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# SAR TEST REPORT

<b>Applicant Name:</b> <b>SAMSUNG Electronics Co., Ltd.</b> 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677 Rep. of Korea	<b>Date of Issue:</b> Nov. 05, 2021 <b>Test Report No.:</b> HCT-SR-2110-FC012-R1 <b>Test Site:</b> HCT CO., LTD.
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**FCC ID:**

**A3LSMN981B1**

<b>Equipment Type:</b>	<b>Mobile Phone</b>
<b>Application Type</b>	<b>Certification</b>
<b>FCC Rule Part(s):</b>	<b>CFR §2.1093</b>
<b>Model Name:</b>	<b>SM-N981B/DS</b>
<b>Additional Model Name:</b>	<b>SM-N981B</b>
<b>Date of Test:</b>	<b>Oct. 01, 2021 ~ Oct. 21. 2021</b>

This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in FCC KDB procedures and had been tested in accordance with the measurement procedures specified in FCC KDB procedures.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested By

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**REVISION HISTORY**

The revision history for this test report is shown in table.

<b>Revision No.</b>	<b>Date of Issue</b>	<b>Description</b>
0	Oct. 29, 2021	Initial Release
1	Nov. 05, 2021	Revised Sec.3, Sec.4. Sec.11, Sec.13 and Sec.14

This test results were applied only to the test methods required by the standard.

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

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## 1. Test Regulations

The tests documented in this report were performed in accordance with FCC CFR § 2.1093, IEEE 1528-2013, ANSI C63.26-2015 the following FCC Published RF exposure KDB procedures:

- FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
- FCC KDB Publication 941225 D06 Hot Spot SAR v02r01
- FCC KDB Publication 941225 D05 SAR for LTE Devices v02r05
- FCC KDB Publication 941225 D05A LTE Rel.10 KDB Inquiry sheet v01r02
- FCC KDB Publication 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB Publication 447498 D01 General SAR Guidance v06
- FCC KDB Publication 648474 D04 Handset SAR v01r03
- FCC KDB Publication 616217 D04 v01r02 (Proximity Sensor)
- FCC KDB Publication 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03
- FCC KDB Publication 971168 D01 Power Meas License Digital Systems v03r01

In Addition to the above, the following information was used.

- October 2013 TCB Workshop Notes (GPRS testing criteria)
- October 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- November 2017 TCBC Workshop Notes (LTE Carrier Aggregation)
- May 2017 TCBC Workshop Notes (LTE Band 41 Power Class 2)
- April 2018 TCBC Workshop Notes (LTE DL CA SAR Test Exclusion)
- April 2019 TCBC Workshop Notes (802.11ax SAR Testing)

## 2. Test Location

### 2.1 Test Laboratory

<b>Company Name</b>	HCT Co., Ltd.
<b>Address</b>	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
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### 2.2 Test Facilities

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

<b>Korea</b>	National Radio Research Agency (Designation No. KR0032)
	KOLAS (Testing No. KT197)

## 3. Information of the EUT

### 3.1 General Information of the EUT

<b>Model Name</b>	SM-N981B/DS
<b>Additional Model Name</b>	SM-N981B
<b>Equipment Type</b>	Mobile Phone
<b>FCC ID</b>	A3LSMN981B1
<b>Application Type</b>	Certification
<b>Applicant</b>	SAMSUNG Electronics Co., Ltd.

### 3.2 Attestation of test result of device under test

The Highest Reported SAR						
Band	Tx. Frequency	Equipment Class	Reported SAR (W/kg)			
			1g Head	1g Body-Worn	1g Hotspot	10g Extremity
GSM/GPRS/EDGE 850	824.2 MHz ~ 848.8 MHz	PCE	0.18	0.36	0.62	N/A
GSM/GPRS/EDGE 1900	1 850.2 MHz ~ 1 909.8 MHz	PCE	< 0.1	0.53	1.10	1.33
UMTS 850	826.4 MHz ~ 846.6 MHz	PCE	0.14	0.27	0.50	N/A
UMTS 1700	1 712.4 MHz ~ 1 752.6 MHz	PCE	0.13	0.48	0.95	1.88
UMTS 1900	1 852.4 MHz ~ 1 907.6 MHz	PCE	< 0.1	0.44	1.08	1.76
LTE Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz	PCE	< 0.1	0.70	1.01	2.05
LTE Band 4 (AWS)	1 710.7 MHz ~ 1 754.3 MHz	PCE	N/A	N/A	N/A	N/A
LTE Band 5 (Cell)	824.7 MHz ~ 848.3 MHz	PCE	0.15	0.39	0.65	N/A
LTE Band 12	699.7 MHz ~ 715.3 MHz	PCE	< 0.1	< 0.1	0.22	N/A
LTE Band 13	779.5 MHz ~ 784.5 MHz	PCE	0.11	0.23	0.31	N/A
LTE Band 17	706.5 MHz ~ 713.5 MHz	PCE	N/A	N/A	N/A	N/A
LTE Band 25 (PCS)	1 850.7 MHz ~ 1 914.3 MHz	PCE	0.11	0.56	1.04	1.41
LTE Band 26 (Cell)	814.7 MHz ~ 848.3 MHz	PCE	0.12	0.29	0.46	N/A
LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz	PCE	< 0.1	0.47	0.58	N/A
LTE Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz	PCE	0.13	0.56	0.97	2.29
802.11b	2 412 MHz ~ 2 472 MHz	DTS	0.89	0.23	0.51	N/A
U-NII-1	5 180 MHz ~ 5 240 MHz	NII	N/A	N/A	N/A	N/A
U-NII-2A	5 260 MHz ~ 5 320 MHz	NII	0.39	0.66	N/A	1.56
U-NII-2C	5 500 MHz ~ 5 720 MHz	NII	0.37	0.47	N/A	1.38
U-NII-3	5 745 MHz ~ 5 825 MHz	NII	0.30	0.42	0.62	N/A
Bluetooth	2 402 MHz ~ 2 480 MHz	DSS	0.95	0.16	0.44	N/A
Simultaneous SAR per KDB 690783 D01v01r03			1.369	1.524	1.597	2.966
Date(s) of Tests:	Oct. 01. 2021 ~ Oct. 21. 2021					

## 4. Device Under Test Description

### 4.1 DUT specification

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Voice / Data	824.2 MHz~ 848.8 MHz
GSM1900	Voice / Data	1 850.2 MHz~ 1 909.8 MHz
UMTS Band 5	Voice / Data	826.4 MHz~ 846.6 MHz
UMTS Band 4	Voice / Data	1 712.4 MHz~ 1 752.6 MHz
UMTS Band 2	Voice / Data	1 852.4 MHz~ 1 907.6 MHz
LTE Band 2 (PCS)	Voice / Data	1 850.7 MHz~ 1 909.3 MHz
LTE Band 4 (AWS)	Voice / Data	1 710.7 MHz~ 1 754.3 MHz
LTE Band 5 (Cell)	Voice / Data	824.7 MHz~ 848.3 MHz
LTE Band 12	Voice / Data	699.7 MHz~ 715.3 MHz
LTE Band 13	Voice / Data	779.5 MHz~ 784.5 MHz
LTE Band 17	Voice / Data	706.5 MHz ~ 713.5 MHz
LTE Band 25	Voice / Data	1 850.7 MHz~ 1 914.3 MHz
LTE Band 26	Voice / Data	814.7 MHz~ 848.3 MHz
LTE TDD Band 41	Voice / Data	2 498.5 MHz~ 2 687.5 MHz
LTE Band 66 (AWS)	Voice / Data	1 710.7 MHz ~ 1 779.3 MHz
U-NII-1	Voice / Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Voice / Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Voice / Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Voice / Data	5 745 MHz ~ 5 825 MHz
2.4 GHz WLAN	Voice / Data	2 412 MHz ~ 2 462 MHz
Bluetooth / LE 5.0	Data	2 402 MHz ~ 2 480 MHz
NFC	Data	13.56 MHz
MST	Data	555Hz~8.33kHz
WPC	Data	110kHz ~ 148kHz
S-Pen WPC	Data	590kHz ~ 625kHz
Device Description		
HW version	REV0.1	
SW version	N981B.001	
Device Serial Numbers	Mode	Serial Number
	Main	UIR1410M / UIR1408M / UIR1726M
	WLAN	UIR1409M
The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.		

## 4.2 Power Reduction for SAR

This device utilizes power reduction mechanisms for some wireless modes and bands for SAR compliance under hotspot conditions and under some conditions when the device is being used in close proximity to the user's hand. All hotspot SAR evaluations for this device were performed at the maximum allowed output power when Hotspot is enabled. FCC KDB Publication 616217 D04v01r02 Sec.6 was used as a guideline for selection SAR test distances for device when being used in phablet use conditions.

This device uses an independent fixed level power reduction mechanism for WLAN modes during held-to-ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR Positions described in IEEE1528-2013. Detailed descriptions of the power reduction mechanism are included in the operational description.

The reduced powers for the power reduction mechanisms were conformed via conducted power measurements at the RF Port .

### 4.3 Nominal and Maximum Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

#### 4.3.1 Maximum PCE Output Power

Mode / Band		Voice	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot
GSM/GPRS/EDGE 850	Maximum	34.0	34.0	32.0	30.5	29.0	27.0	25.0	23.5	22.0
	Nominal	33.0	33.0	31.0	29.5	28.0	26.0	24.0	22.5	21.0
GSM/GPRS/EDGE1900	Maximum	31.0	31.0	28.5	26.5	25.0	26.0	24.0	22.5	21.0
	Nominal	30.0	30.0	27.5	25.5	24.0	25.0	23.0	21.5	20.0

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	3GPP HSDPA	3GPP HSUPA	DC-HSDPA
UMTS Band 5 (850 MHz)	Maximum	25.0	23.5	23.0	24.3
	Nominal	24.0	22.5	22.0	23.3
UMTS Band 4 (1700 MHz)	Maximum	23.5	23.5	22.0	23.5
	Nominal	22.5	22.5	21.0	22.5
UMTS Band 2 (1900 MHz)	Maximum	23.5	23.5	22.0	23.5
	Nominal	22.5	22.5	21.0	22.5

Mode / Band		Modulated Average (dBm)
LTE Band 2 (PCS)	Maximum	23.0
	Nominal	22.0
LTE Band 4 (AWS)	Maximum	23.7
	Nominal	22.7
LTE Band 5 (Cell)	Maximum	25.0
	Nominal	24.0
LTE Band 12	Maximum	24.5
	Nominal	23.5
LTE Band 13	Maximum	25.0
	Nominal	24.0
LTE Band 17	Maximum	24.5
	Nominal	23.5
LTE Band 25 (PCS)	Maximum	23.0
	Nominal	22.0
LTE Band 26 (Cell)	Maximum	25.0
	Nominal	24.0
LTE TDD Band 41	Maximum	24.4
	Nominal	23.4
LTE TDD Band 41 (HPUE)	Maximum	25.7
	Nominal	24.7
LTE Band 66 (AWS)	Maximum	23.7
	Nominal	22.7

### 4.3.2 Reduced PCE Power (Hotspot Mode / Grip Sensor on / Ear jack)

Mode / Band		Voice	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot
GSM/GPRS/EDGE1900 (Ear jack, Grip Sensor on, Hotspot)	Maximum	28.0	28.0	25.5	23.5	22.5	26.0	23.5	22.0	20.5
	Nominal	27.0	27.0	24.5	22.5	21.5	25.0	22.5	21.0	19.5

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	3GPP HSDPA	3GPP HSUPA	DC-HSDPA
UMTS Band 4 (1700 MHz) (Ear jack, Grip Sensor on, Hotspot)	Maximum	20.0	20.0	19.0	20.0
	Nominal	19.0	19.0	18.0	19.0
UMTS Band 2 (1900 MHz) (Ear jack, Grip Sensor on, Hotspot)	Maximum	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0

Mode / Band		Modulated Average (dBm)		
		Grip Sensor on	Hotspot Mode	Ear jack
LTE Band 2 (PCS)	Maximum	19.5	19.5	19.5
	Nominal	18.5	18.5	18.5
LTE Band 4 (AWS)	Maximum	20.5	20.5	20.5
	Nominal	19.5	19.5	19.5
LTE Band 25 (PCS)	Maximum	19.5	19.5	19.5
	Nominal	18.5	18.5	18.5
LTE TDD Band 41	Maximum	23.4	23.4	23.4
	Nominal	22.4	22.4	22.4
LTE TDD Band 41 (HUPE)	Maximum	23.4	23.4	23.4
	Nominal	22.4	22.4	22.4
LTE Band 66 (AWS)	Maximum	20.5	20.5	20.5
	Nominal	19.5	19.5	19.5

### 4.3.3 Maximum 2.4 GHz, 5 GHz WIFI output power

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

Mode	Band	SISO						MIMO				
		a	b	g	n	ac	ax(SU)	a (CDD+STBC)	g (CDD+STBC)	n (CDD+STBC, SDM)	ac (CDD+STBC, SDM)	ax(SU) (CDD+STBC, SDM)
2.4GHz	1 CH		19	15	14		14		18	17		17
	2~10 CH		19	16	16		16 (10ch: 15)		19	19		19 (10ch: 18)
	11 CH		19	15	14		14		18	17		17
5GHZ (20MHz)	5200MHz	17			17	17		20		20	20	20 (36ch: 19)
	5300MHz	17 (64ch: 16)			17 (64ch: 16)	17 (64ch: 16)		20 (64ch: 19)		20 (64ch: 19)	20 (64ch: 19)	20 (64ch: 19)
	5500MHz	17 (100ch: 16)			17 (100ch: 16)	17 (100ch: 16)		20 (100ch: 19)		20 (100ch: 19)	20 (100ch: 19)	20 (100ch: 19)
	5800MHz	17			17	17		20		20	20	20
5GHZ (40MHz)	5200MHz				16 (38ch: 12)	16 (38ch: 12)				19 (38ch: 15)	19 (38ch: 15)	19 (38ch: 15)
	5300MHz				16 (62ch: 12)	16 (62ch: 12)				19 (62ch: 15)	19 (62ch: 15)	19 (62ch: 15)
	5500MHz				16 (102ch: 12)	16 (102ch: 12)				19 (102ch: 15)	19 (102ch: 15)	19 (102ch: 15)
	5800MHz				16	16				19	19	19
5GHZ (80MHz)	5200MHz					12					15	14
	5300MHz					12					15	14
	5500MHz					15 (106ch: 12)					18 (106ch: 15)	18 (106ch: 15)
	5800MHz					15					18	18

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.4 Reduced 2.4 GHz, 5 GHz WIFI output power (RCV on)

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

Mode	Band	SISO						MIMO				
		a	b	g	n	ac	ax(SU)	a (CDD+STBC)	g (CDD+STBC)	n (CDD+STBC, SDM)	ac (CDD+STBC, SDM)	ax(SU) (CDD+STBC, SDM)
2.4GHz	1 CH		16	15	14		14		18	17		17
	2~10 CH		16	16	16		16 (10ch: 15)		19	19		19 (10ch: 18)
	11 CH		16	15	14		14		18	17		17
5GHz (20MHz)	5200MHz	14			14	14		17		17	17	17
	5300MHz	14			14	14		17		17	17	17
	5500MHz	14			14	14		17		17	17	17
	5800MHz	14			14	14		17		17	17	17
5GHz (40MHz)	5200MHz				14 (38ch: 12)	14 (38ch: 12)				17 (38ch: 15)	17 (38ch: 15)	17 (38ch: 15)
	5300MHz				14 (62ch: 12)	14 (62ch: 12)				17 (62ch: 15)	17 (62ch: 15)	17 (62ch: 15)
	5500MHz				14 (102ch: 12)	14 (102ch: 12)				17 (102ch: 15)	17 (102ch: 15)	17 (102ch: 15)
	5800MHz				14	14				17	17	17
5GHz (80MHz)	5200MHz					12					15	14
	5300MHz					12					15	14
	5500MHz					14 (106ch: 12)					17 (106ch: 15)	17 (106ch: 15)
	5800MHz					14					17	17

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.5 2.4 GHz, 5 GHz WIFI output power – RSDB

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

Mode	Band	SISO						MIMO				
		a	b	g	n	ac	ax(SU)	a (CDD+STBC)	g (CDD+STBC)	n (CDD+STBC, SDM)	ac (CDD+STBC, SDM)	ax(SU) (CDD+STBC, SDM)
2.4GHz	1 CH		16	15	14		14		18	17		17
	2~10 CH		16	16	16		16 (10ch: 15)		19	19		19 (10ch: 18)
	11 CH		16	15	14		14		18	17		17
5GHz (20MHz)	5200MHz	13			13	13		16		16	16	16
	5300MHz	13			13	13		16		16	16	16
	5500MHz	13			13	13		16		16	16	16
	5800MHz	13			13	13		16		16	16	16
5GHz (40MHz)	5200MHz				13 (38ch: 12)	13 (38ch: 12)				16 (38ch: 15)	16 (38ch: 15)	16 (38ch: 15)
	5300MHz				13 (62ch: 12)	13 (62ch: 12)				16 (62ch: 15)	16 (62ch: 15)	16 (62ch: 15)
	5500MHz				13 (102ch: 12)	13 (102ch: 12)				16 (102ch: 15)	16 (102ch: 15)	16 (102ch: 15)
	5800MHz				13	13				16	16	16
5GHz (80MHz)	5200MHz					12					15	14
	5300MHz					12					15	14
	5500MHz					13 (106ch: 12)					16 (106ch: 15)	16 (106ch: 15)
	5800MHz					13					16	16

(Tolerance: target -1.5dB ~ +1.0 dB)

**4.3.6 2.4 GHz, 5 GHz WIFI output power – RSDB with RCV on (Reduced Power)**

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

Mode	Band	SISO						MIMO				
		a	b	g	n	ac	ax(SU)	a (CDD+STBC)	g (CDD+STBC)	n (CDD+STBC, SDM)	ac (CDD+STBC, SDM)	ax(SU) (CDD+STBC, SDM)
2.4GHz	2.45GHz		13	13	13		13		16	16		16
5GHz (20MHz)	5200MHz	13			13	13		16		16	16	16
	5300MHz	13			13	13		16		16	16	16
	5500MHz	13			13	13		16		16	16	16
	5800MHz	13			13	13		16		16	16	16
5GHz (40MHz)	5200MHz				13 (38ch: 12)	13 (38ch: 12)				16 (38ch: 15)	16 (38ch: 15)	16 (38ch: 15)
	5300MHz				13 (62ch: 12)	13 (62ch: 12)				16 (62ch: 15)	16 (62ch: 15)	16 (62ch: 15)
	5500MHz				13 (102ch: 12)	13 (102ch: 12)				16 (102ch: 15)	16 (102ch: 15)	16 (102ch: 15)
	5800MHz				13	13				16	16	16
5GHz (80MHz)	5200MHz					12					15	14
	5300MHz					12					15	14
	5500MHz					13 (106ch: 12)					16 (106ch: 15)	16 (106ch: 15)
	5800MHz					13					16	16

