



FCC SAR TEST REPORT

FCC ID : A4RG020H
Equipment : Smartphone
Model Name : G020H
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. 15, 2018 and testing was started from Nov. 10, 2018 and completed on Jan. 04, 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 variant 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

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FA891148-01	01	Initial issue of report	Jan. 11, 2019
FA891148-01	02	Update section13 and section14.	Jan. 21, 2019
FA891148-01	03	Update section14.	Jan. 28, 2019
FA891148-01	04	added notes in section 3.2 and update section 14.	Feb. 7, 2019



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Google LLC, Smartphone, G020H, 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	0.66	0.22	0.22		1.59
	GSM1900	1.19	0.36	0.36		
	WCDMA II	1.19	0.79	0.79		
	WCDMA IV	0.50	1.11	1.11		
	WCDMA V	0.68	0.20	0.20		
	LTE Band 2	1.11	0.72	0.80		
	LTE Band 4	0.56	1.03	1.03		
	LTE Band 12 / 17	0.42	0.19	0.19		
	LTE Band 13	0.84	0.25	0.26		
	LTE Band 5 / 26	1.17	0.27	0.27		
	LTE Band 38	0.75	0.54	0.54		
	LTE Band 41	0.68	0.47	0.47		
DTS	2.4GHz WLAN	0.71	0.33	0.33		1.59
NII	5GHz WLAN	0.68	0.93	1.17	1.18	1.59
DSS	Bluetooth	0.70	0.23	0.23		1.59
Date of Testing:		2018/11/10 ~ 2019/1/4				

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

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Smartphone
Model Name	G020H
FCC ID	A4RG020H
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 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 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 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 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 LTE: QPSK, 16QAM, 64QAM WLAN 2.4GHz : 802.11b/g/n HT20 WLAN 5GHz : 802.11a/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.
Remark:	
1. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications. 2. Two battery options for this product, the RF exposure is choose battery 1 as the main tested, other battery 2 found worst case from battery 1 perform.	

Battery Option				
Battery 1	Manufacturer	Desay	Model Name	G020E-B
Battery 2	Manufacturer	NVT	Model Name	G020E-B



3.2 Maximum Tune-up Limit

General Note:

1. For each cellular band, the device has 2 antennas (LAT antenna located in the bottom, UAT antenna located in the top edge), the antenna selection is based on the connection quality condition, and only one antenna will transmit at a time.
2. The device has several power modes which are determined by the exposure conditions for head/hotspot/body-worn and also the simultaneous transmission conditions, the detailed implementation of the detection of the use cases and the power table control is illustrated in the operational description exhibit.
3. This device uses different power reduction mechanisms based on a proprietary detection mechanism for next-to-ear operation (head mode). When detected in head mode, WLAN ON or OFF status will activate 2 different power tables. Full details are provided in the operational description exhibit. The power tables below show the maximum powers for the various combinations of antennas when the WLAN is off or on and when a voice call is active (Head Mode) and inactive (Body-Worn / Hotspot Mode).

<WWAN Power table>

RF Exposure Conditions								
Power Condition		Default Maximum Tune up Power (dBm)	Head Power Level (dBm)		Body Worn Power Level (dBm)		Hotspot Power Level (dBm)	
Band			UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna
GSM850	GSM 1 Tx slot		34.00	34.00	34.00	34.00	34.00	34.00
	GPRS 1 Tx slot		34.00	34.00	34.00	34.00	34.00	34.00
	GPRS 2 Tx slots		32.00	32.00	32.00	32.00	32.00	32.00
	GPRS 3 Tx slots		30.00	30.00	30.00	30.00	30.00	30.00
	GPRS 4 Tx slots		29.00	29.00	29.00	29.00	29.00	29.00
	EDGE 1 Tx slot		28.00	28.00	28.00	28.00	28.00	28.00
	EDGE 2 Tx slots		27.00	27.00	27.00	27.00	27.00	27.00
	EDGE 3 Tx slots		25.00	25.00	25.00	25.00	25.00	25.00
	EDGE 4 Tx slots		23.00	23.00	23.00	23.00	23.00	23.00
	DTM Multi-slot class 5	GSM 1 Tx slot	32.00	32.00	32.00	32.00	32.00	32.00
		GPRS 1 Tx slot	32.00	32.00	32.00	32.00	32.00	32.00
	DTM Multi-slot class 9	GSM 1 Tx slot	32.00	32.00	32.00	32.00	32.00	32.00
		GPRS 1 Tx slot	32.00	32.00	32.00	32.00	32.00	32.00
	DTM Multi-slot class 11	GSM 1 Tx slot	30.00	30.00	30.00	30.00	30.00	30.00
		GPRS 2 Tx slots	30.00	30.00	30.00	30.00	30.00	30.00
	DTM Multi-slot class 5	GSM 1 Tx slot	32.00	32.00	32.00	32.00	32.00	32.00
		EDGE 1 Tx slot	27.00	27.00	27.00	27.00	27.00	27.00
	DTM Multi-slot class 9	GSM 1 Tx slot	32.00	32.00	32.00	32.00	32.00	32.00
		EDGE 1 Tx slot	27.00	27.00	27.00	27.00	27.00	27.00
	DTM Multi-slot class 11	GSM 1 Tx slot	30.00	30.00	30.00	30.00	30.00	30.00
EDGE 2 Tx slots		25.00	25.00	25.00	25.00	25.00	25.00	
GSM1900	GSM 1 Tx slot		31.00	28.00	31.00	31.00	31.00	31.00
	GPRS 1 Tx slot		31.00	28.00	31.00	31.00	31.00	31.00
	GPRS 2 Tx slots		29.50	26.50	29.50	29.50	29.50	29.50
	GPRS 3 Tx slots		27.50	24.50	27.50	27.50	27.50	27.50
	GPRS 4 Tx slots		26.50	23.50	26.50	26.50	26.50	26.50
	EDGE 1 Tx slot		27.00	24.00	27.00	27.00	27.00	27.00
	EDGE 2 Tx slots		26.00	23.00	26.00	26.00	26.00	26.00
	EDGE 3 Tx slots		25.00	22.00	25.00	25.00	25.00	25.00
	EDGE 4 Tx slots		24.00	21.00	24.00	24.00	24.00	24.00
	DTM Multi-slot class 5	GSM 1 Tx slot	29.50	26.50	29.50	29.50	29.50	29.50
		GPRS 1 Tx slot	29.50	26.50	29.50	29.50	29.50	29.50
	DTM Multi-slot class 9	GSM 1 Tx slot	29.50	26.50	29.50	29.50	29.50	29.50
		GPRS 1 Tx slot	29.50	26.50	29.50	29.50	29.50	29.50
	DTM Multi-slot class 11	GSM 1 Tx slot	27.50	24.50	27.50	27.50	27.50	27.50
		GPRS 2 Tx slots	27.50	24.50	27.50	27.50	27.50	27.50
	DTM Multi-slot class 5	GSM 1 Tx slot	29.50	26.50	29.50	29.50	29.50	29.50
		EDGE 1 Tx slot	26.00	23.00	26.00	26.00	26.00	26.00
	DTM Multi-slot class 9	GSM 1 Tx slot	29.50	26.50	29.50	29.50	29.50	29.50
		EDGE 1 Tx slot	26.00	23.00	26.00	26.00	26.00	26.00
	DTM Multi-slot class 11	GSM 1 Tx slot	27.50	24.50	27.50	27.50	27.50	27.50
EDGE 2 Tx slots		25.00	22.00	25.00	25.00	25.00	25.00	



RF Exposure Conditions							
Power Condition	Default Maximum Tune up Power (dBm)	Head Power Level (dBm)		Body Worn Power Level (dBm)		Hotspot Power Level (dBm)	
Band		UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna
WCDMA II	25.7	21.5	25.7	25.7	25.7	25.7	25.7
WCDMA IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA V	24.5	24.5	24.5	24.5	24.5	24.5	24.5
LTE 2	25.7	21.5	25.7	25.7	25.7	25.7	25.7
LTE 4	24.5	24.5	24.5	24.5	24.5	24.5	24.5
LTE 5	25.7	25.7	25.7	25.7	25.7	25.7	25.7
LTE 12	25.7	25.7	25.7	25.7	25.7	25.7	25.7
LTE 13	25.3	25.3	25.3	25.3	25.3	25.3	25.3
LTE 17	25.7	25.7	25.7	25.7	25.7	25.7	25.7
LTE 26	25.7	25.7	25.7	25.7	25.7	25.7	25.7
LTE 38	25.7	25.7	25.7	25.7	25.7	25.7	25.7
LTE 41	25.0	25.0	25.0	25.0	25.0	25.0	25.0



<WWAN Power table (WLAN on)>

RF Exposure Conditions								
Power Condition		Default Maximum Tune up Power (dBm)	Head Power Level (dBm)		Body Worn Power Level (dBm)		Hotspot Power Level (dBm)	
Band			UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna
GSM850	GSM 1 Tx slot		34.00	33.00	34.00	34.00	34.00	34.00
	GPRS 1 Tx slot		34.00	33.00	34.00	34.00	34.00	34.00
	GPRS 2 Tx slots		32.00	30.50	32.00	32.00	32.00	32.00
	GPRS 3 Tx slots		30.00	28.50	30.00	30.00	30.00	30.00
	GPRS 4 Tx slots		29.00	27.50	29.00	29.00	29.00	29.00
	EDGE 1 Tx slot		28.00	26.00	28.00	28.00	28.00	28.00
	EDGE 2 Tx slots		27.00	26.00	27.00	27.00	27.00	27.00
	EDGE 3 Tx slots		25.00	24.00	25.00	25.00	25.00	25.00
	EDGE 4 Tx slots		23.00	21.00	23.00	23.00	23.00	23.00
	DTM Multi-slot class 5	GSM 1 Tx slot	32.00	30.50	32.00	32.00	32.00	32.00
		GPRS 1 Tx slot	32.00	30.50	32.00	32.00	32.00	32.00
	DTM Multi-slot class 9	GSM 1 Tx slot	32.00	30.50	32.00	32.00	32.00	32.00
		GPRS 1 Tx slot	32.00	30.50	32.00	32.00	32.00	32.00
	DTM Multi-slot class 11	GSM 1 Tx slot	30.00	28.50	30.00	30.00	30.00	30.00
		GPRS 2 Tx slots	30.00	28.50	30.00	30.00	30.00	30.00
	DTM Multi-slot class 5	GSM 1 Tx slot	32.00	30.50	32.00	32.00	32.00	32.00
		EDGE 1 Tx slot	27.00	26.00	27.00	27.00	27.00	27.00
	DTM Multi-slot class 9	GSM 1 Tx slot	32.00	30.50	32.00	32.00	32.00	32.00
		EDGE 1 Tx slot	27.00	26.00	27.00	27.00	27.00	27.00
	DTM Multi-slot class 11	GSM 1 Tx slot	30.00	28.50	30.00	30.00	30.00	30.00
EDGE 2 Tx slots		25.00	24.00	25.00	25.00	25.00	25.00	
GSM1900	GSM 1 Tx slot		31.00	24.00	31.00	31.00	31.00	31.00
	GPRS 1 Tx slot		31.00	24.00	31.00	31.00	31.00	31.00
	GPRS 2 Tx slots		29.50	24.00	29.50	29.50	29.50	29.50
	GPRS 3 Tx slots		27.50	22.00	27.50	27.50	27.50	27.50
	GPRS 4 Tx slots		26.50	21.00	26.50	26.50	26.50	26.50
	EDGE 1 Tx slot		27.00	22.00	27.00	27.00	27.00	27.00
	EDGE 2 Tx slots		26.00	21.50	26.00	26.00	26.00	26.00
	EDGE 3 Tx slots		25.00	20.50	25.00	25.00	25.00	25.00
	EDGE 4 Tx slots		24.00	19.50	24.00	24.00	24.00	24.00
	DTM Multi-slot class 5	GSM 1 Tx slot	29.50	24.00	29.50	29.50	29.50	29.50
		GPRS 1 Tx slot	29.50	24.00	29.50	29.50	29.50	29.50
	DTM Multi-slot class 9	GSM 1 Tx slot	29.50	24.00	29.50	29.50	29.50	29.50
		GPRS 1 Tx slot	29.50	24.00	29.50	29.50	29.50	29.50
	DTM Multi-slot class 11	GSM 1 Tx slot	27.50	22.00	27.50	27.50	27.50	27.50
		GPRS 2 Tx slots	27.50	22.00	27.50	27.50	27.50	27.50
	DTM Multi-slot class 5	GSM 1 Tx slot	29.50	24.00	29.50	29.50	29.50	29.50
		EDGE 1 Tx slot	26.00	21.50	26.00	26.00	26.00	26.00
	DTM Multi-slot class 9	GSM 1 Tx slot	29.50	24.00	29.50	29.50	29.50	29.50
		EDGE 1 Tx slot	26.00	21.50	26.00	26.00	26.00	26.00
	DTM Multi-slot class 11	GSM 1 Tx slot	27.50	22.00	27.50	27.50	27.50	27.50
EDGE 2 Tx slots		25.00	20.50	25.00	25.00	25.00	25.00	



RF Exposure Conditions							
Power Condition	Default Maximum Tune up Power (dBm)	Head Power Level (dBm)		Body Worn Power Level (dBm)		Hotspot Power Level (dBm)	
Band		UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna
WCDMA II	25.7	19.0	24.5	22.0	24.5	22.0	24.5
WCDMA IV	24.0	24.0	19.5	24.0	19.5	24.0	19.5
WCDMA V	24.5	23.0	24.5	24.5	24.5	24.5	24.5
LTE 2	25.7	19.0	24.5	21.7	24.5	21.7	24.5
LTE 4	24.5	24.5	21.0	24.5	21.0	24.5	21.0
LTE 5	25.7	23.0	25.7	25.7	25.7	25.7	25.7
LTE 12	25.7	25.7	25.7	25.7	25.7	25.7	25.7
LTE 13	25.3	24.0	25.3	25.3	25.3	25.3	25.3
LTE 17	25.7	25.7	25.7	25.7	25.7	25.7	25.7
LTE 26	25.7	23.0	25.7	25.7	25.7	25.7	25.7
LTE 38	25.7	24.5	24.5	24.5	24.5	24.5	24.5
LTE 41	25.0	24.5	24.5	24.5	24.5	24.5	24.5

**<WLAN Tune up Power table>
<WLAN SISO Power table>**

Frequency Band	Modulation	Head		Body Worn/Hotspot	
		Ant 4	Ant 5	Ant 4	Ant 5
WLAN 2.4GHz	802.11b	16.5	16.5	18	18
	802.11g	16.5	16.5	18	18
	802.11n HT20	16.5	16.5	18	18

Frequency Band	Modulation	Head		Body Worn/Hotspot	
		Ant 4	Ant 5	Ant 4	Ant 5
WLAN5GHz UNII 1	802.11a	12.5	12.5	17.5	17.5
	802.11n HT20	12.5	12.5	17.5	17.5
	802.11n HT40	12.5	12.5	17.5	17.5
	802.11ac VHT20	12.5	12.5	17.5	17.5
	802.11ac VHT40	12.5	12.5	17.5	17.5
	802.11ac VHT80	12.5	12.5	12.5	12.5
WLAN5GHz UNII 2A	802.11a	12.5	12.5	17.5	17.5
	802.11n HT20	12.5	12.5	17.5	17.5
	802.11n HT40	12.5	12.5	17.5	17.5
	802.11ac VHT20	12.5	12.5	17.5	17.5
	802.11ac VHT40	12.5	12.5	17.5	17.5
	802.11ac VHT80	12.5	12.5	14.0	14.0
WLAN5GHz UNII 2C	802.11a	10.5	10.5	17.5	17.5
	802.11n HT20	10.5	10.5	17.5	17.5
	802.11n HT40	10.5	10.5	17.5	17.5
	802.11ac VHT20	10.5	10.5	17.5	17.5
	802.11ac VHT40	10.5	10.5	17.5	17.5
	802.11ac VHT80	10.5	10.5	17.5	17.5
WLAN5GHz UNII 3	802.11a	10	10	17.5	17.5
	802.11n HT20	10	10	17.5	17.5
	802.11n HT40	10	10	17.5	17.5
	802.11ac VHT20	10	10	17.5	17.5
	802.11ac VHT40	10	10	17.5	17.5
	802.11ac VHT80	10	10	17.5	17.5



<WLAN MIMO Power table>

Frequency Band	Modulation	Head			Body Worn/Hotspot		
		Ant4	Ant5	Ant 4+5	Ant4	Ant5	Ant 4+5
WLAN 2.4GHz	802.11b	16.5	16.5	19.5	18	18	21
	802.11g	16.5	16.5	19.5	18	18	21
	802.11n HT20	16.5	16.5	19.5	18	18	21

Frequency Band	Modulation	Head			Body Worn/Hotspot		
		Ant4	Ant5	Ant 4+5	Ant4	Ant5	Ant 4+5
WLAN5GHz UNII 1	802.11a	12.5	12.5	15.5	17.5	17.5	20.5
	802.11n HT20	12.5	12.5	15.5	17.5	17.5	20.5
	802.11n HT40	12.5	12.5	15.5	17.5	17.5	20.5
	802.11ac VHT20	12.5	12.5	15.5	17.5	17.5	20.5
	802.11ac VHT40	12.5	12.5	15.5	17.5	17.5	20.5
	802.11ac VHT80	12.5	12.5	15.5	12.5	12.5	15.5
WLAN5GHz UNII 2A	802.11a	12.5	12.5	15.5	17.5	17.5	20.5
	802.11n HT20	12.5	12.5	15.5	17.5	17.5	20.5
	802.11n HT40	12.5	12.5	15.5	17.5	17.5	20.5
	802.11ac VHT20	12.5	12.5	15.5	17.5	17.5	20.5
	802.11ac VHT40	12.5	12.5	15.5	17.5	17.5	20.5
	802.11ac VHT80	12.5	12.5	15.5	14.0	14.0	17.0
WLAN5GHz UNII 2C	802.11a	10.5	10.5	13.5	17.5	17.5	20.5
	802.11n HT20	10.5	10.5	13.5	17.5	17.5	20.5
	802.11n HT40	10.5	10.5	13.5	17.5	17.5	20.5
	802.11ac VHT20	10.5	10.5	13.5	17.5	17.5	20.5
	802.11ac VHT40	10.5	10.5	13.5	17.5	17.5	20.5
	802.11ac VHT80	10.5	10.5	13.5	17.5	17.5	20.5
WLAN5GHz UNII 3	802.11a	10	10	13	17.5	17.5	20.5
	802.11n HT20	10	10	13	17.5	17.5	20.5
	802.11n HT40	10	10	13	17.5	17.5	20.5
	802.11ac VHT20	10	10	13	17.5	17.5	20.5
	802.11ac VHT40	10	10	13	17.5	17.5	20.5
	802.11ac VHT80	10	10	13	17.5	17.5	20.5

<Bluetooth Power table>

Frequency Band	Mode		Tune up Power (dBm)
			Ant 4
Bluetooth	BR/EDR	1Mbps	18
		2Mbps	13
		3Mbps	13
	LE	1Mbps	10
		2Mbps	10



3.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																										
FCC ID	A4RG020H																																																																									
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 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 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																																																																									
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 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz																																																																									
uplink modulations used	QPSK / 16QAM / 64QAM																																																																									
LTE Voice / Data requirements	Voice and Data																																																																									
LTE MPR permanently built-in by design	<p align="center">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</p> <table border="1"> <thead> <tr> <th rowspan="2">Modulation</th> <th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th> <th rowspan="2">MPR (dB)</th> </tr> <tr> <th>1.4 MHz</th> <th>3.0 MHz</th> <th>5 MHz</th> <th>10 MHz</th> <th>15 MHz</th> <th>20 MHz</th> </tr> </thead> <tbody> <tr> <td>QPSK</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 2</td> </tr> <tr> <td>64 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 2</td> </tr> <tr> <td>64 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 3</td> </tr> <tr> <td>256 QAM</td> <td colspan="6" style="text-align: center;">≥ 1</td> <td>≤ 5</td> </tr> </tbody> </table>												Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3	256 QAM	≥ 1						≤ 5
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-worn conditions SAR compliance; power selection is determined by the device's positioning and usage scenarios, the power selection is defined in the section3.2.																																																																									
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 10																																																																									
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																																																														



Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	20407	824.7	20415	825.5	20425	826.5	20450	829				
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5				
H	20643	848.3	20635	847.5	20625	846.5	20600	844				
LTE Band 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	23017	699.7	23025	700.5	23035	701.5	23060	704				
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5				
H	23173	715.3	23165	714.5	23155	713.5	23130	711				
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	23205		779.5		23230		782					
M	23230		782									
H	23255		784.5									
LTE Band 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 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)		
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580				
M	38000	2595	38000	2595	38000	2595	38000	2595				
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
L	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				



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:

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

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

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

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

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

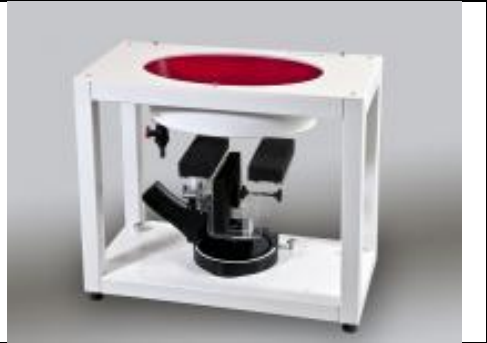
6.3 Phantom

<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 dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: $\Delta x_{Area}, \Delta y_{Area}$	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ 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 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 shoes 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: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm	
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm	
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

7.5 Volume Scan Procedures

The volume scan is used for 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	1012	Sep. 05, 2018	Sep. 04, 2019
SPEAG	835MHz System Validation Kit	D835V2	499	Sep. 06, 2018	Sep. 05, 2019
SPEAG	1750MHz System Validation Kit	D1750V2	1068	Nov. 19, 2018	Nov. 18, 2019
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Sep. 11, 2018	Sep. 10, 2019
SPEAG	2450MHz System Validation Kit	D2450V2	736	Aug. 31, 2018	Aug. 30, 2019
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 31, 2018	Aug. 30, 2019
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Sep. 27, 2018	Sep. 26, 2019
SPEAG	Data Acquisition Electronics	DAE3	495	May. 24, 2018	May. 23, 2019
SPEAG	Data Acquisition Electronics	DAE4	853	Jul. 24, 2018	Jul. 23, 2019
SPEAG	Data Acquisition Electronics	DAE4	854	Jun. 14, 2018	Jun. 13, 2019
SPEAG	Data Acquisition Electronics	DAE4	910	Jun. 21, 2018	Jun. 20, 2019
SPEAG	Data Acquisition Electronics	DAE4	1326	Sep. 18, 2018	Sep. 17, 2019
SPEAG	Data Acquisition Electronics	DAE4	918	Jun. 20, 2018	Jun. 19, 2019
SPEAG	Data Acquisition Electronics	DAE4	1424	Jan. 18, 2018	Jan. 17, 2019
SPEAG	Dosimetric E-Field Probe	ES3DV3	3169	May. 28, 2018	May. 27, 2019
SPEAG	Dosimetric E-Field Probe	ES3DV3	3270	Sep. 24, 2018	Sep. 23, 2019
SPEAG	Dosimetric E-Field Probe	EX3DV4	3931	Sep. 27, 2018	Sep. 26, 2019
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 23, 2018	Jan. 22, 2019
SPEAG	Dosimetric E-Field Probe	EX3DV4	7515	Oct. 03, 2018	Oct. 02, 2019
RCPTWN	Thermometer	HTC-1	TM685-1	Mar. 16, 2018	Mar. 15, 2019
RCPTWN	Thermometer	HTC-1	TM281-1	Mar. 16, 2018	Mar. 15, 2019
RCPTWN	Thermometer	HTC-1	TM560-1	Mar. 16, 2018	Mar. 15, 2019
Gencom	Thermometer	TE1	TM225-1	Mar. 16, 2018	Mar. 15, 2019
WonDer	Thermometer	WD-5016	TM642-1	Mar. 16, 2018	Mar. 15, 2019
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Apr. 17, 2018	Apr. 16, 2019
Agilent	Wireless Communication Test Set	E5515C	MY50266977	May. 21, 2018	May. 20, 2019
R&S	BT Base Station	CBT	100815	Feb. 05, 2018	Feb. 04, 2019
SPEAG	Device Holder	N/A	N/A	N/A	N/A
R&S	Signal Generator	SMA100A	101091	Jul. 09, 2018	Jul. 08, 2019
Agilent	ENA Network Analyzer	E5071C	MY46104758	Sep. 19, 2018	Sep. 18, 2019
SPEAG	Dielectric Probe Kit	DAK-3.5	1146	Jul. 24, 2018	Jul. 23, 2019
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3169	Sep. 11, 2018	Sep. 10, 2019
Anritsu	Power Meter	ML2495A	1419002	May. 18, 2018	May. 17, 2019
Anritsu	Power Sensor	MA2411B	1339124	May. 18, 2018	May. 17, 2019
Anritsu	Power Meter	ML2495A	1240001	Sep. 13, 2018	Sep. 12, 2019
Anritsu	Power Sensor	MA2411B	1207349	Sep. 13, 2018	Sep. 12, 2019
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 28, 2018	Aug. 27, 2019
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jun. 23, 2018	Jun. 22, 2019
Mini-Circuits	Power Amplifier	ZVE-8G+	6382	Aug. 09, 2018	Aug. 08, 2019
Mini-Circuits	Power Amplifier	ZHL-42W+	15542	Aug. 09, 2018	Aug. 08, 2019
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:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.

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

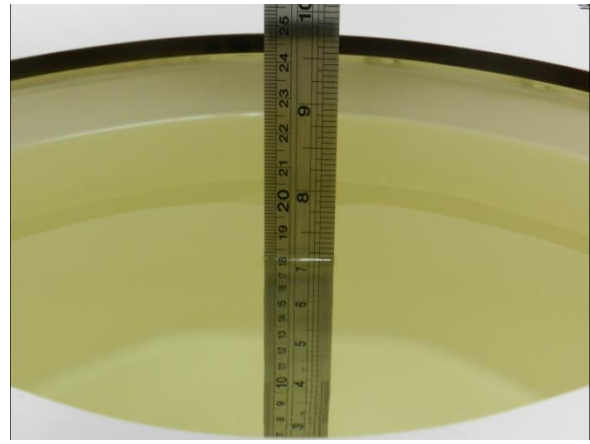


Fig 10.2 Photo of Liquid Height for Body SAR



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 (εr)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
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
For Body								
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0	0	31.4	1.95	52.7
2600	68.1	0	0	0.1	0	31.8	2.16	52.5

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%



<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
750	HSL	22.4	0.884	42.887	0.89	41.90	-0.67	2.36	±5	2018/12/4
750	HSL	22.6	0.899	42.886	0.89	41.90	1.01	2.35	±5	2018/12/9
750	MSL	22.2	0.971	54.211	0.96	55.50	1.15	-2.32	±5	2018/12/2
835	HSL	22.4	0.893	42.388	0.90	41.50	-0.78	2.14	±5	2018/11/27
835	HSL	22.5	0.902	43.087	0.90	41.50	0.22	3.82	±5	2018/12/1
835	HSL	22.9	0.889	42.030	0.90	41.50	-1.22	1.28	±5	2018/12/4
835	HSL	22.6	0.889	42.712	0.90	41.50	-1.22	2.92	±5	2018/12/9
835	MSL	22.3	0.988	54.339	0.97	55.20	1.86	-1.56	±5	2018/12/3
835	MSL	22.5	0.983	54.216	0.97	55.20	1.34	-1.78	±5	2018/12/6
1750	HSL	22.8	1.358	41.604	1.37	40.10	-0.88	3.75	±5	2018/12/3
1750	HSL	22.5	1.347	41.486	1.37	40.10	-1.68	3.46	±5	2018/12/13
1750	MSL	22.6	1.477	55.125	1.49	53.40	-0.87	3.23	±5	2018/12/8
1750	MSL	22.5	1.489	54.653	1.49	53.40	-0.07	2.35	±5	2018/12/10
1900	HSL	22.6	1.454	39.016	1.40	40.00	3.86	-2.46	±5	2018/12/5
1900	HSL	22.8	1.432	39.032	1.40	40.00	2.29	-2.42	±5	2018/12/8
1900	HSL	22.5	1.448	38.965	1.40	40.00	3.43	-2.59	±5	2018/12/13
1900	MSL	22.5	1.573	53.528	1.52	53.30	3.49	0.43	±5	2018/12/6
1900	MSL	22.6	1.553	53.712	1.52	53.30	2.17	0.77	±5	2018/12/8
1900	MSL	22.4	1.529	52.437	1.52	53.30	0.59	-1.62	±5	2018/12/9
2450	HSL	22.4	1.782	39.438	1.80	39.20	-1.00	0.61	±5	2018/11/10
2450	HSL	22.3	1.792	40.066	1.80	39.20	-0.44	2.21	±5	2018/12/4
2450	MSL	22.5	1.978	52.652	1.95	52.70	1.44	-0.09	±5	2018/11/10
2600	HSL	22.6	2.029	38.538	1.96	39.00	3.52	-1.18	±5	2018/12/8
2600	HSL	22.5	2.013	38.427	1.96	39.00	2.70	-1.47	±5	2018/12/13
2600	MSL	22.2	2.175	51.888	2.16	52.50	0.69	-1.17	±5	2018/12/9
2600	MSL	22.8	2.140	51.642	2.16	52.50	-0.93	-1.63	±5	2018/12/11
2600	MSL	22.8	2.140	51.642	2.16	52.50	-0.93	-1.63	±5	2018/12/11
5250	HSL	22.3	4.519	35.521	4.71	35.95	-4.06	-1.19	±5	2018/12/4
5250	MSL	22.7	5.400	47.561	5.36	48.95	0.75	-2.84	±5	2018/11/15
5250	MSL	22.5	5.407	48.970	5.36	48.95	0.88	0.04	±5	2018/12/7
5250	MSL	22.6	5.366	48.637	5.36	48.95	0.11	-0.64	±5	2019/1/4
5600	HSL	22.3	4.869	35.036	5.07	35.50	-3.96	-1.31	±5	2018/12/4
5600	MSL	22.7	5.855	47.008	5.77	48.50	1.47	-3.08	±5	2018/11/15
5600	MSL	22.5	5.790	48.482	5.77	48.50	0.35	-0.04	±5	2018/12/7
5600	MSL	22.6	5.747	48.149	5.77	48.50	-0.40	-0.72	±5	2019/1/4
5750	HSL	22.3	5.023	34.832	5.22	35.35	-3.77	-1.47	±5	2018/12/4
5750	MSL	22.2	5.889	48.703	5.94	48.28	-0.86	0.88	±5	2018/11/13
5750	MSL	22.7	6.051	46.734	5.94	48.28	1.87	-3.20	±5	2018/11/15
5750	MSL	22.5	5.950	48.279	5.94	48.28	0.17	0.00	±5	2018/12/7



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)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2018/12/4	750	HSL	250	D750V3-1012	ES3DV3 - SN3270	DAE4 Sn1326	2.10	8.47	8.4	-0.83
2018/12/9	750	HSL	250	D750V3-1012	EX3DV4 - SN3976	DAE4 Sn1424	2.19	8.47	8.76	3.42
2018/12/2	750	MSL	250	D750V3-1012	EX3DV4 - SN7515	DAE4 Sn918	2.13	8.76	8.52	-2.74
2018/11/27	835	HSL	250	D835V2-499	EX3DV4 - SN7515	DAE4 Sn918	2.54	9.59	10.16	5.94
2018/12/1	835	HSL	250	D835V2-499	ES3DV3 - SN3270	DAE3 Sn495	2.45	9.59	9.8	2.19
2018/12/4	835	HSL	250	D835V2-499	ES3DV3 - SN3270	DAE4 Sn1326	2.52	9.59	10.08	5.11
2018/12/9	835	HSL	250	D835V2-499	EX3DV4 - SN3976	DAE4 Sn1424	2.49	9.59	9.96	3.86
2018/12/3	835	MSL	250	D835V2-499	EX3DV4 - SN7515	DAE4 Sn918	2.58	9.82	10.32	5.09
2018/12/6	835	MSL	250	D835V2-499	ES3DV3 - SN3270	DAE4 Sn1326	2.40	9.82	9.6	-2.24
2018/12/3	1750	HSL	250	D1750V2-1068	ES3DV3 - SN3270	DAE4 Sn1326	8.90	37.10	35.6	-4.04
2018/12/13	1750	HSL	250	D1750V2-1068	ES3DV3 - SN3270	DAE4 Sn853	8.77	37.10	35.08	-5.44
2018/12/8	1750	MSL	250	D1750V2-1068	ES3DV3 - SN3169	DAE4 Sn853	9.34	37.00	37.36	0.97
2018/12/10	1750	MSL	250	D1750V2-1068	ES3DV3 - SN3270	DAE4 Sn1326	9.23	37.00	36.92	-0.22
2018/12/5	1900	HSL	250	D1900V2-5d041	ES3DV3 - SN3270	DAE4 Sn1326	10.00	40.20	40	-0.50
2018/12/8	1900	HSL	250	D1900V2-5d041	ES3DV3 - SN3169	DAE4 Sn853	10.50	40.20	42	4.48
2018/12/13	1900	HSL	250	D1900V2-5d041	ES3DV3 - SN3270	DAE4 Sn853	9.93	40.20	39.72	-1.19
2018/12/6	1900	MSL	250	D1900V2-5d041	ES3DV3 - SN3270	DAE4 Sn1326	10.60	40.20	42.4	5.47
2018/12/8	1900	MSL	250	D1900V2-5d041	ES3DV3 - SN3169	DAE4 Sn853	10.00	40.20	40	-0.50
2018/12/9	1900	MSL	250	D1900V2-5d041	EX3DV4 - SN3976	DAE4 Sn1424	9.35	40.20	37.4	-6.97
2018/11/10	2450	HSL	250	D2450V2-736	EX3DV4 - SN3931	DAE4 Sn910	13.20	52.70	52.8	0.19
2018/12/4	2450	HSL	250	D2450V2-736	EX3DV4 - SN3976	DAE4 Sn1424	12.00	52.70	48	-8.92
2018/11/10	2450	MSL	250	D2450V2-736	EX3DV4 - SN3931	DAE4 Sn910	13.80	51.50	55.2	7.18
2018/12/8	2600	HSL	250	D2600V2-1008	ES3DV3 - SN3270	DAE4 Sn1326	14.20	56.40	56.8	0.71
2018/12/13	2600	HSL	250	D2600V2-1008	ES3DV3 - SN3270	DAE4 Sn853	14.00	56.40	56	-0.71
2018/12/9	2600	MSL	250	D2600V2-1008	ES3DV3 - SN3270	DAE4 Sn1326	14.10	55.30	56.4	1.99
2018/12/11	2600	MSL	250	D2600V2-1008	EX3DV4 - SN7515	DAE4 Sn854	14.20	55.30	56.8	2.71
2018/12/11	2600	MSL	250	D2600V2-1008	ES3DV3 - SN3169	DAE4 Sn853	14.70	55.30	58.8	6.33
2018/12/4	5250	HSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.47	80.70	74.7	-7.43
2018/11/15	5250	MSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.41	78.30	74.1	-5.36
2018/12/7	5250	MSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.87	78.30	78.7	0.51
2018/12/4	5600	HSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.67	83.30	76.7	-7.92
2018/11/15	5600	MSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.73	81.00	77.3	-4.57
2018/12/7	5600	MSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	8.12	81.00	81.2	0.25
2018/12/4	5750	HSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.47	80.40	74.7	-7.09
2018/11/13	5750	MSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.39	77.40	73.9	-4.52
2018/11/15	5750	MSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.82	77.40	78.2	1.03
2018/12/7	5750	MSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.39	77.40	73.9	-4.52

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2019/1/4	5250	MSL	100	D5GHzV2-1006	EX3DV4 - SN3931	DAE4 Sn1326	2.18	21.70	21.8	0.46
2019/1/4	5600	MSL	100	D5GHzV2-1006	EX3DV4 - SN3931	DAE4 Sn1326	2.26	22.50	22.6	0.44

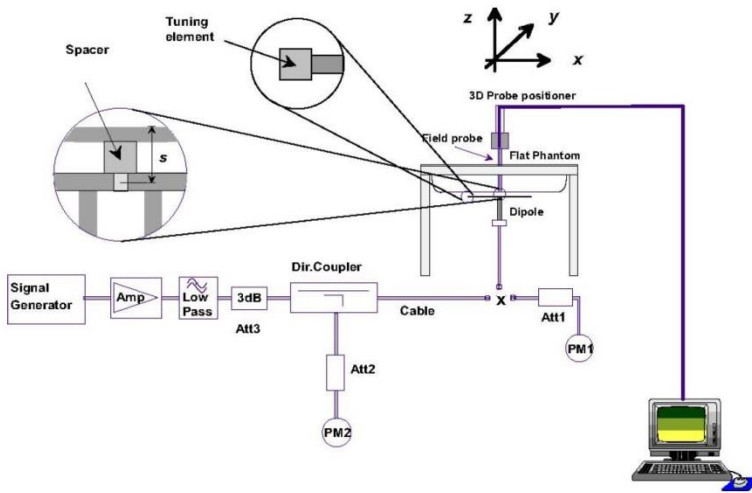


Fig 8.3.1 System Performance Check Setup



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.

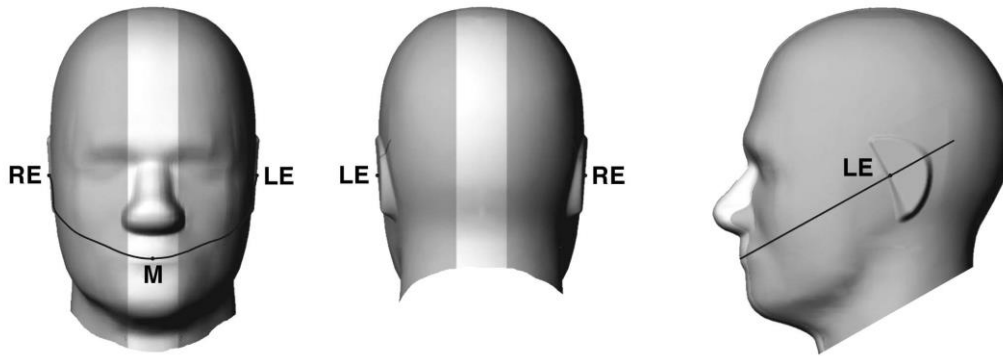


Fig 9.1.1 Front, back, and side views of SAM twin phantom

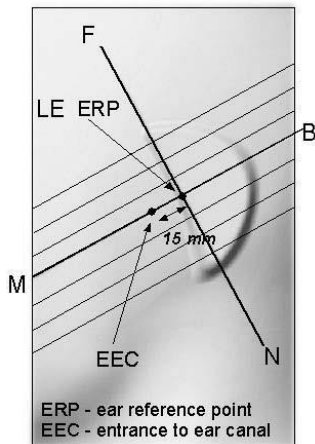


Fig 9.1.2 Close-up side view of phantom showing the ear region.

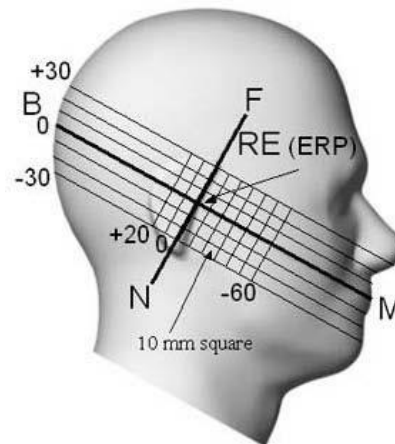


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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.

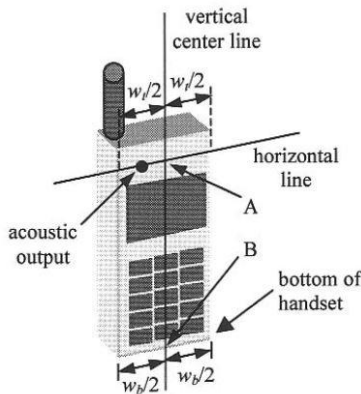


Fig 9.2.1 Handset vertical and horizontal reference lines—“fixed case”

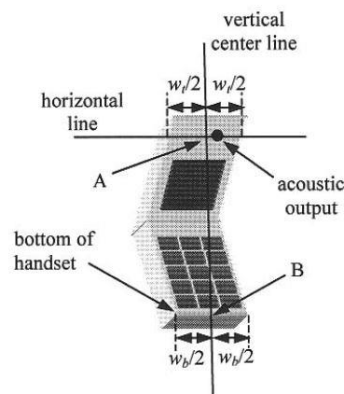


Fig 9.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

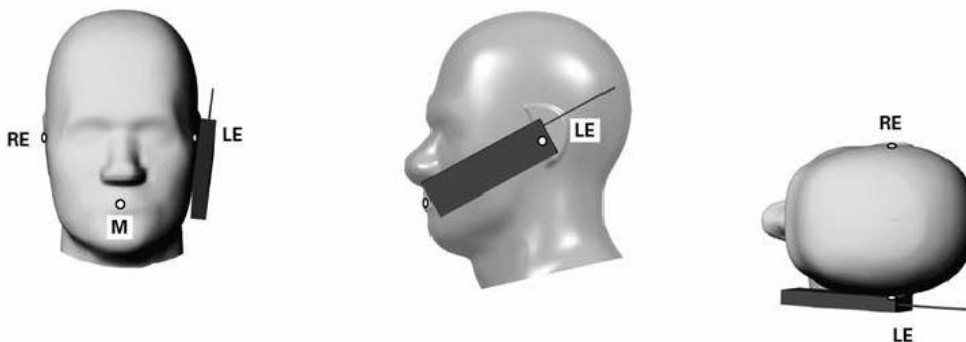


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

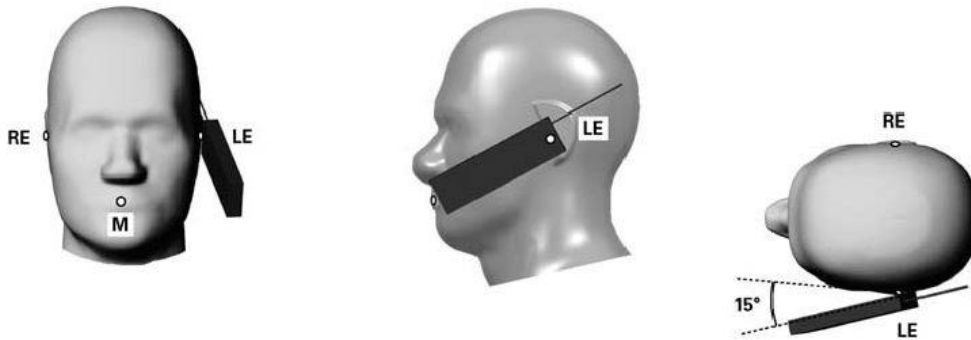


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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

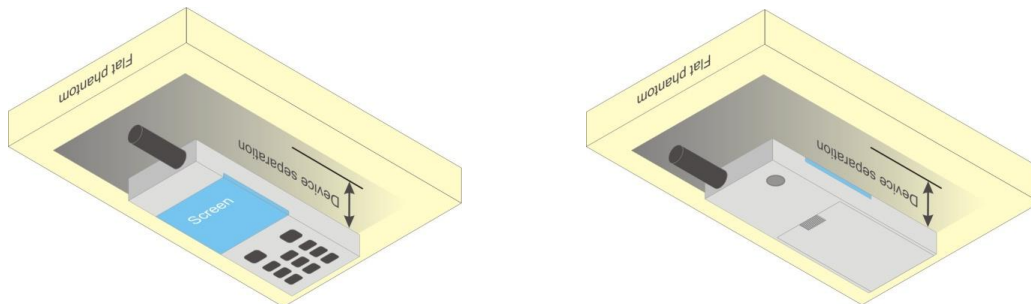


Fig 9.4 Body Worn Position



10.5 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.

10.6 Extremity Exposure

For smart phones with a display diagonal dimension $> 15.0 \text{ cm}$ or an overall diagonal dimension $> 16.0 \text{ cm}$ 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 $\leq 25 \text{ mm}$ 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 $> 1.2 \text{ W/kg}$.



