1	24	21.83	21.86	21.80
5	64QAM	12	0	20.67	20.71	20.67
5	64QAM	12	7	20.77	20.76	20.70
5	64QAM	12	13	20.71	20.78	20.71
5	64QAM	25	0	20.66	20.70	20.65



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 2		
Max. Power				19.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	18.53	18.50	18.49
20	QPSK	1	49	18.52	18.50	18.48
20	QPSK	1	99	18.50	18.49	18.47
20	QPSK	50	0	18.58	18.59	18.52
20	QPSK	50	24	18.61	18.64	18.59
20	QPSK	50	50	18.67	18.63	18.59
20	QPSK	100	0	18.60	18.61	18.56
20	16QAM	1	0	18.70	18.80	18.74
20	16QAM	1	49	18.82	18.84	18.76
20	16QAM	1	99	18.92	18.91	18.89
20	16QAM	50	0	18.66	18.62	18.56
20	16QAM	50	24	18.66	18.68	18.61
20	16QAM	50	50	18.70	18.72	18.66
20	16QAM	100	0	18.65	18.67	18.61
20	64QAM	1	0	18.69	18.68	18.59
20	64QAM	1	49	18.74	18.78	18.76
20	64QAM	1	99	18.84	18.85	18.81
20	64QAM	50	0	18.64	18.65	18.59
20	64QAM	50	24	18.67	18.70	18.66
20	64QAM	50	50	18.71	18.75	18.70
20	64QAM	100	0	18.68	18.70	18.65
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	18.56	18.54	18.44
15	QPSK	1	37	18.53	18.58	18.48
15	QPSK	1	74	18.63	18.68	18.59
15	QPSK	36	0	18.57	18.59	18.52
15	QPSK	36	20	18.66	18.66	18.57
15	QPSK	36	39	18.66	18.66	18.59
15	QPSK	75	0	18.60	18.61	18.55
15	16QAM	1	0	18.76	18.87	18.76
15	16QAM	1	37	18.85	18.84	18.74
15	16QAM	1	74	18.88	18.90	18.89
15	16QAM	36	0	18.64	18.66	18.58
15	16QAM	36	20	18.69	18.68	18.65
15	16QAM	36	39	18.68	18.74	18.66
15	16QAM	75	0	18.68	18.67	18.61
15	64QAM	1	0	18.79	18.73	18.68
15	64QAM	1	37	18.79	18.82	18.76
15	64QAM	1	74	18.89	18.91	18.85
15	64QAM	36	0	18.70	18.69	18.64
15	64QAM	36	20	18.77	18.74	18.70
15	64QAM	36	39	18.76	18.76	18.67
15	64QAM	75	0	18.67	18.69	18.66
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	18.50	18.56	18.45
10	QPSK	1	25	18.55	18.58	18.49



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	18.55	18.65	18.56
10	QPSK	25	0	18.57	18.57	18.52
10	QPSK	25	12	18.57	18.61	18.55
10	QPSK	25	25	18.61	18.65	18.56
10	QPSK	50	0	18.56	18.63	18.55
10	16QAM	1	0	18.72	18.85	18.75
10	16QAM	1	25	18.85	18.83	18.73
10	16QAM	1	49	18.88	18.87	18.78
10	16QAM	25	0	18.65	18.62	18.55
10	16QAM	25	12	18.64	18.70	18.60
10	16QAM	25	25	18.66	18.69	18.64
10	16QAM	50	0	18.62	18.67	18.59
10	64QAM	1	0	18.75	18.76	18.68
10	64QAM	1	25	18.76	18.81	18.75
10	64QAM	1	49	18.79	18.88	18.81
10	64QAM	25	0	18.65	18.68	18.60
10	64QAM	25	12	18.70	18.73	18.62
10	64QAM	25	25	18.67	18.72	18.63
10	64QAM	50	0	18.67	18.68	18.61
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	18.48	18.55	18.46
5	QPSK	1	12	18.51	18.58	18.48
5	QPSK	1	24	18.53	18.62	18.53
5	QPSK	12	0	18.53	18.57	18.49
5	QPSK	12	7	18.62	18.67	18.55
5	QPSK	12	13	18.58	18.64	18.57
5	QPSK	25	0	18.56	18.58	18.52
5	16QAM	1	0	18.73	18.82	18.69
5	16QAM	1	12	18.82	18.84	18.79
5	16QAM	1	24	18.83	18.85	18.74
5	16QAM	12	0	18.62	18.65	18.56
5	16QAM	12	7	18.68	18.69	18.64
5	16QAM	12	13	18.67	18.66	18.62
5	16QAM	25	0	18.63	18.66	18.57
5	64QAM	1	0	18.73	18.80	18.73
5	64QAM	1	12	18.78	18.81	18.72
5	64QAM	1	24	18.81	18.82	18.75
5	64QAM	12	0	18.68	18.70	18.65
5	64QAM	12	7	18.71	18.75	18.69
5	64QAM	12	13	18.72	18.70	18.65
5	64QAM	25	0	18.65	18.67	18.63



<LTE Band 12>

Power Selection				Head		
Transmit Antenna				Ant 0		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	24.75	24.83	24.89
10	QPSK	1	25	24.85	24.90	24.92
10	QPSK	1	49	24.95	24.92	24.99
10	QPSK	25	0	23.89	23.95	23.92
10	QPSK	25	12	24.00	24.03	23.95
10	QPSK	25	25	23.97	23.96	23.93
10	QPSK	50	0	23.96	23.97	23.96
10	16QAM	1	0	24.11	24.14	24.22
10	16QAM	1	25	24.19	24.28	24.25
10	16QAM	1	49	24.28	24.25	24.26
10	16QAM	25	0	22.98	23.05	23.02
10	16QAM	25	12	23.12	23.11	23.08
10	16QAM	25	25	23.07	23.08	23.03
10	16QAM	50	0	23.07	23.10	23.04
10	64QAM	1	0	23.00	23.05	23.10
10	64QAM	1	25	23.10	23.17	23.16
10	64QAM	1	49	23.19	23.17	23.20
10	64QAM	25	0	21.98	22.08	22.06
10	64QAM	25	12	22.11	22.11	22.08
10	64QAM	25	25	22.10	22.09	22.03
10	64QAM	50	0	22.11	22.06	22.06
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	24.84	24.88	24.90
5	QPSK	1	12	24.91	24.96	24.97
5	QPSK	1	24	24.89	24.94	24.97
5	QPSK	12	0	23.90	23.96	23.89
5	QPSK	12	7	23.95	24.00	24.00
5	QPSK	12	13	23.91	23.98	23.99
5	QPSK	25	0	23.94	24.01	23.94
5	16QAM	1	0	24.13	24.17	24.19
5	16QAM	1	12	24.24	24.29	24.31
5	16QAM	1	24	24.20	24.26	24.22
5	16QAM	12	0	23.03	23.07	23.02
5	16QAM	12	7	23.04	23.08	23.10
5	16QAM	12	13	23.00	23.10	23.06
5	16QAM	25	0	23.02	23.08	23.02
5	64QAM	1	0	23.04	23.11	23.12
5	64QAM	1	12	23.18	23.19	23.22
5	64QAM	1	24	23.11	23.19	23.17
5	64QAM	12	0	22.07	22.12	22.05
5	64QAM	12	7	22.10	22.17	22.17
5	64QAM	12	13	22.05	22.13	22.14
5	64QAM	25	0	22.01	22.09	22.01
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	24.82	24.94	24.98
3	QPSK	1	8	24.83	24.97	24.98



FCC SAR TEST REPORT

Report No. : FA9O2116

3	QPSK	1	14	24.93	24.95	24.94
3	QPSK	8	0	23.82	23.95	23.99
3	QPSK	8	4	23.84	24.03	24.01
3	QPSK	8	7	23.93	23.98	23.97
3	QPSK	15	0	23.93	23.98	23.97
3	16QAM	1	0	24.14	24.23	24.28
3	16QAM	1	8	24.13	24.29	24.26
3	16QAM	1	14	24.23	24.26	24.20
3	16QAM	8	0	22.93	23.09	23.08
3	16QAM	8	4	22.98	23.13	23.12
3	16QAM	8	7	23.05	23.10	23.07
3	16QAM	15	0	23.03	23.09	23.07
3	64QAM	1	0	23.06	23.18	23.19
3	64QAM	1	8	23.06	23.19	23.20
3	64QAM	1	14	23.14	23.20	23.16
3	64QAM	8	0	21.95	22.11	22.10
3	64QAM	8	4	21.97	22.15	22.14
3	64QAM	8	7	22.05	22.11	22.11
3	64QAM	15	0	22.05	22.09	22.08
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	24.79	24.88	24.90
1.4	QPSK	1	3	24.83	24.95	24.96
1.4	QPSK	1	5	24.75	24.88	24.87
1.4	QPSK	3	0	24.81	24.90	24.91
1.4	QPSK	3	1	24.84	24.95	24.94
1.4	QPSK	3	3	24.80	24.91	24.89
1.4	QPSK	6	0	23.78	23.92	23.91
1.4	16QAM	1	0	24.08	24.19	24.17
1.4	16QAM	1	3	24.16	24.26	24.23
1.4	16QAM	1	5	24.09	24.19	24.09
1.4	16QAM	3	0	23.90	24.01	23.97
1.4	16QAM	3	1	23.92	24.03	24.00
1.4	16QAM	3	3	23.87	23.99	23.96
1.4	16QAM	6	0	22.93	23.08	23.05
1.4	64QAM	1	0	23.02	23.12	23.14
1.4	64QAM	1	3	23.08	23.19	23.19
1.4	64QAM	1	5	23.00	23.11	23.08
1.4	64QAM	3	0	23.02	23.11	23.11
1.4	64QAM	3	1	23.05	23.15	23.15
1.4	64QAM	3	3	23.01	23.12	23.10
1.4	64QAM	6	0	21.86	22.02	22.00



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				24.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	23.71	23.77	23.85
10	QPSK	1	25	23.82	23.87	23.87
10	QPSK	1	49	23.90	23.91	23.92
10	QPSK	25	0	23.89	23.90	23.90
10	QPSK	25	12	23.96	23.95	23.88
10	QPSK	25	25	23.95	23.92	23.86
10	QPSK	50	0	23.97	23.95	23.88
10	16QAM	1	0	24.05	24.10	24.15
10	16QAM	1	25	24.16	24.21	24.16
10	16QAM	1	49	24.24	24.18	24.06
10	16QAM	25	0	22.93	23.03	23.00
10	16QAM	25	12	23.09	23.02	23.00
10	16QAM	25	25	23.05	23.02	22.94
10	16QAM	50	0	23.04	23.04	23.01
10	64QAM	1	0	22.97	23.03	23.08
10	64QAM	1	25	23.06	23.11	23.07
10	64QAM	1	49	23.14	23.09	23.14
10	64QAM	25	0	21.97	22.02	21.99
10	64QAM	25	12	22.11	22.02	22.04
10	64QAM	25	25	22.09	22.02	22.00
10	64QAM	50	0	22.05	22.03	21.99
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	23.72	23.75	23.81
5	QPSK	1	12	23.84	23.90	23.89
5	QPSK	1	24	23.82	23.88	23.88
5	QPSK	12	0	23.86	23.90	23.87
5	QPSK	12	7	23.92	23.97	23.97
5	QPSK	12	13	23.85	23.90	23.92
5	QPSK	25	0	23.85	23.89	23.84
5	16QAM	1	0	24.11	24.10	24.11
5	16QAM	1	12	24.19	24.22	24.22
5	16QAM	1	24	24.17	24.23	23.90
5	16QAM	12	0	22.94	23.01	22.94
5	16QAM	12	7	22.95	23.01	23.02
5	16QAM	12	13	22.93	23.00	22.98
5	16QAM	25	0	22.97	23.00	22.94
5	64QAM	1	0	22.98	23.02	23.04
5	64QAM	1	12	23.11	23.11	23.14
5	64QAM	1	24	23.08	23.10	22.96
5	64QAM	12	0	22.01	22.03	21.99
5	64QAM	12	7	22.02	22.07	22.09
5	64QAM	12	13	21.97	22.05	22.03
5	64QAM	25	0	21.96	22.02	21.95
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	23.74	23.89	23.88
3	QPSK	1	8	23.74	23.87	23.89



FCC SAR TEST REPORT

Report No. : FA9O2116

3	QPSK	1	14	23.85	23.85	23.87
3	QPSK	8	0	23.76	23.93	23.91
3	QPSK	8	4	23.81	23.94	23.94
3	QPSK	8	7	23.87	23.90	23.92
3	QPSK	15	0	23.86	23.90	23.92
3	16QAM	1	0	24.11	24.18	24.22
3	16QAM	1	8	24.13	24.23	24.18
3	16QAM	1	14	24.15	24.19	23.90
3	16QAM	8	0	22.88	23.02	23.00
3	16QAM	8	4	22.92	23.05	23.04
3	16QAM	8	7	22.98	23.00	23.01
3	16QAM	15	0	22.97	23.00	23.01
3	64QAM	1	0	22.99	23.07	23.12
3	64QAM	1	8	22.98	23.09	23.09
3	64QAM	1	14	23.04	23.08	22.92
3	64QAM	8	0	21.88	22.03	22.03
3	64QAM	8	4	21.91	22.08	22.03
3	64QAM	8	7	22.00	22.03	22.00
3	64QAM	15	0	21.97	22.03	22.01
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	23.68	23.82	23.80
1.4	QPSK	1	3	23.76	23.86	23.88
1.4	QPSK	1	5	23.66	23.79	23.80
1.4	QPSK	3	0	23.70	23.86	23.80
1.4	QPSK	3	1	23.74	23.88	23.86
1.4	QPSK	3	3	23.73	23.85	23.84
1.4	QPSK	6	0	23.72	23.85	23.83
1.4	16QAM	1	0	24.04	24.10	24.10
1.4	16QAM	1	3	24.15	24.22	24.08
1.4	16QAM	1	5	24.02	24.14	23.88
1.4	16QAM	3	0	23.84	23.92	23.88
1.4	16QAM	3	1	23.87	23.97	23.91
1.4	16QAM	3	3	23.81	23.93	23.70
1.4	16QAM	6	0	22.88	23.01	22.96
1.4	64QAM	1	0	22.98	23.04	23.03
1.4	64QAM	1	3	23.04	23.13	23.11
1.4	64QAM	1	5	22.96	23.05	22.89
1.4	64QAM	3	0	22.97	23.05	23.02
1.4	64QAM	3	1	23.00	23.09	23.04
1.4	64QAM	3	3	22.95	23.03	22.94
1.4	64QAM	6	0	21.82	21.94	21.93

<LTE Band 13>

Power Selection				Head			Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				25.3			23.8		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23230			23230		
Frequency (MHz)				782			782		
10	QPSK	1	0		24.21			22.84	
10	QPSK	1	25		24.33			22.82	
10	QPSK	1	49		24.27			22.78	
10	QPSK	25	0		23.39			22.90	
10	QPSK	25	12		23.37			22.89	
10	QPSK	25	25		23.38			22.87	
10	QPSK	50	0		23.37			22.90	
10	16QAM	1	0		23.50			23.07	
10	16QAM	1	25		23.63			23.12	
10	16QAM	1	49		23.54			23.10	
10	16QAM	25	0		22.47			22.50	
10	16QAM	25	12		22.46			22.50	
10	16QAM	25	25		22.44			22.50	
10	16QAM	50	0		22.46			22.48	
10	64QAM	1	0		22.44			22.47	
10	64QAM	1	25		22.53			22.55	
10	64QAM	1	49		22.47			22.52	
10	64QAM	25	0		21.47			21.48	
10	64QAM	25	12		21.49			21.50	
10	64QAM	25	25		21.45			21.50	
10	64QAM	50	0		21.47			21.52	
Channel				23205	23230	23255	23205	23230	23255
Frequency (MHz)				779.5	782	784.5	779.5	782	784.5
5	QPSK	1	0	24.17	24.24	24.31	22.79	22.72	22.77
5	QPSK	1	12	24.25	24.32	24.27	22.71	22.80	22.79
5	QPSK	1	24	24.31	24.31	24.20	22.81	22.77	22.77
5	QPSK	12	0	23.31	23.37	23.34	22.80	22.86	22.83
5	QPSK	12	7	23.41	23.35	23.40	22.93	22.89	22.88
5	QPSK	12	13	23.37	23.33	23.34	22.88	22.83	22.82
5	QPSK	25	0	23.39	23.32	23.34	22.89	22.85	22.84
5	16QAM	1	0	23.44	23.52	23.63	23.05	23.06	23.11
5	16QAM	1	12	23.56	23.65	23.58	23.06	23.00	23.11
5	16QAM	1	24	23.61	23.60	23.46	23.10	23.11	23.08
5	16QAM	12	0	22.38	22.44	22.39	22.41	22.47	22.42
5	16QAM	12	7	22.47	22.44	22.42	22.50	22.48	22.45
5	16QAM	12	13	22.43	22.40	22.43	22.47	22.44	22.44
5	16QAM	25	0	22.47	22.43	22.44	22.50	22.44	22.43
5	64QAM	1	0	22.36	22.44	22.50	22.45	22.48	22.53
5	64QAM	1	12	22.45	22.51	22.50	22.51	22.56	22.51
5	64QAM	1	24	22.50	22.51	22.36	22.51	22.51	22.38
5	64QAM	12	0	21.43	21.47	21.43	21.43	21.51	21.43
5	64QAM	12	7	21.51	21.51	21.50	21.55	21.52	21.50
5	64QAM	12	13	21.47	21.45	21.47	21.49	21.49	21.48
5	64QAM	25	0	21.47	21.43	21.43	21.49	21.45	21.45



<LTE Band 17>

Power Selection				Head		
Transmit Antenna				Ant 0		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	24.81	24.89	24.88
10	QPSK	1	25	25.04	24.99	24.97
10	QPSK	1	49	24.94	24.96	24.91
10	QPSK	25	0	24.00	23.99	24.02
10	QPSK	25	12	24.04	24.02	24.03
10	QPSK	25	25	24.03	23.99	23.99
10	QPSK	50	0	24.00	23.99	23.99
10	16QAM	1	0	24.08	24.19	24.17
10	16QAM	1	25	24.31	24.31	24.29
10	16QAM	1	49	24.27	24.24	24.20
10	16QAM	25	0	23.12	23.10	23.11
10	16QAM	25	12	23.14	23.13	23.12
10	16QAM	25	25	23.08	23.08	23.05
10	16QAM	50	0	23.10	23.11	23.08
10	64QAM	1	0	23.02	23.13	23.11
10	64QAM	1	25	23.22	23.22	23.21
10	64QAM	1	49	23.18	23.20	23.14
10	64QAM	25	0	22.08	22.09	22.08
10	64QAM	25	12	22.13	22.12	22.12
10	64QAM	25	25	22.11	22.11	22.07
10	64QAM	50	0	22.11	22.13	22.08
Channel				23755	23790	23825
Frequency (MHz)				706.5	710	713.5
5	QPSK	1	0	24.82	24.97	25.03
5	QPSK	1	12	24.92	24.97	25.02
5	QPSK	1	24	25.03	24.96	24.92
5	QPSK	12	0	23.90	23.99	24.07
5	QPSK	12	7	23.93	24.00	24.05
5	QPSK	12	13	24.03	23.97	24.05
5	QPSK	25	0	24.06	24.00	24.06
5	16QAM	1	0	24.10	24.31	24.36
5	16QAM	1	12	24.22	24.26	24.33
5	16QAM	1	24	24.32	24.29	24.23
5	16QAM	12	0	22.99	23.09	23.15
5	16QAM	12	7	23.01	23.10	23.14
5	16QAM	12	13	23.08	23.08	23.12
5	16QAM	25	0	23.14	23.08	23.15
5	64QAM	1	0	23.04	23.24	23.29
5	64QAM	1	12	23.16	23.20	23.26
5	64QAM	1	24	23.24	23.20	23.21
5	64QAM	12	0	22.05	22.11	22.17
5	64QAM	12	7	22.09	22.14	22.21
5	64QAM	12	13	22.16	22.12	22.21
5	64QAM	25	0	22.11	22.08	22.14



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0		
Max. Power				24.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	23.72	23.77	23.78
10	QPSK	1	25	23.91	23.91	23.89
10	QPSK	1	49	23.92	23.87	23.88
10	QPSK	25	0	23.98	23.94	23.93
10	QPSK	25	12	23.99	23.94	23.93
10	QPSK	25	25	23.98	23.91	23.92
10	QPSK	50	0	23.96	23.94	23.90
10	16QAM	1	0	24.03	24.06	24.11
10	16QAM	1	25	24.28	24.24	24.25
10	16QAM	1	49	24.18	24.13	23.93
10	16QAM	25	0	23.02	23.02	23.00
10	16QAM	25	12	23.07	23.02	23.04
10	16QAM	25	25	23.06	23.03	22.97
10	16QAM	50	0	23.05	23.02	23.03
10	64QAM	1	0	22.96	23.02	23.04
10	64QAM	1	25	23.17	23.15	23.12
10	64QAM	1	49	23.13	23.10	23.01
10	64QAM	25	0	22.05	22.00	22.00
10	64QAM	25	12	22.08	22.02	22.05
10	64QAM	25	25	22.05	22.00	22.02
10	64QAM	50	0	22.05	22.03	22.03
Channel				23755	23790	23825
Frequency (MHz)				706.5	710	713.5
5	QPSK	1	0	23.74	23.89	23.95
5	QPSK	1	12	23.80	23.87	23.96
5	QPSK	1	24	23.91	23.89	23.92
5	QPSK	12	0	23.81	23.95	24.00
5	QPSK	12	7	23.86	23.96	24.01
5	QPSK	12	13	23.96	23.92	23.95
5	QPSK	25	0	23.94	23.91	23.99
5	16QAM	1	0	24.03	24.21	24.12
5	16QAM	1	12	24.17	24.22	24.25
5	16QAM	1	24	24.24	24.20	23.81
5	16QAM	12	0	22.93	22.98	23.04
5	16QAM	12	7	22.98	23.01	23.09
5	16QAM	12	13	23.02	23.01	23.03
5	16QAM	25	0	23.06	22.99	23.06
5	64QAM	1	0	22.98	23.13	23.18
5	64QAM	1	12	23.07	23.09	23.16
5	64QAM	1	24	23.17	23.09	22.88
5	64QAM	12	0	21.98	22.02	22.13
5	64QAM	12	7	21.99	22.06	22.13
5	64QAM	12	13	22.06	22.02	22.08
5	64QAM	25	0	22.06	22.02	22.08



<LTE Band 25>

Power Selection				Head			Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				23.2			20.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26140	26340	26590	26140	26340	26590
Frequency (MHz)				1860	1880	1905	1860	1880	1905
20	QPSK	1	0	22.06	22.07	22.20	19.76	19.75	19.83
20	QPSK	1	49	22.19	22.09	22.19	19.89	19.74	19.91
20	QPSK	1	99	22.02	22.08	22.14	19.69	19.76	19.85
20	QPSK	50	0	22.16	22.08	22.19	19.88	19.77	19.86
20	QPSK	50	24	22.18	22.12	22.29	19.86	19.81	19.99
20	QPSK	50	50	22.12	22.04	22.26	19.80	19.75	19.94
20	QPSK	100	0	22.14	22.07	22.29	19.84	19.77	19.97
20	16QAM	1	0	22.33	22.40	22.42	20.02	20.10	20.18
20	16QAM	1	49	22.50	22.34	22.54	20.24	20.02	20.34
20	16QAM	1	99	22.30	22.40	22.45	19.99	20.12	20.16
20	16QAM	50	0	22.23	22.17	22.26	19.94	19.88	19.97
20	16QAM	50	24	22.26	22.18	22.37	19.95	19.90	20.09
20	16QAM	50	50	22.18	22.11	22.31	19.89	19.84	20.02
20	16QAM	100	0	22.19	22.11	22.33	19.89	19.84	20.02
20	64QAM	1	0	22.27	22.28	22.39	20.00	20.01	20.07
20	64QAM	1	49	22.47	22.28	22.46	20.15	20.01	20.18
20	64QAM	1	99	22.23	22.33	22.34	19.94	20.03	20.09
20	64QAM	50	0	21.74	21.68	21.75	19.97	19.89	19.99
20	64QAM	50	24	21.76	21.70	21.87	20.00	19.93	20.12
20	64QAM	50	50	21.68	21.64	21.82	19.93	19.88	20.07
20	64QAM	100	0	21.71	21.62	21.83	19.92	19.85	20.07
Channel				26115	26340	26615	26115	26340	26615
Frequency (MHz)				1857.5	1880	1907.5	1857.5	1880	1907.5
15	QPSK	1	0	22.14	22.04	22.26	19.55	19.56	19.78
15	QPSK	1	37	22.19	22.05	22.32	19.60	19.55	19.83
15	QPSK	1	74	22.21	21.98	22.15	19.60	19.50	19.66
15	QPSK	36	0	22.26	22.12	22.26	19.67	19.60	19.80
15	QPSK	36	20	22.28	22.09	22.32	19.69	19.64	19.84
15	QPSK	36	39	22.19	22.06	22.21	19.64	19.58	19.76
15	QPSK	75	0	22.24	22.08	22.27	19.64	19.58	19.79
15	16QAM	1	0	22.42	22.37	22.52	19.81	19.89	20.10
15	16QAM	1	37	22.51	22.33	22.51	19.92	19.83	19.90
15	16QAM	1	74	22.53	22.26	22.48	19.96	19.82	20.01
15	16QAM	36	0	22.32	22.18	22.35	19.75	19.69	19.88
15	16QAM	36	20	22.36	22.20	22.36	19.77	19.71	19.91
15	16QAM	36	39	22.29	22.14	22.32	19.72	19.65	19.86
15	16QAM	75	0	22.30	22.16	22.34	19.71	19.66	19.88
15	64QAM	1	0	22.35	22.26	22.49	19.79	19.83	20.03
15	64QAM	1	37	22.47	22.28	22.50	19.86	19.81	20.10
15	64QAM	1	74	22.45	22.21	22.39	19.87	19.76	19.93
15	64QAM	36	0	21.86	21.70	21.86	19.79	19.75	19.92
15	64QAM	36	20	21.87	21.71	21.88	19.83	19.77	19.93
15	64QAM	36	39	21.80	21.65	21.81	19.76	19.70	19.89
15	64QAM	75	0	21.78	21.63	21.83	19.76	19.66	19.89
Channel				26090	26340	26640	26090	26340	26640
Frequency (MHz)				1855	1880	1910	1855	1880	1910
10	QPSK	1	0	22.15	22.18	22.26	19.69	19.66	19.79
10	QPSK	1	25	22.21	22.06	22.25	19.74	19.59	19.76



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	22.22	22.08	22.19	19.71	19.57	19.70
10	QPSK	25	0	22.20	22.10	22.25	19.71	19.63	19.82
10	QPSK	25	12	22.21	22.11	22.29	19.70	19.63	19.82
10	QPSK	25	25	22.13	22.08	22.27	19.65	19.59	19.78
10	QPSK	50	0	22.16	22.09	22.26	19.69	19.62	19.79
10	16QAM	1	0	22.41	22.48	22.53	19.94	20.00	20.10
10	16QAM	1	25	22.50	22.40	22.50	20.08	19.90	20.10
10	16QAM	1	49	22.49	22.39	22.53	20.06	19.94	19.97
10	16QAM	25	0	22.29	22.19	22.39	19.79	19.70	19.92
10	16QAM	25	12	22.26	22.20	22.38	19.78	19.72	19.89
10	16QAM	25	25	22.22	22.15	22.33	19.72	19.67	19.88
10	16QAM	50	0	22.23	22.18	22.36	19.76	19.69	19.88
10	64QAM	1	0	22.35	22.37	22.49	19.94	19.95	20.01
10	64QAM	1	25	22.49	22.29	22.44	20.02	19.82	19.99
10	64QAM	1	49	22.48	22.26	22.41	19.98	19.82	19.94
10	64QAM	25	0	21.78	21.69	21.87	19.82	19.75	19.91
10	64QAM	25	12	21.75	21.68	21.86	19.84	19.77	19.91
10	64QAM	25	25	21.72	21.65	21.81	19.78	19.71	19.86
10	64QAM	50	0	21.74	21.67	21.84	19.80	19.72	19.92
Channel				26065	26340	26665	26065	26340	26665
Frequency (MHz)				1852.5	1880	1912.5	1852.5	1880	1912.5
5	QPSK	1	0	22.17	22.05	22.24	19.56	19.57	19.74
5	QPSK	1	12	22.23	22.09	22.32	19.67	19.58	19.84
5	QPSK	1	24	22.32	22.03	22.22	19.71	19.55	19.72
5	QPSK	12	0	22.30	22.10	22.27	19.72	19.61	19.78
5	QPSK	12	7	22.33	22.12	22.29	19.74	19.62	19.78
5	QPSK	12	13	22.27	22.08	22.23	19.67	19.56	19.76
5	QPSK	25	0	22.25	22.09	22.25	19.67	19.60	19.74
5	16QAM	1	0	22.40	22.40	22.52	19.86	19.90	20.09
5	16QAM	1	12	22.51	22.39	22.53	19.96	19.92	20.13
5	16QAM	1	24	22.50	22.29	22.49	20.01	19.85	19.97
5	16QAM	12	0	22.39	22.19	22.32	19.79	19.70	19.89
5	16QAM	12	7	22.40	22.19	22.36	19.79	19.74	19.91
5	16QAM	12	13	22.33	22.16	22.32	19.76	19.68	19.83
5	16QAM	25	0	22.36	22.15	22.33	19.75	19.67	19.88
5	64QAM	1	0	22.38	22.28	22.43	19.82	19.85	19.98
5	64QAM	1	12	22.51	22.33	22.51	19.95	19.89	20.10
5	64QAM	1	24	22.53	22.23	22.39	19.95	19.80	19.97
5	64QAM	12	0	21.88	21.71	21.86	19.87	19.77	19.93
5	64QAM	12	7	21.91	21.75	21.89	19.90	19.79	19.93
5	64QAM	12	13	21.84	21.70	21.84	19.82	19.74	19.90
5	64QAM	25	0	21.84	21.66	21.84	19.79	19.71	19.87
Channel				26055	26340	26675	26055	26340	26675
Frequency (MHz)				1851.5	1880	1913.5	1851.5	1880	1913.5
3	QPSK	1	0	22.05	22.07	22.23	19.58	19.57	19.72
3	QPSK	1	8	22.14	22.06	22.11	19.69	19.57	19.63
3	QPSK	1	14	22.11	22.02	22.07	19.63	19.55	19.60
3	QPSK	8	0	22.17	22.10	22.12	19.73	19.62	19.67
3	QPSK	8	4	22.22	22.12	22.18	19.73	19.65	19.70
3	QPSK	8	7	22.17	22.10	22.17	19.67	19.61	19.68
3	QPSK	15	0	22.17	22.05	22.14	19.68	19.59	19.65
3	16QAM	1	0	22.27	22.35	22.46	19.84	19.83	20.02
3	16QAM	1	8	22.42	22.30	22.42	19.93	19.90	19.94
3	16QAM	1	14	22.40	22.30	22.35	19.91	19.82	19.83
3	16QAM	8	0	22.28	22.23	22.23	19.82	19.73	19.79
3	16QAM	8	4	22.33	22.26	22.29	19.84	19.78	19.84



