FCC SAR TEST REPORT

FCC ID	:	**A4RG020A**
Equipment	:	**Smartphone**
Model Name	:	**G020A**
Applicant	:	**Google LLC** **1600 Amphitheatre Parkway,** **Mountain View, California, 94043 USA**
Standard	:	**FCC 47 CFR Part 2 (2.1093)** **ANSI/IEEE C95.1-1992** **IEEE 1528-2013**

The product was received on Oct. 28, 2019 and testing was started from Oct. 28, 2019 and completed on Nov. 06, 2019. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

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

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA9O2113	01	Initial issue of report	Nov. 13. 2019
FA9O2113	02	Update section 3.1 note and section 15 note.	Nov. 17. 2019

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Google LLC, Smartphone, G020A, 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	0.34	0.61	0.61		1.59
	GSM1900	0.22	0.66	0.77		
	WCDMA II	0.78	1.13	1.16		
	WCDMA IV	0.35	0.62	0.79		
	WCDMA V		0.21	0.21		
	CDMA BC0	0.41	0.55	0.60		
	CDMA BC1	0.68	1.05	1.13		
	CDMA BC10	0.39	0.43	0.45		
	LTE Band 7	0.68	1.03	1.03		
	LTE Band 2 / 25	0.73	1.01	1.01		
	LTE Band 4 / 66	0.48	0.72	0.89		
	LTE Band 38		0.26	0.26		
	LTE Band 41		0.20	0.20		
DTS	2.4GHz WLAN	0.40	0.55	0.55		1.53
NII	5GHz WLAN	0.67	1.03	1.19	3.04	1.59
Date of Testing:		2019/10/28 ~ 2019/11/6				

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) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications

Reviewed by: Jason Wang
Report Producer: Wan Liu

2. Guidance Applied

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

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01
- FCC KDB 941225 D07 UMPC Mini Tablet v01r02

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Smartphone
Model Name	G020A
FCC ID	A4RG020A
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz CDMA2000 BC0: 824.7 MHz ~ 848.31 MHz CDMA 2000 BC1: 1851.25 MHz ~ 1908.75 MHz CDMA 2000 BC10: 817.9 MHz ~ 823.1 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2472 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
Mode	GSM/GPRS/EGPRS/DTM RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA CDMA2000 : 1xRTT/1xEv-Do(Rev.0)/1xEv-Do(Rev.A) LTE: QPSK, 16QAM, 64QAM WLAN: 802.11a/b/g/n/ac HT20 / HT40 / VHT20 / VHT40 / VHT80 Bluetooth BR/EDR/LE NFC:ASK
GSM / (E)GPRS Dual Transfer mode	Class A – EUT can support Packet Switched and Circuit Switched Network simultaneously.
EUT Stage	Production Unit

Remark:

1. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
2. In this report the Bluetooth test result is referred to BUREAU VERITAS SAR test report (FCC ID: A4RG020A, Report No.: SA181001C06-2).
3. This is a Class II permissive change test report and the test plan is included in the operational description.
4. For spot check worst case of body exposure condition was referring to BUREAU VERITAS SAR test report (FCC ID: A4RG020A, Report No.: SA181001C06-2).

3.2 Maximum Tune-up Limit

General Note:

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

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

WLAN OFF					
Band	Default Tune up Power (dBm)	Head Power Mode		Body-Worn / Hotspot Mode	
		Ant-0 Default Power	Ant-1 Power table 2	Ant-0 Default Power	Ant-1 Default Power
WCDMA Band II	25.1 / -2.4	25.1 / -2.4	NA	25.1 / -2.4	25.1 / -2.4
WCDMA Band IV	24.0 / -3	24.0 / -3	NA	24.0 / -3	24.0 / -3
WCDMA Band V	24.5 / -3	24.5 / -3	NA	24.5 / -3	24.5 / -3
CDMA BC0	25.5 / -3	25.5 / -3	NA	25.5 / -3	25.5 / -3
CDMA BC1	25.0 / -3	25.0 / -3	NA	25.0 / -3	25.0 / -3
CDMA BC10	25.5 / -3	25.5 / -3	NA	25.5 / -3	25.5 / -3
LTE 2	25.1 / -2.4	25.1 / -2.4	NA	25.1 / -2.4	25.1 / -2.4
LTE 4	24.5 / -3	24.5 / -3	NA	24.5 / -3	24.5 / -3
LTE 5	25.7 / -3	25.7 / -3	NA	25.7 / -3	25.7 / -3
LTE 12	25.7 / -3	25.7 / -3	NA	25.7 / -3	25.7 / -3
LTE 13	25.3 / -3	25.3 / -3	25.3 / -3	25.3 / -3	25.3 / -3
LTE 17	25.7 / -3	25.7 / -3	NA	25.7 / -3	25.7 / -3
LTE 25	25.1 / -2.4	25.1 / -2.4	NA	25.1 / -2.4	25.1 / -2.4
LTE 26	25.7 / -3	25.7 / -3	NA	25.7 / -3	25.7 / -3
LTE 66	24.5 / -3	24.5 / -3	NA	24.5 / -3	24.5 / -3

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

WLAN ON						
Band		Default Tune up Power (dBm)	Head Mode		Body-Worn / Hotspot Mode	
			Ant-0 Default Power	Ant-1 Power table 1	Ant-0 Default Power	Ant-1 Default Power
GSM850	GSM (GMSK, 1Tx-slot)	34.0 / -3	34.0 / -3	NA	31.5 / -3	NA
	GPRS (GMSK, 1Tx-slot)	34.0 / -3	34.0 / -3	NA	31.5 / -3	NA
	GPRS (GMSK, 2Tx-slot)	32.0 / -3	32.0 / -3	NA	29.5 / -3	NA
	GPRS (GMSK, 3Tx-slot)	30.0 / -3	30.0 / -3	NA	27.5 / -3	NA
	GPRS (GMSK, 4Tx-slot)	29.0 / -3	29.0 / -3	NA	26.5 / -3	NA
	DTM (GMSK, 2Tx-slot)	32.0 / -3	32.0 / -3	NA	29.5 / -3	NA
	DTM (GMSK, 3Tx-slot)	30.0 / -3	30.0 / -3	NA	27.5 / -3	NA
	EDGE (8PSK, 1Tx-slot)	28.0 / -3	28.0 / -3	NA	25.5 / -3	NA
	EDGE (8PSK, 2Tx-slot)	27.0 / -3	27.0 / -3	NA	24.5 / -3	NA
	EDGE (8PSK, 3Tx-slot)	25.0 / -3	25.0 / -3	NA	22.5 / -3	NA
	EDGE (8PSK, 4Tx-slot)	23.0 / -3	23.0 / -3	NA	20.5 / -3	NA
	DTM (8PSK, 2Tx-slot)	27.0 / -3	27.0 / -3	NA	24.5 / -3	NA
	DTM (8PSK, 3Tx-slot)	25.0 / -3	25.0 / -3	NA	22.5 / -3	NA
GSM1900	GSM (GMSK, 1Tx-slot)	31.0 / -3	31.0 / -3	NA	27.5 / -3	NA
	GPRS (GMSK, 1Tx-slot)	31.0 / -3	31.0 / -3	NA	27.5 / -3	NA
	GPRS (GMSK, 2Tx-slot)	29.5 / -3	29.5 / -3	NA	26.0 / -3	NA
	GPRS (GMSK, 3Tx-slot)	27.5 / -3	27.5 / -3	NA	24.0 / -3	NA
	GPRS (GMSK, 4Tx-slot)	26.5 / -3	26.5 / -3	NA	23.0 / -3	NA
	DTM (GMSK, 2Tx-slot)	29.5 / -3	29.5 / -3	NA	26.0 / -3	NA
	DTM (GMSK, 3Tx-slot)	27.5 / -3	27.5 / -3	NA	24.0 / -3	NA
	EDGE (8PSK, 1Tx-slot)	27.0 / -3	27.0 / -3	NA	23.5 / -3	NA
	EDGE (8PSK, 2Tx-slot)	26.0 / -3	26.0 / -3	NA	22.5 / -3	NA
	EDGE (8PSK, 3Tx-slot)	25.0 / -3	25.0 / -3	NA	21.5 / -3	NA
	EDGE (8PSK, 4Tx-slot)	24.0 / -3	24.0 / -3	NA	20.5 / -3	NA
	DTM (8PSK, 2Tx-slot)	26.0 / -3	26.0 / -3	NA	22.5 / -3	NA
	DTM (8PSK, 3Tx-slot)	25.0 / -3	25.0 / -3	NA	21.5 / -3	NA

WLAN ON					
Band	Default Tune up Power (dBm)	Head Power Mode		Body-Worn / Hotspot Mode	
		Ant-0 Default Power	Ant-1 Power table 1	Ant-0 Default Power	Ant-1 Default Power
WCDMA Band II	25.1 / -2.4	22.2 / -3	NA	19.7 / -3	NA
WCDMA Band IV	24.0 / -3	24.0 / -3	NA	19.5 / -3	NA
WCDMA Band V	24.5 / -3	24.5 / -3	NA	22.0 / -3	NA
CDMA BC0	25.5 / -3	25.5 / -3	NA	22.5 / -3	NA
CDMA BC1	25.0 / -3	22.5 / -3	NA	19.5 / -3	NA
CDMA BC10	25.5 / -3	25.5 / -3	NA	23.0 / -3	NA
LTE 2	25.1 / -2.4	22.2 / -3	NA	19.7 / -3	NA
LTE 4	24.5 / -3	23.5 / -3	NA	20.5 / -3	NA
LTE 5	25.7 / -3	25.7 / -3	NA	25.7 / -3	NA
LTE 12	25.7 / -3	25.7 / -3	NA	25.7 / -3	NA
LTE 13	25.3 / -3	25.3 / -3	NA	25.3 / -3	NA
LTE 17	25.7 / -3	25.7 / -3	NA	25.7 / -3	NA
LTE 25	25.1 / -2.4	22.2 / -3	NA	19.7 / -3	NA
LTE 26	25.7 / -3	25.7 / -3	NA	25.7 / -3	NA
LTE 66	24.5 / -3	23.5 / -3	NA	20.5 / -3	NA

WLAN ON					
Band	Default Tune up Power (dBm)	Head Power Mode		Body-Worn / Hotspot Mode	
		Ant-2 Default Power	Ant-3 Power table 1	Ant-2 Default Power	Ant-3 Default Power
LTE 7	24.5 / -3	23.0 / -3	NA	19.0 / -3	NA
LTE 38	25.7 / -3	25.7 / -3	NA	22.2 / -3	NA
LTE 41	25.0 / -3	25.0 / -3	NA	20.5 / -3	NA

WLAN 2.4GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11b	1	15.0 / -3	14.0 / -3	18.0 / -3	18.0 / -3
	6	15.0 / -3	14.0 / -3	18.0 / -3	18.0 / -3
	11	15.0 / -3	14.0 / -3	16.0 / -3	16.0 / -3
	12	15.0 / -3	14.0 / -3	16.0 / -3	16.0 / -3
	13	7.5 / -3	7.5 / -3	7.5 / -3	7.5 / -3
802.11g	1	14.5 / -3	14.0 / -3	14.5 / -3	14.5 / -3
	6	15.0 / -3	14.0 / -3	18.0 / -3	18.0 / -3
	11	15.0 / -3	14.0 / -3	15.5 / -3	15.5 / -3
	12	12.0 / -3	12.0 / -3	12.0 / -3	12.0 / -3
	13	-1.0 / -3	-1.0 / -3	-1.0 / -3	-1.0 / -3
802.11n HT20	1	14.0 / -3	14.0 / -3	14.0 / -3	14.0 / -3
	6	15.0 / -3	14.0 / -3	18.0 / -3	18.0 / -3
	11	14.0 / -3	14.0 / -3	14.0 / -3	14.0 / -3
	12	11.5 / -3	11.5 / -3	11.5 / -3	11.5 / -3
	13	-1.0 / -3	-1.0 / -3	-1.0 / -3	-1.0 / -3
802.11ac VHT20	1	14.0 / -3	14.0 / -3	14.0 / -3	14.0 / -3
	6	15.0 / -3	14.0 / -3	18.0 / -3	18.0 / -3
	11	14.0 / -3	14.0 / -3	14.0 / -3	14.0 / -3
	12	11.5 / -3	11.5 / -3	11.5 / -3	11.5 / -3
	13	-1.0 / -3	-1.0 / -3	-1.0 / -3	-1.0 / -3

WLAN 2.4GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11b	1	13.0 / -3	13.0 / -3	16.0/ -3	18.0 / -3	18.0 / -3	21.0 / -3
	6	13.0 / -3	13.0 / -3	16.0/ -3	18.0 / -3	18.0 / -3	21.0 / -3
	11	13.0 / -3	13.0 / -3	16.0/ -3	16.0 / -3	16.0 / -3	19.0 / -3
	12	13.0 / -3	13.0 / -3	16.0/ -3	16.0 / -3	16.0 / -3	19.0 / -3
	13	7.5 / -3	7.5 / -3	10.5 / -3	7.5 / -3	7.5 / -3	10.5 / -3
802.11g	1	13.0 / -3	13.0 / -3	16.0/ -3	14.5 / -3	14.5 / -3	17.5 / -3
	6	13.0 / -3	13.0 / -3	16.0/ -3	18.0 / -3	18.0 / -3	21.0 / -3
	11	13.0 / -3	13.0 / -3	16.0/ -3	15.5 / -3	15.5 / -3	18.5 / -3
	12	12.0 / -3	12.0 / -3	15.0 / -3	12.0 / -3	12.0 / -3	15.0 / -3
	13	-1.0 / -3	-1.0 / -3	2.0 / -3	-1.0 / -3	-1.0 / -3	2.0 / -3
802.11n HT20	1	13.0 / -3	13.0 / -3	16.0/ -3	14.0 / -3	14.0 / -3	17.0 / -3
	6	13.0 / -3	13.0 / -3	16.0/ -3	18.0 / -3	18.0 / -3	21.0 / -3
	11	13.0 / -3	13.0 / -3	16.0/ -3	14.0 / -3	14.0 / -3	17.0 / -3
	12	11.5 / -3	11.5 / -3	14.5 / -3	11.5 / -3	11.5 / -3	14.5 / -3
	13	-1.0 / -3	-1.0 / -3	2.0 / -3	-1.0 / -3	-1.0 / -3	2.0 / -3
802.11ac VHT20	1	13.0 / -3	13.0 / -3	16.0/ -3	14.0 / -3	14.0 / -3	17.0 / -3
	6	13.0 / -3	13.0 / -3	16.0/ -3	18.0 / -3	18.0 / -3	21.0 / -3
	11	13.0 / -3	13.0 / -3	16.0/ -3	14.0 / -3	14.0 / -3	17.0 / -3
	12	11.5 / -3	11.5 / -3	14.5 / -3	11.5 / -3	11.5 / -3	14.5 / -3
	13	-1.0 / -3	-1.0 / -3	2.0 / -3	-1.0 / -3	-1.0 / -3	2.0 / -3

WLAN 5.2GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11a	36	12 / -3	12 / -3	15.5 / -3	15.5 / -3
	40	12 / -3	12 / -3	17.5 / -3	17.5 / -3
	44	12 / -3	12 / -3	17.5 / -3	17.5 / -3
	48	12 / -3	12 / -3	17.5 / -3	17.5 / -3
802.11n HT20	36	12 / -3	12 / -3	15.5 / -3	15.5 / -3
	40	12 / -3	12 / -3	17.5 / -3	17.5 / -3
	44	12 / -3	12 / -3	17.5 / -3	17.5 / -3
	48	12 / -3	12 / -3	17.5 / -3	17.5 / -3
802.11n HT40	38	12 / -3	12 / -3	12.5 / -3	12.5 / -3
	46	12 / -3	12 / -3	17.5 / -3	17.5 / -3
802.11ac VHT20	36	12 / -3	12 / -3	15.5 / -3	15.5 / -3
	40	12 / -3	12 / -3	17.5 / -3	17.5 / -3
	44	12 / -3	12 / -3	17.5 / -3	17.5 / -3
	48	12 / -3	12 / -3	17.5 / -3	17.5 / -3
802.11ac VHT40	38	12 / -3	12 / -3	12.5 / -3	12.5 / -3
	46	12 / -3	12 / -3	17.5 / -3	17.5 / -3
802.11ac VHT80	42	11.5 / -3	11.5 / -3	11.5 / -3	11.5 / -3

WLAN 5.2GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11a	36	12.0 / -3	12.0 / -3	15 / -3	15.5 / -3	15.5 / -3	18.5 / -3
	40	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	44	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	48	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11n HT20	36	12.0 / -3	12.0 / -3	15 / -3	15.5 / -3	15.5 / -3	18.5 / -3
	40	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	44	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	48	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11n HT40	38	12.0 / -3	12.0 / -3	15 / -3	12.5/ -3	12.5/ -3	15.5/ -3
	46	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT20	36	12.0 / -3	12.0 / -3	15 / -3	15.5 / -3	15.5 / -3	18.5 / -3
	40	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	44	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	48	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT40	38	12.0 / -3	12.0 / -3	15 / -3	12.5 / -3	12.5 / -3	15.5 / -3
	46	12.0 / -3	12.0 / -3	15 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT80	42	11.5 / -3	11.5 / -3	14.5 / -3	11.5 / -3	11.5 / -3	14.5 / -3

WLAN 5.3GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11a	52	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	56	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	60	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	64	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
802.11n HT20	52	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	56	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	60	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	64	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
802.11n HT40	54	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	62	12.0 / -3	12.0 / -3	13.0 / -3	13.0 / -3
802.11ac VHT20	52	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	56	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	60	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	64	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
802.11ac VHT40	54	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	62	12.0 / -3	12.0 / -3	13.0 / -3	13.0 / -3
802.11ac VHT80	58	12.0 / -3	12.0 / -3	12.0 / -3	12.0 / -3

WLAN 5.3GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11a	52	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	56	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	60	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	64	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11n HT20	52	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	56	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	60	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	64	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11n HT40	54	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	62	12.0 / -3	12.0 / -3	15.0 / -3	13.0 / -3	13.0 / -3	16.0 / -3
802.11ac VHT20	52	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	56	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	60	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	64	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT40	54	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	62	12.0 / -3	12.0 / -3	15.0 / -3	13.0 / -3	13.0 / -3	16.0 / -3
802.11ac VHT80	58	12.0 / -3	12.0 / -3	15.0 / -3	12.0 / -3	12.0 / -3	15.0 / -3

WLAN 5.6GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11a	100	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	116	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	120	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	124	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	132	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	140	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	144	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
802.11n HT20	100	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	116	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	120	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	124	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	132	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	140	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	144	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
802.11n HT40	102	11.5 / -3	13.0 / -3	13.0 / -3	13.0 / -3
	110	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	118	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	126	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	134	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	142	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
802.11ac VHT20	100	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	116	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	120	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	124	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	132	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	140	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	144	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
802.11ac VHT40	102	11.5 / -3	13.0 / -3	13.0 / -3	13.0 / -3
	110	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	118	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	126	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	134	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	142	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
802.11ac VHT80	106	11.0 / -3	11.0 / -3	11.0 / -3	11.0 / -3
	122	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3
	138	11.5 / -3	14.0 / -3	17.5 / -3	17.5 / -3

WLAN 5.6GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11a	100	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	116	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	120	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	124	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	132	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	140	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	144	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11n HT20	100	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	116	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	120	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	124	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	132	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	140	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	144	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11n HT40	102	12.0 / -3	12.0 / -3	15.0 / -3	13.0 / -3	13.0 / -3	16.0 / -3
	110	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	118	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	126	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	134	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	142	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT20	100	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	116	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	120	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	124	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	132	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	140	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	144	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT40	102	12.0 / -3	12.0 / -3	15.0 / -3	13.0 / -3	13.0 / -3	16.0 / -3
	110	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	118	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	126	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	134	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	142	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT80	106	11.0 / -3	11.0 / -3	14.0 / -3	11.0 / -3	11.0 / -3	14.0 / -3
	122	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	138	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3

WLAN 5.8GHz <SISO>					
Mode	Channel	WWAN OFF/ON			
		Head		Body-Worn / Hotspot	
		SISO Ant-0 Power table 1	SISO Ant-1 Power table 1	SISO Ant-0 Power table 2	SISO Ant-1 Power table 2
802.11a	149	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	153	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	157	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	161	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	165	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
802.11n HT20	149	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	153	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	157	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	161	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	165	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
802.11n HT40	151	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	159	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
802.11ac VHT20	149	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	153	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	157	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	161	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	165	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
802.11ac VHT40	151	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
	159	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3
802.11ac VHT80	155	12.0 / -3	12.0 / -3	17.5 / -3	17.5 / -3

WLAN 5.8GHz <MIMO>							
Mode	Channel	WWAN OFF/ON					
		Head			Body-Worn / Hotspot		
		MIMO Ant-0 Power table 1	MIMO Ant-1 Power table 1	MIMO Ant-0+1 Power table 1	MIMO Ant-0 Power table 2	MIMO Ant-1 Power table 2	MIMO Ant-0+1 Power table 2
802.11a	149	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	153	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	157	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	161	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	165	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11n HT20	149	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	153	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	157	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	161	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	165	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11n HT40	151	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	159	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT20	149	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	153	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	157	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	161	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	165	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT40	151	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
	159	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3
802.11ac VHT80	155	12.0 / -3	12.0 / -3	15.0 / -3	17.5 / -3	17.5 / -3	20.5 / -3

Mode	2.4G Bluetooth
Bluetooth DH	18.0 / -4
Bluetooth 2DH	13.0 / -4
Bluetooth 3DH	13.0 / -4
Bluetooth LE	10.0 / -4
Bluetooth 5.0	10.0 / -4

3.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05	
FCC ID	A4RG020A
Equipment Name	Smartphone
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
UE Rel and Cat.	Rel 11, cat 11
uplink modulations used	QPSK / 16QAM / 64QAM
LTE Voice / Data requirements	Voice and Data
LTE MPR permanently built-in by design	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3**
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 conditions SAR compliance; power selection is determined by the device's positioning and usage scenarios.
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to BUREAU VERITAS SAR test report (FCC ID: A4RG020A, Report No.: SA181001C06-2) page 122 and page 123
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.

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

Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
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 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510				
M	21100	2535	21100	2535	21100	2535	21100	2535				
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560				
LTE Band 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
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 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
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

LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

4. RF Exposure Limits

4.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

4.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

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

5. Specific Absorption Rate (SAR)

5.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

5.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

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

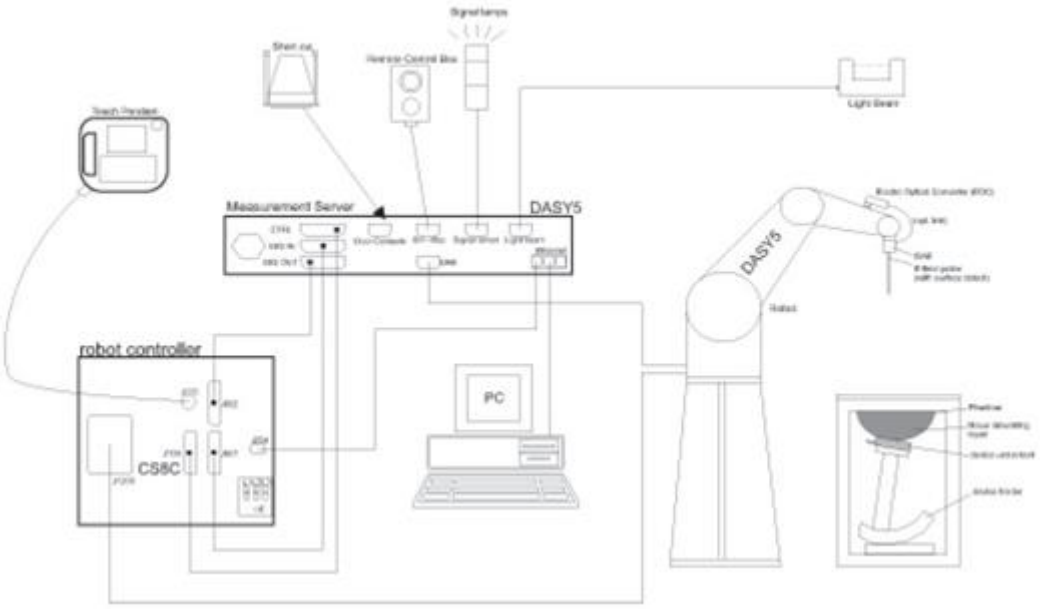
SAR is expressed in units of Watts per kilogram (W/kg)

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

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.

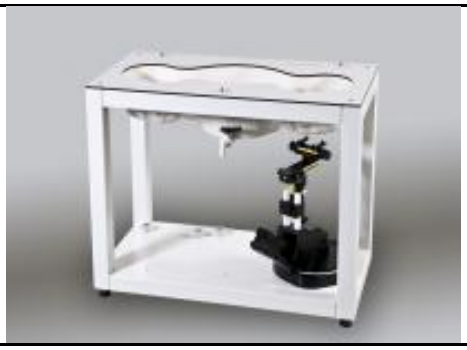
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig 5.1 Photo of DAE

6.3 Phantom

<SAM Twin Phantom>

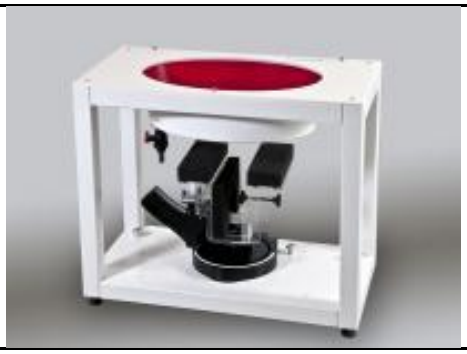
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
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	835MHz System Validation Kit	D835V2	4d167	Mar. 08, 2019	Mar. 07, 2020
SPEAG	1750MHz System Validation Kit	D1750V2	1112	Mar. 07, 2019	Mar. 06, 2020
SPEAG	1900MHz System Validation Kit	D1900V2	5d185	Mar. 07, 2019	Mar. 06, 2020
SPEAG	2450MHz System Validation Kit	D2450V2	929	Mar. 06, 2019	Mar. 05, 2020
SPEAG	2600MHz System Validation Kit	D2600V2	1078	Mar. 06, 2019	Mar. 05, 2020
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Sep. 27, 2018	Sep. 26, 2020
SPEAG	Data Acquisition Electronics	DAE4	316	Jan. 03, 2019	Jan. 02, 2020
SPEAG	Data Acquisition Electronics	DAE4	853	Jul. 18, 2019	Jul. 17, 2020
SPEAG	Data Acquisition Electronics	DAE4	1311	Aug. 27, 2019	Aug. 26, 2020
SPEAG	Dosimetric E-Field Probe	ES3DV3	3124	Jan. 15, 2019	Jan. 14, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	3642	Apr. 29, 2019	Apr. 28, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	3925	Sep. 20, 2019	Sep. 19, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	7346	Apr. 25, 2019	Apr. 24, 2020
RCPTWN	Thermometer	HTC-1	TM685-1	Nov. 19, 2018	Nov. 18, 2019
RCPTWN	Thermometer	HTC-1	TM560-2	Nov. 19, 2018	Nov. 18, 2019
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Apr. 21, 2019	Apr. 20, 2020
Agilent	Wireless Communication Test Set	E5515C	MY50266977	May. 27, 2019	May. 26, 2020
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Dec. 11, 2018	Dec. 10, 2019
Agilent	ENA Network Analyzer	E5071C	MY46104758	Sep. 06, 2019	Sep. 05, 2020
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 18, 2019	Sep. 17, 2020
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3169	Sep. 10, 2019	Sep. 09, 2020
Anritsu	Power Meter	ML2495A	1036004	Aug. 08, 2019	Aug. 07, 2020
Anritsu	Power Sensor	MA2411B	1027253	Aug. 08, 2019	Aug. 07, 2020
Anritsu	Power Meter	ML2495A	1419002	May. 29, 2019	May. 28, 2020
Anritsu	Power Sensor	MA2411B	1339124	May. 29, 2019	May. 28, 2020
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 27, 2019	Aug. 26, 2020
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jun. 27, 2019	Jun. 26, 2020
Mini-Circuits	Power Amplifier	ZHL-42W+	321501827	Aug. 12, 2019	Aug. 11, 2020
Mini-Circuits	Power Amplifier	ZHL-42W+	715701915	May. 10, 2019	May. 09, 2020
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

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.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole D5GHzV2, SN: 1006 can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

9. System Verification

9.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.2.

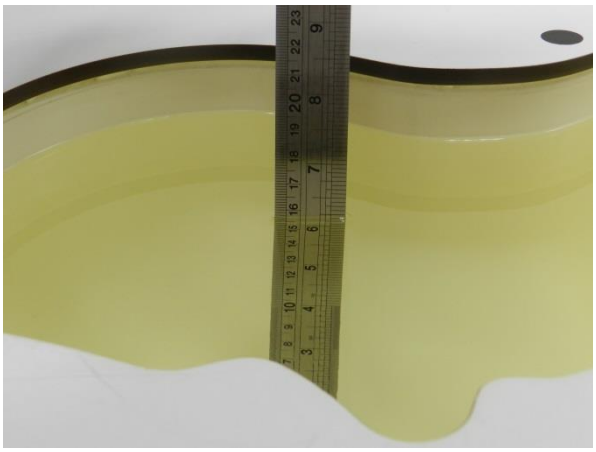


Fig 10.1Photo of Liquid Height for Head SAR

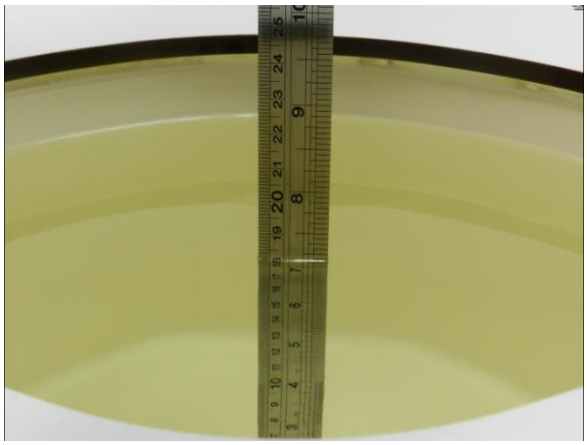


Fig 10.2 Photo of Liquid Height for Body SAR

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)
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
835	22.3	0.896	42.318	0.90	41.50	-0.44	1.97	±5	2019/10/31
835	22.3	0.896	42.318	0.90	41.50	-0.44	1.97	±5	2019/10/31
1750	22.2	1.347	40.458	1.37	40.10	-1.68	0.89	±5	2019/10/29
1750	22.2	1.389	39.608	1.37	40.10	1.39	-1.23	±5	2019/10/30
1750	22.6	1.383	41.198	1.37	40.10	0.95	2.74	±5	2019/11/3
1900	22.2	1.450	38.066	1.40	40.00	3.57	-4.83	±5	2019/10/29
1900	22.2	1.450	38.066	1.40	40.00	3.57	-4.83	±5	2019/10/29
1900	22.5	1.388	38.629	1.40	40.00	-0.86	-3.43	±5	2019/11/1
1900	22.9	1.408	40.718	1.40	40.00	0.57	1.80	±5	2019/11/3
1900	22.5	1.417	40.819	1.40	40.00	1.21	2.05	±5	2019/11/6
2450	22.7	1.785	38.405	1.80	39.20	-0.83	-2.03	±5	2019/10/28
2450	22.6	1.801	38.465	1.80	39.20	0.06	-1.88	±5	2019/10/29
2600	22.5	1.963	38.136	1.96	39.00	0.15	-2.22	±5	2019/11/1
2600	22.7	1.910	37.746	1.96	39.00	-2.55	-3.22	±5	2019/11/4
2600	22.5	1.975	38.590	1.96	39.00	0.77	-1.05	±5	2019/11/6
5250	22.6	4.611	36.305	4.71	35.95	-2.10	0.99	±5	2019/10/28
5250	22.5	4.607	36.316	4.71	35.95	-2.19	1.02	±5	2019/10/29
5250	22.7	4.610	36.365	4.71	35.95	-2.12	1.15	±5	2019/11/1
5600	22.6	4.970	35.823	5.07	35.50	-1.97	0.91	±5	2019/10/28
5600	22.5	4.966	35.834	5.07	35.50	-2.05	0.94	±5	2019/10/29
5600	22.7	4.968	35.883	5.07	35.50	-2.01	1.08	±5	2019/11/1
5750	22.5	5.116	35.558	5.22	35.35	-1.99	0.59	±5	2019/10/29

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)2	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2019/10/31	835	250	D835V2-4d167	EX3DV4 - SN3642	DAE4 Sn1311	2.41	9.50	9.64	1.47
2019/10/31	835	250	D835V2-4d167	EX3DV4 - SN3925	DAE4 Sn1311	2.42	9.50	9.68	1.89
2019/10/29	1750	250	D1750V2-1112	EX3DV4 - SN7346	DAE4 Sn853	9.76	36.70	39.04	6.38
2019/10/30	1750	250	D1750V2-1112	EX3DV4 - SN3642	DAE4 Sn1311	9.72	36.70	38.88	5.94
2019/11/3	1750	250	D1750V2-1112	EX3DV4 - SN3925	DAE4 Sn1311	9.38	36.70	37.52	2.23
2019/10/29	1900	250	D1900V2-5d185	EX3DV4 - SN3642	DAE4 Sn1311	10.50	39.40	42	6.60
2019/10/29	1900	250	D1900V2-5d185	EX3DV4 - SN7346	DAE4 Sn853	9.46	39.40	37.84	-3.96
2019/11/1	1900	250	D1900V2-5d185	EX3DV4 - SN3642	DAE4 Sn1311	10.40	39.40	41.6	5.58
2019/11/3	1900	250	D1900V2-5d185	EX3DV4 - SN3925	DAE4 Sn1311	10.40	39.40	41.6	5.58
2019/11/6	1900	250	D1900V2-5d185	EX3DV4 - SN3925	DAE4 Sn1311	9.13	39.40	36.52	-7.31
2019/10/28	2450	250	D2450V2-929	ES3DV3 - SN3124	DAE4 Sn316	12.30	52.10	49.2	-5.57
2019/10/29	2450	250	D2450V2-929	ES3DV3 - SN3124	DAE4 Sn316	12.00	52.10	48	-7.87
2019/11/1	2600	250	D2600V2-1078	EX3DV4 - SN3642	DAE4 Sn1311	14.10	57.60	56.4	-2.08
2019/11/4	2600	250	D2600V2-1078	EX3DV4 - SN3925	DAE4 Sn1311	14.30	57.60	57.2	-0.69
2019/11/6	2600	250	D2600V2-1078	EX3DV4 - SN3925	DAE4 Sn1311	13.50	57.60	54	-6.25
2019/10/28	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN7346	DAE4 Sn853	7.88	80.70	78.8	-2.35
2019/10/29	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN7346	DAE4 Sn853	7.87	80.70	78.7	-2.48
2019/11/1	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN7346	DAE4 Sn853	8.13	80.70	81.3	0.74
2019/10/28	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7346	DAE4 Sn853	8.20	83.30	82	-1.56
2019/10/29	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7346	DAE4 Sn853	8.19	83.30	81.9	-1.68
2019/11/1	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7346	DAE4 Sn853	8.20	83.30	82	-1.56
2019/10/29	5750	100	D5GHzV2-1006-5750	EX3DV4 - SN7346	DAE4 Sn853	7.82	80.40	78.2	-2.74

Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2019/11/1	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN7346	DAE4 Sn853	2.31	23.20	23.1	-0.43
2019/11/1	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7346	DAE4 Sn853	2.37	23.80	23.7	-0.42

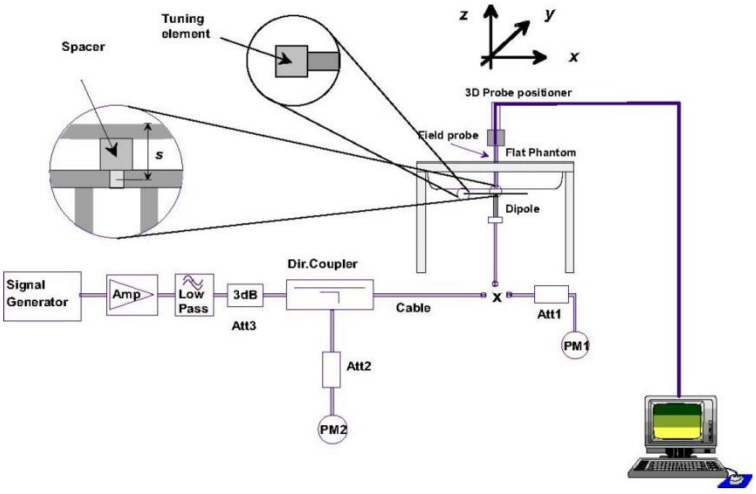


Fig 8.3.1 System Performance Check Setup

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.