11. Conducted RF Output Power (Unit: dBm)

<GSM Conducted Power>

General Note:

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE / 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.
3. 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

<WiFi off>

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 / Body-worn	UAT / LAT	GSM 1 Tx slot	33.82	33.53	33.80	34.00	24.82	24.53	24.80	25.00	
		GPRS 1 Tx slot	33.83	33.53	33.81	34.00	24.83	24.53	24.81	25.00	
		GPRS 2 Tx slots	31.96	31.59	31.61	32.00	25.96	25.59	25.61	26.00	
		GPRS 3 Tx slots	29.67	29.94	29.92	30.00	25.41	25.68	25.66	25.74	
		GPRS 4 Tx slots	28.54	28.76	28.80	29.00	25.54	25.76	25.80	26.00	
		EDGE 1 Tx slot	27.12	27.15	27.08	28.00	18.12	18.15	18.08	19.00	
		EDGE 2 Tx slots	26.48	26.55	26.84	27.00	20.48	20.55	20.84	21.00	
		EDGE 3 Tx slots	24.28	24.65	24.38	25.00	20.02	20.39	20.12	20.74	
		EDGE 4 Tx slots	22.21	22.20	22.14	23.00	19.21	19.20	19.14	20.00	
		DTM Multi-slot class 5	GSM 1 Tx slot	31.72	31.73	31.84	32.00	25.64	25.65	25.76	25.98
			GPRS 1 Tx slot	31.61	31.62	31.72	32.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	31.72	31.77	31.85	32.00	25.64	25.69	25.77	25.98
			GPRS 1 Tx slot	31.60	31.65	31.73	32.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	29.42	29.61	29.65	30.00	25.07	25.25	25.29	25.74
			GPRS 2 Tx slots	29.28	29.46	29.50	30.00				
		DTM Multi-slot class 5	GSM 1 Tx slot	31.60	31.70	31.78	32.00	23.72	23.81	23.88	24.16
			EDGE 1 Tx slot	26.42	26.47	26.50	27.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	31.72	31.78	31.88	32.00	23.79	23.83	23.93	24.16
			EDGE 1 Tx slot	26.31	26.31	26.41	27.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	29.75	29.56	29.65	30.00	22.68	22.57	22.63	23.10
EDGE 2 Tx slots	24.30		24.33	24.34	25.00						



<Wifi on>

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	UAT	GSM 1 Tx slot		32.91	32.90	32.85	33.00	23.91	23.90	23.85	24.00		
		GPRS 1 Tx slot		32.95	32.92	32.87	33.00	23.95	23.92	23.87	24.00		
		GPRS 2 Tx slots		30.09	30.15	30.08	30.50	24.09	24.15	24.08	24.50		
		GPRS 3 Tx slots		28.06	28.10	27.95	28.50	23.80	23.84	23.69	24.24		
		GPRS 4 Tx slots		26.41	26.44	26.49	27.50	23.41	23.44	23.49	24.50		
		EDGE 1 Tx slot		25.90	25.96	25.83	26.00	16.90	16.96	16.83	17.00		
		EDGE 2 Tx slots		25.22	25.25	25.23	26.00	19.22	19.25	19.23	20.00		
		EDGE 3 Tx slots		23.10	23.03	22.94	24.00	18.84	18.77	18.68	19.74		
		EDGE 4 Tx slots		20.91	20.89	20.75	21.00	17.91	17.89	17.75	18.00		
		DTM Multi-slot class 5		GSM 1 Tx slot		30.27	30.30	30.20	30.50	24.18	24.21	24.10	24.48
				GPRS 1 Tx slot		30.14	30.16	30.04	30.50				
		DTM Multi-slot class 9		GSM 1 Tx slot		30.29	30.37	30.21	30.50	24.20	24.25	24.12	24.48
				GPRS 1 Tx slot		30.16	30.17	30.06	30.50				
		DTM Multi-slot class 11		GSM 1 Tx slot		28.05	28.01	27.90	28.50	23.69	23.67	23.51	24.24
				GPRS 2 Tx slots		27.90	27.89	27.71	28.50				
		DTM Multi-slot class 5		GSM 1 Tx slot		30.12	30.24	30.23	30.50	22.29	22.40	22.41	22.79
				EDGE 1 Tx slot		25.16	25.22	25.30	26.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		30.34	30.36	30.39	30.50	22.46	22.46	22.46	22.79
				EDGE 1 Tx slot		25.14	25.10	24.99	26.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		28.30	27.96	27.81	28.50	21.31	21.09	20.95	21.80
				EDGE 2 Tx slots		23.07	23.05	22.92	24.00				

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			
Head	LAT	GSM 1 Tx slot		33.82	33.53	33.80	34.00	24.82	24.53	24.80	25.00		
		GPRS 1 Tx slot		33.83	33.53	33.81	34.00	24.83	24.53	24.81	25.00		
		GPRS 2 Tx slots		31.96	31.59	31.61	32.00	25.96	25.59	25.61	26.00		
		GPRS 3 Tx slots		29.67	29.94	29.92	30.00	25.41	25.68	25.66	25.74		
		GPRS 4 Tx slots		28.54	28.76	28.80	29.00	25.54	25.76	25.80	26.00		
		EDGE 1 Tx slot		27.12	27.15	27.08	28.00	18.12	18.15	18.08	19.00		
		EDGE 2 Tx slots		26.48	26.55	26.84	27.00	20.48	20.55	20.84	21.00		
		EDGE 3 Tx slots		24.28	24.65	24.38	25.00	20.02	20.39	20.12	20.74		
		EDGE 4 Tx slots		22.21	22.20	22.14	23.00	19.21	19.20	19.14	20.00		
		DTM Multi-slot class 5		GSM 1 Tx slot		31.72	31.73	31.84	32.00	25.64	25.65	25.76	25.98
				GPRS 1 Tx slot		31.61	31.62	31.72	32.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		31.72	31.77	31.85	32.00	25.64	25.69	25.77	25.98
				GPRS 1 Tx slot		31.60	31.65	31.73	32.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		29.42	29.61	29.65	30.00	25.07	25.25	25.29	25.74
				GPRS 2 Tx slots		29.28	29.46	29.50	30.00				
		DTM Multi-slot class 5		GSM 1 Tx slot		31.60	31.70	31.78	32.00	23.72	23.81	23.88	24.16
				EDGE 1 Tx slot		26.42	26.47	26.50	27.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		31.72	31.78	31.88	32.00	23.79	23.83	23.93	24.16
				EDGE 1 Tx slot		26.31	26.31	26.41	27.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		29.75	29.56	29.65	30.00	22.68	22.57	22.63	23.10
				EDGE 2 Tx slots		24.30	24.33	24.34	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 / Body-worn	UAT / LAT	GSM 1 Tx slot		33.82	33.53	33.80	34.00	24.82	24.53	24.80	25.00		
		GPRS 1 Tx slot		33.83	33.53	33.81	34.00	24.83	24.53	24.81	25.00		
		GPRS 2 Tx slots		31.96	31.59	31.61	32.00	25.96	25.59	25.61	26.00		
		GPRS 3 Tx slots		29.67	29.94	29.92	30.00	25.41	25.68	25.66	25.74		
		GPRS 4 Tx slots		28.54	28.76	28.80	29.00	25.54	25.76	25.80	26.00		
		EDGE 1 Tx slot		27.12	27.15	27.08	28.00	18.12	18.15	18.08	19.00		
		EDGE 2 Tx slots		26.48	26.55	26.84	27.00	20.48	20.55	20.84	21.00		
		EDGE 3 Tx slots		24.28	24.65	24.38	25.00	20.02	20.39	20.12	20.74		
		EDGE 4 Tx slots		22.21	22.20	22.14	23.00	19.21	19.20	19.14	20.00		
		DTM Multi-slot class 5		GSM 1 Tx slot		31.72	31.73	31.84	32.00	25.64	25.65	25.76	25.98
				GPRS 1 Tx slot		31.61	31.62	31.72	32.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		31.72	31.77	31.85	32.00	25.64	25.69	25.77	25.98
				GPRS 1 Tx slot		31.60	31.65	31.73	32.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		29.42	29.61	29.65	30.00	25.07	25.25	25.29	25.74
				GPRS 2 Tx slots		29.28	29.46	29.50	30.00				
		DTM Multi-slot class 5		GSM 1 Tx slot		31.60	31.70	31.78	32.00	23.72	23.81	23.88	24.16
				EDGE 1 Tx slot		26.42	26.47	26.50	27.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		31.72	31.78	31.88	32.00	23.79	23.83	23.93	24.16
				EDGE 1 Tx slot		26.31	26.31	26.41	27.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		29.75	29.56	29.65	30.00	22.68	22.57	22.63	23.10
				EDGE 2 Tx slots		24.30	24.33	24.34	25.00				



<WiFi off>

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	UAT	GSM 1 Tx slot		26.82	26.50	26.51	28.00	17.82	17.50	17.51	19.00		
		GPRS 1 Tx slot		26.84	26.53	26.56	28.00	17.84	17.53	17.56	19.00		
		GPRS 2 Tx slots		25.65	25.29	25.28	26.50	19.65	19.29	19.28	20.50		
		GPRS 3 Tx slots		23.51	23.07	23.09	24.50	19.25	18.81	18.83	20.24		
		GPRS 4 Tx slots		22.36	22.07	22.03	23.50	19.36	19.07	19.03	20.50		
		EDGE 1 Tx slot		23.09	22.75	22.68	24.00	14.09	13.75	13.68	15.00		
		EDGE 2 Tx slots		21.88	21.53	21.44	23.00	15.88	15.53	15.44	17.00		
		EDGE 3 Tx slots		20.73	20.40	20.27	22.00	16.47	16.14	16.01	17.74		
		EDGE 4 Tx slots		19.59	19.29	19.17	21.00	16.59	16.29	16.17	18.00		
		DTM Multi-slot class 5		GSM 1 Tx slot		25.54	25.21	25.20	26.50	19.50	19.17	19.17	20.48
				GPRS 1 Tx slot		25.51	25.18	25.18	26.50				
		DTM Multi-slot class 9		GSM 1 Tx slot		25.52	25.18	25.19	26.50	19.49	19.15	19.15	20.48
				GPRS 1 Tx slot		25.50	25.16	25.16	26.50				
		DTM Multi-slot class 11		GSM 1 Tx slot		23.48	23.05	23.06	24.50	19.19	18.77	18.79	20.24
				GPRS 2 Tx slots		23.43	23.02	23.04	24.50				
		DTM Multi-slot class 5		GSM 1 Tx slot		25.50	25.16	25.17	26.50	18.02	17.69	17.67	19.07
				EDGE 1 Tx slot		21.82	21.51	21.42	23.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		25.48	25.14	25.15	26.50	18.00	17.66	17.65	19.07
				EDGE 1 Tx slot		21.80	21.48	21.40	23.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		23.45	23.03	23.03	24.50	17.57	17.19	17.11	18.74
				EDGE 2 Tx slots		20.72	20.38	20.22	22.00				

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	LAT	GSM 1 Tx slot		30.51	30.10	29.99	31.00	21.51	21.10	20.99	22.00		
		GPRS 1 Tx slot		30.53	30.10	30.00	31.00	21.53	21.10	21.00	22.00		
		GPRS 2 Tx slots		29.01	28.85	28.65	29.50	23.01	22.85	22.65	23.50		
		GPRS 3 Tx slots		27.21	26.96	26.59	27.50	22.95	22.70	22.33	23.24		
		GPRS 4 Tx slots		26.26	26.03	25.76	26.50	23.26	23.03	22.76	23.50		
		EDGE 1 Tx slot		26.36	26.13	25.91	27.00	17.36	17.13	16.91	18.00		
		EDGE 2 Tx slots		25.72	25.57	25.38	26.00	19.72	19.57	19.38	20.00		
		EDGE 3 Tx slots		24.65	24.56	24.09	25.00	20.39	20.30	19.83	20.74		
		EDGE 4 Tx slots		23.47	23.25	23.00	24.00	20.47	20.25	20.00	21.00		
		DTM Multi-slot class 5		GSM 1 Tx slot		29.23	29.04	28.91	29.50	23.12	22.93	22.79	23.48
				GPRS 1 Tx slot		29.05	28.85	28.70	29.50				
		DTM Multi-slot class 9		GSM 1 Tx slot		29.26	29.07	28.88	29.50	23.15	22.96	22.76	23.48
				GPRS 1 Tx slot		29.08	28.88	28.67	29.50				
		DTM Multi-slot class 11		GSM 1 Tx slot		27.16	27.01	26.69	27.50	22.78	22.61	22.30	23.24
				GPRS 2 Tx slots		26.98	26.80	26.49	27.50				
		DTM Multi-slot class 5		GSM 1 Tx slot		29.01	28.88	28.69	29.50	21.66	21.52	21.33	22.07
				EDGE 1 Tx slot		25.74	25.58	25.40	26.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		29.16	29.04	28.86	29.50	21.72	21.57	21.40	22.07
				EDGE 1 Tx slot		25.61	25.39	25.24	26.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		27.02	26.81	26.53	27.50	21.34	21.14	20.92	21.74
				EDGE 2 Tx slots		24.66	24.47	24.30	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 / Body-worn	UAT / LAT	GSM 1 Tx slot			30.51	30.10	29.99	31.00	21.51	21.10	20.99	22.00	
		GPRS 1 Tx slot			30.53	30.10	30.00	31.00	21.53	21.10	21.00	22.00	
		GPRS 2 Tx slots			29.01	28.85	28.65	29.50	23.01	22.85	22.65	23.50	
		GPRS 3 Tx slots			27.21	26.96	26.59	27.50	22.95	22.70	22.33	23.24	
		GPRS 4 Tx slots			26.26	26.03	25.76	26.50	23.26	23.03	22.76	23.50	
		EDGE 1 Tx slot			26.36	26.13	25.91	27.00	17.36	17.13	16.91	18.00	
		EDGE 2 Tx slots			25.72	25.57	25.38	26.00	19.72	19.57	19.38	20.00	
		EDGE 3 Tx slots			24.65	24.56	24.09	25.00	20.39	20.30	19.83	20.74	
		EDGE 4 Tx slots			23.47	23.25	23.00	24.00	20.47	20.25	20.00	21.00	
				DTM Multi-slot class 5	GSM 1 Tx slot	29.23	29.04	28.91	29.50	23.12	22.93	22.79	23.48
					GPRS 1 Tx slot	29.05	28.85	28.70	29.50				
				DTM Multi-slot class 9	GSM 1 Tx slot	29.26	29.07	28.88	29.50	23.15	22.96	22.76	23.48
					GPRS 1 Tx slot	29.08	28.88	28.67	29.50				
				DTM Multi-slot class 11	GSM 1 Tx slot	27.16	27.01	26.69	27.50	22.78	22.61	22.30	23.24
					GPRS 2 Tx slots	26.98	26.80	26.49	27.50				
				DTM Multi-slot class 5	GSM 1 Tx slot	29.01	28.88	28.69	29.50	21.66	21.52	21.33	22.07
					EDGE 1 Tx slot	25.74	25.58	25.40	26.00				
				DTM Multi-slot class 9	GSM 1 Tx slot	29.16	29.04	28.86	29.50	21.72	21.57	21.40	22.07
					EDGE 1 Tx slot	25.61	25.39	25.24	26.00				
				DTM Multi-slot class 11	GSM 1 Tx slot	27.02	26.81	26.53	27.50	21.34	21.14	20.92	21.74
					EDGE 2 Tx slots	24.66	24.47	24.30	25.00				



<Wifi on>

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	UAT	GSM 1 Tx slot		23.50	23.23	23.10	24.00	14.50	14.23	14.10	15.00		
		GPRS 1 Tx slot		23.53	23.32	23.12	24.00	14.53	14.32	14.12	15.00		
		GPRS 2 Tx slots		23.92	23.63	23.58	24.00	17.92	17.63	17.58	18.00		
		GPRS 3 Tx slots		22.00	21.98	21.95	22.00	17.74	17.72	17.69	17.74		
		GPRS 4 Tx slots		19.78	19.37	19.42	21.00	16.78	16.37	16.42	18.00		
		EDGE 1 Tx slot		21.97	21.67	21.45	22.00	12.97	12.67	12.45	13.00		
		EDGE 2 Tx slots		21.33	21.04	20.87	21.50	15.33	15.04	14.87	15.50		
		EDGE 3 Tx slots		20.26	19.91	19.72	20.50	16.00	15.65	15.46	16.24		
		EDGE 4 Tx slots		19.10	18.72	18.58	19.50	16.10	15.72	15.58	16.50		
		DTM Multi-slot class 5		GSM 1 Tx slot		23.91	23.64	23.57	24.00	17.88	17.55	17.48	17.98
				GPRS 1 Tx slot		23.89	23.50	23.42	24.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		23.76	23.45	23.49	24.00	17.78	17.44	17.36	17.98
				GPRS 1 Tx slot		23.85	23.48	23.27	24.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		21.99	21.79	21.80	22.00	17.67	17.52	17.58	17.74
				GPRS 2 Tx slots		21.90	21.77	21.86	22.00				
		DTM Multi-slot class 5		GSM 1 Tx slot		23.89	23.58	23.47	24.00	16.81	16.48	16.38	16.91
				EDGE 1 Tx slot		21.44	21.06	20.99	21.50				
		DTM Multi-slot class 9		GSM 1 Tx slot		23.91	23.64	23.58	24.00	16.77	16.47	16.38	16.91
				EDGE 1 Tx slot		21.29	20.93	20.78	21.50				
		DTM Multi-slot class 11		GSM 1 Tx slot		21.99	21.90	21.78	22.00	16.61	16.42	16.28	16.80
				EDGE 2 Tx slots		20.18	19.91	19.75	20.50				

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	LAT	GSM 1 Tx slot		30.51	30.10	29.99	31.00	21.51	21.10	20.99	22.00		
		GPRS 1 Tx slot		30.53	30.10	30.00	31.00	21.53	21.10	21.00	22.00		
		GPRS 2 Tx slots		29.01	28.85	28.65	29.50	23.01	22.85	22.65	23.50		
		GPRS 3 Tx slots		27.21	26.96	26.59	27.50	22.95	22.70	22.33	23.24		
		GPRS 4 Tx slots		26.26	26.03	25.76	26.50	23.26	23.03	22.76	23.50		
		EDGE 1 Tx slot		26.36	26.13	25.91	27.00	17.36	17.13	16.91	18.00		
		EDGE 2 Tx slots		25.72	25.57	25.38	26.00	19.72	19.57	19.38	20.00		
		EDGE 3 Tx slots		24.65	24.56	24.09	25.00	20.39	20.30	19.83	20.74		
		EDGE 4 Tx slots		23.47	23.25	23.00	24.00	20.47	20.25	20.00	21.00		
		DTM Multi-slot class 5		GSM 1 Tx slot		29.23	29.04	28.91	29.50	23.12	22.93	22.79	23.48
				GPRS 1 Tx slot		29.05	28.85	28.70	29.50				
		DTM Multi-slot class 9		GSM 1 Tx slot		29.26	29.07	28.88	29.50	23.15	22.96	22.76	23.48
				GPRS 1 Tx slot		29.08	28.88	28.67	29.50				
		DTM Multi-slot class 11		GSM 1 Tx slot		27.16	27.01	26.69	27.50	22.78	22.61	22.30	23.24
				GPRS 2 Tx slots		26.98	26.80	26.49	27.50				
		DTM Multi-slot class 5		GSM 1 Tx slot		29.01	28.88	28.69	29.50	21.66	21.52	21.33	22.07
				EDGE 1 Tx slot		25.74	25.58	25.40	26.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		29.16	29.04	28.86	29.50	21.72	21.57	21.40	22.07
				EDGE 1 Tx slot		25.61	25.39	25.24	26.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		27.02	26.81	26.53	27.50	21.34	21.14	20.92	21.74
				EDGE 2 Tx slots		24.66	24.47	24.30	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 / Body-worn	UAT / LAT	GSM 1 Tx slot		30.51	30.10	29.99	31.00	21.51	21.10	20.99	22.00		
		GPRS 1 Tx slot		30.53	30.10	30.00	31.00	21.53	21.10	21.00	22.00		
		GPRS 2 Tx slots		29.01	28.85	28.65	29.50	23.01	22.85	22.65	23.50		
		GPRS 3 Tx slots		27.21	26.96	26.59	27.50	22.95	22.70	22.33	23.24		
		GPRS 4 Tx slots		26.26	26.03	25.76	26.50	23.26	23.03	22.76	23.50		
		EDGE 1 Tx slot		26.36	26.13	25.91	27.00	17.36	17.13	16.91	18.00		
		EDGE 2 Tx slots		25.72	25.57	25.38	26.00	19.72	19.57	19.38	20.00		
		EDGE 3 Tx slots		24.65	24.56	24.09	25.00	20.39	20.30	19.83	20.74		
		EDGE 4 Tx slots		23.47	23.25	23.00	24.00	20.47	20.25	20.00	21.00		
		DTM Multi-slot class 5		GSM 1 Tx slot		29.23	29.04	28.91	29.50	23.12	22.93	22.79	23.48
				GPRS 1 Tx slot		29.05	28.85	28.70	29.50				
		DTM Multi-slot class 9		GSM 1 Tx slot		29.26	29.07	28.88	29.50	23.15	22.96	22.76	23.48
				GPRS 1 Tx slot		29.08	28.88	28.67	29.50				
		DTM Multi-slot class 11		GSM 1 Tx slot		27.16	27.01	26.69	27.50	22.78	22.61	22.30	23.24
				GPRS 2 Tx slots		26.98	26.80	26.49	27.50				
		DTM Multi-slot class 5		GSM 1 Tx slot		29.01	28.88	28.69	29.50	21.66	21.52	21.33	22.07
				EDGE 1 Tx slot		25.74	25.58	25.40	26.00				
		DTM Multi-slot class 9		GSM 1 Tx slot		29.16	29.04	28.86	29.50	21.72	21.57	21.40	22.07
				EDGE 1 Tx slot		25.61	25.39	25.24	26.00				
		DTM Multi-slot class 11		GSM 1 Tx slot		27.02	26.81	26.53	27.50	21.34	21.14	20.92	21.74
				EDGE 2 Tx slots		24.66	24.47	24.30	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-TFCl
 - viii. Confirm that E-TFCl is equal to the target E-TFCl of 75 for sub-test 1, and other subtest's E-TFCl
- d. The transmitted maximum output power was recorded.

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCl
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 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:

- 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.		

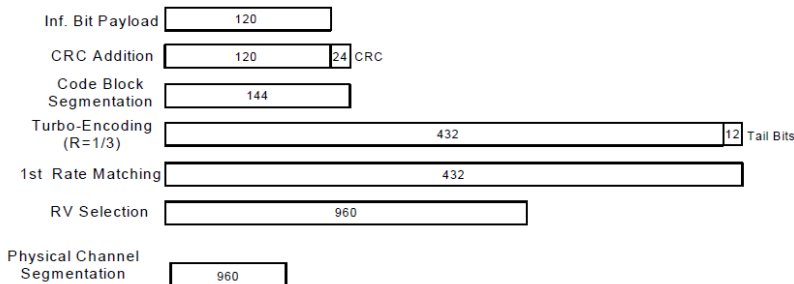


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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.

<WiFi off>

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	UAT	Max. Power		21.5			24.0			24.5		
		3GPP Rel 99	AMR 12.2Kbps	20.38	20.36	20.45	23.38	23.50	23.49	23.77	23.80	23.92
		3GPP Rel 99	RMC 12.2Kbps	20.41	20.38	20.48	23.38	23.52	23.50	23.79	23.82	23.93
		Max. Power		20.5			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	19.42	19.36	19.50	22.40	22.50	22.54	22.52	22.49	22.63
		3GPP Rel 6	HSDPA Subtest-2	19.43	19.39	19.50	22.14	22.53	22.57	22.53	22.51	22.64
		3GPP Rel 6	HSDPA Subtest-3	18.94	18.90	19.00	21.92	22.00	22.08	22.03	22.02	22.16
		3GPP Rel 6	HSDPA Subtest-4	18.93	18.90	19.00	21.93	22.05	22.07	22.04	22.03	22.15
		Max. Power		20.5			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	19.22	19.20	19.40	22.31	22.40	22.49	22.53	22.49	22.63
		3GPP Rel 8	DC-HSDPA Subtest-2	19.37	19.23	19.47	22.14	22.53	22.53	22.51	22.49	22.62
		3GPP Rel 8	DC-HSDPA Subtest-3	18.83	18.75	18.87	21.92	21.99	22.08	22.03	22.02	22.15
		3GPP Rel 8	DC-HSDPA Subtest-4	18.75	18.90	18.81	21.83	22.03	22.03	22.03	22.02	22.15
		Max. Power		20.5			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	19.90	18.87	18.97	22.38	22.51	22.48	21.50	21.45	21.57
		3GPP Rel 6	HSUPA Subtest-2	17.42	17.40	17.50	20.34	20.55	20.54	20.50	20.50	20.60
		3GPP Rel 6	HSUPA Subtest-3	18.42	18.39	18.49	21.41	21.53	21.53	21.01	20.95	21.04
		3GPP Rel 6	HSUPA Subtest-4	17.40	17.37	17.50	20.32	20.54	20.55	20.50	20.49	20.61
3GPP Rel 6	HSUPA Subtest-5	19.44	19.40	19.51	22.40	22.60	22.50	22.51	22.49	22.61		

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	LAT	Max. Power		25.7			24.0			24.5		
		3GPP Rel 99	AMR 12.2Kbps	24.76	24.90	24.92	23.38	23.50	23.49	23.77	23.80	23.92
		3GPP Rel 99	RMC 12.2Kbps	24.78	24.91	24.94	23.38	23.52	23.50	23.79	23.82	23.93
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	23.63	23.81	23.93	22.40	22.50	22.54	22.52	22.49	22.63
		3GPP Rel 6	HSDPA Subtest-2	23.65	23.82	23.93	22.14	22.53	22.57	22.53	22.51	22.64
		3GPP Rel 6	HSDPA Subtest-3	23.16	23.45	23.41	21.92	22.00	22.08	22.03	22.02	22.16
		3GPP Rel 6	HSDPA Subtest-4	23.18	23.45	23.43	21.93	22.05	22.07	22.04	22.03	22.15
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.62	23.81	23.91	22.31	22.40	22.49	22.53	22.49	22.63
		3GPP Rel 8	DC-HSDPA Subtest-2	23.64	23.80	23.92	22.14	22.53	22.53	22.51	22.49	22.62
		3GPP Rel 8	DC-HSDPA Subtest-3	23.15	23.43	23.42	21.92	21.99	22.08	22.03	22.02	22.15
		3GPP Rel 8	DC-HSDPA Subtest-4	23.17	23.45	23.43	21.83	22.03	22.03	22.03	22.02	22.15
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	22.82	22.71	22.76	22.38	22.51	22.48	21.50	21.45	21.57
		3GPP Rel 6	HSUPA Subtest-2	21.64	21.83	21.93	20.34	20.55	20.54	20.50	20.50	20.60
		3GPP Rel 6	HSUPA Subtest-3	21.80	21.98	22.10	21.41	21.53	21.53	21.01	20.95	21.04
		3GPP Rel 6	HSUPA Subtest-4	21.49	21.83	21.94	20.32	20.54	20.55	20.50	20.49	20.61
3GPP Rel 6	HSUPA Subtest-5	23.65	23.82	23.93	22.40	22.60	22.50	22.51	22.49	22.61		



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
		Max. Power		25.7			24.0			24.5		
		3GPP Rel 99	AMR 12.2Kbps	24.76	24.90	24.92	23.38	23.50	23.49	23.77	23.80	23.92
		3GPP Rel 99	RMC 12.2Kbps	24.78	24.91	24.94	23.38	23.52	23.50	23.79	23.82	23.93
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	23.63	23.81	23.93	22.40	22.50	22.54	22.52	22.49	22.63
		3GPP Rel 6	HSDPA Subtest-2	23.65	23.82	23.93	22.14	22.53	22.57	22.53	22.51	22.64
		3GPP Rel 6	HSDPA Subtest-3	23.16	23.45	23.41	21.92	22.00	22.08	22.03	22.02	22.16
		3GPP Rel 6	HSDPA Subtest-4	23.18	23.45	23.43	21.93	22.05	22.07	22.04	22.03	22.15
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.62	23.81	23.91	22.31	22.40	22.49	22.53	22.49	22.63
		3GPP Rel 8	DC-HSDPA Subtest-2	23.64	23.80	23.92	22.14	22.53	22.53	22.51	22.49	22.62
		3GPP Rel 8	DC-HSDPA Subtest-3	23.15	23.43	23.42	21.92	21.99	22.08	22.03	22.02	22.15
		3GPP Rel 8	DC-HSDPA Subtest-4	23.17	23.45	23.43	21.83	22.03	22.03	22.03	22.02	22.15
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	22.82	22.71	22.76	22.38	22.51	22.48	21.50	21.45	21.57
		3GPP Rel 6	HSUPA Subtest-2	21.64	21.83	21.93	20.34	20.55	20.54	20.50	20.50	20.60
		3GPP Rel 6	HSUPA Subtest-3	21.80	21.98	22.10	21.41	21.53	21.53	21.01	20.95	21.04
		3GPP Rel 6	HSUPA Subtest-4	21.49	21.83	21.94	20.32	20.54	20.55	20.50	20.49	20.61
		3GPP Rel 6	HSUPA Subtest-5	23.65	23.82	23.93	22.40	22.60	22.50	22.51	22.49	22.61

Hotspot / Body-worn

UAT / LAT



<Wifi on>

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
Max. Power		19.0			24.0			23.0				
Head	UAT	3GPP Rel 99	AMR 12.2Kbps	18.31	18.25	18.31	23.38	23.50	23.49	22.32	22.29	22.38
		3GPP Rel 99	RMC 12.2Kbps	18.35	18.31	18.36	23.38	23.52	23.50	22.39	22.38	22.40
		Max. Power		18.0			23.0			22.0		
		3GPP Rel 6	HSDPA Subtest-1	17.34	17.32	17.38	22.40	22.50	22.54	21.38	21.40	21.37
		3GPP Rel 6	HSDPA Subtest-2	17.08	17.36	17.45	22.14	22.53	22.57	21.43	21.40	21.38
		3GPP Rel 6	HSDPA Subtest-3	16.86	16.81	16.92	21.92	22.00	22.08	20.89	20.89	20.88
		3GPP Rel 6	HSDPA Subtest-4	16.82	16.85	16.97	21.93	22.05	22.07	20.90	20.91	20.88
		Max. Power		18.0			23.0			22.0		
		3GPP Rel 8	DC-HSDPA Subtest-1	17.26	17.30	17.38	22.31	22.40	22.49	21.28	21.36	21.31
		3GPP Rel 8	DC-HSDPA Subtest-2	17.02	17.33	17.39	22.14	22.53	22.53	21.35	21.33	21.31
		3GPP Rel 8	DC-HSDPA Subtest-3	16.76	16.75	16.86	21.92	21.99	22.08	20.80	20.80	20.83
		3GPP Rel 8	DC-HSDPA Subtest-4	16.74	16.78	16.87	21.83	22.03	22.03	20.84	20.86	20.82
		Max. Power		18.0			23.0			22.0		
		3GPP Rel 6	HSUPA Subtest-1	17.25	17.34	17.41	22.38	22.51	22.48	21.42	21.39	21.36
		3GPP Rel 6	HSUPA Subtest-2	15.24	15.34	15.39	20.34	20.55	20.54	19.40	19.37	19.38
		3GPP Rel 6	HSUPA Subtest-3	16.38	16.31	16.46	21.41	21.53	21.53	20.44	20.40	20.38
3GPP Rel 6	HSUPA Subtest-4	15.39	15.35	15.44	20.32	20.54	20.55	19.40	19.43	19.40		
3GPP Rel 6	HSUPA Subtest-5	17.40	17.40	17.50	22.40	22.60	22.50	21.40	21.40	21.40		

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
Max. Power		24.5			19.5			24.5				
Head	LAT	3GPP Rel 99	AMR 12.2Kbps	23.20	23.21	23.18	19.17	19.19	19.15	23.77	23.80	23.92
		3GPP Rel 99	RMC 12.2Kbps	23.23	23.23	23.28	19.24	19.25	19.21	23.79	23.82	23.93
		Max. Power		23.5			18.5			23.5		
		3GPP Rel 6	HSDPA Subtest-1	22.23	22.21	22.26	18.27	18.17	18.22	22.52	22.49	22.63
		3GPP Rel 6	HSDPA Subtest-2	22.23	22.24	22.31	18.27	18.19	18.23	22.53	22.51	22.64
		3GPP Rel 6	HSDPA Subtest-3	21.75	21.75	21.81	17.39	17.72	17.72	22.03	22.02	22.16
		3GPP Rel 6	HSDPA Subtest-4	21.75	21.74	21.81	17.78	17.73	17.67	22.04	22.03	22.15
		Max. Power		23.5			18.5			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	22.13	22.21	22.23	18.20	18.14	18.14	22.53	22.49	22.63
		3GPP Rel 8	DC-HSDPA Subtest-2	22.19	22.22	22.26	18.20	18.19	18.19	22.51	22.49	22.62
		3GPP Rel 8	DC-HSDPA Subtest-3	21.75	21.73	21.72	17.39	17.66	17.72	22.03	22.02	22.15
		3GPP Rel 8	DC-HSDPA Subtest-4	21.71	21.71	21.80	17.76	17.63	17.63	22.03	22.02	22.15
		Max. Power		23.5			18.5			23.5		
		3GPP Rel 6	HSUPA Subtest-1	22.24	22.21	22.29	18.27	18.17	18.23	21.50	21.45	21.57
		3GPP Rel 6	HSUPA Subtest-2	20.24	20.26	20.23	16.31	16.20	16.19	20.50	20.50	20.60
		3GPP Rel 6	HSUPA Subtest-3	21.27	21.22	21.28	17.29	17.18	17.22	21.01	20.95	21.04
3GPP Rel 6	HSUPA Subtest-4	20.27	20.22	20.31	16.26	16.20	16.18	20.50	20.49	20.61		
3GPP Rel 6	HSUPA Subtest-5	22.30	22.30	22.30	18.30	18.20	18.20	22.51	22.49	22.61		



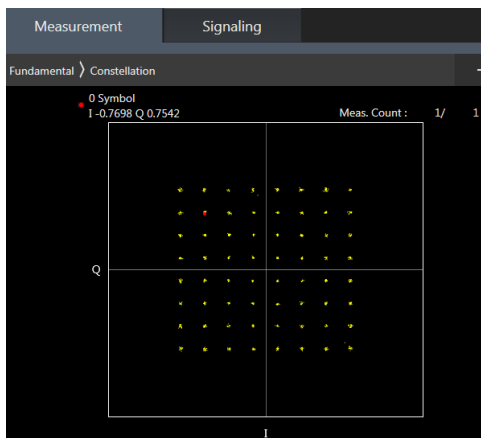
Power Selection	Transmit Antenna	Band		WCDMA II			WCDMA IV			WCDMA V		
		TX Channel	Rx Channel	9262	9400	9538	1312	1413	1513	4132	4182	4233
Hotspot / Body-worn	UAT	Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6
		Max. Power		22.0			24.0			24.5		
		3GPP Rel 99	AMR 12.2Kbps	21.30	21.25	21.34	23.38	23.50	23.49	23.77	23.80	23.92
		3GPP Rel 99	RMC 12.2Kbps	21.32	21.29	21.38	23.38	23.52	23.50	23.79	23.82	23.93
		Max. Power		21.0			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	20.35	20.35	20.35	22.40	22.50	22.54	22.52	22.49	22.63
		3GPP Rel 6	HSDPA Subtest-2	20.37	20.41	20.39	22.14	22.53	22.57	22.53	22.51	22.64
		3GPP Rel 6	HSDPA Subtest-3	19.88	19.85	19.91	21.92	22.00	22.08	22.03	22.02	22.16
		3GPP Rel 6	HSDPA Subtest-4	19.87	19.85	19.89	21.93	22.05	22.07	22.04	22.03	22.15
		Max. Power		21.0			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	20.31	20.33	20.35	22.31	22.40	22.49	22.53	22.49	22.63
		3GPP Rel 8	DC-HSDPA Subtest-2	20.31	20.37	20.31	22.14	22.53	22.53	22.51	22.49	22.62
		3GPP Rel 8	DC-HSDPA Subtest-3	19.84	19.75	19.84	21.92	21.99	22.08	22.03	22.02	22.15
		3GPP Rel 8	DC-HSDPA Subtest-4	19.83	19.82	19.82	21.83	22.03	22.03	22.03	22.02	22.15
		Max. Power		21.0			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	20.40	20.35	20.39	22.38	22.51	22.48	21.50	21.45	21.57
		3GPP Rel 6	HSUPA Subtest-2	18.35	18.41	18.43	20.34	20.55	20.54	20.50	20.50	20.60
		3GPP Rel 6	HSUPA Subtest-3	19.27	19.35	19.44	21.41	21.53	21.53	21.01	20.95	21.04
		3GPP Rel 6	HSUPA Subtest-4	18.37	18.32	18.40	20.32	20.54	20.55	20.50	20.49	20.61
		3GPP Rel 6	HSUPA Subtest-5	20.50	20.40	20.50	22.40	22.60	22.50	22.51	22.49	22.61

Power Selection	Transmit Antenna	Band		WCDMA II			WCDMA IV			WCDMA V		
		TX Channel	Rx Channel	9262	9400	9538	1312	1413	1513	4132	4182	4233
Hotspot / Body-worn	LAT	Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6
		Max. Power		24.5			19.5			24.5		
		3GPP Rel 99	AMR 12.2Kbps	23.20	23.21	23.18	19.17	19.19	19.15	23.77	23.80	23.92
		3GPP Rel 99	RMC 12.2Kbps	23.23	23.23	23.28	19.24	19.25	19.21	23.79	23.82	23.93
		Max. Power		23.5			18.5			23.5		
		3GPP Rel 6	HSDPA Subtest-1	22.23	22.21	22.26	18.27	18.17	18.22	22.52	22.49	22.63
		3GPP Rel 6	HSDPA Subtest-2	22.23	22.24	22.31	18.27	18.19	18.23	22.53	22.51	22.64
		3GPP Rel 6	HSDPA Subtest-3	21.75	21.75	21.81	17.39	17.72	17.72	22.03	22.02	22.16
		3GPP Rel 6	HSDPA Subtest-4	21.75	21.74	21.81	17.78	17.73	17.67	22.04	22.03	22.15
		Max. Power		23.5			18.5			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	22.13	22.21	22.23	18.20	18.14	18.14	22.53	22.49	22.63
		3GPP Rel 8	DC-HSDPA Subtest-2	22.19	22.22	22.26	18.20	18.19	18.19	22.51	22.49	22.62
		3GPP Rel 8	DC-HSDPA Subtest-3	21.75	21.73	21.72	17.39	17.66	17.72	22.03	22.02	22.15
		3GPP Rel 8	DC-HSDPA Subtest-4	21.71	21.71	21.80	17.76	17.63	17.63	22.03	22.02	22.15
		Max. Power		23.5			18.5			23.5		
		3GPP Rel 6	HSUPA Subtest-1	22.24	22.21	22.29	18.27	18.17	18.23	21.50	21.45	21.57
		3GPP Rel 6	HSUPA Subtest-2	20.24	20.26	20.23	16.31	16.20	16.19	20.50	20.50	20.60
		3GPP Rel 6	HSUPA Subtest-3	21.27	21.22	21.28	17.29	17.18	17.22	21.01	20.95	21.04
		3GPP Rel 6	HSUPA Subtest-4	20.27	20.22	20.31	16.26	16.20	16.18	20.50	20.49	20.61
		3GPP Rel 6	HSUPA Subtest-5	22.30	22.30	22.30	18.30	18.20	18.20	22.51	22.49	22.61

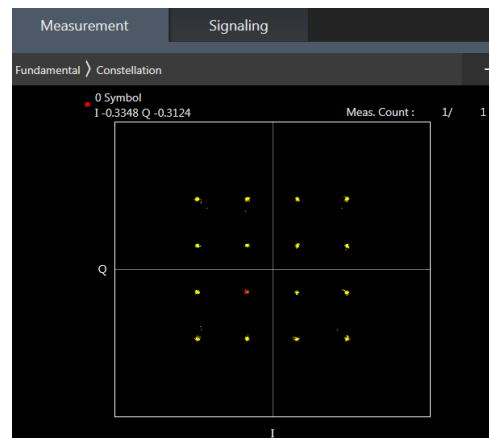
<LTE Conducted Power>

General Note:

1. Anritsu MT88201 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 B4 / B12 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 5 / 17 SAR test and the conducted measurement was covered by Band 26 / 12; 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>

<WiFi off>

Power Selection				Head					
Transmit Antenna				UAT			LAT		
Max. Power				21.5			25.7		
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	21.03	20.91	20.84	24.67	24.40	24.13
20	QPSK	1	49	20.95	20.84	20.79	24.52	24.32	24.00
20	QPSK	1	99	20.86	20.83	20.83	24.47	24.19	23.93
20	QPSK	50	0	20.99	20.89	20.88	23.67	23.50	23.31
20	QPSK	50	24	21.02	20.91	20.88	23.63	23.55	23.20
20	QPSK	50	50	20.95	20.82	20.82	23.53	23.43	23.11
20	QPSK	100	0	20.98	20.84	20.86	23.64	23.50	23.25
20	16QAM	1	0	20.94	20.85	20.71	23.82	23.89	23.46
20	16QAM	1	49	20.80	20.72	20.71	23.86	23.71	23.68
20	16QAM	1	99	20.75	20.75	20.76	23.87	23.77	23.39
20	16QAM	50	0	20.70	20.57	20.55	22.67	22.63	22.38
20	16QAM	50	24	20.69	20.61	20.56	22.71	22.71	22.28
20	16QAM	50	50	20.62	20.51	20.49	22.71	22.57	22.22
20	16QAM	100	0	20.63	20.53	20.53	22.67	22.66	22.30
20	64QAM	1	0	20.85	20.73	20.65	22.76	22.66	22.39
20	64QAM	1	49	20.81	20.64	20.63	22.64	22.57	22.57
20	64QAM	1	99	20.70	20.67	20.64	22.88	22.43	22.38
20	64QAM	50	0	20.70	20.60	20.57	21.65	21.61	21.40
20	64QAM	50	24	20.71	20.59	20.56	21.72	21.63	21.28
20	64QAM	50	50	20.63	20.51	20.52	21.69	21.52	21.17
20	64QAM	100	0	20.68	20.53	20.54	21.76	21.63	21.26
Channel				18675	18900	19125	18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5	1857.5	1880	1902.5
15	QPSK	1	0	20.89	20.77	20.72	24.63	24.51	24.06
15	QPSK	1	37	20.87	20.75	20.79	24.59	24.50	24.01
15	QPSK	1	74	20.77	20.67	20.73	24.47	24.27	23.94
15	QPSK	36	0	20.93	20.82	20.73	23.64	23.51	23.20
15	QPSK	36	20	20.92	20.80	20.80	23.65	23.53	23.14
15	QPSK	36	39	20.88	20.72	20.84	23.63	23.49	23.15
15	QPSK	75	0	20.89	20.77	20.77	23.67	23.43	23.07
15	16QAM	1	0	20.81	20.70	20.65	23.96	24.00	23.32
15	16QAM	1	37	20.73	20.64	20.72	23.92	23.56	23.30
15	16QAM	1	74	20.72	20.55	20.67	23.71	23.45	23.14
15	16QAM	36	0	20.59	20.50	20.44	22.75	22.66	22.23
15	16QAM	36	20	20.62	20.50	20.43	22.72	22.61	22.33
15	16QAM	36	39	20.55	20.43	20.49	22.71	22.66	22.19
15	16QAM	75	0	20.56	20.45	20.40	22.76	22.55	22.19
15	64QAM	1	0	20.70	20.61	20.54	22.83	22.69	22.25
15	64QAM	1	37	20.68	20.57	20.64	22.82	22.80	22.41
15	64QAM	1	74	20.61	20.47	20.56	22.96	22.47	22.37
15	64QAM	36	0	20.62	20.53	20.46	21.68	21.65	21.24
15	64QAM	36	20	20.62	20.52	20.49	21.79	21.69	21.25
15	64QAM	36	39	20.58	20.44	20.51	21.74	21.53	21.24
15	64QAM	75	0	20.57	20.45	20.50	21.65	21.61	21.21
Channel				18650	18900	19150	18650	18900	19150
Frequency (MHz)				1855	1880	1905	1855	1880	1905
10	QPSK	1	0	21.02	20.86	20.72	24.66	24.54	24.07
10	QPSK	1	25	20.89	20.76	20.80	24.61	24.47	23.99
10	QPSK	1	49	20.89	20.77	20.73	24.65	24.52	23.86
10	QPSK	25	0	20.95	20.80	20.77	23.73	23.48	23.18
10	QPSK	25	12	20.93	20.82	20.83	23.62	23.53	23.16
10	QPSK	25	25	20.86	20.75	20.79	23.65	23.42	23.04
10	QPSK	50	0	20.90	20.79	20.75	23.62	23.50	23.13
10	16QAM	1	0	20.91	20.83	20.66	23.88	23.71	23.34
10	16QAM	1	25	20.83	20.65	20.75	23.75	23.62	23.18
10	16QAM	1	49	20.77	20.70	20.62	23.77	23.73	23.20
10	16QAM	25	0	20.63	20.49	20.42	22.79	22.63	22.14
10	16QAM	25	12	20.62	20.48	20.55	22.79	22.59	22.21
10	16QAM	25	25	20.58	20.46	20.53	22.61	22.53	22.01
10	16QAM	50	0	20.60	20.46	20.39	22.77	22.62	22.18
10	64QAM	1	0	20.81	20.70	20.57	22.99	22.88	22.42
10	64QAM	1	25	20.73	20.59	20.62	22.91	22.79	22.37
10	64QAM	1	49	20.70	20.60	20.59	22.96	22.78	22.36



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10	64QAM	25	0	20.64	20.49	20.44	21.73	21.58	21.26
10	64QAM	25	12	20.63	20.50	20.55	21.71	21.66	21.24
10	64QAM	25	25	20.57	20.44	20.49	21.78	21.57	21.10
10	64QAM	50	0	20.61	20.48	20.44	21.81	21.68	21.26
Channel				18625	18900	19175	18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5	1852.5	1880	1907.5
5	QPSK	1	0	20.88	20.76	20.75	24.51	24.48	24.04
5	QPSK	1	12	20.88	20.76	20.76	24.53	24.51	24.19
5	QPSK	1	24	20.84	20.71	20.73	24.46	24.42	24.07
5	QPSK	12	0	20.95	20.80	20.84	23.66	23.63	23.12
5	QPSK	12	7	20.94	20.79	20.86	23.58	23.67	23.19
5	QPSK	12	13	20.89	20.75	20.81	23.57	23.60	23.07
5	QPSK	25	0	20.91	20.75	20.83	23.51	23.56	23.10
5	16QAM	1	0	20.80	20.60	20.70	23.83	23.93	23.59
5	16QAM	1	12	20.81	20.65	20.73	23.97	23.90	23.28
5	16QAM	1	24	20.77	20.64	20.65	23.72	24.00	23.54
5	16QAM	12	0	20.62	20.49	20.53	22.75	22.75	22.18
5	16QAM	12	7	20.61	20.48	20.54	22.80	22.77	22.26
5	16QAM	12	13	20.58	20.45	20.52	22.69	22.65	22.21
5	16QAM	25	0	20.60	20.47	20.52	22.72	22.70	22.16
5	64QAM	1	0	20.72	20.59	20.63	22.92	22.91	22.18
5	64QAM	1	12	20.71	20.59	20.61	22.90	22.85	22.44
5	64QAM	1	24	20.66	20.51	20.57	22.43	22.82	21.89
5	64QAM	12	0	20.64	20.53	20.57	21.77	21.80	21.18
5	64QAM	12	7	20.66	20.53	20.59	21.75	21.68	21.23
5	64QAM	12	13	20.61	20.49	20.52	21.73	21.69	21.18
5	64QAM	25	0	20.59	20.44	20.51	21.71	21.67	21.20
Channel				18615	18900	19185	18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5	1851.5	1880	1908.5
3	QPSK	1	0	20.89	20.75	20.74	24.64	24.53	24.00
3	QPSK	1	8	20.88	20.74	20.76	24.52	24.44	24.03
3	QPSK	1	14	20.84	20.70	20.73	24.60	24.58	23.93
3	QPSK	8	0	20.94	20.77	20.81	23.61	23.62	23.09
3	QPSK	8	4	20.94	20.81	20.85	23.68	23.67	23.12
3	QPSK	8	7	20.89	20.77	20.79	23.61	23.55	23.07
3	QPSK	15	0	20.90	20.76	20.78	23.64	23.63	23.13
3	16QAM	1	0	20.78	20.60	20.69	23.88	23.46	23.51
3	16QAM	1	8	20.82	20.64	20.73	23.86	23.83	23.52
3	16QAM	1	14	20.78	20.61	20.57	23.81	23.79	23.40
3	16QAM	8	0	20.63	20.50	20.53	22.78	22.60	22.09
3	16QAM	8	4	20.64	20.50	20.56	22.68	22.75	22.12
3	16QAM	8	7	20.62	20.50	20.54	22.63	22.62	22.16
3	16QAM	15	0	20.60	20.44	20.50	22.66	22.67	22.24
3	64QAM	1	0	20.69	20.56	20.59	22.70	22.65	22.19
3	64QAM	1	8	20.70	20.58	20.62	22.76	22.74	22.20
3	64QAM	1	14	20.64	20.52	20.58	22.78	22.65	22.22
3	64QAM	8	0	20.64	20.50	20.52	21.73	21.69	21.19
3	64QAM	8	4	20.66	20.54	20.55	21.79	21.71	21.18
3	64QAM	8	7	20.61	20.47	20.52	21.69	21.72	21.18
3	64QAM	15	0	20.60	20.45	20.49	21.70	21.65	21.15
Channel				18607	18900	19193	18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3	1850.7	1880	1909.3
1.4	QPSK	1	0	20.83	20.69	20.68	24.55	24.48	23.89
1.4	QPSK	1	3	20.89	20.74	20.77	24.56	24.48	24.09
1.4	QPSK	1	5	20.83	20.67	20.68	24.54	24.43	23.99
1.4	QPSK	3	0	20.88	20.71	20.75	24.60	24.51	23.99
1.4	QPSK	3	1	20.89	20.76	20.77	24.66	24.58	24.15
1.4	QPSK	3	3	20.86	20.72	20.73	24.65	24.47	24.01
1.4	QPSK	6	0	20.85	20.72	20.73	23.62	23.61	23.06
1.4	16QAM	1	0	20.73	20.58	20.64	23.67	23.69	23.21
1.4	16QAM	1	3	20.79	20.62	20.73	23.52	23.66	23.30
1.4	16QAM	1	5	20.73	20.57	20.62	23.63	23.52	23.58
1.4	16QAM	3	0	20.56	20.39	20.44	23.51	23.62	23.17
1.4	16QAM	3	1	20.58	20.43	20.49	23.58	23.72	22.93
1.4	16QAM	3	3	20.52	20.37	20.43	23.54	23.60	22.98
1.4	16QAM	6	0	20.60	20.48	20.50	22.64	22.68	22.19
1.4	64QAM	1	0	20.64	20.52	20.54	22.57	22.75	22.28
1.4	64QAM	1	3	20.72	20.58	20.60	22.94	22.65	22.41
1.4	64QAM	1	5	20.63	20.52	20.54	22.80	22.58	22.34
1.4	64QAM	3	0	20.58	20.52	20.56	22.83	22.65	22.15
1.4	64QAM	3	1	20.69	20.58	20.60	22.75	22.71	22.29
1.4	64QAM	3	3	20.67	20.51	20.54	22.85	22.60	22.24
1.4	64QAM	6	0	20.54	20.42	20.45	21.70	21.65	21.13



Power Selection				Hotspot / Body-Worn					
Transmit Antenna				UAT			LAT		
Max. Power				25.7			25.7		
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	24.67	24.40	24.13	24.67	24.40	24.13
20	QPSK	1	49	24.52	24.32	24.00	24.52	24.32	24.00
20	QPSK	1	99	24.47	24.19	23.93	24.47	24.19	23.93
20	QPSK	50	0	23.67	23.50	23.31	23.67	23.50	23.31
20	QPSK	50	24	23.63	23.55	23.20	23.63	23.55	23.20
20	QPSK	50	50	23.53	23.43	23.11	23.53	23.43	23.11
20	QPSK	100	0	23.64	23.50	23.25	23.64	23.50	23.25
20	16QAM	1	0	23.82	23.89	23.46	23.82	23.89	23.46
20	16QAM	1	49	23.86	23.71	23.68	23.86	23.71	23.68
20	16QAM	1	99	23.87	23.77	23.39	23.87	23.77	23.39
20	16QAM	50	0	22.67	22.63	22.38	22.67	22.63	22.38
20	16QAM	50	24	22.71	22.71	22.28	22.71	22.71	22.28
20	16QAM	50	50	22.71	22.57	22.22	22.71	22.57	22.22
20	16QAM	100	0	22.67	22.66	22.30	22.67	22.66	22.30
20	64QAM	1	0	22.76	22.66	22.39	22.76	22.66	22.39
20	64QAM	1	49	22.64	22.57	22.57	22.64	22.57	22.57
20	64QAM	1	99	22.88	22.43	22.38	22.88	22.43	22.38
20	64QAM	50	0	21.65	21.61	21.40	21.65	21.61	21.40
20	64QAM	50	24	21.72	21.63	21.28	21.72	21.63	21.28
20	64QAM	50	50	21.69	21.52	21.17	21.69	21.52	21.17
20	64QAM	100	0	21.76	21.63	21.26	21.76	21.63	21.26
Channel				18675	18900	19125	18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5	1857.5	1880	1902.5
15	QPSK	1	0	24.63	24.51	24.06	24.63	24.51	24.06
15	QPSK	1	37	24.59	24.50	24.01	24.59	24.50	24.01
15	QPSK	1	74	24.47	24.27	23.94	24.47	24.27	23.94
15	QPSK	36	0	23.64	23.51	23.20	23.64	23.51	23.20
15	QPSK	36	20	23.65	23.53	23.14	23.65	23.53	23.14
15	QPSK	36	39	23.63	23.49	23.15	23.63	23.49	23.15
15	QPSK	75	0	23.67	23.43	23.07	23.67	23.43	23.07
15	16QAM	1	0	23.96	24.00	23.32	23.96	24.00	23.32
15	16QAM	1	37	23.92	23.56	23.30	23.92	23.56	23.30
15	16QAM	1	74	23.71	23.45	23.14	23.71	23.45	23.14
15	16QAM	36	0	22.75	22.66	22.23	22.75	22.66	22.23
15	16QAM	36	20	22.72	22.61	22.33	22.72	22.61	22.33
15	16QAM	36	39	22.71	22.66	22.19	22.71	22.66	22.19
15	16QAM	75	0	22.76	22.55	22.19	22.76	22.55	22.19
15	64QAM	1	0	22.83	22.69	22.25	22.83	22.69	22.25
15	64QAM	1	37	22.82	22.80	22.41	22.82	22.80	22.41
15	64QAM	1	74	22.96	22.47	22.37	22.96	22.47	22.37
15	64QAM	36	0	21.68	21.65	21.24	21.68	21.65	21.24
15	64QAM	36	20	21.79	21.69	21.25	21.79	21.69	21.25
15	64QAM	36	39	21.74	21.53	21.24	21.74	21.53	21.24
15	64QAM	75	0	21.65	21.61	21.21	21.65	21.61	21.21
Channel				18650	18900	19150	18650	18900	19150
Frequency (MHz)				1855	1880	1905	1855	1880	1905
10	QPSK	1	0	24.66	24.54	24.07	24.66	24.54	24.07
10	QPSK	1	25	24.61	24.47	23.99	24.61	24.47	23.99
10	QPSK	1	49	24.65	24.52	23.86	24.65	24.52	23.86
10	QPSK	25	0	23.73	23.48	23.18	23.73	23.48	23.18
10	QPSK	25	12	23.62	23.53	23.16	23.62	23.53	23.16
10	QPSK	25	25	23.65	23.42	23.04	23.65	23.42	23.04
10	QPSK	50	0	23.62	23.50	23.13	23.62	23.50	23.13
10	16QAM	1	0	23.88	23.71	23.34	23.88	23.71	23.34
10	16QAM	1	25	23.75	23.62	23.18	23.75	23.62	23.18
10	16QAM	1	49	23.77	23.73	23.20	23.77	23.73	23.20
10	16QAM	25	0	22.79	22.63	22.14	22.79	22.63	22.14
10	16QAM	25	12	22.79	22.59	22.21	22.79	22.59	22.21
10	16QAM	25	25	22.61	22.53	22.01	22.61	22.53	22.01
10	16QAM	50	0	22.77	22.62	22.18	22.77	22.62	22.18
10	64QAM	1	0	22.99	22.88	22.42	22.99	22.88	22.42
10	64QAM	1	25	22.91	22.79	22.37	22.91	22.79	22.37
10	64QAM	1	49	22.96	22.78	22.36	22.96	22.78	22.36
10	64QAM	25	0	21.73	21.58	21.26	21.73	21.58	21.26
10	64QAM	25	12	21.71	21.66	21.24	21.71	21.66	21.24



