FCC SAR TEST REPORT

FCC ID	:	**A4RG020D**
Equipment	:	**Smartphone**
Model Name	:	**G020D**
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 Dec. 10, 2018. 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 INTERTIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager

SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory
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History of this test report

Report No.	Version	Description	Issued Date
FA891147-01	01	Initial issue of report	Jan. 11, 2019
FA891147-01	02	Update section13	Jan. 21, 2019
FA891147-01	03	Update section3.2 and section14	Jan. 28, 2019
FA891147-01	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, G020D, 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	0.62	0.28	0.28		1.59
	GSM1900	1.11	0.32	0.37		
	WCDMA II	1.07	0.76	1.06		
	WCDMA IV	0.44	0.56	0.73		
	WCDMA V	0.46	0.20	0.20		
	LTE Band 2	1.20	0.78	0.99		
	LTE Band 4	0.48	0.63	0.74		
	LTE Band 12 / 17	0.82	0.27	0.27		
	LTE Band 13	0.40	0.26	0.26		
	LTE Band 5 / 26	0.83	0.27	0.27		
	LTE Band 38	0.92	0.48	0.48		
	LTE Band 41	0.84	0.51	0.51		
DTS	2.4GHz WLAN	0.55	0.52	0.52		1.59
NII	5GHz WLAN	0.76	0.62	0.47	1.81	1.59
DSS	Bluetooth	0.60	0.18	0.18		1.58
Date of Testing:		2018/11/10 ~ 2018/12/10				

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	G020D
FCC ID	A4RG020D
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	G020A-B
Battery 2	Manufacturer	Sunwoda	Model Name	G020A-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)		Product Specific Power Level (dBm)	
Band				UAT Antenna	LAT Antenna	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	34.00	34.00	34.00
	GPRS 1 Tx slot		34.00	34.00	34.00	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	32.00	32.00	32.00
	GPRS 3 Tx slots		30.00	30.00	30.00	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	29.00	29.00	29.00
	EDGE 1 Tx slot		28.00	28.00	28.00	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	27.00	27.00	27.00
	EDGE 3 Tx slots		25.00	25.00	25.00	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	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	32.00	32.00	32.00
		GPRS 1 Tx slot	32.00	32.00	32.00	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	32.00	32.00	32.00
		GPRS 1 Tx slot	32.00	32.00	32.00	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	30.00	30.00	30.00
		GPRS 2 Tx slots	30.00	30.00	30.00	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	32.00	32.00	32.00
		EDGE 1 Tx slot	27.00	27.00	27.00	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	32.00	32.00	32.00
		EDGE 1 Tx slot	27.00	27.00	27.00	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	30.00	30.00	30.00
		EDGE 2 Tx slots	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
GSM1900	GSM 1 Tx slot		31.00	30.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
	GPRS 1 Tx slot		31.00	30.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
	GPRS 2 Tx slots		29.50	27.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
	GPRS 3 Tx slots		27.50	25.50	27.50	27.50	27.50	27.50	27.50	27.50	27.50
	GPRS 4 Tx slots		26.50	24.50	26.50	26.50	26.50	26.50	26.50	26.50	26.50
	EDGE 1 Tx slot		27.00	26.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
	EDGE 2 Tx slots		26.00	25.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00
	EDGE 3 Tx slots		25.00	24.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
	EDGE 4 Tx slots		24.00	23.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
	DTM Multi-slot class 5	GSM 1 Tx slot	29.50	27.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
		GPRS 1 Tx slot	29.50	27.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
	DTM Multi-slot class 9	GSM 1 Tx slot	29.50	27.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
		GPRS 1 Tx slot	29.50	27.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
	DTM Multi-slot class 11	GSM 1 Tx slot	27.50	25.50	27.50	27.50	27.50	27.50	27.50	27.50	27.50
		GPRS 2 Tx slots	27.50	25.50	27.50	27.50	27.50	27.50	27.50	27.50	27.50
	DTM Multi-slot class 5	GSM 1 Tx slot	29.50	27.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
		EDGE 1 Tx slot	26.00	25.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00
	DTM Multi-slot class 9	GSM 1 Tx slot	29.50	27.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
		EDGE 1 Tx slot	26.00	25.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00
	DTM Multi-slot class 11	GSM 1 Tx slot	27.50	25.50	27.50	27.50	27.50	27.50	27.50	27.50	27.50
		EDGE 2 Tx slots	25.00	24.00	25.00	25.00	25.00	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)		Product Specific Power Level (dBm)	
Band		UAT Antenna	LAT Antenna	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	25.7	25.7
WCDMA IV	24.0	24.0	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	24.5	24.5
LTE 2	25.7	24.5	25.7	25.7	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	24.5	24.5
LTE 5	25.7	25.7	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	25.7	25.7
LTE 13	25.3	25.3	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	25.7	25.7
LTE 26	25.7	25.7	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	25.7	25.7
LTE 41	25.0	25.0	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)		Product Specific Power Level (dBm)	
Band				UAT Antenna	LAT Antenna	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	34.00	34.00	34.00
	GPRS 1 Tx slot		34.00	34.00	34.00	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	32.00	32.00	32.00
	GPRS 3 Tx slots		30.00	30.00	30.00	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	29.00	29.00	29.00
	EDGE 1 Tx slot		28.00	28.00	28.00	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	27.00	27.00	27.00
	EDGE 3 Tx slots		25.00	25.00	25.00	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	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	32.00	32.00	32.00
		GPRS 1 Tx slot	32.00	32.00	32.00	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	32.00	32.00	32.00
		GPRS 1 Tx slot	32.00	32.00	32.00	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	30.00	30.00	30.00
		GPRS 2 Tx slots	30.00	30.00	30.00	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	32.00	32.00	32.00
		EDGE 1 Tx slot	27.00	27.00	27.00	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	32.00	32.00	32.00
		EDGE 1 Tx slot	27.00	27.00	27.00	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	30.00	30.00	30.00
		EDGE 2 Tx slots	25.00	25.00	25.00	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	31.00	31.00	31.00
	GPRS 1 Tx slot		31.00	28.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
	GPRS 2 Tx slots		29.50	26.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
	GPRS 3 Tx slots		27.50	24.50	27.50	27.50	27.50	27.50	27.50	27.50	27.50
	GPRS 4 Tx slots		26.50	23.50	26.50	26.50	26.50	26.50	26.50	26.50	26.50
	EDGE 1 Tx slot		27.00	24.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
	EDGE 2 Tx slots		26.00	23.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00
	EDGE 3 Tx slots		25.00	22.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
	EDGE 4 Tx slots		24.00	21.00	24.00	24.00	24.00	24.00	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	29.50	29.50	29.50
		GPRS 1 Tx slot	29.50	26.50	29.50	29.50	29.50	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	29.50	29.50	29.50
		GPRS 1 Tx slot	29.50	26.50	29.50	29.50	29.50	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	27.50	27.50	27.50
		GPRS 2 Tx slots	27.50	24.50	27.50	27.50	27.50	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	29.50	29.50	29.50
		EDGE 1 Tx slot	26.00	23.00	26.00	26.00	26.00	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	29.50	29.50	29.50
		EDGE 1 Tx slot	26.00	23.00	26.00	26.00	26.00	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	27.50	27.50	27.50
		EDGE 2 Tx slots	25.00	22.00	25.00	25.00	25.00	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)		Product Specific Power Level (dBm)	
Band		UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna	UAT Antenna	LAT Antenna
WCDMA II	25.7	20.5	25.7	25.7	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	24.0	24.0
WCDMA V	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
LTE 2	25.7	23.0	25.7	25.7	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	24.5	24.5
LTE 5	25.7	25.7	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	25.7	25.7
LTE 13	25.3	25.3	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	25.7	25.7
LTE 26	25.7	25.7	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	25.7	25.7
LTE 41	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

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

Frequency Band	Modulation	Head		Body Worn/Hotspot/Product Specific	
		Ant 4	Ant 5	Ant 4	Ant 5
WLAN 2.4GHz	802.11b	16	16	18	18
	802.11g	16	16	18	18
	802.11n HT20	16	16	18	18

Frequency Band	Modulation	Head		Body Worn/Hotspot/Product Specific	
		Ant 4	Ant 5	Ant 4	Ant 5
WLAN5GHz UNII 1	802.11a	13.5	13.5	17.5	17.5
	802.11n HT20	13.5	13.5	17.5	17.5
	802.11n HT40	13.5	13.5	17.5	17.5
	802.11ac VHT20	13.5	13.5	17.5	17.5
	802.11ac VHT40	13.5	13.5	17.5	17.5
	802.11ac VHT80	12.5	12.5	12.5	12.5
WLAN5GHz UNII 2A	802.11a	13.5	13.5	17.5	17.5
	802.11n HT20	13.5	13.5	17.5	17.5
	802.11n HT40	13.5	13.5	17.5	17.5
	802.11ac VHT20	13.5	13.5	17.5	17.5
	802.11ac VHT40	13.5	13.5	17.5	17.5
	802.11ac VHT80	12.5	12.5	12.5	12.5
WLAN5GHz UNII 2C	802.11a	13.5	13.5	17.5	17.5
	802.11n HT20	13.5	13.5	17.5	17.5
	802.11n HT40	13.5	13.5	17.5	17.5
	802.11ac VHT20	13.5	13.5	17.5	17.5
	802.11ac VHT40	13.5	13.5	17.5	17.5
	802.11ac VHT80	13.5	13.5	17.5	17.5
WLAN5GHz UNII 3	802.11a	12	12	17.5	17.5
	802.11n HT20	12	12	17.5	17.5
	802.11n HT40	12	12	17.5	17.5
	802.11ac VHT20	12	12	17.5	17.5
	802.11ac VHT40	12	12	17.5	17.5
	802.11ac VHT80	12	12	17.5	17.5

<WLAN MIMO Power table>

Frequency Band	Modulation	Head			Body Worn/Hotspot/Product Specific		
		Ant4	Ant5	Ant 4+5	Ant4	Ant5	Ant 4+5
WLAN 2.4GHz	802.11b	16	16	19	18	18	21
	802.11g	16	16	19	18	18	21
	802.11n HT20	16	16	19	18	18	21

Frequency Band	Modulation	Head			Body Worn/Hotspot/Product Specific		
		Ant4	Ant5	Ant 4+5	Ant4	Ant5	Ant 4+5
WLAN5GHz UNII 1	802.11a	13.5	13.5	16.5	17.5	17.5	20.5
	802.11n HT20	13.5	13.5	16.5	17.5	17.5	20.5
	802.11n HT40	13.5	13.5	16.5	17.5	17.5	20.5
	802.11ac VHT20	13.5	13.5	16.5	17.5	17.5	20.5
	802.11ac VHT40	13.5	13.5	16.5	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	13.5	13.5	16.5	17.5	17.5	20.5
	802.11n HT20	13.5	13.5	16.5	17.5	17.5	20.5
	802.11n HT40	13.5	13.5	16.5	17.5	17.5	20.5
	802.11ac VHT20	13.5	13.5	16.5	17.5	17.5	20.5
	802.11ac VHT40	13.5	13.5	16.5	17.5	17.5	20.5
	802.11ac VHT80	12.5	12.5	15.5	12.5	12.5	15.5
WLAN5GHz UNII 2C	802.11a	13.5	13.5	16.5	17.5	17.5	20.5
	802.11n HT20	13.5	13.5	16.5	17.5	17.5	20.5
	802.11n HT40	13.5	13.5	16.5	17.5	17.5	20.5
	802.11ac VHT20	13.5	13.5	16.5	17.5	17.5	20.5
	802.11ac VHT40	13.5	13.5	16.5	17.5	17.5	20.5
	802.11ac VHT80	13.5	13.5	16.5	17.5	17.5	20.5
WLAN5GHz UNII 3	802.11a	12	12	15	17.5	17.5	20.5
	802.11n HT20	12	12	15	17.5	17.5	20.5
	802.11n HT40	12	12	15	17.5	17.5	20.5
	802.11ac VHT20	12	12	15	17.5	17.5	20.5
	802.11ac VHT40	12	12	15	17.5	17.5	20.5
	802.11ac VHT80	12	12	15	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	A4RG020D
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	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3**

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.
Power reduction applied to satisfy SAR compliance	The device has several different power modes for head / hotspot / body-worn / Product Specific 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)
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)
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)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610

LTE Band 41

	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
L M	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
H M	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

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:

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

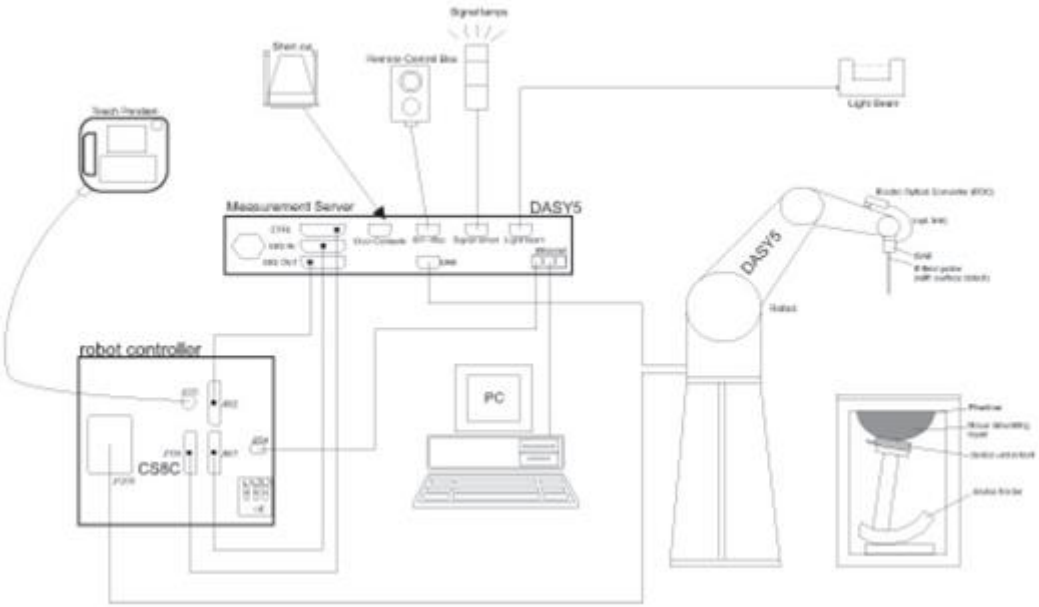
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

6.2 Data Acquisition Electronics (DAE)

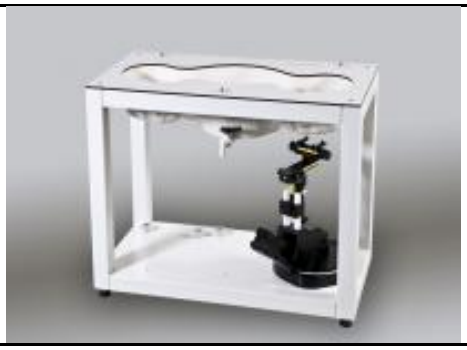
The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an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

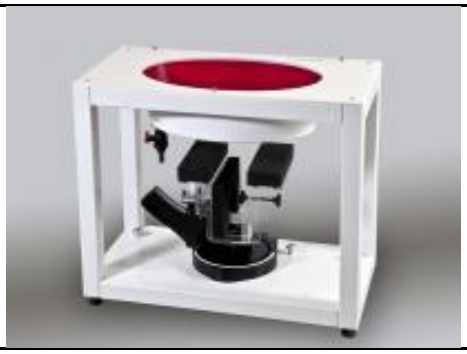
6.3 Phantom

<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 form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

7.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

7.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 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: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ 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: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st 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 *reported* SAR from the *area scan based 1-g SAR estimation* 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	1112	Feb. 28, 2018	Feb. 27, 2019
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Sep. 11, 2018	Sep. 10, 2019
SPEAG	2450MHz System Validation Kit	D2450V2	736	Aug. 31, 2018	Sep. 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	DAE4	853	Jul. 24, 2018	Jul. 23, 2019
SPEAG	Data Acquisition Electronics	DAE4	910	Jun. 21, 2018	Jun. 20, 2019
SPEAG	Data Acquisition Electronics	DAE4	1399	Nov. 16, 2018	Nov. 15, 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	EX3DV4	3931	Sep. 27, 2018	Sep. 26, 2019
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 23, 2018	Jan. 22, 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
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	1126	Sep. 19, 2018	Sep. 18, 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.

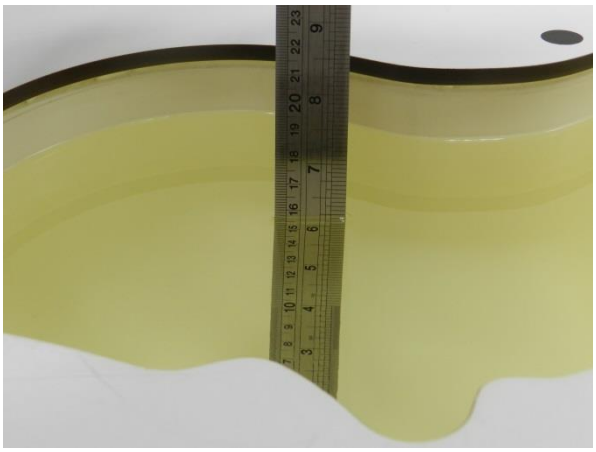


Fig 10.1Photo of Liquid Height for Head SAR

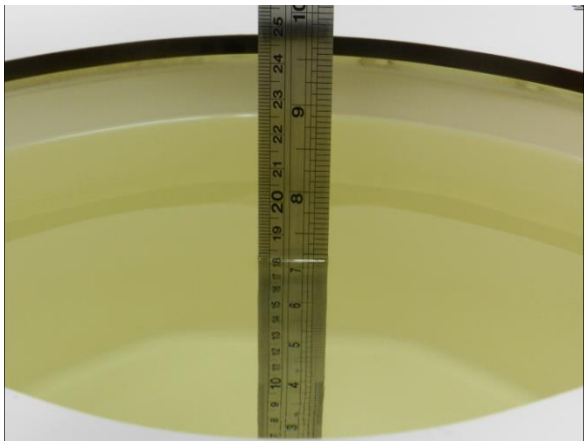


Fig 10.2 Photo of Liquid Height for Body SAR

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. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	HSL	22.4	0.890	42.180	0.89	41.90	0.00	0.67	±5	2018/11/28
750	HSL	22.6	0.892	43.159	0.89	41.90	0.22	3.00	±5	2018/11/30
750	MSL	22.4	0.969	55.292	0.96	55.50	0.94	-0.37	±5	2018/11/26
835	HSL	22.4	0.869	41.385	0.90	41.50	-3.44	-0.28	±5	2018/11/28
835	HSL	22.6	0.903	43.269	0.90	41.50	0.33	4.26	±5	2018/11/30
835	MSL	22.4	0.965	56.263	0.97	55.20	-0.52	1.93	±5	2018/11/26
1750	HSL	22.6	1.382	40.546	1.37	40.10	0.88	1.11	±5	2018/12/1
1750	MSL	22.2	1.442	55.844	1.49	53.40	-3.22	4.58	±5	2018/12/5
1900	HSL	22.6	1.439	39.113	1.40	40.00	2.79	-2.22	±5	2018/12/1
1900	HSL	22.2	1.431	39.593	1.40	40.00	2.21	-1.02	±5	2018/12/3
1900	HSL	22.4	1.423	40.754	1.40	40.00	1.64	1.88	±5	2018/12/10
1900	MSL	22.2	1.559	53.885	1.52	53.30	2.57	1.10	±5	2018/12/6
1900	MSL	22.2	1.559	53.885	1.52	53.30	2.57	1.10	±5	2018/12/6
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	22.8	2.028	38.661	1.96	39.00	3.47	-0.87	±5	2018/12/2
2600	MSL	22.2	2.209	51.901	2.16	52.50	2.27	-1.14	±5	2018/12/3
2600	MSL	22.4	2.191	51.778	2.16	52.50	1.44	-1.38	±5	2018/12/4
5250	HSL	22.3	4.519	35.521	4.71	35.95	-4.06	-1.19	±5	2018/12/4
5250	MSL	22.2	5.164	50.056	5.36	48.95	-3.66	2.26	±5	2018/11/13
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
5600	HSL	22.3	4.869	35.036	5.07	35.50	-3.96	-1.31	±5	2018/12/4
5600	MSL	22.2	5.637	49.474	5.77	48.50	-2.31	2.01	±5	2018/11/13
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
5750	HSL	22.3	5.023	34.832	5.22	35.35	-3.77	-1.47	±5	2018/12/4
5750	MSL	22.2	5.850	49.229	5.94	48.28	-1.52	1.97	±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 (%)
2018/11/28	750	HSL	250	D750V3-1012	EX3DV4 - SN3931	DAE4 Sn910	2.14	8.47	8.56	1.06
2018/11/30	750	HSL	250	D750V3-1012	EX3DV4 - SN3931	DAE4 Sn1399	2.15	8.47	8.6	1.53
2018/11/26	750	MSL	250	D750V3-1012	EX3DV4 - SN3931	DAE4 Sn910	2.25	8.76	9	2.74
2018/11/28	835	HSL	250	D835V2-499	EX3DV4 - SN3931	DAE4 Sn910	2.26	9.59	9.04	-5.74
2018/11/30	835	HSL	250	D835V2-499	EX3DV4 - SN3931	DAE4 Sn1399	2.45	9.59	9.8	2.19
2018/11/26	835	MSL	250	D835V2-499	EX3DV4 - SN3931	DAE4 Sn910	2.54	9.82	10.16	3.46
2018/12/1	1750	HSL	250	D1750V2-1112	EX3DV4 - SN3931	DAE4 Sn1399	9.67	37.90	38.68	2.06
2018/12/5	1750	MSL	250	D1750V2-1112	ES3DV3 - SN3169	DAE4 Sn853	9.12	38.10	36.48	-4.25
2018/12/1	1900	HSL	250	D1900V2-5d041	EX3DV4 - SN3931	DAE4 Sn1399	10.90	40.20	43.6	8.46
2018/12/3	1900	HSL	250	D1900V2-5d041	EX3DV4 - SN3931	DAE4 Sn1399	10.90	40.20	43.6	8.46
2018/12/10	1900	HSL	250	D1900V2-5d041	EX3DV4 - SN3976	DAE4 Sn1424	9.16	40.20	36.64	-8.86
2018/12/6	1900	MSL	250	D1900V2-5d041	ES3DV3 - SN3169	DAE4 Sn853	10.10	40.20	40.4	0.50
2018/12/6	1900	MSL	250	D1900V2-5d041	EX3DV4 - SN3931	DAE4 Sn1399	10.90	40.20	43.6	8.46
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
2018/12/2	2600	HSL	250	D2600V2-1008	EX3DV4 - SN3931	DAE4 Sn1399	14.90	56.40	59.6	5.67
2018/12/3	2600	MSL	250	D2600V2-1008	EX3DV4 - SN3931	DAE4 Sn1399	14.00	55.30	56	1.27
2018/12/4	2600	MSL	250	D2600V2-1008	EX3DV4 - SN3931	DAE4 Sn1399	13.90	55.30	55.6	0.54
2018/12/4	5250	HSL	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn1424	7.47	80.70	74.7	-7.43
2018/11/13	5250	MSL	100	D5GHzV2-1006	EX3DV4 - SN3931	DAE4 Sn910	7.45	78.30	74.5	-4.85
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
2018/11/13	5600	MSL	100	D5GHzV2-1006	EX3DV4 - SN3931	DAE4 Sn910	8.01	81.00	80.1	-1.11
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 - SN3931	DAE4 Sn910	7.13	77.40	71.3	-7.88
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

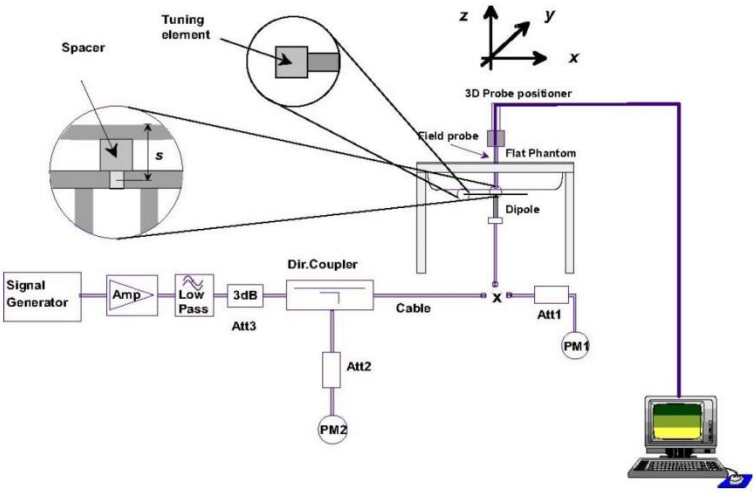


Fig 8.3.1 System Performance Check Setup

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.

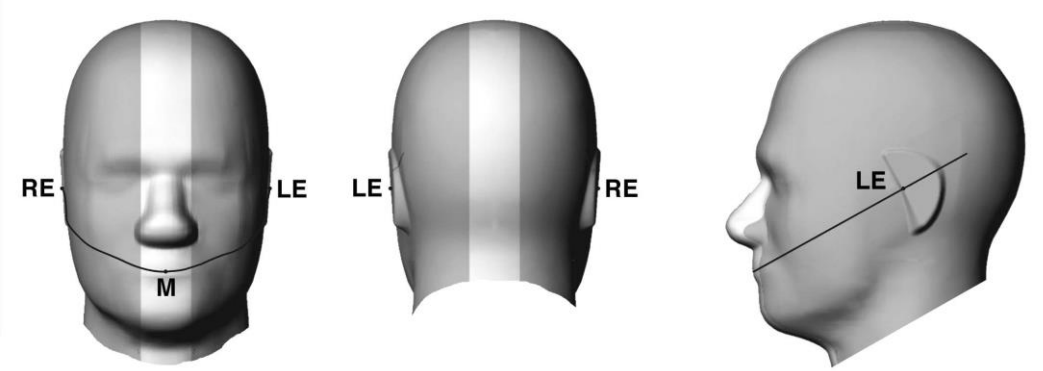


Fig 9.1.1 Front, back, and side views of SAM twin phantom

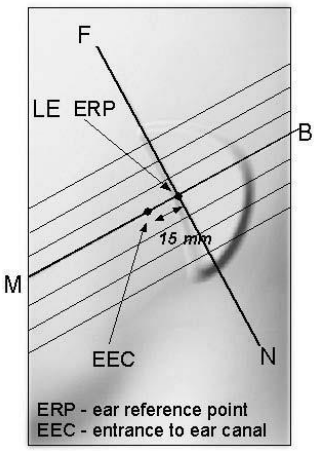


Fig 9.1.2 Close-up side view of phantom showing the ear region.

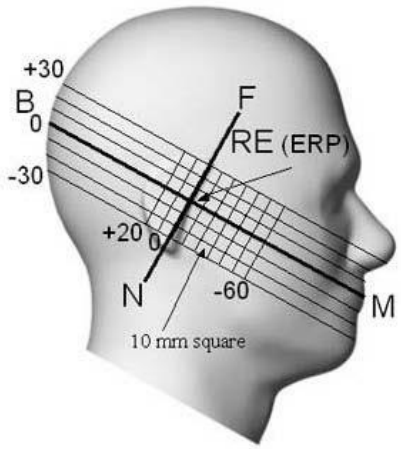


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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 wt 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 wb 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.

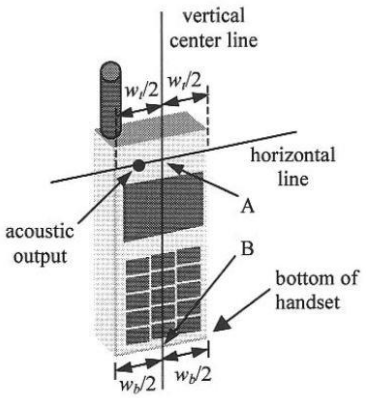


Fig 9.2.1 Handset vertical and horizontal reference lines—"fixed case

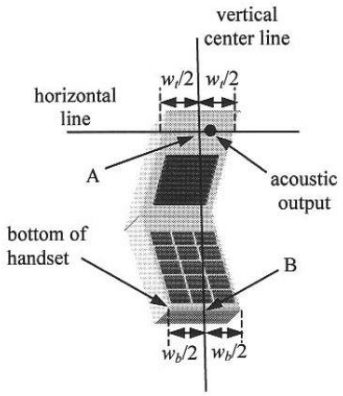


Fig 9.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

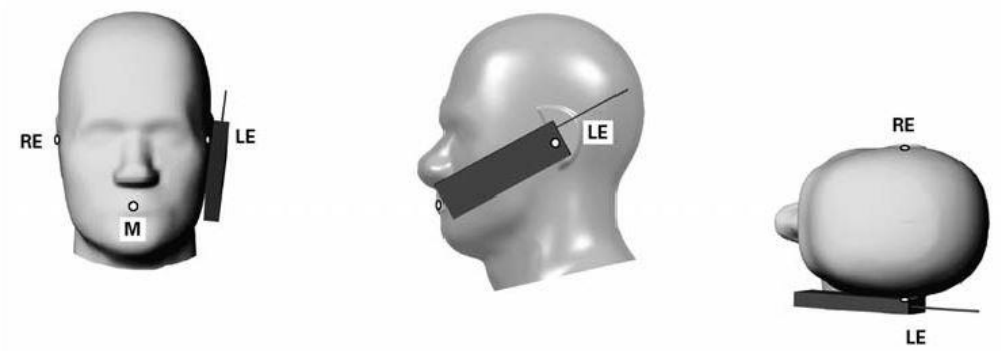


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

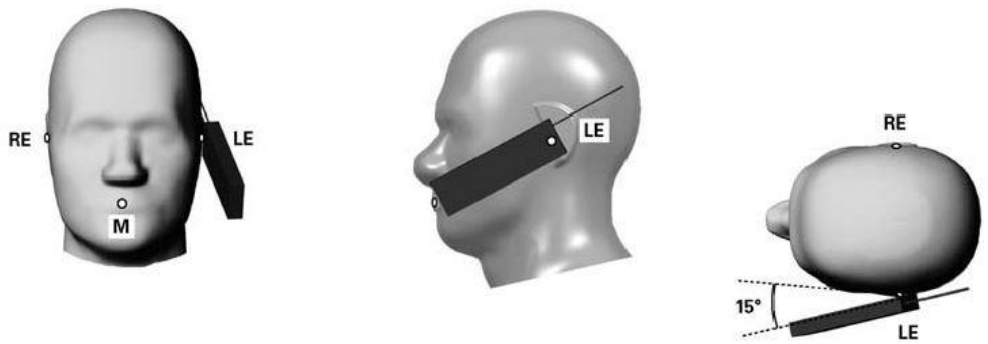


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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 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.

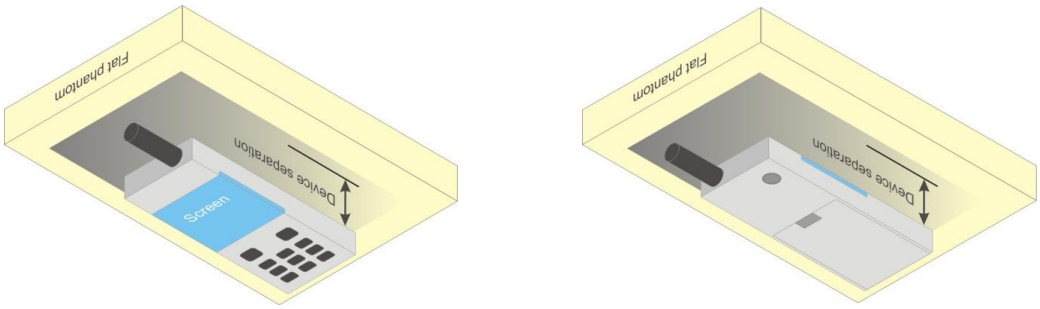


Fig 9.4 Body Worn Position

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 x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form 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 Product Specific Exposure

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

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.