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.7 802.11ax RU Tx Power

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

Mode	Band	SISO						MIMO					
		26T	52T	106T	242T	484T	996T	26T	52T	106T	242T	484T	996T
2.4GHz	1 CH	16	16	15	14			19	19	18	17		
	2~10 CH	16	16	16	16 (10ch: 15)			19	19	19	19 (10ch: 18)		
	11 CH	14	16	16	14			17	19	19	17		
5GHz (20MHz)	5200MHz							13	16	19	20 (36ch: 19)		
	5300MHz							13	16	19	20 (64ch: 19)		
	5500MHz							12.5	16	19	20 (100ch: 19)		
	5800MHz							17 (153,157ch: 16) (161, 165ch: 15)	18	19 (149ch: 20)	20		
5GHz (40MHz)	5200MHz							13 (ch46: 11)	16	19	19	19 (38ch: 15)	
	5300MHz							13 (54ch: 11)	16	19	19	19 (62ch: 15)	
	5500MHz							12.5	16	19 (102ch: 17)	19 (102ch: 17)	19 (102ch: 15)	
	5800MHz							16 (159ch: 15)	18 (159ch: 17)	19	19	19	
5GHz (80MHz)	5200MHz							13	15	15	15	15	14
	5300MHz							13	15	15	15	15	14
	5500MHz							13	16 (106ch: 15)	18 (106ch: 15)	18 (106ch: 17)	18 (106ch: 15)	18 (106ch: 15)
	5800MHz							16	18	18	18	18	18

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.8 Reduced Power 11ax RU Tx power Tables – RCV on

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

Mode	Band	SISO						MIMO					
		26T	52T	106T	242T	484T	996T	26T	52T	106T	242T	484T	996T
2.4GHz	1 CH	16	16	15	14			19	19	18	17		
	2~10 CH	16	16	16	16 (10ch: 15)			19	19	19	19 (10ch: 18)		
	11 CH	14	16	16	14			17	19	19	17		
5GHZ (20MHz)	5200MHz							13	16	16	16		
	5300MHz							13	16	16	16		
	5500MHz							12.5	16	16	16		
	5800MHz							16 (161, 165ch: 15)	16	16	16		
5GHZ (40MHz)	5200MHz							13 (ch46: 11)	16	16	16	16 (38ch: 15)	
	5300MHz							13 (54ch: 11)	16	16	16	16 (62ch: 15)	
	5500MHz							12.5	16	16	16	16 (102ch: 15)	
	5800MHz							16 (159ch: 15)	16	16	16	16	
5GHZ (80MHz)	5200MHz							13	15	15	15	15	14
	5300MHz							13	15	15	15	15	14
	5500MHz							13	16 (106ch: 15)	16 (106ch: 15)	16	16 (106ch: 15)	16 (106ch: 15)
	5800MHz							16	16	16	16	16	16

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.9 Power 11ax RU Tx power Tables in RSDB mode

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

Mode	Band	SISO						MIMO					
		26T	52T	106T	242T	484T	996T	26T	52T	106T	242T	484T	996T
2.4GHz	1 CH	16	16	15	14			19	19	18	17		
	2~10 CH	16	16	16	16 (10ch: 15)			19	19	19	19 (10ch: 18)		
	11 CH	14	16	16	14			17	19	19	17		
5GHZ (20MHz)	5200MHz							13	16	16	16		
	5300MHz							13	16	16	16		
	5500MHz							12.5	16	16	16		
	5800MHz							16 (161, 165ch: 15)	16	16	16		
5GHZ (40MHz)	5200MHz							13 (ch46: 11)	16	16	16	16 (38ch: 15)	
	5300MHz							13 (54ch: 11)	16	16	16	16 (62ch: 15)	
	5500MHz							12.5	16	16	16	16 (102ch: 15)	
	5800MHz							16 (159ch: 15)	16	16	16	16	
5GHZ (80MHz)	5200MHz							13	15	15	15	15	14
	5300MHz							13	15	15	15	15	14
	5500MHz							13	16 (106ch: 15)	16 (106ch: 15)	16	16 (106ch: 15)	16 (106ch: 15)
	5800MHz							16	16	16	16	16	16

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.10 Power 11ax RU Tx power Tables in RSDB with RCV on (Reduced Power)

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

Mode	Band	SISO						MIMO					
		26T	52T	106T	242T	484T	996T	26T	52T	106T	242T	484T	996T
2.4GHz	2.45GHz	13	13	13	13			16	16	16	16		
5GHZ (20MHz)	5200MHz							13	16	16	16		
	5300MHz							13	16	16	16		
	5500MHz							12.5	16	16	16		
	5800MHz							16 (161, 165ch: 15)	16	16	16		
5GHZ (40MHz)	5200MHz							13 (ch46: 11)	16	16	16	16 (38ch: 15)	
	5300MHz							13 (54ch: 11)	16	16	16	16 (62ch: 15)	
	5500MHz							12.5	16	16	16	16 (102ch: 15)	
	5800MHz							16 (159ch: 15)	16	16	16	16	
5GHZ (80MHz)	5200MHz							13	15	15	15	15	14
	5300MHz							13	15	15	15	15	14
	5500MHz							13	16 (106ch: 15)	16 (106ch: 15)	16	16 (106ch: 15)	16 (106ch: 15)
	5800MHz							16	16	16	16	16	16

(Tolerance: target -1.5dB ~ +1.0 dB)

**4.3.11. Legacy(11b/g/n/a/ac) Real Simultaneous Dual Band (RSDB) Power**

	# TX	5 GHz WIFI[dBm]		2.4 GHz WIFI[dBm]		802.11 Modes
		Ant1	Ant2	Ant1	Ant2	
2.4 GHz + 5 GHz RSDB Only	2	13 dBm	-	-	16 dBm	2.4 GHz: b, g, n, ax 5 GHz: a, n, ac
	2	-	13 dBm	16 dBm	-	
	2	13 dBm	-	16 dBm	-	
	2	-	13 dBm	-	16 dBm	
2.4 GHz + 5 GHz RSDB & MIMO	3	13 dBm	13 dBm	16 dBm	-	2.4 GHz: b, g, n,ax 5 GHz: a, n, ac,ax (CDD+STBC Only)
	3	13 dBm	13 dBm	-	16 dBm	
	3	13 dBm	-	16 dBm	16 dBm	2.4 GHz: g, n, ax(CDD+STBC Only), 5 GHz: a, n, ac
	3	-	13 dBm	16 dBm	16 dBm	
2.4 GHz + 5 GHz RSDB MIMO	4	13 dBm	13 dBm	16 dBm	16 dBm	2.4 GHz: g, n,ax (CDD+STBC Only) 5 GHz: a, n, ac,ax (CDD+STBC Only)

(Tolerance: target -1.5dB ~ +1.0 dB)

**4.3.12. Legacy(11b/g/n/a/ac) Real Simultaneous Dual Band (RSDB) Power with RCV On**

	#TX	5 GHz WIFI[dBm]		2.4 GHz WIFI[dBm]		802.11 Modes
		Ant1	Ant2	Ant1	Ant2	
2.4 GHz + 5 GHz RSDB Only	2	13 dBm	-	-	13 dBm	2.4 GHz: b, g, n, ax 5 GHz: a, n, ac
	2	-	13 dBm	13 dBm	-	
	2	13 dBm	-	13 dBm	-	
	2	-	13 dBm	-	13 dBm	
2.4 GHz + 5 GHz RSDB & MIMO	3	13 dBm	13 dBm	13 dBm	-	2.4 GHz: b, g, n,ax 5 GHz: a, n, ac,ax (CDD+STBC Only)
	3	13 dBm	13 dBm	-	13 dBm	
	3	13 dBm	-	13 dBm	13 dBm	2.4 GHz: g, n, ax(CDD+STBC Only), 5 GHz: a, n, ac
	3	-	13 dBm	13 dBm	13 dBm	
2.4 GHz + 5 GHz RSDB MIMO	4	13 dBm	13 dBm	13 dBm	13 dBm	2.4 GHz: g, n,ax (CDD+STBC Only) 5 GHz: a, n, ac,ax (CDD+STBC Only)

(Tolerance: target -1.5dB ~ +1.0 dB)

**4.3.13. Simultaneous TX condition Bluetooth with 5GHz WIFI (not RSDB)**

	#TX	5 GHz WIFI[dBm]		2.4GHz BT
		Ant1	Ant2	Ant1
BT(2.4 GHz) + 5GHz WiFi (Not RSDB)	2	o	-	o
	2		o	o
	3	o	o	o

**4.3.14 Maximum Bluetooth Power**

Mode / Band		Modulated Average (dBm)
Bluetooth (1 Mbps)	Maximum	17.5
	Nominal	16.5
Bluetooth (EDR)	Maximum	11.5
	Nominal	10.5
Bluetooth LE (2 Mbps)	Maximum	9.0
	Nominal	8.0
Bluetooth LE 1Mbps, 125/500Kbps	Maximum	8.0
	Nominal	7.0

### 4.4 LTE Information

Item.	Description
Frequency Range	LTE Band 2 (PCS) 1 850.7 MHz~ 1 909.3 MHz
	LTE Band 4 (AWS) 1 710.7 MHz~ 1 754.3 MHz
	LTE Band 5 (Cell) 824.7 MHz~ 848.3 MHz
	LTE Band 12 699.7 MHz ~ 715.3 MHz
	LTE Band 13 779.5 MHz ~ 784.5 MHz
	LTE Band 17 706.5 MHz ~ 713.5 MHz
	LTE Band 25 (PCS) 1 850.7 MHz ~ 1 914.3 MHz
	LTE Band 26 (Cell) 814.7 MHz ~ 848.3 MHz
	LTE TDD Band 41 2 498.5 MHz ~ 2 687.5 MHz
	LTE Band 66 (AWS) 1 710.7 MHz ~ 1 779.3 MHz
Channel Bandwidths	LTE Band 2 (PCS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE Band 4 (AWS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE Band 5 (Cell) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	LTE Band 12 1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	LTE Band 13 5 MHz, 10 MHz
	LTE Band 17 5 MHz, 10 MHz
	LTE Band 25 (PCS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE Band 26 (Cell) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz
	LTE TDD Band 41 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE Band 66 (AWS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz

Ch. No.& Freq.(MHz)	Low	Mid	High	
LTE Band 2 (PCS)	1.4 MHz	1 850.7 (18607)	1 880.0 (18900)	1 909.3 (19193)
	3 MHz	1 851.5 (18615)	1 880.0 (18900)	1 908.5 (19185)
	5 MHz	1 852.5 (18625)	1 880.0 (18900)	1 907.5 (19175)
	10 MHz	1 855.0 (18650)	1 880.0 (18900)	1 905.0 (19150)
	15 MHz	1 857.5 (18675)	1 880.0 (18900)	1 902.5 (19125)
	20 MHz	1 860.0 (18700)	1 880.0 (18900)	1 900.0 (19100)
LTE Band 4 (AWS)	1.4 MHz	1 710.7 (19957)	1 732.5 (20175)	1 754.3 (20393)
	3 MHz	1 711.5 (19965)	1 732.5 (20175)	1 753.5 (20385)
	5 MHz	1 712.5 (19975)	1 732.5 (20175)	1 752.5 (20375)
	10 MHz	1 715.0 (20000)	1 732.5 (20175)	1 750.0 (20350)
	15 MHz	1 717.5 (20025)	1 732.5 (20175)	1 747.5 (20325)
	20 MHz	1 720.0 (20050)	1 732.5 (20175)	1 745.0 (20300)
LTE Band 5 (Cell)	1.4 MHz	824.7 (20407)	836.5 (20525)	848.3 (20643)
	3 MHz	825.5 (20415)	836.5 (20525)	847.5 (20635)
	5 MHz	826.5 (20425)	836.5 (20525)	846.5 (20625)
	10 MHz	829.0 (20450)	836.5 (20525)	844.0 (20600)
LTE Band 12	1.4 MHz	699.7 (23017)	707.5 (23095)	715.3 (23173)
	3 MHz	700.5 (23025)	707.5 (23095)	714.5 (23165)
	5 MHz	701.5 (23035)	707.5 (23095)	713.5 (23155)
	10 MHz	704.0 (23060)	707.5 (23095)	711.0 (23130)
LTE Band 13	5 MHz	779.5 (23205)	782 (23230)	784.5 (23255)
	10 MHz		782 (23230)	
LTE Band 17	5 MHz	706.5 (23755)	710 (23790)	713.5 (23825)
	10 MHz		710 (23790)	
LTE Band 25(PCS)	1.4 MHz	1 850.7 (26047)	1 882.5 (26365)	1 914.3 (26683)
	3 MHz	1 851.5 (26055)	1 882.5 (26365)	1 913.5 (26675)
	5 MHz	1 852.5 (26065)	1 882.5 (26365)	1 912.5 (26665)
	10 MHz	1 855 (26090)	1 882.5 (26365)	1 910 (26640)
	15 MHz	1 857.5 (26115)	1 882.5 (26365)	1 907.5 (26615)
	20 MHz	1 860 (26140)	1 882.5 (26365)	1 905 (26590)
LTE Band 26 (Cell)	1.4 MHz	814.7 (26697)	831.5 (26865)	848.3 (27033)
	3 MHz	815.5 (26705)	831.5 (26865)	847.5 (27025)
	5 MHz	816.5 (26715)	831.5 (26865)	846.5 (27015)
	10 MHz	819.0 (26740)	831.5 (26865)	844.0 (26990)
	15 MHz	821.5 (26765)	831.5 (26865)	841.5 (26965)

Ch. No.& Freq.(MHz)	Low		Mid		High	
LTE Band 66 (AWS)	1.4 MHz	1 710.7 (131979)		1 745 (132322)		1 779.3 (132665)
	3 MHz	1 711.5 (131987)		1 745 (132322)		1 778.5 (132657)
	5 MHz	1 712.5 (131997)		1 745 (132322)		1 777.5 (132647)
	10 MHz	1 715.0 (132022)		1 745 (132322)		1 775.0 (132622)
	15 MHz	1 717.5 (132047)		1 745 (132322)		1 772.5 (132597)
	20 MHz	1 720.0 (132072)		1 745 (132322)		1 770.0 (132572)
LTE TDD Band 41	5 MHz	2506.0(39750)	2549.5(40185)	2593.0(40620)	2636.5(41055)	2680.0(41490)
	10 MHz	2506.0(39750)	2549.5(40185)	2593.0(40620)	2636.5(41055)	2680.0(41490)
	15 MHz	2506.0(39750)	2549.5(40185)	2593.0(40620)	2636.5(41055)	2680.0(41490)
	20 MHz	2506.0(39750)	2549.5(40185)	2593.0(40620)	2636.5(41055)	2680.0(41490)
UE Category	LTE Rel.15, DL: Category 20, UL: Category 18					
HPUE Power Class	TDD 41 Power Class 3 :(Duty: 63.3%) Power Class 2 : (Duty:43.3%)					
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM					
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3	Yes					
A-MPR disabled for SAR Testing.	Yes					
LTE Carrier Aggregation	Up-Link CA	This device dose not supports Up-Link Carrier aggregation.in US.				
	Down-Link CA	This device supports Inter-band & Intra-band DL DL-link Carrier aggregations only. Detaled information of Down-Link CA are included in the section 11				
LTE Release information	This device does not support full CA features on 3GPP Release 15. It supports carrier aggregation, downlink MIMO. All other uplink communications are identical to te release 8 specifications. The following LTE Release 15 Features are not supported: Relay, Hetnet, Enhanced eICI, MDH, cross-carrier Scheduling, Enhanced SC-FDMA.					

### 4.5 DUT Antenna Locations

The overall dimensions of this device are > 9 X 5 cm. A diagram showing device antenna can be found in SAR\_setup\_photos. Since the diagonal dimension of this device is > 160 mm and < 200 mm, it is considered a “phablet”.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering. Therefore, SAR test was performed for additional simultaneous transmissions.

Head and Bluetooth Tethering SAR were evaluated for BT BR tethering applications.

Mode	Rear	Front	Left	Right	Bottom	Top
GSM/GPRS/EDGE 850	Yes	Yes	Yes	Yes	Yes	No
GSM/GPRS/EDGE 1900	Yes	Yes	Yes	Yes	Yes	No
UMTS850	Yes	Yes	Yes	Yes	Yes	No
UMTS1700	Yes	Yes	Yes	Yes	Yes	No
UMTS1900	Yes	Yes	Yes	Yes	Yes	No
LTE Band 2 (PCS)	Yes	Yes	Yes	Yes	Yes	No
LTE Band 4 (AWS)	Yes	Yes	Yes	Yes	Yes	No
LTE Band 5 (Cell)	Yes	Yes	Yes	Yes	Yes	No
LTE Band 12	Yes	Yes	Yes	Yes	Yes	No
LTE Band 13	Yes	Yes	Yes	Yes	Yes	No
LTE Band 17	Yes	Yes	Yes	Yes	Yes	No
LTE Band 25 (PCS)	Yes	Yes	Yes	Yes	Yes	No
LTE Band 26 (Cell)	Yes	Yes	Yes	Yes	Yes	No
LTE TDD Band 41	Yes	Yes	No	Yes	Yes	No
LTE Band 66	Yes	Yes	Yes	Yes	Yes	No
2.4 GHz WLAN	Yes	Yes	Yes	No	No	Yes
5 GHz WLAN	Yes	Yes	Yes	No	No	Yes
Bluetooth	Yes	Yes	Yes	No	No	Yes

Particular EUT edges were not required to be evaluated for Bluetooth Tethering and Hotspot SAR if the edges were > 25 mm from the transmitting antenna according to FCC KDB 941225 D06v02r01 on page 2.

The distance between the transmit antennas and the edges of the device are included in the filing.

- Note: All test configurations are based on front view position.

### 4.6 Near Field Communications (NFC) Antenna and S-PEN considerations

This EUT has NFC operations. The NFC antenna is integrated into the device for this model. Therefore, all SAR tests were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the NFC antenna can be found in SAR\_Setup\_photos.

This EUT has S-PEN operations. The S-PEN is attached inside the EUT during all SAR testing.

### 4.7 SAR Summation Scenario

According to FCC KDB 447498 D01v06, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown below paths and are mode in same rectangle to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB 447498 D01v06.