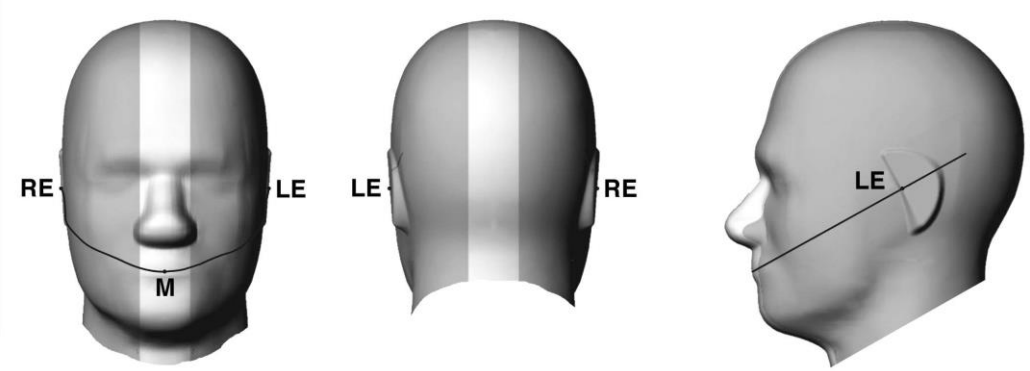


Fig 9.1.1 Front, back, and side views of SAM twin phantom

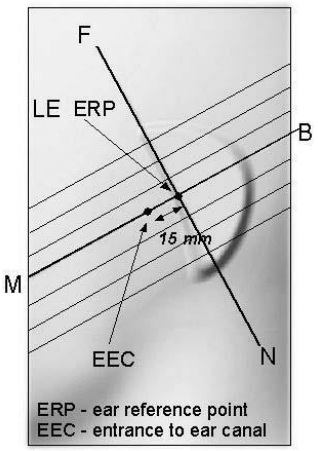


Fig 9.1.2 Close-up side view of phantom showing the ear region.

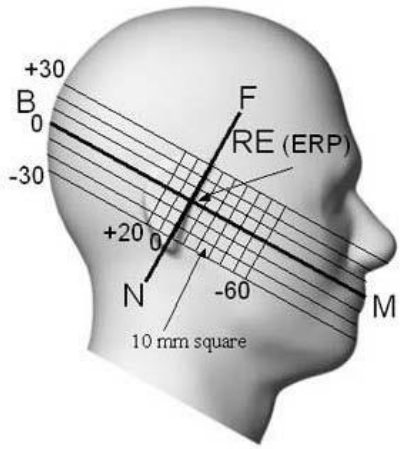


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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.

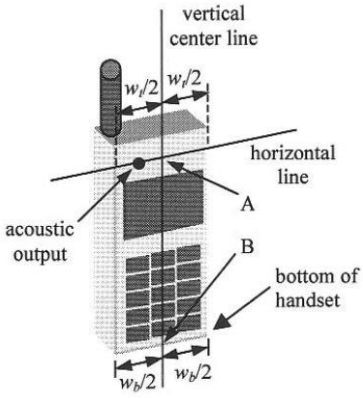


Fig 9.2.1 Handset vertical and horizontal reference lines—"fixed case

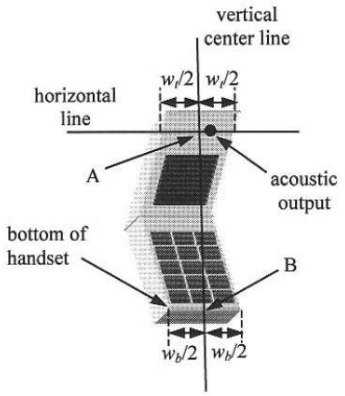


Fig 9.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

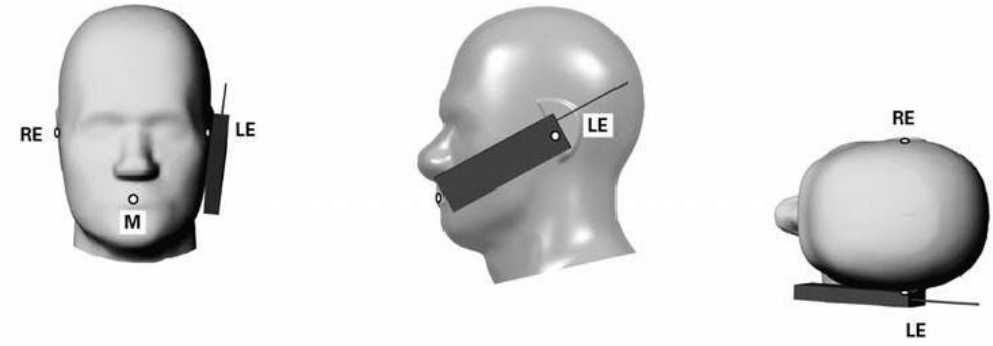


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

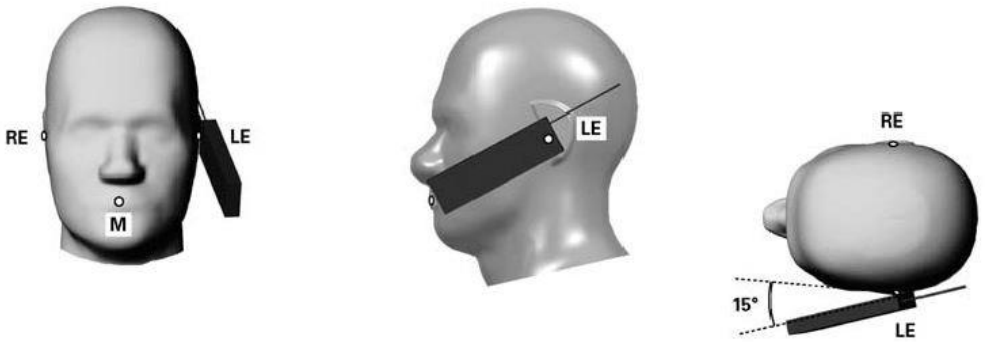


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

10.4 Product Specific Exposure

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

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

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

10.5 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 9.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is > 1.2 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.

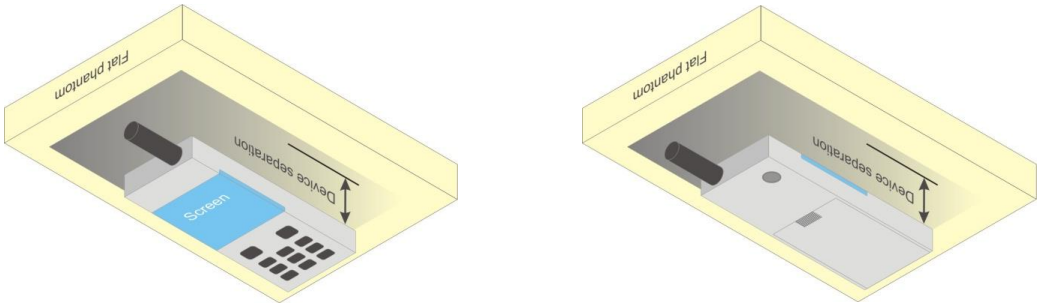


Fig 9.4 Body Worn Position

10.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L 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.

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

<GSM Conducted Power>

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

   *DTM frame average power (dBm) = 10*log [∑(power of each slot, in mW)/8]*
3. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
4. 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.
5. 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

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 / Near body	Ant 0	GSM 1 Tx slot		32.90	32.85	32.80	34.00	23.90	23.85	23.80	25.00
		GPRS 1 Tx slot		32.93	32.86	32.81	34.00	23.93	23.86	23.81	25.00
		GPRS 2 Tx slots		30.66	30.52	30.48	32.00	24.66	24.52	24.48	26.00
		GPRS 3 Tx slots		28.23	28.08	28.05	30.00	23.97	23.82	23.79	25.74
		GPRS 4 Tx slots		27.16	27.11	27.17	29.00	24.16	24.11	24.17	26.00
		EDGE 1 Tx slot		27.05	26.74	26.83	28.00	18.05	17.74	17.83	19.00
		EDGE 2 Tx slots		25.80	25.69	25.85	27.00	19.80	19.69	19.85	21.00
		EDGE 3 Tx slots		23.90	23.55	23.50	25.00	19.64	19.29	19.24	20.74
		EDGE 4 Tx slots		21.54	21.47	21.37	23.00	18.54	18.47	18.37	20.00
		DTM Multi-slot class 5	GSM 1 Tx slot	30.63	30.51	30.43	32.00	24.62	24.48	24.40	25.98
			GPRS 1 Tx slot	30.66	30.49	30.41	32.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.65	30.43	30.38	32.00	24.63	24.43	24.39	25.98
			GPRS 1 Tx slot	30.65	30.48	30.44	32.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.13	28.06	28.05	30.00	23.90	23.77	23.76	25.74
			GPRS 2 Tx slots	28.18	28.02	28.00	30.00				
		DTM Multi-slot class 5	GSM 1 Tx slot	30.56	30.44	30.38	32.00	22.78	22.66	22.63	24.16
			EDGE 1 Tx slot	25.79	25.68	25.75	27.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.61	30.52	30.41	32.00	22.80	22.71	22.68	24.16
			EDGE 1 Tx slot	25.71	25.62	25.85	27.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.14	28.01	28.00	30.00	21.53	21.32	21.29	23.10
			EDGE 2 Tx slots	23.86	23.55	23.47	25.00				

Power Selection	Transmit Antenna	GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		512	661	810		512	661	810	
		Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8	
Head / Near body	Ant 0	GSM 1 Tx slot		29.23	29.48	29.40	31.00	20.23	20.48	20.40	22.00
		GPRS 1 Tx slot		29.25	29.49	29.41	31.00	20.25	20.49	20.41	22.00
		GPRS 2 Tx slots		27.55	27.71	27.61	29.50	21.55	21.71	21.61	23.50
		GPRS 3 Tx slots		26.13	26.11	26.14	27.50	21.87	21.85	21.88	23.24
		GPRS 4 Tx slots		24.99	24.95	24.98	26.50	21.99	21.95	21.98	23.50
		EDGE 1 Tx slot		25.76	25.75	25.79	27.00	16.76	16.75	16.79	18.00
		EDGE 2 Tx slots		24.70	24.37	24.56	26.00	18.70	18.37	18.56	20.00
		EDGE 3 Tx slots		23.53	23.33	23.14	25.00	19.27	19.07	18.88	20.74
		EDGE 4 Tx slots		22.91	22.39	22.43	24.00	19.91	19.39	19.43	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	27.55	27.65	27.58	29.50	21.53	21.66	21.56	23.48
			GPRS 1 Tx slot	27.55	27.71	27.59	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.50	27.64	27.61	29.50	21.48	21.64	21.54	23.48
			GPRS 1 Tx slot	27.51	27.69	27.51	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	26.11	26.07	26.10	27.50	21.85	21.81	21.83	23.24
			GPRS 2 Tx slots	26.11	26.07	26.08	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	27.53	27.70	27.52	29.50	20.31	20.32	20.24	22.07
			EDGE 1 Tx slot	24.67	24.36	24.48	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.51	27.63	27.61	29.50	20.28	20.26	20.31	22.07
			EDGE 1 Tx slot	24.61	24.30	24.51	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	26.05	26.08	26.05	27.50	20.28	20.18	20.06	21.74
			EDGE 2 Tx slots	23.53	23.31	23.11	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	Proces ses	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.		

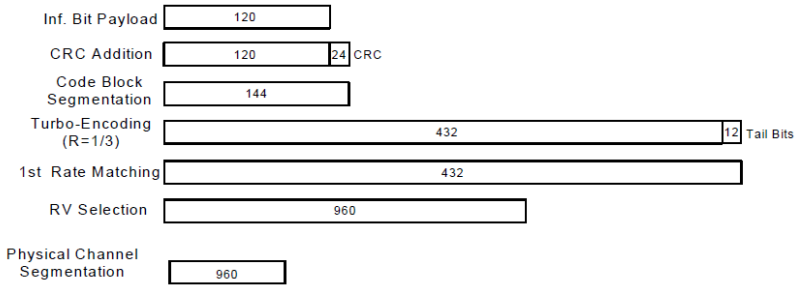


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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.

Power Selection	Transmit Antenna	Band		WCDMA II			WCDMA IV		
		TX Channel		9262	9400	9538	1312	1413	1513
		Rx Channel		9662	9800	9938	1537	1638	1738
		Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6
Head / Near body	Ant 0	Max Power			25.10			24.00	
		3GPP Rel 99	AMR 12.2Kbps	24.38	24.52	24.55	23.07	23.08	23.10
		3GPP Rel 99	RMC 12.2Kbps	24.48	24.61	24.64	23.08	23.09	23.12
		Max Power			24.10			23.00	
		3GPP Rel 6	HSDPA Subtest-1	23.57	23.63	23.74	22.09	22.13	22.11
		3GPP Rel 6	HSDPA Subtest-2	23.61	23.65	23.78	22.11	22.09	22.16
		3GPP Rel 6	HSDPA Subtest-3	23.07	23.18	23.27	21.62	21.62	21.67
		3GPP Rel 6	HSDPA Subtest-4	23.10	23.17	23.28	21.60	21.60	21.66
		Max Power			24.10			23.00	
		3GPP Rel 8	DC-HSDPA Subtest-1	23.56	23.62	23.66	22.03	22.07	22.03
		3GPP Rel 8	DC-HSDPA Subtest-2	23.55	23.60	23.72	22.11	21.99	22.06
		3GPP Rel 8	DC-HSDPA Subtest-3	23.00	23.15	23.18	21.62	21.57	21.61
		3GPP Rel 8	DC-HSDPA Subtest-4	23.00	23.16	23.22	21.55	21.52	21.57
		Max Power			24.10			23.00	
		3GPP Rel 6	HSUPA Subtest-1	23.57	23.65	23.61	21.93	21.97	22.05
		3GPP Rel 6	HSUPA Subtest-2	21.65	21.64	21.65	19.99	20.01	20.08
		3GPP Rel 6	HSUPA Subtest-3	22.39	22.67	22.60	21.01	21.02	21.06
		3GPP Rel 6	HSUPA Subtest-4	21.47	21.66	21.65	19.98	20.03	20.06
		3GPP Rel 6	HSUPA Subtest-5	23.50	23.70	23.70	22.00	22.00	22.10

Power Selection	Transmit Antenna	Band		WCDMA II		
		TX Channel		9262	9400	9538
		Rx Channel		9662	9800	9938
		Frequency (MHz)		1852.4	1880	1907.6
Head / Near body	Ant 1	Max Power		25.10		
		3GPP Rel 99	AMR 12.2Kbps	24.38	24.52	24.55
		3GPP Rel 99	RMC 12.2Kbps	24.48	24.61	24.64
		Max Power		24.10		
		3GPP Rel 6	HSDPA Subtest-1	23.57	23.63	23.74
		3GPP Rel 6	HSDPA Subtest-2	23.61	23.65	23.78
		3GPP Rel 6	HSDPA Subtest-3	23.07	23.18	23.27
		3GPP Rel 6	HSDPA Subtest-4	23.10	23.17	23.28
		Max Power		24.10		
		3GPP Rel 8	DC-HSDPA Subtest-1	23.56	23.62	23.66
		3GPP Rel 8	DC-HSDPA Subtest-2	23.55	23.60	23.72
		3GPP Rel 8	DC-HSDPA Subtest-3	23.00	23.15	23.18
		3GPP Rel 8	DC-HSDPA Subtest-4	23.00	23.16	23.22
		Max Power		24.10		
		3GPP Rel 6	HSUPA Subtest-1	23.57	23.65	23.61
		3GPP Rel 6	HSUPA Subtest-2	21.65	21.64	21.65
		3GPP Rel 6	HSUPA Subtest-3	22.39	22.67	22.60
		3GPP Rel 6	HSUPA Subtest-4	21.47	21.66	21.65
		3GPP Rel 6	HSUPA Subtest-5	23.50	23.70	23.70

<CDMA2000 Conducted Power>

General Note:

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

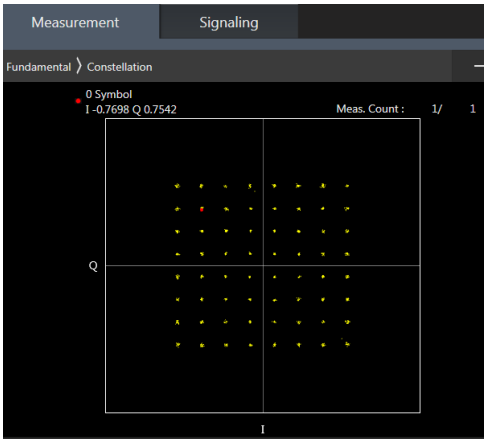
Power Selection	Transmit Antenna	Band	CDMA BC0			CDMA BC10		
		TX Channel	1013	384	777	476	580	684
		Frequency (MHz)	824.7	836.52	848.31	817.9	820.5	823.1
Head / Near body	Ant 0	Max Power	25.50			25.50		
		RC1 SO55	24.39	24.47	24.40	24.58	24.61	24.61
		RC3 SO55	24.41	24.43	24.45	24.70	24.66	24.52
		RC3 SO32 (F+SCH)	24.57	24.55	24.58	24.67	24.64	24.60
		RC3 SO32 (+SCH)	24.43	24.39	24.44	24.64	24.56	24.53
		RTAP 153.6Kbps	24.53	24.47	24.54	24.67	24.67	24.66
		RETAP 4096Bits	24.42	24.38	24.45	24.64	24.68	24.63

Power Selection	Transmit Antenna	Band	CDMA BC1		
		TX Channel	25	600	1175
		Frequency (MHz)	1851.25	1880	1908.75
Head / Near body	Ant 0	Max Power	25.00		
		RC1 SO55	24.15	24.01	24.24
		RC3 SO55	24.15	24.05	24.25
		RC3 SO32 (F+SCH)	24.23	24.14	24.36
		RC3 SO32 (+SCH)	24.23	24.09	24.33
		RTAP 153.6Kbps	24.15	24.06	24.29
		RETAP 4096Bits	24.11	24.05	24.28

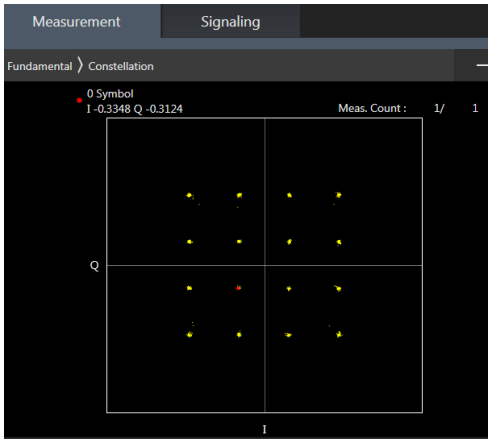
<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not 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. LTE band 2/4 SAR test was covered by Band 25/66; 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
9. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

<LTE Band 2>

Power Selection				Head / Near body					
Transmit Antenna				Ant 0			Ant 1		
Max. Power				25.1			25.1		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100	18700	18900	19100
Frequency (MHz)				1860	1880	1900	1860	1880	1900
20	QPSK	1	0	24.66	24.55	24.74	24.66	24.55	24.74
20	QPSK	1	49	24.58	24.51	24.69	24.58	24.51	24.69
20	QPSK	1	99	24.50	24.55	24.74	24.50	24.55	24.74
20	QPSK	50	0	23.67	23.60	23.69	23.67	23.60	23.69
20	QPSK	50	24	23.67	23.60	23.68	23.67	23.60	23.68
20	QPSK	50	50	23.59	23.53	23.63	23.59	23.53	23.63
20	QPSK	100	0	23.63	23.56	23.67	23.63	23.56	23.67
20	16QAM	1	0	23.94	23.85	23.91	23.94	23.85	23.91
20	16QAM	1	49	23.86	23.79	23.97	23.86	23.79	23.97
20	16QAM	1	99	23.82	23.83	24.03	23.82	23.83	24.03
20	16QAM	50	0	22.75	22.67	22.77	22.75	22.67	22.77
20	16QAM	50	24	22.74	22.70	22.76	22.74	22.70	22.76
20	16QAM	50	50	22.67	22.62	22.71	22.67	22.62	22.71
20	16QAM	100	0	22.70	22.62	22.73	22.70	22.62	22.73
20	64QAM	1	0	22.90	22.79	22.85	22.90	22.79	22.85
20	64QAM	1	49	22.81	22.75	22.93	22.81	22.75	22.93
20	64QAM	1	99	22.73	22.76	22.92	22.73	22.76	22.92
20	64QAM	50	0	21.76	21.68	21.77	21.76	21.68	21.77
20	64QAM	50	24	21.76	21.68	21.77	21.76	21.68	21.77
20	64QAM	50	50	21.68	21.62	21.71	21.68	21.62	21.71
20	64QAM	100	0	21.70	21.62	21.74	21.70	21.62	21.74
Channel				18675	18900	19125	18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5	1857.5	1880	1902.5
15	QPSK	1	0	24.67	24.56	24.70	24.67	24.56	24.70
15	QPSK	1	37	24.62	24.54	24.62	24.62	24.54	24.62
15	QPSK	1	74	24.51	24.58	24.75	24.51	24.58	24.75
15	QPSK	36	0	23.70	23.63	23.67	23.70	23.63	23.67
15	QPSK	36	20	23.71	23.63	23.69	23.71	23.63	23.69
15	QPSK	36	39	23.65	23.57	23.77	23.65	23.57	23.77
15	QPSK	75	0	23.66	23.58	23.67	23.66	23.58	23.67
15	16QAM	1	0	23.95	23.83	24.10	23.95	23.83	24.10
15	16QAM	1	37	23.89	23.85	23.92	23.89	23.85	23.92
15	16QAM	1	74	23.79	23.86	24.08	23.79	23.86	24.08
15	16QAM	36	0	22.76	22.70	22.76	22.76	22.70	22.76
15	16QAM	36	20	22.77	22.73	22.77	22.77	22.73	22.77
15	16QAM	36	39	22.73	22.67	22.82	22.73	22.67	22.82
15	16QAM	75	0	22.74	22.66	22.75	22.74	22.66	22.75
15	64QAM	1	0	22.90	22.78	23.00	22.90	22.78	23.00
15	64QAM	1	37	22.86	22.78	22.85	22.86	22.78	22.85
15	64QAM	1	74	22.73	22.80	22.98	22.73	22.80	22.98
15	64QAM	36	0	21.78	21.71	21.80	21.78	21.71	21.80
15	64QAM	36	20	21.80	21.73	21.81	21.80	21.73	21.81
15	64QAM	36	39	21.75	21.67	21.87	21.75	21.67	21.87
15	64QAM	75	0	21.74	21.65	21.74	21.74	21.65	21.74
Channel				18650	18900	19150	18650	18900	19150
Frequency (MHz)				1855	1880	1905	1855	1880	1905
10	QPSK	1	0	24.70	24.45	24.75	24.70	24.45	24.75
10	QPSK	1	25	24.74	24.55	24.73	24.74	24.55	24.73

10	QPSK	1	49	24.63	24.56	24.74	24.63	24.56	24.74
10	QPSK	25	0	23.69	23.60	23.68	23.69	23.60	23.68
10	QPSK	25	12	23.71	23.64	23.71	23.71	23.64	23.71
10	QPSK	25	25	23.64	23.56	23.74	23.64	23.56	23.74
10	QPSK	50	0	23.66	23.60	23.65	23.66	23.60	23.65
10	16QAM	1	0	24.03	23.81	24.03	24.03	23.81	24.03
10	16QAM	1	25	24.06	23.85	24.04	24.06	23.85	24.04
10	16QAM	1	49	23.89	23.91	24.09	23.89	23.91	24.09
10	16QAM	25	0	22.78	22.69	22.77	22.78	22.69	22.77
10	16QAM	25	12	22.79	22.69	22.77	22.79	22.69	22.77
10	16QAM	25	25	22.72	22.65	22.80	22.72	22.65	22.80
10	16QAM	50	0	22.75	22.68	22.74	22.75	22.68	22.74
10	64QAM	1	0	22.97	22.84	22.98	22.97	22.84	22.98
10	64QAM	1	25	22.95	22.78	22.98	22.95	22.78	22.98
10	64QAM	1	49	22.84	22.79	22.99	22.84	22.79	22.99
10	64QAM	25	0	21.78	21.70	21.76	21.78	21.70	21.76
10	64QAM	25	12	21.78	21.72	21.78	21.78	21.72	21.78
10	64QAM	25	25	21.72	21.66	21.83	21.72	21.66	21.83
10	64QAM	50	0	21.75	21.68	21.75	21.75	21.68	21.75
Channel				18625	18900	19175	18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5	1852.5	1880	1907.5
5	QPSK	1	0	24.65	24.54	24.71	24.65	24.54	24.71
5	QPSK	1	12	24.66	24.59	24.72	24.66	24.59	24.72
5	QPSK	1	24	24.70	24.53	24.77	24.70	24.53	24.77
5	QPSK	12	0	23.70	23.60	23.77	23.70	23.60	23.77
5	QPSK	12	7	23.69	23.61	23.81	23.69	23.61	23.81
5	QPSK	12	13	23.66	23.58	23.74	23.66	23.58	23.74
5	QPSK	25	0	23.70	23.59	23.74	23.70	23.59	23.74
5	16QAM	1	0	23.94	23.80	24.04	23.94	23.80	24.04
5	16QAM	1	12	23.97	23.87	24.05	23.97	23.87	24.05
5	16QAM	1	24	24.02	23.83	24.06	24.02	23.83	24.06
5	16QAM	12	0	22.77	22.70	22.85	22.77	22.70	22.85
5	16QAM	12	7	22.80	22.71	22.87	22.80	22.71	22.87
5	16QAM	12	13	22.75	22.67	22.81	22.75	22.67	22.81
5	16QAM	25	0	22.76	22.66	22.84	22.76	22.66	22.84
5	64QAM	1	0	22.87	22.78	22.93	22.87	22.78	22.93
5	64QAM	1	12	22.91	22.79	22.94	22.91	22.79	22.94
5	64QAM	1	24	22.93	22.74	22.98	22.93	22.74	22.98
5	64QAM	12	0	21.81	21.74	21.88	21.81	21.74	21.88
5	64QAM	12	7	21.84	21.73	21.91	21.84	21.73	21.91
5	64QAM	12	13	21.79	21.71	21.85	21.79	21.71	21.85
5	64QAM	25	0	21.76	21.68	21.85	21.76	21.68	21.85
Channel				18615	18900	19185	18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5	1851.5	1880	1908.5
3	QPSK	1	0	24.66	24.54	24.71	24.66	24.54	24.71
3	QPSK	1	8	24.66	24.57	24.70	24.66	24.57	24.70
3	QPSK	1	14	24.61	24.51	24.70	24.61	24.51	24.70
3	QPSK	8	0	23.71	23.59	23.73	23.71	23.59	23.73
3	QPSK	8	4	23.73	23.62	23.79	23.73	23.62	23.79
3	QPSK	8	7	23.67	23.59	23.84	23.67	23.59	23.84
3	QPSK	15	0	23.66	23.58	23.75	23.66	23.58	23.75
3	16QAM	1	0	23.93	23.78	23.98	23.93	23.78	23.98
3	16QAM	1	8	23.96	23.84	24.10	23.96	23.84	24.10
3	16QAM	1	14	23.90	23.84	24.06	23.90	23.84	24.06
3	16QAM	8	0	22.78	22.71	22.87	22.78	22.71	22.87
3	16QAM	8	4	22.83	22.74	22.87	22.83	22.74	22.87

3	16QAM	8	7	22.77	22.72	22.97	22.77	22.72	22.97
3	16QAM	15	0	22.75	22.69	22.84	22.75	22.69	22.84
3	64QAM	1	0	22.86	22.73	22.92	22.86	22.73	22.92
3	64QAM	1	8	22.88	22.79	23.03	22.88	22.79	23.03
3	64QAM	1	14	22.82	22.77	22.99	22.82	22.77	22.99
3	64QAM	8	0	21.81	21.71	21.85	21.81	21.71	21.85
3	64QAM	8	4	21.84	21.76	21.89	21.84	21.76	21.89
3	64QAM	8	7	21.78	21.69	21.95	21.78	21.69	21.95
3	64QAM	15	0	21.77	21.67	21.84	21.77	21.67	21.84
Channel				18607	18900	19193	18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3	1850.7	1880	1909.3
1.4	QPSK	1	0	24.62	24.52	24.73	24.62	24.52	24.73
1.4	QPSK	1	3	24.67	24.57	24.70	24.67	24.57	24.70
1.4	QPSK	1	5	24.61	24.50	24.73	24.61	24.50	24.73
1.4	QPSK	3	0	24.65	24.52	24.70	24.65	24.52	24.70
1.4	QPSK	3	1	24.70	24.57	24.70	24.70	24.57	24.70
1.4	QPSK	3	3	24.64	24.53	24.70	24.64	24.53	24.70
1.4	QPSK	6	0	23.63	23.52	23.80	23.63	23.52	23.80
1.4	16QAM	1	0	23.88	23.78	24.05	23.88	23.78	24.05
1.4	16QAM	1	3	23.95	23.86	24.09	23.95	23.86	24.09
1.4	16QAM	1	5	23.90	23.77	24.05	23.90	23.77	24.05
1.4	16QAM	3	0	23.70	23.56	23.85	23.70	23.56	23.85
1.4	16QAM	3	1	23.77	23.63	23.89	23.77	23.63	23.89
1.4	16QAM	3	3	23.70	23.58	23.83	23.70	23.58	23.83
1.4	16QAM	6	0	22.79	22.67	22.95	22.79	22.67	22.95
1.4	64QAM	1	0	22.82	22.70	22.95	22.82	22.70	22.95
1.4	64QAM	1	3	22.88	22.80	23.02	22.88	22.80	23.02
1.4	64QAM	1	5	22.81	22.70	22.96	22.81	22.70	22.96
1.4	64QAM	3	0	22.83	22.73	22.98	22.83	22.73	22.98
1.4	64QAM	3	1	22.88	22.78	23.01	22.88	22.78	23.01
1.4	64QAM	3	3	22.83	22.73	22.95	22.83	22.73	22.95
1.4	64QAM	6	0	21.73	21.62	21.87	21.73	21.62	21.87

<LTE Band 4>

Power Selection				Head / Near body		
Transmit Antenna				Ant 0		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	23.39	23.55	23.44
20	QPSK	1	49	23.36	23.29	23.41
20	QPSK	1	99	23.25	23.18	23.33
20	QPSK	50	0	22.42	22.39	22.44
20	QPSK	50	24	22.41	22.38	22.43
20	QPSK	50	50	22.36	22.32	22.48
20	QPSK	100	0	22.38	22.35	22.42
20	16QAM	1	0	22.75	22.68	22.76
20	16QAM	1	49	22.69	22.65	22.80
20	16QAM	1	99	22.56	22.54	22.67
20	16QAM	50	0	21.52	21.45	21.55
20	16QAM	50	24	21.49	21.42	21.55
20	16QAM	50	50	21.41	21.36	21.57
20	16QAM	100	0	21.45	21.41	21.49
20	64QAM	1	0	21.67	21.61	21.64
20	64QAM	1	49	21.60	21.59	21.67
20	64QAM	1	99	21.49	21.46	21.57
20	64QAM	50	0	20.51	20.48	20.54
20	64QAM	50	24	20.51	20.45	20.51
20	64QAM	50	50	20.41	20.39	20.59
20	64QAM	100	0	20.48	20.42	20.51
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	23.41	23.37	23.42
15	QPSK	1	37	23.38	23.34	23.46
15	QPSK	1	74	23.31	23.27	23.36
15	QPSK	36	0	22.42	22.42	22.43
15	QPSK	36	20	22.43	22.42	22.55
15	QPSK	36	39	22.39	22.36	22.48
15	QPSK	75	0	22.41	22.35	22.43
15	16QAM	1	0	22.75	22.73	22.77
15	16QAM	1	37	22.70	22.65	22.81
15	16QAM	1	74	22.64	22.59	22.71
15	16QAM	36	0	21.48	21.47	21.52
15	16QAM	36	20	21.52	21.47	21.63
15	16QAM	36	39	21.47	21.44	21.57
15	16QAM	75	0	21.50	21.42	21.48
15	64QAM	1	0	21.69	21.61	21.70
15	64QAM	1	37	21.66	21.59	21.71
15	64QAM	1	74	21.52	21.51	21.60
15	64QAM	36	0	20.54	20.51	20.58
15	64QAM	36	20	20.55	20.50	20.67
15	64QAM	36	39	20.47	20.44	20.63
15	64QAM	75	0	20.49	20.46	20.50
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	23.46	23.38	23.52
10	QPSK	1	25	23.40	23.35	23.49

10	QPSK	1	49	23.33	23.28	23.42
10	QPSK	25	0	22.45	22.37	22.56
10	QPSK	25	12	22.46	22.38	22.57
10	QPSK	25	25	22.42	22.30	22.48
10	QPSK	50	0	22.45	22.36	22.53
10	16QAM	1	0	22.78	22.72	22.85
10	16QAM	1	25	22.77	22.71	22.84
10	16QAM	1	49	22.71	22.60	22.77
10	16QAM	25	0	21.55	21.47	21.60
10	16QAM	25	12	21.54	21.48	21.66
10	16QAM	25	25	21.50	21.41	21.56
10	16QAM	50	0	21.51	21.47	21.63
10	64QAM	1	0	21.65	21.64	21.77
10	64QAM	1	25	21.70	21.62	21.74
10	64QAM	1	49	21.61	21.54	21.69
10	64QAM	25	0	20.55	20.51	20.65
10	64QAM	25	12	20.53	20.51	20.64
10	64QAM	25	25	20.51	20.45	20.60
10	64QAM	50	0	20.50	20.45	20.64
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	23.42	23.32	23.49
5	QPSK	1	12	23.42	23.35	23.48
5	QPSK	1	24	23.37	23.32	23.41
5	QPSK	12	0	22.43	22.37	22.50
5	QPSK	12	7	22.48	22.42	22.56
5	QPSK	12	13	22.42	22.35	22.53
5	QPSK	25	0	22.45	22.38	22.49
5	16QAM	1	0	22.77	22.70	22.79
5	16QAM	1	12	22.78	22.71	22.81
5	16QAM	1	24	22.72	22.62	22.73
5	16QAM	12	0	21.54	21.46	21.61
5	16QAM	12	7	21.56	21.48	21.61
5	16QAM	12	13	21.51	21.41	21.57
5	16QAM	25	0	21.54	21.44	21.57
5	64QAM	1	0	21.65	21.58	21.72
5	64QAM	1	12	21.68	21.61	21.74
5	64QAM	1	24	21.62	21.54	21.68
5	64QAM	12	0	20.56	20.48	20.66
5	64QAM	12	7	20.60	20.51	20.69
5	64QAM	12	13	20.54	20.46	20.63
5	64QAM	25	0	20.53	20.43	20.61
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.40	23.32	23.38
3	QPSK	1	8	23.41	23.35	23.37
3	QPSK	1	14	23.37	23.31	23.34
3	QPSK	8	0	22.43	22.35	22.51
3	QPSK	8	4	22.46	22.37	22.53
3	QPSK	8	7	22.45	22.35	22.51
3	QPSK	15	0	22.43	22.34	22.37
3	16QAM	1	0	22.72	22.69	22.69
3	16QAM	1	8	22.76	22.70	22.76
3	16QAM	1	14	22.70	22.64	22.67
3	16QAM	8	0	21.58	21.49	21.63
3	16QAM	8	4	21.60	21.52	21.64