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

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

<WiFi off / 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 / Hotspot / Body-worn / Product Specific	UAT / LAT	GSM 1 Tx slot		33.28	33.20	33.05	34.00	24.28	24.20	24.05	25.00
		GPRS 1 Tx slot		33.29	33.21	33.09	34.00	24.29	24.21	24.09	25.00
		GPRS 2 Tx slots		30.86	30.93	30.94	32.00	24.86	24.93	24.94	26.00
		GPRS 3 Tx slots		28.73	28.88	28.96	30.00	24.47	24.62	24.70	25.74
		GPRS 4 Tx slots		27.46	27.67	27.73	29.00	24.46	24.67	24.73	26.00
		EDGE 1 Tx slot		27.02	26.99	27.01	28.00	18.02	17.99	18.01	19.00
		EDGE 2 Tx slots		26.06	25.91	25.87	27.00	20.06	19.91	19.87	21.00
		EDGE 3 Tx slots		23.85	23.84	23.81	25.00	19.59	19.58	19.55	20.74
		EDGE 4 Tx slots		21.79	21.75	21.82	23.00	18.79	18.75	18.82	20.00
		DTM Multi-slot class 5	GSM 1 Tx slot	30.82	30.92	30.91	32.00	24.75	24.85	24.87	25.98
			GPRS 1 Tx slot	30.73	30.83	30.88	32.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.75	30.87	30.92	32.00	24.69	24.81	24.86	25.98
			GPRS 1 Tx slot	30.68	30.80	30.85	32.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.65	28.84	28.92	30.00	24.32	24.53	24.61	25.74
			GPRS 2 Tx slots	28.55	28.76	28.85	30.00				
		DTM Multi-slot class 5	GSM 1 Tx slot	30.73	30.85	30.89	32.00	22.93	23.01	23.06	24.16
			EDGE 1 Tx slot	25.88	25.86	25.91	27.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.80	30.91	30.92	32.00	22.96	23.04	23.06	24.16
			EDGE 1 Tx slot	25.78	25.77	25.81	27.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.63	28.78	28.85	30.00	21.75	21.87	21.92	23.10
			EDGE 2 Tx slots	23.70	23.75	23.78	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		28.38	28.33	28.31	30.00	19.38	19.33	19.31	21.00
		GPRS 1 Tx slot		28.40	28.36	28.34	30.00	19.40	19.36	19.34	21.00
		GPRS 2 Tx slots		26.70	26.57	26.81	27.50	20.70	20.57	20.81	21.50
		GPRS 3 Tx slots		24.56	24.55	24.63	25.50	20.30	20.29	20.37	21.24
		GPRS 4 Tx slots		23.46	23.55	23.52	24.50	20.46	20.55	20.52	21.50
		EDGE 1 Tx slot		24.56	24.56	24.64	26.00	15.56	15.56	15.64	17.00
		EDGE 2 Tx slots		23.48	23.48	23.55	25.00	17.48	17.48	17.55	19.00
		EDGE 3 Tx slots		22.30	22.34	22.46	24.00	18.04	18.08	18.20	19.74
		EDGE 4 Tx slots		21.28	21.24	21.31	23.00	18.28	18.24	18.31	20.00
		DTM Multi-slot class 5	GSM 1 Tx slot	26.58	26.54	26.78	27.50	20.54	20.51	20.73	21.48
			GPRS 1 Tx slot	26.54	26.52	26.73	27.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	26.55	26.51	26.70	27.50	20.51	20.48	20.67	21.48
			GPRS 1 Tx slot	26.51	26.50	26.69	27.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	24.55	24.52	24.61	25.50	20.27	20.25	20.30	21.24
			GPRS 2 Tx slots	24.52	24.50	24.54	25.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	26.52	26.51	26.70	27.50	19.22	19.22	19.37	20.41
			EDGE 1 Tx slot	23.43	23.44	23.52	25.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	26.50	26.51	26.68	27.50	19.20	19.21	19.35	20.41
			EDGE 1 Tx slot	23.41	23.42	23.50	25.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	24.55	24.53	24.58	25.50	18.92	18.92	19.01	20.30
			EDGE 2 Tx slots	22.28	22.31	22.43	24.00				

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		30.00	30.29	30.18	31.00	21.00	21.29	21.18	22.00
		GPRS 1 Tx slot		30.01	30.34	30.19	31.00	21.01	21.34	21.19	22.00
		GPRS 2 Tx slots		28.33	28.36	28.29	29.50	22.33	22.36	22.29	23.50
		GPRS 3 Tx slots		25.93	26.03	26.16	27.50	21.67	21.77	21.90	23.24
		GPRS 4 Tx slots		24.75	24.84	24.95	26.50	21.75	21.84	21.95	23.50
		EDGE 1 Tx slot		25.78	25.67	25.73	27.00	16.78	16.67	16.73	18.00
		EDGE 2 Tx slots		24.54	24.56	24.65	26.00	18.54	18.56	18.65	20.00
		EDGE 3 Tx slots		23.53	23.47	23.64	25.00	19.27	19.21	19.38	20.74
		EDGE 4 Tx slots		22.83	22.81	22.89	24.00	19.83	19.81	19.89	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	28.25	28.26	28.14	29.50	22.19	22.19	22.07	23.48
			GPRS 1 Tx slot	28.17	28.16	28.05	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.24	28.25	28.13	29.50	22.17	22.17	22.06	23.48
			GPRS 1 Tx slot	28.15	28.14	28.04	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.87	25.93	26.08	27.50	21.55	21.61	21.75	23.24
			GPRS 2 Tx slots	25.78	25.84	25.97	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	28.16	28.15	28.04	29.50	20.68	20.67	20.60	22.07
			EDGE 1 Tx slot	24.48	24.46	24.51	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.19	28.23	28.13	29.50	20.67	20.69	20.63	22.07
			EDGE 1 Tx slot	24.38	24.37	24.40	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.83	25.90	25.97	27.50	20.19	20.16	20.25	21.74
			EDGE 2 Tx slots	23.55	23.43	23.55	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 / Product Specific	LAT / LAT	GSM 1 Tx slot		30.00	30.29	30.18	31.00	21.00	21.29	21.18	22.00
		GPRS 1 Tx slot		30.01	30.34	30.19	31.00	21.01	21.34	21.19	22.00
		GPRS 2 Tx slots		28.33	28.36	28.29	29.50	22.33	22.36	22.29	23.50
		GPRS 3 Tx slots		25.93	26.03	26.16	27.50	21.67	21.77	21.90	23.24
		GPRS 4 Tx slots		24.75	24.84	24.95	26.50	21.75	21.84	21.95	23.50
		EDGE 1 Tx slot		25.78	25.67	25.73	27.00	16.78	16.67	16.73	18.00
		EDGE 2 Tx slots		24.54	24.56	24.65	26.00	18.54	18.56	18.65	20.00
		EDGE 3 Tx slots		23.53	23.47	23.64	25.00	19.27	19.21	19.38	20.74
		EDGE 4 Tx slots		22.83	22.81	22.89	24.00	19.83	19.81	19.89	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	28.25	28.26	28.14	29.50	22.19	22.19	22.07	23.48
			GPRS 1 Tx slot	28.17	28.16	28.05	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.24	28.25	28.13	29.50	22.17	22.17	22.06	23.48
			GPRS 1 Tx slot	28.15	28.14	28.04	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.87	25.93	26.08	27.50	21.55	21.61	21.75	23.24
			GPRS 2 Tx slots	25.78	25.84	25.97	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	28.16	28.15	28.04	29.50	20.68	20.67	20.60	22.07
			EDGE 1 Tx slot	24.48	24.46	24.51	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.19	28.23	28.13	29.50	20.67	20.69	20.63	22.07
			EDGE 1 Tx slot	24.38	24.37	24.40	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.83	25.90	25.97	27.50	20.19	20.16	20.25	21.74
			EDGE 2 Tx slots	23.55	23.43	23.55	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		26.50	26.59	26.68	28.00	17.50	17.59	17.68	19.00
		GPRS 1 Tx slot		26.51	26.62	26.69	28.00	17.51	17.62	17.69	19.00
		GPRS 2 Tx slots		24.92	24.91	24.94	26.50	18.92	18.91	18.94	20.50
		GPRS 3 Tx slots		22.77	22.76	22.73	24.50	18.51	18.50	18.47	20.24
		GPRS 4 Tx slots		21.80	21.79	21.74	23.50	18.80	18.79	18.74	20.50
		EDGE 1 Tx slot		23.00	23.04	22.99	24.00	14.00	14.04	13.99	15.00
		EDGE 2 Tx slots		21.91	22.00	22.01	23.00	15.91	16.00	16.01	17.00
		EDGE 3 Tx slots		20.90	20.78	20.93	22.00	16.64	16.52	16.67	17.74
		EDGE 4 Tx slots		19.71	19.78	19.78	21.00	16.71	16.78	16.78	18.00
		DTM Multi-slot class 5	GSM 1 Tx slot	24.98	25.02	25.00	26.50	18.92	18.97	18.97	20.48
			GPRS 1 Tx slot	24.90	24.97	24.99	26.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	24.98	24.91	24.89	26.50	18.94	18.88	18.86	20.48
			GPRS 1 Tx slot	24.95	24.89	24.88	26.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	23.05	22.85	22.89	24.50	18.74	18.56	18.56	20.24
			GPRS 2 Tx slots	22.97	22.81	22.78	24.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	24.86	24.85	25.00	26.50	17.59	17.58	17.71	19.07
			EDGE 1 Tx slot	21.84	21.84	21.93	23.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	24.90	24.81	25.00	26.50	17.62	17.56	17.73	19.07
			EDGE 1 Tx slot	21.85	21.87	22.00	23.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	22.81	22.88	22.99	24.50	17.27	17.30	17.44	18.74
			EDGE 2 Tx slots	20.71	20.71	20.87	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		30.00	30.29	30.18	31.00	21.00	21.29	21.18	22.00
		GPRS 1 Tx slot		30.01	30.34	30.19	31.00	21.01	21.34	21.19	22.00
		GPRS 2 Tx slots		28.33	28.36	28.29	29.50	22.33	22.36	22.29	23.50
		GPRS 3 Tx slots		25.93	26.03	26.16	27.50	21.67	21.77	21.90	23.24
		GPRS 4 Tx slots		24.75	24.84	24.95	26.50	21.75	21.84	21.95	23.50
		EDGE 1 Tx slot		25.78	25.67	25.73	27.00	16.78	16.67	16.73	18.00
		EDGE 2 Tx slots		24.54	24.56	24.65	26.00	18.54	18.56	18.65	20.00
		EDGE 3 Tx slots		23.53	23.47	23.64	25.00	19.27	19.21	19.38	20.74
		EDGE 4 Tx slots		22.83	22.81	22.89	24.00	19.83	19.81	19.89	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	28.25	28.26	28.14	29.50	22.19	22.19	22.07	23.48
			GPRS 1 Tx slot	28.17	28.16	28.05	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.24	28.25	28.13	29.50	22.17	22.17	22.06	23.48
			GPRS 1 Tx slot	28.15	28.14	28.04	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.87	25.93	26.08	27.50	21.55	21.61	21.75	23.24
			GPRS 2 Tx slots	25.78	25.84	25.97	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	28.16	28.15	28.04	29.50	20.68	20.67	20.60	22.07
			EDGE 1 Tx slot	24.48	24.46	24.51	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.19	28.23	28.13	29.50	20.67	20.69	20.63	22.07
			EDGE 1 Tx slot	24.38	24.37	24.40	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.83	25.90	25.97	27.50	20.19	20.16	20.25	21.74
			EDGE 2 Tx slots	23.55	23.43	23.55	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 / Product Specific	LAT / LAT	GSM 1 Tx slot		30.00	30.29	30.18	31.00	21.00	21.29	21.18	22.00
		GPRS 1 Tx slot		30.01	30.34	30.19	31.00	21.01	21.34	21.19	22.00
		GPRS 2 Tx slots		28.33	28.36	28.29	29.50	22.33	22.36	22.29	23.50
		GPRS 3 Tx slots		25.93	26.03	26.16	27.50	21.67	21.77	21.90	23.24
		GPRS 4 Tx slots		24.75	24.84	24.95	26.50	21.75	21.84	21.95	23.50
		EDGE 1 Tx slot		25.78	25.67	25.73	27.00	16.78	16.67	16.73	18.00
		EDGE 2 Tx slots		24.54	24.56	24.65	26.00	18.54	18.56	18.65	20.00
		EDGE 3 Tx slots		23.53	23.47	23.64	25.00	19.27	19.21	19.38	20.74
		EDGE 4 Tx slots		22.83	22.81	22.89	24.00	19.83	19.81	19.89	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	28.25	28.26	28.14	29.50	22.19	22.19	22.07	23.48
			GPRS 1 Tx slot	28.17	28.16	28.05	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.24	28.25	28.13	29.50	22.17	22.17	22.06	23.48
			GPRS 1 Tx slot	28.15	28.14	28.04	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.87	25.93	26.08	27.50	21.55	21.61	21.75	23.24
			GPRS 2 Tx slots	25.78	25.84	25.97	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	28.16	28.15	28.04	29.50	20.68	20.67	20.60	22.07
			EDGE 1 Tx slot	24.48	24.46	24.51	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.19	28.23	28.13	29.50	20.67	20.69	20.63	22.07
			EDGE 1 Tx slot	24.38	24.37	24.40	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	25.83	25.90	25.97	27.50	20.19	20.16	20.25	21.74
			EDGE 2 Tx slots	23.55	23.43	23.55	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} *(Note1, 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 Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_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 Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_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 β_c = 11/15 and β_d = 15/15.

Setup Configuration

HSUPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	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	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 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 Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c . For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c .

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c = 10/15 and β_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: β_c/β_d=2/15
      b). Subtest 2: β_c/β_d=12/15
      c). Subtest 3: β_c/β_d=15/8
      d). Subtest 4: β_c/β_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.		

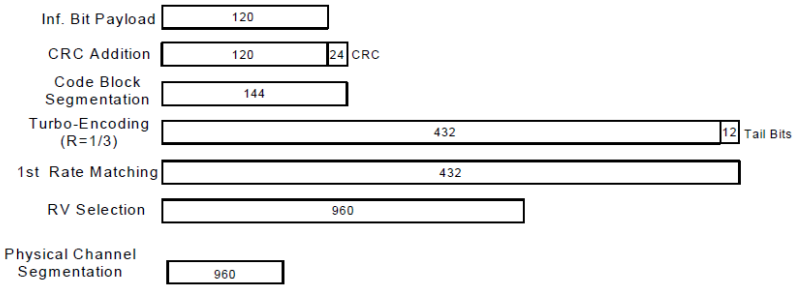


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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 ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA 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 ¼ 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
		Max. Power		21.5			24.0			24.5		
Head	UAT	3GPP Rel 99	AMR 12.2Kbps	20.40	20.36	20.51	23.20	23.13	23.11	23.78	23.70	23.84
		3GPP Rel 99	RMC 12.2Kbps	20.48	20.39	20.59	23.22	23.14	23.15	23.80	23.74	23.85
		Max. Power		20.5			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	19.44	19.35	19.58	22.38	22.34	22.28	22.72	22.66	22.73
		3GPP Rel 6	HSDPA Subtest-2	19.46	19.36	19.58	22.35	22.33	22.26	22.79	22.72	22.77
		3GPP Rel 6	HSDPA Subtest-3	18.95	18.86	19.08	21.91	21.80	21.81	22.28	22.15	22.23
		3GPP Rel 6	HSDPA Subtest-4	18.92	18.95	19.08	21.90	21.79	21.75	22.27	22.14	22.18
		Max. Power		20.5			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	19.43	19.32	19.66	22.26	22.21	22.21	22.64	22.56	22.64
		3GPP Rel 8	DC-HSDPA Subtest-2	19.43	19.44	19.66	22.23	22.00	22.20	22.61	22.59	22.66
		3GPP Rel 8	DC-HSDPA Subtest-3	18.94	18.85	19.17	21.79	21.72	21.59	22.18	22.05	22.10
		3GPP Rel 8	DC-HSDPA Subtest-4	18.94	18.85	19.16	21.77	21.69	21.51	22.15	22.02	22.08
		Max. Power		20.5			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	19.40	19.41	19.63	22.23	22.22	22.28	22.85	22.72	22.85
		3GPP Rel 6	HSUPA Subtest-2	17.42	17.42	17.64	20.22	20.32	20.20	20.77	20.78	20.80
		3GPP Rel 6	HSUPA Subtest-3	18.40	18.43	18.64	21.27	21.27	21.31	21.85	21.77	21.85
		3GPP Rel 6	HSUPA Subtest-4	17.42	17.34	17.55	20.25	20.29	20.27	20.81	20.81	20.83
		3GPP Rel 6	HSUPA Subtest-5	19.43	19.36	19.67	22.30	22.20	22.20	22.75	22.75	22.85

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		
Head	LAT	3GPP Rel 99	AMR 12.2Kbps	24.86	24.94	24.92	23.20	23.13	23.11	23.78	23.70	23.84
		3GPP Rel 99	RMC 12.2Kbps	24.87	24.95	24.93	23.22	23.14	23.15	23.80	23.74	23.85
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	23.86	23.91	23.85	22.38	22.34	22.28	22.72	22.66	22.73
		3GPP Rel 6	HSDPA Subtest-2	23.88	23.90	23.87	22.35	22.33	22.26	22.79	22.72	22.77
		3GPP Rel 6	HSDPA Subtest-3	23.38	23.43	23.40	21.91	21.80	21.81	22.28	22.15	22.23
		3GPP Rel 6	HSDPA Subtest-4	23.41	23.42	23.40	21.90	21.79	21.75	22.27	22.14	22.18
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.79	23.81	23.75	22.26	22.21	22.21	22.64	22.56	22.64
		3GPP Rel 8	DC-HSDPA Subtest-2	23.75	23.79	23.74	22.23	22.00	22.20	22.61	22.59	22.66
		3GPP Rel 8	DC-HSDPA Subtest-3	23.28	23.33	23.32	21.79	21.72	21.59	22.18	22.05	22.10
		3GPP Rel 8	DC-HSDPA Subtest-4	23.27	23.34	23.30	21.77	21.69	21.51	22.15	22.02	22.08
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	23.84	23.92	23.89	22.23	22.22	22.28	22.85	22.72	22.85
		3GPP Rel 6	HSUPA Subtest-2	21.91	21.91	21.89	20.22	20.32	20.20	20.77	20.78	20.80
		3GPP Rel 6	HSUPA Subtest-3	22.91	22.94	22.74	21.27	21.27	21.31	21.85	21.77	21.85
		3GPP Rel 6	HSUPA Subtest-4	21.80	21.85	21.93	20.25	20.29	20.27	20.81	20.81	20.83
		3GPP Rel 6	HSUPA Subtest-5	23.85	23.95	23.95	22.30	22.20	22.20	22.75	22.75	22.85

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		
Hotspot / Body-worn / Product Specific	UAT / LAT	3GPP Rel 99	AMR 12.2Kbps	24.86	24.94	24.92	23.20	23.13	23.11	23.78	23.70	23.84
		3GPP Rel 99	RMC 12.2Kbps	24.87	24.95	24.93	23.22	23.14	23.15	23.80	23.74	23.85
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	23.86	23.91	23.85	22.38	22.34	22.28	22.72	22.66	22.73
		3GPP Rel 6	HSDPA Subtest-2	23.88	23.90	23.87	22.35	22.33	22.26	22.79	22.72	22.77
		3GPP Rel 6	HSDPA Subtest-3	23.38	23.43	23.40	21.91	21.80	21.81	22.28	22.15	22.23
		3GPP Rel 6	HSDPA Subtest-4	23.41	23.42	23.40	21.90	21.79	21.75	22.27	22.14	22.18
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.79	23.81	23.75	22.26	22.21	22.21	22.64	22.56	22.64
		3GPP Rel 8	DC-HSDPA Subtest-2	23.75	23.79	23.74	22.23	22.00	22.20	22.61	22.59	22.66
		3GPP Rel 8	DC-HSDPA Subtest-3	23.28	23.33	23.32	21.79	21.72	21.59	22.18	22.05	22.10
		3GPP Rel 8	DC-HSDPA Subtest-4	23.27	23.34	23.30	21.77	21.69	21.51	22.15	22.02	22.08
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	23.84	23.92	23.89	22.23	22.22	22.28	22.85	22.72	22.85
		3GPP Rel 6	HSUPA Subtest-2	21.91	21.91	21.89	20.22	20.32	20.20	20.77	20.78	20.80
		3GPP Rel 6	HSUPA Subtest-3	22.91	22.94	22.74	21.27	21.27	21.31	21.85	21.77	21.85
		3GPP Rel 6	HSUPA Subtest-4	21.80	21.85	21.93	20.25	20.29	20.27	20.81	20.81	20.83
		3GPP Rel 6	HSUPA Subtest-5	23.85	23.95	23.95	22.30	22.20	22.20	22.75	22.75	22.85

<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		20.5			24.0			24.5		
Head	UAT	3GPP Rel 99	AMR 12.2Kbps	19.98	19.99	19.98	23.20	23.13	23.11	23.78	23.70	23.84
		3GPP Rel 99	RMC 12.2Kbps	20.01	20.00	19.98	23.22	23.14	23.15	23.80	23.74	23.85
		Max. Power		19.5			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	18.94	18.90	18.93	22.38	22.34	22.28	22.72	22.66	22.73
		3GPP Rel 6	HSDPA Subtest-2	18.96	18.94	18.89	22.35	22.33	22.26	22.79	22.72	22.77
		3GPP Rel 6	HSDPA Subtest-3	18.38	18.42	18.47	21.91	21.80	21.81	22.28	22.15	22.23
		3GPP Rel 6	HSDPA Subtest-4	18.40	18.45	18.44	21.90	21.79	21.75	22.27	22.14	22.18
		Max. Power		19.5			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	18.86	18.84	18.96	22.26	22.21	22.21	22.64	22.56	22.64
		3GPP Rel 8	DC-HSDPA Subtest-2	18.91	18.96	19.06	22.23	22.00	22.20	22.61	22.59	22.66
		3GPP Rel 8	DC-HSDPA Subtest-3	18.36	18.38	18.54	21.79	21.72	21.59	22.18	22.05	22.10
		3GPP Rel 8	DC-HSDPA Subtest-4	18.40	18.45	18.49	21.77	21.69	21.51	22.15	22.02	22.08
		Max. Power		19.5			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	18.89	18.93	18.96	22.23	22.22	22.28	22.85	22.72	22.85
		3GPP Rel 6	HSUPA Subtest-2	16.87	16.97	17.02	20.22	20.32	20.20	20.77	20.78	20.80
		3GPP Rel 6	HSUPA Subtest-3	17.84	18.01	17.98	21.27	21.27	21.31	21.85	21.77	21.85
		3GPP Rel 6	HSUPA Subtest-4	16.85	16.93	16.90	20.25	20.29	20.27	20.81	20.81	20.83
		3GPP Rel 6	HSUPA Subtest-5	18.84	18.96	19.04	22.30	22.20	22.20	22.75	22.75	22.85

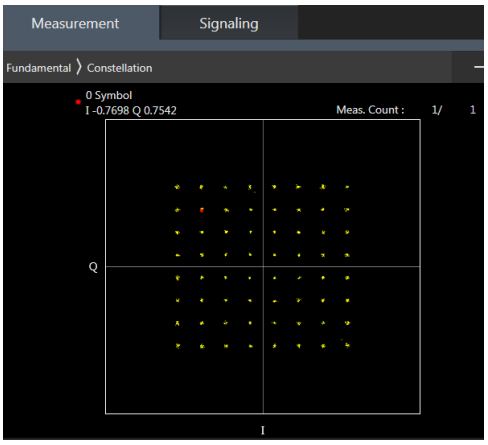
Power Selection	Transmit Antenna	Band		WCDMA II			WCDMA IV			WCDMA V		
		TX Channel		9262	9400	9538	1312	1413	1513	4132	4182	4233
		Rx Channel		9662	9800	9938	1537	1638	1738	4357	4407	4458
		Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6
		Max. Power		25.7			24.0			24.5		
Head	LAT	3GPP Rel 99	AMR 12.2Kbps	24.86	24.94	24.92	23.20	23.13	23.11	23.78	23.70	23.84
		3GPP Rel 99	RMC 12.2Kbps	24.87	24.95	24.93	23.22	23.14	23.15	23.80	23.74	23.85
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	23.86	23.91	23.85	22.38	22.34	22.28	22.72	22.66	22.73
		3GPP Rel 6	HSDPA Subtest-2	23.88	23.90	23.87	22.35	22.33	22.26	22.79	22.72	22.77
		3GPP Rel 6	HSDPA Subtest-3	23.38	23.43	23.40	21.91	21.80	21.81	22.28	22.15	22.23
		3GPP Rel 6	HSDPA Subtest-4	23.41	23.42	23.40	21.90	21.79	21.75	22.27	22.14	22.18
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.79	23.81	23.75	22.26	22.21	22.21	22.64	22.56	22.64
		3GPP Rel 8	DC-HSDPA Subtest-2	23.75	23.79	23.74	22.23	22.00	22.20	22.61	22.59	22.66
		3GPP Rel 8	DC-HSDPA Subtest-3	23.28	23.33	23.32	21.79	21.72	21.59	22.18	22.05	22.10
		3GPP Rel 8	DC-HSDPA Subtest-4	23.27	23.34	23.30	21.77	21.69	21.51	22.15	22.02	22.08
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	23.84	23.92	23.89	22.23	22.22	22.28	22.85	22.72	22.85
		3GPP Rel 6	HSUPA Subtest-2	21.91	21.91	21.89	20.22	20.32	20.20	20.77	20.78	20.80
		3GPP Rel 6	HSUPA Subtest-3	22.91	22.94	22.74	21.27	21.27	21.31	21.85	21.77	21.85
		3GPP Rel 6	HSUPA Subtest-4	21.80	21.85	21.93	20.25	20.29	20.27	20.81	20.81	20.83
		3GPP Rel 6	HSUPA Subtest-5	23.85	23.95	23.95	22.30	22.20	22.20	22.75	22.75	22.85

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		
Hotspot / Body-worn / Product Specific	UAT / LAT	3GPP Rel 99	AMR 12.2Kbps	24.86	24.94	24.92	23.20	23.13	23.11	23.78	23.70	23.84
		3GPP Rel 99	RMC 12.2Kbps	24.87	24.95	24.93	23.22	23.14	23.15	23.80	23.74	23.85
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSDPA Subtest-1	23.86	23.91	23.85	22.38	22.34	22.28	22.72	22.66	22.73
		3GPP Rel 6	HSDPA Subtest-2	23.88	23.90	23.87	22.35	22.33	22.26	22.79	22.72	22.77
		3GPP Rel 6	HSDPA Subtest-3	23.38	23.43	23.40	21.91	21.80	21.81	22.28	22.15	22.23
		3GPP Rel 6	HSDPA Subtest-4	23.41	23.42	23.40	21.90	21.79	21.75	22.27	22.14	22.18
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.79	23.81	23.75	22.26	22.21	22.21	22.64	22.56	22.64
		3GPP Rel 8	DC-HSDPA Subtest-2	23.75	23.79	23.74	22.23	22.00	22.20	22.61	22.59	22.66
		3GPP Rel 8	DC-HSDPA Subtest-3	23.28	23.33	23.32	21.79	21.72	21.59	22.18	22.05	22.10
		3GPP Rel 8	DC-HSDPA Subtest-4	23.27	23.34	23.30	21.77	21.69	21.51	22.15	22.02	22.08
		Max. Power		24.7			23.0			23.5		
		3GPP Rel 6	HSUPA Subtest-1	23.84	23.92	23.89	22.23	22.22	22.28	22.85	22.72	22.85
		3GPP Rel 6	HSUPA Subtest-2	21.91	21.91	21.89	20.22	20.32	20.20	20.77	20.78	20.80
		3GPP Rel 6	HSUPA Subtest-3	22.91	22.94	22.74	21.27	21.27	21.31	21.85	21.77	21.85
		3GPP Rel 6	HSUPA Subtest-4	21.80	21.85	21.93	20.25	20.29	20.27	20.81	20.81	20.83
		3GPP Rel 6	HSUPA Subtest-5	23.85	23.95	23.95	22.30	22.20	22.20	22.75	22.75	22.85

<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 ½ 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 ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; 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 ≤ 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		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	23.51	23.65	23.53
20	QPSK	1	49	23.26	23.29	23.29
20	QPSK	1	99	23.28	23.24	23.21
20	QPSK	50	0	23.34	23.19	23.26
20	QPSK	50	24	23.35	23.35	23.53
20	QPSK	50	50	23.35	23.32	23.30
20	QPSK	100	0	23.39	23.33	23.23
20	16QAM	1	0	23.51	23.49	23.54
20	16QAM	1	49	23.54	23.57	23.59
20	16QAM	1	99	23.56	23.57	23.56
20	16QAM	50	0	22.42	22.30	22.33
20	16QAM	50	24	22.40	22.48	22.46
20	16QAM	50	50	22.44	22.41	22.37
20	16QAM	100	0	22.43	22.39	22.28
20	64QAM	1	0	22.43	22.55	22.46
20	64QAM	1	49	22.45	22.52	22.52
20	64QAM	1	99	22.47	22.47	22.47
20	64QAM	50	0	21.43	21.32	21.33
20	64QAM	50	24	21.43	21.47	21.46
20	64QAM	50	50	21.45	21.40	21.42
20	64QAM	100	0	21.47	21.41	21.31
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	23.17	23.27	23.34
15	QPSK	1	37	23.15	23.30	23.29
15	QPSK	1	74	23.19	23.22	23.21
15	QPSK	36	0	23.35	23.20	23.34
15	QPSK	36	20	23.35	23.39	23.35
15	QPSK	36	39	23.25	23.33	23.32
15	QPSK	75	0	23.31	23.34	23.33
15	16QAM	1	0	23.47	23.35	23.56
15	16QAM	1	37	23.43	23.58	23.56
15	16QAM	1	74	23.45	23.55	23.56
15	16QAM	36	0	22.42	22.28	22.40
15	16QAM	36	20	22.41	22.43	22.40
15	16QAM	36	39	22.34	22.37	22.38
15	16QAM	75	0	22.37	22.40	22.39
15	64QAM	1	0	22.40	22.34	22.58
15	64QAM	1	37	22.35	22.51	22.53
15	64QAM	1	74	22.36	22.45	22.47
15	64QAM	36	0	21.42	21.27	21.45
15	64QAM	36	20	21.45	21.50	21.46
15	64QAM	36	39	21.38	21.42	21.40
15	64QAM	75	0	21.38	21.41	21.41
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	23.33	23.43	23.34
10	QPSK	1	25	23.31	23.33	23.31
10	QPSK	1	49	23.30	23.34	23.24
10	QPSK	25	0	23.33	23.20	23.37
10	QPSK	25	12	23.38	23.39	23.37
10	QPSK	25	25	23.31	23.33	23.31
10	QPSK	50	0	23.32	23.36	23.32
10	16QAM	1	0	23.58	23.32	23.62
10	16QAM	1	25	23.60	23.59	23.60
10	16QAM	1	49	23.59	23.63	23.58
10	16QAM	25	0	22.44	22.31	22.40
10	16QAM	25	12	22.44	22.46	22.44
10	16QAM	25	25	22.38	22.40	22.38
10	16QAM	50	0	22.43	22.44	22.42
10	64QAM	1	0	22.51	22.28	22.55
10	64QAM	1	25	22.50	22.55	22.54
10	64QAM	1	49	22.48	22.55	22.50

10	64QAM	25	0	21.44	21.34	21.44
10	64QAM	25	12	21.44	21.48	21.42
10	64QAM	25	25	21.38	21.41	21.40
10	64QAM	50	0	21.42	21.44	21.42
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	23.21	23.32	23.31
5	QPSK	1	12	23.34	23.34	23.37
5	QPSK	1	24	23.28	23.28	23.24
5	QPSK	12	0	23.38	23.31	23.31
5	QPSK	12	7	23.37	23.37	23.45
5	QPSK	12	13	23.30	23.36	23.28
5	QPSK	25	0	23.35	23.32	23.32
5	16QAM	1	0	23.47	23.44	23.61
5	16QAM	1	12	23.61	23.59	23.52
5	16QAM	1	24	23.54	23.55	23.57
5	16QAM	12	0	22.44	22.41	22.37
5	16QAM	12	7	22.43	22.47	22.50
5	16QAM	12	13	22.42	22.41	22.36
5	16QAM	25	0	22.41	22.39	22.41
5	64QAM	1	0	22.43	22.43	22.50
5	64QAM	1	12	22.52	22.54	22.63
5	64QAM	1	24	22.46	22.47	22.47
5	64QAM	12	0	21.49	21.46	21.42
5	64QAM	12	7	21.51	21.49	21.55
5	64QAM	12	13	21.45	21.48	21.39
5	64QAM	25	0	21.42	21.41	21.40
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	23.20	23.31	23.35
3	QPSK	1	8	23.20	23.32	23.36
3	QPSK	1	14	23.27	23.30	23.25
3	QPSK	8	0	23.26	23.38	23.41
3	QPSK	8	4	23.41	23.37	23.34
3	QPSK	8	7	23.35	23.35	23.32
3	QPSK	15	0	23.36	23.34	23.33
3	16QAM	1	0	23.47	23.52	23.51
3	16QAM	1	8	23.51	23.58	23.56
3	16QAM	1	14	23.55	23.57	23.59
3	16QAM	8	0	22.35	22.46	22.50
3	16QAM	8	4	22.51	22.49	22.45
3	16QAM	8	7	22.46	22.46	22.43
3	16QAM	15	0	22.45	22.43	22.40
3	64QAM	1	0	22.42	22.51	22.63
3	64QAM	1	8	22.41	22.54	22.63
3	64QAM	1	14	22.49	22.53	22.52
3	64QAM	8	0	21.34	21.50	21.51
3	64QAM	8	4	21.48	21.52	21.45
3	64QAM	8	7	21.44	21.47	21.41
3	64QAM	15	0	21.44	21.43	21.40
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	23.18	23.29	23.30
1.4	QPSK	1	3	23.23	23.35	23.29
1.4	QPSK	1	5	23.16	23.26	23.21
1.4	QPSK	3	0	23.18	23.31	23.26
1.4	QPSK	3	1	23.24	23.34	23.29
1.4	QPSK	3	3	23.21	23.30	23.26
1.4	QPSK	6	0	23.21	23.27	23.27
1.4	16QAM	1	0	23.44	23.53	23.55
1.4	16QAM	1	3	23.50	23.58	23.54
1.4	16QAM	1	5	23.41	23.52	23.53
1.4	16QAM	3	0	23.24	23.33	23.37
1.4	16QAM	3	1	23.27	23.38	23.40
1.4	16QAM	3	3	23.23	23.33	23.34
1.4	16QAM	6	0	22.33	22.45	22.38
1.4	64QAM	1	0	22.38	22.49	22.56
1.4	64QAM	1	3	22.43	22.55	22.53
1.4	64QAM	1	5	22.34	22.46	22.45
1.4	64QAM	3	0	22.37	22.47	22.48
1.4	64QAM	3	1	22.41	22.50	22.52
1.4	64QAM	3	3	22.35	22.49	22.45
1.4	64QAM	6	0	21.27	21.37	21.32

Power Selection				Head		
Transmit Antenna				LAT		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	24.72	24.82	24.73
20	QPSK	1	49	24.76	24.74	24.78
20	QPSK	1	99	24.81	24.81	24.75
20	QPSK	50	0	23.86	23.80	23.79
20	QPSK	50	24	23.84	23.84	23.82
20	QPSK	50	50	23.80	23.77	23.74
20	QPSK	100	0	23.82	23.78	23.78
20	16QAM	1	0	23.95	24.00	23.92
20	16QAM	1	49	23.98	23.92	24.00
20	16QAM	1	99	24.00	24.00	23.97
20	16QAM	50	0	22.94	22.88	22.87
20	16QAM	50	24	22.95	22.90	22.88
20	16QAM	50	50	22.90	22.87	22.81
20	16QAM	100	0	22.90	22.86	22.83
20	64QAM	1	0	22.95	23.02	22.94
20	64QAM	1	49	23.00	23.00	23.06
20	64QAM	1	99	23.04	23.03	22.99
20	64QAM	50	0	21.94	21.87	21.88
20	64QAM	50	24	21.95	21.93	21.89
20	64QAM	50	50	21.91	21.88	21.83
20	64QAM	100	0	21.91	21.87	21.85
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	24.71	24.81	24.80
15	QPSK	1	37	24.75	24.74	24.65
15	QPSK	1	74	24.72	24.78	24.72
15	QPSK	36	0	23.84	23.81	23.73
15	QPSK	36	20	23.84	23.81	23.74
15	QPSK	36	39	23.78	23.76	23.74
15	QPSK	75	0	23.81	23.78	23.73
15	16QAM	1	0	23.92	23.95	24.00
15	16QAM	1	37	23.98	23.93	23.95
15	16QAM	1	74	23.93	24.00	23.97
15	16QAM	36	0	22.92	22.84	22.81
15	16QAM	36	20	22.93	22.93	22.82
15	16QAM	36	39	22.90	22.85	22.77
15	16QAM	75	0	22.89	22.86	22.79
15	64QAM	1	0	22.93	22.95	22.95
15	64QAM	1	37	23.00	22.96	22.87
15	64QAM	1	74	22.94	23.00	22.94
15	64QAM	36	0	21.94	21.87	21.83
15	64QAM	36	20	21.95	21.93	21.86
15	64QAM	36	39	21.90	21.88	21.81
15	64QAM	75	0	21.90	21.86	21.80
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	24.77	24.79	24.78
10	QPSK	1	25	24.68	24.74	24.76
10	QPSK	1	49	24.80	24.77	24.73
10	QPSK	25	0	23.82	23.78	23.72
10	QPSK	25	12	23.85	23.80	23.72
10	QPSK	25	25	23.78	23.76	23.80
10	QPSK	50	0	23.79	23.78	23.73
10	16QAM	1	0	24.00	23.98	23.98
10	16QAM	1	25	24.00	23.92	23.99
10	16QAM	1	49	24.00	24.00	23.93
10	16QAM	25	0	22.90	22.87	22.80
10	16QAM	25	12	22.92	22.88	22.80
10	16QAM	25	25	22.88	22.86	22.88
10	16QAM	50	0	22.91	22.88	22.78
10	64QAM	1	0	22.99	22.93	22.94
10	64QAM	1	25	22.89	22.96	22.99
10	64QAM	1	49	22.91	22.91	22.97
10	64QAM	25	0	21.93	21.88	21.81
10	64QAM	25	12	21.94	21.90	21.82