Simultaneous Transmission Scenarios				
Applicable Combination	Head	Body-Worn	Hotspot	Extremity
GSM Voice + 2.4 GHz WiFi SISO	Yes	Yes	N/A	Yes
GSM Voice + 5 GHz WiFi SISO	Yes	Yes	N/A	Yes
GSM Voice + 2.4 GHz WiFi MIMO	Yes	Yes	N/A	Yes
GSM Voice + 5 GHz WiFi MIMO	Yes	Yes	N/A	Yes
GSM Voice + 2.4 GHz WiFi SISO +5 GHz WiFi SISO	Yes	Yes	N/A	Yes
GSM Voice + 2.4 GHz WiFi RSDB MIMO +5 GHz WiFi RSDB MIMO	Yes	Yes	N/A	Yes
GSM Voice + 5 GHz WiFi SISO + Bluetooth	Yes#	Yes	N/A	Yes
GSM Voice + 5 GHz WiFi MIMO + Bluetooth	Yes#	Yes	N/A	Yes
GSM Voice + Bluetooth	Yes#	Yes	N/A	Yes
GSMGPRS/EDGE + 2.4 GHz WiFi SISO	N/A	N/A	Yes	Yes
GSMGPRS/EDGE + 5 GHz WiFi SISO	N/A	N/A	Yes	Yes
GSMGPRS/EDGE + 2.4 GHz WiFi MIMO	N/A	N/A	Yes	Yes
GSMGPRS/EDGE + 5 GHz WiFi MIMO	N/A	N/A	Yes	Yes
GSMGPRS/EDGE + 2.4 GHz WiFi SISO +5 GHz WiFi SISO	N/A	N/A	Yes	Yes
GSMGPRS/EDGE + 2.4 GHz WiFi RSDB MIMO +5 GHz WiFi RSDB MIMO	N/A	N/A	Yes	Yes
GSMGPRS/EDGE + 5 GHz WiFi SISO + Bluetooth	N/A	N/A	Yes#	Yes
GSMGPRS/EDGE + 5 GHz WiFi MIMO + Bluetooth	N/A	N/A	Yes#	Yes
GSMGPRS/EDGE + Bluetooth	N/A	N/A	Yes#	Yes
UMTS+ 2.4 GHz WiFi SISO	Yes	Yes	Yes	Yes
UMTS + 5 GHz WiFi SISO	Yes	Yes	Yes	Yes
UMTS + 2.4 GHz WiFi MIMO	Yes	Yes	Yes	Yes
UMTS + 5 GHz WiFi MIMO	Yes	Yes	Yes	Yes
UMTS + 2.4 GHz WiFi SISO +5 GHz WiFi SISO	Yes	Yes	Yes	Yes
UMTS + 2.4 GHz WiFi RSDB MIMO +5 GHz WiFi RSDB MIMO	Yes	Yes	Yes	Yes
UMTS + 5 GHz WiFi SISO + Bluetooth	Yes#	Yes	Yes#	Yes
UMTS + 5 GHz WiFi MIMO + Bluetooth	Yes#	Yes	Yes#	Yes
UMTS + Bluetooth	Yes#	Yes	Yes#	Yes
LTE+ 2.4 GHz WiFi SISO	Yes	Yes	Yes	Yes
LTE + 5 GHz WiFi SISO	Yes	Yes	Yes	Yes
LTE + 2.4 GHz WiFi MIMO	Yes	Yes	Yes	Yes
LTE + 5 GHz WiFi MIMO	Yes	Yes	Yes	Yes
LTE + 2.4 GHz WiFi SISO +5 GHz WiFi SISO	Yes	Yes	Yes	Yes
LTE + 2.4 GHz WiFi RSDB MIMO +5 GHz WiFi RSDB MIMO	Yes	Yes	Yes	Yes
LTE + 5 GHz WiFi SISO + Bluetooth	Yes#	Yes	Yes#	Yes
LTE + 5 GHz WiFi MIMO + Bluetooth	Yes#	Yes	Yes#	Yes
LTE + Bluetooth	Yes#	Yes	Yes#	Yes

1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. All licensed modes share the same antenna path and cannot transmit simultaneously.

3. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario
4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table
5. 5.5GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, and U-NII-2C were not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. Each WLAN antenna can transmit independently or together when operating with MIMO.
7. This device supports VOLTE.
8. This device supports VOWIFI.
9. This device supports Bluetooth Tethering.

## 4.8 SAR Test Considerations

### 4.8.1 WiFi

Since wireless router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A & U-NII-2C WiFi, WiFi Hotspot SAR test and combinations are considered only 2.4 GHz and U-NII-3 for SAR with respected to wireless router configurations according to FCC KDB 941225 D06v02r01.

Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg for 1g SAR and is less than 3.0 W/kg for 10g SAR, SAR is not required for U-NII-1 band according to FCC KDB 248227D01v02r02.

This device supports IEEE 802.11 ax with the following features:

- a) Up to 80 MHz Bandwidth only
- b) No aggregate channel configurations
- c) 2Tx Antenna output
- d) 256 QAM is supported
- e) TDWR channels are supported.
- f) Straddle channels are supported
- g) Band gap channels are supported

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

Per April 2019 TCB Workshop Notes, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

#### 4.8.2 Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

LTE SAR for the higher modulations and lower bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth; and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r05.

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

This device supports 64QAM and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is  $\leq \frac{1}{2}$  dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is  $\leq 1.45$ W/kg, per Section 5.2.4 of FCC KDB Publication 941225 D05v02r05..

This device supports downlink 4x4 MIMO operations for some LTE Bands. Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of LTE Band falls completely within an LTE Band with a larger transmission frequency range, both LTE bands have the same target power or the band with the larger transmission frequency range has a higher target power and both LTE bands share the same transmission path and signal characteristics, SAR was only tested for the band with the larger transmission frequency range.

LTE Band 17(706.5 MHz ~ 713.5 MHz) is covered by LTE Band 12 (699.7 MHz ~ 715.3 MHz), LTE Band 4 (1 710.7 MHz ~ 1 754.3 MHz) is covered by LTE Band 66 (1 710.7 MHz ~ 1 779.3 MHz) each both LTE bands have the same target powers

This device support both Power class 2(PC2) and Power Class 3 (PC3) for LTE band 41. Per May 2017 TCB workshop Notes, SAR test were performed with Power Class 3(given the specific UL/DL Limitations for Power Class 2). Additionally, SAR testing for the power class condition was evaluated for the highest configuration in Power class 3 for each test configuration to confirm he results were scalable linearly.

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB publication 941225 D05A v01r02, SAR for LTE DL CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The Highest available duty cycle for Power Class 2 operations is 43.3% using UL-DL configuration 1. Per May TCB Workshop notes, 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 configuration for each exposure conditions.

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

Per FCC KDB 941225 D01v03r01, 12.2 kbps RMC is the primary mode and HSPA (HSUPA/HSDPA with RMC) is the secondary mode.

Per FCC KDB 941225 D01v03r01, The SAR test exclusion is applied to the secondary mode by the following equation.

$$\text{Adjusted SAR} = \text{Highest Reported SAR} \times \frac{\text{Secondary Max tune-up (mW)}}{\text{Primary Max tune-up (mW)}} \leq 1.2 \text{ W/kg.}$$

Based on the highest Reported SAR, the secondary mode is not required.

Per FCC KDB 690783 1 D01 SAR Listings on Grants v01r03 and KDB 447498 D01 General RF Exposure Guidance v06 The SAR numbers listed must be consistent with the highest reported test results required by the published RF exposure KDB procedures. When the measured SAR is not at the maximum tune-up tolerance limit or maximum output power allowed for production units, the measured results are scaled to the maximum conditions to determine compliance; the scaled results are referred to as the reported SAR.

$$\text{The Reported SAR} = \text{The Measured SAR} \times \frac{\text{Maximum tune-up (mW)}}{\text{Measured Conducted Power(mW)}}$$

The Reported SAR for WLAN and Bluetooth

$$\text{The Reported SAR} = \text{The Measured SAR} \times \frac{\text{Maximum tune-up (mW)}}{\text{Measured Conducted Power(mW)}} \times \text{Duty factor}$$

## 5. Introduction

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on Aug. 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York 10017. The measurement procedure described in IEEE/ANSI C95.3-1992 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring SAR due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields," NCRP Report No. 86 NCRP, 1986, Bethesda, MD 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

### SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy ( $dW$ ) absorbed by (dissipated in) an incremental mass ( $dm$ ) contained in a volume element ( $dV$ ) of a given density ( $r$ ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body.

$$SAR = \frac{d}{dt} \left( \frac{dU}{dm} \right)$$

Figure 1. SAR Mathematical Equation  
*SAR is expressed in units of Watts per Kilogram (W/kg)*  
 $SAR = \sigma E^2 / \rho$

Where:

- $\sigma$  = conductivity of the tissue-simulant material (S/m)
- $\rho$  = mass density of the tissue-simulant material (kg/m<sup>3</sup>)
- $E$  = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

## 6. Description of test equipment

### 6.1 SAR MEASUREMENT SETUP

These measurements are performed using the DASY4 automated dosimetric assessment system. It is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Staubli), robot controller, Pentium III computer, near-field probe, probe alignment sensor, and the generic twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Figure.2).

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC with Windows XP or Windows 7 is working with SAR Measurement system DASY4 & DASY5, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

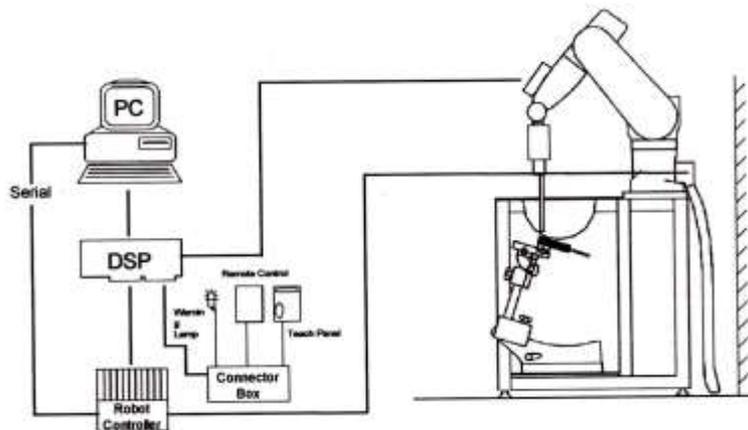


Figure 2. HCT SAR Lab. Test Measurement Set-up

The 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 PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own DSP controller with a built in VME-bus computer. The system is described in detail in.

## 7. SAR Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013.

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 table 4-1 & IEEE 1528-2013.
2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned are, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.
3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)
  - a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
  - b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
  - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

Area scan and zoom scan resolution setting follow KDB 865664 D01v01r04 quoted below.

		≤ 3 GHz	> 3 GHz	
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		5±1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm	
Maximum probe angle from probe axis to phantom surface normal at the measurement location		30°±1°	20°±1°	
Maximum area scan Spatial resolution: $\Delta x_{Area}, \Delta y_{Area}$		≤ 2 GHz: ≤15 mm 2-3 GHz: ≤12 mm	3-4 GHz: ≤12 mm 4-6 GHz: ≤10 mm	
		When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.		
Maximum zoom scan Spatial resolution: $\Delta x_{zoom}, \Delta y_{zoom}$		≤ 2 GHz: ≤8mm 2-3 GHz: ≤5mm*	3-4 GHz: ≤5 mm* 4-6 GHz: ≤4 mm*	
Maximum zoom scan Spatial resolution normal to phantom surface	uniform grid: $\Delta z_{zoom}(n)$	≤ 5 mm	3-4 GHz: ≤4 mm 4-5 GHz: ≤3 mm 5-6 GHz: ≤2 mm	
	graded grid	$\Delta z_{zoom}(1)$ : between 1 <sup>st</sup> 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	
<p>Note: <math>\delta</math> is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.</p> <p>* 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.</p>				

## 8. Description of Test Position

### 8.1 EAR REFERENCE POINT

Figure 8-2 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 on the B-M (back-mouth) line located 15 mm behind the entrance-to-ear-canal (EEC) point, as shown in Figure 6-1. The Reference Plane is defined as passing through the two ear reference point and point M. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (See Figure 5-1), Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning.

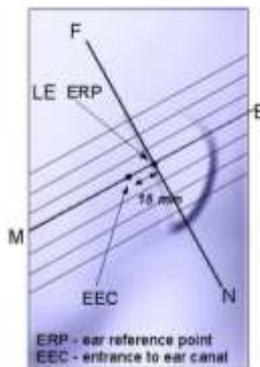


Figure 8-1  
Close-up side view of ERP

### 8.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The device under test was placed in a normal operating position with the acoustic output located along the “vertical centerline” on the front of the device aligned to the “ear reference point”(see Figure 8-3). The acoustic output was then located at the same level as the center of the ear reference point. The device under test was positioned so that the “vertical centerline” was bisecting the front surface of the handset at its top and bottom edges, positioning the “ear reference point” on the outer surface of the both the left and right head phantoms on the ear reference point.



Figure 8-2  
Front, back and side views of SAM Twin Phantom

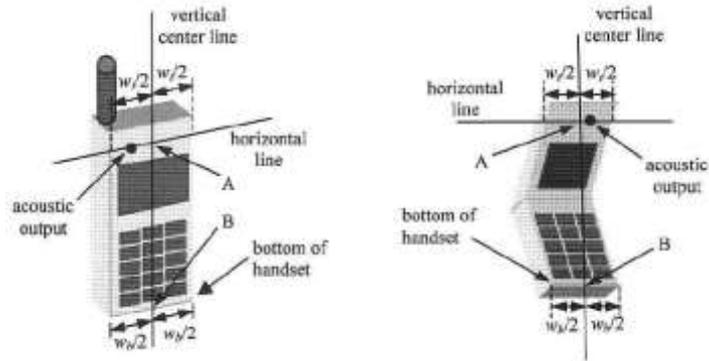


Figure 6-3. Handset vertical and horizontal reference lines

### 8.3 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameter; relative permittivity  $\epsilon=3$  and loss tangent  $\sigma =0.02$ .

### 8.4 Position for cheek

Figure 6.4. shows 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.

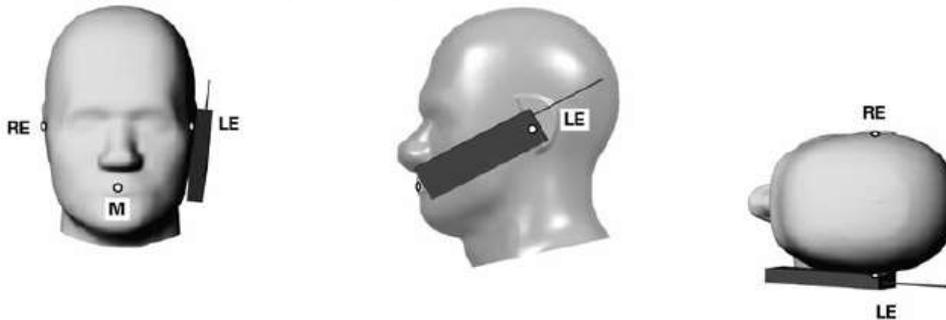


Figure 8.4 Cheek/ Touch position of the wireless device

### 8.5 Definition of the “tilted” position

Figure 6.5. shows tilted position. Place the device in the cheek position. Then while maintaining the orientation of the device, retract the device parallel to the reference plane far enough away from the phantom to enable a rotation of the device by 15°.



Figure 8.5. Tilt 15° position of the wireless device

### 8.6 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-dips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6-6). Per FCC KDB Publication 648474 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 Publication 447498 D01v06 should be used to test for Body-worn accessory SAR compliance, without a headset connected to it.. When the reported SAR for a 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 headset attached to the handset.



Figure 8-6  
Sample Body-Worn Diagram

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

## 8.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W $\geq$ 9cmx5 cm) are based on a composite test separation distance of 10 mm from the front back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the Body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some Body-worn accessory SAR tests.

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

## 8.8 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions: i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1-g body and 10-g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

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. the phablets procedures outlined in KDB Publication 648474 D04 v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worm accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna  $\leq$ 25 mm from that surface or edge, in direct contact with the phantom, for 10-g SAR. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1-g SAR > 1.2 W/kg.

### 8.9 Additional Test Positions due to Proximity Conditions

This device uses a sensor to reduce output powers in extremity (hand-held) use conditions.

When the sensor detects a user is touching the device on or near to the antenna the device reduces the maximum allowed output power. However, the proximity sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, an additional exposure condition is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level.

FCC KDB 616217 D04 v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional exposure conditions. The smallest separation distance determined by the sensor triggering and sensor coverage for each applicable edge, minus 1 mm, was used as the test separation distance for SAR testing. Sensor triggering distance summary data is included in below table.

Wireless technologies	Position	§6.2 Triggering Distance	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Phablet SAR
GSM 1900/ UMTS B2/B4 LTE/B2/B4/B25/B66 LTE 41(PC3) LTE 41 (HUPE)	Rear	9	N/A	N/A	8
	Front	7	N/A	N/A	6
	Bottom	13	N/A	N/A	12

### 8.10 Bluetooth tethering Configurations

Per May 2017 TCBC Workshop documents When Bluetooth tethering applies ,simultaneous transmission SAR needs consideration.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering.

Therefore, SAR test was performed for additional simultaneous transmissions.

Head and Bluetooth tethering SAR were evaluated for BT BR tethering applications.

## 9. RF Exposure Limits

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT Occupational (W/kg) or (mW/g)
SPATIAL PEAK SAR * (Partial Body)	1.6	8.0
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.4
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.0	20.0

**NOTES:**

\* The Spatial Peak value of the SAR averaged over any 1 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

\*\* The Spatial Average value of the SAR averaged over the whole-body.

\*\*\* The Spatial Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

**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 mad 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.

**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. This 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.

## 10. FCC SAR General Measurement Procedures

Power Measurements for licensed transmitters are performed using a base simulator under digital average power.

### 10.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as Reported SAR. The highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

### 10.2 3G SAR Test Reduction Procedure

#### 10.2.1 GSM, GPRS AND EDGE

The following procedures may be considered for each frequency band to determine SAR test reduction for devices operating in GSM/GPRS/EDGE modes to demonstrate RF exposure compliance. GSM voice mode transmits with 1 time-slot. GPRS and EDGE may transmit up to 4 time slots in the 8 time-slot frame according to the multi-slot class implemented in a device.

#### 10.2.2 SAR Test Reduction

In FCC KDB 941225 D01v03r01, certain transmission modes within a frequency band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is  $\leq 0.25$  dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is  $\leq 1.2$  W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data 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

#### 10.2.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB 941225 D01v03r01-3G SAR Measurement Procedures. The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to Check for power drifts. If conducted Power deviations of more than 5 % occurred, the tests were repeated.