3	16QAM	8	7	21.53	21.49	21.52
3	16QAM	15	0	21.54	21.45	21.51
3	64QAM	1	0	21.67	21.57	21.63
3	64QAM	1	8	21.66	21.60	21.63
3	64QAM	1	14	21.61	21.54	21.59
3	64QAM	8	0	20.54	20.49	20.53
3	64QAM	8	4	20.59	20.52	20.57
3	64QAM	8	7	20.56	20.48	20.51
3	64QAM	15	0	20.51	20.47	20.50
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.33	23.25	23.38
1.4	QPSK	1	3	23.42	23.35	23.48
1.4	QPSK	1	5	23.35	23.28	23.38
1.4	QPSK	3	0	23.38	23.31	23.44
1.4	QPSK	3	1	23.43	23.34	23.46
1.4	QPSK	3	3	23.39	23.31	23.44
1.4	QPSK	6	0	22.36	22.29	22.42
1.4	16QAM	1	0	22.68	22.58	22.72
1.4	16QAM	1	3	22.76	22.69	22.82
1.4	16QAM	1	5	22.66	22.57	22.72
1.4	16QAM	3	0	22.48	22.40	22.53
1.4	16QAM	3	1	22.53	22.45	22.56
1.4	16QAM	3	3	22.48	22.39	22.50
1.4	16QAM	6	0	21.53	21.47	21.59
1.4	64QAM	1	0	21.62	21.49	21.64
1.4	64QAM	1	3	21.65	21.61	21.73
1.4	64QAM	1	5	21.58	21.53	21.60
1.4	64QAM	3	0	21.61	21.51	21.65
1.4	64QAM	3	1	21.64	21.57	21.67
1.4	64QAM	3	3	21.60	21.50	21.65
1.4	64QAM	6	0	20.49	20.40	20.52

<LTE Band 7>

Power Selection				Head / Near body		
Transmit Antenna				Ant 2		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	23.82	23.80	23.77
20	QPSK	1	49	23.68	23.80	23.64
20	QPSK	1	99	23.75	23.80	23.75
20	QPSK	50	0	22.89	22.88	22.83
20	QPSK	50	24	22.76	22.87	22.80
20	QPSK	50	50	22.79	22.87	22.74
20	QPSK	100	0	22.89	22.88	22.78
20	16QAM	1	0	23.02	23.12	23.02
20	16QAM	1	49	23.08	23.14	23.01
20	16QAM	1	99	23.25	23.15	23.08
20	16QAM	50	0	21.82	21.91	21.85
20	16QAM	50	24	21.88	21.97	21.91
20	16QAM	50	50	21.98	22.00	21.82
20	16QAM	100	0	21.97	21.96	21.89
20	64QAM	1	0	21.91	22.02	21.93
20	64QAM	1	49	21.98	22.07	21.93
20	64QAM	1	99	22.15	22.06	22.00
20	64QAM	50	0	20.83	20.96	20.86
20	64QAM	50	24	20.92	20.98	20.93
20	64QAM	50	50	21.00	21.01	20.84
20	64QAM	100	0	21.00	20.96	20.89
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	23.71	23.81	23.73
15	QPSK	1	37	23.72	23.81	23.64
15	QPSK	1	74	23.80	23.80	23.77
15	QPSK	36	0	22.76	22.82	22.75
15	QPSK	36	20	22.81	22.89	22.69
15	QPSK	36	39	22.82	22.93	22.73
15	QPSK	75	0	22.79	22.90	22.77
15	16QAM	1	0	23.05	23.12	23.05
15	16QAM	1	37	23.06	23.12	22.99
15	16QAM	1	74	23.17	23.24	23.12
15	16QAM	36	0	21.83	21.90	21.86
15	16QAM	36	20	21.89	21.96	21.79
15	16QAM	36	39	21.89	21.98	21.82
15	16QAM	75	0	21.87	21.97	21.86
15	64QAM	1	0	21.95	22.06	21.96
15	64QAM	1	37	21.98	22.03	21.89
15	64QAM	1	74	22.07	22.17	22.00
15	64QAM	36	0	20.89	20.93	20.86
15	64QAM	36	20	20.90	21.01	20.82
15	64QAM	36	39	20.92	21.02	20.83
15	64QAM	75	0	20.85	20.97	20.87
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	23.70	23.76	23.60
10	QPSK	1	25	23.70	23.80	23.63

10	QPSK	1	49	23.76	23.80	23.70
10	QPSK	25	0	22.70	22.80	22.61
10	QPSK	25	12	22.78	22.85	22.66
10	QPSK	25	25	22.73	22.85	22.65
10	QPSK	50	0	22.76	22.84	22.66
10	16QAM	1	0	23.02	23.11	22.95
10	16QAM	1	25	23.06	23.13	23.00
10	16QAM	1	49	23.12	23.18	23.01
10	16QAM	25	0	21.83	21.88	21.70
10	16QAM	25	12	21.87	21.94	21.79
10	16QAM	25	25	21.84	21.93	21.77
10	16QAM	50	0	21.85	21.91	21.76
10	64QAM	1	0	21.92	22.02	21.86
10	64QAM	1	25	21.94	22.07	21.90
10	64QAM	1	49	22.02	22.08	21.94
10	64QAM	25	0	20.84	20.91	20.76
10	64QAM	25	12	20.82	20.94	20.74
10	64QAM	25	25	20.84	20.99	20.76
10	64QAM	50	0	20.81	20.97	20.76
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	23.68	23.77	23.62
5	QPSK	1	12	23.68	23.78	23.63
5	QPSK	1	24	23.70	23.81	23.63
5	QPSK	12	0	22.73	22.85	22.66
5	QPSK	12	7	22.77	22.89	22.70
5	QPSK	12	13	22.77	22.85	22.71
5	QPSK	25	0	22.74	22.84	22.64
5	16QAM	1	0	23.02	23.07	22.94
5	16QAM	1	12	23.04	23.14	22.96
5	16QAM	1	24	23.02	23.14	22.97
5	16QAM	12	0	21.82	21.93	21.75
5	16QAM	12	7	21.82	21.97	21.77
5	16QAM	12	13	21.85	21.95	21.78
5	16QAM	25	0	21.82	21.89	21.71
5	64QAM	1	0	21.92	22.00	21.88
5	64QAM	1	12	21.98	22.05	21.87
5	64QAM	1	24	21.97	22.05	21.88
5	64QAM	12	0	20.83	20.98	20.78
5	64QAM	12	7	20.87	21.02	20.85
5	64QAM	12	13	20.90	20.99	20.83
5	64QAM	25	0	20.81	20.89	20.72

<LTE Band 25>

Power Selection				Head / Near body					
Transmit Antenna				Ant 0			Ant 1		
Max. Power				25.1			25.1		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26140	26340	26590	26140	26340	26590
Frequency (MHz)				1860	1880	1905	1860	1880	1905
20	QPSK	1	0	24.70	24.76	24.87	24.70	24.76	24.87
20	QPSK	1	49	24.69	24.62	24.77	24.69	24.62	24.77
20	QPSK	1	99	24.65	24.64	24.70	24.65	24.64	24.70
20	QPSK	50	0	23.79	23.71	23.87	23.79	23.71	23.87
20	QPSK	50	24	23.78	23.68	23.85	23.78	23.68	23.85
20	QPSK	50	50	23.69	23.64	23.82	23.69	23.64	23.82
20	QPSK	100	0	23.73	23.66	23.75	23.73	23.66	23.75
20	16QAM	1	0	23.98	24.02	24.05	23.98	24.02	24.05
20	16QAM	1	49	23.95	23.92	24.09	23.95	23.92	24.09
20	16QAM	1	99	24.00	23.93	24.00	24.00	23.93	24.00
20	16QAM	50	0	22.87	22.78	22.88	22.87	22.78	22.88
20	16QAM	50	24	22.85	22.78	22.96	22.85	22.78	22.96
20	16QAM	50	50	22.79	22.73	22.91	22.79	22.73	22.91
20	16QAM	100	0	22.80	22.74	22.81	22.80	22.74	22.81
20	64QAM	1	0	22.87	22.95	22.93	22.87	22.95	22.93
20	64QAM	1	49	22.92	22.87	23.03	22.92	22.87	23.03
20	64QAM	1	99	22.94	22.88	22.92	22.94	22.88	22.92
20	64QAM	50	0	21.86	21.78	21.87	21.86	21.78	21.87
20	64QAM	50	24	21.86	21.81	21.98	21.86	21.81	21.98
20	64QAM	50	50	21.78	21.73	21.91	21.78	21.73	21.91
20	64QAM	100	0	21.81	21.75	21.80	21.81	21.75	21.80
Channel				26115	26340	26615	26115	26340	26615
Frequency (MHz)				1857.5	1880	1907.5	1857.5	1880	1907.5
15	QPSK	1	0	24.73	24.51	24.79	24.73	24.51	24.79
15	QPSK	1	37	24.78	24.61	24.78	24.78	24.61	24.78
15	QPSK	1	74	24.69	24.65	24.71	24.69	24.65	24.71
15	QPSK	36	0	23.85	23.69	23.87	23.85	23.69	23.87
15	QPSK	36	20	23.85	23.71	23.88	23.85	23.71	23.88
15	QPSK	36	39	23.77	23.63	23.79	23.77	23.63	23.79
15	QPSK	75	0	23.81	23.65	23.85	23.81	23.65	23.85
15	16QAM	1	0	24.03	23.84	24.09	24.03	23.84	24.09
15	16QAM	1	37	24.09	23.93	24.09	24.09	23.93	24.09
15	16QAM	1	74	24.00	23.91	23.98	24.00	23.91	23.98
15	16QAM	36	0	22.91	22.75	22.93	22.91	22.75	22.93
15	16QAM	36	20	22.91	22.77	22.93	22.91	22.77	22.93
15	16QAM	36	39	22.86	22.70	22.90	22.86	22.70	22.90
15	16QAM	75	0	22.89	22.72	22.91	22.89	22.72	22.91
15	64QAM	1	0	22.94	22.85	23.04	22.94	22.85	23.04
15	64QAM	1	37	23.01	22.85	22.99	23.01	22.85	22.99
15	64QAM	1	74	22.90	22.84	22.93	22.90	22.84	22.93
15	64QAM	36	0	21.93	21.77	21.96	21.93	21.77	21.96
15	64QAM	36	20	21.96	21.79	21.97	21.96	21.79	21.97
15	64QAM	36	39	21.89	21.73	21.92	21.89	21.73	21.92
15	64QAM	75	0	21.88	21.73	21.92	21.88	21.73	21.92
Channel				26090	26340	26640	26090	26340	26640
Frequency (MHz)				1855	1880	1910	1855	1880	1910
10	QPSK	1	0	24.76	24.44	24.83	24.76	24.44	24.83
10	QPSK	1	25	24.73	24.64	24.78	24.73	24.64	24.78

10	QPSK	1	49	24.70	24.66	24.74	24.70	24.66	24.74
10	QPSK	25	0	23.79	23.67	23.88	23.79	23.67	23.88
10	QPSK	25	12	23.79	23.70	23.88	23.79	23.70	23.88
10	QPSK	25	25	23.73	23.65	23.82	23.73	23.65	23.82
10	QPSK	50	0	23.76	23.68	23.82	23.76	23.68	23.82
10	16QAM	1	0	24.06	23.84	24.10	24.06	23.84	24.10
10	16QAM	1	25	24.07	23.90	24.08	24.07	23.90	24.08
10	16QAM	1	49	23.97	24.00	24.02	23.97	24.00	24.02
10	16QAM	25	0	22.88	22.78	22.95	22.88	22.78	22.95
10	16QAM	25	12	22.88	22.78	22.95	22.88	22.78	22.95
10	16QAM	25	25	22.82	22.74	22.90	22.82	22.74	22.90
10	16QAM	50	0	22.83	22.75	22.92	22.83	22.75	22.92
10	64QAM	1	0	22.95	22.81	23.04	22.95	22.81	23.04
10	64QAM	1	25	22.93	22.86	23.03	22.93	22.86	23.03
10	64QAM	1	49	22.93	22.88	22.97	22.93	22.88	22.97
10	64QAM	25	0	21.87	21.79	21.96	21.87	21.79	21.96
10	64QAM	25	12	21.90	21.81	21.94	21.90	21.81	21.94
10	64QAM	25	25	21.82	21.75	21.91	21.82	21.75	21.91
10	64QAM	50	0	21.85	21.76	21.93	21.85	21.76	21.93
Channel				26065	26340	26665	26065	26340	26665
Frequency (MHz)				1852.5	1880	1912.5	1852.5	1880	1912.5
5	QPSK	1	0	24.73	24.59	24.75	24.73	24.59	24.75
5	QPSK	1	12	24.85	24.64	24.79	24.85	24.64	24.79
5	QPSK	1	24	24.77	24.60	24.74	24.77	24.60	24.74
5	QPSK	12	0	23.87	23.69	23.82	23.87	23.69	23.82
5	QPSK	12	7	23.86	23.69	23.84	23.86	23.69	23.84
5	QPSK	12	13	23.82	23.66	23.80	23.82	23.66	23.80
5	QPSK	25	0	23.82	23.67	23.80	23.82	23.67	23.80
5	16QAM	1	0	24.03	23.87	24.06	24.03	23.87	24.06
5	16QAM	1	12	24.09	23.93	24.07	24.09	23.93	24.07
5	16QAM	1	24	24.08	23.91	23.99	24.08	23.91	23.99
5	16QAM	12	0	22.95	22.78	22.90	22.95	22.78	22.90
5	16QAM	12	7	22.94	22.78	22.94	22.94	22.78	22.94
5	16QAM	12	13	22.91	22.74	22.87	22.91	22.74	22.87
5	16QAM	25	0	22.91	22.74	22.87	22.91	22.74	22.87
5	64QAM	1	0	22.96	22.83	23.00	22.96	22.83	23.00
5	64QAM	1	12	23.06	22.88	22.99	23.06	22.88	22.99
5	64QAM	1	24	23.01	22.80	22.93	23.01	22.80	22.93
5	64QAM	12	0	21.98	21.81	21.94	21.98	21.81	21.94
5	64QAM	12	7	22.01	21.84	21.97	22.01	21.84	21.97
5	64QAM	12	13	21.96	21.78	21.92	21.96	21.78	21.92
5	64QAM	25	0	21.94	21.76	21.91	21.94	21.76	21.91
Channel				26055	26340	26675	26055	26340	26675
Frequency (MHz)				1851.5	1880	1913.5	1851.5	1880	1913.5
3	QPSK	1	0	24.63	24.59	24.67	24.63	24.59	24.67
3	QPSK	1	8	24.63	24.65	24.66	24.63	24.65	24.66
3	QPSK	1	14	24.69	24.60	24.64	24.69	24.60	24.64
3	QPSK	8	0	23.68	23.68	23.69	23.68	23.68	23.69
3	QPSK	8	4	23.82	23.72	23.75	23.82	23.72	23.75
3	QPSK	8	7	23.79	23.69	23.72	23.79	23.69	23.72
3	QPSK	15	0	23.78	23.65	23.72	23.78	23.65	23.72
3	16QAM	1	0	23.93	23.87	23.97	23.93	23.87	23.97
3	16QAM	1	8	23.96	23.93	23.97	23.96	23.93	23.97
3	16QAM	1	14	23.98	23.89	23.92	23.98	23.89	23.92
3	16QAM	8	0	22.79	22.80	22.83	22.79	22.80	22.83
3	16QAM	8	4	22.92	22.82	22.87	22.92	22.82	22.87

3	16QAM	8	7	22.87	22.80	22.84	22.87	22.80	22.84
3	16QAM	15	0	22.87	22.76	22.80	22.87	22.76	22.80
3	64QAM	1	0	22.84	22.84	22.87	22.84	22.84	22.87
3	64QAM	1	8	22.85	22.88	22.90	22.85	22.88	22.90
3	64QAM	1	14	22.91	22.81	22.85	22.91	22.81	22.85
3	64QAM	8	0	21.79	21.80	21.84	21.79	21.80	21.84
3	64QAM	8	4	21.92	21.83	21.87	21.92	21.83	21.87
3	64QAM	8	7	21.87	21.78	21.83	21.87	21.78	21.83
3	64QAM	15	0	21.86	21.76	21.80	21.86	21.76	21.80
Channel				26047	26340	26683	26047	26340	26683
Frequency (MHz)				1850.7	1880	1914.3	1850.7	1880	1914.3
1.4	QPSK	1	0	24.57	24.58	24.79	24.57	24.58	24.79
1.4	QPSK	1	3	24.64	24.64	24.83	24.64	24.64	24.83
1.4	QPSK	1	5	24.57	24.53	24.75	24.57	24.53	24.75
1.4	QPSK	3	0	24.60	24.60	24.82	24.60	24.60	24.82
1.4	QPSK	3	1	24.65	24.65	24.86	24.65	24.65	24.86
1.4	QPSK	3	3	24.62	24.58	24.76	24.62	24.58	24.76
1.4	QPSK	6	0	23.62	23.63	23.86	23.62	23.63	23.86
1.4	16QAM	1	0	23.89	23.86	24.05	23.89	23.86	24.05
1.4	16QAM	1	3	23.95	23.92	24.00	23.95	23.92	24.00
1.4	16QAM	1	5	23.84	23.85	24.03	23.84	23.85	24.03
1.4	16QAM	3	0	23.67	23.64	23.86	23.67	23.64	23.86
1.4	16QAM	3	1	23.72	23.70	23.90	23.72	23.70	23.90
1.4	16QAM	3	3	23.67	23.66	23.82	23.67	23.66	23.82
1.4	16QAM	6	0	22.75	22.75	23.00	22.75	22.75	23.00
1.4	64QAM	1	0	22.82	22.81	23.00	22.82	22.81	23.00
1.4	64QAM	1	3	22.87	22.86	23.01	22.87	22.86	23.01
1.4	64QAM	1	5	22.80	22.78	22.99	22.80	22.78	22.99
1.4	64QAM	3	0	22.81	22.79	23.01	22.81	22.79	23.01
1.4	64QAM	3	1	22.87	22.85	23.05	22.87	22.85	23.05
1.4	64QAM	3	3	22.80	22.81	23.00	22.80	22.81	23.00
1.4	64QAM	6	0	21.69	21.69	21.94	21.69	21.69	21.94

<LTE Band 66>

Power Selection				Head / Near body		
Transmit Antenna				Ant 0		
Max. Power				24.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				132072	132322	132572
Frequency (MHz)				1720	1745	1770
20	QPSK	1	0	23.45	23.47	23.51
20	QPSK	1	49	23.44	23.46	23.50
20	QPSK	1	99	23.26	23.36	23.36
20	QPSK	50	0	22.41	22.42	22.43
20	QPSK	50	24	22.35	22.35	22.39
20	QPSK	50	50	22.32	22.33	22.41
20	QPSK	100	0	22.35	22.38	22.39
20	16QAM	1	0	22.74	22.78	22.74
20	16QAM	1	49	22.79	22.82	22.90
20	16QAM	1	99	22.56	22.70	22.69
20	16QAM	50	0	21.45	21.52	21.49
20	16QAM	50	24	21.43	21.46	21.43
20	16QAM	50	50	21.42	21.39	21.47
20	16QAM	100	0	21.41	21.44	21.44
20	64QAM	1	0	21.66	21.68	21.71
20	64QAM	1	49	21.71	21.70	21.79
20	64QAM	1	99	21.50	21.62	21.59
20	64QAM	50	0	20.48	20.52	20.51
20	64QAM	50	24	20.42	20.48	20.46
20	64QAM	50	50	20.40	20.42	20.50
20	64QAM	100	0	20.43	20.46	20.46
Channel				132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5
15	QPSK	1	0	23.43	23.45	23.41
15	QPSK	1	37	23.45	23.46	23.50
15	QPSK	1	74	23.30	23.31	23.37
15	QPSK	36	0	22.30	22.37	22.34
15	QPSK	36	20	22.43	22.43	22.50
15	QPSK	36	39	22.30	22.29	22.40
15	QPSK	75	0	22.31	22.32	22.32
15	16QAM	1	0	22.74	22.76	22.75
15	16QAM	1	37	22.78	22.78	22.87
15	16QAM	1	74	22.61	22.63	22.70
15	16QAM	36	0	21.41	21.43	21.40
15	16QAM	36	20	21.48	21.51	21.57
15	16QAM	36	39	21.36	21.39	21.45
15	16QAM	75	0	21.37	21.41	21.37
15	64QAM	1	0	21.65	21.68	21.67
15	64QAM	1	37	21.71	21.72	21.81
15	64QAM	1	74	21.55	21.54	21.61
15	64QAM	36	0	20.41	20.44	20.43
15	64QAM	36	20	20.49	20.50	20.62
15	64QAM	36	39	20.36	20.43	20.48
15	64QAM	75	0	20.38	20.41	20.39
Channel				132022	132322	132622
Frequency (MHz)				1715	1745	1775
10	QPSK	1	0	23.41	23.41	23.50
10	QPSK	1	25	23.39	23.41	23.47

10	QPSK	1	49	23.33	23.28	23.37
10	QPSK	25	0	22.40	22.42	22.48
10	QPSK	25	12	22.37	22.41	22.47
10	QPSK	25	25	22.33	22.34	22.44
10	QPSK	50	0	22.38	22.38	22.42
10	16QAM	1	0	22.76	22.75	22.84
10	16QAM	1	25	22.76	22.75	22.82
10	16QAM	1	49	22.66	22.64	22.69
10	16QAM	25	0	21.46	21.45	21.56
10	16QAM	25	12	21.47	21.46	21.55
10	16QAM	25	25	21.40	21.44	21.51
10	16QAM	50	0	21.46	21.44	21.52
10	64QAM	1	0	21.64	21.63	21.76
10	64QAM	1	25	21.66	21.64	21.72
10	64QAM	1	49	21.55	21.55	21.59
10	64QAM	25	0	20.47	20.47	20.58
10	64QAM	25	12	20.50	20.49	20.56
10	64QAM	25	25	20.45	20.43	20.53
10	64QAM	50	0	20.47	20.45	20.55
Channel				131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5
5	QPSK	1	0	23.23	23.24	23.32
5	QPSK	1	12	23.39	23.38	23.45
5	QPSK	1	24	23.20	23.20	23.24
5	QPSK	12	0	22.40	22.34	22.39
5	QPSK	12	7	22.44	22.46	22.49
5	QPSK	12	13	22.37	22.35	22.38
5	QPSK	25	0	22.38	22.33	22.43
5	16QAM	1	0	22.60	22.58	22.65
5	16QAM	1	12	22.73	22.71	22.76
5	16QAM	1	24	22.55	22.50	22.57
5	16QAM	12	0	21.46	21.46	21.49
5	16QAM	12	7	21.51	21.52	21.59
5	16QAM	12	13	21.42	21.41	21.47
5	16QAM	25	0	21.44	21.43	21.49
5	64QAM	1	0	21.47	21.50	21.57
5	64QAM	1	12	21.65	21.65	21.68
5	64QAM	1	24	21.46	21.46	21.46
5	64QAM	12	0	20.50	20.45	20.55
5	64QAM	12	7	20.60	20.57	20.64
5	64QAM	12	13	20.48	20.47	20.51
5	64QAM	25	0	20.46	20.41	20.47
Channel				131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5
3	QPSK	1	0	23.27	23.27	23.34
3	QPSK	1	8	23.41	23.38	23.44
3	QPSK	1	14	23.25	23.22	23.30
3	QPSK	8	0	22.40	22.40	22.43
3	QPSK	8	4	22.44	22.46	22.53
3	QPSK	8	7	22.39	22.38	22.43
3	QPSK	15	0	22.41	22.39	22.46
3	16QAM	1	0	22.61	22.59	22.63
3	16QAM	1	8	22.71	22.73	22.81
3	16QAM	1	14	22.59	22.56	22.64
3	16QAM	8	0	21.52	21.52	21.58
3	16QAM	8	4	21.59	21.56	21.65

3	16QAM	8	7	21.53	21.53	21.54
3	16QAM	15	0	21.48	21.47	21.52
3	64QAM	1	0	21.54	21.51	21.58
3	64QAM	1	8	21.67	21.66	21.69
3	64QAM	1	14	21.52	21.51	21.53
3	64QAM	8	0	20.52	20.51	20.57
3	64QAM	8	4	20.58	20.58	20.63
3	64QAM	8	7	20.50	20.52	20.57
3	64QAM	15	0	20.47	20.49	20.55
Channel				131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3
1.4	QPSK	1	0	23.32	23.31	23.37
1.4	QPSK	1	3	23.39	23.39	23.46
1.4	QPSK	1	5	23.29	23.27	23.35
1.4	QPSK	3	0	23.35	23.33	23.43
1.4	QPSK	3	1	23.41	23.38	23.46
1.4	QPSK	3	3	23.38	23.35	23.41
1.4	QPSK	6	0	22.35	22.37	22.43
1.4	16QAM	1	0	22.67	22.64	22.71
1.4	16QAM	1	3	22.75	22.71	22.79
1.4	16QAM	1	5	22.66	22.63	22.68
1.4	16QAM	3	0	22.45	22.42	22.49
1.4	16QAM	3	1	22.50	22.47	22.54
1.4	16QAM	3	3	22.46	22.42	22.48
1.4	16QAM	6	0	21.51	21.53	21.58
1.4	64QAM	1	0	21.55	21.54	21.61
1.4	64QAM	1	3	21.65	21.64	21.68
1.4	64QAM	1	5	21.54	21.53	21.59
1.4	64QAM	3	0	21.57	21.56	21.62
1.4	64QAM	3	1	21.62	21.61	21.67
1.4	64QAM	3	3	21.58	21.57	21.63
1.4	64QAM	6	0	20.46	20.47	20.53

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

<GSM Conducted Power>

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

   *DTM frame average power (dBm) = 10*log [∑(power of each slot, in mW)/8]*
3. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
4. 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.
5. 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

Power Selection	Transmit Antenna	GSM850		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		128	189	251		128	189	251	
		Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8	
Head	Ant 0	GSM 1 Tx slot		32.90	32.85	32.80	34.00	23.90	23.85	23.80	25.00
		GPRS 1 Tx slot		32.93	32.86	32.81	34.00	23.93	23.86	23.81	25.00
		GPRS 2 Tx slots		30.66	30.52	30.48	32.00	24.66	24.52	24.48	26.00
		GPRS 3 Tx slots		28.23	28.08	28.05	30.00	23.97	23.82	23.79	25.74
		GPRS 4 Tx slots		27.16	27.11	27.17	29.00	24.16	24.11	24.17	26.00
		EDGE 1 Tx slot		27.05	26.74	26.83	28.00	18.05	17.74	17.83	19.00
		EDGE 2 Tx slots		25.80	25.69	25.85	27.00	19.80	19.69	19.85	21.00
		EDGE 3 Tx slots		23.90	23.55	23.50	25.00	19.64	19.29	19.24	20.74
		EDGE 4 Tx slots		21.54	21.47	21.37	23.00	18.54	18.47	18.37	20.00
		DTM Multi-slot class 5	GSM 1 Tx slot	30.63	30.51	30.43	32.00	24.62	24.48	24.40	25.98
			GPRS 1 Tx slot	30.66	30.49	30.41	32.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.65	30.43	30.38	32.00	24.63	24.43	24.39	25.98
			GPRS 1 Tx slot	30.65	30.48	30.44	32.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.13	28.06	28.05	30.00	23.90	23.77	23.76	25.74
			GPRS 2 Tx slots	28.18	28.02	28.00	30.00				
		DTM Multi-slot class 5	GSM 1 Tx slot	30.56	30.44	30.38	32.00	22.78	22.66	22.63	24.16
			EDGE 1 Tx slot	25.79	25.68	25.75	27.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	30.61	30.52	30.41	32.00	22.80	22.71	22.68	24.16
			EDGE 1 Tx slot	25.71	25.62	25.85	27.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	28.14	28.01	28.00	30.00	21.53	21.32	21.29	23.10
			EDGE 2 Tx slots	23.86	23.55	23.47	25.00				

Power Selection	Transmit Antenna	GSM850		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		128	189	251		128	189	251	
		Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8	
Hotspot / Near body	Ant 0	GSM 1 Tx slot		29.83	29.79	29.84	31.50	20.83	20.79	20.84	22.50
		GPRS 1 Tx slot		29.84	29.80	29.85	31.50	20.84	20.80	20.85	22.50
		GPRS 2 Tx slots		28.51	28.41	28.33	29.50	22.51	22.41	22.33	23.50
		GPRS 3 Tx slots		26.19	26.09	26.01	27.50	21.93	21.83	21.75	23.24
		GPRS 4 Tx slots		25.01	24.95	25.02	26.50	22.01	21.95	22.02	23.50
		EDGE 1 Tx slot		24.57	24.24	24.13	25.50	15.57	15.24	15.13	16.50
		EDGE 2 Tx slots		23.28	23.04	23.17	24.50	17.28	17.04	17.17	18.50
		EDGE 3 Tx slots		21.02	20.66	20.57	22.50	16.76	16.40	16.31	18.24
		EDGE 4 Tx slots		19.52	19.37	19.40	20.50	16.52	16.37	16.40	17.50
		DTM Multi-slot class 5	GSM 1 Tx slot	28.43	28.32	28.25	29.50	22.42	22.30	22.24	23.48
			GPRS 1 Tx slot	28.46	28.32	28.28	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.46	28.35	28.31	29.50	22.46	22.34	22.26	23.48
			GPRS 1 Tx slot	28.51	28.38	28.25	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	26.10	25.99	26.00	27.50	21.89	21.73	21.70	23.24
			GPRS 2 Tx slots	26.18	25.99	25.94	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	28.44	28.37	28.27	29.50	20.54	20.45	20.40	21.66
			EDGE 1 Tx slot	23.18	23.03	23.13	24.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	28.46	28.41	28.32	29.50	20.57	20.47	20.44	21.66
			EDGE 1 Tx slot	23.23	22.96	23.16	24.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	26.12	26.07	25.96	27.50	19.16	19.01	18.89	20.60
			EDGE 2 Tx slots	20.98	20.65	20.50	22.50				

Power Selection	Transmit Antenna	GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		512	661	810		512	661	810	
		Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8	
Head	Ant 0	GSM 1 Tx slot		29.23	29.48	29.40	31.00	20.23	20.48	20.40	22.00
		GPRS 1 Tx slot		29.25	29.49	29.41	31.00	20.25	20.49	20.41	22.00
		GPRS 2 Tx slots		27.55	27.71	27.61	29.50	21.55	21.71	21.61	23.50
		GPRS 3 Tx slots		26.13	26.11	26.14	27.50	21.87	21.85	21.88	23.24
		GPRS 4 Tx slots		24.99	24.95	24.98	26.50	21.99	21.95	21.98	23.50
		EDGE 1 Tx slot		25.76	25.75	25.79	27.00	16.76	16.75	16.79	18.00
		EDGE 2 Tx slots		24.70	24.37	24.56	26.00	18.70	18.37	18.56	20.00
		EDGE 3 Tx slots		23.53	23.33	23.14	25.00	19.27	19.07	18.88	20.74
		EDGE 4 Tx slots		22.91	22.39	22.43	24.00	19.91	19.39	19.43	21.00
		DTM Multi-slot class 5	GSM 1 Tx slot	27.55	27.65	27.58	29.50	21.53	21.66	21.56	23.48
			GPRS 1 Tx slot	27.55	27.71	27.59	29.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.50	27.64	27.61	29.50	21.48	21.64	21.54	23.48
			GPRS 1 Tx slot	27.51	27.69	27.51	29.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	26.11	26.07	26.10	27.50	21.85	21.81	21.83	23.24
			GPRS 2 Tx slots	26.11	26.07	26.08	27.50				
		DTM Multi-slot class 5	GSM 1 Tx slot	27.53	27.70	27.52	29.50	20.31	20.32	20.24	22.07
			EDGE 1 Tx slot	24.67	24.36	24.48	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	27.51	27.63	27.61	29.50	20.28	20.26	20.31	22.07
			EDGE 1 Tx slot	24.61	24.30	24.51	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	26.05	26.08	26.05	27.50	20.28	20.18	20.06	21.74
			EDGE 2 Tx slots	23.53	23.31	23.11	25.00				

Power Selection	Transmit Antenna	GSM1900		Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
		TX Channel		512	661	810		512	661	810	
		Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8	
Hotspot / Near body	Ant 0	GSM 1 Tx slot		25.94	25.90	26.07	27.50	16.94	16.90	17.07	18.50
		GPRS 1 Tx slot		25.95	25.91	26.08	27.50	16.95	16.91	17.08	18.50
		GPRS 2 Tx slots		24.23	24.31	24.38	26.00	18.23	18.31	18.38	20.00
		GPRS 3 Tx slots		22.08	22.18	22.27	24.00	17.82	17.92	18.01	19.74
		GPRS 4 Tx slots		21.36	21.33	21.35	23.00	18.36	18.33	18.35	20.00
		EDGE 1 Tx slot		22.15	22.26	22.35	23.50	13.15	13.26	13.35	14.50
		EDGE 2 Tx slots		21.17	20.94	20.97	22.50	15.17	14.94	14.97	16.50
		EDGE 3 Tx slots		19.93	19.74	19.80	21.50	15.67	15.48	15.54	17.24
		EDGE 4 Tx slots		19.10	18.86	18.88	20.50	16.10	15.86	15.88	17.50
		DTM Multi-slot class 5	GSM 1 Tx slot	24.16	24.27	24.28	26.00	18.15	18.26	18.27	19.98
			GPRS 1 Tx slot	24.19	24.30	24.30	26.00				
		DTM Multi-slot class 9	GSM 1 Tx slot	24.20	24.23	24.30	26.00	18.16	18.21	18.27	19.98
			GPRS 1 Tx slot	24.17	24.24	24.29	26.00				
		DTM Multi-slot class 11	GSM 1 Tx slot	22.08	22.17	22.17	24.00	17.78	17.87	17.92	19.74
			GPRS 2 Tx slots	22.02	22.11	22.19	24.00				
		DTM Multi-slot class 5	GSM 1 Tx slot	24.16	24.29	24.32	26.00	16.88	16.90	16.94	18.57
			EDGE 1 Tx slot	21.12	20.91	20.96	22.50				
		DTM Multi-slot class 9	GSM 1 Tx slot	24.13	24.22	24.31	26.00	16.86	16.86	16.90	18.57
			EDGE 1 Tx slot	21.12	20.93	20.87	22.50				
		DTM Multi-slot class 11	GSM 1 Tx slot	22.01	22.08	22.19	24.00	16.47	16.35	16.47	18.24
			EDGE 2 Tx slots	19.91	19.64	19.76	21.50				

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

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

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

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

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

e. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
f. The RF path losses were compensated into the measurements.
g. A call was established between EUT and Base Station with following setting:
   xi. Set RMC 12.2Kbps + HSDPA mode.
   xii. Set Cell Power = -25 dBm
   xiii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
   xiv. Select HSDPA Uplink Parameters
   xv. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
      a). Subtest 1: 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
   xvi. Set Delta ACK, Delta NACK and Delta CQI = 8
   xvii. Set Ack-Nack Repetition Factor to 3
   xviii. Set CQI Feedback Cycle (k) to 4 ms
   xix. Set CQI Repetition Factor to 2
   xx. Power Ctrl Mode = All Up bits
h. The transmitted maximum output power was recorded.

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Proces ses	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.		

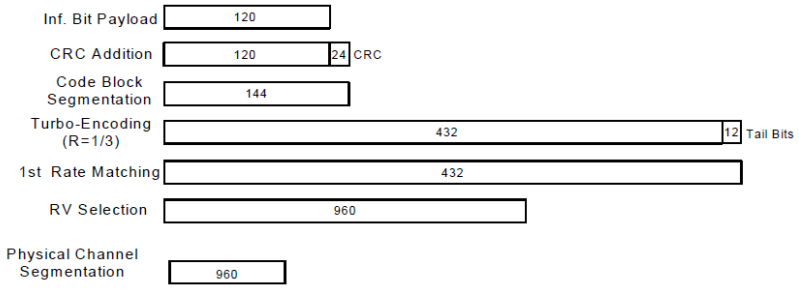


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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.