10	64QAM	25	25	21.88	21.85	21.88
10	64QAM	50	0	21.91	21.88	21.79
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	24.67	24.70	24.71
5	QPSK	1	12	24.77	24.72	24.72
5	QPSK	1	24	24.61	24.68	24.68
5	QPSK	12	0	23.80	23.77	23.81
5	QPSK	12	7	23.83	23.78	23.83
5	QPSK	12	13	23.79	23.77	23.80
5	QPSK	25	0	23.78	23.75	23.79
5	16QAM	1	0	23.96	23.95	23.93
5	16QAM	1	12	24.00	23.93	23.97
5	16QAM	1	24	23.93	23.91	24.00
5	16QAM	12	0	22.87	22.88	22.87
5	16QAM	12	7	22.88	22.86	22.90
5	16QAM	12	13	22.88	22.85	22.86
5	16QAM	25	0	22.89	22.84	22.85
5	64QAM	1	0	22.90	22.92	22.98
5	64QAM	1	12	22.99	22.96	22.97
5	64QAM	1	24	22.81	22.90	22.91
5	64QAM	12	0	21.93	21.88	21.92
5	64QAM	12	7	21.94	21.91	21.95
5	64QAM	12	13	21.91	21.89	21.90
5	64QAM	25	0	21.88	21.85	21.88
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	24.65	24.71	24.72
3	QPSK	1	8	24.69	24.71	24.73
3	QPSK	1	14	24.71	24.68	24.69
3	QPSK	8	0	23.69	23.77	23.78
3	QPSK	8	4	23.87	23.81	23.82
3	QPSK	8	7	23.82	23.76	23.81
3	QPSK	15	0	23.81	23.77	23.79
3	16QAM	1	0	23.98	23.98	23.95
3	16QAM	1	8	23.92	23.92	23.97
3	16QAM	1	14	23.94	23.99	23.91
3	16QAM	8	0	22.84	22.90	22.92
3	16QAM	8	4	22.97	22.92	22.93
3	16QAM	8	7	22.92	22.89	22.92
3	16QAM	15	0	22.88	22.86	22.87
3	64QAM	1	0	22.87	22.94	22.95
3	64QAM	1	8	22.90	22.97	22.97
3	64QAM	1	14	22.97	22.93	22.94
3	64QAM	8	0	21.83	21.91	21.90
3	64QAM	8	4	21.98	21.92	21.94
3	64QAM	8	7	21.93	21.89	21.91
3	64QAM	15	0	21.92	21.84	21.87
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	24.62	24.70	24.68
1.4	QPSK	1	3	24.70	24.75	24.75
1.4	QPSK	1	5	24.63	24.67	24.67
1.4	QPSK	3	0	24.65	24.72	24.71
1.4	QPSK	3	1	24.72	24.78	24.76
1.4	QPSK	3	3	24.69	24.72	24.72
1.4	QPSK	6	0	23.67	23.71	23.76
1.4	16QAM	1	0	23.95	23.96	23.98
1.4	16QAM	1	3	24.00	23.94	24.00
1.4	16QAM	1	5	23.94	23.95	23.99
1.4	16QAM	3	0	23.74	23.78	23.81
1.4	16QAM	3	1	23.81	23.83	23.86
1.4	16QAM	3	3	23.72	23.78	23.80
1.4	16QAM	6	0	22.83	22.89	22.89
1.4	64QAM	1	0	22.89	22.94	22.89
1.4	64QAM	1	3	22.94	22.99	22.98
1.4	64QAM	1	5	22.85	22.93	22.89
1.4	64QAM	3	0	22.88	22.94	22.92
1.4	64QAM	3	1	22.94	22.99	22.96
1.4	64QAM	3	3	22.87	22.93	22.91
1.4	64QAM	6	0	21.75	21.82	21.83

Power Selection				Hotspot / Body-worn / Product Specific		
Transmit Antenna				UAT / LAT		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	24.72	24.82	24.73
20	QPSK	1	49	24.76	24.74	24.78
20	QPSK	1	99	24.81	24.81	24.75
20	QPSK	50	0	23.86	23.80	23.79
20	QPSK	50	24	23.84	23.84	23.82
20	QPSK	50	50	23.80	23.77	23.74
20	QPSK	100	0	23.82	23.78	23.78
20	16QAM	1	0	23.95	24.00	23.92
20	16QAM	1	49	23.98	23.92	24.00
20	16QAM	1	99	24.00	24.00	23.97
20	16QAM	50	0	22.94	22.88	22.87
20	16QAM	50	24	22.95	22.90	22.88
20	16QAM	50	50	22.90	22.87	22.81
20	16QAM	100	0	22.90	22.86	22.83
20	64QAM	1	0	22.95	23.02	22.94
20	64QAM	1	49	23.00	23.00	23.06
20	64QAM	1	99	23.04	23.03	22.99
20	64QAM	50	0	21.94	21.87	21.88
20	64QAM	50	24	21.95	21.93	21.89
20	64QAM	50	50	21.91	21.88	21.83
20	64QAM	100	0	21.91	21.87	21.85
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	24.71	24.81	24.80
15	QPSK	1	37	24.75	24.74	24.65
15	QPSK	1	74	24.72	24.78	24.72
15	QPSK	36	0	23.84	23.81	23.73
15	QPSK	36	20	23.84	23.81	23.74
15	QPSK	36	39	23.78	23.76	23.74
15	QPSK	75	0	23.81	23.78	23.73
15	16QAM	1	0	23.92	23.95	24.00
15	16QAM	1	37	23.98	23.93	23.95
15	16QAM	1	74	23.93	24.00	23.97
15	16QAM	36	0	22.92	22.84	22.81
15	16QAM	36	20	22.93	22.93	22.82
15	16QAM	36	39	22.90	22.85	22.77
15	16QAM	75	0	22.89	22.86	22.79
15	64QAM	1	0	22.93	22.95	22.95
15	64QAM	1	37	23.00	22.96	22.87
15	64QAM	1	74	22.94	23.00	22.94
15	64QAM	36	0	21.94	21.87	21.83
15	64QAM	36	20	21.95	21.93	21.86
15	64QAM	36	39	21.90	21.88	21.81
15	64QAM	75	0	21.90	21.86	21.80
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	24.77	24.79	24.78
10	QPSK	1	25	24.68	24.74	24.76
10	QPSK	1	49	24.80	24.77	24.73
10	QPSK	25	0	23.82	23.78	23.72
10	QPSK	25	12	23.85	23.80	23.72
10	QPSK	25	25	23.78	23.76	23.80
10	QPSK	50	0	23.79	23.78	23.73
10	16QAM	1	0	24.00	23.98	23.98
10	16QAM	1	25	24.00	23.92	23.99
10	16QAM	1	49	24.00	24.00	23.93
10	16QAM	25	0	22.90	22.87	22.80
10	16QAM	25	12	22.92	22.88	22.80
10	16QAM	25	25	22.88	22.86	22.88
10	16QAM	50	0	22.91	22.88	22.78
10	64QAM	1	0	22.99	22.93	22.94
10	64QAM	1	25	22.89	22.96	22.99
10	64QAM	1	49	22.91	22.91	22.97
10	64QAM	25	0	21.93	21.88	21.81
10	64QAM	25	12	21.94	21.90	21.82

10	64QAM	25	25	21.88	21.85	21.88
10	64QAM	50	0	21.91	21.88	21.79
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	24.67	24.70	24.71
5	QPSK	1	12	24.77	24.72	24.72
5	QPSK	1	24	24.61	24.68	24.68
5	QPSK	12	0	23.80	23.77	23.81
5	QPSK	12	7	23.83	23.78	23.83
5	QPSK	12	13	23.79	23.77	23.80
5	QPSK	25	0	23.78	23.75	23.79
5	16QAM	1	0	23.96	23.95	23.93
5	16QAM	1	12	24.00	23.93	23.97
5	16QAM	1	24	23.93	23.91	24.00
5	16QAM	12	0	22.87	22.88	22.87
5	16QAM	12	7	22.88	22.86	22.90
5	16QAM	12	13	22.88	22.85	22.86
5	16QAM	25	0	22.89	22.84	22.85
5	64QAM	1	0	22.90	22.92	22.98
5	64QAM	1	12	22.99	22.96	22.97
5	64QAM	1	24	22.81	22.90	22.91
5	64QAM	12	0	21.93	21.88	21.92
5	64QAM	12	7	21.94	21.91	21.95
5	64QAM	12	13	21.91	21.89	21.90
5	64QAM	25	0	21.88	21.85	21.88
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	24.65	24.71	24.72
3	QPSK	1	8	24.69	24.71	24.73
3	QPSK	1	14	24.71	24.68	24.69
3	QPSK	8	0	23.69	23.77	23.78
3	QPSK	8	4	23.87	23.81	23.82
3	QPSK	8	7	23.82	23.76	23.81
3	QPSK	15	0	23.81	23.77	23.79
3	16QAM	1	0	23.98	23.98	23.95
3	16QAM	1	8	23.92	23.92	23.97
3	16QAM	1	14	23.94	23.99	23.91
3	16QAM	8	0	22.84	22.90	22.92
3	16QAM	8	4	22.97	22.92	22.93
3	16QAM	8	7	22.92	22.89	22.92
3	16QAM	15	0	22.88	22.86	22.87
3	64QAM	1	0	22.87	22.94	22.95
3	64QAM	1	8	22.90	22.97	22.97
3	64QAM	1	14	22.97	22.93	22.94
3	64QAM	8	0	21.83	21.91	21.90
3	64QAM	8	4	21.98	21.92	21.94
3	64QAM	8	7	21.93	21.89	21.91
3	64QAM	15	0	21.92	21.84	21.87
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	24.62	24.70	24.68
1.4	QPSK	1	3	24.70	24.75	24.75
1.4	QPSK	1	5	24.63	24.67	24.67
1.4	QPSK	3	0	24.65	24.72	24.71
1.4	QPSK	3	1	24.72	24.78	24.76
1.4	QPSK	3	3	24.69	24.72	24.72
1.4	QPSK	6	0	23.67	23.71	23.76
1.4	16QAM	1	0	23.95	23.96	23.98
1.4	16QAM	1	3	24.00	23.94	24.00
1.4	16QAM	1	5	23.94	23.95	23.99
1.4	16QAM	3	0	23.74	23.78	23.81
1.4	16QAM	3	1	23.81	23.83	23.86
1.4	16QAM	3	3	23.72	23.78	23.80
1.4	16QAM	6	0	22.83	22.89	22.89
1.4	64QAM	1	0	22.89	22.94	22.89
1.4	64QAM	1	3	22.94	22.99	22.98
1.4	64QAM	1	5	22.85	22.93	22.89
1.4	64QAM	3	0	22.88	22.94	22.92
1.4	64QAM	3	1	22.94	22.99	22.96
1.4	64QAM	3	3	22.87	22.93	22.91
1.4	64QAM	6	0	21.75	21.82	21.83

<WiFi on>

Power Selection				Head		
Transmit Antenna				UAT		
Max. Power				23		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	22.20	22.21	22.22
20	QPSK	1	49	22.13	22.19	22.19
20	QPSK	1	99	22.18	22.20	22.18
20	QPSK	50	0	22.20	22.20	22.16
20	QPSK	50	24	22.25	22.29	22.30
20	QPSK	50	50	22.23	22.23	22.23
20	QPSK	100	0	22.24	22.15	22.28
20	16QAM	1	0	22.38	22.50	22.47
20	16QAM	1	49	22.44	22.45	22.46
20	16QAM	1	99	22.44	22.44	22.48
20	16QAM	50	0	22.28	22.32	22.25
20	16QAM	50	24	22.29	22.36	22.34
20	16QAM	50	50	22.34	22.32	22.34
20	16QAM	100	0	22.35	22.34	22.22
20	64QAM	1	0	22.31	22.44	22.31
20	64QAM	1	49	22.36	22.40	22.45
20	64QAM	1	99	22.43	22.46	22.38
20	64QAM	50	0	21.98	22.00	21.94
20	64QAM	50	24	22.02	22.06	22.07
20	64QAM	50	50	22.03	22.02	22.03
20	64QAM	100	0	22.04	22.02	21.92
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	22.04	22.17	22.21
15	QPSK	1	37	21.99	22.16	22.15
15	QPSK	1	74	22.07	22.13	22.13
15	QPSK	36	0	22.15	22.23	22.23
15	QPSK	36	20	22.18	22.23	22.23
15	QPSK	36	39	22.15	22.21	22.18
15	QPSK	75	0	22.16	22.21	22.20
15	16QAM	1	0	22.29	22.49	22.40
15	16QAM	1	37	22.30	22.40	22.46
15	16QAM	1	74	22.38	22.49	22.48
15	16QAM	36	0	22.22	22.32	22.29
15	16QAM	36	20	22.27	22.36	22.31
15	16QAM	36	39	22.21	22.32	22.27
15	16QAM	75	0	22.22	22.31	22.28
15	64QAM	1	0	22.25	22.36	22.44
15	64QAM	1	37	22.21	22.41	22.39
15	64QAM	1	74	22.27	22.36	22.38
15	64QAM	36	0	21.96	21.85	22.00
15	64QAM	36	20	21.99	22.07	22.03
15	64QAM	36	39	21.93	22.00	22.00
15	64QAM	75	0	21.91	22.00	21.98
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	22.18	22.28	22.23
10	QPSK	1	25	22.15	22.20	22.15
10	QPSK	1	49	22.17	22.24	22.15
10	QPSK	25	0	22.20	22.23	22.21
10	QPSK	25	12	22.19	22.26	22.21
10	QPSK	25	25	22.16	22.22	22.19
10	QPSK	50	0	22.19	22.25	22.20
10	16QAM	1	0	22.42	22.44	22.45
10	16QAM	1	25	22.47	22.44	22.44
10	16QAM	1	49	22.41	22.49	22.45
10	16QAM	25	0	22.27	22.33	22.30
10	16QAM	25	12	22.27	22.35	22.30
10	16QAM	25	25	22.23	22.32	22.28
10	16QAM	50	0	22.27	22.35	22.30
10	64QAM	1	0	22.37	22.49	22.46
10	64QAM	1	25	22.39	22.40	22.42
10	64QAM	1	49	22.36	22.49	22.42
10	64QAM	25	0	21.99	21.90	22.00
10	64QAM	25	12	21.99	22.04	22.04

10	64QAM	25	25	21.93	22.00	22.00
10	64QAM	50	0	21.98	22.04	22.02
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	22.07	22.19	22.17
5	QPSK	1	12	22.20	22.23	22.27
5	QPSK	1	24	22.13	22.20	22.12
5	QPSK	12	0	22.20	22.26	22.22
5	QPSK	12	7	22.22	22.26	22.35
5	QPSK	12	13	22.19	22.22	22.20
5	QPSK	25	0	22.16	22.21	22.19
5	16QAM	1	0	22.32	22.48	22.44
5	16QAM	1	12	22.43	22.45	22.45
5	16QAM	1	24	22.40	22.47	22.45
5	16QAM	12	0	22.29	22.36	22.30
5	16QAM	12	7	22.27	22.35	22.43
5	16QAM	12	13	22.25	22.33	22.29
5	16QAM	25	0	22.26	22.35	22.28
5	64QAM	1	0	22.30	22.42	22.38
5	64QAM	1	12	22.38	22.46	22.48
5	64QAM	1	24	22.33	22.40	22.37
5	64QAM	12	0	22.02	22.07	22.04
5	64QAM	12	7	22.05	22.09	22.14
5	64QAM	12	13	22.02	22.05	22.01
5	64QAM	25	0	21.98	22.00	21.99
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	22.12	22.19	22.22
3	QPSK	1	8	22.08	22.18	22.09
3	QPSK	1	14	22.12	22.14	22.11
3	QPSK	8	0	22.17	22.23	22.18
3	QPSK	8	4	22.13	22.17	22.14
3	QPSK	8	7	22.13	22.21	22.14
3	QPSK	15	0	22.18	22.22	22.19
3	16QAM	1	0	22.37	22.34	22.42
3	16QAM	1	8	22.47	22.38	22.44
3	16QAM	1	14	22.39	22.42	22.40
3	16QAM	8	0	22.26	22.33	22.28
3	16QAM	8	4	22.20	22.26	22.24
3	16QAM	8	7	22.17	22.23	22.18
3	16QAM	15	0	22.23	22.32	22.26
3	64QAM	1	0	22.31	22.48	22.40
3	64QAM	1	8	22.34	22.33	22.37
3	64QAM	1	14	22.34	22.46	22.41
3	64QAM	8	0	21.99	21.80	21.91
3	64QAM	8	4	21.95	21.95	22.04
3	64QAM	8	7	21.85	21.94	21.97
3	64QAM	15	0	21.91	21.98	21.92
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	22.09	22.19	22.20
1.4	QPSK	1	3	22.09	22.13	22.15
1.4	QPSK	1	5	22.12	22.18	22.15
1.4	QPSK	3	0	22.10	22.16	22.21
1.4	QPSK	3	1	22.17	22.19	22.17
1.4	QPSK	3	3	22.14	22.18	22.15
1.4	QPSK	6	0	22.14	22.24	22.13
1.4	16QAM	1	0	22.41	22.39	22.39
1.4	16QAM	1	3	22.42	22.37	22.34
1.4	16QAM	1	5	22.35	22.40	22.42
1.4	16QAM	3	0	22.23	22.24	22.30
1.4	16QAM	3	1	22.19	22.28	22.21
1.4	16QAM	3	3	22.17	22.29	22.25
1.4	16QAM	6	0	22.19	22.29	22.21
1.4	64QAM	1	0	22.27	22.47	22.44
1.4	64QAM	1	3	22.34	22.33	22.36
1.4	64QAM	1	5	22.26	22.42	22.38
1.4	64QAM	3	0	21.96	21.89	21.98
1.4	64QAM	3	1	21.95	22.04	21.98
1.4	64QAM	3	3	21.90	21.90	22.00
1.4	64QAM	6	0	21.97	21.99	22.02

Power Selection				Head		
Transmit Antenna				LAT		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	24.72	24.82	24.73
20	QPSK	1	49	24.76	24.74	24.78
20	QPSK	1	99	24.81	24.81	24.75
20	QPSK	50	0	23.86	23.80	23.79
20	QPSK	50	24	23.84	23.84	23.82
20	QPSK	50	50	23.80	23.77	23.74
20	QPSK	100	0	23.82	23.78	23.78
20	16QAM	1	0	23.95	24.00	23.92
20	16QAM	1	49	23.98	23.92	24.00
20	16QAM	1	99	24.00	24.00	23.97
20	16QAM	50	0	22.94	22.88	22.87
20	16QAM	50	24	22.95	22.90	22.88
20	16QAM	50	50	22.90	22.87	22.81
20	16QAM	100	0	22.90	22.86	22.83
20	64QAM	1	0	22.95	23.02	22.94
20	64QAM	1	49	23.00	23.00	23.06
20	64QAM	1	99	23.04	23.03	22.99
20	64QAM	50	0	21.94	21.87	21.88
20	64QAM	50	24	21.95	21.93	21.89
20	64QAM	50	50	21.91	21.88	21.83
20	64QAM	100	0	21.91	21.87	21.85
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	24.71	24.81	24.80
15	QPSK	1	37	24.75	24.74	24.65
15	QPSK	1	74	24.72	24.78	24.72
15	QPSK	36	0	23.84	23.81	23.73
15	QPSK	36	20	23.84	23.81	23.74
15	QPSK	36	39	23.78	23.76	23.74
15	QPSK	75	0	23.81	23.78	23.73
15	16QAM	1	0	23.92	23.95	24.00
15	16QAM	1	37	23.98	23.93	23.95
15	16QAM	1	74	23.93	24.00	23.97
15	16QAM	36	0	22.92	22.84	22.81
15	16QAM	36	20	22.93	22.93	22.82
15	16QAM	36	39	22.90	22.85	22.77
15	16QAM	75	0	22.89	22.86	22.79
15	64QAM	1	0	22.93	22.95	22.95
15	64QAM	1	37	23.00	22.96	22.87
15	64QAM	1	74	22.94	23.00	22.94
15	64QAM	36	0	21.94	21.87	21.83
15	64QAM	36	20	21.95	21.93	21.86
15	64QAM	36	39	21.90	21.88	21.81
15	64QAM	75	0	21.90	21.86	21.80
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	24.77	24.79	24.78
10	QPSK	1	25	24.68	24.74	24.76
10	QPSK	1	49	24.80	24.77	24.73
10	QPSK	25	0	23.82	23.78	23.72
10	QPSK	25	12	23.85	23.80	23.72
10	QPSK	25	25	23.78	23.76	23.80
10	QPSK	50	0	23.79	23.78	23.73
10	16QAM	1	0	24.00	23.98	23.98
10	16QAM	1	25	24.00	23.92	23.99
10	16QAM	1	49	24.00	24.00	23.93
10	16QAM	25	0	22.90	22.87	22.80
10	16QAM	25	12	22.92	22.88	22.80
10	16QAM	25	25	22.88	22.86	22.88
10	16QAM	50	0	22.91	22.88	22.78
10	64QAM	1	0	22.99	22.93	22.94
10	64QAM	1	25	22.89	22.96	22.99
10	64QAM	1	49	22.91	22.91	22.97
10	64QAM	25	0	21.93	21.88	21.81
10	64QAM	25	12	21.94	21.90	21.82

10	64QAM	25	25	21.88	21.85	21.88
10	64QAM	50	0	21.91	21.88	21.79
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	24.67	24.70	24.71
5	QPSK	1	12	24.77	24.72	24.72
5	QPSK	1	24	24.61	24.68	24.68
5	QPSK	12	0	23.80	23.77	23.81
5	QPSK	12	7	23.83	23.78	23.83
5	QPSK	12	13	23.79	23.77	23.80
5	QPSK	25	0	23.78	23.75	23.79
5	16QAM	1	0	23.96	23.95	23.93
5	16QAM	1	12	24.00	23.93	23.97
5	16QAM	1	24	23.93	23.91	24.00
5	16QAM	12	0	22.87	22.88	22.87
5	16QAM	12	7	22.88	22.86	22.90
5	16QAM	12	13	22.88	22.85	22.86
5	16QAM	25	0	22.89	22.84	22.85
5	64QAM	1	0	22.90	22.92	22.98
5	64QAM	1	12	22.99	22.96	22.97
5	64QAM	1	24	22.81	22.90	22.91
5	64QAM	12	0	21.93	21.88	21.92
5	64QAM	12	7	21.94	21.91	21.95
5	64QAM	12	13	21.91	21.89	21.90
5	64QAM	25	0	21.88	21.85	21.88
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	24.65	24.71	24.72
3	QPSK	1	8	24.69	24.71	24.73
3	QPSK	1	14	24.71	24.68	24.69
3	QPSK	8	0	23.69	23.77	23.78
3	QPSK	8	4	23.87	23.81	23.82
3	QPSK	8	7	23.82	23.76	23.81
3	QPSK	15	0	23.81	23.77	23.79
3	16QAM	1	0	23.98	23.98	23.95
3	16QAM	1	8	23.92	23.92	23.97
3	16QAM	1	14	23.94	23.99	23.91
3	16QAM	8	0	22.84	22.90	22.92
3	16QAM	8	4	22.97	22.92	22.93
3	16QAM	8	7	22.92	22.89	22.92
3	16QAM	15	0	22.88	22.86	22.87
3	64QAM	1	0	22.87	22.94	22.95
3	64QAM	1	8	22.90	22.97	22.97
3	64QAM	1	14	22.97	22.93	22.94
3	64QAM	8	0	21.83	21.91	21.90
3	64QAM	8	4	21.98	21.92	21.94
3	64QAM	8	7	21.93	21.89	21.91
3	64QAM	15	0	21.92	21.84	21.87
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	24.62	24.70	24.68
1.4	QPSK	1	3	24.70	24.75	24.75
1.4	QPSK	1	5	24.63	24.67	24.67
1.4	QPSK	3	0	24.65	24.72	24.71
1.4	QPSK	3	1	24.72	24.78	24.76
1.4	QPSK	3	3	24.69	24.72	24.72
1.4	QPSK	6	0	23.67	23.71	23.76
1.4	16QAM	1	0	23.95	23.96	23.98
1.4	16QAM	1	3	24.00	23.94	24.00
1.4	16QAM	1	5	23.94	23.95	23.99
1.4	16QAM	3	0	23.74	23.78	23.81
1.4	16QAM	3	1	23.81	23.83	23.86
1.4	16QAM	3	3	23.72	23.78	23.80
1.4	16QAM	6	0	22.83	22.89	22.89
1.4	64QAM	1	0	22.89	22.94	22.89
1.4	64QAM	1	3	22.94	22.99	22.98
1.4	64QAM	1	5	22.85	22.93	22.89
1.4	64QAM	3	0	22.88	22.94	22.92
1.4	64QAM	3	1	22.94	22.99	22.96
1.4	64QAM	3	3	22.87	22.93	22.91
1.4	64QAM	6	0	21.75	21.82	21.83

Power Selection				Hotspot / Body-worn / Product Specific		
Transmit Antenna				UAT / LAT		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	24.72	24.82	24.73
20	QPSK	1	49	24.76	24.74	24.78
20	QPSK	1	99	24.81	24.81	24.75
20	QPSK	50	0	23.86	23.80	23.79
20	QPSK	50	24	23.84	23.84	23.82
20	QPSK	50	50	23.80	23.77	23.74
20	QPSK	100	0	23.82	23.78	23.78
20	16QAM	1	0	23.95	24.00	23.92
20	16QAM	1	49	23.98	23.92	24.00
20	16QAM	1	99	24.00	24.00	23.97
20	16QAM	50	0	22.94	22.88	22.87
20	16QAM	50	24	22.95	22.90	22.88
20	16QAM	50	50	22.90	22.87	22.81
20	16QAM	100	0	22.90	22.86	22.83
20	64QAM	1	0	22.95	23.02	22.94
20	64QAM	1	49	23.00	23.00	23.06
20	64QAM	1	99	23.04	23.03	22.99
20	64QAM	50	0	21.94	21.87	21.88
20	64QAM	50	24	21.95	21.93	21.89
20	64QAM	50	50	21.91	21.88	21.83
20	64QAM	100	0	21.91	21.87	21.85
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	24.71	24.81	24.80
15	QPSK	1	37	24.75	24.74	24.65
15	QPSK	1	74	24.72	24.78	24.72
15	QPSK	36	0	23.84	23.81	23.73
15	QPSK	36	20	23.84	23.81	23.74
15	QPSK	36	39	23.78	23.76	23.74
15	QPSK	75	0	23.81	23.78	23.73
15	16QAM	1	0	23.92	23.95	24.00
15	16QAM	1	37	23.98	23.93	23.95
15	16QAM	1	74	23.93	24.00	23.97
15	16QAM	36	0	22.92	22.84	22.81
15	16QAM	36	20	22.93	22.93	22.82
15	16QAM	36	39	22.90	22.85	22.77
15	16QAM	75	0	22.89	22.86	22.79
15	64QAM	1	0	22.93	22.95	22.95
15	64QAM	1	37	23.00	22.96	22.87
15	64QAM	1	74	22.94	23.00	22.94
15	64QAM	36	0	21.94	21.87	21.83
15	64QAM	36	20	21.95	21.93	21.86
15	64QAM	36	39	21.90	21.88	21.81
15	64QAM	75	0	21.90	21.86	21.80
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	24.77	24.79	24.78
10	QPSK	1	25	24.68	24.74	24.76
10	QPSK	1	49	24.80	24.77	24.73
10	QPSK	25	0	23.82	23.78	23.72
10	QPSK	25	12	23.85	23.80	23.72
10	QPSK	25	25	23.78	23.76	23.80
10	QPSK	50	0	23.79	23.78	23.73
10	16QAM	1	0	24.00	23.98	23.98
10	16QAM	1	25	24.00	23.92	23.99
10	16QAM	1	49	24.00	24.00	23.93
10	16QAM	25	0	22.90	22.87	22.80
10	16QAM	25	12	22.92	22.88	22.80
10	16QAM	25	25	22.88	22.86	22.88
10	16QAM	50	0	22.91	22.88	22.78
10	64QAM	1	0	22.99	22.93	22.94
10	64QAM	1	25	22.89	22.96	22.99
10	64QAM	1	49	22.91	22.91	22.97
10	64QAM	25	0	21.93	21.88	21.81
10	64QAM	25	12	21.94	21.90	21.82

10	64QAM	25	25	21.88	21.85	21.88
10	64QAM	50	0	21.91	21.88	21.79
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	24.67	24.70	24.71
5	QPSK	1	12	24.77	24.72	24.72
5	QPSK	1	24	24.61	24.68	24.68
5	QPSK	12	0	23.80	23.77	23.81
5	QPSK	12	7	23.83	23.78	23.83
5	QPSK	12	13	23.79	23.77	23.80
5	QPSK	25	0	23.78	23.75	23.79
5	16QAM	1	0	23.96	23.95	23.93
5	16QAM	1	12	24.00	23.93	23.97
5	16QAM	1	24	23.93	23.91	24.00
5	16QAM	12	0	22.87	22.88	22.87
5	16QAM	12	7	22.88	22.86	22.90
5	16QAM	12	13	22.88	22.85	22.86
5	16QAM	25	0	22.89	22.84	22.85
5	64QAM	1	0	22.90	22.92	22.98
5	64QAM	1	12	22.99	22.96	22.97
5	64QAM	1	24	22.81	22.90	22.91
5	64QAM	12	0	21.93	21.88	21.92
5	64QAM	12	7	21.94	21.91	21.95
5	64QAM	12	13	21.91	21.89	21.90
5	64QAM	25	0	21.88	21.85	21.88
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	24.65	24.71	24.72
3	QPSK	1	8	24.69	24.71	24.73
3	QPSK	1	14	24.71	24.68	24.69
3	QPSK	8	0	23.69	23.77	23.78
3	QPSK	8	4	23.87	23.81	23.82
3	QPSK	8	7	23.82	23.76	23.81
3	QPSK	15	0	23.81	23.77	23.79
3	16QAM	1	0	23.98	23.98	23.95
3	16QAM	1	8	23.92	23.92	23.97
3	16QAM	1	14	23.94	23.99	23.91
3	16QAM	8	0	22.84	22.90	22.92
3	16QAM	8	4	22.97	22.92	22.93
3	16QAM	8	7	22.92	22.89	22.92
3	16QAM	15	0	22.88	22.86	22.87
3	64QAM	1	0	22.87	22.94	22.95
3	64QAM	1	8	22.90	22.97	22.97
3	64QAM	1	14	22.97	22.93	22.94
3	64QAM	8	0	21.83	21.91	21.90
3	64QAM	8	4	21.98	21.92	21.94
3	64QAM	8	7	21.93	21.89	21.91
3	64QAM	15	0	21.92	21.84	21.87
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	24.62	24.70	24.68
1.4	QPSK	1	3	24.70	24.75	24.75
1.4	QPSK	1	5	24.63	24.67	24.67
1.4	QPSK	3	0	24.65	24.72	24.71
1.4	QPSK	3	1	24.72	24.78	24.76
1.4	QPSK	3	3	24.69	24.72	24.72
1.4	QPSK	6	0	23.67	23.71	23.76
1.4	16QAM	1	0	23.95	23.96	23.98
1.4	16QAM	1	3	24.00	23.94	24.00
1.4	16QAM	1	5	23.94	23.95	23.99
1.4	16QAM	3	0	23.74	23.78	23.81
1.4	16QAM	3	1	23.81	23.83	23.86
1.4	16QAM	3	3	23.72	23.78	23.80
1.4	16QAM	6	0	22.83	22.89	22.89
1.4	64QAM	1	0	22.89	22.94	22.89
1.4	64QAM	1	3	22.94	22.99	22.98
1.4	64QAM	1	5	22.85	22.93	22.89
1.4	64QAM	3	0	22.88	22.94	22.92
1.4	64QAM	3	1	22.94	22.99	22.96
1.4	64QAM	3	3	22.87	22.93	22.91
1.4	64QAM	6	0	21.75	21.82	21.83

<LTE Band 4>

<WiFi off / WiFi on>

Power Selection				Head / Hotspot / Body-worn / Product Specific		
Transmit Antenna				UAT / LAT		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	23.49	23.52	23.64
20	QPSK	1	49	23.46	23.50	23.57
20	QPSK	1	99	23.47	23.43	23.50
20	QPSK	50	0	22.57	22.60	22.67
20	QPSK	50	24	22.65	22.62	22.68
20	QPSK	50	50	22.63	22.53	22.63
20	QPSK	100	0	22.64	22.58	22.66
20	16QAM	1	0	22.81	22.87	22.95
20	16QAM	1	49	22.81	22.81	22.92
20	16QAM	1	99	22.74	22.75	22.82
20	16QAM	50	0	21.65	21.70	21.76
20	16QAM	50	24	21.72	21.70	21.77
20	16QAM	50	50	21.67	21.64	21.70
20	16QAM	100	0	21.69	21.67	21.74
20	64QAM	1	0	21.72	21.73	21.84
20	64QAM	1	49	21.71	21.75	21.85
20	64QAM	1	99	21.69	21.67	21.75
20	64QAM	50	0	20.66	20.70	20.75
20	64QAM	50	24	20.76	20.70	20.79
20	64QAM	50	50	20.69	20.65	20.70
20	64QAM	100	0	20.71	20.67	20.72
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	23.49	23.54	23.61
15	QPSK	1	37	23.46	23.50	23.60
15	QPSK	1	74	23.49	23.45	23.52
15	QPSK	36	0	22.54	22.58	22.67
15	QPSK	36	20	22.66	22.58	22.67
15	QPSK	36	39	22.64	22.55	22.65
15	QPSK	75	0	22.62	22.59	22.64
15	16QAM	1	0	22.84	22.79	22.97
15	16QAM	1	37	22.78	22.82	22.93
15	16QAM	1	74	22.79	22.79	22.85
15	16QAM	36	0	21.61	21.64	21.76
15	16QAM	36	20	21.74	21.68	21.76
15	16QAM	36	39	21.69	21.64	21.71
15	16QAM	75	0	21.70	21.65	21.72
15	64QAM	1	0	21.73	21.75	21.88
15	64QAM	1	37	21.71	21.76	21.86
15	64QAM	1	74	21.71	21.66	21.77
15	64QAM	36	0	20.64	20.68	20.74
15	64QAM	36	20	20.76	20.72	20.79
15	64QAM	36	39	20.72	20.66	20.75
15	64QAM	75	0	20.70	20.66	20.71
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	23.51	23.55	23.63
10	QPSK	1	25	23.49	23.51	23.61
10	QPSK	1	49	23.45	23.48	23.56
10	QPSK	25	0	22.55	22.57	22.68
10	QPSK	25	12	22.55	22.59	22.65
10	QPSK	25	25	22.51	22.55	22.62
10	QPSK	50	0	22.52	22.58	22.64
10	16QAM	1	0	22.88	22.87	22.97
10	16QAM	1	25	22.85	22.87	22.94
10	16QAM	1	49	22.80	22.81	22.89
10	16QAM	25	0	21.66	21.65	21.77
10	16QAM	25	12	21.65	21.70	21.74
10	16QAM	25	25	21.58	21.64	21.73
10	16QAM	50	0	21.65	21.68	21.72
10	64QAM	1	0	21.76	21.74	21.88
10	64QAM	1	25	21.75	21.78	21.86
10	64QAM	1	49	21.69	21.76	21.80