### 10.3 SAR Measurement Conditions for WCDMA

#### 10.3.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in sec. 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

#### 10.3.2 Body SAR measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all “1s”. the 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using and applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported SAR configuration in 12.2 kbps RMC.

#### 10.3.3 SAR Measurements with Rel. 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using and FRC with H-SET 1 in Sub-test and a 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to release 6 HSPA test procedures. 8.4.5 SAR Measurement with Rel.6 HSUPA The 3G SAR test Reduction Procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, Using H-Set 1 and QPSK for FRC and a 12.2kbps RMC configured in Test Loop Mode 1 and Power Control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

#### 10.3.4 SAR Measurements with Rel. 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

#### 10.3.5 DC-HSDPA

SAR is required for Rel.8 DC-HSDPA when SAR is required for Rel.5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in table C.8.1.12 of 3GPP TS34.121-1 to determine SAR test reduction. Primary and secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

#### DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



## 10.4 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r05 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluation SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

### 10.4.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

### 10.4.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36. 101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

### 10.4.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

### 10.4.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

- a. Per sec 4.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
  - i. The required channel and offset combination with the highest maximum output power is required for SAR.
  - ii. When the reported SAR is  $\leq 0.8$  W/Kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
  - iii. When the reported SAR for a required test channel is  $> 1.45$  W/kg, SAR is required for all RB offset configurations for that channel.
- b. Per Sec 4.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Sec 4.2.1.
- c. Per Sec. 4.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is  $< 0.8$  W/kg.
- d. Per Sec. 4.2.4 and 4.3, SAR test for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sec. 4.2.1 through 4.2.3 is less than or equal to 1/2 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is  $< 1.45$  W/Kg.

### 10.4.5 Downlink Carrier Aggregation

Conducted power measurements with LTE Carrier aggregation (CA) downlink only active are made in accordance to KDB publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. For every supported combination of downlink only carrier aggregation, additional conducted output Powers are measured with downlink carrier aggregation active for the configuration with highest measured maximum conducted power with the downlink carrier aggregation inactive measured among the channel bandwidth, modulation and RB combinations in each frequency band. Per FCC KDB Publication

941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25dB higher than the average output power with downlink only carrier aggregation inactive.

### 10.4.6 LTE(TDD) Considerations

According to KDB 941225 D05v02r05, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

SAR was tested with the highest transmission duty factor (63.33 %) using Uplink-downlink configuration 0 and Special subframe configuration 6. LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special sub frame configurations.

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	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-		
9	$13168 \cdot T_s$			-		

Calculated Duty Cycle – Extended cyclic prefix in uplink x (T<sub>s</sub>) x no of S + no of U

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

Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:

$$\text{Calculated Duty Cycle} = (5120 \times (1/(15000 \times 2048))) \times 2 + 0.006/0.01 = 63.33 \%$$

Where

$$T_s = 1/(15000 \times 2048) \text{ seconds}$$

HPUE :

Calculated Duty Cycle for Uplink-Downlink Configuration 1:

$$\text{Calculated Duty Cycle} = 5120 \times (1/(15000 \times 2048)) \times 2 + 0.004/0.01 = 43.33 \%$$

### 10.4.7 The Call Box Setup for LTE(TDD)

When you Want to Test for LTE TDD, Please Change Frame Structure TDD and TDD Uplink Downlink Configuration 0 and Special Subframe Configuration 6.

2018/01/08 11:00 Idle( Regist ) Phone-2 W-CDMA Phone-1 LTE  
 <Fundamental Measurement> Output Main Continuous

Parameter Fundamental UE Report

Reference Signal not found UE Power : -21.5 dBm (Meas. Count : 11/ 20)

Power Measurement

	Avg.	Max.	Min.	Limit
TX Power	*****	*****	*****	dBm 20.3 to 25.7 dBm
Channel Power	*****	*****	*****	dBm

Modulation Analysis View (Meas. Count : 1/ 1)

Common Parameter

Test Parameter TX1 - Max. Power(QPSK/1 RB)

Call Processing On Scenario Normal

Frequency

Frame Structure TDD

Channel Bandwidth FDD 20 Hz

UL Channel & Frequency TDD 20 CH = 2593.000000 MHz

DL Channel & Frequency 40620 CH = 2593.000000 MHz

Operation Band 41

Frequency Separation ( 0 )MHz

Level

Input Level 30.0 dBm

2018/01/08 11:01 Idle( Regist ) Phone-2 W-CDMA Phone-1 LTE  
 <Fundamental Measurement> Output Main Continuous

Parameter Fundamental UE Report

Reference Signal not found UE Power : -21.5 dBm (Meas. Count : 11/ 20)

Power Measurement

	Avg.	Max.	Min.	Limit
TX Power	*****	*****	*****	dBm 20.3 to 25.7 dBm
Channel Power	*****	*****	*****	dBm

Modulation Analysis View (Meas. Count : 1/ 1)

MCS Index	Modulation	QPSK	QAM	QAM	QAM	QAM	QAM	QAM	QAM
MCS Index (-)	5	(QPSK)	(5)	(2216)	-	-	-	-	-
MCS Index (5)	5	(QPSK)	(5)	(1884)	4	-	-	-	-
MCS Index (0)	5	(QPSK)	(5)	(2216)	-	2	-	-	-
MCS Index (1,6)	N/A	(-----)	(--)	(-----)	-	2	-	-	-

CFI 3

TDD subframe 0 1 2 3 4 5 6 7 8 9

Uplink Downlink Configuration 0 : ( 5ms) D S U U U D S U U U

Special Subframe Configuration 6

Physical Channel Parameter

PSS Power	0.0	dB
SSS Power	0.0	dB
PBCH Power	0.0	dB
PCFICH Power	0.0	dB
PHICH Power	0.0	dB

## 10.5 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

### 10.5.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR system to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92-96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

### 10.5.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is  $> 1.2$  W/kg for 1g SAR or  $> 3.0$  W/kg for 10g SAR. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is  $> 1.2$  W/kg for 1g SAR or  $> 3.0$  W/kg for 10g SAR.

### 10.5.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 GHz – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 GHz – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification.

Unless band gap channels are permanently disabled, SAR must be considered for these channels.

### 10.5.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is  $\leq 0.4$  W/kg for 1g SAR and  $\leq 1.0$  W/kg for 10g SAR, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is  $\leq 0.8$  W/kg for 1g SAR and  $\leq 2.0$  W/kg for 10g SAR or all test positions are measured.

#### 10.5.5 2.4 GHz SAR test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is  $\leq 0.8$  W/kg, no further SAR testing is required for 802.11b DSSS is that exposure configuration.
- 2) When the reported SAR is  $> 0.8$  W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is  $> 1.2$  W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is  $> 1.2$  W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed.

#### 10.5.6 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 GHz and 5 GHz bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate and lowest order 802.11 a/g/n/ac mode. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11 ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

#### 10.5.7 Initial Test Configuration Procedure

For OFDM, in both 2.4 GHz and 5 GHz bands, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, and lowest data rate. If the average RF output powers of the highest identical transmission modes are within 0.25 dB of each other, mid channel of the transmission mode with highest average RF output power is the initial test channel. Otherwise, the channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is  $\leq 0.8$  W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements.

#### 10.5.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position on procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is  $\leq 1.2$  W/kg for 1g SAR and  $\leq 3.0$  W/kg for 10g SAR, no additional SAR tests for the subsequent test configurations are required.

**10.5.9 MIMO SAR Considerations**

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is  $<1.6$  W/kg, no additional SAR Measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

## 11. Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

### Licensed bands

Test Description	Test Procedure Used
Conducted Output Power	- KDB 971168 D01 v03r01 - Section 5.2.4 - ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2

### Test Overview

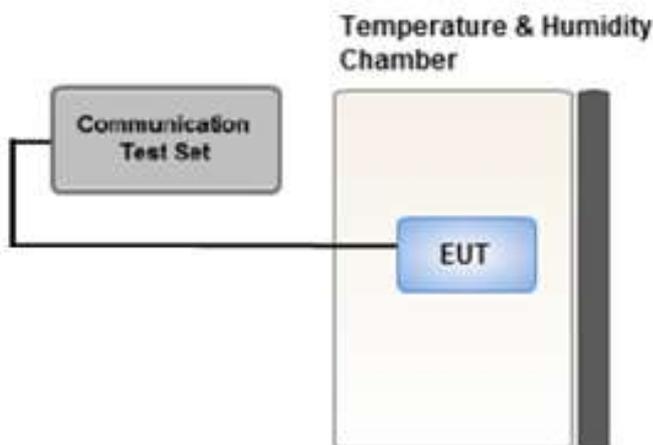
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base station emulator, communications test set, call box, or similar instrumentation that is capable of establishing a communications link with the EUT to enable control over variable parameters (e.g., output power, OBW, etc.).

In some cases, these instruments also include basic digital spectrum analyzer and/or power meter capabilities that can be utilized to measure the RF output power if the specified detectors and requirements can be realized and the measurement functions have been calibrated.

### Test Procedure

1. The RF port of the EUT was connected to the Communication Tester via an RF cable.
2. Conducted average power was measured using a calibrated Radio Communication Tester.

### Test setup



## 11.1 GSM

### 11.1.1 GSM Maximum Conducted Output Power

Mode / Band	Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)				
	GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot	
Maximum	34.0	34.0	32.0	30.5	29.0	27.0	25.0	23.5	22.0	
Nominal	33.0	33.0	31.0	29.5	28.0	26.0	24.0	22.5	21.0	
GSM 850	128	33.44	33.34	31.45	29.61	28.94	26.78	24.93	22.98	21.82
	190	33.45	33.46	31.45	29.65	28.78	26.71	24.98	23.14	21.94
	251	33.46	33.42	31.34	29.66	28.76	26.82	24.94	23.02	21.85
Maximum	31.0	31.0	28.5	26.5	25.0	26.0	24.0	22.5	21.0	
Nominal	30.0	30.0	27.5	25.5	24.0	25.0	23.0	21.5	20.0	
GSM 1900	512	30.59	30.61	27.49	25.80	24.00	25.82	23.70	21.95	20.46
	661	30.61	30.71	27.81	26.12	24.95	25.95	23.98	22.26	20.68
	810	30.57	30.54	27.36	25.58	24.42	25.63	23.45	21.88	20.28

GSM Conducted output powers (Burst-Average)

Mode / Band	Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)				
	GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot	
Maximum	24.97	24.97	25.98	26.24	25.99	17.97	18.98	19.24	18.99	
Nominal	23.97	23.97	24.98	25.24	24.99	16.97	17.98	18.24	17.99	
GSM 850	128	24.41	24.31	25.43	25.35	25.93	17.75	18.91	18.72	18.81
	190	24.42	24.43	25.43	25.39	25.77	17.68	18.96	18.88	18.93
	251	24.43	24.39	25.32	25.40	25.75	17.79	18.92	18.76	18.84
Maximum	21.97	21.97	22.48	22.24	21.99	16.97	17.98	18.24	17.99	
Nominal	20.97	20.97	21.48	21.24	20.99	15.97	16.98	17.24	16.99	
GSM 1900	512	21.56	21.58	21.47	21.54	20.99	16.79	17.68	17.69	17.45
	661	21.58	21.68	21.79	21.86	21.94	16.92	17.96	18.00	17.67
	810	21.54	21.51	21.34	21.32	21.41	16.60	17.43	17.62	17.27

GSM Conducted output powers (Frame-Average)

**Note:**

Time slot average factor is as follows:

- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

GSM Class : B

GSM voice: Head SAR , Body worn SAR

GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE  
Multi-slot Class 12 with CS 1 (GMSK)



**11.1.2 GSM Reduced Conducted Output Power (Hotspot mode activated)**

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		28.0	28.0	25.5	23.5	22.5	26.0	23.5	22.0	20.5
Nominal		27.0	27.0	24.5	22.5	21.5	25.0	22.5	21.0	19.5
GSM 1900	512	27.40	27.47	24.95	23.16	21.06	25.28	23.15	21.61	19.90
	661	27.72	27.71	24.48	23.48	20.80	25.51	22.47	21.77	20.19
	810	27.30	27.31	24.80	22.95	20.83	25.21	22.94	21.21	19.65

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		18.97	18.97	19.48	19.24	19.49	16.97	17.48	17.74	17.49
Nominal		17.97	17.97	18.48	18.24	18.49	15.97	16.48	16.74	16.49
GSM 1900	512	18.37	18.44	18.93	18.90	18.05	16.25	17.13	17.35	16.89
	661	18.69	18.68	18.46	19.22	17.79	16.48	16.45	17.51	17.18
	810	18.27	18.28	18.78	18.69	17.82	16.18	16.92	16.95	16.64

GSM Conducted output powers (Frame-Average)

**Note:**

Time slot average factor is as follows:

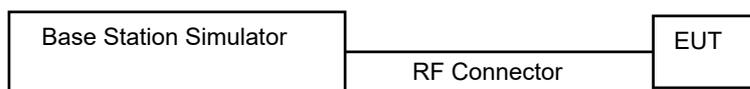
- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

GSM Class : B

GSM voice: Head SAR , Body worn SAR

GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE

Multi-slot Class 12 with CS 1 (GMSK)



**11.1.3 GSM Reduced Conducted Output Power (Grip Sensor on/ Ear-jack Activated)**

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		28.0	28.0	25.5	23.5	22.5	26.0	23.5	22.0	20.5
Nominal		27.0	27.0	24.5	22.5	21.5	25.0	22.5	21.0	19.5
GSM 1900	512	27.37	27.46	25.05	23.26	21.05	25.2	23.22	21.55	19.99
	661	27.66	27.79	24.50	23.48	20.82	25.41	22.54	21.74	20.21
	810	27.23	27.28	24.79	22.87	20.87	25.31	22.91	21.26	19.66

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		18.97	18.97	19.48	19.24	19.49	16.97	17.48	17.74	17.49
Nominal		17.97	17.97	18.48	18.24	18.49	15.97	16.48	16.74	16.49
GSM 1900	512	18.34	18.43	19.03	19.00	18.04	16.17	17.20	17.29	16.98
	661	18.63	18.76	18.48	19.22	17.81	16.38	16.52	17.48	17.20
	810	18.20	18.25	18.77	18.61	17.86	16.28	16.89	17.00	16.65

GSM Conducted output powers (Frame-Average)

**Note:**

Time slot average factor is as follows:

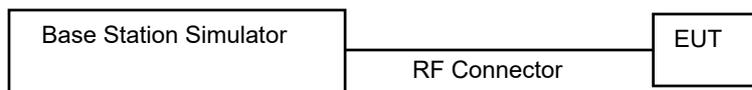
- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

GSM Class : B

GSM voice: Head SAR , Body worn SAR

GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE

Multi-slot Class 12 with CS 1 (GMSK)



## 11.2 UMTS

### HSPA+

This DUT is only capable of QPSK HSPA+ in uplink. Therefore, the RF conducted power is not measured according to 941225 D01v03r01 3G SAR.

### 11.2.1 UMTS Maximum Conducted Output Power

#### UMTS Band 5 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121	UMTSBand 5 [dBm]			3GPP MPR
		Subtest	UL 4132 DL 4357	UL 4183 DL 4408	UL 4233 DL 4458	
99	WCDMA	12.2 kbps RMC	24.61	24.65	24.42	-
99		12.2 kbps AMR	24.66	24.59	24.44	-
5	HSDPA	Subtest 1	23.49	23.42	23.25	0
5		Subtest 2	22.97	22.94	22.76	0
5		Subtest 3	22.47	22.44	22.24	0.5
5		Subtest 4	21.90	21.89	21.65	0.5
6	HSUPA	Subtest 1	22.50	22.43	22.24	0
6		Subtest 2	20.36	20.32	20.16	2
6		Subtest 3	21.44	21.60	21.19	1
6		Subtest 4	20.37	20.33	20.15	2
6		Subtest 5	22.47	22.43	22.25	0
8	DC-HSDPA	Subtest 1	24.05	24.01	23.91	0
8		Subtest 2	23.23	22.97	22.89	0
8		Subtest 3	22.27	22.07	21.96	0.5
8		Subtest 4	22.28	22.02	21.91	0.5

UMTSAverage Conducted output powers

#### UMTS Band 4 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121	UMTSBand 5 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	WCDMA	12.2 kbps RMC	22.72	23.17	23.15	-
99		12.2 kbps AMR	22.75	23.16	23.14	-
5	HSDPA	Subtest 1	22.67	23.08	23.20	0
5		Subtest 2	22.59	23.03	23.15	0
5		Subtest 3	22.57	22.54	23.12	0.5
5		Subtest 4	21.47	22.00	22.11	0.5
6	HSUPA	Subtest 1	21.45	21.90	22.02	0
6		Subtest 2	18.61	18.67	18.74	2
6		Subtest 3	18.91	19.55	19.54	1
6		Subtest 4	18.45	18.91	18.99	2
6		Subtest 5	21.45	21.92	21.95	0
8	DC-HSDPA	Subtest 1	22.50	22.81	23.10	0
8		Subtest 2	22.52	22.88	23.12	0
8		Subtest 3	22.53	21.82	22.09	0.5
8		Subtest 4	22.50	21.87	22.09	0.5

UMTSAverage Conducted output powers

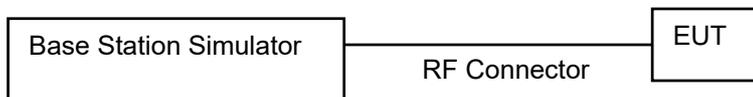
UMTS Band 2 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121	UMTSBand 2 [dBm]			3GPP MPR
		Subtest	UL 9262 DL 9662	UL 9400 DL 9800	UL 9538 DL 9938	
99	WCDMA	12.2 kbps RMC	22.65	22.87	22.56	-
99		12.2 kbps AMR	22.63	22.84	22.60	-
5	HSDPA	Subtest 1	22.63	22.86	22.63	0
5		Subtest 2	22.54	22.76	22.55	0
5		Subtest 3	22.42	22.72	22.52	0.5
5		Subtest 4	21.85	22.14	21.93	0.5
6	HSUPA	Subtest 1	21.41	21.63	21.42	0
6		Subtest 2	19.85	20.13	19.86	2
6		Subtest 3	19.41	19.64	19.42	1
6		Subtest 4	20.92	21.18	20.95	2
6		Subtest 5	21.40	21.62	21.44	0
8	DC-HSDPA	Subtest 1	22.37	22.72	22.24	0
8		Subtest 2	22.35	22.69	22.26	0
8		Subtest 3	22.36	22.72	22.27	0.5
8		Subtest 4	22.39	22.73	22.23	0.5