Power Selection	Transmit Antenna	Band		WCDMA II			WCDMA IV		
		TX Channel		9262	9400	9538	1312	1413	1513
		Rx Channel		9662	9800	9938	1537	1638	1738
		Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6
Head	Ant 0	Max Power		22.20			24.00		
		3GPP Rel 99	AMR 12.2Kbps	21.45	21.54	21.67	23.07	23.08	23.10
		3GPP Rel 99	RMC 12.2Kbps	21.47	21.57	21.69	23.08	23.09	23.12
		Max Power		21.20			23.00		
		3GPP Rel 6	HSDPA Subtest-1	20.43	20.59	20.73	22.09	22.13	22.11
		3GPP Rel 6	HSDPA Subtest-2	20.51	20.62	20.74	22.11	22.09	22.16
		3GPP Rel 6	HSDPA Subtest-3	19.99	20.08	20.26	21.62	21.62	21.67
		3GPP Rel 6	HSDPA Subtest-4	19.95	20.11	20.22	21.60	21.60	21.66
		Max Power		21.20			23.00		
		3GPP Rel 8	DC-HSDPA Subtest-1	20.36	20.53	20.67	22.03	22.07	22.03
		3GPP Rel 8	DC-HSDPA Subtest-2	20.43	20.58	20.72	22.11	21.99	22.06
		3GPP Rel 8	DC-HSDPA Subtest-3	19.93	20.06	20.25	21.62	21.57	21.61
		3GPP Rel 8	DC-HSDPA Subtest-4	19.94	20.01	20.17	21.55	21.52	21.57
		Max Power		21.20			23.00		
		3GPP Rel 6	HSUPA Subtest-1	20.52	20.65	20.70	21.93	21.97	22.05
		3GPP Rel 6	HSUPA Subtest-2	18.47	18.59	18.67	19.99	20.01	20.08
		3GPP Rel 6	HSUPA Subtest-3	19.53	19.60	19.71	21.01	21.02	21.06
		3GPP Rel 6	HSUPA Subtest-4	18.50	18.65	18.73	19.98	20.03	20.06
		3GPP Rel 6	HSUPA Subtest-5	20.50	20.70	20.70	22.00	22.00	22.10

Power Selection	Transmit Antenna	Band		WCDMA II			WCDMA IV		
		TX Channel		9262	9400	9538	1312	1413	1513
		Rx Channel		9662	9800	9938	1537	1638	1738
		Frequency (MHz)		1852.4	1880	1907.6	1712.4	1732.6	1752.6
Hotspot / Near body	Ant 0	Max Power			19.70			19.50	
		3GPP Rel 99	AMR 12.2Kbps	19.25	19.25	19.41	18.75	18.77	18.82
		3GPP Rel 99	RMC 12.2Kbps	19.28	19.29	19.44	18.78	18.80	18.85
		Max Power			18.70			18.50	
		3GPP Rel 6	HSDPA Subtest-1	17.96	18.01	18.16	17.80	17.78	17.85
		3GPP Rel 6	HSDPA Subtest-2	18.01	18.05	18.17	17.77	17.77	17.85
		3GPP Rel 6	HSDPA Subtest-3	17.55	17.53	17.66	17.28	17.30	17.36
		3GPP Rel 6	HSDPA Subtest-4	17.58	17.53	17.65	17.25	17.29	17.00
		Max Power			18.70			18.50	
		3GPP Rel 8	DC-HSDPA Subtest-1	17.94	17.95	18.10	17.73	17.76	17.82
		3GPP Rel 8	DC-HSDPA Subtest-2	17.93	18.00	18.14	17.70	17.73	17.82
		3GPP Rel 8	DC-HSDPA Subtest-3	17.52	17.53	17.65	17.25	17.29	17.35
		3GPP Rel 8	DC-HSDPA Subtest-4	17.48	17.50	17.63	17.23	17.25	16.93
		Max Power			18.70			18.50	
		3GPP Rel 6	HSUPA Subtest-1	17.97	18.00	18.14	17.78	17.79	17.82
		3GPP Rel 6	HSUPA Subtest-2	16.07	16.04	16.06	15.78	15.79	15.80
		3GPP Rel 6	HSUPA Subtest-3	17.05	17.04	17.10	16.79	16.78	16.82
		3GPP Rel 6	HSUPA Subtest-4	16.03	16.03	16.18	15.73	15.77	15.86
		3GPP Rel 6	HSUPA Subtest-5	18.10	18.10	18.10	17.80	17.80	17.80

Power Selection	Transmit Antenna	Band		WCDMA V		
		TX Channel		4132	4182	4233
		Rx Channel		4357	4407	4458
		Frequency (MHz)		826.4	836.4	846.6
Near body / Hotspot	Ant 0	Max Power		22.00		
		3GPP Rel 99	AMR 12.2Kbps	21.40	21.41	21.38
		3GPP Rel 99	RMC 12.2Kbps	21.42	21.42	21.39
		Max Power		21.00		
		3GPP Rel 6	HSDPA Subtest-1	20.42	20.41	20.37
		3GPP Rel 6	HSDPA Subtest-2	20.48	20.46	20.39
		3GPP Rel 6	HSDPA Subtest-3	19.93	19.98	19.92
		3GPP Rel 6	HSDPA Subtest-4	19.97	19.97	19.91
		Max Power		21.00		
		3GPP Rel 8	DC-HSDPA Subtest-1	20.37	20.37	20.33
		3GPP Rel 8	DC-HSDPA Subtest-2	20.48	20.43	20.30
		3GPP Rel 8	DC-HSDPA Subtest-3	19.87	19.88	19.85
		3GPP Rel 8	DC-HSDPA Subtest-4	19.97	19.87	19.91
		Max Power		21.00		
		3GPP Rel 6	HSUPA Subtest-1	20.46	20.39	20.38
		3GPP Rel 6	HSUPA Subtest-2	18.48	18.39	18.35
		3GPP Rel 6	HSUPA Subtest-3	19.46	19.43	19.37
		3GPP Rel 6	HSUPA Subtest-4	18.45	18.43	18.36
		3GPP Rel 6	HSUPA Subtest-5	20.40	20.40	20.40

<CDMA2000 Conducted Power>

General Note:

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

Power Selection	Transmit Antenna	Band	CDMA BC0			CDMA BC10		
		TX Channel	1013	384	777	476	580	684
		Frequency (MHz)	824.7	836.52	848.31	817.9	820.5	823.1
Head	Ant 0	Max Power	25.50			25.50		
		RC1 SO55	24.39	24.47	24.40	24.58	24.61	24.61
		RC3 SO55	24.41	24.43	24.45	24.70	24.66	24.52
		RC3 SO32 (F+SCH)	24.57	24.55	24.58	24.67	24.64	24.60
		RC3 SO32 (+SCH)	24.43	24.39	24.44	24.64	24.56	24.53
		RTAP 153.6Kbps	24.53	24.47	24.54	24.67	24.67	24.66
		RETAP 4096Bits	24.42	24.38	24.45	24.64	24.68	24.63

Power Selection	Transmit Antenna	Band	CDMA BC1		
		TX Channel	25	600	1175
		Frequency (MHz)	1851.25	1880	1908.75
Head	Ant 0	Max Power	22.50		
		RC1 SO55	21.29	21.40	21.64
		RC3 SO55	21.38	21.45	21.64
		RC3 SO32 (F+SCH)	21.53	21.44	21.67
		RC3 SO32 (+SCH)	21.38	21.40	21.55
		RTAP 153.6Kbps	21.56	21.49	21.69
		RETAP 4096Bits	21.32	21.38	21.63

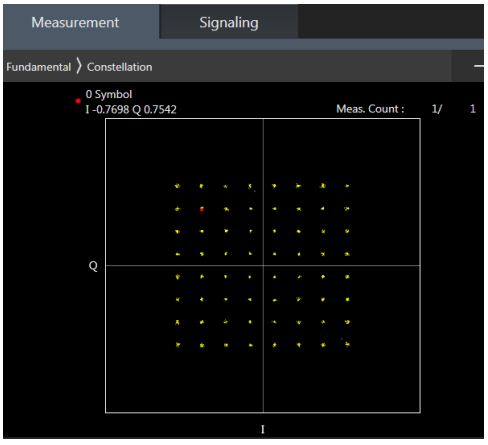
Power Selection	Transmit Antenna	Band	CDMA BC0			CDMA BC10		
		TX Channel	1013	384	777	476	580	684
		Frequency (MHz)	824.7	836.52	848.31	817.9	820.5	823.1
Near body / Hotspot	Ant 0	Max Power	22.50			23.00		
		RC1 SO55	21.75	21.70	21.78	22.15	22.17	22.16
		RC3 SO55	21.77	21.71	21.78	22.24	22.23	22.10
		RC3 SO32 (F+SCH)	21.87	21.81	21.88	22.24	22.23	22.20
		RC3 SO32 (+SCH)	21.81	21.76	21.82	22.16	22.13	22.10
		RTAP 153.6Kbps	21.89	21.83	21.90	22.24	22.21	22.21
		RETAP 4096Bits	21.83	21.76	21.84	22.17	22.22	22.16

Power Selection	Transmit Antenna	Band	CDMA BC1		
		TX Channel	25	600	1175
		Frequency (MHz)	1851.25	1880	1908.75
Near body / Hotspot	Ant 0	Max Power	19.50		
		RC1 SO55	18.67	18.59	18.79
		RC3 SO55	18.72	18.66	18.82
		RC3 SO32 (F+SCH)	18.74	18.66	18.84
		RC3 SO32 (+SCH)	18.74	18.63	18.83
		RTAP 153.6Kbps	18.78	18.70	18.86
		RETAP 4096Bits	18.71	18.56	18.82

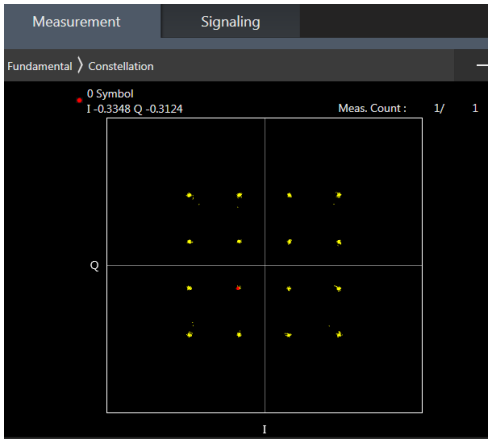
<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not 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. LTE band 2/4 SAR test was covered by Band 25/66; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   c. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   d. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
9. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

<LTE Band 2>

Power Selection				Head			Hotspot / Near body		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				22.2			19.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100	18700	18900	19100
Frequency (MHz)				1860	1880	1900	1860	1880	1900
20	QPSK	1	0	21.15	21.05	21.32	18.67	18.60	18.75
20	QPSK	1	49	21.05	21.00	21.15	18.60	18.54	18.73
20	QPSK	1	99	20.98	21.04	21.19	18.51	18.58	18.69
20	QPSK	50	0	21.15	21.10	21.18	18.69	18.61	18.73
20	QPSK	50	24	21.15	21.00	21.16	18.69	18.61	18.73
20	QPSK	50	50	21.06	21.05	21.11	18.61	18.56	18.66
20	QPSK	100	0	21.09	21.02	21.14	18.65	18.58	18.70
20	16QAM	1	0	21.48	21.40	21.39	19.03	18.92	19.01
20	16QAM	1	49	21.36	21.31	21.52	18.95	18.86	19.09
20	16QAM	1	99	21.35	21.33	21.55	18.85	18.93	19.08
20	16QAM	50	0	21.22	21.16	21.25	18.80	18.70	18.81
20	16QAM	50	24	21.25	21.15	21.23	18.80	18.74	18.82
20	16QAM	50	50	21.17	21.11	21.18	18.72	18.64	18.73
20	16QAM	100	0	21.19	21.10	21.21	18.73	18.66	18.77
20	64QAM	1	0	21.39	21.27	21.36	18.87	18.77	18.88
20	64QAM	1	49	21.34	21.25	21.45	18.84	18.76	18.94
20	64QAM	1	99	21.21	21.31	21.48	18.74	18.77	18.98
20	64QAM	50	0	21.25	21.16	21.27	18.76	18.69	18.81
20	64QAM	50	24	21.25	21.18	21.28	18.77	18.71	18.80
20	64QAM	50	50	21.17	21.12	21.21	18.69	18.64	18.75
20	64QAM	100	0	21.20	21.11	21.23	18.73	18.63	18.77
Channel				18675	18900	19125	18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5	1857.5	1880	1902.5
15	QPSK	1	0	21.12	21.04	21.26	18.68	18.57	18.77
15	QPSK	1	37	21.07	21.01	21.12	18.62	18.55	18.63
15	QPSK	1	74	20.99	21.05	21.23	18.53	18.57	18.75
15	QPSK	36	0	21.15	21.04	21.17	18.69	18.60	18.70
15	QPSK	36	20	21.16	21.08	21.21	18.70	18.63	18.69
15	QPSK	36	39	21.08	21.06	21.25	18.64	18.59	18.77
15	QPSK	75	0	21.12	21.05	21.14	18.66	18.60	18.68
15	16QAM	1	0	21.45	21.35	21.52	19.01	18.87	18.89
15	16QAM	1	37	21.39	21.36	21.45	18.94	18.87	18.94
15	16QAM	1	74	21.28	21.36	21.50	18.86	18.91	18.95
15	16QAM	36	0	21.25	21.15	21.26	18.76	18.68	18.79
15	16QAM	36	20	21.26	21.18	21.25	18.79	18.71	18.81
15	16QAM	36	39	21.20	21.11	21.31	18.71	18.66	18.83
15	16QAM	75	0	21.22	21.14	21.22	18.75	18.65	18.77
15	64QAM	1	0	21.37	21.26	21.49	18.87	18.76	19.01
15	64QAM	1	37	21.33	21.25	21.33	18.84	18.77	18.85
15	64QAM	1	74	21.24	21.31	21.49	18.75	18.79	18.98
15	64QAM	36	0	21.26	21.19	21.27	18.77	18.68	18.79
15	64QAM	36	20	21.29	21.22	21.29	18.78	18.70	18.81
15	64QAM	36	39	21.21	21.17	21.35	18.71	18.67	18.84
15	64QAM	75	0	21.22	21.15	21.24	18.73	18.64	18.75
Channel				18650	18900	19150	18650	18900	19150
Frequency (MHz)				1855	1880	1905	1855	1880	1905
10	QPSK	1	0	21.26	21.16	21.27	18.76	18.69	18.77
10	QPSK	1	25	21.23	21.05	21.24	18.73	18.57	18.73

10	QPSK	1	49	21.13	21.05	21.26	18.63	18.58	18.77
10	QPSK	25	0	21.19	21.10	21.19	18.70	18.60	18.66
10	QPSK	25	12	21.18	21.08	21.20	18.67	18.60	18.66
10	QPSK	25	25	21.13	21.07	21.22	18.62	18.57	18.74
10	QPSK	50	0	21.16	21.07	21.15	18.68	18.60	18.67
10	16QAM	1	0	21.51	21.47	21.52	18.86	18.98	18.87
10	16QAM	1	25	21.49	21.38	21.53	18.90	18.89	19.07
10	16QAM	1	49	21.38	21.39	21.54	18.97	18.92	18.92
10	16QAM	25	0	21.31	21.20	21.26	18.80	18.71	18.76
10	16QAM	25	12	21.29	21.19	21.25	18.80	18.71	18.78
10	16QAM	25	25	21.23	21.16	21.30	18.73	18.65	18.84
10	16QAM	50	0	21.26	21.17	21.23	18.76	18.67	18.74
10	64QAM	1	0	21.49	21.41	21.49	18.96	18.88	18.99
10	64QAM	1	25	21.48	21.28	21.47	18.94	18.73	18.95
10	64QAM	1	49	21.37	21.28	21.50	18.84	18.79	19.00
10	64QAM	25	0	21.29	21.19	21.29	18.77	18.67	18.76
10	64QAM	25	12	21.29	21.22	21.28	18.78	18.69	18.77
10	64QAM	25	25	21.24	21.15	21.36	18.70	18.64	18.81
10	64QAM	50	0	21.26	21.17	21.25	18.74	18.66	18.76
Channel				18625	18900	19175	18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5	1852.5	1880	1907.5
5	QPSK	1	0	21.13	21.02	21.24	18.65	18.54	18.70
5	QPSK	1	12	21.13	21.05	21.20	18.65	18.56	18.71
5	QPSK	1	24	21.18	21.00	21.28	18.70	18.50	18.76
5	QPSK	12	0	21.17	21.10	21.26	18.70	18.60	18.76
5	QPSK	12	7	21.18	21.08	21.26	18.71	18.63	18.78
5	QPSK	12	13	21.14	21.05	21.24	18.67	18.56	18.72
5	QPSK	25	0	21.15	21.07	21.25	18.66	18.56	18.74
5	16QAM	1	0	21.49	21.37	21.52	19.00	18.85	19.05
5	16QAM	1	12	21.48	21.40	21.53	18.98	18.89	19.04
5	16QAM	1	24	21.52	21.33	21.53	19.03	18.85	18.85
5	16QAM	12	0	21.27	21.17	21.35	18.77	18.67	18.84
5	16QAM	12	7	21.28	21.17	21.35	18.79	18.70	18.86
5	16QAM	12	13	21.24	21.14	21.31	18.75	18.65	18.82
5	16QAM	25	0	21.24	21.16	21.32	18.75	18.66	18.81
5	64QAM	1	0	21.37	21.31	21.45	18.87	18.75	18.91
5	64QAM	1	12	21.38	21.30	21.45	18.86	18.77	18.96
5	64QAM	1	24	21.45	21.21	21.53	18.89	18.70	19.00
5	64QAM	12	0	21.32	21.20	21.39	18.80	18.70	18.86
5	64QAM	12	7	21.33	21.25	21.44	18.80	18.72	18.89
5	64QAM	12	13	21.27	21.19	21.35	18.76	18.66	18.83
5	64QAM	25	0	21.26	21.17	21.35	18.73	18.63	18.82
Channel				18615	18900	19185	18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5	1851.5	1880	1908.5
3	QPSK	1	0	21.15	21.04	21.18	18.66	18.53	18.69
3	QPSK	1	8	21.13	21.03	21.31	18.64	18.56	18.80
3	QPSK	1	14	21.07	21.01	21.29	18.60	18.52	18.77
3	QPSK	8	0	21.18	21.11	21.25	18.70	18.61	18.73
3	QPSK	8	4	21.21	21.12	21.26	18.72	18.62	18.78
3	QPSK	8	7	21.14	21.08	21.36	18.68	18.57	18.82
3	QPSK	15	0	21.16	21.06	21.23	18.68	18.55	18.71
3	16QAM	1	0	21.45	21.37	21.52	18.98	18.83	19.04
3	16QAM	1	8	21.49	21.38	21.52	18.96	18.88	18.89
3	16QAM	1	14	21.43	21.32	21.52	18.90	18.81	19.06
3	16QAM	8	0	21.29	21.22	21.36	18.81	18.68	18.87
3	16QAM	8	4	21.33	21.23	21.40	18.84	18.74	18.89

3	16QAM	8	7	21.26	21.19	21.47	18.80	18.68	18.95
3	16QAM	15	0	21.26	21.18	21.31	18.77	18.67	18.83
3	64QAM	1	0	21.37	21.29	21.45	18.86	18.75	18.91
3	64QAM	1	8	21.36	21.28	21.50	18.88	18.74	19.04
3	64QAM	1	14	21.33	21.26	21.52	18.82	18.69	18.98
3	64QAM	8	0	21.29	21.20	21.36	18.77	18.69	18.84
3	64QAM	8	4	21.33	21.23	21.42	18.81	18.73	18.88
3	64QAM	8	7	21.27	21.21	21.45	18.76	18.67	18.94
3	64QAM	15	0	21.26	21.16	21.33	18.74	18.64	18.80
Channel				18607	18900	19193	18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3	1850.7	1880	1909.3
1.4	QPSK	1	0	21.10	21.01	21.24	18.59	18.49	18.71
1.4	QPSK	1	3	21.16	21.06	21.31	18.64	18.55	18.79
1.4	QPSK	1	5	21.08	20.98	21.24	18.55	18.47	18.70
1.4	QPSK	3	0	21.14	21.03	21.28	18.62	18.52	18.75
1.4	QPSK	3	1	21.18	21.07	21.32	18.65	18.55	18.78
1.4	QPSK	3	3	21.13	21.02	21.29	18.63	18.51	18.75
1.4	QPSK	6	0	21.12	21.03	21.30	18.59	18.49	18.76
1.4	16QAM	1	0	21.41	21.32	21.52	18.90	18.78	19.01
1.4	16QAM	1	3	21.49	21.40	21.53	18.97	18.85	18.84
1.4	16QAM	1	5	21.42	21.31	21.52	18.88	18.78	19.03
1.4	16QAM	3	0	21.23	21.11	21.39	18.69	18.59	18.85
1.4	16QAM	3	1	21.27	21.17	21.43	18.73	18.65	18.87
1.4	16QAM	3	3	21.21	21.11	21.37	18.70	18.58	18.82
1.4	16QAM	6	0	21.28	21.19	21.45	18.77	18.67	18.92
1.4	64QAM	1	0	21.32	21.23	21.48	18.81	18.70	18.94
1.4	64QAM	1	3	21.38	21.29	21.50	18.84	18.75	19.03
1.4	64QAM	1	5	21.32	21.21	21.45	18.78	18.68	18.93
1.4	64QAM	3	0	21.33	21.23	21.49	18.78	18.69	18.96
1.4	64QAM	3	1	21.39	21.28	21.53	18.83	18.75	19.00
1.4	64QAM	3	3	21.34	21.21	21.50	18.77	18.68	18.95
1.4	64QAM	6	0	21.23	21.12	21.38	18.70	18.59	18.85

<LTE Band 4>

Power Selection				Head			Hotspot / Near body		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				23.5			20.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300	20050	20175	20300
Frequency (MHz)				1720	1732.5	1745	1720	1732.5	1745
20	QPSK	1	0	22.38	22.33	22.45	19.39	19.34	19.46
20	QPSK	1	49	22.32	22.29	22.43	19.32	19.28	19.43
20	QPSK	1	99	22.21	22.19	22.35	19.23	19.19	19.35
20	QPSK	50	0	22.38	22.39	22.46	19.42	19.39	19.46
20	QPSK	50	24	22.37	22.34	22.42	19.42	19.37	19.44
20	QPSK	50	50	22.33	22.33	22.42	19.38	19.30	19.43
20	QPSK	100	0	22.37	22.33	22.38	19.40	19.33	19.39
20	16QAM	1	0	22.73	22.80	22.72	19.72	19.70	19.77
20	16QAM	1	49	22.67	22.64	22.78	19.69	19.59	19.72
20	16QAM	1	99	22.58	22.55	22.67	19.58	19.56	19.70
20	16QAM	50	0	21.51	21.46	21.53	19.53	19.51	19.53
20	16QAM	50	24	21.49	21.42	21.53	19.53	19.47	19.51
20	16QAM	50	50	21.44	21.36	21.52	19.45	19.44	19.57
20	16QAM	100	0	21.43	21.41	21.48	19.49	19.45	19.49
20	64QAM	1	0	21.63	21.58	21.66	19.66	19.64	19.66
20	64QAM	1	49	21.59	21.56	21.70	19.61	19.54	19.71
20	64QAM	1	99	21.48	21.44	21.60	19.52	19.40	19.59
20	64QAM	50	0	20.49	20.46	20.56	19.55	19.52	19.57
20	64QAM	50	24	20.50	20.48	20.55	19.51	19.48	19.53
20	64QAM	50	50	20.42	20.42	20.56	19.46	19.41	19.59
20	64QAM	100	0	20.43	20.41	20.46	19.47	19.47	19.52
Channel				20025	20175	20325	20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5	1717.5	1732.5	1747.5
15	QPSK	1	0	22.43	22.37	22.31	19.41	19.35	19.29
15	QPSK	1	37	22.35	22.32	22.38	19.36	19.30	19.37
15	QPSK	1	74	22.27	22.21	22.28	19.27	19.23	19.27
15	QPSK	36	0	22.43	22.36	22.35	19.42	19.36	19.33
15	QPSK	36	20	22.44	22.36	22.48	19.41	19.37	19.43
15	QPSK	36	39	22.40	22.31	22.39	19.37	19.32	19.39
15	QPSK	75	0	22.40	22.36	22.32	19.39	19.33	19.31
15	16QAM	1	0	22.79	22.71	22.68	19.75	19.71	19.67
15	16QAM	1	37	22.69	22.65	22.71	19.70	19.60	19.70
15	16QAM	1	74	22.63	22.57	22.64	19.63	19.58	19.60
15	16QAM	36	0	21.51	21.43	21.44	19.51	19.45	19.47
15	16QAM	36	20	21.52	21.46	21.55	19.51	19.47	19.52
15	16QAM	36	39	21.45	21.43	21.48	19.46	19.46	19.44
15	16QAM	75	0	21.47	21.43	21.38	19.49	19.46	19.39
15	64QAM	1	0	21.68	21.64	21.58	19.66	19.64	19.56
15	64QAM	1	37	21.64	21.59	21.63	19.61	19.57	19.65
15	64QAM	1	74	21.51	21.51	21.52	19.53	19.46	19.55
15	64QAM	36	0	20.51	20.49	20.46	19.55	19.49	19.42
15	64QAM	36	20	20.53	20.50	20.56	19.54	19.48	19.57
15	64QAM	36	39	20.49	20.43	20.52	19.50	19.43	19.52
15	64QAM	75	0	20.48	20.43	20.39	19.48	19.47	19.38
Channel				20000	20175	20350	20000	20175	20350
Frequency (MHz)				1715	1732.5	1750	1715	1732.5	1750
10	QPSK	1	0	22.44	22.40	22.41	19.40	19.34	19.44
10	QPSK	1	25	22.40	22.36	22.39	19.39	19.32	19.38

10	QPSK	1	49	22.34	22.27	22.30	19.33	19.24	19.27
10	QPSK	25	0	22.45	22.38	22.48	19.45	19.38	19.42
10	QPSK	25	12	22.43	22.40	22.44	19.45	19.38	19.47
10	QPSK	25	25	22.39	22.34	22.40	19.39	19.31	19.36
10	QPSK	50	0	22.45	22.35	22.42	19.39	19.34	19.39
10	16QAM	1	0	22.70	22.71	22.71	19.74	19.72	19.73
10	16QAM	1	25	22.76	22.70	22.76	19.76	19.64	19.75
10	16QAM	1	49	22.72	22.65	22.68	19.67	19.62	19.65
10	16QAM	25	0	21.51	21.47	21.52	19.52	19.49	19.53
10	16QAM	25	12	21.54	21.49	21.57	19.54	19.51	19.53
10	16QAM	25	25	21.47	21.43	21.49	19.51	19.44	19.50
10	16QAM	50	0	21.54	21.43	21.49	19.54	19.48	19.49
10	64QAM	1	0	21.68	21.65	21.71	19.70	19.61	19.66
10	64QAM	1	25	21.66	21.60	21.67	19.63	19.58	19.65
10	64QAM	1	49	21.56	21.52	21.56	19.58	19.52	19.60
10	64QAM	25	0	20.57	20.49	20.54	19.53	19.49	19.56
10	64QAM	25	12	20.55	20.50	20.54	19.54	19.52	19.56
10	64QAM	25	25	20.48	20.41	20.50	19.49	19.47	19.51
10	64QAM	50	0	20.55	20.44	20.52	19.51	19.49	19.51
Channel				19975	20175	20375	19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5	1712.5	1732.5	1752.5
5	QPSK	1	0	22.41	22.32	22.37	19.40	19.33	19.38
5	QPSK	1	12	22.41	22.33	22.38	19.40	19.32	19.36
5	QPSK	1	24	22.36	22.29	22.32	19.34	19.26	19.30
5	QPSK	12	0	22.47	22.39	22.41	19.43	19.35	19.42
5	QPSK	12	7	22.45	22.40	22.44	19.45	19.36	19.42
5	QPSK	12	13	22.43	22.38	22.43	19.41	19.32	19.35
5	QPSK	25	0	22.39	22.33	22.39	19.39	19.35	19.41
5	16QAM	1	0	22.77	22.68	22.72	19.69	19.62	19.72
5	16QAM	1	12	22.77	22.68	22.73	19.73	19.63	19.69
5	16QAM	1	24	22.69	22.65	22.66	19.67	19.54	19.61
5	16QAM	12	0	21.51	21.45	21.48	19.55	19.50	19.50
5	16QAM	12	7	21.58	21.49	21.50	19.55	19.49	19.51
5	16QAM	12	13	21.50	21.46	21.48	19.51	19.42	19.49
5	16QAM	25	0	21.48	21.44	21.49	19.53	19.47	19.45
5	64QAM	1	0	21.66	21.57	21.64	19.65	19.58	19.59
5	64QAM	1	12	21.67	21.59	21.63	19.68	19.57	19.63
5	64QAM	1	24	21.60	21.50	21.56	19.55	19.51	19.58
5	64QAM	12	0	20.60	20.52	20.55	19.58	19.51	19.57
5	64QAM	12	7	20.61	20.55	20.59	19.59	19.52	19.60
5	64QAM	12	13	20.55	20.47	20.50	19.53	19.48	19.52
5	64QAM	25	0	20.51	20.43	20.52	19.53	19.43	19.50
Channel				19965	20175	20385	19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5	1711.5	1732.5	1753.5
3	QPSK	1	0	22.39	22.33	22.35	19.38	19.30	19.37
3	QPSK	1	8	22.38	22.33	22.37	19.39	19.32	19.35
3	QPSK	1	14	22.35	22.27	22.34	19.36	19.27	19.31
3	QPSK	8	0	22.46	22.35	22.41	19.41	19.34	19.38
3	QPSK	8	4	22.49	22.43	22.45	19.48	19.37	19.44
3	QPSK	8	7	22.41	22.35	22.38	19.43	19.36	19.39
3	QPSK	15	0	22.44	22.38	22.41	19.41	19.35	19.41
3	16QAM	1	0	22.72	22.66	22.72	19.69	19.61	19.60
3	16QAM	1	8	22.76	22.69	22.70	19.73	19.64	19.63
3	16QAM	1	14	22.72	22.62	22.67	19.69	19.55	19.57
3	16QAM	8	0	21.56	21.48	21.55	19.60	19.50	19.53
3	16QAM	8	4	21.62	21.53	21.57	19.60	19.54	19.55

3	16QAM	8	7	21.55	21.48	21.50	19.58	19.48	19.52
3	16QAM	15	0	21.50	21.47	21.47	19.55	19.49	19.51
3	64QAM	1	0	21.66	21.60	21.61	19.67	19.54	19.61
3	64QAM	1	8	21.70	21.62	21.64	19.64	19.60	19.62
3	64QAM	1	14	21.62	21.57	21.57	19.62	19.54	19.57
3	64QAM	8	0	20.56	20.49	20.54	19.55	19.50	19.52
3	64QAM	8	4	20.60	20.51	20.56	19.58	19.51	19.57
3	64QAM	8	7	20.56	20.48	20.50	19.55	19.48	19.53
3	64QAM	15	0	20.55	20.44	20.50	19.54	19.43	19.48
Channel				19957	20175	20393	19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3	1710.7	1732.5	1754.3
1.4	QPSK	1	0	22.36	22.25	22.30	19.31	19.25	19.26
1.4	QPSK	1	3	22.42	22.34	22.37	19.38	19.31	19.36
1.4	QPSK	1	5	22.32	22.25	22.28	19.30	19.24	19.27
1.4	QPSK	3	0	22.37	22.30	22.37	19.34	19.30	19.32
1.4	QPSK	3	1	22.42	22.34	22.39	19.38	19.31	19.35
1.4	QPSK	3	3	22.38	22.29	22.32	19.33	19.27	19.31
1.4	QPSK	6	0	22.36	22.31	22.33	19.34	19.28	19.29
1.4	16QAM	1	0	22.72	22.65	22.64	19.66	19.55	19.54
1.4	16QAM	1	3	22.76	22.70	22.71	19.72	19.63	19.63
1.4	16QAM	1	5	22.69	22.62	22.64	19.62	19.53	19.54
1.4	16QAM	3	0	22.49	22.40	22.45	19.45	19.35	19.38
1.4	16QAM	3	1	22.52	22.44	22.49	19.50	19.38	19.41
1.4	16QAM	3	3	22.48	22.37	22.42	19.44	19.33	19.37
1.4	16QAM	6	0	21.54	21.45	21.51	19.50	19.45	19.47
1.4	64QAM	1	0	21.65	21.52	21.55	19.58	19.48	19.55
1.4	64QAM	1	3	21.67	21.59	21.63	19.65	19.58	19.61
1.4	64QAM	1	5	21.59	21.52	21.56	19.56	19.48	19.53
1.4	64QAM	3	0	21.60	21.51	21.55	19.58	19.51	19.55
1.4	64QAM	3	1	21.66	21.54	21.61	19.62	19.56	19.57
1.4	64QAM	3	3	21.59	21.51	21.57	19.60	19.51	19.55
1.4	64QAM	6	0	20.48	20.38	20.44	19.44	19.38	19.44

<LTE Band 7>

Power Selection				Head			Hotspot / Near body		
Transmit Antenna				Ant 2			Ant 2		
Max. Power				23.0			19.0		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20850	21100	21350	20850	21100	21350
Frequency (MHz)				2510	2535	2560	2510	2535	2560
20	QPSK	1	0	22.37	22.31	22.25	18.74	18.68	18.61
20	QPSK	1	49	22.17	22.28	22.14	18.55	18.63	18.51
20	QPSK	1	99	22.18	22.30	22.23	18.51	18.67	18.54
20	QPSK	50	0	22.22	22.32	22.27	18.80	18.78	18.72
20	QPSK	50	24	22.27	22.41	22.32	18.64	18.77	18.66
20	QPSK	50	50	22.43	22.41	22.35	18.57	18.72	18.64
20	QPSK	100	0	22.39	22.37	22.32	18.75	18.75	18.69
20	16QAM	1	0	22.50	22.64	22.56	18.37	18.56	18.50
20	16QAM	1	49	22.55	22.68	22.51	18.48	18.57	18.43
20	16QAM	1	99	22.76	22.64	22.57	18.69	18.54	18.56
20	16QAM	50	0	21.74	21.85	21.78	18.28	18.42	18.31
20	16QAM	50	24	21.79	21.91	21.83	18.31	18.44	18.39
20	16QAM	50	50	21.91	21.90	21.75	18.44	18.45	18.31
20	16QAM	100	0	21.86	21.89	21.81	18.40	18.41	18.39
20	64QAM	1	0	21.85	21.96	21.88	18.36	18.46	18.36
20	64QAM	1	49	21.88	21.98	21.85	18.37	18.55	18.33
20	64QAM	1	99	22.00	21.97	21.91	18.59	18.51	18.41
20	64QAM	50	0	20.77	20.87	20.79	18.30	18.41	18.32
20	64QAM	50	24	20.79	20.91	20.86	18.34	18.46	18.41
20	64QAM	50	50	20.95	20.94	20.77	18.49	18.50	18.29
20	64QAM	100	0	20.88	20.90	20.84	18.46	18.47	18.37
Channel				20825	21100	21375	20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5	2507.5	2535	2562.5
15	QPSK	1	0	22.05	22.18	22.09	18.13	18.24	18.16
15	QPSK	1	37	22.05	22.21	22.05	18.13	18.26	18.09
15	QPSK	1	74	22.19	22.30	22.17	18.25	18.38	18.21
15	QPSK	36	0	22.11	22.25	22.17	18.18	18.31	18.21
15	QPSK	36	20	22.14	22.26	22.14	18.25	18.36	18.20
15	QPSK	36	39	22.19	22.29	22.13	18.22	18.39	18.17
15	QPSK	75	0	22.13	22.23	22.19	18.20	18.34	18.25
15	16QAM	1	0	22.43	22.56	22.50	18.41	18.52	18.46
15	16QAM	1	37	22.42	22.58	22.36	18.46	18.54	18.34
15	16QAM	1	74	22.52	22.66	22.49	18.60	18.65	18.53
15	16QAM	36	0	21.74	21.83	21.78	18.26	18.40	18.31
15	16QAM	36	20	21.79	21.90	21.71	18.32	18.41	18.25
15	16QAM	36	39	21.76	21.86	21.70	18.31	18.44	18.24
15	16QAM	75	0	21.76	21.83	21.79	18.29	18.39	18.32
15	64QAM	1	0	21.86	21.97	21.91	18.43	18.53	18.45
15	64QAM	1	37	21.88	21.98	21.85	18.42	18.51	18.32
15	64QAM	1	74	21.99	22.08	21.94	18.49	18.65	18.43
15	64QAM	36	0	20.76	20.88	20.81	18.30	18.43	18.34
15	64QAM	36	20	20.80	20.92	20.73	18.36	18.45	18.28
15	64QAM	36	39	20.82	20.91	20.74	18.35	18.48	18.25
15	64QAM	75	0	20.74	20.88	20.82	18.29	18.42	18.32
Channel				20800	21100	21400	20800	21100	21400
Frequency (MHz)				2505	2535	2565	2505	2535	2565
10	QPSK	1	0	22.09	22.17	22.02	18.13	18.25	18.02
10	QPSK	1	25	22.12	22.20	22.02	18.11	18.24	18.10