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10	64QAM	25	25	21.78	21.57	21.10	21.78	21.57	21.10
10	64QAM	50	0	21.81	21.68	21.26	21.81	21.68	21.26
Channel				18625	18900	19175	18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5	1852.5	1880	1907.5
5	QPSK	1	0	24.51	24.48	24.04	24.51	24.48	24.04
5	QPSK	1	12	24.53	24.51	24.19	24.53	24.51	24.19
5	QPSK	1	24	24.46	24.42	24.07	24.46	24.42	24.07
5	QPSK	12	0	23.66	23.63	23.12	23.66	23.63	23.12
5	QPSK	12	7	23.58	23.67	23.19	23.58	23.67	23.19
5	QPSK	12	13	23.57	23.60	23.07	23.57	23.60	23.07
5	QPSK	25	0	23.51	23.56	23.10	23.51	23.56	23.10
5	16QAM	1	0	23.83	23.93	23.59	23.83	23.93	23.59
5	16QAM	1	12	23.97	23.90	23.28	23.97	23.90	23.28
5	16QAM	1	24	23.72	24.00	23.54	23.72	24.00	23.54
5	16QAM	12	0	22.75	22.75	22.18	22.75	22.75	22.18
5	16QAM	12	7	22.80	22.77	22.26	22.80	22.77	22.26
5	16QAM	12	13	22.69	22.65	22.21	22.69	22.65	22.21
5	16QAM	25	0	22.72	22.70	22.16	22.72	22.70	22.16
5	64QAM	1	0	22.92	22.91	22.18	22.92	22.91	22.18
5	64QAM	1	12	22.90	22.85	22.44	22.90	22.85	22.44
5	64QAM	1	24	22.43	22.82	21.89	22.43	22.82	21.89
5	64QAM	12	0	21.77	21.80	21.18	21.77	21.80	21.18
5	64QAM	12	7	21.75	21.68	21.23	21.75	21.68	21.23
5	64QAM	12	13	21.73	21.69	21.18	21.73	21.69	21.18
5	64QAM	25	0	21.71	21.67	21.20	21.71	21.67	21.20
Channel				18615	18900	19185	18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5	1851.5	1880	1908.5
3	QPSK	1	0	24.64	24.53	24.00	24.64	24.53	24.00
3	QPSK	1	8	24.52	24.44	24.03	24.52	24.44	24.03
3	QPSK	1	14	24.60	24.58	23.93	24.60	24.58	23.93
3	QPSK	8	0	23.61	23.62	23.09	23.61	23.62	23.09
3	QPSK	8	4	23.68	23.67	23.12	23.68	23.67	23.12
3	QPSK	8	7	23.61	23.55	23.07	23.61	23.55	23.07
3	QPSK	15	0	23.64	23.63	23.13	23.64	23.63	23.13
3	16QAM	1	0	23.88	23.46	23.51	23.88	23.46	23.51
3	16QAM	1	8	23.86	23.83	23.52	23.86	23.83	23.52
3	16QAM	1	14	23.81	23.79	23.40	23.81	23.79	23.40
3	16QAM	8	0	22.78	22.60	22.09	22.78	22.60	22.09
3	16QAM	8	4	22.68	22.75	22.12	22.68	22.75	22.12
3	16QAM	8	7	22.63	22.62	22.16	22.63	22.62	22.16
3	16QAM	15	0	22.66	22.67	22.24	22.66	22.67	22.24
3	64QAM	1	0	22.70	22.65	22.19	22.70	22.65	22.19
3	64QAM	1	8	22.76	22.74	22.20	22.76	22.74	22.20
3	64QAM	1	14	22.78	22.65	22.22	22.78	22.65	22.22
3	64QAM	8	0	21.73	21.69	21.19	21.73	21.69	21.19
3	64QAM	8	4	21.79	21.71	21.18	21.79	21.71	21.18
3	64QAM	8	7	21.69	21.72	21.18	21.69	21.72	21.18
3	64QAM	15	0	21.70	21.65	21.15	21.70	21.65	21.15
Channel				18607	18900	19193	18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3	1850.7	1880	1909.3
1.4	QPSK	1	0	24.55	24.48	23.89	24.55	24.48	23.89
1.4	QPSK	1	3	24.56	24.48	24.09	24.56	24.48	24.09
1.4	QPSK	1	5	24.54	24.43	23.99	24.54	24.43	23.99
1.4	QPSK	3	0	24.60	24.51	23.99	24.60	24.51	23.99
1.4	QPSK	3	1	24.66	24.58	24.15	24.66	24.58	24.15
1.4	QPSK	3	3	24.65	24.47	24.01	24.65	24.47	24.01
1.4	QPSK	6	0	23.62	23.61	23.06	23.62	23.61	23.06
1.4	16QAM	1	0	23.67	23.69	23.21	23.67	23.69	23.21
1.4	16QAM	1	3	23.52	23.66	23.30	23.52	23.66	23.30
1.4	16QAM	1	5	23.63	23.52	23.58	23.63	23.52	23.58
1.4	16QAM	3	0	23.51	23.62	23.17	23.51	23.62	23.17
1.4	16QAM	3	1	23.58	23.72	22.93	23.58	23.72	22.93
1.4	16QAM	3	3	23.54	23.60	22.98	23.54	23.60	22.98
1.4	16QAM	6	0	22.64	22.68	22.19	22.64	22.68	22.19
1.4	64QAM	1	0	22.57	22.75	22.28	22.57	22.75	22.28
1.4	64QAM	1	3	22.94	22.65	22.41	22.94	22.65	22.41
1.4	64QAM	1	5	22.80	22.58	22.34	22.80	22.58	22.34
1.4	64QAM	3	0	22.83	22.65	22.15	22.83	22.65	22.15
1.4	64QAM	3	1	22.75	22.71	22.29	22.75	22.71	22.29
1.4	64QAM	3	3	22.85	22.60	22.24	22.85	22.60	22.24
1.4	64QAM	6	0	21.70	21.65	21.13	21.70	21.65	21.13



<WiFi on>

Power Selection				Head					
Transmit Antenna				UAT			LAT		
Max. Power				19.0			24.5		
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	18.06	17.94	17.85	23.45	23.30	23.23
20	QPSK	1	49	17.98	17.87	17.81	23.35	23.25	23.20
20	QPSK	1	99	17.89	17.87	17.84	23.27	23.26	23.21
20	QPSK	50	0	18.06	17.94	17.91	23.44	23.31	23.29
20	QPSK	50	24	18.07	17.96	17.91	23.42	23.33	23.26
20	QPSK	50	50	17.98	17.86	17.84	23.36	23.23	23.24
20	QPSK	100	0	18.04	17.90	17.86	23.39	23.28	23.25
20	16QAM	1	0	18.36	18.17	18.08	23.40	23.31	23.27
20	16QAM	1	49	18.22	18.09	18.05	23.38	23.26	23.20
20	16QAM	1	99	18.11	18.11	18.07	23.28	23.33	23.27
20	16QAM	50	0	18.04	17.91	17.88	22.41	22.29	22.26
20	16QAM	50	24	18.04	17.94	17.86	22.40	22.30	22.26
20	16QAM	50	50	17.96	17.88	17.83	22.33	22.21	22.21
20	16QAM	100	0	17.98	17.87	17.85	22.35	22.24	22.23
20	64QAM	1	0	18.16	18.05	17.99	22.48	22.46	22.35
20	64QAM	1	49	18.15	17.98	17.97	22.47	22.40	22.30
20	64QAM	1	99	18.02	18.03	17.96	22.39	22.41	22.32
20	64QAM	50	0	18.06	17.92	17.91	21.40	21.30	21.25
20	64QAM	50	24	18.05	17.95	17.90	21.40	21.28	21.26
20	64QAM	50	50	17.98	17.86	17.85	21.33	21.24	21.21
20	64QAM	100	0	18.00	17.89	17.86	21.37	21.25	21.23
Channel				18675	18900	19125	18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5	1857.5	1880	1902.5
15	QPSK	1	0	17.93	17.79	17.74	23.38	23.24	23.22
15	QPSK	1	37	17.89	17.78	17.80	23.35	23.23	23.28
15	QPSK	1	74	17.80	17.69	17.74	23.25	23.14	23.20
15	QPSK	36	0	17.98	17.84	17.77	23.40	23.28	23.26
15	QPSK	36	20	17.98	17.84	17.81	23.35	23.34	23.26
15	QPSK	36	39	17.88	17.80	17.85	23.36	23.24	23.29
15	QPSK	75	0	17.94	17.85	17.73	23.41	23.26	23.21
15	16QAM	1	0	18.23	18.13	18.07	23.35	23.22	23.24
15	16QAM	1	37	18.18	18.10	18.13	23.34	23.25	23.27
15	16QAM	1	74	18.12	17.98	18.08	23.25	23.16	23.26
15	16QAM	36	0	18.04	17.92	17.87	22.36	22.26	22.24
15	16QAM	36	20	18.06	17.93	17.85	22.39	22.26	22.24
15	16QAM	36	39	18.00	17.85	17.92	22.33	22.22	22.27
15	16QAM	75	0	18.01	17.87	17.82	22.35	22.23	22.20
15	64QAM	1	0	18.14	18.03	17.99	22.39	22.40	22.36
15	64QAM	1	37	18.13	17.99	18.05	22.40	22.36	22.44
15	64QAM	1	74	18.02	17.90	17.96	22.41	22.29	22.34
15	64QAM	36	0	18.06	17.94	17.88	21.40	21.30	21.24
15	64QAM	36	20	18.08	17.95	17.90	21.42	21.30	21.24
15	64QAM	36	39	17.99	17.89	17.95	21.33	21.24	21.32
15	64QAM	75	0	18.01	17.89	17.83	21.35	21.24	21.21
Channel				18650	18900	19150	18650	18900	19150
Frequency (MHz)				1855	1880	1905	1855	1880	1905
10	QPSK	1	0	18.04	17.91	17.74	23.39	23.36	23.21
10	QPSK	1	25	17.92	17.77	17.83	23.38	23.26	23.27
10	QPSK	1	49	17.92	17.79	17.77	23.36	23.26	23.22
10	QPSK	25	0	17.97	17.83	17.76	23.42	23.30	23.25
10	QPSK	25	12	17.98	17.85	17.89	23.43	23.32	23.32
10	QPSK	25	25	17.92	17.77	17.84	23.36	23.24	23.31
10	QPSK	50	0	17.95	17.81	17.72	23.40	23.27	23.22
10	16QAM	1	0	18.28	18.19	18.05	23.42	23.31	23.18
10	16QAM	1	25	18.25	18.12	18.17	23.39	23.26	23.29
10	16QAM	1	49	18.23	18.10	18.09	23.38	23.25	23.27
10	16QAM	25	0	18.04	17.93	17.85	22.40	22.27	22.25
10	16QAM	25	12	18.04	17.91	17.96	22.39	22.29	22.32
10	16QAM	25	25	17.98	17.87	17.89	22.34	22.22	22.28
10	16QAM	50	0	18.02	17.90	17.83	22.36	22.24	22.22
10	64QAM	1	0	18.24	18.12	17.97	22.43	22.40	22.34
10	64QAM	1	25	18.13	17.98	18.04	22.41	22.40	22.42
10	64QAM	1	49	18.12	18.00	17.98	22.42	22.39	22.36
10	64QAM	25	0	18.06	17.91	17.87	21.40	21.28	21.24
10	64QAM	25	12	18.05	17.92	17.96	21.40	21.27	21.34



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10	64QAM	25	25	17.98	17.87	17.90	21.34	21.23	21.27
10	64QAM	50	0	18.03	17.90	17.87	21.37	21.27	21.20
Channel				18625	18900	19175	18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5	1852.5	1880	1907.5
5	QPSK	1	0	17.91	17.78	17.80	23.39	23.26	23.29
5	QPSK	1	12	17.92	17.79	17.78	23.39	23.25	23.26
5	QPSK	1	24	17.85	17.73	17.77	23.33	23.21	23.22
5	QPSK	12	0	17.95	17.85	17.84	23.41	23.31	23.34
5	QPSK	12	7	17.97	17.84	17.88	23.44	23.29	23.36
5	QPSK	12	13	17.92	17.81	17.82	23.38	23.27	23.29
5	QPSK	25	0	17.94	17.77	17.83	23.40	23.27	23.29
5	16QAM	1	0	18.23	18.08	18.11	23.34	23.23	23.29
5	16QAM	1	12	18.23	18.11	18.11	23.36	23.25	23.30
5	16QAM	1	24	18.16	18.04	18.07	23.32	23.16	23.28
5	16QAM	12	0	18.04	17.91	17.93	22.39	22.28	22.28
5	16QAM	12	7	18.03	17.88	17.96	22.38	22.27	22.34
5	16QAM	12	13	17.99	17.88	17.90	22.36	22.25	22.28
5	16QAM	25	0	18.01	17.87	17.91	22.36	22.25	22.29
5	64QAM	1	0	18.14	18.01	18.06	22.50	22.37	22.38
5	64QAM	1	12	18.15	18.00	18.06	22.49	22.40	22.41
5	64QAM	1	24	18.09	17.94	18.00	22.44	22.31	22.37
5	64QAM	12	0	18.07	17.95	17.98	21.43	21.30	21.31
5	64QAM	12	7	18.09	17.96	18.00	21.44	21.31	21.36
5	64QAM	12	13	18.03	17.90	17.94	21.39	21.26	21.34
5	64QAM	25	0	18.00	17.88	17.92	21.36	21.22	21.30
Channel				18615	18900	19185	18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5	1851.5	1880	1908.5
3	QPSK	1	0	17.88	17.74	17.78	23.29	23.24	23.24
3	QPSK	1	8	17.89	17.78	17.78	23.30	23.22	23.23
3	QPSK	1	14	17.84	17.73	17.76	23.26	23.11	23.15
3	QPSK	8	0	17.91	17.80	17.81	23.37	23.28	23.28
3	QPSK	8	4	17.95	17.83	17.84	23.38	23.20	23.27
3	QPSK	8	7	17.90	17.80	17.81	23.38	23.22	23.27
3	QPSK	15	0	17.89	17.78	17.79	23.37	23.19	23.29
3	16QAM	1	0	18.16	18.04	18.08	23.32	23.19	23.28
3	16QAM	1	8	18.18	18.11	18.11	23.35	23.20	23.27
3	16QAM	1	14	18.13	18.03	18.07	23.30	23.07	23.26
3	16QAM	8	0	18.03	17.90	17.91	22.31	22.24	22.19
3	16QAM	8	4	18.08	17.92	17.96	22.30	22.21	22.27
3	16QAM	8	7	18.03	17.88	17.94	22.26	22.17	22.20
3	16QAM	15	0	17.98	17.85	17.90	22.28	22.15	22.27
3	64QAM	1	0	18.08	17.96	17.97	22.49	22.34	22.36
3	64QAM	1	8	18.12	17.97	18.00	22.42	22.32	22.37
3	64QAM	1	14	18.08	17.95	17.98	22.41	22.26	22.35
3	64QAM	8	0	18.04	17.92	17.93	21.33	21.24	21.25
3	64QAM	8	4	18.08	17.95	17.97	21.40	21.22	21.30
3	64QAM	8	7	18.02	17.89	17.94	21.35	21.23	21.30
3	64QAM	15	0	18.00	17.86	17.90	21.33	21.13	21.24
Channel				18607	18900	19193	18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3	1850.7	1880	1909.3
1.4	QPSK	1	0	17.88	17.73	17.73	23.36	23.22	23.24
1.4	QPSK	1	3	17.92	17.77	17.79	23.33	23.20	23.18
1.4	QPSK	1	5	17.85	17.70	17.71	23.33	23.16	23.16
1.4	QPSK	3	0	17.91	17.76	17.78	23.35	23.25	23.21
1.4	QPSK	3	1	17.94	17.80	17.81	23.30	23.18	23.21
1.4	QPSK	3	3	17.91	17.75	17.76	23.24	23.12	23.17
1.4	QPSK	6	0	17.88	17.75	17.77	23.42	23.19	23.31
1.4	16QAM	1	0	18.16	18.02	18.02	23.41	23.22	23.28
1.4	16QAM	1	3	18.23	18.07	18.11	23.40	23.23	23.31
1.4	16QAM	1	5	18.14	18.02	18.01	23.33	23.26	23.28
1.4	16QAM	3	0	17.98	17.82	17.84	23.40	23.20	23.26
1.4	16QAM	3	1	18.01	17.86	17.89	23.33	23.31	23.26
1.4	16QAM	3	3	17.96	17.82	17.83	23.39	23.27	23.35
1.4	16QAM	6	0	18.01	17.88	17.91	22.32	22.26	22.27
1.4	64QAM	1	0	18.07	17.94	17.95	22.37	22.21	22.33
1.4	64QAM	1	3	18.12	17.99	18.00	22.36	22.19	22.28
1.4	64QAM	1	5	18.07	17.91	17.92	22.28	22.16	22.22
1.4	64QAM	3	0	18.08	17.93	17.97	22.49	22.27	22.29
1.4	64QAM	3	1	18.14	17.97	18.02	22.42	22.39	22.36
1.4	64QAM	3	3	18.09	17.94	17.95	22.35	22.25	22.37
1.4	64QAM	6	0	17.96	17.84	17.85	21.34	21.25	21.22



Power Selection				Hotspot / Body-Worn					
Transmit Antenna				UAT			LAT		
Max. Power				21.7			24.5		
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	20.70	20.66	20.63	23.45	23.30	23.23
20	QPSK	1	49	20.59	20.57	20.51	23.35	23.25	23.20
20	QPSK	1	99	20.50	20.54	20.56	23.27	23.26	23.21
20	QPSK	50	0	20.65	20.66	20.62	23.44	23.31	23.29
20	QPSK	50	24	20.63	20.64	20.60	23.42	23.33	23.26
20	QPSK	50	50	20.57	20.56	20.54	23.36	23.23	23.24
20	QPSK	100	0	20.62	20.63	20.57	23.39	23.28	23.25
20	16QAM	1	0	20.68	20.66	20.54	23.40	23.31	23.27
20	16QAM	1	49	20.56	20.58	20.57	23.38	23.26	23.20
20	16QAM	1	99	20.54	20.59	20.60	23.28	23.33	23.27
20	16QAM	50	0	20.45	20.42	20.41	22.41	22.29	22.26
20	16QAM	50	24	20.45	20.42	20.42	22.40	22.30	22.26
20	16QAM	50	50	20.38	20.38	20.35	22.33	22.21	22.21
20	16QAM	100	0	20.40	20.38	20.36	22.35	22.24	22.23
20	64QAM	1	0	20.54	20.59	20.49	22.48	22.46	22.35
20	64QAM	1	49	20.51	20.53	20.47	22.47	22.40	22.30
20	64QAM	1	99	20.42	20.54	20.51	22.39	22.41	22.32
20	64QAM	50	0	20.45	20.42	20.40	21.40	21.30	21.25
20	64QAM	50	24	20.44	20.43	20.42	21.40	21.28	21.26
20	64QAM	50	50	20.37	20.36	20.35	21.33	21.24	21.21
20	64QAM	100	0	20.42	20.39	20.36	21.37	21.25	21.23
Channel				18675	18900	19125	18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5	1857.5	1880	1902.5
15	QPSK	1	0	20.56	20.63	20.55	23.38	23.24	23.22
15	QPSK	1	37	20.58	20.47	20.45	23.35	23.23	23.28
15	QPSK	1	74	20.41	20.53	20.48	23.25	23.14	23.20
15	QPSK	36	0	20.56	20.66	20.56	23.40	23.28	23.26
15	QPSK	36	20	20.55	20.54	20.52	23.35	23.34	23.26
15	QPSK	36	39	20.51	20.53	20.50	23.36	23.24	23.29
15	QPSK	75	0	20.53	20.54	20.48	23.41	23.26	23.21
15	16QAM	1	0	20.59	20.61	20.46	23.35	23.22	23.24
15	16QAM	1	37	20.49	20.57	20.51	23.34	23.25	23.27
15	16QAM	1	74	20.44	20.54	20.57	23.25	23.16	23.26
15	16QAM	36	0	20.36	20.40	20.31	22.36	22.26	22.24
15	16QAM	36	20	20.41	20.38	20.32	22.39	22.26	22.24
15	16QAM	36	39	20.31	20.29	20.33	22.33	22.22	22.27
15	16QAM	75	0	20.38	20.28	20.32	22.35	22.23	22.20
15	64QAM	1	0	20.45	20.55	20.42	22.39	22.40	22.36
15	64QAM	1	37	20.47	20.43	20.44	22.40	22.36	22.44
15	64QAM	1	74	20.40	20.45	20.48	22.41	22.29	22.34
15	64QAM	36	0	20.42	20.41	20.34	21.40	21.30	21.24
15	64QAM	36	20	20.43	20.42	20.36	21.42	21.30	21.24
15	64QAM	36	39	20.27	20.30	20.33	21.33	21.24	21.32
15	64QAM	75	0	20.41	20.39	20.32	21.35	21.24	21.21
Channel				18650	18900	19150	18650	18900	19150
Frequency (MHz)				1855	1880	1905	1855	1880	1905
10	QPSK	1	0	20.64	20.61	20.59	23.39	23.36	23.21
10	QPSK	1	25	20.52	20.49	20.47	23.38	23.26	23.27
10	QPSK	1	49	20.50	20.51	20.55	23.36	23.26	23.22
10	QPSK	25	0	20.60	20.61	20.55	23.42	23.30	23.25
10	QPSK	25	12	20.61	20.56	20.53	23.43	23.32	23.32
10	QPSK	25	25	20.47	20.46	20.44	23.36	23.24	23.31
10	QPSK	50	0	20.60	20.56	20.47	23.40	23.27	23.22
10	16QAM	1	0	20.65	20.62	20.48	23.42	23.31	23.18
10	16QAM	1	25	20.49	20.51	20.54	23.39	23.26	23.29
10	16QAM	1	49	20.44	20.50	20.55	23.38	23.25	23.27
10	16QAM	25	0	20.43	20.40	20.41	22.40	22.27	22.25
10	16QAM	25	12	20.37	20.36	20.41	22.39	22.29	22.32
10	16QAM	25	25	20.30	20.34	20.26	22.34	22.22	22.28
10	16QAM	50	0	20.32	20.33	20.29	22.36	22.24	22.22
10	64QAM	1	0	20.52	20.59	20.44	22.43	22.40	22.34
10	64QAM	1	25	20.42	20.46	20.37	22.41	22.40	22.42
10	64QAM	1	49	20.37	20.51	20.51	22.42	22.39	22.36
10	64QAM	25	0	20.37	20.36	20.35	21.40	21.28	21.24



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10	64QAM	25	12	20.38	20.34	20.32	21.40	21.27	21.34
10	64QAM	25	25	20.32	20.27	20.29	21.34	21.23	21.27
10	64QAM	50	0	20.37	20.38	20.35	21.37	21.27	21.20
Channel				18625	18900	19175	18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5	1852.5	1880	1907.5
5	QPSK	1	0	20.59	20.58	20.62	23.39	23.26	23.29
5	QPSK	1	12	20.56	20.57	20.50	23.39	23.25	23.26
5	QPSK	1	24	20.44	20.44	20.48	23.33	23.21	23.22
5	QPSK	12	0	20.60	20.56	20.57	23.41	23.31	23.34
5	QPSK	12	7	20.63	20.63	20.54	23.44	23.29	23.36
5	QPSK	12	13	20.51	20.46	20.53	23.38	23.27	23.29
5	QPSK	25	0	20.54	20.57	20.52	23.40	23.27	23.29
5	16QAM	1	0	20.59	20.66	20.50	23.34	23.23	23.29
5	16QAM	1	12	20.51	20.55	20.52	23.36	23.25	23.30
5	16QAM	1	24	20.47	20.53	20.54	23.32	23.16	23.28
5	16QAM	12	0	20.36	20.34	20.31	22.39	22.28	22.28
5	16QAM	12	7	20.44	20.39	20.34	22.38	22.27	22.34
5	16QAM	12	13	20.34	20.32	20.28	22.36	22.25	22.28
5	16QAM	25	0	20.38	20.28	20.33	22.36	22.25	22.29
5	64QAM	1	0	20.51	20.53	20.47	22.50	22.37	22.38
5	64QAM	1	12	20.46	20.49	20.37	22.49	22.40	22.41
5	64QAM	1	24	20.37	20.49	20.49	22.44	22.31	22.37
5	64QAM	12	0	20.41	20.33	20.40	21.43	21.30	21.31
5	64QAM	12	7	20.44	20.42	20.35	21.44	21.31	21.36
5	64QAM	12	13	20.27	20.33	20.25	21.39	21.26	21.34
5	64QAM	25	0	20.34	20.38	20.26	21.36	21.22	21.30
Channel				18615	18900	19185	18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5	1851.5	1880	1908.5
3	QPSK	1	0	20.63	20.61	20.54	23.29	23.24	23.24
3	QPSK	1	8	20.52	20.48	20.47	23.30	23.22	23.23
3	QPSK	1	14	20.41	20.51	20.46	23.26	23.11	23.15
3	QPSK	8	0	20.58	20.64	20.57	23.37	23.28	23.28
3	QPSK	8	4	20.58	20.63	20.51	23.38	23.20	23.27
3	QPSK	8	7	20.51	20.49	20.51	23.38	23.22	23.27
3	QPSK	15	0	20.60	20.63	20.50	23.37	23.19	23.29
3	16QAM	1	0	20.66	20.66	20.47	23.32	23.19	23.28
3	16QAM	1	8	20.54	20.50	20.50	23.35	23.20	23.27
3	16QAM	1	14	20.54	20.58	20.50	23.30	23.07	23.26
3	16QAM	8	0	20.43	20.32	20.34	22.31	22.24	22.19
3	16QAM	8	4	20.37	20.37	20.34	22.30	22.21	22.27
3	16QAM	8	7	20.36	20.33	20.27	22.26	22.17	22.20
3	16QAM	15	0	20.34	20.36	20.31	22.28	22.15	22.27
3	64QAM	1	0	20.47	20.58	20.47	22.49	22.34	22.36
3	64QAM	1	8	20.47	20.46	20.43	22.42	22.32	22.37
3	64QAM	1	14	20.33	20.51	20.51	22.41	22.26	22.35
3	64QAM	8	0	20.39	20.32	20.34	21.33	21.24	21.25
3	64QAM	8	4	20.34	20.35	20.37	21.40	21.22	21.30
3	64QAM	8	7	20.30	20.36	20.27	21.35	21.23	21.30
3	64QAM	15	0	20.38	20.39	20.27	21.33	21.13	21.24
Channel				18607	18900	19193	18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3	1850.7	1880	1909.3
1.4	QPSK	1	0	20.61	20.68	20.59	23.36	23.22	23.24
1.4	QPSK	1	3	20.50	20.53	20.43	23.33	23.20	23.18
1.4	QPSK	1	5	20.49	20.45	20.52	23.33	23.16	23.16
1.4	QPSK	3	0	20.55	20.59	20.57	23.35	23.25	23.21
1.4	QPSK	3	1	20.60	20.63	20.51	23.30	23.18	23.21
1.4	QPSK	3	3	20.56	20.53	20.44	23.24	23.12	23.17
1.4	QPSK	6	0	20.52	20.56	20.56	23.42	23.19	23.31
1.4	16QAM	1	0	20.68	20.63	20.49	23.41	23.22	23.28
1.4	16QAM	1	3	20.55	20.54	20.55	23.40	23.23	23.31
1.4	16QAM	1	5	20.51	20.54	20.50	23.33	23.26	23.28
1.4	16QAM	3	0	20.45	20.41	20.32	23.40	23.20	23.26
1.4	16QAM	3	1	20.38	20.42	20.36	23.33	23.31	23.26
1.4	16QAM	3	3	20.34	20.33	20.34	23.39	23.27	23.35
1.4	16QAM	6	0	20.30	20.29	20.31	22.32	22.26	22.27
1.4	64QAM	1	0	20.44	20.57	20.48	22.37	22.21	22.33
1.4	64QAM	1	3	20.45	20.45	20.37	22.36	22.19	22.28
1.4	64QAM	1	5	20.42	20.51	20.45	22.28	22.16	22.22
1.4	64QAM	3	0	20.37	20.41	20.37	22.49	22.27	22.29
1.4	64QAM	3	1	20.38	20.42	20.38	22.42	22.39	22.36
1.4	64QAM	3	3	20.31	20.27	20.27	22.35	22.25	22.37
1.4	64QAM	6	0	20.41	20.29	20.27	21.34	21.25	21.22



<LTE Band 4>

<WiFi off>

Power Selection				Head / Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				24.5			24.5		
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	23.76	23.68	23.66	23.76	23.68	23.66
20	QPSK	1	49	23.69	23.62	23.68	23.69	23.62	23.68
20	QPSK	1	99	23.63	23.56	23.58	23.63	23.56	23.58
20	QPSK	50	0	22.75	22.68	22.65	22.75	22.68	22.65
20	QPSK	50	24	22.78	22.69	22.64	22.78	22.69	22.64
20	QPSK	50	50	22.70	22.64	22.69	22.70	22.64	22.69
20	QPSK	100	0	22.72	22.68	22.61	22.72	22.68	22.61
20	16QAM	1	0	23.09	23.01	22.97	23.09	23.01	22.97
20	16QAM	1	49	23.04	22.98	23.02	23.04	22.98	23.02
20	16QAM	1	99	22.96	22.92	22.92	22.96	22.92	22.92
20	16QAM	50	0	21.82	21.79	21.75	21.82	21.79	21.75
20	16QAM	50	24	21.84	21.81	21.73	21.84	21.81	21.73
20	16QAM	50	50	21.80	21.72	21.77	21.80	21.72	21.77
20	16QAM	100	0	21.80	21.75	21.69	21.80	21.75	21.69
20	64QAM	1	0	21.97	21.93	21.90	21.97	21.93	21.90
20	64QAM	1	49	21.93	21.86	21.94	21.93	21.86	21.94
20	64QAM	1	99	21.86	21.81	21.83	21.86	21.81	21.83
20	64QAM	50	0	20.85	20.80	20.74	20.85	20.80	20.74
20	64QAM	50	24	20.85	20.80	20.75	20.85	20.80	20.75
20	64QAM	50	50	20.80	20.72	20.78	20.80	20.72	20.78
20	64QAM	100	0	20.82	20.77	20.70	20.82	20.77	20.70
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	23.75	23.71	23.63	23.75	23.71	23.63
15	QPSK	1	37	23.71	23.64	23.68	23.71	23.64	23.68
15	QPSK	1	74	23.68	23.57	23.59	23.68	23.57	23.59
15	QPSK	36	0	22.79	22.70	22.63	22.79	22.70	22.63
15	QPSK	36	20	22.80	22.73	22.75	22.80	22.73	22.75
15	QPSK	36	39	22.70	22.64	22.68	22.70	22.64	22.68
15	QPSK	75	0	22.74	22.66	22.62	22.74	22.66	22.62
15	16QAM	1	0	23.07	23.01	22.98	23.07	23.01	22.98
15	16QAM	1	37	23.02	22.97	22.97	23.02	22.97	22.97
15	16QAM	1	74	22.96	22.91	22.91	22.96	22.91	22.91
15	16QAM	36	0	21.85	21.75	21.71	21.85	21.75	21.71
15	16QAM	36	20	21.87	21.82	21.82	21.87	21.82	21.82
15	16QAM	36	39	21.80	21.71	21.74	21.80	21.71	21.74
15	16QAM	75	0	21.83	21.75	21.69	21.83	21.75	21.69
15	64QAM	1	0	21.97	21.92	21.87	21.97	21.92	21.87
15	64QAM	1	37	21.96	21.90	21.93	21.96	21.90	21.93
15	64QAM	1	74	21.87	21.83	21.83	21.87	21.83	21.83
15	64QAM	36	0	20.88	20.79	20.73	20.88	20.79	20.73
15	64QAM	36	20	20.91	20.82	20.85	20.91	20.82	20.85
15	64QAM	36	39	20.84	20.74	20.79	20.84	20.74	20.79
15	64QAM	75	0	20.83	20.75	20.70	20.83	20.75	20.70
Channel				20000	20175	20350	20000	20175	20350
Frequency (MHz)				1715	1732.5	1750	1715	1732.5	1750
10	QPSK	1	0	23.70	23.73	23.68	23.70	23.73	23.68
10	QPSK	1	25	23.75	23.67	23.60	23.75	23.67	23.60
10	QPSK	1	49	23.72	23.63	23.52	23.72	23.63	23.52
10	QPSK	25	0	22.77	22.72	22.62	22.77	22.72	22.62
10	QPSK	25	12	22.80	22.71	22.68	22.80	22.71	22.68
10	QPSK	25	25	22.74	22.69	22.59	22.74	22.69	22.59
10	QPSK	50	0	22.80	22.69	22.61	22.80	22.69	22.61
10	16QAM	1	0	23.11	23.05	22.95	23.11	23.05	22.95
10	16QAM	1	25	23.09	23.00	22.93	23.09	23.00	22.93
10	16QAM	1	49	23.01	22.97	22.86	23.01	22.97	22.86
10	16QAM	25	0	21.88	21.80	21.75	21.88	21.80	21.75
10	16QAM	25	12	21.88	21.80	21.71	21.88	21.80	21.71
10	16QAM	25	25	21.81	21.74	21.68	21.81	21.74	21.68
10	16QAM	50	0	21.84	21.76	21.71	21.84	21.76	21.71
10	64QAM	1	0	22.04	21.97	21.89	22.04	21.97	21.89
10	64QAM	1	25	21.99	21.93	21.84	21.99	21.93	21.84
10	64QAM	1	49	21.94	21.87	21.77	21.94	21.87	21.77



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10	64QAM	25	0	20.86	20.80	20.74	20.86	20.80	20.74
10	64QAM	25	12	20.89	20.83	20.75	20.89	20.83	20.75
10	64QAM	25	25	20.82	20.75	20.70	20.82	20.75	20.70
10	64QAM	50	0	20.84	20.79	20.72	20.84	20.79	20.72
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	23.75	23.64	23.53	23.75	23.64	23.53
5	QPSK	1	12	23.73	23.64	23.55	23.73	23.64	23.55
5	QPSK	1	24	23.67	23.59	23.49	23.67	23.59	23.49
5	QPSK	12	0	22.73	22.69	22.59	22.73	22.69	22.59
5	QPSK	12	7	22.76	22.70	22.60	22.76	22.70	22.60
5	QPSK	12	13	22.76	22.63	22.55	22.76	22.63	22.55
5	QPSK	25	0	22.76	22.67	22.57	22.76	22.67	22.57
5	16QAM	1	0	23.08	22.99	22.89	23.08	22.99	22.89
5	16QAM	1	12	23.05	22.96	22.85	23.05	22.96	22.85
5	16QAM	1	24	23.03	22.90	22.76	23.03	22.90	22.76
5	16QAM	12	0	21.83	21.79	21.64	21.83	21.79	21.64
5	16QAM	12	7	21.88	21.77	21.67	21.88	21.77	21.67
5	16QAM	12	13	21.84	21.75	21.63	21.84	21.75	21.63
5	16QAM	25	0	21.84	21.77	21.66	21.84	21.77	21.66
5	64QAM	1	0	22.03	21.91	21.80	22.03	21.91	21.80
5	64QAM	1	12	21.99	21.91	21.79	21.99	21.91	21.79
5	64QAM	1	24	21.96	21.86	21.70	21.96	21.86	21.70
5	64QAM	12	0	20.88	20.85	20.71	20.88	20.85	20.71
5	64QAM	12	7	20.93	20.85	20.74	20.93	20.85	20.74
5	64QAM	12	13	20.91	20.79	20.70	20.91	20.79	20.70
5	64QAM	25	0	20.87	20.80	20.69	20.87	20.80	20.69
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	23.72	23.64	23.55	23.72	23.64	23.55
3	QPSK	1	8	23.72	23.62	23.52	23.72	23.62	23.52
3	QPSK	1	14	23.69	23.59	23.46	23.69	23.59	23.46
3	QPSK	8	0	22.76	22.70	22.56	22.76	22.70	22.56
3	QPSK	8	4	22.79	22.69	22.62	22.79	22.69	22.62
3	QPSK	8	7	22.76	22.65	22.53	22.76	22.65	22.53
3	QPSK	15	0	22.73	22.68	22.54	22.73	22.68	22.54
3	16QAM	1	0	23.04	22.95	22.88	23.04	22.95	22.88
3	16QAM	1	8	23.08	22.96	22.79	23.08	22.96	22.79
3	16QAM	1	14	23.01	22.92	22.76	23.01	22.92	22.76
3	16QAM	8	0	21.85	21.77	21.67	21.85	21.77	21.67
3	16QAM	8	4	21.92	21.81	21.70	21.92	21.81	21.70
3	16QAM	8	7	21.86	21.79	21.67	21.86	21.79	21.67
3	16QAM	15	0	21.85	21.77	21.66	21.85	21.77	21.66
3	64QAM	1	0	21.97	21.84	21.76	21.97	21.84	21.76
3	64QAM	1	8	21.95	21.89	21.77	21.95	21.89	21.77
3	64QAM	1	14	21.93	21.82	21.73	21.93	21.82	21.73
3	64QAM	8	0	20.86	20.76	20.67	20.86	20.76	20.67
3	64QAM	8	4	20.90	20.83	20.70	20.90	20.83	20.70
3	64QAM	8	7	20.87	20.78	20.66	20.87	20.78	20.66
3	64QAM	15	0	20.82	20.72	20.65	20.82	20.72	20.65
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	23.66	23.56	23.44	23.66	23.56	23.44
1.4	QPSK	1	3	23.72	23.63	23.50	23.72	23.63	23.50
1.4	QPSK	1	5	23.65	23.56	23.41	23.65	23.56	23.41
1.4	QPSK	3	0	23.66	23.56	23.46	23.66	23.56	23.46
1.4	QPSK	3	1	23.72	23.63	23.50	23.72	23.63	23.50
1.4	QPSK	3	3	23.68	23.59	23.48	23.68	23.59	23.48
1.4	QPSK	6	0	22.67	22.57	22.49	22.67	22.57	22.49
1.4	16QAM	1	0	23.00	22.87	22.74	23.00	22.87	22.74
1.4	16QAM	1	3	23.07	22.95	22.83	23.07	22.95	22.83
1.4	16QAM	1	5	22.96	22.85	22.71	22.96	22.85	22.71
1.4	16QAM	3	0	22.78	22.68	22.51	22.78	22.68	22.51
1.4	16QAM	3	1	22.83	22.71	22.55	22.83	22.71	22.55
1.4	16QAM	3	3	22.79	22.65	22.49	22.79	22.65	22.49
1.4	16QAM	6	0	21.83	21.73	21.64	21.83	21.73	21.64
1.4	64QAM	1	0	21.92	21.80	21.68	21.92	21.80	21.68
1.4	64QAM	1	3	21.99	21.90	21.74	21.99	21.90	21.74
1.4	64QAM	1	5	21.89	21.77	21.66	21.89	21.77	21.66
1.4	64QAM	3	0	21.90	21.79	21.66	21.90	21.79	21.66
1.4	64QAM	3	1	21.96	21.84	21.73	21.96	21.84	21.73
1.4	64QAM	3	3	21.88	21.77	21.64	21.88	21.77	21.64
1.4	64QAM	6	0	20.77	20.68	20.56	20.77	20.68	20.56



<WiFi on>

Power Selection				Head / Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				24.5			21.0		
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	23.76	23.68	23.66	20.49	20.48	20.45
20	QPSK	1	49	23.69	23.62	23.68	20.46	20.41	20.45
20	QPSK	1	99	23.63	23.56	23.58	20.34	20.30	20.33
20	QPSK	50	0	22.75	22.68	22.65	20.55	20.50	20.44
20	QPSK	50	24	22.78	22.69	22.64	20.53	20.49	20.42
20	QPSK	50	50	22.70	22.64	22.69	20.45	20.41	20.45
20	QPSK	100	0	22.72	22.68	22.61	20.48	20.47	20.43
20	16QAM	1	0	23.09	23.01	22.97	20.87	20.80	20.69
20	16QAM	1	49	23.04	22.98	23.02	20.76	20.71	20.82
20	16QAM	1	99	22.96	22.92	22.92	20.67	20.66	20.62
20	16QAM	50	0	21.82	21.79	21.75	20.63	20.60	20.57
20	16QAM	50	24	21.84	21.81	21.73	20.64	20.59	20.51
20	16QAM	50	50	21.80	21.72	21.77	20.55	20.49	20.57
20	16QAM	100	0	21.80	21.75	21.69	20.57	20.53	20.47
20	64QAM	1	0	21.97	21.93	21.90	20.76	20.70	20.65
20	64QAM	1	49	21.93	21.86	21.94	20.75	20.65	20.72
20	64QAM	1	99	21.86	21.81	21.83	20.59	20.52	20.61
20	64QAM	50	0	20.85	20.80	20.74	20.65	20.60	20.54
20	64QAM	50	24	20.85	20.80	20.75	20.62	20.61	20.53
20	64QAM	50	50	20.80	20.72	20.78	20.56	20.53	20.55
20	64QAM	100	0	20.82	20.77	20.70	20.62	20.56	20.51
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	23.75	23.71	23.63	20.51	20.49	20.41
15	QPSK	1	37	23.71	23.64	23.68	20.46	20.40	20.47
15	QPSK	1	74	23.68	23.57	23.59	20.38	20.32	20.35
15	QPSK	36	0	22.79	22.70	22.63	20.56	20.48	20.42
15	QPSK	36	20	22.80	22.73	22.75	20.58	20.53	20.54
15	QPSK	36	39	22.70	22.64	22.68	20.50	20.46	20.46
15	QPSK	75	0	22.74	22.66	22.62	20.50	20.46	20.39
15	16QAM	1	0	23.07	23.01	22.98	20.85	20.81	20.76
15	16QAM	1	37	23.02	22.97	22.97	20.77	20.70	20.79
15	16QAM	1	74	22.96	22.91	22.91	20.71	20.69	20.65
15	16QAM	36	0	21.85	21.75	21.71	20.62	20.54	20.52
15	16QAM	36	20	21.87	21.82	21.82	20.61	20.57	20.60
15	16QAM	36	39	21.80	21.71	21.74	20.59	20.52	20.55
15	16QAM	75	0	21.83	21.75	21.69	20.58	20.55	20.47
15	64QAM	1	0	21.97	21.92	21.87	20.75	20.76	20.68
15	64QAM	1	37	21.96	21.90	21.93	20.72	20.68	20.71
15	64QAM	1	74	21.87	21.83	21.83	20.62	20.59	20.61
15	64QAM	36	0	20.88	20.79	20.73	20.63	20.59	20.54
15	64QAM	36	20	20.91	20.82	20.85	20.67	20.63	20.65
15	64QAM	36	39	20.84	20.74	20.79	20.62	20.57	20.61
15	64QAM	75	0	20.83	20.75	20.70	20.61	20.57	20.51
Channel				20000	20175	20350	20000	20175	20350
Frequency (MHz)				1715	1732.5	1750	1715	1732.5	1750
10	QPSK	1	0	23.70	23.73	23.68	20.54	20.52	20.63
10	QPSK	1	25	23.75	23.67	23.60	20.51	20.46	20.58
10	QPSK	1	49	23.72	23.63	23.52	20.41	20.36	20.50
10	QPSK	25	0	22.77	22.72	22.62	20.57	20.47	20.62
10	QPSK	25	12	22.80	22.71	22.68	20.56	20.50	20.63
10	QPSK	25	25	22.74	22.69	22.59	20.55	20.47	20.57
10	QPSK	50	0	22.80	22.69	22.61	20.55	20.47	20.58
10	16QAM	1	0	23.11	23.05	22.95	20.81	20.83	20.80
10	16QAM	1	25	23.09	23.00	22.93	20.80	20.75	20.83
10	16QAM	1	49	23.01	22.97	22.86	20.72	20.72	20.78
10	16QAM	25	0	21.88	21.80	21.75	20.62	20.61	20.75
10	16QAM	25	12	21.88	21.80	21.71	20.65	20.62	20.71
10	16QAM	25	25	21.81	21.74	21.68	20.61	20.57	20.67
10	16QAM	50	0	21.84	21.76	21.71	20.61	20.56	20.67
10	64QAM	1	0	22.04	21.97	21.89	20.82	20.78	20.81
10	64QAM	1	25	21.99	21.93	21.84	20.79	20.71	20.82
10	64QAM	1	49	21.94	21.87	21.77	20.68	20.67	20.76
10	64QAM	25	0	20.86	20.80	20.74	20.68	20.61	20.71
10	64QAM	25	12	20.89	20.83	20.75	20.69	20.63	20.73



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10	64QAM	25	25	20.82	20.75	20.70	20.59	20.53	20.68
10	64QAM	50	0	20.84	20.79	20.72	20.64	20.58	20.69
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	23.75	23.64	23.53	20.29	20.25	20.32
5	QPSK	1	12	23.73	23.64	23.55	20.32	20.25	20.32
5	QPSK	1	24	23.67	23.59	23.49	20.27	20.20	20.28
5	QPSK	12	0	22.73	22.69	22.59	20.36	20.27	20.36
5	QPSK	12	7	22.76	22.70	22.60	20.37	20.30	20.40
5	QPSK	12	13	22.76	22.63	22.55	20.33	20.25	20.36
5	QPSK	25	0	22.76	22.67	22.57	20.36	20.29	20.35
5	16QAM	1	0	23.08	22.99	22.89	20.62	20.56	20.65
5	16QAM	1	12	23.05	22.96	22.85	20.66	20.53	20.63
5	16QAM	1	24	23.03	22.90	22.76	20.53	20.48	20.57
5	16QAM	12	0	21.83	21.79	21.64	20.43	20.35	20.47
5	16QAM	12	7	21.88	21.77	21.67	20.47	20.40	20.51
5	16QAM	12	13	21.84	21.75	21.63	20.40	20.36	20.42
5	16QAM	25	0	21.84	21.77	21.66	20.44	20.36	20.45
5	64QAM	1	0	22.03	21.91	21.80	20.57	20.47	20.58
5	64QAM	1	12	21.99	21.91	21.79	20.55	20.49	20.58
5	64QAM	1	24	21.96	21.86	21.70	20.55	20.43	20.55
5	64QAM	12	0	20.88	20.85	20.71	20.47	20.44	20.51
5	64QAM	12	7	20.93	20.85	20.74	20.52	20.47	20.54
5	64QAM	12	13	20.91	20.79	20.70	20.48	20.39	20.49
5	64QAM	25	0	20.87	20.80	20.69	20.46	20.36	20.47
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	23.72	23.64	23.55	20.30	20.23	20.33
3	QPSK	1	8	23.72	23.62	23.52	20.33	20.23	20.34
3	QPSK	1	14	23.69	23.59	23.46	20.30	20.17	20.25
3	QPSK	8	0	22.76	22.70	22.56	20.37	20.28	20.35
3	QPSK	8	4	22.79	22.69	22.62	20.40	20.31	20.38
3	QPSK	8	7	22.76	22.65	22.53	20.37	20.23	20.37
3	QPSK	15	0	22.73	22.68	22.54	20.38	20.29	20.35
3	16QAM	1	0	23.04	22.95	22.88	20.61	20.52	20.58
3	16QAM	1	8	23.08	22.96	22.79	20.67	20.52	20.59
3	16QAM	1	14	23.01	22.92	22.76	20.62	20.44	20.57
3	16QAM	8	0	21.85	21.77	21.67	20.49	20.39	20.48
3	16QAM	8	4	21.92	21.81	21.70	20.54	20.44	20.52
3	16QAM	8	7	21.86	21.79	21.67	20.49	20.41	20.48
3	16QAM	15	0	21.85	21.77	21.66	20.44	20.37	20.47
3	64QAM	1	0	21.97	21.84	21.76	20.59	20.50	20.57
3	64QAM	1	8	21.95	21.89	21.77	20.57	20.49	20.61
3	64QAM	1	14	21.93	21.82	21.73	20.53	20.46	20.55
3	64QAM	8	0	20.86	20.76	20.67	20.49	20.43	20.50
3	64QAM	8	4	20.90	20.83	20.70	20.52	20.45	20.55
3	64QAM	8	7	20.87	20.78	20.66	20.50	20.40	20.48
3	64QAM	15	0	20.82	20.72	20.65	20.44	20.36	20.46
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	23.66	23.56	23.44	20.27	20.36	20.44
1.4	QPSK	1	3	23.72	23.63	23.50	20.31	20.43	20.53
1.4	QPSK	1	5	23.65	23.56	23.41	20.26	20.33	20.43
1.4	QPSK	3	0	23.66	23.56	23.46	20.28	20.41	20.50
1.4	QPSK	3	1	23.72	23.63	23.50	20.30	20.44	20.54
1.4	QPSK	3	3	23.68	23.59	23.48	20.26	20.39	20.50
1.4	QPSK	6	0	22.67	22.57	22.49	20.29	20.41	20.49
1.4	16QAM	1	0	23.00	22.87	22.74	20.61	20.64	20.75
1.4	16QAM	1	3	23.07	22.95	22.83	20.67	20.73	20.83
1.4	16QAM	1	5	22.96	22.85	22.71	20.57	20.64	20.73
1.4	16QAM	3	0	22.78	22.68	22.51	20.39	20.46	20.55
1.4	16QAM	3	1	22.83	22.71	22.55	20.42	20.51	20.60
1.4	16QAM	3	3	22.79	22.65	22.49	20.36	20.44	20.54
1.4	16QAM	6	0	21.83	21.73	21.64	20.43	20.55	20.68
1.4	64QAM	1	0	21.92	21.80	21.68	20.50	20.63	20.75
1.4	64QAM	1	3	21.99	21.90	21.74	20.55	20.69	20.80
1.4	64QAM	1	5	21.89	21.77	21.66	20.47	20.59	20.73
1.4	64QAM	3	0	21.90	21.79	21.66	20.51	20.63	20.73
1.4	64QAM	3	1	21.96	21.84	21.73	20.53	20.70	20.79
1.4	64QAM	3	3	21.88	21.77	21.64	20.49	20.63	20.71
1.4	64QAM	6	0	20.77	20.68	20.56	20.38	20.52	20.62



<LTE Band 5>

SAR for LTE B5 is covered by LTE B26 due to overlapping frequency range, less or same maximum tune-up limit and the same channel bandwidth

<LTE Band 12>

<WiFi off / Wifi on>

Power Selection				Head / Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				25.7			25.7		
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				23060	23095	23130	23060	23095	23130
Frequency (MHz)				704	707.5	711	704	707.5	711
10	QPSK	1	0	24.41	24.53	24.63	24.41	24.53	24.63
10	QPSK	1	25	24.65	24.77	24.84	24.65	24.77	24.84
10	QPSK	1	49	24.66	24.96	24.59	24.66	24.96	24.59
10	QPSK	25	0	23.62	23.73	23.74	23.62	23.73	23.74
10	QPSK	25	12	23.71	23.75	23.87	23.71	23.75	23.87
10	QPSK	25	25	23.86	23.79	23.87	23.86	23.79	23.87
10	QPSK	50	0	23.67	23.73	23.88	23.67	23.73	23.88
10	16QAM	1	0	24.00	23.97	23.88	24.00	23.97	23.88
10	16QAM	1	25	23.90	23.96	23.92	23.90	23.96	23.92
10	16QAM	1	49	23.96	23.99	23.89	23.96	23.99	23.89
10	16QAM	25	0	22.84	22.90	22.85	22.84	22.90	22.85
10	16QAM	25	12	22.87	22.93	22.94	22.87	22.93	22.94
10	16QAM	25	25	22.97	22.86	22.97	22.97	22.86	22.97
10	16QAM	50	0	22.90	22.94	22.90	22.90	22.94	22.90
10	64QAM	1	0	22.35	22.66	22.83	22.35	22.66	22.83
10	64QAM	1	25	22.55	22.85	22.98	22.55	22.85	22.98
10	64QAM	1	49	22.69	22.82	23.00	22.69	22.82	23.00
10	64QAM	25	0	21.70	21.87	21.88	21.70	21.87	21.88
10	64QAM	25	12	21.82	21.88	21.93	21.82	21.88	21.93
10	64QAM	25	25	21.89	21.87	21.96	21.89	21.87	21.96
10	64QAM	50	0	21.90	21.90	21.99	21.90	21.90	21.99
Channel				23035	23095	23155	23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5	701.5	707.5	713.5
5	QPSK	1	0	24.41	24.64	24.91	24.41	24.64	24.91
5	QPSK	1	12	24.60	24.84	24.95	24.60	24.84	24.95
5	QPSK	1	24	24.69	24.95	24.72	24.69	24.95	24.72
5	QPSK	12	0	23.58	23.82	23.95	23.58	23.82	23.95
5	QPSK	12	7	23.60	23.92	23.96	23.60	23.92	23.96
5	QPSK	12	13	23.70	23.85	23.96	23.70	23.85	23.96
5	QPSK	25	0	23.62	23.89	23.95	23.62	23.89	23.95
5	16QAM	1	0	23.73	23.82	23.97	23.73	23.82	23.97
5	16QAM	1	12	23.94	23.91	23.93	23.94	23.91	23.93
5	16QAM	1	24	23.95	23.98	23.95	23.95	23.98	23.95
5	16QAM	12	0	22.68	23.00	22.99	22.68	23.00	22.99
5	16QAM	12	7	22.71	22.89	22.91	22.71	22.89	22.91
5	16QAM	12	13	22.78	22.85	22.94	22.78	22.85	22.94
5	16QAM	25	0	22.71	22.90	22.92	22.71	22.90	22.92
5	64QAM	1	0	22.94	22.93	22.99	22.94	22.93	22.99
5	64QAM	1	12	22.98	22.92	22.93	22.98	22.92	22.93
5	64QAM	1	24	22.93	22.96	22.92	22.93	22.96	22.92
5	64QAM	12	0	21.66	21.96	21.97	21.66	21.96	21.97
5	64QAM	12	7	21.76	21.94	21.93	21.76	21.94	21.93
5	64QAM	12	13	21.87	21.96	21.98	21.87	21.96	21.98
5	64QAM	25	0	21.73	21.95	21.91	21.73	21.95	21.91
Channel				23025	23095	23165	23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5	700.5	707.5	714.5
3	QPSK	1	0	24.46	24.58	24.95	24.46	24.58	24.95
3	QPSK	1	8	24.56	24.87	24.74	24.56	24.87	24.74
3	QPSK	1	14	24.55	24.84	24.49	24.55	24.84	24.49
3	QPSK	8	0	23.60	23.86	23.93	23.60	23.86	23.93
3	QPSK	8	4	23.71	23.85	23.91	23.71	23.85	23.91
3	QPSK	8	7	23.66	23.84	23.68	23.66	23.84	23.68
3	QPSK	15	0	23.63	23.83	23.93	23.63	23.83	23.93
3	16QAM	1	0	23.88	23.99	23.96	23.88	23.99	23.96
3	16QAM	1	8	23.98	23.92	23.94	23.98	23.92	23.94
3	16QAM	1	14	23.97	23.93	23.43	23.97	23.93	23.43