UMTSAverage Conducted output powers

DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



**11.2.2 UMTS Reduced Conducted Output Power (Hotspot mode activated)**

When Power reduction is applied , MPR set to 0

UMTS Band 4 Hotspot Back-off Power

3GPP Release Version	Mode	3GPP 34.121	UMTSBand 2 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	WCDMA	12.2 kbps RMC	19.36	19.64	19.73	-
99		12.2 kbps AMR	19.35	19.63	19.72	-
5	HSDPA	Subtest 1	19.17	19.62	19.66	0
5		Subtest 2	19.15	19.55	19.62	0
5		Subtest 3	18.93	19.48	19.49	0
5		Subtest 4	18.90	19.39	19.48	0
6	HSUPA	Subtest 1	18.23	18.65	18.71	0
6		Subtest 2	18.35	18.67	18.75	0
6		Subtest 3	18.32	18.64	18.76	0
6		Subtest 4	18.27	18.67	18.73	0
6		Subtest 5	18.25	18.68	18.76	0
8	DC-HSDPA	Subtest 1	18.98	19.31	19.50	0
8		Subtest 2	18.99	19.26	19.48	0
8		Subtest 3	18.96	19.30	19.51	0
8		Subtest 4	18.97	19.27	19.48	0

UMTSAverage Conducted output powers

When Power reduction is applied , MPR set to 0

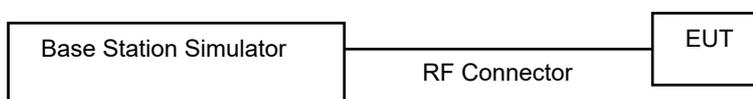
UMTS Band 2 Hotspot Back-off Power

3GPP Release Version	Mode	3GPP 34.121	UMTSBand 2 [dBm]			3GPP MPR
		Subtest	UL 9262 DL 9662	UL 9400 DL 9800	UL 9538 DL 9938	
99	WCDMA	12.2 kbps RMC	18.98	19.26	18.86	-
99		12.2 kbps AMR	19.03	19.30	18.90	-
5	HSDPA	Subtest 1	18.78	19.16	18.82	0
5		Subtest 2	18.68	19.12	18.67	0
5		Subtest 3	18.67	19.12	18.68	0
5		Subtest 4	18.66	19.07	18.66	0
6	HSUPA	Subtest 1	18.13	18.46	18.04	0
6		Subtest 2	18.04	18.14	18.04	0
6		Subtest 3	17.94	18.13	17.97	0
6		Subtest 4	17.96	18.11	17.86	0
6		Subtest 5	17.96	18.48	18.01	0
8	DC-HSDPA	Subtest 1	18.08	18.84	18.36	0
8		Subtest 2	17.86	18.62	18.14	0
8		Subtest 3	17.65	18.42	17.95	0
8		Subtest 4	17.61	18.37	17.90	0

UMTSAverage Conducted output powers

DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK) was conformed to be used during DC-HSDPA measurements.



### 11.2.3 UMTS Reduced Conducted Output Power (Grip Seonsor on/ Ear-jack Activated)

When Power reduction is applied , MPR set to 0  
UMTS Band 4 Grip/Ear-jack Back-off Power

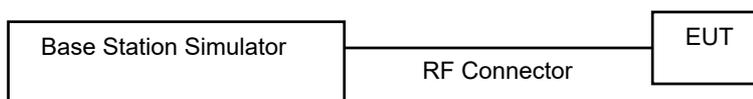
3GPP Release Version	Mode	3GPP 34.121	UMTSBand 4 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	WCDMA	12.2 kbps RMC	19.37	19.55	19.78	-
99		12.2 kbps AMR	19.36	19.54	19.77	-
5	HSDPA	Subtest 1	19.16	19.58	19.75	0
5		Subtest 2	19.14	19.62	19.55	0
5		Subtest 3	19.01	19.44	19.52	0
5		Subtest 4	18.88	19.41	19.58	0
6	HSUPA	Subtest 1	18.17	18.73	18.63	0
6		Subtest 2	18.37	18.62	18.83	0
6		Subtest 3	18.40	18.54	18.78	0
6		Subtest 4	18.26	18.73	18.79	0
6		Subtest 5	18.17	18.65	18.79	0
8	DC-HSDPA	Subtest 1	19.05	19.41	19.56	0
8		Subtest 2	18.97	19.22	19.39	0
8		Subtest 3	18.91	19.30	19.46	0
8		Subtest 4	19.05	19.21	19.58	0

UMTSAverage Conducted output powers

When Power reduction is applied , MPR set to 0  
UMTS Band 2 Grip/Ear-jack Back-off Power

3GPP Release Version	Mode	3GPP 34.121	UMTSBand 2 [dBm]			3GPP MPR
		Subtest	UL 9262 DL 9662	UL 9400 DL 9800	UL 9538 DL 9938	
99	WCDMA	12.2 kbps RMC	19.00	19.28	18.89	-
99		12.2 kbps AMR	19.05	19.34	18.85	-
5	HSDPA	Subtest 1	18.82	19.13	18.83	0
5		Subtest 2	18.71	19.13	18.62	0
5		Subtest 3	18.65	19.09	18.72	0
5		Subtest 4	18.64	19.06	18.61	0
6	HSUPA	Subtest 1	18.16	18.49	18.05	0
6		Subtest 2	18.08	18.18	18.06	0
6		Subtest 3	17.96	18.13	17.98	0
6		Subtest 4	18.00	18.16	17.90	0
6		Subtest 5	17.99	18.50	17.98	0
8	DC-HSDPA	Subtest 1	18.13	18.84	18.31	0
8		Subtest 2	17.86	18.62	18.19	0
8		Subtest 3	17.61	18.39	17.98	0
8		Subtest 4	17.61	18.38	17.88	0

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK) was conformed to be used during DC-HSDPA measurements.



### 11.3 LTE Maximum Output Power

LTE B4/5/12/13/17/26 at 20 MHz Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

11.3.1 LTE Maximum Conducted Power

LTE Band 2 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]	
				18607 Ch. 1850.7 MHz	18900 Ch. 1880 MHz	19193 Ch. 1909.3 MHz			
1.4 MHz	QPSK	1	0	22.50	22.06	22.54	0	0	
		1	3	22.53	22.03	22.55	0	0	
		1	5	22.50	22.04	22.51	0	0	
		3	0	22.49	22.00	22.48	0	0	
		3	1	22.63	22.11	22.60	0	0	
		3	3	22.56	22.11	22.56	0	0	
	16QAM	6	0	21.57	21.04	21.54	0-1	1	
		1	0	21.80	21.22	21.65	0-1	1	
		1	3	21.65	21.14	21.48	0-1	1	
		1	5	21.84	21.27	21.77	0-1	1	
		3	0	21.67	21.17	21.68	0-1	1	
		3	1	21.79	21.23	21.82	0-1	1	
	64QAM	3	3	21.64	21.28	21.68	0-1	1	
		6	0	20.68	20.16	20.61	0-2	2	
		1	0	20.78	20.23	20.76	0-2	2	
		1	3	20.67	20.11	20.71	0-2	2	
		1	5	20.75	20.24	20.76	0-2	2	
		3	0	20.61	20.09	20.60	0-2	2	
	256QAM	3	1	20.76	20.15	20.74	0-2	2	
		3	3	20.64	20.21	20.67	0-2	2	
		6	0	19.63	19.17	19.66	0-3	3	
		1	0	17.63	17.05	17.65	0-5	5	
		1	3	17.57	16.94	17.62	0-5	5	
		1	5	17.63	17.08	17.71	0-5	5	
		256QAM	3	0	17.51	17.00	17.54	0-5	5
			3	1	17.58	17.14	17.67	0-5	5
			3	3	17.61	17.15	17.62	0-5	5
6			0	17.54	16.95	17.52	0-5	5	

LTE Band 2\_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 MHz	18900 Ch. 1880 MHz	19185 Ch. 1908.5 MHz		
3 MHz	QPSK	1	0	22.55	22.05	22.55	0	0
		1	7	22.54	21.97	22.46	0	0
		1	14	22.53	22.07	22.51	0	0
		8	0	21.62	21.12	21.59	0-1	1
		8	3	21.59	21.08	21.57	0-1	1
		8	7	21.62	21.09	21.58	0-1	1
	16QAM	15	0	21.59	21.13	21.62	0-1	1
		1	0	21.90	21.27	21.80	0-1	1
		1	7	21.67	21.23	21.89	0-1	1
		1	14	21.82	21.19	21.70	0-1	1
		8	0	20.73	20.17	20.67	0-2	2
		8	3	20.65	20.17	20.72	0-2	2
	64QAM	8	7	20.66	20.23	20.72	0-2	2
		15	0	20.67	20.18	20.73	0-2	2
		1	0	20.79	20.29	20.76	0-2	2
		1	7	20.67	20.23	20.72	0-2	2
		1	14	20.82	20.18	20.76	0-2	2
		8	0	19.56	19.20	19.64	0-3	3
	256QAM	8	3	19.57	19.11	19.66	0-3	3
		8	7	19.64	19.15	19.63	0-3	3
		15	0	19.61	19.14	19.69	0-3	3
		1	0	17.48	17.12	17.57	0-5	5
		1	7	17.50	17.07	17.67	0-5	5
		1	14	17.55	17.16	17.70	0-5	5
8		0	17.53	17.03	17.56	0-5	5	
8		3	17.54	17.03	17.57	0-5	5	
	8	7	17.52	17.04	17.58	0-5	5	
	15	0	17.55	17.06	17.59	0-5	5	

LTE Band 2\_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 MHz	18900 Ch. 1880 MHz	19175 Ch. 1907.5 MHz		
5 MHz	QPSK	1	0	22.58	22.11	22.63	0	0
		1	12	22.45	22.05	22.57	0	0
		1	24	22.54	22.09	22.61	0	0
		12	0	21.60	21.16	21.66	0-1	1
		12	6	21.61	21.15	21.62	0-1	1
		12	11	21.64	21.15	21.67	0-1	1
		25	0	21.63	21.14	21.64	0-1	1
	16QAM	1	0	21.76	21.40	21.75	0-1	1
		1	12	21.72	21.25	21.76	0-1	1
		1	24	21.88	21.40	21.94	0-1	1
		12	0	20.69	20.23	20.74	0-2	2
		12	6	20.68	20.16	20.72	0-2	2
		12	11	20.69	20.17	20.71	0-2	2
		25	0	20.66	20.18	20.75	0-2	2
	64QAM	1	0	20.79	20.27	20.82	0-2	2
		1	12	20.62	20.19	20.70	0-2	2
		1	24	20.80	20.32	20.81	0-2	2
		12	0	19.60	19.21	19.69	0-3	3
		12	6	19.65	19.22	19.70	0-3	3
		12	11	19.66	19.18	19.70	0-3	3
		25	0	19.63	19.19	19.72	0-3	3
	256QAM	1	0	17.57	17.10	17.70	0-5	5
		1	12	17.53	16.92	17.74	0-5	5
		1	24	17.65	17.17	17.72	0-5	5
		12	0	17.55	17.07	17.60	0-5	5
		12	6	17.49	17.08	17.57	0-5	5
		12	11	17.47	17.08	17.60	0-5	5
		25	0	17.56	17.11	17.62	0-5	5

LTE Band 2 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 MHz	18900 Ch. 1880 MHz	19150 Ch. 1905 MHz		
10 MHz	QPSK	1	0	22.51	22.08	22.62	0	0
		1	24	22.49	22.05	22.62	0	0
		1	49	22.52	22.14	22.59	0	0
		25	0	21.60	21.21	21.66	0-1	1
		25	12	21.58	21.20	21.64	0-1	1
		25	24	21.57	21.14	21.67	0-1	1
	16QAM	50	0	21.54	21.06	21.57	0-1	1
		1	0	21.91	21.30	21.95	0-1	1
		1	24	21.69	21.28	21.75	0-1	1
		1	49	21.75	21.35	21.88	0-1	1
		25	0	20.65	20.22	20.72	0-2	2
		25	12	20.60	20.18	20.70	0-2	2
	64QAM	25	24	20.60	20.23	20.69	0-2	2
		50	0	20.55	20.14	20.61	0-2	2
		1	0	20.86	20.38	20.90	0-2	2
		1	24	20.75	20.23	20.74	0-2	2
		1	49	20.71	20.22	20.87	0-2	2
		25	0	19.56	19.20	19.70	0-3	3
	256QAM	25	12	19.53	19.18	19.66	0-3	3
		25	24	19.51	19.13	19.68	0-3	3
		50	0	19.57	19.14	19.65	0-3	3
		1	0	17.59	17.18	17.71	0-5	5
		1	24	17.61	17.12	17.61	0-5	5
		1	49	17.61	17.15	17.65	0-5	5
		25	0	17.54	17.13	17.62	0-5	5
		25	12	17.53	17.07	17.61	0-5	5
		25	24	17.49	17.10	17.62	0-5	5
		50	0	17.55	17.15	17.60	0-5	5

LTE Band 2 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 MHz	18900 Ch. 1880 MHz	19125 Ch. 1902.5 MHz		
15 MHz	QPSK	1	0	22.55	22.21	22.64	0	0
		1	36	22.39	21.98	22.45	0	0
		1	74	22.57	22.10	22.56	0	0
		36	0	21.57	21.14	21.59	0-1	1
		36	18	21.57	21.13	21.58	0-1	1
		36	39	21.56	21.14	21.58	0-1	1
		75	0	21.57	21.12	21.59	0-1	1
	16QAM	1	0	21.83	21.45	21.83	0-1	1
		1	36	21.57	21.11	21.66	0-1	1
		1	74	21.74	21.33	21.75	0-1	1
		36	0	20.57	20.15	20.60	0-2	2
		36	18	20.58	20.16	20.61	0-2	2
		36	39	20.57	20.13	20.56	0-2	2
	64QAM	75	0	20.56	20.16	20.60	0-2	2
		1	0	20.79	20.31	20.81	0-2	2
		1	36	20.61	20.10	20.54	0-2	2
		1	74	20.70	20.34	20.73	0-2	2
		36	0	19.61	19.17	19.61	0-3	3
		36	18	19.59	19.17	19.61	0-3	3
		36	39	19.60	19.16	19.58	0-3	3
	256QAM	75	0	19.56	19.17	19.59	0-3	3
		1	0	17.73	17.12	17.75	0-5	5
		1	36	17.55	17.11	17.62	0-5	5
		1	74	17.69	17.22	17.66	0-5	5
		36	0	17.54	17.11	17.57	0-5	5
		36	18	17.56	17.13	17.61	0-5	5
		36	39	17.51	17.08	17.53	0-5	5
		75	0	17.57	17.11	17.57	0-5	5

LTE Band 2 \_ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	22.48	22.18	22.58	0	0
		1	49	22.42	22.03	22.52	0	0
		1	99	22.47	22.12	22.56	0	0
		50	0	21.51	21.09	21.57	0-1	1
		50	25	21.51	21.06	21.53	0-1	1
		50	49	21.49	21.08	21.52	0-1	1
		100	0	21.54	21.12	21.56	0-1	1
	16QAM	1	0	21.81	21.57	21.93	0-1	1
		1	49	21.62	21.28	21.64	0-1	1
		1	99	21.81	21.33	21.76	0-1	1
		50	0	20.54	20.14	20.57	0-2	2
		50	25	20.50	20.11	20.53	0-2	2
		50	49	20.49	20.13	20.51	0-2	2
		100	0	20.50	20.10	20.54	0-2	2
	64QAM	1	0	20.75	20.48	20.86	0-2	2
		1	49	20.54	20.31	20.74	0-2	2
		1	99	20.73	20.44	20.81	0-2	2
		50	0	19.54	19.16	19.58	0-3	3
		50	25	19.51	19.14	19.54	0-3	3
		50	49	19.49	19.10	19.53	0-3	3
		100	0	19.50	19.09	19.57	0-3	3
	256QAM	1	0	17.70	17.28	17.75	0-5	5
		1	49	17.52	17.17	17.64	0-5	5
		1	99	17.54	17.27	17.64	0-5	5
		50	0	17.50	17.11	17.52	0-5	5
		50	25	17.46	17.12	17.53	0-5	5
		50	49	17.50	17.11	17.53	0-5	5
		100	0	17.53	17.14	17.55	0-5	5

[ LTE Band 4 Conducted Power ]

LTE Band 4 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 MHz	20175 Ch. 1732.5 MHz	20393 Ch. 1754.3 MHz		
1.4 MHz	QPSK	1	0	23.19	22.81	22.57	0	0
		1	3	23.23	22.81	22.59	0	0
		1	5	23.22	22.84	22.56	0	0
		3	0	23.18	22.78	22.54	0	0
		3	1	23.36	22.94	22.70	0	0
		3	3	23.25	22.82	22.57	0	0
		6	0	22.24	21.90	21.62	0-1	1
	16QAM	1	0	22.49	22.12	21.82	0-1	1
		1	3	22.24	21.83	21.64	0-1	1
		1	5	22.44	22.05	21.87	0-1	1
		3	0	22.31	21.95	21.75	0-1	1
		3	1	22.45	22.03	21.89	0-1	1
		3	3	22.39	22.02	21.78	0-1	1
		6	0	21.39	20.96	20.75	0-2	2
	64QAM	1	0	21.37	21.18	20.82	0-2	2
		1	3	21.35	21.03	20.83	0-2	2
		1	5	21.38	21.06	20.79	0-2	2
		3	0	21.35	20.94	20.71	0-2	2
		3	1	21.51	21.05	20.90	0-2	2
		3	3	21.32	21.03	20.72	0-2	2
		6	0	20.36	19.97	19.66	0-3	3
	256QAM	1	0	18.39	17.94	17.63	0-5	5
		1	3	18.30	17.63	17.44	0-5	5
		1	5	18.41	17.88	17.56	0-5	5
		3	0	18.17	17.79	17.51	0-5	5
		3	1	18.42	17.98	17.73	0-5	5
		3	3	18.30	17.89	17.64	0-5	5
		6	0	18.30	17.82	17.53	0-5	5