10	QPSK	1	49	22.14	22.28	22.13	18.19	18.32	18.14
10	QPSK	25	0	22.10	22.21	22.03	18.14	18.26	18.12
10	QPSK	25	12	22.16	22.26	22.08	18.19	18.34	18.15
10	QPSK	25	25	22.19	22.31	22.13	18.19	18.32	18.16
10	QPSK	50	0	22.14	22.27	22.10	18.17	18.29	18.14
10	16QAM	1	0	22.39	22.59	22.34	18.35	18.53	18.30
10	16QAM	1	25	22.43	22.58	22.40	18.42	18.55	18.32
10	16QAM	1	49	22.50	22.66	22.45	18.55	18.58	18.47
10	16QAM	25	0	21.73	21.85	21.65	18.24	18.35	18.17
10	16QAM	25	12	21.76	21.91	21.67	18.29	18.39	18.18
10	16QAM	25	25	21.79	21.91	21.71	18.27	18.37	18.20
10	16QAM	50	0	21.74	21.86	21.70	18.29	18.36	18.19
10	64QAM	1	0	21.88	21.95	21.80	18.36	18.50	18.25
10	64QAM	1	25	21.90	22.00	21.86	18.39	18.49	18.28
10	64QAM	1	49	21.96	22.03	21.87	18.38	18.54	18.31
10	64QAM	25	0	20.76	20.88	20.66	18.25	18.37	18.15
10	64QAM	25	12	20.81	20.92	20.69	18.25	18.44	18.19
10	64QAM	25	25	20.80	20.92	20.74	18.30	18.41	18.18
10	64QAM	50	0	20.80	20.87	20.69	18.28	18.40	18.16
Channel				20775	21100	21425	20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5	2502.5	2535	2567.5
5	QPSK	1	0	22.07	22.19	22.05	18.09	18.23	18.05
5	QPSK	1	12	22.08	22.20	22.06	18.11	18.23	18.06
5	QPSK	1	24	22.11	22.22	22.07	18.11	18.24	18.07
5	QPSK	12	0	22.10	22.23	22.09	18.17	18.26	18.11
5	QPSK	12	7	22.16	22.26	22.15	18.16	18.28	18.13
5	QPSK	12	13	22.18	22.27	22.13	18.21	18.29	18.11
5	QPSK	25	0	22.15	22.27	22.07	18.12	18.29	18.14
5	16QAM	1	0	22.40	22.55	22.38	18.34	18.53	18.31
5	16QAM	1	12	22.45	22.59	22.41	18.39	18.54	18.38
5	16QAM	1	24	22.44	22.62	22.43	18.43	18.51	18.43
5	16QAM	12	0	21.75	21.86	21.69	18.25	18.36	18.16
5	16QAM	12	7	21.77	21.90	21.74	18.30	18.39	18.21
5	16QAM	12	13	21.76	21.86	21.72	18.26	18.35	18.21
5	16QAM	25	0	21.74	21.85	21.65	18.26	18.38	18.18
5	64QAM	1	0	21.88	21.98	21.82	18.38	18.46	18.27
5	64QAM	1	12	21.88	22.00	21.83	18.37	18.49	18.30
5	64QAM	1	24	21.86	22.02	21.88	18.37	18.53	18.31
5	64QAM	12	0	20.78	20.86	20.73	18.27	18.42	18.17
5	64QAM	12	7	20.85	20.93	20.78	18.32	18.44	18.26
5	64QAM	12	13	20.80	20.95	20.77	18.30	18.42	18.25
5	64QAM	25	0	20.77	20.85	20.67	18.23	18.41	18.15

<LTE Band 25>

Power Selection				Head			Hotspot / Near body		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				22.2			19.7		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26140	26340	26590	26140	26340	26590
Frequency (MHz)				1860	1880	1905	1860	1880	1905
20	QPSK	1	0	21.20	21.25	21.27	18.74	18.82	18.83
20	QPSK	1	49	21.17	21.11	21.23	18.71	18.67	18.78
20	QPSK	1	99	21.15	21.16	21.22	18.73	18.73	18.77
20	QPSK	50	0	21.24	21.17	21.37	18.83	18.76	18.89
20	QPSK	50	24	21.23	21.14	21.36	18.82	18.75	18.88
20	QPSK	50	50	21.17	21.10	21.31	18.73	18.70	18.88
20	QPSK	100	0	21.22	21.14	21.24	18.75	18.69	18.82
20	16QAM	1	0	21.48	21.56	21.60	19.09	19.22	19.12
20	16QAM	1	49	21.45	21.43	21.47	19.05	19.00	19.17
20	16QAM	1	99	21.49	21.43	21.53	19.11	19.07	19.12
20	16QAM	50	0	21.34	21.24	21.35	18.90	18.84	18.90
20	16QAM	50	24	21.33	21.27	21.45	18.92	18.85	19.01
20	16QAM	50	50	21.28	21.21	21.39	18.85	18.78	18.95
20	16QAM	100	0	21.28	21.20	21.30	18.87	18.79	18.86
20	64QAM	1	0	21.39	21.49	21.48	18.93	19.01	19.03
20	64QAM	1	49	21.45	21.35	21.52	18.99	18.87	19.03
20	64QAM	1	99	21.44	21.38	21.40	18.99	18.98	19.01
20	64QAM	50	0	21.35	21.29	21.36	18.91	18.83	18.94
20	64QAM	50	24	21.35	21.30	21.45	18.90	18.86	19.04
20	64QAM	50	50	21.30	21.24	21.40	18.84	18.78	18.98
20	64QAM	100	0	21.30	21.24	21.31	18.86	18.78	18.88
Channel				26115	26340	26615	26115	26340	26615
Frequency (MHz)				1857.5	1880	1907.5	1857.5	1880	1907.5
15	QPSK	1	0	21.23	21.23	21.32	18.69	18.79	18.88
15	QPSK	1	37	21.28	21.11	21.28	18.73	18.67	18.84
15	QPSK	1	74	21.19	21.03	21.22	18.62	18.59	18.78
15	QPSK	36	0	21.36	21.16	21.34	18.81	18.73	18.91
15	QPSK	36	20	21.37	21.17	21.38	18.82	18.78	18.92
15	QPSK	36	39	21.26	21.12	21.31	18.76	18.71	18.86
15	QPSK	75	0	21.32	21.14	21.33	18.77	18.71	18.90
15	16QAM	1	0	21.55	21.54	21.52	19.02	19.13	19.10
15	16QAM	1	37	21.55	21.42	21.57	19.08	19.01	19.15
15	16QAM	1	74	21.51	21.31	21.56	18.99	18.92	19.11
15	16QAM	36	0	21.42	21.25	21.42	18.89	18.81	19.01
15	16QAM	36	20	21.45	21.25	21.43	18.91	18.82	18.99
15	16QAM	36	39	21.38	21.23	21.41	18.85	18.77	18.98
15	16QAM	75	0	21.39	21.23	21.41	18.86	18.79	18.97
15	64QAM	1	0	21.47	21.47	21.55	18.94	19.02	19.11
15	64QAM	1	37	21.53	21.38	21.53	18.99	18.90	19.08
15	64QAM	1	74	21.43	21.30	21.44	18.90	18.83	19.01
15	64QAM	36	0	21.44	21.30	21.44	18.90	18.82	19.00
15	64QAM	36	20	21.46	21.32	21.46	18.94	18.86	19.04
15	64QAM	36	39	21.39	21.25	21.41	18.86	18.79	18.98
15	64QAM	75	0	21.38	21.23	21.40	18.87	18.78	18.94
Channel				26090	26340	26640	26090	26340	26640
Frequency (MHz)				1855	1880	1910	1855	1880	1910
10	QPSK	1	0	21.23	21.32	21.32	18.81	18.91	18.88
10	QPSK	1	25	21.19	21.13	21.28	18.77	18.69	18.85

10	QPSK	1	49	21.19	21.12	21.24	18.75	18.70	18.79
10	QPSK	25	0	21.26	21.15	21.31	18.82	18.73	18.90
10	QPSK	25	12	21.26	21.19	21.32	18.81	18.73	18.91
10	QPSK	25	25	21.21	21.13	21.30	18.76	18.68	18.87
10	QPSK	50	0	21.23	21.13	21.31	18.80	18.73	18.90
10	16QAM	1	0	21.54	21.54	21.55	19.14	19.21	19.21
10	16QAM	1	25	21.55	21.45	21.53	19.12	19.03	19.20
10	16QAM	1	49	21.46	21.47	21.57	19.10	19.05	19.17
10	16QAM	25	0	21.35	21.26	21.44	18.92	18.84	19.00
10	16QAM	25	12	21.34	21.28	21.43	18.91	18.85	18.99
10	16QAM	25	25	21.29	21.22	21.39	18.89	18.78	18.97
10	16QAM	50	0	21.30	21.24	21.41	18.88	18.81	18.96
10	64QAM	1	0	21.44	21.56	21.52	19.04	19.12	19.11
10	64QAM	1	25	21.47	21.38	21.53	19.01	18.92	19.10
10	64QAM	1	49	21.44	21.42	21.47	19.04	18.95	19.00
10	64QAM	25	0	21.38	21.29	21.43	18.92	18.83	19.00
10	64QAM	25	12	21.39	21.30	21.43	18.91	18.82	18.98
10	64QAM	25	25	21.31	21.24	21.37	18.87	18.78	18.94
10	64QAM	50	0	21.35	21.27	21.43	18.89	18.80	18.99
Channel				26065	26340	26665	26065	26340	26665
Frequency (MHz)				1852.5	1880	1912.5	1852.5	1880	1912.5
5	QPSK	1	0	21.22	21.22	21.29	18.70	18.69	18.82
5	QPSK	1	12	21.33	21.33	21.27	18.80	18.69	18.84
5	QPSK	1	24	21.27	21.27	21.25	18.74	18.63	18.80
5	QPSK	12	0	21.38	21.38	21.31	18.82	18.72	18.88
5	QPSK	12	7	21.37	21.37	21.36	18.85	18.74	18.89
5	QPSK	12	13	21.35	21.35	21.30	18.77	18.70	18.86
5	QPSK	25	0	21.34	21.34	21.29	18.80	18.69	18.88
5	16QAM	1	0	21.52	21.52	21.52	19.05	19.00	19.16
5	16QAM	1	12	21.53	21.54	21.50	19.12	19.03	19.16
5	16QAM	1	24	21.58	21.58	21.58	19.06	18.97	19.16
5	16QAM	12	0	21.44	21.44	21.42	18.94	18.82	18.96
5	16QAM	12	7	21.44	21.44	21.44	18.94	18.81	18.99
5	16QAM	12	13	21.42	21.42	21.40	18.90	18.80	18.94
5	16QAM	25	0	21.41	21.41	21.39	18.89	18.79	18.95
5	64QAM	1	0	21.46	21.46	21.52	18.92	18.91	19.08
5	64QAM	1	12	21.55	21.55	21.52	19.02	18.93	19.08
5	64QAM	1	24	21.48	21.48	21.44	18.95	18.87	19.04
5	64QAM	12	0	21.50	21.50	21.42	18.95	18.85	18.97
5	64QAM	12	7	21.50	21.50	21.46	18.98	18.87	19.05
5	64QAM	12	13	21.46	21.46	21.43	18.91	18.82	18.97
5	64QAM	25	0	21.42	21.42	21.39	18.89	18.78	18.95
Channel				26055	26340	26675	26055	26340	26675
Frequency (MHz)				1851.5	1880	1913.5	1851.5	1880	1913.5
3	QPSK	1	0	21.09	21.15	21.16	18.68	18.66	18.73
3	QPSK	1	8	21.13	21.14	21.16	18.70	18.68	18.73
3	QPSK	1	14	21.19	21.10	21.14	18.71	18.64	18.72
3	QPSK	8	0	21.15	21.17	21.21	18.71	18.74	18.77
3	QPSK	8	4	21.33	21.23	21.24	18.87	18.75	18.81
3	QPSK	8	7	21.24	21.18	21.21	18.79	18.72	18.77
3	QPSK	15	0	21.25	21.15	21.21	18.80	18.69	18.78
3	16QAM	1	0	21.43	21.40	21.50	19.03	18.99	19.03
3	16QAM	1	8	21.46	21.46	21.55	19.07	19.03	19.06
3	16QAM	1	14	21.51	21.41	21.47	19.08	18.98	19.00
3	16QAM	8	0	21.28	21.29	21.34	18.87	18.83	18.90
3	16QAM	8	4	21.41	21.33	21.39	18.97	18.87	18.91

3	16QAM	8	7	21.38	21.26	21.34	18.96	18.82	18.87
3	16QAM	15	0	21.37	21.23	21.33	18.90	18.80	18.88
3	64QAM	1	0	21.36	21.36	21.43	18.91	18.87	18.95
3	64QAM	1	8	21.37	21.41	21.43	18.91	18.90	18.97
3	64QAM	1	14	21.43	21.33	21.41	18.96	18.89	18.90
3	64QAM	8	0	21.28	21.31	21.33	18.83	18.85	18.86
3	64QAM	8	4	21.45	21.34	21.37	18.96	18.86	18.92
3	64QAM	8	7	21.40	21.29	21.34	18.91	18.82	18.86
3	64QAM	15	0	21.37	21.28	21.32	18.90	18.79	18.86
Channel				26047	26340	26683	26047	26340	26683
Frequency (MHz)				1850.7	1880	1914.3	1850.7	1880	1914.3
1.4	QPSK	1	0	21.11	21.14	21.27	18.64	18.64	18.76
1.4	QPSK	1	3	21.19	21.19	21.35	18.69	18.69	18.84
1.4	QPSK	1	5	21.10	21.13	21.29	18.62	18.63	18.77
1.4	QPSK	3	0	21.16	21.16	21.33	18.67	18.66	18.82
1.4	QPSK	3	1	21.20	21.21	21.35	18.68	18.72	18.85
1.4	QPSK	3	3	21.15	21.19	21.31	18.66	18.64	18.80
1.4	QPSK	6	0	21.14	21.15	21.32	18.65	18.67	18.83
1.4	16QAM	1	0	21.46	21.40	21.58	19.00	18.94	19.08
1.4	16QAM	1	3	21.54	21.52	21.54	19.04	19.01	19.20
1.4	16QAM	1	5	21.46	21.44	21.59	18.96	18.92	19.12
1.4	16QAM	3	0	21.26	21.23	21.41	18.78	18.75	18.89
1.4	16QAM	3	1	21.28	21.29	21.44	18.84	18.83	18.94
1.4	16QAM	3	3	21.24	21.23	21.38	18.77	18.75	18.88
1.4	16QAM	6	0	21.32	21.32	21.47	18.86	18.82	18.97
1.4	64QAM	1	0	21.38	21.39	21.52	18.87	18.86	18.98
1.4	64QAM	1	3	21.40	21.46	21.56	18.92	18.90	19.07
1.4	64QAM	1	5	21.37	21.37	21.48	18.86	18.87	19.00
1.4	64QAM	3	0	21.38	21.38	21.52	18.87	18.87	19.00
1.4	64QAM	3	1	21.41	21.45	21.53	18.92	18.91	19.04
1.4	64QAM	3	3	21.37	21.40	21.49	18.85	18.86	19.01
1.4	64QAM	6	0	21.26	21.30	21.40	18.76	18.74	18.88

<LTE Band 66>

Power Selection				Head			Hotspot / Near body		
Transmit Antenna				Ant 0			Ant 0		
Max. Power				23.5			20.5		
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				132072	132322	132572	132072	132322	132572
Frequency (MHz)				1720	1745	1770	1720	1745	1770
20	QPSK	1	0	22.46	22.49	22.53	19.76	19.81	19.82
20	QPSK	1	49	22.43	22.48	22.51	19.74	19.79	19.80
20	QPSK	1	99	22.29	22.40	22.37	19.58	19.72	19.70
20	QPSK	50	0	22.39	22.40	22.44	19.73	19.74	19.75
20	QPSK	50	24	22.35	22.35	22.37	19.67	19.67	19.71
20	QPSK	50	50	22.29	22.33	22.42	19.62	19.66	19.70
20	QPSK	100	0	22.33	22.39	22.40	19.69	19.68	19.70
20	16QAM	1	0	22.77	22.80	22.73	19.71	19.82	19.85
20	16QAM	1	49	22.80	22.80	22.90	19.83	19.78	19.83
20	16QAM	1	99	22.58	22.70	22.67	19.65	19.75	19.66
20	16QAM	50	0	21.45	21.48	21.48	19.53	19.54	19.50
20	16QAM	50	24	21.42	21.47	21.43	19.46	19.49	19.50
20	16QAM	50	50	21.41	21.42	21.51	19.44	19.43	19.53
20	16QAM	100	0	21.41	21.43	21.45	19.45	19.48	19.48
20	64QAM	1	0	21.65	21.68	21.64	19.71	19.77	19.80
20	64QAM	1	49	21.70	21.70	21.79	19.75	19.79	19.81
20	64QAM	1	99	21.50	21.60	21.59	19.57	19.71	19.65
20	64QAM	50	0	20.48	20.52	20.50	19.54	19.56	19.58
20	64QAM	50	24	20.44	20.47	20.47	19.48	19.54	19.52
20	64QAM	50	50	20.43	20.43	20.51	19.46	19.47	19.57
20	64QAM	100	0	20.45	20.46	20.47	19.47	19.50	19.50
Channel				132047	132322	132597	132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5	1717.5	1745	1772.5
15	QPSK	1	0	22.45	22.49	22.46	19.46	19.47	19.45
15	QPSK	1	37	22.46	22.48	22.54	19.48	19.49	19.58
15	QPSK	1	74	22.33	22.32	22.41	19.34	19.34	19.43
15	QPSK	36	0	22.32	22.33	22.35	19.35	19.34	19.34
15	QPSK	36	20	22.40	22.42	22.54	19.42	19.45	19.53
15	QPSK	36	39	22.31	22.33	22.34	19.31	19.32	19.42
15	QPSK	75	0	22.30	22.34	22.33	19.34	19.34	19.34
15	16QAM	1	0	22.77	22.79	22.77	19.70	19.78	19.83
15	16QAM	1	37	22.78	22.78	22.88	19.80	19.77	19.78
15	16QAM	1	74	22.62	22.64	22.72	19.67	19.67	19.71
15	16QAM	36	0	21.41	21.45	21.41	19.43	19.46	19.47
15	16QAM	36	20	21.52	21.49	21.61	19.53	19.52	19.64
15	16QAM	36	39	21.36	21.38	21.47	19.38	19.40	19.51
15	16QAM	75	0	21.38	21.42	21.39	19.43	19.44	19.41
15	64QAM	1	0	21.65	21.69	21.67	19.71	19.75	19.72
15	64QAM	1	37	21.72	21.74	21.78	19.74	19.78	19.83
15	64QAM	1	74	21.54	21.56	21.61	19.61	19.60	19.69
15	64QAM	36	0	20.45	20.46	20.46	19.48	19.49	19.50
15	64QAM	36	20	20.53	20.54	20.61	19.55	19.61	19.65
15	64QAM	36	39	20.41	20.39	20.48	19.44	19.43	19.52
15	64QAM	75	0	20.40	20.43	20.41	19.43	19.45	19.43
Channel				132022	132322	132622	132022	132322	132622
Frequency (MHz)				1715	1745	1775	1715	1745	1775
10	QPSK	1	0	22.41	22.42	22.53	19.44	19.45	19.54
10	QPSK	1	25	22.41	22.42	22.49	19.43	19.43	19.50

10	QPSK	1	49	22.31	22.29	22.37	19.34	19.32	19.42
10	QPSK	25	0	22.39	22.38	22.51	19.43	19.40	19.53
10	QPSK	25	12	22.37	22.36	22.48	19.41	19.42	19.50
10	QPSK	25	25	22.34	22.37	22.44	19.35	19.35	19.46
10	QPSK	50	0	22.38	22.40	22.46	19.40	19.42	19.50
10	16QAM	1	0	22.75	22.74	22.84	19.72	19.77	19.84
10	16QAM	1	25	22.76	22.76	22.80	19.76	19.73	19.84
10	16QAM	1	49	22.61	22.63	22.69	19.70	19.66	19.70
10	16QAM	25	0	21.46	21.48	21.57	19.53	19.50	19.58
10	16QAM	25	12	21.47	21.44	21.55	19.49	19.45	19.56
10	16QAM	25	25	21.40	21.42	21.50	19.49	19.42	19.54
10	16QAM	50	0	21.45	21.46	21.53	19.47	19.50	19.58
10	64QAM	1	0	21.65	21.64	21.76	19.69	19.73	19.77
10	64QAM	1	25	21.66	21.63	21.71	19.70	19.72	19.76
10	64QAM	1	49	21.52	21.53	21.59	19.62	19.63	19.66
10	64QAM	25	0	20.51	20.51	20.59	19.54	19.51	19.59
10	64QAM	25	12	20.48	20.49	20.56	19.53	19.56	19.58
10	64QAM	25	25	20.46	20.44	20.52	19.49	19.50	19.54
10	64QAM	50	0	20.45	20.49	20.56	19.51	19.52	19.59
Channel				131997	132322	132647	131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5	1712.5	1745	1777.5
5	QPSK	1	0	22.23	22.28	22.35	19.29	19.25	19.36
5	QPSK	1	12	22.42	22.42	22.47	19.45	19.42	19.49
5	QPSK	1	24	22.22	22.19	22.27	19.24	19.22	19.28
5	QPSK	12	0	22.40	22.34	22.43	19.37	19.39	19.45
5	QPSK	12	7	22.47	22.47	22.51	19.50	19.47	19.53
5	QPSK	12	13	22.32	22.31	22.39	19.37	19.35	19.40
5	QPSK	25	0	22.37	22.33	22.43	19.40	19.39	19.44
5	16QAM	1	0	22.60	22.59	22.65	19.58	19.58	19.69
5	16QAM	1	12	22.76	22.74	22.79	19.70	19.74	19.83
5	16QAM	1	24	22.54	22.52	22.61	19.54	19.54	19.59
5	16QAM	12	0	21.47	21.42	21.49	19.49	19.48	19.54
5	16QAM	12	7	21.50	21.51	21.57	19.58	19.52	19.64
5	16QAM	12	13	21.43	21.41	21.44	19.48	19.46	19.50
5	16QAM	25	0	21.44	21.44	21.48	19.50	19.42	19.52
5	64QAM	1	0	21.51	21.48	21.53	19.56	19.54	19.59
5	64QAM	1	12	21.68	21.66	21.71	19.72	19.69	19.74
5	64QAM	1	24	21.42	21.45	21.47	19.50	19.47	19.53
5	64QAM	12	0	20.51	20.49	20.55	19.55	19.51	19.60
5	64QAM	12	7	20.59	20.57	20.65	19.61	19.59	19.67
5	64QAM	12	13	20.46	20.47	20.50	19.48	19.47	19.57
5	64QAM	25	0	20.46	20.46	20.49	19.47	19.47	19.55
Channel				131987	132322	132657	131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5	1711.5	1745	1778.5
3	QPSK	1	0	22.29	22.29	22.38	19.33	19.30	19.40
3	QPSK	1	8	22.41	22.40	22.47	19.42	19.40	19.50
3	QPSK	1	14	22.29	22.28	22.31	19.29	19.26	19.34
3	QPSK	8	0	22.40	22.41	22.44	19.42	19.41	19.47
3	QPSK	8	4	22.45	22.47	22.53	19.48	19.45	19.54
3	QPSK	8	7	22.42	22.40	22.45	19.40	19.41	19.48
3	QPSK	15	0	22.42	22.38	22.45	19.41	19.39	19.47
3	16QAM	1	0	22.61	22.59	22.69	19.56	19.62	19.68
3	16QAM	1	8	22.76	22.74	22.80	19.78	19.73	19.78
3	16QAM	1	14	22.60	22.59	22.59	19.57	19.56	19.63
3	16QAM	8	0	21.50	21.52	21.58	19.55	19.53	19.58
3	16QAM	8	4	21.58	21.60	21.62	19.63	19.59	19.65

3	16QAM	8	7	21.54	21.51	21.56	19.53	19.51	19.60
3	16QAM	15	0	21.49	21.48	21.56	19.50	19.48	19.57
3	64QAM	1	0	21.56	21.52	21.56	19.54	19.55	19.61
3	64QAM	1	8	21.68	21.64	21.70	19.66	19.69	19.73
3	64QAM	1	14	21.52	21.50	21.55	19.51	19.53	19.60
3	64QAM	8	0	20.53	20.53	20.57	19.58	19.53	19.60
3	64QAM	8	4	20.61	20.60	20.63	19.58	19.62	19.66
3	64QAM	8	7	20.53	20.52	20.58	19.56	19.57	19.59
3	64QAM	15	0	20.49	20.47	20.54	19.55	19.53	19.57
Channel				131979	132322	132665	131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3	1710.7	1745	1779.3
1.4	QPSK	1	0	22.38	22.36	22.45	19.37	19.34	19.40
1.4	QPSK	1	3	22.50	22.47	22.54	19.44	19.42	19.50
1.4	QPSK	1	5	22.39	22.35	22.40	19.32	19.35	19.39
1.4	QPSK	3	0	22.42	22.41	22.49	19.40	19.38	19.47
1.4	QPSK	3	1	22.49	22.46	22.53	19.44	19.45	19.50
1.4	QPSK	3	3	22.45	22.40	22.51	19.43	19.40	19.45
1.4	QPSK	6	0	22.46	22.42	22.50	19.41	19.38	19.46
1.4	16QAM	1	0	22.73	22.64	22.75	19.70	19.62	19.69
1.4	16QAM	1	3	22.84	22.81	22.83	19.77	19.71	19.78
1.4	16QAM	1	5	22.71	22.65	22.70	19.69	19.64	19.66
1.4	16QAM	3	0	22.51	22.50	22.57	19.49	19.43	19.50
1.4	16QAM	3	1	22.55	22.55	22.61	19.57	19.50	19.54
1.4	16QAM	3	3	22.49	22.50	22.54	19.49	19.44	19.51
1.4	16QAM	6	0	21.61	21.58	21.64	19.57	19.56	19.61
1.4	64QAM	1	0	21.60	21.59	21.65	19.60	19.62	19.66
1.4	64QAM	1	3	21.72	21.72	21.74	19.68	19.69	19.74
1.4	64QAM	1	5	21.61	21.59	21.65	19.57	19.58	19.61
1.4	64QAM	3	0	21.64	21.63	21.68	19.64	19.64	19.69
1.4	64QAM	3	1	21.68	21.68	21.72	19.67	19.71	19.73
1.4	64QAM	3	3	21.65	21.62	21.66	19.61	19.61	19.68
1.4	64QAM	6	0	20.55	20.49	20.58	19.50	19.51	19.56

<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.

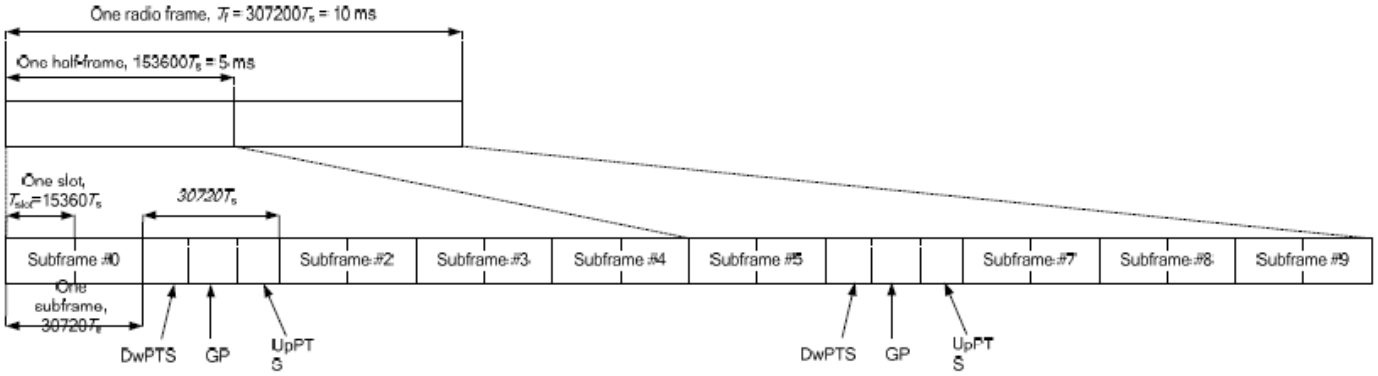


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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>

Power Selection				Hotspot / Near body		
Transmit Antenna				Ant 2		
Max. Power				22.2		
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	21.54	21.65	21.63
20	QPSK	1	49	21.55	21.66	21.67
20	QPSK	1	99	21.71	21.71	21.73
20	QPSK	50	0	21.65	21.74	21.74
20	QPSK	50	24	21.76	21.77	21.76
20	QPSK	50	50	21.77	21.78	21.78
20	QPSK	100	0	21.78	21.79	21.76
20	16QAM	1	0	21.34	21.41	21.45
20	16QAM	1	49	21.38	21.46	21.47
20	16QAM	1	99	21.51	21.52	21.51
20	16QAM	50	0	21.37	21.49	21.49
20	16QAM	50	24	21.53	21.54	21.54
20	16QAM	50	50	21.53	21.56	21.55
20	16QAM	100	0	21.51	21.51	21.51
20	64QAM	1	0	21.07	21.16	21.16
20	64QAM	1	49	21.10	21.18	21.19
20	64QAM	1	99	21.23	21.22	21.22
20	64QAM	50	0	21.37	21.48	21.48
20	64QAM	50	24	21.49	21.50	21.50
20	64QAM	50	50	21.49	21.52	21.52
20	64QAM	100	0	21.49	21.51	21.50
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	21.19	21.30	21.30
15	QPSK	1	37	21.21	21.30	21.32
15	QPSK	1	74	21.36	21.38	21.37
15	QPSK	36	0	21.28	21.39	21.40
15	QPSK	36	20	21.44	21.44	21.42
15	QPSK	36	39	21.42	21.44	21.43
15	QPSK	75	0	21.40	21.41	21.42
15	16QAM	1	0	21.28	21.39	21.39
15	16QAM	1	37	21.31	21.42	21.44
15	16QAM	1	74	21.45	21.45	21.48
15	16QAM	36	0	21.34	21.44	21.45
15	16QAM	36	20	21.47	21.46	21.48
15	16QAM	36	39	21.49	21.51	21.49
15	16QAM	75	0	21.48	21.46	21.46
15	64QAM	1	0	21.00	21.12	21.11
15	64QAM	1	37	21.04	21.13	21.12
15	64QAM	1	74	21.17	21.18	21.18
15	64QAM	36	0	21.32	21.40	21.43
15	64QAM	36	20	21.44	21.45	21.46
15	64QAM	36	39	21.45	21.46	21.49
15	64QAM	75	0	21.44	21.46	21.47
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	21.19	21.30	21.33
10	QPSK	1	25	21.23	21.35	21.34

10	QPSK	1	49	21.29	21.40	21.42
10	QPSK	25	0	21.25	21.36	21.37
10	QPSK	25	12	21.31	21.38	21.40
10	QPSK	25	25	21.29	21.39	21.39
10	QPSK	50	0	21.30	21.39	21.42
10	16QAM	1	0	21.31	21.39	21.40
10	16QAM	1	25	21.30	21.41	21.44
10	16QAM	1	49	21.33	21.46	21.47
10	16QAM	25	0	21.33	21.40	21.43
10	16QAM	25	12	21.36	21.43	21.48
10	16QAM	25	25	21.33	21.45	21.47
10	16QAM	50	0	21.35	21.45	21.48
10	64QAM	1	0	21.03	21.14	21.16
10	64QAM	1	25	21.05	21.15	21.16
10	64QAM	1	49	21.09	21.20	21.21
10	64QAM	25	0	21.34	21.43	21.43
10	64QAM	25	12	21.40	21.49	21.49
10	64QAM	25	25	21.38	21.48	21.47
10	64QAM	50	0	21.34	21.43	21.45
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	21.17	21.26	21.30
5	QPSK	1	12	21.19	21.30	21.31
5	QPSK	1	24	21.16	21.26	21.30
5	QPSK	12	0	21.21	21.32	21.33
5	QPSK	12	7	21.23	21.35	21.38
5	QPSK	12	13	21.23	21.35	21.37
5	QPSK	25	0	21.20	21.33	21.33
5	16QAM	1	0	21.22	21.31	21.34
5	16QAM	1	12	21.25	21.36	21.39
5	16QAM	1	24	21.28	21.38	21.42
5	16QAM	12	0	21.22	21.31	21.35
5	16QAM	12	7	21.25	21.37	21.37
5	16QAM	12	13	21.25	21.36	21.36
5	16QAM	25	0	21.29	21.39	21.41
5	64QAM	1	0	20.96	21.04	21.10
5	64QAM	1	12	20.99	21.08	21.11
5	64QAM	1	24	21.01	21.14	21.15
5	64QAM	12	0	21.25	21.36	21.35
5	64QAM	12	7	21.29	21.40	21.42
5	64QAM	12	13	21.30	21.36	21.41
5	64QAM	25	0	21.29	21.41	21.43

<LTE Band 41>

Power Selection				Hotspot / Near body				
Transmit Antenna				Ant 2				
Max. Power				20.5				
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				39750	40185	40620	41055	41490
Frequency (MHz)				2506	2549.5	2593	2636.5	2680
20	QPSK	1	0	20.24	20.30	20.33	20.34	20.41
20	QPSK	1	49	20.15	20.19	20.27	20.28	20.31
20	QPSK	1	99	20.19	20.28	20.32	20.30	20.29
20	QPSK	50	0	20.25	20.32	20.39	20.39	20.42
20	QPSK	50	24	20.21	20.40	20.37	20.38	20.41
20	QPSK	50	50	20.18	20.35	20.34	20.37	20.36
20	QPSK	100	0	20.24	20.37	20.38	20.37	20.37
20	16QAM	1	0	20.34	20.39	20.48	20.49	20.50
20	16QAM	1	49	20.23	20.29	20.40	20.37	20.38
20	16QAM	1	99	20.23	20.41	20.40	20.42	20.40
20	16QAM	50	0	20.31	20.36	20.45	20.44	20.49
20	16QAM	50	24	20.30	20.45	20.45	20.46	20.48
20	16QAM	50	50	20.28	20.43	20.42	20.41	20.42
20	16QAM	100	0	20.28	20.44	20.41	20.42	20.43
20	64QAM	1	0	20.05	20.10	20.24	20.22	20.28
20	64QAM	1	49	19.97	20.01	20.15	20.17	20.19
20	64QAM	1	99	19.97	20.14	20.18	20.15	20.14
20	64QAM	50	0	20.29	20.34	20.46	20.46	20.48
20	64QAM	50	24	20.29	20.46	20.44	20.45	20.49
20	64QAM	50	50	20.25	20.42	20.42	20.44	20.44
20	64QAM	100	0	20.28	20.44	20.46	20.47	20.49
Channel				39725	40173	40620	41068	41515
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5
15	QPSK	1	0	20.20	20.25	20.31	20.33	20.39
15	QPSK	1	37	20.13	20.13	20.23	20.26	20.30
15	QPSK	1	74	20.14	20.27	20.25	20.28	20.29
15	QPSK	36	0	20.23	20.27	20.34	20.34	20.41
15	QPSK	36	20	20.23	20.35	20.33	20.36	20.42
15	QPSK	36	39	20.17	20.31	20.30	20.34	20.33
15	QPSK	75	0	20.21	20.32	20.31	20.35	20.38
15	16QAM	1	0	20.33	20.35	20.42	20.46	20.49
15	16QAM	1	37	20.20	20.19	20.27	20.33	20.37
15	16QAM	1	74	20.23	20.34	20.35	20.37	20.40
15	16QAM	36	0	20.30	20.32	20.40	20.44	20.48
15	16QAM	36	20	20.29	20.39	20.39	20.41	20.48
15	16QAM	36	39	20.25	20.35	20.39	20.40	20.44
15	16QAM	75	0	20.28	20.41	20.36	20.43	20.46
15	64QAM	1	0	20.03	20.06	20.19	20.20	20.29
15	64QAM	1	37	19.96	19.97	20.09	20.14	20.19
15	64QAM	1	74	19.96	20.11	20.13	20.16	20.15
15	64QAM	36	0	20.27	20.30	20.40	20.43	20.49
15	64QAM	36	20	20.27	20.40	20.40	20.42	20.49
15	64QAM	36	39	20.22	20.39	20.38	20.40	20.43
15	64QAM	75	0	20.25	20.41	20.41	20.42	20.49
Channel				39700	40160	40620	41080	41540
Frequency (MHz)				2501	2547	2593	2639	2685
10	QPSK	1	0	20.12	20.20	20.26	20.31	20.37
10	QPSK	1	25	20.11	20.15	20.24	20.29	20.30