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3	16QAM	8	0	22.75	22.97	22.92	22.75	22.97	22.92
3	16QAM	8	4	22.78	22.94	22.95	22.78	22.94	22.95
3	16QAM	8	7	22.74	23.00	22.94	22.74	23.00	22.94
3	16QAM	15	0	22.67	22.96	22.91	22.67	22.96	22.91
3	64QAM	1	0	22.67	22.94	22.98	22.67	22.94	22.98
3	64QAM	1	8	22.90	22.98	22.97	22.90	22.98	22.97
3	64QAM	1	14	22.76	22.91	22.87	22.76	22.91	22.87
3	64QAM	8	0	21.73	21.96	21.92	21.73	21.96	21.92
3	64QAM	8	4	21.72	21.96	21.95	21.72	21.96	21.95
3	64QAM	8	7	21.73	21.93	21.98	21.73	21.93	21.98
3	64QAM	15	0	21.71	21.97	21.93	21.71	21.97	21.93
Channel				23017	23095	23173	23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3	699.7	707.5	715.3
1.4	QPSK	1	0	24.41	24.57	24.67	24.41	24.57	24.67
1.4	QPSK	1	3	24.46	24.77	24.58	24.46	24.77	24.58
1.4	QPSK	1	5	24.36	24.74	24.39	24.36	24.74	24.39
1.4	QPSK	3	0	24.50	24.64	24.59	24.50	24.64	24.59
1.4	QPSK	3	1	24.49	24.69	24.58	24.49	24.69	24.58
1.4	QPSK	3	3	24.55	24.73	24.43	24.55	24.73	24.43
1.4	QPSK	6	0	23.54	23.73	23.60	23.54	23.73	23.60
1.4	16QAM	1	0	23.98	23.94	23.96	23.98	23.94	23.96
1.4	16QAM	1	3	23.97	23.95	23.79	23.97	23.95	23.79
1.4	16QAM	1	5	24.00	23.94	23.58	24.00	23.94	23.58
1.4	16QAM	3	0	23.45	23.79	23.56	23.45	23.79	23.56
1.4	16QAM	3	1	23.64	23.83	23.48	23.64	23.83	23.48
1.4	16QAM	3	3	23.41	23.74	23.41	23.41	23.74	23.41
1.4	16QAM	6	0	22.67	22.95	22.67	22.67	22.95	22.67
1.4	64QAM	1	0	22.81	22.80	22.83	22.81	22.80	22.83
1.4	64QAM	1	3	22.81	22.61	22.81	22.81	22.61	22.81
1.4	64QAM	1	5	22.30	22.96	22.27	22.30	22.96	22.27
1.4	64QAM	3	0	22.68	22.93	22.74	22.68	22.93	22.74
1.4	64QAM	3	1	22.80	23.00	22.83	22.80	23.00	22.83
1.4	64QAM	3	3	22.68	22.93	22.70	22.68	22.93	22.70
1.4	64QAM	6	0	21.41	21.74	21.63	21.41	21.74	21.63



<LTE Band 13>

<WiFi off>

Power Selection				Head / Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				25.3			25.3		
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	24.46			24.46		
10	QPSK	1	25	24.19			24.19		
10	QPSK	1	49	24.09			24.09		
10	QPSK	25	0	23.31			23.31		
10	QPSK	25	12	23.36			23.36		
10	QPSK	25	25	23.31			23.31		
10	QPSK	50	0	23.31			23.31		
10	16QAM	1	0	23.45			23.45		
10	16QAM	1	25	23.48			23.48		
10	16QAM	1	49	23.36			23.36		
10	16QAM	25	0	22.43			22.43		
10	16QAM	25	12	22.41			22.41		
10	16QAM	25	25	22.46			22.46		
10	16QAM	50	0	22.47			22.47		
10	64QAM	1	0	22.41			22.41		
10	64QAM	1	25	22.43			22.43		
10	64QAM	1	49	22.28			22.28		
10	64QAM	25	0	21.45			21.45		
10	64QAM	25	12	21.46			21.46		
10	64QAM	25	25	21.48			21.48		
10	64QAM	50	0	21.40			21.40		
Channel				23205	23230	23255	23205	23230	23255
Frequency (MHz)				779.5	782	784.5	779.5	782	784.5
5	QPSK	1	0	24.28	24.32	24.34	24.28	24.32	24.34
5	QPSK	1	12	24.43	24.29	24.26	24.43	24.29	24.26
5	QPSK	1	24	24.29	24.34	24.23	24.29	24.34	24.23
5	QPSK	12	0	23.45	23.35	23.34	23.45	23.35	23.34
5	QPSK	12	7	23.41	23.34	23.33	23.41	23.34	23.33
5	QPSK	12	13	23.34	23.26	23.11	23.34	23.26	23.11
5	QPSK	25	0	23.32	23.35	23.33	23.32	23.35	23.33
5	16QAM	1	0	23.40	23.46	23.47	23.40	23.46	23.47
5	16QAM	1	12	23.48	23.49	23.44	23.48	23.49	23.44
5	16QAM	1	24	23.49	23.42	23.25	23.49	23.42	23.25
5	16QAM	12	0	22.49	22.35	22.36	22.49	22.35	22.36
5	16QAM	12	7	22.42	22.43	22.42	22.42	22.43	22.42
5	16QAM	12	13	22.41	22.41	22.29	22.41	22.41	22.29
5	16QAM	25	0	22.42	22.39	22.37	22.42	22.39	22.37
5	64QAM	1	0	22.21	22.49	22.48	22.21	22.49	22.48
5	64QAM	1	12	22.43	22.44	22.25	22.43	22.44	22.25
5	64QAM	1	24	22.48	22.46	22.41	22.48	22.46	22.41
5	64QAM	12	0	21.48	21.46	21.42	21.48	21.46	21.42
5	64QAM	12	7	21.45	21.42	21.46	21.45	21.42	21.46
5	64QAM	12	13	21.39	21.46	21.34	21.39	21.46	21.34
5	64QAM	25	0	21.46	21.35	21.33	21.46	21.35	21.33



<Wifi on>

Power Selection				Head					
Transmit Antenna				UAT			LAT		
Max. Power				24.0			25.3		
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	23.76			24.46		
10	QPSK	1	25	23.54			24.19		
10	QPSK	1	49	23.47			24.09		
10	QPSK	25	0	23.57			23.31		
10	QPSK	25	12	23.58			23.36		
10	QPSK	25	25	23.54			23.31		
10	QPSK	50	0	23.55			23.31		
10	16QAM	1	0	23.74			23.45		
10	16QAM	1	25	23.72			23.48		
10	16QAM	1	49	23.73			23.36		
10	16QAM	25	0	22.93			22.43		
10	16QAM	25	12	22.95			22.41		
10	16QAM	25	25	22.91			22.46		
10	16QAM	50	0	22.93			22.47		
10	64QAM	1	0	22.98			22.41		
10	64QAM	1	25	22.97			22.43		
10	64QAM	1	49	22.96			22.28		
10	64QAM	25	0	21.94			21.45		
10	64QAM	25	12	21.96			21.46		
10	64QAM	25	25	21.92			21.48		
10	64QAM	50	0	21.94			21.40		
Channel				23205	23230	23255	23205	23230	23255
Frequency (MHz)				779.5	782	784.5	779.5	782	784.5
5	QPSK	1	0	23.17	23.11	23.09	24.28	24.32	24.34
5	QPSK	1	12	23.12	23.09	23.05	24.43	24.29	24.26
5	QPSK	1	24	23.09	23.05	23.05	24.29	24.34	24.23
5	QPSK	12	0	23.20	23.15	23.11	23.45	23.35	23.34
5	QPSK	12	7	23.22	23.16	23.14	23.41	23.34	23.33
5	QPSK	12	13	23.16	23.12	23.08	23.34	23.26	23.11
5	QPSK	25	0	23.19	23.16	23.12	23.32	23.35	23.33
5	16QAM	1	0	23.42	23.36	23.38	23.40	23.46	23.47
5	16QAM	1	12	23.40	23.39	23.32	23.48	23.49	23.44
5	16QAM	1	24	23.38	23.29	23.31	23.49	23.42	23.25
5	16QAM	12	0	22.57	22.51	22.50	22.49	22.35	22.36
5	16QAM	12	7	22.56	22.54	22.50	22.42	22.43	22.42
5	16QAM	12	13	22.53	22.49	22.44	22.41	22.41	22.29
5	16QAM	25	0	22.54	22.53	22.49	22.42	22.39	22.37
5	64QAM	1	0	22.61	22.61	22.60	22.21	22.49	22.48
5	64QAM	1	12	22.60	22.63	22.57	22.43	22.44	22.25
5	64QAM	1	24	22.61	22.60	22.54	22.48	22.46	22.41
5	64QAM	12	0	21.62	21.57	21.54	21.48	21.46	21.42
5	64QAM	12	7	21.64	21.60	21.58	21.45	21.42	21.46
5	64QAM	12	13	21.58	21.55	21.53	21.39	21.46	21.34
5	64QAM	25	0	21.56	21.52	21.50	21.46	21.35	21.33



Power Selection				Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				25.3			25.3		
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	24.46			24.46		
10	QPSK	1	25	24.19			24.19		
10	QPSK	1	49	24.09			24.09		
10	QPSK	25	0	23.31			23.31		
10	QPSK	25	12	23.36			23.36		
10	QPSK	25	25	23.31			23.31		
10	QPSK	50	0	23.31			23.31		
10	16QAM	1	0	23.45			23.45		
10	16QAM	1	25	23.48			23.48		
10	16QAM	1	49	23.36			23.36		
10	16QAM	25	0	22.43			22.43		
10	16QAM	25	12	22.41			22.41		
10	16QAM	25	25	22.46			22.46		
10	16QAM	50	0	22.47			22.47		
10	64QAM	1	0	22.41			22.41		
10	64QAM	1	25	22.43			22.43		
10	64QAM	1	49	22.28			22.28		
10	64QAM	25	0	21.45			21.45		
10	64QAM	25	12	21.46			21.46		
10	64QAM	25	25	21.48			21.48		
10	64QAM	50	0	21.40			21.40		
Channel				23205	23230	23255	23205	23230	23255
Frequency (MHz)				779.5	782	784.5	779.5	782	784.5
5	QPSK	1	0	24.28	24.32	24.34	24.28	24.32	24.34
5	QPSK	1	12	24.43	24.29	24.26	24.43	24.29	24.26
5	QPSK	1	24	24.29	24.34	24.23	24.29	24.34	24.23
5	QPSK	12	0	23.45	23.35	23.34	23.45	23.35	23.34
5	QPSK	12	7	23.41	23.34	23.33	23.41	23.34	23.33
5	QPSK	12	13	23.34	23.26	23.11	23.34	23.26	23.11
5	QPSK	25	0	23.32	23.35	23.33	23.32	23.35	23.33
5	16QAM	1	0	23.40	23.46	23.47	23.40	23.46	23.47
5	16QAM	1	12	23.48	23.49	23.44	23.48	23.49	23.44
5	16QAM	1	24	23.49	23.42	23.25	23.49	23.42	23.25
5	16QAM	12	0	22.49	22.35	22.36	22.49	22.35	22.36
5	16QAM	12	7	22.42	22.43	22.42	22.42	22.43	22.42
5	16QAM	12	13	22.41	22.41	22.29	22.41	22.41	22.29
5	16QAM	25	0	22.42	22.39	22.37	22.42	22.39	22.37
5	64QAM	1	0	22.21	22.49	22.48	22.21	22.49	22.48
5	64QAM	1	12	22.43	22.44	22.25	22.43	22.44	22.25
5	64QAM	1	24	22.48	22.46	22.41	22.48	22.46	22.41
5	64QAM	12	0	21.48	21.46	21.42	21.48	21.46	21.42
5	64QAM	12	7	21.45	21.42	21.46	21.45	21.42	21.46
5	64QAM	12	13	21.39	21.46	21.34	21.39	21.46	21.34
5	64QAM	25	0	21.46	21.35	21.33	21.46	21.35	21.33

<LTE Band 17>

SAR for LTE B17 is covered by LTE B12 due to overlapping frequency range, the same maximum tune-up limit and the same channel bandwidth



<LTE Band 26>

<WiFi off>

Power Selection				Head / Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				25.7			25.7		
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	24.56	24.55	24.51	24.56	24.55	24.51
15	QPSK	1	37	24.55	24.47	24.46	24.55	24.47	24.46
15	QPSK	1	74	24.54	24.53	24.42	24.54	24.53	24.42
15	QPSK	36	0	23.61	23.57	23.49	23.61	23.57	23.49
15	QPSK	36	20	23.65	23.62	23.58	23.65	23.62	23.58
15	QPSK	36	39	23.70	23.59	23.57	23.70	23.59	23.57
15	QPSK	75	0	23.57	23.57	23.50	23.57	23.57	23.50
15	16QAM	1	0	23.46	23.64	23.47	23.46	23.64	23.47
15	16QAM	1	37	23.50	23.66	23.96	23.50	23.66	23.96
15	16QAM	1	74	23.81	23.45	23.60	23.81	23.45	23.60
15	16QAM	36	0	22.71	22.73	22.60	22.71	22.73	22.60
15	16QAM	36	20	22.64	22.68	22.58	22.64	22.68	22.58
15	16QAM	36	39	22.80	22.65	22.70	22.80	22.65	22.70
15	16QAM	75	0	22.61	22.73	22.55	22.61	22.73	22.55
15	64QAM	1	0	22.88	22.98	22.68	22.88	22.98	22.68
15	64QAM	1	37	22.96	22.95	22.96	22.96	22.95	22.96
15	64QAM	1	74	22.94	22.98	22.95	22.94	22.98	22.95
15	64QAM	36	0	21.76	21.74	21.67	21.76	21.74	21.67
15	64QAM	36	20	21.74	21.75	21.66	21.74	21.75	21.66
15	64QAM	36	39	21.79	21.73	21.70	21.79	21.73	21.70
15	64QAM	75	0	21.67	21.73	21.59	21.67	21.73	21.59
Channel				26740	26865	26990	26740	26865	26990
Frequency (MHz)				819	831.5	844	819	831.5	844
10	QPSK	1	0	24.39	24.38	24.55	24.39	24.38	24.55
10	QPSK	1	25	24.52	24.44	24.54	24.52	24.44	24.54
10	QPSK	1	49	24.49	24.55	24.49	24.49	24.55	24.49
10	QPSK	25	0	23.66	23.65	23.53	23.66	23.65	23.53
10	QPSK	25	12	23.62	23.63	23.58	23.62	23.63	23.58
10	QPSK	25	25	23.62	23.57	23.54	23.62	23.57	23.54
10	QPSK	50	0	23.59	23.57	23.56	23.59	23.57	23.56
10	16QAM	1	0	23.67	23.92	23.57	23.67	23.92	23.57
10	16QAM	1	25	23.80	23.69	23.71	23.80	23.69	23.71
10	16QAM	1	49	23.89	23.80	23.65	23.89	23.80	23.65
10	16QAM	25	0	22.69	22.65	22.66	22.69	22.65	22.66
10	16QAM	25	12	22.72	22.69	22.70	22.72	22.69	22.70
10	16QAM	25	25	22.61	22.57	22.64	22.61	22.57	22.64
10	16QAM	50	0	22.70	22.68	22.62	22.70	22.68	22.62
10	64QAM	1	0	22.86	22.59	22.66	22.86	22.59	22.66
10	64QAM	1	25	22.76	22.70	22.63	22.76	22.70	22.63
10	64QAM	1	49	22.70	22.62	22.84	22.70	22.62	22.84
10	64QAM	25	0	21.67	21.71	21.71	21.67	21.71	21.71
10	64QAM	25	12	21.73	21.67	21.67	21.73	21.67	21.67
10	64QAM	25	25	21.67	21.68	21.61	21.67	21.68	21.61
10	64QAM	50	0	21.64	21.67	21.69	21.64	21.67	21.69
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	24.50	24.55	24.55	24.50	24.55	24.55
5	QPSK	1	12	24.41	24.54	24.41	24.41	24.54	24.41
5	QPSK	1	24	24.53	24.54	24.50	24.53	24.54	24.50
5	QPSK	12	0	23.50	23.70	23.48	23.50	23.70	23.48
5	QPSK	12	7	23.53	23.70	23.53	23.53	23.70	23.53
5	QPSK	12	13	23.61	23.72	23.54	23.61	23.72	23.54
5	QPSK	25	0	23.65	23.67	23.57	23.65	23.67	23.57
5	16QAM	1	0	23.99	23.97	23.95	23.99	23.97	23.95
5	16QAM	1	12	23.94	23.92	23.93	23.94	23.92	23.93
5	16QAM	1	24	23.92	23.91	23.65	23.92	23.91	23.65
5	16QAM	12	0	22.61	22.74	22.54	22.61	22.74	22.54
5	16QAM	12	7	22.70	22.83	22.57	22.70	22.83	22.57
5	16QAM	12	13	22.61	22.72	22.57	22.61	22.72	22.57
5	16QAM	25	0	22.69	22.75	22.57	22.69	22.75	22.57
5	64QAM	1	0	22.60	22.62	22.38	22.60	22.62	22.38
5	64QAM	1	12	22.41	22.44	22.59	22.41	22.44	22.59
5	64QAM	1	24	22.45	22.48	22.55	22.45	22.48	22.55



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5	64QAM	12	0	21.69	21.81	21.72	21.69	21.81	21.72
5	64QAM	12	7	21.69	21.81	21.68	21.69	21.81	21.68
5	64QAM	12	13	21.74	21.78	21.63	21.74	21.78	21.63
5	64QAM	25	0	21.74	21.80	21.65	21.74	21.80	21.65
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	24.53	24.55	24.52	24.53	24.55	24.52
3	QPSK	1	8	24.51	24.51	24.50	24.51	24.51	24.50
3	QPSK	1	14	24.52	24.49	24.51	24.52	24.49	24.51
3	QPSK	8	0	23.54	23.68	23.46	23.54	23.68	23.46
3	QPSK	8	4	23.53	23.66	23.57	23.53	23.66	23.57
3	QPSK	8	7	23.48	23.67	23.47	23.48	23.67	23.47
3	QPSK	15	0	23.57	23.71	23.55	23.57	23.71	23.55
3	16QAM	1	0	23.61	23.62	23.95	23.61	23.62	23.95
3	16QAM	1	8	23.96	23.91	23.65	23.96	23.91	23.65
3	16QAM	1	14	23.61	23.71	23.38	23.61	23.71	23.38
3	16QAM	8	0	22.58	22.79	22.70	22.58	22.79	22.70
3	16QAM	8	4	22.72	22.97	22.75	22.72	22.97	22.75
3	16QAM	8	7	22.65	22.91	22.66	22.65	22.91	22.66
3	16QAM	15	0	22.60	22.81	22.73	22.60	22.81	22.73
3	64QAM	1	0	22.71	22.95	22.82	22.71	22.95	22.82
3	64QAM	1	8	22.83	22.98	22.89	22.83	22.98	22.89
3	64QAM	1	14	22.86	22.99	22.80	22.86	22.99	22.80
3	64QAM	8	0	21.72	21.85	21.59	21.72	21.85	21.59
3	64QAM	8	4	21.81	21.79	21.77	21.81	21.79	21.77
3	64QAM	8	7	21.71	21.95	21.60	21.71	21.95	21.60
3	64QAM	15	0	21.57	21.67	21.48	21.57	21.67	21.48
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	24.39	24.44	24.49	24.39	24.44	24.49
1.4	QPSK	1	3	24.53	24.55	24.44	24.53	24.55	24.44
1.4	QPSK	1	5	24.39	24.51	24.48	24.39	24.51	24.48
1.4	QPSK	3	0	24.52	24.47	24.43	24.52	24.47	24.43
1.4	QPSK	3	1	24.53	24.49	24.46	24.53	24.49	24.46
1.4	QPSK	3	3	24.44	24.52	24.44	24.44	24.52	24.44
1.4	QPSK	6	0	23.49	23.51	23.33	23.49	23.51	23.33
1.4	16QAM	1	0	23.47	23.82	23.60	23.47	23.82	23.60
1.4	16QAM	1	3	24.00	23.97	23.99	24.00	23.97	23.99
1.4	16QAM	1	5	23.98	23.69	23.52	23.98	23.69	23.52
1.4	16QAM	3	0	23.51	23.49	23.43	23.51	23.49	23.43
1.4	16QAM	3	1	23.44	23.60	23.43	23.44	23.60	23.43
1.4	16QAM	3	3	23.51	23.47	23.32	23.51	23.47	23.32
1.4	16QAM	6	0	22.52	22.61	22.59	22.52	22.61	22.59
1.4	64QAM	1	0	22.55	22.37	22.51	22.55	22.37	22.51
1.4	64QAM	1	3	22.38	22.65	22.61	22.38	22.65	22.61
1.4	64QAM	1	5	22.38	22.66	22.59	22.38	22.66	22.59
1.4	64QAM	3	0	22.68	22.78	22.68	22.68	22.78	22.68
1.4	64QAM	3	1	22.81	22.78	22.59	22.81	22.78	22.59
1.4	64QAM	3	3	22.68	22.79	22.66	22.68	22.79	22.66
1.4	64QAM	6	0	21.53	21.53	21.54	21.53	21.53	21.54



<Wifi on>

Power Selection				Head					
Transmit Antenna				UAT			LAT		
Max. Power				23.0			25.7		
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	22.57	22.56	22.45	24.56	24.55	24.51
15	QPSK	1	37	22.48	22.45	22.45	24.55	24.47	24.46
15	QPSK	1	74	22.51	22.50	22.47	24.54	24.53	24.42
15	QPSK	36	0	22.45	22.56	22.41	23.61	23.57	23.49
15	QPSK	36	20	22.48	22.54	22.49	23.65	23.62	23.58
15	QPSK	36	39	22.47	22.48	22.46	23.70	23.59	23.57
15	QPSK	75	0	22.46	22.48	22.48	23.57	23.57	23.50
15	16QAM	1	0	22.49	22.50	22.30	23.46	23.64	23.47
15	16QAM	1	37	22.41	22.42	22.32	23.50	23.66	23.96
15	16QAM	1	74	22.44	22.42	22.40	23.81	23.45	23.60
15	16QAM	36	0	22.23	22.22	22.09	22.71	22.73	22.60
15	16QAM	36	20	22.35	22.25	22.18	22.64	22.68	22.58
15	16QAM	36	39	22.24	22.16	22.14	22.80	22.65	22.70
15	16QAM	75	0	22.28	22.21	22.16	22.61	22.73	22.55
15	64QAM	1	0	22.36	22.37	22.28	22.88	22.98	22.68
15	64QAM	1	37	22.31	22.32	22.25	22.96	22.95	22.96
15	64QAM	1	74	22.31	22.30	22.27	22.94	22.98	22.95
15	64QAM	36	0	21.98	21.93	21.85	21.76	21.74	21.67
15	64QAM	36	20	21.87	21.93	21.91	21.74	21.75	21.66
15	64QAM	36	39	22.00	21.89	21.84	21.79	21.73	21.70
15	64QAM	75	0	21.99	21.88	21.86	21.67	21.73	21.59
Channel				26740	26865	26990	26740	26865	26990
Frequency (MHz)				819	831.5	844	819	831.5	844
10	QPSK	1	0	22.48	22.53	22.35	24.39	24.38	24.55
10	QPSK	1	25	22.43	22.44	22.37	24.52	24.44	24.54
10	QPSK	1	49	22.51	22.44	22.39	24.49	24.55	24.49
10	QPSK	25	0	22.43	22.46	22.39	23.66	23.65	23.53
10	QPSK	25	12	22.41	22.44	22.47	23.62	23.63	23.58
10	QPSK	25	25	22.39	22.41	22.38	23.62	23.57	23.54
10	QPSK	50	0	22.38	22.38	22.40	23.59	23.57	23.56
10	16QAM	1	0	22.40	22.41	22.29	23.67	23.92	23.57
10	16QAM	1	25	22.37	22.37	22.23	23.80	23.69	23.71
10	16QAM	1	49	22.34	22.42	22.37	23.89	23.80	23.65
10	16QAM	25	0	22.14	22.20	22.00	22.69	22.65	22.66
10	16QAM	25	12	22.29	22.25	22.12	22.72	22.69	22.70
10	16QAM	25	25	22.16	22.08	22.10	22.61	22.57	22.64
10	16QAM	50	0	22.26	22.13	22.09	22.70	22.68	22.62
10	64QAM	1	0	22.32	22.27	22.25	22.86	22.59	22.66
10	64QAM	1	25	22.21	22.25	22.18	22.76	22.70	22.63
10	64QAM	1	49	22.23	22.22	22.23	22.70	22.62	22.84
10	64QAM	25	0	21.92	21.85	21.78	21.67	21.71	21.71
10	64QAM	25	12	21.77	21.92	21.81	21.73	21.67	21.67
10	64QAM	25	25	21.92	21.86	21.80	21.67	21.68	21.61
10	64QAM	50	0	21.89	21.78	21.76	21.64	21.67	21.69
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	22.51	22.53	22.39	24.50	24.55	24.55
5	QPSK	1	12	22.41	22.42	22.45	24.41	24.54	24.41
5	QPSK	1	24	22.51	22.49	22.38	24.53	24.54	24.50
5	QPSK	12	0	22.37	22.50	22.33	23.50	23.70	23.48
5	QPSK	12	7	22.40	22.45	22.41	23.53	23.70	23.53
5	QPSK	12	13	22.47	22.44	22.36	23.61	23.72	23.54
5	QPSK	25	0	22.42	22.44	22.47	23.65	23.67	23.57
5	16QAM	1	0	22.48	22.46	22.29	23.99	23.97	23.95
5	16QAM	1	12	22.35	22.41	22.23	23.94	23.92	23.93
5	16QAM	1	24	22.38	22.42	22.38	23.92	23.91	23.65
5	16QAM	12	0	22.15	22.19	22.09	22.61	22.74	22.54
5	16QAM	12	7	22.27	22.17	22.15	22.70	22.83	22.57
5	16QAM	12	13	22.15	22.13	22.05	22.61	22.72	22.57
5	16QAM	25	0	22.18	22.17	22.11	22.69	22.75	22.57
5	64QAM	1	0	22.27	22.32	22.20	22.60	22.62	22.38
5	64QAM	1	12	22.27	22.23	22.22	22.41	22.44	22.59
5	64QAM	1	24	22.26	22.29	22.17	22.45	22.48	22.55
5	64QAM	12	0	21.92	21.91	21.75	21.69	21.81	21.72
5	64QAM	12	7	21.77	21.90	21.90	21.69	21.81	21.68



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5	64QAM	12	13	21.96	21.80	21.75	21.74	21.78	21.63
5	64QAM	25	0	21.92	21.82	21.86	21.74	21.80	21.65
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	22.50	22.47	22.44	24.53	24.55	24.52
3	QPSK	1	8	22.45	22.43	22.42	24.51	24.51	24.50
3	QPSK	1	14	22.46	22.45	22.47	24.52	24.49	24.51
3	QPSK	8	0	22.37	22.52	22.38	23.54	23.68	23.46
3	QPSK	8	4	22.44	22.52	22.47	23.53	23.66	23.57
3	QPSK	8	7	22.39	22.48	22.39	23.48	23.67	23.47
3	QPSK	15	0	22.36	22.46	22.42	23.57	23.71	23.55
3	16QAM	1	0	22.48	22.47	22.29	23.61	23.62	23.95
3	16QAM	1	8	22.39	22.38	22.22	23.96	23.91	23.65
3	16QAM	1	14	22.37	22.34	22.30	23.61	23.71	23.38
3	16QAM	8	0	22.18	22.21	22.04	22.58	22.79	22.70
3	16QAM	8	4	22.27	22.21	22.11	22.72	22.97	22.75
3	16QAM	8	7	22.20	22.11	22.07	22.65	22.91	22.66
3	16QAM	15	0	22.28	22.17	22.16	22.60	22.81	22.73
3	64QAM	1	0	22.26	22.37	22.26	22.71	22.95	22.82
3	64QAM	1	8	22.28	22.31	22.15	22.83	22.98	22.89
3	64QAM	1	14	22.24	22.24	22.27	22.86	22.99	22.80
3	64QAM	8	0	21.90	21.87	21.81	21.72	21.85	21.59
3	64QAM	8	4	21.84	21.86	21.83	21.81	21.79	21.77
3	64QAM	8	7	21.94	21.87	21.74	21.71	21.95	21.60
3	64QAM	15	0	21.99	21.87	21.81	21.57	21.67	21.48
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	22.56	22.53	22.35	24.39	24.44	24.49
1.4	QPSK	1	3	22.43	22.40	22.37	24.53	24.55	24.44
1.4	QPSK	1	5	22.44	22.45	22.45	24.39	24.51	24.48
1.4	QPSK	3	0	22.35	22.48	22.31	24.52	24.47	24.43
1.4	QPSK	3	1	22.39	22.52	22.46	24.53	24.49	24.46
1.4	QPSK	3	3	22.46	22.46	22.36	24.44	24.52	24.44
1.4	QPSK	6	0	22.38	22.42	22.45	23.49	23.51	23.33
1.4	16QAM	1	0	22.43	22.48	22.25	23.47	23.82	23.60
1.4	16QAM	1	3	22.41	22.38	22.30	24.00	23.97	23.99
1.4	16QAM	1	5	22.37	22.34	22.37	23.98	23.69	23.52
1.4	16QAM	3	0	22.19	22.14	22.06	23.51	23.49	23.43
1.4	16QAM	3	1	22.28	22.19	22.10	23.44	23.60	23.43
1.4	16QAM	3	3	22.20	22.07	22.12	23.51	23.47	23.32
1.4	16QAM	6	0	22.24	22.13	22.16	22.52	22.61	22.59
1.4	64QAM	1	0	22.38	22.50	22.31	22.55	22.37	22.51
1.4	64QAM	1	3	22.46	22.51	22.40	22.38	22.65	22.61
1.4	64QAM	1	5	22.39	22.46	22.38	22.38	22.66	22.59
1.4	64QAM	3	0	22.37	22.38	22.38	22.68	22.78	22.68
1.4	64QAM	3	1	22.38	22.44	22.40	22.81	22.78	22.59
1.4	64QAM	3	3	22.30	22.20	22.27	22.68	22.79	22.66
1.4	64QAM	6	0	21.88	21.93	21.78	21.53	21.53	21.54



Power Selection				Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				25.7			25.7		
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	24.56	24.55	24.51	24.56	24.55	24.51
15	QPSK	1	37	24.55	24.47	24.46	24.55	24.47	24.46
15	QPSK	1	74	24.54	24.53	24.42	24.54	24.53	24.42
15	QPSK	36	0	23.61	23.57	23.49	23.61	23.57	23.49
15	QPSK	36	20	23.65	23.62	23.58	23.65	23.62	23.58
15	QPSK	36	39	23.70	23.59	23.57	23.70	23.59	23.57
15	QPSK	75	0	23.57	23.57	23.50	23.57	23.57	23.50
15	16QAM	1	0	23.46	23.64	23.47	23.46	23.64	23.47
15	16QAM	1	37	23.50	23.66	23.96	23.50	23.66	23.96
15	16QAM	1	74	23.81	23.45	23.60	23.81	23.45	23.60
15	16QAM	36	0	22.71	22.73	22.60	22.71	22.73	22.60
15	16QAM	36	20	22.64	22.68	22.58	22.64	22.68	22.58
15	16QAM	36	39	22.80	22.65	22.70	22.80	22.65	22.70
15	16QAM	75	0	22.61	22.73	22.55	22.61	22.73	22.55
15	64QAM	1	0	22.88	22.98	22.68	22.88	22.98	22.68
15	64QAM	1	37	22.96	22.95	22.96	22.96	22.95	22.96
15	64QAM	1	74	22.94	22.98	22.95	22.94	22.98	22.95
15	64QAM	36	0	21.76	21.74	21.67	21.76	21.74	21.67
15	64QAM	36	20	21.74	21.75	21.66	21.74	21.75	21.66
15	64QAM	36	39	21.79	21.73	21.70	21.79	21.73	21.70
15	64QAM	75	0	21.67	21.73	21.59	21.67	21.73	21.59
Channel				26740	26865	26990	26740	26865	26990
Frequency (MHz)				819	831.5	844	819	831.5	844
10	QPSK	1	0	24.39	24.38	24.55	24.39	24.38	24.55
10	QPSK	1	25	24.52	24.44	24.54	24.52	24.44	24.54
10	QPSK	1	49	24.49	24.55	24.49	24.49	24.55	24.49
10	QPSK	25	0	23.66	23.65	23.53	23.66	23.65	23.53
10	QPSK	25	12	23.62	23.63	23.58	23.62	23.63	23.58
10	QPSK	25	25	23.62	23.57	23.54	23.62	23.57	23.54
10	QPSK	50	0	23.59	23.57	23.56	23.59	23.57	23.56
10	16QAM	1	0	23.67	23.92	23.57	23.67	23.92	23.57
10	16QAM	1	25	23.80	23.69	23.71	23.80	23.69	23.71
10	16QAM	1	49	23.89	23.80	23.65	23.89	23.80	23.65
10	16QAM	25	0	22.69	22.65	22.66	22.69	22.65	22.66
10	16QAM	25	12	22.72	22.69	22.70	22.72	22.69	22.70
10	16QAM	25	25	22.61	22.57	22.64	22.61	22.57	22.64
10	16QAM	50	0	22.70	22.68	22.62	22.70	22.68	22.62
10	64QAM	1	0	22.86	22.59	22.66	22.86	22.59	22.66
10	64QAM	1	25	22.76	22.70	22.63	22.76	22.70	22.63
10	64QAM	1	49	22.70	22.62	22.84	22.70	22.62	22.84
10	64QAM	25	0	21.67	21.71	21.71	21.67	21.71	21.71
10	64QAM	25	12	21.73	21.67	21.67	21.73	21.67	21.67
10	64QAM	25	25	21.67	21.68	21.61	21.67	21.68	21.61
10	64QAM	50	0	21.64	21.67	21.69	21.64	21.67	21.69
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	24.50	24.55	24.55	24.50	24.55	24.55
5	QPSK	1	12	24.41	24.54	24.41	24.41	24.54	24.41
5	QPSK	1	24	24.53	24.54	24.50	24.53	24.54	24.50
5	QPSK	12	0	23.50	23.70	23.48	23.50	23.70	23.48
5	QPSK	12	7	23.53	23.70	23.53	23.53	23.70	23.53
5	QPSK	12	13	23.61	23.72	23.54	23.61	23.72	23.54
5	QPSK	25	0	23.65	23.67	23.57	23.65	23.67	23.57
5	16QAM	1	0	23.99	23.97	23.95	23.99	23.97	23.95
5	16QAM	1	12	23.94	23.92	23.93	23.94	23.92	23.93
5	16QAM	1	24	23.92	23.91	23.65	23.92	23.91	23.65
5	16QAM	12	0	22.61	22.74	22.54	22.61	22.74	22.54
5	16QAM	12	7	22.70	22.83	22.57	22.70	22.83	22.57
5	16QAM	12	13	22.61	22.72	22.57	22.61	22.72	22.57
5	16QAM	25	0	22.69	22.75	22.57	22.69	22.75	22.57
5	64QAM	1	0	22.60	22.62	22.38	22.60	22.62	22.38
5	64QAM	1	12	22.41	22.44	22.59	22.41	22.44	22.59
5	64QAM	1	24	22.45	22.48	22.55	22.45	22.48	22.55
5	64QAM	12	0	21.69	21.81	21.72	21.69	21.81	21.72
5	64QAM	12	7	21.69	21.81	21.68	21.69	21.81	21.68



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5	64QAM	12	13	21.74	21.78	21.63	21.74	21.78	21.63
5	64QAM	25	0	21.74	21.80	21.65	21.74	21.80	21.65
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	24.53	24.55	24.52	24.53	24.55	24.52
3	QPSK	1	8	24.51	24.51	24.50	24.51	24.51	24.50
3	QPSK	1	14	24.52	24.49	24.51	24.52	24.49	24.51
3	QPSK	8	0	23.54	23.68	23.46	23.54	23.68	23.46
3	QPSK	8	4	23.53	23.66	23.57	23.53	23.66	23.57
3	QPSK	8	7	23.48	23.67	23.47	23.48	23.67	23.47
3	QPSK	15	0	23.57	23.71	23.55	23.57	23.71	23.55
3	16QAM	1	0	23.61	23.62	23.95	23.61	23.62	23.95
3	16QAM	1	8	23.96	23.91	23.65	23.96	23.91	23.65
3	16QAM	1	14	23.61	23.71	23.38	23.61	23.71	23.38
3	16QAM	8	0	22.58	22.79	22.70	22.58	22.79	22.70
3	16QAM	8	4	22.72	22.97	22.75	22.72	22.97	22.75
3	16QAM	8	7	22.65	22.91	22.66	22.65	22.91	22.66
3	16QAM	15	0	22.60	22.81	22.73	22.60	22.81	22.73
3	64QAM	1	0	22.71	22.95	22.82	22.71	22.95	22.82
3	64QAM	1	8	22.83	22.98	22.89	22.83	22.98	22.89
3	64QAM	1	14	22.86	22.99	22.80	22.86	22.99	22.80
3	64QAM	8	0	21.72	21.85	21.59	21.72	21.85	21.59
3	64QAM	8	4	21.81	21.79	21.77	21.81	21.79	21.77
3	64QAM	8	7	21.71	21.95	21.60	21.71	21.95	21.60
3	64QAM	15	0	21.57	21.67	21.48	21.57	21.67	21.48
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	24.39	24.44	24.49	24.39	24.44	24.49
1.4	QPSK	1	3	24.53	24.55	24.44	24.53	24.55	24.44
1.4	QPSK	1	5	24.39	24.51	24.48	24.39	24.51	24.48
1.4	QPSK	3	0	24.52	24.47	24.43	24.52	24.47	24.43
1.4	QPSK	3	1	24.53	24.49	24.46	24.53	24.49	24.46
1.4	QPSK	3	3	24.44	24.52	24.44	24.44	24.52	24.44
1.4	QPSK	6	0	23.49	23.51	23.33	23.49	23.51	23.33
1.4	16QAM	1	0	23.47	23.82	23.60	23.47	23.82	23.60
1.4	16QAM	1	3	24.00	23.97	23.99	24.00	23.97	23.99
1.4	16QAM	1	5	23.98	23.69	23.52	23.98	23.69	23.52
1.4	16QAM	3	0	23.51	23.49	23.43	23.51	23.49	23.43
1.4	16QAM	3	1	23.44	23.60	23.43	23.44	23.60	23.43
1.4	16QAM	3	3	23.51	23.47	23.32	23.51	23.47	23.32
1.4	16QAM	6	0	22.52	22.61	22.59	22.52	22.61	22.59
1.4	64QAM	1	0	22.55	22.37	22.51	22.55	22.37	22.51
1.4	64QAM	1	3	22.38	22.65	22.61	22.38	22.65	22.61
1.4	64QAM	1	5	22.38	22.66	22.59	22.38	22.66	22.59
1.4	64QAM	3	0	22.68	22.78	22.68	22.68	22.78	22.68
1.4	64QAM	3	1	22.81	22.78	22.59	22.81	22.78	22.59
1.4	64QAM	3	3	22.68	22.79	22.66	22.68	22.79	22.66
1.4	64QAM	6	0	21.53	21.53	21.54	21.53	21.53	21.54

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

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

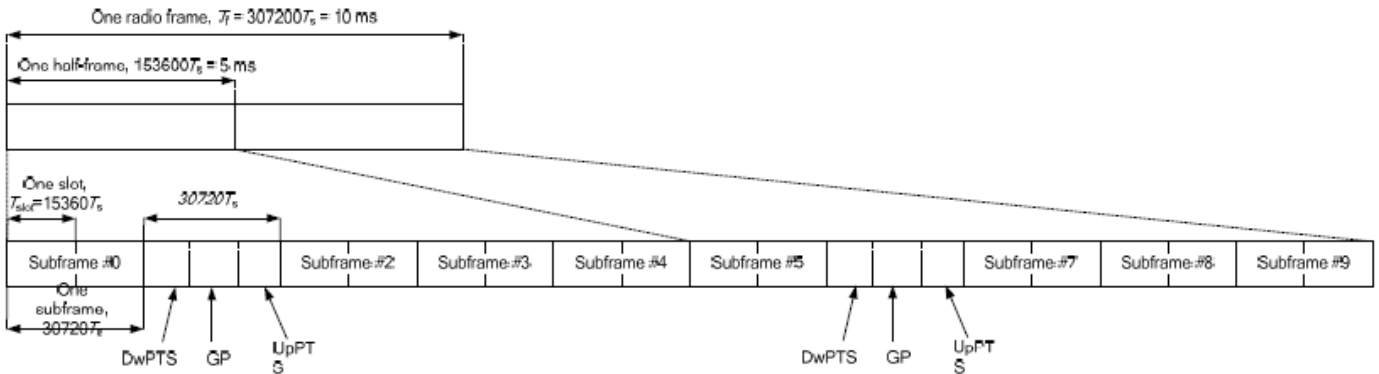


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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



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

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

The highest duty factor is resulted from:

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

<WiFi off>

Power Selection				Head / Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				25.7			25.7		
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				37850	38000	38150	37850	38000	38150
Frequency (MHz)				2580	2595	2610	2580	2595	2610
20	QPSK	1	0	25.07	25.30	25.26	25.07	25.30	25.26
20	QPSK	1	49	25.09	25.23	25.15	25.09	25.23	25.15
20	QPSK	1	99	25.27	25.29	25.21	25.27	25.29	25.21
20	QPSK	50	0	24.15	24.31	24.33	24.15	24.31	24.33
20	QPSK	50	24	24.30	24.34	24.33	24.30	24.34	24.33
20	QPSK	50	50	24.32	24.37	24.25	24.32	24.37	24.25
20	QPSK	100	0	24.28	24.30	24.35	24.28	24.30	24.35
20	16QAM	1	0	24.23	24.35	24.38	24.23	24.35	24.38
20	16QAM	1	49	24.22	24.35	24.28	24.22	24.35	24.28
20	16QAM	1	99	24.37	24.40	24.31	24.37	24.40	24.31
20	16QAM	50	0	23.26	23.38	23.41	23.26	23.38	23.41
20	16QAM	50	24	23.39	23.42	23.42	23.39	23.42	23.42
20	16QAM	50	50	23.39	23.42	23.31	23.39	23.42	23.31
20	16QAM	100	0	23.38	23.40	23.41	23.38	23.40	23.41
20	64QAM	1	0	22.95	23.10	23.10	22.95	23.10	23.10
20	64QAM	1	49	22.95	23.10	23.02	22.95	23.10	23.02
20	64QAM	1	99	23.09	23.13	23.05	23.09	23.13	23.05
20	64QAM	50	0	22.23	22.37	22.40	22.23	22.37	22.40
20	64QAM	50	24	22.35	22.41	22.42	22.35	22.41	22.42
20	64QAM	50	50	22.36	22.41	22.32	22.36	22.41	22.32
20	64QAM	100	0	22.34	22.40	22.41	22.34	22.40	22.41
Channel				37825	38000	38175	37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5	2577.5	2595	2612.5
15	QPSK	1	0	25.15	25.27	25.29	25.15	25.27	25.29
15	QPSK	1	37	25.10	25.23	25.15	25.10	25.23	25.15
15	QPSK	1	74	25.29	25.28	25.27	25.29	25.28	25.27
15	QPSK	36	0	24.15	24.30	24.30	24.15	24.30	24.30
15	QPSK	36	20	24.15	24.29	24.23	24.15	24.29	24.23
15	QPSK	36	39	24.31	24.31	24.20	24.31	24.31	24.20
15	QPSK	75	0	24.29	24.31	24.34	24.29	24.31	24.34
15	16QAM	1	0	24.25	24.36	24.41	24.25	24.36	24.41
15	16QAM	1	37	24.22	24.34	24.27	24.22	24.34	24.27
15	16QAM	1	74	24.44	24.46	24.37	24.44	24.46	24.37
15	16QAM	36	0	23.18	23.34	23.34	23.18	23.34	23.34
15	16QAM	36	20	23.25	23.36	23.28	23.25	23.36	23.28
15	16QAM	36	39	23.32	23.36	23.26	23.32	23.36	23.26
15	16QAM	75	0	23.36	23.40	23.41	23.36	23.40	23.41
15	64QAM	1	0	22.98	23.11	23.16	22.98	23.11	23.16
15	64QAM	1	37	22.95	23.09	23.02	22.95	23.09	23.02
15	64QAM	1	74	23.15	23.19	23.11	23.15	23.19	23.11
15	64QAM	36	0	22.20	22.34	22.36	22.20	22.34	22.36
15	64QAM	36	20	22.25	22.38	22.29	22.25	22.38	22.29
15	64QAM	36	39	22.34	22.36	22.28	22.34	22.36	22.28
15	64QAM	75	0	22.34	22.38	22.39	22.34	22.38	22.39
Channel				37800	38000	38200	37800	38000	38200
Frequency (MHz)				2575	2595	2615	2575	2595	2615
10	QPSK	1	0	25.11	25.26	25.20	25.11	25.26	25.20
10	QPSK	1	25	25.12	25.24	25.18	25.12	25.24	25.18
10	QPSK	1	49	25.16	25.29	25.24	25.16	25.29	25.24
10	QPSK	25	0	24.11	24.29	24.24	24.11	24.29	24.24
10	QPSK	25	12	24.19	24.34	24.22	24.19	24.34	24.22
10	QPSK	25	25	24.17	24.29	24.22	24.17	24.29	24.22
10	QPSK	50	0	24.16	24.30	24.24	24.16	24.30	24.24
10	16QAM	1	0	24.24	24.38	24.36	24.24	24.38	24.36
10	16QAM	1	25	24.22	24.37	24.30	24.22	24.37	24.30
10	16QAM	1	49	24.28	24.39	24.32	24.28	24.39	24.32
10	16QAM	25	0	23.24	23.39	23.32	23.24	23.39	23.32
10	16QAM	25	12	23.25	23.42	23.31	23.25	23.42	23.31
10	16QAM	25	25	23.22	23.41	23.32	23.22	23.41	23.32
10	16QAM	50	0	23.25	23.40	23.32	23.25	23.40	23.32
10	64QAM	1	0	22.97	23.13	23.07	22.97	23.13	23.07
10	64QAM	1	25	22.98	23.11	23.05	22.98	23.11	23.05
10	64QAM	1	49	22.98	23.12	23.10	22.98	23.12	23.10



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10	64QAM	25	0	22.26	22.40	22.33	22.26	22.40	22.33
10	64QAM	25	12	22.27	22.43	22.36	22.27	22.43	22.36
10	64QAM	25	25	22.30	22.43	22.35	22.30	22.43	22.35
10	64QAM	50	0	22.23	22.38	22.32	22.23	22.38	22.32
Channel				37775	38000	38225	37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5	2572.5	2595	2617.5
5	QPSK	1	0	25.06	25.26	25.16	25.06	25.26	25.16
5	QPSK	1	12	25.10	25.24	25.17	25.10	25.24	25.17
5	QPSK	1	24	25.07	25.23	25.17	25.07	25.23	25.17
5	QPSK	12	0	24.13	24.27	24.21	24.13	24.27	24.21
5	QPSK	12	7	24.15	24.32	24.22	24.15	24.32	24.22
5	QPSK	12	13	24.16	24.27	24.23	24.16	24.27	24.23
5	QPSK	25	0	24.12	24.29	24.19	24.12	24.29	24.19
5	16QAM	1	0	24.17	24.34	24.27	24.17	24.34	24.27
5	16QAM	1	12	24.21	24.36	24.31	24.21	24.36	24.31
5	16QAM	1	24	24.24	24.39	24.32	24.24	24.39	24.32
5	16QAM	12	0	23.15	23.32	23.25	23.15	23.32	23.25
5	16QAM	12	7	23.20	23.33	23.27	23.20	23.33	23.27
5	16QAM	12	13	23.18	23.34	23.27	23.18	23.34	23.27
5	16QAM	25	0	23.22	23.37	23.30	23.22	23.37	23.30
5	64QAM	1	0	22.93	23.05	23.04	22.93	23.05	23.04
5	64QAM	1	12	22.94	23.09	23.04	22.94	23.09	23.04
5	64QAM	1	24	22.95	23.12	23.07	22.95	23.12	23.07
5	64QAM	12	0	22.20	22.35	22.28	22.20	22.35	22.28
5	64QAM	12	7	22.22	22.39	22.32	22.22	22.39	22.32
5	64QAM	12	13	22.21	22.40	22.28	22.21	22.40	22.28
5	64QAM	25	0	22.25	22.39	22.33	22.25	22.39	22.33