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	22.26	22.20	22.23	19.80	19.74	19.80
3	16QAM	15	0	22.27	22.15	22.22	19.79	19.68	19.78
3	64QAM	1	0	22.25	22.28	22.43	19.82	19.83	19.99
3	64QAM	1	8	22.36	22.33	22.36	19.94	19.84	19.91
3	64QAM	1	14	22.30	22.27	22.32	19.90	19.82	19.87
3	64QAM	8	0	21.81	21.70	21.72	19.85	19.75	19.80
3	64QAM	8	4	21.84	21.75	21.75	19.90	19.82	19.83
3	64QAM	8	7	21.79	21.67	21.72	19.82	19.76	19.79
3	64QAM	15	0	21.72	21.66	21.69	19.83	19.74	19.77
Channel				26047	26340	26683	26047	26340	26683
Frequency (MHz)				1850.7	1880	1914.3	1850.7	1880	1914.3
1.4	QPSK	1	0	21.97	22.01	22.22	19.50	19.50	19.63
1.4	QPSK	1	3	22.04	22.06	22.33	19.56	19.58	19.72
1.4	QPSK	1	5	22.07	22.01	22.22	19.59	19.49	19.66
1.4	QPSK	3	0	22.01	22.02	22.27	19.55	19.56	19.69
1.4	QPSK	3	1	22.06	22.07	22.33	19.58	19.58	19.73
1.4	QPSK	3	3	22.11	22.04	22.27	19.65	19.56	19.72
1.4	QPSK	6	0	22.11	22.02	22.29	19.64	19.56	19.67
1.4	16QAM	1	0	22.24	22.29	22.52	19.76	19.79	20.07
1.4	16QAM	1	3	22.31	22.34	22.52	19.83	19.89	20.12
1.4	16QAM	1	5	22.33	22.25	22.53	19.83	19.72	19.96
1.4	16QAM	3	0	22.04	22.11	22.36	19.56	19.63	19.78
1.4	16QAM	3	1	22.10	22.12	22.40	19.62	19.67	19.83
1.4	16QAM	3	3	22.14	22.04	22.35	19.66	19.64	19.89
1.4	16QAM	6	0	22.26	22.18	22.42	19.79	19.68	19.87
1.4	64QAM	1	0	22.20	22.23	22.47	19.75	19.77	19.96
1.4	64QAM	1	3	22.23	22.28	22.53	19.79	19.83	20.07
1.4	64QAM	1	5	22.30	22.20	22.46	19.83	19.76	19.94
1.4	64QAM	3	0	22.17	22.23	22.46	19.76	19.78	19.90
1.4	64QAM	3	1	22.27	22.27	22.53	19.82	19.84	20.06
1.4	64QAM	3	3	22.30	22.22	22.46	19.88	19.77	20.00
1.4	64QAM	6	0	21.68	21.59	21.83	19.74	19.66	19.81



<LTE Band 26>

Power Selection				Head			Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				25.7			22.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26765	26865	26965	26765	26865	26965
Frequency (MHz)				821.5	831.5	841.5	821.5	831.5	841.5
15	QPSK	1	0	24.69	24.82	24.80	21.73	21.81	21.72
15	QPSK	1	37	24.73	24.81	24.79	21.74	21.74	21.80
15	QPSK	1	74	24.76	24.73	24.73	21.77	21.66	21.65
15	QPSK	36	0	23.80	23.85	23.76	21.81	21.83	21.73
15	QPSK	36	20	23.78	23.87	23.74	21.79	21.82	21.71
15	QPSK	36	39	23.78	23.78	23.78	21.82	21.77	21.74
15	QPSK	75	0	23.73	23.82	23.70	21.80	21.79	21.66
15	16QAM	1	0	23.97	24.10	24.10	22.05	22.07	22.11
15	16QAM	1	37	24.03	24.12	24.08	22.07	22.12	22.06
15	16QAM	1	74	24.05	24.04	23.97	22.16	22.03	21.98
15	16QAM	36	0	22.83	22.90	22.84	21.90	21.94	21.78
15	16QAM	36	20	22.83	22.94	22.80	21.89	21.92	21.77
15	16QAM	36	39	22.89	22.85	22.85	21.95	21.85	21.82
15	16QAM	75	0	22.80	22.87	22.78	21.86	21.87	21.76
15	64QAM	1	0	22.92	23.04	23.06	21.97	21.99	22.01
15	64QAM	1	37	22.98	23.07	23.03	22.01	22.00	21.97
15	64QAM	1	74	23.00	22.97	22.88	22.01	21.92	21.88
15	64QAM	36	0	21.89	21.95	21.88	21.90	21.95	21.83
15	64QAM	36	20	21.89	21.95	21.85	21.92	21.91	21.81
15	64QAM	36	39	21.94	21.93	21.86	21.96	21.86	21.80
15	64QAM	75	0	21.83	21.92	21.80	21.85	21.87	21.74
Channel				26740	26865	26990	26740	26865	26990
Frequency (MHz)				819	831.5	844	819	831.5	844
10	QPSK	1	0	24.68	24.73	24.80	21.72	21.79	21.87
10	QPSK	1	25	24.72	24.80	24.78	21.78	21.87	21.80
10	QPSK	1	49	24.67	24.74	24.55	21.73	21.78	21.70
10	QPSK	25	0	23.78	23.84	23.83	21.81	21.92	21.90
10	QPSK	25	12	23.79	23.86	23.84	21.86	21.93	21.87
10	QPSK	25	25	23.74	23.78	23.74	21.80	21.86	21.78
10	QPSK	50	0	23.75	23.80	23.79	21.80	21.90	21.85
10	16QAM	1	0	23.89	24.03	24.12	22.05	22.14	22.12
10	16QAM	1	25	24.01	24.11	24.07	22.14	22.00	22.12
10	16QAM	1	49	23.99	24.02	23.95	22.07	22.12	22.08
10	16QAM	25	0	22.86	22.93	22.90	21.90	22.03	21.96
10	16QAM	25	12	22.87	22.94	22.90	21.92	22.04	21.97
10	16QAM	25	25	22.83	22.88	22.82	21.90	21.94	21.89
10	16QAM	50	0	22.83	22.91	22.86	21.91	21.97	21.94
10	64QAM	1	0	22.87	22.96	23.03	21.96	22.06	22.09
10	64QAM	1	25	22.95	23.07	23.00	22.03	22.09	22.05
10	64QAM	1	49	22.93	22.97	22.88	22.00	22.04	21.97
10	64QAM	25	0	21.87	21.94	21.89	21.91	22.01	21.94
10	64QAM	25	12	21.89	21.96	21.90	21.94	22.00	21.94
10	64QAM	25	25	21.80	21.91	21.83	21.85	21.92	21.88
10	64QAM	50	0	21.86	21.94	21.89	21.92	21.97	21.94
Channel				26715	26865	27015	26715	26865	27015
Frequency (MHz)				816.5	831.5	846.5	816.5	831.5	846.5
5	QPSK	1	0	24.65	24.80	24.74	21.69	21.84	21.78
5	QPSK	1	12	24.65	24.81	24.72	21.69	21.83	21.75



FCC SAR TEST REPORT

Report No. : FA9O2116

5	QPSK	1	24	24.71	24.78	24.67	21.74	21.83	21.70
5	QPSK	12	0	23.68	23.83	23.76	21.72	21.88	21.78
5	QPSK	12	7	23.71	23.87	23.80	21.74	21.93	21.86
5	QPSK	12	13	23.74	23.81	23.75	21.80	21.85	21.74
5	QPSK	25	0	23.76	23.83	23.77	21.81	21.88	21.79
5	16QAM	1	0	23.87	24.10	24.07	22.02	22.13	22.13
5	16QAM	1	12	23.90	24.10	24.02	22.04	22.14	22.10
5	16QAM	1	24	23.99	24.08	23.94	22.11	22.15	22.02
5	16QAM	12	0	22.78	22.92	22.82	21.82	22.01	21.89
5	16QAM	12	7	22.81	22.93	22.86	21.86	22.02	21.92
5	16QAM	12	13	22.81	22.87	22.79	21.90	21.95	21.85
5	16QAM	25	0	22.85	22.88	22.83	21.90	21.98	21.87
5	64QAM	1	0	22.87	23.04	22.99	21.93	22.07	22.04
5	64QAM	1	12	22.88	23.06	22.98	21.94	22.08	22.01
5	64QAM	1	24	22.94	23.01	22.88	22.00	22.04	21.94
5	64QAM	12	0	21.81	22.00	21.89	21.85	22.00	21.93
5	64QAM	12	7	21.84	21.97	21.91	21.89	22.02	21.96
5	64QAM	12	13	21.89	21.95	21.85	21.93	22.00	21.91
5	64QAM	25	0	21.85	21.88	21.86	21.88	21.94	21.86
Channel				26705	26865	27025	26705	26865	27025
Frequency (MHz)				815.5	831.5	847.5	815.5	831.5	847.5
3	QPSK	1	0	24.67	24.81	24.75	21.72	21.86	21.77
3	QPSK	1	8	24.63	24.80	24.70	21.70	21.85	21.76
3	QPSK	1	14	24.63	24.78	24.61	21.68	21.84	21.73
3	QPSK	8	0	23.67	23.79	23.76	21.77	21.88	21.80
3	QPSK	8	4	23.69	23.85	23.74	21.75	21.94	21.82
3	QPSK	8	7	23.66	23.80	23.73	21.71	21.87	21.78
3	QPSK	15	0	23.68	23.80	23.73	21.77	21.88	21.79
3	16QAM	1	0	23.87	24.08	24.00	22.04	22.15	22.13
3	16QAM	1	8	23.87	24.09	23.97	22.06	22.10	22.11
3	16QAM	1	14	23.88	24.04	23.90	22.05	22.10	22.03
3	16QAM	8	0	22.77	22.93	22.80	21.86	22.04	21.94
3	16QAM	8	4	22.80	22.94	22.86	21.91	22.02	21.95
3	16QAM	8	7	22.80	22.91	22.80	21.85	22.00	21.91
3	16QAM	15	0	22.77	22.91	22.80	21.85	21.98	21.91
3	64QAM	1	0	22.85	23.02	22.93	21.94	22.08	22.00
3	64QAM	1	8	22.85	23.03	22.89	21.97	22.10	21.97
3	64QAM	1	14	22.86	23.03	22.85	21.90	22.05	21.94
3	64QAM	8	0	21.77	21.94	21.83	21.85	21.99	21.91
3	64QAM	8	4	21.83	21.99	21.89	21.87	22.03	21.94
3	64QAM	8	7	21.79	21.94	21.82	21.83	22.01	21.89
3	64QAM	15	0	21.79	21.90	21.83	21.83	21.94	21.88
Channel				26697	26865	27033	26697	26865	27033
Frequency (MHz)				814.7	831.5	848.3	814.7	831.5	848.3
1.4	QPSK	1	0	24.60	24.71	24.63	21.64	21.77	21.68
1.4	QPSK	1	3	24.68	24.80	24.61	21.71	21.86	21.75
1.4	QPSK	1	5	24.58	24.72	24.33	21.64	21.77	21.68
1.4	QPSK	3	0	24.61	24.77	24.68	21.68	21.85	21.69
1.4	QPSK	3	1	24.59	24.81	24.64	21.72	21.86	21.75
1.4	QPSK	3	3	24.64	24.76	24.56	21.69	21.83	21.71
1.4	QPSK	6	0	23.64	23.76	23.67	21.69	21.83	21.72
1.4	16QAM	1	0	23.82	24.02	23.90	21.96	22.12	22.01
1.4	16QAM	1	3	23.89	24.10	23.89	22.07	22.11	22.11
1.4	16QAM	1	5	23.81	24.03	23.81	21.97	22.10	21.98
1.4	16QAM	3	0	23.66	23.85	23.67	21.79	21.93	21.82
1.4	16QAM	3	1	23.68	23.87	23.74	21.82	21.99	21.87



FCC SAR TEST REPORT

Report No. : FA9O2116

1.4	16QAM	3	3	23.64	23.82	23.59	21.78	21.94	21.80
1.4	16QAM	6	0	22.78	22.92	22.80	21.84	22.00	21.89
1.4	64QAM	1	0	22.82	22.98	22.86	21.89	22.03	21.91
1.4	64QAM	1	3	22.86	23.04	22.92	21.93	22.11	21.96
1.4	64QAM	1	5	22.80	22.98	22.82	21.87	21.97	21.88
1.4	64QAM	3	0	22.79	22.99	22.82	21.87	22.02	21.92
1.4	64QAM	3	1	22.85	23.01	22.87	21.91	22.08	21.97
1.4	64QAM	3	3	22.82	22.98	22.84	21.85	22.00	21.90
1.4	64QAM	6	0	21.72	21.84	21.75	21.75	21.90	21.67



<LTE Band 66>

Power Selection				Head			Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				24.5			20		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				132072	132322	132572	132072	132322	132572
Frequency (MHz)				1720	1745	1770	1720	1745	1770
20	QPSK	1	0	23.46	23.50	23.51	18.97	19.00	19.01
20	QPSK	1	49	23.45	23.50	23.48	19.00	18.99	19.00
20	QPSK	1	99	23.25	23.31	23.29	18.80	18.84	18.79
20	QPSK	50	0	22.38	22.39	22.40	18.91	18.97	18.99
20	QPSK	50	24	22.35	22.36	22.35	18.90	18.93	18.88
20	QPSK	50	50	22.31	22.37	22.35	18.86	18.90	18.84
20	QPSK	100	0	22.36	22.37	22.38	18.85	18.91	18.89
20	16QAM	1	0	22.75	22.84	22.80	19.28	19.37	19.40
20	16QAM	1	49	22.79	22.86	22.81	19.34	19.37	19.34
20	16QAM	1	99	22.59	22.63	22.62	19.17	19.18	19.17
20	16QAM	50	0	21.46	21.50	21.49	19.01	19.04	19.03
20	16QAM	50	24	21.45	21.47	21.45	18.96	19.01	19.00
20	16QAM	50	50	21.39	21.47	21.44	18.92	19.01	18.95
20	16QAM	100	0	21.43	21.46	21.46	18.95	18.98	18.98
20	64QAM	1	0	21.70	21.77	21.78	19.22	19.30	19.27
20	64QAM	1	49	21.76	21.80	21.79	19.32	19.31	19.24
20	64QAM	1	99	21.56	21.60	21.58	19.10	19.06	19.05
20	64QAM	50	0	20.54	20.57	20.57	19.04	19.08	19.05
20	64QAM	50	24	20.53	20.55	20.51	19.02	19.02	19.02
20	64QAM	50	50	20.47	20.49	20.46	18.99	18.98	18.97
20	64QAM	100	0	20.50	20.53	20.52	19.00	19.00	19.01
Channel				132047	132322	132597	132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5	1717.5	1745	1772.5
15	QPSK	1	0	23.41	23.47	23.46	18.96	19.05	18.97
15	QPSK	1	37	23.46	23.50	23.49	19.02	19.04	19.00
15	QPSK	1	74	23.33	23.35	23.32	18.87	18.88	18.83
15	QPSK	36	0	22.35	22.37	22.32	18.87	18.91	18.89
15	QPSK	36	20	22.43	22.46	22.40	18.95	18.96	18.91
15	QPSK	36	39	22.28	22.31	22.28	18.82	18.83	18.84
15	QPSK	75	0	22.34	22.36	22.35	18.88	18.90	18.83
15	16QAM	1	0	22.79	22.82	22.75	19.27	19.39	19.36
15	16QAM	1	37	22.81	22.86	22.81	19.33	19.36	19.34
15	16QAM	1	74	22.66	22.72	22.66	19.22	19.27	19.22
15	16QAM	36	0	21.43	21.47	21.44	18.94	19.01	18.97
15	16QAM	36	20	21.52	21.50	21.49	19.04	19.05	19.03
15	16QAM	36	39	21.35	21.37	21.34	18.90	18.96	18.91
15	16QAM	75	0	21.43	21.45	21.41	18.93	19.00	18.96
15	64QAM	1	0	21.72	21.78	21.70	19.23	19.29	19.30
15	64QAM	1	37	21.76	21.80	21.75	19.30	19.31	19.30
15	64QAM	1	74	21.60	21.64	21.58	19.15	19.14	19.08
15	64QAM	36	0	20.50	20.49	20.50	19.00	19.07	19.02
15	64QAM	36	20	20.57	20.60	20.58	19.10	19.09	19.07
15	64QAM	36	39	20.47	20.47	20.43	18.98	19.01	18.95
15	64QAM	75	0	20.43	20.45	20.46	18.96	19.01	18.97
Channel				132022	132322	132622	132022	132322	132622
Frequency (MHz)				1715	1745	1775	1715	1745	1775
10	QPSK	1	0	23.40	23.47	23.43	18.97	18.96	18.96
10	QPSK	1	25	23.42	23.46	23.42	18.96	18.99	18.92



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	23.30	23.37	23.30	18.83	18.88	18.80
10	QPSK	25	0	22.44	22.41	22.41	18.93	18.98	18.92
10	QPSK	25	12	22.40	22.41	22.42	18.92	18.93	18.91
10	QPSK	25	25	22.38	22.37	22.37	18.89	18.88	18.87
10	QPSK	50	0	22.38	22.40	22.37	18.95	18.94	18.88
10	16QAM	1	0	22.74	22.83	22.78	19.25	19.37	19.32
10	16QAM	1	25	22.79	22.82	22.78	19.30	19.36	19.28
10	16QAM	1	49	22.63	22.71	22.65	19.22	19.28	19.17
10	16QAM	25	0	21.53	21.51	21.48	19.03	19.05	19.04
10	16QAM	25	12	21.49	21.51	21.46	19.02	19.07	19.02
10	16QAM	25	25	21.44	21.45	21.46	18.96	18.99	18.94
10	16QAM	50	0	21.47	21.49	21.47	19.02	19.06	19.01
10	64QAM	1	0	21.72	21.74	21.70	19.29	19.26	19.15
10	64QAM	1	25	21.68	21.75	21.68	19.23	19.23	19.24
10	64QAM	1	49	21.59	21.61	21.57	19.11	19.18	19.08
10	64QAM	25	0	20.54	20.53	20.51	19.08	19.05	19.01
10	64QAM	25	12	20.54	20.53	20.51	19.04	19.06	19.03
10	64QAM	25	25	20.51	20.50	20.46	19.03	19.01	18.98
10	64QAM	50	0	20.54	20.51	20.47	19.02	19.05	19.01
Channel				131997	132322	132647	131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5	1712.5	1745	1777.5
5	QPSK	1	0	23.27	23.32	23.27	18.81	18.84	18.77
5	QPSK	1	12	23.41	23.45	23.40	18.95	18.99	18.91
5	QPSK	1	24	23.22	23.23	23.19	18.76	18.75	18.71
5	QPSK	12	0	22.39	22.42	22.34	18.91	18.93	18.85
5	QPSK	12	7	22.47	22.46	22.44	19.00	19.00	18.95
5	QPSK	12	13	22.39	22.36	22.32	18.89	18.88	18.83
5	QPSK	25	0	22.39	22.39	22.36	18.89	18.93	18.84
5	16QAM	1	0	22.60	22.66	22.60	19.12	19.18	19.11
5	16QAM	1	12	22.77	22.82	22.75	19.29	19.31	19.27
5	16QAM	1	24	22.58	22.63	22.52	19.10	19.14	19.06
5	16QAM	12	0	21.46	21.47	21.42	19.00	19.03	18.97
5	16QAM	12	7	21.57	21.56	21.53	19.12	19.12	19.08
5	16QAM	12	13	21.46	21.44	21.41	18.99	19.03	18.91
5	16QAM	25	0	21.48	21.49	21.42	18.99	19.00	18.97
5	64QAM	1	0	21.51	21.60	21.54	19.13	19.11	19.03
5	64QAM	1	12	21.68	21.73	21.66	19.26	19.25	19.20
5	64QAM	1	24	21.47	21.54	21.46	18.99	19.01	18.96
5	64QAM	12	0	20.55	20.53	20.49	19.07	19.10	19.03
5	64QAM	12	7	20.63	20.61	20.57	19.14	19.13	19.11
5	64QAM	12	13	20.51	20.51	20.45	19.06	19.06	19.00
5	64QAM	25	0	20.47	20.51	20.45	19.03	19.01	18.98
Channel				131987	132322	132657	131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5	1711.5	1745	1778.5
3	QPSK	1	0	23.33	23.35	23.31	18.88	18.88	18.79
3	QPSK	1	8	23.41	23.47	23.41	18.97	18.97	18.91
3	QPSK	1	14	23.30	23.34	23.26	18.82	18.86	18.75
3	QPSK	8	0	22.47	22.49	22.41	18.95	18.96	18.89
3	QPSK	8	4	22.51	22.48	22.44	19.05	19.02	18.98
3	QPSK	8	7	22.43	22.46	22.37	18.96	18.99	18.87
3	QPSK	15	0	22.44	22.47	22.37	18.94	18.94	18.87
3	16QAM	1	0	22.65	22.67	22.61	19.18	19.23	19.18
3	16QAM	1	8	22.80	22.83	22.73	19.28	19.34	19.28
3	16QAM	1	14	22.59	22.63	22.55	19.14	19.15	19.12
3	16QAM	8	0	21.61	21.56	21.54	19.11	19.13	19.05
3	16QAM	8	4	21.64	21.62	21.59	19.15	19.19	19.11



FCC SAR TEST REPORT

Report No. : FA9O2116

3	16QAM	8	7	21.60	21.59	21.53	19.11	19.09	19.05
3	16QAM	15	0	21.54	21.55	21.49	19.09	19.07	19.01
3	64QAM	1	0	21.54	21.59	21.55	19.13	19.09	19.02
3	64QAM	1	8	21.71	21.73	21.67	19.25	19.24	19.21
3	64QAM	1	14	21.54	21.60	21.52	19.11	19.06	19.03
3	64QAM	8	0	20.59	20.59	20.52	19.11	19.12	19.06
3	64QAM	8	4	20.66	20.63	20.58	19.20	19.15	19.10
3	64QAM	8	7	20.56	20.57	20.49	19.11	19.08	19.03
3	64QAM	15	0	20.55	20.53	20.49	19.10	19.09	19.02
Channel				131979	132322	132665	131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3	1710.7	1745	1779.3
1.4	QPSK	1	0	23.34	23.38	23.32	18.88	18.89	18.82
1.4	QPSK	1	3	23.45	23.49	23.43	18.96	18.98	18.91
1.4	QPSK	1	5	23.35	23.37	23.33	18.86	18.88	18.81
1.4	QPSK	3	0	23.38	23.45	23.38	18.91	18.93	18.87
1.4	QPSK	3	1	23.44	23.49	23.42	18.96	18.99	18.92
1.4	QPSK	3	3	23.41	23.43	23.40	18.91	18.93	18.85
1.4	QPSK	6	0	22.45	22.44	22.38	18.92	18.95	18.85
1.4	16QAM	1	0	22.69	22.73	22.63	19.14	19.20	19.15
1.4	16QAM	1	3	22.79	22.81	22.75	19.25	19.32	19.26
1.4	16QAM	1	5	22.63	22.75	22.62	19.15	19.22	19.16
1.4	16QAM	3	0	22.53	22.52	22.47	18.99	19.05	18.96
1.4	16QAM	3	1	22.56	22.59	22.53	19.02	19.10	19.02
1.4	16QAM	3	3	22.45	22.53	22.46	18.97	19.03	18.96
1.4	16QAM	6	0	21.59	21.60	21.55	19.06	19.12	19.04
1.4	64QAM	1	0	21.64	21.62	21.59	19.16	19.14	19.08
1.4	64QAM	1	3	21.69	21.73	21.67	19.24	19.25	19.14
1.4	64QAM	1	5	21.61	21.63	21.57	19.14	19.11	19.03
1.4	64QAM	3	0	21.60	21.65	21.60	19.14	19.15	19.10
1.4	64QAM	3	1	21.67	21.74	21.66	19.23	19.25	19.16
1.4	64QAM	3	3	21.61	21.64	21.59	19.16	19.15	19.07
1.4	64QAM	6	0	20.50	20.51	20.49	19.02	19.06	18.99

<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.

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

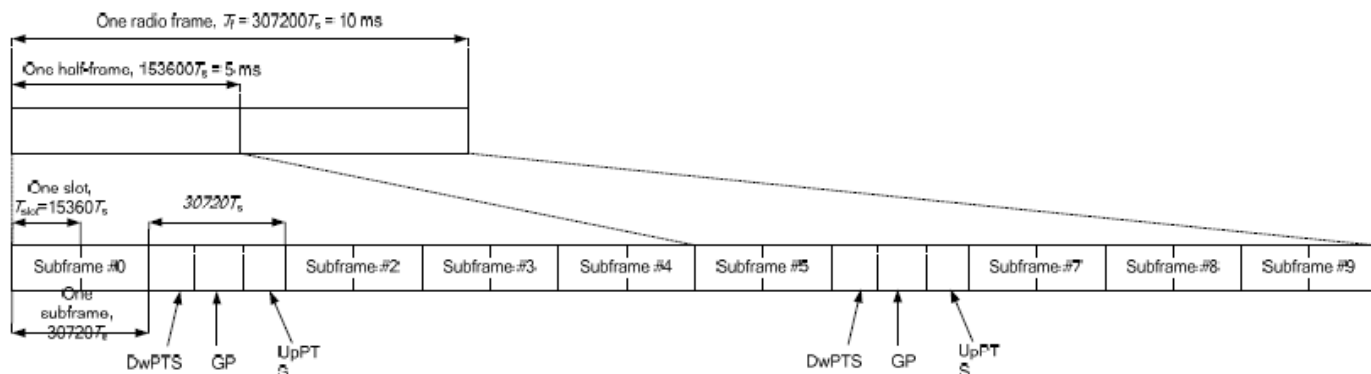


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

- viii. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- ix. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- x. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- xi. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- xii. 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.
- xiii. The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE Band 41
- xiv. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1, for Power Class 3 operation is 63.3% using UL-DL configuration 0. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR among all exposure condition



<LTE Band 38>

Power Selection				Head		
Transmit Antenna				Ant 2		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				37850	38000	38150
Frequency (MHz)				2580	2595	2610
20	QPSK	1	0	24.69	24.80	24.81
20	QPSK	1	49	24.75	24.86	24.85
20	QPSK	1	99	24.89	24.90	24.95
20	QPSK	50	0	23.81	23.91	23.92
20	QPSK	50	24	23.91	23.95	23.95
20	QPSK	50	50	23.93	23.95	23.96
20	QPSK	100	0	23.90	23.90	23.91
20	16QAM	1	0	23.84	23.93	23.92
20	16QAM	1	49	23.86	23.98	23.96
20	16QAM	1	99	23.98	24.01	24.02
20	16QAM	50	0	22.85	22.98	22.95
20	16QAM	50	24	22.99	23.00	23.00
20	16QAM	50	50	23.00	23.02	23.02
20	16QAM	100	0	22.97	22.99	22.98
20	64QAM	1	0	22.55	22.66	22.66
20	64QAM	1	49	22.59	22.67	22.70
20	64QAM	1	99	22.69	22.74	22.74
20	64QAM	50	0	21.85	21.96	21.96
20	64QAM	50	24	21.97	21.98	21.98
20	64QAM	50	50	21.98	22.00	22.01
20	64QAM	100	0	21.97	21.99	21.98
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	24.76	24.83	24.85
15	QPSK	1	37	24.77	24.86	24.87
15	QPSK	1	74	24.91	24.92	24.94
15	QPSK	36	0	23.78	23.88	23.87
15	QPSK	36	20	23.80	23.92	23.93
15	QPSK	36	39	23.88	23.90	23.93
15	QPSK	75	0	23.90	23.90	23.92
15	16QAM	1	0	23.85	23.94	23.96
15	16QAM	1	37	23.85	23.95	23.96
15	16QAM	1	74	24.02	24.05	24.06
15	16QAM	36	0	22.79	22.88	22.88
15	16QAM	36	20	22.85	22.97	22.94
15	16QAM	36	39	22.91	22.95	22.96
15	16QAM	75	0	22.98	22.98	22.99
15	64QAM	1	0	22.59	22.68	22.69
15	64QAM	1	37	22.59	22.71	22.71
15	64QAM	1	74	22.76	22.78	22.79
15	64QAM	36	0	21.82	21.91	21.92
15	64QAM	36	20	21.84	21.96	21.97
15	64QAM	36	39	21.95	21.95	21.96
15	64QAM	75	0	21.98	21.97	21.99
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	24.75	24.83	24.83
10	QPSK	1	25	24.75	24.84	24.86



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	24.82	24.92	24.94
10	QPSK	25	0	23.74	23.86	23.87
10	QPSK	25	12	23.75	23.88	23.91
10	QPSK	25	25	23.80	23.79	23.93
10	QPSK	50	0	23.79	23.91	23.92
10	16QAM	1	0	23.85	23.78	23.96
10	16QAM	1	25	23.85	23.96	23.98
10	16QAM	1	49	23.89	24.01	24.03
10	16QAM	25	0	22.82	22.95	22.94
10	16QAM	25	12	22.85	22.95	23.00
10	16QAM	25	25	22.85	22.98	23.01
10	16QAM	50	0	22.85	22.98	22.99
10	64QAM	1	0	22.58	22.68	22.69
10	64QAM	1	25	22.60	22.70	22.71
10	64QAM	1	49	22.61	22.73	22.75
10	64QAM	25	0	21.86	21.96	21.99
10	64QAM	25	12	21.89	21.99	22.02
10	64QAM	25	25	21.88	21.99	22.02
10	64QAM	50	0	21.82	21.95	21.97
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	24.69	24.80	24.84
5	QPSK	1	12	24.72	24.84	24.86
5	QPSK	1	24	24.72	24.83	24.84
5	QPSK	12	0	23.72	23.87	23.89
5	QPSK	12	7	23.75	23.89	23.91
5	QPSK	12	13	23.74	23.90	23.93
5	QPSK	25	0	23.74	23.88	23.91
5	16QAM	1	0	23.82	23.92	23.94
5	16QAM	1	12	23.83	23.97	23.99
5	16QAM	1	24	23.88	24.00	24.01
5	16QAM	12	0	22.75	22.88	22.90
5	16QAM	12	7	22.79	22.90	22.96
5	16QAM	12	13	22.80	22.91	22.94
5	16QAM	25	0	22.83	22.94	22.97
5	64QAM	1	0	22.54	22.64	22.67
5	64QAM	1	12	22.57	22.68	22.70
5	64QAM	1	24	22.60	22.71	22.74
5	64QAM	12	0	21.80	21.89	21.94
5	64QAM	12	7	21.83	21.95	21.99
5	64QAM	12	13	21.82	21.96	21.97
5	64QAM	25	0	21.84	21.98	22.00



Power Selection				Hotspot / Near body / Product Specific		
Transmit Antenna				Ant 2		
Max. Power				21.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				37850	38000	38150
Frequency (MHz)				2580	2595	2610
20	QPSK	1	0	20.60	20.69	20.73
20	QPSK	1	49	20.64	20.75	20.76
20	QPSK	1	99	20.78	20.85	20.83
20	QPSK	50	0	20.70	20.80	20.81
20	QPSK	50	24	20.82	20.83	20.86
20	QPSK	50	50	20.81	20.84	20.86
20	QPSK	100	0	20.81	20.83	20.86
20	16QAM	1	0	20.71	20.81	20.78
20	16QAM	1	49	20.72	20.83	20.84
20	16QAM	1	99	20.87	20.88	20.91
20	16QAM	50	0	20.78	20.85	20.86
20	16QAM	50	24	20.88	20.88	20.91
20	16QAM	50	50	20.87	20.93	20.95
20	16QAM	100	0	20.87	20.87	20.88
20	64QAM	1	0	20.45	20.54	20.54
20	64QAM	1	49	20.48	20.58	20.60
20	64QAM	1	99	20.62	20.61	20.65
20	64QAM	50	0	20.76	20.85	20.86
20	64QAM	50	24	20.88	20.89	20.91
20	64QAM	50	50	20.88	20.90	20.92
20	64QAM	100	0	20.88	20.89	20.92
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	20.66	20.78	20.78
15	QPSK	1	37	20.67	20.77	20.80
15	QPSK	1	74	20.86	20.86	20.87
15	QPSK	36	0	20.70	20.81	20.82
15	QPSK	36	20	20.78	20.84	20.89
15	QPSK	36	39	20.81	20.82	20.83
15	QPSK	75	0	20.82	20.82	20.84
15	16QAM	1	0	20.75	20.81	20.84
15	16QAM	1	37	20.75	20.86	20.86
15	16QAM	1	74	20.93	20.91	20.94
15	16QAM	36	0	20.73	20.80	20.82
15	16QAM	36	20	20.80	20.87	20.88
15	16QAM	36	39	20.84	20.83	20.88
15	16QAM	75	0	20.88	20.88	20.91
15	64QAM	1	0	20.49	20.59	20.60
15	64QAM	1	37	20.52	20.60	20.62
15	64QAM	1	74	20.68	20.68	20.72
15	64QAM	36	0	20.77	20.85	20.86
15	64QAM	36	20	20.81	20.89	20.90
15	64QAM	36	39	20.89	20.89	20.91
15	64QAM	75	0	20.88	20.88	20.91
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	20.61	20.75	20.77
10	QPSK	1	25	20.66	20.75	20.80