10	QPSK	1	49	20.10	20.18	20.26	20.27	20.31
10	QPSK	25	0	20.14	20.22	20.27	20.32	20.41
10	QPSK	25	12	20.15	20.23	20.29	20.30	20.39
10	QPSK	25	25	20.13	20.18	20.26	20.29	20.32
10	QPSK	50	0	20.16	20.21	20.31	20.35	20.34
10	16QAM	1	0	20.23	20.30	20.39	20.37	20.49
10	16QAM	1	25	20.18	20.27	20.36	20.40	20.45
10	16QAM	1	49	20.17	20.23	20.34	20.35	20.41
10	16QAM	25	0	20.23	20.28	20.39	20.38	20.44
10	16QAM	25	12	20.23	20.29	20.36	20.42	20.49
10	16QAM	25	25	20.19	20.22	20.35	20.38	20.42
10	16QAM	50	0	20.23	20.25	20.35	20.39	20.44
10	64QAM	1	0	19.99	20.03	20.16	20.17	20.29
10	64QAM	1	25	19.95	19.97	20.12	20.17	20.21
10	64QAM	1	49	19.90	19.96	20.14	20.17	20.19
10	64QAM	25	0	20.25	20.28	20.41	20.44	20.47
10	64QAM	25	12	20.26	20.29	20.43	20.46	20.48
10	64QAM	25	25	20.22	20.24	20.38	20.42	20.49
10	64QAM	50	0	20.19	20.23	20.37	20.42	20.47
Channel				39675	40148	40620	41093	41565
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5
5	QPSK	1	0	20.05	20.13	20.20	20.26	20.28
5	QPSK	1	12	20.06	20.13	20.20	20.24	20.29
5	QPSK	1	24	20.03	20.04	20.12	20.17	20.21
5	QPSK	12	0	20.07	20.16	20.25	20.30	20.29
5	QPSK	12	7	20.13	20.16	20.25	20.28	20.32
5	QPSK	12	13	20.09	20.13	20.22	20.29	20.31
5	QPSK	25	0	20.10	20.15	20.24	20.29	20.30
5	16QAM	1	0	20.10	20.21	20.30	20.28	20.38
5	16QAM	1	12	20.15	20.23	20.33	20.34	20.41
5	16QAM	1	24	20.11	20.19	20.30	20.31	20.39
5	16QAM	12	0	20.10	20.19	20.30	20.31	20.36
5	16QAM	12	7	20.12	20.17	20.29	20.33	20.36
5	16QAM	12	13	20.09	20.17	20.27	20.28	20.34
5	16QAM	25	0	20.18	20.21	20.34	20.36	20.38
5	64QAM	1	0	19.91	19.97	20.09	20.10	20.14
5	64QAM	1	12	19.89	19.95	20.07	20.12	20.18
5	64QAM	1	24	19.90	19.93	20.06	20.09	20.14
5	64QAM	12	0	20.14	20.21	20.30	20.39	20.40
5	64QAM	12	7	20.16	20.20	20.34	20.38	20.43
5	64QAM	12	13	20.13	20.19	20.32	20.34	20.39
5	64QAM	25	0	20.18	20.24	20.36	20.42	20.42

13. WLAN Conducted RF Output Power (Unit: dBm)

General Note:

1. For each antenna, transmit power in SISO operation is larger than (or equal to) the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode.
2. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6W/kg and SAR peak to location ratio ≤ 0.04, no additional SAR measurements for MIMO.
3. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
4. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
5. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
6. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of the initial test position is ≤ 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 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	14.60	15.00	99.02	14.00	14.00	98.63	13.00	13.00	13.00	13.00	16.00	16.00	98.62
		6	2437	14.50	15.00		13.90	14.00		12.70	13.00	12.80	13.00	15.76	16.00	
		11	2462	14.80	15.00		14.00	14.00		13.00	13.00	12.80	13.00	15.91	16.00	
		12	2467	14.41	15.00		13.60	14.00		12.68	13.00	12.60	13.00	15.70	16.00	
		13	2472	7.10	7.50		7.30	7.50		7.30	7.50	7.10	7.50	10.21	10.50	
	802.11g 6Mbps	1	2412	14.20	14.50	98.11	13.90	14.00	98.11	12.90	13.00	12.70	13.00	15.81	16.00	98.11
		6	2437	14.90	15.00		13.80	14.00		12.70	13.00	12.80	13.00	15.76	16.00	
		11	2462	14.60	15.00		13.60	14.00		12.90	13.00	12.80	13.00	15.86	16.00	
		12	2467	11.80	12.00		11.70	12.00		11.60	12.00	11.60	12.00	14.61	15.00	
		13	2472	-1.20	-1.00		-1.40	-1.00		-1.20	-1.00	-1.40	-1.00	1.81	2.00	
	802.11n-HT20 MCS0	1	2412	13.60	14.00	98.20	13.90	14.00	98.20	12.90	13.00	12.80	13.00	15.86	16.00	98.20
		6	2437	14.60	15.00		13.80	14.00		12.70	13.00	12.90	13.00	15.81	16.00	
		11	2462	13.70	14.00		13.60	14.00		12.90	13.00	12.80	13.00	15.86	16.00	
		12	2467	11.20	11.50		11.10	11.50		11.40	11.50	11.40	11.50	14.41	14.50	
		13	2472	-1.30	-1.00		-1.30	-1.00		-1.10	-1.00	-1.50	-1.00	1.71	2.00	
	802.11ac-VHT20 MCS0	1	2412	13.60	14.00	98.04	13.90	14.00	97.77	13.00	13.00	12.80	13.00	15.91	16.00	97.77
		6	2437	14.60	15.00		13.90	14.00		12.90	13.00	12.90	13.00	15.91	16.00	
		11	2462	13.70	14.00		13.70	14.00		13.00	13.00	12.90	13.00	15.96	16.00	
		12	2467	11.50	11.50		11.36	11.50		11.20	11.50	11.10	11.50	14.16	14.50	
		13	2472	-1.25	-1.00		-1.35	-1.00		-0.90	-1.00	-1.30	-1.00	1.91	2.00	

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	17.90	18.00	99.02	17.70	18.00	98.63	18.00	18.00	18.00	18.00	21.00	21.00	98.62
		6	2437	17.90	18.00		17.80	18.00		17.70	18.00	17.60	18.00	20.66	21.00	
		11	2462	15.60	16.00		15.90	16.00		15.90	16.00	15.80	16.00	18.86	19.00	
		12	2467	15.58	16.00		15.78	16.00		15.60	16.00	15.50	16.00	18.60	19.00	
		13	2472	7.10	7.50		7.30	7.50		7.20	7.50	7.20	7.50	10.21	10.50	
	802.11g 6Mbps	1	2412	14.20	14.50	98.11	14.40	14.50	98.11	14.50	14.50	14.30	14.50	17.46	17.50	98.11
		6	2437	17.90	18.00		17.80	18.00		17.80	18.00	17.60	18.00	20.71	21.00	
		11	2462	15.10	15.50		15.10	15.50		15.50	15.50	15.30	15.50	18.41	18.50	
		12	2467	11.80	12.00		11.70	12.00		11.60	12.00	11.60	12.00	14.61	15.00	
		13	2472	-1.80	-1.00		-1.76	-1.00		-1.80	-1.00	-2.10	-1.00	1.01	2.00	
	802.11n-HT20 MCS0	1	2412	13.60	14.00	98.20	13.90	14.00	98.20	14.00	14.00	13.90	14.00	16.96	17.00	98.20
		6	2437	17.80	18.00		17.70	18.00		17.50	18.00	17.70	18.00	20.61	21.00	
		11	2462	13.70	14.00		13.60	14.00		14.00	14.00	13.90	14.00	16.96	17.00	
		12	2467	11.20	11.50		11.10	11.50		11.40	11.50	11.40	11.50	14.41	14.50	
		13	2472	-1.60	-1.00		-1.80	-1.00		-1.90	-1.00	-2.20	-1.00	0.90	2.00	
	802.11ac-VHT20 MCS0	1	2412	13.60	14.00	98.04	13.90	14.00	97.77	14.00	14.00	13.80	14.00	16.96	17.00	97.77
		6	2437	17.90	18.00		17.80	18.00		17.60	18.00	17.60	18.00	20.61	21.00	
		11	2462	13.70	14.00		13.70	14.00		14.00	14.00	13.90	14.00	16.96	17.00	
		12	2467	11.48	11.50		11.36	11.50		11.20	11.50	11.10	11.50	14.16	14.50	
		13	2472	-1.70	-1.00		-1.80	-1.00		-1.70	-1.00	-2.00	-1.00	1.11	2.00	

<5GHz WLAN>

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	11.60	12.00	98.10	11.80	12.00	98.35	11.90	12.00	10.00	12.00	14.06	15.00	98.10
		40	5200	11.70	12.00		11.80	12.00		12.00	12.00	10.00	12.00	13.79	15.00	
		44	5220	11.80	12.00		11.90	12.00		12.00	12.00	10.70	12.00	14.41	15.00	
		48	5240	11.90	12.00		11.60	12.00		12.00	12.00	10.90	12.00	14.55	15.00	
	802.11n-HT20 MCS0	36	5180	11.70	12.00	97.77	11.70	12.00	97.76	12.00	12.00	10.00	12.00	13.96	15.00	97.21
		40	5200	11.70	12.00		11.70	12.00		11.90	12.00	10.90	12.00	14.44	15.00	
		44	5220	11.70	12.00		11.70	12.00		12.00	12.00	10.70	12.00	14.41	15.00	
		48	5240	11.90	12.00		11.70	12.00		12.00	12.00	10.00	12.00	13.44	15.00	
	802.11n-HT40 MCS0	38	5190	11.80	12.00	96.45	11.70	12.00	96.30	12.00	12.00	10.00	12.00	14.19	15.00	96.30
		46	5230	11.90	12.00		11.70	12.00		11.60	12.00	10.10	12.00	13.92	15.00	
	802.11ac-VHT20 MCS0	36	5180	11.60	12.00	95.56	11.60	12.00	97.77	12.00	12.00	10.00	12.00	13.86	15.00	97.77
		40	5200	11.60	12.00		11.60	12.00		12.00	12.00	10.70	12.00	14.41	15.00	
		44	5220	11.60	12.00		11.60	12.00		11.90	12.00	10.60	12.00	14.31	15.00	
		48	5240	11.80	12.00		11.60	12.00		11.80	12.00	10.80	12.00	14.34	15.00	
	802.11ac-VHT40 MCS0	38	5190	11.70	12.00	95.56	11.60	12.00	95.60	12.00	12.00	10.00	12.00	14.09	15.00	95.60
		46	5230	11.80	12.00		11.60	12.00		12.00	12.00	10.50	12.00	14.32	15.00	
	802.11ac-VHT80 MCS0	42	5210	11.40	11.50	92.81	11.20	11.50	92.22	11.30	11.50	10.20	11.50	13.80	14.50	92.22

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	15.30	15.50	98.10	15.30	15.50	98.35	15.40	15.50	13.90	15.50	17.72	18.50	98.10
		40	5200	17.40	17.50		17.10	17.50		17.30	17.50	15.50	17.50	19.34	20.50	
		44	5220	17.30	17.50		17.30	17.50		17.30	17.50	16.20	17.50	19.85	20.50	
		48	5240	17.40	17.50		17.40	17.50		17.30	17.50	15.80	17.50	19.62	20.50	
	802.11n-HT20 MCS0	36	5180	15.20	15.50	97.77	15.20	15.50	97.76	15.20	15.50	13.80	15.50	17.57	18.50	97.21
		40	5200	17.30	17.50		17.30	17.50		17.50	17.50	15.50	17.50	19.59	20.50	
		44	5220	17.40	17.50		17.40	17.50		17.40	17.50	16.10	17.50	19.81	20.50	
		48	5240	17.30	17.50		17.40	17.50		17.10	17.50	15.70	17.50	19.47	20.50	
	802.11n-HT40 MCS0	38	5190	12.30	12.50	96.45	12.50	12.50	96.43	12.50	12.50	12.30	12.50	15.41	15.50	96.30
		46	5230	17.40	17.50		17.50	17.50		17.50	17.50	17.40	17.50	20.46	20.50	
	802.11ac-VHT20 MCS0	36	5180	15.10	15.50	95.56	15.10	15.50	97.77	15.10	15.50	13.70	15.50	17.47	18.50	97.77
		40	5200	17.40	17.50		17.30	17.50		17.50	17.50	15.50	17.50	19.69	20.50	
		44	5220	17.40	17.50		17.40	17.50		17.40	17.50	16.20	17.50	19.85	20.50	
		48	5240	17.30	17.50		17.40	17.50		17.10	17.50	15.70	17.50	19.47	20.50	
	802.11ac-VHT40 MCS0	38	5190	12.40	12.50	95.56	12.40	12.50	95.60	12.20	12.50	10.50	12.50	14.36	15.50	95.60
		46	5230	17.40	17.50		17.30	17.50		17.30	17.50	16.00	17.50	19.71	20.50	
	802.11ac-VHT80 MCS0	42	5210	11.20	11.50	92.81	11.20	11.50	92.22	11.50	11.50	10.30	11.50	13.95	14.50	92.70

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	11.70	12.00	98.10	11.90	12.00	98.35	11.80	12.00	10.60	12.00	14.25	15.00	98.10
		56	5280	11.80	12.00		11.80	12.00		12.00	12.00	11.30	12.00	14.72	15.00	
		60	5300	11.90	12.00		11.90	12.00		12.00	12.00	11.50	12.00	14.77	15.00	
		64	5320	11.90	12.00		11.60	12.00		12.00	12.00	11.70	12.00	14.86	15.00	
	802.11n-HT20 MCS0	52	5260	11.90	12.00	97.77	11.70	12.00	97.76	12.00	12.00	11.50	12.00	14.82	15.00	97.21
		56	5280	11.70	12.00		11.60	12.00		11.80	12.00	11.90	12.00	14.81	15.00	
		60	5300	11.80	12.00		11.70	12.00		11.80	12.00	11.10	12.00	14.47	15.00	
		64	5320	11.80	12.00		11.70	12.00		11.90	12.00	11.80	12.00	14.81	15.00	
	802.11n-HT40 MCS0	54	5270	11.70	12.00	96.45	11.70	12.00	96.30	12.00	12.00	10.70	12.00	14.41	15.00	96.43
		62	5310	11.70	12.00		11.90	12.00		11.80	12.00	11.10	12.00	14.47	15.00	
	802.11ac-VHT20 MCS0	52	5260	11.80	12.00	95.56	11.60	12.00	97.77	12.00	12.00	11.40	12.00	14.72	15.00	97.77
		56	5280	11.70	12.00		11.60	12.00		12.00	12.00	11.70	12.00	14.86	15.00	
		60	5300	11.70	12.00		11.60	12.00		11.70	12.00	11.00	12.00	14.37	15.00	
		64	5320	11.70	12.00		11.80	12.00		11.80	12.00	11.60	12.00	14.72	15.00	
	802.11ac-VHT40 MCS0	54	5270	11.60	12.00	95.56	11.60	12.00	95.60	11.90	12.00	10.60	12.00	14.31	15.00	95.60
		62	5310	11.60	12.00		11.80	12.00		11.70	12.00	11.00	12.00	14.37	15.00	
	802.11ac-VHT80 MCS0	58	5290	11.90	12.00	92.81	11.70	12.00	92.22	11.80	12.00	11.80	12.00	14.66	15.00	92.22

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	17.40	17.50	98.10	17.10	17.50	98.35	17.30	17.50	16.00	17.50	19.71	20.50	98.10
		56	5280	17.20	17.50		17.20	17.50		17.50	17.50	16.70	17.50	20.13	20.50	
		60	5300	17.10	17.50		17.10	17.50		17.10	17.50	16.50	17.50	19.82	20.50	
		64	5320	17.40	17.50		17.40	17.50		17.50	17.50	17.30	17.50	20.41	20.50	
	802.11n-HT20 MCS0	52	5260	17.30	17.50	97.77	17.20	17.50	97.76	17.20	17.50	15.90	17.50	19.61	20.50	97.21
		56	5280	17.30	17.50		17.40	17.50		17.40	17.50	16.80	17.50	20.12	20.50	
		60	5300	17.40	17.50		17.30	17.50		17.10	17.50	16.60	17.50	19.87	20.50	
		64	5320	17.40	17.50		17.40	17.50		17.50	17.50	17.20	17.50	20.36	20.50	
	802.11n-HT40 MCS0	54	5270	17.30	17.50	96.45	17.20	17.50	96.43	17.20	17.50	16.30	17.50	19.78	20.50	96.30
		62	5310	12.90	13.00		12.80	13.00		12.90	13.00	12.90	13.00	15.91	16.00	
	802.11ac-VHT20 MCS0	52	5260	17.40	17.50	95.56	17.30	17.50	97.77	17.10	17.50	16.10	17.50	19.64	20.50	97.77
		56	5280	17.30	17.50		17.40	17.50		17.40	17.50	16.80	17.50	20.12	20.50	
		60	5300	17.30	17.50		17.30	17.50		17.50	17.50	17.10	17.50	20.31	20.50	
		64	5320	17.30	17.50		17.40	17.50		17.50	17.50	17.30	17.50	20.41	20.50	
	802.11ac-VHT40 MCS0	54	5270	17.40	17.50	95.56	17.20	17.50	95.60	17.50	17.50	16.20	17.50	19.91	20.50	95.60
		62	5310	12.90	13.00		12.70	13.00		13.00	13.00	12.50	13.00	15.77	16.00	
	802.11ac-VHT80 MCS0	58	5290	11.90	12.00	92.81	11.60	12.00	92.22	11.80	12.00	11.50	12.00	14.66	15.00	92.70

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	11.20	11.50		13.80	14.00		12.00	12.00	11.30	12.00	14.67	15.00	
		116	5580	11.30	11.50		13.60	14.00		11.40	12.00	12.00	12.00	14.72	15.00	
		124	5620	11.10	11.50	98.10	13.90	14.00	98.35	10.90	12.00	11.90	12.00	14.44	15.00	98.10
		132	5660	11.10	11.50		13.90	14.00		10.80	12.00	12.00	12.00	14.45	15.00	
		144	5720	11.30	11.50		13.90	14.00		11.50	12.00	11.90	12.00	14.71	15.00	
	802.11n-HT20 MCS0	100	5500	11.20	11.50		13.90	14.00		11.90	12.00	11.30	12.00	14.62	15.00	
		116	5580	11.20	11.50		13.80	14.00		11.40	12.00	12.00	12.00	14.77	15.00	
		124	5620	11.20	11.50	97.76	13.90	14.00	97.76	10.90	12.00	11.90	12.00	14.44	15.00	97.21
		132	5660	11.30	11.50		13.90	14.00		11.60	12.00	12.00	12.00	14.81	15.00	
		144	5720	11.40	11.50		13.70	14.00		11.40	12.00	11.80	12.00	14.61	15.00	
	802.11n-HT40 MCS0	102	5510	11.20	11.50		12.90	13.00		12.00	12.00	11.50	12.00	14.77	15.00	
		110	5550	11.40	11.50		13.90	14.00		10.90	12.00	11.90	12.00	14.44	15.00	
		126	5630	11.40	11.50	96.45	13.90	14.00	96.30	10.90	12.00	11.90	12.00	14.44	15.00	96.30
		134	5670	11.20	11.50		13.90	14.00		10.90	12.00	11.90	12.00	14.44	15.00	
		142	5710	11.40	11.50		13.70	14.00		11.70	12.00	12.00	12.00	14.91	15.00	
	802.11ac-VHT20 MCS0	100	5500	11.10	11.50		13.80	14.00		11.80	12.00	11.20	12.00	14.52	15.00	
		116	5580	11.10	11.50		13.70	14.00		11.30	12.00	12.00	12.00	14.67	15.00	
		124	5620	11.20	11.50	97.77	13.70	14.00	97.77	11.60	12.00	12.00	12.00	14.81	15.00	97.77
		132	5660	11.10	11.50		13.70	14.00		11.30	12.00	11.70	12.00	14.51	15.00	
		144	5720	11.30	11.50		13.60	14.00		11.30	12.00	11.70	12.00	14.51	15.00	
	802.11ac-VHT40 MCS0	102	5510	11.10	11.50		12.80	13.00		11.90	12.00	11.40	12.00	14.67	15.00	
		110	5550	11.30	11.50		13.80	14.00		10.80	12.00	11.80	12.00	14.34	15.00	
		126	5630	11.20	11.50	95.56	13.80	14.00	95.60	10.80	12.00	11.80	12.00	14.34	15.00	95.60
		134	5670	11.10	11.50		13.80	14.00		10.80	12.00	11.80	12.00	14.34	15.00	
		142	5710	11.30	11.50		13.60	14.00		11.60	12.00	12.00	12.00	14.81	15.00	
	802.11ac-VHT80 MCS0	106	5530	10.60	11.00		11.00	11.00		10.90	11.00	10.80	11.00	13.86	14.00	
		122	5610	11.30	11.50	92.81	13.80	14.00	92.22	10.70	12.00	11.90	12.00	14.29	15.00	92.22
		138	5690	11.50	11.50		14.00	14.00		11.30	12.00	12.00	12.00	14.80	15.00	

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.20	17.50	98.10	17.40	17.50	98.35	17.30	17.50	16.90	17.50	20.11	20.50	98.10
		116	5580	17.40	17.50		17.20	17.50		17.40	17.50	16.70	17.50	20.31	20.50	
		124	5620	17.40	17.50		17.40	17.50		16.60	17.50	17.20	17.50	19.57	20.50	
		132	5660	17.40	17.50		17.40	17.50		17.10	17.50	17.50	17.50	20.42	20.50	
		144	5720	17.40	17.50		17.40	17.50		17.40	17.50	17.30	17.50	20.36	20.50	
	802.11n-HT20 MCS0	100	5500	17.20	17.50	97.76	17.20	17.50	97.76	17.50	17.50	17.20	17.50	20.41	20.50	97.21
		116	5580	17.40	17.50		17.40	17.50		16.90	17.50	17.30	17.50	20.11	20.50	
		124	5620	17.20	17.50		17.30	17.50		16.90	17.50	17.50	17.50	20.22	20.50	
		132	5660	17.40	17.50		17.40	17.50		16.80	17.50	17.50	17.50	20.17	20.50	
		144	5720	17.40	17.50		17.40	17.50		17.30	17.50	17.20	17.50	20.26	20.50	
	802.11n-HT40 MCS0	102	5510	12.70	13.00	96.45	12.70	13.00	96.43	12.30	13.00	12.70	13.00	15.51	16.00	96.30
		110	5550	17.40	17.50		17.40	17.50		17.10	17.50	17.50	17.50	20.31	20.50	
		126	5630	17.40	17.50		17.40	17.50		17.10	17.50	17.50	17.50	20.31	20.50	
		134	5670	17.20	17.50		17.40	17.50		16.90	17.50	17.50	17.50	20.22	20.50	
		142	5710	17.40	17.50		17.40	17.50		17.20	17.50	17.10	17.50	20.16	20.50	
	802.11ac-VHT20 MCS0	100	5500	17.20	17.50	98.48	17.10	17.50	97.97	17.40	17.50	17.10	17.50	20.26	20.50	97.97
		116	5580	17.30	17.50		17.40	17.50		17.10	17.50	17.40	17.50	20.26	20.50	
		124	5620	17.40	17.50		17.40	17.50		17.00	17.50	17.50	17.50	20.27	20.50	
		132	5660	17.40	17.50		17.30	17.50		17.00	17.50	17.40	17.50	20.21	20.50	
		144	5720	16.80	17.50		17.10	17.50		17.30	17.50	17.30	17.50	20.31	20.50	
	802.11ac-VHT40 MCS0	102	5510	12.60	13.00	95.56	12.60	13.00	95.60	12.20	13.00	12.60	13.00	15.41	16.00	95.60
		110	5550	17.40	17.50		17.40	17.50		16.70	17.50	17.20	17.50	19.97	20.50	
		126	5630	17.40	17.50		17.40	17.50		17.10	17.50	17.50	17.50	20.31	20.50	
		134	5670	17.20	17.50		17.40	17.50		16.70	17.50	17.20	17.50	19.97	20.50	
		142	5710	17.40	17.50		17.40	17.50		17.50	17.50	17.40	17.50	20.46	20.50	
	802.11ac-VHT80 MCS0	106	5530	10.70	11.00	92.81	10.60	11.00	92.22	11.00	11.00	10.80	11.00	13.91	14.00	92.70
		122	5610	17.50	17.50		17.40	17.50		17.50	17.50	17.50	17.50	20.31	20.50	
		138	5690	17.20	17.50		17.40	17.50		17.30	17.50	17.30	17.50	20.16	20.50	

Power Selection				Head			Head			Head						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a MCS0	149	5745	11.90	12.00	98.10	11.70	12.00	98.10	11.90	12.00	11.90	12.00	14.91	15.00	98.10
		157	5785	11.90	12.00		11.70	12.00		11.70	12.00	11.40	12.00	14.56	15.00	
		165	5825	11.80	12.00		11.90	12.00		11.70	12.00	11.60	12.00	14.66	15.00	
	802.11n-HT20 MCS0	149	5745	11.90	12.00	97.76	11.70	12.00	97.21	11.70	12.00	11.80	12.00	14.76	15.00	97.21
		157	5785	11.80	12.00		11.80	12.00		12.00	12.00	11.80	12.00	14.96	15.00	
		165	5825	11.70	12.00		11.90	12.00		11.50	12.00	11.70	12.00	14.61	15.00	
	802.11n-HT40 MCS0	151	5755	11.70	12.00	96.45	11.90	12.00	96.30	11.80	12.00	12.00	12.00	14.96	15.00	96.30
		159	5795	11.90	12.00		11.90	12.00		11.90	12.00	11.50	12.00	14.71	15.00	
	802.11ac-VHT20 MCS0	149	5745	11.80	12.00	97.77	11.60	12.00	97.77	11.60	12.00	11.70	12.00	14.66	15.00	97.77
		157	5785	11.70	12.00		11.70	12.00		12.00	12.00	11.70	12.00	14.86	15.00	
		165	5825	11.60	12.00		11.80	12.00		11.40	12.00	11.60	12.00	14.51	15.00	
	802.11ac-VHT40 MCS0	151	5755	11.60	12.00	95.56	11.80	12.00	95.60	11.70	12.00	12.00	12.00	14.86	15.00	95.60
		159	5795	11.80	12.00		11.80	12.00		11.80	12.00	11.40	12.00	14.61	15.00	
	802.11ac-VHT80 MCS0	155	5775	11.70	12.00	92.81	12.00	12.00	92.22	11.60	12.00	12.00	12.00	14.87	15.00	92.22

Power Selection				Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific			Hotspot / Body-worn / Product Specific						
Transmit Antenna				Ant 0			Ant 1			Ant 0+1						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Ant 0 Average power (dBm)	Ant 0 Tune-Up Limit	Ant 1 Average power (dBm)	Ant 1 Tune-Up Limit	Ant 0+1 Average power (dBm)	Ant 0+1 Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a MCS0	149	5745	17.40	17.50		17.40	17.50		17.10	17.50	16.50	17.50	19.82	20.50	
		157	5785	17.40	17.50	98.10	17.30	17.50	98.10	17.30	17.50	16.30	17.50	19.84	20.50	98.10
		165	5825	17.40	17.50		17.40	17.50		17.30	17.50	16.60	17.50	19.97	20.50	
	802.11n-HT20 MCS0	149	5745	17.40	17.50		17.40	17.50		17.10	17.50	16.60	17.50	19.87	20.50	
		157	5785	17.40	17.50	97.76	17.30	17.50	97.21	17.10	17.50	16.30	17.50	19.73	20.50	97.21
		165	5825	17.40	17.50		17.40	17.50		17.10	17.50	16.30	17.50	19.73	20.50	
	802.11n-HT40 MCS0	151	5755	17.20	17.50	96.45	17.40	17.50	96.43	17.30	17.50	17.30	17.50	20.21	20.50	96.30
		159	5795	17.50	17.50		17.20	17.50		17.30	17.50	16.90	17.50	20.11	20.50	
	802.11ac-VHT20 MCS0	149	5745	17.40	17.50		17.40	17.50		17.20	17.50	16.60	17.50	19.92	20.50	
		157	5785	17.40	17.50	97.77	17.40	17.50	97.77	17.40	17.50	16.50	17.50	19.98	20.50	97.77
		165	5825	17.40	17.50		17.40	17.50		17.20	17.50	16.60	17.50	19.92	20.50	
	802.11ac-VHT40 MCS0	151	5755	17.40	17.50	95.56	17.40	17.50	95.60	17.20	17.50	16.70	17.50	19.97	20.50	95.60
		159	5795	17.40	17.50		17.40	17.50		17.40	17.50	16.50	17.50	19.98	20.50	
	802.11ac-VHT80 MCS0	155	5775	17.50	17.50	92.81	17.50	17.50	92.22	17.50	17.50	17.50	17.50	20.41	20.50	92.70

14. RF Exposure position consideration

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

General Note:

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. The detail antenna location refers to operational description.

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   d. For WLAN: 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. Per KDB 648474 D04v01r03, for WWAN / 2.4GHz, 5.2GHz and 5.8GHz WLAN and Bluetooth hotspot SAR was < 1.2W/kg, therefore, the extremity SAR was not necessary evan the overall diagonal dimensioin is > 16cm. only 5.3GHz and 5.5GHz WLAN extremity is required.
6. In section 15.1 Head SAR, “WiFi on / WiFi off” means the same power limits apply to WiFi on or WiFi off in HEAD mode. WiFi off was used during SAR testing.

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.

CDMA Note:

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

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not 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. LTE B2/B4 SAR test was covered by B66/B25; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. The maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion.
   b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

WLAN Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. When in MIMO SAR testing, if the hot spots are separated the scaling factor would scale each hot spot based on the difference between the power for that transmit antenna and the maximum rated power, if the hot spot were not separable or too much overlap which the scaling factor is the worst case rated power/measured power across the two chains in SAR calculation.
6. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

15.1 Head SAR

<GSM SAR>

WiFi on / WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
01	GSM850_Ant 0	GPRS (4 Tx slots)	Right Cheek	0mm	251	848.8	27.17	29.00	1.524	-0.07	0.225	0.343
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Tilted	0mm	251	848.8	27.17	29.00	1.524	0.02	0.139	0.212
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	251	848.8	27.17	29.00	1.524	0.02	0.202	0.308
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Tilted	0mm	251	848.8	27.17	29.00	1.524	0.07	0.126	0.192

WiFi on / WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Cheek	0mm	512	1850.2	24.99	26.50	1.416	-0.13	0.102	0.144
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Tilted	0mm	512	1850.2	24.99	26.50	1.416	-0.03	0.097	0.137
02	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	512	1850.2	24.99	26.50	1.416	0.16	0.158	0.224
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Tilted	0mm	512	1850.2	24.99	26.50	1.416	-0.04	0.066	0.093

<WCDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	9538	1907.6	24.64	25.10	1.112	-0.09	0.417	0.464
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	9538	1907.6	24.64	25.10	1.112	0.18	0.329	0.366
03	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	9538	1907.6	24.64	25.10	1.112	0.12	0.697	0.775
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	9538	1907.6	24.64	25.10	1.112	-0.06	0.262	0.291
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	9538	1907.6	21.69	22.20	1.125	-0.15	0.161	0.181
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	9538	1907.6	21.69	22.20	1.125	0.03	0.133	0.150
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	9538	1907.6	21.69	22.20	1.125	0.09	0.287	0.323
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	9538	1907.6	21.69	22.20	1.125	-0.08	0.100	0.112

WiFi on / WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	1513	1752.6	23.12	24.00	1.225	-0.12	0.172	0.211
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	1513	1752.6	23.12	24.00	1.225	-0.03	0.197	0.241
04	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	1513	1752.6	23.12	24.00	1.225	-0.05	0.288	0.353
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	1513	1752.6	23.12	24.00	1.225	0.05	0.135	0.165

<CDMA SAR>

WiFi on / WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
05	CDMA BC0_Ant 0	1xRTT RC3 SO55	Right Cheek	0mm	777	848.31	24.45	25.50	1.274	-0.01	0.325	0.414
	CDMA BC0_Ant 0	1xRTT RC3 SO55	Right Tilted	0mm	777	848.31	24.45	25.50	1.274	-0.03	0.186	0.237
	CDMA BC0_Ant 0	1xRTT RC3 SO55	Left Cheek	0mm	777	848.31	24.45	25.50	1.274	0.08	0.285	0.363
	CDMA BC0_Ant 0	1xRTT RC3 SO55	Left Tilted	0mm	777	848.31	24.45	25.50	1.274	-0.01	0.193	0.246

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Right Cheek	0mm	1175	1908.75	24.25	25.00	1.189	-0.12	0.253	0.301
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Right Tilted	0mm	1175	1908.75	24.25	25.00	1.189	-0.03	0.294	0.349
06	CDMA BC1_Ant 0	1xRTT RC3 SO55	Left Cheek	0mm	1175	1908.75	24.25	25.00	1.189	0.03	0.569	0.676
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Left Tilted	0mm	1175	1908.75	24.25	25.00	1.189	0	0.198	0.235
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Right Cheek	0mm	1175	1908.75	21.64	22.50	1.219	0.16	0.178	0.217
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Right Tilted	0mm	1175	1908.75	21.64	22.50	1.219	0.05	0.141	0.172
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Left Cheek	0mm	1175	1908.75	21.64	22.50	1.219	-0.1	0.347	0.423
	CDMA BC1_Ant 0	1xRTT RC3 SO55	Left Tilted	0mm	1175	1908.75	21.64	22.50	1.219	-0.1	0.106	0.129

WiFi on / WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
07	CDMA BC10_Ant 0	1xRTT RC3 SO55	Right Cheek	0mm	580	820.5	24.66	25.50	1.213	0.01	0.324	0.393
	CDMA BC10_Ant 0	1xRTT RC3 SO55	Right Tilted	0mm	580	820.5	24.66	25.50	1.213	-0.05	0.186	0.226
	CDMA BC10_Ant 0	1xRTT RC3 SO55	Left Cheek	0mm	580	820.5	24.66	25.50	1.213	0.03	0.285	0.346
	CDMA BC10_Ant 0	1xRTT RC3 SO55	Left Tilted	0mm	580	820.5	24.66	25.50	1.213	-0.03	0.187	0.227

<FDD LTE SAR>

WiFi off														
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
08	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	20850	2510	23.82	24.50	1.169	-0.02	0.580	0.678
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	20850	2510	22.89	23.50	1.151	0.12	0.454	0.522
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	20850	2510	23.82	24.50	1.169	-0.13	0.169	0.198
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	20850	2510	22.89	23.50	1.151	0.1	0.120	0.138
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	20850	2510	23.82	24.50	1.169	0.04	0.269	0.315
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	20850	2510	22.89	23.50	1.151	0.01	0.213	0.245
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	20850	2510	23.82	24.50	1.169	-0.1	0.239	0.280
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	20850	2510	22.89	23.50	1.151	0.09	0.175	0.201
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	20850	2510	22.37	23.00	1.156	0.02	0.399	0.461
	LTE Band 7_Ant 2	20M	QPSK	50	50	Right Cheek	0mm	20850	2510	22.43	23.00	1.140	0.05	0.396	0.452
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	20850	2510	22.37	23.00	1.156	0.18	0.127	0.147
	LTE Band 7_Ant 2	20M	QPSK	50	50	Right Tilted	0mm	20850	2510	22.43	23.00	1.140	-0.1	0.108	0.123
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	20850	2510	22.37	23.00	1.156	0.01	0.201	0.232
	LTE Band 7_Ant 2	20M	QPSK	50	50	Left Cheek	0mm	20850	2510	22.43	23.00	1.140	-0.03	0.200	0.228
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	20850	2510	22.37	23.00	1.156	0.02	0.151	0.175
	LTE Band 7_Ant 2	20M	QPSK	50	50	Left Tilted	0mm	20850	2510	22.43	23.00	1.140	-0.04	0.141	0.161