LTE Band 4 \_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 MHz	20175 Ch. 1732.5 MHz	20385 Ch. 1753.5 MHz		
3 MHz	QPSK	1	0	23.12	22.74	22.51	0	0
		1	7	23.11	22.74	22.44	0	0
		1	14	23.22	22.82	22.57	0	0
		8	0	22.32	21.86	21.62	0-1	1
		8	3	22.29	21.87	21.55	0-1	1
		8	7	22.29	21.84	21.58	0-1	1
		15	0	22.31	21.87	21.57	0-1	1
	16QAM	1	0	22.34	22.09	21.75	0-1	1
		1	7	22.40	22.03	21.64	0-1	1
		1	14	22.36	22.02	21.82	0-1	1
		8	0	21.37	20.97	20.68	0-2	2
		8	3	21.32	20.94	20.63	0-2	2
		8	7	21.36	20.95	20.67	0-2	2
		15	0	21.33	20.93	20.65	0-2	2
	64QAM	1	0	21.34	21.09	20.68	0-2	2
		1	7	21.23	21.05	20.54	0-2	2
		1	14	21.38	21.03	20.64	0-2	2
		8	0	20.35	19.95	19.65	0-3	3
		8	3	20.33	19.94	19.58	0-3	3
		8	7	20.34	19.97	19.63	0-3	3
		15	0	20.34	19.93	19.58	0-3	3
	256QAM	1	0	18.35	17.85	17.61	0-5	5
		1	7	18.23	17.81	17.46	0-5	5
		1	14	18.41	17.87	17.56	0-5	5
		8	0	18.22	17.81	17.52	0-5	5
		8	3	18.23	17.77	17.45	0-5	5
		8	7	18.26	17.79	17.52	0-5	5
		15	0	18.28	17.80	17.54	0-5	5

LTE Band 4 \_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 MHz	20175 Ch. 1732.5 MHz	20375 Ch. 1752.5 MHz		
5 MHz	QPSK	1	0	23.32	22.89	22.54	0	0
		1	12	23.23	22.81	22.44	0	0
		1	24	23.34	22.93	22.55	0	0
		12	0	22.42	22.02	21.64	0-1	1
		12	6	22.44	21.97	21.65	0-1	1
		12	11	22.41	21.97	21.64	0-1	1
		25	0	22.39	21.96	21.64	0-1	1
	16QAM	1	0	22.40	22.21	21.74	0-1	1
		1	12	22.43	22.15	21.58	0-1	1
		1	24	22.57	22.13	21.79	0-1	1
		12	0	21.44	21.06	20.72	0-2	2
		12	6	21.46	21.05	20.72	0-2	2
		12	11	21.46	21.06	20.73	0-2	2
		25	0	21.44	21.01	20.70	0-2	2
	64QAM	1	0	21.37	21.14	20.78	0-2	2
		1	12	21.41	21.13	20.66	0-2	2
		1	24	21.52	21.18	20.87	0-2	2
		12	0	20.47	19.99	19.63	0-3	3
		12	6	20.43	20.00	19.61	0-3	3
		12	11	20.41	20.02	19.63	0-3	3
		25	0	20.39	20.02	19.62	0-3	3
	256QAM	1	0	18.42	17.94	17.67	0-5	5
		1	12	18.35	17.94	17.51	0-5	5
		1	24	18.44	17.99	17.55	0-5	5
		12	0	18.36	17.87	17.54	0-5	5
		12	6	18.27	17.84	17.52	0-5	5
		12	11	18.34	17.87	17.53	0-5	5
		25	0	18.34	17.94	17.53	0-5	5

LTE Band 4 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 MHz	20175 Ch. 1732.5 MHz	20350 Ch. 1750 MHz		
10 MHz	QPSK	1	0	23.20	22.88	22.65	0	0
		1	24	23.24	22.90	22.61	0	0
		1	49	23.39	22.95	22.67	0	0
		25	0	22.37	21.96	21.70	0-1	1
		25	12	22.38	22.01	21.75	0-1	1
		25	24	22.41	22.00	21.77	0-1	1
	16QAM	50	0	22.38	21.96	21.69	0-1	1
		1	0	22.47	22.22	21.81	0-1	1
		1	24	22.43	22.03	21.80	0-1	1
		1	49	22.42	22.05	21.93	0-1	1
		25	0	21.40	21.09	20.77	0-2	2
		25	12	21.36	21.05	20.77	0-2	2
	64QAM	25	24	21.41	20.99	20.80	0-2	2
		50	0	21.37	20.99	20.71	0-2	2
		1	0	21.53	21.21	20.95	0-2	2
		1	24	21.48	21.13	20.82	0-2	2
		1	49	21.46	21.18	20.84	0-2	2
		25	0	20.35	20.04	19.68	0-3	3
	256QAM	25	12	20.35	19.97	19.68	0-3	3
		25	24	20.34	19.96	19.71	0-3	3
		50	0	20.37	19.99	19.72	0-3	3
		1	0	18.36	17.95	17.76	0-5	5
		1	24	18.32	17.93	17.64	0-5	5
		1	49	18.39	18.05	17.73	0-5	5
		25	0	18.32	17.91	17.61	0-5	5
		25	12	18.29	17.90	17.59	0-5	5
	25	24	18.31	17.92	17.60	0-5	5	
			50	0	18.35	17.93	17.67	0-5

LTE Band 4 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 MHz	20175 Ch. 1732.5 MHz	20325 Ch. 1747.5 MHz		
15 MHz	QPSK	1	0	23.31	22.92	22.61	0	0
		1	36	23.27	22.84	22.50	0	0
		1	74	23.30	22.93	22.68	0	0
		36	0	22.34	21.94	21.67	0-1	1
		36	18	22.33	21.94	21.71	0-1	1
		36	39	22.39	21.95	21.66	0-1	1
		75	0	22.33	21.93	21.65	0-1	1
	16QAM	1	0	22.30	22.13	21.89	0-1	1
		1	36	22.32	22.03	21.63	0-1	1
		1	74	22.55	22.21	21.99	0-1	1
		36	0	21.30	20.98	20.66	0-2	2
		36	18	21.28	20.96	20.69	0-2	2
		36	39	21.32	20.99	20.71	0-2	2
		75	0	21.34	20.97	20.70	0-2	2
	64QAM	1	0	21.43	21.07	20.83	0-2	2
		1	36	21.31	20.86	20.68	0-2	2
		1	74	21.57	21.16	20.91	0-2	2
		36	0	20.29	19.97	19.69	0-3	3
		36	18	20.31	19.98	19.67	0-3	3
		36	39	20.33	20.00	19.72	0-3	3
		75	0	20.33	19.93	19.67	0-3	3
	256QAM	1	0	18.31	17.99	17.72	0-5	5
		1	36	18.24	17.80	17.60	0-5	5
		1	74	18.33	18.00	17.79	0-5	5
		36	0	18.26	17.90	17.61	0-5	5
		36	18	18.27	17.94	17.67	0-5	5
		36	39	18.26	17.94	17.66	0-5	5
		75	0	18.27	17.93	17.64	0-5	5

LTE Band 4 \_ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 MHz		
20 MHz	QPSK	1	0	22.97	0	0
		1	49	22.96	0	0
		1	99	22.92	0	0
		50	0	21.93	0-1	1
		50	25	21.91	0-1	1
		50	49	21.96	0-1	1
		100	0	21.93	0-1	1
	16QAM	1	0	22.13	0-1	1
		1	49	21.83	0-1	1
		1	99	22.14	0-1	1
		50	0	20.92	0-2	2
		50	25	20.97	0-2	2
		50	49	20.96	0-2	2
		100	0	20.93	0-2	2
	64QAM	1	0	21.18	0-2	2
		1	49	21.05	0-2	2
		1	99	21.13	0-2	2
		50	0	19.91	0-3	3
		50	25	19.99	0-3	3
		50	49	19.97	0-3	3
		100	0	19.92	0-3	3
	256QAM	1	0	18.01	0-5	5
		1	49	18.01	0-5	5
		1	99	18.07	0-5	5
		50	0	17.95	0-5	5
		50	25	17.93	0-5	5
		50	49	17.97	0-5	5
		100	0	17.95	0-5	5

[ LTE Band 5 Conducted Power ]

LTE Band 5 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20407 Ch. 824.7 MHz	20525 Ch. 836.5 MHz	20643 Ch. 848.3 MHz		
1.4 MHz	QPSK	1	0	24.47	24.48	24.42	0	0
		1	3	24.44	24.44	24.34	0	0
		1	5	24.41	24.44	24.41	0	0
		3	0	24.41	24.42	24.36	0	1
		3	1	24.49	24.58	24.49	0	1
		3	3	24.46	24.48	24.42	0	1
		6	0	22.43	22.53	22.45	0-1	1
	16QAM	1	0	22.58	22.60	22.58	0-1	1
		1	3	22.50	22.57	22.39	0-1	1
		1	5	22.61	22.74	22.67	0-1	1
		3	0	22.41	22.63	22.53	0-1	2
		3	1	22.59	22.65	22.69	0-1	2
		3	3	22.47	22.63	22.55	0-1	2
		6	0	21.56	21.59	21.44	0-2	2
	64QAM	1	0	21.58	21.76	21.59	0-2	2
		1	3	21.62	21.61	21.52	0-2	2
		1	5	21.58	21.69	21.65	0-2	2
		3	0	21.49	21.57	21.49	0-2	3
		3	1	21.61	21.57	21.63	0-2	3
		3	3	21.50	21.59	21.54	0-2	3
		6	0	20.50	20.59	20.52	0-3	3
	256QAM	1	0	20.63	20.74	20.61	0-5	4
		1	3	20.44	20.69	20.47	0-5	4
		1	5	20.58	20.69	20.60	0-5	4
		3	0	20.48	20.56	20.46	0-5	4
		3	1	20.57	20.74	20.59	0-5	4
		3	3	20.53	20.66	20.56	0-5	4
		6	0	19.47	19.55	19.53	0-5	4

LTE Band 5\_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20415 Ch. 825.5 MHz	20525 Ch. 836.5 MHz	20635 Ch. 847.5 MHz		
3 MHz	QPSK	1	0	24.48	24.48	24.37	0	0
		1	7	24.37	24.37	24.33	0	0
		1	14	24.49	24.49	24.45	0	0
		8	0	22.58	22.60	22.50	0-1	1
		8	3	22.54	22.52	22.43	0-1	1
		8	7	22.53	22.55	22.49	0-1	1
		15	0	22.60	22.65	22.54	0-1	1
	16QAM	1	0	22.70	22.79	22.66	0-1	1
		1	7	22.74	22.68	22.55	0-1	1
		1	14	22.72	22.65	22.71	0-1	1
		8	0	21.56	21.62	21.58	0-2	2
		8	3	21.56	21.59	21.48	0-2	2
		8	7	21.63	21.64	21.57	0-2	2
		15	0	21.60	21.61	21.57	0-2	2
	64QAM	1	0	21.61	21.66	21.63	0-2	2
		1	7	21.66	21.54	21.57	0-2	2
		1	14	21.60	21.58	21.54	0-2	2
		8	0	20.49	20.57	20.53	0-3	3
		8	3	20.49	20.54	20.52	0-3	3
		8	7	20.55	20.61	20.55	0-3	3
		15	0	20.57	20.60	20.55	0-3	3
	256QAM	1	0	20.54	20.61	20.56	0-5	4
		1	7	20.47	20.48	20.37	0-5	4
		1	14	20.62	20.62	20.50	0-5	4
		8	0	19.44	19.55	19.51	0-5	4
		8	3	19.45	19.54	19.48	0-5	4
		8	7	19.52	19.52	19.51	0-5	4
		15	0	19.49	19.56	19.49	0-5	4

LTE Band 5\_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20425 Ch. 826.5 MHz	20525 Ch. 836.5 MHz	20625 Ch. 846.5 MHz		
5 MHz	QPSK	1	0	24.53	24.60	24.47	0	0
		1	12	24.41	24.39	24.40	0	0
		1	24	24.54	24.49	24.49	0	0
		12	0	22.62	22.58	22.53	0-1	1
		12	6	22.61	22.64	22.55	0-1	1
		12	11	22.59	22.62	22.62	0-1	1
		25	0	22.60	22.59	22.55	0-1	1
	16QAM	1	0	22.78	22.77	22.59	0-1	1
		1	12	22.72	22.79	22.59	0-1	1
		1	24	22.81	22.77	22.76	0-1	1
		12	0	21.64	21.64	21.61	0-2	2
		12	6	21.63	21.61	21.58	0-2	2
		12	11	21.65	21.61	21.58	0-2	2
		25	0	21.62	21.60	21.57	0-2	2
	64QAM	1	0	21.68	21.72	21.67	0-2	2
		1	12	21.67	21.61	21.66	0-2	2
		1	24	21.73	21.62	21.70	0-2	2
		12	0	20.58	20.62	20.55	0-3	3
		12	6	20.61	20.53	20.56	0-3	3
		12	11	20.63	20.57	20.61	0-3	3
		25	0	20.59	20.64	20.55	0-3	3
	256QAM	1	0	20.69	20.90	20.71	0-5	4
		1	12	20.67	20.61	20.67	0-5	4
		1	24	20.77	20.66	20.77	0-5	4
		12	0	19.60	19.58	19.50	0-5	4
		12	6	19.53	19.55	19.52	0-5	4
		12	11	19.54	19.55	19.54	0-5	4
		25	0	19.64	19.65	19.53	0-5	4

LTE Band 5 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20525 Ch. 836.5 MHz		
10 MHz	QPSK	1	0	24.78	0	0
		1	24	24.55	0	0
		1	49	24.52	0	0
		25	0	22.71	0-1	1
		25	12	22.64	0-1	1
		25	24	22.58	0-1	1
	16QAM	50	0	22.60	0-1	1
		1	0	22.90	0-1	1
		1	24	22.80	0-1	1
		1	49	22.75	0-1	1
		25	0	21.67	0-2	2
		25	12	21.63	0-2	2
	64QAM	25	24	21.58	0-2	2
		50	0	21.61	0-2	2
		1	0	21.87	0-2	2
		1	24	21.68	0-2	2
		1	49	21.68	0-2	2
		25	0	20.67	0-3	3
	256QAM	25	12	20.60	0-3	3
		25	24	20.56	0-3	3
		50	0	20.60	0-3	3
		1	0	20.78	0-5	4
		1	24	20.65	0-5	4
		1	49	20.68	0-5	4
	25	0	19.69	0-5	4	
	25	12	19.60	0-5	4	
	25	24	19.59	0-5	4	
	50	0	19.61	0-5	4	

[LTE Band 12 Conducted Power]

LTE Band 12 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23017 Ch. 699.7 MHz	23095 Ch. 707.5 MHz	23173 Ch. 715.3 MHz		
1.4 MHz	QPSK	1	0	24.14	24.17	24.04	0	0
		1	3	24.18	24.14	24.00	0	0
		1	5	24.17	24.15	24.08	0	0
		3	0	24.22	24.16	24.04	0	1
		3	1	24.33	24.30	24.19	0	1
		3	3	24.20	24.17	24.09	0	1
		6	0	22.69	22.66	22.58	0-1	1
	16QAM	1	0	22.39	22.46	22.10	0-1	1
		1	3	22.26	22.31	22.09	0-1	1
		1	5	22.47	22.33	22.16	0-1	1
		3	0	22.25	22.25	22.09	0-1	2
		3	1	22.42	22.39	22.20	0-1	2
		3	3	22.27	22.29	22.13	0-1	2
		6	0	21.27	21.37	21.06	0-2	2
	64QAM	1	0	21.36	21.47	21.17	0-2	2
		1	3	21.37	21.34	21.11	0-2	2
		1	5	21.34	21.34	21.16	0-2	2
		3	0	21.21	21.25	21.07	0-2	3
		3	1	21.36	21.33	21.12	0-2	3
		3	3	21.29	21.25	21.14	0-2	3
		6	0	20.21	20.24	20.09	0-3	3
	256QAM	1	0	20.31	20.44	20.25	0-5	4
		1	3	20.18	20.20	20.17	0-5	4
		1	5	20.36	20.40	20.26	0-5	4
		3	0	20.24	20.25	20.10	0-5	4
		3	1	20.39	20.28	20.14	0-5	4
		3	3	20.32	20.38	20.17	0-5	4
		6	0	19.18	19.26	19.10	0-5	4

LTE Band 12 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23025 Ch. 700.5 MHz	23095 Ch. 707.5 MHz	23165 Ch. 714.5 MHz		
3 MHz	QPSK	1	0	24.11	24.19	24.04	0	0
		1	7	24.04	24.05	23.89	0	0
		1	14	24.17	24.16	24.04	0	0
		8	0	22.75	22.79	22.62	0-1	1
		8	3	22.71	22.70	22.55	0-1	1
		8	7	22.71	22.67	22.59	0-1	1
	16QAM	15	0	22.78	22.79	22.64	0-1	1
		1	0	22.37	22.35	22.26	0-1	1
		1	7	22.34	22.40	22.14	0-1	1
		1	14	22.28	22.32	22.13	0-1	1
		8	0	21.29	21.31	21.10	0-2	2
		8	3	21.20	21.23	21.09	0-2	2
	64QAM	8	7	21.29	21.24	21.12	0-2	2
		15	0	21.29	21.29	21.12	0-2	2
		1	0	21.30	21.38	21.21	0-2	2
		1	7	21.23	21.27	21.12	0-2	2
		1	14	21.41	21.34	21.19	0-2	2
		8	0	20.26	20.25	20.13	0-3	3
	256QAM	8	3	20.21	20.17	20.09	0-3	3
		8	7	20.32	20.21	20.09	0-3	3
		8	7	20.32	20.21	20.09	0-3	3
		15	0	20.29	20.24	20.13	0-3	3
		1	0	20.20	20.31	20.12	0-5	4
		1	7	20.13	20.28	20.15	0-5	4
	1	14	20.31	20.32	20.17	0-5	4	
	8	0	19.18	19.23	19.09	0-5	4	
	8	3	19.17	19.19	19.06	0-5	4	
	8	7	19.25	19.17	19.05	0-5	4	
	8	7	19.25	19.17	19.05	0-5	4	
	15	0	19.21	19.21	19.09	0-5	4	

LTE Band 12 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23035 Ch. 701.5 MHz	23095 Ch. 707.5 MHz	23155 Ch. 713.5 MHz		
5 MHz	QPSK	1	0	24.31	24.27	24.09	0	0
		1	12	24.23	24.03	23.91	0	0
		1	24	24.22	24.07	23.99	0	0
		12	0	22.79	22.74	22.65	0-1	1
		12	6	22.80	22.72	22.63	0-1	1
		12	11	22.79	22.74	22.66	0-1	1
	16QAM	25	0	22.75	22.72	22.62	0-1	1
		1	0	22.51	22.39	22.26	0-1	1
		1	12	22.43	22.32	22.23	0-1	1
		1	24	22.54	22.32	22.32	0-1	1
		12	0	21.30	21.33	21.14	0-2	2
		12	6	21.31	21.25	21.11	0-2	2
	64QAM	12	11	21.25	21.24	21.09	0-2	2
		25	0	21.26	21.26	21.10	0-2	2
		1	0	21.27	21.46	21.20	0-2	2
		1	12	21.26	21.20	21.05	0-2	2
		1	24	21.37	21.28	21.22	0-2	2
		12	0	20.30	20.33	20.15	0-3	3
	256QAM	12	6	20.29	20.26	20.14	0-3	3
		12	11	20.28	20.24	20.15	0-3	3
		25	0	20.26	20.26	20.11	0-3	3
		1	0	20.33	20.44	20.20	0-5	4
		1	12	20.31	20.36	20.14	0-5	4
		1	24	20.31	20.30	20.22	0-5	4
	12	0	19.25	19.26	19.10	0-5	4	
	12	6	19.25	19.27	19.05	0-5	4	
	12	11	19.28	19.23	19.09	0-5	4	
	25	0	19.26	19.29	19.13	0-5	4	