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	20.73	20.85	20.86
10	QPSK	25	0	20.68	20.79	20.78
10	QPSK	25	12	20.71	20.83	20.86
10	QPSK	25	25	20.72	20.82	20.83
10	QPSK	50	0	20.70	20.80	20.85
10	16QAM	1	0	20.72	20.84	20.86
10	16QAM	1	25	20.75	20.83	20.87
10	16QAM	1	49	20.79	20.87	20.93
10	16QAM	25	0	20.78	20.84	20.86
10	16QAM	25	12	20.79	20.86	20.91
10	16QAM	25	25	20.78	20.89	20.91
10	16QAM	50	0	20.80	20.87	20.92
10	64QAM	1	0	20.49	20.59	20.61
10	64QAM	1	25	20.50	20.59	20.61
10	64QAM	1	49	20.53	20.63	20.67
10	64QAM	25	0	20.78	20.89	20.90
10	64QAM	25	12	20.83	20.91	20.93
10	64QAM	25	25	20.83	20.92	20.92
10	64QAM	50	0	20.78	20.88	20.89
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	20.61	20.74	20.77
5	QPSK	1	12	20.64	20.75	20.80
5	QPSK	1	24	20.59	20.74	20.77
5	QPSK	12	0	20.67	20.77	20.80
5	QPSK	12	7	20.70	20.78	20.85
5	QPSK	12	13	20.67	20.77	20.83
5	QPSK	25	0	20.68	20.75	20.79
5	16QAM	1	0	20.68	20.79	20.81
5	16QAM	1	12	20.73	20.82	20.87
5	16QAM	1	24	20.74	20.87	20.89
5	16QAM	12	0	20.67	20.79	20.82
5	16QAM	12	7	20.72	20.83	20.86
5	16QAM	12	13	20.71	20.81	20.85
5	16QAM	25	0	20.76	20.86	20.89
5	64QAM	1	0	20.45	20.56	20.58
5	64QAM	1	12	20.47	20.58	20.62
5	64QAM	1	24	20.50	20.62	20.66
5	64QAM	12	0	20.72	20.81	20.87
5	64QAM	12	7	20.79	20.89	20.92
5	64QAM	12	13	20.78	20.87	20.89
5	64QAM	25	0	20.80	20.90	20.92



<LTE Band 41>

Power Selection				Head				
Transmit Antenna				Ant 2				
Max. Power				25				
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				39750	40185	40620	41055	41490
Frequency (MHz)				2506	2549.5	2593	2636.5	2680
20	QPSK	1	0	24.00	24.12	24.17	24.18	24.24
20	QPSK	1	49	23.93	23.97	24.08	24.12	24.18
20	QPSK	1	99	23.96	24.11	24.13	24.13	24.17
20	QPSK	50	0	23.07	23.11	23.19	23.22	23.29
20	QPSK	50	24	23.06	23.10	23.18	23.20	23.28
20	QPSK	50	50	23.00	23.09	23.17	23.19	23.21
20	QPSK	100	0	23.04	23.18	23.17	23.19	23.24
20	16QAM	1	0	23.11	23.18	23.28	23.29	23.39
20	16QAM	1	49	23.05	23.09	23.19	23.24	23.28
20	16QAM	1	99	23.04	23.18	23.20	23.23	23.27
20	16QAM	50	0	22.12	22.19	22.27	22.32	22.34
20	16QAM	50	24	22.12	22.27	22.25	22.30	22.35
20	16QAM	50	50	22.08	22.22	22.25	22.27	22.32
20	16QAM	100	0	22.12	22.25	22.26	22.27	22.31
20	64QAM	1	0	21.84	21.91	22.00	22.02	22.11
20	64QAM	1	49	21.77	21.80	21.93	21.96	22.01
20	64QAM	1	99	21.77	21.94	21.94	21.96	22.02
20	64QAM	50	0	21.12	21.17	21.25	21.28	21.36
20	64QAM	50	24	21.10	21.24	21.25	21.26	21.35
20	64QAM	50	50	21.08	21.22	21.22	21.26	21.30
20	64QAM	100	0	21.09	21.25	21.24	21.27	21.33
Channel				39725	40173	40620	41068	41515
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5
15	QPSK	1	0	24.03	24.07	24.19	24.19	24.20
15	QPSK	1	37	23.97	24.00	24.09	24.14	24.19
15	QPSK	1	74	24.01	24.16	24.16	24.20	24.18
15	QPSK	36	0	23.02	23.06	23.16	23.19	23.24
15	QPSK	36	20	23.05	23.06	23.17	23.21	23.25
15	QPSK	36	39	22.98	23.13	23.15	23.16	23.19
15	QPSK	75	0	23.01	23.16	23.18	23.19	23.25
15	16QAM	1	0	23.12	23.15	23.27	23.32	23.37
15	16QAM	1	37	23.08	23.08	23.20	23.24	23.29
15	16QAM	1	74	23.08	23.24	23.25	23.25	23.29
15	16QAM	36	0	22.03	22.08	22.20	22.22	22.27
15	16QAM	36	20	22.10	22.07	22.21	22.21	22.29
15	16QAM	36	39	22.03	22.15	22.17	22.20	22.25
15	16QAM	75	0	22.10	22.25	22.25	22.26	22.31
15	64QAM	1	0	21.85	21.88	22.02	22.03	22.10
15	64QAM	1	37	21.80	21.82	21.96	21.98	22.00
15	64QAM	1	74	21.81	21.96	21.97	21.99	22.02
15	64QAM	36	0	21.07	21.10	21.22	21.23	21.32
15	64QAM	36	20	21.10	21.12	21.22	21.26	21.30
15	64QAM	36	39	21.03	21.18	21.19	21.22	21.27
15	64QAM	75	0	21.08	21.21	21.25	21.25	21.30
Channel				39700	40160	40620	41080	41540
Frequency (MHz)				2501	2547	2593	2639	2685
10	QPSK	1	0	23.94	24.00	24.13	24.10	24.21
10	QPSK	1	25	23.86	23.96	24.04	24.02	24.12



FCC SAR TEST REPORT

Report No. : FA902116

10	QPSK	1	49	23.91	24.11	24.08	24.09	24.17
10	QPSK	25	0	23.00	23.01	23.14	23.12	23.29
10	QPSK	25	12	23.06	23.16	23.18	23.12	23.20
10	QPSK	25	25	22.91	23.08	23.07	23.14	23.15
10	QPSK	50	0	22.99	23.12	23.14	23.09	23.19
10	16QAM	1	0	23.09	23.14	23.19	23.23	23.29
10	16QAM	1	25	23.02	23.05	23.14	23.16	23.27
10	16QAM	1	49	23.03	23.14	23.14	23.20	23.20
10	16QAM	25	0	22.11	22.17	22.26	22.23	22.26
10	16QAM	25	12	22.10	22.23	22.20	22.22	22.34
10	16QAM	25	25	22.02	22.21	22.15	22.26	22.26
10	16QAM	50	0	22.10	22.16	22.24	22.18	22.27
10	64QAM	1	0	21.82	21.88	21.96	21.92	22.10
10	64QAM	1	25	21.71	21.71	21.86	21.91	22.01
10	64QAM	1	49	21.67	21.92	21.87	21.94	21.92
10	64QAM	25	0	21.09	21.10	21.22	21.27	21.28
10	64QAM	25	12	21.10	21.22	21.17	21.24	21.33
10	64QAM	25	25	21.00	21.22	21.22	21.20	21.28
10	64QAM	50	0	21.08	21.17	21.21	21.19	21.33
Channel				39675	40148	40620	41093	41565
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5
5	QPSK	1	0	23.95	24.01	24.13	24.16	24.20
5	QPSK	1	12	23.96	24.02	24.15	24.18	24.20
5	QPSK	1	24	23.88	23.96	24.08	24.11	24.15
5	QPSK	12	0	23.03	23.05	23.19	23.18	23.26
5	QPSK	12	7	23.00	23.08	23.19	23.20	23.25
5	QPSK	12	13	23.01	23.05	23.13	23.16	23.23
5	QPSK	25	0	22.99	23.07	23.16	23.17	23.24
5	16QAM	1	0	23.03	23.10	23.20	23.26	23.31
5	16QAM	1	12	23.06	23.11	23.25	23.28	23.35
5	16QAM	1	24	23.04	23.09	23.23	23.26	23.32
5	16QAM	12	0	22.02	22.08	22.18	22.23	22.29
5	16QAM	12	7	22.04	22.10	22.20	22.24	22.29
5	16QAM	12	13	22.01	22.06	22.19	22.24	22.28
5	16QAM	25	0	22.08	22.14	22.26	22.29	22.32
5	64QAM	1	0	21.75	21.84	21.97	22.02	22.08
5	64QAM	1	12	21.79	21.86	22.00	22.01	22.09
5	64QAM	1	24	21.76	21.84	21.98	22.00	22.05
5	64QAM	12	0	21.05	21.11	21.22	21.26	21.29
5	64QAM	12	7	21.06	21.15	21.25	21.27	21.34
5	64QAM	12	13	21.04	21.11	21.20	21.27	21.30
5	64QAM	25	0	21.11	21.16	21.26	21.31	21.36



Power Selection				Hotspot / Near body / Product Specific				
Transmit Antenna				Ant 2				
Max. Power				22				
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				39750	40185	40620	41055	41490
Frequency (MHz)				2506	2549.5	2593	2636.5	2680
20	QPSK	1	0	21.02	21.20	21.13	21.15	21.21
20	QPSK	1	49	20.90	20.96	21.08	21.13	21.17
20	QPSK	1	99	20.93	21.05	21.09	21.13	21.18
20	QPSK	50	0	21.02	21.07	21.20	21.23	21.30
20	QPSK	50	24	21.01	21.20	21.18	21.23	21.29
20	QPSK	50	50	20.98	21.15	21.18	21.19	21.24
20	QPSK	100	0	20.99	21.14	21.17	21.23	21.27
20	16QAM	1	0	21.07	21.10	21.28	21.29	21.40
20	16QAM	1	49	21.00	21.03	21.15	21.22	21.28
20	16QAM	1	99	21.00	21.15	21.21	21.23	21.26
20	16QAM	50	0	21.07	21.12	21.27	21.33	21.38
20	16QAM	50	24	21.07	21.24	21.26	21.31	21.39
20	16QAM	50	50	21.04	21.21	21.24	21.29	21.31
20	16QAM	100	0	21.06	21.25	21.26	21.31	21.36
20	64QAM	1	0	20.81	20.88	20.99	21.03	21.11
20	64QAM	1	49	20.75	20.78	20.91	20.95	21.01
20	64QAM	1	99	20.75	20.89	20.94	20.98	20.99
20	64QAM	50	0	21.06	21.12	21.22	21.27	21.35
20	64QAM	50	24	21.07	21.23	21.24	21.28	21.35
20	64QAM	50	50	21.04	21.18	21.23	21.26	21.31
20	64QAM	100	0	21.06	21.20	21.24	21.28	21.34
Channel				39725	40173	40620	41068	41515
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5
15	QPSK	1	0	20.98	21.07	21.16	21.21	21.27
15	QPSK	1	37	20.93	20.96	21.10	21.15	21.20
15	QPSK	1	74	20.98	21.09	21.16	21.19	21.18
15	QPSK	36	0	20.97	21.04	21.14	21.20	21.29
15	QPSK	36	20	20.99	21.02	21.17	21.23	21.26
15	QPSK	36	39	20.93	21.10	21.14	21.16	21.22
15	QPSK	75	0	21.00	21.14	21.16	21.18	21.24
15	16QAM	1	0	21.05	21.10	21.24	21.28	21.34
15	16QAM	1	37	21.02	21.04	21.18	21.23	21.28
15	16QAM	1	74	21.04	21.18	21.23	21.27	21.27
15	16QAM	36	0	20.99	21.03	21.18	21.23	21.31
15	16QAM	36	20	21.01	21.04	21.23	21.25	21.31
15	16QAM	36	39	20.97	21.16	21.18	21.23	21.27
15	16QAM	75	0	21.04	21.20	21.24	21.30	21.33
15	64QAM	1	0	20.80	20.86	20.97	21.03	21.09
15	64QAM	1	37	20.76	20.79	20.92	20.96	20.99
15	64QAM	1	74	20.78	20.91	20.95	20.99	21.00
15	64QAM	36	0	21.02	21.07	21.19	21.25	21.33
15	64QAM	36	20	21.05	21.08	21.20	21.25	21.30
15	64QAM	36	39	21.00	21.16	21.18	21.22	21.28
15	64QAM	75	0	21.05	21.20	21.22	21.27	21.31
Channel				39700	40160	40620	41080	41540
Frequency (MHz)				2501	2547	2593	2639	2685
10	QPSK	1	0	20.90	20.97	21.15	21.14	21.26
10	QPSK	1	25	20.95	20.97	21.09	21.16	21.19



FCC SAR TEST REPORT

Report No. : FA9O2116

10	QPSK	1	49	20.91	20.97	21.15	21.18	21.23
10	QPSK	25	0	20.96	20.99	21.14	21.21	21.27
10	QPSK	25	12	20.95	21.02	21.16	21.19	21.25
10	QPSK	25	25	20.94	20.98	21.12	21.19	21.24
10	QPSK	50	0	20.94	21.03	21.16	21.23	21.25
10	16QAM	1	0	20.99	21.04	21.24	21.27	21.38
10	16QAM	1	25	21.01	21.07	21.21	21.27	21.31
10	16QAM	1	49	20.99	21.02	21.20	21.28	21.31
10	16QAM	25	0	21.00	21.08	21.24	21.31	21.35
10	16QAM	25	12	21.03	21.07	21.25	21.33	21.36
10	16QAM	25	25	21.00	21.06	21.22	21.28	21.34
10	16QAM	50	0	21.02	21.06	21.26	21.30	21.34
10	64QAM	1	0	20.76	20.82	20.95	21.03	21.11
10	64QAM	1	25	20.75	20.81	20.94	20.97	21.00
10	64QAM	1	49	20.71	20.77	20.92	20.97	21.05
10	64QAM	25	0	21.06	21.11	21.24	21.31	21.39
10	64QAM	25	12	21.07	21.13	21.28	21.32	21.38
10	64QAM	25	25	21.04	21.12	21.24	21.28	21.36
10	64QAM	50	0	21.02	21.07	21.21	21.27	21.34
Channel				39675	40148	40620	41093	41565
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5
5	QPSK	1	0	20.92	20.97	21.11	21.17	21.21
5	QPSK	1	12	20.91	20.96	21.11	21.16	21.21
5	QPSK	1	24	20.81	20.93	21.08	21.10	21.13
5	QPSK	12	0	20.91	21.03	21.14	21.19	21.20
5	QPSK	12	7	20.91	21.02	21.16	21.20	21.28
5	QPSK	12	13	20.92	20.99	21.14	21.21	21.20
5	QPSK	25	0	20.89	20.98	21.12	21.15	21.23
5	16QAM	1	0	20.94	21.03	21.17	21.23	21.31
5	16QAM	1	12	20.97	21.04	21.21	21.25	21.33
5	16QAM	1	24	20.94	20.99	21.16	21.26	21.27
5	16QAM	12	0	20.94	21.00	21.18	21.25	21.26
5	16QAM	12	7	20.95	21.04	21.20	21.26	21.31
5	16QAM	12	13	20.94	21.00	21.19	21.24	21.26
5	16QAM	25	0	21.00	21.08	21.22	21.30	21.32
5	64QAM	1	0	20.71	20.77	20.92	20.97	21.02
5	64QAM	1	12	20.74	20.80	20.93	21.00	21.05
5	64QAM	1	24	20.72	20.75	20.92	20.96	21.01
5	64QAM	12	0	21.00	21.09	21.19	21.26	21.31
5	64QAM	12	7	21.01	21.08	21.23	21.27	21.33
5	64QAM	12	13	20.97	21.04	21.19	21.27	21.28
5	64QAM	25	0	21.03	21.11	21.22	21.29	21.33

13. LTE Carrier Aggregation combinations

General Note:

1. This device supports Carrier Aggregation on downlink only for inter and intra band, Uplink CA is not supported. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.

2CC Downlink Carrier Aggregation				3CC Downlink Carrier Aggregation			
Number	Combination	Restriction	Covered by Measurement Superset	Number	Combination	Restriction	Covered by Measurement Superset
1	CA_5B			1	CA_66D		
2	CA_66B			2	CA_2A-2A-4A		
3	CA_66C		3CC-1	3	CA_2A-2A-5A		
4	CA_7C			4	CA_2A-4A-4A		
5	CA_38C			5	CA_2A-5B		
6	CA_2A-2A			6	CA_4A-4A-5A		
7	CA_4A-4A			7	CA_4A-5B		
8	CA_5A-5A			8	CA_2A-2A-66A		
9	CA_66A-66A			9	CA_2A-66A-66A		
10	CA_7A-7A			10	CA_2A-66B		
11	CA_41A-41A			11	CA_2A-66C		
12	CA_2A-4A		3CC-2	12	CA_5A-5A-66A		
13	CA_2A-5A		3CC-3	13	CA_5A-66A-66A		
14	CA_4A-5A		3CC-6	14	CA_5A-66B		
15	CA_2A-66A		3CC-8	15	CA_5A-66C		
16	CA_5A-66A		3CC-12	16	CA_5B-66A		
17	CA_2A-13A		3CC-25	17	CA_2A-2A-13A		
18	CA_4A-13A		3CC-18	18	CA_4A-4A-13A		
19	CA_13A-66A		3CC-19	19	CA_13A-66A-66A		
20	CA_5A-7A			20	CA_13A-66B		
				21	CA_13A-66C		
				22	CA_66A-66C		
				23	CA_2A-4A-5A		
				24	CA_2A-5A-66A		
				25	CA_2A-4A-13A		
				26	CA_2A-13A-66A		

<Power verification when LTE Carrier Aggregation Active>
General Note:

- 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 non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.
- vi. The device supports uplink carrier aggregation for LTE B41C with a maximum of two 20MHz 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.
- 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.

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

<Two Carrier power verification>

Configure		PCC						SCC				Power		
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		5	10	836.5	20525	QPSK	1	25	7	20	2655	3100	24.78	24.83
Intra-Band	Non-Contiguous	2	20	1860	18700	QPSK	1	49	2	5	1987.5	1175	24.94	24.94
		4	20	1745	20300	QPSK	1	49	4	5	2112.5	1975	23.49	23.57
		5	10	836.5	20525	QPSK	1	25	5	5	891.5	2625	24.74	24.83
		66	20	1770	132572	QPSK	1	0	66	5	2112.5	66461	23.45	23.51
		7	20	2535	21100	QPSK	1	99	7	5	2687.5	3425	23.68	23.77
		41	20	2680	41490	QPSK	1	0	41	5	2545.8	39675	24.20	24.24
	Contiguous	5	10	831.6	20476	QPSK	1	0	5	10	886.50	2575	24.80	24.80
		66	15	1745	132322	QPSK	1	37	66	5	2154.30	66879	23.43	23.50
		7	20	2535	21100	QPSK	1	99	7	20	2674.80	3298	23.68	23.77
		38	20	2610	38150	QPSK	1	99	38	20	2590.20	37952	24.85	24.95



<Three Carrier power verification>

Configure	PCC							SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	2	20	1860	18700	QPSK	1	49	2	5	1987.5	1175	4	20	2132.5	2175	24.91	24.94
	2	20	1860	18700	QPSK	1	49	2	5	1987.5	1175	5	10	881.5	2525	24.89	24.94
	2	20	1860	18700	QPSK	1	49	4	20	2132.5	2175	4	5	2112.5	1975	24.88	24.94
	2	20	1860	18700	QPSK	1	49	5	10	876.6	2476	5	10	886.5	2575	24.92	24.94
	4	20	1745	20300	QPSK	1	49	4	5	2112.5	1975	5	10	881.5	2525	24.86	24.94
	4	20	1745	20300	QPSK	1	49	5	10	876.6	2476	5	10	886.5	2575	24.92	24.94
	2	20	1860	18700	QPSK	1	49	2	5	1987.5	1175	66	20	2155	66886	24.89	24.94
	2	20	1860	18700	QPSK	1	49	66	20	2155	66886	66	5	2112.5	66461	24.91	24.94
	2	20	1860	18700	QPSK	1	49	66	15	2155	66886	66	5	2164.3	66985	24.94	24.94
	2	20	1860	18700	QPSK	1	49	66	20	2155	66886	66	20	2174.8	67084	24.91	24.94
	5	10	836.5	20525	QPSK	1	25	5	5	891.5	2625	66	20	2155	66886	24.78	24.83
	5	10	836.5	20525	QPSK	1	25	66	20	2155	66886	66	5	2112.5	66461	24.79	24.83
	5	10	836.5	20525	QPSK	1	25	66	15	2155	66886	66	5	2164.3	66985	24.82	24.83
	5	10	836.5	20525	QPSK	1	25	66	20	2155	66886	66	20	2174.8	67084	24.73	24.83
	5	10	831.6	20476	QPSK	1	0	5	10	886.5	2575	66	20	2155	66886	24.76	24.80
	2	20	1860	18700	QPSK	1	49	2	5	1987.5	1175	13	10	751	5230	24.89	24.94
	4	20	1745	20300	QPSK	1	49	4	5	2112.5	1975	13	10	751	5230	24.93	24.94
	13	10	782	23230	QPSK	1	25	66	20	2155	66886	66	5	2112.5	66461	24.24	24.33
	13	10	782	23230	QPSK	1	25	66	15	2155	66886	66	5	2164.3	66985	24.26	24.33
	13	10	782	23230	QPSK	1	25	66	20	2155	66886	66	20	2174.8	67084	24.31	24.33
	66	20	1770	132572	QPSK	1	0	66	20	2155	66886	66	20	2174.8	67084	23.48	23.51
	2	20	1860	18700	QPSK	1	49	4	20	2132.5	2175	5	10	881.5	2525	24.92	24.94
	2	20	1860	18700	QPSK	1	49	5	10	881.5	2525	66	20	2155	66886	24.87	24.94
	2	20	1860	18700	QPSK	1	49	4	20	2132.5	2175	13	10	751	5230	24.84	24.94
	2	20	1860	18700	QPSK	1	49	13	10	751	5230	66	20	2155	66886	24.86	24.94
Intra-Band Contiguous	66	20	1770	132572	QPSK	1	0	66	20	2150.2	66838	66	20	2130.4	66640	23.42	23.51

14. WWAN OFF & WWAN ON WLAN Conducted Power

General Note:

1. For each antenna, transmit power in SISO operation is larger than (or equal to) the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode.
2. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is $< 1.6\text{W/kg}$ and SAR peak to location ratio ≤ 0.04 , no additional SAR measurements for MIMO.
3. 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.
4. 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).
5. 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.
6. 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 $\leq 0.4\text{ W/kg}$, 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 $> 0.4\text{ W/kg}$, 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 $\leq 0.8\text{ W/kg}$ or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is $> 0.8\text{ W/kg}$, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is $\leq 1.2\text{ W/kg}$ or all required channels are tested.



<2.4GHz WLAN>

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	15.00	15.00	99.02	13.70	14.00	98.63	12.90	13.00	12.70	13.00	15.81	16.00	98.98
		6	2437	14.80	15.00		13.60	14.00		12.70	13.00	12.60	13.00	15.66	16.00	
		11	2462	14.70	15.00		13.80	14.00		13.00	13.00	12.40	13.00	15.72	16.00	
		12	2467	14.80	15.00		13.80	14.00		13.00	13.00	12.40	13.00	15.72	16.00	
		13	2472	6.80	7.50		7.00	7.50		7.50	7.50	7.00	7.50	10.27	10.50	
	802.11g 6Mbps	1	2412	13.30	13.50	98.10	13.40	13.50	98.81	12.80	13.00	12.60	13.00	15.71	16.00	98.11
		6	2437	14.70	15.00		13.90	14.00		13.00	13.00	12.50	13.00	15.77	16.00	
		11	2462	14.70	15.00		13.70	14.00		12.60	13.00	11.80	13.00	15.23	16.00	
		12	2467	11.30	11.50		10.60	11.50		11.70	12.00	10.90	12.00	14.33	15.00	
		13	2472	-1.10	-1.00		-1.10	-1.00		0.10	-1.00	-2.60	-1.00	1.97	2.00	
	802.11n-HT20 MCS0	1	2412	14.80	15.00	97.96	13.80	14.00	97.46	12.70	13.00	12.60	13.00	15.66	16.00	97.71
		6	2437	14.70	15.00		13.80	14.00		13.00	13.00	12.50	13.00	15.77	16.00	
		11	2462	13.10	13.50		13.20	13.50		12.90	13.00	12.30	13.00	15.62	16.00	
		12	2467	11.70	12.00		11.70	12.00		11.60	12.00	10.80	12.00	14.23	15.00	
		13	2472	-1.10	-1.00		-1.10	-1.00		0.10	-1.00	-2.70	-1.00	1.93	2.00	
	802.11ac-VHT20 MCS0	1	2412	14.80	15.00	97.97	13.80	14.00	97.97	12.70	13.00	12.60	13.00	15.66	16.00	97.72
		6	2437	14.70	15.00		13.80	14.00		12.90	13.00	12.50	13.00	15.71	16.00	
		11	2462	13.40	13.50		13.40	13.50		13.00	13.00	12.30	13.00	15.67	16.00	
		12	2467	11.70	12.00		11.70	12.00		11.60	12.00	10.80	12.00	14.23	15.00	
13		2472	-1.10	-1.00	-1.10		-1.00	0.10		-1.00	-2.60	-1.00	1.97	2.00		

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	18.00	18.00	99.02	17.90	18.00	98.63	17.80	18.00	17.60	18.00	20.71	21.00	98.98
		6	2437	18.00	18.00		18.00	18.00		17.90	18.00	20.96	21.00			
		11	2462	16.00	16.00		15.70	16.00		16.00	16.00	15.30	16.00	18.67	19.00	
		12	2467	15.00	15.00		14.90	15.00		15.00	15.00	14.30	15.00	17.67	18.00	
		13	2472	6.80	7.50		7.00	7.50		7.50	7.50	7.00	7.50	10.27	10.50	
	802.11g 6Mbps	1	2412	13.56	14.00	98.10	13.50	14.00	98.81	13.24	13.50	13.12	13.50	16.19	16.50	98.11
		6	2437	17.68	18.00		17.59	18.00		17.68	18.00	17.29	18.00	20.50	21.00	
		11	2462	14.69	15.00		14.65	15.00		14.92	15.00	14.16	15.00	17.57	18.00	
		12	2467	11.28	11.50		11.19	11.50		11.99	12.00	11.34	12.00	14.69	15.00	
		13	2472	-1.33	-1.00		-1.35	-1.00		-0.07	-1.00	-2.77	-1.00	1.80	2.00	
	802.11n-HT20 MCS0	1	2412	14.51	15.00	97.96	14.50	15.00	97.46	14.35	14.50	14.38	14.50	17.38	17.50	97.71
		6	2437	17.50	18.00		17.55	18.00		17.63	18.00	17.42	18.00	20.54	21.00	
		11	2462	13.64	14.00		13.54	14.00		13.48	13.50	12.67	13.50	16.10	16.50	
		12	2467	11.66	12.00		11.56	12.00		12.00	12.00	11.30	12.00	14.68	15.00	
		13	2472	-1.32	-1.00		-1.17	-1.00		-0.08	-1.00	-2.66	-1.00	1.83	2.00	
	802.11ac-VHT20 MCS0	1	2412	14.52	15.00	97.97	14.50	15.00	97.97	14.77	15.00	14.79	15.00	17.79	18.00	97.72
		6	2437	17.50	18.00		17.58	18.00		17.66	18.00	17.44	18.00	20.56	21.00	
		11	2462	13.50	13.50		13.19	13.50		13.49	13.50	12.68	13.50	16.11	16.50	
		12	2467	11.70	12.00		11.65	12.00		12.00	12.00	11.37	12.00	14.71	15.00	
13		2472	-1.22	-1.00	-1.12		-1.00	-0.06		-1.00	-2.66	-1.00	1.84	2.00		

<5GHz WLAN>

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	11.80	12.00	98.10	11.70	12.00	98.10	11.80	12.00	11.10	12.00	14.47	15.00	98.10
		40	5200	11.80	12.00		11.70	12.00		11.90	12.00	10.80	12.00	14.45	15.00	
		44	5220	11.70	12.00		11.70	12.00		11.80	12.00	10.60	12.00	14.25	15.00	
		48	5240	11.80	12.00		11.90	12.00		11.80	12.00	10.30	12.00	14.12	15.00	
	802.11n-HT20 MCS0	36	5180	11.90	12.00	97.96	11.70	12.00	97.96	11.80	12.00	11.00	12.00	14.43	15.00	97.96
		40	5200	11.90	12.00		11.70	12.00		11.80	12.00	10.90	12.00	14.38	15.00	
		44	5220	11.90	12.00		11.70	12.00		11.80	12.00	10.50	12.00	14.21	15.00	
		48	5240	11.80	12.00		11.90	12.00		11.70	12.00	10.50	12.00	14.15	15.00	
	802.11n-HT40 MCS0	38	5190	11.50	11.50	95.45	11.20	11.50	95.67	12.00	12.00	11.30	12.00	14.67	15.00	96.21
		46	5230	12.00	12.00		11.80	12.00		12.00	12.00	11.20	12.00	14.63	15.00	
	802.11ac-VHT20 MCS0	36	5180	11.80	12.00	97.98	11.60	12.00	97.97	11.70	12.00	10.90	12.00	14.33	15.00	97.97
		40	5200	11.80	12.00		11.60	12.00		11.70	12.00	10.80	12.00	14.28	15.00	
		44	5220	11.80	12.00		11.60	12.00		11.70	12.00	10.40	12.00	14.11	15.00	
		48	5240	11.70	12.00		11.80	12.00		11.60	12.00	10.40	12.00	14.05	15.00	
	802.11ac-VHT40 MCS0	38	5190	11.40	12.00	94.95	11.10	12.00	94.95	11.90	12.00	11.20	12.00	14.57	15.00	94.95
		46	5230	11.90	12.00		11.70	12.00		11.90	12.00	11.10	12.00	14.53	15.00	
	802.11ac-VHT80 MCS0	42	5210	10.50	10.50	92.68	10.50	10.50	92.74	10.50	10.50	10.30	10.50	13.41	13.50	92.74