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	26590	1905	24.87	25.10	1.054	0.05	0.365	0.385
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	26590	1905	23.87	24.10	1.054	0.07	0.290	0.306
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	26590	1905	24.87	25.10	1.054	0.05	0.433	0.457
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	26590	1905	23.87	24.10	1.054	0	0.350	0.369
09	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	26590	1905	24.87	25.10	1.054	-0.14	0.696	0.734
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	26590	1905	23.87	24.10	1.054	0.07	0.553	0.583
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	26590	1905	24.87	25.10	1.054	-0.04	0.408	0.430
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	26590	1905	23.87	24.10	1.054	-0.02	0.327	0.345
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	26590	1905	21.27	22.20	1.239	-0.03	0.146	0.181
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	26590	1905	21.37	22.20	1.211	-0.15	0.151	0.183
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	26590	1905	21.27	22.20	1.239	0.14	0.154	0.191
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	26590	1905	21.37	22.20	1.211	0.02	0.161	0.195
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	26590	1905	21.27	22.20	1.239	-0.14	0.297	0.368
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	26590	1905	21.37	22.20	1.211	0.16	0.303	0.367
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	26590	1905	21.27	22.20	1.239	-0.15	0.144	0.178
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	26590	1905	21.37	22.20	1.211	-0.14	0.147	0.178

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	132572	1770	23.51	24.50	1.256	-0.18	0.185	0.232
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	132572	1770	22.43	23.50	1.279	-0.18	0.149	0.191
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	132572	1770	23.51	24.50	1.256	0.07	0.214	0.269
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	132572	1770	22.43	23.50	1.279	0.16	0.179	0.229
10	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	132572	1770	23.51	24.50	1.256	0.1	0.381	0.479
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	132572	1770	22.43	23.50	1.279	0.02	0.304	0.389
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	132572	1770	23.51	24.50	1.256	0.01	0.207	0.260
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	132572	1770	22.43	23.50	1.279	-0.04	0.166	0.212
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	132572	1770	22.53	23.50	1.250	-0.07	0.133	0.166
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	132572	1770	22.44	23.50	1.276	-0.11	0.131	0.167
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	132572	1770	22.53	23.50	1.250	0.01	0.177	0.221
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	132572	1770	22.44	23.50	1.276	0.07	0.178	0.227
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	132572	1770	22.53	23.50	1.250	-0.09	0.301	0.376
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	132572	1770	22.44	23.50	1.276	0.09	0.300	0.383
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	132572	1770	22.53	23.50	1.250	0.01	0.163	0.204
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	132572	1770	22.44	23.50	1.276	0.07	0.162	0.207

<WLAN SAR>

WWAN off / WWAN on															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 0	11	2462	14.80	15.00	1.047	99.02	1.010	0.13	0.138	0.146
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 0	11	2462	14.80	15.00	1.047	99.02	1.010	0.09	0.151	0.160
11	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 0	11	2462	14.80	15.00	1.047	99.02	1.010	-0.07	0.375	0.397
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 0	11	2462	14.80	15.00	1.047	99.02	1.010	-0.1	0.233	0.246
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 1	11	2462	14.00	14.00	1.000	98.63	1.014	0.12	0.036	0.037
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 1	11	2462	14.00	14.00	1.000	98.63	1.014	0.18	0.024	0.024
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 1	11	2462	14.00	14.00	1.000	98.63	1.014	0.17	0.132	0.134
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 1	11	2462	14.00	14.00	1.000	98.63	1.014	-0.12	0.062	0.063
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 0+1	1	2412	13.00	13.00	1.000	98.62	1.014	-0.11	0.158	0.160
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 0+1	1	2412	13.00	13.00	1.000	98.62	1.014	-0.01	0.147	0.149
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 0+1	1	2412	13.00	13.00	1.000	98.62	1.014	-0.14	0.304	0.308
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 0+1	1	2412	13.00	13.00	1.000	98.62	1.014	0.12	0.185	0.188
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0	58	5290	11.90	12.00	1.023	92.81	1.077	0.16	0.243	0.268
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0	58	5290	11.90	12.00	1.023	92.81	1.077	-0.09	0.295	0.325
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0	58	5290	11.90	12.00	1.023	92.81	1.077	-0.14	0.395	0.435
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0	58	5290	11.90	12.00	1.023	92.81	1.077	0	0.388	0.428
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 1	58	5290	11.70	12.00	1.072	92.22	1.084	-0.11	0.064	0.074
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 1	58	5290	11.70	12.00	1.072	92.22	1.084	-0.17	0.073	0.085
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 1	58	5290	11.70	12.00	1.072	92.22	1.084	-0.01	0.242	0.281
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 1	58	5290	11.70	12.00	1.072	92.22	1.084	0.01	0.070	0.081
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0+1	58	5290	11.80	12.00	1.047	92.22	1.084	-0.11	0.230	0.261
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0+1	58	5290	11.80	12.00	1.047	92.22	1.084	0.13	0.263	0.299
12	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0+1	58	5290	11.80	12.00	1.047	92.22	1.084	-0.07	0.384	0.436
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0+1	58	5290	11.80	12.00	1.047	92.22	1.084	0.08	0.380	0.431
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0	138	5690	11.50	11.50	1.000	92.81	1.077	-0.16	0.199	0.214
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0	138	5690	11.50	11.50	1.000	92.81	1.077	0.1	0.230	0.248
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0	138	5690	11.50	11.50	1.000	92.81	1.077	-0.14	0.502	0.541
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0	138	5690	11.50	11.50	1.000	92.81	1.077	-0.08	0.349	0.376
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 1	138	5690	14.00	14.00	1.000	92.22	1.084	-0.01	0.091	0.099
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 1	138	5690	14.00	14.00	1.000	92.22	1.084	0.02	0.049	0.053
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 1	138	5690	14.00	14.00	1.000	92.22	1.084	-0.18	0.210	0.228
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 1	138	5690	14.00	14.00	1.000	92.22	1.084	-0.1	0.087	0.094
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0+1	138	5690	11.30	12.00	1.175	92.22	1.084	-0.15	0.192	0.245
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0+1	138	5690	11.30	12.00	1.175	92.22	1.084	0.12	0.216	0.275
13	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0+1	138	5690	11.30	12.00	1.175	92.22	1.084	0.11	0.469	0.597
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0+1	138	5690	11.30	12.00	1.175	92.22	1.084	0.02	0.276	0.352
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0	155	5775	11.70	12.00	1.072	92.81	1.077	-0.04	0.160	0.185
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0	155	5775	11.70	12.00	1.072	92.81	1.077	-0.03	0.183	0.211
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0	155	5775	11.70	12.00	1.072	92.81	1.077	0.04	0.521	0.601
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0	155	5775	11.70	12.00	1.072	92.81	1.077	0.06	0.290	0.335
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 1	155	5775	12.00	12.00	1.000	92.22	1.084	0.08	0.030	0.033
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 1	155	5775	12.00	12.00	1.000	92.22	1.084	-0.06	0.012	0.013
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 1	155	5775	12.00	12.00	1.000	92.22	1.084	-0.05	0.127	0.138
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 1	155	5775	12.00	12.00	1.000	92.22	1.084	0.12	0.020	0.022
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 0+1	155	5775	11.60	12.00	1.096	92.22	1.084	0.05	0.230	0.273
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 0+1	155	5775	11.60	12.00	1.096	92.22	1.084	-0.08	0.235	0.279
14	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 0+1	155	5775	11.60	12.00	1.096	92.22	1.084	-0.08	0.565	0.672
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 0+1	155	5775	11.60	12.00	1.096	92.22	1.084	-0.11	0.324	0.385

15.2 Hotspot SAR

<GSM SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	251	848.8	27.17	29.00	1.524	-0.06	0.243	0.370
15	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	251	848.8	27.17	29.00	1.524	-0.07	0.397	0.605
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	251	848.8	27.17	29.00	1.524	0.02	0.174	0.265
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	251	848.8	27.17	29.00	1.524	-0.02	0.230	0.351
	GSM850_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	251	848.8	27.17	29.00	1.524	0.12	0.127	0.194
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	251	848.8	25.02	26.50	1.406	-0.14	0.134	0.188
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	251	848.8	25.02	26.50	1.406	-0.07	0.193	0.271
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	251	848.8	25.02	26.50	1.406	-0.01	0.100	0.141
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	251	848.8	25.02	26.50	1.406	-0.05	0.146	0.205
	GSM850_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	251	848.8	25.02	26.50	1.406	0.19	0.067	0.094

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	512	1850.2	24.99	26.50	1.416	0.02	0.360	0.510
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	512	1850.2	24.99	26.50	1.416	0.01	0.467	0.661
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	512	1850.2	24.99	26.50	1.416	0.02	0.181	0.256
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	512	1850.2	24.99	26.50	1.416	0.09	0.088	0.125
16	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	512	1850.2	24.99	26.50	1.416	-0.02	0.541	0.766
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	512	1850.2	21.36	23.00	1.459	-0.09	0.156	0.228
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	512	1850.2	21.36	23.00	1.459	-0.02	0.199	0.290
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	512	1850.2	21.36	23.00	1.459	0.02	0.090	0.131
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	512	1850.2	21.36	23.00	1.459	-0.15	0.034	0.050
	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	512	1850.2	21.36	23.00	1.459	-0.11	0.254	0.371

<WCDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9538	1907.6	24.64	25.10	1.112	-0.06	1.020	1.134
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9262	1852.4	24.48	25.10	1.153	-0.03	0.960	1.107
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9400	1880	24.61	25.10	1.119	-0.05	0.982	1.099
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9538	1907.6	24.64	25.10	1.112	-0.07	0.922	1.025
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9262	1852.4	24.48	25.10	1.153	-0.08	0.901	1.039
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9400	1880	24.61	25.10	1.119	-0.07	0.904	1.012
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Side	10mm	9538	1907.6	24.64	25.10	1.112	-0.15	0.669	0.744
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Side	10mm	9538	1907.6	24.64	25.10	1.112	0.07	0.182	0.202
17	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9538	1907.6	24.64	25.10	1.112	-0.09	1.040	1.156
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9262	1852.4	24.48	25.10	1.153	-0.12	0.999	1.152
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9400	1880	24.61	25.10	1.119	-0.15	0.994	1.113
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	10mm	9538	1907.6	24.64	25.10	1.112	0.04	0.649	0.722
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9538	1907.6	24.64	25.10	1.112	-0.04	0.798	0.887
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9262	1852.4	24.48	25.10	1.153	-0.06	0.881	1.016
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9400	1880	24.61	25.10	1.119	-0.12	0.911	1.020
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	9538	1907.6	24.64	25.10	1.112	-0.04	0.243	0.270
	WCDMA II_Ant 1	RMC 12.2Kbps	Right Side	10mm	9538	1907.6	24.64	25.10	1.112	0.14	0.061	0.068
	WCDMA II_Ant 1	RMC 12.2Kbps	Top Side	10mm	9538	1907.6	24.64	25.10	1.112	0.08	0.820	0.912
	WCDMA II_Ant 1	RMC 12.2Kbps	Top Side	10mm	9262	1852.4	24.48	25.10	1.153	0.06	0.869	1.002
	WCDMA II_Ant 1	RMC 12.2Kbps	Top Side	10mm	9400	1880	24.61	25.10	1.119	0.1	0.838	0.938
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9538	1907.6	19.44	19.70	1.062	0.01	0.264	0.280
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9538	1907.6	19.44	19.70	1.062	-0.07	0.249	0.264
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Side	10mm	9538	1907.6	19.44	19.70	1.062	-0.01	0.167	0.177
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Side	10mm	9538	1907.6	19.44	19.70	1.062	0.09	0.044	0.047
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9538	1907.6	19.44	19.70	1.062	0.04	0.270	0.287

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	1513	1752.6	23.12	24.00	1.225	-0.01	0.506	0.620
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	1513	1752.6	23.12	24.00	1.225	-0.06	0.498	0.610
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Side	10mm	1513	1752.6	23.12	24.00	1.225	0	0.304	0.372
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Side	10mm	1513	1752.6	23.12	24.00	1.225	0.02	0.131	0.160
18	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	1513	1752.6	23.12	24.00	1.225	-0.09	0.648	0.794
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	1513	1752.6	18.85	19.50	1.161	0.19	0.173	0.201
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	1513	1752.6	18.85	19.50	1.161	-0.12	0.179	0.208
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Side	10mm	1513	1752.6	18.85	19.50	1.161	-0.05	0.109	0.127
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Side	10mm	1513	1752.6	18.85	19.50	1.161	0.16	0.046	0.053
	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	1513	1752.6	18.85	19.50	1.161	0.14	0.242	0.281

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
19	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4132	826.4	21.42	22.00	1.143	0.01	0.179	0.205

<CDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Front	10mm	777	848.31	24.54	25.50	1.247	-0.02	0.310	0.387
20	CDMA BC0_Ant 0	RTAP 153.6Kbps	Back	10mm	777	848.31	24.54	25.50	1.247	0	0.477	0.595
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Left Side	10mm	777	848.31	24.54	25.50	1.247	-0.04	0.188	0.235
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Right Side	10mm	777	848.31	24.54	25.50	1.247	-0.02	0.293	0.365
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	777	848.31	24.54	25.50	1.247	0.04	0.153	0.191
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Front	10mm	777	848.31	21.90	22.50	1.148	-0.01	0.150	0.172
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Back	10mm	777	848.31	21.90	22.50	1.148	-0.01	0.236	0.271
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Left Side	10mm	777	848.31	21.90	22.50	1.148	-0.03	0.122	0.140
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Right Side	10mm	777	848.31	21.90	22.50	1.148	-0.07	0.165	0.189
	CDMA BC0_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	777	848.31	21.90	22.50	1.148	0.13	0.083	0.095

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Front	10mm	1175	1908.75	24.29	25.00	1.178	0.02	0.897	1.056
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Front	10mm	25	1851.25	24.15	25.00	1.216	-0.02	0.830	1.009
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Front	10mm	600	1880	24.06	25.00	1.242	0.02	0.850	1.055
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Back	10mm	1175	1908.75	24.29	25.00	1.178	-0.04	0.855	1.007
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Back	10mm	25	1851.25	24.15	25.00	1.216	-0.04	0.782	0.951
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Back	10mm	600	1880	24.06	25.00	1.242	-0.06	0.851	1.057
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Left Side	10mm	1175	1908.75	24.29	25.00	1.178	-0.09	0.598	0.704
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Right Side	10mm	1175	1908.75	24.29	25.00	1.178	-0.09	0.158	0.186
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	1175	1908.75	24.29	25.00	1.178	0.04	0.901	1.061
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	25	1851.25	24.15	25.00	1.216	0.12	0.924	1.124
21	CDMA BC1_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	600	1880	24.06	25.00	1.242	0.04	0.913	1.134
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Front	10mm	1175	1908.75	18.86	19.50	1.159	0.02	0.228	0.264
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Back	10mm	1175	1908.75	18.86	19.50	1.159	-0.04	0.231	0.268
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Left Side	10mm	1175	1908.75	18.86	19.50	1.159	0.05	0.139	0.161
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Right Side	10mm	1175	1908.75	18.86	19.50	1.159	0.09	0.039	0.045
	CDMA BC1_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	1175	1908.75	18.86	19.50	1.159	0.15	0.251	0.291

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Front	10mm	580	820.5	24.67	25.50	1.211	-0.03	0.322	0.390
22	CDMA BC10_Ant 0	RTAP 153.6Kbps	Back	10mm	580	820.5	24.67	25.50	1.211	0.01	0.373	0.452
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Left Side	10mm	580	820.5	24.67	25.50	1.211	-0.04	0.208	0.252
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Right Side	10mm	580	820.5	24.67	25.50	1.211	-0.01	0.306	0.370
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	580	820.5	24.67	25.50	1.211	0.17	0.095	0.115
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Front	10mm	580	820.5	22.21	23.00	1.199	-0.01	0.164	0.197
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Back	10mm	580	820.5	22.21	23.00	1.199	0	0.214	0.257
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Left Side	10mm	580	820.5	22.21	23.00	1.199	-0.02	0.157	0.188
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Right Side	10mm	580	820.5	22.21	23.00	1.199	-0.15	0.181	0.217
	CDMA BC10_Ant 0	RTAP 153.6Kbps	Bottom Side	10mm	580	820.5	22.21	23.00	1.199	0.16	0.068	0.082

<FDD LTE SAR>

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	20850	2510	23.82	24.50	1.169	-0.02	0.832	0.973
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	21100	2535	23.80	24.50	1.175	0.06	0.798	0.938
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	21350	2560	23.77	24.50	1.183	0.02	0.731	0.865
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	10mm	20850	2510	22.89	23.50	1.151	0	0.662	0.762
	LTE Band 7_Ant 2	20M	QPSK	100	0	Front	10mm	20850	2510	22.89	23.50	1.151	0.02	0.661	0.761
23	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	20850	2510	23.82	24.50	1.169	-0.03	0.881	1.030
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	21100	2535	23.80	24.50	1.175	0.07	0.861	1.012
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	21350	2560	23.77	24.50	1.183	0.06	0.787	0.931
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	20850	2510	22.89	23.50	1.151	0	0.717	0.825
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	21100	2535	22.88	23.50	1.153	0.01	0.682	0.787
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	21350	2560	22.83	23.50	1.167	0.05	0.621	0.725
	LTE Band 7_Ant 2	20M	QPSK	100	0	Back	10mm	20850	2510	22.89	23.50	1.151	0.02	0.713	0.821
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	10mm	20850	2510	23.82	24.50	1.169	0.08	0.698	0.816
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	10mm	21100	2535	23.80	24.50	1.175	0.03	0.625	0.734
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	10mm	21350	2560	23.77	24.50	1.183	0.08	0.580	0.686
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Side	10mm	20850	2510	22.89	23.50	1.151	0.15	0.551	0.634
	LTE Band 7_Ant 2	20M	QPSK	100	0	Right Side	10mm	20850	2510	22.89	23.50	1.151	0.1	0.545	0.627
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	20850	2510	23.82	24.50	1.169	0.03	0.367	0.429
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	20850	2510	22.89	23.50	1.151	0.1	0.291	0.335
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	20850	2510	18.74	19.00	1.062	-0.05	0.235	0.249
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	10mm	20850	2510	18.80	19.00	1.047	-0.01	0.235	0.246
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	20850	2510	18.74	19.00	1.062	-0.14	0.263	0.279
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	20850	2510	18.80	19.00	1.047	0	0.261	0.273
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	10mm	20850	2510	18.74	19.00	1.062	-0.11	0.209	0.222
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Side	10mm	20850	2510	18.80	19.00	1.047	-0.11	0.208	0.218
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	20850	2510	18.74	19.00	1.062	0.02	0.099	0.105
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	20850	2510	18.80	19.00	1.047	-0.03	0.099	0.104

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26590	1905	24.87	25.10	1.054	0.03	0.950	1.002
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26140	1860	24.70	25.10	1.096	-0.16	0.868	0.952
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26340	1880	24.76	25.10	1.081	0.02	0.878	0.949
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	26590	1905	23.87	24.10	1.054	-0.02	0.777	0.819
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	26140	1860	23.79	24.10	1.074	0	0.683	0.734
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	26340	1880	23.71	24.10	1.094	-0.02	0.728	0.796
	LTE Band 25_Ant 0	20M	QPSK	100	0	Front	10mm	26590	1905	23.75	24.10	1.084	-0.01	0.785	0.851
24	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26590	1905	24.87	25.10	1.054	-0.04	0.962	1.014
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26140	1860	24.70	25.10	1.096	-0.07	0.873	0.957
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26340	1880	24.76	25.10	1.081	-0.03	0.838	0.906
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	26590	1905	23.87	24.10	1.054	-0.07	0.744	0.784
	LTE Band 25_Ant 0	20M	QPSK	100	0	Back	10mm	26590	1905	23.75	24.10	1.084	-0.06	0.749	0.812
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Side	10mm	26590	1905	24.87	25.10	1.054	-0.04	0.548	0.578
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Side	10mm	26590	1905	23.87	24.10	1.054	0.03	0.469	0.495
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Side	10mm	26590	1905	24.87	25.10	1.054	0.07	0.184	0.194
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Side	10mm	26590	1905	23.87	24.10	1.054	0.1	0.145	0.153
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	26590	1905	24.87	25.10	1.054	0.03	0.947	0.999
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	26140	1860	24.70	25.10	1.096	0.08	0.876	0.961
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	26340	1880	24.76	25.10	1.081	0.11	0.909	0.983
	LTE Band 25_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	26590	1905	23.87	24.10	1.054	0.11	0.726	0.765
	LTE Band 25_Ant 0	20M	QPSK	100	0	Bottom Side	10mm	26590	1905	23.75	24.10	1.084	0.09	0.733	0.795
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	10mm	26590	1905	24.87	25.10	1.054	0.04	0.342	0.361
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26590	1905	18.83	19.70	1.222	0	0.231	0.282
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	26590	1905	18.89	19.70	1.205	0.03	0.235	0.283
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26590	1905	18.83	19.70	1.222	-0.08	0.237	0.290
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	26590	1905	18.89	19.70	1.205	-0.01	0.241	0.290
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Side	10mm	26590	1905	18.83	19.70	1.222	0.12	0.153	0.187
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Side	10mm	26590	1905	18.89	19.70	1.205	0.04	0.151	0.182
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Side	10mm	26590	1905	18.83	19.70	1.222	0.15	0.041	0.050
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Side	10mm	26590	1905	18.89	19.70	1.205	0.13	0.038	0.046
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	26590	1905	18.83	19.70	1.222	0.08	0.237	0.290
	LTE Band 25_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	26590	1905	18.89	19.70	1.205	0.1	0.237	0.286

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	132572	1770	23.51	24.50	1.256	0.04	0.573	0.720
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	132572	1770	22.43	23.50	1.279	-0.01	0.465	0.595
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	132572	1770	23.51	24.50	1.256	-0.09	0.558	0.701
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	132572	1770	22.43	23.50	1.279	-0.1	0.445	0.569
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Side	10mm	132572	1770	23.51	24.50	1.256	-0.06	0.363	0.456
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Side	10mm	132572	1770	22.43	23.50	1.279	-0.01	0.282	0.361
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Side	10mm	132572	1770	23.51	24.50	1.256	0.06	0.139	0.175
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Side	10mm	132572	1770	22.43	23.50	1.279	-0.01	0.110	0.141
25	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	132572	1770	23.51	24.50	1.256	0.08	0.712	0.894
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	132072	1720	23.45	24.50	1.274	0.13	0.696	0.886
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	132322	1745	23.47	24.50	1.268	0.15	0.683	0.866
	LTE Band 66_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	132572	1770	22.43	23.50	1.279	0.15	0.561	0.718
	LTE Band 66_Ant 0	20M	QPSK	100	0	Bottom Side	10mm	132572	1770	22.39	23.50	1.291	0	0.555	0.717
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	132572	1770	19.82	20.50	1.169	0.11	0.223	0.261
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	132572	1770	19.75	20.50	1.189	0.03	0.222	0.264
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	132572	1770	19.82	20.50	1.169	-0.06	0.223	0.261
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	132572	1770	19.75	20.50	1.189	0	0.224	0.266
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Side	10mm	132572	1770	19.82	20.50	1.169	0.02	0.138	0.161
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Side	10mm	132572	1770	19.75	20.50	1.189	0	0.139	0.165
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Side	10mm	132572	1770	19.82	20.50	1.169	0.06	0.059	0.069
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Side	10mm	132572	1770	19.75	20.50	1.189	-0.03	0.058	0.069
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	132572	1770	19.82	20.50	1.169	0.08	0.270	0.316
	LTE Band 66_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	132572	1770	19.75	20.50	1.189	0.06	0.265	0.315

<TDD LTE SAR>

WiFi on																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
26	LTE Band 38_Ant 2	20M	QPSK	1	0	Back	10mm	37850	2580	21.54	22.20	1.164	62.90	1.006	0.01	0.222	0.260

WiFi on																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
27	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	40185	2549.5	20.30	20.50	1.047	62.90	1.006	0.01	0.190	0.200

<WLAN SAR>

WWAN on															
Plot No.	Band	Mode	Test Position	Gap (mm)	Ant.	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 0	6	2437	17.90	18.00	1.023	99.02	1.010	0.04	0.163	0.168
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 0	6	2437	17.90	18.00	1.023	99.02	1.010	-0.15	0.163	0.168
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 0	6	2437	17.90	18.00	1.023	99.02	1.010	0.09	0.086	0.088
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 0	6	2437	17.90	18.00	1.023	99.02	1.010	-0.04	0.082	0.085
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 1	6	2437	17.80	18.00	1.047	98.63	1.014	-0.1	0.151	0.160
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 1	6	2437	17.80	18.00	1.047	98.63	1.014	-0.18	0.492	0.522
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 1	6	2437	17.80	18.00	1.047	98.63	1.014	-0.05	0.317	0.337
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	6	2437	17.80	18.00	1.047	98.63	1.014	-0.09	0.045	0.048
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 0+1	1	2412	18.00	18.00	1.000	98.62	1.014	0.03	0.210	0.213
28	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 0+1	1	2412	18.00	18.00	1.000	98.62	1.014	-0.19	0.540	0.548
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 0+1	1	2412	18.00	18.00	1.000	98.62	1.014	-0.12	0.306	0.310
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 0+1	1	2412	18.00	18.00	1.000	98.62	1.014	-0.13	0.085	0.086
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 0	46	5230	17.40	17.50	1.023	96.45	1.037	-0.06	0.371	0.394
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0	46	5230	17.40	17.50	1.023	96.45	1.037	-0.18	0.267	0.283
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 0	46	5230	17.40	17.50	1.023	96.45	1.037	-0.07	0.222	0.236
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 0	46	5230	17.40	17.50	1.023	96.45	1.037	-0.09	0.396	0.420
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 1	46	5230	17.50	17.50	1.000	96.43	1.037	-0.08	0.208	0.216
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	46	5230	17.50	17.50	1.000	96.43	1.037	-0.1	0.979	1.015
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 1	48	5240	17.40	17.50	1.023	98.35	1.017	-0.06	1.020	1.062
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	46	5230	17.50	17.50	1.000	96.43	1.037	-0.11	1.140	1.182
	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 1	48	5240	17.40	17.50	1.023	98.35	1.017	0.05	1.130	1.176
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 1	46	5230	17.50	17.50	1.000	96.43	1.037	-0.04	0.072	0.075
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 0+1	46	5230	17.40	17.50	1.023	96.30	1.038	-0.17	0.451	0.479
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0+1	46	5230	17.40	17.50	1.023	96.30	1.038	-0.08	0.837	0.889
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 0+1	44	5220	16.20	17.50	1.349	98.10	1.019	-0.03	0.759	1.043
29	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 0+1	46	5230	17.40	17.50	1.023	96.30	1.038	-0.04	1.120	1.190
	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 0+1	44	5220	16.20	17.50	1.349	98.10	1.019	-0.02	0.864	1.188
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 0+1	46	5230	17.40	17.50	1.023	96.30	1.038	-0.07	0.457	0.485
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0	155	5775	17.50	17.50	1.000	92.81	1.077	-0.12	0.329	0.354
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0	155	5775	17.50	17.50	1.000	92.81	1.077	-0.14	0.228	0.246
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 0	155	5775	17.50	17.50	1.000	92.81	1.077	-0.15	0.189	0.204
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 0	155	5775	17.50	17.50	1.000	92.81	1.077	0.17	0.205	0.221
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.22	1.084	-0.06	0.160	0.173
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.22	1.084	-0.06	0.814	0.882
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	151	5755	17.40	17.50	1.023	96.43	1.037	-0.02	0.888	0.942
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.22	1.084	-0.19	0.800	0.867
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	151	5755	17.40	17.50	1.023	96.43	1.037	0.11	0.896	0.951
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.22	1.084	0.04	0.032	0.035
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0+1	155	5775	17.50	17.50	1.000	92.70	1.079	-0.16	0.358	0.386
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1	155	5775	17.50	17.50	1.000	92.70	1.079	-0.11	0.850	0.917
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0+1	151	5755	17.30	17.50	1.047	96.30	1.038	-0.05	0.897	0.975
30	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 0+1	155	5775	17.50	17.50	1.000	92.70	1.079	-0.13	0.918	0.991
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 0+1	151	5755	17.30	17.50	1.047	96.30	1.038	-0.15	0.898	0.976
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 0+1	155	5775	17.50	17.50	1.000	92.70	1.079	-0.07	0.188	0.203

15.3 Body Worn Accessory SAR

<GSM SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	251	848.8	27.17	29.00	1.524	-0.06	0.243	0.370
31	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	251	848.8	27.17	29.00	1.524	-0.07	0.397	0.605
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	251	848.8	25.02	26.50	1.406	-0.14	0.134	0.188
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	251	848.8	25.02	26.50	1.406	-0.07	0.193	0.271

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	512	1850.2	24.99	26.50	1.416	0.02	0.360	0.510
32	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	512	1850.2	24.99	26.50	1.416	0.01	0.467	0.661
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	512	1850.2	21.36	23.00	1.459	-0.09	0.156	0.228
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	512	1850.2	21.36	23.00	1.459	-0.02	0.199	0.290

<WCDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
33	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9538	1907.6	24.64	25.10	1.112	-0.06	1.020	1.134
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9262	1852.4	24.48	25.10	1.153	-0.03	0.960	1.107
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9400	1880	24.61	25.10	1.119	-0.05	0.982	1.099
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9538	1907.6	24.64	25.10	1.112	-0.07	0.922	1.025
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9262	1852.4	24.48	25.10	1.153	-0.08	0.901	1.039
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9400	1880	24.61	25.10	1.119	-0.07	0.904	1.012
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	10mm	9538	1907.6	24.64	25.10	1.112	0.04	0.649	0.722
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9538	1907.6	24.64	25.10	1.112	-0.04	0.798	0.887
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9612	1922.4	24.48	25.10	1.153	-0.08	0.718	0.828
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	10mm	9400	1880	24.61	25.10	1.119	-0.12	0.911	1.020
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	9538	1907.6	19.44	19.70	1.062	0.01	0.264	0.280
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	9538	1907.6	19.44	19.70	1.062	-0.07	0.249	0.264

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
34	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	1513	1752.6	23.12	24.00	1.225	-0.01	0.506	0.620
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	1513	1752.6	23.12	24.00	1.225	-0.06	0.498	0.610
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	1513	1752.6	18.85	19.50	1.161	0.19	0.173	0.201
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	1513	1752.6	18.85	19.50	1.161	-0.12	0.179	0.208

WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
35	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4132	826.4	21.42	22.00	1.143	0.01	0.179	0.205

<CDMA SAR>

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 0	1xRTT RC3 SO32	Front	10mm	777	848.31	24.58	25.50	1.236	0.07	0.303	0.374
36	CDMA BC0_Ant 0	1xRTT RC3 SO32	Back	10mm	777	848.31	24.58	25.50	1.236	-0.11	0.446	0.551
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0_Ant 0	1xRTT RC3 SO32	Front	10mm	777	848.31	21.88	22.50	1.153	0.02	0.145	0.167
	CDMA BC0_Ant 0	1xRTT RC3 SO32	Back	10mm	777	848.31	21.88	22.50	1.153	-0.14	0.229	0.264

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Front	10mm	1175	1908.75	24.36	25.00	1.159	0	0.895	1.037
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Front	10mm	25	1851.25	24.23	25.00	1.194	-0.05	0.855	1.021
37	CDMA BC1_Ant 0	1xRTT RC3 SO32	Front	10mm	600	1880	24.14	25.00	1.219	0.02	0.861	1.050
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Back	10mm	1175	1908.75	24.36	25.00	1.159	-0.06	0.854	0.990
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Back	10mm	25	1851.25	24.23	25.00	1.194	-0.06	0.803	0.959
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Back	10mm	600	1880	24.14	25.00	1.219	0	0.822	1.002
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Front	10mm	1175	1908.75	18.84	19.50	1.164	0.04	0.242	0.282
	CDMA BC1_Ant 0	1xRTT RC3 SO32	Back	10mm	1175	1908.75	18.84	19.50	1.164	0	0.236	0.275

WiFi off												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 0	1xRTT RC3 SO32	Front	10mm	580	820.5	24.64	25.50	1.219	-0.01	0.320	0.390
38	CDMA BC10_Ant 0	1xRTT RC3 SO32	Back	10mm	580	820.5	24.64	25.50	1.219	-0.03	0.349	0.425
WiFi on												
Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10_Ant 0	1xRTT RC3 SO32	Front	10mm	580	820.5	22.23	23.00	1.194	-0.02	0.195	0.233
	CDMA BC10_Ant 0	1xRTT RC3 SO32	Back	10mm	580	820.5	22.23	23.00	1.194	0.03	0.204	0.244

<FDD LTE SAR>

WiFi off														
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	20850	2510	23.82	24.50	1.169	-0.02	0.832	0.973
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	21100	2535	23.80	24.50	1.175	0.06	0.798	0.938
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	21350	2560	23.77	24.50	1.183	0.02	0.731	0.865
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	10mm	20850	2510	22.89	23.50	1.151	0	0.662	0.762
	LTE Band 7_Ant 2	20M	QPSK	100	0	Front	10mm	20850	2510	22.89	23.50	1.151	0.02	0.661	0.761
39	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	20850	2510	23.82	24.50	1.169	-0.03	0.881	1.030
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	21100	2535	23.80	24.50	1.175	0.07	0.861	1.012
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	21350	2560	23.77	24.50	1.183	0.06	0.787	0.931
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	20850	2510	22.89	23.50	1.151	0	0.717	0.825
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	21100	2535	22.88	23.50	1.153	0.01	0.682	0.787
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	21350	2560	22.83	23.50	1.167	0.05	0.621	0.725
	LTE Band 7_Ant 2	20M	QPSK	100	0	Back	10mm	20850	2510	22.89	23.50	1.151	0.02	0.713	0.821
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	20850	2510	18.74	19.00	1.062	-0.05	0.235	0.249
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	10mm	20850	2510	18.80	19.00	1.047	-0.01	0.235	0.246
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	20850	2510	18.74	19.00	1.062	-0.14	0.263	0.279
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	20850	2510	18.80	19.00	1.047	0	0.261	0.273

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26590	1905	24.87	25.10	1.054	0.03	0.950	1.002
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26140	1860	24.70	25.10	1.096	-0.16	0.868	0.952
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26340	1880	24.76	25.10	1.081	0.02	0.878	0.949
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	26590	1905	23.87	24.10	1.054	-0.02	0.777	0.819
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	26140	1860	23.79	24.10	1.074	0	0.683	0.734
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	26340	1880	23.71	24.10	1.094	-0.02	0.728	0.796
	LTE Band 25_Ant 0	20M	QPSK	100	0	Front	10mm	26590	1905	23.75	24.10	1.084	-0.01	0.785	0.851
40	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26590	1905	24.87	25.10	1.054	-0.04	0.962	1.014
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26140	1860	24.70	25.10	1.096	-0.07	0.873	0.957
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26340	1880	24.76	25.10	1.081	-0.03	0.838	0.906
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	26590	1905	23.87	24.10	1.054	-0.07	0.744	0.784
	LTE Band 25_Ant 0	20M	QPSK	100	0	Back	10mm	26590	1905	23.75	24.10	1.084	-0.06	0.749	0.812
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	10mm	26590	1905	24.87	25.10	1.054	0.04	0.342	0.361
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	26590	1905	18.83	19.70	1.222	0	0.231	0.282
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	26590	1905	18.89	19.70	1.205	0.03	0.235	0.283
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	26590	1905	18.83	19.70	1.222	-0.08	0.237	0.290
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	26590	1905	18.89	19.70	1.205	-0.01	0.241	0.290