10	64QAM	25	0	20.64	20.70	20.77
10	64QAM	25	12	20.66	20.69	20.76
10	64QAM	25	25	20.62	20.67	20.71
10	64QAM	50	0	20.63	20.68	20.75
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	23.48	23.52	23.57
5	QPSK	1	12	23.51	23.52	23.60
5	QPSK	1	24	23.43	23.49	23.54
5	QPSK	12	0	22.54	22.58	22.64
5	QPSK	12	7	22.55	22.59	22.68
5	QPSK	12	13	22.54	22.53	22.65
5	QPSK	25	0	22.51	22.59	22.60
5	16QAM	1	0	22.80	22.83	22.92
5	16QAM	1	12	22.86	22.86	22.92
5	16QAM	1	24	22.76	22.78	22.85
5	16QAM	12	0	21.65	21.67	21.75
5	16QAM	12	7	21.67	21.72	21.75
5	16QAM	12	13	21.61	21.64	21.74
5	16QAM	25	0	21.65	21.68	21.69
5	64QAM	1	0	21.73	21.75	21.83
5	64QAM	1	12	21.77	21.78	21.85
5	64QAM	1	24	21.70	21.71	21.78
5	64QAM	12	0	20.66	20.71	20.77
5	64QAM	12	7	20.69	20.75	20.79
5	64QAM	12	13	20.66	20.69	20.74
5	64QAM	25	0	20.62	20.66	20.71
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.49	23.51	23.59
3	QPSK	1	8	23.50	23.53	23.59
3	QPSK	1	14	23.47	23.52	23.56
3	QPSK	8	0	22.56	22.62	22.66
3	QPSK	8	4	22.61	22.64	22.65
3	QPSK	8	7	22.55	22.56	22.62
3	QPSK	15	0	22.55	22.59	22.63
3	16QAM	1	0	22.85	22.87	22.90
3	16QAM	1	8	22.85	22.87	22.94
3	16QAM	1	14	22.79	22.80	22.87
3	16QAM	8	0	21.65	21.72	21.78
3	16QAM	8	4	21.74	21.74	21.79
3	16QAM	8	7	21.66	21.73	21.76
3	16QAM	15	0	21.63	21.69	21.74
3	64QAM	1	0	21.72	21.74	21.81
3	64QAM	1	8	21.76	21.76	21.85
3	64QAM	1	14	21.72	21.75	21.81
3	64QAM	8	0	20.68	20.72	20.77
3	64QAM	8	4	20.72	20.75	20.80
3	64QAM	8	7	20.69	20.72	20.76
3	64QAM	15	0	20.67	20.70	20.74
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.42	23.46	23.53
1.4	QPSK	1	3	23.53	23.54	23.60
1.4	QPSK	1	5	23.42	23.45	23.51
1.4	QPSK	3	0	23.50	23.50	23.58
1.4	QPSK	3	1	23.51	23.55	23.60
1.4	QPSK	3	3	23.49	23.51	23.57
1.4	QPSK	6	0	22.49	22.54	22.58
1.4	16QAM	1	0	22.75	22.78	22.84
1.4	16QAM	1	3	22.86	22.89	22.95
1.4	16QAM	1	5	22.74	22.79	22.83
1.4	16QAM	3	0	22.56	22.60	22.64
1.4	16QAM	3	1	22.62	22.63	22.69
1.4	16QAM	3	3	22.56	22.59	22.65
1.4	16QAM	6	0	21.67	21.68	21.73
1.4	64QAM	1	0	21.71	21.70	21.79
1.4	64QAM	1	3	21.77	21.78	21.85
1.4	64QAM	1	5	21.64	21.69	21.74
1.4	64QAM	3	0	21.69	21.72	21.78
1.4	64QAM	3	1	21.74	21.78	21.80
1.4	64QAM	3	3	21.70	21.72	21.76
1.4	64QAM	6	0	20.58	20.63	20.67

<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 / Product Specific		
Transmit Antenna				UAT / LAT		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	24.86	24.83	24.89
10	QPSK	1	25	24.98	24.95	24.91
10	QPSK	1	49	24.97	24.92	24.88
10	QPSK	25	0	23.93	23.93	23.88
10	QPSK	25	12	23.98	23.95	23.92
10	QPSK	25	25	23.95	23.93	23.91
10	QPSK	50	0	23.94	23.91	23.90
10	16QAM	1	0	23.99	23.98	23.97
10	16QAM	1	25	23.92	23.91	23.96
10	16QAM	1	49	23.91	23.99	23.92
10	16QAM	25	0	22.94	22.92	22.87
10	16QAM	25	12	22.99	22.93	22.91
10	16QAM	25	25	22.96	22.89	22.89
10	16QAM	50	0	22.95	22.90	22.90
10	64QAM	1	0	22.89	22.85	22.95
10	64QAM	1	25	22.93	22.98	22.95
10	64QAM	1	49	22.92	22.99	22.93
10	64QAM	25	0	21.97	21.92	21.91
10	64QAM	25	12	21.99	21.98	21.95
10	64QAM	25	25	21.96	21.94	21.88
10	64QAM	50	0	21.97	21.91	21.90
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	24.77	24.84	24.76
5	QPSK	1	12	24.76	24.84	24.76
5	QPSK	1	24	24.88	24.82	24.76
5	QPSK	12	0	23.82	23.92	23.86
5	QPSK	12	7	23.82	23.96	23.89
5	QPSK	12	13	23.98	23.92	23.84
5	QPSK	25	0	23.94	23.90	23.84
5	16QAM	1	0	23.95	23.91	23.94
5	16QAM	1	12	23.95	23.93	23.98
5	16QAM	1	24	23.94	23.99	23.89
5	16QAM	12	0	22.76	22.88	22.82
5	16QAM	12	7	22.78	22.86	22.80
5	16QAM	12	13	22.93	22.87	22.78
5	16QAM	25	0	22.89	22.86	22.79
5	64QAM	1	0	22.87	22.93	22.85
5	64QAM	1	12	22.86	22.95	22.86
5	64QAM	1	24	22.94	22.91	22.82
5	64QAM	12	0	21.82	21.89	21.85
5	64QAM	12	7	21.82	21.95	21.87
5	64QAM	12	13	21.95	21.90	21.81
5	64QAM	25	0	21.91	21.96	21.91
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	24.88	24.94	24.85
3	QPSK	1	8	24.87	24.93	24.86
3	QPSK	1	14	24.87	24.91	24.84
3	QPSK	8	0	23.90	23.93	23.92
3	QPSK	8	4	23.93	23.96	23.97
3	QPSK	8	7	23.93	23.92	23.95
3	QPSK	15	0	23.89	23.98	23.94
3	16QAM	1	0	23.96	23.91	23.94
3	16QAM	1	8	23.89	23.99	23.87
3	16QAM	1	14	23.89	23.94	23.84

3	16QAM	8	0	22.74	22.84	22.75
3	16QAM	8	4	22.78	22.85	22.79
3	16QAM	8	7	22.76	22.84	22.77
3	16QAM	15	0	22.72	22.81	22.74
3	64QAM	1	0	22.81	22.87	22.79
3	64QAM	1	8	22.84	22.88	22.78
3	64QAM	1	14	22.83	22.85	22.78
3	64QAM	8	0	21.74	21.83	21.75
3	64QAM	8	4	21.75	21.87	21.79
3	64QAM	8	7	21.74	21.84	21.74
3	64QAM	15	0	21.97	21.95	21.98
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	24.81	24.94	24.87
1.4	QPSK	1	3	24.90	24.88	24.85
1.4	QPSK	1	5	24.83	24.79	24.76
1.4	QPSK	3	0	24.87	24.85	24.79
1.4	QPSK	3	1	24.90	24.88	24.84
1.4	QPSK	3	3	24.86	24.83	24.80
1.4	QPSK	6	0	23.86	23.90	23.86
1.4	16QAM	1	0	23.95	23.93	23.91
1.4	16QAM	1	3	23.94	23.92	23.94
1.4	16QAM	1	5	23.95	23.95	23.87
1.4	16QAM	3	0	23.75	23.71	23.66
1.4	16QAM	3	1	23.78	23.78	23.71
1.4	16QAM	3	3	23.72	23.70	23.65
1.4	16QAM	6	0	22.82	22.87	22.82
1.4	64QAM	1	0	22.88	22.85	22.81
1.4	64QAM	1	3	22.93	22.91	22.89
1.4	64QAM	1	5	22.86	22.87	22.91
1.4	64QAM	3	0	22.87	22.84	22.89
1.4	64QAM	3	1	22.91	22.89	22.96
1.4	64QAM	3	3	22.86	22.85	22.90
1.4	64QAM	6	0	21.85	21.78	21.85

<LTE Band 13>

<WiFi off / Wifi on>

Power Selection				Head / Hotspot / Body-worn / Product Specific		
Transmit Antenna				UAT / LAT		
Max. Power				25.3		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23230		
Frequency (MHz)				782		
10	QPSK	1	0	24.52		
10	QPSK	1	25	24.51		
10	QPSK	1	49	24.47		
10	QPSK	25	0	23.55		
10	QPSK	25	12	23.56		
10	QPSK	25	25	23.55		
10	QPSK	50	0	23.55		
10	16QAM	1	0	23.70		
10	16QAM	1	25	23.79		
10	16QAM	1	49	23.76		
10	16QAM	25	0	22.64		
10	16QAM	25	12	22.63		
10	16QAM	25	25	22.61		
10	16QAM	50	0	22.61		
10	64QAM	1	0	22.65		
10	64QAM	1	25	22.69		
10	64QAM	1	49	22.68		
10	64QAM	25	0	21.65		
10	64QAM	25	12	21.65		
10	64QAM	25	25	21.62		
10	64QAM	50	0	21.64		
Channel				23205	23230	23255
Frequency (MHz)				779.5	782	784.5
5	QPSK	1	0	24.19	24.50	24.49
5	QPSK	1	12	24.43	24.50	24.51
5	QPSK	1	24	24.50	24.50	24.47
5	QPSK	12	0	23.48	23.54	23.52
5	QPSK	12	7	23.61	23.54	23.56
5	QPSK	12	13	23.54	23.50	23.51
5	QPSK	25	0	23.56	23.53	23.53
5	16QAM	1	0	23.45	23.73	23.79
5	16QAM	1	12	23.73	23.79	23.80
5	16QAM	1	24	23.77	23.77	23.74
5	16QAM	12	0	22.56	22.59	22.57
5	16QAM	12	7	22.66	22.60	22.62
5	16QAM	12	13	22.58	22.58	22.57
5	16QAM	25	0	22.64	22.60	22.60
5	64QAM	1	0	22.45	22.66	22.70
5	64QAM	1	12	22.64	22.70	22.74
5	64QAM	1	24	22.65	22.68	22.68
5	64QAM	12	0	21.59	21.66	21.61
5	64QAM	12	7	21.70	21.66	21.67
5	64QAM	12	13	21.66	21.62	21.65
5	64QAM	25	0	21.64	21.59	21.61

<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 / Wifi on>

Power Selection				Head / Hotspot / Body-worn / Product Specific		
Transmit Antenna				UAT / LAT		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26765	26865	26965
Frequency (MHz)				821.5	831.5	841.5
15	QPSK	1	0	24.69	25.00	24.91
15	QPSK	1	37	24.93	24.93	24.90
15	QPSK	1	74	24.99	24.93	24.83
15	QPSK	36	0	23.86	23.93	23.81
15	QPSK	36	20	23.91	23.92	23.80
15	QPSK	36	39	23.92	23.84	23.84
15	QPSK	75	0	23.88	23.89	23.77
15	16QAM	1	0	23.90	23.92	23.97
15	16QAM	1	37	23.84	23.91	23.96
15	16QAM	1	74	23.89	23.87	23.98
15	16QAM	36	0	22.89	22.95	22.86
15	16QAM	36	20	22.97	22.85	22.79
15	16QAM	36	39	22.92	22.83	22.83
15	16QAM	75	0	22.90	22.82	22.73
15	64QAM	1	0	22.88	22.97	22.92
15	64QAM	1	37	22.88	22.92	22.92
15	64QAM	1	74	22.94	22.92	22.85
15	64QAM	36	0	21.85	21.87	21.82
15	64QAM	36	20	21.98	21.92	21.80
15	64QAM	36	39	21.96	21.87	21.83
15	64QAM	75	0	21.92	21.82	21.75
Channel				26740	26865	26990
Frequency (MHz)				819	831.5	844
10	QPSK	1	0	24.56	24.68	24.91
10	QPSK	1	25	24.67	24.95	24.89
10	QPSK	1	49	24.94	24.96	24.56
10	QPSK	25	0	23.81	23.97	23.86
10	QPSK	25	12	23.81	23.95	23.87
10	QPSK	25	25	23.92	23.96	23.85
10	QPSK	50	0	23.75	23.94	23.87
10	16QAM	1	0	23.69	23.73	23.97
10	16QAM	1	25	23.94	23.98	23.95
10	16QAM	1	49	23.96	23.95	23.75
10	16QAM	25	0	22.71	22.95	22.84
10	16QAM	25	12	22.79	22.98	22.84
10	16QAM	25	25	22.93	22.93	22.82
10	16QAM	50	0	22.74	22.95	22.86
10	64QAM	1	0	22.84	22.78	22.97
10	64QAM	1	25	22.94	22.95	22.89
10	64QAM	1	49	22.99	22.93	22.83
10	64QAM	25	0	21.88	21.97	21.89
10	64QAM	25	12	21.92	21.99	21.87
10	64QAM	25	25	21.95	21.96	21.83
10	64QAM	50	0	21.89	21.98	21.85
Channel				26715	26865	27015
Frequency (MHz)				816.5	831.5	846.5
5	QPSK	1	0	24.54	24.92	24.89
5	QPSK	1	12	24.76	24.91	24.88
5	QPSK	1	24	24.79	24.98	24.51
5	QPSK	12	0	23.75	23.99	23.92
5	QPSK	12	7	23.76	23.95	23.96
5	QPSK	12	13	23.73	23.94	23.87
5	QPSK	25	0	23.78	23.91	23.92
5	16QAM	1	0	23.65	23.98	23.89
5	16QAM	1	12	23.75	23.92	23.84
5	16QAM	1	24	23.85	23.99	23.63
5	16QAM	12	0	22.68	22.92	22.73
5	16QAM	12	7	22.63	22.92	22.78
5	16QAM	12	13	22.63	22.91	22.74
5	16QAM	25	0	22.61	22.91	22.74
5	64QAM	1	0	22.81	22.97	22.85
5	64QAM	1	12	22.70	23.00	22.81
5	64QAM	1	24	22.83	22.97	22.74

5	64QAM	12	0	21.72	21.96	21.80
5	64QAM	12	7	21.73	21.97	21.83
5	64QAM	12	13	21.73	21.93	21.76
5	64QAM	25	0	21.79	21.90	21.77
Channel				26705	26865	27025
Frequency (MHz)				815.5	831.5	847.5
3	QPSK	1	0	24.51	24.94	24.89
3	QPSK	1	8	24.57	24.99	24.71
3	QPSK	1	14	24.60	24.99	24.59
3	QPSK	8	0	23.68	23.98	23.77
3	QPSK	8	4	23.71	23.97	23.74
3	QPSK	8	7	23.71	23.95	23.54
3	QPSK	15	0	23.60	23.91	23.65
3	16QAM	1	0	23.85	23.95	23.95
3	16QAM	1	8	23.88	23.95	23.93
3	16QAM	1	14	23.91	23.93	23.62
3	16QAM	8	0	22.79	22.87	22.89
3	16QAM	8	4	22.87	22.92	22.86
3	16QAM	8	7	22.82	22.91	22.70
3	16QAM	15	0	22.72	22.86	22.86
3	64QAM	1	0	22.96	22.94	22.91
3	64QAM	1	8	22.96	22.92	22.90
3	64QAM	1	14	22.95	22.90	22.86
3	64QAM	8	0	21.96	21.91	21.88
3	64QAM	8	4	21.97	21.93	21.91
3	64QAM	8	7	21.98	21.89	21.88
3	64QAM	15	0	21.90	21.86	21.86
Channel				26697	26865	27033
Frequency (MHz)				814.7	831.5	848.3
1.4	QPSK	1	0	24.38	24.90	24.53
1.4	QPSK	1	3	24.53	24.98	24.61
1.4	QPSK	1	5	24.40	24.81	24.48
1.4	QPSK	3	0	24.41	24.96	24.55
1.4	QPSK	3	1	24.38	24.96	24.50
1.4	QPSK	3	3	24.35	24.89	24.24
1.4	QPSK	6	0	23.46	23.96	23.45
1.4	16QAM	1	0	23.74	23.96	23.95
1.4	16QAM	1	3	23.90	23.98	23.77
1.4	16QAM	1	5	23.77	23.90	23.65
1.4	16QAM	3	0	23.43	23.73	23.57
1.4	16QAM	3	1	23.53	23.78	23.58
1.4	16QAM	3	3	23.46	23.69	23.31
1.4	16QAM	6	0	22.68	22.86	22.70
1.4	64QAM	1	0	22.87	22.94	22.97
1.4	64QAM	1	3	22.77	22.87	22.83
1.4	64QAM	1	5	22.88	22.90	22.89
1.4	64QAM	3	0	22.72	22.92	22.87
1.4	64QAM	3	1	22.76	22.96	22.86
1.4	64QAM	3	3	22.73	22.90	22.70
1.4	64QAM	6	0	21.71	21.84	21.83

<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.

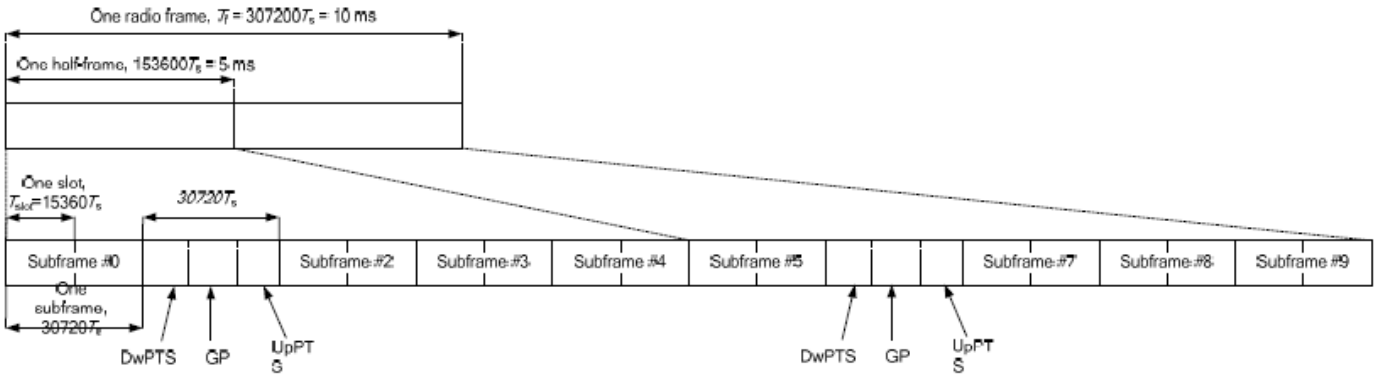


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

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

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

The highest duty factor is resulted from:

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, 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 / WiFi on>

Power Selection				Head / Hotspot / Body-worn / Product Specific		
Transmit Antenna				UAT / LAT		
Max. Power				25.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				37850	38000	38150
Frequency (MHz)				2580	2595	2610
20	QPSK	1	0	25.00	24.93	24.95
20	QPSK	1	49	24.99	24.91	24.85
20	QPSK	1	99	24.97	24.90	24.91
20	QPSK	50	0	24.00	23.93	23.96
20	QPSK	50	24	23.99	23.92	23.95
20	QPSK	50	50	23.92	23.91	23.95
20	QPSK	100	0	23.98	23.91	23.92
20	16QAM	1	0	24.00	23.80	23.82
20	16QAM	1	49	23.99	23.79	23.83
20	16QAM	1	99	23.79	23.82	23.84
20	16QAM	50	0	22.91	22.83	22.85
20	16QAM	50	24	22.83	22.84	22.97
20	16QAM	50	50	22.83	22.96	22.76
20	16QAM	100	0	22.83	22.83	22.85
20	64QAM	1	0	22.72	22.62	22.64
20	64QAM	1	49	22.72	22.60	22.54
20	64QAM	1	99	22.63	22.66	22.57
20	64QAM	50	0	21.99	21.82	21.83
20	64QAM	50	24	21.81	21.85	21.84
20	64QAM	50	50	21.81	21.84	21.77
20	64QAM	100	0	21.80	21.83	21.84
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	24.86	24.78	24.82
15	QPSK	1	37	24.84	24.76	24.71
15	QPSK	1	74	24.84	24.86	24.77
15	QPSK	36	0	23.88	23.81	23.80
15	QPSK	36	20	23.90	23.84	23.76
15	QPSK	36	39	23.79	23.83	23.73
15	QPSK	75	0	23.81	23.83	23.87
15	16QAM	1	0	23.99	23.91	23.90
15	16QAM	1	37	23.93	23.87	23.79
15	16QAM	1	74	23.91	23.98	23.89
15	16QAM	36	0	22.90	22.83	22.84
15	16QAM	36	20	22.91	22.84	22.78
15	16QAM	36	39	22.83	22.83	22.80
15	16QAM	75	0	22.88	22.90	22.93
15	64QAM	1	0	22.72	22.64	22.64
15	64QAM	1	37	22.68	22.61	22.55
15	64QAM	1	74	22.64	22.69	22.61
15	64QAM	36	0	21.92	21.85	21.86
15	64QAM	36	20	21.96	21.88	21.82
15	64QAM	36	39	21.83	21.87	21.79
15	64QAM	75	0	21.87	21.90	21.93
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	24.99	24.89	24.83
10	QPSK	1	25	24.96	24.88	24.83
10	QPSK	1	49	24.92	24.96	24.89
10	QPSK	25	0	23.99	23.92	23.86
10	QPSK	25	12	23.97	23.95	23.88
10	QPSK	25	25	24.00	23.94	23.88
10	QPSK	50	0	23.87	23.81	23.73
10	16QAM	1	0	23.96	23.87	23.82
10	16QAM	1	25	23.95	23.85	23.82
10	16QAM	1	49	23.95	23.89	23.84
10	16QAM	25	0	22.91	22.86	22.77
10	16QAM	25	12	22.93	22.87	22.83
10	16QAM	25	25	22.92	22.88	22.81
10	16QAM	50	0	22.92	22.87	22.82
10	64QAM	1	0	22.68	22.63	22.55
10	64QAM	1	25	22.67	22.59	22.52
10	64QAM	1	49	22.71	22.61	22.55

10	64QAM	25	0	21.93	21.88	21.82
10	64QAM	25	12	21.96	21.93	21.86
10	64QAM	25	25	21.97	21.91	21.85
10	64QAM	50	0	21.91	21.86	21.82
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	24.93	24.85	24.81
5	QPSK	1	12	24.93	24.88	24.81
5	QPSK	1	24	24.92	24.85	24.80
5	QPSK	12	0	23.94	23.92	23.82
5	QPSK	12	7	23.99	23.91	23.92
5	QPSK	12	13	23.96	23.93	23.85
5	QPSK	25	0	23.92	23.88	23.87
5	16QAM	1	0	23.91	23.85	23.80
5	16QAM	1	12	23.94	23.90	23.87
5	16QAM	1	24	23.97	23.90	23.86
5	16QAM	12	0	22.86	22.82	22.76
5	16QAM	12	7	22.90	22.84	22.80
5	16QAM	12	13	22.93	22.85	22.80
5	16QAM	25	0	22.94	22.89	22.84
5	64QAM	1	0	22.67	22.60	22.55
5	64QAM	1	12	22.69	22.65	22.59
5	64QAM	1	24	22.71	22.64	22.59
5	64QAM	12	0	21.91	21.85	21.79
5	64QAM	12	7	21.96	21.90	21.86
5	64QAM	12	13	21.94	21.89	21.82
5	64QAM	25	0	21.96	21.92	21.86

<LTE Band 41>

<WiFi off / WiFi on>

Power Selection				Head / Hotspot / Body-worn / Product Specific				
Transmit Antenna				UAT / LAT				
Max. Power				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.
Channel				39750	40185	40620	41055	41490
Frequency (MHz)				2506	2549.5	2593	2636.5	2680
20	QPSK	1	0	24.40	24.37	24.21	24.29	24.31
20	QPSK	1	49	24.31	24.25	24.12	24.15	24.16
20	QPSK	1	99	24.32	24.17	24.16	24.17	24.12
20	QPSK	50	0	23.46	23.40	23.21	23.26	23.27
20	QPSK	50	24	23.44	23.26	23.19	23.23	23.23
20	QPSK	50	50	23.38	23.22	23.19	23.20	23.19
20	QPSK	100	0	23.41	23.24	23.20	23.25	23.22
20	16QAM	1	0	23.53	23.48	23.34	23.38	23.41
20	16QAM	1	49	23.41	23.36	23.22	23.26	23.26
20	16QAM	1	99	23.40	23.23	23.21	23.24	23.22
20	16QAM	50	0	22.52	22.44	22.30	22.34	22.33
20	16QAM	50	24	22.47	22.33	22.27	22.29	22.32
20	16QAM	50	50	22.46	22.29	22.25	22.27	22.23
20	16QAM	100	0	22.44	22.32	22.27	22.32	22.29
20	64QAM	1	0	22.27	22.22	22.06	22.11	22.13
20	64QAM	1	49	22.14	22.07	21.94	21.99	21.99
20	64QAM	1	99	22.14	21.97	21.97	21.98	21.96
20	64QAM	50	0	21.50	21.45	21.30	21.34	21.33
20	64QAM	50	24	21.47	21.32	21.24	21.31	21.29
20	64QAM	50	50	21.44	21.28	21.22	21.26	21.22
20	64QAM	100	0	21.46	21.32	21.27	21.28	21.30
Channel				39725	40173	40620	41068	41515
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5
15	QPSK	1	0	24.40	24.35	24.22	24.27	24.28
15	QPSK	1	37	24.29	24.25	24.12	24.16	24.15
15	QPSK	1	74	24.32	24.19	24.16	24.16	24.14
15	QPSK	36	0	23.38	23.31	23.17	23.22	23.22
15	QPSK	36	20	23.37	23.33	23.19	23.21	23.19
15	QPSK	36	39	23.34	23.15	23.15	23.15	23.12
15	QPSK	75	0	23.39	23.22	23.15	23.22	23.19
15	16QAM	1	0	23.49	23.43	23.29	23.35	23.35
15	16QAM	1	37	23.39	23.33	23.21	23.25	23.24
15	16QAM	1	74	23.40	23.25	23.23	23.26	23.22
15	16QAM	36	0	22.37	22.35	22.19	22.22	22.24
15	16QAM	36	20	22.40	22.33	22.22	22.21	22.20
15	16QAM	36	39	22.35	22.20	22.16	22.18	22.16
15	16QAM	75	0	22.43	22.28	22.24	22.28	22.25
15	64QAM	1	0	22.22	22.17	22.03	22.09	22.09
15	64QAM	1	37	22.12	22.08	21.95	21.99	21.97
15	64QAM	1	74	22.14	21.98	21.96	21.99	21.97
15	64QAM	36	0	21.43	21.36	21.22	21.27	21.27
15	64QAM	36	20	21.42	21.38	21.23	21.26	21.25
15	64QAM	36	39	21.37	21.23	21.19	21.21	21.19
15	64QAM	75	0	21.45	21.28	21.24	21.28	21.24
Channel				39700	40160	40620	41080	41540
Frequency (MHz)				2501	2547	2593	2639	2685
10	QPSK	1	0	24.37	24.31	24.16	24.21	24.25
10	QPSK	1	25	24.29	24.25	24.11	24.17	24.14
10	QPSK	1	49	24.30	24.25	24.15	24.18	24.17
10	QPSK	25	0	23.38	23.30	23.16	23.23	23.23
10	QPSK	25	12	23.35	23.33	23.17	23.22	23.22
10	QPSK	25	25	23.32	23.28	23.14	23.17	23.17
10	QPSK	50	0	23.37	23.31	23.16	23.23	23.18
10	16QAM	1	0	23.46	23.42	23.30	23.34	23.36
10	16QAM	1	25	23.41	23.38	23.24	23.31	23.28
10	16QAM	1	49	23.36	23.34	23.21	23.24	23.24
10	16QAM	25	0	22.44	22.37	22.23	22.29	22.30
10	16QAM	25	12	22.44	22.39	22.26	22.30	22.29
10	16QAM	25	25	22.40	22.36	22.22	22.27	22.25
10	16QAM	50	0	22.44	22.37	22.23	22.29	22.27
10	64QAM	1	0	22.18	22.15	22.02	22.08	22.09
10	64QAM	1	25	22.13	22.11	21.98	22.03	22.00
10	64QAM	1	49	22.11	22.06	21.95	21.98	22.00

10	64QAM	25	0	21.47	21.41	21.26	21.32	21.32
10	64QAM	25	12	21.48	21.43	21.29	21.35	21.30
10	64QAM	25	25	21.45	21.39	21.24	21.29	21.28
10	64QAM	50	0	21.42	21.37	21.23	21.28	21.26
Channel				39675	40148	40620	41093	41565
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5
5	QPSK	1	0	24.29	24.25	24.12	24.16	24.16
5	QPSK	1	12	24.27	24.23	24.14	24.18	24.16
5	QPSK	1	24	24.20	24.19	24.06	24.09	24.08
5	QPSK	12	0	23.36	23.31	23.14	23.21	23.16
5	QPSK	12	7	23.33	23.31	23.15	23.22	23.20
5	QPSK	12	13	23.36	23.25	23.14	23.17	23.14
5	QPSK	25	0	23.33	23.27	23.14	23.18	23.16
5	16QAM	1	0	23.37	23.33	23.21	23.27	23.25
5	16QAM	1	12	23.39	23.34	23.25	23.28	23.27
5	16QAM	1	24	23.37	23.32	23.20	23.24	23.23
5	16QAM	12	0	22.36	22.30	22.15	22.20	22.19
5	16QAM	12	7	22.36	22.30	22.22	22.24	22.19
5	16QAM	12	13	22.33	22.28	22.14	22.20	22.17
5	16QAM	25	0	22.42	22.35	22.21	22.26	22.24
5	64QAM	1	0	22.11	22.09	21.97	22.00	22.01
5	64QAM	1	12	22.13	22.08	21.98	22.02	22.01
5	64QAM	1	24	22.11	22.05	21.95	21.98	21.95
5	64QAM	12	0	21.42	21.35	21.18	21.26	21.24
5	64QAM	12	7	21.41	21.36	21.21	21.26	21.24
5	64QAM	12	13	21.38	21.31	21.20	21.21	21.21
5	64QAM	25	0	21.44	21.38	21.23	21.30	21.26

<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.

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

<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	2506	39750	QPSK	1	0	41	5	2687.5	41565	24.35	24.40
	Contiguous	41	20	2506	39750	QPSK	1	0	41	20	2525.80	39948	24.36	24.40

<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	2506	39750	QPSK	1	0	41	5	2687.5	41565	41	20	2675.8	41448	24.35	24.40

<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 < 1.6W/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 ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
   b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
   c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

<2.4GHz 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	14.73	16.00	99.23	14.76	16.00	98.99	14.90	16.00	14.25	16.00	17.60	19.00	98.91
		6	2437	14.98	16.00		14.74	16.00		15.00	16.00	14.07	16.00	17.57	19.00	
		11	2462	14.99	16.00		14.77	16.00		15.00	16.00	14.17	16.00	17.62	19.00	
		12	2467	14.60	16.00		14.61	16.00		14.96	16.00	14.00	16.00	17.52	19.00	
		13	2472	12.62	13.00		12.02	13.00		12.51	13.00	12.59	13.00	15.56	16.00	
	802.11g 6Mbps	1	2412	14.65	16.00	98.31	14.90	16.00	97.83	14.95	16.00	14.05	16.00	17.53	19.00	98.31
		6	2437	14.75	16.00		14.87	16.00		15.32	16.00	14.60	16.00	17.99	19.00	
		11	2462	14.95	16.00		14.85	16.00		15.02	16.00	14.57	16.00	17.81	19.00	
		12	2467	10.26	10.50		9.62	10.50		10.22	10.50	10.34	10.50	13.29	13.50	
		13	2472	-1.87	-1.00		-4.15	-2.50		-2.76	-1.00	-2.94	-2.50	0.16	0.50	
	802.11n-HT20 MCS0	1	2412	14.98	16.00	98.44	14.75	16.00	97.93	15.42	16.00	14.49	16.00	17.99	19.00	98.44
		6	2437	14.61	16.00		14.74	16.00		15.29	16.00	14.44	16.00	17.90	19.00	
		11	2462	14.89	16.00		14.77	16.00		14.69	16.00	14.47	16.00	17.59	19.00	
		12	2467	9.92	10.00		9.39	10.00		9.65	10.00	9.71	10.00	12.69	13.00	
		13	2472	-6.01	-5.50		-8.42	-7.00		-7.06	-5.50	-7.03	-7.00	-4.03	-4.00	

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
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	17.69	18.00	99.23	17.01	18.00	98.99	17.99	18.00	17.96	18.00	20.99	21.00	98.91
		6	2437	18.00	18.00		16.92	18.00		17.75	18.00	17.73	18.00	20.75	21.00	
		11	2462	17.93	18.00		17.50	18.00		17.97	18.00	17.95	18.00	20.97	21.00	
		12	2467	17.02	17.50		16.33	17.50		16.87	17.50	16.91	17.50	19.90	20.50	
		13	2472	12.62	13.00		12.02	13.00		12.51	13.00	12.59	13.00	15.56	16.00	
	802.11g 6Mbps	1	2412	17.87	18.00	98.31	16.88	18.00	97.83	17.76	18.00	17.75	18.00	20.77	21.00	98.31
		6	2437	17.85	18.00		17.20	18.00		17.81	18.00	17.66	18.00	20.75	21.00	
		11	2462	16.82	17.00		16.48	17.00		16.71	17.00	16.96	17.00	19.85	20.00	
		12	2467	10.26	10.50		9.62	10.50		10.22	10.50	10.34	10.50	13.29	13.50	
		13	2472	-1.87	-1.00		-4.15	-1.00		-2.76	-1.00	-2.94	-1.00	0.16	0.50	
	802.11n-HT20 MCS0	1	2412	17.43	18.00	98.44	16.59	18.00	97.93	17.43	18.00	16.97	18.00	20.22	21.00	98.44
		6	2437	17.64	18.00		17.06	18.00		17.62	18.00	17.66	18.00	20.65	21.00	
		11	2462	15.72	16.00		15.40	16.00		15.71	16.00	15.84	16.00	18.79	19.00	
		12	2467	9.92	10.00		9.39	10.00		9.65	10.00	9.71	10.00	12.69	13.00	
		13	2472	-6.01	-5.50		-8.42	-7.00		-7.06	-5.50	-7.03	-8.00	-4.03	-4.00	

<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	12.23	13.50	98.07	12.27	13.50	98.07	13.26	13.50	11.50	13.50	15.48	16.50	98.07
		40	5200	12.13	13.50		12.34	13.50		12.03	13.50	12.20	13.50	15.13	16.50	
		44	5220	12.03	13.50		12.48	13.50		12.75	13.50	11.68	13.50	15.26	16.50	
		48	5240	12.45	13.50		12.07	13.50		12.81	13.50	11.87	13.50	15.38	16.50	
	802.11n-HT20 MCS0	36	5180	12.14	13.50	97.93	12.19	13.50	97.93	13.26	13.50	11.50	13.50	15.48	16.50	97.93
		40	5200	12.16	13.50		12.10	13.50		12.89	13.50	11.60	13.50	15.30	16.50	
		44	5220	12.19	13.50		12.47	13.50		12.78	13.50	11.60	13.50	15.24	16.50	
		48	5240	12.34	13.50		12.09	13.50		12.81	13.50	11.69	13.50	15.30	16.50	
	802.11n-HT40 MCS0	38	5190	12.33	13.50	95.85	12.40	12.50	95.85	13.28	13.50	11.40	12.50	15.46	16.50	95.85
		46	5230	12.49	13.50		12.36	13.50		12.91	13.50	11.98	13.50	15.48	16.50	
	802.11ac-VHT20 MCS0	36	5180	12.13	13.50	97.94	12.17	13.50	97.94	13.21	13.50	11.50	13.50	15.45	16.50	97.94
		40	5200	11.81	13.50		12.29	13.50		12.69	13.50	11.67	13.50	15.22	16.50	
		44	5220	12.15	13.50		12.45	13.50		12.73	13.50	11.50	13.50	15.17	16.50	
		48	5240	12.31	13.50		12.03	13.50		12.72	13.50	11.67	13.50	15.24	16.50	
	802.11ac-VHT40 MCS0	38	5190	12.31	13.50	95.90	12.33	13.50	95.90	13.05	13.50	11.50	13.50	15.35	16.50	96.39
		46	5230	12.48	13.50		12.35	13.50		12.89	13.50	11.94	13.50	15.45	16.50	
	802.11ac-VHT80 MCS0	42	5210	12.15	12.50	92.68	12.32	12.50	92.68	12.40	12.50	10.50	12.50	14.56	15.50	92.68