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	17.40	17.50	98.10	17.40	17.50	98.10	17.20	17.50	16.20	17.50	19.74	20.50	98.10
		40	5200	17.40	17.50		17.30	17.50		17.30	17.50	16.00	17.50	19.71	20.50	
		44	5220	17.20	17.50		17.40	17.50		17.40	17.50	16.20	17.50	19.85	20.50	
		48	5240	17.20	17.50		17.30	17.50		17.30	17.50	16.10	17.50	19.75	20.50	
	802.11n-HT20 MCS0	36	5180	17.30	17.50	97.96	17.20	17.50	97.96	17.20	17.50	16.10	17.50	19.70	20.50	97.96
		40	5200	17.30	17.50		17.20	17.50		17.50	17.50	16.20	17.50	19.91	20.50	
		44	5220	17.30	17.50		17.20	17.50		17.30	17.50	16.00	17.50	19.71	20.50	
		48	5240	17.30	17.50		17.30	17.50		17.20	17.50	16.00	17.50	19.65	20.50	
	802.11n-HT40 MCS0	38	5190	11.50	11.50	95.45	11.20	11.50	95.67	12.00	12.00	11.70	12.00	14.86	15.00	96.21
		46	5230	17.50	17.50		17.20	17.50		17.30	17.50	16.30	17.50	19.84	20.50	
	802.11ac-VHT20 MCS0	36	5180	17.40	17.50	97.98	17.30	17.50	97.97	17.20	17.50	16.40	17.50	19.74	20.50	97.97
		40	5200	17.30	17.50		17.20	17.50		17.50	17.50	16.20	17.50	19.97	20.50	
		44	5220	17.30	17.50		17.40	17.50		17.30	17.50	16.10	17.50	19.75	20.50	
		48	5240	17.40	17.50		17.40	17.50		17.30	17.50	16.00	17.50	19.71	20.50	
	802.11ac-VHT40 MCS0	38	5190	11.90	12.00	94.95	11.90	12.00	94.95	11.90	12.00	10.70	12.00	14.35	15.00	94.95
		46	5230	17.30	17.50		17.40	17.50		17.50	17.50	16.30	17.50	19.95	20.50	
	802.11ac-VHT80 MCS0	42	5210	10.50	10.50	92.68	10.50	10.50	92.74	10.50	10.50	10.30	10.50	13.41	13.50	92.74

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	52	5260	11.80	12.00	98.10	11.60	12.00	98.10	11.80	12.00	10.50	12.00	14.21	15.00	98.10
		56	5280	11.70	12.00		11.70	12.00		11.90	12.00	10.90	12.00	14.44	15.00	
		60	5300	11.60	12.00		11.90	12.00		11.70	12.00	10.40	12.00	14.11	15.00	
		64	5320	11.70	12.00		11.80	12.00		11.60	12.00	10.60	12.00	14.14	15.00	
	802.11n-HT20 MCS0	52	5260	11.80	12.00	97.96	11.70	12.00	97.96	11.70	12.00	10.50	12.00	14.15	15.00	97.96
		56	5280	11.80	12.00		11.70	12.00		11.70	12.00	11.00	12.00	14.37	15.00	
		60	5300	11.90	12.00		11.80	12.00		12.00	12.00	10.70	12.00	14.41	15.00	
		64	5320	11.90	12.00		11.70	12.00		11.60	12.00	10.60	12.00	14.14	15.00	
	802.11n-HT40 MCS0	54	5270	12.00	12.00	95.45	12.00	12.00	95.67	12.00	12.00	11.30	12.00	14.67	15.00	96.21
		62	5310	11.80	12.00		11.80	12.00		12.00	12.00	11.90	12.00	14.96	15.00	
	802.11ac-VHT20 MCS0	52	5260	11.70	12.00	97.98	11.60	12.00	97.97	11.60	12.00	10.40	12.00	14.10	15.00	97.97
		56	5280	11.70	12.00		11.70	12.00		11.60	12.00	10.90	12.00	14.27	15.00	
		60	5300	11.80	12.00		11.70	12.00		11.90	12.00	10.60	12.00	14.31	15.00	
		64	5320	11.80	12.00		11.60	12.00		11.50	12.00	10.50	12.00	14.04	15.00	
	802.11ac-VHT40 MCS0	54	5270	11.90	12.00	94.95	11.90	12.00	94.95	11.90	12.00	11.20	12.00	14.57	15.00	94.95
		62	5310	11.70	12.00		11.70	12.00		11.90	12.00	11.80	12.00	14.86	15.00	
802.11ac-VHT80 MCS0	58	5290	11.00	11.00	92.68	11.00	11.00	92.74	11.00	11.00	10.60	11.00	13.81	14.00	92.74	

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	52	5260	17.20	17.50	98.10	17.20	17.50	98.10	17.20	17.50	16.20	17.50	19.74	20.50	98.10
		56	5280	17.40	17.50		17.30	17.50		17.10	17.50	16.10	17.50	19.64	20.50	
		60	5300	17.40	17.50		17.40	17.50		17.20	17.50	16.20	17.50	19.75	20.50	
		64	5320	17.40	17.50		17.30	17.50		17.20	17.50	16.30	17.50	19.74	20.50	
	802.11n-HT20 MCS0	52	5260	17.30	17.50	97.96	17.30	17.50	97.96	17.10	17.50	16.10	17.50	19.64	20.50	97.96
		56	5280	17.30	17.50		17.30	17.50		17.30	17.50	16.40	17.50	19.88	20.50	
		60	5300	17.30	17.50		17.20	17.50		17.30	17.50	16.50	17.50	19.93	20.50	
		64	5320	17.20	17.50		17.20	17.50		17.20	17.50	16.30	17.50	19.78	20.50	
	802.11n-HT40 MCS0	54	5270	17.50	17.50	95.45	17.50	17.50	95.67	17.50	17.50	17.20	17.50	20.36	20.50	96.21
		62	5310	13.20	13.50		13.50	13.50		13.50	13.50	13.40	13.50	16.46	16.50	
	802.11ac-VHT20 MCS0	52	5260	17.40	17.50	97.98	17.40	17.50	97.97	17.20	17.50	16.10	17.50	19.70	20.50	97.97
		56	5280	17.40	17.50		17.40	17.50		17.40	17.50	16.40	17.50	19.94	20.50	
		60	5300	17.40	17.50		17.40	17.50		17.40	17.50	16.50	17.50	19.98	20.50	
		64	5320	17.30	17.50		17.40	17.50		17.20	17.50	16.40	17.50	19.83	20.50	
	802.11ac-VHT40 MCS0	54	5270	17.40	17.50	94.95	17.40	17.50	94.95	17.50	17.50	16.30	17.50	19.95	20.50	94.95
		62	5310	13.40	13.50		13.40	13.50		13.30	13.50	12.20	13.50	15.80	16.50	
802.11ac-VHT80 MCS0	58	5290	11.00	11.00	92.68	11.00	11	92.74	11.00	11	10.60	11	13.81	14	92.74	

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	100	5500	11.30	11.50	98.10	13.80	14.00	98.10	11.60	12.00	11.30	12.00	14.46	15.00	98.10
		116	5580	11.40	11.50		13.90	14.00		11.60	12.00	11.80	12.00	14.71	15.00	
		124	5620	11.40	11.50		13.80	14.00		11.40	12.00	11.90	12.00	14.67	15.00	
		132	5660	11.40	11.50		13.70	14.00		11.40	12.00	11.90	12.00	14.67	15.00	
		144	5720	11.20	11.50		13.90	14.00		11.20	12.00	11.80	12.00	14.85	15.00	
	802.11n-HT20 MCS0	100	5500	11.40	11.50	97.96	13.70	14.00	97.96	11.90	12.00	11.60	12.00	14.76	15.00	97.96
		116	5580	11.30	11.50		13.90	14.00		11.50	12.00	11.80	12.00	14.66	15.00	
		124	5620	11.30	11.50		13.80	14.00		11.40	12.00	11.90	12.00	14.67	15.00	
		132	5660	11.30	11.50		13.70	14.00		11.50	12.00	11.80	12.00	14.66	15.00	
		144	5720	11.30	11.50		13.90	14.00		10.60	12.00	11.90	12.00	14.31	15.00	
	802.11n-HT40 MCS0	102	5510	11.50	11.50	95.45	12.70	13.00	95.67	11.90	12.00	11.90	12.00	14.91	15.00	96.21
		110	5550	11.50	11.50		14.00	14.00		11.90	12.00	12.00	12.00	14.96	15.00	
		126	5630	11.50	11.50		14.00	14.00		11.90	12.00	12.00	12.00	14.96	15.00	
		134	5670	11.50	11.50		14.00	14.00		11.90	12.00	12.00	12.00	14.96	15.00	
		142	5710	11.50	11.50		14.00	14.00		11.90	12.00	12.00	12.00	14.96	15.00	
	802.11ac-VHT20 MCS0	100	5500	11.30	11.50	97.98	13.60	14.00	97.97	11.80	12.00	11.50	12.00	14.66	15.00	97.97
		116	5580	11.20	11.50		13.80	14.00		11.40	12.00	11.70	12.00	14.56	15.00	
		124	5620	11.20	11.50		13.80	14.00		11.30	12.00	11.80	12.00	14.82	15.00	
		132	5660	11.20	11.50		13.70	14.00		11.40	12.00	11.70	12.00	14.56	15.00	
		144	5720	11.20	11.50		13.80	14.00		10.50	12.00	11.80	12.00	14.21	15.00	
	802.11ac-VHT40 MCS0	102	5510	11.40	11.50	94.95	12.60	13.00	94.95	11.80	12.00	11.80	12.00	14.81	15.00	94.95
		110	5550	11.40	11.50		13.90	14.00		11.80	12.00	11.90	12.00	14.86	15.00	
		126	5630	11.40	11.50		13.90	14.00		11.80	12.00	11.90	12.00	14.86	15.00	
		134	5670	11.40	11.50		13.90	14.00		11.80	12.00	11.90	12.00	14.86	15.00	
		142	5710	11.40	11.50		13.90	14.00		11.80	12.00	11.90	12.00	14.86	15.00	
	802.11ac-VHT80 MCS0	106	5530	9.80	10.00	92.68	10.00	10.00	92.74	10.70	11.00	10.70	11.00	13.71	14.00	92.74
		122	5610	11.50	11.50		13.80	14.00		11.90	12.00	12.00	12.00	14.96	15.00	
138		5690	11.40	11.50	14.00		14.00	11.80		12.00	12.00	12.00	14.91	15.00		



Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.40	17.50	98.10	17.40	17.50	98.10	17.20	17.50	16.60	17.50	19.92	20.50	98.10
		116	5580	17.40	17.50		17.40	17.50		16.90	17.50	16.70	17.50	19.81	20.50	
		124	5620	17.40	17.50		17.30	17.50		16.50	17.50	17.20	17.50	19.87	20.50	
		132	5660	17.40	17.50		17.30	17.50		16.20	17.50	17.30	17.50	19.80	20.50	
		144	5720	17.50	17.50		17.30	17.50		16.60	17.50	17.30	17.50	19.97	20.50	
	802.11n-HT20 MCS0	100	5500	17.30	17.50	97.96	17.20	17.50	97.96	17.10	17.50	16.50	17.50	19.82	20.50	97.96
		116	5580	17.40	17.50		17.30	17.50		16.80	17.50	16.60	17.50	19.71	20.50	
		124	5620	17.00	17.50		17.20	17.50		16.40	17.50	17.10	17.50	19.77	20.50	
		132	5660	17.40	17.50		17.20	17.50		16.10	17.50	17.30	17.50	19.75	20.50	
		144	5720	17.30	17.50		17.10	17.50		16.60	17.50	17.20	17.50	19.92	20.50	
	802.11n-HT40 MCS0	102	5510	12.80	13.00	95.45	12.70	13.00	95.67	12.80	13.00	12.70	13.00	15.67	16.00	96.21
		110	5550	17.40	17.50		17.30	17.50		17.40	17.50	17.40	17.50	20.13	20.50	
		126	5630	17.30	17.50		17.30	17.50		17.30	17.50	17.30	17.50	20.02	20.50	
		134	5670	17.30	17.50		17.30	17.50		17.30	17.50	17.30	17.50	20.27	20.50	
		142	5710	17.30	17.50		17.30	17.50		17.30	17.50	17.30	17.50	20.18	20.50	
	802.11ac-VHT20 MCS0	100	5500	17.50	17.50	98.00	17.50	17.50	97.97	17.40	17.50	17.50	17.50	20.46	20.50	97.97
		116	5580	17.50	17.50		17.30	17.50		17.40	17.50	17.50	17.50	20.46	20.50	
		124	5620	17.50	17.50		17.50	17.50		17.20	17.50	17.30	17.50	20.21	20.50	
		132	5660	17.50	17.50		17.50	17.50		17.40	17.50	17.40	17.50	20.44	20.50	
		144	5720	17.50	17.50		17.20	17.50		17.40	17.50	17.50	17.50	20.46	20.50	
	802.11ac-VHT40 MCS0	102	5510	12.90	13.00	94.95	12.90	13.00	94.95	12.90	13.00	12.50	13.00	15.71	16.00	94.95
		110	5550	17.40	17.50		17.40	17.50		16.40	17.50	17.00	17.50	19.72	20.50	
		126	5630	17.30	17.50		17.40	17.50		16.70	17.50	17.20	17.50	19.97	20.50	
		134	5670	17.40	17.50		17.40	17.50		16.00	17.50	17.40	17.50	19.77	20.50	
		142	5710	17.40	17.50		17.30	17.50		16.30	17.50	17.20	17.50	19.78	20.50	
	802.11ac-VHT80 MCS0	106	5530	9.80	10.00	92.68	10.00	10.00	92.74	10.70	11.00	10.70	11.00	13.71	14.00	92.74
		122	5610	17.40	17.50		17.30	17.50		17.10	17.50	17.50	17.50	20.31	20.50	
		138	5690	17.50	17.50		17.50	17.50		17.40	17.50	17.50	17.50	20.46	20.50	

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a MCS0	149	5745	11.90	12.00	98.10	11.70	12.00	98.10	11.10	12.00	12.00	12.00	14.58	15.00	98.10
		157	5785	11.80	12.00		11.90	12.00		11.20	12.00	11.70	12.00	14.47	15.00	
		165	5825	11.90	12.00		11.80	12.00		11.10	12.00	11.70	12.00	14.42	15.00	
	802.11n-HT20 MCS0	149	5745	11.70	12.00	97.96	11.70	12.00	97.96	10.60	12.00	11.60	12.00	14.14	15.00	97.96
		157	5785	11.70	12.00		11.70	12.00		11.10	12.00	11.80	12.00	14.47	15.00	
		165	5825	11.70	12.00		11.80	12.00		11.10	12.00	11.70	12.00	14.42	15.00	
	802.11n-HT40 MCS0	151	5755	12.00	12.00	95.45	12.00	12.00	95.67	11.60	12.00	12.00	12.00	14.81	15.00	96.21
		159	5795	12.00	12.00		12.00	12.00		12.00	12.00	11.90	12.00	14.96	15.00	
	802.11ac-VHT20 MCS0	149	5745	11.60	12.00	97.98	11.60	12.00	97.97	11.00	12.00	12.00	12.00	14.54	15.00	97.97
		157	5785	11.60	12.00		11.60	12.00		11.00	12.00	11.70	12.00	14.37	15.00	
		165	5825	11.60	12.00		11.70	12.00		11.00	12.00	11.60	12.00	14.32	15.00	
	802.11ac-VHT40 MCS0	151	5755	11.90	12.00	94.95	11.90	12.00	94.95	11.50	12.00	11.90	12.00	14.71	15.00	94.95
		159	5795	11.90	12.00		11.90	12.00		11.90	12.00	11.80	12.00	14.86	15.00	
	802.11ac-VHT80 MCS0	155	5775	11.70	12.00	92.68	12.00	12.00	92.74	11.80	12.00	12.00	12.00	14.91	15.00	92.74



Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a MCS0	149	5745	17.40	17.50	98.10	17.30	17.50	98.10	16.60	17.50	17.30	17.50	19.97	20.50	98.10
		157	5785	17.40	17.50		17.40	17.50		16.90	17.50	16.70	17.50	19.81	20.50	
		165	5825	17.40	17.50		17.40	17.50		16.70	17.50	17.10	17.50	19.91	20.50	
	802.11n-HT20 MCS0	149	5745	17.20	17.50	97.96	17.30	17.50	97.96	17.20	17.50	17.50	17.50	20.41	20.50	97.96
		157	5785	17.30	17.50		17.40	17.50		17.30	17.50	17.20	17.50	20.26	20.50	
		165	5825	17.30	17.50		17.30	17.50		17.20	17.50	17.40	17.50	20.31	20.50	
	802.11n-HT40 MCS0	151	5755	17.50	17.50	95.45	17.50	17.50	95.67	17.30	17.50	17.50	17.50	20.41	20.50	96.21
		159	5795	17.50	17.50		17.50	17.50		17.50	17.50	17.20	17.50	20.36	20.50	
	802.11ac-VHT20 MCS0	149	5745	17.30	17.50	97.98	17.40	17.50	97.97	16.70	17.50	17.20	17.50	19.97	20.50	97.97
		157	5785	17.30	17.50		17.40	17.50		17.40	17.50	17.20	17.50	20.31	20.50	
		165	5825	17.40	17.50		17.40	17.50		17.20	17.50	17.50	17.50	20.36	20.50	
	802.11ac-VHT40 MCS0	151	5755	17.40	17.50	94.95	17.40	17.50	94.95	16.50	17.50	17.20	17.50	19.87	20.50	94.95
		159	5795	17.40	17.50		17.40	17.50		17.40	17.50	17.40	17.50	20.41	20.50	
	802.11ac-VHT80 MCS0	155	5775	17.30	17.50	92.68	17.50	17.50	92.74	17.40	17.50	17.50	17.50	20.46	20.50	92.74

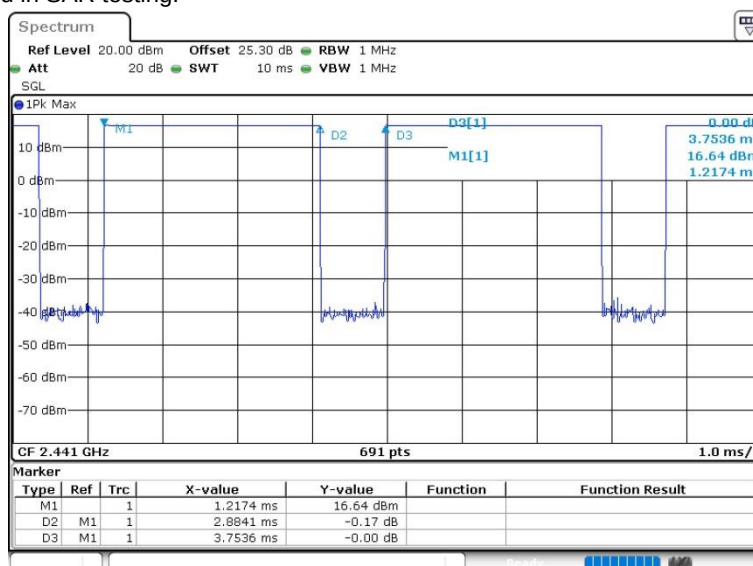
15. Bluetooth Conducted RF Output Power (Unit: dBm)

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	17.98	12.93	12.38
	CH 39	2441	17.84	12.12	12.22
	CH 78	2480	16.78	12.07	11.49
Tune-up Limit			18	13	13

Mode	Channel	Frequency (MHz)	Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	9.32	9.32
	CH 19	2440	9.36	9.27
	CH 39	2480	8.88	8.87
Tune-up Limit			10	10

General Note:

- For 2.4GHz Bluetooth SAR testing was selected 1Mbps due to its highest average power and the duty cycle is 76.84% considered in SAR testing.



16. RF Exposure position consideration

Positions for SAR tests; Hotspot mode						
Antennas	Front	Back	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 0	Yes	Yes	No	Yes	Yes	Yes
WWAN Ant 1	Yes	Yes	Yes	No	No	Yes
WWAN Ant 2	Yes	Yes	No	Yes	Yes	No
WWAN Ant 3	Yes	Yes	Yes	No	No	Yes
WLAN/BT Ant 0	Yes	Yes	Yes	No	Yes	No
WLAN Ant 1	Yes	Yes	Yes	No	Yes	No

General Note:

- Referring to KDB 941225 D06 v02r01, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge
- The detail antenna location refers to operational description.

17. 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 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 WLAN/BT: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
 - e. 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 Reported TDD LTE SAR = 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 only when the measured SAR is ≥ 0.8 W/kg.
4. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. Per KDB 648474 D04v01r03, for WWAN / 2.4GHz, 5.2GHz and 5.8GHz WLAN and Bluetooth hotspot SAR was < 1.2 W/kg, therefore, the extremity SAR was not necessary even the overall diagonal dimension is > 16 cm. only 5.3GHz and 5.5GHz WLAN extremity is required.
6. In section 17 WWAN SAR testing, "WiFi on / WiFi off" means the same power limits apply to WiFi on or WiFi off in all mode. in section17 WiFi/BT SAR testing, "WWAN on / WWAN off" means the same power limit apply to WWAN on or WWAN off in all mode.

GSM Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE / DTM 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. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
2. Other configurations of GSM / GPRS / EDGE / DTM 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.

UMTS Note:

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

**CDMA Note:**

1. Per KDB 941225 D01v03r01, SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55.
2. Per KDB 941225 D01v03r01, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
3. Per KDB 941225 D01v03r01, for Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH), with FCH only as the primary mode.

LTE Note:

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

WLAN 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. When in MIMO SAR testing, if the hot spots are separated the scaling factor would scale each hot spot based on the difference between the power for that transmit antenna and the maximum rated power, if the hot spot were not separable or too much overlap which the scaling factor is the worst case rated power/measured power across the two chains in SAR calculation.
6. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

17.1 Head SAR

<GSM SAR>

WiFi off / WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
01	GSM850_Ant 0	GPRS (4 Tx slots)	Right Cheek	0mm	251	848.8	27.57	29.00	1.390	-0.02	0.293	0.407
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Tilted	0mm	251	848.8	27.57	29.00	1.390	-0.13	0.120	0.167
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	251	848.8	27.57	29.00	1.390	0.11	0.222	0.309
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Tilted	0mm	251	848.8	27.57	29.00	1.390	-0.05	0.142	0.197

WiFi off / WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Cheek	0mm	512	1850.2	24.85	26.50	1.462	0.01	0.089	0.130
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Tilted	0mm	512	1850.2	24.85	26.50	1.462	-0.06	0.094	0.137
02	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	512	1850.2	24.85	26.50	1.462	-0.11	0.156	0.228
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Tilted	0mm	512	1850.2	24.85	26.50	1.462	0.03	0.063	0.092

<WCDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	9538	1907.6	24.82	25.10	1.067	0.09	0.390	0.416
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	9538	1907.6	24.82	25.10	1.067	0.09	0.299	0.319
03	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	9538	1907.6	24.82	25.10	1.067	-0.1	0.626	0.668
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	9538	1907.6	24.82	25.10	1.067	0.05	0.219	0.234

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	9538	1907.6	22.69	23.20	1.125	-0.18	0.277	0.312
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	9538	1907.6	22.69	23.20	1.125	0.04	0.202	0.227
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	9538	1907.6	22.69	23.20	1.125	-0.1	0.484	0.544
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	9538	1907.6	22.69	23.20	1.125	0	0.167	0.188

WiFi off / WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	1312	1712.4	23.31	24.00	1.172	0.19	0.173	0.203
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	1312	1712.4	23.31	24.00	1.172	-0.02	0.233	0.273
04	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	1312	1712.4	23.31	24.00	1.172	0.12	0.292	0.342
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	1312	1712.4	23.31	24.00	1.172	0.05	0.174	0.204

WiFi off / WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
05	WCDMA V_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	4132	826.4	23.81	24.50	1.172	0.1	0.204	0.239
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	4132	826.4	23.81	24.50	1.172	-0.13	0.112	0.131
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	4132	826.4	23.81	24.50	1.172	-0.1	0.200	0.234
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	4132	826.4	23.81	24.50	1.172	-0.04	0.129	0.151

<CDMA SAR>

WiFi off / WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
06	CDMA BC0_Ant 0	1xRTT RC3 SO55	Right Cheek	0mm	1013	824.7	24.67	25.50	1.211	0.13	0.308	0.373
	CDMA BC0_Ant 0	1xRTT RC3 SO55	Right Tilted	0mm	1013	824.7	24.67	25.50	1.211	0.03	0.181	0.219
	CDMA BC0_Ant 0	1xRTT RC3 SO55	Left Cheek	0mm	1013	824.7	24.67	25.50	1.211	-0.04	0.264	0.320
	CDMA BC0_Ant 0	1xRTT RC3 SO55	Left Tilted	0mm	1013	824.7	24.67	25.50	1.211	0.06	0.183	0.222

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Right Cheek	0mm	1175	1908.75	24.33	25.00	1.167	-0.17	0.316	0.369
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Right Tilted	0mm	1175	1908.75	24.33	25.00	1.167	0.05	0.251	0.293
07	CDMA BC1_Ant 0	1xRTT RC3 SO55	Left Cheek	0mm	1175	1908.75	24.33	25.00	1.167	-0.14	0.562	0.656
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Left Tilted	0mm	1175	1908.75	24.33	25.00	1.167	0.06	0.178	0.208

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Right Cheek	0mm	25	1851.25	21.69	22.50	1.205	-0.14	0.151	0.182
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Right Tilted	0mm	25	1851.25	21.69	22.50	1.205	-0.03	0.178	0.214
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Left Cheek	0mm	25	1851.25	21.69	22.50	1.205	-0.13	0.296	0.357
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Left Tilted	0mm	25	1851.25	21.69	22.50	1.205	0.11	0.117	0.141

WiFi off / WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
08	CDMA BC10_Ant 0	1xRTT RC3 SO55	Right Cheek	0mm	476	817.9	24.60	25.50	1.230	0.05	0.280	0.344
	CDMA BC10_Ant 0	1xRTT RC3 SO55	Right Tilted	0mm	476	817.9	24.60	25.50	1.230	0.1	0.166	0.204
	CDMA BC10_Ant 0	1xRTT RC3 SO55	Left Cheek	0mm	476	817.9	24.60	25.50	1.230	0.01	0.246	0.303
	CDMA BC10_Ant 0	1xRTT RC3 SO55	Left Tilted	0mm	476	817.9	24.60	25.50	1.230	0	0.169	0.208

<FDD LTE SAR>

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
09	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Cheek	0mm	21100	2535	23.77	24.50	1.183	-0.09	0.456	0.539
	LTE Band 7_Ant 2	20M	QPSK	50	50	Right Cheek	0mm	21100	2535	22.76	23.50	1.186	0	0.366	0.434
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Tilted	0mm	21100	2535	23.77	24.50	1.183	-0.03	0.084	0.099
	LTE Band 7_Ant 2	20M	QPSK	50	50	Right Tilted	0mm	21100	2535	22.76	23.50	1.186	0.02	0.066	0.078
	LTE Band 7_Ant 2	20M	QPSK	1	99	Left Cheek	0mm	21100	2535	23.77	24.50	1.183	-0.01	0.212	0.251
	LTE Band 7_Ant 2	20M	QPSK	50	50	Left Cheek	0mm	21100	2535	22.76	23.50	1.186	-0.03	0.173	0.205
	LTE Band 7_Ant 2	20M	QPSK	1	99	Left Tilted	0mm	21100	2535	23.77	24.50	1.183	-0.03	0.148	0.175
	LTE Band 7_Ant 2	20M	QPSK	50	50	Left Tilted	0mm	21100	2535	22.76	23.50	1.186	-0.15	0.111	0.132
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Cheek	0mm	21100	2535	22.15	23.00	1.216	-0.03	0.314	0.382
	LTE Band 7_Ant 2	20M	QPSK	50	50	Right Cheek	0mm	21100	2535	22.16	23.00	1.213	-0.15	0.323	0.392
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Tilted	0mm	21100	2535	22.15	23.00	1.216	0	0.058	0.071
	LTE Band 7_Ant 2	20M	QPSK	50	50	Right Tilted	0mm	21100	2535	22.16	23.00	1.213	0.06	0.056	0.068
	LTE Band 7_Ant 2	20M	QPSK	1	99	Left Cheek	0mm	21100	2535	22.15	23.00	1.216	-0.1	0.154	0.187
	LTE Band 7_Ant 2	20M	QPSK	50	50	Left Cheek	0mm	21100	2535	22.16	23.00	1.213	-0.08	0.162	0.197
	LTE Band 7_Ant 2	20M	QPSK	1	99	Left Tilted	0mm	21100	2535	22.15	23.00	1.216	-0.01	0.104	0.126
	LTE Band 7_Ant 2	20M	QPSK	50	50	Left Tilted	0mm	21100	2535	22.16	23.00	1.213	-0.02	0.102	0.124

WiFi off / WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
10	LTE Band 12_Ant 0	10M	QPSK	1	49	Right Cheek	0mm	23095	707.5	24.92	25.70	1.197	-0.14	0.137	0.164
	LTE Band 12_Ant 0	10M	QPSK	25	12	Right Cheek	0mm	23095	707.5	24.03	24.70	1.167	0.01	0.106	0.124
	LTE Band 12_Ant 0	10M	QPSK	1	49	Right Tilted	0mm	23095	707.5	24.92	25.70	1.197	0.08	0.074	0.089
	LTE Band 12_Ant 0	10M	QPSK	25	12	Right Tilted	0mm	23095	707.5	24.03	24.70	1.167	0.03	0.057	0.067
	LTE Band 12_Ant 0	10M	QPSK	1	49	Left Cheek	0mm	23095	707.5	24.92	25.70	1.197	-0.1	0.118	0.141
	LTE Band 12_Ant 0	10M	QPSK	25	12	Left Cheek	0mm	23095	707.5	24.03	24.70	1.167	-0.03	0.097	0.113
	LTE Band 12_Ant 0	10M	QPSK	1	49	Left Tilted	0mm	23095	707.5	24.92	25.70	1.197	0.05	0.067	0.080
	LTE Band 12_Ant 0	10M	QPSK	25	12	Left Tilted	0mm	23095	707.5	24.03	24.70	1.167	0.04	0.052	0.061

WiFi off / WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
11	LTE Band 13_Ant 0	10M	QPSK	1	25	Right Cheek	0mm	23230	782	24.33	25.30	1.250	0	0.266	0.333
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	23230	782	23.39	24.30	1.233	-0.06	0.207	0.255
	LTE Band 13_Ant 0	10M	QPSK	1	25	Right Tilted	0mm	23230	782	24.33	25.30	1.250	0.02	0.154	0.193
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	23230	782	23.39	24.30	1.233	0.02	0.119	0.147
	LTE Band 13_Ant 0	10M	QPSK	1	25	Left Cheek	0mm	23230	782	24.33	25.30	1.250	0	0.231	0.289
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	23230	782	23.39	24.30	1.233	0.02	0.179	0.221
	LTE Band 13_Ant 0	10M	QPSK	1	25	Left Tilted	0mm	23230	782	24.33	25.30	1.250	0	0.161	0.201
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	23230	782	23.39	24.30	1.233	0.03	0.124	0.153

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	26590	1905	24.75	25.10	1.084	-0.13	0.332	0.360
	LTE Band 25_Ant 0	20M	QPSK	50	24	Right Cheek	0mm	26590	1905	23.74	24.10	1.086	-0.03	0.278	0.302
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	26590	1905	24.75	25.10	1.084	0.13	0.318	0.345
	LTE Band 25_Ant 0	20M	QPSK	50	24	Right Tilted	0mm	26590	1905	23.74	24.10	1.086	0.02	0.267	0.290
12	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	26590	1905	24.75	25.10	1.084	-0.14	0.639	0.693
	LTE Band 25_Ant 0	20M	QPSK	50	24	Left Cheek	0mm	26590	1905	23.74	24.10	1.086	0	0.510	0.554
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	26590	1905	24.75	25.10	1.084	0.05	0.306	0.332
	LTE Band 25_Ant 0	20M	QPSK	50	24	Left Tilted	0mm	26590	1905	23.74	24.10	1.086	-0.01	0.247	0.268

WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	26590	1905	22.20	23.20	1.259	0.15	0.186	0.234
	LTE Band 25_Ant 0	20M	QPSK	50	24	Right Cheek	0mm	26590	1905	22.29	23.20	1.233	0.12	0.195	0.240
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	26590	1905	22.20	23.20	1.259	0.07	0.175	0.220
	LTE Band 25_Ant 0	20M	QPSK	50	24	Right Tilted	0mm	26590	1905	22.29	23.20	1.233	0.02	0.181	0.223
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	26590	1905	22.20	23.20	1.259	-0.03	0.349	0.439
	LTE Band 25_Ant 0	20M	QPSK	50	24	Left Cheek	0mm	26590	1905	22.29	23.20	1.233	0.03	0.350	0.432
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	26590	1905	22.20	23.20	1.259	0.04	0.173	0.218
	LTE Band 25_Ant 0	20M	QPSK	50	24	Left Tilted	0mm	26590	1905	22.29	23.20	1.233	0.07	0.175	0.216