LTE Band 12 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23095 Ch. 707.5 MHz		
10 MHz	QPSK	1	0	24.29	0	0
		1	24	24.18	0	0
		1	49	24.13	0	0
		25	0	22.86	0-1	1
		25	12	22.75	0-1	1
		25	24	22.69	0-1	1
		50	0	22.78	0-1	1
	16QAM	1	0	22.56	0-1	1
		1	24	22.26	0-1	1
		1	49	22.37	0-1	1
		25	0	21.32	0-2	2
		25	12	21.26	0-2	2
		25	24	21.20	0-2	2
		50	0	21.28	0-2	2
	64QAM	1	0	21.57	0-2	2
		1	24	21.41	0-2	2
		1	49	21.33	0-2	2
		25	0	20.34	0-3	3
		25	12	20.25	0-3	3
		25	24	20.19	0-3	3
		50	0	20.30	0-3	3
	256QAM	1	0	20.40	0-5	4
		1	24	20.39	0-5	4
		1	49	20.42	0-5	4
25		0	19.34	0-5	4	
25		12	19.29	0-5	4	
25		24	19.22	0-5	4	
50		0	19.24	0-5	4	

[LTE Band 13 Conducted Power ]  
 LTE Band 13 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23205 Ch. 779.5 MHz	23230 Ch. 782 MHz	23255 Ch. 784.5 MHz		
5 MHz	QPSK	1	0	23.96	24.08	23.98	0	0
		1	12	23.88	24.00	23.84	0	0
		1	24	24.05	24.12	23.91	0	0
		12	0	22.64	22.65	22.55	0-1	1
		12	6	22.59	22.68	22.58	0-1	1
		12	11	22.65	22.71	22.56	0-1	1
	16QAM	25	0	22.57	22.66	22.53	0-1	1
		1	0	22.28	22.30	22.15	0-1	1
		1	12	22.14	22.30	22.01	0-1	1
		1	24	22.41	22.51	22.32	0-1	1
		12	0	21.13	21.20	21.09	0-2	2
		12	6	21.13	21.17	21.09	0-2	2
	64QAM	12	11	21.17	21.23	21.07	0-2	2
		25	0	21.11	21.18	21.01	0-2	2
		1	0	21.25	21.18	21.07	0-2	2
		1	12	21.18	21.09	21.11	0-2	2
		1	24	21.27	21.34	21.14	0-2	2
		12	0	20.10	20.12	20.04	0-3	3
	256QAM	12	6	20.13	20.21	20.07	0-3	3
		12	11	20.12	20.20	20.07	0-3	3
		25	0	20.13	20.19	19.98	0-3	3
		1	0	20.19	20.24	20.12	0-5	4
		1	12	20.14	20.18	20.13	0-5	4
		1	24	20.29	20.34	20.02	0-5	4
		12	0	19.07	19.06	18.96	0-5	4
12		6	19.10	19.09	19.00	0-5	4	
12		11	19.10	19.12	19.04	0-5	4	
25		0	19.11	19.17	19.01	0-5	4	

LTE Band 13 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23230 Ch. 782 MHz		
10 MHz	QPSK	1	0	23.97	0	0
		1	24	24.05	0	0
		1	49	24.11	0	0
		25	0	22.62	0-1	1
		25	12	22.65	0-1	1
		25	24	22.70	0-1	1
	50	0	22.68	0-1	1	
	16QAM	1	0	22.23	0-1	1
		1	24	22.24	0-1	1
		1	49	22.37	0-1	1
		25	0	21.09	0-2	2
		25	12	21.18	0-2	2
		25	24	21.23	0-2	2
	50	0	21.17	0-2	2	
	64QAM	1	0	21.32	0-2	2
		1	24	21.32	0-2	2
		1	49	21.31	0-2	2
		25	0	20.10	0-3	3
		25	12	20.14	0-3	3
		25	24	20.14	0-3	3
	50	0	20.12	0-3	3	
	256QAM	1	0	20.19	0-5	4
		1	24	20.32	0-5	4
		1	49	20.23	0-5	4
25		0	19.12	0-5	4	
25		12	19.18	0-5	4	
25		24	19.21	0-5	4	
50	0	19.14	0-5	4		

[ LTE Band 17 Conducted Power ]  
 LTE Band 17 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23790 Ch. 710 MHz		
5 MHz	QPSK	1	0	24.11	0	0
		1	12	24.01	0	0
		1	24	24.06	0	0
		12	0	22.75	0-1	1
		12	6	22.66	0-1	1
		12	11	22.74	0-1	1
	16QAM	25	0	22.70	0-1	1
		1	0	22.39	0-1	1
		1	12	22.26	0-1	1
		1	24	22.33	0-1	1
		12	0	21.28	0-2	2
		12	6	21.29	0-2	2
	64QAM	12	11	21.25	0-2	2
		25	0	21.21	0-2	2
		1	0	21.28	0-2	2
		1	12	21.20	0-2	2
		1	24	21.31	0-2	2
		12	0	20.27	0-3	3
	256QAM	12	6	20.20	0-3	3
		12	11	20.21	0-3	3
		25	0	20.16	0-3	3
		1	0	20.26	0-5	4
		1	12	20.26	0-5	4
		1	24	20.29	0-5	4
	256QAM	12	0	19.21	0-5	4
		12	6	19.18	0-5	4
		12	11	19.16	0-5	4
		25	0	19.17	0-5	4

LTE Band 17 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23790 Ch. 710 MHz		
10 MHz	QPSK	1	0	24.12	0	0
		1	24	24.06	0	0
		1	49	24.07	0	0
		25	0	22.82	0-1	1
		25	12	22.72	0-1	1
		25	24	22.74	0-1	1
	16QAM	50	0	22.81	0-1	1
		1	0	22.49	0-1	1
		1	24	22.30	0-1	1
		1	49	22.27	0-1	1
		25	0	21.28	0-2	2
		25	12	21.21	0-2	2
	64QAM	25	24	21.20	0-2	2
		50	0	21.25	0-2	2
		1	0	21.46	0-2	2
		1	24	21.29	0-2	2
		1	49	21.27	0-2	2
		25	0	20.22	0-3	3
	256QAM	25	12	20.18	0-3	3
		25	24	20.17	0-3	3
		50	0	20.26	0-3	3
		1	0	20.42	0-5	4
		1	24	20.27	0-5	4
		1	49	20.28	0-5	4
	25	0	19.26	0-5	4	
	25	12	19.16	0-5	4	
	25	24	19.15	0-5	4	
	50	0	19.17	0-5	4	

[ LTE Band 25 Conducted Power ]  
 LTE Band 25 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 MHz	26365 Ch. 1882.5 MHz	26683 Ch. 1914.3 MHz		
1.4 MHz	QPSK	1	0	22.49	22.11	22.32	0	0
		1	3	22.53	22.08	22.32	0	0
		1	5	22.47	22.12	22.31	0	0
		3	0	22.48	22.07	22.34	0	0
		3	1	22.59	22.19	22.43	0	0
		3	3	22.51	22.12	22.36	0	0
	16QAM	6	0	21.52	21.10	21.36	0-1	1
		1	0	21.82	21.34	21.48	0-1	1
		1	3	21.73	21.11	21.40	0-1	1
		1	5	21.81	21.27	21.48	0-1	1
		3	0	21.61	21.22	21.46	0-1	1
		3	1	21.71	21.32	21.48	0-1	1
	64QAM	3	3	21.62	21.20	21.49	0-1	1
		6	0	20.56	20.18	20.37	0-2	2
		1	0	20.66	20.32	20.41	0-2	2
		1	3	20.60	20.08	20.35	0-2	2
		1	5	20.69	20.21	20.46	0-2	2
		3	0	20.51	20.10	20.36	0-2	2
	256QAM	3	1	20.64	20.35	20.44	0-2	2
		3	3	20.62	20.20	20.31	0-2	2
		6	0	19.48	19.13	19.36	0-3	3
		1	0	17.58	17.18	17.51	0-5	5
		1	3	17.49	17.18	17.32	0-5	5
		1	5	17.61	17.15	17.60	0-5	5
		3	0	17.48	17.11	17.35	0-5	5
		3	1	17.49	17.12	17.41	0-5	5
		3	3	17.61	17.15	17.40	0-5	5
		6	0	17.48	17.12	17.38	0-5	5

LTE Band 25 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 MHz	26365 Ch. 1882.5 MHz	26675 Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	22.62	22.08	22.34	0	0
		1	7	22.61	22.04	22.27	0	0
		1	14	22.57	22.08	22.35	0	0
		8	0	21.58	21.20	21.42	0-1	1
		8	3	21.60	21.16	21.38	0-1	1
		8	7	21.58	21.17	21.40	0-1	1
	16QAM	15	0	21.61	21.19	21.45	0-1	1
		1	0	21.81	21.29	21.50	0-1	1
		1	7	21.68	21.24	21.41	0-1	1
		1	14	21.70	21.42	21.58	0-1	1
		8	0	20.63	20.27	20.51	0-2	2
		8	3	20.62	20.17	20.41	0-2	2
	64QAM	8	7	20.64	20.25	20.45	0-2	2
		15	0	20.61	20.15	20.43	0-2	2
		1	0	20.79	20.21	20.50	0-2	2
		1	7	20.55	20.21	20.45	0-2	2
		1	14	20.59	20.32	20.58	0-2	2
		8	0	19.54	19.14	19.43	0-3	3
	256QAM	8	3	19.57	19.14	19.43	0-3	3
		8	7	19.60	19.07	19.40	0-3	3
		15	0	19.60	19.19	19.45	0-3	3
		1	0	17.54	17.24	17.51	0-5	5
		1	7	17.58	17.10	17.42	0-5	5
		1	14	17.69	17.10	17.50	0-5	5
		8	0	17.52	17.11	17.37	0-5	5
		8	3	17.50	17.10	17.39	0-5	5
		8	7	17.54	17.15	17.36	0-5	5
15		0	17.53	17.09	17.39	0-5	5	

LTE Band 25 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 MHz	26365 Ch. 1882.5 MHz	26665 Ch. 1912.5 MHz		
5 MHz	QPSK	1	0	22.59	22.17	22.43	0	0
		1	12	22.51	22.04	22.34	0	0
		1	24	22.60	22.14	22.40	0	0
		12	0	21.65	21.20	21.51	0-1	1
		12	6	21.65	21.18	21.55	0-1	1
		12	11	21.66	21.21	21.52	0-1	1
	16QAM	25	0	21.70	21.20	21.47	0-1	1
		1	0	21.76	21.30	21.60	0-1	1
		1	12	21.83	21.31	21.63	0-1	1
		1	24	21.85	21.37	21.61	0-1	1
		12	0	20.68	20.27	20.55	0-2	2
		12	6	20.68	20.20	20.52	0-2	2
	64QAM	12	11	20.62	20.17	20.49	0-2	2
		25	0	20.67	20.24	20.53	0-2	2
		1	0	20.72	20.28	20.59	0-2	2
		1	12	20.61	20.24	20.54	0-2	2
		1	24	20.73	20.33	20.68	0-2	2
		12	0	19.65	19.17	19.51	0-3	3
	256QAM	12	6	19.64	19.17	19.46	0-3	3
		12	11	19.63	19.13	19.48	0-3	3
		25	0	19.57	19.12	19.50	0-3	3
		1	0	17.55	17.40	17.60	0-5	5
		1	12	17.50	17.17	17.48	0-5	5
		1	24	17.49	17.23	17.47	0-5	5
		12	0	17.58	17.13	17.41	0-5	5
		12	6	17.54	17.12	17.45	0-5	5
		12	11	17.51	17.17	17.49	0-5	5
25		0	17.55	17.18	17.50	0-5	5	

LTE Band 25 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 MHz	26365 Ch. 1882.5 MHz	26640 Ch. 1910 MHz		
10 MHz	QPSK	1	0	22.51	22.16	22.64	0	0
		1	24	22.54	22.11	22.57	0	0
		1	49	22.59	22.19	22.62	0	0
		25	0	21.63	21.20	21.68	0-1	1
		25	12	21.64	21.18	21.64	0-1	1
		25	24	21.63	21.21	21.65	0-1	1
	16QAM	50	0	21.60	21.18	21.66	0-1	1
		1	0	21.81	21.38	21.86	0-1	1
		1	24	21.74	21.23	21.74	0-1	1
		1	49	21.77	21.40	21.70	0-1	1
		25	0	20.65	20.21	20.67	0-2	2
		25	12	20.66	20.20	20.63	0-2	2
	64QAM	25	24	20.64	20.19	20.66	0-2	2
		50	0	20.67	20.21	20.67	0-2	2
		1	0	20.73	20.36	20.82	0-2	2
		1	24	20.65	20.26	20.73	0-2	2
		1	49	20.75	20.29	20.75	0-2	2
		25	0	19.60	19.15	19.64	0-3	3
	256QAM	25	12	19.53	19.14	19.59	0-3	3
		25	24	19.57	19.08	19.58	0-3	3
		50	0	19.60	19.16	19.65	0-3	3
		1	0	17.62	17.22	17.80	0-5	5
		1	24	17.62	17.18	17.73	0-5	5
		1	49	17.61	17.24	17.79	0-5	5
	25	0	17.54	17.16	17.64	0-5	5	
	25	12	17.57	17.18	17.62	0-5	5	
	25	24	17.59	17.14	17.62	0-5	5	
	50	0	17.57	17.14	17.68	0-5	5	

LTE Band 25 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 MHz	26365 Ch. 1882.5 MHz	26615 Ch. 1907.5 MHz		
15 MHz	QPSK	1	0	22.52	22.21	22.63	0	0
		1	36	22.37	22.01	22.55	0	0
		1	74	22.57	22.13	22.60	0	0
		36	0	21.56	21.15	21.66	0-1	1
		36	18	21.58	21.14	21.64	0-1	1
		36	39	21.55	21.12	21.64	0-1	1
		75	0	21.56	21.14	21.67	0-1	1
	16QAM	1	0	21.65	21.32	21.79	0-1	1
		1	36	21.51	21.17	21.52	0-1	1
		1	74	21.73	21.29	21.76	0-1	1
		36	0	20.56	20.18	20.65	0-2	2
		36	18	20.56	20.17	20.65	0-2	2
		36	39	20.57	20.15	20.67	0-2	2
		75	0	20.53	20.11	20.67	0-2	2
	64QAM	1	0	20.75	20.28	20.70	0-2	2
		1	36	20.60	20.25	20.64	0-2	2
		1	74	20.64	20.32	20.79	0-2	2
		36	0	19.58	19.18	19.66	0-3	3
		36	18	19.54	19.12	19.66	0-3	3
		36	39	19.55	19.10	19.67	0-3	3
		75	0	19.50	19.13	19.63	0-3	3
	256QAM	1	0	17.70	17.14	17.75	0-5	5
		1	36	17.44	17.23	17.70	0-5	5
		1	74	17.56	17.24	17.66	0-5	5
36		0	17.52	17.17	17.63	0-5	5	
36		18	17.56	17.16	17.59	0-5	5	
36		39	17.46	17.14	17.58	0-5	5	
75		0	17.54	17.12	17.63	0-5	5	

LTE Band 25 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	22.44	22.20	22.70	0	0
		1	49	22.40	22.12	22.51	0	0
		1	99	22.53	22.17	22.60	0	0
		50	0	21.50	21.14	21.66	0-1	1
		50	25	21.47	21.11	21.62	0-1	1
		50	49	21.49	21.11	21.60	0-1	1
	16QAM	100	0	21.46	21.17	21.66	0-1	1
		1	0	21.68	21.48	21.84	0-1	1
		1	49	21.60	21.23	21.71	0-1	1
		1	99	21.60	21.37	21.80	0-1	1
		50	0	20.50	20.13	20.62	0-2	2
		50	25	20.48	20.15	20.56	0-2	2
	64QAM	50	49	20.49	20.16	20.60	0-2	2
		100	0	20.47	20.14	20.65	0-2	2
		1	0	20.66	20.36	20.79	0-2	2
		1	49	20.57	20.39	20.74	0-2	2
		1	99	20.61	20.45	20.77	0-2	2
		50	0	19.50	19.19	19.62	0-3	3
	256QAM	50	25	19.48	19.13	19.58	0-3	3
		50	49	19.47	19.15	19.60	0-3	3
		100	0	19.48	19.13	19.63	0-3	3
		1	0	17.59	17.21	17.79	0-5	5
		1	49	17.43	17.19	17.65	0-5	5
		1	99	17.57	17.26	17.74	0-5	5
		50	0	17.47	17.20	17.60	0-5	5
		50	25	17.46	17.13	17.60	0-5	5
		50	49	17.48	17.16	17.58	0-5	5
		100	0	17.45	17.15	17.62	0-5	5

[ LTE Band 26 Conducted Power ]  
 LTE Band 26 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26697 Ch. 814.7 MHz	26865 Ch. 831.5 MHz	27033 Ch. 848.3 MHz		
1.4 MHz	QPSK	1	0	23.88	24.04	23.94	0	0
		1	3	23.88	23.99	23.99	0	0
		1	5	23.90	24.01	23.96	0	0
		3	0	23.85	24.01	23.94	0	0
		3	1	23.96	24.15	24.09	0	0
		3	3	23.91	24.04	23.99	0	0
	16QAM	6	0	22.40	22.51	22.54	0-1	1
		1	0	22.15	22.29	22.23	0-1	1
		1	3	21.99	22.15	22.13	0-1	1
		1	5	22.16	22.31	22.18	0-1	1
		3	0	21.98	22.09	22.09	0-1	1
		3	1	22.01	22.29	22.23	0-1	1
	64QAM	3	3	22.05	22.09	22.22	0-1	1
		6	0	21.02	21.09	21.05	0-2	2
		1	0	21.08	21.11	21.11	0-2	2
		1	3	20.94	21.02	21.03	0-2	2
		1	5	21.06	21.13	21.15	0-2	2
		3	0	20.86	20.96	20.95	0-2	2
	256QAM	3	1	21.09	21.13	21.09	0-2	2
		3	3	21.00	21.03	21.07	0-2	2
		6	0	19.99	20.05	20.00	0-3	3
		1	0	20.06	20.17	20.07	0-5	5
		1	3	19.99	20.03	20.08	0-5	5
		1	5	20.09	20.11	20.12	0-5	5
		3	0	19.88	20.02	20.00	0-5	5
		3	1	20.05	20.15	20.16	0-5	5
		3	3	20.03	20.13	20.14	0-5	5
		6	0	18.95	19.06	19.02	0-5	5