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
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	17.45	17.50	98.07	16.44	17.50	98.07	17.48	17.50	17.47	17.50	20.49	20.50	98.07
		40	5200	17.42	17.50		17.36	17.50		17.18	17.50	17.25	17.50	20.23	20.50	
		44	5220	17.36	17.50		16.33	17.50		17.50	17.50	17.25	17.50	20.39	20.50	
		48	5240	17.44	17.50		16.61	17.50		17.49	17.50	16.90	17.50	20.22	20.50	
	802.11n-HT20 MCS0	36	5180	17.34	17.50	97.93	16.37	17.50	97.93	17.50	17.50	17.46	17.50	20.49	20.50	97.93
		40	5200	17.31	17.50		17.32	17.50		17.45	17.50	17.33	17.50	20.40	20.50	
		44	5220	17.20	17.50		16.61	17.50		17.45	17.50	17.43	17.50	20.45	20.50	
		48	5240	17.33	17.50		16.45	17.50		17.48	17.50	16.89	17.50	20.21	20.50	
	802.11n-HT40 MCS0	38	5190	14.94	15.00	95.85	12.40	12.50	95.85	15.00	15.00	12.50	12.50	16.94	17.50	95.85
		46	5230	17.24	17.50		16.81	17.50		17.48	17.50	17.40	17.50	20.45	20.50	
	802.11ac-VHT20 MCS0	36	5180	17.30	17.50	97.94	16.25	17.50	97.94	17.50	17.50	17.35	17.50	20.44	20.50	97.94
		40	5200	17.28	17.50		17.25	17.50		17.41	17.50	17.34	17.50	20.39	20.50	
		44	5220	17.17	17.50		16.59	17.50		17.50	17.50	17.32	17.50	20.42	20.50	
		48	5240	17.31	17.50		16.42	17.50		17.34	17.50	17.01	17.50	20.19	20.50	
	802.11ac-VHT40 MCS0	38	5190	14.88	15.00	95.90	12.33	12.50	95.90	15.00	15.00	12.50	12.50	16.94	17.50	96.39
		46	5230	17.20	17.50		16.76	17.50		17.49	17.50	17.27	17.50	20.39	20.50	
	802.11ac-VHT80 MCS0	42	5210	12.15	12.50	92.68	10.22	12.50	92.68	12.41	12.50	10.47	12.50	14.56	15.50	92.68

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 %
5.3GHz WLAN	802.11a 6Mbps	52	5260	12.08	13.50	98.07	12.19	13.50	98.07	12.97	13.50	11.84	13.50	15.46	16.50	98.07
		56	5280	12.15	13.50		12.31	13.50		12.69	13.50	11.80	13.50	15.28	16.50	
		60	5300	12.27	13.50		12.43	13.50		11.98	13.50	12.04	13.50	15.03	16.50	
		64	5320	12.24	13.50		12.36	13.50		12.36	13.50	12.42	13.50	15.41	16.50	
	802.11n-HT20 MCS0	52	5260	12.48	13.50	97.93	12.27	13.50	97.93	12.82	13.50	11.70	13.50	15.31	16.50	97.93
		56	5280	12.35	13.50		12.29	13.50		12.73	13.50	11.65	13.50	15.23	16.50	
		60	5300	12.21	13.50		12.40	13.50		11.98	13.50	12.29	13.50	15.15	16.50	
		64	5320	12.14	13.50		12.28	13.50		12.24	13.50	12.42	13.50	15.34	16.50	
	802.11n-HT40 MCS0	54	5270	12.45	13.50	95.85	12.36	13.50	95.85	12.83	13.50	11.83	13.50	15.37	16.50	95.85
		62	5310	12.26	13.50		12.33	13.50		12.38	13.50	12.38	13.50	15.39	16.50	
	802.11ac-VHT20 MCS0	52	5260	12.03	13.50	97.94	12.16	13.50	97.94	12.76	13.50	11.66	13.50	15.26	16.50	97.94
		56	5280	12.14	13.50		12.33	13.50		12.51	13.50	11.72	13.50	15.16	16.50	
		60	5300	12.19	13.50		12.35	13.50		11.94	13.50	12.09	13.50	15.03	16.50	
		64	5320	12.10	13.50		12.26	13.50		12.22	13.50	12.41	13.50	15.33	16.50	
	802.11ac-VHT40 MCS0	54	5270	12.40	13.50	95.90	12.33	13.50	95.90	12.68	13.50	11.80	13.50	15.27	16.50	96.39
		62	5310	12.25	13.50		12.26	13.50		12.34	13.50	12.31	13.50	15.34	16.50	
	802.11ac-VHT80 MCS0	58	5290	12.27	12.50	92.68	12.18	12.50	92.68	12.50	12.50	12.27	12.50	15.40	15.50	92.68

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
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 %
5.3GHz WLAN	802.11a 6Mbps	52	5260	17.49	17.50	98.07	16.68	17.50	98.07	17.50	17.50	17.05	17.50	20.29	20.50	98.07
		56	5280	17.38	17.50		17.15	17.50		17.32	17.50	17.01	17.50	20.18	20.50	
		60	5300	17.35	17.50		17.26	17.50		17.45	17.50	17.40	17.50	20.44	20.50	
		64	5320	17.40	17.50		17.12	17.50		17.48	17.50	17.28	17.50	20.40	20.50	
	802.11n-HT20 MCS0	52	5260	17.45	17.50	97.93	16.65	17.50	97.93	17.48	17.50	17.05	17.50	20.28	20.50	97.93
		56	5280	17.42	17.50		17.42	17.50		17.21	17.50	17.20	17.50	20.22	20.50	
		60	5300	16.90	17.50		17.13	17.50		17.04	17.50	17.21	17.50	20.14	20.50	
		64	5320	16.98	17.50		17.03	17.50		17.10	17.50	17.04	17.50	20.08	20.50	
	802.11n-HT40 MCS0	54	5270	17.47	17.50	95.85	16.44	17.50	95.85	17.50	17.50	16.81	17.50	20.18	20.50	95.85
		62	5310	13.96	14.00		13.96	14.00		13.66	14.00	13.55	14.00	16.62	17.00	
	802.11ac-VHT20 MCS0	52	5260	17.42	17.50	97.94	16.57	17.50	97.94	17.49	17.50	16.90	17.50	20.22	20.50	97.94
		56	5280	17.35	17.50		17.40	17.50		17.01	17.50	17.23	17.50	20.13	20.50	
		60	5300	16.88	17.50		17.06	17.50		17.02	17.50	17.16	17.50	20.10	20.50	
		64	5320	16.97	17.50		16.99	17.50		17.04	17.50	17.01	17.50	20.04	20.50	
	802.11ac-VHT40 MCS0	54	5270	17.41	17.50	95.90	16.41	17.50	95.90	17.50	17.50	16.72	17.50	20.14	20.50	96.39
		62	5310	13.94	14.00		13.92	14.00		13.60	14.00	13.47	14.00	16.55	17.00	
	802.11ac-VHT80 MCS0	58	5290	12.27	12.50	92.68	12.18	12.50	92.68	12.50	12.50	12.27	12.50	15.40	15.50	92.68

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 %
5.5GHz WLAN	802.11a 6Mbps	100	5500	13.35	13.50	98.07	13.33	13.50	98.07	13.36	13.50	12.85	13.50	16.13	16.50	98.07
		116	5580	13.11	13.50		13.28	13.50		12.97	13.50	13.50	13.50	16.25	16.50	
		124	5620	13.14	13.50		13.37	13.50		13.06	13.50	13.03	13.50	16.06	16.50	
		132	5660	13.20	13.50		13.40	13.50		13.15	13.50	13.29	13.50	16.23	16.50	
		144	5720	13.21	13.50		13.48	13.50		13.33	13.50	13.50	13.50	16.43	16.50	
	802.11n-HT20 MCS0	100	5500	13.21	13.50	97.93	13.27	13.50	97.93	13.34	13.50	12.87	13.50	16.12	16.50	97.93
		116	5580	13.41	13.50		13.09	13.50		12.83	13.50	13.50	13.50	16.19	16.50	
		124	5620	13.45	13.50		13.18	13.50		13.37	13.50	12.90	13.50	16.15	16.50	
		132	5660	13.32	13.50		13.28	13.50		13.41	13.50	13.06	13.50	16.25	16.50	
		144	5720	13.19	13.50		13.24	13.50		13.23	13.50	13.50	13.50	16.38	16.50	
	802.11n-HT40 MCS0	102	5510	13.25	13.50	95.85	13.46	13.50	95.85	13.45	13.50	12.88	13.50	16.19	16.50	95.85
		110	5550	13.26	13.50		13.48	13.50		13.13	13.50	13.50	13.50	16.33	16.50	
		126	5630	13.40	13.50		13.20	13.50		13.50	13.50	13.37	13.50	16.45	16.50	
		134	5670	13.41	13.50		13.31	13.50		13.09	13.50	13.05	13.50	16.08	16.50	
		142	5710	13.21	13.50		13.33	13.50		12.79	13.50	13.44	13.50	16.14	16.50	
	802.11ac-VHT20 MCS0	100	5500	13.19	13.50	97.94	13.26	13.50	97.94	13.29	13.50	12.74	13.50	16.03	16.50	97.94
		116	5580	13.40	13.50		13.06	13.50		12.79	13.50	13.50	13.50	16.17	16.50	
		124	5620	13.38	13.50		13.34	13.50		12.83	13.50	13.30	13.50	16.08	16.50	
		132	5660	13.21	13.50		13.42	13.50		13.15	13.50	13.31	13.50	16.24	16.50	
		144	5720	13.14	13.50		13.21	13.50		13.08	13.50	13.29	13.50	16.20	16.50	
	802.11ac-VHT40 MCS0	102	5510	13.20	13.50	95.90	13.39	13.50	95.90	13.22	13.50	13.06	13.50	16.15	16.50	96.39
		110	5550	13.22	13.50		13.46	13.50		13.21	13.50	13.26	13.50	16.25	16.50	
		126	5630	13.28	13.50		13.39	13.50		13.38	13.50	13.39	13.50	16.40	16.50	
		134	5670	13.37	13.50		13.28	13.50		12.98	13.50	13.02	13.50	16.01	16.50	
		142	5710	13.18	13.50		13.32	13.50		13.50	13.50	12.60	13.50	16.08	16.50	
	802.11ac-VHT80 MCS0	106	5530	12.15	12.50	92.68	11.54	12.50	92.68	11.77	12.50	12.01	12.50	14.90	15.50	92.68
		122	5610	13.27	13.50		13.46	13.50		13.05	13.50	13.49	13.50	16.29	16.50	
		138	5690	13.08	13.50		13.43	13.50		13.18	13.50	13.09	13.50	16.15	16.50	

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
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 %
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.39	17.50	98.07	17.07	17.50	98.07	17.50	17.50	17.45	17.50	20.49	20.50	98.07
		116	5580	16.91	17.50		17.22	17.50		16.93	17.50	17.23	17.50	20.10	20.50	
		124	5620	17.35	17.50		17.22	17.50		16.93	17.50	17.30	17.50	20.13	20.50	
		132	5660	17.25	17.50		17.13	17.50		16.95	17.50	17.32	17.50	20.15	20.50	
		144	5720	16.96	17.50		17.06	17.50		17.03	17.50	17.17	17.50	20.12	20.50	
	802.11n-HT20 MCS0	100	5500	17.28	17.50	97.93	16.95	17.50	97.93	17.49	17.50	17.23	17.50	20.37	20.50	97.93
		116	5580	16.77	17.50		17.14	17.50		16.95	17.50	17.34	17.50	20.16	20.50	
		124	5620	17.24	17.50		17.25	17.50		17.41	17.50	17.26	17.50	20.35	20.50	
		132	5660	17.19	17.50		17.22	17.50		17.25	17.50	17.31	17.50	20.29	20.50	
		144	5720	16.86	17.50		17.14	17.50		17.02	17.50	17.23	17.50	20.14	20.50	
	802.11n-HT40 MCS0	102	5510	13.24	13.50	95.85	12.66	13.50	95.85	13.50	13.50	12.81	13.50	16.18	16.50	95.85
		110	5550	17.13	17.50		17.32	17.50		17.24	17.50	17.50	17.50	20.38	20.50	
		126	5630	17.15	17.50		17.30	17.50		17.42	17.50	17.43	17.50	20.44	20.50	
		134	5670	17.19	17.50		17.25	17.50		17.24	17.50	17.36	17.50	20.31	20.50	
		142	5710	16.95	17.50		17.36	17.50		17.14	17.50	17.39	17.50	20.28	20.50	
	802.11ac-VHT20 MCS0	100	5500	17.25	17.50	97.94	16.92	17.50	97.94	17.50	17.50	17.08	17.50	20.31	20.50	97.94
		116	5580	16.74	17.50		17.09	17.50		16.90	17.50	17.24	17.50	20.08	20.50	
		124	5620	17.22	17.50		17.15	17.50		17.49	17.50	17.08	17.50	20.30	20.50	
		132	5660	17.16	17.50		17.11	17.50		17.45	17.50	17.09	17.50	20.28	20.50	
		144	5720	16.85	17.50		16.95	17.50		16.99	17.50	17.21	17.50	20.11	20.50	
	802.11ac-VHT40 MCS0	102	5510	13.20	13.50	95.90	12.63	13.50	95.90	13.50	13.50	12.75	13.50	16.15	16.50	96.39
		110	5550	17.07	17.50		17.29	17.50		17.08	17.50	17.50	17.50	20.31	20.50	
		126	5630	17.11	17.50		17.28	17.50		17.20	17.50	17.50	17.50	20.36	20.50	
		134	5670	17.14	17.50		17.20	17.50		17.19	17.50	17.28	17.50	20.25	20.50	
		142	5710	16.89	17.50		17.32	17.50		17.06	17.50	17.33	17.50	20.21	20.50	
	802.11ac-VHT80 MCS0	106	5530	12.15	12.50	92.68	11.54	12.50	92.68	12.19	12.50	11.56	12.50	14.90	15.50	92.68
		122	5610	16.71	17.50		16.93	17.50		16.86	17.50	17.34	17.50	20.12	20.50	
		138	5690	17.01	17.50		16.89	17.50		17.12	17.50	16.99	17.50	20.07	20.50	

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 %
5.8GHz WLAN	802.11a MCS0	149	5745	11.83	12.00	98.07	11.68	12.00	98.07	11.85	12.00	12.00	12.00	14.94	15.00	98.07
		157	5785	11.73	12.00		11.70	12.00		12.00	12.00	11.70	12.00	14.87	15.00	
		165	5825	11.91	12.00		11.89	12.00		11.71	12.00	11.38	12.00	14.56	15.00	
	802.11n-HT20 MCS0	149	5745	11.74	12.00	97.93	11.57	12.00	97.93	11.40	12.00	12.00	12.00	14.72	15.00	97.93
		157	5785	11.99	12.00		11.97	12.00		11.84	12.00	11.59	12.00	14.73	15.00	
		165	5825	11.78	12.00		11.73	12.00		11.99	12.00	11.76	12.00	14.89	15.00	
	802.11n-HT40 MCS0	151	5755	11.98	12.00	95.85	11.93	12.00	95.85	11.58	12.00	11.98	12.00	14.80	15.00	95.85
		159	5795	11.68	12.00		11.56	12.00		11.91	12.00	11.56	12.00	14.75	15.00	
	802.11ac-VHT20 MCS0	149	5745	11.70	12.00	97.94	11.54	12.00	97.94	11.32	12.00	12.00	12.00	14.68	15.00	97.94
		157	5785	11.95	12.00		11.92	12.00		11.79	12.00	11.57	12.00	14.69	15.00	
		165	5825	11.74	12.00		11.69	12.00		11.96	12.00	11.69	12.00	14.84	15.00	
	802.11ac-VHT40 MCS0	151	5755	11.93	12.00	95.90	11.89	12.00	95.90	11.53	12.00	11.93	12.00	14.74	15.00	96.39
		159	5795	11.64	12.00		11.53	12.00		11.86	12.00	11.51	12.00	14.70	15.00	
	802.11ac-VHT80 MCS0	155	5775	11.83	12.00	92.68	11.83	12.00	92.68	11.63	12.00	11.71	12.00	14.68	15.00	92.68

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
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 %
5.8GHz WLAN	802.11a MCS0	149	5745	17.08	17.50	98.07	17.49	17.50	98.07	17.38	17.50	17.50	17.50	20.45	20.50	98.07
		157	5785	17.43	17.50		17.19	17.50		17.49	17.50	17.30	17.50	20.41	20.50	
		165	5825	17.42	17.50		17.17	17.50		17.50	17.50	17.23	17.50	20.38	20.50	
	802.11n-HT20 MCS0	149	5745	17.03	17.50	97.93	17.49	17.50	97.93	17.39	17.50	17.48	17.50	20.45	20.50	97.93
		157	5785	17.37	17.50		17.06	17.50		17.50	17.50	17.15	17.50	20.34	20.50	
		165	5825	17.36	17.50		16.97	17.50		17.44	17.50	16.99	17.50	20.23	20.50	
	802.11n-HT40 MCS0	151	5755	17.17	17.50	95.85	17.44	17.50	95.85	17.42	17.50	17.50	17.50	20.47	20.50	95.85
		159	5795	17.46	17.50		16.65	17.50		17.50	17.50	16.96	17.50	20.25	20.50	
	802.11ac-VHT20 MCS0	149	5745	16.98	17.50	97.94	17.48	17.50	97.94	17.40	17.50	17.45	17.50	20.44	20.50	97.94
		157	5785	17.36	17.50		16.69	17.50		17.50	17.50	17.11	17.50	20.32	20.50	
		165	5825	17.35	17.50		16.74	17.50		17.43	17.50	16.97	17.50	20.22	20.50	
	802.11ac-VHT40 MCS0	151	5755	17.14	17.50	95.90	17.38	17.50	95.90	17.32	17.50	17.47	17.50	20.41	20.50	96.39
		159	5795	17.42	17.50		16.61	17.50		17.50	17.50	16.90	17.50	20.22	20.50	
	802.11ac-VHT80 MCS0	155	5775	16.56	17.50	92.68	17.04	17.50	92.68	16.67	17.50	17.13	17.50	19.92	20.50	92.68

<2.4GHz Bluetooth>

General Note:

1. 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	17.32	11.96	12.08
	CH 39	2441	17.44	12.08	11.58
	CH 78	2480	16.18	10.58	11.18

Transmit Antenna			Ant 4	
Max. Power			10.00	10.00
Mode	Channel	Frequency (MHz)	1Mbps	2Mbps
LE	CH 00	2402	9.45	9.44
	CH 19	2440	9.31	9.27
	CH 39	2480	8.23	8.24

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:

1. 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.
2. 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 ≥0.8W/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. For 5.3GHz / 5.5GHz WLAN product specific SAR is necessary too, due to an overall diagonal dimension is > 16cm.

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 ≤ ¼ 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 ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA 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 ¼ 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 ½ 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 ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; 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 ≤ 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 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 < 1.6W/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 the worst case rated power/measured power across the two chains in SAR calculation.

13.1 Head 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)
01	GSM850_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	251	848.8	27.73	29.00	1.340	0.07	0.460	0.616
	GSM850_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.16	0.364	0.488
	GSM850_UAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	251	848.8	27.73	29.00	1.340	0.04	0.230	0.308
	GSM850_UAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.09	0.188	0.252
	GSM850_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	251	848.8	27.73	29.00	1.340	0.07	0.451	0.604
	GSM850_LAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.04	0.162	0.217
	GSM850_LAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.04	0.081	0.109
	GSM850_LAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	251	848.8	27.73	29.00	1.340	0.12	0.145	0.194
	GSM850_LAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.02	0.113	0.151
	GSM850_LAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	251	848.8	27.73	29.00	1.340	-0.04	0.157	0.210

<GSM1900>

WiFi on													
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	21.80	23.50	1.479	0.16	0.490	0.725
	GSM1900_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	512	1850.2	21.80	23.50	1.479	0.1	0.476	0.704
	GSM1900_UAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	512	1850.2	21.80	23.50	1.479	-0.01	0.176	0.260
	GSM1900_UAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	512	1850.2	21.80	23.50	1.479	0.04	0.202	0.299
	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	512	1850.2	21.80	23.50	1.479	0.16	0.481	0.711
WiFi off													
	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	661	1880	23.55	24.50	1.245	0.07	0.753	0.937
02	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	512	1850.2	23.46	24.50	1.271	0.09	0.877	1.114
	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	810	1909.8	23.52	24.50	1.253	0.01	0.640	0.802
	GSM1900_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	661	1880	23.55	24.50	1.245	0.04	0.661	0.823
	GSM1900_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	512	1850.2	23.46	24.50	1.271	0.1	0.759	0.964
	GSM1900_UAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	810	1909.8	23.52	24.50	1.253	0.05	0.561	0.703
	GSM1900_UAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	661	1880	23.55	24.50	1.245	0.05	0.241	0.300
	GSM1900_UAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	661	1880	23.55	24.50	1.245	0.14	0.287	0.357
	GSM1900_UAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 2	512	1850.2	23.46	24.50	1.271	0.09	0.862	1.095
WWAN LAT													
	GSM1900_LAT	GPRS (4 Tx slots)	Right Cheek	0mm	Battery 1	810	1909.8	24.95	26.50	1.429	0.11	0.051	0.073
	GSM1900_LAT	GPRS (4 Tx slots)	Right Tilted	0mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.03	0.047	0.067
	GSM1900_LAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 1	810	1909.8	24.95	26.50	1.429	0.03	0.094	0.134
	GSM1900_LAT	GPRS (4 Tx slots)	Left Tilted	0mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.07	0.045	0.064
	GSM1900_LAT	GPRS (4 Tx slots)	Left Cheek	0mm	Battery 2	810	1909.8	24.95	26.50	1.429	0.03	0.088	0.126

<WCDMA II>

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)
WiFi on													
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9262	1852.4	20.01	20.50	1.119	-0.02	0.636	0.712
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9262	1852.4	20.01	20.50	1.119	0.06	0.549	0.615
	WCDMA II_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	9262	1852.4	20.01	20.50	1.119	0.07	0.199	0.223
	WCDMA II_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	9262	1852.4	20.01	20.50	1.119	0.03	0.228	0.255
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	9262	1852.4	20.01	20.50	1.119	-0.08	0.629	0.704
WiFi off													
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9538	1907.6	20.59	21.50	1.233	0.03	0.720	0.888
03	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9262	1852.4	20.48	21.50	1.265	-0.02	0.849	1.074
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9400	1880	20.39	21.50	1.291	0.09	0.792	1.023
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9538	1907.6	20.59	21.50	1.233	0.05	0.702	0.866
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9262	1852.4	20.48	21.50	1.265	0	0.836	1.057
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9400	1880	20.39	21.50	1.291	0	0.770	0.994
	WCDMA II_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	9538	1907.6	20.59	21.50	1.233	0.05	0.228	0.281
	WCDMA II_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	9538	1907.6	20.59	21.50	1.233	0.02	0.280	0.345
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	9262	1852.4	20.48	21.50	1.265	-0.02	0.839	1.061
WWAN LAT													
	WCDMA II_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	9400	1880	24.95	25.70	1.189	0.04	0.112	0.133
	WCDMA II_LAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	9400	1880	24.95	25.70	1.189	0.02	0.086	0.102
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	9400	1880	24.95	25.70	1.189	0.01	0.166	0.197
	WCDMA II_LAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.01	0.096	0.114
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 2	9400	1880	24.95	25.70	1.189	0.01	0.152	0.181

<WCDMA IV>

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	Right Cheek	0mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.19	0.356	0.426
04	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.05	0.367	0.439
	WCDMA IV_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.06	0.124	0.148
	WCDMA IV_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.08	0.138	0.165
	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 2	1312	1712.4	23.22	24.00	1.197	0.05	0.355	0.425
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.04	0.079	0.095
	WCDMA IV_LAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	1312	1712.4	23.22	24.00	1.197	-0.01	0.048	0.057
	WCDMA IV_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.06	0.094	0.112
	WCDMA IV_LAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	1312	1712.4	23.22	24.00	1.197	-0.01	0.055	0.066
	WCDMA IV_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 2	1312	1712.4	23.22	24.00	1.197	0.06	0.088	0.105

<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)
05	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	4233	846.6	23.85	24.50	1.161	0	0.398	0.462
	WCDMA V_UAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	4233	846.6	23.85	24.50	1.161	0	0.339	0.394
	WCDMA V_UAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	4233	846.6	23.85	24.50	1.161	0.01	0.221	0.257
	WCDMA V_UAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	4233	846.6	23.85	24.50	1.161	0.01	0.173	0.201
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	4233	846.6	23.85	24.50	1.161	0	0.387	0.449
	WCDMA V_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 1	4233	846.6	23.85	24.50	1.161	0.08	0.123	0.143
	WCDMA V_LAT	RMC 12.2Kbps	Right Tilted	0mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.14	0.070	0.081
	WCDMA V_LAT	RMC 12.2Kbps	Left Cheek	0mm	Battery 1	4233	846.6	23.85	24.50	1.161	0.05	0.112	0.130
	WCDMA V_LAT	RMC 12.2Kbps	Left Tilted	0mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.03	0.088	0.102
	WCDMA V_LAT	RMC 12.2Kbps	Right Cheek	0mm	Battery 2	4233	846.6	23.85	24.50	1.161	0.08	0.104	0.121

<FDD LTE B2>

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)
WiFi on																
	LTE Band 2_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	19100	1900	22.22	23.00	1.197	-0.01	0.648	0.775
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	19100	1900	22.30	23.00	1.175	0	0.702	0.825
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	18700	1860	22.25	23.00	1.189	0	0.551	0.655
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	18900	1880	22.29	23.00	1.178	0.04	0.614	0.723
	LTE Band 2_UAT	20M	QPSK	100	0	Right Cheek	0mm	Battery 1	19100	1900	22.28	23.00	1.180	0.04	0.698	0.824
	LTE Band 2_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	19100	1900	22.22	23.00	1.197	0.12	0.653	0.781
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	19100	1900	22.30	23.00	1.175	0.05	0.696	0.818
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	18700	1860	22.25	23.00	1.189	0.01	0.558	0.663
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	18900	1880	22.29	23.00	1.178	0.03	0.618	0.728
	LTE Band 2_UAT	20M	QPSK	100	0	Right Tilted	0mm	Battery 1	19100	1900	22.28	23.00	1.180	-0.04	0.693	0.818
	LTE Band 2_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	19100	1900	22.22	23.00	1.197	0.17	0.258	0.309
	LTE Band 2_UAT	20M	QPSK	50	24	Left Cheek	0mm	Battery 1	19100	1900	22.30	23.00	1.175	0.01	0.279	0.328
	LTE Band 2_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	19100	1900	22.22	23.00	1.197	0.09	0.295	0.353
	LTE Band 2_UAT	20M	QPSK	50	24	Left Tilted	0mm	Battery 1	19100	1900	22.30	23.00	1.175	-0.02	0.314	0.369
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 2	19100	1900	22.30	23.00	1.175	0	0.671	0.788
WiFi off																
	LTE Band 2_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	18900	1880	23.65	24.50	1.216	0.1	0.804	0.978
	LTE Band 2_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	18700	1860	23.51	24.50	1.256	0.01	0.732	0.919
	LTE Band 2_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	19100	1900	23.53	24.50	1.250	0.05	0.916	1.145
06	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	19100	1900	23.53	24.50	1.250	0.05	0.958	1.198
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	18700	1860	23.35	24.50	1.303	0.08	0.774	1.009
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	18900	1880	23.35	24.50	1.303	0.05	0.856	1.116
	LTE Band 2_UAT	20M	QPSK	100	0	Right Cheek	0mm	Battery 1	18700	1860	23.39	24.50	1.291	0.1	0.767	0.990
	LTE Band 2_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	18900	1880	23.65	24.50	1.216	0.16	0.779	0.947
	LTE Band 2_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	18700	1860	23.51	24.50	1.256	0.08	0.717	0.901
	LTE Band 2_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	19100	1900	23.53	24.50	1.250	0.08	0.862	1.078
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	19100	1900	23.53	24.50	1.250	0.05	0.918	1.148
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	18700	1860	23.35	24.50	1.303	0.07	0.751	0.979
	LTE Band 2_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	18900	1880	23.35	24.50	1.303	0.07	0.820	1.069
	LTE Band 2_UAT	20M	QPSK	100	0	Right Tilted	0mm	Battery 1	18700	1860	23.39	24.50	1.291	0.07	0.746	0.963
	LTE Band 2_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	18900	1880	23.65	24.50	1.216	0.03	0.319	0.388
	LTE Band 2_UAT	20M	QPSK	50	24	Left Cheek	0mm	Battery 1	19100	1900	23.53	24.50	1.250	0	0.317	0.396
	LTE Band 2_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	18900	1880	23.65	24.50	1.216	0.03	0.306	0.372
	LTE Band 2_UAT	20M	QPSK	50	24	Left Tilted	0mm	Battery 1	19100	1900	23.53	24.50	1.250	0.08	0.308	0.385
	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 2	19100	1900	23.53	24.50	1.250	0.07	0.943	1.179
WWAN LAT																
	LTE Band 2_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.02	0.117	0.143
	LTE Band 2_LAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.11	0.084	0.102
	LTE Band 2_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.03	0.092	0.113
	LTE Band 2_LAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.12	0.076	0.092
	LTE Band 2_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	18900	1880	24.82	25.70	1.225	0.14	0.149	0.182
	LTE Band 2_LAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.16	0.118	0.143
	LTE Band 2_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	18900	1880	24.82	25.70	1.225	0.05	0.096	0.118
	LTE Band 2_LAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.19	0.076	0.092
	LTE Band 2_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 2	18900	1880	24.82	25.70	1.225	0.14	0.142	0.174

<FDD LTE B4>

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	Right Cheek	0mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.14	0.385	0.482
	LTE Band 4_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.16	0.324	0.397
07	LTE Band 4_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.03	0.386	0.484
	LTE Band 4_UAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.17	0.323	0.396
	LTE Band 4_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.08	0.128	0.160
	LTE Band 4_UAT	20M	QPSK	50	24	Left Cheek	0mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.19	0.108	0.132
	LTE Band 4_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.14	0.151	0.189
	LTE Band 4_UAT	20M	QPSK	50	24	Left Tilted	0mm	Battery 1	20175	1732.5	22.62	23.50	1.225	0.17	0.127	0.156
	LTE Band 4_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 2	20175	1732.5	23.52	24.50	1.253	0.12	0.375	0.470
	LTE Band 4_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.02	0.093	0.117
	LTE Band 4_LAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.12	0.076	0.093
	LTE Band 4_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.06	0.077	0.096
	LTE Band 4_LAT	20M	QPSK	50	24	Right Tilted	0mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.13	0.063	0.077
	LTE Band 4_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.02	0.103	0.129
	LTE Band 4_LAT	20M	QPSK	50	24	Left Cheek	0mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.11	0.090	0.110
	LTE Band 4_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.14	0.063	0.079
	LTE Band 4_LAT	20M	QPSK	50	24	Left Tilted	0mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.17	0.054	0.066
	LTE Band 4_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 2	20175	1732.5	23.52	24.50	1.253	0.08	0.101	0.127

<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	25	Right Cheek	0mm	Battery 1	23095	707.5	24.95	25.70	1.189	0.08	0.688	0.818
	LTE Band 12_UAT	10M	QPSK	25	12	Right Cheek	0mm	Battery 1	23095	707.5	23.95	24.70	1.189	0.04	0.582	0.692
	LTE Band 12_UAT	10M	QPSK	50	0	Right Cheek	0mm	Battery 1	23095	707.5	23.91	24.70	1.199	0	0.580	0.696
	LTE Band 12_UAT	10M	QPSK	1	25	Right Tilted	0mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.07	0.669	0.795
	LTE Band 12_UAT	10M	QPSK	25	12	Right Tilted	0mm	Battery 1	23095	707.5	23.95	24.70	1.189	0	0.569	0.676
	LTE Band 12_UAT	10M	QPSK	1	25	Left Cheek	0mm	Battery 1	23095	707.5	24.95	25.70	1.189	0.07	0.301	0.358
	LTE Band 12_UAT	10M	QPSK	25	12	Left Cheek	0mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.02	0.260	0.309
	LTE Band 12_UAT	10M	QPSK	1	25	Left Tilted	0mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.01	0.274	0.326
	LTE Band 12_UAT	10M	QPSK	25	12	Left Tilted	0mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.16	0.235	0.279
	LTE Band 12_UAT	10M	QPSK	1	25	Right Cheek	0mm	Battery 2	23095	707.5	24.95	25.70	1.189	0.12	0.675	0.802
	LTE Band 12_LAT	10M	QPSK	1	25	Right Cheek	0mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.09	0.081	0.096
	LTE Band 12_LAT	10M	QPSK	25	12	Right Cheek	0mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.17	0.066	0.078
	LTE Band 12_LAT	10M	QPSK	1	25	Right Tilted	0mm	Battery 1	23095	707.5	24.95	25.70	1.189	0.08	0.048	0.057
	LTE Band 12_LAT	10M	QPSK	25	12	Right Tilted	0mm	Battery 1	23095	707.5	23.95	24.70	1.189	0.1	0.039	0.046
	LTE Band 12_LAT	10M	QPSK	1	25	Left Cheek	0mm	Battery 1	23095	707.5	24.95	25.70	1.189	0.07	0.079	0.094
	LTE Band 12_LAT	10M	QPSK	25	12	Left Cheek	0mm	Battery 1	23095	707.5	23.95	24.70	1.189	0.08	0.079	0.094
	LTE Band 12_LAT	10M	QPSK	1	25	Left Tilted	0mm	Battery 1	23095	707.5	24.95	25.70	1.189	0.03	0.052	0.062
	LTE Band 12_LAT	10M	QPSK	25	12	Left Tilted	0mm	Battery 1	23095	707.5	23.95	24.70	1.189	0.03	0.043	0.051
	LTE Band 12_LAT	10M	QPSK	1	25	Right Cheek	0mm	Battery 2	23095	707.5	24.95	25.70	1.189	-0.12	0.075	0.089

<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)
09	LTE Band 13_UAT	10M	QPSK	1	0	Right Cheek	0mm	Battery 1	23230	782	24.52	25.30	1.197	-0.18	0.331	0.396
	LTE Band 13_UAT	10M	QPSK	25	12	Right Cheek	0mm	Battery 1	23230	782	23.56	24.30	1.186	0.01	0.253	0.300
	LTE Band 13_UAT	10M	QPSK	1	0	Right Tilted	0mm	Battery 1	23230	782	24.52	25.30	1.197	0	0.308	0.369
	LTE Band 13_UAT	10M	QPSK	25	12	Right Tilted	0mm	Battery 1	23230	782	23.56	24.30	1.186	0.03	0.234	0.277
	LTE Band 13_UAT	10M	QPSK	1	0	Left Cheek	0mm	Battery 1	23230	782	24.52	25.30	1.197	-0.02	0.168	0.201
	LTE Band 13_UAT	10M	QPSK	25	12	Left Cheek	0mm	Battery 1	23230	782	23.56	24.30	1.186	0	0.128	0.152
	LTE Band 13_UAT	10M	QPSK	1	0	Left Tilted	0mm	Battery 1	23230	782	24.52	25.30	1.197	-0.01	0.128	0.153
	LTE Band 13_UAT	10M	QPSK	25	12	Left Tilted	0mm	Battery 1	23230	782	23.56	24.30	1.186	0.02	0.098	0.116
	LTE Band 13_UAT	10M	QPSK	1	0	Right Cheek	0mm	Battery 2	23230	782	24.52	25.30	1.197	0.09	0.324	0.388
	LTE Band 13_LAT	10M	QPSK	1	0	Right Cheek	0mm	Battery 1	23230	782	24.52	25.30	1.197	-0.02	0.114	0.136
	LTE Band 13_LAT	10M	QPSK	25	12	Right Cheek	0mm	Battery 1	23230	782	23.56	24.30	1.186	0.08	0.096	0.114
	LTE Band 13_LAT	10M	QPSK	1	0	Right Tilted	0mm	Battery 1	23230	782	24.52	25.30	1.197	0	0.086	0.103
	LTE Band 13_LAT	10M	QPSK	25	12	Right Tilted	0mm	Battery 1	23230	782	23.56	24.30	1.186	-0.15	0.072	0.086
	LTE Band 13_LAT	10M	QPSK	1	0	Left Cheek	0mm	Battery 1	23230	782	24.52	25.30	1.197	-0.05	0.129	0.154
	LTE Band 13_LAT	10M	QPSK	25	12	Left Cheek	0mm	Battery 1	23230	782	23.56	24.30	1.186	0	0.106	0.126
	LTE Band 13_LAT	10M	QPSK	1	0	Left Tilted	0mm	Battery 1	23230	782	24.52	25.30	1.197	0	0.102	0.122
	LTE Band 13_LAT	10M	QPSK	25	12	Left Tilted	0mm	Battery 1	23230	782	23.56	24.30	1.186	-0.17	0.084	0.100
	LTE Band 13_LAT	10M	QPSK	1	0	Left Cheek	0mm	Battery 2	23230	782	24.52	25.30	1.197	0.11	0.121	0.145