<WiFi on>

Power Selection				Head / Hotspot / Body-worn					
Transmit Antenna				UAT			LAT		
Max. Power				24.5			24.5		
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				37850	38000	38150	37850	38000	38150
Frequency (MHz)				2580	2595	2610	2580	2595	2610
20	QPSK	1	0	24.16	24.29	24.20	24.16	24.29	24.20
20	QPSK	1	49	24.16	24.16	24.06	24.16	24.16	24.06
20	QPSK	1	99	24.24	24.21	24.14	24.24	24.21	24.14
20	QPSK	50	0	24.22	24.24	24.28	24.22	24.24	24.28
20	QPSK	50	24	24.26	24.27	24.27	24.26	24.27	24.27
20	QPSK	50	50	24.25	24.28	24.18	24.25	24.28	24.18
20	QPSK	100	0	24.23	24.26	24.28	24.23	24.26	24.28
20	16QAM	1	0	24.19	24.25	24.22	24.19	24.25	24.22
20	16QAM	1	49	24.26	24.27	24.20	24.26	24.27	24.20
20	16QAM	1	99	24.21	24.14	24.23	24.21	24.14	24.23
20	16QAM	50	0	23.46	23.45	23.45	23.46	23.45	23.45
20	16QAM	50	24	23.50	23.44	23.40	23.50	23.44	23.40
20	16QAM	50	50	23.50	23.45	23.42	23.50	23.45	23.42
20	16QAM	100	0	23.46	23.49	23.49	23.46	23.49	23.49
20	64QAM	1	0	23.22	23.21	23.24	23.22	23.21	23.24
20	64QAM	1	49	23.18	23.22	23.13	23.18	23.22	23.13
20	64QAM	1	99	23.25	23.24	23.18	23.25	23.24	23.18
20	64QAM	50	0	22.46	22.49	22.50	22.46	22.49	22.50
20	64QAM	50	24	22.49	22.49	22.49	22.49	22.49	22.49
20	64QAM	50	50	22.49	22.40	22.41	22.49	22.40	22.41
20	64QAM	100	0	22.46	22.48	22.50	22.46	22.48	22.50
Channel				37825	38000	38175	37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5	2577.5	2595	2612.5
15	QPSK	1	0	24.05	24.09	24.11	24.05	24.09	24.11
15	QPSK	1	37	24.05	24.08	24.00	24.05	24.08	24.00
15	QPSK	1	74	24.12	24.14	24.07	24.12	24.14	24.07
15	QPSK	36	0	24.09	24.10	24.15	24.09	24.10	24.15
15	QPSK	36	20	24.09	24.12	24.04	24.09	24.12	24.04
15	QPSK	36	39	24.09	24.09	24.04	24.09	24.09	24.04
15	QPSK	75	0	24.09	24.11	24.16	24.09	24.11	24.16
15	16QAM	1	0	24.17	24.20	24.25	24.17	24.20	24.25
15	16QAM	1	37	24.14	24.17	24.08	24.14	24.17	24.08
15	16QAM	1	74	24.23	24.26	24.17	24.23	24.26	24.17
15	16QAM	36	0	23.25	23.28	23.32	23.25	23.28	23.32
15	16QAM	36	20	23.32	23.31	23.26	23.32	23.31	23.26
15	16QAM	36	39	23.30	23.34	23.25	23.30	23.34	23.25
15	16QAM	75	0	23.33	23.37	23.40	23.33	23.37	23.40
15	64QAM	1	0	23.06	23.12	23.15	23.06	23.12	23.15
15	64QAM	1	37	23.05	23.12	23.04	23.05	23.12	23.04
15	64QAM	1	74	23.13	23.19	23.11	23.13	23.19	23.11
15	64QAM	36	0	22.29	22.31	22.37	22.29	22.31	22.37
15	64QAM	36	20	22.32	22.36	22.28	22.32	22.36	22.28
15	64QAM	36	39	22.32	22.34	22.26	22.32	22.34	22.26
15	64QAM	75	0	22.31	22.37	22.39	22.31	22.37	22.39
Channel				37800	38000	38200	37800	38000	38200
Frequency (MHz)				2575	2595	2615	2575	2595	2615
10	QPSK	1	0	24.01	24.07	23.97	24.01	24.07	23.97
10	QPSK	1	25	24.01	24.05	23.96	24.01	24.05	23.96
10	QPSK	1	49	24.08	24.13	24.01	24.08	24.13	24.01
10	QPSK	25	0	24.03	24.09	24.03	24.03	24.09	24.03
10	QPSK	25	12	24.04	24.10	24.02	24.04	24.10	24.02
10	QPSK	25	25	24.06	24.08	24.02	24.06	24.08	24.02
10	QPSK	50	0	24.06	24.12	24.05	24.06	24.12	24.05
10	16QAM	1	0	24.15	24.21	24.13	24.15	24.21	24.13
10	16QAM	1	25	24.13	24.18	24.10	24.13	24.18	24.10
10	16QAM	1	49	24.14	24.20	24.13	24.14	24.20	24.13
10	16QAM	25	0	23.27	23.35	23.26	23.27	23.35	23.26
10	16QAM	25	12	23.29	23.38	23.31	23.29	23.38	23.31
10	16QAM	25	25	23.33	23.38	23.30	23.33	23.38	23.30
10	16QAM	50	0	23.30	23.34	23.29	23.30	23.34	23.29
10	64QAM	1	0	23.05	23.12	23.07	23.05	23.12	23.07
10	64QAM	1	25	23.05	23.09	23.06	23.05	23.09	23.06
10	64QAM	1	49	23.10	23.15	23.06	23.10	23.15	23.06
10	64QAM	25	0	22.31	22.37	22.29	22.31	22.37	22.29
10	64QAM	25	12	22.34	22.42	22.35	22.34	22.42	22.35



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10	64QAM	25	25	22.36	22.40	22.32	22.36	22.40	22.32
10	64QAM	50	0	22.30	22.35	22.28	22.30	22.35	22.28
Channel				37775	38000	38225	37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5	2572.5	2595	2617.5
5	QPSK	1	0	23.95	24.03	23.95	23.95	24.03	23.95
5	QPSK	1	12	23.99	24.06	23.95	23.99	24.06	23.95
5	QPSK	1	24	23.99	24.02	23.94	23.99	24.02	23.94
5	QPSK	12	0	23.97	24.09	24.02	23.97	24.09	24.02
5	QPSK	12	7	24.06	24.10	24.01	24.06	24.10	24.01
5	QPSK	12	13	24.03	24.05	24.02	24.03	24.05	24.02
5	QPSK	25	0	23.98	24.06	24.00	23.98	24.06	24.00
5	16QAM	1	0	24.10	24.13	24.06	24.10	24.13	24.06
5	16QAM	1	12	24.11	24.18	24.09	24.11	24.18	24.09
5	16QAM	1	24	24.12	24.16	24.10	24.12	24.16	24.10
5	16QAM	12	0	23.18	23.25	23.20	23.18	23.25	23.20
5	16QAM	12	7	23.20	23.29	23.24	23.20	23.29	23.24
5	16QAM	12	13	23.22	23.28	23.22	23.22	23.28	23.22
5	16QAM	25	0	23.28	23.32	23.26	23.28	23.32	23.26
5	64QAM	1	0	23.00	23.09	23.02	23.00	23.09	23.02
5	64QAM	1	12	23.04	23.10	23.04	23.04	23.10	23.04
5	64QAM	1	24	23.03	23.13	23.07	23.03	23.13	23.07
5	64QAM	12	0	22.24	22.30	22.25	22.24	22.30	22.25
5	64QAM	12	7	22.27	22.33	22.29	22.27	22.33	22.29
5	64QAM	12	13	22.30	22.32	22.26	22.30	22.32	22.26
5	64QAM	25	0	22.28	22.35	22.29	22.28	22.35	22.29



FCC SAR TEST REPORT

Report No. : FA891148-01

<LTE Band 41>

<WiFi off>

Power Selection				Head / Hotspot / Body-worn									
Transmit Antenna				UAT					LAT				
Max. Power				25.0					25.0				
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.	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	39750	40185	40620	41055	41490
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	2506	2549.5	2593	2636.5	2680
20	QPSK	1	0	24.47	24.50	24.52	24.58	24.45	24.47	24.50	24.52	24.58	24.45
20	QPSK	1	49	24.38	24.41	24.42	24.34	24.33	24.38	24.41	24.42	24.34	24.33
20	QPSK	1	99	24.38	24.45	24.48	24.34	24.29	24.38	24.45	24.48	24.34	24.29
20	QPSK	50	0	23.48	23.52	23.55	23.58	23.47	23.48	23.52	23.55	23.58	23.47
20	QPSK	50	24	23.44	23.48	23.51	23.41	23.42	23.44	23.48	23.51	23.41	23.42
20	QPSK	50	50	23.42	23.49	23.52	23.39	23.35	23.42	23.49	23.52	23.39	23.35
20	QPSK	100	0	23.44	23.49	23.51	23.53	23.39	23.44	23.49	23.51	23.53	23.39
20	16QAM	1	0	23.62	23.62	23.64	23.71	23.59	23.62	23.62	23.64	23.71	23.59
20	16QAM	1	49	23.51	23.52	23.54	23.43	23.46	23.51	23.52	23.54	23.43	23.46
20	16QAM	1	99	23.49	23.54	23.57	23.41	23.38	23.49	23.54	23.57	23.41	23.38
20	16QAM	50	0	22.55	22.59	22.65	22.65	22.52	22.55	22.59	22.65	22.65	22.52
20	16QAM	50	24	22.53	22.60	22.63	22.50	22.48	22.53	22.60	22.63	22.50	22.48
20	16QAM	50	50	22.52	22.55	22.58	22.47	22.41	22.52	22.55	22.58	22.47	22.41
20	16QAM	100	0	22.53	22.56	22.62	22.61	22.49	22.53	22.56	22.62	22.61	22.49
20	64QAM	1	0	22.31	22.37	22.40	22.43	22.32	22.31	22.37	22.40	22.43	22.32
20	64QAM	1	49	22.22	22.24	22.29	22.19	22.19	22.22	22.24	22.29	22.19	22.19
20	64QAM	1	99	22.22	22.29	22.30	22.19	22.14	22.22	22.29	22.30	22.19	22.14
20	64QAM	50	0	21.54	21.59	21.62	21.65	21.51	21.54	21.59	21.62	21.65	21.51
20	64QAM	50	24	21.51	21.57	21.60	21.50	21.48	21.51	21.57	21.60	21.50	21.48
20	64QAM	50	50	21.50	21.55	21.57	21.46	21.42	21.50	21.55	21.57	21.46	21.42
20	64QAM	100	0	21.53	21.57	21.58	21.61	21.46	21.53	21.57	21.58	21.61	21.46
Channel				39725	40173	40620	39725	40173	40620	41068	41515	39725	40173
Frequency (MHz)				2503.5	2548.3	2593	2503.5	2548.3	2593	2637.8	2682.5	2503.5	2548.3
15	QPSK	1	0	24.46	24.52	24.53	24.45	24.46	24.46	24.52	24.53	24.45	24.46
15	QPSK	1	37	24.37	24.41	24.44	24.36	24.33	24.37	24.41	24.44	24.36	24.33
15	QPSK	1	74	24.40	24.46	24.46	24.39	24.29	24.40	24.46	24.46	24.39	24.29
15	QPSK	36	0	23.44	23.46	23.53	23.44	23.44	23.44	23.46	23.53	23.44	23.44
15	QPSK	36	20	23.44	23.50	23.49	23.43	23.40	23.44	23.50	23.49	23.43	23.40
15	QPSK	36	39	23.40	23.44	23.49	23.35	23.32	23.40	23.44	23.49	23.35	23.32
15	QPSK	75	0	23.43	23.48	23.53	23.42	23.39	23.43	23.48	23.53	23.42	23.39
15	16QAM	1	0	23.57	23.59	23.62	23.57	23.58	23.57	23.59	23.62	23.57	23.58
15	16QAM	1	37	23.48	23.53	23.53	23.44	23.44	23.48	23.53	23.53	23.44	23.44
15	16QAM	1	74	23.48	23.57	23.59	23.46	23.41	23.48	23.57	23.59	23.46	23.41
15	16QAM	36	0	22.45	22.53	22.55	22.48	22.44	22.45	22.53	22.55	22.48	22.44
15	16QAM	36	20	22.49	22.51	22.56	22.46	22.43	22.49	22.51	22.56	22.46	22.43
15	16QAM	36	39	22.40	22.47	22.52	22.42	22.35	22.40	22.47	22.52	22.42	22.35
15	16QAM	75	0	22.51	22.57	22.61	22.49	22.45	22.51	22.57	22.61	22.49	22.45
15	64QAM	1	0	22.31	22.34	22.38	22.31	22.30	22.31	22.34	22.38	22.31	22.30
15	64QAM	1	37	22.23	22.28	22.27	22.22	22.18	22.23	22.28	22.27	22.22	22.18
15	64QAM	1	74	22.23	22.29	22.31	22.20	22.15	22.23	22.29	22.31	22.20	22.15
15	64QAM	36	0	21.48	21.53	21.56	21.49	21.47	21.48	21.53	21.56	21.49	21.47
15	64QAM	36	20	21.50	21.55	21.57	21.47	21.45	21.50	21.55	21.57	21.47	21.45
15	64QAM	36	39	21.45	21.51	21.54	21.44	21.40	21.45	21.51	21.54	21.44	21.40
15	64QAM	75	0	21.51	21.56	21.59	21.49	21.45	21.51	21.56	21.59	21.49	21.45
Channel				39700	40160	40620	39700	40160	40620	41080	41540	39700	40160
Frequency (MHz)				2501	2547	2593	2501	2547	2593	2639	2685	2501	2547
10	QPSK	1	0	24.42	24.47	24.48	24.41	24.36	24.42	24.47	24.48	24.41	24.36
10	QPSK	1	25	24.38	24.42	24.45	24.29	24.35	24.38	24.42	24.45	24.29	24.35
10	QPSK	1	49	24.39	24.45	24.49	24.26	24.29	24.39	24.45	24.49	24.26	24.29
10	QPSK	25	0	23.41	23.47	23.47	23.41	23.34	23.41	23.47	23.47	23.41	23.34
10	QPSK	25	12	23.40	23.45	23.55	23.34	23.33	23.40	23.45	23.55	23.34	23.33
10	QPSK	25	25	23.41	23.45	23.51	23.26	23.34	23.41	23.45	23.51	23.26	23.34
10	QPSK	50	0	23.39	23.46	23.51	23.32	23.34	23.39	23.46	23.51	23.32	23.34
10	16QAM	1	0	23.54	23.60	23.62	23.53	23.47	23.54	23.60	23.62	23.53	23.47
10	16QAM	1	25	23.49	23.55	23.56	23.38	23.36	23.49	23.55	23.56	23.38	23.36
10	16QAM	1	49	23.45	23.53	23.57	23.39	23.34	23.45	23.53	23.57	23.39	23.34
10	16QAM	25	0	22.47	22.55	22.58	22.41	22.42	22.47	22.55	22.58	22.41	22.42
10	16QAM	25	12	22.51	22.56	22.60	22.45	22.37	22.51	22.56	22.60	22.45	22.37
10	16QAM	25	25	22.48	22.54	22.55	22.36	22.34	22.48	22.54	22.55	22.36	22.34
10	16QAM	50	0	22.49	22.53	22.61	22.44	22.38	22.49	22.53	22.61	22.44	22.38
10	64QAM	1	0	22.30	22.35	22.36	22.30	22.21	22.30	22.35	22.36	22.30	22.21



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10	64QAM	1	25	22.25	22.28	22.31	22.24	22.18	22.25	22.28	22.31	22.24	22.18
10	64QAM	1	49	22.20	22.29	22.31	22.13	22.09	22.20	22.29	22.31	22.13	22.09
10	64QAM	25	0	21.53	21.57	21.63	21.56	21.42	21.53	21.57	21.63	21.56	21.42
10	64QAM	25	12	21.54	21.60	21.61	21.53	21.43	21.54	21.60	21.61	21.53	21.43
10	64QAM	25	25	21.47	21.55	21.59	21.49	21.46	21.47	21.55	21.59	21.49	21.46
10	64QAM	50	0	21.49	21.55	21.56	21.46	21.41	21.49	21.55	21.56	21.46	21.41
Channel				39675	40148	40620	39675	40148	40620	41093	41565	39675	40148
Frequency (MHz)				2498.5	2545.8	2593	2498.5	2545.8	2593	2640.30	2687.5	2498.5	2545.8
5	QPSK	1	0	24.37	24.40	24.44	24.36	24.32	24.37	24.40	24.44	24.36	24.32
5	QPSK	1	12	24.35	24.39	24.43	24.35	24.33	24.35	24.39	24.43	24.35	24.33
5	QPSK	1	24	24.31	24.35	24.39	24.29	24.25	24.31	24.35	24.39	24.29	24.25
5	QPSK	12	0	23.40	23.44	23.50	23.42	23.37	23.40	23.44	23.50	23.42	23.37
5	QPSK	12	7	23.39	23.50	23.52	23.43	23.39	23.39	23.50	23.52	23.43	23.39
5	QPSK	12	13	23.40	23.44	23.49	23.38	23.32	23.40	23.44	23.49	23.38	23.32
5	QPSK	25	0	23.40	23.42	23.50	23.37	23.33	23.40	23.42	23.50	23.37	23.33
5	16QAM	1	0	23.45	23.51	23.53	23.42	23.43	23.45	23.51	23.53	23.42	23.43
5	16QAM	1	12	23.48	23.53	23.57	23.45	23.43	23.48	23.53	23.57	23.45	23.43
5	16QAM	1	24	23.47	23.52	23.55	23.44	23.39	23.47	23.52	23.55	23.44	23.39
5	16QAM	12	0	22.43	22.48	22.56	22.40	22.38	22.43	22.48	22.56	22.40	22.38
5	16QAM	12	7	22.41	22.48	22.53	22.42	22.41	22.41	22.48	22.53	22.42	22.41
5	16QAM	12	13	22.39	22.46	22.54	22.43	22.38	22.39	22.46	22.54	22.43	22.38
5	16QAM	25	0	22.49	22.53	22.58	22.45	22.43	22.49	22.53	22.58	22.45	22.43
5	64QAM	1	0	22.19	22.26	22.33	22.23	22.19	22.19	22.26	22.33	22.23	22.19
5	64QAM	1	12	22.20	22.24	22.29	22.22	22.17	22.20	22.24	22.29	22.22	22.17
5	64QAM	1	24	22.20	22.25	22.32	22.21	22.16	22.20	22.25	22.32	22.21	22.16
5	64QAM	12	0	21.46	21.52	21.58	21.47	21.44	21.46	21.52	21.58	21.47	21.44
5	64QAM	12	7	21.48	21.53	21.56	21.48	21.43	21.48	21.53	21.56	21.48	21.43
5	64QAM	12	13	21.43	21.51	21.56	21.45	21.39	21.43	21.51	21.56	21.45	21.39
5	64QAM	25	0	21.49	21.54	21.59	21.50	21.45	21.49	21.54	21.59	21.50	21.45



<WiFi on>

Power Selection				Head / Hotspot / Body-worn									
Transmit Antenna				UAT					LAT				
Max. Power				24.5					24.5				
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.	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	39750	40185	40620	41055	41490
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	2506	2549.5	2593	2636.5	2680
20	QPSK	1	0	24.00	24.14	24.24	24.30	24.16	24.00	24.14	24.24	24.30	24.16
20	QPSK	1	49	23.89	24.05	24.11	24.06	24.03	23.89	24.05	24.11	24.06	24.03
20	QPSK	1	99	23.92	24.07	24.16	24.05	24.00	23.92	24.07	24.16	24.05	24.00
20	QPSK	50	0	23.52	23.67	23.77	23.79	23.67	23.52	23.67	23.77	23.79	23.67
20	QPSK	50	24	23.48	23.64	23.73	23.68	23.62	23.48	23.64	23.73	23.68	23.62
20	QPSK	50	50	23.47	23.60	23.71	23.62	23.56	23.47	23.60	23.71	23.62	23.56
20	QPSK	100	0	23.47	23.62	23.71	23.75	23.62	23.47	23.62	23.71	23.75	23.62
20	16QAM	1	0	23.63	23.77	23.86	23.93	23.80	23.63	23.77	23.86	23.93	23.80
20	16QAM	1	49	23.47	23.64	23.71	23.62	23.66	23.47	23.64	23.71	23.62	23.66
20	16QAM	1	99	23.51	23.65	23.76	23.64	23.60	23.51	23.65	23.76	23.64	23.60
20	16QAM	50	0	22.59	22.74	22.83	22.87	22.75	22.59	22.74	22.83	22.87	22.75
20	16QAM	50	24	22.58	22.71	22.80	22.75	22.71	22.58	22.71	22.80	22.75	22.71
20	16QAM	50	50	22.54	22.70	22.77	22.69	22.64	22.54	22.70	22.77	22.69	22.64
20	16QAM	100	0	22.55	22.68	22.80	22.82	22.70	22.55	22.68	22.80	22.82	22.70
20	64QAM	1	0	22.34	22.48	22.58	22.64	22.53	22.34	22.48	22.58	22.64	22.53
20	64QAM	1	49	22.22	22.39	22.46	22.40	22.38	22.22	22.39	22.46	22.40	22.38
20	64QAM	1	99	22.24	22.39	22.49	22.37	22.32	22.24	22.39	22.49	22.37	22.32
20	64QAM	50	0	21.57	21.70	21.81	21.83	21.74	21.57	21.70	21.81	21.83	21.74
20	64QAM	50	24	21.54	21.66	21.78	21.70	21.69	21.54	21.66	21.78	21.70	21.69
20	64QAM	50	50	21.52	21.66	21.76	21.67	21.64	21.52	21.66	21.76	21.67	21.64
20	64QAM	100	0	21.53	21.69	21.78	21.81	21.70	21.53	21.69	21.78	21.81	21.70
Channel				39725	40173	40620	39725	40173	40620	41068	41515	39725	40173
Frequency (MHz)				2503.5	2548.3	2593	2503.5	2548.3	2593	2637.8	2682.5	2503.5	2548.3
15	QPSK	1	0	23.86	24.01	24.12	24.16	24.14	23.86	24.01	24.12	24.16	24.14
15	QPSK	1	37	23.77	23.89	24.04	24.01	24.01	23.77	23.89	24.04	24.01	24.01
15	QPSK	1	74	23.82	23.97	24.08	24.07	24.02	23.82	23.97	24.08	24.07	24.02
15	QPSK	36	0	23.33	23.49	23.60	23.62	23.59	23.33	23.49	23.60	23.62	23.59
15	QPSK	36	20	23.37	23.49	23.60	23.63	23.47	23.37	23.49	23.60	23.63	23.47
15	QPSK	36	39	23.30	23.43	23.56	23.57	23.41	23.30	23.43	23.56	23.57	23.41
15	QPSK	75	0	23.34	23.49	23.59	23.51	23.56	23.34	23.49	23.59	23.51	23.56
15	16QAM	1	0	23.49	23.61	23.71	23.76	23.75	23.49	23.61	23.71	23.76	23.75
15	16QAM	1	37	23.37	23.51	23.62	23.50	23.63	23.37	23.51	23.62	23.50	23.63
15	16QAM	1	74	23.40	23.55	23.63	23.52	23.50	23.40	23.55	23.63	23.52	23.50
15	16QAM	36	0	22.37	22.52	22.61	22.55	22.63	22.37	22.52	22.61	22.55	22.63
15	16QAM	36	20	22.35	22.51	22.62	22.62	22.53	22.35	22.51	22.62	22.62	22.53
15	16QAM	36	39	22.32	22.46	22.58	22.54	22.51	22.32	22.46	22.58	22.54	22.51
15	16QAM	75	0	22.41	22.57	22.67	22.59	22.62	22.41	22.57	22.67	22.59	22.62
15	64QAM	1	0	22.20	22.31	22.45	22.40	22.36	22.20	22.31	22.45	22.40	22.36
15	64QAM	1	37	22.13	22.24	22.38	22.27	22.25	22.13	22.24	22.38	22.27	22.25
15	64QAM	1	74	22.15	22.28	22.38	22.38	22.31	22.15	22.28	22.38	22.38	22.31
15	64QAM	36	0	21.39	21.52	21.63	21.66	21.65	21.39	21.52	21.63	21.66	21.65
15	64QAM	36	20	21.38	21.54	21.64	21.66	21.52	21.38	21.54	21.64	21.66	21.52
15	64QAM	36	39	21.35	21.50	21.59	21.51	21.49	21.35	21.50	21.59	21.51	21.49
15	64QAM	75	0	21.41	21.55	21.64	21.57	21.63	21.41	21.55	21.64	21.57	21.63
Channel				39700	40160	40620	39700	40160	40620	41080	41540	39700	40160
Frequency (MHz)				2501	2547	2593	2501	2547	2593	2639	2685	2501	2547
10	QPSK	1	0	23.80	23.96	24.07	24.10	24.10	23.80	23.96	24.07	24.10	24.10
10	QPSK	1	25	23.76	23.93	24.04	24.07	24.01	23.76	23.93	24.04	24.07	24.01
10	QPSK	1	49	23.77	23.95	24.04	24.03	24.00	23.77	23.95	24.04	24.03	24.00
10	QPSK	25	0	23.29	23.45	23.58	23.61	23.60	23.29	23.45	23.58	23.61	23.60
10	QPSK	25	12	23.34	23.45	23.58	23.60	23.58	23.34	23.45	23.58	23.60	23.58
10	QPSK	25	25	23.26	23.42	23.54	23.56	23.53	23.26	23.42	23.54	23.56	23.53
10	QPSK	50	0	23.30	23.45	23.58	23.61	23.58	23.30	23.45	23.58	23.61	23.58
10	16QAM	1	0	23.42	23.59	23.68	23.74	23.75	23.42	23.59	23.68	23.74	23.75
10	16QAM	1	25	23.38	23.54	23.64	23.66	23.61	23.38	23.54	23.64	23.66	23.61
10	16QAM	1	49	23.32	23.51	23.63	23.60	23.57	23.32	23.51	23.63	23.60	23.57
10	16QAM	25	0	22.40	22.55	22.68	22.70	22.67	22.40	22.55	22.68	22.70	22.67
10	16QAM	25	12	22.40	22.57	22.68	22.71	22.65	22.40	22.57	22.68	22.71	22.65
10	16QAM	25	25	22.37	22.52	22.63	22.66	22.63	22.37	22.52	22.63	22.66	22.63
10	16QAM	50	0	22.37	22.55	22.67	22.70	22.65	22.37	22.55	22.67	22.70	22.65
10	64QAM	1	0	22.15	22.32	22.43	22.47	22.47	22.15	22.32	22.43	22.47	22.47
10	64QAM	1	25	22.11	22.29	22.39	22.40	22.34	22.11	22.29	22.39	22.40	22.34
10	64QAM	1	49	22.08	22.27	22.38	22.38	22.35	22.08	22.27	22.38	22.38	22.35



FCC SAR TEST REPORT

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10	64QAM	25	0	21.38	21.56	21.70	21.72	21.72	21.38	21.56	21.70	21.72	21.72
10	64QAM	25	12	21.40	21.55	21.70	21.71	21.70	21.40	21.55	21.70	21.71	21.70
10	64QAM	25	25	21.38	21.54	21.66	21.67	21.66	21.38	21.54	21.66	21.67	21.66
10	64QAM	50	0	21.36	21.53	21.63	21.66	21.64	21.36	21.53	21.63	21.66	21.64
Channel				39675	40148	40620	39675	40148	40620	41093	41565	39675	40148
Frequency (MHz)				2498.5	2545.8	2593	2498.5	2545.8	2593	2640.30	2687.5	2498.5	2545.8
5	QPSK	1	0	23.74	23.89	24.04	24.04	24.01	23.74	23.89	24.04	24.04	24.01
5	QPSK	1	12	23.73	23.87	24.06	24.04	24.02	23.73	23.87	24.06	24.04	24.02
5	QPSK	1	24	23.67	23.84	23.98	23.97	23.94	23.67	23.84	23.98	23.97	23.94
5	QPSK	12	0	23.25	23.45	23.55	23.56	23.55	23.25	23.45	23.55	23.56	23.55
5	QPSK	12	7	23.27	23.46	23.59	23.57	23.55	23.27	23.46	23.59	23.57	23.55
5	QPSK	12	13	23.28	23.41	23.57	23.57	23.54	23.28	23.41	23.57	23.57	23.54
5	QPSK	25	0	23.28	23.43	23.56	23.56	23.53	23.28	23.43	23.56	23.56	23.53
5	16QAM	1	0	23.32	23.49	23.60	23.60	23.61	23.32	23.49	23.60	23.60	23.61
5	16QAM	1	12	23.34	23.49	23.66	23.64	23.64	23.34	23.49	23.66	23.64	23.64
5	16QAM	1	24	23.30	23.49	23.61	23.61	23.58	23.30	23.49	23.61	23.61	23.58
5	16QAM	12	0	22.30	22.48	22.61	22.63	22.56	22.30	22.48	22.61	22.63	22.56
5	16QAM	12	7	22.32	22.48	22.60	22.63	22.58	22.32	22.48	22.60	22.63	22.58
5	16QAM	12	13	22.28	22.45	22.59	22.59	22.53	22.28	22.45	22.59	22.59	22.53
5	16QAM	25	0	22.39	22.50	22.67	22.68	22.64	22.39	22.50	22.67	22.68	22.64
5	64QAM	1	0	22.07	22.24	22.40	22.39	22.36	22.07	22.24	22.40	22.39	22.36
5	64QAM	1	12	22.09	22.23	22.40	22.37	22.39	22.09	22.23	22.40	22.37	22.39
5	64QAM	1	24	22.06	22.23	22.36	22.36	22.33	22.06	22.23	22.36	22.36	22.33
5	64QAM	12	0	21.32	21.50	21.63	21.65	21.63	21.32	21.50	21.63	21.65	21.63
5	64QAM	12	7	21.35	21.50	21.66	21.65	21.64	21.35	21.50	21.66	21.65	21.64
5	64QAM	12	13	21.31	21.47	21.65	21.63	21.56	21.31	21.47	21.65	21.63	21.56
5	64QAM	25	0	21.36	21.52	21.68	21.70	21.66	21.36	21.52	21.68	21.70	21.66

<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					3CC				
Number	Combination	4X4 MIMO	Restriction	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Restriction	Covered by Measurement Superset
1	41A_41A				3	41A_41C			
2	41C								

<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. 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)
Intra-Band	Non-Contiguous	41	20	2636.5	41055	QPSK	1	0	41	5	2498.5	39675	24.51	24.58
	Contiguous	41	20	2636.5	41055	QPSK	1	0	41	20	2656.30	41253	24.55	24.58

<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		41	20	2636.5	41055	QPSK	1	0	41	5	2498.5	39675	41	20	2510.2	39792	24.52	24.58

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

1. 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.
2. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
3. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
4. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
5. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is $\leq 0.4\text{ W/kg}$, 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 4			Ant 5			Ant 4+5							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %	
2.4GHz WLAN	802.11b 1Mbps	1	2412	16.48	16.50	100.00	16.18	16.50	100.00	16.42	16.50	16.50	16.50	19.47	19.50	100.00
		6	2437	16.47	16.50		16.05	16.50		16.34	16.50	15.95	16.50	19.16	19.50	
		11	2462	16.23	16.50		16.10	16.50		16.49	16.50	16.44	16.50	19.48	19.50	
		12	2467	16.42	16.50		16.08	16.50		16.25	16.50	16.15	16.50	19.21	19.50	
		13	2472	16.40	16.50		16.02	16.50		16.30	16.50	16.33	16.50	19.33	19.50	
	802.11g 6Mbps	1	2412	16.49	16.50	98.30	16.48	16.50	97.83	16.35	16.50	16.28	16.50	19.33	19.50	97.69
		6	2437	16.37	16.50		16.18	16.50		16.12	16.50	16.07	16.50	19.11	19.50	
		11	2462	16.28	16.50		16.26	16.50		16.10	16.50	16.13	16.50	19.13	19.50	
		12	2467	9.97	10.50		9.76	10.50		9.98	10.50	10.12	10.50	13.06	13.50	
		13	2472	-5.33	-5.00		-7.60	-6.00		-5.25	-5.00	-7.57	-6.00	-3.25	-2.00	
	802.11n-HT20 MCS0	1	2412	16.23	16.50	98.18	16.12	16.50	97.36	16.14	16.50	16.24	16.50	19.20	19.50	97.92
		6	2437	16.28	16.50		16.10	16.50		16.39	16.50	16.50	16.50	19.46	19.50	
		11	2462	14.94	15.50		15.14	15.50		15.25	15.50	15.31	15.50	18.29	18.50	
		12	2467	13.80	14.50		13.93	14.50		13.89	14.50	14.19	14.50	17.05	17.50	
		13	2472	-3.69	-3.00		-6.03	-6.00		-3.61	-3.00	-6.01	-6.00	-1.64	-1.00	

Power Selection			Hotspot / Body-worn			Hotspot / Body-worn			Hotspot / Body-worn							
Transmit Antenna			Ant 4			Ant 5			Ant 4+5							
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %	
2.4GHz WLAN	802.11b 1Mbps	1	2412	17.83	18.00	100.00	17.48	18.00	100.00	17.84	18.00	17.77	18.00	20.82	21.00	100.00
		6	2437	17.57	18.00		17.06	18.00		17.58	18.00	17.35	18.00	20.48	21.00	
		11	2462	16.23	18.00		16.10	18.00		16.49	18.00	16.44	18.00	19.48	21.00	
		12	2467	17.10	18.00		17.26	18.00		17.36	18.00	17.66	18.00	20.52	21.00	
		13	2472	16.64	18.00		16.22	18.00		16.66	18.00	16.62	18.00	19.65	21.00	
	802.11g 6Mbps	1	2412	16.79	18.00	98.30	16.87	18.00	97.83	17.20	18.00	17.19	18.00	20.21	21.00	97.69
		6	2437	17.43	18.00		17.55	18.00		17.75	18.00	18.00	18.00	20.89	21.00	
		11	2462	16.51	18.00		17.26	18.00		16.54	18.00	17.81	18.00	20.23	21.00	
		12	2467	9.97	10.50		9.76	10.50		9.98	10.50	10.12	10.50	13.06	13.50	
		13	2472	-5.33	-5.00		-7.60	-6.00		-5.25	-5.00	-7.57	-6.00	-3.25	-2.00	
	802.11n-HT20 MCS0	1	2412	16.23	18.00	98.18	16.12	18.00	97.36	16.57	18.00	16.53	18.00	19.56	21.00	97.92
		6	2437	17.36	18.00		17.48	18.00		17.58	18.00	17.97	18.00	20.79	21.00	
		11	2462	14.94	15.50		15.14	15.50		15.25	15.50	15.31	15.50	18.29	18.50	
		12	2467	13.80	14.50		13.93	14.50		13.89	14.50	14.19	14.50	17.05	17.50	
		13	2472	-3.69	-3.00		-6.03	-6.00		-3.61	-3.00	-6.01	-6.00	-1.64	-1.00	



<5GHz WLAN>

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 4			Ant 5			Ant 4+5						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %	
5.2GHz WLAN	802.11a 6Mbps	36	5180	11.25	12.50	97.83	11.10	12.50	98.06	11.92	12.50	10.97	12.50	14.48	15.50	97.35
		40	5200	11.15	12.50		11.08	12.50		11.38	12.50	11.43	12.50	14.42	15.50	
		44	5220	11.10	12.50		11.19	12.50		11.39	12.50	11.04	12.50	14.23	15.50	
		48	5240	11.06	12.50		11.47	12.50		11.34	12.50	11.37	12.50	14.37	15.50	
	802.11n-HT20 MCS0	36	5180	11.07	12.50	97.36	11.49	12.50	97.94	11.80	12.50	10.71	12.50	14.30	15.50	97.36
		40	5200	11.35	12.50		11.48	12.50		11.37	12.50	11.50	12.50	14.45	15.50	
		44	5220	11.40	12.50		11.47	12.50		11.67	12.50	11.24	12.50	14.47	15.50	
		48	5240	11.35	12.50		11.24	12.50		11.12	12.50	11.17	12.50	14.15	15.50	
	802.11n-HT40 MCS0	38	5190	11.32	12.50	96.48	11.48	12.50	95.95	11.93	12.50	10.98	12.50	14.49	15.50	95.85
		46	5230	11.21	12.50		11.45	12.50		11.34	12.50	11.01	12.50	14.19	15.50	
	802.11ac-VHT20 MCS0	36	5180	11.02	12.50	97.83	11.46	12.50	97.39	11.77	12.50	10.68	12.50	14.27	15.50	97.13
		40	5200	11.30	12.50		11.44	12.50		11.32	12.50	11.45	12.50	14.40	15.50	
44		5220	11.35	12.50	11.41		12.50	11.62		12.50	11.23	12.50	14.44	15.50		
48		5240	11.30	12.50	11.19		12.50	11.08		12.50	11.15	12.50	14.12	15.50		
802.11ac-VHT40 MCS0	38	5190	11.30	12.50	95.98	11.46	12.50	95.98	11.91	12.50	10.97	12.50	14.47	15.50	95.78	
	46	5230	11.18	12.50		11.43	12.50		11.32	12.50	10.99	12.50	14.16	15.50		
802.11ac-VHT80 MCS0	42	5210	11.57	12.50	91.87	11.39	12.50	91.87	11.67	12.50	11.08	12.50	14.40	15.50	91.87	

Power Selection				Hotspot / Body-worn			Hotspot / Body-worn			Hotspot / Body-worn						
Transmit Antenna				Ant 4			Ant 5			Ant 4+5						
Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %	
5.2GHz WLAN	802.11a 6Mbps	36	5180	17.48	17.50	97.83	16.53	17.50	98.06	17.50	17.50	16.71	17.50	20.13	20.50	97.35
		40	5200	17.22	17.50		16.64	17.50		17.50	17.50	16.84	17.50	20.11	20.50	
		44	5220	17.19	17.50		16.77	17.50		17.39	17.50	16.78	17.50	20.11	20.50	
		48	5240	17.17	17.50		17.02	17.50		17.40	17.50	17.18	17.50	20.30	20.50	
	802.11n-HT20 MCS0	36	5180	17.33	17.50	97.36	16.52	17.50	97.94	17.50	17.50	17.38	17.50	20.45	20.50	97.36
		40	5200	17.18	17.50		16.65	17.50		17.49	17.50	17.28	17.50	20.40	20.50	
		44	5220	17.00	17.50		16.70	17.50		17.50	17.50	17.33	17.50	20.43	20.50	
		48	5240	17.03	17.50		16.92	17.50		17.50	17.50	17.46	17.50	20.49	20.50	
	802.11n-HT40 MCS0	38	5190	12.21	12.50	96.48	11.66	12.50	95.95	12.50	12.50	11.90	12.50	15.22	15.50	95.85
		46	5230	17.02	17.50		16.68	17.50		17.29	17.50	17.03	17.50	20.17	20.50	
	802.11ac-VHT20 MCS0	36	5180	17.30	17.50	97.83	16.49	17.50	97.39	17.50	17.50	17.28	17.50	20.40	20.50	97.13
		40	5200	17.07	17.50		16.57	17.50		17.48	17.50	17.24	17.50	20.37	20.50	
44		5220	16.97	17.50	16.66		17.50	17.50		17.50	17.25	17.50	20.39	20.50		
48		5240	17.01	17.50	16.89		17.50	17.50		17.50	17.42	17.50	20.47	20.50		
802.11ac-VHT40 MCS0	38	5190	12.20	12.50	95.98	11.58	12.50	95.98	12.50	12.50	11.74	12.50	15.15	15.50	95.78	
	46	5230	17.01	17.50		16.67	17.50		17.28	17.50	17.00	17.50	20.15	20.50		
802.11ac-VHT80 MCS0	42	5210	11.57	12.50	91.87	11.39	12.50	91.87	11.87	12.50	11.76	12.50	14.83	15.50	91.87	



Power Selection				Head			Head			Head						
Transmit Antenna				Ant 4			Ant 5			Ant 4+5						
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps		52	5260	11.22	12.50	97.83	11.44	12.50	98.06	11.47	12.50	11.34	12.50	14.42	15.50
56			5280	11.20	12.50	11.46		12.50	11.09		12.50	11.35	12.50	14.23	15.50	
60			5300	11.15	12.50	11.47		12.50	11.39		12.50	10.87	12.50	14.15	15.50	
64			5320	11.10	12.50	11.39		12.50	11.35		12.50	10.67	12.50	14.03	15.50	
802.11n-HT20 MCS0		52	5260	11.44	12.50	97.36	11.21	12.50	97.94	11.22	12.50	11.09	12.50	14.16	15.50	97.36
		56	5280	11.43	12.50		11.25	12.50		11.21	12.50	11.33	12.50	14.28	15.50	
		60	5300	11.42	12.50		11.31	12.50		11.64	12.50	11.04	12.50	14.36	15.50	
		64	5320	11.38	12.50		11.15	12.50		11.59	12.50	10.95	12.50	14.29	15.50	
802.11n-HT40 MCS0		54	5270	11.20	12.50	96.48	11.49	12.50	95.95	11.31	12.50	11.33	12.50	14.33	15.50	95.85
		62	5310	11.47	12.50		11.34	12.50		11.66	12.50	11.13	12.50	14.42	15.50	
802.11ac-VHT20 MCS0		52	5260	11.39	12.50	97.83	11.16	12.50	97.39	11.17	12.50	11.04	12.50	14.11	15.50	97.13
		56	5280	11.38	12.50		11.20	12.50		11.31	12.50	11.19	12.50	14.26	15.50	
		60	5300	11.35	12.50		11.25	12.50		11.62	12.50	11.03	12.50	14.34	15.50	
		64	5320	11.32	12.50		11.11	12.50		11.57	12.50	10.91	12.50	14.26	15.50	
802.11ac-VHT40 MCS0		54	5270	11.17	12.50	95.98	11.45	12.50	95.98	11.29	12.50	11.31	12.50	14.31	15.50	95.78
		62	5310	11.45	12.50		11.30	12.50		11.64	12.50	11.11	12.50	14.39	15.50	
802.11ac-VHT80 MCS0		58	5290	11.25	12.50	91.87	11.37	12.50	91.87	11.39	12.50	11.18	12.50	14.30	15.50	91.87

Power Selection				Hotspot / Body-worn			Hotspot / Body-worn			Hotspot / Body-worn						
Transmit Antenna				Ant 4			Ant 5			Ant 4+5						
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps		52	5260	17.32	17.50	97.83	17.26	17.50	98.06	17.50	17.50	17.36	17.50	20.44	20.50
56			5280	17.24	17.50	16.68		17.50	17.48		17.50	16.93	17.50	20.22	20.50	
60			5300	17.07	17.50	16.47		17.50	17.20		17.50	16.99	17.50	20.11	20.50	
64			5320	17.21	17.50	16.53		17.50	17.33		17.50	16.90	17.50	20.13	20.50	
802.11n-HT20 MCS0		52	5260	17.09	17.50	97.36	17.12	17.50	97.94	17.28	17.50	17.14	17.50	20.22	20.50	97.36
		56	5280	17.18	17.50		17.14	17.50		17.45	17.50	17.00	17.50	20.24	20.50	
		60	5300	17.39	17.50		17.15	17.50		17.43	17.50	17.27	17.50	20.36	20.50	
		64	5320	17.46	17.50		17.20	17.50		17.50	17.50	17.36	17.50	20.44	20.50	
802.11n-HT40 MCS0		54	5270	17.12	17.50	96.48	17.16	17.50	95.95	17.45	17.50	17.38	17.50	20.43	20.50	95.85
		62	5310	13.86	14.00		13.83	14.00		13.88	14.00	13.86	14.00	16.88	17.00	
802.11ac-VHT20 MCS0		52	5260	17.06	17.50	97.83	17.09	17.50	97.39	17.26	17.50	17.11	17.50	20.19	20.50	97.13
		56	5280	17.11	17.50		17.10	17.50		17.48	17.50	16.88	17.50	20.20	20.50	
		60	5300	17.35	17.50		17.14	17.50		17.42	17.50	17.25	17.50	20.34	20.50	
		64	5320	17.41	17.50		17.18	17.50		17.50	17.50	17.26	17.50	20.39	20.50	
802.11ac-VHT40 MCS0		54	5270	17.07	17.50	95.98	17.10	17.50	95.98	17.42	17.50	17.34	17.50	20.39	20.50	95.78
		62	5310	13.74	14.00		13.74	14.00		13.77	14.00	13.79	14.00	16.79	17.00	
802.11ac-VHT80 MCS0		58	5290	14.00	14.00	91.87	13.75	14.00	91.87	13.98	14.00	13.99	14.00	17.00	17.00	91.87



Power Selection				Head			Head			Head						
Transmit Antenna				Ant 4			Ant 5			Ant 4+5						
5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %
	5.5GHz WLAN	802.11a 6Mbps	100	5500	10.45	10.50	97.83	10.21	10.50	98.06	10.09	10.50	10.45	10.50	13.28	13.50
116			5580	10.30	10.50	10.47		10.50	10.39		10.50	10.47	10.50	13.44	13.50	
124			5620	10.28	10.50	10.44		10.50	10.35		10.50	10.42	10.50	13.40	13.50	
132			5660	10.25	10.50	10.40		10.50	10.23		10.50	10.46	10.50	13.36	13.50	
144			5720	10.28	10.50	10.21		10.50	10.47		10.50	10.47	10.50	13.48	13.50	
802.11n-HT20 MCS0		100	5500	10.30	10.50	97.36	10.47	10.50	97.94	9.96	10.50	10.44	10.50	13.22	13.50	97.36
		116	5580	10.29	10.50		10.33	10.50		10.17	10.50	10.50	10.50	13.35	13.50	
		124	5620	10.22	10.50		10.30	10.50		10.26	10.50	10.37	10.50	13.33	13.50	
		132	5660	10.19	10.50		10.26	10.50		10.35	10.50	10.17	10.50	13.27	13.50	
		144	5720	10.12	10.50		10.49	10.50		10.29	10.50	10.33	10.50	13.32	13.50	
802.11n-HT40 MCS0		102	5510	10.32	10.50	96.48	10.48	10.50	95.95	10.01	10.50	10.48	10.50	13.26	13.50	95.85
		110	5550	10.46	10.50		10.49	10.50		10.47	10.50	10.49	10.50	13.49	13.50	
		126	5630	10.32	10.50		10.40	10.50		10.33	10.50	10.46	10.50	13.41	13.50	
		134	5670	10.21	10.50		10.11	10.50		10.20	10.50	10.28	10.50	13.25	13.50	
		142	5710	10.29	10.50		10.10	10.50		10.21	10.50	10.38	10.50	13.31	13.50	
802.11ac-VHT20 MCS0		100	5500	10.25	10.50	97.83	10.43	10.50	97.39	9.95	10.50	10.43	10.50	13.20	13.50	97.13
		116	5580	10.23	10.50		10.29	10.50		10.13	10.50	10.49	10.50	13.32	13.50	
		124	5620	10.20	10.50		10.28	10.50		10.13	10.50	10.46	10.50	13.31	13.50	
		132	5660	10.15	10.50		10.25	10.50		10.29	10.50	10.19	10.50	13.25	13.50	
		144	5720	10.06	10.50		10.45	10.50		10.24	10.50	10.31	10.50	13.28	13.50	
802.11ac-VHT40 MCS0	102	5510	10.30	10.50	95.98	10.43	10.50	95.98	9.99	10.50	10.47	10.50	13.24	13.50	95.78	
	110	5550	10.43	10.50		10.48	10.50		10.42	10.50	10.50	10.50	13.47	13.50		
	126	5630	10.30	10.50		10.36	10.50		10.38	10.50	10.39	10.50	13.40	13.50		
	134	5670	10.18	10.50		10.08	10.50		10.18	10.50	10.26	10.50	13.23	13.50		
	142	5710	10.26	10.50		10.06	10.50		10.19	10.50	10.37	10.50	13.29	13.50		
802.11ac-VHT80 MCS0	106	5530	10.41	10.50	91.87	10.31	10.50	91.87	10.21	10.50	10.50	10.50	13.37	13.50	91.87	
	122	5610	10.47	10.50		10.37	10.50		10.45	10.50	10.49	10.50	13.48	13.50		
	138	5690	10.22	10.50		10.19	10.50		10.05	10.50	10.10	10.50	13.09	13.50		



Power Selection				Hotspot / Body-worn			Hotspot / Body-worn			Hotspot / Body-worn							
Transmit Antenna				Ant 4			Ant 5			Ant 4+5							
5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Average	Tune-Up	Duty	Average	Tune-Up	Duty	Ant 4	Ant 4	Ant 5	Ant 5	Ant 4+5	Ant 4+5	Duty	
				power	Limit		Cycle	power		Limit	Cycle	Average	Tune-Up	Average	Tune-Up		Average
				(dBm)	(dBm)	%	(dBm)	(dBm)	%	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	%
5.5GHz WLAN	802.11a 6Mbps	100	5500	16.96	17.50	97.83	16.82	17.50	98.06	17.18	17.50	17.06	17.50	20.13	20.50	97.35	
		116	5580	16.98	17.50		16.97	17.50		17.08	17.50	16.98	17.50	20.04	20.50		
		124	5620	17.00	17.50		16.91	17.50		17.10	17.50	16.93	17.50	20.03	20.50		
		132	5660	17.04	17.50		16.78	17.50		17.20	17.50	16.91	17.50	20.07	20.50		
		144	5720	17.26	17.50		16.65	17.50		17.33	17.50	16.73	17.50	20.05	20.50		
	802.11n-HT20 MCS0	100	5500	17.28	17.50	97.36	17.16	17.50	97.94	17.32	17.50	17.26	17.50	20.30	20.50	97.36	
		116	5580	17.30	17.50		17.21	17.50		17.40	17.50	17.29	17.50	20.35	20.50		
		124	5620	17.21	17.50		17.19	17.50		17.39	17.50	17.20	17.50	20.31	20.50		
		132	5660	17.14	17.50		17.08	17.50		17.48	17.50	17.10	17.50	20.30	20.50		
		144	5720	17.10	17.50		16.93	17.50		17.50	17.50	17.14	17.50	20.33	20.50		
	802.11n-HT40 MCS0	102	5510	14.86	15.00	96.48	14.68	15.00	95.95	14.98	15.00	14.99	15.00	18.00	18.00	95.85	
		110	5550	16.92	17.50		17.22	17.50		17.26	17.50	17.23	17.50	20.26	20.50		
		126	5630	17.31	17.50		17.20	17.50		17.48	17.50	17.15	17.50	20.33	20.50		
		134	5670	17.49	17.50		16.94	17.50		17.50	17.50	17.34	17.50	20.43	20.50		
		142	5710	17.49	17.50		16.95	17.50		17.50	17.50	17.34	17.50	20.43	20.50		
	802.11ac-VHT20 MCS0	100	5500	17.27	17.50	97.83	17.15	17.50	97.39	17.30	17.50	17.23	17.50	20.27	20.50	97.13	
		116	5580	17.28	17.50		17.13	17.50		17.39	17.50	17.24	17.50	20.32	20.50		
		124	5620	17.19	17.50		17.03	17.50		17.44	17.50	17.00	17.50	20.24	20.50		
		132	5660	17.06	17.50		16.74	17.50		17.42	17.50	16.90	17.50	20.18	20.50		
		144	5720	17.06	17.50		16.51	17.50		17.26	17.50	16.71	17.50	20.00	20.50		
802.11ac-VHT40 MCS0	102	5510	14.78	15.00	95.98	14.63	15.00	95.98	14.89	15.00	14.92	15.00	17.91	18.00	95.78		
	110	5550	16.54	17.50		17.19	17.50		17.03	17.50	17.20	17.50	20.12	20.50			
	126	5630	17.18	17.50		17.10	17.50		17.42	17.50	17.03	17.50	20.24	20.50			
	134	5670	17.23	17.50		16.88	17.50		17.50	17.50	17.13	17.50	20.33	20.50			
	142	5710	17.47	17.50		16.94	17.50		17.50	17.50	17.25	17.50	20.39	20.50			
802.11ac-VHT80 MCS0	106	5530	11.77	12.00	91.87	11.75	12.00	91.87	11.99	12.00	11.91	12.00	14.96	15.00	91.87		
	122	5610	17.14	17.50		17.06	17.50		17.33	17.50	17.12	17.50	20.24	20.50			
	138	5690	17.35	17.50		16.87	17.50		17.48	17.50	16.93	17.50	20.23	20.50			



Power Selection				Head			Head			Head						
Transmit Antenna				Ant 4			Ant 5			Ant 4+5						
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %
	802.11a MCS0		149	5745	9.60	10.00	97.83	9.99	10.00	98.06	9.32	10.00	9.82	10.00	12.59	13.00
157			5785	9.88	10.00	9.69		10.00	9.84		10.00	9.87	10.00	12.87	13.00	
165			5825	9.83	10.00	9.80		10.00	9.50		10.00	9.57	10.00	12.55	13.00	
802.11n-HT20 MCS0		149	5745	9.90	10.00	97.36	9.81	10.00	97.94	9.68	10.00	9.99	10.00	12.85	13.00	97.36
		157	5785	9.99	10.00		9.93	10.00		9.74	10.00	9.84	10.00	12.80	13.00	
		165	5825	9.67	10.00		9.69	10.00		9.92	10.00	9.84	10.00	12.89	13.00	
802.11n-HT40 MCS0		151	5755	9.77	10.00	96.48	9.98	10.00	95.95	9.78	10.00	9.99	10.00	12.90	13.00	95.85
		159	5795	9.81	10.00		9.99	10.00		9.88	10.00	9.78	10.00	12.84	13.00	
802.11ac-VHT20 MCS0		149	5745	9.85	10.00	97.83	9.79	10.00	97.39	9.64	10.00	9.99	10.00	12.83	13.00	97.13
		157	5785	9.93	10.00		9.91	10.00		9.72	10.00	9.82	10.00	12.78	13.00	
		165	5825	9.60	10.00		9.66	10.00		9.88	10.00	9.83	10.00	12.86	13.00	
802.11ac-VHT40 MCS0		151	5755	9.74	10.00	95.98	9.91	10.00	95.98	9.69	10.00	9.99	10.00	12.85	13.00	95.78
		159	5795	9.78	10.00		9.95	10.00		9.81	10.00	9.74	10.00	12.78	13.00	
802.11ac-VHT80 MCS0		155	5775	9.87	10.00	91.87	9.62	10.00	91.87	9.63	10.00	9.86	10.00	12.76	13.00	91.87

Power Selection				Hotspot / Body-worn			Hotspot / Body-worn			Hotspot / Body-worn						
Transmit Antenna				Ant 4			Ant 5			Ant 4+5						
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 4 Average power (dBm)	Ant 4 Tune-Up Limit	Ant 5 Average power (dBm)	Ant 5 Tune-Up Limit	Ant 4+5 Average power (dBm)	Ant 4+5 Tune-Up Limit	Duty Cycle %
	802.11a MCS0		149	5745	17.08	17.50	97.83	17.06	17.50	98.06	17.09	17.50	17.16	17.50	20.14	20.50
157			5785	17.40	17.50	17.08		17.50	17.50		17.50	17.29	17.50	20.41	20.50	
165			5825	17.48	17.50	17.00		17.50	17.50		17.50	17.20	17.50	20.36	20.50	
802.11n-HT20 MCS0		149	5745	17.26	17.50	97.36	17.46	17.50	97.94	17.44	17.50	17.50	17.50	20.48	20.50	97.36
		157	5785	17.27	17.50		17.00	17.50		17.50	17.50	17.07	17.50	20.30	20.50	
		165	5825	17.18	17.50		17.00	17.50		17.42	17.50	17.00	17.50	20.22	20.50	
802.11n-HT40 MCS0		151	5755	17.09	17.50	96.48	17.05	17.50	95.95	17.21	17.50	17.14	17.50	20.19	20.50	95.85
		159	5795	17.36	17.50		17.00	17.50		17.50	17.50	17.21	17.50	20.37	20.50	
802.11ac-VHT20 MCS0		149	5745	17.21	17.50	97.83	17.42	17.50	97.39	17.31	17.50	17.50	17.50	20.42	20.50	97.13
		157	5785	17.24	17.50		17.24	17.50		17.49	17.50	17.01	17.50	20.26	20.50	
		165	5825	17.10	17.50		17.19	17.50		17.40	17.50	17.00	17.50	20.21	20.50	
802.11ac-VHT40 MCS0		151	5755	17.04	17.50	95.98	17.02	17.50	95.98	17.12	17.50	17.05	17.50	20.09	20.50	95.78
		159	5795	17.33	17.50		17.01	17.50		17.50	17.50	17.20	17.50	20.36	20.50	
802.11ac-VHT80 MCS0		155	5775	17.32	17.50	91.87	17.15	17.50	91.87	17.50	17.50	17.25	17.50	20.39	20.50	91.87



<2.4GHz Bluetooth>

General Note:

- For 2.4GHz Bluetooth SAR testing was selected 1Mbps due to its highest average power and duty cycle is 76.6% refer to part15C Bluetooth test report also considered in SAR testing, and the duty cycle would be scaled to theoretical 83.3% in reported SAR calculation.