WiFi off / WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Cheek	0mm	26865	831.5	24.82	25.70	1.225	-0.03	0.304	0.372
	LTE Band 26_Ant 0	15M	QPSK	36	20	Right Cheek	0mm	26865	831.5	23.87	24.70	1.211	0.14	0.254	0.307
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Tilted	0mm	26865	831.5	24.82	25.70	1.225	0.01	0.183	0.224
	LTE Band 26_Ant 0	15M	QPSK	36	20	Right Tilted	0mm	26865	831.5	23.87	24.70	1.211	0.06	0.153	0.185
13	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Cheek	0mm	26865	831.5	24.82	25.70	1.225	-0.01	0.325	0.398
	LTE Band 26_Ant 0	15M	QPSK	36	20	Left Cheek	0mm	26865	831.5	23.87	24.70	1.211	0.16	0.264	0.320
	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Tilted	0mm	26865	831.5	24.82	25.70	1.225	0.03	0.207	0.253
	LTE Band 26_Ant 0	15M	QPSK	36	20	Left Tilted	0mm	26865	831.5	23.87	24.70	1.211	0	0.169	0.205

WiFi off / WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	132572	1770	23.51	24.50	1.256	0.07	0.209	0.263
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	132572	1770	22.40	23.50	1.288	0.06	0.164	0.211
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	132572	1770	23.51	24.50	1.256	0.11	0.231	0.290
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	132572	1770	22.40	23.50	1.288	0.01	0.179	0.231
14	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	132572	1770	23.51	24.50	1.256	0.16	0.345	0.433
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	132572	1770	22.40	23.50	1.288	-0.04	0.276	0.356
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	132572	1770	23.51	24.50	1.256	0.06	0.197	0.247
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	132572	1770	22.40	23.50	1.288	-0.08	0.153	0.197

<TDD LTE SAR>

WiFi off / WiFi on																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
15	LTE Band 38_Ant 2	20M	QPSK	1	99	Right Cheek	0mm	38000	2595	24.90	25.70	1.202	62.9	1.006	-0.09	0.293	0.354
	LTE Band 38_Ant 2	20M	QPSK	50	50	Right Cheek	0mm	38000	2595	23.95	24.70	1.189	62.9	1.006	0.07	0.241	0.288
	LTE Band 38_Ant 2	20M	QPSK	1	99	Right Tilted	0mm	38000	2595	24.90	25.70	1.202	62.9	1.006	-0.11	0.093	0.112
	LTE Band 38_Ant 2	20M	QPSK	50	50	Right Tilted	0mm	38000	2595	23.95	24.70	1.189	62.9	1.006	-0.05	0.076	0.091
	LTE Band 38_Ant 2	20M	QPSK	1	99	Left Cheek	0mm	38000	2595	24.90	25.70	1.202	62.9	1.006	-0.06	0.149	0.180
	LTE Band 38_Ant 2	20M	QPSK	50	50	Left Cheek	0mm	38000	2595	23.95	24.70	1.189	62.9	1.006	-0.03	0.120	0.143
	LTE Band 38_Ant 2	20M	QPSK	1	99	Left Tilted	0mm	38000	2595	24.90	25.70	1.202	62.9	1.006	0.09	0.152	0.184
	LTE Band 38_Ant 2	20M	QPSK	50	50	Left Tilted	0mm	38000	2595	23.95	24.70	1.189	62.9	1.006	0.05	0.121	0.145

WiFi off / WiFi on																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
16	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	41490	2680	24.24	25.00	1.191	62.90	1.006	-0.15	0.279	0.334
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	41490	2680	23.29	24.00	1.178	62.90	1.006	0.12	0.220	0.261
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	41490	2680	24.24	25.00	1.191	62.90	1.006	-0.13	0.080	0.096
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	41490	2680	23.29	24.00	1.178	62.90	1.006	0.02	0.064	0.076
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	41490	2680	24.24	25.00	1.191	62.90	1.006	0.04	0.120	0.144
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	41490	2680	23.29	24.00	1.178	62.90	1.006	0	0.093	0.110
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	41490	2680	24.24	25.00	1.191	62.90	1.006	-0.09	0.148	0.177
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	41490	2680	23.29	24.00	1.178	62.90	1.006	0	0.119	0.141

<WLAN SAR>

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 0	1	2412	15.00	15.00	1.000	99.02	1.010	-0.15	0.125	0.126
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 0	1	2412	15.00	15.00	1.000	99.02	1.010	0.15	0.135	0.136
17	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 0	1	2412	15.00	15.00	1.000	99.02	1.010	-0.04	0.294	0.297
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 0	1	2412	15.00	15.00	1.000	99.02	1.010	0.02	0.177	0.179
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 1	11	2462	13.80	14.00	1.047	98.63	1.014	-0.08	0.044	0.047
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 1	11	2462	13.80	14.00	1.047	98.63	1.014	-0.15	0.032	0.034
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 1	11	2462	13.80	14.00	1.047	98.63	1.014	-0.06	0.159	0.169
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 1	11	2462	13.80	14.00	1.047	98.63	1.014	-0.08	0.081	0.086
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 0+1	1	2412	12.70	13.00	1.072	98.98	1.010	0.04	0.083	0.090
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 0+1	1	2412	12.70	13.00	1.072	98.98	1.010	0.18	0.077	0.083
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 0+1	1	2412	12.70	13.00	1.072	98.98	1.010	0.05	0.242	0.262
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 0+1	1	2412	12.70	13.00	1.072	98.98	1.010	0.15	0.123	0.133

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 0	54	5270	12.00	12.00	1.000	95.45	1.048	-0.18	0.272	0.285
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 0	54	5270	12.00	12.00	1.000	95.45	1.048	-0.07	0.256	0.268
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 0	54	5270	12.00	12.00	1.000	95.45	1.048	-0.02	0.382	0.400
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 0	54	5270	12.00	12.00	1.000	95.45	1.048	-0.08	0.371	0.389
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 1	54	5270	12.00	12.00	1.000	95.67	1.045	-0.11	0.046	0.048
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 1	54	5270	12.00	12.00	1.000	95.67	1.045	-0.03	0.014	0.015
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 1	54	5270	12.00	12.00	1.000	95.67	1.045	-0.14	0.227	0.237
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 1	54	5270	12.00	12.00	1.000	95.67	1.045	-0.12	0.046	0.048
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 0+1	62	5310	11.90	12.00	1.023	96.21	1.039	-0.08	0.299	0.318
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 0+1	62	5310	11.90	12.00	1.023	96.21	1.039	-0.08	0.303	0.322
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 0+1	62	5310	11.90	12.00	1.023	96.21	1.039	-0.1	0.372	0.396
18	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 0+1	62	5310	11.90	12.00	1.023	96.21	1.039	-0.06	0.384	0.408
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0	122	5610	11.50	11.50	1.000	92.68	1.079	-0.01	0.360	0.388
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0	122	5610	11.50	11.50	1.000	92.68	1.079	-0.03	0.400	0.432
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0	122	5610	11.50	11.50	1.000	92.68	1.079	-0.03	0.374	0.404
19	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0	122	5610	11.50	11.50	1.000	92.68	1.079	-0.14	0.457	0.493
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 1	138	5690	14.00	14.00	1.000	92.74	1.078	-0.06	0.081	0.087
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 1	138	5690	14.00	14.00	1.000	92.74	1.078	-0.06	0.021	0.023
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 1	138	5690	14.00	14.00	1.000	92.74	1.078	-0.07	0.315	0.340
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 1	138	5690	14.00	14.00	1.000	92.74	1.078	-0.03	0.043	0.046
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0+1	122	5610	11.90	12.00	1.023	92.74	1.078	-0.02	0.327	0.361
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0+1	122	5610	11.90	12.00	1.023	92.74	1.078	-0.03	0.377	0.416
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0+1	122	5610	11.90	12.00	1.023	92.74	1.078	-0.17	0.347	0.383
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0+1	122	5610	11.90	12.00	1.023	92.74	1.078	-0.08	0.413	0.456
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0	155	5775	11.70	12.00	1.072	92.68	1.079	-0.05	0.222	0.257
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0	155	5775	11.70	12.00	1.072	92.68	1.079	-0.04	0.254	0.294
20	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0	155	5775	11.70	12.00	1.072	92.68	1.079	-0.07	0.413	0.477
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0	155	5775	11.70	12.00	1.072	92.68	1.079	0.04	0.270	0.312
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 1	155	5775	12.00	12.00	1.000	92.74	1.078	-0.02	0.051	0.055
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 1	155	5775	12.00	12.00	1.000	92.74	1.078	-0.07	0.023	0.025
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 1	155	5775	12.00	12.00	1.000	92.74	1.078	-0.09	0.185	0.199
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 1	155	5775	12.00	12.00	1.000	92.74	1.078	-0.07	0.052	0.056
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0+1	155	5775	11.80	12.00	1.047	92.74	1.078	-0.01	0.227	0.256
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0+1	155	5775	11.80	12.00	1.047	92.74	1.078	-0.04	0.249	0.281
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0+1	155	5775	11.80	12.00	1.047	92.74	1.078	0.17	0.410	0.463
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0+1	155	5775	11.80	12.00	1.047	92.74	1.078	-0.06	0.296	0.334

<Bluetooth SAR>

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	-0.09	0.173	0.188
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	0	0.110	0.120
21	Bluetooth	1Mbps	Left Cheek	0mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	-0.01	0.472	0.514
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	0.1	0.231	0.251

17.2 Hotspot SAR

<GSM SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	251	848.8	27.57	29.00	1.390	-0.13	0.224	0.311
22	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	251	848.8	27.57	29.00	1.390	-0.1	0.320	0.445
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	251	848.8	27.57	29.00	1.390	-0.06	0.168	0.234
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	251	848.8	27.57	29.00	1.390	-0.16	0.251	0.349
	GSM850_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	251	848.8	27.57	29.00	1.390	0.08	0.131	0.182
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	128	824.2	25.58	26.50	1.236	-0.07	0.161	0.199
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	128	824.2	25.58	26.50	1.236	-0.11	0.177	0.219
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	128	824.2	25.58	26.50	1.236	-0.1	0.126	0.156
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	128	824.2	25.58	26.50	1.236	-0.14	0.166	0.205
	GSM850_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	128	824.2	25.58	26.50	1.236	0.14	0.067	0.083
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 1	GPRS (4 Tx slots)	Front	10mm	251	848.8	27.57	29.00	1.390	-0.06	0.265	0.368
	GSM850_Ant 1	GPRS (4 Tx slots)	Back	10mm	251	848.8	27.57	29.00	1.390	-0.14	0.320	0.445
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Side	10mm	251	848.8	27.57	29.00	1.390	-0.12	0.156	0.217
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Side	10mm	251	848.8	27.57	29.00	1.390	-0.07	0.174	0.242
	GSM850_Ant 1	GPRS (4 Tx slots)	Top Side	10mm	251	848.8	27.57	29.00	1.390	-0.12	0.239	0.332

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	512	1850.2	24.85	26.50	1.462	-0.19	0.378	0.553
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	512	1850.2	24.85	26.50	1.462	-0.14	0.470	0.687
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	512	1850.2	24.85	26.50	1.462	0.17	0.212	0.310
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	512	1850.2	24.85	26.50	1.462	-0.19	0.087	0.127
	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	512	1850.2	24.85	26.50	1.462	0.1	0.553	0.809
	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	661	1880	24.61	26.50	1.545	0.15	0.543	0.839
23	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	810	1909.8	24.70	26.50	1.514	0.12	0.602	0.911
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	810	1909.8	23.45	24.50	1.274	-0.08	0.300	0.382
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	810	1909.8	23.45	24.50	1.274	-0.05	0.315	0.401
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	810	1909.8	23.45	24.50	1.274	0.08	0.167	0.213
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	810	1909.8	23.45	24.50	1.274	0.04	0.050	0.064
	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	810	1909.8	23.45	24.50	1.274	0.04	0.380	0.484
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 1	GPRS (4 Tx slots)	Front	10mm	512	1850.2	24.85	26.50	1.462	-0.03	0.353	0.516
	GSM1900_Ant 1	GPRS (4 Tx slots)	Back	10mm	512	1850.2	24.85	26.50	1.462	0.11	0.476	0.696
	GSM1900_Ant 1	GPRS (4 Tx slots)	Left Side	10mm	512	1850.2	24.85	26.50	1.462	-0.09	0.139	0.203
	GSM1900_Ant 1	GPRS (4 Tx slots)	Right Side	10mm	512	1850.2	24.85	26.50	1.462	0.03	0.037	0.054
	GSM1900_Ant 1	GPRS (4 Tx slots)	Top Side	10mm	512	1850.2	24.85	26.50	1.462	0.13	0.462	0.676

<WCDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9538	1907.6	24.82	25.10	1.067	-0.08	1.100	1.173
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9262	1852.4	24.69	25.10	1.099	0.01	1.020	1.121
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9400	1880	24.59	25.10	1.125	-0.11	1.020	1.147
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9538	1907.6	24.82	25.10	1.067	-0.04	1.010	1.077
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9262	1852.4	24.69	25.10	1.099	-0.02	0.948	1.042
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9400	1880	24.59	25.10	1.125	-0.05	0.993	1.117
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Side	10mm	9538	1907.6	24.82	25.10	1.067	0.03	0.693	0.739
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Side	10mm	9538	1907.6	24.82	25.10	1.067	-0.17	0.165	0.176
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9538	1907.6	24.82	25.10	1.067	0.07	1.040	1.109
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9262	1852.4	24.69	25.10	1.099	0.1	1.070	1.176
24	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9400	1880	24.59	25.10	1.125	0.1	1.050	1.181

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9538	1907.6	19.63	20.20	1.140	-0.11	0.302	0.344
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9538	1907.6	19.63	20.20	1.140	-0.03	0.301	0.343
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Side	10mm	9538	1907.6	19.63	20.20	1.140	-0.03	0.198	0.226
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Side	10mm	9538	1907.6	19.63	20.20	1.140	0.11	0.043	0.049
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9538	1907.6	19.63	20.20	1.140	0.11	0.316	0.360

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	10mm	9538	1907.6	24.82	25.10	1.067	0.05	0.613	0.654
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9538	1907.6	24.82	25.10	1.067	0.05	0.879	0.938
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9262	1852.4	24.69	25.10	1.099	-0.07	0.976	1.073
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9400	1880	24.59	25.10	1.125	-0.02	0.877	0.986
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	9538	1907.6	24.82	25.10	1.067	0.11	0.233	0.249
	WCDMA II_Ant 1	RMC 12.2Kbps	Right Side	10mm	9538	1907.6	24.82	25.10	1.067	-0.04	0.055	0.059
	WCDMA II_Ant 1	RMC 12.2Kbps	Top Side	10mm	9538	1907.6	24.82	25.10	1.067	-0.19	0.734	0.783

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	1312	1712.4	19.50	20.00	1.122	0.02	0.216	0.242
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	1312	1712.4	19.50	20.00	1.122	-0.01	0.219	0.246
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Side	10mm	1312	1712.4	19.50	20.00	1.122	0.11	0.104	0.117
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Side	10mm	1312	1712.4	19.50	20.00	1.122	0.04	0.049	0.055
	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	1312	1712.4	19.50	20.00	1.122	0	0.274	0.307

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	10mm	1312	1712.4	23.31	24.00	1.172	0.16	0.430	0.504
25	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	10mm	1312	1712.4	23.31	24.00	1.172	-0.04	0.503	0.590
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	10mm	1312	1712.4	23.31	24.00	1.172	0.02	0.166	0.195
	WCDMA IV_Ant 1	RMC 12.2Kbps	Right Side	10mm	1312	1712.4	23.31	24.00	1.172	-0.02	0.008	0.009
	WCDMA IV_Ant 1	RMC 12.2Kbps	Top Side	10mm	1312	1712.4	23.31	24.00	1.172	0.11	0.492	0.577

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	4132	826.4	23.81	24.50	1.172	-0.13	0.243	0.285
26	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4132	826.4	23.81	24.50	1.172	-0.12	0.332	0.389
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Side	10mm	4132	826.4	23.81	24.50	1.172	-0.06	0.216	0.253
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Side	10mm	4132	826.4	23.81	24.50	1.172	-0.04	0.294	0.345
	WCDMA V_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4132	826.4	23.81	24.50	1.172	0.07	0.111	0.130
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	4182	836.4	22.04	22.50	1.112	-0.16	0.172	0.191
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4182	836.4	22.04	22.50	1.112	-0.13	0.244	0.271
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Side	10mm	4182	836.4	22.04	22.50	1.112	-0.11	0.134	0.149
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Side	10mm	4182	836.4	22.04	22.50	1.112	-0.15	0.194	0.216
	WCDMA V_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4182	836.4	22.04	22.50	1.112	0.16	0.096	0.107
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	10mm	4132	826.4	23.81	24.50	1.172	-0.1	0.189	0.222
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	4132	826.4	23.81	24.50	1.172	-0.13	0.264	0.309
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	4132	826.4	23.81	24.50	1.172	-0.17	0.120	0.141
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Side	10mm	4132	826.4	23.81	24.50	1.172	-0.11	0.123	0.144
	WCDMA V_Ant 1	RMC 12.2Kbps	Top Side	10mm	4132	826.4	23.81	24.50	1.172	-0.12	0.159	0.186

<CDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Front	10mm	1013	824.7	24.66	25.50	1.213	-0.04	0.330	0.400
27	CDMA BC0_Ant 0	RTAP 153.6Kbps	Back	10mm	1013	824.7	24.66	25.50	1.213	-0.01	0.389	0.472
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Left Side	10mm	1013	824.7	24.66	25.50	1.213	0.01	0.237	0.288
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Right Side	10mm	1013	824.7	24.66	25.50	1.213	0.02	0.312	0.379
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	1013	824.7	24.66	25.50	1.213	0.11	0.119	0.144
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Front	10mm	384	836.52	21.75	22.50	1.189	-0.06	0.150	0.178
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Back	10mm	384	836.52	21.75	22.50	1.189	-0.13	0.232	0.276
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Left Side	10mm	384	836.52	21.75	22.50	1.189	0.04	0.130	0.155
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Right Side	10mm	384	836.52	21.75	22.50	1.189	0.04	0.197	0.234
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	384	836.52	21.75	22.50	1.189	0.16	0.050	0.059
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 1	RTAP 153.6Kbps	Front	10mm	1013	824.7	24.66	25.50	1.213	-0.11	0.230	0.279
	CDMA BC0_Ant 1	RTAP 153.6Kbps	Back	10mm	1013	824.7	24.66	25.50	1.213	-0.15	0.292	0.354
	CDMA BC0_Ant 1	RTAP 153.6Kbps	Left Side	10mm	1013	824.7	24.66	25.50	1.213	-0.18	0.154	0.187
	CDMA BC0_Ant 1	RTAP 153.6Kbps	Right Side	10mm	1013	824.7	24.66	25.50	1.213	-0.11	0.139	0.169
	CDMA BC0_Ant 1	RTAP 153.6Kbps	Top Side	10mm	1013	824.7	24.66	25.50	1.213	-0.1	0.180	0.218

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Front	10mm	1175	1908.75	24.34	25.00	1.164	-0.16	0.964	1.122
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Front	10mm	25	1851.25	24.33	25.00	1.167	0.05	0.953	1.112
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Front	10mm	600	1880	24.25	25.00	1.189	-0.04	0.923	1.097
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Back	10mm	1175	1908.75	24.34	25.00	1.164	-0.01	0.860	1.001
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Back	10mm	25	1851.25	24.33	25.00	1.167	-0.07	0.848	0.989
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Back	10mm	600	1880	24.25	25.00	1.189	-0.04	0.913	1.085
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Left Side	10mm	1175	1908.75	24.34	25.00	1.164	0.01	0.612	0.712
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Right Side	10mm	1175	1908.75	24.34	25.00	1.164	-0.01	0.162	0.189
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	1175	1908.75	24.34	25.00	1.164	0.09	0.900	1.048
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	25	1851.25	24.33	25.00	1.167	0.19	0.893	1.042
28	CDMA BC1_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	600	1880	24.25	25.00	1.189	0.16	0.956	1.136
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Front	10mm	25	1851.25	18.72	19.50	1.197	0.01	0.251	0.300
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Back	10mm	25	1851.25	18.72	19.50	1.197	-0.01	0.230	0.275
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Left Side	10mm	25	1851.25	18.72	19.50	1.197	0.05	0.183	0.219
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Right Side	10mm	25	1851.25	18.72	19.50	1.197	-0.15	0.048	0.057
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	25	1851.25	18.72	19.50	1.197	0.12	0.242	0.290
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 1	RTAP 153.6Kbps	Front	10mm	1175	1908.75	24.34	25.00	1.164	0.18	0.539	0.627
	CDMA BC1_Ant 1	RTAP 153.6Kbps	Back	10mm	1175	1908.75	24.34	25.00	1.164	0	0.665	0.774
	CDMA BC1_Ant 1	RTAP 153.6Kbps	Left Side	10mm	1175	1908.75	24.34	25.00	1.164	-0.01	0.205	0.239
	CDMA BC1_Ant 1	RTAP 153.6Kbps	Right Side	10mm	1175	1908.75	24.34	25.00	1.164	0.05	0.060	0.070
	CDMA BC1_Ant 1	RTAP 153.6Kbps	Top Side	10mm	1175	1908.75	24.34	25.00	1.164	0.16	0.697	0.811
	CDMA BC1_Ant 1	RTAP 153.6Kbps	Top Side	10mm	25	1851.25	24.33	25.00	1.167	0.16	0.869	1.014
	CDMA BC1_Ant 1	RTAP 153.6Kbps	Top Side	10mm	600	1880	24.25	25.00	1.189	0.16	0.748	0.889

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Front	10mm	476	817.9	24.59	25.50	1.233	-0.03	0.313	0.386
29	CDMA BC10_Ant 0	RTAP 153.6Kbps	Back	10mm	476	817.9	24.59	25.50	1.233	-0.01	0.351	0.433
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Left Side	10mm	476	817.9	24.59	25.50	1.233	0.02	0.223	0.275
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Right Side	10mm	476	817.9	24.59	25.50	1.233	0.04	0.285	0.351
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	476	817.9	24.59	25.50	1.233	0.19	0.099	0.122
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Front	10mm	476	817.9	21.82	22.50	1.169	-0.06	0.164	0.192
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Back	10mm	476	817.9	21.82	22.50	1.169	-0.15	0.180	0.211
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Left Side	10mm	476	817.9	21.82	22.50	1.169	0.05	0.119	0.139
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Right Side	10mm	476	817.9	21.82	22.50	1.169	0.01	0.165	0.193
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	476	817.9	21.82	22.50	1.169	0.11	0.055	0.064
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 1	RTAP 153.6Kbps	Front	10mm	580	820.5	24.56	25.50	1.242	-0.03	0.217	0.269
	CDMA BC10_Ant 1	RTAP 153.6Kbps	Back	10mm	580	820.5	24.56	25.50	1.242	-0.11	0.280	0.348
	CDMA BC10_Ant 1	RTAP 153.6Kbps	Left Side	10mm	580	820.5	24.56	25.50	1.242	-0.01	0.154	0.191
	CDMA BC10_Ant 1	RTAP 153.6Kbps	Right Side	10mm	580	820.5	24.56	25.50	1.242	-0.16	0.134	0.166
	CDMA BC10_Ant 1	RTAP 153.6Kbps	Top Side	10mm	580	820.5	24.56	25.50	1.242	-0.17	0.165	0.205

<FDD LTE SAR>

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	99	Front	10mm	21100	2535	23.77	24.50	1.183	-0.09	0.845	1.000
	LTE Band 7_Ant 2	20M	QPSK	1	99	Front	10mm	20850	2510	23.71	24.50	1.199	-0.14	0.910	1.092
	LTE Band 7_Ant 2	20M	QPSK	1	99	Front	10mm	21350	2560	23.65	24.50	1.216	-0.02	0.781	0.950
	LTE Band 7_Ant 2	20M	QPSK	50	50	Front	10mm	21100	2535	22.76	23.50	1.186	-0.07	0.687	0.815
	LTE Band 7_Ant 2	20M	QPSK	50	50	Front	10mm	20850	2510	22.74	23.50	1.191	-0.01	0.752	0.896
	LTE Band 7_Ant 2	20M	QPSK	50	50	Front	10mm	21350	2560	22.67	23.50	1.211	-0.01	0.646	0.782
	LTE Band 7_Ant 2	20M	QPSK	100	0	Front	10mm	20850	2510	22.68	23.50	1.208	-0.17	0.751	0.907
	LTE Band 7_Ant 2	20M	QPSK	1	99	Back	10mm	21100	2535	23.77	24.50	1.183	-0.02	0.895	1.059
30	LTE Band 7_Ant 2	20M	QPSK	1	99	Back	10mm	20850	2510	23.71	24.50	1.199	-0.09	0.968	1.161
	LTE Band 7_Ant 2	20M	QPSK	1	99	Back	10mm	21350	2560	23.65	24.50	1.216	-0.03	0.811	0.986
	LTE Band 7_Ant 2	20M	QPSK	50	50	Back	10mm	21100	2535	22.76	23.50	1.186	-0.01	0.740	0.877
	LTE Band 7_Ant 2	20M	QPSK	50	50	Back	10mm	20850	2510	22.74	23.50	1.191	-0.06	0.828	0.986
	LTE Band 7_Ant 2	20M	QPSK	50	50	Back	10mm	21350	2560	22.67	23.50	1.211	-0.12	0.680	0.823
	LTE Band 7_Ant 2	20M	QPSK	100	0	Back	10mm	20850	2510	22.68	23.50	1.208	-0.1	0.766	0.925
	LTE Band 7_Ant 2	20M	QPSK	1	99	Left Side	10mm	21100	2535	23.77	24.50	1.183	-0.14	0.085	0.101
	LTE Band 7_Ant 2	20M	QPSK	50	50	Left Side	10mm	21100	2535	22.76	23.50	1.186	-0.08	0.070	0.083
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Side	10mm	21100	2535	23.77	24.50	1.183	-0.17	0.704	0.833
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Side	10mm	20850	2510	23.71	24.50	1.199	-0.06	0.781	0.937
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Side	10mm	21350	2560	23.65	24.50	1.216	-0.18	0.608	0.739
	LTE Band 7_Ant 2	20M	QPSK	50	50	Right Side	10mm	21100	2535	22.76	23.50	1.186	-0.07	0.576	0.683
	LTE Band 7_Ant 2	20M	QPSK	100	50	Right Side	10mm	21100	2510	22.68	23.50	1.208	-0.07	0.664	0.802
	LTE Band 7_Ant 2	20M	QPSK	1	99	Bottom Side	10mm	21100	2535	23.77	24.50	1.183	0.01	0.409	0.484
	LTE Band 7_Ant 2	20M	QPSK	50	50	Bottom Side	10mm	21100	2535	22.76	23.50	1.186	0	0.330	0.391
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	20850	2510	18.53	19.50	1.250	0	0.287	0.359
	LTE Band 7_Ant 2	20M	QPSK	50	50	Front	10mm	20850	2510	18.67	19.50	1.211	-0.01	0.278	0.337
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	20850	2510	18.53	19.50	1.250	-0.06	0.325	0.406
	LTE Band 7_Ant 2	20M	QPSK	50	50	Back	10mm	20850	2510	18.67	19.50	1.211	-0.04	0.314	0.380
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Side	10mm	20850	2510	18.53	19.50	1.250	0.15	0.030	0.038
	LTE Band 7_Ant 2	20M	QPSK	50	50	Left Side	10mm	20850	2510	18.67	19.50	1.211	-0.1	0.029	0.035
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	10mm	20850	2510	18.53	19.50	1.250	0.03	0.262	0.328
	LTE Band 7_Ant 2	20M	QPSK	50	50	Right Side	10mm	20850	2510	18.67	19.50	1.211	0.02	0.240	0.291
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	20850	2510	18.53	19.50	1.250	-0.02	0.144	0.180
	LTE Band 7_Ant 2	20M	QPSK	50	50	Bottom Side	10mm	20850	2510	18.67	19.50	1.211	0.03	0.140	0.169



WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Ant 0	10M	QPSK	1	49	Front	10mm	23095	707.5	24.92	25.70	1.197	-0.09	0.204	0.244
	LTE Band 12_Ant 0	10M	QPSK	25	12	Front	10mm	23095	707.5	24.03	24.70	1.167	0	0.158	0.184
	LTE Band 12_Ant 0	10M	QPSK	1	49	Back	10mm	23095	707.5	24.92	25.70	1.197	-0.02	0.282	0.337
	LTE Band 12_Ant 0	10M	QPSK	25	12	Back	10mm	23095	707.5	24.03	24.70	1.167	-0.01	0.223	0.260
	LTE Band 12_Ant 0	10M	QPSK	1	49	Left Side	10mm	23095	707.5	24.92	25.70	1.197	-0.02	0.187	0.224
	LTE Band 12_Ant 0	10M	QPSK	25	12	Left Side	10mm	23095	707.5	24.03	24.70	1.167	0.01	0.143	0.167
	LTE Band 12_Ant 0	10M	QPSK	1	49	Right Side	10mm	23095	707.5	24.92	25.70	1.197	0.02	0.172	0.206
	LTE Band 12_Ant 0	10M	QPSK	25	12	Right Side	10mm	23095	707.5	24.03	24.70	1.167	-0.02	0.132	0.154
	LTE Band 12_Ant 0	10M	QPSK	1	49	Bottom Side	10mm	23095	707.5	24.92	25.70	1.197	0.12	0.042	0.050
	LTE Band 12_Ant 0	10M	QPSK	25	12	Bottom Side	10mm	23095	707.5	24.03	24.70	1.167	0.13	0.033	0.039
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Ant 0	10M	QPSK	1	49	Front	10mm	23095	707.5	23.91	24.70	1.199	-0.06	0.162	0.194
	LTE Band 12_Ant 0	10M	QPSK	25	12	Front	10mm	23095	707.5	23.95	24.70	1.189	-0.03	0.157	0.187
	LTE Band 12_Ant 0	10M	QPSK	1	49	Back	10mm	23095	707.5	23.91	24.70	1.199	-0.03	0.228	0.273
	LTE Band 12_Ant 0	10M	QPSK	25	12	Back	10mm	23095	707.5	23.95	24.70	1.189	-0.04	0.227	0.270
	LTE Band 12_Ant 0	10M	QPSK	1	49	Left Side	10mm	23095	707.5	23.91	24.70	1.199	0.01	0.168	0.202
	LTE Band 12_Ant 0	10M	QPSK	25	12	Left Side	10mm	23095	707.5	23.95	24.70	1.189	-0.04	0.159	0.189
	LTE Band 12_Ant 0	10M	QPSK	1	49	Right Side	10mm	23095	707.5	23.91	24.70	1.199	-0.04	0.155	0.186
	LTE Band 12_Ant 0	10M	QPSK	25	12	Right Side	10mm	23095	707.5	23.95	24.70	1.189	-0.04	0.147	0.175
	LTE Band 12_Ant 0	10M	QPSK	1	49	Bottom Side	10mm	23095	707.5	23.91	24.70	1.199	0.08	0.030	0.036
	LTE Band 12_Ant 0	10M	QPSK	25	12	Bottom Side	10mm	23095	707.5	23.95	24.70	1.189	0.13	0.030	0.036
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Ant 1	10M	QPSK	1	49	Front	10mm	23095	707.5	24.92	25.70	1.197	-0.05	0.253	0.303
	LTE Band 12_Ant 1	10M	QPSK	25	12	Front	10mm	23095	707.5	24.03	24.70	1.167	0.05	0.208	0.243
31	LTE Band 12_Ant 1	10M	QPSK	1	49	Back	10mm	23095	707.5	24.92	25.70	1.197	-0.06	0.327	0.391
	LTE Band 12_Ant 1	10M	QPSK	25	12	Back	10mm	23095	707.5	24.03	24.70	1.167	-0.05	0.269	0.314
	LTE Band 12_Ant 1	10M	QPSK	1	49	Left Side	10mm	23095	707.5	24.92	25.70	1.197	0.01	0.306	0.366
	LTE Band 12_Ant 1	10M	QPSK	25	12	Left Side	10mm	23095	707.5	24.03	24.70	1.167	0.03	0.257	0.300
	LTE Band 12_Ant 1	10M	QPSK	1	49	Right Side	10mm	23095	707.5	24.92	25.70	1.197	-0.06	0.171	0.205
	LTE Band 12_Ant 1	10M	QPSK	25	12	Right Side	10mm	23095	707.5	24.03	24.70	1.167	-0.03	0.139	0.162
	LTE Band 12_Ant 1	10M	QPSK	1	49	Top Side	10mm	23095	707.5	24.92	25.70	1.197	0	0.145	0.174
	LTE Band 12_Ant 1	10M	QPSK	25	12	Top Side	10mm	23095	707.5	24.03	24.70	1.167	0.01	0.115	0.134