<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)
10	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 1	26865	831.5	25.00	25.70	1.175	0.07	0.702	0.825
	LTE Band 26_UAT	15M	QPSK	36	0	Right Cheek	0mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.08	0.548	0.654
	LTE Band 26_UAT	15M	QPSK	75	0	Right Cheek	0mm	Battery 1	26865	831.5	23.89	24.70	1.205	0.1	0.489	0.589
	LTE Band 26_UAT	15M	QPSK	1	0	Right Tilted	0mm	Battery 1	26865	831.5	25.00	25.70	1.175	0.05	0.616	0.724
	LTE Band 26_UAT	15M	QPSK	36	0	Right Tilted	0mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.07	0.481	0.574
	LTE Band 26_UAT	15M	QPSK	1	0	Left Cheek	0mm	Battery 1	26865	831.5	25.00	25.70	1.175	0.01	0.325	0.382
	LTE Band 26_UAT	15M	QPSK	36	0	Left Cheek	0mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.03	0.276	0.330
	LTE Band 26_UAT	15M	QPSK	1	0	Left Tilted	0mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.07	0.286	0.336
	LTE Band 26_UAT	15M	QPSK	36	0	Left Tilted	0mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.03	0.226	0.270
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 2	26865	831.5	25.00	25.70	1.175	-0.05	0.693	0.814
	LTE Band 26_LAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 1	26865	831.5	25.00	25.70	1.175	0.06	0.120	0.141
	LTE Band 26_LAT	15M	QPSK	36	0	Right Cheek	0mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.07	0.101	0.121
	LTE Band 26_LAT	15M	QPSK	1	0	Right Tilted	0mm	Battery 1	26865	831.5	25.00	25.70	1.175	0.13	0.061	0.072
	LTE Band 26_LAT	15M	QPSK	36	0	Right Tilted	0mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.02	0.051	0.061
	LTE Band 26_LAT	15M	QPSK	1	0	Left Cheek	0mm	Battery 1	26865	831.5	25.00	25.70	1.175	0.03	0.109	0.128
	LTE Band 26_LAT	15M	QPSK	36	0	Left Cheek	0mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.03	0.094	0.112
	LTE Band 26_LAT	15M	QPSK	1	0	Left Tilted	0mm	Battery 1	26865	831.5	25.00	25.70	1.175	0.07	0.067	0.079
	LTE Band 26_LAT	15M	QPSK	36	0	Left Tilted	0mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.03	0.058	0.069
	LTE Band 26_LAT	15M	QPSK	1	0	Right Cheek	0mm	Battery 2	26865	831.5	25.00	25.70	1.175	-0.17	0.111	0.130

<TDD LTE B38>

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	24.93	25.70	1.194	62.9	1.006	0.18	0.765	0.919
	LTE Band 38_UAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.02	0.631	0.758
	LTE Band 38_UAT	20M	QPSK	100	0	Right Cheek	0mm	Battery 1	38000	2595	23.91	24.70	1.199	62.9	1.006	0.03	0.613	0.740
	LTE Band 38_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	0.13	0.408	0.490
	LTE Band 38_UAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.03	0.334	0.401
	LTE Band 38_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.1	0.264	0.317
	LTE Band 38_UAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.03	0.218	0.262
	LTE Band 38_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.07	0.176	0.211
	LTE Band 38_UAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.13	0.141	0.169
	LTE Band 38_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	38000	2595	24.93	25.70	1.194	62.9	1.006	0.17	0.671	0.806
	LTE Band 38_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	0.11	0.248	0.298
	LTE Band 38_LAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.13	0.201	0.241
	LTE Band 38_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.06	0.081	0.097
	LTE Band 38_LAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.1	0.062	0.074
	LTE Band 38_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.06	0.123	0.148
	LTE Band 38_LAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.12	0.095	0.114
	LTE Band 38_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	0.08	0.108	0.130
	LTE Band 38_LAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.09	0.086	0.103
	LTE Band 38_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.05	0.204	0.245

<TDD LTE B41>

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	39750	2506	24.40	25.00	1.148	62.9	1.006	0.04	0.684	0.790
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	40185	2549.5	24.37	25.00	1.156	62.9	1.006	-0.03	0.716	0.833
12	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	40620	2593	24.21	25.00	1.199	62.9	1.006	-0.01	0.698	0.842
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	41055	2636.5	24.29	25.00	1.178	62.9	1.006	0.02	0.582	0.689
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	41490	2680	24.31	25.00	1.172	62.9	1.006	-0.08	0.431	0.508
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.05	0.546	0.622
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	40185	2549.5	23.40	24.00	1.148	62.9	1.006	0.01	0.572	0.661
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	40620	2593	23.21	24.00	1.199	62.9	1.006	0.01	0.549	0.662
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	41055	2636.5	23.26	24.00	1.186	62.9	1.006	-0.01	0.450	0.537
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	41490	2680	23.27	24.00	1.183	62.9	1.006	-0.02	0.330	0.393
	LTE Band 41_UAT	20M	QPSK	100	0	Right Cheek	0mm	Battery 1	39750	2506	23.41	24.00	1.146	62.9	1.006	0	0.546	0.629
	LTE Band 41_UAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	0.13	0.404	0.467
	LTE Band 41_UAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.04	0.326	0.371
	LTE Band 41_UAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	0.06	0.233	0.269
	LTE Band 41_UAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.13	0.187	0.213
	LTE Band 41_UAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.12	0.157	0.181
	LTE Band 41_UAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.04	0.124	0.141
	LTE Band 41_UAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	40620	2593	24.21	25.00	1.199	62.9	1.006	-0.07	0.612	0.738
	LTE Band 41_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	0.12	0.260	0.300
	LTE Band 41_LAT	20M	QPSK	50	0	Right Cheek	0mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.1	0.198	0.226
	LTE Band 41_LAT	20M	QPSK	1	0	Right Tilted	0mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.01	0.078	0.090
	LTE Band 41_LAT	20M	QPSK	50	0	Right Tilted	0mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.14	0.050	0.057
	LTE Band 41_LAT	20M	QPSK	1	0	Left Cheek	0mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.14	0.120	0.139
	LTE Band 41_LAT	20M	QPSK	50	0	Left Cheek	0mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.1	0.093	0.106
	LTE Band 41_LAT	20M	QPSK	1	0	Left Tilted	0mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	0.13	0.112	0.129
	LTE Band 41_LAT	20M	QPSK	50	0	Left Tilted	0mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.13	0.071	0.081
	LTE Band 41_LAT	20M	QPSK	1	0	Right Cheek	0mm	Battery 2	39750	2506	24.40	25.00	1.148	62.9	1.006	0.08	0.214	0.247

<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	11	2462	14.99	16.00	1.262	99.23	1.008	0.12	0.053	0.067
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	Battery 1	11	2462	14.99	16.00	1.262	99.23	1.008	0.02	0.056	0.071
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	Battery 1	11	2462	14.99	16.00	1.262	99.23	1.008	-0.12	0.140	0.178
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	Battery 1	11	2462	14.99	16.00	1.262	99.23	1.008	0.02	0.089	0.113
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	Battery 2	11	2462	14.99	16.00	1.262	99.23	1.008	-0.12	0.130	0.165
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 5	Battery 1	11	2462	14.77	16.00	1.327	98.99	1.010	0.06	0.103	0.138
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 5	Battery 1	11	2462	14.77	16.00	1.327	98.99	1.010	-0.04	0.082	0.110
13	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 5	Battery 1	11	2462	14.77	16.00	1.327	98.99	1.010	0.13	0.410	0.550
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 5	Battery 1	11	2462	14.77	16.00	1.327	98.99	1.010	0.1	0.174	0.233
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 5	Battery 2	11	2462	14.77	16.00	1.327	98.99	1.010	0.1	0.234	0.314

<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	Right Cheek	0mm	Ant 4	Battery 1	54	5270	12.45	13.50	1.272	95.85	1.043	-0.1	0.204	0.271
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4	Battery 1	54	5270	12.45	13.50	1.272	95.85	1.043	-0.05	0.249	0.330
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4	Battery 1	54	5270	12.45	13.50	1.272	95.85	1.043	-0.12	0.391	0.519
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4	Battery 1	54	5270	12.45	13.50	1.272	95.85	1.043	0.14	0.407	0.540
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4	Battery 2	54	5270	12.45	13.50	1.272	95.85	1.043	0.01	0.400	0.531
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5	Battery 1	54	5270	12.36	13.50	1.299	95.85	1.043	0.15	0.045	0.061
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5	Battery 1	54	5270	12.36	13.50	1.299	95.85	1.043	-0.17	0.026	0.035
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5	Battery 1	54	5270	12.36	13.50	1.299	95.85	1.043	-0.03	0.201	0.272
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5	Battery 1	54	5270	12.36	13.50	1.299	95.85	1.043	0.1	0.065	0.088
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5	Battery 2	54	5270	12.36	13.50	1.299	95.85	1.043	-0.09	0.195	0.264
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+5	Battery 1	62	5310	12.38	13.50	1.293	95.85	1.043	-0.13	0.228	0.307
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+5	Battery 1	62	5310	12.38	13.50	1.293	95.85	1.043	0.05	0.281	0.379
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+5	Battery 1	62	5310	12.38	13.50	1.293	95.85	1.043	0.12	0.431	0.581
14	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+5	Battery 1	62	5310	12.38	13.50	1.293	95.85	1.043	-0.12	0.476	0.642
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+5	Battery 2	62	5310	12.38	13.50	1.293	95.85	1.043	-0.11	0.475	0.641

<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	13.27	13.50	1.054	92.68	1.079	-0.01	0.357	0.406
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Battery 1	122	5610	13.27	13.50	1.054	92.68	1.079	0	0.407	0.463
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Battery 1	122	5610	13.27	13.50	1.054	92.68	1.079	0.18	0.443	0.504
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Battery 1	122	5610	13.27	13.50	1.054	92.68	1.079	-0.07	0.553	0.629
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Battery 2	122	5610	13.27	13.50	1.054	92.68	1.079	-0.07	0.541	0.615
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 5	Battery 1	122	5610	13.46	13.50	1.009	92.68	1.079	0.07	0.055	0.060
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 5	Battery 1	122	5610	13.46	13.50	1.009	92.68	1.079	0	0.046	0.050
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 5	Battery 1	122	5610	13.46	13.50	1.009	92.68	1.079	-0.12	0.246	0.268
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Battery 1	122	5610	13.46	13.50	1.009	92.68	1.079	0.03	0.088	0.096
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 5	Battery 2	122	5610	13.46	13.50	1.009	92.68	1.079	-0.12	0.235	0.256
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	Battery 1	122	5610	13.05	13.50	1.109	92.68	1.079	-0.16	0.410	0.491
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	Battery 1	122	5610	13.05	13.50	1.109	92.68	1.079	0.03	0.474	0.567
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Battery 1	122	5610	13.05	13.50	1.109	92.68	1.079	0.19	0.501	0.600
15	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 1	122	5610	13.05	13.50	1.109	92.68	1.079	0	0.638	0.764
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 2	122	5610	13.05	13.50	1.109	92.68	1.079	-0.1	0.611	0.731

<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	11.83	12.00	1.040	92.68	1.079	-0.11	0.345	0.387
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Battery 1	155	5775	11.83	12.00	1.040	92.68	1.079	0	0.400	0.449
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Battery 1	155	5775	11.83	12.00	1.040	92.68	1.079	0.12	0.535	0.600
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Battery 1	155	5775	11.83	12.00	1.040	92.68	1.079	-0.03	0.419	0.470
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Battery 2	155	5775	11.83	12.00	1.040	92.68	1.079	0.12	0.510	0.572
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 5	Battery 1	155	5775	11.83	12.00	1.040	92.68	1.079	0.02	0.044	0.049
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 5	Battery 1	155	5775	11.83	12.00	1.040	92.68	1.079	0.08	0.042	0.047
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 5	Battery 1	155	5775	11.83	12.00	1.040	92.68	1.079	-0.15	0.090	0.101
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 5	Battery 1	155	5775	11.83	12.00	1.040	92.68	1.079	-0.04	0.028	0.031
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 5	Battery 2	155	5775	11.83	12.00	1.040	92.68	1.079	-0.15	0.085	0.095
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+5	Battery 1	155	5775	11.63	12.00	1.089	92.68	1.079	-0.19	0.299	0.351
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+5	Battery 1	155	5775	11.63	12.00	1.089	92.68	1.079	-0.01	0.347	0.408
16	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Battery 1	155	5775	11.63	12.00	1.089	92.68	1.079	0	0.516	0.606
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+5	Battery 1	155	5775	11.63	12.00	1.089	92.68	1.079	-0.12	0.370	0.435
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+5	Battery 2	155	5775	11.63	12.00	1.089	92.68	1.079	0.04	0.511	0.600

<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	17.32	18.00	1.169	76.84	1.084	0.11	0.128	0.162
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4	Battery 1	0	2402	17.32	18.00	1.169	76.84	1.084	-0.01	0.095	0.120
17	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4	Battery 1	0	2402	17.32	18.00	1.169	76.84	1.084	0.08	0.470	0.596
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	Battery 1	0	2402	17.32	18.00	1.169	76.84	1.084	0.01	0.204	0.258
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4	Battery 2	0	2402	17.32	18.00	1.169	76.84	1.084	0.01	0.461	0.584

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	27.73	29.00	1.340	-0.11	0.123	0.165
	GSM850_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.14	0.142	0.190
	GSM850_UAT	GPRS (4 Tx slots)	Left Side	10mm	Battery 1	251	848.8	27.73	29.00	1.340	0.03	0.070	0.094
	GSM850_UAT	GPRS (4 Tx slots)	Right Side	10mm	Battery 1	251	848.8	27.73	29.00	1.340	0.01	0.077	0.103
	GSM850_UAT	GPRS (4 Tx slots)	Top Side	10mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.14	0.091	0.122
	GSM850_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	251	848.8	27.73	29.00	1.340	-0.11	0.138	0.185
	GSM850_LAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	251	848.8	27.73	29.00	1.340	0.05	0.118	0.158
18	GSM850_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.08	0.205	0.275
	GSM850_LAT	GPRS (4 Tx slots)	Left Side	10mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.12	0.088	0.118
	GSM850_LAT	GPRS (4 Tx slots)	Right Side	10mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.06	0.153	0.205
	GSM850_LAT	GPRS (4 Tx slots)	Bottom Side	10mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.17	0.050	0.067
	GSM850_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	251	848.8	27.73	29.00	1.340	-0.06	0.197	0.264

<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	810	1909.8	24.95	26.50	1.429	0.19	0.119	0.170
	GSM1900_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	0.18	0.155	0.221
	GSM1900_UAT	GPRS (4 Tx slots)	Left Side	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	0.06	0.064	0.091
	GSM1900_UAT	GPRS (4 Tx slots)	Right Side	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.06	0.011	0.016
	GSM1900_UAT	GPRS (4 Tx slots)	Top Side	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.1	0.168	0.240
	GSM1900_UAT	GPRS (4 Tx slots)	Top Side	10mm	Battery 2	810	1909.8	24.95	26.50	1.429	0.1	0.155	0.221
	GSM1900_LAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.03	0.187	0.267
	GSM1900_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.02	0.226	0.323
	GSM1900_LAT	GPRS (4 Tx slots)	Left Side	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.01	0.081	0.116
	GSM1900_LAT	GPRS (4 Tx slots)	Right Side	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	0.13	0.030	0.043
19	GSM1900_LAT	GPRS (4 Tx slots)	Bottom Side	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	0.14	0.260	0.372
	GSM1900_LAT	GPRS (4 Tx slots)	Bottom Side	10mm	Battery 2	810	1909.8	24.95	26.50	1.429	0.06	0.254	0.363

<WCDMA II>

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	9400	1880	24.95	25.70	1.189	0.12	0.319	0.379
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	9400	1880	24.95	25.70	1.189	0.03	0.397	0.472
	WCDMA II_UAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.03	0.153	0.182
	WCDMA II_UAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	9400	1880	24.95	25.70	1.189	0.08	0.041	0.049
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.07	0.478	0.568
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	Battery 2	9400	1880	24.95	25.70	1.189	-0.01	0.453	0.538
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.03	0.479	0.569
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.06	0.638	0.758
	WCDMA II_LAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.06	0.196	0.233
	WCDMA II_LAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.06	0.094	0.112
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	9400	1880	24.95	25.70	1.189	0.01	0.786	0.934
20	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	9262	1852.4	24.87	25.70	1.211	-0.04	0.873	1.057
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	9538	1907.6	24.93	25.70	1.194	0.05	0.698	0.833
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 2	9262	1852.4	24.87	25.70	1.211	0.01	0.719	0.870

<WCDMA IV>

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	1312	1712.4	23.22	24.00	1.197	0.02	0.064	0.077
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0	0.072	0.086
	WCDMA IV_UAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	-0.06	0.025	0.030
	WCDMA IV_UAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.12	0.001	0.001
	WCDMA IV_UAT	RMC 12.2Kbps	Top Side	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.03	0.067	0.080
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	1312	1712.4	23.22	24.00	1.197	-0.06	0.067	0.080
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0	0.305	0.365
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.01	0.470	0.562
	WCDMA IV_LAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	-0.05	0.077	0.092
	WCDMA IV_LAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	-0.07	0.053	0.063
21	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.03	0.606	0.725
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 2	1312	1712.4	23.22	24.00	1.197	0.07	0.604	0.723

<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	23.85	24.50	1.161	0	0.113	0.131
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.02	0.132	0.153
	WCDMA V_UAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.02	0.069	0.080
	WCDMA V_UAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.04	0.074	0.086
	WCDMA V_UAT	RMC 12.2Kbps	Top Side	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.01	0.088	0.102
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	4233	846.6	23.85	24.50	1.161	0.02	0.127	0.148
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.11	0.126	0.146
22	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.1	0.168	0.195
	WCDMA V_LAT	RMC 12.2Kbps	Left Side	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	0	0.068	0.079
	WCDMA V_LAT	RMC 12.2Kbps	Right Side	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	0.02	0.119	0.138
	WCDMA V_LAT	RMC 12.2Kbps	Bottom Side	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.16	0.033	0.038
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	4233	846.6	23.85	24.50	1.161	-0.09	0.161	0.187

<FDD LTE B2>

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	18900	1880	24.82	25.70	1.225	0.05	0.134	0.164
	LTE Band 2_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.86	24.70	1.213	0.01	0.116	0.141
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.04	0.180	0.220
	LTE Band 2_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.01	0.159	0.193
	LTE Band 2_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	18900	1880	24.82	25.70	1.225	0.07	0.071	0.087
	LTE Band 2_UAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	18700	1860	23.86	24.70	1.213	0.11	0.062	0.075
	LTE Band 2_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	18900	1880	24.82	25.70	1.225	0.12	0.017	0.021
	LTE Band 2_UAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	18700	1860	23.86	24.70	1.213	0.01	0.016	0.019
	LTE Band 2_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.04	0.168	0.206
	LTE Band 2_UAT	20M	QPSK	50	0	Top Side	10mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.03	0.150	0.182
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	18900	1880	24.82	25.70	1.225	0.09	0.156	0.191
	LTE Band 2_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.05	0.495	0.606
	LTE Band 2_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.05	0.400	0.485
	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.08	0.634	0.776
	LTE Band 2_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.06	0.547	0.664
	LTE Band 2_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.03	0.177	0.217
	LTE Band 2_LAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.03	0.134	0.163
	LTE Band 2_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.13	0.093	0.114
	LTE Band 2_LAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	18700	1860	23.86	24.70	1.213	0.01	0.076	0.092
23	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.01	0.811	0.993
	LTE Band 2_LAT	20M	QPSK	1	99	Bottom Side	10mm	Battery 1	18700	1860	24.81	25.70	1.227	0.01	0.767	0.941
	LTE Band 2_LAT	20M	QPSK	1	49	Bottom Side	10mm	Battery 1	19100	1900	24.78	25.70	1.236	-0.01	0.731	0.903
	LTE Band 2_LAT	20M	QPSK	50	0	Bottom Side	10mm	Battery 1	18700	1860	23.86	24.70	1.213	0.02	0.701	0.851
	LTE Band 2_LAT	20M	QPSK	50	24	Bottom Side	10mm	Battery 1	18900	1880	23.84	24.70	1.219	-0.01	0.630	0.768
	LTE Band 2_LAT	20M	QPSK	50	24	Bottom Side	10mm	Battery 1	19100	1900	23.82	24.70	1.225	-0.03	0.579	0.709
	LTE Band 2_LAT	20M	QPSK	100	0	Bottom Side	10mm	Battery 1	18700	1860	23.82	24.70	1.225	0.01	0.680	0.833
	LTE Band 2_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 2	18900	1880	24.82	25.70	1.225	0.02	0.665	0.814

<FDD LTE B4>

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	23.52	24.50	1.253	0.03	0.058	0.073
	LTE Band 4_UAT	20M	QPSK	50	24	Front	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	0.07	0.053	0.065
	LTE Band 4_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.09	0.070	0.088
	LTE Band 4_UAT	20M	QPSK	50	24	Back	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.05	0.060	0.073
	LTE Band 4_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.06	0.024	0.030
	LTE Band 4_UAT	20M	QPSK	50	24	Left Side	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	0.06	0.022	0.027
	LTE Band 4_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.11	0.003	0.003
	LTE Band 4_UAT	20M	QPSK	50	24	Right Side	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.02	0.002	0.002
	LTE Band 4_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.03	0.069	0.086
	LTE Band 4_UAT	20M	QPSK	50	24	Top Side	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.1	0.059	0.072
	LTE Band 4_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	20175	1732.5	23.52	24.50	1.253	0.05	0.065	0.081
	LTE Band 4_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.05	0.324	0.406
	LTE Band 4_LAT	20M	QPSK	50	24	Front	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.02	0.257	0.315
	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.04	0.499	0.625
	LTE Band 4_LAT	20M	QPSK	50	24	Back	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.06	0.386	0.473
	LTE Band 4_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.03	0.091	0.114
	LTE Band 4_LAT	20M	QPSK	50	24	Left Side	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.03	0.077	0.094
	LTE Band 4_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.12	0.061	0.076
	LTE Band 4_LAT	20M	QPSK	50	24	Right Side	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	0.08	0.050	0.061
24	LTE Band 4_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.01	0.588	0.737
	LTE Band 4_LAT	20M	QPSK	50	24	Bottom Side	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.04	0.451	0.552
	LTE Band 4_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 2	20175	1732.5	23.52	24.50	1.253	0.02	0.582	0.729

<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	25	Front	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.03	0.169	0.201
	LTE Band 12_UAT	10M	QPSK	25	12	Front	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.01	0.148	0.176
25	LTE Band 12_UAT	10M	QPSK	1	25	Back	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.15	0.225	0.267
	LTE Band 12_UAT	10M	QPSK	25	12	Back	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.04	0.192	0.228
	LTE Band 12_UAT	10M	QPSK	1	25	Left Side	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.08	0.204	0.242
	LTE Band 12_UAT	10M	QPSK	25	12	Left Side	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.02	0.175	0.208
	LTE Band 12_UAT	10M	QPSK	1	25	Right Side	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	0.01	0.099	0.118
	LTE Band 12_UAT	10M	QPSK	25	12	Right Side	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.07	0.086	0.102
	LTE Band 12_UAT	10M	QPSK	1	25	Top Side	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.04	0.076	0.090
	LTE Band 12_UAT	10M	QPSK	25	12	Top Side	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.02	0.065	0.077
	LTE Band 12_UAT	10M	QPSK	1	25	Back	10mm	Battery 2	23095	707.5	24.95	25.70	1.189	-0.08	0.219	0.260
	LTE Band 12_LAT	10M	QPSK	1	25	Front	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.02	0.145	0.172
	LTE Band 12_LAT	10M	QPSK	25	12	Front	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	0.01	0.118	0.140
	LTE Band 12_LAT	10M	QPSK	1	25	Back	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.07	0.200	0.238
	LTE Band 12_LAT	10M	QPSK	25	12	Back	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.08	0.169	0.201
	LTE Band 12_LAT	10M	QPSK	1	25	Left Side	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.05	0.131	0.156
	LTE Band 12_LAT	10M	QPSK	25	12	Left Side	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.01	0.106	0.126
	LTE Band 12_LAT	10M	QPSK	1	25	Right Side	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.04	0.126	0.150
	LTE Band 12_LAT	10M	QPSK	25	12	Right Side	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.03	0.102	0.121
	LTE Band 12_LAT	10M	QPSK	1	25	Bottom Side	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	0.03	0.025	0.030
	LTE Band 12_LAT	10M	QPSK	25	12	Bottom Side	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	0.04	0.020	0.024
	LTE Band 12_LAT	10M	QPSK	1	25	Back	10mm	Battery 2	23095	707.5	24.95	25.70	1.189	0.06	0.191	0.227

<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	24.52	25.30	1.197	-0.07	0.091	0.109
	LTE Band 13_UAT	10M	QPSK	25	12	Front	10mm	Battery 1	23230	782	23.56	24.30	1.186	0.03	0.069	0.082
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.03	0.120	0.144
	LTE Band 13_UAT	10M	QPSK	25	12	Back	10mm	Battery 1	23230	782	23.56	24.30	1.186	-0.02	0.091	0.108
	LTE Band 13_UAT	10M	QPSK	1	0	Left Side	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.08	0.102	0.122
	LTE Band 13_UAT	10M	QPSK	25	12	Left Side	10mm	Battery 1	23230	782	23.56	24.30	1.186	0.02	0.078	0.092
	LTE Band 13_UAT	10M	QPSK	1	0	Right Side	10mm	Battery 1	23230	782	24.52	25.30	1.197	0.17	0.070	0.084
	LTE Band 13_UAT	10M	QPSK	25	12	Right Side	10mm	Battery 1	23230	782	23.56	24.30	1.186	-0.03	0.053	0.063
	LTE Band 13_UAT	10M	QPSK	1	0	Top Side	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.01	0.053	0.063
	LTE Band 13_UAT	10M	QPSK	25	12	Top Side	10mm	Battery 1	23230	782	23.56	24.30	1.186	-0.07	0.042	0.050
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	Battery 2	23230	782	24.52	25.30	1.197	0.02	0.113	0.135
	LTE Band 13_LAT	10M	QPSK	1	0	Front	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.04	0.177	0.212
	LTE Band 13_LAT	10M	QPSK	25	12	Front	10mm	Battery 1	23230	782	23.56	24.30	1.186	0.05	0.145	0.172
26	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.06	0.219	0.262
	LTE Band 13_LAT	10M	QPSK	25	12	Back	10mm	Battery 1	23230	782	23.56	24.30	1.186	-0.03	0.173	0.205
	LTE Band 13_LAT	10M	QPSK	1	0	Left Side	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.07	0.180	0.215
	LTE Band 13_LAT	10M	QPSK	25	12	Left Side	10mm	Battery 1	23230	782	23.56	24.30	1.186	-0.01	0.146	0.173
	LTE Band 13_LAT	10M	QPSK	1	0	Right Side	10mm	Battery 1	23230	782	24.52	25.30	1.197	0.02	0.204	0.244
	LTE Band 13_LAT	10M	QPSK	25	12	Right Side	10mm	Battery 1	23230	782	23.56	24.30	1.186	-0.03	0.168	0.199
	LTE Band 13_LAT	10M	QPSK	1	0	Bottom Side	10mm	Battery 1	23230	782	24.52	25.30	1.197	0.03	0.030	0.036
	LTE Band 13_LAT	10M	QPSK	25	12	Bottom Side	10mm	Battery 1	23230	782	23.56	24.30	1.186	0.1	0.025	0.030
	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Battery 2	23230	782	24.52	25.30	1.197	-0.03	0.211	0.253

<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	25.00	25.70	1.175	-0.07	0.176	0.207
	LTE Band 26_UAT	15M	QPSK	36	0	Front	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.02	0.140	0.167
27	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.09	0.228	0.268
	LTE Band 26_UAT	15M	QPSK	36	0	Back	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.07	0.180	0.215
	LTE Band 26_UAT	15M	QPSK	1	0	Left Side	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.01	0.105	0.123
	LTE Band 26_UAT	15M	QPSK	36	0	Left Side	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.01	0.080	0.096
	LTE Band 26_UAT	15M	QPSK	1	0	Right Side	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.04	0.088	0.103
	LTE Band 26_UAT	15M	QPSK	36	0	Right Side	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.03	0.069	0.082
	LTE Band 26_UAT	15M	QPSK	1	0	Top Side	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.02	0.128	0.150
	LTE Band 26_UAT	15M	QPSK	36	0	Top Side	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.02	0.101	0.121
	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Battery 2	26865	831.5	25.00	25.70	1.175	0.03	0.219	0.257
	LTE Band 26_LAT	15M	QPSK	1	0	Front	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.08	0.113	0.133
	LTE Band 26_LAT	15M	QPSK	36	0	Front	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.03	0.096	0.115
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.05	0.177	0.208
	LTE Band 26_LAT	15M	QPSK	36	0	Back	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.02	0.150	0.179
	LTE Band 26_LAT	15M	QPSK	1	0	Left Side	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.06	0.098	0.115
	LTE Band 26_LAT	15M	QPSK	36	0	Left Side	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.03	0.079	0.094
	LTE Band 26_LAT	15M	QPSK	1	0	Right Side	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.06	0.130	0.153
	LTE Band 26_LAT	15M	QPSK	36	0	Right Side	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.04	0.108	0.129
	LTE Band 26_LAT	15M	QPSK	1	0	Bottom Side	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	0.06	0.035	0.041
	LTE Band 26_LAT	15M	QPSK	36	0	Bottom Side	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.05	0.031	0.037
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Battery 2	26865	831.5	25.00	25.70	1.175	-0.07	0.162	0.190

<TDD LTE B38>

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	24.93	25.70	1.194	62.9	1.006	-0.02	0.130	0.156
	LTE Band 38_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.07	0.106	0.127
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.02	0.310	0.372
	LTE Band 38_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.03	0.255	0.306
	LTE Band 38_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.11	0.202	0.243
	LTE Band 38_UAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.09	0.167	0.201
	LTE Band 38_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.14	0.012	0.014
	LTE Band 38_UAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.01	0.010	0.012
	LTE Band 38_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.02	0.050	0.060
	LTE Band 38_UAT	20M	QPSK	50	0	Top Side	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.13	0.040	0.048
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.11	0.299	0.359
28	LTE Band 38_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.1	0.403	0.484
	LTE Band 38_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.04	0.327	0.393
	LTE Band 38_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	0.07	0.335	0.402
	LTE Band 38_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.05	0.270	0.324
	LTE Band 38_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	0.16	0.019	0.023
	LTE Band 38_LAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.05	0.015	0.018
	LTE Band 38_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.16	0.315	0.378
	LTE Band 38_LAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.17	0.250	0.300
	LTE Band 38_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.02	0.182	0.219
	LTE Band 38_LAT	20M	QPSK	50	0	Bottom Side	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.11	0.143	0.172
	LTE Band 38_LAT	20M	QPSK	1	0	Front	10mm	Battery 2	38000	2595	24.93	25.70	1.194	62.9	1.006	0.05	0.389	0.467

<TDD LTE B41>

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	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.1	0.154	0.178
	LTE Band 41_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.12	0.122	0.139
29	LTE Band 41_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.08	0.437	0.505
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.02	0.344	0.392
	LTE Band 41_UAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.08	0.189	0.218
	LTE Band 41_UAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.13	0.150	0.171
	LTE Band 41_UAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	0.06	0.009	0.010
	LTE Band 41_UAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.17	0.007	0.008
	LTE Band 41_UAT	20M	QPSK	1	0	Top Side	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.03	0.077	0.089
	LTE Band 41_UAT	20M	QPSK	50	0	Top Side	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.09	0.062	0.071
	LTE Band 41_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	39750	2506	24.40	25.00	1.148	62.9	1.006	0.02	0.425	0.491
	LTE Band 41_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.03	0.380	0.439
	LTE Band 41_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.03	0.298	0.339
	LTE Band 41_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	0.04	0.351	0.405
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.06	0.274	0.312
	LTE Band 41_LAT	20M	QPSK	1	0	Left Side	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	0.15	0.017	0.020
	LTE Band 41_LAT	20M	QPSK	50	0	Left Side	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.05	0.014	0.016
	LTE Band 41_LAT	20M	QPSK	1	0	Right Side	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.18	0.256	0.296
	LTE Band 41_LAT	20M	QPSK	50	0	Right Side	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.12	0.202	0.230
	LTE Band 41_LAT	20M	QPSK	1	0	Bottom Side	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.04	0.159	0.184
	LTE Band 41_LAT	20M	QPSK	50	0	Bottom Side	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.03	0.127	0.145
	LTE Band 41_LAT	20M	QPSK	1	0	Front	10mm	Battery 2	39750	2506	24.40	25.00	1.148	62.9	1.006	0.04	0.366	0.423

<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	6	2437	18.00	18.00	1.000	99.23	1.008	-0.11	0.088	0.089
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	Battery 1	6	2437	18.00	18.00	1.000	99.23	1.008	0	0.243	0.245
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4	Battery 1	6	2437	18.00	18.00	1.000	99.23	1.008	0.03	0.072	0.073
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 4	Battery 1	6	2437	18.00	18.00	1.000	99.23	1.008	-0.02	0.063	0.064
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	Battery 2	6	2437	18.00	18.00	1.000	99.23	1.008	0.01	0.240	0.242
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 5	Battery 1	11	2462	17.50	18.00	1.122	98.99	1.010	0.08	0.148	0.168
30	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 5	Battery 1	11	2462	17.50	18.00	1.122	98.99	1.010	-0.05	0.461	0.522
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 5	Battery 1	11	2462	17.50	18.00	1.122	98.99	1.010	0.13	0.347	0.393
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 5	Battery 1	11	2462	17.50	18.00	1.122	98.99	1.010	-0.02	0.037	0.042
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 5	Battery 2	11	2462	17.50	18.00	1.122	98.99	1.010	-0.02	0.455	0.516

<5.2GHz 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	17.24	17.50	1.061	95.85	1.043	0.06	0.163	0.180
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4	Battery 1	46	5230	17.24	17.50	1.061	95.85	1.043	0.11	0.081	0.090
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 4	Battery 1	46	5230	17.24	17.50	1.061	95.85	1.043	0.15	0.084	0.093
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4	Battery 1	46	5230	17.24	17.50	1.061	95.85	1.043	0.17	0.196	0.217
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4	Battery 2	46	5230	17.24	17.50	1.061	95.85	1.043	0.05	0.190	0.210
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 5	Battery 1	46	5230	16.81	17.50	1.171	95.85	1.043	-0.04	0.141	0.172
31	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 1	46	5230	16.81	17.50	1.171	95.85	1.043	0.12	0.385	0.470
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 5	Battery 1	46	5230	16.81	17.50	1.171	95.85	1.043	-0.09	0.290	0.354
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 5	Battery 1	46	5230	16.81	17.50	1.171	95.85	1.043	0.12	0.045	0.055
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 2	46	5230	16.81	17.50	1.171	95.85	1.043	0.11	0.379	0.463
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+5	Battery 1	46	5230	17.40	17.50	1.023	95.85	1.043	0	0.275	0.294
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Battery 1	46	5230	17.40	17.50	1.023	95.85	1.043	-0.19	0.423	0.451
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 4+5	Battery 1	46	5230	17.40	17.50	1.023	95.85	1.043	0.14	0.347	0.370
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+5	Battery 1	46	5230	17.40	17.50	1.023	95.85	1.043	0.05	0.286	0.305
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Battery 2	46	5230	17.40	17.50	1.023	95.85	1.043	-0.14	0.401	0.428