Transmit Antenna			Ant 4		
Max. Power			18.00	13.00	13.00
Mode	Channel	Frequency (MHz)	1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	17.81	12.58	12.58
	CH 39	2441	17.78	12.52	12.52
	CH 78	2480	16.63	11.63	11.63

Transmit Antenna			Ant 4	
Max. Power			10.00	10.00
Mode	Channel	Frequency (MHz)	1Mbps	2Mbps
LE	CH 00	2402	9.49	9.46
	CH 19	2440	9.00	8.99
	CH 39	2480	8.60	8.62

12. Exposure Conditions

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm
WWAN LAT	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
BT&2.4GHz WLAN Ant 4	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
2.4GHz WLAN Ant 5	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
5GHz WLAN Ant 4	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
5GHz WLAN Ant 5	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
5GHz WLAN Ant 4+5	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT	Yes	Yes	Yes	No	Yes	Yes
WWAN LAT	Yes	Yes	No	Yes	Yes	Yes
BT&2.4GHz WLAN Ant 4	Yes	Yes	Yes	No	Yes	No
2.4GHz WLAN Ant 5	Yes	Yes	Yes	No	Yes	No
5GHz WLAN Ant 4	Yes	Yes	Yes	No	Yes	No
5GHz WLAN Ant 5	Yes	Yes	Yes	No	Yes	No
5GHz WLAN Ant 4+5	Yes	Yes	Yes	No	Yes	No

General Note:

- Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 9cm*5cm, 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.
- Detail antenna locations refer to appendix D.



13. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - d. For WLAN/Bluetooth: 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. In this report, additional 5.3GHz / 5.5GHz WLAN product specific SAR results which is submitted voluntarily.

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 $\leq 1/4$ 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 $\leq 1/4$ 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 $1/4$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

**LTE Note:**

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM 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 B4 / B12 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 5 / 17 SAR test and the conducted measurement was covered by Band 26 / 12; 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.

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 Head SAR testing is required when the U-NII-2A band highest reported SAR for a test configuration is > 1.2 W/kg, SAR is 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. Per KDB 248227 D01v02r02, the simultaneous 2.4GHz SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for 2.4GHz WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6 W/kg and SAR peak to location ratio ≤ 0.04 , no additional SAR measurements for MIMO.
6. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
7. Additional 5GHz MIMO SAR is used for simultaneous transmission analysis, 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 used the worst case rated power/measured power across the two transmit antenna



13.1 Head SAR

<GSM850>

WiFi off													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	251	848.8	28.80	29.00	1.047	0.02	0.626	0.656
	GSM850_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	251	848.8	28.80	29.00	1.047	0.01	0.439	0.460
	GSM850_UAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.18	0.360	0.377
	GSM850_UAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.08	0.266	0.279
	GSM850_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	251	848.8	28.80	29.00	1.047	0.07	0.589	0.617
WiFi on													
	GSM850_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	251	848.8	26.49	27.50	1.262	0.14	0.448	0.565
	GSM850_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	251	848.8	26.49	27.50	1.262	-0.06	0.372	0.469
	GSM850_UAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	251	848.8	26.49	27.50	1.262	-0.04	0.263	0.332
	GSM850_UAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	251	848.8	26.49	27.50	1.262	-0.08	0.194	0.245
	GSM850_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	251	848.8	26.49	27.50	1.262	0.1	0.439	0.554
WWAN LAT													
	GSM850_LAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.05	0.178	0.186
	GSM850_LAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	251	848.8	28.80	29.00	1.047	0.08	0.057	0.060
	GSM850_LAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	251	848.8	28.80	29.00	1.047	0.12	0.147	0.154
	GSM850_LAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	251	848.8	28.80	29.00	1.047	0.06	0.088	0.092
	GSM850_LAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	251	848.8	28.80	29.00	1.047	0	0.117	0.123

<GSM1900>

WiFi off													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	512	1850.2	22.36	23.50	1.300	-0.09	0.844	1.097
02	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	661	1880	22.07	23.50	1.390	-0.12	0.858	1.193
	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	810	1909.8	22.03	23.50	1.403	0.04	0.831	1.166
	GSM1900_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	512	1850.2	22.36	23.50	1.300	0.19	0.687	0.893
	GSM1900_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	661	1880	22.07	23.50	1.390	0.05	0.695	0.966
	GSM1900_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	810	1909.8	22.03	23.50	1.403	-0.04	0.704	0.988
	GSM1900_UAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	512	1850.2	22.36	23.50	1.300	-0.02	0.318	0.413
	GSM1900_UAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	512	1850.2	22.36	23.50	1.300	-0.07	0.341	0.443
	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	661	1880	22.07	23.50	1.390	0.08	0.841	1.169
WiFi on													
	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	512	1850.2	19.78	21.00	1.324	-0.05	0.329	0.436
	GSM1900_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	512	1850.2	19.78	21.00	1.324	0.18	0.286	0.379
	GSM1900_UAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	512	1850.2	19.78	21.00	1.324	0.04	0.131	0.173
	GSM1900_UAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	512	1850.2	19.78	21.00	1.324	0.08	0.146	0.193
	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	512	1850.2	19.78	21.00	1.324	-0.04	0.308	0.408
WWAN LAT													
	GSM1900_LAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.06	0.074	0.078
	GSM1900_LAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.18	0.029	0.031
	GSM1900_LAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.15	0.047	0.050
	GSM1900_LAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.05	0.033	0.035
	GSM1900_LAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	512	1850.2	26.26	26.50	1.057	0.02	0.061	0.064



<WCDMA II>

WiFi off													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9538	1907.6	20.48	21.50	1.265	0.06	0.930	1.176
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9262	1852.4	20.41	21.50	1.285	0.06	0.900	1.157
03	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9400	1880	20.38	21.50	1.294	0.05	0.920	1.191
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9538	1907.6	20.48	21.50	1.265	-0.02	0.810	1.024
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9262	1852.4	20.41	21.50	1.285	-0.12	0.790	1.015
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9400	1880	20.38	21.50	1.294	0.01	0.811	1.050
	WCDMA II_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	9538	1907.6	20.48	21.50	1.265	0.09	0.400	0.506
	WCDMA II_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	9538	1907.6	20.48	21.50	1.265	0.04	0.406	0.513
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	9400	1880	20.38	21.50	1.294	0.01	0.899	1.163
WiFi on													
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9538	1907.6	18.36	19.00	1.159	-0.17	0.496	0.575
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9538	1907.6	18.36	19.00	1.159	0.06	0.440	0.510
	WCDMA II_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	9538	1907.6	18.36	19.00	1.159	0.11	0.210	0.243
	WCDMA II_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	9538	1907.6	18.36	19.00	1.159	0.04	0.222	0.257
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	9538	1907.6	18.36	19.00	1.159	-0.11	0.478	0.554
WiFi off													
	WCDMA II_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.12	0.167	0.199
	WCDMA II_LAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.17	0.055	0.066
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.03	0.145	0.173
	WCDMA II_LAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.15	0.084	0.100
	WCDMA II_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	9538	1907.6	24.94	25.70	1.191	0.04	0.159	0.189
WiFi on													
	WCDMA II_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0.01	0.087	0.115
	WCDMA II_LAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0.02	0.027	0.036
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0.04	0.072	0.095
	WCDMA II_LAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0.01	0.040	0.053
	WCDMA II_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	9538	1907.6	23.28	24.50	1.324	0.03	0.073	0.097

<WCDMA IV>

WWAN UAT													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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)
04	WCDMA IV_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.05	0.450	0.503
	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.05	0.437	0.488
	WCDMA IV_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.11	0.139	0.155
	WCDMA IV_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.02	0.160	0.179
	WCDMA IV_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	1413	1732.6	23.52	24.00	1.117	0.02	0.431	0.481
WiFi off													
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	1413	1732.6	23.52	24.00	1.117	-0.07	0.030	0.034
	WCDMA IV_LAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.12	0.017	0.019
	WCDMA IV_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.08	0.023	0.026
	WCDMA IV_LAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.13	0.019	0.021
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	1413	1732.6	23.52	24.00	1.117	0.05	0.027	0.030
WiFi on													
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	1413	1732.6	19.25	19.50	1.059	-0.19	0.012	0.013
	WCDMA IV_LAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	1413	1732.6	19.25	19.50	1.059	0.08	0.008	0.008
	WCDMA IV_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	1413	1732.6	19.25	19.50	1.059	0.04	0.010	0.011
	WCDMA IV_LAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	1413	1732.6	19.25	19.50	1.059	-0.04	0.007	0.007
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	1413	1732.6	19.25	19.50	1.059	-0.15	0.010	0.011



<WCDMA V>

WiFi off													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.02	0.596	0.680
	WCDMA V_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.078	0.523	0.596
	WCDMA V_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.068	0.353	0.403
	WCDMA V_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.01	0.273	0.311
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	4233	846.6	23.93	24.50	1.140	-0.09	0.585	0.667
WiFi on													
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	4233	846.6	22.40	23.00	1.148	0.01	0.418	0.480
	WCDMA V_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	4233	846.6	22.40	23.00	1.148	0.08	0.354	0.406
	WCDMA V_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	4233	846.6	22.40	23.00	1.148	-0.03	0.275	0.316
	WCDMA V_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	4233	846.6	22.40	23.00	1.148	0.02	0.199	0.228
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	4233	846.6	22.40	23.00	1.148	0.06	0.408	0.468
WWAN LAT													
	WCDMA V_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.15	0.133	0.152
	WCDMA V_LAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.157	0.057	0.065
	WCDMA V_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.081	0.119	0.136
	WCDMA V_LAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.043	0.071	0.081
	WCDMA V_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	4233	846.6	23.93	24.50	1.140	0.01	0.101	0.115

<FDD LTE B2>

WiFi off																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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 2_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	18700	1860	21.03	21.50	1.114	0.07	0.914	1.018
	LTE Band 2_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	18900	1880	20.91	21.50	1.146	0.05	0.932	1.068
	LTE Band 2_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	19100	1900	20.84	21.50	1.164	0.04	0.918	1.069
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	18700	1860	21.02	21.50	1.117	-0.05	0.939	1.049
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	18900	1880	20.91	21.50	1.146	0.01	0.923	1.057
06	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	19100	1900	20.88	21.50	1.153	0.01	0.963	1.111
	LTE Band 2_UAT	20M	QPSK	100	0	Right Cheek	0mm	Battery 1	18700	1860	20.98	21.50	1.127	0	0.937	1.056
	LTE Band 2_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	18700	1860	21.03	21.50	1.114	0.06	0.779	0.868
	LTE Band 2_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	18900	1880	20.91	21.50	1.146	0	0.790	0.905
	LTE Band 2_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	19100	1900	20.84	21.50	1.164	0.02	0.773	0.900
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	18700	1860	21.02	21.50	1.117	0.01	0.802	0.896
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	18900	1880	20.91	21.50	1.146	0.01	0.803	0.920
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	19100	1900	20.88	21.50	1.153	0.04	0.810	0.934
	LTE Band 2_UAT	20M	QPSK	100	0	Right Tilted	0mm	Battery 1	18700	1860	20.98	21.50	1.127	0.01	0.802	0.904
	LTE Band 2_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	18700	1860	21.03	21.50	1.114	0.01	0.388	0.432
	LTE Band 2_UAT	20M	QPSK	50	24	Left Cheek	0mm	Battery 1	18700	1860	21.02	21.50	1.117	-0.01	0.396	0.442
	LTE Band 2_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	18700	1860	21.03	21.50	1.114	-0.02	0.394	0.439
	LTE Band 2_UAT	20M	QPSK	50	24	Left Tilted	0mm	Battery 1	18700	1860	21.02	21.50	1.117	-0.03	0.398	0.445
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 2	19100	1900	20.88	21.50	1.153	-0.08	0.942	1.087
WiFi on																
	LTE Band 2_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	18700	1860	18.06	19.00	1.242	0.05	0.370	0.459
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	18700	1860	18.07	19.00	1.239	0.01	0.393	0.487
	LTE Band 2_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	18700	1860	18.06	19.00	1.242	0.04	0.338	0.420
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	18700	1860	18.07	19.00	1.239	-0.01	0.357	0.442
	LTE Band 2_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	18700	1860	18.06	19.00	1.242	0	0.153	0.190
	LTE Band 2_UAT	20M	QPSK	50	24	Left Cheek	0mm	Battery 1	18700	1860	18.07	19.00	1.239	0.03	0.162	0.201
	LTE Band 2_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	18700	1860	18.06	19.00	1.242	0.02	0.162	0.201
	LTE Band 2_UAT	20M	QPSK	50	24	Left Tilted	0mm	Battery 1	18700	1860	18.07	19.00	1.239	0	0.172	0.213
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 2	18700	1860	18.07	19.00	1.239	0.05	0.372	0.461



WiFi off																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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 2_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.16	0.113	0.143
	LTE Band 2_LAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	18700	1860	23.67	24.70	1.268	-0.06	0.096	0.122
	LTE Band 2_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.04	0.037	0.047
	LTE Band 2_LAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	18700	1860	23.67	24.70	1.268	0.02	0.031	0.039
	LTE Band 2_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	18700	1860	24.67	25.70	1.268	0.1	0.071	0.090
	LTE Band 2_LAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	18700	1860	23.67	24.70	1.268	0.05	0.066	0.084
	LTE Band 2_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	18700	1860	24.67	25.70	1.268	0.13	0.048	0.061
	LTE Band 2_LAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	18700	1860	23.67	24.70	1.268	0.06	0.046	0.058
	LTE Band 2_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	18700	1860	24.67	25.70	1.268	0.03	0.102	0.129
WiFi on																
	LTE Band 2_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	18700	1860	23.45	24.50	1.274	0.13	0.081	0.103
	LTE Band 2_LAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.06	0.087	0.088
	LTE Band 2_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	18700	1860	23.45	24.50	1.274	0.04	0.023	0.029
	LTE Band 2_LAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.01	0.024	0.024
	LTE Band 2_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	18700	1860	23.45	24.50	1.274	0.03	0.050	0.064
	LTE Band 2_LAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	18700	1860	23.44	23.50	1.014	0.08	0.061	0.062
	LTE Band 2_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	18700	1860	23.45	24.50	1.274	0.014	0.038	0.048
	LTE Band 2_LAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	18700	1860	23.44	23.50	1.014	0.011	0.040	0.041
	LTE Band 2_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	18700	1860	23.45	24.50	1.274	0.16	0.078	0.099

<FDD LTE B4>

WWAN UAT																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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)
07	LTE Band 4_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.15	0.466	0.563
	LTE Band 4_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	20175	1732.5	22.69	23.50	1.205	-0.03	0.402	0.484
	LTE Band 4_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.09	0.410	0.495
	LTE Band 4_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.03	0.335	0.404
	LTE Band 4_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.05	0.146	0.176
	LTE Band 4_UAT	20M	QPSK	50	24	Left Cheek	0mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.03	0.121	0.146
	LTE Band 4_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.02	0.152	0.184
	LTE Band 4_UAT	20M	QPSK	50	24	Left Tilted	0mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.03	0.126	0.152
	LTE Band 4_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	20175	1732.5	23.68	24.50	1.208	0.03	0.438	0.529
WiFi off																
	LTE Band 4_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.18	0.029	0.035
	LTE Band 4_LAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.17	0.027	0.033
	LTE Band 4_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.02	0.016	0.019
	LTE Band 4_LAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.05	0.013	0.016
	LTE Band 4_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.13	0.028	0.034
	LTE Band 4_LAT	20M	QPSK	50	24	Left Cheek	0mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.07	0.020	0.024
	LTE Band 4_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.13	0.019	0.023
	LTE Band 4_LAT	20M	QPSK	50	24	Left Tilted	0mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.08	0.015	0.018
	LTE Band 4_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	20175	1732.5	23.68	24.50	1.208	-0.13	0.025	0.030
WiFi on																
	LTE Band 4_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	20175	1732.5	20.48	21.00	1.127	0.14	0.015	0.017
	LTE Band 4_LAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	20175	1732.5	20.50	21.00	1.122	0.04	0.014	0.016
	LTE Band 4_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	20175	1732.5	20.48	21.00	1.127	-0.01	0.008	0.009
	LTE Band 4_LAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	20175	1732.5	20.50	21.00	1.122	-0.02	0.009	0.010
	LTE Band 4_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	20175	1732.5	20.48	21.00	1.127	0.07	0.014	0.016
	LTE Band 4_LAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	20175	1732.5	20.50	21.00	1.122	-0.01	0.012	0.013
	LTE Band 4_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	20175	1732.5	20.48	21.00	1.127	-0.16	0.009	0.010
	LTE Band 4_LAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	20175	1732.5	20.50	21.00	1.122	0.04	0.008	0.009
	LTE Band 4_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	20175	1732.5	20.48	21.00	1.127	0.08	0.014	0.016



<FDD LTE B12>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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	LTE Band 12_UAT	10M	QPSK	1	49	Right Cheek	0mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.02	0.353	0.419
	LTE Band 12_UAT	10M	QPSK	25	25	Right Cheek	0mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.03	0.303	0.374
	LTE Band 12_UAT	10M	QPSK	1	49	Right Tilted	0mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.02	0.268	0.318
	LTE Band 12_UAT	10M	QPSK	25	25	Right Tilted	0mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.07	0.230	0.284
	LTE Band 12_UAT	10M	QPSK	1	49	Left Cheek	0mm	Battery 1	23095	707.5	24.96	25.70	1.186	-0.04	0.139	0.165
	LTE Band 12_UAT	10M	QPSK	25	25	Left Cheek	0mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.06	0.120	0.148
	LTE Band 12_UAT	10M	QPSK	1	49	Left Tilted	0mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.05	0.101	0.120
	LTE Band 12_UAT	10M	QPSK	25	25	Left Tilted	0mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.02	0.085	0.105
	LTE Band 12_UAT	10M	QPSK	1	49	Right Cheek	0mm	Battery 2	23095	707.5	24.96	25.70	1.186	-0.02	0.345	0.409
	LTE Band 12_LAT	10M	QPSK	1	49	Right Cheek	0mm	Battery 1	23095	707.5	24.96	25.70	1.186	-0.09	0.079	0.094
	LTE Band 12_LAT	10M	QPSK	25	25	Right Cheek	0mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.11	0.065	0.080
	LTE Band 12_LAT	10M	QPSK	1	49	Right Tilted	0mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.05	0.046	0.055
	LTE Band 12_LAT	10M	QPSK	25	25	Right Tilted	0mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.18	0.036	0.044
	LTE Band 12_LAT	10M	QPSK	1	49	Left Cheek	0mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.09	0.099	0.117
	LTE Band 12_LAT	10M	QPSK	25	25	Left Cheek	0mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.07	0.078	0.096
	LTE Band 12_LAT	10M	QPSK	1	49	Left Tilted	0mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.02	0.061	0.072
	LTE Band 12_LAT	10M	QPSK	25	25	Left Tilted	0mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.07	0.048	0.059
	LTE Band 12_LAT	10M	QPSK	1	49	Left Cheek	0mm	Battery 2	23095	707.5	24.96	25.70	1.186	-0.05	0.070	0.083

<FDD LTE B13>

WiFi off																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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 13_UAT	10M	QPSK	1	0	Right Cheek	0mm	Battery 1	23230	782	24.46	25.30	1.213	0.01	0.689	0.836
	LTE Band 13_UAT	10M	QPSK	25	12	Right Cheek	0mm	Battery 1	23230	782	23.36	24.30	1.242	0.05	0.535	0.664
	LTE Band 13_UAT	10M	QPSK	50	0	Right Cheek	0mm	Battery 1	23230	782	23.31	24.30	1.256	0.14	0.527	0.662
	LTE Band 13_UAT	10M	QPSK	1	0	Right Tilted	0mm	Battery 1	23230	782	24.46	25.30	1.213	0.02	0.470	0.570
	LTE Band 13_UAT	10M	QPSK	25	12	Right Tilted	0mm	Battery 1	23230	782	23.36	24.30	1.242	0.07	0.384	0.477
	LTE Band 13_UAT	10M	QPSK	1	0	Left Cheek	0mm	Battery 1	23230	782	24.46	25.30	1.213	-0.13	0.287	0.348
	LTE Band 13_UAT	10M	QPSK	25	12	Left Cheek	0mm	Battery 1	23230	782	23.36	24.30	1.242	0.07	0.233	0.289
	LTE Band 13_UAT	10M	QPSK	1	0	Left Tilted	0mm	Battery 1	23230	782	24.46	25.30	1.213	-0.04	0.243	0.295
	LTE Band 13_UAT	10M	QPSK	25	12	Left Tilted	0mm	Battery 1	23230	782	23.36	24.30	1.242	0.06	0.194	0.241
	LTE Band 13_UAT	10M	QPSK	1	0	Right Cheek	0mm	Battery 2	23230	782	24.46	25.30	1.213	-0.08	0.594	0.721
WiFi on																
	LTE Band 13_UAT	10M	QPSK	1	0	Right Cheek	0mm	Battery 1	23230	782	23.76	24.00	1.057	-0.03	0.451	0.477
	LTE Band 13_UAT	10M	QPSK	25	12	Right Cheek	0mm	Battery 1	23230	782	23.58	24.00	1.102	0.01	0.454	0.500
	LTE Band 13_UAT	10M	QPSK	1	0	Right Tilted	0mm	Battery 1	23230	782	23.76	24.00	1.057	-0.03	0.353	0.373
	LTE Band 13_UAT	10M	QPSK	25	12	Right Tilted	0mm	Battery 1	23230	782	23.58	24.00	1.102	0.04	0.353	0.389
	LTE Band 13_UAT	10M	QPSK	1	0	Left Cheek	0mm	Battery 1	23230	782	23.76	24.00	1.057	0.02	0.239	0.253
	LTE Band 13_UAT	10M	QPSK	25	12	Left Cheek	0mm	Battery 1	23230	782	23.58	24.00	1.102	0.02	0.240	0.264
	LTE Band 13_UAT	10M	QPSK	1	0	Left Tilted	0mm	Battery 1	23230	782	23.76	24.00	1.057	0.04	0.172	0.182
	LTE Band 13_UAT	10M	QPSK	25	12	Left Tilted	0mm	Battery 1	23230	782	23.58	24.00	1.102	0.05	0.174	0.192
	LTE Band 13_UAT	10M	QPSK	25	12	Right Cheek	0mm	Battery 2	23230	782	23.58	24.00	1.102	0.02	0.449	0.495



WWAN LAT																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_LAT	10M	QPSK	1	0	Right Cheek	0mm	Battery 1	23230	782	24.46	25.30	1.213	0.07	0.111	0.135
	LTE Band 13_LAT	10M	QPSK	25	12	Right Cheek	0mm	Battery 1	23230	782	23.36	24.30	1.242	0.08	0.085	0.106
	LTE Band 13_LAT	10M	QPSK	1	0	Right Tilted	0mm	Battery 1	23230	782	24.46	25.30	1.213	0.03	0.059	0.072
	LTE Band 13_LAT	10M	QPSK	25	12	Right Tilted	0mm	Battery 1	23230	782	23.36	24.30	1.242	0.1	0.047	0.058
	LTE Band 13_LAT	10M	QPSK	1	0	Left Cheek	0mm	Battery 1	23230	782	24.46	25.30	1.213	0.09	0.070	0.085
	LTE Band 13_LAT	10M	QPSK	25	12	Left Cheek	0mm	Battery 1	23230	782	23.36	24.30	1.242	0.17	0.053	0.066
	LTE Band 13_LAT	10M	QPSK	1	0	Left Tilted	0mm	Battery 1	23230	782	24.46	25.30	1.213	0.06	0.062	0.075
	LTE Band 13_LAT	10M	QPSK	25	12	Left Tilted	0mm	Battery 1	23230	782	23.36	24.30	1.242	0.15	0.049	0.061
	LTE Band 13_LAT	10M	QPSK	1	0	Right Cheek	0mm	Battery 2	23230	782	24.46	25.30	1.213	0.06	0.079	0.096

<FDD LTE B26>

WiFi off																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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 26_UAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 1	26865	831.5	24.55	25.70	1.303	-0.08	0.894	1.165
	LTE Band 26_UAT	15M	QPSK	36	20	Right Cheek	0mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.07	0.723	0.927
	LTE Band 26_UAT	15M	QPSK	75	0	Right Cheek	0mm	Battery 1	26865	831.5	23.57	24.70	1.297	0.06	0.716	0.929
	LTE Band 26_UAT	15M	QPSK	1	0	Right Tilted	0mm	Battery 1	26865	831.5	24.55	25.70	1.303	-0.1	0.863	1.125
	LTE Band 26_UAT	15M	QPSK	36	20	Right Tilted	0mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.01	0.701	0.899
	LTE Band 26_UAT	15M	QPSK	75	0	Right Tilted	0mm	Battery 1	26865	831.5	23.57	24.70	1.297	0.01	0.692	0.898
	LTE Band 26_UAT	15M	QPSK	1	0	Left Cheek	0mm	Battery 1	26865	831.5	24.55	25.70	1.303	-0.04	0.462	0.602
	LTE Band 26_UAT	15M	QPSK	36	20	Left Cheek	0mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.02	0.379	0.486
	LTE Band 26_UAT	15M	QPSK	1	0	Left Tilted	0mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.06	0.325	0.424
	LTE Band 26_UAT	15M	QPSK	36	20	Left Tilted	0mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.07	0.264	0.339
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 2	26865	831.5	24.55	25.70	1.303	-0.07	0.774	1.009
WiFi on																
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 1	26865	831.5	22.56	23.00	1.107	0.01	0.427	0.473
	LTE Band 26_UAT	15M	QPSK	36	0	Right Cheek	0mm	Battery 1	26865	831.5	22.56	23.00	1.107	0.02	0.425	0.470
	LTE Band 26_UAT	15M	QPSK	1	0	Right Tilted	0mm	Battery 1	26865	831.5	22.56	23.00	1.107	0.09	0.335	0.371
	LTE Band 26_UAT	15M	QPSK	36	0	Right Tilted	0mm	Battery 1	26865	831.5	22.56	23.00	1.107	0.02	0.339	0.375
	LTE Band 26_UAT	15M	QPSK	1	0	Left Cheek	0mm	Battery 1	26865	831.5	22.56	23.00	1.107	0.1	0.237	0.262
	LTE Band 26_UAT	15M	QPSK	36	0	Left Cheek	0mm	Battery 1	26865	831.5	22.56	23.00	1.107	0.03	0.241	0.267
	LTE Band 26_UAT	15M	QPSK	1	0	Left Tilted	0mm	Battery 1	26865	831.5	22.56	23.00	1.107	0	0.173	0.191
	LTE Band 26_UAT	15M	QPSK	36	0	Left Tilted	0mm	Battery 1	26865	831.5	22.56	23.00	1.107	0.01	0.177	0.196
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 2	26865	831.5	22.56	23.00	1.107	0.05	0.421	0.466
WWAN LAT																
	LTE Band 26_LAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.01	0.112	0.146
	LTE Band 26_LAT	15M	QPSK	36	20	Right Cheek	0mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.05	0.097	0.124
	LTE Band 26_LAT	15M	QPSK	1	0	Right Tilted	0mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.15	0.057	0.074
	LTE Band 26_LAT	15M	QPSK	36	20	Right Tilted	0mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.03	0.046	0.059
	LTE Band 26_LAT	15M	QPSK	1	0	Left Cheek	0mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.05	0.113	0.147
	LTE Band 26_LAT	15M	QPSK	36	20	Left Cheek	0mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.1	0.095	0.122
	LTE Band 26_LAT	15M	QPSK	1	0	Left Tilted	0mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.13	0.067	0.087
	LTE Band 26_LAT	15M	QPSK	36	20	Left Tilted	0mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.13	0.055	0.071
	LTE Band 26_LAT	15M	QPSK	1	0	Left Cheek	0mm	Battery 2	26865	831.5	24.55	25.70	1.303	-0.11	0.079	0.103



<TDD LTE B38>

WiFi off																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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)
11	LTE Band 38_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.11	0.675	0.745
	LTE Band 38_UAT	20M	QPSK	50	50	Right Cheek	0mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.1	0.575	0.624
	LTE Band 38_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.13	0.325	0.358
	LTE Band 38_UAT	20M	QPSK	50	50	Right Tilted	0mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.04	0.255	0.277
	LTE Band 38_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.03	0.274	0.302
	LTE Band 38_UAT	20M	QPSK	50	50	Left Cheek	0mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.02	0.213	0.231
	LTE Band 38_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.02	0.173	0.191
	LTE Band 38_UAT	20M	QPSK	50	50	Left Tilted	0mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.1	0.131	0.142
	LTE Band 38_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	38000	2595	25.30	25.70	1.096	62.9	1.006	0.07	0.643	0.709
WiFi on																		
	LTE Band 38_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.1	0.577	0.609
	LTE Band 38_UAT	20M	QPSK	50	50	Right Cheek	0mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.03	0.568	0.601
	LTE Band 38_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.01	0.268	0.283
	LTE Band 38_UAT	20M	QPSK	50	50	Right Tilted	0mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0	0.266	0.282
	LTE Band 38_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	0.03	0.221	0.233
	LTE Band 38_UAT	20M	QPSK	50	50	Left Cheek	0mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.02	0.210	0.222
	LTE Band 38_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	0.01	0.134	0.141
	LTE Band 38_UAT	20M	QPSK	50	50	Left Tilted	0mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.04	0.128	0.135
	LTE Band 38_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.03	0.569	0.601
WiFi off																		
	LTE Band 38_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.1	0.463	0.511
	LTE Band 38_LAT	20M	QPSK	50	50	Right Cheek	0mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.06	0.364	0.395
	LTE Band 38_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.11	0.117	0.129
	LTE Band 38_LAT	20M	QPSK	50	50	Right Tilted	0mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.15	0.096	0.104
	LTE Band 38_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.1	0.245	0.270
	LTE Band 38_LAT	20M	QPSK	50	50	Left Cheek	0mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.04	0.195	0.212
	LTE Band 38_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.1	0.158	0.174
	LTE Band 38_LAT	20M	QPSK	50	50	Left Tilted	0mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.19	0.126	0.137
	LTE Band 38_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	38000	2595	25.30	25.70	1.096	62.9	1.006	0.06	0.438	0.483
WiFi on																		
	LTE Band 38_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	0.05	0.319	0.337
	LTE Band 38_LAT	20M	QPSK	50	50	Right Cheek	0mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.12	0.311	0.329
	LTE Band 38_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.01	0.080	0.084
	LTE Band 38_LAT	20M	QPSK	50	50	Right Tilted	0mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.02	0.082	0.087
	LTE Band 38_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	0.06	0.171	0.181
	LTE Band 38_LAT	20M	QPSK	50	50	Left Cheek	0mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.01	0.168	0.178
	LTE Band 38_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.09	0.103	0.109
	LTE Band 38_LAT	20M	QPSK	50	50	Left Tilted	0mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.13	0.108	0.114
	LTE Band 38_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	38000	2595	24.29	24.50	1.050	62.9	1.006	0.02	0.311	0.328



<TDD LTE B41>

WiFi off																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	0	0.598	0.663
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	39750	2506	24.47	25.00	1.130	62.9	1.006	-0.11	0.537	0.610
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	40185	2549.5	24.50	25.00	1.122	62.9	1.006	-0.03	0.548	0.619
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	40620	2593	24.52	25.00	1.117	62.9	1.006	-0.02	0.583	0.655
12	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	41490	2680	24.45	25.00	1.135	62.9	1.006	-0.02	0.599	0.684
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	-0.04	0.470	0.521
	LTE Band 41_UAT	20M	QPSK	100	0	Right Cheek	0mm	Battery 1	41055	2636.5	23.53	24.00	1.114	62.9	1.006	-0.03	0.461	0.517
	LTE Band 41_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	-0.01	0.263	0.291
	LTE Band 41_UAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	-0.02	0.205	0.227
	LTE Band 41_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	-0.03	0.224	0.248
	LTE Band 41_UAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	0.04	0.175	0.194
	LTE Band 41_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	-0.03	0.145	0.161
	LTE Band 41_UAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	0.14	0.113	0.125
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	41490	2680	24.45	25.00	1.135	62.9	1.006	-0.08	0.555	0.634
WiFi on																		
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	-0.05	0.568	0.598
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	0.06	0.463	0.489
	LTE Band 41_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0.08	0.264	0.278
	LTE Band 41_UAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	0.04	0.203	0.214
	LTE Band 41_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	-0.01	0.218	0.230
	LTE Band 41_UAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	0	0.165	0.174
	LTE Band 41_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0.03	0.137	0.144
	LTE Band 41_UAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	-0.12	0.108	0.114
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	41055	2636.5	24.30	24.50	1.047	62.9	1.006	-0.01	0.543	0.572
WiFi off																		
	LTE Band 41_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	0.08	0.370	0.410
	LTE Band 41_LAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	0.07	0.363	0.402
	LTE Band 41_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	0.12	0.086	0.095
	LTE Band 41_LAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	0.1	0.086	0.095
	LTE Band 41_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	0.16	0.177	0.196
	LTE Band 41_LAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	0.04	0.138	0.153
	LTE Band 41_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	-0.03	0.141	0.156
	LTE Band 41_LAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	0.05	0.112	0.124
	LTE Band 41_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	41055	2636.5	24.58	25.00	1.102	62.9	1.006	0.05	0.339	0.376
WiFi on																		
	LTE Band 41_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0.15	0.309	0.326
	LTE Band 41_LAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	0.01	0.289	0.305
	LTE Band 41_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	-0.04	0.071	0.075
	LTE Band 41_LAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	-0.01	0.082	0.087
	LTE Band 41_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0	0.138	0.145
	LTE Band 41_LAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	0.03	0.133	0.140
	LTE Band 41_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0.02	0.108	0.114
	LTE Band 41_LAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	0.06	0.105	0.111
	LTE Band 41_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0.12	0.283	0.298



<2.4GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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 4	Battery 1	1	2412	16.48	16.50	1.005	100	1.000	-0.14	0.209	0.210
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	Battery 1	1	2412	16.48	16.50	1.005	100	1.000	0.1	0.244	0.245
13	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	Battery 1	1	2412	16.48	16.50	1.005	100	1.000	-0.08	0.705	0.708
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	Battery 1	1	2412	16.48	16.50	1.005	100	1.000	0.04	0.441	0.443
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	Battery 2	1	2412	16.48	16.50	1.005	100	1.000	-0.08	0.699	0.702
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 5	Battery 1	1	2412	16.18	16.50	1.076	100	1.000	0.01	0.132	0.142
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 5	Battery 1	1	2412	16.18	16.50	1.076	100	1.000	0.04	0.071	0.076
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 5	Battery 1	1	2412	16.18	16.50	1.076	100	1.000	-0.12	0.428	0.461
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 5	Battery 1	1	2412	16.18	16.50	1.076	100	1.000	-0.1	0.143	0.154
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 5	Battery 2	1	2412	16.18	16.50	1.076	100	1.000	-0.12	0.425	0.457

<5.3GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Battery 1	58	5290	11.25	12.50	1.334	91.9	1.088	0.06	0.186	0.270
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Battery 1	58	5290	11.25	12.50	1.334	91.9	1.088	0.09	0.204	0.296
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Battery 1	58	5290	11.25	12.50	1.334	91.9	1.088	-0.02	0.245	0.355
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Battery 1	58	5290	11.25	12.50	1.334	91.9	1.088	0.17	0.240	0.348
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Battery 2	58	5290	11.25	12.50	1.334	91.9	1.088	-0.02	0.241	0.350
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 5	Battery 1	58	5290	11.37	12.50	1.297	91.9	1.088	-0.06	0.040	0.056
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 5	Battery 1	58	5290	11.37	12.50	1.297	91.9	1.088	0.17	0.038	0.054
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 5	Battery 1	58	5290	11.37	12.50	1.297	91.9	1.088	0.19	0.119	0.168
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Battery 1	58	5290	11.37	12.50	1.297	91.9	1.088	-0.04	0.074	0.104
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 5	Battery 2	58	5290	11.37	12.50	1.297	91.9	1.088	0.19	0.106	0.150
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	Battery 1	58	5290	11.18	12.50	1.355	91.9	1.088	-0.06	0.203	0.299
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	Battery 1	58	5290	11.18	12.50	1.355	91.9	1.088	0.06	0.232	0.342
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Battery 1	58	5290	11.18	12.50	1.355	91.9	1.088	0	0.300	0.442
14	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 1	58	5290	11.18	12.50	1.355	91.9	1.088	0.05	0.310	0.457
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 2	58	5290	11.18	12.50	1.355	91.9	1.088	0.05	0.306	0.451



<5.5GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Battery 1	122	5610	10.47	10.50	1.007	91.9	1.088	-0.06	0.309	0.339
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Battery 1	122	5610	10.47	10.50	1.007	91.9	1.088	-0.04	0.357	0.391
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Battery 1	122	5610	10.47	10.50	1.007	91.9	1.088	0.13	0.417	0.457
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Battery 1	122	5610	10.47	10.50	1.007	91.9	1.088	0.1	0.485	0.531
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Battery 2	122	5610	10.47	10.50	1.007	91.9	1.088	0.1	0.480	0.526
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 5	Battery 1	122	5610	10.37	10.50	1.030	91.9	1.088	-0.18	0.012	0.013
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 5	Battery 1	122	5610	10.37	10.50	1.030	91.9	1.088	0.07	0.012	0.013
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 5	Battery 1	122	5610	10.37	10.50	1.030	91.9	1.088	-0.14	0.065	0.073
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Battery 1	122	5610	10.37	10.50	1.030	91.9	1.088	0.1	0.078	0.087
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Battery 2	122	5610	10.37	10.50	1.030	91.9	1.088	0.1	0.073	0.082
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	Battery 1	122	5610	10.45	10.50	1.012	91.9	1.088	-0.12	0.416	0.458
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	Battery 1	122	5610	10.45	10.50	1.012	91.9	1.088	0.01	0.448	0.493
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Battery 1	122	5610	10.45	10.50	1.012	91.9	1.088	0.11	0.511	0.562
15	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 1	122	5610	10.45	10.50	1.012	91.9	1.088	0.17	0.617	0.679
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 2	122	5610	10.45	10.50	1.012	91.9	1.088	0.17	0.612	0.674

<5.8GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Battery 1	155	5775	9.87	10.00	1.030	91.9	1.088	-0.11	0.288	0.323
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Battery 1	155	5775	9.87	10.00	1.030	91.9	1.088	0.1	0.338	0.379
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Battery 1	155	5775	9.87	10.00	1.030	91.9	1.088	0.1	0.397	0.445
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Battery 1	155	5775	9.87	10.00	1.030	91.9	1.088	0.09	0.419	0.470
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Battery 2	155	5775	9.87	10.00	1.030	91.9	1.088	0.09	0.417	0.467
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 5	Battery 1	155	5775	9.62	10.00	1.091	91.9	1.088	-0.1	0.016	0.019
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 5	Battery 1	155	5775	9.62	10.00	1.091	91.9	1.088	0.17	0.029	0.034
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 5	Battery 1	155	5775	9.62	10.00	1.091	91.9	1.088	0.1	0.079	0.094
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Battery 1	155	5775	9.62	10.00	1.091	91.9	1.088	-0.11	0.103	0.122
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Battery 2	155	5775	9.62	10.00	1.091	91.9	1.088	-0.11	0.099	0.118
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	Battery 1	155	5775	9.63	10.00	1.089	91.9	1.088	-0.11	0.345	0.409
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	Battery 1	155	5775	9.63	10.00	1.089	91.9	1.088	0.17	0.387	0.459
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Battery 1	155	5775	9.63	10.00	1.089	91.9	1.088	0.17	0.409	0.485
16	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 1	155	5775	9.63	10.00	1.089	91.9	1.088	0.08	0.470	0.557
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 2	155	5775	9.63	10.00	1.089	91.9	1.088	0.08	0.459	0.544

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	-0.11	0.325	0.366
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	-0.03	0.294	0.331
17	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	-0.03	0.618	0.696
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	0.02	0.364	0.410
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4	Battery 2	0	2402	17.81	18.00	1.044	77.2	1.079	0.05	0.587	0.661



13.2 Hotspot SAR

<GSM850>

Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.1	0.149	0.156
	GSM850_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.02	0.164	0.172
	GSM850_UAT	GPRS (4 Tx slots)	Left Side	10mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.04	0.129	0.135
	GSM850_UAT	GPRS (4 Tx slots)	Right Side	10mm	Battery 1	251	848.8	28.80	29.00	1.047	0.04	0.098	0.103
	GSM850_UAT	GPRS (4 Tx slots)	Top Side	10mm	Battery 1	251	848.8	28.80	29.00	1.047	0.07	0.110	0.115
	GSM850_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	251	848.8	28.80	29.00	1.047	-0.06	0.161	0.169
	GSM850_LAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	251	848.8	28.80	29.00	1.047	0.11	0.167	0.175
18	GSM850_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	251	848.8	28.80	29.00	1.047	0.18	0.205	0.215
	GSM850_LAT	GPRS (4 Tx slots)	Left Side	10mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.14	0.099	0.104
	GSM850_LAT	GPRS (4 Tx slots)	Right Side	10mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.09	0.164	0.172
	GSM850_LAT	GPRS (4 Tx slots)	Bottom Side	10mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.01	0.033	0.035
	GSM850_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	251	848.8	28.80	29.00	1.047	-0.03	0.170	0.178

<GSM1900>

Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.17	0.270	0.285
19	GSM1900_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.11	0.341	0.360
	GSM1900_UAT	GPRS (4 Tx slots)	Left Side	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.12	0.174	0.184
	GSM1900_UAT	GPRS (4 Tx slots)	Right Side	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.08	0.040	0.042
	GSM1900_UAT	GPRS (4 Tx slots)	Top Side	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.13	0.253	0.267
	GSM1900_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	512	1850.2	26.26	26.50	1.057	-0.06	0.326	0.345
	GSM1900_LAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.02	0.147	0.155
	GSM1900_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.01	0.332	0.351
	GSM1900_LAT	GPRS (4 Tx slots)	Left Side	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.08	0.042	0.044
	GSM1900_LAT	GPRS (4 Tx slots)	Right Side	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.06	0.036	0.038
	GSM1900_LAT	GPRS (4 Tx slots)	Bottom Side	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.03	0.340	0.359
	GSM1900_LAT	GPRS (4 Tx slots)	Bottom Side	10mm	Battery 2	512	1850.2	26.26	26.50	1.057	0.18	0.322	0.340

<WCDMA II>

WiFi off													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	RMC 12.2Kbps	Front	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	-0.17	0.460	0.548
20	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	-0.13	0.662	0.789
	WCDMA II_UAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.19	0.295	0.351
	WCDMA II_UAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.03	0.067	0.080
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.1	0.456	0.543
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	9538	1907.6	24.94	25.70	1.191	-0.03	0.642	0.765
WiFi on													
	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	Battery 1	9538	1907.6	21.38	22.00	1.153	-0.11	0.167	0.193
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	9538	1907.6	21.38	22.00	1.153	0.02	0.296	0.341
	WCDMA II_UAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	9538	1907.6	21.38	22.00	1.153	0.04	0.116	0.134
	WCDMA II_UAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	9538	1907.6	21.38	22.00	1.153	-0.01	0.021	0.024
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	Battery 1	9538	1907.6	21.38	22.00	1.153	0.03	0.174	0.201
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	9538	1907.6	21.38	22.00	1.153	0.08	0.288	0.332
WiFi off													
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.01	0.303	0.361
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.04	0.459	0.547
	WCDMA II_LAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	-0.04	0.147	0.175
	WCDMA II_LAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.05	0.078	0.093
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.04	0.533	0.635
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 2	9538	1907.6	24.94	25.70	1.191	0.08	0.456	0.543
WiFi on													
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0.07	0.181	0.240
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0.09	0.250	0.331
	WCDMA II_LAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	9538	1907.6	23.28	24.50	1.324	-0.08	0.072	0.095
	WCDMA II_LAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	9538	1907.6	23.28	24.50	1.324	-0.03	0.037	0.049
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0	0.311	0.412
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 2	9538	1907.6	23.28	24.50	1.324	0.11	0.281	0.372

<WCDMA IV>

WWAN UAT													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	RMC 12.2Kbps	Front	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	-0.12	0.097	0.108
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0	0.130	0.145
	WCDMA IV_UAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.06	0.060	0.067
	WCDMA IV_UAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.07	0.004	0.005
	WCDMA IV_UAT	RMC 12.2Kbps	Top Side	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.14	0.106	0.118
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	1413	1732.6	23.52	24.00	1.117	0.04	0.119	0.133
WiFi off													
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.01	0.277	0.309
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.05	0.925	1.033
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1312	1712.4	23.38	24.00	1.153	0.05	0.641	0.739
21	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1513	1752.6	23.50	24.00	1.122	0.05	0.987	1.107
	WCDMA IV_LAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.15	0.046	0.051
	WCDMA IV_LAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.01	0.025	0.028
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.17	0.904	1.010
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	1312	1712.4	23.38	24.00	1.153	0.17	0.482	0.556
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	1513	1752.6	23.50	24.00	1.122	0.14	0.926	1.039
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	1513	1752.6	23.50	24.00	1.122	0.04	0.938	1.052
WiFi on													
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	1413	1732.6	19.25	19.50	1.059	-0.13	0.077	0.082
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1413	1732.6	19.25	19.50	1.059	-0.01	0.188	0.199
	WCDMA IV_LAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	1413	1732.6	19.25	19.50	1.059	0.04	0.007	0.008
	WCDMA IV_LAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	1413	1732.6	19.25	19.50	1.059	-0.15	0.005	0.005
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	1413	1732.6	19.25	19.50	1.059	-0.06	0.194	0.205
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 2	1413	1732.6	19.25	19.50	1.059	-0.06	0.190	0.201

<WCDMA V>

Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	RMC 12.2Kbps	Front	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.04	0.160	0.182
22	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.01	0.171	0.195
	WCDMA V_UAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.16	0.166	0.189
	WCDMA V_UAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.05	0.129	0.147
	WCDMA V_UAT	RMC 12.2Kbps	Top Side	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.03	0.125	0.143
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	4233	846.6	23.93	24.50	1.140	-0.02	0.143	0.163
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.07	0.125	0.143
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.02	0.152	0.173
	WCDMA V_LAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.01	0.050	0.057
	WCDMA V_LAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.01	0.125	0.143
	WCDMA V_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.01	0.019	0.022
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	4233	846.6	23.93	24.50	1.140	-0.06	0.148	0.169