WiFi off															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
41	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	132572	1770	23.51	24.50	1.256	0.04	0.573	0.720
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	132572	1770	22.43	23.50	1.279	-0.01	0.465	0.595
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	132572	1770	23.51	24.50	1.256	-0.09	0.558	0.701
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	132572	1770	22.43	23.50	1.279	-0.1	0.445	0.569
WiFi on															
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	132572	1770	19.82	20.50	1.169	0.11	0.223	0.261
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	132572	1770	19.75	20.50	1.189	0.03	0.222	0.264
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	132572	1770	19.82	20.50	1.169	-0.06	0.223	0.261
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	132572	1770	19.75	20.50	1.189	0	0.224	0.266

<TDD LTE SAR>

WiFi on																
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
42	LTE Band 38_Ant 2	20M	QPSK	1	0	Back	10mm	37850	2580	21.54	22.20	1.164	62.90	1.006	0.01	0.222	0.260

WiFi on																	
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
43	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	40185	2549.5	20.30	20.50	1.047	62.90	1.006	0.01	0.190	0.200

<WLAN SAR>

WWAN off / WWAN on															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 0	6	2437	17.90	18.00	1.023	99.02	1.010	0.04	0.163	0.168
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 0	6	2437	17.90	18.00	1.023	99.02	1.010	-0.15	0.163	0.168
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 1	6	2437	17.80	18.00	1.047	98.63	1.014	-0.1	0.151	0.160
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 1	6	2437	17.80	18.00	1.047	98.63	1.014	-0.18	0.492	0.522
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 0+1	1	2412	18.00	18.00	1.000	98.62	1.014	0.03	0.210	0.213
44	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 0+1	1	2412	18.00	18.00	1.000	98.62	1.014	-0.19	0.540	0.548
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 0	54	5270	17.30	17.50	1.047	96.45	1.037	-0.06	0.343	0.372
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0	54	5270	17.30	17.50	1.047	96.45	1.037	-0.04	0.222	0.241
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 1	54	5270	17.20	17.50	1.072	96.43	1.037	-0.16	0.212	0.236
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	54	5270	17.20	17.50	1.072	96.43	1.037	-0.08	0.831	0.923
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 1	64	5320	17.40	17.50	1.023	98.35	1.017	-0.04	0.852	0.887
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 0+1	54	5270	16.30	17.50	1.318	96.30	1.038	0.02	0.416	0.569
45	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0+1	54	5270	16.30	17.50	1.318	96.30	1.038	-0.06	0.715	0.978
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 0+1	64	5320	17.30	17.50	1.047	98.10	1.019	-0.11	0.815	0.870
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0	122	5610	17.50	17.50	1.000	92.81	1.077	-0.09	0.344	0.370
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0	122	5610	17.50	17.50	1.000	92.81	1.077	-0.11	0.201	0.216
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 1	122	5610	17.40	17.50	1.023	92.22	1.084	-0.12	0.167	0.185
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	122	5610	17.40	17.50	1.023	92.22	1.084	-0.16	0.769	0.853
46	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	138	5690	17.40	17.50	1.023	92.22	1.084	-0.13	0.925	1.026
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0+1	122	5610	17.50	17.50	1.000	92.70	1.079	-0.11	0.376	0.406
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1	122	5610	17.50	17.50	1.000	92.70	1.079	-0.12	0.847	0.914
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1	138	5690	17.30	17.50	1.047	92.70	1.079	-0.15	0.865	0.977
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0	155	5775	17.50	17.50	1.000	92.81	1.077	-0.12	0.329	0.354
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0	155	5775	17.50	17.50	1.000	92.81	1.077	-0.14	0.228	0.246
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.22	1.084	-0.06	0.160	0.173
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	155	5775	17.50	17.50	1.000	92.22	1.084	-0.06	0.814	0.882
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	151	5755	17.40	17.50	1.023	96.43	1.037	-0.02	0.888	0.942
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 0+1	155	5775	17.50	17.50	1.000	92.70	1.079	-0.16	0.358	0.386
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 0+1	155	5775	17.50	17.50	1.000	92.70	1.079	-0.11	0.850	0.917
47	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 0+1	151	5755	17.30	17.50	1.047	96.30	1.038	-0.05	0.897	0.975

15.4 Product Specific SAR

<WLAN SAR>

WWAN off / WWAN on															
Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 0	54	5270	17.30	17.50	1.047	96.45	1.037	-0.05	1.050	1.140
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 0	54	5270	17.30	17.50	1.047	96.45	1.037	-0.03	0.782	0.849
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 0	54	5270	17.30	17.50	1.047	96.45	1.037	0	0.605	0.657
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 0	54	5270	17.30	17.50	1.047	96.45	1.037	0.11	0.753	0.818
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 1	54	5270	17.20	17.50	1.072	96.43	1.037	0	0.801	0.890
48	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	54	5270	17.20	17.50	1.072	96.43	1.037	-0.04	2.730	3.033
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 1	64	5320	17.40	17.50	1.023	98.35	1.017	-0.07	2.650	2.758
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 1	54	5270	17.20	17.50	1.072	96.43	1.037	0.11	1.720	1.911
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 1	54	5270	17.20	17.50	1.072	96.43	1.037	-0.06	0.091	0.101
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 0+1	54	5270	16.30	17.50	1.318	96.30	1.038	-0.1	1.090	1.492
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 0+1	54	5270	16.30	17.50	1.318	96.30	1.038	-0.12	2.070	2.832
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 0+1	64	5320	17.30	17.50	1.047	98.10	1.019	-0.11	2.330	2.486
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 0+1	54	5270	16.30	17.50	1.318	96.30	1.038	0.14	1.790	2.449
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 0+1	64	5320	17.30	17.50	1.047	98.10	1.019	0.11	1.880	2.006
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 0+1	54	5270	16.30	17.50	1.318	96.30	1.038	-0.1	0.952	1.303
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 0	122	5610	17.50	17.50	1.000	92.81	1.077	-0.18	1.060	1.142
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0	122	5610	17.50	17.50	1.000	92.81	1.077	0.11	0.775	0.835
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 0	122	5610	17.50	17.50	1.000	92.81	1.077	0.1	0.723	0.779
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 0	122	5610	17.50	17.50	1.000	92.81	1.077	-0.16	0.770	0.829
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 1	122	5610	17.40	17.50	1.023	92.22	1.084	0.1	0.443	0.491
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 1	122	5610	17.40	17.50	1.023	92.22	1.084	-0.09	2.060	2.285
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 1	138	5690	17.40	17.50	1.023	92.22	1.084	-0.16	2.030	2.252
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 1	122	5610	17.40	17.50	1.023	92.22	1.084	0.1	1.150	1.276
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 1	122	5610	17.40	17.50	1.023	92.22	1.084	-0.14	0.057	0.063
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 0+1	122	5610	17.50	17.50	1.000	92.70	1.079	-0.17	1.090	1.176
49	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0+1	122	5610	17.50	17.50	1.000	92.70	1.079	-0.07	2.820	3.043
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0+1	138	5690	17.30	17.50	1.047	92.70	1.079	-0.12	2.340	2.644
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 0+1	122	5610	17.50	17.50	1.000	92.70	1.079	0.17	1.700	1.834
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 0+1	122	5610	17.50	17.50	1.000	92.70	1.079	-0.18	0.666	0.719

15.5 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9538	1907.6	24.64	25.10	1.112	-0.09	1.040	-	1.156
2nd	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	9538	1907.6	24.64	25.10	1.112	-0.15	1.030	1.01	1.145
1st	LTE Band 7_Ant 2	20M_QPSK_1_0	Back	10mm	20850	2510	23.82	24.50	1.169	-0.03	0.881	-	1.030
2nd	LTE Band 7_Ant 2	20M_QPSK_1_0	Back	10mm	20850	2510	23.82	24.50	1.169	0.07	0.841	1.05	0.984

No.	Band	Mode	Test Position	Gap (mm)	Ant.	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	46	5230	17.50	17.50	1.000	96.43	1.037	-0.11	1.140	-	1.182
2nd	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	46	5230	17.50	17.50	1.000	96.43	1.037	-0.06	1.090	1.05	1.130
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 0+1	155	5775	17.50	17.50	1.000	92.70	1.079	-0.13	0.918	-	0.991
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 0+1	155	5775	17.50	17.50	1.000	92.70	1.079	-0.11	0.909	1.01	0.981
1st	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 1	64	5320	17.40	17.50	1.023	98.35	1.017	-0.04	0.852	-	0.887
2nd	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 1	64	5320	17.40	17.50	1.023	98.35	1.017	-0.14	0.846	1.01	0.880
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	138	5690	17.40	17.50	1.023	92.22	1.084	-0.13	0.925	-	1.026
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 1	138	5690	17.40	17.50	1.023	92.22	1.084	-0.13	0.922	1.00	1.023

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	54	5270	17.20	17.50	1.072	96.43	1.037	-0.04	2.730	-	3.033
2nd	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	54	5270	17.20	17.50	1.072	96.43	1.037	-0.09	2.700	1.01	3.000
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0+1	122	5610	17.50	17.50	1.000	92.70	1.079	-0.07	2.820	-	3.043
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 0+1	122	5610	17.50	17.50	1.000	92.70	1.079	-0.02	2.780	1.01	3.000

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. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The ratio is the difference in percentage between original and repeated *measured SAR*.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

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

General Note:

1. All licensed modes share the same antenna part and cannot transmit simultaneously.
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/hotspot/body-worn, cellular TX power has 2 power table associated with WiFi-ON (power table 1) and WiFi-OFF (power table 2). Cellular SAR associated with power table 1 was used for analysis of simultaneous transmission with WLAN and BT, associated with power table 2 was used for analysis of simultaneous transmission with BTonly.
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.

16.1 Head Exposure Conditions

<WWAN off>

Exposure Position	2 2.4GHz WLAN Ant 0 1g SAR (W/kg)	3 2.4GHz WLAN Ant 1 1g SAR (W/kg)	4 5GHz WLAN Ant 0 1g SAR (W/kg)	5 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 0 1g SAR (W/kg)	7 2.4GHz WLAN Ant 0+1 1g SAR (W/kg)	8 5GHz WLAN Ant 0+1 1g SAR (W/kg)	3+6 Summed 1g SAR (W/kg)	4+6 Summed 1g SAR (W/kg)	5+6 Summed 1g SAR (W/kg)	6+8 Summed 1g SAR (W/kg)
Right Cheek	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.197**	**0.428**	**0.259**	**0.433**
Right Tilted	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.144**	**0.445**	**0.205**	**0.419**
Left Cheek	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**0.434**	**0.901**	**0.581**	**0.972**
Left Tilted	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.303**	**0.668**	**0.334**	**0.671**

<WiFi on>

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 0 1g SAR (W/kg)	3 2.4GHz WLAN Ant 1 1g SAR (W/kg)	4 5GHz WLAN Ant 0 1g SAR (W/kg)	5 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 0 1g SAR (W/kg)	7 2.4GHz WLAN Ant 0+1 1g SAR (W/kg)	8 5GHz WLAN Ant 0+1 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)
GSM850_Ant 0	Right Cheek	0.343	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.588**	**0.540**	**0.503**	**0.771**	**0.602**	**0.776**
	Right Tilted	0.212	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.457**	**0.356**	**0.361**	**0.657**	**0.417**	**0.631**
	Left Cheek	0.308	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**0.986**	**0.742**	**0.616**	**1.209**	**0.889**	**1.280**
	Left Tilted	0.192	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.532**	**0.495**	**0.380**	**0.860**	**0.526**	**0.863**
GSM1900_Ant 0	Right Cheek	0.144	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.389**	**0.341**	**0.304**	**0.572**	**0.403**	**0.577**
	Right Tilted	0.137	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.382**	**0.281**	**0.286**	**0.582**	**0.342**	**0.556**
	Left Cheek	0.224	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**0.902**	**0.658**	**0.532**	**1.125**	**0.805**	**1.196**
	Left Tilted	0.093	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.433**	**0.396**	**0.281**	**0.761**	**0.427**	**0.764**
WCDMA II_Ant 0	Right Cheek	0.181	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.426**	**0.378**	**0.341**	**0.609**	**0.440**	**0.614**
	Right Tilted	0.150	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.395**	**0.294**	**0.299**	**0.595**	**0.355**	**0.569**
	Left Cheek	0.323	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**1.001**	**0.757**	**0.631**	**1.224**	**0.904**	**1.295**
	Left Tilted	0.112	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.452**	**0.415**	**0.300**	**0.780**	**0.446**	**0.783**
WCDMA IV_Ant 0	Right Cheek	0.211	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.456**	**0.408**	**0.371**	**0.639**	**0.470**	**0.644**
	Right Tilted	0.241	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.486**	**0.385**	**0.390**	**0.686**	**0.446**	**0.660**
	Left Cheek	0.353	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**1.031**	**0.787**	**0.661**	**1.254**	**0.934**	**1.325**
	Left Tilted	0.165	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.505**	**0.468**	**0.353**	**0.833**	**0.499**	**0.836**
CDMA BC0_Ant 0	Right Cheek	0.414	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.659**	**0.611**	**0.574**	**0.842**	**0.673**	**0.847**
	Right Tilted	0.237	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.482**	**0.381**	**0.386**	**0.682**	**0.442**	**0.656**
	Left Cheek	0.363	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**1.041**	**0.797**	**0.671**	**1.264**	**0.944**	**1.335**
	Left Tilted	0.246	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.586**	**0.549**	**0.434**	**0.914**	**0.580**	**0.917**
CDMA BC1_Ant 0	Right Cheek	0.217	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.462**	**0.414**	**0.377**	**0.645**	**0.476**	**0.650**
	Right Tilted	0.172	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.417**	**0.316**	**0.321**	**0.617**	**0.377**	**0.591**
	Left Cheek	0.423	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**1.101**	**0.857**	**0.731**	**1.324**	**1.004**	**1.395**
	Left Tilted	0.129	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.469**	**0.432**	**0.317**	**0.797**	**0.463**	**0.800**
CDMA BC10_Ant 0	Right Cheek	0.393	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.638**	**0.590**	**0.553**	**0.821**	**0.652**	**0.826**
	Right Tilted	0.226	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.471**	**0.370**	**0.375**	**0.671**	**0.431**	**0.645**
	Left Cheek	0.346	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**1.024**	**0.780**	**0.654**	**1.247**	**0.927**	**1.318**
	Left Tilted	0.227	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.567**	**0.530**	**0.415**	**0.895**	**0.561**	**0.898**
LTE Band 7_Ant 2	Right Cheek	0.461	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.706**	**0.658**	**0.621**	**0.889**	**0.720**	**0.894**
	Right Tilted	0.147	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.392**	**0.291**	**0.296**	**0.592**	**0.352**	**0.566**
	Left Cheek	0.232	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**0.910**	**0.666**	**0.540**	**1.133**	**0.813**	**1.204**
	Left Tilted	0.175	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.515**	**0.478**	**0.363**	**0.843**	**0.509**	**0.846**
LTE Band 25_Ant 0	Right Cheek	0.183	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.428**	**0.380**	**0.343**	**0.611**	**0.442**	**0.616**
	Right Tilted	0.195	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.440**	**0.339**	**0.344**	**0.640**	**0.400**	**0.614**
	Left Cheek	0.368	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**1.046**	**0.802**	**0.676**	**1.269**	**0.949**	**1.340**
	Left Tilted	0.178	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.518**	**0.481**	**0.366**	**0.846**	**0.512**	**0.849**
LTE Band 66_Ant 0	Right Cheek	0.167	0.146	0.037	0.268	0.099	0.160	0.160	0.273	**0.412**	**0.364**	**0.327**	**0.595**	**0.426**	**0.600**
	Right Tilted	0.227	0.160	0.024	0.325	0.085	0.120	0.149	0.299	**0.472**	**0.371**	**0.376**	**0.672**	**0.432**	**0.646**
	Left Cheek	0.383	0.397	0.134	0.601	0.281	0.300	0.308	0.672	**1.061**	**0.817**	**0.691**	**1.284**	**0.964**	**1.355**
	Left Tilted	0.207	0.246	0.063	0.428	0.094	0.240	0.188	0.431	**0.547**	**0.510**	**0.395**	**0.875**	**0.541**	**0.878**

<WiFi off>

WWAN Band	Exposure Position	1	6	1+6
		WWAN	Bluetooth Ant 0	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM850_Ant 0	Right Cheek	0.343	0.160	**0.503**
	Right Tilted	0.212	0.120	**0.332**
	Left Cheek	0.308	0.300	**0.608**
	Left Tilted	0.192	0.240	**0.432**
GSM1900_Ant 0	Right Cheek	0.144	0.160	**0.304**
	Right Tilted	0.137	0.120	**0.257**
	Left Cheek	0.224	0.300	**0.524**
	Left Tilted	0.093	0.240	**0.333**
WCDMA II_Ant 0	Right Cheek	0.464	0.160	**0.624**
	Right Tilted	0.366	0.120	**0.486**
	Left Cheek	0.775	0.300	**1.075**
	Left Tilted	0.291	0.240	**0.531**
WCDMA IV_Ant 0	Right Cheek	0.211	0.160	**0.371**
	Right Tilted	0.241	0.120	**0.361**
	Left Cheek	0.353	0.300	**0.653**
	Left Tilted	0.165	0.240	**0.405**
CDMA BC0_Ant 0	Right Cheek	0.414	0.160	**0.574**
	Right Tilted	0.237	0.120	**0.357**
	Left Cheek	0.363	0.300	**0.663**
	Left Tilted	0.246	0.240	**0.486**
CDMA BC1_Ant 0	Right Cheek	0.301	0.160	**0.461**
	Right Tilted	0.349	0.120	**0.469**
	Left Cheek	0.676	0.300	**0.976**
	Left Tilted	0.235	0.240	**0.475**
CDMA BC10_Ant 0	Right Cheek	0.393	0.160	**0.553**
	Right Tilted	0.226	0.120	**0.346**
	Left Cheek	0.346	0.300	**0.646**
	Left Tilted	0.227	0.240	**0.467**
LTE Band 7_Ant 2	Right Cheek	0.678	0.160	**0.838**
	Right Tilted	0.530	0.120	**0.650**
	Left Cheek	0.315	0.300	**0.615**
	Left Tilted	0.280	0.240	**0.520**
LTE Band 25_Ant 0	Right Cheek	0.385	0.160	**0.545**
	Right Tilted	0.457	0.120	**0.577**
	Left Cheek	0.734	0.300	**1.034**
	Left Tilted	0.430	0.240	**0.670**
LTE Band 66_Ant 0	Right Cheek	0.232	0.160	**0.392**
	Right Tilted	0.269	0.120	**0.389**
	Left Cheek	0.479	0.300	**0.779**
	Left Tilted	0.260	0.240	**0.500**

16.2 Hotspot Exposure Conditions

<WiFi on>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0	2.4GHz WLAN Ant 0+1	5GHz WLAN Ant 0+1						
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)						
GSM850_ Ant 0	Front	0.188	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.572**	**0.518**	**0.401**	**0.752**	**0.574**	**0.837**
	Back	0.271	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.501**	**1.033**	**0.819**	**0.794**	**1.573**	**1.554**
	Left side	0.141								**0.141**	**0.141**	**0.141**	**0.141**	**0.141**	**0.141**
	Right side	0.205	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.475**	**0.572**	**0.515**	**0.471**	**1.417**	**1.425**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.094								**0.094**	**0.094**	**0.094**	**0.094**	**0.094**	**0.094**
GSM1900 _Ant 0	Front	0.228	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.612**	**0.558**	**0.441**	**0.792**	**0.614**	**0.877**
	Back	0.290	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.520**	**1.052**	**0.838**	**0.813**	**1.592**	**1.573**
	Left side	0.131								**0.131**	**0.131**	**0.131**	**0.131**	**0.131**	**0.131**
	Right side	0.050	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.320**	**0.417**	**0.360**	**0.316**	**1.262**	**1.270**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.371								**0.371**	**0.371**	**0.371**	**0.371**	**0.371**	**0.371**
WCDMA II_Ant 0	Front	0.280	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.664**	**0.610**	**0.493**	**0.844**	**0.666**	**0.929**
	Back	0.264	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.494**	**1.026**	**0.812**	**0.787**	**1.566**	**1.547**
	Left side	0.177								**0.177**	**0.177**	**0.177**	**0.177**	**0.177**	**0.177**
	Right side	0.047	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.317**	**0.414**	**0.357**	**0.313**	**1.259**	**1.267**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.287								**0.287**	**0.287**	**0.287**	**0.287**	**0.287**	**0.287**
WCDMA IV_Ant 0	Front	0.201	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.585**	**0.531**	**0.414**	**0.765**	**0.587**	**0.850**
	Back	0.208	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.438**	**0.970**	**0.756**	**0.731**	**1.510**	**1.491**
	Left side	0.127								**0.127**	**0.127**	**0.127**	**0.127**	**0.127**	**0.127**
	Right side	0.053	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.323**	**0.420**	**0.363**	**0.319**	**1.265**	**1.273**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.281								**0.281**	**0.281**	**0.281**	**0.281**	**0.281**	**0.281**
WCDMA V_Ant 0	Front	0.205	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.589**	**0.535**	**0.418**	**0.769**	**0.591**	**0.854**
	Back	0.205	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.435**	**0.967**	**0.753**	**0.728**	**1.507**	**1.488**
	Left side	0.205								**0.205**	**0.205**	**0.205**	**0.205**	**0.205**	**0.205**
	Right side	0.205	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.475**	**0.572**	**0.515**	**0.471**	**1.417**	**1.425**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.205								**0.205**	**0.205**	**0.205**	**0.205**	**0.205**	**0.205**
CDMA BC0_Ant 0	Front	0.172	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.556**	**0.502**	**0.385**	**0.736**	**0.558**	**0.821**
	Back	0.271	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.501**	**1.033**	**0.819**	**0.794**	**1.573**	**1.554**
	Left side	0.140								**0.140**	**0.140**	**0.140**	**0.140**	**0.140**	**0.140**
	Right side	0.189	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.459**	**0.556**	**0.499**	**0.455**	**1.401**	**1.409**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.095								**0.095**	**0.095**	**0.095**	**0.095**	**0.095**	**0.095**
CDMA BC1_Ant 0	Front	0.264	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.648**	**0.594**	**0.477**	**0.828**	**0.650**	**0.913**
	Back	0.268	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.498**	**1.030**	**0.816**	**0.791**	**1.570**	**1.551**
	Left side	0.161								**0.161**	**0.161**	**0.161**	**0.161**	**0.161**	**0.161**
	Right side	0.045	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.315**	**0.412**	**0.355**	**0.311**	**1.257**	**1.265**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.291								**0.291**	**0.291**	**0.291**	**0.291**	**0.291**	**0.291**
CDMA BC10_Ant 0	Front	0.197	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.581**	**0.527**	**0.410**	**0.761**	**0.583**	**0.846**
	Back	0.257	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.487**	**1.019**	**0.805**	**0.780**	**1.559**	**1.540**
	Left side	0.188								**0.188**	**0.188**	**0.188**	**0.188**	**0.188**	**0.188**
	Right side	0.217	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.487**	**0.584**	**0.527**	**0.483**	**1.429**	**1.437**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.082								**0.082**	**0.082**	**0.082**	**0.082**	**0.082**	**0.082**
LTE Band 7_Ant 2	Front	0.249	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.633**	**0.579**	**0.462**	**0.813**	**0.635**	**0.898**
	Back	0.279	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.509**	**1.041**	**0.827**	**0.802**	**1.581**	**1.562**

	Left side									**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Right side	0.222	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.492**	**0.589**	**0.532**	**0.488**	**1.434**	**1.442**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.105								**0.105**	**0.105**	**0.105**	**0.105**	**0.105**	**0.105**
LTE Band 25_Ant 0	Front	0.283	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.667**	**0.613**	**0.496**	**0.847**	**0.669**	**0.932**
	Back	0.290	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.520**	**1.052**	**0.838**	**0.813**	**1.592**	**1.573**
	Left side	0.187								**0.187**	**0.187**	**0.187**	**0.187**	**0.187**	**0.187**
	Right side	0.050	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.320**	**0.417**	**0.360**	**0.316**	**1.262**	**1.270**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.290								**0.290**	**0.290**	**0.290**	**0.290**	**0.290**	**0.290**
LTE Band 66_Ant 0	Front	0.264	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.648**	**0.594**	**0.477**	**0.828**	**0.650**	**0.913**
	Back	0.266	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.496**	**1.028**	**0.814**	**0.789**	**1.568**	**1.549**
	Left side	0.165								**0.165**	**0.165**	**0.165**	**0.165**	**0.165**	**0.165**
	Right side	0.069	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.339**	**0.436**	**0.379**	**0.335**	**1.281**	**1.289**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.316								**0.316**	**0.316**	**0.316**	**0.316**	**0.316**	**0.316**
LTE Band 38_Ant 2	Front	0.260	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.644**	**0.590**	**0.473**	**0.824**	**0.646**	**0.909**
	Back	0.260	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.490**	**1.022**	**0.808**	**0.783**	**1.562**	**1.543**
	Left side	0.260								**0.260**	**0.260**	**0.260**	**0.260**	**0.260**	**0.260**
	Right side	0.260	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.530**	**0.627**	**0.570**	**0.526**	**1.472**	**1.480**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.260								**0.260**	**0.260**	**0.260**	**0.260**	**0.260**	**0.260**
LTE Band 41_Ant 2	Front	0.200	0.168	0.160	0.394	0.216	0.170	0.213	0.479	**0.584**	**0.530**	**0.413**	**0.764**	**0.586**	**0.849**
	Back	0.200	0.168	0.522	0.283	1.062	0.240	0.548	1.043	**1.430**	**0.962**	**0.748**	**0.723**	**1.502**	**1.483**
	Left side	0.200								**0.200**	**0.200**	**0.200**	**0.200**	**0.200**	**0.200**
	Right side	0.200	0.088	0.337	0.236	1.182	0.030	0.310	1.190	**1.470**	**0.567**	**0.510**	**0.466**	**1.412**	**1.420**
	Top side		0.085	0.048	0.420	0.075	0.150	0.086	0.485	**0.160**	**0.198**	**0.086**	**0.570**	**0.225**	**0.635**
	Bottom side	0.200								**0.200**	**0.200**	**0.200**	**0.200**	**0.200**	**0.200**

<WiFi off>

WWAN Band	Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
		WWAN	Bluetooth Ant 0	
		1g SAR (W/kg)	1g SAR (W/kg)	
GSM850_Ant 0	Front	0.370	0.170	**0.540**
	Back	0.605	0.240	**0.845**
	Left side	0.265		**0.265**
	Right side	0.351	0.030	**0.381**
	Top side		0.150	**0.150**
	Bottom side	0.194		**0.194**
GSM1900_Ant 0	Front	0.510	0.170	**0.680**
	Back	0.661	0.240	**0.901**
	Left side	0.256		**0.256**
	Right side	0.125	0.030	**0.155**
	Top side		0.150	**0.150**
	Bottom side	0.766		**0.766**
WCDMA II_Ant 0	Front	1.134	0.170	**1.304**
	Back	1.039	0.240	**1.279**
	Left side	0.744		**0.744**
	Right side	0.202	0.030	**0.232**
	Top side		0.150	**0.150**
	Bottom side	1.156		**1.156**
WCDMA IV_Ant 0	Front	0.620	0.170	**0.790**
	Back	0.610	0.240	**0.850**
	Left side	0.372		**0.372**
	Right side	0.160	0.030	**0.190**
	Top side		0.150	**0.150**
	Bottom side	0.794		**0.794**
xCDMA BC0_Ant 0	Front	0.387	0.170	**0.557**
	Back	0.595	0.240	**0.835**
	Left side	0.235		**0.235**
	Right side	0.365	0.030	**0.395**
	Top side		0.150	**0.150**
	Bottom side	0.191		**0.191**
xCDMA BC1_Ant 0	Front	1.056	0.170	**1.226**
	Back	1.057	0.240	**1.297**
	Left side	0.704		**0.704**
	Right side	0.186	0.030	**0.216**
	Top side		0.150	**0.150**
	Bottom side	1.134		**1.134**
CDMA BC10_Ant 0	Front	0.390	0.170	**0.560**
	Back	0.452	0.240	**0.692**
	Left side	0.252		**0.252**
	Right side	0.370	0.030	**0.400**
	Top side		0.150	**0.150**
	Bottom side	0.115		**0.115**
LTE Band 7_Ant 2	Front	0.973	0.170	**1.143**
	Back	1.030	0.240	**1.270**
	Left side	0.108		**0.108**
	Right side	0.816	0.030	**0.846**
	Top side		0.150	**0.150**
	Bottom side	0.429		**0.429**
LTE Band 25_Ant 0	Front	1.002	0.170	**1.172**
	Back	1.014	0.240	**1.254**
	Left side	0.578		**0.578**

	Right side	0.194	0.030	**0.224**
	Top side		0.150	**0.150**
	Bottom side	0.999		**0.999**
LTE Band 66_Ant 0	Front	0.720	0.170	**0.890**
	Back	0.701	0.240	**0.941**
	Left side	0.456		**0.456**
	Right side	0.175	0.030	**0.205**
	Top side		0.150	**0.150**
	Bottom side	0.894		**0.894**
WCDMA II_Ant 1	Front	0.722	0.170	**0.892**
	Back	1.020	0.240	**1.260**
	Left side	0.270		**0.270**
	Right side	0.068	0.030	**0.098**
	Top side	1.002	0.150	**1.152**
	Bottom side			**0.000**
LTE Band 25_Ant 1	Front	0.361	0.170	**0.531**
	Back	0.361	0.240	**0.601**
	Left side	0.361		**0.361**
	Right side	0.361	0.030	**0.391**
	Top side	0.361	0.150	**0.511**
	Bottom side			**0.000**

16.3 Body-Worn Accessory Exposure Conditions

<WWAN off>

Exposure Position	2	3	4	5	6	7	8	3+6 Summed 1g SAR (W/kg)	4+6 Summed 1g SAR (W/kg)	5+6 Summed 1g SAR (W/kg)	6+8 Summed 1g SAR (W/kg)
	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0	2.4GHz WLAN Ant 0+1	5GHz WLAN Ant 0+1				
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)				
Front	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.330**	**0.542**	**0.406**	**0.739**
Back	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**0.762**	**0.486**	**1.266**	**1.218**

<WiFi on>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+2+5 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	Bluetooth Ant 0	2.4GHz WLAN Ant 0+1	5GHz WLAN Ant 0+1						
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)						
GSM850_ Ant 0	Front	0.188	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.592**	**0.518**	**0.401**	**0.730**	**0.594**	**0.927**
	Back	0.271	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.465**	**1.033**	**0.819**	**0.757**	**1.537**	**1.489**
GSM1900 _Ant 0	Front	0.228	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.632**	**0.558**	**0.441**	**0.770**	**0.634**	**0.967**
	Back	0.290	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.484**	**1.052**	**0.838**	**0.776**	**1.556**	**1.508**
WCDMA II_Ant 0	Front	0.280	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.684**	**0.610**	**0.493**	**0.822**	**0.686**	**1.019**
	Back	0.264	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.458**	**1.026**	**0.812**	**0.750**	**1.530**	**1.482**
WCDMA IV_Ant 0	Front	0.201	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.605**	**0.531**	**0.414**	**0.743**	**0.607**	**0.940**
	Back	0.208	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.402**	**0.970**	**0.756**	**0.694**	**1.474**	**1.426**
WCDMA V_Ant 0	Front	0.205	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.609**	**0.535**	**0.418**	**0.747**	**0.611**	**0.944**
	Back	0.205	0.168	0.522	0.246	1.026	0.240	0.548	0.975	**1.399**	**0.967**	**0.753**	**0.691**	**1.471**	**1.420**
CDMA BC0_Ant 0	Front	0.167	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.571**	**0.497**	**0.380**	**0.709**	**0.573**	**0.906**
	Back	0.264	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.458**	**1.026**	**0.812**	**0.750**	**1.530**	**1.482**
CDMA BC1_Ant 0	Front	0.282	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.686**	**0.612**	**0.495**	**0.824**	**0.688**	**1.021**
	Back	0.275	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.469**	**1.037**	**0.823**	**0.761**	**1.541**	**1.493**
CDMA BC10_Ant 0	Front	0.233	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.637**	**0.563**	**0.446**	**0.775**	**0.639**	**0.972**
	Back	0.244	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.438**	**1.006**	**0.792**	**0.730**	**1.510**	**1.462**
LTE Band 7_Ant 2	Front	0.249	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.653**	**0.579**	**0.462**	**0.791**	**0.655**	**0.988**
	Back	0.279	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.473**	**1.041**	**0.827**	**0.765**	**1.545**	**1.497**
LTE Band 25_Ant 0	Front	0.283	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.687**	**0.613**	**0.496**	**0.825**	**0.689**	**1.022**
	Back	0.290	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.484**	**1.052**	**0.838**	**0.776**	**1.556**	**1.508**
LTE Band 66_Ant 0	Front	0.264	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.668**	**0.594**	**0.477**	**0.806**	**0.670**	**1.003**
	Back	0.266	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.460**	**1.028**	**0.814**	**0.752**	**1.532**	**1.484**
LTE Band 38_Ant 2	Front	0.260	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.664**	**0.590**	**0.473**	**0.802**	**0.666**	**0.999**
	Back	0.260	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.454**	**1.022**	**0.808**	**0.746**	**1.526**	**1.478**
LTE Band 41_Ant 2	Front	0.200	0.168	0.160	0.372	0.236	0.170	0.213	0.569	**0.604**	**0.530**	**0.413**	**0.742**	**0.606**	**0.939**
	Back	0.200	0.168	0.522	0.246	1.026	0.240	0.548	0.978	**1.394**	**0.962**	**0.748**	**0.686**	**1.466**	**1.418**

<WiFi off>

WWAN Band	Exposure Position	1	6	1+6 Summed 1g SAR (W/kg)
		WWAN	Bluetooth Ant 0	
		1g SAR (W/kg)	1g SAR (W/kg)	
GSM850_Ant 0	Front	0.370	0.170	**0.540**
	Back	0.605	0.240	**0.845**
GSM1900_Ant 0	Front	0.510	0.170	**0.680**
	Back	0.661	0.240	**0.901**
WCDMA II_Ant 0	Front	1.134	0.170	**1.304**
	Back	1.039	0.240	**1.279**
WCDMA IV_Ant 0	Front	0.620	0.170	**0.790**
	Back	0.610	0.240	**0.850**
CDMA BC0_Ant 0	Front	0.374	0.170	**0.544**
	Back	0.551	0.240	**0.791**
CDMA BC1_Ant 0	Front	1.050	0.170	**1.220**
	Back	1.002	0.240	**1.242**
CDMA BC10_Ant 0	Front	0.390	0.170	**0.560**
	Back	0.425	0.240	**0.665**
LTE Band 7_Ant 2	Front	0.973	0.170	**1.143**
	Back	1.030	0.240	**1.270**
LTE Band 25_Ant 0	Front	1.002	0.170	**1.172**
	Back	1.014	0.240	**1.254**
LTE Band 66_Ant 0	Front	0.720	0.170	**0.890**
	Back	0.701	0.240	**0.941**
WCDMA II_Ant 1	Front	0.722	0.170	**0.892**
	Back	1.020	0.240	**1.260**
LTE Band 25_Ant 1	Front	0.361	0.170	**0.531**
	Back	0.361	0.240	**0.601**

16.4 Product Specific Exposure Conditions

Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 10g SAR (W/kg)	1+2+5 Summed 10g SAR (W/kg)	1+4+7 Summed 10g SAR (W/kg)	1+5+7 Summed 10g SAR (W/kg)	1+6+7 Summed 10g SAR (W/kg)
	WWAN	2.4GHz WLAN Ant 0	2.4GHz WLAN Ant 1	5GHz WLAN Ant 0	5GHz WLAN Ant 1	5GHz WLAN Ant 0+1	Bluetooth Ant 0					
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)					
Front				1.142	0.890	1.492		**0.000**	**0.890**	**1.142**	**0.890**	**1.492**
Back				0.849	3.033	3.043		**0.000**	**3.033**	**0.849**	**3.033**	**3.043**
Right side				0.779	1.911	2.449		**0.000**	**1.911**	**0.779**	**1.911**	**2.449**
Top side				0.829	0.101	1.303		**0.000**	**0.101**	**0.829**	**0.101**	**1.303**

Remark:

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

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17. 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.

18. References

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

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[6] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[7] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[8] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[9] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[10] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[11] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

[12] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[13] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.

[14] FCC KDB 941225 D07 v01r02, " SAR Evaluation Procedures for UMPC Mini-Tablet Devices", Oct 2015.