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
32	LTE Band 13_Ant 0	10M	QPSK	1	25	Front	10mm	23230	782	24.33	25.30	1.250	-0.05	0.301	0.376
	LTE Band 13_Ant 0	10M	QPSK	25	0	Front	10mm	23230	782	23.39	24.30	1.233	-0.04	0.238	0.293
	LTE Band 13_Ant 0	10M	QPSK	1	25	Back	10mm	23230	782	24.33	25.30	1.250	-0.03	0.299	0.374
	LTE Band 13_Ant 0	10M	QPSK	25	0	Back	10mm	23230	782	23.39	24.30	1.233	-0.02	0.239	0.295
	LTE Band 13_Ant 0	10M	QPSK	1	25	Left Side	10mm	23230	782	24.33	25.30	1.250	-0.1	0.216	0.270
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Side	10mm	23230	782	23.39	24.30	1.233	-0.04	0.169	0.208
	LTE Band 13_Ant 0	10M	QPSK	1	25	Right Side	10mm	23230	782	24.33	25.30	1.250	-0.15	0.272	0.340
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Side	10mm	23230	782	23.39	24.30	1.233	-0.01	0.214	0.264
	LTE Band 13_Ant 0	10M	QPSK	1	25	Bottom Side	10mm	23230	782	24.33	25.30	1.250	-0.15	0.067	0.084
	LTE Band 13_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	23230	782	23.39	24.30	1.233	-0.13	0.051	0.063
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_Ant 0	10M	QPSK	1	0	Front	10mm	23230	782	22.84	23.80	1.247	-0.03	0.205	0.256
	LTE Band 13_Ant 0	10M	QPSK	25	0	Front	10mm	23230	782	22.90	23.80	1.230	-0.03	0.210	0.258
	LTE Band 13_Ant 0	10M	QPSK	1	0	Back	10mm	23230	782	22.84	23.80	1.247	0	0.206	0.257
	LTE Band 13_Ant 0	10M	QPSK	25	0	Back	10mm	23230	782	22.90	23.80	1.230	0.02	0.214	0.263
	LTE Band 13_Ant 0	10M	QPSK	1	0	Left Side	10mm	23230	782	22.84	23.80	1.247	-0.04	0.150	0.187
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Side	10mm	23230	782	22.90	23.80	1.230	-0.01	0.155	0.191
	LTE Band 13_Ant 0	10M	QPSK	1	0	Right Side	10mm	23230	782	22.84	23.80	1.247	-0.04	0.171	0.213
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Side	10mm	23230	782	22.90	23.80	1.230	-0.01	0.179	0.220
	LTE Band 13_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	23230	782	22.84	23.80	1.247	-0.16	0.042	0.052
	LTE Band 13_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	23230	782	22.90	23.80	1.230	0.01	0.044	0.054
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_Ant 1	10M	QPSK	1	25	Front	10mm	23230	782	24.33	25.30	1.250	-0.12	0.214	0.268
	LTE Band 13_Ant 1	10M	QPSK	25	0	Front	10mm	23230	782	23.39	24.30	1.233	0	0.172	0.212
	LTE Band 13_Ant 1	10M	QPSK	1	25	Back	10mm	23230	782	24.33	25.30	1.250	-0.04	0.270	0.338
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	10mm	23230	782	23.39	24.30	1.233	-0.04	0.218	0.269
	LTE Band 13_Ant 1	10M	QPSK	1	25	Left Side	10mm	23230	782	24.33	25.30	1.250	-0.1	0.151	0.189
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Side	10mm	23230	782	23.39	24.30	1.233	-0.02	0.129	0.159
	LTE Band 13_Ant 1	10M	QPSK	1	25	Right Side	10mm	23230	782	24.33	25.30	1.250	-0.01	0.126	0.158
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Side	10mm	23230	782	23.39	24.30	1.233	-0.01	0.107	0.132
	LTE Band 13_Ant 1	10M	QPSK	1	25	Top Side	10mm	23230	782	24.33	25.30	1.250	-0.03	0.129	0.161
	LTE Band 13_Ant 1	10M	QPSK	25	0	Top Side	10mm	23230	782	23.39	24.30	1.233	-0.02	0.105	0.129



WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26590	1905	24.75	25.10	1.084	0.01	1.010	1.095
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26140	1860	24.67	25.10	1.104	0	0.896	0.989
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26340	1880	24.55	25.10	1.135	0.02	0.976	1.108
	LTE Band 25_Ant 0	20M	QPSK	50	24	Front	10mm	26590	1905	23.74	24.10	1.086	0.01	0.845	0.918
	LTE Band 25_Ant 0	20M	QPSK	50	24	Front	10mm	26140	1860	23.61	24.10	1.119	0.03	0.764	0.855
	LTE Band 25_Ant 0	20M	QPSK	50	24	Front	10mm	26340	1880	23.54	24.10	1.138	-0.03	0.790	0.899
	LTE Band 25_Ant 0	20M	QPSK	100	0	Front	10mm	26590	1905	23.72	24.10	1.091	0	0.835	0.911
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26590	1905	24.75	25.10	1.084	0	0.996	1.080
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26140	1860	24.67	25.10	1.104	-0.08	0.850	0.938
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26340	1880	24.55	25.10	1.135	-0.08	0.943	1.070
	LTE Band 25_Ant 0	20M	QPSK	50	24	Back	10mm	26590	1905	23.74	24.10	1.086	-0.11	0.833	0.905
	LTE Band 25_Ant 0	20M	QPSK	50	24	Back	10mm	26140	1860	23.61	24.10	1.119	-0.09	0.721	0.807
	LTE Band 25_Ant 0	20M	QPSK	50	24	Back	10mm	26340	1880	23.54	24.10	1.138	-0.09	0.782	0.890
	LTE Band 25_Ant 0	20M	QPSK	100	0	Back	10mm	26590	1905	23.72	24.10	1.091	-0.12	0.835	0.911
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Side	10mm	26590	1905	24.75	25.10	1.084	0.02	0.678	0.735
	LTE Band 25_Ant 0	20M	QPSK	50	24	Left Side	10mm	26590	1905	23.74	24.10	1.086	0.05	0.545	0.592
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Side	10mm	26590	1905	24.75	25.10	1.084	-0.1	0.194	0.210
	LTE Band 25_Ant 0	20M	QPSK	50	24	Right Side	10mm	26590	1905	23.74	24.10	1.086	-0.01	0.148	0.161
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	26590	1905	24.75	25.10	1.084	0.14	1.010	1.095
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	26140	1860	24.67	25.10	1.104	0.11	0.985	1.088
33	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	26340	1880	24.55	25.10	1.135	0.11	1.030	1.169
	LTE Band 25_Ant 0	20M	QPSK	50	24	Bottom Side	10mm	26590	1905	23.74	24.10	1.086	0.09	0.850	0.923
	LTE Band 25_Ant 0	20M	QPSK	50	24	Bottom Side	10mm	26140	1860	23.61	24.10	1.119	0.06	0.811	0.908
	LTE Band 25_Ant 0	20M	QPSK	50	24	Bottom Side	10mm	26340	1880	23.54	24.10	1.138	0.09	0.828	0.942
	LTE Band 25_Ant 0	20M	QPSK	100	0	Bottom Side	10mm	26590	1905	23.72	24.10	1.091	0.08	0.843	0.920
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	49	Front	10mm	26590	1905	19.91	20.70	1.199	-0.16	0.327	0.392
	LTE Band 25_Ant 0	20M	QPSK	50	24	Front	10mm	26590	1905	19.99	20.70	1.178	0.03	0.340	0.400
	LTE Band 25_Ant 0	20M	QPSK	1	49	Back	10mm	26590	1905	19.91	20.70	1.199	-0.12	0.314	0.377
	LTE Band 25_Ant 0	20M	QPSK	50	24	Back	10mm	26590	1905	19.99	20.70	1.178	-0.09	0.325	0.383
	LTE Band 25_Ant 0	20M	QPSK	1	49	Left Side	10mm	26590	1905	19.91	20.70	1.199	-0.03	0.204	0.245
	LTE Band 25_Ant 0	20M	QPSK	50	24	Left Side	10mm	26590	1905	19.99	20.70	1.178	0.03	0.212	0.250
	LTE Band 25_Ant 0	20M	QPSK	1	49	Right Side	10mm	26590	1905	19.91	20.70	1.199	0.05	0.054	0.065
	LTE Band 25_Ant 0	20M	QPSK	50	24	Right Side	10mm	26590	1905	19.99	20.70	1.178	-0.07	0.056	0.066
	LTE Band 25_Ant 0	20M	QPSK	1	49	Bottom Side	10mm	26590	1905	19.91	20.70	1.199	0.06	0.324	0.389
	LTE Band 25_Ant 0	20M	QPSK	50	24	Bottom Side	10mm	26590	1905	19.99	20.70	1.178	0.12	0.338	0.398
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 1	20M	QPSK	1	0	Front	10mm	26590	1905	24.75	25.10	1.084	0.17	0.282	0.306
	LTE Band 25_Ant 1	20M	QPSK	50	24	Front	10mm	26590	1905	23.74	24.10	1.086	0.16	0.253	0.275
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	10mm	26590	1905	24.75	25.10	1.084	0.06	0.373	0.404
	LTE Band 25_Ant 1	20M	QPSK	50	24	Back	10mm	26590	1905	23.74	24.10	1.086	0.01	0.339	0.368
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	26590	1905	24.75	25.10	1.084	0.04	0.131	0.142
	LTE Band 25_Ant 1	20M	QPSK	50	24	Left Side	10mm	26590	1905	23.74	24.10	1.086	-0.1	0.116	0.126
	LTE Band 25_Ant 1	20M	QPSK	1	0	Right Side	10mm	26590	1905	24.75	25.10	1.084	0.12	0.026	0.028
	LTE Band 25_Ant 1	20M	QPSK	50	24	Right Side	10mm	26590	1905	23.74	24.10	1.086	-0.01	0.023	0.025
	LTE Band 25_Ant 1	20M	QPSK	1	0	Top Side	10mm	26590	1905	24.75	25.10	1.084	0.09	0.354	0.384
	LTE Band 25_Ant 1	20M	QPSK	50	0	Top Side	10mm	26590	1905	23.74	24.10	1.086	0.1	0.302	0.328

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 0	15M	QPSK	1	0	Front	10mm	26865	831.5	24.82	25.70	1.225	-0.12	0.320	0.392
	LTE Band 26_Ant 0	15M	QPSK	36	20	Front	10mm	26865	831.5	23.87	24.70	1.211	-0.03	0.253	0.306
34	LTE Band 26_Ant 0	15M	QPSK	1	0	Back	10mm	26865	831.5	24.82	25.70	1.225	-0.02	0.408	0.500
	LTE Band 26_Ant 0	15M	QPSK	36	20	Back	10mm	26865	831.5	23.87	24.70	1.211	0.04	0.350	0.424
	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Side	10mm	26865	831.5	24.82	25.70	1.225	0.01	0.252	0.309
	LTE Band 26_Ant 0	15M	QPSK	36	20	Left Side	10mm	26865	831.5	23.87	24.70	1.211	0.04	0.202	0.245
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Side	10mm	26865	831.5	24.82	25.70	1.225	-0.02	0.356	0.436
	LTE Band 26_Ant 0	15M	QPSK	36	20	Right Side	10mm	26865	831.5	23.87	24.70	1.211	0.01	0.292	0.353
	LTE Band 26_Ant 0	15M	QPSK	1	0	Bottom Side	10mm	26865	831.5	24.82	25.70	1.225	0.17	0.125	0.153
	LTE Band 26_Ant 0	15M	QPSK	36	20	Bottom Side	10mm	26865	831.5	23.87	24.70	1.211	0.09	0.115	0.139
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 0	15M	QPSK	1	0	Front	10mm	26865	831.5	21.81	22.70	1.227	-0.02	0.160	0.196
	LTE Band 26_Ant 0	15M	QPSK	36	0	Front	10mm	26865	831.5	21.83	22.70	1.222	-0.03	0.161	0.197
	LTE Band 26_Ant 0	15M	QPSK	1	0	Back	10mm	26865	831.5	21.81	22.70	1.227	0.09	0.203	0.249
	LTE Band 26_Ant 0	15M	QPSK	36	0	Back	10mm	26865	831.5	21.83	22.70	1.222	0.01	0.209	0.255
	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Side	10mm	26865	831.5	21.81	22.70	1.227	-0.07	0.122	0.150
	LTE Band 26_Ant 0	15M	QPSK	36	0	Left Side	10mm	26865	831.5	21.83	22.70	1.222	0.04	0.121	0.148
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Side	10mm	26865	831.5	21.81	22.70	1.227	0.04	0.165	0.203
	LTE Band 26_Ant 0	15M	QPSK	36	0	Right Side	10mm	26865	831.5	21.83	22.70	1.222	0.03	0.166	0.203
	LTE Band 26_Ant 0	15M	QPSK	1	0	Bottom Side	10mm	26865	831.5	21.81	22.70	1.227	0.1	0.062	0.076
	LTE Band 26_Ant 0	15M	QPSK	36	0	Bottom Side	10mm	26865	831.5	21.83	22.70	1.222	0.18	0.068	0.083
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	10mm	26865	831.5	24.82	25.70	1.225	-0.08	0.250	0.306
	LTE Band 26_Ant 1	15M	QPSK	36	20	Front	10mm	26865	831.5	23.87	24.70	1.211	-0.04	0.228	0.276
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	10mm	26865	831.5	24.82	25.70	1.225	-0.12	0.329	0.403
	LTE Band 26_Ant 1	15M	QPSK	36	20	Back	10mm	26865	831.5	23.87	24.70	1.211	-0.1	0.303	0.367
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	26865	831.5	24.82	25.70	1.225	-0.14	0.118	0.145
	LTE Band 26_Ant 1	15M	QPSK	36	20	Left Side	10mm	26865	831.5	23.87	24.70	1.211	-0.09	0.099	0.120
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Side	10mm	26865	831.5	24.82	25.70	1.225	-0.15	0.102	0.125
	LTE Band 26_Ant 1	15M	QPSK	36	20	Right Side	10mm	26865	831.5	23.87	24.70	1.211	-0.05	0.087	0.105
	LTE Band 26_Ant 1	15M	QPSK	1	0	Top Side	10mm	26865	831.5	24.82	25.70	1.225	-0.15	0.192	0.235
	LTE Band 26_Ant 1	15M	QPSK	36	20	Top Side	10mm	26865	831.5	23.87	24.70	1.211	-0.01	0.172	0.208

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	132572	1770	23.51	24.50	1.256	-0.12	0.596	0.749
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	132572	1770	22.40	23.50	1.288	-0.01	0.466	0.600
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	132572	1770	23.51	24.50	1.256	-0.1	0.551	0.692
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	132572	1770	22.40	23.50	1.288	-0.01	0.435	0.560
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Side	10mm	132572	1770	23.51	24.50	1.256	0.1	0.361	0.453
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Side	10mm	132572	1770	22.40	23.50	1.288	0.05	0.294	0.379
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Side	10mm	132572	1770	23.51	24.50	1.256	0.01	0.145	0.182
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Side	10mm	132572	1770	22.40	23.50	1.288	-0.06	0.115	0.148
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	132572	1770	23.51	24.50	1.256	0.06	0.752	0.945
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	132072	1720	23.46	24.50	1.271	0.07	0.719	0.914
35	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	132322	1745	23.50	24.50	1.259	0.13	0.787	0.991
	LTE Band 66_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	132572	1770	22.40	23.50	1.288	0.08	0.584	0.752
	LTE Band 66_Ant 0	20M	QPSK	100	0	Bottom Side	10mm	132572	1770	22.38	23.50	1.294	0.13	0.572	0.740
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	132572	1770	19.01	20.00	1.256	0.02	0.210	0.264
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	132572	1770	18.99	20.00	1.262	0.09	0.210	0.265
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	132572	1770	19.01	20.00	1.256	-0.1	0.208	0.261
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	132572	1770	18.99	20.00	1.262	0.03	0.208	0.262
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Side	10mm	132572	1770	19.01	20.00	1.256	0.06	0.129	0.162
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Side	10mm	132572	1770	18.99	20.00	1.262	0.09	0.130	0.164
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Side	10mm	132572	1770	19.01	20.00	1.256	-0.11	0.054	0.068
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Side	10mm	132572	1770	18.99	20.00	1.262	0.16	0.054	0.068
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	132572	1770	19.01	20.00	1.256	0.04	0.266	0.334
	LTE Band 66_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	132572	1770	18.99	20.00	1.262	0.06	0.265	0.334
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	10mm	132572	1770	23.51	24.50	1.256	0.09	0.484	0.608
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	10mm	132572	1770	22.40	23.50	1.288	0.14	0.382	0.492
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	132572	1770	23.51	24.50	1.256	-0.03	0.670	0.842
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	132072	1720	23.46	24.50	1.271	-0.03	0.592	0.752
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	132322	1745	23.50	24.50	1.259	0.03	0.649	0.817
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	10mm	132572	1770	22.40	23.50	1.288	0.02	0.524	0.675
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	10mm	132572	1770	23.51	24.50	1.256	0.07	0.202	0.254
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Side	10mm	132572	1770	22.40	23.50	1.288	0.07	0.158	0.204
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Side	10mm	132572	1770	23.51	24.50	1.256	0.12	0.025	0.031
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Side	10mm	132572	1770	22.40	23.50	1.288	-0.07	0.021	0.027
	LTE Band 66_Ant 1	20M	QPSK	1	0	Top Side	10mm	132572	1770	23.51	24.50	1.256	0.17	0.584	0.734
	LTE Band 66_Ant 1	20M	QPSK	50	0	Top Side	10mm	132572	1770	22.40	23.50	1.288	0.16	0.459	0.591



<TDD LTE SAR>

WiFi off																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
36	LTE Band 38_Ant 2	20M	QPSK	1	99	Front	10mm	38000	2595	24.90	25.70	1.202	62.9	1.006	-0.13	0.579	0.700
	LTE Band 38_Ant 2	20M	QPSK	50	50	Front	10mm	38000	2595	23.95	24.70	1.189	62.9	1.006	-0.04	0.464	0.555
	LTE Band 38_Ant 2	20M	QPSK	1	99	Back	10mm	38000	2595	24.90	25.70	1.202	62.9	1.006	-0.01	0.580	0.701
	LTE Band 38_Ant 2	20M	QPSK	50	50	Back	10mm	38000	2595	23.95	24.70	1.189	62.9	1.006	-0.03	0.473	0.566
	LTE Band 38_Ant 2	20M	QPSK	1	99	Left Side	10mm	38000	2595	24.90	25.70	1.202	62.9	1.006	-0.12	0.053	0.064
	LTE Band 38_Ant 2	20M	QPSK	50	50	Left Side	10mm	38000	2595	23.95	24.70	1.189	62.9	1.006	-0.06	0.041	0.049
	LTE Band 38_Ant 2	20M	QPSK	1	0	Right Side	10mm	38000	2595	24.90	25.70	1.202	62.9	1.006	0.16	0.413	0.500
	LTE Band 38_Ant 2	20M	QPSK	50	50	Right Side	10mm	38000	2595	23.95	24.70	1.189	62.9	1.006	0.09	0.335	0.401
	LTE Band 38_Ant 2	20M	QPSK	1	99	Bottom Side	10mm	38000	2595	24.90	25.70	1.202	62.9	1.006	0.03	0.301	0.364
	LTE Band 38_Ant 2	20M	QPSK	50	50	Bottom Side	10mm	38000	2595	23.95	24.70	1.189	62.9	1.006	0.01	0.238	0.285
WiFi on																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
	LTE Band 38_Ant 2	20M	QPSK	1	99	Front	10mm	38000	2595	20.85	21.70	1.216	62.9	1.006	-0.05	0.230	0.281
	LTE Band 38_Ant 2	20M	QPSK	50	50	Front	10mm	38000	2595	20.84	21.70	1.219	62.9	1.006	0.07	0.234	0.287
	LTE Band 38_Ant 2	20M	QPSK	1	99	Back	10mm	38000	2595	20.85	21.70	1.216	62.9	1.006	-0.14	0.224	0.274
	LTE Band 38_Ant 2	20M	QPSK	50	50	Back	10mm	38000	2595	20.84	21.70	1.219	62.9	1.006	-0.12	0.230	0.282
	LTE Band 38_Ant 2	20M	QPSK	1	99	Left Side	10mm	38000	2595	20.85	21.70	1.216	62.9	1.006	0.1	0.009	0.011
	LTE Band 38_Ant 2	20M	QPSK	50	50	Left Side	10mm	38000	2595	20.84	21.70	1.219	62.9	1.006	-0.04	0.008	0.010
	LTE Band 38_Ant 2	20M	QPSK	1	99	Right Side	10mm	38000	2595	20.85	21.70	1.216	62.9	1.006	0.15	0.167	0.204
	LTE Band 38_Ant 2	20M	QPSK	50	50	Right Side	10mm	38000	2595	20.84	21.70	1.219	62.9	1.006	0.16	0.170	0.208
	LTE Band 38_Ant 2	20M	QPSK	1	99	Bottom Side	10mm	38000	2595	20.85	21.70	1.216	62.9	1.006	-0.15	0.124	0.152
	LTE Band 38_Ant 2	20M	QPSK	50	50	Bottom Side	10mm	38000	2595	20.84	21.70	1.219	62.9	1.006	-0.12	0.121	0.148

WiFi off																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
37	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	41490	2680	24.24	25.00	1.191	62.90	1.006	-0.05	0.510	0.611
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	39750	2506	24.00	25.00	1.259	62.90	1.006	0.01	0.650	0.823
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	40185	2549.5	24.12	25.00	1.225	62.90	1.006	-0.01	0.587	0.723
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	40620	2593	24.17	25.00	1.211	62.90	1.006	-0.05	0.504	0.614
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	41055	2636.5	24.18	25.00	1.208	62.90	1.006	0.08	0.480	0.583
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	10mm	41490	2680	23.29	24.00	1.178	62.90	1.006	-0.08	0.401	0.475
	LTE Band 41_Ant 2	20M	QPSK	100	0	Front	10mm	41490	2680	23.24	24.00	1.191	62.90	1.006	-0.06	0.391	0.469
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	41490	2680	24.24	25.00	1.191	62.90	1.006	-0.09	0.475	0.569
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	41490	2680	23.29	24.00	1.178	62.90	1.006	-0.01	0.373	0.442
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Side	10mm	41490	2680	24.24	25.00	1.191	62.90	1.006	0.11	0.051	0.061
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Side	10mm	41490	2680	23.29	24.00	1.178	62.90	1.006	0.12	0.041	0.049
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	41490	2680	24.24	25.00	1.191	62.90	1.006	0.06	0.345	0.413
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	10mm	41490	2680	23.29	24.00	1.178	62.90	1.006	0.07	0.269	0.319
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	41490	2680	24.24	25.00	1.191	62.90	1.006	-0.17	0.271	0.325
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	41490	2680	23.29	24.00	1.178	62.90	1.006	0.08	0.210	0.249
WiFi on																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	41490	2680	21.21	22.00	1.199	62.90	1.006	-0.13	0.251	0.303
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	10mm	41490	2680	21.30	22.00	1.175	62.90	1.006	-0.1	0.248	0.293
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	41490	2680	21.21	22.00	1.199	62.90	1.006	-0.02	0.229	0.276
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	41490	2680	21.30	22.00	1.175	62.90	1.006	0.06	0.223	0.264
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Side	10mm	41490	2680	21.21	22.00	1.199	62.90	1.006	-0.1	0.024	0.029
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Side	10mm	41490	2680	21.30	22.00	1.175	62.90	1.006	0.15	0.022	0.026
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	41490	2680	21.21	22.00	1.199	62.90	1.006	0.15	0.180	0.217
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	10mm	41490	2680	21.30	22.00	1.175	62.90	1.006	0.08	0.179	0.212
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	41490	2680	21.21	22.00	1.199	62.90	1.006	0.09	0.129	0.156
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	41490	2680	21.30	22.00	1.175	62.90	1.006	0.11	0.127	0.150

<WLAN SAR>

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 0	6	2437	18.00	18.00	1.000	99.02	1.010	-0.06	0.121	0.122
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 0	6	2437	18.00	18.00	1.000	99.02	1.010	0.08	0.194	0.196
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 0	6	2437	18.00	18.00	1.000	99.02	1.010	-0.04	0.083	0.084
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 0	6	2437	18.00	18.00	1.000	99.02	1.010	0.08	0.073	0.074
38	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 1	6	2437	18.00	18.00	1.000	98.63	1.014	0.07	0.179	0.182
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 1	6	2437	18.00	18.00	1.000	98.63	1.014	0.19	0.488	0.495
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 1	6	2437	18.00	18.00	1.000	98.63	1.014	0.04	0.340	0.345
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	6	2437	18.00	18.00	1.000	98.63	1.014	-0.13	0.047	0.048
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 0+1	6	2437	17.90	18.00	1.023	98.98	1.010	0.06	0.250	0.258
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 0+1	6	2437	17.90	18.00	1.023	98.98	1.010	0.07	0.450	0.465
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 0+1	6	2437	17.90	18.00	1.023	98.98	1.010	-0.13	0.343	0.354
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 0+1	6	2437	17.90	18.00	1.023	98.98	1.010	-0.02	0.093	0.096

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 0	46	5230	17.50	17.50	1.000	95.45	1.048	-0.07	0.283	0.297
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0	46	5230	17.50	17.50	1.000	95.45	1.048	0.03	0.204	0.214
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 0	46	5230	17.50	17.50	1.000	95.45	1.048	-0.09	0.125	0.131
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 0	46	5230	17.50	17.50	1.000	95.45	1.048	-0.04	0.190	0.199
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 1	46	5230	17.20	17.50	1.072	95.67	1.045	-0.07	0.215	0.241
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	46	5230	17.20	17.50	1.072	95.67	1.045	-0.08	0.884	0.990
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 1	44	5220	17.40	17.50	1.023	98.10	1.019	-0.04	0.949	0.990
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	46	5230	17.20	17.50	1.072	95.67	1.045	0.01	0.943	1.056
39	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 1	44	5220	17.40	17.50	1.023	98.10	1.019	-0.11	1.040	1.084
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 1	46	5230	17.20	17.50	1.072	95.67	1.045	-0.08	0.070	0.078
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 0+1	46	5230	16.30	17.50	1.318	96.21	1.039	-0.03	0.345	0.473
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0+1	46	5230	16.30	17.50	1.318	96.21	1.039	-0.02	0.714	0.978
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 0+1	44	5220	16.20	17.50	1.349	98.10	1.019	-0.05	0.719	0.988
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 0+1	46	5230	16.30	17.50	1.318	96.21	1.039	-0.07	0.788	1.079
	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 0+1	44	5220	16.20	17.50	1.349	98.10	1.019	-0.04	0.767	1.054
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 0+1	46	5230	16.30	17.50	1.318	96.21	1.039	-0.03	0.276	0.378
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0	155	5775	17.30	17.50	1.047	92.68	1.079	-0.05	0.356	0.402
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0	155	5775	17.30	17.50	1.047	92.68	1.079	-0.07	0.212	0.240
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 0	155	5775	17.30	17.50	1.047	92.68	1.079	-0.07	0.315	0.356
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 0	155	5775	17.30	17.50	1.047	92.68	1.079	-0.09	0.292	0.330
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.74	1.078	-0.07	0.184	0.198
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.74	1.078	-0.09	0.868	0.936
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	151	5755	17.50	17.50	1.000	95.67	1.045	-0.08	0.909	0.950
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.74	1.078	0.01	0.860	0.927
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	151	5755	17.50	17.50	1.000	95.67	1.045	-0.05	0.850	0.888
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.74	1.078	0	0.050	0.054
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0+1	155	5775	17.40	17.50	1.023	92.74	1.078	-0.08	0.378	0.417
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1	155	5775	17.40	17.50	1.023	92.74	1.078	-0.09	0.876	0.966
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0+1	151	5755	17.30	17.50	1.047	96.21	1.039	-0.03	0.875	0.952
40	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 0+1	155	5775	17.40	17.50	1.023	92.74	1.078	-0.03	0.945	1.042
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 0+1	151	5755	17.30	17.50	1.047	96.21	1.039	-0.09	0.908	0.988
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 0+1	155	5775	17.40	17.50	1.023	92.74	1.078	-0.14	0.260	0.287

<Bluetooth SAR>

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	10mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	-0.04	0.076	0.083
41	Bluetooth	1Mbps	Back	10mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	0.08	0.129	0.140
	Bluetooth	1Mbps	Right Side	10mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	-0.06	0.055	0.060
	Bluetooth	1Mbps	Top Side	10mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	-0.04	0.042	0.046

17.3 Body Worn Accessory SAR
<GSM SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	251	848.8	27.57	29.00	1.390	-0.13	0.224	0.311
42	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	251	848.8	27.57	29.00	1.390	-0.1	0.320	0.445
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	128	824.2	25.58	26.50	1.236	-0.07	0.161	0.199
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	128	824.2	25.58	26.50	1.236	-0.11	0.177	0.219
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 1	GPRS (4 Tx slots)	Front	10mm	251	848.8	27.57	29.00	1.390	-0.06	0.265	0.368
	GSM850_Ant 1	GPRS (4 Tx slots)	Back	10mm	251	848.8	27.57	29.00	1.390	-0.14	0.320	0.445

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	512	1850.2	24.85	26.50	1.462	-0.19	0.378	0.553
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	512	1850.2	24.85	26.50	1.462	-0.14	0.470	0.687
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	810	1909.8	23.45	24.50	1.274	-0.08	0.300	0.382
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	810	1909.8	23.45	24.50	1.274	-0.05	0.315	0.401
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 1	GPRS (4 Tx slots)	Front	10mm	512	1850.2	24.85	26.50	1.462	-0.03	0.353	0.516
43	GSM1900_Ant 1	GPRS (4 Tx slots)	Back	10mm	512	1850.2	24.85	26.50	1.462	0.11	0.476	0.696

<WCDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
44	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9538	1907.6	24.82	25.10	1.067	-0.08	1.100	1.173
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9262	1852.4	24.69	25.10	1.099	0.01	1.020	1.121
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9400	1880	24.59	25.10	1.125	-0.11	1.020	1.147
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9538	1907.6	24.82	25.10	1.067	-0.04	1.010	1.077
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9262	1852.4	24.69	25.10	1.099	-0.02	0.948	1.042
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9400	1880	24.59	25.10	1.125	-0.05	0.993	1.117

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9538	1907.6	19.63	20.20	1.140	-0.11	0.302	0.344
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9538	1907.6	19.63	20.20	1.140	-0.03	0.301	0.343

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	10mm	9538	1907.6	24.82	25.10	1.067	0.05	0.613	0.654
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9538	1907.6	24.82	25.10	1.067	0.05	0.879	0.938
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9262	1852.4	24.69	25.10	1.099	-0.07	0.976	1.073
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9400	1880	24.59	25.10	1.125	-0.02	0.877	0.986