<FDD LTE B2>

WiFi off																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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 2_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.1	0.417	0.529
	LTE Band 2_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.67	24.70	1.268	-0.08	0.342	0.434
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.12	0.569	0.721
	LTE Band 2_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.67	24.70	1.268	-0.02	0.470	0.596
	LTE Band 2_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.16	0.258	0.327
	LTE Band 2_UAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	18700	1860	23.67	24.70	1.268	-0.17	0.210	0.266
	LTE Band 2_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	18700	1860	24.67	25.70	1.268	0.17	0.064	0.081
	LTE Band 2_UAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	18700	1860	23.67	24.70	1.268	0.13	0.052	0.066
	LTE Band 2_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.16	0.373	0.473
	LTE Band 2_UAT	20M	QPSK	50	0	Top Side	10mm	Battery 1	18700	1860	23.67	24.70	1.268	-0.15	0.308	0.390
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	18700	1860	24.67	25.70	1.268	-0.01	0.540	0.685
WiFi on																
	LTE Band 2_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	18700	1860	20.70	21.70	1.259	-0.16	0.184	0.232
	LTE Band 2_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	18900	1880	20.66	21.70	1.271	-0.14	0.180	0.229
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	18700	1860	20.70	21.70	1.259	-0.05	0.230	0.290
	LTE Band 2_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	18900	1880	20.66	21.70	1.271	-0.03	0.227	0.288
	LTE Band 2_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	18700	1860	20.70	21.70	1.259	0.17	0.122	0.154
	LTE Band 2_UAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	18900	1880	20.66	21.70	1.271	0.11	0.116	0.147
	LTE Band 2_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	18700	1860	20.70	21.70	1.259	0.06	0.023	0.029
	LTE Band 2_UAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	18900	1880	20.66	21.70	1.271	0.17	0.023	0.029
	LTE Band 2_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	18700	1860	20.70	21.70	1.259	0.17	0.172	0.217
	LTE Band 2_UAT	20M	QPSK	50	0	Top Side	10mm	Battery 1	18900	1880	20.66	21.70	1.271	0.18	0.171	0.217
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	18700	1860	20.70	21.70	1.259	0.01	0.221	0.278
WiFi off																
	LTE Band 2_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	18700	1860	24.67	25.70	1.268	0.02	0.230	0.292
	LTE Band 2_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.67	24.70	1.268	0.18	0.185	0.235
	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	18700	1860	24.67	25.70	1.268	0.16	0.476	0.603
	LTE Band 2_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.67	24.70	1.268	0.08	0.382	0.484
	LTE Band 2_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	18700	1860	24.67	25.70	1.268	0.07	0.066	0.084
	LTE Band 2_LAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	18700	1860	23.67	24.70	1.268	0.13	0.057	0.072
	LTE Band 2_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	18700	1860	24.67	25.70	1.268	0.12	0.055	0.070
	LTE Band 2_LAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	18700	1860	23.67	24.70	1.268	0.18	0.045	0.057
23	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.17	0.633	0.802
	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	18900	1880	24.40	25.70	1.349	-0.13	0.475	0.641
	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	19100	1900	24.13	25.70	1.435	-0.09	0.520	0.746
	LTE Band 2_LAT	20M	QPSK	50	0	Bottom Side	10mm	Battery 1	18700	1860	23.67	24.70	1.268	-0.15	0.505	0.640
	LTE Band 2_LAT	20M	QPSK	100	0	Bottom Side	10mm	Battery 1	18700	1860	23.64	24.70	1.276	-0.18	0.489	0.624
	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 2	18700	1860	24.67	25.70	1.268	-0.05	0.598	0.758
WiFi on																
	LTE Band 2_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	18700	1860	23.45	24.50	1.274	0.02	0.156	0.199
	LTE Band 2_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.02	0.168	0.170
	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	18700	1860	23.45	24.50	1.274	0.07	0.296	0.377
	LTE Band 2_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.01	0.292	0.296
	LTE Band 2_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	18700	1860	23.45	24.50	1.274	-0.16	0.043	0.055
	LTE Band 2_LAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.16	0.046	0.047
	LTE Band 2_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	18700	1860	23.45	24.50	1.274	0.09	0.004	0.005
	LTE Band 2_LAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.17	0.002	0.002
	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	18700	1860	23.45	24.50	1.274	-0.05	0.361	0.460
	LTE Band 2_LAT	20M	QPSK	50	0	Bottom Side	10mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.02	0.367	0.372
	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 2	18700	1860	23.45	24.50	1.274	0.08	0.355	0.452



<FDD LTE B4>

WWAN UAT																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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 4_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	-0.05	0.111	0.134
	LTE Band 4_UAT	20M	QPSK	50	24	Front	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	-0.01	0.092	0.111
	LTE Band 4_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	-0.03	0.136	0.164
	LTE Band 4_UAT	20M	QPSK	50	24	Back	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.09	0.115	0.139
	LTE Band 4_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	-0.1	0.059	0.071
	LTE Band 4_UAT	20M	QPSK	50	24	Left Side	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	-0.03	0.050	0.060
	LTE Band 4_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.02	0.006	0.008
	LTE Band 4_UAT	20M	QPSK	50	24	Right Side	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.08	0.005	0.006
	LTE Band 4_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.06	0.091	0.110
	LTE Band 4_UAT	20M	QPSK	50	24	Top Side	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.03	0.074	0.089
	LTE Band 4_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	20175	1732.5	23.68	24.50	1.208	-0.01	0.129	0.156
WiFi off																
	LTE Band 4_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.07	0.269	0.325
	LTE Band 4_LAT	20M	QPSK	50	24	Front	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.08	0.236	0.284
24	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.08	0.851	1.028
	LTE Band 4_LAT	20M	QPSK	50	24	Back	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.14	0.774	0.933
	LTE Band 4_LAT	20M	QPSK	100	0	Back	10mm	Battery 1	20175	1732.5	22.68	23.50	1.208	0.09	0.764	0.923
	LTE Band 4_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.02	0.034	0.041
	LTE Band 4_LAT	20M	QPSK	50	24	Left Side	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.11	0.018	0.022
	LTE Band 4_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.01	0.018	0.022
	LTE Band 4_LAT	20M	QPSK	50	24	Right Side	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.1	0.017	0.020
	LTE Band 4_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.02	0.677	0.818
	LTE Band 4_LAT	20M	QPSK	50	24	Bottom Side	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.07	0.642	0.774
	LTE Band 4_LAT	20M	QPSK	100	0	Bottom Side	10mm	Battery 1	20175	1732.5	22.68	23.50	1.208	0.08	0.640	0.773
	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	20175	1732.5	23.68	24.50	1.208	0.03	0.821	0.992
WiFi on																
	LTE Band 4_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	20175	1732.5	20.48	21.00	1.127	-0.09	0.080	0.090
	LTE Band 4_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	20175	1732.5	20.50	21.00	1.122	-0.08	0.080	0.090
	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	20.48	21.00	1.127	-0.02	0.210	0.237
	LTE Band 4_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	20175	1732.5	20.50	21.00	1.122	0.04	0.278	0.312
	LTE Band 4_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	20175	1732.5	20.48	21.00	1.127	0.01	0.012	0.014
	LTE Band 4_LAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	20175	1732.5	20.50	21.00	1.122	-0.17	0.011	0.012
	LTE Band 4_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	20175	1732.5	20.48	21.00	1.127	0.06	0.003	0.004
	LTE Band 4_LAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	20175	1732.5	20.50	21.00	1.122	-0.03	0.004	0.004
	LTE Band 4_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	20175	1732.5	20.48	21.00	1.127	-0.07	0.159	0.179
	LTE Band 4_LAT	20M	QPSK	50	0	Bottom Side	10mm	Battery 1	20175	1732.5	20.50	21.00	1.122	0.19	0.176	0.197
	LTE Band 4_LAT	20M	QPSK	50	0	Back	10mm	Battery 2	20175	1732.5	20.50	21.00	1.122	0.09	0.263	0.295



<FDD LTE B12>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	10M	QPSK	1	49	Front	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	-0.09	0.085	0.101
	LTE Band 12_UAT	10M	QPSK	25	25	Front	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.06	0.069	0.085
	LTE Band 12_UAT	10M	QPSK	1	49	Back	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0	0.115	0.136
	LTE Band 12_UAT	10M	QPSK	25	25	Back	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.1	0.093	0.115
	LTE Band 12_UAT	10M	QPSK	1	49	Left Side	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	-0.02	0.110	0.130
	LTE Band 12_UAT	10M	QPSK	25	25	Left Side	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	-0.04	0.093	0.115
	LTE Band 12_UAT	10M	QPSK	1	49	Right Side	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	-0.01	0.042	0.050
	LTE Band 12_UAT	10M	QPSK	25	25	Right Side	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	-0.01	0.035	0.043
	LTE Band 12_UAT	10M	QPSK	1	49	Top Side	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.08	0.031	0.037
	LTE Band 12_UAT	10M	QPSK	25	25	Top Side	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.08	0.026	0.032
	LTE Band 12_UAT	10M	QPSK	1	49	Back	10mm	Battery 2	23095	707.5	24.96	25.70	1.186	0.02	0.112	0.133
	LTE Band 12_LAT	10M	QPSK	1	49	Front	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.15	0.110	0.130
	LTE Band 12_LAT	10M	QPSK	25	25	Front	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.15	0.091	0.112
25	LTE Band 12_LAT	10M	QPSK	1	49	Back	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.01	0.162	0.192
	LTE Band 12_LAT	10M	QPSK	25	25	Back	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	-0.07	0.132	0.163
	LTE Band 12_LAT	10M	QPSK	1	49	Left Side	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.06	0.092	0.109
	LTE Band 12_LAT	10M	QPSK	25	25	Left Side	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.06	0.075	0.092
	LTE Band 12_LAT	10M	QPSK	1	49	Right Side	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0	0.097	0.115
	LTE Band 12_LAT	10M	QPSK	25	25	Right Side	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0	0.077	0.095
	LTE Band 12_LAT	10M	QPSK	1	49	Bottom Side	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.11	0.021	0.025
	LTE Band 12_LAT	10M	QPSK	25	25	Bottom Side	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.11	0.017	0.021
	LTE Band 12_LAT	10M	QPSK	1	49	Back	10mm	Battery 2	23095	707.5	24.96	25.70	1.186	-0.01	0.133	0.158

<FDD LTE B13>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	10M	QPSK	1	0	Front	10mm	Battery 1	23230	782	24.46	25.30	1.213	-0.07	0.176	0.214
	LTE Band 13_UAT	10M	QPSK	25	12	Front	10mm	Battery 1	23230	782	23.36	24.30	1.242	-0.01	0.148	0.184
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	Battery 1	23230	782	24.46	25.30	1.213	-0.06	0.203	0.246
	LTE Band 13_UAT	10M	QPSK	25	12	Back	10mm	Battery 1	23230	782	23.36	24.30	1.242	0.05	0.168	0.209
26	LTE Band 13_UAT	10M	QPSK	1	0	Left Side	10mm	Battery 1	23230	782	24.46	25.30	1.213	0	0.217	0.263
	LTE Band 13_UAT	10M	QPSK	25	12	Left Side	10mm	Battery 1	23230	782	23.36	24.30	1.242	0	0.180	0.223
	LTE Band 13_UAT	10M	QPSK	1	0	Right Side	10mm	Battery 1	23230	782	24.46	25.30	1.213	-0.01	0.137	0.166
	LTE Band 13_UAT	10M	QPSK	25	12	Right Side	10mm	Battery 1	23230	782	23.36	24.30	1.242	-0.01	0.114	0.142
	LTE Band 13_UAT	10M	QPSK	1	0	Top Side	10mm	Battery 1	23230	782	24.46	25.30	1.213	-0.01	0.076	0.092
	LTE Band 13_UAT	10M	QPSK	25	12	Top Side	10mm	Battery 1	23230	782	23.36	24.30	1.242	-0.01	0.067	0.083
	LTE Band 13_UAT	10M	QPSK	1	0	Left Side	10mm	Battery 2	23230	782	24.46	25.30	1.213	-0.02	0.212	0.257
	LTE Band 13_LAT	10M	QPSK	1	0	Front	10mm	Battery 1	23230	782	24.46	25.30	1.213	0.15	0.116	0.141
	LTE Band 13_LAT	10M	QPSK	25	12	Front	10mm	Battery 1	23230	782	23.36	24.30	1.242	-0.13	0.090	0.112
	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Battery 1	23230	782	24.46	25.30	1.213	0.11	0.156	0.189
	LTE Band 13_LAT	10M	QPSK	25	12	Back	10mm	Battery 1	23230	782	23.36	24.30	1.242	0.02	0.106	0.132
	LTE Band 13_LAT	10M	QPSK	1	0	Left Side	10mm	Battery 1	23230	782	24.46	25.30	1.213	-0.01	0.081	0.098
	LTE Band 13_LAT	10M	QPSK	25	12	Left Side	10mm	Battery 1	23230	782	23.36	24.30	1.242	-0.04	0.062	0.077
	LTE Band 13_LAT	10M	QPSK	1	0	Right Side	10mm	Battery 1	23230	782	24.46	25.30	1.213	-0.08	0.109	0.132
	LTE Band 13_LAT	10M	QPSK	25	12	Right Side	10mm	Battery 1	23230	782	23.36	24.30	1.242	0.02	0.087	0.108
	LTE Band 13_LAT	10M	QPSK	1	0	Bottom Side	10mm	Battery 1	23230	782	24.46	25.30	1.213	0.19	0.022	0.027
	LTE Band 13_LAT	10M	QPSK	25	12	Bottom Side	10mm	Battery 1	23230	782	23.36	24.30	1.242	0.08	0.017	0.021
	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Battery 2	23230	782	24.46	25.30	1.213	-0.01	0.150	0.182



<FDD LTE B26>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	15M	QPSK	1	0	Front	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	-0.1	0.169	0.220
	LTE Band 26_UAT	15M	QPSK	36	20	Front	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.02	0.133	0.171
27	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	-0.15	0.210	0.274
	LTE Band 26_UAT	15M	QPSK	36	20	Back	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.06	0.184	0.236
	LTE Band 26_UAT	15M	QPSK	1	0	Left Side	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.01	0.176	0.229
	LTE Band 26_UAT	15M	QPSK	36	20	Left Side	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.01	0.145	0.186
	LTE Band 26_UAT	15M	QPSK	1	0	Right Side	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	-0.1	0.119	0.155
	LTE Band 26_UAT	15M	QPSK	36	20	Right Side	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.01	0.101	0.130
	LTE Band 26_UAT	15M	QPSK	1	0	Top Side	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.08	0.116	0.151
	LTE Band 26_UAT	15M	QPSK	36	20	Top Side	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.01	0.097	0.124
	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Battery 2	26865	831.5	24.55	25.70	1.303	0.01	0.199	0.259
	LTE Band 26_LAT	15M	QPSK	1	0	Front	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.17	0.111	0.145
	LTE Band 26_LAT	15M	QPSK	36	20	Front	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.01	0.083	0.106
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.02	0.141	0.184
	LTE Band 26_LAT	15M	QPSK	36	20	Back	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.01	0.117	0.150
	LTE Band 26_LAT	15M	QPSK	1	0	Left Side	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.12	0.073	0.095
	LTE Band 26_LAT	15M	QPSK	36	20	Left Side	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.04	0.052	0.067
	LTE Band 26_LAT	15M	QPSK	1	0	Right Side	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.07	0.092	0.120
	LTE Band 26_LAT	15M	QPSK	36	20	Right Side	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.07	0.068	0.087
	LTE Band 26_LAT	15M	QPSK	1	0	Bottom Side	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.01	0.019	0.025
	LTE Band 26_LAT	15M	QPSK	36	20	Bottom Side	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.16	0.017	0.022
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Battery 2	26865	831.5	24.55	25.70	1.303	0	0.126	0.164



<TDD LTE B38>

WiFi off																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0	0.139	0.153
	LTE Band 38_UAT	20M	QPSK	50	50	Front	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.04	0.109	0.118
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.07	0.404	0.446
	LTE Band 38_UAT	20M	QPSK	50	50	Back	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.1	0.323	0.351
	LTE Band 38_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.11	0.242	0.267
	LTE Band 38_UAT	20M	QPSK	50	50	Left Side	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.08	0.205	0.223
	LTE Band 38_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.08	0.007	0.008
	LTE Band 38_UAT	20M	QPSK	50	50	Right Side	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.08	0.006	0.007
	LTE Band 38_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.01	0.048	0.053
	LTE Band 38_UAT	20M	QPSK	50	50	Top Side	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.12	0.041	0.045
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.07	0.378	0.417
WiFi on																		
	LTE Band 38_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.16	0.099	0.105
	LTE Band 38_UAT	20M	QPSK	50	50	Front	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.04	0.098	0.104
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.15	0.278	0.294
	LTE Band 38_UAT	20M	QPSK	50	50	Back	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.07	0.293	0.310
	LTE Band 38_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	0.1	0.164	0.173
	LTE Band 38_UAT	20M	QPSK	50	50	Left Side	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.09	0.175	0.185
	LTE Band 38_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.07	0.008	0.009
	LTE Band 38_UAT	20M	QPSK	50	50	Right Side	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.09	0.009	0.009
	LTE Band 38_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.17	0.037	0.039
	LTE Band 38_UAT	20M	QPSK	50	50	Top Side	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.01	0.039	0.041
	LTE Band 38_UAT	20M	QPSK	50	50	Back	10mm	Battery 2	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.07	0.287	0.304
WiFi off																		
	LTE Band 38_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.17	0.297	0.328
	LTE Band 38_LAT	20M	QPSK	50	50	Front	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.02	0.235	0.255
28	LTE Band 38_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.06	0.492	0.543
	LTE Band 38_LAT	20M	QPSK	50	50	Back	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.13	0.389	0.422
	LTE Band 38_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.17	0.021	0.023
	LTE Band 38_LAT	20M	QPSK	50	50	Left Side	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.04	0.016	0.017
	LTE Band 38_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.11	0.408	0.450
	LTE Band 38_LAT	20M	QPSK	50	50	Right Side	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.08	0.330	0.358
	LTE Band 38_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.19	0.085	0.094
	LTE Band 38_LAT	20M	QPSK	50	50	Bottom Side	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	0.11	0.068	0.074
	LTE Band 38_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	38000	2595	25.30	25.70	1.096	62.9	1.006	0.08	0.458	0.505
WiFi on																		
	LTE Band 38_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	0.1	0.316	0.334
	LTE Band 38_LAT	20M	QPSK	50	50	Front	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.06	0.320	0.339
	LTE Band 38_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.09	0.222	0.234
	LTE Band 38_LAT	20M	QPSK	50	50	Back	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.11	0.223	0.236
	LTE Band 38_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.1	0.020	0.021
	LTE Band 38_LAT	20M	QPSK	50	50	Left Side	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.17	0.020	0.021
	LTE Band 38_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.01	0.287	0.303
	LTE Band 38_LAT	20M	QPSK	50	50	Right Side	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.07	0.292	0.309
	LTE Band 38_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.06	0.077	0.081
	LTE Band 38_LAT	20M	QPSK	50	50	Bottom Side	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.08	0.076	0.080
	LTE Band 38_LAT	20M	QPSK	50	50	Front	10mm	Battery 2	38000	2595	24.28	24.50	1.052	62.9	1.006	0.06	0.302	0.320



<TDD LTE B41>

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Battery, 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). Includes sections for WiFi off and WiFi on.

<2.4GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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)
30	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4	Battery 1	1	2412	17.83	18.00	1.040	100	1.000	-0.07	0.190	0.198
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	Battery 1	1	2412	17.83	18.00	1.040	100	1.000	0.07	0.313	0.325
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4	Battery 1	1	2412	17.83	18.00	1.040	100	1.000	0.12	0.132	0.137
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 4	Battery 1	1	2412	17.83	18.00	1.040	100	1.000	-0.01	0.144	0.150
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	Battery 2	1	2412	17.83	18.00	1.040	100	1.000	0.07	0.297	0.309
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 5	Battery 1	1	2412	17.48	18.00	1.127	100	1.000	-0.08	0.080	0.090
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 5	Battery 1	1	2412	17.48	18.00	1.127	100	1.000	0.02	0.189	0.213
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 5	Battery 1	1	2412	17.48	18.00	1.127	100	1.000	0.01	0.129	0.145
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 5	Battery 1	1	2412	17.48	18.00	1.127	100	1.000	0.06	0.026	0.029
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 5	Battery 2	1	2412	17.48	18.00	1.127	100	1.000	0.04	0.172	0.194

<5.3GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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 4	Battery 1	46	5230	17.02	17.50	1.118	96.5	1.036	0.02	0.223	0.258	
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4	Battery 1	46	5230	17.02	17.50	1.118	96.5	1.036	-0.15	0.231	0.268	
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 4	Battery 1	46	5230	17.02	17.50	1.118	96.5	1.036	-0.03	0.185	0.214	
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4	Battery 1	46	5230	17.02	17.50	1.118	96.5	1.036	-0.13	0.262	0.303	
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4	Battery 2	46	5230	17.02	17.50	1.118	96.5	1.036	0.1	0.248	0.287	
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 5	Battery 1	46	5230	16.68	17.50	1.208	96	1.042	-0.13	0.068	0.086	
	31	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 1	46	5230	16.68	17.50	1.208	96	1.042	-0.12	0.559	0.704
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 5	Battery 1	46	5230	16.68	17.50	1.208	96	1.042	0.07	0.451	0.568	
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 5	Battery 1	46	5230	16.68	17.50	1.208	96	1.042	0.08	0.100	0.126	
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 2	46	5230	16.68	17.50	1.208	96	1.042	0.11	0.534	0.672	
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+5	Battery 1	46	5230	17.03	17.50	1.113	95.9	1.043	0.19	0.245	0.284	
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Battery 1	46	5230	17.03	17.50	1.113	95.9	1.043	-0.1	0.582	0.676	
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 4+5	Battery 1	46	5230	17.03	17.50	1.113	95.9	1.043	0.06	0.528	0.613	
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+5	Battery 1	46	5230	17.03	17.50	1.113	95.9	1.043	-0.04	0.370	0.430	
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Battery 2	46	5230	17.03	17.50	1.113	95.9	1.043	-0.1	0.576	0.669	



<5.8GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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	802.11ac-VHT80 MCS0	Front	10mm	Ant 4	Battery 1	155	5775	17.32	17.50	1.042	91.9	1.088	0.06	0.342	0.388
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4	Battery 1	155	5775	17.32	17.50	1.042	91.9	1.088	0.05	0.607	0.688
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4	Battery 1	155	5775	17.32	17.50	1.042	91.9	1.088	0.08	0.195	0.221
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4	Battery 1	155	5775	17.32	17.50	1.042	91.9	1.088	-0.16	0.776	0.880
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4	Battery 1	159	5795	17.36	17.50	1.033	96.5	1.036	-0.02	0.951	1.018
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4	Battery 2	159	5795	17.36	17.50	1.033	96.5	1.036	-0.08	0.937	1.003
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 5	Battery 1	155	5775	17.15	17.50	1.084	91.9	1.088	0.12	0.084	0.099
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5	Battery 1	155	5775	17.15	17.50	1.084	91.9	1.088	-0.17	0.746	0.880
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 1	151	5755	17.05	17.50	1.109	96	1.042	-0.15	0.772	0.892
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 5	Battery 1	155	5775	17.15	17.50	1.084	91.9	1.088	0.08	0.532	0.627
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 5	Battery 1	155	5775	17.15	17.50	1.084	91.9	1.088	-0.19	0.102	0.120
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 2	151	5755	17.05	17.50	1.109	96	1.042	-0.15	0.748	0.865
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+5	Battery 1	155	5775	17.25	17.50	1.059	91.9	1.088	-0.1	0.367	0.423
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Battery 1	155	5775	17.25	17.50	1.059	91.9	1.088	-0.11	0.729	0.840
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Battery 1	159	5795	17.21	17.50	1.069	95.9	1.043	-0.14	0.835	0.931
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+5	Battery 1	155	5775	17.25	17.50	1.059	91.9	1.088	-0.08	0.630	0.726
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+5	Battery 1	155	5775	17.25	17.50	1.059	91.9	1.088	0.18	0.738	0.851
32	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+5	Battery 1	159	5795	17.21	17.50	1.069	95.9	1.043	-0.03	1.050	1.171
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+5	Battery 2	159	5795	17.21	17.50	1.069	95.9	1.043	-0.03	1.030	1.148

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	-0.11	0.116	0.131
33	Bluetooth	1Mbps	Back	10mm	Ant 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	0.03	0.200	0.225
	Bluetooth	1Mbps	Right Side	10mm	Ant 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	-0.01	0.075	0.085
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	0.1	0.092	0.104
	Bluetooth	1Mbps	Back	10mm	Ant 4	Battery 2	0	2402	17.81	18.00	1.044	77.2	1.079	0.04	0.180	0.203

13.3 Body Worn Accessory SAR
<GSM850>

Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.1	0.149	0.156
	GSM850_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	251	848.8	28.80	29.00	1.047	-0.02	0.164	0.172
	GSM850_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	251	848.8	28.80	29.00	1.047	-0.06	0.161	0.169
	GSM850_LAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	251	848.8	28.80	29.00	1.047	0.11	0.167	0.175
34	GSM850_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	251	848.8	28.80	29.00	1.047	0.18	0.205	0.215
	GSM850_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	251	848.8	28.80	29.00	1.047	-0.03	0.170	0.178

<GSM1900>

Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.17	0.270	0.285
35	GSM1900_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.11	0.341	0.360
	GSM1900_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	512	1850.2	26.26	26.50	1.057	-0.06	0.326	0.345
	GSM1900_LAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.02	0.147	0.155
	GSM1900_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	512	1850.2	26.26	26.50	1.057	0.01	0.332	0.351
	GSM1900_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	512	1850.2	26.26	26.50	1.057	0.08	0.311	0.329

<WCDMA II>

WiFi off													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	RMC 12.2Kbps	Front	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	-0.17	0.460	0.548
36	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	-0.13	0.662	0.789
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	9538	1907.6	24.94	25.70	1.191	-0.03	0.642	0.765
WiFi on													
	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	Battery 1	9538	1907.6	21.38	22.00	1.153	-0.11	0.167	0.193
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	9538	1907.6	21.38	22.00	1.153	0.02	0.296	0.341
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	9538	1907.6	21.38	22.00	1.153	0.08	0.288	0.332
WiFi off													
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.01	0.303	0.361
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	9538	1907.6	24.94	25.70	1.191	0.04	0.459	0.547
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	9538	1907.6	24.94	25.70	1.191	0.05	0.330	0.393
WiFi on													
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0.07	0.181	0.240
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	9538	1907.6	23.28	24.50	1.324	0.09	0.250	0.331
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	9538	1907.6	23.28	24.50	1.324	0.15	0.222	0.294



<WCDMA IV>

WWAN UAT													
Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	RMC 12.2Kbps	Front	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	-0.12	0.097	0.108
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0	0.130	0.145
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	1413	1732.6	23.52	24.00	1.117	0.04	0.119	0.133
WiFi off													
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.01	0.277	0.309
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1413	1732.6	23.52	24.00	1.117	0.05	0.925	1.033
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1312	1712.4	23.38	24.00	1.153	0.05	0.641	0.739
37	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1513	1752.6	23.50	24.00	1.122	0.05	0.987	1.107
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	1513	1752.6	23.50	24.00	1.122	0.04	0.938	1.052
WiFi on													
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	1413	1732.6	19.25	19.50	1.059	-0.13	0.077	0.082
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1413	1732.6	19.25	19.50	1.059	-0.01	0.188	0.199
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	1413	1732.6	19.25	19.50	1.059	-0.09	0.178	0.189

<WCDMA V>

Plot No.	Band	Mode	Test Position	Gap (mm)	Battery	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_UAT	RMC 12.2Kbps	Front	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.04	0.160	0.182
38	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.01	0.171	0.195
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	4233	846.6	23.93	24.50	1.140	-0.02	0.143	0.163
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	0.07	0.125	0.143
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	4233	846.6	23.93	24.50	1.140	-0.02	0.152	0.173
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	4233	846.6	23.93	24.50	1.140	-0.06	0.148	0.169



<FDD LTE B2>

WiFi off																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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 2_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.1	0.417	0.529
	LTE Band 2_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.67	24.70	1.268	-0.08	0.342	0.434
39	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	18700	1860	24.67	25.70	1.268	-0.12	0.569	0.721
	LTE Band 2_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.67	24.70	1.268	-0.02	0.470	0.596
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	18700	1860	24.67	25.70	1.268	-0.01	0.540	0.685
WiFi on																
	LTE Band 2_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	18700	1860	20.70	21.70	1.259	-0.16	0.184	0.232
	LTE Band 2_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	18900	1880	20.66	21.70	1.271	-0.14	0.180	0.229
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	18700	1860	20.70	21.70	1.259	-0.05	0.230	0.290
	LTE Band 2_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	18900	1880	20.66	21.70	1.271	-0.03	0.227	0.288
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	18700	1860	20.70	21.70	1.259	0.01	0.221	0.278
WiFi off																
	LTE Band 2_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	18700	1860	24.67	25.70	1.268	0.02	0.230	0.292
	LTE Band 2_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.67	24.70	1.268	0.18	0.185	0.235
	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	18700	1860	24.67	25.70	1.268	0.16	0.476	0.603
	LTE Band 2_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.67	24.70	1.268	0.08	0.382	0.484
	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	18700	1860	24.67	25.70	1.268	-0.01	0.446	0.565
WiFi on																
	LTE Band 2_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	18700	1860	23.45	24.50	1.274	0.02	0.156	0.199
	LTE Band 2_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.02	0.168	0.170
	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	18700	1860	23.45	24.50	1.274	0.07	0.296	0.377
	LTE Band 2_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.44	23.50	1.014	-0.01	0.292	0.296
	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	18700	1860	23.45	24.50	1.274	0.11	0.288	0.367

<FDD LTE B4>

WWAN UAT																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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 4_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	-0.05	0.111	0.134
	LTE Band 4_UAT	20M	QPSK	50	24	Front	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	-0.01	0.092	0.111
	LTE Band 4_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	-0.03	0.136	0.164
	LTE Band 4_UAT	20M	QPSK	50	24	Back	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.09	0.115	0.139
	LTE Band 4_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	20175	1732.5	23.68	24.50	1.208	-0.01	0.129	0.156
WiFi off																
	LTE Band 4_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.07	0.269	0.325
	LTE Band 4_LAT	20M	QPSK	50	24	Front	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.08	0.236	0.284
40	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	23.68	24.50	1.208	0.08	0.851	1.028
	LTE Band 4_LAT	20M	QPSK	50	24	Back	10mm	Battery 1	20175	1732.5	22.69	23.50	1.205	0.14	0.774	0.933
	LTE Band 4_LAT	20M	QPSK	100	0	Back	10mm	Battery 1	20175	1732.5	22.68	23.50	1.208	0.09	0.764	0.923
	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	20175	1732.5	23.68	24.50	1.208	0.03	0.821	0.992
WiFi on																
	LTE Band 4_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	20175	1732.5	20.48	21.00	1.127	-0.09	0.080	0.090
	LTE Band 4_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	20175	1732.5	20.50	21.00	1.122	-0.08	0.080	0.090
	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	20.48	21.00	1.127	-0.02	0.210	0.237
	LTE Band 4_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	20175	1732.5	20.50	21.00	1.122	0.04	0.278	0.312
	LTE Band 4_LAT	20M	QPSK	50	0	Back	10mm	Battery 2	20175	1732.5	20.50	21.00	1.122	0.09	0.263	0.295



<FDD LTE B12>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	10M	QPSK	1	49	Front	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	-0.09	0.085	0.101
	LTE Band 12_UAT	10M	QPSK	25	25	Front	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.06	0.069	0.085
	LTE Band 12_UAT	10M	QPSK	1	49	Back	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0	0.115	0.136
	LTE Band 12_UAT	10M	QPSK	25	25	Back	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.1	0.093	0.115
	LTE Band 12_UAT	10M	QPSK	1	49	Back	10mm	Battery 2	23095	707.5	24.96	25.70	1.186	0.02	0.112	0.133
	LTE Band 12_LAT	10M	QPSK	1	49	Front	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.15	0.110	0.130
	LTE Band 12_LAT	10M	QPSK	25	25	Front	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	0.15	0.091	0.112
41	LTE Band 12_LAT	10M	QPSK	1	49	Back	10mm	Battery 1	23095	707.5	24.96	25.70	1.186	0.01	0.162	0.192
	LTE Band 12_LAT	10M	QPSK	25	25	Back	10mm	Battery 1	23095	707.5	23.79	24.70	1.233	-0.07	0.132	0.163
	LTE Band 12_LAT	10M	QPSK	1	49	Back	10mm	Battery 2	23095	707.5	24.96	25.70	1.186	-0.01	0.133	0.158

<FDD LTE B13>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	10M	QPSK	1	0	Front	10mm	Battery 1	23230	782	24.46	25.30	1.213	-0.07	0.176	0.214
	LTE Band 13_UAT	10M	QPSK	25	12	Front	10mm	Battery 1	23230	782	23.36	24.30	1.242	-0.01	0.148	0.184
42	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	Battery 1	23230	782	24.46	25.30	1.213	-0.06	0.203	0.246
	LTE Band 13_UAT	10M	QPSK	25	12	Back	10mm	Battery 1	23230	782	23.36	24.30	1.242	0.05	0.168	0.209
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	Battery 2	23230	782	24.46	25.30	1.213	0.03	0.194	0.235
	LTE Band 13_LAT	10M	QPSK	1	0	Front	10mm	Battery 1	23230	782	24.46	25.30	1.213	0.15	0.116	0.141
	LTE Band 13_LAT	10M	QPSK	25	12	Front	10mm	Battery 1	23230	782	23.36	24.30	1.242	-0.13	0.090	0.112
	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Battery 1	23230	782	24.46	25.30	1.213	0.11	0.156	0.189
	LTE Band 13_LAT	10M	QPSK	25	12	Back	10mm	Battery 1	23230	782	23.36	24.30	1.242	0.02	0.106	0.132
	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Battery 2	23230	782	24.46	25.30	1.213	-0.01	0.150	0.182

<FDD LTE B26>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	15M	QPSK	1	0	Front	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	-0.1	0.169	0.220
	LTE Band 26_UAT	15M	QPSK	36	20	Front	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.02	0.133	0.171
43	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	-0.15	0.210	0.274
	LTE Band 26_UAT	15M	QPSK	36	20	Back	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.06	0.184	0.236
	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Battery 2	26865	831.5	24.55	25.70	1.303	0.01	0.199	0.259
	LTE Band 26_LAT	15M	QPSK	1	0	Front	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.17	0.111	0.145
	LTE Band 26_LAT	15M	QPSK	36	20	Front	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	0.01	0.083	0.106
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Battery 1	26865	831.5	24.55	25.70	1.303	0.02	0.141	0.184
	LTE Band 26_LAT	15M	QPSK	36	20	Back	10mm	Battery 1	26865	831.5	23.62	24.70	1.282	-0.01	0.117	0.150
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Battery 2	26865	831.5	24.55	25.70	1.303	0	0.126	0.164



<TDD LTE B38>

WiFi off																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0	0.139	0.153
	LTE Band 38_UAT	20M	QPSK	50	50	Front	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.04	0.109	0.118
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.07	0.404	0.446
	LTE Band 38_UAT	20M	QPSK	50	50	Back	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.1	0.323	0.351
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.07	0.378	0.417
WiFi on																		
	LTE Band 38_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.16	0.099	0.105
	LTE Band 38_UAT	20M	QPSK	50	50	Front	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.04	0.098	0.104
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.15	0.278	0.294
	LTE Band 38_UAT	20M	QPSK	50	50	Back	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.07	0.293	0.310
	LTE Band 38_UAT	20M	QPSK	50	50	Back	10mm	Battery 2	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.07	0.287	0.304
WiFi off																		
	LTE Band 38_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	-0.17	0.297	0.328
	LTE Band 38_LAT	20M	QPSK	50	50	Front	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.02	0.235	0.255
44	LTE Band 38_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	25.30	25.70	1.096	62.9	1.006	0.06	0.492	0.543
	LTE Band 38_LAT	20M	QPSK	50	50	Back	10mm	Battery 1	38000	2595	24.37	24.70	1.079	62.9	1.006	-0.13	0.389	0.422
	LTE Band 38_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	38000	2595	25.30	25.70	1.096	62.9	1.006	0.08	0.458	0.505
WiFi on																		
	LTE Band 38_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	0.1	0.316	0.334
	LTE Band 38_LAT	20M	QPSK	50	50	Front	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	0.06	0.320	0.339
	LTE Band 38_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	24.29	24.50	1.050	62.9	1.006	-0.09	0.222	0.234
	LTE Band 38_LAT	20M	QPSK	50	50	Back	10mm	Battery 1	38000	2595	24.28	24.50	1.052	62.9	1.006	-0.11	0.223	0.236
	LTE Band 38_LAT	20M	QPSK	50	50	Front	10mm	Battery 2	38000	2595	24.28	24.50	1.052	62.9	1.006	0.06	0.302	0.320



<TDD LTE B41>

WiFi off																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Battery	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_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	-0.05	0.116	0.129
	LTE Band 41_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	0.07	0.092	0.102
	LTE Band 41_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	-0.13	0.345	0.382
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	-0.11	0.273	0.303
	LTE Band 41_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	41055	2636.5	24.58	25.00	1.102	62.9	1.006	-0.02	0.331	0.367
WiFi on																		
	LTE Band 41_UAT	20M	QPSK	1	0	Front	10mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	-0.11	0.116	0.122
	LTE Band 41_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	-0.07	0.109	0.115
	LTE Band 41_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	-0.02	0.328	0.346
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	-0.18	0.292	0.308
	LTE Band 41_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	41055	2636.5	24.30	24.50	1.047	62.9	1.006	-0.02	0.305	0.321
WiFi off																		
	LTE Band 41_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	-0.07	0.245	0.271
	LTE Band 41_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	-0.08	0.189	0.209
45	LTE Band 41_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	41055	2636.5	24.58	25.00	1.102	62.9	1.006	0.04	0.428	0.474
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	41055	2636.5	23.58	24.00	1.102	62.9	1.006	0.15	0.340	0.377
	LTE Band 41_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	41055	2636.5	24.58	25.00	1.102	62.9	1.006	0.14	0.417	0.462
WiFi on																		
	LTE Band 41_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0.02	0.225	0.237
	LTE Band 41_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	0.1	0.195	0.206
	LTE Band 41_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0.15	0.341	0.359
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	41055	2636.5	23.79	24.00	1.050	62.9	1.006	0.1	0.303	0.320
	LTE Band 41_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	41055	2636.5	24.30	24.50	1.047	62.9	1.006	0.15	0.333	0.351

<2.4GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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 4	Battery 1	1	2412	17.83	18.00	1.040	100	1.000	-0.07	0.190	0.198
46	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	Battery 1	1	2412	17.83	18.00	1.040	100	1.000	0.07	0.313	0.325
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	Battery 2	1	2412	17.83	18.00	1.040	100	1.000	0.09	0.297	0.309
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 5	Battery 1	1	2412	17.48	18.00	1.127	100	1.000	-0.08	0.080	0.090
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 5	Battery 1	1	2412	17.48	18.00	1.127	100	1.000	0.02	0.189	0.213
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 5	Battery 2	1	2412	17.48	18.00	1.127	100	1.000	0.04	0.172	0.194



<5.3GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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 4	Battery 1	54	5270	17.12	17.50	1.093	96.5	1.036	-0.12	0.213	0.241	
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4	Battery 1	54	5270	17.12	17.50	1.093	96.5	1.036	-0.14	0.227	0.257	
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4	Battery 2	54	5270	17.12	17.50	1.093	96.5	1.036	-0.18	0.201	0.228	
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 5	Battery 1	54	5270	17.16	17.50	1.082	96	1.042	-0.17	0.071	0.080	
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 1	54	5270	17.16	17.50	1.082	96	1.042	0.11	0.510	0.575	
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 2	54	5270	17.16	17.50	1.082	96	1.042	0.01	0.481	0.542	
47	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+5	Ant 5	Battery 1	54	5270	17.38	17.50	1.027	95.85	1.043	-0.13	0.238	0.255
						Ant 4	Battery 1	54	5270	17.45	17.50	1.012	95.85	1.043	-0.13	0.143	0.151
					Ant 4+5	Ant 5	Battery 1	54	5270	17.38	17.50	1.027	95.85	1.043	-0.11	0.538	0.576
						Ant 4	Battery 1	54	5270	17.45	17.50	1.012	95.85	1.043	-0.11	0.432	0.456
WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Ant 5	Battery 2	54	5270	17.38	17.50	1.027	95.85	1.043	-0.08	0.531	0.569	
					Ant 4	Battery 2	54	5270	17.45	17.50	1.012	95.85	1.043	-0.08	0.436	0.460	

<5.5GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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	802.11ac-VHT80 MCS0	Front	10mm	Ant 4	Battery 1	138	5690	17.35	17.50	1.036	91.9	1.088	-0.02	0.235	0.265
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4	Battery 1	138	5690	17.35	17.50	1.036	91.9	1.088	-0.17	0.438	0.493
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4	Battery 2	138	5690	17.35	17.50	1.036	91.9	1.088	-0.07	0.403	0.454
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 5	Battery 1	122	5610	17.06	17.50	1.107	91.9	1.088	0.02	0.074	0.089
48	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5	Battery 1	122	5610	17.06	17.50	1.107	91.9	1.088	0.13	0.617	0.743
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5	Battery 2	122	5610	17.06	17.50	1.107	91.9	1.088	0.05	0.573	0.690
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+5	Battery 1	122	5610	17.12	17.50	1.090	91.9	1.088	-0.18	0.313	0.371
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Battery 1	122	5610	17.12	17.50	1.090	91.9	1.088	-0.18	0.607	0.720
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Battery 2	122	5610	17.12	17.50	1.090	91.9	1.088	0.17	0.600	0.712



<5.8GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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	802.11ac-VHT80 MCS0	Front	10mm	Ant 4	Battery 1	155	5775	17.32	17.50	1.042	91.9	1.088	0.06	0.342	0.388
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4	Battery 1	155	5775	17.32	17.50	1.042	91.9	1.088	0.05	0.607	0.688
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4	Battery 2	155	5775	17.32	17.50	1.042	91.9	1.088	0.01	0.584	0.662
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 5	Battery 1	155	5775	17.15	17.50	1.084	91.9	1.088	0.12	0.084	0.099
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5	Battery 1	155	5775	17.15	17.50	1.084	91.9	1.088	-0.17	0.746	0.880
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 1	151	5755	17.05	17.50	1.109	96	1.042	-0.15	0.772	0.892
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 2	151	5755	17.05	17.50	1.109	96	1.042	-0.15	0.748	0.865
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+5	Ant 5 Battery 1	155	5775	17.25	17.50	1.059	91.87	1.088	-0.1	0.367	0.423
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm		Ant 4 Battery 1	155	5775	17.50	17.50	1.000	91.87	1.088	-0.1	0.214	0.233
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Ant 5 Battery 1	155	5775	17.25	17.50	1.059	91.87	1.088	-0.11	0.729	0.840
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm		Ant 4 Battery 1	155	5775	17.50	17.50	1.000	91.87	1.088	-0.11	0.594	0.646
49	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Ant 5 Battery 1	159	5795	17.21	17.50	1.069	95.85	1.043	-0.14	0.835	0.931
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm		Ant 4 Battery 1	159	5795	17.50	17.50	1.000	95.85	1.043	-0.14	0.610	0.636
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Ant 5 Battery 2	159	5795	17.21	17.50	1.069	95.85	1.043	-0.1	0.828	0.923
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm		Ant 4 Battery 2	159	5795	17.50	17.50	1.000	95.85	1.043	-0.1	0.676	0.705

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	-0.11	0.116	0.131
50	Bluetooth	1Mbps	Back	10mm	Ant 4	Battery 1	0	2402	17.81	18.00	1.044	77.2	1.079	0.03	0.200	0.225
	Bluetooth	1Mbps	Back	10mm	Ant 4	Battery 2	0	2402	17.81	18.00	1.044	77.2	1.079	0.04	0.180	0.203

13.4 Product Specific SAR

<5.3GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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	Ant4	Battery 1	54	5270	17.12	17.50	1.093	96.48	1.036	-0.19	0.451	0.510
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant4	Battery 1	54	5270	17.12	17.50	1.093	96.48	1.036	0.18	0.572	0.647
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant4	Battery 1	54	5270	17.12	17.50	1.093	96.48	1.036	0.16	0.139	0.157
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant4	Battery 1	54	5270	17.12	17.50	1.093	96.48	1.036	0.17	0.434	0.491
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant4	Battery 2	54	5270	17.12	17.50	1.093	96.48	1.036	-0.16	0.512	0.580
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant5	Battery 1	54	5270	17.16	17.50	1.082	95.95	1.042	-0.01	0.237	0.267
51	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant5	Battery 1	54	5270	17.16	17.50	1.082	95.95	1.042	-0.18	1.050	1.183
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant5	Battery 1	54	5270	17.16	17.50	1.082	95.95	1.042	0.19	0.759	0.855
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant5	Battery 1	54	5270	17.16	17.50	1.082	95.95	1.042	0.07	0.151	0.170
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant5	Battery 2	54	5270	17.16	17.50	1.082	95.95	1.042	0.12	0.896	1.010

<5.5GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	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	802.11ac-VHT80 MCS0	Front	0mm	Ant4	Battery 1	138	5690	17.35	17.50	1.036	91.87	1.088	0.09	0.726	0.818
52	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant4	Battery 1	138	5690	17.35	17.50	1.036	91.87	1.088	-0.1	0.880	0.991
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant4	Battery 1	138	5690	17.35	17.50	1.036	91.87	1.088	0.01	0.168	0.189
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant4	Battery 1	138	5690	17.35	17.50	1.036	91.87	1.088	-0.18	0.686	0.773
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant4	Battery 2	138	5690	17.35	17.50	1.036	91.87	1.088	-0.17	0.822	0.926
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant5	Battery 1	122	5610	17.06	17.50	1.107	91.87	1.088	0.13	0.152	0.183
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant5	Battery 1	122	5610	17.06	17.50	1.107	91.87	1.088	-0.08	0.790	0.952
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant5	Battery 1	122	5610	17.06	17.50	1.107	91.87	1.088	0.15	0.623	0.750
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant5	Battery 1	122	5610	17.06	17.50	1.107	91.87	1.088	-0.03	0.046	0.055
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant5	Battery 2	122	5610	17.06	17.50	1.107	91.87	1.088	-0.15	0.783	0.943

13.5 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 2_UAT	20M_QPSK_50_24	Right Cheek	0mm	-	Battery 1	19100	1900	20.88	21.50	1.153	-	1.000	0.01	0.963	-	1.111
2nd	LTE Band 2_UAT	20M_QPSK_50_24	Right Cheek	0mm	-	Battery 1	19100	1900	20.88	21.50	1.153	-	1.000	0.05	0.954	1.01	1.100
1st	LTE Band 26_UAT	15M_QPSK_1_0	Right Cheek	0mm	-	Battery 1	26865	831.5	24.55	25.70	1.303	-	1.000	-0.08	0.894	-	1.165
2nd	LTE Band 26_UAT	15M_QPSK_1_0	Right Cheek	0mm	-	Battery 1	26865	831.5	24.55	25.70	1.303	-	1.000	-0.01	0.861	1.04	1.122
1st	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	-	Battery 1	1513	1752.6	23.50	24.00	1.122	-	1.000	0.05	0.987	-	1.107
2nd	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	-	Battery 2	1513	1752.6	23.50	24.00	1.122	-	1.000	0.04	0.945	1.04	1.060
1st	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+5	Battery 1	159	5795	17.21	17.50	1.069	95.85	1.043	-0.03	1.050	-	1.171
2nd	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+5	Battery 1	159	5795	17.21	17.50	1.069	95.85	1.043	-0.05	1.040	1.01	1.160

General Note:

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



14. Simultaneous Transmission Analysis

RF Exposure Conditions	Item	Simultaneous Transmission Configurations	Remark
Head / Body-worn / Hotspot / Product Specific	1	(Ant 4)WIFI 5G SISO +(Ant 4) Bluetooth	
	2	(Ant 5)WIFI 5G SISO+(Ant 4) Bluetooth	
	3	WIFI 5G MIMO+(Ant 4) Bluetooth	
	4	(Ant 4)WIFI 5G SISO	
	5	(Ant 5)WIFI 5G SISO	
	6	WIFI 5G MIMO	
	7	(Ant 4) WIFI 2.4G SISO	
	8	(Ant 5) WIFI 2.4G SISO	
	9	(Ant 5) WIFI 2.4G SISO +(Ant 4) Bluetooth	
	10	WIFI 2.4G MIMO	
	11	(Ant 4) Bluetooth	
	12	(Ant 5) WIFI 5G SISO+(Ant 4) WIFI 2.4G SISO	
	13	(Ant 4) WIFI 5G SISO +(Ant 4) Bluetooth	
	14	(Ant 5) WIFI 5G SISO+(Ant 4) Bluetooth	
	15	WIFI 5G MIMO+(Ant 4) Bluetooth	
	16	(Ant 4) WIFI 5G SISO	
	17	(Ant 5) WIFI 5G SISO	
	18	WIFI 5G MIMO	
	19	(Ant 4) WIFI 2.4G SISO	
	20	(Ant 5) WIFI 2.4G SISO	
	21	(Ant 5) WIFI 2.4G SISO +(Ant 4) Bluetooth	
	22	WIFI 2.4G MIMO	
	23	(Ant 5) WIFI 5G SISO+ (Ant 4) WIFI 2.4G SISO	
	24	(Ant 4) Bluetooth	

General Note:

1. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
2. 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.
3. When the device operates in different RF exposure conditions, cellular TX power has 2 power table associated with WLAN-ON and WLAN-OFF.
4. The Scaled SAR summation is calculated based on the same configuration and test position.
5. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$ for 1g SAR, if $SPLSR < 0.1$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
 - v) When the device operates in head mode, cellular TX power has 2 power table associated with WLAN-ON (power table 1) and WLAN-OFF (power table 2). For Head exposure positions, Cellular SAR associated with power table 1 was used for analysis of simultaneous transmission with WLAN.