<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	16.56	17.50	1.242	92.68	1.079	-0.19	0.246	0.330
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4	Battery 1	155	5775	16.56	17.50	1.242	92.68	1.079	-0.13	0.159	0.213
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4	Battery 1	155	5775	16.56	17.50	1.242	92.68	1.079	-0.12	0.236	0.316
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4	Battery 1	155	5775	16.56	17.50	1.242	92.68	1.079	-0.05	0.238	0.319
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4	Battery 2	155	5775	16.56	17.50	1.242	92.68	1.079	0.1	0.231	0.309
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 5	Battery 1	155	5775	17.04	17.50	1.112	92.68	1.079	0	0.120	0.144
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5	Battery 1	155	5775	17.04	17.50	1.112	92.68	1.079	-0.09	0.282	0.338
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 5	Battery 1	155	5775	17.04	17.50	1.112	92.68	1.079	0.16	0.281	0.337
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 5	Battery 1	155	5775	17.04	17.50	1.112	92.68	1.079	0.01	0.030	0.036
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5	Battery 2	155	5775	17.04	17.50	1.112	92.68	1.079	-0.13	0.271	0.325
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+5	Battery 1	155	5775	16.67	17.50	1.211	92.68	1.079	-0.15	0.279	0.364
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Battery 1	155	5775	16.67	17.50	1.211	92.68	1.079	-0.11	0.308	0.402
32	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+5	Battery 1	155	5775	16.67	17.50	1.211	92.68	1.079	0.18	0.327	0.427
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+5	Battery 1	155	5775	16.67	17.50	1.211	92.68	1.079	0.06	0.244	0.319
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+5	Battery 2	155	5775	16.67	17.50	1.211	92.68	1.079	0.13	0.322	0.421

<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	17.32	18.00	1.169	76.84	1.084	-0.06	0.061	0.077
33	Bluetooth	1Mbps	Back	10mm	Ant 4	Battery 1	0	2402	17.32	18.00	1.169	76.84	1.084	0.07	0.141	0.179
	Bluetooth	1Mbps	Right Side	10mm	Ant 4	Battery 1	0	2402	17.32	18.00	1.169	76.84	1.084	0.06	0.005	0.006
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	Battery 1	0	2402	17.32	18.00	1.169	76.84	1.084	0.04	0.033	0.042
	Bluetooth	1Mbps	Back	10mm	Ant 4	Battery 2	0	2402	17.32	18.00	1.169	76.84	1.084	0.07	0.133	0.169

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	27.73	29.00	1.340	-0.11	0.123	0.165
	GSM850_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.14	0.142	0.190
	GSM850_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	251	848.8	27.73	29.00	1.340	-0.11	0.138	0.185
	GSM850_LAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	251	848.8	27.73	29.00	1.340	0.05	0.118	0.158
34	GSM850_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	251	848.8	27.73	29.00	1.340	-0.08	0.205	0.275
	GSM850_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	251	848.8	27.73	29.00	1.340	-0.06	0.197	0.264

<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	810	1909.8	24.95	26.50	1.429	0.19	0.119	0.170
	GSM1900_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	0.18	0.155	0.221
	GSM1900_UAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	810	1909.8	24.95	26.50	1.429	0.05	0.123	0.176
	GSM1900_LAT	GPRS (4 Tx slots)	Front	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.03	0.187	0.267
35	GSM1900_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 1	810	1909.8	24.95	26.50	1.429	-0.02	0.226	0.323
	GSM1900_LAT	GPRS (4 Tx slots)	Back	10mm	Battery 2	810	1909.8	24.95	26.50	1.429	-0.06	0.225	0.322

<WCDMA II>

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	9400	1880	24.95	25.70	1.189	0.12	0.319	0.379
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	9400	1880	24.95	25.70	1.189	0.03	0.397	0.472
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	9400	1880	24.95	25.70	1.189	0.05	0.357	0.424
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.03	0.479	0.569
36	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	9400	1880	24.95	25.70	1.189	-0.06	0.638	0.758
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	9400	1880	24.95	25.70	1.189	-0.09	0.554	0.658

<WCDMA IV>

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	1312	1712.4	23.22	24.00	1.197	0.02	0.064	0.077
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0	0.072	0.086
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	1312	1712.4	23.22	24.00	1.197	-0.06	0.067	0.080
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0	0.305	0.365
37	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	1312	1712.4	23.22	24.00	1.197	0.01	0.470	0.562
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	1312	1712.4	23.22	24.00	1.197	0.01	0.466	0.558

<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	23.85	24.50	1.161	0	0.113	0.131
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.02	0.132	0.153
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Battery 2	4233	846.6	23.85	24.50	1.161	0.02	0.127	0.148
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.11	0.126	0.146
38	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Battery 1	4233	846.6	23.85	24.50	1.161	-0.1	0.168	0.195
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Battery 2	4233	846.6	23.85	24.50	1.161	-0.09	0.161	0.187

<FDD LTE B2>

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	18900	1880	24.82	25.70	1.225	0.05	0.134	0.164
	LTE Band 2_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.86	24.70	1.213	0.01	0.116	0.141
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.04	0.180	0.220
	LTE Band 2_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.01	0.159	0.193
	LTE Band 2_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	18900	1880	24.82	25.70	1.225	0.09	0.156	0.191
	LTE Band 2_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.05	0.495	0.606
	LTE Band 2_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.05	0.400	0.485
39	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	18900	1880	24.82	25.70	1.225	-0.08	0.634	0.776
	LTE Band 2_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	18700	1860	23.86	24.70	1.213	-0.06	0.547	0.664
	LTE Band 2_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	18900	1880	24.82	25.70	1.225	-0.1	0.526	0.644

<FDD LTE B4>

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	23.52	24.50	1.253	0.03	0.058	0.073
	LTE Band 4_UAT	20M	QPSK	50	24	Front	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	0.07	0.053	0.065
	LTE Band 4_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.09	0.070	0.088
	LTE Band 4_UAT	20M	QPSK	50	24	Back	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.05	0.060	0.073
	LTE Band 4_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	20175	1732.5	23.52	24.50	1.253	0.05	0.065	0.081
	LTE Band 4_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	0.05	0.324	0.406
	LTE Band 4_LAT	20M	QPSK	50	24	Front	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.02	0.257	0.315
40	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	20175	1732.5	23.52	24.50	1.253	-0.04	0.499	0.625
	LTE Band 4_LAT	20M	QPSK	50	24	Back	10mm	Battery 1	20175	1732.5	22.62	23.50	1.225	-0.06	0.386	0.473
	LTE Band 4_LAT	20M	QPSK	1	0	Back	10mm	Battery 2	20175	1732.5	23.52	24.50	1.253	-0.04	0.492	0.617

<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	25	Front	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.03	0.169	0.201
	LTE Band 12_UAT	10M	QPSK	25	12	Front	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.01	0.148	0.176
41	LTE Band 12_UAT	10M	QPSK	1	25	Back	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.15	0.225	0.267
	LTE Band 12_UAT	10M	QPSK	25	12	Back	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.04	0.192	0.228
	LTE Band 12_UAT	10M	QPSK	1	25	Back	10mm	Battery 2	23095	707.5	24.95	25.70	1.189	-0.08	0.219	0.260
	LTE Band 12_LAT	10M	QPSK	1	25	Front	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.02	0.145	0.172
	LTE Band 12_LAT	10M	QPSK	25	12	Front	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	0.01	0.118	0.140
	LTE Band 12_LAT	10M	QPSK	1	25	Back	10mm	Battery 1	23095	707.5	24.95	25.70	1.189	-0.07	0.200	0.238
	LTE Band 12_LAT	10M	QPSK	25	12	Back	10mm	Battery 1	23095	707.5	23.95	24.70	1.189	-0.08	0.169	0.201
	LTE Band 12_LAT	10M	QPSK	1	25	Back	10mm	Battery 2	23095	707.5	24.95	25.70	1.189	0.06	0.191	0.227

<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	24.52	25.30	1.197	-0.07	0.091	0.109
	LTE Band 13_UAT	10M	QPSK	25	12	Front	10mm	Battery 1	23230	782	23.56	24.30	1.186	0.03	0.069	0.082
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.03	0.120	0.144
	LTE Band 13_UAT	10M	QPSK	25	12	Back	10mm	Battery 1	23230	782	23.56	24.30	1.186	-0.02	0.091	0.108
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	Battery 2	23230	782	24.52	25.30	1.197	0.02	0.113	0.135
	LTE Band 13_LAT	10M	QPSK	1	0	Front	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.04	0.177	0.212
	LTE Band 13_LAT	10M	QPSK	25	12	Front	10mm	Battery 1	23230	782	23.56	24.30	1.186	0.05	0.145	0.172
42	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Battery 1	23230	782	24.52	25.30	1.197	-0.06	0.219	0.262
	LTE Band 13_LAT	10M	QPSK	25	12	Back	10mm	Battery 1	23230	782	23.56	24.30	1.186	-0.03	0.173	0.205
	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Battery 2	23230	782	24.52	25.30	1.197	-0.03	0.211	0.253

<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	25.00	25.70	1.175	-0.07	0.176	0.207
	LTE Band 26_UAT	15M	QPSK	36	0	Front	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.02	0.140	0.167
43	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.09	0.228	0.268
	LTE Band 26_UAT	15M	QPSK	36	0	Back	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.07	0.180	0.215
	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Battery 2	26865	831.5	25.00	25.70	1.175	0.03	0.219	0.257
	LTE Band 26_LAT	15M	QPSK	1	0	Front	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.08	0.113	0.133
	LTE Band 26_LAT	15M	QPSK	36	0	Front	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	0.03	0.096	0.115
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Battery 1	26865	831.5	25.00	25.70	1.175	-0.05	0.177	0.208
	LTE Band 26_LAT	15M	QPSK	36	0	Back	10mm	Battery 1	26865	831.5	23.93	24.70	1.194	-0.02	0.150	0.179
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Battery 2	26865	831.5	25.00	25.70	1.175	-0.07	0.162	0.190

<TDD LTE B38>

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	24.93	25.70	1.194	62.9	1.006	-0.02	0.130	0.156
	LTE Band 38_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.07	0.106	0.127
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.02	0.310	0.372
	LTE Band 38_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.03	0.255	0.306
	LTE Band 38_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.11	0.299	0.359
44	LTE Band 38_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	-0.1	0.403	0.484
	LTE Band 38_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	-0.04	0.327	0.393
	LTE Band 38_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	38000	2595	24.93	25.70	1.194	62.9	1.006	0.07	0.335	0.402
	LTE Band 38_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	38000	2595	23.93	24.70	1.194	62.9	1.006	0.05	0.270	0.324
	LTE Band 38_LAT	20M	QPSK	1	0	Front	10mm	Battery 2	38000	2595	24.93	25.70	1.194	62.9	1.006	0.05	0.389	0.467

<TDD LTE B41>

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	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.1	0.154	0.178
	LTE Band 41_UAT	20M	QPSK	50	0	Front	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.12	0.122	0.139
45	LTE Band 41_UAT	20M	QPSK	1	0	Back	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.08	0.437	0.505
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.02	0.344	0.392
	LTE Band 41_UAT	20M	QPSK	1	0	Back	10mm	Battery 2	39750	2506	24.40	25.00	1.148	62.9	1.006	0.02	0.425	0.491
	LTE Band 41_LAT	20M	QPSK	1	0	Front	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	-0.03	0.380	0.439
	LTE Band 41_LAT	20M	QPSK	50	0	Front	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	-0.03	0.298	0.339
	LTE Band 41_LAT	20M	QPSK	1	0	Back	10mm	Battery 1	39750	2506	24.40	25.00	1.148	62.9	1.006	0.04	0.351	0.405
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	Battery 1	39750	2506	23.46	24.00	1.132	62.9	1.006	0.06	0.274	0.312
	LTE Band 41_LAT	20M	QPSK	1	0	Front	10mm	Battery 2	39750	2506	24.40	25.00	1.148	62.9	1.006	0.04	0.366	0.423

<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	6	2437	18.00	18.00	1.000	99.23	1.008	-0.11	0.088	0.089
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	Battery 1	6	2437	18.00	18.00	1.000	99.23	1.008	0	0.243	0.245
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	Battery 2	6	2437	18.00	18.00	1.000	99.23	1.008	0.01	0.240	0.242
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 5	Battery 1	11	2462	17.50	18.00	1.122	98.99	1.010	0.08	0.148	0.168
46	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 5	Battery 1	11	2462	17.50	18.00	1.122	98.99	1.010	-0.05	0.461	0.522
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 5	Battery 2	11	2462	17.50	18.00	1.122	98.99	1.010	-0.02	0.455	0.516

<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	17.47	17.50	1.006	95.85	1.043	-0.02	0.213	0.223
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4	Battery 1	54	5270	17.47	17.50	1.006	95.85	1.043	-0.05	0.105	0.110
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4	Battery 2	54	5270	17.47	17.50	1.006	95.85	1.043	0.03	0.201	0.211
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 5	Battery 1	54	5270	16.44	17.50	1.275	95.85	1.043	-0.04	0.121	0.161
47	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 1	54	5270	16.44	17.50	1.275	95.85	1.043	-0.13	0.430	0.572
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5	Battery 2	54	5270	16.44	17.50	1.275	95.85	1.043	0.1	0.419	0.557
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+5	Battery 1	54	5270	16.81	17.50	1.172	95.85	1.043	-0.15	0.251	0.307
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Battery 1	54	5270	16.81	17.50	1.172	95.85	1.043	-0.18	0.381	0.466
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+5	Battery 2	54	5270	16.81	17.50	1.172	95.85	1.043	-0.12	0.352	0.430

<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	17.01	17.50	1.119	92.68	1.079	-0.15	0.180	0.217
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4	Battery 1	138	5690	17.01	17.50	1.119	92.68	1.079	-0.03	0.085	0.103
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4	Battery 2	138	5690	17.01	17.50	1.119	92.68	1.079	-0.03	0.175	0.211
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 5	Battery 1	122	5610	16.93	17.50	1.140	92.68	1.079	-0.17	0.117	0.144
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5	Battery 1	122	5610	16.93	17.50	1.140	92.68	1.079	0.03	0.413	0.508
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5	Battery 2	122	5610	16.93	17.50	1.140	92.68	1.079	0.01	0.409	0.503
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+5	Battery 1	122	5610	16.86	17.50	1.159	92.68	1.079	0.08	0.179	0.224
48	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Battery 1	122	5610	16.86	17.50	1.159	92.68	1.079	-0.19	0.493	0.616
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Battery 2	122	5610	16.86	17.50	1.159	92.68	1.079	0.08	0.470	0.588

<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	16.56	17.50	1.242	92.68	1.079	-0.19	0.246	0.330
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4		Battery 1	155	5775	16.56	17.50	1.242	92.68	1.079	-0.13	0.159	0.213
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4		Battery 2	155	5775	16.56	17.50	1.242	92.68	1.079	0.1	0.238	0.319
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 5		Battery 1	155	5775	17.04	17.50	1.112	92.68	1.079	0	0.120	0.144
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5		Battery 1	155	5775	17.04	17.50	1.112	92.68	1.079	-0.09	0.282	0.338
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 5		Battery 2	155	5775	17.04	17.50	1.112	92.68	1.079	-0.13	0.271	0.325
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+5	Ant 4	Battery 1	155	5775	16.67	17.50	1.211	92.68	1.079	-0.15	0.279	0.364
						Ant 5	Battery 1	155	5775	17.13	17.50	1.089	92.68	1.079	-0.15	0.156	0.183
49	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Ant 4	Battery 1	155	5775	16.67	17.50	1.211	92.68	1.079	-0.11	0.308	0.402
						Ant 5	Battery 1	155	5775	17.13	17.50	1.089	92.68	1.079	-0.11	0.202	0.237
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+5	Ant 4	Battery 2	155	5775	16.67	17.50	1.211	92.68	1.079	-0.05	0.302	0.394
						Ant 5	Battery 2	155	5775	17.13	17.50	1.089	92.68	1.079	-0.05	0.198	0.233

<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	17.32	18.00	1.169	76.84	1.084	-0.06	0.061	0.077
50	Bluetooth	1Mbps	Back	10mm	Ant 4	Battery 1	0	2402	17.32	18.00	1.169	76.84	1.084	0.07	0.141	0.179
	Bluetooth	1Mbps	Back	10mm	Ant 4	Battery 2	0	2402	17.32	18.00	1.169	76.84	1.084	0.01	0.133	0.169

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	Ant 4	Battery 1	54	5270	17.47	17.50	1.006	95.85	1.043	-0.11	0.541	0.568
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4	Battery 1	54	5270	17.47	17.50	1.006	95.85	1.043	-0.03	0.396	0.416
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 4	Battery 1	54	5270	17.47	17.50	1.006	95.85	1.043	0.05	0.054	0.056
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 4	Battery 1	54	5270	17.47	17.50	1.006	95.85	1.043	-0.06	0.299	0.314
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 4	Battery 2	54	5270	17.47	17.50	1.006	95.85	1.043	-0.13	0.533	0.559
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 5	Battery 1	54	5270	16.44	17.50	1.275	95.85	1.043	-0.15	0.361	0.480
51	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 5	Battery 1	54	5270	16.44	17.50	1.275	95.85	1.043	0.01	1.360	1.809
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 5	Battery 1	54	5270	16.44	17.50	1.275	95.85	1.043	0.13	1.190	1.583
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5	Battery 1	54	5270	16.44	17.50	1.275	95.85	1.043	0.06	0.038	0.051
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 5	Battery 2	54	5270	16.44	17.50	1.275	95.85	1.043	0.12	1.340	1.782

<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	Ant 4	Battery 1	138	5690	17.01	17.50	1.119	92.68	1.079	-0.11	0.498	0.602
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4	Battery 1	138	5690	17.01	17.50	1.119	92.68	1.079	0.01	0.426	0.515
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4	Battery 1	138	5690	17.01	17.50	1.119	92.68	1.079	0.12	0.107	0.129
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 4	Battery 1	138	5690	17.01	17.50	1.119	92.68	1.079	0.06	0.390	0.471
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4	Battery 2	138	5690	17.01	17.50	1.119	92.68	1.079	-0.05	0.481	0.581
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 5	Battery 1	122	5610	16.93	17.50	1.140	92.68	1.079	0.03	0.277	0.341
52	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 5	Battery 1	122	5610	16.93	17.50	1.140	92.68	1.079	0.05	1.140	1.403
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 5	Battery 1	122	5610	16.93	17.50	1.140	92.68	1.079	0.06	0.732	0.901
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 5	Battery 1	122	5610	16.93	17.50	1.140	92.68	1.079	-0.04	0.048	0.059
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 5	Battery 2	122	5610	16.93	17.50	1.140	92.68	1.079	0.03	1.110	1.366

13.5 Repeated SAR Measurement

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)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	19100	1900	23.53	24.50	1.250	0.05	0.958		1.198
2nd	LTE Band 2_UAT	20M	QPSK	50	24	Right Cheek	0mm	Battery 1	19100	1900	23.53	24.50	1.250	0.02	0.952	1.01	1.190

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥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	1	WWAN off (Cellular off)	(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	WWAN on (Cellular on)	(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 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."
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 / (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 ≤ 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) 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. 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

14.1 Head Exposure Conditions (WLAN On)

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 5 1g SAR (W/kg)	4 5GHz WLAN Ant 4 1g SAR (W/kg)	5 5GHz WLAN Ant 5 1g SAR (W/kg)	6 Bluetooth Ant 4 1g SAR (W/kg)	7 5GHz WLAN Ant 4+5 1g SAR (W/kg)	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)
GSM	GSM850_UAT	Right Cheek	0.616	0.067	0.138	0.406	0.061	0.162	0.491	**0.821**	**0.744**	**0.916**	**1.184**	**0.839**	**1.269**
		Right Tilted	0.488	0.071	0.110	0.463	0.050	0.120	0.567	**0.669**	**0.609**	**0.718**	**1.071**	**0.658**	**1.175**
		Left Cheek	0.308	0.178	0.550	0.600	0.272	0.596	0.606	**1.036**	**0.758**	**1.454**	**1.504**	**1.176**	**1.510**
		Left Tilted	0.252	0.113	0.233	0.629	0.096	0.258	0.764	**0.598**	**0.461**	**0.743**	**1.139**	**0.606**	**1.274**
	GSM1900_UAT	Right Cheek	0.725	0.067	0.138	0.406	0.061	0.162	0.491	**0.930**	**0.853**	**1.025**	**1.293**	**0.948**	**1.378**
		Right Tilted	0.704	0.071	0.110	0.463	0.050	0.120	0.567	**0.885**	**0.825**	**0.934**	**1.287**	**0.874**	**1.391**
		Left Cheek	0.260	0.178	0.550	0.600	0.272	0.596	0.606	**0.988**	**0.710**	**1.406**	**1.456**	**1.128**	**1.462**
		Left Tilted	0.299	0.113	0.233	0.629	0.096	0.258	0.764	**0.645**	**0.508**	**0.790**	**1.186**	**0.653**	**1.321**
WCDMA	WCDMA II_UAT	Right Cheek	0.712	0.067	0.138	0.406	0.061	0.162	0.491	**0.917**	**0.840**	**1.012**	**1.280**	**0.935**	**1.365**
		Right Tilted	0.615	0.071	0.110	0.463	0.050	0.120	0.567	**0.796**	**0.736**	**0.845**	**1.198**	**0.785**	**1.302**
		Left Cheek	0.223	0.178	0.550	0.600	0.272	0.596	0.606	**0.951**	**0.673**	**1.369**	**1.419**	**1.091**	**1.425**
		Left Tilted	0.255	0.113	0.233	0.629	0.096	0.258	0.764	**0.601**	**0.464**	**0.746**	**1.142**	**0.609**	**1.277**
	WCDMA IV_UAT	Right Cheek	0.426	0.067	0.138	0.406	0.061	0.162	0.491	**0.631**	**0.554**	**0.726**	**0.994**	**0.649**	**1.079**
		Right Tilted	0.439	0.071	0.110	0.463	0.050	0.120	0.567	**0.620**	**0.560**	**0.669**	**1.022**	**0.609**	**1.126**
		Left Cheek	0.148	0.178	0.550	0.600	0.272	0.596	0.606	**0.876**	**0.598**	**1.294**	**1.344**	**1.016**	**1.350**
		Left Tilted	0.165	0.113	0.233	0.629	0.096	0.258	0.764	**0.511**	**0.374**	**0.656**	**1.052**	**0.519**	**1.187**
	WCDMA V_UAT	Right Cheek	0.462	0.067	0.138	0.406	0.061	0.162	0.491	**0.667**	**0.590**	**0.762**	**1.030**	**0.685**	**1.115**
		Right Tilted	0.394	0.071	0.110	0.463	0.050	0.120	0.567	**0.575**	**0.515**	**0.624**	**0.977**	**0.564**	**1.081**
		Left Cheek	0.257	0.178	0.550	0.600	0.272	0.596	0.606	**0.985**	**0.707**	**1.403**	**1.453**	**1.125**	**1.459**
		Left Tilted	0.201	0.113	0.233	0.629	0.096	0.258	0.764	**0.547**	**0.410**	**0.692**	**1.088**	**0.555**	**1.223**
LTE	LTE Band 2_UAT	Right Cheek	0.825	0.067	0.138	0.406	0.061	0.162	0.491	**1.030**	**0.953**	**1.125**	**1.393**	**1.048**	**1.478**
		Right Tilted	0.818	0.071	0.110	0.463	0.050	0.120	0.567	**0.999**	**0.939**	**1.048**	**1.401**	**0.988**	**1.505**
		Left Cheek	0.328	0.178	0.550	0.600	0.272	0.596	0.606	**1.056**	**0.778**	**1.474**	**1.524**	**1.196**	**1.530**
		Left Tilted	0.369	0.113	0.233	0.629	0.096	0.258	0.764	**0.715**	**0.578**	**0.860**	**1.256**	**0.723**	**1.391**
	LTE Band 4_UAT	Right Cheek	0.482	0.067	0.138	0.406	0.061	0.162	0.491	**0.687**	**0.610**	**0.782**	**1.050**	**0.705**	**1.135**
		Right Tilted	0.484	0.071	0.110	0.463	0.050	0.120	0.567	**0.665**	**0.605**	**0.714**	**1.067**	**0.654**	**1.171**
		Left Cheek	0.160	0.178	0.550	0.600	0.272	0.596	0.606	**0.888**	**0.610**	**1.306**	**1.356**	**1.028**	**1.362**
		Left Tilted	0.189	0.113	0.233	0.629	0.096	0.258	0.764	**0.535**	**0.398**	**0.680**	**1.076**	**0.543**	**1.211**
	LTE Band 12_UAT	Right Cheek	0.818	0.067	0.138	0.406	0.061	0.162	0.491	**1.023**	**0.946**	**1.118**	**1.386**	**1.041**	**1.471**
		Right Tilted	0.795	0.071	0.110	0.463	0.050	0.120	0.567	**0.976**	**0.916**	**1.025**	**1.378**	**0.965**	**1.482**
		Left Cheek	0.358	0.178	0.550	0.600	0.272	0.596	0.606	**1.086**	**0.808**	**1.504**	**1.554**	**1.226**	**1.560**
		Left Tilted	0.326	0.113	0.233	0.629	0.096	0.258	0.764	**0.672**	**0.535**	**0.817**	**1.213**	**0.680**	**1.348**
	LTE Band 13_UAT	Right Cheek	0.396	0.067	0.138	0.406	0.061	0.162	0.491	**0.601**	**0.524**	**0.696**	**0.964**	**0.619**	**1.049**
		Right Tilted	0.369	0.071	0.110	0.463	0.050	0.120	0.567	**0.550**	**0.490**	**0.599**	**0.952**	**0.539**	**1.056**
		Left Cheek	0.201	0.178	0.550	0.600	0.272	0.596	0.606	**0.929**	**0.651**	**1.347**	**1.397**	**1.069**	**1.403**
		Left Tilted	0.153	0.113	0.233	0.629	0.096	0.258	0.764	**0.499**	**0.362**	**0.644**	**1.040**	**0.507**	**1.175**
	LTE Band 26_UAT	Right Cheek	0.825	0.067	0.138	0.406	0.061	0.162	0.491	**1.030**	**0.953**	**1.125**	**1.393**	**1.048**	**1.478**
		Right Tilted	0.724	0.071	0.110	0.463	0.050	0.120	0.567	**0.905**	**0.845**	**0.954**	**1.307**	**0.894**	**1.411**
		Left Cheek	0.382	0.178	0.550	0.600	0.272	0.596	0.606	**1.110**	**0.832**	**1.528**	**1.578**	**1.250**	**1.584**
		Left Tilted	0.336	0.113	0.233	0.629	0.096	0.258	0.764	**0.682**	**0.545**	**0.827**	**1.223**	**0.690**	**1.358**
	LTE Band 38_UAT	Right Cheek	0.919	0.067	0.138	0.406	0.061	0.162	0.491	**1.124**	**1.047**	**1.219**	**1.487**	**1.142**	**1.572**
		Right Tilted	0.490	0.071	0.110	0.463	0.050	0.120	0.567	**0.671**	**0.611**	**0.720**	**1.073**	**0.660**	**1.177**
		Left Cheek	0.317	0.178	0.550	0.600	0.272	0.596	0.606	**1.045**	**0.767**	**1.463**	**1.513**	**1.185**	**1.519**
		Left Tilted	0.211	0.113	0.233	0.629	0.096	0.258	0.764	**0.557**	**0.420**	**0.702**	**1.098**	**0.565**	**1.233**
	LTE Band 41_UAT	Right Cheek	0.842	0.067	0.138	0.406	0.061	0.162	0.491	**1.047**	**0.970**	**1.142**	**1.410**	**1.065**	**1.495**
		Right Tilted	0.467	0.071	0.110	0.463	0.050	0.120	0.567	**0.648**	**0.588**	**0.697**	**1.050**	**0.637**	**1.154**
		Left Cheek	0.269	0.178	0.550	0.600	0.272	0.596	0.606	**0.997**	**0.719**	**1.415**	**1.465**	**1.137**	**1.471**
		Left Tilted	0.181	0.113	0.233	0.629	0.096	0.258	0.764	**0.527**	**0.390**	**0.672**	**1.068**	**0.535**	**1.203**

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	0.217	0.067	0.138	0.406	0.061	0.162	0.491	**0.422**	**0.345**	**0.517**	**0.785**	**0.440**	**0.870**
		Right Tilted	0.109	0.071	0.110	0.463	0.050	0.120	0.567	**0.290**	**0.230**	**0.339**	**0.692**	**0.279**	**0.796**
		Left Cheek	0.194	0.178	0.550	0.600	0.272	0.596	0.606	**0.922**	**0.644**	**1.340**	**1.390**	**1.062**	**1.396**
		Left Tilted	0.151	0.113	0.233	0.629	0.096	0.258	0.764	**0.497**	**0.360**	**0.642**	**1.038**	**0.505**	**1.173**
	GSM1900_LAT	Right Cheek	0.073	0.067	0.138	0.406	0.061	0.162	0.491	**0.278**	**0.201**	**0.373**	**0.641**	**0.296**	**0.726**
		Right Tilted	0.067	0.071	0.110	0.463	0.050	0.120	0.567	**0.248**	**0.188**	**0.297**	**0.650**	**0.237**	**0.754**
		Left Cheek	0.134	0.178	0.550	0.600	0.272	0.596	0.606	**0.862**	**0.584**	**1.280**	**1.330**	**1.002**	**1.336**
		Left Tilted	0.064	0.113	0.233	0.629	0.096	0.258	0.764	**0.410**	**0.273**	**0.555**	**0.951**	**0.418**	**1.086**
WCDMA	WCDMA II_LAT	Right Cheek	0.133	0.067	0.138	0.406	0.061	0.162	0.491	**0.338**	**0.261**	**0.433**	**0.701**	**0.356**	**0.786**
		Right Tilted	0.102	0.071	0.110	0.463	0.050	0.120	0.567	**0.283**	**0.223**	**0.332**	**0.685**	**0.272**	**0.789**
		Left Cheek	0.197	0.178	0.550	0.600	0.272	0.596	0.606	**0.925**	**0.647**	**1.343**	**1.393**	**1.065**	**1.399**
		Left Tilted	0.114	0.113	0.233	0.629	0.096	0.258	0.764	**0.460**	**0.323**	**0.605**	**1.001**	**0.468**	**1.136**
	WCDMA IV_LAT	Right Cheek	0.095	0.067	0.138	0.406	0.061	0.162	0.491	**0.300**	**0.223**	**0.395**	**0.663**	**0.318**	**0.748**
		Right Tilted	0.057	0.071	0.110	0.463	0.050	0.120	0.567	**0.238**	**0.178**	**0.287**	**0.640**	**0.227**	**0.744**
		Left Cheek	0.112	0.178	0.550	0.600	0.272	0.596	0.606	**0.840**	**0.562**	**1.258**	**1.308**	**0.980**	**1.314**
		Left Tilted	0.066	0.113	0.233	0.629	0.096	0.258	0.764	**0.412**	**0.275**	**0.557**	**0.953**	**0.420**	**1.088**
	WCDMA V_LAT	Right Cheek	0.143	0.067	0.138	0.406	0.061	0.162	0.491	**0.348**	**0.271**	**0.443**	**0.711**	**0.366**	**0.796**
		Right Tilted	0.081	0.071	0.110	0.463	0.050	0.120	0.567	**0.262**	**0.202**	**0.311**	**0.664**	**0.251**	**0.768**
		Left Cheek	0.130	0.178	0.550	0.600	0.272	0.596	0.606	**0.858**	**0.580**	**1.276**	**1.326**	**0.998**	**1.332**
		Left Tilted	0.102	0.113	0.233	0.629	0.096	0.258	0.764	**0.448**	**0.311**	**0.593**	**0.989**	**0.456**	**1.124**
LTE	LTE Band 2_LAT	Right Cheek	0.143	0.067	0.138	0.406	0.061	0.162	0.491	**0.348**	**0.271**	**0.443**	**0.711**	**0.366**	**0.796**
		Right Tilted	0.113	0.071	0.110	0.463	0.050	0.120	0.567	**0.294**	**0.234**	**0.343**	**0.696**	**0.283**	**0.800**
		Left Cheek	0.182	0.178	0.550	0.600	0.272	0.596	0.606	**0.910**	**0.632**	**1.328**	**1.378**	**1.050**	**1.384**
		Left Tilted	0.118	0.113	0.233	0.629	0.096	0.258	0.764	**0.464**	**0.327**	**0.609**	**1.005**	**0.472**	**1.140**
	LTE Band 4_LAT	Right Cheek	0.117	0.067	0.138	0.406	0.061	0.162	0.491	**0.322**	**0.245**	**0.417**	**0.685**	**0.340**	**0.770**
		Right Tilted	0.096	0.071	0.110	0.463	0.050	0.120	0.567	**0.277**	**0.217**	**0.326**	**0.679**	**0.266**	**0.783**
		Left Cheek	0.129	0.178	0.550	0.600	0.272	0.596	0.606	**0.857**	**0.579**	**1.275**	**1.325**	**0.997**	**1.331**
		Left Tilted	0.079	0.113	0.233	0.629	0.096	0.258	0.764	**0.425**	**0.288**	**0.570**	**0.966**	**0.433**	**1.101**
	LTE Band 12_LAT	Right Cheek	0.096	0.067	0.138	0.406	0.061	0.162	0.491	**0.301**	**0.224**	**0.396**	**0.664**	**0.319**	**0.749**
		Right Tilted	0.057	0.071	0.110	0.463	0.050	0.120	0.567	**0.238**	**0.178**	**0.287**	**0.640**	**0.227**	**0.744**
		Left Cheek	0.094	0.178	0.550	0.600	0.272	0.596	0.606	**0.822**	**0.544**	**1.240**	**1.290**	**0.962**	**1.296**
		Left Tilted	0.062	0.113	0.233	0.629	0.096	0.258	0.764	**0.408**	**0.271**	**0.553**	**0.949**	**0.416**	**1.084**
	LTE Band 13_LAT	Right Cheek	0.136	0.067	0.138	0.406	0.061	0.162	0.491	**0.341**	**0.264**	**0.436**	**0.704**	**0.359**	**0.789**
		Right Tilted	0.103	0.071	0.110	0.463	0.050	0.120	0.567	**0.284**	**0.224**	**0.333**	**0.686**	**0.273**	**0.790**
		Left Cheek	0.154	0.178	0.550	0.600	0.272	0.596	0.606	**0.882**	**0.604**	**1.300**	**1.350**	**1.022**	**1.356**
		Left Tilted	0.122	0.113	0.233	0.629	0.096	0.258	0.764	**0.468**	**0.331**	**0.613**	**1.009**	**0.476**	**1.144**
	LTE Band 26_LAT	Right Cheek	0.141	0.067	0.138	0.406	0.061	0.162	0.491	**0.346**	**0.269**	**0.441**	**0.709**	**0.364**	**0.794**
		Right Tilted	0.072	0.071	0.110	0.463	0.050	0.120	0.567	**0.253**	**0.193**	**0.302**	**0.655**	**0.242**	**0.759**
		Left Cheek	0.128	0.178	0.550	0.600	0.272	0.596	0.606	**0.856**	**0.578**	**1.274**	**1.324**	**0.996**	**1.330**
		Left Tilted	0.079	0.113	0.233	0.629	0.096	0.258	0.764	**0.425**	**0.288**	**0.570**	**0.966**	**0.433**	**1.101**
	LTE Band 38_LAT	Right Cheek	0.298	0.067	0.138	0.406	0.061	0.162	0.491	**0.503**	**0.426**	**0.598**	**0.866**	**0.521**	**0.951**
		Right Tilted	0.097	0.071	0.110	0.463	0.050	0.120	0.567	**0.278**	**0.218**	**0.327**	**0.680**	**0.267**	**0.784**
		Left Cheek	0.148	0.178	0.550	0.600	0.272	0.596	0.606	**0.876**	**0.598**	**1.294**	**1.344**	**1.016**	**1.350**
		Left Tilted	0.130	0.113	0.233	0.629	0.096	0.258	0.764	**0.476**	**0.339**	**0.621**	**1.017**	**0.484**	**1.152**
	LTE Band 41_LAT	Right Cheek	0.300	0.067	0.138	0.406	0.061	0.162	0.491	**0.505**	**0.428**	**0.600**	**0.868**	**0.523**	**0.953**
		Right Tilted	0.090	0.071	0.110	0.463	0.050	0.120	0.567	**0.271**	**0.211**	**0.320**	**0.673**	**0.260**	**0.777**
		Left Cheek	0.139	0.178	0.550	0.600	0.272	0.596	0.606	**0.867**	**0.589**	**1.285**	**1.335**	**1.007**	**1.341**
		Left Tilted	0.129	0.113	0.233	0.629	0.096	0.258	0.764	**0.475**	**0.338**	**0.620**	**1.016**	**0.483**	**1.151**