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	1312	1712.4	19.50	20.00	1.122	0.02	0.216	0.242
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	1312	1712.4	19.50	20.00	1.122	-0.01	0.219	0.246

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	10mm	1312	1712.4	23.31	24.00	1.172	0.16	0.430	0.504
45	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	10mm	1312	1712.4	23.31	24.00	1.172	-0.04	0.503	0.590

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	4132	826.4	23.81	24.50	1.172	-0.13	0.243	0.285
46	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4132	826.4	23.81	24.50	1.172	-0.12	0.332	0.389

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	4182	836.4	22.04	22.50	1.112	-0.16	0.172	0.191
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4182	836.4	22.04	22.50	1.112	-0.13	0.244	0.271

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	10mm	4132	826.4	23.81	24.50	1.172	-0.1	0.189	0.222
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	4132	826.4	23.81	24.50	1.172	-0.13	0.264	0.309

<CDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 0	1xRTT RC3 SO32	Front	10mm	1013	824.7	24.66	25.50	1.213	-0.01	0.319	0.387
47	CDMA BC0_Ant 0	1xRTT RC3 SO32	Back	10mm	1013	824.7	24.66	25.50	1.213	0.02	0.403	0.489
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 0	1xRTT RC3 SO32	Front	10mm	384	836.52	21.78	22.50	1.180	-0.06	0.153	0.181
	CDMA BC0_Ant 0	1xRTT RC3 SO32	Back	10mm	384	836.52	21.78	22.50	1.180	0	0.233	0.275
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 1	1xRTT RC3 SO32	Front	10mm	1013	824.7	24.66	25.50	1.213	-0.08	0.219	0.266
	CDMA BC0_Ant 1	1xRTT RC3 SO32	Back	10mm	1013	824.7	24.66	25.50	1.213	-0.18	0.316	0.383

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Front	10mm	1175	1908.75	24.34	25.00	1.164	-0.08	0.927	1.079
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Front	10mm	25	1851.25	24.33	25.00	1.167	-0.02	0.904	1.055
48	CDMA BC1_Ant 0	1xRTT RC3 SO32	Front	10mm	600	1880	24.24	25.00	1.191	-0.01	0.943	1.123
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Back	10mm	1175	1908.75	24.34	25.00	1.164	-0.17	0.894	1.041
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Back	10mm	25	1851.25	24.33	25.00	1.167	-0.09	0.839	0.979
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Back	10mm	600	1880	24.24	25.00	1.191	-0.06	0.902	1.075
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Front	10mm	25	1851.25	18.69	19.50	1.205	-0.01	0.244	0.294
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Back	10mm	25	1851.25	18.69	19.50	1.205	-0.02	0.229	0.276
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 1	1xRTT RC3 SO32	Front	10mm	1175	1908.75	24.34	25.00	1.164	0.11	0.504	0.587
	CDMA BC1_Ant 1	1xRTT RC3 SO32	Back	10mm	1175	1908.75	24.34	25.00	1.164	0.06	0.726	0.845
	CDMA BC1_Ant 1	1xRTT RC3 SO32	Back	10mm	25	1851.25	24.33	25.00	1.167	-0.01	0.881	1.028
	CDMA BC1_Ant 1	1xRTT RC3 SO32	Back	10mm	600	1880	24.25	25.00	1.189	0.01	0.766	0.910

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 0	1xRTT RC3 SO32	Front	10mm	476	817.9	24.59	25.50	1.233	0.01	0.302	0.372
49	CDMA BC10_Ant 0	1xRTT RC3 SO32	Back	10mm	476	817.9	24.59	25.50	1.233	-0.01	0.346	0.427
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 0	1xRTT RC3 SO32	Front	10mm	476	817.9	21.81	22.50	1.172	0.01	0.163	0.191
	CDMA BC10_Ant 0	1xRTT RC3 SO32	Back	10mm	476	817.9	21.81	22.50	1.172	-0.01	0.183	0.215
WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 1	1xRTT RC3 SO32	Front	10mm	580	820.5	24.57	25.50	1.239	-0.07	0.199	0.247
	CDMA BC10_Ant 1	1xRTT RC3 SO32	Back	10mm	580	820.5	24.57	25.50	1.239	-0.16	0.305	0.378

<FDD LTE SAR>

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	99	Front	10mm	21100	2535	23.77	24.50	1.183	-0.09	0.845	1.000
	LTE Band 7_Ant 2	20M	QPSK	1	99	Front	10mm	20850	2510	23.71	24.50	1.199	-0.14	0.910	1.092
	LTE Band 7_Ant 2	20M	QPSK	1	99	Front	10mm	21350	2560	23.65	24.50	1.216	-0.02	0.781	0.950
	LTE Band 7_Ant 2	20M	QPSK	50	50	Front	10mm	21100	2535	22.76	23.50	1.186	-0.07	0.687	0.815
	LTE Band 7_Ant 2	20M	QPSK	50	50	Front	10mm	20850	2510	22.74	23.50	1.191	-0.01	0.752	0.896
	LTE Band 7_Ant 2	20M	QPSK	50	50	Front	10mm	21350	2560	22.67	23.50	1.211	-0.01	0.646	0.782
	LTE Band 7_Ant 2	20M	QPSK	100	0	Front	10mm	20850	2510	22.68	23.50	1.208	-0.17	0.751	0.907
	LTE Band 7_Ant 2	20M	QPSK	1	99	Back	10mm	21100	2535	23.77	24.50	1.183	-0.02	0.895	1.059
50	LTE Band 7_Ant 2	20M	QPSK	1	99	Back	10mm	20850	2510	23.71	24.50	1.199	-0.09	0.968	1.161
	LTE Band 7_Ant 2	20M	QPSK	1	99	Back	10mm	21350	2560	23.65	24.50	1.216	-0.03	0.811	0.986
	LTE Band 7_Ant 2	20M	QPSK	50	50	Back	10mm	21100	2535	22.76	23.50	1.186	-0.01	0.740	0.877
	LTE Band 7_Ant 2	20M	QPSK	50	50	Back	10mm	20850	2510	22.74	23.50	1.191	-0.06	0.828	0.986
	LTE Band 7_Ant 2	20M	QPSK	50	50	Back	10mm	21350	2560	22.67	23.50	1.211	-0.12	0.680	0.823
	LTE Band 7_Ant 2	20M	QPSK	100	0	Back	10mm	20850	2510	22.68	23.50	1.208	-0.1	0.766	0.925
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	20850	2510	18.53	19.50	1.250	0	0.287	0.359
	LTE Band 7_Ant 2	20M	QPSK	50	50	Front	10mm	20850	2510	18.67	19.50	1.211	-0.01	0.278	0.337
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	20850	2510	18.53	19.50	1.250	-0.06	0.325	0.406
	LTE Band 7_Ant 2	20M	QPSK	50	50	Back	10mm	20850	2510	18.67	19.50	1.211	-0.04	0.314	0.380

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Ant 0	10M	QPSK	1	49	Front	10mm	23095	707.5	24.92	25.70	1.197	-0.09	0.204	0.244
	LTE Band 12_Ant 0	10M	QPSK	25	12	Front	10mm	23095	707.5	24.03	24.70	1.167	0	0.158	0.184
	LTE Band 12_Ant 0	10M	QPSK	1	49	Back	10mm	23095	707.5	24.92	25.70	1.197	-0.02	0.282	0.337
	LTE Band 12_Ant 0	10M	QPSK	25	12	Back	10mm	23095	707.5	24.03	24.70	1.167	-0.01	0.223	0.260
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Ant 0	10M	QPSK	1	49	Front	10mm	23095	707.5	23.91	24.70	1.199	-0.06	0.162	0.194
	LTE Band 12_Ant 0	10M	QPSK	25	12	Front	10mm	23095	707.5	23.95	24.70	1.189	-0.03	0.157	0.187
	LTE Band 12_Ant 0	10M	QPSK	1	49	Back	10mm	23095	707.5	23.91	24.70	1.199	-0.03	0.228	0.273
	LTE Band 12_Ant 0	10M	QPSK	25	12	Back	10mm	23095	707.5	23.95	24.70	1.189	-0.04	0.227	0.270
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Ant 1	10M	QPSK	1	49	Front	10mm	23095	707.5	24.92	25.70	1.197	-0.05	0.253	0.303
	LTE Band 12_Ant 1	10M	QPSK	25	12	Front	10mm	23095	707.5	24.03	24.70	1.167	0.05	0.208	0.243
51	LTE Band 12_Ant 1	10M	QPSK	1	49	Back	10mm	23095	707.5	24.92	25.70	1.197	-0.06	0.327	0.391
	LTE Band 12_Ant 1	10M	QPSK	25	12	Back	10mm	23095	707.5	24.03	24.70	1.167	-0.05	0.269	0.314

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
52	LTE Band 13_Ant 0	10M	QPSK	1	25	Front	10mm	23230	782	24.33	25.30	1.250	-0.05	0.301	0.376
	LTE Band 13_Ant 0	10M	QPSK	25	0	Front	10mm	23230	782	23.39	24.30	1.233	-0.04	0.238	0.293
	LTE Band 13_Ant 0	10M	QPSK	1	25	Back	10mm	23230	782	24.33	25.30	1.250	-0.03	0.299	0.374
	LTE Band 13_Ant 0	10M	QPSK	25	0	Back	10mm	23230	782	23.39	24.30	1.233	-0.02	0.239	0.295
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_Ant 0	10M	QPSK	1	0	Front	10mm	23230	782	22.84	23.80	1.247	-0.03	0.205	0.256
	LTE Band 13_Ant 0	10M	QPSK	25	0	Front	10mm	23230	782	22.90	23.80	1.230	-0.03	0.210	0.258
	LTE Band 13_Ant 0	10M	QPSK	1	0	Back	10mm	23230	782	22.84	23.80	1.247	0	0.206	0.257
	LTE Band 13_Ant 0	10M	QPSK	25	0	Back	10mm	23230	782	22.90	23.80	1.230	0.02	0.214	0.263
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_Ant 1	10M	QPSK	1	25	Front	10mm	23230	782	24.33	25.30	1.250	-0.12	0.214	0.268
	LTE Band 13_Ant 1	10M	QPSK	25	0	Front	10mm	23230	782	23.39	24.30	1.233	0	0.172	0.212
	LTE Band 13_Ant 1	10M	QPSK	1	25	Back	10mm	23230	782	24.33	25.30	1.250	-0.04	0.270	0.338
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	10mm	23230	782	23.39	24.30	1.233	-0.04	0.218	0.269

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26590	1905	24.75	25.10	1.084	0.01	1.010	1.095
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26140	1860	24.67	25.10	1.104	0	0.896	0.989
53	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26340	1880	24.55	25.10	1.135	0.02	0.976	1.108
	LTE Band 25_Ant 0	20M	QPSK	52	24	Front	10mm	26590	1905	23.74	24.10	1.086	0.01	0.845	0.918
	LTE Band 25_Ant 0	20M	QPSK	52	24	Front	10mm	26140	1860	23.61	24.10	1.119	0.03	0.764	0.855
	LTE Band 25_Ant 0	20M	QPSK	52	24	Front	10mm	26340	1880	23.54	24.10	1.138	-0.03	0.790	0.899
	LTE Band 25_Ant 0	20M	QPSK	100	0	Front	10mm	26590	1905	23.72	24.10	1.091	0	0.835	0.911
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26590	1905	24.75	25.10	1.084	0	0.996	1.080
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26140	1860	24.67	25.10	1.104	-0.08	0.850	0.938
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26340	1880	24.55	25.10	1.135	-0.08	0.943	1.070
	LTE Band 25_Ant 0	20M	QPSK	50	24	Back	10mm	26590	1905	23.74	24.10	1.086	-0.11	0.833	0.905
	LTE Band 25_Ant 0	20M	QPSK	50	24	Back	10mm	26140	1860	23.61	24.10	1.119	-0.09	0.721	0.807
	LTE Band 25_Ant 0	20M	QPSK	50	24	Back	10mm	26340	1880	23.54	24.10	1.138	-0.09	0.782	0.890
	LTE Band 25_Ant 0	20M	QPSK	100	0	Back	10mm	26590	1905	23.72	24.10	1.091	-0.12	0.835	0.911
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	49	Front	10mm	26590	1905	19.91	20.70	1.199	-0.16	0.327	0.392
	LTE Band 25_Ant 0	20M	QPSK	50	24	Front	10mm	26590	1905	19.99	20.70	1.178	0.03	0.340	0.400
	LTE Band 25_Ant 0	20M	QPSK	1	49	Back	10mm	26590	1905	19.91	20.70	1.199	-0.12	0.314	0.377
	LTE Band 25_Ant 0	20M	QPSK	50	24	Back	10mm	26590	1905	19.99	20.70	1.178	-0.09	0.325	0.383
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 1	20M	QPSK	1	0	Front	10mm	26590	1905	24.75	25.10	1.084	0.17	0.282	0.306
	LTE Band 25_Ant 1	20M	QPSK	50	24	Front	10mm	26590	1905	23.74	24.10	1.086	0.16	0.253	0.275
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	10mm	26590	1905	24.75	25.10	1.084	0.06	0.373	0.404
	LTE Band 25_Ant 1	20M	QPSK	50	24	Back	10mm	26590	1905	23.74	24.10	1.086	0.01	0.339	0.368

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 0	15M	QPSK	1	0	Front	10mm	26865	831.5	24.82	25.70	1.225	-0.12	0.320	0.392
	LTE Band 26_Ant 0	15M	QPSK	36	20	Front	10mm	26865	831.5	23.87	24.70	1.211	-0.03	0.253	0.306
54	LTE Band 26_Ant 0	15M	QPSK	1	0	Back	10mm	26865	831.5	24.82	25.70	1.225	-0.02	0.408	0.500
	LTE Band 26_Ant 0	15M	QPSK	36	20	Back	10mm	26865	831.5	23.87	24.70	1.211	0.04	0.350	0.424
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 0	15M	QPSK	1	0	Front	10mm	26865	831.5	21.81	22.70	1.227	-0.02	0.160	0.196
	LTE Band 26_Ant 0	15M	QPSK	36	0	Front	10mm	26865	831.5	21.83	22.70	1.222	-0.03	0.161	0.197
	LTE Band 26_Ant 0	15M	QPSK	1	0	Back	10mm	26865	831.5	21.81	22.70	1.227	0.09	0.203	0.249
	LTE Band 26_Ant 0	15M	QPSK	36	0	Back	10mm	26865	831.5	21.83	22.70	1.222	0.01	0.209	0.255
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	10mm	26865	831.5	24.82	25.70	1.225	-0.08	0.250	0.306
	LTE Band 26_Ant 1	15M	QPSK	36	20	Front	10mm	26865	831.5	23.87	24.70	1.211	-0.04	0.228	0.276
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	10mm	26865	831.5	24.82	25.70	1.225	-0.12	0.329	0.403
	LTE Band 26_Ant 1	15M	QPSK	36	20	Back	10mm	26865	831.5	23.87	24.70	1.211	-0.1	0.303	0.367
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	132572	1770	23.51	24.50	1.256	-0.12	0.596	0.749
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	132572	1770	22.40	23.50	1.288	-0.01	0.466	0.600
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	132572	1770	23.51	24.50	1.256	-0.1	0.551	0.692
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	132572	1770	22.40	23.50	1.288	-0.01	0.435	0.560
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	132572	1770	19.01	20.00	1.256	0.02	0.210	0.264
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	132572	1770	18.99	20.00	1.262	0.09	0.210	0.265
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	132572	1770	19.01	20.00	1.256	-0.1	0.208	0.261
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	132572	1770	18.99	20.00	1.262	0.03	0.208	0.262
WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	10mm	132572	1770	23.51	24.50	1.256	0.09	0.484	0.608
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	10mm	132572	1770	22.40	23.50	1.288	0.14	0.382	0.492
55	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	132572	1770	23.51	24.50	1.256	-0.03	0.670	0.842
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	132072	1720	23.46	24.50	1.271	-0.03	0.592	0.752
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	132322	1745	23.50	24.50	1.259	0.03	0.649	0.817
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	10mm	132572	1770	22.40	23.50	1.288	0.02	0.524	0.675

<TDD LTE SAR>

WiFi off																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
	LTE Band 38_Ant 2	20M	QPSK	1	99	Front	10mm	38000	2595	24.90	25.70	1.202	62.9	1.006	-0.13	0.579	0.700
	LTE Band 38_Ant 2	20M	QPSK	50	50	Front	10mm	38000	2595	23.95	24.70	1.189	62.9	1.006	-0.04	0.464	0.555
56	LTE Band 38_Ant 2	20M	QPSK	1	99	Back	10mm	38000	2595	24.90	25.70	1.202	62.9	1.006	-0.01	0.580	0.701
	LTE Band 38_Ant 2	20M	QPSK	50	50	Back	10mm	38000	2595	23.95	24.70	1.189	62.9	1.006	-0.03	0.473	0.566
WiFi on																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
	LTE Band 38_Ant 2	20M	QPSK	1	99	Front	10mm	38000	2595	20.85	21.70	1.216	62.9	1.006	-0.05	0.230	0.281
	LTE Band 38_Ant 2	20M	QPSK	50	50	Front	10mm	38000	2595	20.84	21.70	1.219	62.9	1.006	0.07	0.234	0.287
	LTE Band 38_Ant 2	20M	QPSK	1	99	Back	10mm	38000	2595	20.85	21.70	1.216	62.9	1.006	-0.14	0.224	0.274
	LTE Band 38_Ant 2	20M	QPSK	50	50	Back	10mm	38000	2595	20.84	21.70	1.219	62.9	1.006	-0.12	0.230	0.282

WiFi off																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	41490	2680	24.24	25.00	1.191	62.90	1.006	-0.05	0.510	0.611
57	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	39750	2506	24.00	25.00	1.259	62.90	1.006	0.01	0.650	0.823
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	40185	2549.5	24.12	25.00	1.225	62.90	1.006	-0.01	0.587	0.723
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	40620	2593	24.17	25.00	1.211	62.90	1.006	-0.05	0.504	0.614
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	41055	2636.5	24.18	25.00	1.208	62.90	1.006	0.08	0.480	0.583
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	10mm	41490	2680	23.29	24.00	1.178	62.90	1.006	-0.08	0.401	0.475
	LTE Band 41_Ant 2	20M	QPSK	100	0	Front	10mm	41490	2680	23.24	24.00	1.191	62.90	1.006	-0.06	0.391	0.469
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	41490	2680	24.24	25.00	1.191	62.90	1.006	-0.09	0.475	0.569
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	41490	2680	23.29	24.00	1.178	62.90	1.006	-0.01	0.373	0.442
WiFi on																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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)
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	41490	2680	21.21	22.00	1.199	62.90	1.006	-0.13	0.251	0.303
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	10mm	41490	2680	21.30	22.00	1.175	62.90	1.006	-0.1	0.248	0.293
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	41490	2680	21.21	22.00	1.199	62.90	1.006	-0.02	0.229	0.276
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	41490	2680	21.30	22.00	1.175	62.90	1.006	0.06	0.223	0.264

<WLAN SAR>

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 0	6	2437	18.00	18.00	1.000	99.02	1.010	-0.06	0.121	0.122
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 0	6	2437	18.00	18.00	1.000	99.02	1.010	0.08	0.194	0.196
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 1	6	2437	18.00	18.00	1.000	98.63	1.014	0.07	0.179	0.182
58	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 1	6	2437	18.00	18.00	1.000	98.63	1.014	0.19	0.488	0.495
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 0+1	6	2437	17.90	18.00	1.023	98.98	1.010	0.06	0.250	0.258
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 0+1	6	2437	17.90	18.00	1.023	98.98	1.010	0.07	0.450	0.465
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 0	54	5270	17.50	17.50	1.000	95.45	1.048	-0.04	0.276	0.289
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0	54	5270	17.50	17.50	1.000	95.45	1.048	-0.06	0.176	0.184
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 1	54	5270	17.50	17.50	1.000	95.67	1.045	-0.01	0.175	0.183
59	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	54	5270	17.50	17.50	1.000	95.67	1.045	-0.05	0.774	0.809
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 1	60	5300	17.40	17.50	1.023	98.10	1.019	-0.04	0.754	0.786
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 0+1	54	5270	17.20	17.50	1.072	96.21	1.039	-0.04	0.328	0.365
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0+1	54	5270	17.20	17.50	1.072	96.21	1.039	-0.05	0.684	0.762
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0	138	5690	17.50	17.50	1.000	92.68	1.079	-0.03	0.311	0.336
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0	138	5690	17.50	17.50	1.000	92.68	1.079	0.1	0.207	0.223
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 1	138	5690	17.50	17.50	1.000	92.74	1.078	-0.06	0.168	0.181
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	138	5690	17.50	17.50	1.000	92.74	1.078	-0.07	0.794	0.856
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	122	5610	17.30	17.50	1.047	92.74	1.078	-0.19	0.559	0.631
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0+1	138	5690	17.40	17.50	1.023	92.74	1.078	-0.08	0.324	0.357
60	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1	138	5690	17.40	17.50	1.023	92.74	1.078	-0.06	0.881	0.972
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1	122	5610	17.10	17.50	1.096	92.74	1.078	-0.16	0.646	0.764
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0	155	5775	17.30	17.50	1.047	92.68	1.079	-0.05	0.356	0.402
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0	155	5775	17.30	17.50	1.047	92.68	1.079	-0.07	0.212	0.240
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.74	1.078	-0.07	0.184	0.198
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.74	1.078	-0.09	0.868	0.936
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	151	5755	17.50	17.50	1.000	95.67	1.045	-0.08	0.909	0.950
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0+1	155	5775	17.40	17.50	1.023	92.74	1.078	-0.08	0.378	0.417
61	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1	155	5775	17.40	17.50	1.023	92.74	1.078	-0.09	0.876	0.966
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0+1	151	5755	17.30	17.50	1.047	96.21	1.039	-0.03	0.875	0.952

<Bluetooth SAR>

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	10mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	-0.04	0.076	0.083
62	Bluetooth	1Mbps	Back	10mm	Ant 0	0	2402	17.98	18.00	1.004	76.84	1.084	0.08	0.129	0.140



17.4 Product Specific SAR

<WLAN SAR>

WWAN OFF / WWAN ON															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 0	54	5270	17.50	17.50	1.000	95.45	1.048	-0.07	0.785	0.823
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 0	54	5270	17.50	17.50	1.000	95.45	1.048	0	0.549	0.575
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 0	54	5270	17.50	17.50	1.000	95.45	1.048	-0.01	0.409	0.429
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 0	54	5270	17.50	17.50	1.000	95.45	1.048	0.01	0.705	0.739
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 1	54	5270	17.50	17.50	1.000	95.67	1.045	0.07	0.643	0.672
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	54	5270	17.50	17.50	1.000	95.67	1.045	-0.05	2.150	2.247
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 1	60	5300	17.40	17.50	1.023	98.10	1.019	-0.06	2.040	2.127
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 1	54	5270	17.50	17.50	1.000	95.67	1.045	0.06	1.660	1.735
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 1	54	5270	17.50	17.50	1.000	95.67	1.045	-0.05	0.111	0.116
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 0+1	54	5270	17.20	17.50	1.072	96.21	1.039	-0.12	0.910	1.013
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 0+1	54	5270	17.20	17.50	1.072	96.21	1.039	-0.19	2.130	2.371
63	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 0+1	60	5300	16.20	17.50	1.349	98.10	1.019	-0.16	1.860	2.557
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 0+1	54	5270	17.20	17.50	1.072	96.21	1.039	0.18	1.630	1.815
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 0+1	54	5270	17.20	17.50	1.072	96.21	1.039	-0.16	0.853	0.950
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 0	138	5690	17.50	17.50	1.000	92.68	1.079	-0.16	1.070	1.155
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0	138	5690	17.50	17.50	1.000	92.68	1.079	0.06	0.740	0.798
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 0	138	5690	17.50	17.50	1.000	92.68	1.079	-0.1	0.543	0.586
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 0	138	5690	17.50	17.50	1.000	92.68	1.079	-0.14	0.779	0.841
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 1	138	5690	17.50	17.50	1.000	92.74	1.078	0.16	0.433	0.467
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 1	138	5690	17.50	17.50	1.000	92.74	1.078	-0.09	1.750	1.887
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 1	138	5690	17.50	17.50	1.000	92.74	1.078	0.17	1.260	1.358
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 1	138	5690	17.50	17.50	1.000	92.74	1.078	-0.02	0.066	0.071
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 0+1	138	5690	17.40	17.50	1.023	92.74	1.078	-0.17	1.220	1.346
64	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0+1	138	5690	17.40	17.50	1.023	92.74	1.078	-0.15	2.390	2.636
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0+1	122	5610	17.10	17.50	1.096	92.74	1.078	-0.18	1.710	2.021
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 0+1	138	5690	17.40	17.50	1.023	92.74	1.078	0.13	1.870	2.063
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 0+1	122	5610	17.10	17.50	1.096	92.74	1.078	0.1	1.300	1.537
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 0+1	138	5690	17.40	17.50	1.023	92.74	1.078	-0.14	0.717	0.791

17.5 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	-	9538	1907.6	24.82	25.10	1.067	-	1.000	-0.08	1.100	-	1.173
2nd	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	-	9538	1907.6	24.82	25.10	1.067	-	1.000	0.06	1.070	1.03	1.141
1st	LTE Band 7_Ant 2	20M_QPSK_1_99	Back	10mm	-	20850	2510	23.71	24.50	1.199	-	1.000	-0.09	0.968	-	1.161
2nd	LTE Band 7_Ant 2	20M_QPSK_1_99	Back	10mm	-	20850	2510	23.71	24.50	1.199	-	1.000	-0.02	0.874	1.11	1.048
1st	CDMA BC1_Ant 1	1xRTT RC3 SO32	Back	10mm	-	25	1851.25	24.33	25.00	1.167	-	1.000	-0.01	0.881	-	1.028
2nd	CDMA BC1_Ant 1	1xRTT RC3 SO32	Back	10mm	-	25	1851.25	24.33	25.00	1.167	-	1.000	0	0.880	1.00	1.027
1st	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 1	44	5220	17.40	17.50	1.023	98.10	1.019	-0.11	1.040	-	1.084
2nd	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 1	44	5220	17.40	17.50	1.023	98.10	1.019	-0.1	0.994	1.05	1.036
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 0+1(0)	155	5775	17.40	17.50	1.023	92.74	1.078	-0.03	0.945	-	1.042
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 0+1(0)	155	5775	17.40	17.50	1.023	92.74	1.078	-0.13	0.910	1.04	1.004
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1(0)	138	5690	17.40	17.50	1.023	92.74	1.078	-0.06	0.881	-	0.972
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1(0)	138	5690	17.40	17.50	1.023	92.74	1.078	-0.03	0.853	1.03	0.941

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	54	5270	17.50	17.50	1.000	95.67	1.045	-0.05	2.150	-	2.247
2nd	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	54	5270	17.50	17.50	1.000	95.67	1.045	-0.11	2.110	1.02	2.205
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0+1(0)	138	5690	17.40	17.50	1.023	92.74	1.078	-0.15	2.390	-	2.636
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0+1(0)	138	5690	17.40	17.50	1.023	92.74	1.078	-0.1	2.310	1.03	2.548

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, only one repeated measurement is required.
3. 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.

18. Simultaneous Transmission Analysis

Config	Mode	Capable TX Configurations
1	WWAN OFF (Cellular off)	WiFi 5G SISO (Ant0) + Bluetooth (Ant0)
2		WiFi 5G SISO (Ant1) + Bluetooth (Ant0)
3		WiFi 5G MIMO (Ant0+1) + Bluetooth (Ant0)
4		WiFi 5G SISO (Ant0)
5		WiFi 5G SISO (Ant1)
6		WiFi 5G MIMO (Ant0+1)
7		WiFi 2.4G SISO (Ant0)
8		WiFi 2.4G SISO (Ant1)
9		WiFi 2.4G SISO (Ant1) + Bluetooth (Ant0)
10		WiFi 2.4G MIMO (Ant0+1)
11		Bluetooth (Ant0)
12		WiFi 2.4G SISO (Ant0) + WiFi 5G SISO (Ant1)
13	WWAN ON (Cellular on)	WiFi 5G SISO (Ant0) + Bluetooth (Ant0)
14		WiFi 5G SISO (Ant1) + Bluetooth (Ant0)
15		WiFi 5G MIMO (Ant0+1) + Bluetooth (Ant0)
16		WiFi 5G SISO (Ant0)
17		WiFi 5G SISO (Ant1)
18		WiFi 5G MIMO (Ant0+1)
19		WiFi 2.4G SISO (Ant0)
20		WiFi 2.4G SISO (Ant1)
21		WiFi 2.4G SISO (Ant1) + Bluetooth (Ant0)
22		WiFi 2.4G MIMO (Ant0+1)
23		Bluetooth (Ant0)
24		WiFi 2.4G SISO (Ant0) + WiFi 5G SISO (Ant1)

General Note:

- All licensed modes share the same antenna part and cannot transmit simultaneously.
- The worst case WLAN reported SAR for each configuration was used for SAR summation, regardless of whether the WLAN channel has WiFi Direct and Hotspot capability. Therefore, the following summations represent the absolute worst cases for simultaneous transmission with WLAN.
- When the device operates in head/hotspot/body-worn, cellular TX power has 2 power table associated with WiFi-ON (power table 1) and WiFi-OFF (power table 2). Cellular SAR associated with power table 1 was used for analysis of simultaneous transmission with WLAN and BT, associated with power table 2 was used for analysis of simultaneous transmission with BT only.
- The Scaled SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - Scalar SAR summation < 1.6W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$, 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, if $SPLSR < 0.1$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.