14.1 Head Exposure Conditions (WLAN On)

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)	
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 5	5GHz WLAN Ant 4	5GHz WLAN Ant 5	Bluetooth Ant 4	5GHz WLAN Ant 4+5							
		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_UAT	Right Cheek	0.565	0.210	0.142	0.339	0.056	0.366	0.458	0.917	0.831	1.073	1.270	0.987	1.389
		Right Tilted	0.469	0.245	0.076	0.391	0.054	0.331	0.493	0.790	0.768	0.876	1.191	0.854	1.293
		Left Cheek	0.332	0.708	0.461	0.457	0.168	0.696	0.562	1.501	1.208	1.489	1.485	1.196	1.590
		Left Tilted	0.245	0.443	0.154	0.531	0.122	0.410	0.679	0.842	0.810	0.809	1.186	0.777	1.334
	GSM1900_UAT	Right Cheek	0.436	0.210	0.142	0.339	0.056	0.366	0.458	0.788	0.702	0.944	1.141	0.858	1.260
		Right Tilted	0.379	0.245	0.076	0.391	0.054	0.331	0.493	0.700	0.678	0.786	1.101	0.764	1.203
		Left Cheek	0.173	0.708	0.461	0.457	0.168	0.696	0.562	1.342	1.049	1.330	1.326	1.037	1.431
		Left Tilted	0.193	0.443	0.154	0.531	0.122	0.410	0.679	0.790	0.758	0.757	1.134	0.725	1.282
WCDMA	WCDMA II_UAT	Right Cheek	0.575	0.210	0.142	0.339	0.056	0.366	0.458	0.927	0.841	1.083	1.280	0.997	1.399
		Right Tilted	0.510	0.245	0.076	0.391	0.054	0.331	0.493	0.831	0.809	0.917	1.232	0.895	1.334
		Left Cheek	0.243	0.708	0.461	0.457	0.168	0.696	0.562	1.412	1.119	1.400	1.396	1.107	1.501
		Left Tilted	0.257	0.443	0.154	0.531	0.122	0.410	0.679	0.854	0.822	0.821	1.198	0.789	1.346
	WCDMA IV_UAT	Right Cheek	0.503	0.210	0.142	0.339	0.056	0.366	0.458	0.855	0.769	1.011	1.208	0.925	1.327
		Right Tilted	0.488	0.245	0.076	0.391	0.054	0.331	0.493	0.809	0.787	0.895	1.210	0.873	1.312
		Left Cheek	0.155	0.708	0.461	0.457	0.168	0.696	0.562	1.324	1.031	1.312	1.308	1.019	1.413
		Left Tilted	0.179	0.443	0.154	0.531	0.122	0.410	0.679	0.776	0.744	0.743	1.120	0.711	1.268
	WCDMA V_UAT	Right Cheek	0.480	0.210	0.142	0.339	0.056	0.366	0.458	0.832	0.746	0.988	1.185	0.902	1.304
		Right Tilted	0.406	0.245	0.076	0.391	0.054	0.331	0.493	0.727	0.705	0.813	1.128	0.791	1.230
		Left Cheek	0.316	0.708	0.461	0.457	0.168	0.696	0.562	1.485	1.192	1.473	1.469	1.180	1.574
		Left Tilted	0.228	0.443	0.154	0.531	0.122	0.410	0.679	0.825	0.793	0.792	1.169	0.760	1.317
LTE	LTE Band 2_UAT	Right Cheek	0.487	0.210	0.142	0.339	0.056	0.366	0.458	0.839	0.753	0.995	1.192	0.909	1.311
		Right Tilted	0.442	0.245	0.076	0.391	0.054	0.331	0.493	0.763	0.741	0.849	1.164	0.827	1.266
		Left Cheek	0.201	0.708	0.461	0.457	0.168	0.696	0.562	1.370	1.077	1.358	1.354	1.065	1.459
		Left Tilted	0.213	0.443	0.154	0.531	0.122	0.410	0.679	0.810	0.778	0.777	1.154	0.745	1.302
	LTE Band 4_UAT	Right Cheek	0.563	0.210	0.142	0.339	0.056	0.366	0.458	0.915	0.829	1.071	1.268	0.985	1.387
		Right Tilted	0.495	0.245	0.076	0.391	0.054	0.331	0.493	0.816	0.794	0.902	1.217	0.880	1.319
		Left Cheek	0.176	0.708	0.461	0.457	0.168	0.696	0.562	1.345	1.052	1.333	1.329	1.040	1.434
		Left Tilted	0.184	0.443	0.154	0.531	0.122	0.410	0.679	0.781	0.749	0.748	1.125	0.716	1.273
	LTE Band 12_UAT	Right Cheek	0.419	0.210	0.142	0.339	0.056	0.366	0.458	0.771	0.685	0.927	1.124	0.841	1.243
		Right Tilted	0.318	0.245	0.076	0.391	0.054	0.331	0.493	0.639	0.617	0.725	1.040	0.703	1.142
		Left Cheek	0.165	0.708	0.461	0.457	0.168	0.696	0.562	1.334	1.041	1.322	1.318	1.029	1.423
		Left Tilted	0.120	0.443	0.154	0.531	0.122	0.410	0.679	0.717	0.685	0.684	1.061	0.652	1.209
	LTE Band 13_UAT	Right Cheek	0.500	0.210	0.142	0.339	0.056	0.366	0.458	0.852	0.766	1.008	1.205	0.922	1.324
		Right Tilted	0.389	0.245	0.076	0.391	0.054	0.331	0.493	0.710	0.688	0.796	1.111	0.774	1.213
		Left Cheek	0.264	0.708	0.461	0.457	0.168	0.696	0.562	1.433	1.140	1.421	1.417	1.128	1.522
		Left Tilted	0.192	0.443	0.154	0.531	0.122	0.410	0.679	0.789	0.757	0.756	1.133	0.724	1.281
	LTE Band 26_UAT	Right Cheek	0.473	0.210	0.142	0.339	0.056	0.366	0.458	0.825	0.739	0.981	1.178	0.895	1.297
		Right Tilted	0.375	0.245	0.076	0.391	0.054	0.331	0.493	0.696	0.674	0.782	1.097	0.760	1.199
		Left Cheek	0.267	0.708	0.461	0.457	0.168	0.696	0.562	1.436	1.143	1.424	1.420	1.131	1.525
		Left Tilted	0.196	0.443	0.154	0.531	0.122	0.410	0.679	0.793	0.761	0.760	1.137	0.728	1.285
	LTE Band 38_UAT	Right Cheek	0.609	0.210	0.142	0.339	0.056	0.366	0.458	0.961	0.875	1.117	1.314	1.031	1.433
		Right Tilted	0.283	0.245	0.076	0.391	0.054	0.331	0.493	0.604	0.582	0.690	1.005	0.668	1.107
		Left Cheek	0.233	0.708	0.461	0.457	0.168	0.696	0.562	1.402	1.109	1.390	1.386	1.097	1.491
		Left Tilted	0.141	0.443	0.154	0.531	0.122	0.410	0.679	0.738	0.706	0.705	1.082	0.673	1.230
LTE Band 41_UAT	Right Cheek	0.598	0.210	0.142	0.339	0.056	0.366	0.458	0.950	0.864	1.106	1.303	1.020	1.422	
	Right Tilted	0.278	0.245	0.076	0.391	0.054	0.331	0.493	0.599	0.577	0.685	1.000	0.663	1.102	
	Left Cheek	0.230	0.708	0.461	0.457	0.168	0.696	0.562	1.399	1.106	1.387	1.383	1.094	1.488	
	Left Tilted	0.144	0.443	0.154	0.531	0.122	0.410	0.679	0.741	0.709	0.708	1.085	0.676	1.233	



WWAN Band		Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 5	5GHz WLAN Ant 4	5GHz WLAN Ant 5	Bluetooth Ant 4	5GHz WLAN Ant 4+5						
			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_LAT	Right Cheek	0.186	0.210	0.142	0.339	0.056	0.366	0.458	0.538	0.452	0.694	0.891	0.608	1.010
		Right Tilted	0.060	0.245	0.076	0.391	0.054	0.331	0.493	0.381	0.359	0.467	0.782	0.445	0.884
		Left Cheek	0.154	0.708	0.461	0.457	0.168	0.696	0.562	1.323	1.030	1.311	1.307	1.018	1.412
		Left Tilted	0.092	0.443	0.154	0.531	0.122	0.410	0.679	0.689	0.657	0.656	1.033	0.624	1.181
	GSM1900_LAT	Right Cheek	0.078	0.210	0.142	0.339	0.056	0.366	0.458	0.430	0.344	0.586	0.783	0.500	0.902
		Right Tilted	0.031	0.245	0.076	0.391	0.054	0.331	0.493	0.352	0.330	0.438	0.753	0.416	0.855
		Left Cheek	0.050	0.708	0.461	0.457	0.168	0.696	0.562	1.219	0.926	1.207	1.203	0.914	1.308
		Left Tilted	0.035	0.443	0.154	0.531	0.122	0.410	0.679	0.632	0.600	0.599	0.976	0.567	1.124
WCDMA	WCDMA II_LAT	Right Cheek	0.115	0.210	0.142	0.339	0.056	0.366	0.458	0.467	0.381	0.623	0.820	0.537	0.939
		Right Tilted	0.036	0.245	0.076	0.391	0.054	0.331	0.493	0.357	0.335	0.443	0.758	0.421	0.860
		Left Cheek	0.095	0.708	0.461	0.457	0.168	0.696	0.562	1.264	0.971	1.252	1.248	0.959	1.353
		Left Tilted	0.053	0.443	0.154	0.531	0.122	0.410	0.679	0.650	0.618	0.617	0.994	0.585	1.142
	WCDMA IV_LAT	Right Cheek	0.013	0.210	0.142	0.339	0.056	0.366	0.458	0.365	0.279	0.521	0.718	0.435	0.837
		Right Tilted	0.008	0.245	0.076	0.391	0.054	0.331	0.493	0.329	0.307	0.415	0.730	0.393	0.832
		Left Cheek	0.011	0.708	0.461	0.457	0.168	0.696	0.562	1.180	0.887	1.168	1.164	0.875	1.269
		Left Tilted	0.007	0.443	0.154	0.531	0.122	0.410	0.679	0.604	0.572	0.571	0.948	0.539	1.096
	WCDMA V_LAT	Right Cheek	0.152	0.210	0.142	0.339	0.056	0.366	0.458	0.504	0.418	0.660	0.857	0.574	0.976
		Right Tilted	0.065	0.245	0.076	0.391	0.054	0.331	0.493	0.386	0.364	0.472	0.787	0.450	0.889
		Left Cheek	0.136	0.708	0.461	0.457	0.168	0.696	0.562	1.305	1.012	1.293	1.289	1.000	1.394
		Left Tilted	0.081	0.443	0.154	0.531	0.122	0.410	0.679	0.678	0.646	0.645	1.022	0.613	1.170
LTE	LTE Band 2_LAT	Right Cheek	0.103	0.210	0.142	0.339	0.056	0.366	0.458	0.455	0.369	0.611	0.808	0.525	0.927
		Right Tilted	0.029	0.245	0.076	0.391	0.054	0.331	0.493	0.350	0.328	0.436	0.751	0.414	0.853
		Left Cheek	0.064	0.708	0.461	0.457	0.168	0.696	0.562	1.233	0.940	1.221	1.217	0.928	1.322
		Left Tilted	0.048	0.443	0.154	0.531	0.122	0.410	0.679	0.645	0.613	0.612	0.989	0.580	1.137
	LTE Band 4_LAT	Right Cheek	0.017	0.210	0.142	0.339	0.056	0.366	0.458	0.369	0.283	0.525	0.722	0.439	0.841
		Right Tilted	0.010	0.245	0.076	0.391	0.054	0.331	0.493	0.331	0.309	0.417	0.732	0.395	0.834
		Left Cheek	0.016	0.708	0.461	0.457	0.168	0.696	0.562	1.185	0.892	1.173	1.169	0.880	1.274
		Left Tilted	0.010	0.443	0.154	0.531	0.122	0.410	0.679	0.607	0.575	0.574	0.951	0.542	1.099
	LTE Band 12_LAT	Right Cheek	0.094	0.210	0.142	0.339	0.056	0.366	0.458	0.446	0.360	0.602	0.799	0.516	0.918
		Right Tilted	0.055	0.245	0.076	0.391	0.054	0.331	0.493	0.376	0.354	0.462	0.777	0.440	0.879
		Left Cheek	0.117	0.708	0.461	0.457	0.168	0.696	0.562	1.286	0.993	1.274	1.270	0.981	1.375
		Left Tilted	0.072	0.443	0.154	0.531	0.122	0.410	0.679	0.669	0.637	0.636	1.013	0.604	1.161
	LTE Band 13_LAT	Right Cheek	0.135	0.210	0.142	0.339	0.056	0.366	0.458	0.487	0.401	0.643	0.840	0.557	0.959
		Right Tilted	0.072	0.245	0.076	0.391	0.054	0.331	0.493	0.393	0.371	0.479	0.794	0.457	0.896
		Left Cheek	0.085	0.708	0.461	0.457	0.168	0.696	0.562	1.254	0.961	1.242	1.238	0.949	1.343
		Left Tilted	0.075	0.443	0.154	0.531	0.122	0.410	0.679	0.672	0.640	0.639	1.016	0.607	1.164
	LTE Band 26_LAT	Right Cheek	0.146	0.210	0.142	0.339	0.056	0.366	0.458	0.498	0.412	0.654	0.851	0.568	0.970
		Right Tilted	0.074	0.245	0.076	0.391	0.054	0.331	0.493	0.395	0.373	0.481	0.796	0.459	0.898
		Left Cheek	0.147	0.708	0.461	0.457	0.168	0.696	0.562	1.316	1.023	1.304	1.300	1.011	1.405
		Left Tilted	0.087	0.443	0.154	0.531	0.122	0.410	0.679	0.684	0.652	0.651	1.028	0.619	1.176
	LTE Band 38_LAT	Right Cheek	0.337	0.210	0.142	0.339	0.056	0.366	0.458	0.689	0.603	0.845	1.042	0.759	1.161
		Right Tilted	0.087	0.245	0.076	0.391	0.054	0.331	0.493	0.408	0.386	0.494	0.809	0.472	0.911
		Left Cheek	0.181	0.708	0.461	0.457	0.168	0.696	0.562	1.350	1.057	1.338	1.334	1.045	1.439
		Left Tilted	0.114	0.443	0.154	0.531	0.122	0.410	0.679	0.711	0.679	0.678	1.055	0.646	1.203
LTE Band 41_LAT	Right Cheek	0.326	0.210	0.142	0.339	0.056	0.366	0.458	0.678	0.592	0.834	1.031	0.748	1.150	
	Right Tilted	0.087	0.245	0.076	0.391	0.054	0.331	0.493	0.408	0.386	0.494	0.809	0.472	0.911	
	Left Cheek	0.145	0.708	0.461	0.457	0.168	0.696	0.562	1.314	1.021	1.302	1.298	1.009	1.403	
	Left Tilted	0.114	0.443	0.154	0.531	0.122	0.410	0.679	0.711	0.679	0.678	1.055	0.646	1.203	



14.2 Head Exposure Conditions (WLAN Off)

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN	Bluetooth Ant 4	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_UAT	Right Cheek	0.656	0.366	1.022
		Right Tilted	0.460	0.331	0.791
		Left Cheek	0.377	0.696	1.073
		Left Tilted	0.279	0.410	0.689
	GSM1900_UAT	Right Cheek	1.193	0.366	1.559
		Right Tilted	0.988	0.331	1.319
		Left Cheek	0.413	0.696	1.109
		Left Tilted	0.443	0.410	0.853
WCDMA	WCDMA II_UAT	Right Cheek	1.191	0.366	1.557
		Right Tilted	1.050	0.331	1.381
		Left Cheek	0.506	0.696	1.202
		Left Tilted	0.513	0.410	0.923
	WCDMA IV_UAT	Right Cheek	0.503	0.366	0.869
		Right Tilted	0.488	0.331	0.819
		Left Cheek	0.155	0.696	0.851
		Left Tilted	0.179	0.410	0.589
	WCDMA V_UAT	Right Cheek	0.680	0.366	1.046
		Right Tilted	0.596	0.331	0.927
		Left Cheek	0.403	0.696	1.099
		Left Tilted	0.311	0.410	0.721
LTE	LTE Band 2_UAT	Right Cheek	1.111	0.366	1.477
		Right Tilted	0.868	0.331	1.199
		Left Cheek	0.442	0.696	1.138
		Left Tilted	0.445	0.410	0.855
	LTE Band 4_UAT	Right Cheek	0.563	0.366	0.929
		Right Tilted	0.495	0.331	0.826
		Left Cheek	0.176	0.696	0.872
		Left Tilted	0.184	0.410	0.594
	LTE Band 12_UAT	Right Cheek	0.419	0.366	0.785
		Right Tilted	0.318	0.331	0.649
		Left Cheek	0.165	0.696	0.861
		Left Tilted	0.120	0.410	0.530
	LTE Band 13_UAT	Right Cheek	0.836	0.366	1.202
		Right Tilted	0.570	0.331	0.901
		Left Cheek	0.348	0.696	1.044
		Left Tilted	0.295	0.410	0.705
	LTE Band 26_UAT	Right Cheek	1.165	0.366	1.531
		Right Tilted	1.125	0.331	1.456
		Left Cheek	0.602	0.696	1.298
		Left Tilted	0.424	0.410	0.834
	LTE Band 38_UAT	Right Cheek	0.745	0.366	1.111
		Right Tilted	0.358	0.331	0.689
		Left Cheek	0.302	0.696	0.998
		Left Tilted	0.191	0.410	0.601
LTE Band 41_UAT	Right Cheek	0.684	0.366	1.050	
	Right Tilted	0.291	0.331	0.622	
	Left Cheek	0.248	0.696	0.944	
	Left Tilted	0.161	0.410	0.571	



WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	Bluetooth Ant 1 1g SAR (W/kg)	
GSM	GSM850_LAT	Right Cheek	0.186	0.366	0.552
		Right Tilted	0.060	0.331	0.391
		Left Cheek	0.154	0.696	0.850
		Left Tilted	0.092	0.410	0.502
	GSM1900_LAT	Right Cheek	0.078	0.366	0.444
		Right Tilted	0.031	0.331	0.362
		Left Cheek	0.050	0.696	0.746
		Left Tilted	0.035	0.410	0.445
WCDMA	WCDMA II_LAT	Right Cheek	0.199	0.366	0.565
		Right Tilted	0.066	0.331	0.397
		Left Cheek	0.173	0.696	0.869
		Left Tilted	0.100	0.410	0.510
	WCDMA IV_LAT	Right Cheek	0.034	0.366	0.400
		Right Tilted	0.019	0.331	0.350
		Left Cheek	0.026	0.696	0.722
		Left Tilted	0.021	0.410	0.431
	WCDMA V_LAT	Right Cheek	0.152	0.366	0.518
		Right Tilted	0.065	0.331	0.396
		Left Cheek	0.136	0.696	0.832
		Left Tilted	0.081	0.410	0.491
LTE	LTE Band 2_LAT	Right Cheek	0.143	0.366	0.509
		Right Tilted	0.047	0.331	0.378
		Left Cheek	0.090	0.696	0.786
		Left Tilted	0.061	0.410	0.471
	LTE Band 4_LAT	Right Cheek	0.035	0.366	0.401
		Right Tilted	0.019	0.331	0.350
		Left Cheek	0.034	0.696	0.730
		Left Tilted	0.023	0.410	0.433
	LTE Band 12_LAT	Right Cheek	0.094	0.366	0.460
		Right Tilted	0.055	0.331	0.386
		Left Cheek	0.117	0.696	0.813
		Left Tilted	0.072	0.410	0.482
	LTE Band 13_LAT	Right Cheek	0.135	0.366	0.501
		Right Tilted	0.072	0.331	0.403
		Left Cheek	0.085	0.696	0.781
		Left Tilted	0.075	0.410	0.485
	LTE Band 26_LAT	Right Cheek	0.146	0.366	0.512
		Right Tilted	0.074	0.331	0.405
		Left Cheek	0.147	0.696	0.843
		Left Tilted	0.087	0.410	0.497
	LTE Band 38_LAT	Right Cheek	0.511	0.366	0.877
		Right Tilted	0.129	0.331	0.460
		Left Cheek	0.270	0.696	0.966
		Left Tilted	0.174	0.410	0.584
LTE Band 41_LAT	Right Cheek	0.410	0.366	0.776	
	Right Tilted	0.095	0.331	0.426	
	Left Cheek	0.196	0.696	0.892	
	Left Tilted	0.156	0.410	0.566	



14.3 Hotspot Exposure Conditions (WLAN On)

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)			
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 5	5GHz WLAN Ant 4	5GHz WLAN Ant 5	Bluetooth Ant 4	5GHz WLAN Ant 4+5									
		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_UAT	Front	0.156	0.198	0.090	0.388	0.099	0.131	0.423	0.444	0.453	0.377	0.675	0.386	0.710		
		Back	0.172	0.325	0.213	0.688	0.892	0.225	0.931	0.710	1.389	0.610	1.085	1.289	1.328		
		Left side	0.135								0.135	0.135	0.135	0.135	0.135	0.135	
		Right side	0.103	0.137	0.145	0.221	0.627	0.085	0.726	0.385	0.867	0.333	0.409	0.815	0.914		
		Top side	0.115	0.150	0.029	1.018	0.126	0.104	1.171	0.294	0.391	0.248	1.237	0.345	1.390		
	GSM1900_UAT	Front	0.285	0.198	0.090	0.388	0.099	0.131	0.423	0.573	0.582	0.506	0.804	0.515	0.839		
		Back	0.360	0.325	0.213	0.688	0.892	0.225	0.931	0.898	1.577	0.798	1.273	1.477	1.516		
		Left side	0.184								0.184	0.184	0.184	0.184	0.184		
		Right side	0.042	0.137	0.145	0.221	0.627	0.085	0.726	0.324	0.806	0.272	0.348	0.754	0.853		
		Top side	0.267	0.150	0.029	1.018	0.126	0.104	1.171	0.446	0.543	0.400	1.389	0.497	1.542		
		WCDMA	WCDMA II_UAT	Front	0.193	0.198	0.090	0.388	0.099	0.131	0.423	0.481	0.490	0.414	0.712	0.423	0.747
				Back	0.341	0.325	0.213	0.688	0.892	0.225	0.931	0.879	1.558	0.779	1.254	1.458	1.497
Left side	0.134										0.134	0.134	0.134	0.134	0.134		
Right side	0.024			0.137	0.145	0.221	0.627	0.085	0.726	0.306	0.788	0.254	0.330	0.736	0.835		
WCDMA IV_UAT	Front		0.108	0.198	0.090	0.388	0.099	0.131	0.423	0.396	0.405	0.329	0.627	0.338	0.662		
	Back		0.145	0.325	0.213	0.688	0.892	0.225	0.931	0.683	1.362	0.583	1.058	1.262	1.301		
	Left side		0.067								0.067	0.067	0.067	0.067	0.067		
	Right side		0.005	0.137	0.145	0.221	0.627	0.085	0.726	0.287	0.769	0.235	0.311	0.717	0.816		
WCDMA V_UAT	Front		0.182	0.198	0.090	0.388	0.099	0.131	0.423	0.470	0.479	0.403	0.701	0.412	0.736		
	Back		0.195	0.325	0.213	0.688	0.892	0.225	0.931	0.733	1.412	0.633	1.108	1.312	1.351		
	Left side		0.189								0.189	0.189	0.189	0.189	0.189		
	Right side		0.147	0.137	0.145	0.221	0.627	0.085	0.726	0.429	0.911	0.377	0.453	0.859	0.958		
LTE	LTE Band 2_UAT	Front	0.232	0.198	0.090	0.388	0.099	0.131	0.423	0.520	0.529	0.453	0.751	0.462	0.786		
		Back	0.290	0.325	0.213	0.688	0.892	0.225	0.931	0.828	1.507	0.728	1.203	1.407	1.446		
		Left side	0.154								0.154	0.154	0.154	0.154	0.154		
		Right side	0.029	0.137	0.145	0.221	0.627	0.085	0.726	0.311	0.793	0.259	0.335	0.741	0.840		
		Top side	0.217	0.150	0.029	1.018	0.126	0.104	1.171	0.396	0.493	0.350	1.339	0.447	1.492		
	LTE Band 4_UAT	Front	0.134	0.198	0.090	0.388	0.099	0.131	0.423	0.422	0.431	0.355	0.653	0.364	0.688		
		Back	0.164	0.325	0.213	0.688	0.892	0.225	0.931	0.702	1.381	0.602	1.077	1.281	1.320		
		Left side	0.071								0.071	0.071	0.071	0.071	0.071		
		Right side	0.008	0.137	0.145	0.221	0.627	0.085	0.726	0.290	0.772	0.238	0.314	0.720	0.819		
		Top side	0.110	0.150	0.029	1.018	0.126	0.104	1.171	0.289	0.386	0.243	1.232	0.340	1.385		
	LTE Band 12_UAT	Front	0.101	0.198	0.090	0.388	0.099	0.131	0.423	0.389	0.398	0.322	0.620	0.331	0.655		
		Back	0.136	0.325	0.213	0.688	0.892	0.225	0.931	0.674	1.353	0.574	1.049	1.253	1.292		
		Left side	0.130								0.130	0.130	0.130	0.130	0.130		
		Right side	0.050	0.137	0.145	0.221	0.627	0.085	0.726	0.332	0.814	0.280	0.356	0.762	0.861		
	LTE Band 13_UAT	Front	0.214	0.198	0.090	0.388	0.099	0.131	0.423	0.502	0.511	0.435	0.733	0.444	0.768		
		Back	0.246	0.325	0.213	0.688	0.892	0.225	0.931	0.784	1.463	0.684	1.159	1.363	1.402		
		Left side	0.263								0.263	0.263	0.263	0.263	0.263		
		Right side	0.166	0.137	0.145	0.221	0.627	0.085	0.726	0.448	0.930	0.396	0.472	0.878	0.977		
		Top side	0.092	0.150	0.029	1.018	0.126	0.104	1.171	0.271	0.368	0.225	1.214	0.322	1.367		
	LTE Band 26_UAT	Front	0.220	0.198	0.090	0.388	0.099	0.131	0.423	0.508	0.517	0.441	0.739	0.450	0.774		
		Back	0.274	0.325	0.213	0.688	0.892	0.225	0.931	0.812	1.491	0.712	1.187	1.391	1.430		
		Left side	0.229								0.229	0.229	0.229	0.229	0.229		
		Right side	0.155	0.137	0.145	0.221	0.627	0.085	0.726	0.437	0.919	0.385	0.461	0.867	0.966		
	LTE Band 38_UAT	Front	0.105	0.198	0.090	0.388	0.099	0.131	0.423	0.393	0.402	0.326	0.624	0.335	0.659		
Back		0.310	0.325	0.213	0.688	0.892	0.225	0.931	0.848	1.527	0.748	1.223	1.427	1.466			
Left side		0.185								0.185	0.185	0.185	0.185	0.185			
Right side		0.009	0.137	0.145	0.221	0.627	0.085	0.726	0.291	0.773	0.239	0.315	0.721	0.820			
Top side		0.041	0.150	0.029	1.018	0.126	0.104	1.171	0.220	0.317	0.174	1.163	0.271	1.316			
LTE Band 41_UAT	Front	0.122	0.198	0.090	0.388	0.099	0.131	0.423	0.410	0.419	0.343	0.641	0.352	0.676			
	Back	0.346	0.325	0.213	0.688	0.892	0.225	0.931	0.884	1.563	0.784	1.259	1.463	1.502			
	Left side	0.205								0.205	0.205	0.205	0.205	0.205			
	Right side	0.009	0.137	0.145	0.221	0.627	0.085	0.726	0.291	0.773	0.239	0.315	0.721	0.820			
		Top side	0.044	0.150	0.029	1.018	0.126	0.104	1.171	0.223	0.320	0.177	1.166	0.274	1.319		



WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)	
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 5	5GHz WLAN Ant 4	5GHz WLAN Ant 5	Bluetooth Ant 4	5GHz WLAN Ant 4+5							
		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_LAT	Front	0.175	0.198	0.090	0.388	0.099	0.131	0.423	0.463	0.472	0.396	0.694	0.405	0.729
		Back	0.215	0.325	0.213	0.688	0.892	0.225	0.931	0.753	1.432	0.653	1.128	1.332	1.371
		Left side	0.104								0.104	0.104	0.104	0.104	0.104
		Right side	0.172	0.137	0.145	0.221	0.627	0.085	0.726	0.454	0.936	0.402	0.478	0.884	0.983
		Bottom side	0.035								0.035	0.035	0.035	0.035	0.035
	GSM1900_LAT	Front	0.155	0.198	0.090	0.388	0.099	0.131	0.423	0.443	0.452	0.376	0.674	0.385	0.709
		Back	0.351	0.325	0.213	0.688	0.892	0.225	0.931	0.889	1.568	0.789	1.264	1.468	1.507
		Left side	0.044								0.044	0.044	0.044	0.044	0.044
		Right side	0.038	0.137	0.145	0.221	0.627	0.085	0.726	0.320	0.802	0.268	0.344	0.750	0.849
		Bottom side	0.359								0.359	0.359	0.359	0.359	0.359
WCDMA	WCDMA II_LAT	Front	0.240	0.198	0.090	0.388	0.099	0.131	0.423	0.528	0.537	0.461	0.759	0.470	0.794
		Back	0.331	0.325	0.213	0.688	0.892	0.225	0.931	0.869	1.548	0.769	1.244	1.448	1.487
		Left side	0.095								0.095	0.095	0.095	0.095	0.095
		Right side	0.049	0.137	0.145	0.221	0.627	0.085	0.726	0.331	0.813	0.279	0.355	0.761	0.860
		Bottom side	0.412								0.412	0.412	0.412	0.412	0.412
	WCDMA IV_LAT	Front	0.082	0.198	0.090	0.388	0.099	0.131	0.423	0.370	0.379	0.303	0.601	0.312	0.636
		Back	0.199	0.325	0.213	0.688	0.892	0.225	0.931	0.737	1.416	0.637	1.112	1.316	1.355
		Left side	0.008								0.008	0.008	0.008	0.008	0.008
		Right side	0.005	0.137	0.145	0.221	0.627	0.085	0.726	0.287	0.769	0.235	0.311	0.717	0.816
		Bottom side	0.205								0.205	0.205	0.205	0.205	0.205
	WCDMA V_LAT	Front	0.143	0.198	0.090	0.388	0.099	0.131	0.423	0.431	0.440	0.364	0.662	0.373	0.697
		Back	0.173	0.325	0.213	0.688	0.892	0.225	0.931	0.711	1.390	0.611	1.086	1.290	1.329
		Left side	0.057								0.057	0.057	0.057	0.057	0.057
		Right side	0.143	0.137	0.145	0.221	0.627	0.085	0.726	0.425	0.907	0.373	0.449	0.855	0.954
		Bottom side	0.022								0.022	0.022	0.022	0.022	0.022
LTE	LTE Band 2_LAT	Front	0.199	0.198	0.090	0.388	0.099	0.131	0.423	0.487	0.496	0.420	0.718	0.429	0.753
		Back	0.377	0.325	0.213	0.688	0.892	0.225	0.931	0.915	1.594	0.815	1.290	1.494	1.533
		Left side	0.055								0.055	0.055	0.055	0.055	0.055
		Right side	0.005	0.137	0.145	0.221	0.627	0.085	0.726	0.287	0.769	0.235	0.311	0.717	0.816
		Bottom side	0.460								0.460	0.460	0.460	0.460	0.460
	LTE Band 4_LAT	Front	0.090	0.198	0.090	0.388	0.099	0.131	0.423	0.378	0.387	0.311	0.609	0.320	0.644
		Back	0.312	0.325	0.213	0.688	0.892	0.225	0.931	0.850	1.529	0.750	1.225	1.429	1.468
		Left side	0.014								0.014	0.014	0.014	0.014	0.014
		Right side	0.004	0.137	0.145	0.221	0.627	0.085	0.726	0.286	0.768	0.234	0.310	0.716	0.815
		Bottom side	0.197								0.197	0.197	0.197	0.197	0.197
	LTE Band 12_LAT	Front	0.130	0.198	0.090	0.388	0.099	0.131	0.423	0.418	0.427	0.351	0.649	0.360	0.684
		Back	0.192	0.325	0.213	0.688	0.892	0.225	0.931	0.730	1.409	0.630	1.105	1.309	1.348
		Left side	0.109								0.109	0.109	0.109	0.109	0.109
		Right side	0.115	0.137	0.145	0.221	0.627	0.085	0.726	0.397	0.879	0.345	0.421	0.827	0.926
		Bottom side	0.025								0.025	0.025	0.025	0.025	0.025
	LTE Band 13_LAT	Front	0.141	0.198	0.090	0.388	0.099	0.131	0.423	0.429	0.438	0.362	0.660	0.371	0.695
		Back	0.189	0.325	0.213	0.688	0.892	0.225	0.931	0.727	1.406	0.627	1.102	1.306	1.345
		Left side	0.098								0.098	0.098	0.098	0.098	0.098
		Right side	0.132	0.137	0.145	0.221	0.627	0.085	0.726	0.414	0.896	0.362	0.438	0.844	0.943
		Bottom side	0.027								0.027	0.027	0.027	0.027	0.027
LTE Band 26_LAT	Front	0.145	0.198	0.090	0.388	0.099	0.131	0.423	0.433	0.442	0.366	0.664	0.375	0.699	
	Back	0.184	0.325	0.213	0.688	0.892	0.225	0.931	0.722	1.401	0.622	1.097	1.301	1.340	
	Left side	0.095								0.095	0.095	0.095	0.095	0.095	
	Right side	0.120	0.137	0.145	0.221	0.627	0.085	0.726	0.402	0.884	0.350	0.426	0.832	0.931	
	Bottom side	0.025								0.025	0.025	0.025	0.025	0.025	
LTE Band 38_LAT	Front	0.339	0.198	0.090	0.388	0.099	0.131	0.423	0.627	0.636	0.560	0.858	0.569	0.893	
	Back	0.236	0.325	0.213	0.688	0.892	0.225	0.931	0.774	1.453	0.674	1.149	1.353	1.392	
	Left side	0.021								0.021	0.021	0.021	0.021	0.021	
	Right side	0.309	0.137	0.145	0.221	0.627	0.085	0.726	0.591	1.073	0.539	0.615	1.021	1.120	
	Bottom side	0.081								0.081	0.081	0.081	0.081	0.081	
LTE Band 41_LAT	Front	0.237	0.198	0.090	0.388	0.099	0.131	0.423	0.525	0.534	0.458	0.756	0.467	0.791	
	Back	0.359	0.325	0.213	0.688	0.892	0.225	0.931	0.897	1.576	0.797	1.272	1.476	1.515	
	Left side	0.018								0.018	0.018	0.018	0.018	0.018	
	Right side	0.349	0.137	0.145	0.221	0.627	0.085	0.726	0.631	1.113	0.579	0.655	1.061	1.160	
	Bottom side	0.078								0.078	0.078	0.078	0.078	0.078	



14.4 Hotspot Exposure Conditions (WLAN Off)

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)	
			WWAN 1g SAR (W/kg)	Bluetooth Ant 4 1g SAR (W/kg)		
GSM	GSM850_UAT	Front	0.156	0.131	0.287	
		Back	0.172	0.225	0.397	
		Left side	0.135		0.135	
		Right side	0.103	0.085	0.188	
		Top side	0.115	0.104	0.219	
	GSM1900_UAT	Front	0.285	0.131	0.416	
		Back	0.360	0.225	0.585	
		Left side	0.184		0.184	
		Right side	0.042	0.085	0.127	
	Top side	0.267	0.104	0.371		
WCDMA	WCDMA II_UAT	Front	0.548	0.131	0.679	
		Back	0.789	0.225	1.014	
		Left side	0.351		0.351	
		Right side	0.080	0.085	0.165	
		Top side	0.543	0.104	0.647	
	WCDMA IV_UAT	Front	0.108	0.131	0.239	
		Back	0.145	0.225	0.370	
		Left side	0.067		0.067	
		Right side	0.005	0.085	0.090	
		Top side	0.118	0.104	0.222	
	WCDMA V_UAT	Front	0.182	0.131	0.313	
		Back	0.195	0.225	0.420	
		Left side	0.189		0.189	
		Right side	0.147	0.085	0.232	
		Top side	0.143	0.104	0.247	
	LTE	LTE Band 2_UAT	Front	0.529	0.131	0.660
			Back	0.721	0.225	0.946
			Left side	0.327		0.327
Right side			0.081	0.085	0.166	
Top side			0.473	0.104	0.577	
LTE Band 4_UAT		Front	0.134	0.131	0.265	
		Back	0.164	0.225	0.389	
		Left side	0.071		0.071	
		Right side	0.008	0.085	0.093	
		Top side	0.110	0.104	0.214	
LTE Band 12_UAT		Front	0.101	0.131	0.232	
		Back	0.136	0.225	0.361	
		Left side	0.130		0.130	
		Right side	0.050	0.085	0.135	
		Top side	0.037	0.104	0.141	
LTE Band 13_UAT		Front	0.214	0.131	0.345	
		Back	0.246	0.225	0.471	
		Left side	0.263		0.263	
		Right side	0.166	0.085	0.251	
		Top side	0.092	0.104	0.196	
LTE Band 26_UAT		Front	0.220	0.131	0.351	
		Back	0.274	0.225	0.499	
		Left side	0.229		0.229	
		Right side	0.155	0.085	0.240	
		Top side	0.151	0.104	0.255	
LTE Band 38_UAT		Front	0.153	0.131	0.284	
		Back	0.446	0.225	0.671	
	Left side	0.267		0.267		
	Right side	0.008	0.085	0.093		
	Top side	0.053	0.104	0.157		
LTE Band 41_UAT	Front	0.129	0.131	0.260		
	Back	0.382	0.225	0.607		
	Left side	0.294		0.294		
	Right side	0.008	0.085	0.093		
	Top side	0.049	0.104	0.153		



WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)	
			WWAN 1g SAR (W/kg)	Bluetooth Ant 1 1g SAR (W/kg)		
GSM	GSM850_LAT	Front	0.175	0.131	0.306	
		Back	0.215	0.225	0.440	
		Left side	0.104		0.104	
		Right side	0.172	0.085	0.257	
		Top side		0.104	0.104	
	GSM1900_LAT	Bottom side	0.035		0.035	
		Front	0.155	0.131	0.286	
		Back	0.351	0.225	0.576	
		Left side	0.044		0.044	
		Right side	0.038	0.085	0.123	
WCDMA	WCDMA II_LAT	Top side		0.104	0.104	
		Bottom side	0.359		0.359	
		Front	0.361	0.131	0.492	
		Back	0.547	0.225	0.772	
		Left side	0.175		0.175	
		Right side	0.093	0.085	0.178	
	WCDMA IV_LAT	Top side		0.104	0.104	
		Bottom side	0.635		0.635	
		Front	0.309	0.131	0.440	
		Back	1.107	0.225	1.332	
		Left side	0.051		0.051	
		Right side	0.028	0.085	0.113	
	WCDMA V_LAT	Top side		0.104	0.104	
		Bottom side	1.039		1.039	
		Front	0.143	0.131	0.274	
		Back	0.173	0.225	0.398	
		Left side	0.057		0.057	
		Right side	0.143	0.085	0.228	
	LTE	LTE Band 2_LAT	Top side		0.104	0.104
			Bottom side	0.022		0.022
			Front	0.292	0.131	0.423
			Back	0.603	0.225	0.828
			Left side	0.084		0.084
			Right side	0.070	0.085	0.155
LTE Band 4_LAT		Top side		0.104	0.104	
		Bottom side	0.818		0.818	
		Front	0.325	0.131	0.456	
		Back	1.028	0.225	1.253	
		Left side	0.041		0.041	
		Right side	0.022	0.085	0.107	
LTE Band 12_LAT		Top side		0.104	0.104	
		Bottom side	0.025		0.025	
		Front	0.130	0.131	0.261	
		Back	0.192	0.225	0.417	
		Left side	0.109		0.109	
		Right side	0.115	0.085	0.200	
LTE Band 13_LAT		Top side		0.104	0.104	
		Bottom side	0.027		0.027	
		Front	0.141	0.131	0.272	
		Back	0.189	0.225	0.414	
		Left side	0.098		0.098	
		Right side	0.132	0.085	0.217	
LTE Band 26_LAT		Top side		0.104	0.104	
		Bottom side	0.025		0.025	
		Front	0.145	0.131	0.276	
		Back	0.184	0.225	0.409	
		Left side	0.095		0.095	
		Right side	0.120	0.085	0.205	
LTE Band 38_LAT		Top side		0.104	0.104	
		Bottom side	0.094		0.094	
		Front	0.328	0.131	0.459	
		Back	0.543	0.225	0.768	
		Left side	0.023		0.023	
		Right side	0.450	0.085	0.535	
LTE Band 41_LAT	Top side		0.104	0.104		
	Bottom side	0.081		0.081		
	Front	0.271	0.131	0.402		
	Back	0.474	0.225	0.699		
	Left side	0.017		0.017		
	Right side	0.398	0.085	0.483		



14.5 Body-Worn Accessory Exposure Conditions (WLAN On)

WWAN Band		Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 5	5GHz WLAN Ant 4	5GHz WLAN Ant 5	Bluetooth Ant 4	5GHz WLAN Ant 4+5						
			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_UAT	Front	0.156	0.198	0.090	0.388	0.099	0.131	0.423	0.444	0.453	0.377	0.675	0.386	0.710
		Back	0.172	0.325	0.213	0.688	0.892	0.225	0.931	0.710	1.389	0.610	1.085	1.289	1.328
	GSM1900_UAT	Front	0.285	0.198	0.090	0.388	0.099	0.131	0.423	0.573	0.582	0.506	0.804	0.515	0.839
		Back	0.360	0.325	0.213	0.688	0.892	0.225	0.931	0.898	1.577	0.798	1.273	1.477	1.516
WCDMA	WCDMA II_UAT	Front	0.193	0.198	0.090	0.388	0.099	0.131	0.423	0.481	0.490	0.414	0.712	0.423	0.747
		Back	0.341	0.325	0.213	0.688	0.892	0.225	0.931	0.879	1.558	0.779	1.254	1.458	1.497
	WCDMA IV_UAT	Front	0.108	0.198	0.090	0.388	0.099	0.131	0.423	0.396	0.405	0.329	0.627	0.338	0.662
		Back	0.145	0.325	0.213	0.688	0.892	0.225	0.931	0.683	1.362	0.583	1.058	1.262	1.301
	WCDMA V_UAT	Front	0.182	0.198	0.090	0.388	0.099	0.131	0.423	0.470	0.479	0.403	0.701	0.412	0.736
		Back	0.195	0.325	0.213	0.688	0.892	0.225	0.931	0.733	1.412	0.633	1.108	1.312	1.351
LTE	LTE Band 2_UAT	Front	0.232	0.198	0.090	0.388	0.099	0.131	0.423	0.520	0.529	0.453	0.751	0.462	0.786
		Back	0.290	0.325	0.213	0.688	0.892	0.225	0.931	0.828	1.507	0.728	1.203	1.407	1.446
	LTE Band 4_UAT	Front	0.134	0.198	0.090	0.388	0.099	0.131	0.423	0.422	0.431	0.355	0.653	0.364	0.688
		Back	0.164	0.325	0.213	0.688	0.892	0.225	0.931	0.702	1.381	0.602	1.077	1.281	1.320
	LTE Band 12_UAT	Front	0.101	0.198	0.090	0.388	0.099	0.131	0.423	0.389	0.398	0.322	0.620	0.331	0.655
		Back	0.136	0.325	0.213	0.688	0.892	0.225	0.931	0.674	1.353	0.574	1.049	1.253	1.292
	LTE Band 13_UAT	Front	0.214	0.198	0.090	0.388	0.099	0.131	0.423	0.502	0.511	0.435	0.733	0.444	0.768
		Back	0.246	0.325	0.213	0.688	0.892	0.225	0.931	0.784	1.463	0.684	1.159	1.363	1.402
	LTE Band 26_UAT	Front	0.220	0.198	0.090	0.388	0.099	0.131	0.423	0.508	0.517	0.441	0.739	0.450	0.774
		Back	0.274	0.325	0.213	0.688	0.892	0.225	0.931	0.812	1.491	0.712	1.187	1.391	1.430
	LTE Band 38_UAT	Front	0.105	0.198	0.090	0.388	0.099	0.131	0.423	0.393	0.402	0.326	0.624	0.335	0.659
		Back	0.310	0.325	0.213	0.688	0.892	0.225	0.931	0.848	1.527	0.748	1.223	1.427	1.466
	LTE Band 41_UAT	Front	0.122	0.198	0.090	0.388	0.099	0.131	0.423	0.410	0.419	0.343	0.641	0.352	0.676
		Back	0.346	0.325	0.213	0.688	0.892	0.225	0.931	0.884	1.563	0.784	1.259	1.463	1.502



WWAN Band		Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 5	5GHz WLAN Ant 4	5GHz WLAN Ant 5	Bluetooth Ant 4	5GHz WLAN Ant 4+5						
			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_LAT	Front	0.175	0.198	0.090	0.388	0.099	0.131	0.423	0.463	0.472	0.396	0.694	0.405	0.729
		Back	0.215	0.325	0.213	0.688	0.892	0.225	0.931	0.753	1.432	0.653	1.128	1.332	1.371
	GSM1900_LAT	Front	0.155	0.198	0.090	0.388	0.099	0.131	0.423	0.443	0.452	0.376	0.674	0.385	0.709
		Back	0.351	0.325	0.213	0.688	0.892	0.225	0.931	0.889	1.568	0.789	1.264	1.468	1.507
WCDMA	WCDMA II_LAT	Front	0.240	0.198	0.090	0.388	0.099	0.131	0.423	0.528	0.537	0.461	0.759	0.470	0.794
		Back	0.331	0.325	0.213	0.688	0.892	0.225	0.931	0.869	1.548	0.769	1.244	1.448	1.487
	WCDMA IV_LAT	Front	0.082	0.198	0.090	0.388	0.099	0.131	0.423	0.370	0.379	0.303	0.601	0.312	0.636
		Back	0.199	0.325	0.213	0.688	0.892	0.225	0.931	0.737	1.416	0.637	1.112	1.316	1.355
	WCDMA V_LAT	Front	0.143	0.198	0.090	0.388	0.099	0.131	0.423	0.431	0.440	0.364	0.662	0.373	0.697
		Back	0.173	0.325	0.213	0.688	0.892	0.225	0.931	0.711	1.390	0.611	1.086	1.290	1.329
LTE	LTE Band 2_LAT	Front	0.199	0.198	0.090	0.388	0.099	0.131	0.423	0.487	0.496	0.420	0.718	0.429	0.753
		Back	0.377	0.325	0.213	0.688	0.892	0.225	0.931	0.915	1.594	0.815	1.290	1.494	1.533
	LTE Band 4_LAT	Front	0.090	0.198	0.090	0.388	0.099	0.131	0.423	0.378	0.387	0.311	0.609	0.320	0.644
		Back	0.312	0.325	0.213	0.688	0.892	0.225	0.931	0.850	1.529	0.750	1.225	1.429	1.468
	LTE Band 12_LAT	Front	0.130	0.198	0.090	0.388	0.099	0.131	0.423	0.418	0.427	0.351	0.649	0.360	0.684
		Back	0.192	0.325	0.213	0.688	0.892	0.225	0.931	0.730	1.409	0.630	1.105	1.309	1.348
	LTE Band 13_LAT	Front	0.141	0.198	0.090	0.388	0.099	0.131	0.423	0.429	0.438	0.362	0.660	0.371	0.695
		Back	0.189	0.325	0.213	0.688	0.892	0.225	0.931	0.727	1.406	0.627	1.102	1.306	1.345
	LTE Band 26_LAT	Front	0.145	0.198	0.090	0.388	0.099	0.131	0.423	0.433	0.442	0.366	0.664	0.375	0.699
		Back	0.184	0.325	0.213	0.688	0.892	0.225	0.931	0.722	1.401	0.622	1.097	1.301	1.340
	LTE Band 38_LAT	Front	0.339	0.198	0.090	0.388	0.099	0.131	0.423	0.627	0.636	0.560	0.858	0.569	0.893
		Back	0.236	0.325	0.213	0.688	0.892	0.225	0.931	0.774	1.453	0.674	1.149	1.353	1.392
	LTE Band 41_LAT	Front	0.237	0.198	0.090	0.388	0.099	0.131	0.423	0.525	0.534	0.458	0.756	0.467	0.791
		Back	0.359	0.325	0.213	0.688	0.892	0.225	0.931	0.897	1.576	0.797	1.272	1.476	1.515



14.6 Body-Worn Accessory Exposure Conditions (WLAN Off)

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN	Bluetooth Ant 4	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_UAT	Front	0.156	0.131	0.287
		Back	0.172	0.225	0.397
	GSM1900_UAT	Front	0.285	0.131	0.416
		Back	0.360	0.225	0.585
WCDMA	WCDMA II_UAT	Front	0.548	0.131	0.679
		Back	0.789	0.225	1.014
	WCDMA IV_UAT	Front	0.108	0.131	0.239
		Back	0.145	0.225	0.370
	WCDMA V_UAT	Front	0.182	0.131	0.313
		Back	0.195	0.225	0.420
LTE	LTE Band 2_UAT	Front	0.529	0.131	0.660
		Back	0.721	0.225	0.946
	LTE Band 4_UAT	Front	0.134	0.131	0.265
		Back	0.164	0.225	0.389
	LTE Band 12_UAT	Front	0.101	0.131	0.232
		Back	0.136	0.225	0.361
	LTE Band 13_UAT	Front	0.214	0.131	0.345
		Back	0.246	0.225	0.471
	LTE Band 26_UAT	Front	0.220	0.131	0.351
		Back	0.274	0.225	0.499
	LTE Band 38_UAT	Front	0.153	0.131	0.284
		Back	0.446	0.225	0.671
	LTE Band 41_UAT	Front	0.129	0.131	0.260
		Back	0.382	0.225	0.607

WWAN Band		Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
			WWAN	Bluetooth Ant 1	
			1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_LAT	Front	0.175	0.131	0.306
		Back	0.215	0.225	0.440
	GSM1900_LAT	Front	0.155	0.131	0.286
		Back	0.351	0.225	0.576
WCDMA	WCDMA II_LAT	Front	0.361	0.131	0.492
		Back	0.547	0.225	0.772
	WCDMA IV_LAT	Front	0.309	0.131	0.440
		Back	1.107	0.225	1.332
	WCDMA V_LAT	Front	0.143	0.131	0.274
		Back	0.173	0.225	0.398
LTE	LTE Band 2_LAT	Front	0.292	0.131	0.423
		Back	0.603	0.225	0.828
	LTE Band 4_LAT	Front	0.325	0.131	0.456
		Back	1.028	0.225	1.253
	LTE Band 12_LAT	Front	0.130	0.131	0.261
		Back	0.192	0.225	0.417
	LTE Band 13_LAT	Front	0.141	0.131	0.272
		Back	0.189	0.225	0.414
	LTE Band 26_LAT	Front	0.145	0.131	0.276
		Back	0.184	0.225	0.409
	LTE Band 38_LAT	Front	0.328	0.131	0.459
		Back	0.543	0.225	0.768
	LTE Band 41_LAT	Front	0.271	0.131	0.402
		Back	0.474	0.225	0.699

14.7 Product Specific Exposure Conditions

Exposure Position	4	5	4+5 Summed 10g SAR (W/kg)
	5GHz WLAN Ant 4	5GHz WLAN Ant 5	
	10g SAR (W/kg)	10g SAR (W/kg)	
Front	0.818	0.267	1.085
Back	0.991	1.183	2.174
Left side	-	-	0.000
Right side	0.189	0.855	1.044
Top side	0.773	0.170	0.943
Bottom side	-	-	0.000

Remark:

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

Test Engineer : Galen Chang Iran Wang Kurt Liu Mood Huang Wilson Lin White Huang Jay Jian Willy Yu Andy Jiang Randy Lin Neil Hsiang Carter Chuang and Ted Hsieh



15. 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.

16. 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.