14.2 Head Exposure Conditions (WLAN Off)

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
GSM	GSM850_UAT	Right Cheek	0.616	0.161	**0.777**
		Right Tilted	0.488	0.120	**0.608**
		Left Cheek	0.308	0.593	**0.901**
		Left Tilted	0.252	0.257	**0.509**
	GSM1900_UAT	Right Cheek	1.114	0.161	**1.275**
		Right Tilted	0.964	0.120	**1.084**
		Left Cheek	0.300	0.593	**0.893**
		Left Tilted	0.357	0.257	**0.614**
WCDMA	WCDMA II_UAT	Right Cheek	1.074	0.161	**1.235**
		Right Tilted	1.057	0.120	**1.177**
		Left Cheek	0.281	0.593	**0.874**
		Left Tilted	0.345	0.257	**0.602**
	WCDMA IV_UAT	Right Cheek	0.426	0.161	**0.587**
		Right Tilted	0.439	0.120	**0.559**
		Left Cheek	0.148	0.593	**0.741**
		Left Tilted	0.165	0.257	**0.422**
	WCDMA V_UAT	Right Cheek	0.462	0.161	**0.623**
		Right Tilted	0.394	0.120	**0.514**
		Left Cheek	0.257	0.593	**0.850**
		Left Tilted	0.201	0.257	**0.458**
LTE	LTE Band 2_UAT	Right Cheek	1.198	0.161	**1.359**
		Right Tilted	1.148	0.120	**1.268**
		Left Cheek	0.396	0.593	**0.989**
		Left Tilted	0.385	0.257	**0.642**
	LTE Band 4_UAT	Right Cheek	0.482	0.161	**0.643**
		Right Tilted	0.484	0.120	**0.604**
		Left Cheek	0.160	0.593	**0.753**
		Left Tilted	0.189	0.257	**0.446**
	LTE Band 12_UAT	Right Cheek	0.818	0.161	**0.979**
		Right Tilted	0.795	0.120	**0.915**
		Left Cheek	0.358	0.593	**0.951**
		Left Tilted	0.326	0.257	**0.583**
	LTE Band 13_UAT	Right Cheek	0.396	0.161	**0.557**
		Right Tilted	0.369	0.120	**0.489**
		Left Cheek	0.201	0.593	**0.794**
		Left Tilted	0.153	0.257	**0.410**
	LTE Band 26_UAT	Right Cheek	0.825	0.161	**0.986**
		Right Tilted	0.724	0.120	**0.844**
		Left Cheek	0.394	0.593	**0.987**
		Left Tilted	0.336	0.257	**0.593**
	LTE Band 38_UAT	Right Cheek	0.919	0.161	**1.080**
		Right Tilted	0.490	0.120	**0.610**
		Left Cheek	0.317	0.593	**0.910**
		Left Tilted	0.211	0.257	**0.468**
	LTE Band 41_UAT	Right Cheek	0.842	0.161	**1.003**
		Right Tilted	0.467	0.120	**0.587**
		Left Cheek	0.269	0.593	**0.862**
		Left Tilted	0.181	0.257	**0.438**

`WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
GSM	GSM850_LAT	Right Cheek	0.217	0.161	**0.378**
		Right Tilted	0.109	0.120	**0.229**
		Left Cheek	0.194	0.593	**0.787**
		Left Tilted	0.151	0.257	**0.408**
	GSM1900_LAT	Right Cheek	0.073	0.161	**0.234**
		Right Tilted	0.067	0.120	**0.187**
		Left Cheek	0.134	0.593	**0.727**
		Left Tilted	0.064	0.257	**0.321**
WCDMA	WCDMA II_LAT	Right Cheek	0.133	0.161	**0.294**
		Right Tilted	0.102	0.120	**0.222**
		Left Cheek	0.197	0.593	**0.790**
		Left Tilted	0.114	0.257	**0.371**
	WCDMA IV_LAT	Right Cheek	0.095	0.161	**0.256**
		Right Tilted	0.057	0.120	**0.177**
		Left Cheek	0.112	0.593	**0.705**
		Left Tilted	0.066	0.257	**0.323**
	WCDMA V_LAT	Right Cheek	0.143	0.161	**0.304**
		Right Tilted	0.081	0.120	**0.201**
		Left Cheek	0.130	0.593	**0.723**
		Left Tilted	0.102	0.257	**0.359**
LTE	LTE Band 2_LAT	Right Cheek	0.143	0.161	**0.304**
		Right Tilted	0.113	0.120	**0.233**
		Left Cheek	0.182	0.593	**0.775**
		Left Tilted	0.118	0.257	**0.375**
	LTE Band 4_LAT	Right Cheek	0.117	0.161	**0.278**
		Right Tilted	0.096	0.120	**0.216**
		Left Cheek	0.129	0.593	**0.722**
		Left Tilted	0.079	0.257	**0.336**
	LTE Band 12_LAT	Right Cheek	0.096	0.161	**0.257**
		Right Tilted	0.057	0.120	**0.177**
		Left Cheek	0.094	0.593	**0.687**
		Left Tilted	0.062	0.257	**0.319**
	LTE Band 13_LAT	Right Cheek	0.136	0.161	**0.297**
		Right Tilted	0.103	0.120	**0.223**
		Left Cheek	0.154	0.593	**0.747**
		Left Tilted	0.122	0.257	**0.379**
	LTE Band 26_LAT	Right Cheek	0.141	0.161	**0.302**
		Right Tilted	0.072	0.120	**0.192**
		Left Cheek	0.128	0.593	**0.721**
		Left Tilted	0.079	0.257	**0.336**
	LTE Band 38_LAT	Right Cheek	0.298	0.161	**0.459**
		Right Tilted	0.097	0.120	**0.217**
		Left Cheek	0.148	0.593	**0.741**
		Left Tilted	0.130	0.257	**0.387**
	LTE Band 41_LAT	Right Cheek	0.300	0.161	**0.461**
		Right Tilted	0.090	0.120	**0.210**
		Left Cheek	0.139	0.593	**0.732**
		Left Tilted	0.129	0.257	**0.386**

14.3 Hotspot Exposure Conditions

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 5 1g SAR (W/kg)	4 5GHz WLAN Ant 4 1g SAR (W/kg)	5 5GHz WLAN Ant 5 1g SAR (W/kg)	6 Bluetooth Ant 4 1g SAR (W/kg)	7 5GHz WLAN Ant 4+5 1g SAR (W/kg)	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)
GSM	GSM850_UAT	Front	0.165	0.089	0.168	0.330	0.172	0.077	0.364	**0.422**	**0.426**	**0.410**	**0.572**	**0.414**	**0.606**
		Back	0.190	0.245	0.522	0.213	0.470	0.179	0.451	**0.957**	**0.905**	**0.891**	**0.582**	**0.839**	**0.820**
		Left side	0.094							**0.094**	**0.094**	**0.094**	**0.094**	**0.094**	**0.094**
		Right side	0.103	0.073	0.393	0.316	0.354	0.006	0.427	**0.569**	**0.530**	**0.502**	**0.425**	**0.463**	**0.536**
		Top side	0.122	0.064	0.042	0.319	0.055	0.042	0.319	**0.228**	**0.241**	**0.206**	**0.483**	**0.219**	**0.483**
	GSM1900_UAT	Front	0.170	0.089	0.168	0.330	0.172	0.077	0.364	**0.427**	**0.431**	**0.415**	**0.577**	**0.419**	**0.611**
		Back	0.221	0.245	0.522	0.213	0.470	0.179	0.451	**0.988**	**0.936**	**0.922**	**0.613**	**0.870**	**0.851**
		Left side	0.091							**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**
		Right side	0.016	0.073	0.393	0.316	0.354	0.006	0.427	**0.482**	**0.443**	**0.415**	**0.338**	**0.376**	**0.449**
		Top side	0.240	0.064	0.042	0.319	0.055	0.042	0.319	**0.346**	**0.359**	**0.324**	**0.601**	**0.337**	**0.601**
WCDMA	WCDMA II_UAT	Front	0.379	0.089	0.168	0.330	0.172	0.077	0.364	**0.636**	**0.640**	**0.624**	**0.786**	**0.628**	**0.820**
		Back	0.472	0.245	0.522	0.213	0.470	0.179	0.451	**1.239**	**1.187**	**1.173**	**0.864**	**1.121**	**1.102**
		Left side	0.182							**0.182**	**0.182**	**0.182**	**0.182**	**0.182**	**0.182**
		Right side	0.049	0.073	0.393	0.316	0.354	0.006	0.427	**0.515**	**0.476**	**0.448**	**0.371**	**0.409**	**0.482**
		Top side	0.568	0.064	0.042	0.319	0.055	0.042	0.319	**0.674**	**0.687**	**0.652**	**0.929**	**0.665**	**0.929**
	WCDMA IV_UAT	Front	0.077	0.089	0.168	0.330	0.172	0.077	0.364	**0.334**	**0.338**	**0.322**	**0.484**	**0.326**	**0.518**
		Back	0.086	0.245	0.522	0.213	0.470	0.179	0.451	**0.853**	**0.801**	**0.787**	**0.478**	**0.735**	**0.716**
		Left side	0.030							**0.030**	**0.030**	**0.030**	**0.030**	**0.030**	**0.030**
		Right side	0.001	0.073	0.393	0.316	0.354	0.006	0.427	**0.467**	**0.428**	**0.400**	**0.323**	**0.361**	**0.434**
		Top side	0.080	0.064	0.042	0.319	0.055	0.042	0.319	**0.186**	**0.199**	**0.164**	**0.441**	**0.177**	**0.441**
	WCDMA V_UAT	Front	0.131	0.089	0.168	0.330	0.172	0.077	0.364	**0.388**	**0.392**	**0.376**	**0.538**	**0.380**	**0.572**
		Back	0.153	0.245	0.522	0.213	0.470	0.179	0.451	**0.920**	**0.868**	**0.854**	**0.545**	**0.802**	**0.783**
		Left side	0.080							**0.080**	**0.080**	**0.080**	**0.080**	**0.080**	**0.080**
		Right side	0.086	0.073	0.393	0.316	0.354	0.006	0.427	**0.552**	**0.513**	**0.485**	**0.408**	**0.446**	**0.519**
		Top side	0.102	0.064	0.042	0.319	0.055	0.042	0.319	**0.208**	**0.221**	**0.186**	**0.463**	**0.199**	**0.463**

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 5 1g SAR (W/kg)	4 5GHz WLAN Ant 4 1g SAR (W/kg)	5 5GHz WLAN Ant 5 1g SAR (W/kg)	6 Bluetooth Ant 4 1g SAR (W/kg)	7 5GHz WLAN Ant 4+5 1g SAR (W/kg)	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)
LTE	LTE Band 2_UAT	Front	0.164	0.089	0.168	0.330	0.172	0.077	0.364	**0.421**	**0.425**	**0.409**	**0.571**	**0.413**	**0.605**
		Back	0.220	0.245	0.522	0.213	0.470	0.179	0.451	**0.987**	**0.935**	**0.921**	**0.612**	**0.869**	**0.850**
		Left side	0.087							**0.087**	**0.087**	**0.087**	**0.087**	**0.087**	**0.087**
		Right side	0.021	0.073	0.393	0.316	0.354	0.006	0.427	**0.487**	**0.448**	**0.420**	**0.343**	**0.381**	**0.454**
		Top side	0.206	0.064	0.042	0.319	0.055	0.042	0.319	**0.312**	**0.325**	**0.290**	**0.567**	**0.303**	**0.567**
	LTE Band 4_UAT	Front	0.073	0.089	0.168	0.330	0.172	0.077	0.364	**0.330**	**0.334**	**0.318**	**0.480**	**0.322**	**0.514**
		Back	0.088	0.245	0.522	0.213	0.470	0.179	0.451	**0.855**	**0.803**	**0.789**	**0.480**	**0.737**	**0.718**
		Left side	0.030							**0.030**	**0.030**	**0.030**	**0.030**	**0.030**	**0.030**
		Right side	0.003	0.073	0.393	0.316	0.354	0.006	0.427	**0.469**	**0.430**	**0.402**	**0.325**	**0.363**	**0.436**
		Top side	0.086	0.064	0.042	0.319	0.055	0.042	0.319	**0.192**	**0.205**	**0.170**	**0.447**	**0.183**	**0.447**
	LTE Band 12_UAT	Front	0.201	0.089	0.168	0.330	0.172	0.077	0.364	**0.458**	**0.462**	**0.446**	**0.608**	**0.450**	**0.642**
		Back	0.267	0.245	0.522	0.213	0.470	0.179	0.451	**1.034**	**0.982**	**0.968**	**0.659**	**0.916**	**0.897**
		Left side	0.242							**0.242**	**0.242**	**0.242**	**0.242**	**0.242**	**0.242**
		Right side	0.118	0.073	0.393	0.316	0.354	0.006	0.427	**0.584**	**0.545**	**0.517**	**0.440**	**0.478**	**0.551**
		Top side	0.090	0.064	0.042	0.319	0.055	0.042	0.319	**0.196**	**0.209**	**0.174**	**0.451**	**0.187**	**0.451**
	LTE Band 13_UAT	Front	0.109	0.089	0.168	0.330	0.172	0.077	0.364	**0.366**	**0.370**	**0.354**	**0.516**	**0.358**	**0.550**
		Back	0.144	0.245	0.522	0.213	0.470	0.179	0.451	**0.911**	**0.859**	**0.845**	**0.536**	**0.793**	**0.774**
		Left side	0.122							**0.122**	**0.122**	**0.122**	**0.122**	**0.122**	**0.122**
		Right side	0.084	0.073	0.393	0.316	0.354	0.006	0.427	**0.550**	**0.511**	**0.483**	**0.406**	**0.444**	**0.517**
		Top side	0.063	0.064	0.042	0.319	0.055	0.042	0.319	**0.169**	**0.182**	**0.147**	**0.424**	**0.160**	**0.424**
	LTE Band 26_UAT	Front	0.207	0.089	0.168	0.330	0.172	0.077	0.364	**0.464**	**0.468**	**0.452**	**0.614**	**0.456**	**0.648**
		Back	0.268	0.245	0.522	0.213	0.470	0.179	0.451	**1.035**	**0.983**	**0.969**	**0.660**	**0.917**	**0.898**
		Left side	0.123							**0.123**	**0.123**	**0.123**	**0.123**	**0.123**	**0.123**
		Right side	0.103	0.073	0.393	0.316	0.354	0.006	0.427	**0.569**	**0.530**	**0.502**	**0.425**	**0.463**	**0.536**
		Top side	0.150	0.064	0.042	0.319	0.055	0.042	0.319	**0.256**	**0.269**	**0.234**	**0.511**	**0.247**	**0.511**
	LTE Band 38_UAT	Front	0.156	0.089	0.168	0.330	0.172	0.077	0.364	**0.413**	**0.417**	**0.401**	**0.563**	**0.405**	**0.597**
		Back	0.372	0.245	0.522	0.213	0.470	0.179	0.451	**1.139**	**1.087**	**1.073**	**0.764**	**1.021**	**1.002**
		Left side	0.243							**0.243**	**0.243**	**0.243**	**0.243**	**0.243**	**0.243**
		Right side	0.014	0.073	0.393	0.316	0.354	0.006	0.427	**0.480**	**0.441**	**0.413**	**0.336**	**0.374**	**0.447**
		Top side	0.060	0.064	0.042	0.319	0.055	0.042	0.319	**0.166**	**0.179**	**0.144**	**0.421**	**0.157**	**0.421**
	LTE Band 41_UAT	Front	0.178	0.089	0.168	0.330	0.172	0.077	0.364	**0.435**	**0.439**	**0.423**	**0.585**	**0.427**	**0.619**
		Back	0.505	0.245	0.522	0.213	0.470	0.179	0.451	**1.272**	**1.220**	**1.206**	**0.897**	**1.154**	**1.135**
		Left side	0.218							**0.218**	**0.218**	**0.218**	**0.218**	**0.218**	**0.218**
		Right side	0.010	0.073	0.393	0.316	0.354	0.006	0.427	**0.476**	**0.437**	**0.409**	**0.332**	**0.370**	**0.443**
		Top side	0.089	0.064	0.042	0.319	0.055	0.042	0.319	**0.195**	**0.208**	**0.173**	**0.450**	**0.186**	**0.450**

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	0.158	0.089	0.168	0.330	0.172	0.077	0.364	**0.415**	**0.419**	**0.403**	**0.565**	**0.407**	**0.599**
		Back	0.275	0.245	0.522	0.213	0.470	0.179	0.451	**1.042**	**0.990**	**0.976**	**0.667**	**0.924**	**0.905**
		Left side	0.118							**0.118**	**0.118**	**0.118**	**0.118**	**0.118**	**0.118**
		Right side	0.205	0.073	0.393	0.316	0.354	0.006	0.427	**0.671**	**0.632**	**0.604**	**0.527**	**0.565**	**0.638**
		Bottom side	0.067							**0.067**	**0.067**	**0.067**	**0.067**	**0.067**	**0.067**
	GSM1900_LAT	Front	0.267	0.089	0.168	0.330	0.172	0.077	0.364	**0.524**	**0.528**	**0.512**	**0.674**	**0.516**	**0.708**
		Back	0.323	0.245	0.522	0.213	0.470	0.179	0.451	**1.090**	**1.038**	**1.024**	**0.715**	**0.972**	**0.953**
		Left side	0.116							**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**
		Right side	0.043	0.073	0.393	0.316	0.354	0.006	0.427	**0.509**	**0.470**	**0.442**	**0.365**	**0.403**	**0.476**
		Bottom side	0.372							**0.372**	**0.372**	**0.372**	**0.372**	**0.372**	**0.372**
WCDMA	WCDMA II_LAT	Front	0.569	0.089	0.168	0.330	0.172	0.077	0.364	**0.826**	**0.830**	**0.814**	**0.976**	**0.818**	**1.010**
		Back	0.758	0.245	0.522	0.213	0.470	0.179	0.451	**1.525**	**1.473**	**1.459**	**1.150**	**1.407**	**1.388**
		Left side	0.233							**0.233**	**0.233**	**0.233**	**0.233**	**0.233**	**0.233**
		Right side	0.112	0.073	0.393	0.316	0.354	0.006	0.427	**0.578**	**0.539**	**0.511**	**0.434**	**0.472**	**0.545**
		Bottom side	1.057							**1.057**	**1.057**	**1.057**	**1.057**	**1.057**	**1.057**
	WCDMA IV_LAT	Front	0.365	0.089	0.168	0.330	0.172	0.077	0.364	**0.622**	**0.626**	**0.610**	**0.772**	**0.614**	**0.806**
		Back	0.562	0.245	0.522	0.213	0.470	0.179	0.451	**1.329**	**1.277**	**1.263**	**0.954**	**1.211**	**1.192**
		Left side	0.092							**0.092**	**0.092**	**0.092**	**0.092**	**0.092**	**0.092**
		Right side	0.063	0.073	0.393	0.316	0.354	0.006	0.427	**0.529**	**0.490**	**0.462**	**0.385**	**0.423**	**0.496**
		Bottom side	0.725							**0.725**	**0.725**	**0.725**	**0.725**	**0.725**	**0.725**
	WCDMA V_LAT	Front	0.146	0.089	0.168	0.330	0.172	0.077	0.364	**0.403**	**0.407**	**0.391**	**0.553**	**0.395**	**0.587**
		Back	0.195	0.245	0.522	0.213	0.470	0.179	0.451	**0.962**	**0.910**	**0.896**	**0.587**	**0.844**	**0.825**
		Left side	0.079							**0.079**	**0.079**	**0.079**	**0.079**	**0.079**	**0.079**
		Right side	0.138	0.073	0.393	0.316	0.354	0.006	0.427	**0.604**	**0.565**	**0.537**	**0.460**	**0.498**	**0.571**
		Bottom side	0.038							**0.038**	**0.038**	**0.038**	**0.038**	**0.038**	**0.038**

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 5 1g SAR (W/kg)	4 5GHz WLAN Ant 4 1g SAR (W/kg)	5 5GHz WLAN Ant 5 1g SAR (W/kg)	6 Bluetooth Ant 4 1g SAR (W/kg)	7 5GHz WLAN Ant 4+5 1g SAR (W/kg)	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)
LTE	LTE Band 2_LAT	Front	0.606	0.089	0.168	0.330	0.172	0.077	0.364	**0.863**	**0.867**	**0.851**	**1.013**	**0.855**	**1.047**
		Back	0.776	0.245	0.522	0.213	0.470	0.179	0.451	**1.543**	**1.491**	**1.477**	**1.168**	**1.425**	**1.406**
		Left side	0.217							**0.217**	**0.217**	**0.217**	**0.217**	**0.217**	**0.217**
		Right side	0.114	0.073	0.393	0.316	0.354	0.006	0.427	**0.580**	**0.541**	**0.513**	**0.436**	**0.474**	**0.547**
		Bottom side	0.993							**0.993**	**0.993**	**0.993**	**0.993**	**0.993**	**0.993**
	LTE Band 4_LAT	Front	0.406	0.089	0.168	0.330	0.172	0.077	0.364	**0.663**	**0.667**	**0.651**	**0.813**	**0.655**	**0.847**
		Back	0.625	0.245	0.522	0.213	0.470	0.179	0.451	**1.392**	**1.340**	**1.326**	**1.017**	**1.274**	**1.255**
		Left side	0.114							**0.114**	**0.114**	**0.114**	**0.114**	**0.114**	**0.114**
		Right side	0.076	0.073	0.393	0.316	0.354	0.006	0.427	**0.542**	**0.503**	**0.475**	**0.398**	**0.436**	**0.509**
		Bottom side	0.737							**0.737**	**0.737**	**0.737**	**0.737**	**0.737**	**0.737**
	LTE Band 12_LAT	Front	0.172	0.089	0.168	0.330	0.172	0.077	0.364	**0.429**	**0.433**	**0.417**	**0.579**	**0.421**	**0.613**
		Back	0.238	0.245	0.522	0.213	0.470	0.179	0.451	**1.005**	**0.953**	**0.939**	**0.630**	**0.887**	**0.868**
		Left side	0.156							**0.156**	**0.156**	**0.156**	**0.156**	**0.156**	**0.156**
		Right side	0.150	0.073	0.393	0.316	0.354	0.006	0.427	**0.616**	**0.577**	**0.549**	**0.472**	**0.510**	**0.583**
		Bottom side	0.030							**0.030**	**0.030**	**0.030**	**0.030**	**0.030**	**0.030**
	LTE Band 13_LAT	Front	0.212	0.089	0.168	0.330	0.172	0.077	0.364	**0.469**	**0.473**	**0.457**	**0.619**	**0.461**	**0.653**
		Back	0.262	0.245	0.522	0.213	0.470	0.179	0.451	**1.029**	**0.977**	**0.963**	**0.654**	**0.911**	**0.892**
		Left side	0.215							**0.215**	**0.215**	**0.215**	**0.215**	**0.215**	**0.215**
		Right side	0.244	0.073	0.393	0.316	0.354	0.006	0.427	**0.710**	**0.671**	**0.643**	**0.566**	**0.604**	**0.677**
		Bottom side	0.036							**0.036**	**0.036**	**0.036**	**0.036**	**0.036**	**0.036**
	LTE Band 26_LAT	Front	0.133	0.089	0.168	0.330	0.172	0.077	0.364	**0.390**	**0.394**	**0.378**	**0.540**	**0.382**	**0.574**
		Back	0.208	0.245	0.522	0.213	0.470	0.179	0.451	**0.975**	**0.923**	**0.909**	**0.600**	**0.857**	**0.838**
		Left side	0.115							**0.115**	**0.115**	**0.115**	**0.115**	**0.115**	**0.115**
		Right side	0.153	0.073	0.393	0.316	0.354	0.006	0.427	**0.619**	**0.580**	**0.552**	**0.475**	**0.513**	**0.586**
		Bottom side	0.041							**0.041**	**0.041**	**0.041**	**0.041**	**0.041**	**0.041**
	LTE Band 38_LAT	Front	0.484	0.089	0.168	0.330	0.172	0.077	0.364	**0.741**	**0.745**	**0.729**	**0.891**	**0.733**	**0.925**
		Back	0.402	0.245	0.522	0.213	0.470	0.179	0.451	**1.169**	**1.117**	**1.103**	**0.794**	**1.051**	**1.032**
		Left side	0.023							**0.023**	**0.023**	**0.023**	**0.023**	**0.023**	**0.023**
		Right side	0.378	0.073	0.393	0.316	0.354	0.006	0.427	**0.844**	**0.805**	**0.777**	**0.700**	**0.738**	**0.811**
		Bottom side	0.219							**0.219**	**0.219**	**0.219**	**0.219**	**0.219**	**0.219**
	LTE Band 41_LAT	Front	0.439	0.089	0.168	0.330	0.172	0.077	0.364	**0.696**	**0.700**	**0.684**	**0.846**	**0.688**	**0.880**
		Back	0.405	0.245	0.522	0.213	0.470	0.179	0.451	**1.172**	**1.120**	**1.106**	**0.797**	**1.054**	**1.035**
		Left side	0.020							**0.020**	**0.020**	**0.020**	**0.020**	**0.020**	**0.020**
		Right side	0.296	0.073	0.393	0.316	0.354	0.006	0.427	**0.762**	**0.723**	**0.695**	**0.618**	**0.656**	**0.729**
		Bottom side	0.184							**0.184**	**0.184**	**0.184**	**0.184**	**0.184**	**0.184**

14.4 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 5 1g SAR (W/kg)	4 5GHz WLAN Ant 4 1g SAR (W/kg)	5 5GHz WLAN Ant 5 1g SAR (W/kg)	6 Bluetooth Ant 4 1g SAR (W/kg)	7 5GHz WLAN Ant 4+5 1g SAR (W/kg)	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)
GSM	GSM850_UAT	Front	0.165	0.089	0.168	0.330	0.161	0.077	0.364	**0.422**	**0.415**	**0.410**	**0.572**	**0.403**	**0.606**
		Back	0.190	0.245	0.522	0.213	0.572	0.179	0.616	**0.957**	**1.007**	**0.891**	**0.582**	**0.941**	**0.985**
	GSM1900_UAT	Front	0.170	0.089	0.168	0.330	0.161	0.077	0.364	**0.427**	**0.420**	**0.415**	**0.577**	**0.408**	**0.611**
		Back	0.221	0.245	0.522	0.213	0.572	0.179	0.616	**0.988**	**1.038**	**0.922**	**0.613**	**0.972**	**1.016**
WCDMA	WCDMA II_UAT	Front	0.379	0.089	0.168	0.330	0.161	0.077	0.364	**0.636**	**0.629**	**0.624**	**0.786**	**0.617**	**0.820**
		Back	0.472	0.245	0.522	0.213	0.572	0.179	0.616	**1.239**	**1.289**	**1.173**	**0.864**	**1.223**	**1.267**
	WCDMA IV_UAT	Front	0.077	0.089	0.168	0.330	0.161	0.077	0.364	**0.334**	**0.327**	**0.322**	**0.484**	**0.315**	**0.518**
		Back	0.086	0.245	0.522	0.213	0.572	0.179	0.616	**0.853**	**0.903**	**0.787**	**0.478**	**0.837**	**0.881**
	WCDMA V_UAT	Front	0.131	0.089	0.168	0.330	0.161	0.077	0.364	**0.388**	**0.381**	**0.376**	**0.538**	**0.369**	**0.572**
		Back	0.153	0.245	0.522	0.213	0.572	0.179	0.616	**0.920**	**0.970**	**0.854**	**0.545**	**0.904**	**0.948**
LTE	LTE Band 2_UAT	Front	0.164	0.089	0.168	0.330	0.161	0.077	0.364	**0.421**	**0.414**	**0.409**	**0.571**	**0.402**	**0.605**
		Back	0.220	0.245	0.522	0.213	0.572	0.179	0.616	**0.987**	**1.037**	**0.921**	**0.612**	**0.971**	**1.015**
	LTE Band 4_UAT	Front	0.073	0.089	0.168	0.330	0.161	0.077	0.364	**0.330**	**0.323**	**0.318**	**0.480**	**0.311**	**0.514**
		Back	0.088	0.245	0.522	0.213	0.572	0.179	0.616	**0.855**	**0.905**	**0.789**	**0.480**	**0.839**	**0.883**
	LTE Band 12_UAT	Front	0.201	0.089	0.168	0.330	0.161	0.077	0.364	**0.458**	**0.451**	**0.446**	**0.608**	**0.439**	**0.642**
		Back	0.267	0.245	0.522	0.213	0.572	0.179	0.616	**1.034**	**1.084**	**0.968**	**0.659**	**1.018**	**1.062**
	LTE Band 13_UAT	Front	0.109	0.089	0.168	0.330	0.161	0.077	0.364	**0.366**	**0.359**	**0.354**	**0.516**	**0.347**	**0.550**
		Back	0.144	0.245	0.522	0.213	0.572	0.179	0.616	**0.911**	**0.961**	**0.845**	**0.536**	**0.895**	**0.939**
	LTE Band 26_UAT	Front	0.207	0.089	0.168	0.330	0.161	0.077	0.364	**0.464**	**0.457**	**0.452**	**0.614**	**0.445**	**0.648**
		Back	0.268	0.245	0.522	0.213	0.572	0.179	0.616	**1.035**	**1.085**	**0.969**	**0.660**	**1.019**	**1.063**
	LTE Band 38_UAT	Front	0.156	0.089	0.168	0.330	0.161	0.077	0.364	**0.413**	**0.406**	**0.401**	**0.563**	**0.394**	**0.597**
		Back	0.372	0.245	0.522	0.213	0.572	0.179	0.616	**1.139**	**1.189**	**1.073**	**0.764**	**1.123**	**1.167**
	LTE Band 41_UAT	Front	0.178	0.089	0.168	0.330	0.161	0.077	0.364	**0.435**	**0.428**	**0.423**	**0.585**	**0.416**	**0.619**
		Back	0.505	0.245	0.522	0.213	0.572	0.179	0.616	**1.272**	**1.322**	**1.206**	**0.897**	**1.256**	**1.300**

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	0.158	0.089	0.168	0.330	0.161	0.077	0.364	**0.415**	**0.408**	**0.403**	**0.565**	**0.396**	**0.599**
		Back	0.275	0.245	0.522	0.213	0.572	0.179	0.616	**1.042**	**1.092**	**0.976**	**0.667**	**1.026**	**1.070**
	GSM1900_LAT	Front	0.267	0.089	0.168	0.330	0.161	0.077	0.364	**0.524**	**0.517**	**0.512**	**0.674**	**0.505**	**0.708**
		Back	0.323	0.245	0.522	0.213	0.572	0.179	0.616	**1.090**	**1.140**	**1.024**	**0.715**	**1.074**	**1.118**
WCDMA	WCDMA II_LAT	Front	0.569	0.089	0.168	0.330	0.161	0.077	0.364	**0.826**	**0.819**	**0.814**	**0.976**	**0.807**	**1.010**
		Back	0.758	0.245	0.522	0.213	0.572	0.179	0.616	**1.525**	**1.575**	**1.459**	**1.150**	**1.509**	**1.553**
	WCDMA IV_LAT	Front	0.365	0.089	0.168	0.330	0.161	0.077	0.364	**0.622**	**0.615**	**0.610**	**0.772**	**0.603**	**0.806**
		Back	0.562	0.245	0.522	0.213	0.572	0.179	0.616	**1.329**	**1.379**	**1.263**	**0.954**	**1.313**	**1.357**
	WCDMA V_LAT	Front	0.146	0.089	0.168	0.330	0.161	0.077	0.364	**0.403**	**0.396**	**0.391**	**0.553**	**0.384**	**0.587**
		Back	0.195	0.245	0.522	0.213	0.572	0.179	0.616	**0.962**	**1.012**	**0.896**	**0.587**	**0.946**	**0.990**
CDMA	LTE Band 2_LAT	Front	0.606	0.089	0.168	0.330	0.161	0.077	0.364	**0.863**	**0.856**	**0.851**	**1.013**	**0.844**	**1.047**
		Back	0.776	0.245	0.522	0.213	0.572	0.179	0.616	**1.543**	**1.593**	**1.477**	**1.168**	**1.527**	**1.571**
LTE	LTE Band 4_LAT	Front	0.406	0.089	0.168	0.330	0.161	0.077	0.364	**0.663**	**0.656**	**0.651**	**0.813**	**0.644**	**0.847**
		Back	0.625	0.245	0.522	0.213	0.572	0.179	0.616	**1.392**	**1.442**	**1.326**	**1.017**	**1.376**	**1.420**
	LTE Band 12_LAT	Front	0.172	0.089	0.168	0.330	0.161	0.077	0.364	**0.429**	**0.422**	**0.417**	**0.579**	**0.410**	**0.613**
		Back	0.238	0.245	0.522	0.213	0.572	0.179	0.616	**1.005**	**1.055**	**0.939**	**0.630**	**0.989**	**1.033**
	LTE Band 13_LAT	Front	0.212	0.089	0.168	0.330	0.161	0.077	0.364	**0.469**	**0.462**	**0.457**	**0.619**	**0.450**	**0.653**
		Back	0.262	0.245	0.522	0.213	0.572	0.179	0.616	**1.029**	**1.079**	**0.963**	**0.654**	**1.013**	**1.057**
	LTE Band 26_LAT	Front	0.133	0.089	0.168	0.330	0.161	0.077	0.364	**0.390**	**0.383**	**0.378**	**0.540**	**0.371**	**0.574**
		Back	0.208	0.245	0.522	0.213	0.572	0.179	0.616	**0.975**	**1.025**	**0.909**	**0.600**	**0.959**	**1.003**
	LTE Band 38_LAT	Front	0.484	0.089	0.168	0.330	0.161	0.077	0.364	**0.741**	**0.734**	**0.729**	**0.891**	**0.722**	**0.925**
		Back	0.402	0.245	0.522	0.213	0.572	0.179	0.616	**1.169**	**1.219**	**1.103**	**0.794**	**1.153**	**1.197**
	LTE Band 41_LAT	Front	0.439	0.089	0.168	0.330	0.161	0.077	0.364	**0.696**	**0.689**	**0.684**	**0.846**	**0.677**	**0.880**
		Back	0.405	0.245	0.522	0.213	0.572	0.179	0.616	**1.172**	**1.222**	**1.106**	**0.797**	**1.156**	**1.200**

14.5 Product Specific Exposure Conditions

Exposure Position	1	2	1+2 Summed 10g SAR (W/kg)
	5GHz WLAN Ant 4	5GHz WLAN Ant 5	
	10g SAR (W/kg)	10g SAR (W/kg)	
Front	0.602	0.480	**1.082**
Back	0.515	1.809	**2.324**
Right side	0.129	1.583	**1.712**
Top side	0.471	0.059	**0.530**

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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 ≤ 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.