**18.1 Head Exposure Conditions****<WWAN OFF>**

Exposure Position	2	3	4	5	6	7	8	2+5 Summed 1g SAR (W/kg)	3+6 Summed 1g SAR (W/kg)	4+6 Summed 1g SAR (W/kg)	5+6 Summed 1g SAR (W/kg)	6+8 Summed 1g SAR (W/kg)
	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0	2.4GHz WLAN Ant 0+1	5GHz WLAN Ant 0+1					
	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)					
Right Cheek	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.213	0.235	0.576	0.275	0.549
Right Tilted	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.161	0.154	0.552	0.145	0.536
Left Cheek	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.637	0.683	0.991	0.854	0.977
Left Tilted	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.235	0.337	0.744	0.307	0.707

<WiFi ON>

WWAN Band		Exposure Position	1	2	3	4	5	6	7	8	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0	2.4GHz WLAN Ant 0+1	5GHz WLAN Ant 0+1						
			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)						
GSM	GSM850_Ant 0	Right Cheek	0.407	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.620	0.642	0.497	0.983	0.682	0.956
		Right Tilted	0.167	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.328	0.321	0.250	0.719	0.312	0.703
		Left Cheek	0.309	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.946	0.992	0.571	1.300	1.163	1.286
		Left Tilted	0.197	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.432	0.534	0.330	0.941	0.504	0.904
	GSM1900_Ant 0	Right Cheek	0.130	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.343	0.365	0.220	0.706	0.405	0.679
		Right Tilted	0.137	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.298	0.291	0.220	0.689	0.282	0.673
		Left Cheek	0.228	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.865	0.911	0.490	1.219	1.082	1.205
		Left Tilted	0.092	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.327	0.429	0.225	0.836	0.399	0.799
WCDMA	WCDMA II_Ant 0	Right Cheek	0.312	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.525	0.547	0.402	0.888	0.587	0.861
		Right Tilted	0.227	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.388	0.381	0.310	0.779	0.372	0.763
		Left Cheek	0.544	0.297	0.169	0.477	0.340	0.514	0.262	0.463	1.181	1.227	0.806	1.535	1.398	1.521
		Left Tilted	0.188	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.423	0.525	0.321	0.932	0.495	0.895
	WCDMA IV_Ant 0	Right Cheek	0.203	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.416	0.438	0.293	0.779	0.478	0.752
		Right Tilted	0.273	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.434	0.427	0.356	0.825	0.418	0.809
		Left Cheek	0.342	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.979	1.025	0.604	1.333	1.196	1.319
		Left Tilted	0.204	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.439	0.541	0.337	0.948	0.511	0.911
	WCDMA V_Ant 0	Right Cheek	0.239	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.452	0.474	0.329	0.815	0.514	0.788
		Right Tilted	0.131	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.292	0.285	0.214	0.683	0.276	0.667
		Left Cheek	0.234	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.871	0.917	0.496	1.225	1.088	1.211
		Left Tilted	0.151	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.386	0.488	0.284	0.895	0.458	0.858
CDMA	CDMA BC0_Ant 0	Right Cheek	0.373	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.586	0.608	0.463	0.949	0.648	0.922
		Right Tilted	0.219	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.380	0.373	0.302	0.771	0.364	0.755
		Left Cheek	0.320	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.957	1.003	0.582	1.311	1.174	1.297
		Left Tilted	0.222	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.457	0.559	0.355	0.966	0.529	0.929
	CDMA BC1_Ant 0	Right Cheek	0.182	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.395	0.417	0.272	0.758	0.457	0.731
		Right Tilted	0.214	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.375	0.368	0.297	0.766	0.359	0.750
		Left Cheek	0.357	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.994	1.040	0.619	1.348	1.211	1.334
		Left Tilted	0.141	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.376	0.478	0.274	0.885	0.448	0.848
	CDMA BC10_Ant 0	Right Cheek	0.344	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.557	0.579	0.434	0.920	0.619	0.893
		Right Tilted	0.204	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.365	0.358	0.287	0.756	0.349	0.740
		Left Cheek	0.303	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.940	0.986	0.565	1.294	1.157	1.280
		Left Tilted	0.208	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.443	0.545	0.341	0.952	0.515	0.915
LTE	LTE Band 7_Ant 2	Right Cheek	0.392	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.605	0.627	0.482	0.968	0.667	0.941
		Right Tilted	0.071	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.232	0.225	0.154	0.623	0.216	0.607
		Left Cheek	0.197	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.834	0.880	0.459	1.188	1.051	1.174



FCC SAR TEST REPORT

Report No. : FA902116

		Left Tilted	0.126	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.361	0.463	0.259	0.870	0.433	0.833
	LTE Band 12_Ant 0	Right Cheek	0.164	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.377	0.399	0.254	0.740	0.439	0.713
		Right Tilted	0.089	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.250	0.243	0.172	0.641	0.234	0.625
		Left Cheek	0.141	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.778	0.824	0.403	1.132	0.995	1.118
		Left Tilted	0.080	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.315	0.417	0.213	0.824	0.387	0.787
	LTE Band 13_Ant 0	Right Cheek	0.333	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.546	0.568	0.423	0.909	0.608	0.882
		Right Tilted	0.193	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.354	0.347	0.276	0.745	0.338	0.729
		Left Cheek	0.289	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.926	0.972	0.551	1.280	1.143	1.266
		Left Tilted	0.201	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.436	0.538	0.334	0.945	0.508	0.908
	LTE Band 25_Ant 0	Right Cheek	0.240	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.453	0.475	0.330	0.816	0.515	0.789
		Right Tilted	0.223	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.384	0.377	0.306	0.775	0.368	0.759
		Left Cheek	0.439	0.297	0.169	0.477	0.340	0.514	0.262	0.463	1.076	1.122	0.701	1.430	1.293	1.416
		Left Tilted	0.218	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.453	0.555	0.351	0.962	0.525	0.925
	LTE Band 26_Ant 0	Right Cheek	0.372	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.585	0.607	0.462	0.948	0.647	0.921
		Right Tilted	0.224	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.385	0.378	0.307	0.776	0.369	0.760
		Left Cheek	0.398	0.297	0.169	0.477	0.340	0.514	0.262	0.463	1.035	1.081	0.660	1.389	1.252	1.375
		Left Tilted	0.253	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.488	0.590	0.386	0.997	0.560	0.960
	LTE Band 38_Ant 2	Right Cheek	0.354	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.567	0.589	0.444	0.930	0.629	0.903
		Right Tilted	0.112	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.273	0.266	0.195	0.664	0.257	0.648
		Left Cheek	0.180	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.817	0.863	0.442	1.171	1.034	1.157
		Left Tilted	0.184	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.419	0.521	0.317	0.928	0.491	0.891
	LTE Band 41_Ant 2	Right Cheek	0.334	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.547	0.569	0.424	0.910	0.609	0.883
		Right Tilted	0.096	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.257	0.250	0.179	0.648	0.241	0.632
		Left Cheek	0.144	0.297	0.169	0.477	0.340	0.514	0.262	0.463	0.781	0.827	0.406	1.135	0.998	1.121
		Left Tilted	0.177	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.412	0.514	0.310	0.921	0.484	0.884
	LTE Band 66_Ant 0	Right Cheek	0.263	0.126	0.047	0.388	0.087	0.188	0.090	0.361	0.476	0.498	0.353	0.839	0.538	0.812
		Right Tilted	0.290	0.136	0.034	0.432	0.025	0.120	0.083	0.416	0.451	0.444	0.373	0.842	0.435	0.826
		Left Cheek	0.433	0.297	0.169	0.477	0.340	0.514	0.262	0.463	1.070	1.116	0.695	1.424	1.287	1.410
		Left Tilted	0.247	0.179	0.086	0.493	0.056	0.251	0.133	0.456	0.482	0.584	0.380	0.991	0.554	0.954



<WiFi OFF>

WWAN Band		Exposure Position	1	2	1+2 Summed 1g SAR (W/kg)
			WWAN	Bluetooth Ant 0	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_Ant 0	Right Cheek	0.407	0.188	0.595
		Right Tilted	0.167	0.120	0.287
		Left Cheek	0.309	0.514	0.823
		Left Tilted	0.197	0.251	0.448
	GSM1900_Ant 0	Right Cheek	0.130	0.188	0.318
		Right Tilted	0.137	0.120	0.257
		Left Cheek	0.228	0.514	0.742
		Left Tilted	0.092	0.251	0.343
WCDMA	WCDMA II_Ant 0-	Right Cheek	0.416	0.188	0.604
		Right Tilted	0.319	0.120	0.439
		Left Cheek	0.668	0.514	1.182
		Left Tilted	0.234	0.251	0.485
	WCDMA IV_Ant 0	Right Cheek	0.203	0.188	0.391
		Right Tilted	0.273	0.120	0.393
		Left Cheek	0.342	0.514	0.856
		Left Tilted	0.204	0.251	0.455
	WCDMA V_Ant 0	Right Cheek	0.239	0.188	0.427
		Right Tilted	0.131	0.120	0.251
		Left Cheek	0.234	0.514	0.748
		Left Tilted	0.151	0.251	0.402
CDMA	CDMA BC0_Ant 0	Right Cheek	0.373	0.188	0.561
		Right Tilted	0.219	0.120	0.339
		Left Cheek	0.320	0.514	0.834
		Left Tilted	0.222	0.251	0.473
	CDMA BC1_Ant 0-	Right Cheek	0.369	0.188	0.557
		Right Tilted	0.293	0.120	0.413
		Left Cheek	0.656	0.514	1.170
		Left Tilted	0.208	0.251	0.459
	CDMA BC10_Ant 0	Right Cheek	0.344	0.188	0.532
		Right Tilted	0.204	0.120	0.324
		Left Cheek	0.303	0.514	0.817
		Left Tilted	0.208	0.251	0.459
LTE	LTE Band 7_Ant 2	Right Cheek	0.539	0.188	0.727
		Right Tilted	0.099	0.120	0.219
		Left Cheek	0.251	0.514	0.765
		Left Tilted	0.175	0.251	0.426
	LTE Band 12_Ant 0	Right Cheek	0.164	0.188	0.352
		Right Tilted	0.089	0.120	0.209
		Left Cheek	0.141	0.514	0.655
		Left Tilted	0.080	0.251	0.331
	LTE Band 13_Ant 0	Right Cheek	0.333	0.188	0.521
		Right Tilted	0.193	0.120	0.313
		Left Cheek	0.289	0.514	0.803
		Left Tilted	0.201	0.251	0.452
	LTE Band 25_Ant 0-	Right Cheek	0.360	0.188	0.548
		Right Tilted	0.345	0.120	0.465
		Left Cheek	0.693	0.514	1.207
		Left Tilted	0.332	0.251	0.583
	LTE Band 26_Ant 0	Right Cheek	0.372	0.188	0.560
		Right Tilted	0.224	0.120	0.344
		Left Cheek	0.398	0.514	0.912



	LTE Band 38_Ant 2	Left Tilted	0.253	0.251	0.504
		Right Cheek	0.354	0.188	0.542
		Right Tilted	0.112	0.120	0.232
		Left Cheek	0.180	0.514	0.694
		Left Tilted	0.184	0.251	0.435
	LTE Band 41_Ant 2	Right Cheek	0.334	0.188	0.522
		Right Tilted	0.096	0.120	0.216
		Left Cheek	0.144	0.514	0.658
		Left Tilted	0.177	0.251	0.428
	LTE Band 66_Ant 0	Right Cheek	0.263	0.188	0.451
		Right Tilted	0.290	0.120	0.410
		Left Cheek	0.433	0.514	0.947
		Left Tilted	0.247	0.251	0.498

**18.2 Hotspot Exposure Conditions****<WiFi ON>**

WWAN Band		Exposure Position	1	2	3	4	5	6	7	8	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0	2.4GHz WLAN Ant 0+1	5GHz WLAN Ant 0+1						
			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)						
GSM	GSM850_Ant 0	Front	0.199	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.562	0.464	0.457	0.684	0.523	0.755
		Back	0.219	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.405	0.854	0.684	0.599	1.349	1.347
		Left side	0.156								0.156	0.156	0.156	0.156	0.156	0.156
		Right side	0.205	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.373	0.610	0.559	0.621	1.349	1.344
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.083								0.083	0.083	0.083	0.083	0.083	0.083
	GSM1900_Ant 0	Front	0.382	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.745	0.647	0.640	0.867	0.706	0.938
		Back	0.401	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.587	1.036	0.866	0.781	1.531	1.529
		Left side	0.213								0.213	0.213	0.213	0.213	0.213	0.213
		Right side	0.064	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.232	0.469	0.418	0.480	1.208	1.203
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.484								0.484	0.484	0.484	0.484	0.484	0.484
WCDMA	WCDMA II_Ant 0	Front	0.344	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.707	0.609	0.602	0.829	0.668	0.900
		Back	0.343	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.529	0.978	0.808	0.723	1.473	1.471
		Left side	0.226								0.226	0.226	0.226	0.226	0.226	0.226
		Right side	0.049	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.217	0.454	0.403	0.465	1.193	1.188
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.360								0.360	0.360	0.360	0.360	0.360	0.360
	WCDMA IV_Ant 0	Front	0.242	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.605	0.507	0.500	0.727	0.566	0.798
		Back	0.246	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.432	0.881	0.711	0.626	1.376	1.374
		Left side	0.117								0.117	0.117	0.117	0.117	0.117	0.117
		Right side	0.055	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.223	0.460	0.409	0.471	1.199	1.194
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.307								0.307	0.307	0.307	0.307	0.307	0.307
	WCDMA V_Ant 0	Front	0.191	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.554	0.456	0.449	0.676	0.515	0.747
		Back	0.271	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.457	0.906	0.736	0.651	1.401	1.399
		Left side	0.149								0.149	0.149	0.149	0.149	0.149	0.149
		Right side	0.216	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.384	0.621	0.570	0.632	1.360	1.355
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.107								0.107	0.107	0.107	0.107	0.107	0.107
CDMA	CDMA BC0_Ant 0	Front	0.178	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.541	0.443	0.436	0.663	0.502	0.734
		Back	0.276	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.462	0.911	0.741	0.656	1.406	1.404
		Left side	0.155								0.155	0.155	0.155	0.155	0.155	0.155
		Right side	0.234	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.402	0.639	0.588	0.650	1.378	1.373
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.059								0.059	0.059	0.059	0.059	0.059	0.059
	CDMA BC1_Ant 0	Front	0.300	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.663	0.565	0.558	0.785	0.624	0.856
		Back	0.275	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.461	0.910	0.740	0.655	1.405	1.403
		Left side	0.219								0.219	0.219	0.219	0.219	0.219	0.219
		Right side	0.057	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.225	0.462	0.411	0.473	1.201	1.196
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.290								0.290	0.290	0.290	0.290	0.290	0.290
	CDMA BC10_Ant 0	Front	0.192	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.555	0.457	0.450	0.677	0.516	0.748
		Back	0.211	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.397	0.846	0.676	0.591	1.341	1.339
		Left side	0.139								0.139	0.139	0.139	0.139	0.139	0.139
		Right side	0.193	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.361	0.598	0.547	0.609	1.337	1.332
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424



FCC SAR TEST REPORT

Report No. : FA902116

		Bottom side	0.064								0.064	0.064	0.064	0.064	0.064	0.064
LTE	LTE Band 7_Ant 2	Front	0.359	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.722	0.624	0.617	0.844	0.683	0.915
		Back	0.406	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.592	1.041	0.871	0.786	1.536	1.534
		Left side	0.038								0.038	0.038	0.038	0.038	0.038	0.038
		Right side	0.328	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.496	0.733	0.682	0.744	1.472	1.467
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.180								0.180	0.180	0.180	0.180	0.180	0.180
	LTE Band 12_Ant 0	Front	0.194	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.557	0.459	0.452	0.679	0.518	0.750
		Back	0.273	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.459	0.908	0.738	0.653	1.403	1.401
		Left side	0.202								0.202	0.202	0.202	0.202	0.202	0.202
		Right side	0.186	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.354	0.591	0.540	0.602	1.330	1.325
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.036								0.036	0.036	0.036	0.036	0.036	0.036
	LTE Band 13_Ant 0	Front	0.258	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.621	0.523	0.516	0.743	0.582	0.814
		Back	0.321	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.507	0.956	0.786	0.701	1.451	1.449
		Left side	0.191								0.191	0.191	0.191	0.191	0.191	0.191
		Right side	0.220	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.388	0.625	0.574	0.636	1.364	1.359
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.054								0.054	0.054	0.054	0.054	0.054	0.054
	LTE Band 25_Ant 0	Front	0.400	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.763	0.665	0.658	0.885	0.724	0.956
		Back	0.383	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.569	1.018	0.848	0.763	1.513	1.511
		Left side	0.250								0.250	0.250	0.250	0.250	0.250	0.250
		Right side	0.066	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.234	0.471	0.420	0.482	1.210	1.205
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.398								0.398	0.398	0.398	0.398	0.398	0.398
	LTE Band 26_Ant 0	Front	0.197	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.560	0.462	0.455	0.682	0.521	0.753
		Back	0.255	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.441	0.890	0.720	0.635	1.385	1.383
		Left side	0.150								0.150	0.150	0.150	0.150	0.150	0.150
		Right side	0.203	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.371	0.608	0.557	0.619	1.347	1.342
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.083								0.083	0.083	0.083	0.083	0.083	0.083
	LTE Band 38_Ant 2	Front	0.287	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.650	0.552	0.545	0.772	0.611	0.843
		Back	0.282	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.468	0.917	0.747	0.662	1.412	1.410
		Left side	0.011								0.011	0.011	0.011	0.011	0.011	0.011
		Right side	0.208	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.376	0.613	0.562	0.624	1.352	1.347
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.152								0.152	0.152	0.152	0.152	0.152	0.152
	LTE Band 41_Ant 2	Front	0.303	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.666	0.568	0.561	0.788	0.627	0.859
		Back	0.276	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.462	0.911	0.741	0.656	1.406	1.404
		Left side	0.029								0.029	0.029	0.029	0.029	0.029	0.029
		Right side	0.217	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.385	0.622	0.571	0.633	1.361	1.356
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.156								0.156	0.156	0.156	0.156	0.156	0.156
	LTE Band 66_Ant 0	Front	0.265	0.122	0.182	0.402	0.241	0.083	0.258	0.473	0.628	0.530	0.523	0.750	0.589	0.821
		Back	0.262	0.196	0.495	0.240	0.990	0.140	0.465	0.988	1.448	0.897	0.727	0.642	1.392	1.390
		Left side	0.164								0.164	0.164	0.164	0.164	0.164	0.164
		Right side	0.068	0.084	0.345	0.356	1.084	0.060	0.354	1.079	1.236	0.473	0.422	0.484	1.212	1.207
		Top side		0.074	0.048	0.330	0.078	0.046	0.096	0.378	0.152	0.094	0.096	0.376	0.124	0.424
		Bottom side	0.334								0.334	0.334	0.334	0.334	0.334	0.334



<WiFi OFF>

WWAN Band		Exposure Position	1	2	1+2 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)	
GSM	GSM850_Ant 0	Front	0.311	0.083	0.394
		Back	0.445	0.140	0.585
		Left side	0.234		0.234
		Right side	0.349	0.060	0.409
		Top side		0.046	0.046
		Bottom side	0.182		0.182
	GSM850_Ant 1	Front	0.368	0.083	0.451
		Back	0.445	0.140	0.585
		Left side	0.217		0.217
		Right side	0.242	0.060	0.302
		Top side	0.332	0.046	0.378
		Bottom side			0.000
	GSM1900_Ant 0-	Front	0.553	0.083	0.636
		Back	0.687	0.140	0.827
		Left side	0.310		0.310
		Right side	0.127	0.060	0.187
		Top side		0.046	0.046
		Bottom side	0.911		0.911
	GSM1900_Ant 1	Front	0.516	0.083	0.599
		Back	0.696	0.140	0.836
		Left side	0.203		0.203
		Right side	0.054	0.060	0.114
		Top side	0.676	0.046	0.722
		Bottom side			0.000
WCDMA	WCDMA II_Ant 0-	Front	1.173	0.083	1.256
		Back	1.117	0.140	1.257
		Left side	0.739		0.739
		Right side	0.176	0.060	0.236
		Top side		0.046	0.046
		Bottom side	1.181		1.181
	WCDMA IV_Ant 1	Front	0.504	0.083	0.587
		Back	0.590	0.140	0.730
		Left side	0.195		0.195
		Right side	0.009	0.060	0.069
		Top side	0.577	0.046	0.623
		Bottom side			0.000
	WCDMA V_Ant 0	Front	0.285	0.083	0.368
		Back	0.389	0.140	0.529
		Left side	0.253		0.253
		Right side	0.345	0.060	0.405
		Top side		0.046	0.046
		Bottom side	0.130		0.130
	WCDMA V_Ant 1	Front	0.222	0.083	0.305
		Back	0.309	0.140	0.449
		Left side	0.141		0.141
		Right side	0.144	0.060	0.204
		Top side	0.186	0.046	0.232
		Bottom side			0.000
CDMA	CDMA BC0_Ant 0-	Front	0.400	0.083	0.483
		Back	0.472	0.140	0.612
		Left side	0.288		0.288



		Right side	0.379	0.060	0.439
		Top side		0.046	0.046
		Bottom side	0.144		0.144
	CDMA BC0_Ant 1	Front	0.279	0.083	0.362
		Back	0.354	0.140	0.494
		Left side	0.187		0.187
		Right side	0.169	0.060	0.229
		Top side	0.218	0.046	0.264
		Bottom side			0.000
	CDMA BC1_Ant 1	Front	0.627	0.083	0.710
		Back	0.774	0.140	0.914
		Left side	0.239		0.239
		Right side	0.070	0.060	0.130
		Top side	1.014	0.046	1.060
		Bottom side			0.000
	CDMA BC1_Ant 0-	Front	1.122	0.083	1.205
		Back	1.085	0.140	1.225
		Left side	0.712		0.712
		Right side	0.189	0.060	0.249
		Top side		0.046	0.046
		Bottom side	1.136		1.136
	CDMA BC10_Ant 0-	Front	0.386	0.083	0.469
		Back	0.433	0.140	0.573
		Left side	0.275		0.275
		Right side	0.351	0.060	0.411
		Top side		0.046	0.046
		Bottom side	0.122		0.122
	CDMA BC10_Ant 1	Front	0.269	0.083	0.352
		Back	0.348	0.140	0.488
		Left side	0.191		0.191
		Right side	0.166	0.060	0.226
		Top side	0.205	0.046	0.251
		Bottom side			0.000
LTE	LTE Band 7_Ant 2	Front	1.092	0.083	1.175
		Back	1.161	0.140	1.301
		Left side	0.101		0.101
		Right side	0.937	0.060	0.997
		Top side		0.046	0.046
		Bottom side	0.484		0.484
	LTE Band 12_Ant 0	Front	0.244	0.083	0.327
		Back	0.337	0.140	0.477
		Left side	0.224		0.224
		Right side	0.206	0.060	0.266
		Top side		0.046	0.046
		Bottom side	0.050		0.050
	LTE Band 12_Ant 1	Front	0.303	0.083	0.386
		Back	0.391	0.140	0.531
		Left side	0.366		0.366
		Right side	0.205	0.060	0.265
		Top side	0.174	0.046	0.220
		Bottom side			0.000
	LTE Band 13_Ant 0-	Front	0.376	0.083	0.459
		Back	0.374	0.140	0.514
		Left side	0.270		0.270
		Right side	0.340	0.060	0.400
		Top side		0.046	0.046



	LTE Band 13_Ant 1	Bottom side	0.084		0.084
		Front	0.268	0.083	0.351
		Back	0.338	0.140	0.478
		Left side	0.189		0.189
		Right side	0.158	0.060	0.218
		Top side	0.161	0.046	0.207
		Bottom side			0.000
	LTE Band 25_Ant 0-	Front	1.108	0.083	1.191
		Back	1.080	0.140	1.220
		Left side	0.735		0.735
		Right side	0.210	0.060	0.270
		Top side		0.046	0.046
		Bottom side	1.169		1.169
	LTE Band 25_Ant 1	Front	0.306	0.083	0.389
		Back	0.404	0.140	0.544
		Left side	0.142		0.142
		Right side	0.028	0.060	0.088
		Top side	0.384	0.046	0.430
		Bottom side			0.000
	LTE Band 26_Ant 0-	Front	0.392	0.083	0.475
		Back	0.500	0.140	0.640
		Left side	0.309		0.309
		Right side	0.436	0.060	0.496
		Top side		0.046	0.046
		Bottom side	0.153		0.153
	LTE Band 26_Ant 1	Front	0.306	0.083	0.389
		Back	0.403	0.140	0.543
		Left side	0.145		0.145
		Right side	0.125	0.060	0.185
		Top side	0.235	0.046	0.281
		Bottom side			0.000
	LTE Band 38_Ant 2	Front	0.700	0.083	0.783
		Back	0.701	0.140	0.841
		Left side	0.064		0.064
		Right side	0.500	0.060	0.560
		Top side		0.046	0.046
		Bottom side	0.364		0.364
	LTE Band 41_Ant 2-	Front	0.823	0.083	0.906
		Back	0.569	0.140	0.709
		Left side	0.061		0.061
		Right side	0.413	0.060	0.473
		Top side		0.046	0.046
		Bottom side	0.325		0.325
	LTE Band 66_Ant 0-	Front	0.749	0.083	0.832
		Back	0.692	0.140	0.832
		Left side	0.453		0.453
		Right side	0.182	0.060	0.242
		Top side		0.046	0.046
		Bottom side	0.991		0.991
	LTE Band 66_Ant 1	Front	0.608	0.083	0.691
		Back	0.842	0.140	0.982
		Left side	0.254		0.254
		Right side	0.031	0.060	0.091
		Top side	0.734	0.046	0.780
		Bottom side			0.000

18.3 Body-Worn Accessory Exposure Conditions

<WWAN OFF>

Exposure Position	2	3	4	5	6	7	8	2+5 Summed 1g SAR (W/kg)	3+6 Summed 1g SAR (W/kg)	4+6 Summed 1g SAR (W/kg)	5+6 Summed 1g SAR (W/kg)	6+8 Summed 1g SAR (W/kg)
	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0	2.4GHz WLAN Ant 0+1	5GHz WLAN Ant 0+1					
	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)					
Front	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.320	0.265	0.485	0.281	0.500
Back	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.146	0.635	0.380	1.090	1.112

<WiFi ON>

WWAN Band		Exposure Position	1	2	3	4	5	6	7	8	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0	2.4GHz WLAN Ant 0+1	5GHz WLAN Ant 0+1						
			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)						
GSM	GSM850_Ant 0	Front	0.199	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.519	0.464	0.457	0.684	0.480	0.699
		Back	0.219	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.365	0.854	0.684	0.599	1.309	1.331
	GSM1900_Ant 0	Front	0.382	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.702	0.647	0.640	0.867	0.663	0.882
		Back	0.401	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.547	1.036	0.866	0.781	1.491	1.513
WCDMA	WCDMA II_Ant 0	Front	0.344	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.664	0.609	0.602	0.829	0.625	0.844
		Back	0.343	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.489	0.978	0.808	0.723	1.433	1.455
	WCDMA IV_Ant 0	Front	0.242	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.562	0.507	0.500	0.727	0.523	0.742
		Back	0.246	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.392	0.881	0.711	0.626	1.336	1.358
	WCDMA V_Ant 0	Front	0.285	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.605	0.550	0.543	0.770	0.566	0.785
		Back	0.389	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.535	1.024	0.854	0.769	1.479	1.501
CDMA	CDMA BC0_Ant 0	Front	0.181	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.501	0.446	0.439	0.666	0.462	0.681
		Back	0.275	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.421	0.910	0.740	0.655	1.365	1.387
	CDMA BC1_Ant 0	Front	0.294	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.614	0.559	0.552	0.779	0.575	0.794
		Back	0.276	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.422	0.911	0.741	0.656	1.366	1.388
	CDMA BC10_Ant 0	Front	0.191	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.511	0.456	0.449	0.676	0.472	0.691
		Back	0.215	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.361	0.850	0.680	0.595	1.305	1.327
LTE	LTE Band 7_Ant 2	Front	0.359	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.679	0.624	0.617	0.844	0.640	0.859
		Back	0.406	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.552	1.041	0.871	0.786	1.496	1.518
	LTE Band 12_Ant 0	Front	0.194	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.514	0.459	0.452	0.679	0.475	0.694
		Back	0.273	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.419	0.908	0.738	0.653	1.363	1.385
	LTE Band 13_Ant 0	Front	0.258	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.578	0.523	0.516	0.743	0.539	0.758
		Back	0.263	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.409	0.898	0.728	0.643	1.353	1.375
	LTE Band 25_Ant 0	Front	0.400	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.720	0.665	0.658	0.885	0.681	0.900
		Back	0.383	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.529	1.018	0.848	0.763	1.473	1.495
	LTE Band 26_Ant 0	Front	0.197	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.517	0.462	0.455	0.682	0.478	0.697
		Back	0.255	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.401	0.890	0.720	0.635	1.345	1.367
	LTE Band 38_Ant 2	Front	0.287	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.607	0.552	0.545	0.772	0.568	0.787
		Back	0.282	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.428	0.917	0.747	0.662	1.372	1.394
	LTE Band 41_Ant 2	Front	0.303	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.623	0.568	0.561	0.788	0.584	0.803
		Back	0.276	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.422	0.911	0.741	0.656	1.366	1.388
	LTE Band 66_Ant 0	Front	0.265	0.122	0.182	0.402	0.198	0.083	0.258	0.417	0.585	0.530	0.523	0.750	0.546	0.765
		Back	0.262	0.196	0.495	0.240	0.950	0.140	0.465	0.972	1.408	0.897	0.727	0.642	1.352	1.374



<WiFi OFF>

WWAN Band		Exposure Position	1	2	1+2 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	Bluetooth Ant 0 1g SAR (W/kg)	
GSM	GSM850_Ant 0	Front	0.311	0.083	0.394
		Back	0.445	0.140	0.585
	GSM850_Ant 1	Front	0.368	0.083	0.451
		Back	0.445	0.140	0.585
	GSM1900_Ant 0-	Front	0.553	0.083	0.636
		Back	0.687	0.140	0.827
WCDMA	WCDMA II_Ant 0-	Front	1.173	0.083	1.256
		Back	1.117	0.140	1.257
	WCDMA IV_Ant 1	Front	0.504	0.083	0.587
		Back	0.590	0.140	0.730
	WCDMA V_Ant 0	Front	0.285	0.083	0.368
		Back	0.389	0.140	0.529
CDMA	CDMA BC0_Ant 0-	Front	0.387	0.083	0.470
		Back	0.489	0.140	0.629
	CDMA BC0_Ant 1	Front	0.266	0.083	0.349
		Back	0.383	0.140	0.523
	CDMA BC1_Ant 0-	Front	1.123	0.083	1.206
		Back	1.075	0.140	1.215
LTE	LTE Band 7_Ant 2	Front	1.092	0.083	1.175
		Back	1.162	0.140	1.302
	LTE Band 12_Ant 0	Front	0.244	0.083	0.327
		Back	0.337	0.140	0.477
	LTE Band 12_Ant 1	Front	0.303	0.083	0.386
		Back	0.391	0.140	0.531
	LTE Band 13_Ant 0-	Front	0.376	0.083	0.459
		Back	0.374	0.140	0.514
	LTE Band 13_Ant 1	Front	0.268	0.083	0.351
		Back	0.338	0.140	0.478
	LTE Band 25_Ant 0-	Front	1.108	0.083	1.191
		Back	1.080	0.140	1.220
	LTE Band 25_Ant 1	Front	0.306	0.083	0.389
		Back	0.404	0.140	0.544
	LTE Band 26_Ant 0-	Front	0.392	0.083	0.475
		Back	0.500	0.140	0.640
	LTE Band 26_Ant 1	Front	0.306	0.083	0.389
		Back	0.403	0.140	0.543
	LTE Band 38_Ant 2	Front	0.823	0.083	0.906
		Back	0.569	0.140	0.709
	LTE Band 38_Ant 2	Front	0.700	0.083	0.783
		Back	0.701	0.140	0.841
	LTE Band 41_Ant 2-	Front	0.749	0.083	0.832



FCC SAR TEST REPORT

Report No. : FA9O2116

	LTE Band 66_Ant 0-	Back	0.692	0.140	0.832
		Front	0.749	0.083	0.832
	LTE Band 66_Ant 1	Back	0.692	0.140	0.832
		Front	0.608	0.083	0.691
		Back	0.842	0.140	0.982

18.4 Product Specific Exposure Conditions

Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 10g SAR (W/kg)	1+2+5 Summed 10g SAR (W/kg)	1+4+7 Summed 10g SAR (W/kg)	1+5+7 Summed 10g SAR (W/kg)	1+6+7 Summed 10g SAR (W/kg)
	WWAN 10g SAR (W/kg)	2.4GHz WLAN Ant 0 10g SAR (W/kg)	2.4GHz WLAN Ant 1 10g SAR (W/kg)	5GHz WLAN Ant 0 10g SAR (W/kg)	5GHz WLAN Ant 1 10g SAR (W/kg)	5GHz WLAN Ant 0+1 10g SAR (W/kg)	Bluetooth Ant 0 10g SAR (W/kg)					
Front				1.155	0.672	1.346		0.000	0.672	1.155	0.672	1.346
Back				0.798	2.247	2.636		0.000	2.247	0.798	2.247	2.636
Right side				0.586	1.735	2.063		0.000	1.735	0.586	1.735	2.063
Top side				0.841	0.116	0.950		0.000	0.116	0.841	0.116	0.950

Remark:

1. According to KDB 648474 D04v01r03, for WWAN / 2.4GHz WLAN / Bluetooth SAR was excluded, due to Hotspot SAR was < 1.2W/kg.
2. According to KDB 941225 D06 v02r01, for 5GHz WLAN SAR was excluded for that position, due to transmitting antenna located larger 25mm from that surface or edge

Test Engineer : Bevis Chang, Iran Wang, Steven chang, Mood Huang, Thomas Wang and Tommy Chen



19. 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. Therefore, the measurement uncertainty table is not required in this report.

20. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [6] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [7] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [8] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [9] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [10] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [11] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.
- [12] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [13] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.
- [14] FCC KDB 941225 D07 v01r02, " SAR Evaluation Procedures for UMPC Mini-Tablet Devices", Oct 2015.