LTE Band 26 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26705 Ch. 815.5 MHz	26865 Ch. 831.5 MHz	27025 Ch. 847.5 MHz		
3 MHz	QPSK	1	0	23.85	24.03	23.98	0	0
		1	7	23.82	23.90	23.88	0	0
		1	14	23.96	24.01	23.99	0	0
		8	0	22.47	22.62	22.54	0-1	1
		8	3	22.49	22.53	22.49	0-1	1
		8	7	22.49	22.61	22.57	0-1	1
	16QAM	15	0	22.53	22.62	22.59	0-1	1
		1	0	22.25	22.26	22.22	0-1	1
		1	7	22.03	22.22	22.33	0-1	1
		1	14	22.07	22.28	22.09	0-1	1
		8	0	21.03	21.17	21.16	0-2	2
		8	3	21.04	21.11	21.07	0-2	2
	64QAM	8	7	20.98	21.23	21.14	0-2	2
		15	0	21.07	21.13	21.11	0-2	2
		1	0	21.10	21.25	21.21	0-2	2
		1	7	21.04	21.16	21.07	0-2	2
		1	14	21.21	21.16	21.15	0-2	2
		8	0	19.97	20.14	20.05	0-3	3
	256QAM	8	3	20.00	20.10	20.02	0-3	3
		8	7	20.02	20.10	20.12	0-3	3
		15	0	20.04	20.13	20.14	0-3	3
		1	0	20.15	20.25	20.13	0-5	5
		1	7	19.99	20.07	20.04	0-5	5
		1	14	20.18	20.11	20.19	0-5	5
		8	0	18.97	19.06	19.03	0-5	5
		8	3	18.97	19.04	19.04	0-5	5
		8	7	18.98	19.07	19.05	0-5	5
	15	0	18.96	19.06	19.05	0-5	5	

LTE Band 26 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26715 Ch. 816.5 MHz	26865 Ch. 831.5 MHz	27015 Ch. 846.5 MHz		
5 MHz	QPSK	1	0	24.00	24.13	23.94	0	0
		1	12	23.83	24.00	23.90	0	0
		1	24	23.94	24.06	24.01	0	0
		12	0	22.54	22.66	22.60	0-1	1
		12	6	22.56	22.65	22.58	0-1	1
		12	11	22.56	22.62	22.60	0-1	1
	16QAM	25	0	22.52	22.62	22.61	0-1	1
		1	0	22.25	22.47	22.24	0-1	1
		1	12	22.24	22.29	22.09	0-1	1
		1	24	22.29	22.38	22.31	0-1	1
		12	0	21.05	21.18	21.09	0-2	2
		12	6	21.01	21.14	21.11	0-2	2
	64QAM	12	11	21.07	21.15	21.09	0-2	2
		25	0	21.05	21.14	21.06	0-2	2
		1	0	21.12	21.21	21.09	0-2	2
		1	12	21.16	21.15	21.05	0-2	2
		1	24	21.27	21.15	21.17	0-2	2
		12	0	20.05	20.16	20.12	0-3	3
	256QAM	12	6	20.01	20.19	20.10	0-3	3
		12	11	20.04	20.15	20.09	0-3	3
		25	0	20.07	20.18	20.11	0-3	3
		1	0	20.09	20.29	20.26	0-5	5
		1	12	20.15	20.16	20.11	0-5	5
		1	24	20.15	20.15	20.10	0-5	5
		12	0	19.00	19.09	19.02	0-5	5
		12	6	19.01	19.09	19.05	0-5	5
		12	11	19.01	19.07	19.05	0-5	5
25		0	19.06	19.15	19.12	0-5	5	

LTE Band 26 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26750 Ch. 820 MHz	26865 Ch. 831.5 MHz	26990 Ch. 844 MHz		
10 MHz	QPSK	1	0	24.01	24.11	23.97	0	0
		1	24	24.03	24.10	23.95	0	0
		1	49	24.03	24.03	24.12	0	0
		25	0	22.57	22.67	22.58	0-1	1
		25	12	22.56	22.61	22.58	0-1	1
		25	24	22.55	22.58	22.56	0-1	1
	16QAM	50	0	22.56	22.61	22.54	0-1	1
		1	0	22.24	22.39	22.30	0-1	1
		1	24	21.98	22.28	22.25	0-1	1
		1	49	22.24	22.18	22.31	0-1	1
		25	0	21.09	21.22	21.08	0-2	2
		25	12	21.08	21.16	21.16	0-2	2
	64QAM	25	24	21.08	21.17	21.11	0-2	2
		50	0	21.08	21.14	21.05	0-2	2
		1	0	21.24	21.34	21.11	0-2	2
		1	24	21.19	21.35	21.21	0-2	2
		1	49	21.28	21.18	21.20	0-2	2
		25	0	20.07	20.18	20.06	0-3	3
	256QAM	25	12	20.07	20.16	20.01	0-3	3
		25	24	20.09	20.09	20.11	0-3	3
		50	0	20.03	20.09	20.01	0-3	3
		1	0	20.21	20.33	20.19	0-5	5
		1	24	20.09	20.26	20.28	0-5	5
		1	49	20.17	20.27	20.33	0-5	5
	25	0	19.08	19.22	19.05	0-5	5	
	25	12	19.06	19.16	19.06	0-5	5	
	25	24	19.10	19.11	19.09	0-5	5	
	50	0	19.06	19.10	19.01	0-5	5	

LTE Band 26 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					26865 Ch. 831.5 MHz			
15 MHz	QPSK	1	0		24.15		0	0
		1	36		23.91		0	0
		1	74		24.01		0	0
		36	0		22.64		0-1	1
		36	18		22.62		0-1	1
		36	39		22.52		0-1	1
		75	0		22.59		0-1	1
	16QAM	1	0		22.44		0-1	1
		1	36		22.30		0-1	1
		1	74		22.16		0-1	1
		36	0		21.17		0-2	2
		36	18		21.15		0-2	2
		36	39		21.06		0-2	2
		75	0		21.14		0-2	2
	64QAM	1	0		21.38		0-2	2
		1	36		21.25		0-2	2
		1	74		21.16		0-2	2
		36	0		20.18		0-3	3
		36	18		20.14		0-3	3
		36	39		20.06		0-3	3
		75	0		20.14		0-3	3
	256QAM	1	0		20.37		0-5	5
		1	36		20.21		0-5	5
		1	74		20.06		0-5	5
36		0		19.19		0-5	5	
36		18		19.15		0-5	5	
36		39		19.04		0-5	5	
75		0		19.12		0-5	5	

[ LTE Band 41 Conducted Power ] - Power Class 3  
 LTE Band 41 5 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
5 MHz	QPSK	1	0	24.11	23.95	23.86	23.66	24.01	0	0
		1	12	24.13	23.97	23.87	23.70	24.03	0	0
		1	24	24.14	23.98	23.88	23.74	24.02	0	0
		12	0	23.24	23.01	22.93	22.77	23.16	0-1	1
		12	6	23.21	22.99	22.96	22.73	23.18	0-1	1
		12	11	23.22	23.00	22.95	22.74	23.18	0-1	1
		25	0	22.97	23.00	22.91	22.77	23.13	0-1	1
	16QAM	1	0	22.91	23.00	22.81	22.74	22.99	0-1	1
		1	12	22.81	22.90	22.71	22.73	22.87	0-1	1
		1	24	22.84	22.91	22.80	22.71	22.98	0-1	1
		12	0	21.95	22.00	21.93	21.76	22.18	0-2	2
		12	6	21.95	21.95	21.94	21.71	22.17	0-2	2
		12	11	21.98	22.00	21.94	21.72	22.19	0-2	2
		25	0	21.93	21.99	21.89	21.73	22.14	0-2	2
	64QAM	1	0	22.09	22.10	22.08	21.88	22.31	0-2	2
		1	12	21.94	22.00	22.01	21.84	22.16	0-2	2
		1	24	22.02	22.06	22.07	21.85	22.23	0-2	2
		12	0	20.97	21.02	20.95	20.77	21.21	0-3	3
		12	6	20.96	20.95	20.93	20.73	21.23	0-3	3
		12	11	20.99	21.01	20.96	20.76	21.23	0-3	3
		25	0	20.93	20.97	20.90	20.76	21.13	0-3	3
	256QAM	1	0	18.91	18.95	18.75	18.60	19.07	0-5	5
		1	12	18.79	18.89	18.70	18.56	19.00	0-5	5
		1	24	18.84	18.95	18.70	18.57	19.03	0-5	5
		12	0	18.98	19.01	18.93	18.76	19.15	0-5	5
		12	6	19.00	18.98	18.93	18.73	19.17	0-5	5
		12	11	18.99	19.01	18.93	18.73	19.16	0-5	5
		25	0	18.97	19.00	18.93	18.80	19.18	0-5	5

LTE Band 41 10 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
10 MHz	QPSK	1	0	24.02	23.93	23.87	23.80	24.06	0	0
		1	24	23.92	23.82	23.73	23.67	23.93	0	0
		1	49	23.97	23.85	23.73	23.70	23.85	0	0
		25	0	23.05	22.95	22.84	22.81	23.12	0-1	1
		25	12	23.02	22.91	22.83	22.81	23.10	0-1	1
		25	24	23.03	22.92	22.80	22.78	23.10	0-1	1
		50	0	23.06	22.96	22.87	22.84	23.16	0-1	1
	16QAM	1	0	22.98	23.07	22.85	22.76	23.08	0-1	1
		1	24	22.86	22.94	22.69	22.65	23.02	0-1	1
		1	49	22.99	23.03	22.77	22.71	23.15	0-1	1
		25	0	22.10	21.96	21.88	21.79	22.15	0-2	2
		25	12	22.05	21.91	21.86	21.78	22.13	0-2	2
		25	24	22.07	21.93	21.82	21.76	22.13	0-2	2
		50	0	22.06	21.96	21.87	21.79	22.15	0-2	2
	64QAM	1	0	22.27	22.10	22.03	21.95	22.30	0-2	2
		1	24	22.17	22.02	21.89	21.87	22.21	0-2	2
		1	49	22.23	22.09	21.96	21.89	22.24	0-2	2
		25	0	21.07	20.97	20.87	20.80	21.18	0-3	3
		25	12	21.02	20.94	20.86	20.77	21.16	0-3	3
		25	24	21.05	20.95	20.85	20.76	21.16	0-3	3
		50	0	21.08	20.99	20.89	20.85	21.20	0-3	3
	256QAM	1	0	18.96	18.85	18.80	18.67	19.09	0-5	5
		1	24	18.87	18.76	18.68	18.57	18.99	0-5	5
		1	49	18.90	18.80	18.71	18.62	19.05	0-5	5
		25	0	19.11	19.00	18.90	18.83	19.21	0-5	5
		25	12	19.05	18.96	18.85	18.79	19.17	0-5	5
		25	24	19.07	18.99	18.85	18.80	19.19	0-5	5
		50	0	19.11	19.01	18.93	18.89	19.23	0-5	5

LTE Band 41 15 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
15 MHz	QPSK	1	0	23.92	23.93	23.82	23.72	24.05	0	0
		1	36	23.90	23.87	23.72	23.71	24.02	0	0
		1	74	23.91	23.88	23.71	23.70	24.00	0	0
		36	0	23.03	22.96	22.86	22.82	23.18	0-1	1
		36	18	23.00	22.95	22.82	22.79	23.15	0-1	1
		36	39	22.99	22.93	22.79	22.78	23.12	0-1	1
		75	0	22.99	22.95	22.82	22.82	23.14	0-1	1
	16QAM	1	0	23.06	22.97	22.82	22.76	23.14	0-1	1
		1	36	22.95	22.74	22.62	22.62	22.96	0-1	1
		1	74	22.95	22.83	22.68	22.62	22.99	0-1	1
		36	0	22.04	21.92	21.86	21.78	22.19	0-2	2
		36	18	22.01	21.91	21.81	21.74	22.16	0-2	2
		36	39	21.99	21.91	21.78	21.73	22.12	0-2	2
		75	0	22.04	21.93	21.80	21.79	22.16	0-2	2
	64QAM	1	0	22.09	22.02	22.08	21.95	22.25	0-2	2
		1	36	21.93	21.86	21.81	21.82	22.06	0-2	2
		1	74	21.96	21.95	21.87	21.82	22.14	0-2	2
		36	0	21.08	20.96	20.85	20.82	21.20	0-3	3
		36	18	21.03	20.93	20.81	20.75	21.19	0-3	3
		36	39	21.02	20.92	20.78	20.75	21.16	0-3	3
		75	0	21.04	20.93	20.84	20.82	21.18	0-3	3
	256QAM	1	0	18.94	18.91	18.87	18.76	19.19	0-5	5
		1	36	18.82	18.76	18.60	18.68	18.99	0-5	5
		1	74	18.82	18.87	18.73	18.67	19.11	0-5	5
		36	0	19.10	18.98	18.90	18.86	19.22	0-5	5
		36	18	19.06	18.96	18.85	18.81	19.21	0-5	5
		36	39	19.05	18.96	18.84	18.81	19.19	0-5	5
		75	0	19.04	18.94	18.82	18.80	19.19	0-5	5

LTE Band 41 20 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	23.96	23.92	23.87	23.81	24.09	0	0
		1	49	23.82	23.76	23.64	23.64	23.89	0	0
		1	99	23.87	23.80	23.62	23.66	23.96	0	0
		50	0	23.07	22.97	22.87	22.87	23.25	0-1	1
		50	25	23.01	22.91	22.79	22.83	23.21	0-1	1
		50	49	23.00	22.93	22.77	22.82	23.20	0-1	1
	16QAM	100	0	23.00	22.93	22.81	22.82	23.18	0-1	1
		1	0	23.10	23.08	22.85	22.76	23.13	0-1	1
		1	49	22.89	22.87	22.66	22.57	22.96	0-1	1
		1	99	22.93	22.93	22.71	22.62	23.04	0-1	1
		50	0	22.06	21.99	21.88	21.86	22.25	0-2	2
		50	25	22.01	21.94	21.80	21.80	22.20	0-2	2
	64QAM	50	49	22.01	21.95	21.76	21.78	22.19	0-2	2
		100	0	22.08	21.99	21.86	21.85	22.23	0-2	2
		1	0	22.35	22.15	22.12	21.96	22.38	0-2	2
		1	49	22.18	22.00	21.92	21.80	22.27	0-2	2
		1	99	22.21	22.03	21.91	21.94	22.20	0-2	2
		50	0	21.10	21.00	20.92	20.90	21.26	0-3	3
	256QAM	50	25	21.04	20.95	20.85	20.86	21.22	0-3	3
		50	49	21.03	20.97	20.82	20.84	21.21	0-3	3
		100	0	21.02	20.95	20.82	20.83	21.21	0-3	3
		1	0	19.11	18.92	18.93	18.72	19.15	0-5	5
		1	49	18.89	18.75	18.66	18.53	18.98	0-5	5
		1	99	18.94	18.83	18.70	18.64	19.01	0-5	5
	50	0	19.12	19.05	18.97	18.93	19.31	0-5	5	
	50	25	19.08	19.00	18.89	18.89	19.26	0-5	5	
	50	49	19.06	19.01	18.85	18.85	19.25	0-5	5	
	100	0	19.01	18.94	18.83	18.82	19.21	0-5	5	

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[ LTE Band 41 Conducted Power ] - Power Class 2  
 LTE Band 41 5 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
5 MHz	QPSK	1	0	25.05	25.02	24.93	24.93	25.16	0	0
		1	12	25.05	24.99	24.84	24.91	25.11	0	0
		1	24	25.05	25.00	24.89	24.90	25.13	0	0
		12	0	24.10	24.04	23.95	23.93	24.27	0-1	1
		12	6	24.06	24.06	23.95	23.93	24.28	0-1	1
		12	11	24.06	24.06	23.94	23.93	24.25	0-1	1
		25	0	24.11	24.04	23.92	23.93	24.25	0-1	1
	16QAM	1	0	24.46	24.35	24.08	23.93	24.46	0-1	1
		1	12	24.43	24.26	23.94	23.66	24.38	0-1	1
		1	24	24.43	24.36	24.05	23.69	24.43	0-1	1
		12	0	23.24	23.08	23.02	22.95	23.23	0-2	2
		12	6	23.20	23.05	23.00	22.89	23.25	0-2	2
		12	11	23.20	23.05	22.96	22.87	23.21	0-2	2
		25	0	23.14	22.98	22.97	22.91	23.32	0-2	2
	64QAM	1	0	23.40	23.37	23.43	23.26	23.54	0-2	2
		1	12	23.45	23.36	23.40	23.14	23.52	0-2	2
		1	24	23.41	23.43	23.45	23.29	23.56	0-2	2
		12	0	22.20	22.06	21.85	21.86	22.43	0-3	3
		12	6	22.01	22.07	21.98	21.83	22.41	0-3	3
		12	11	22.02	22.06	22.00	21.84	22.39	0-3	3
		25	0	22.15	22.06	21.90	21.87	22.21	0-3	3
	256QAM	1	0	20.10	20.16	19.88	19.52	20.09	0-5	5
		1	12	20.07	20.14	19.81	19.61	20.03	0-5	5
		1	24	20.02	20.13	19.88	19.55	20.07	0-5	5
		12	0	20.17	20.12	19.98	19.92	20.33	0-5	5
		12	6	20.15	20.14	19.95	19.90	20.33	0-5	5
		12	11	20.15	20.10	19.96	19.92	20.31	0-5	5
		25	0	20.23	20.09	19.96	19.96	20.33	0-5	5

LTE Band 41 10 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
10 MHz	QPSK	1	0	25.15	25.11	24.99	24.84	25.15	0	0
		1	24	25.11	25.04	24.95	24.80	25.07	0	0
		1	49	25.10	25.04	24.90	24.85	25.06	0	0
		25	0	24.18	24.09	24.00	23.90	24.25	0-1	1
		25	12	24.15	24.06	23.96	23.87	24.21	0-1	1
		25	24	24.13	24.06	23.92	23.87	24.20	0-1	1
		50	0	24.09	24.07	23.93	23.90	24.21	0-1	1
	16QAM	1	0	24.25	24.31	24.37	24.37	24.56	0-1	1
		1	24	24.10	24.47	24.25	24.13	24.37	0-1	1
		1	49	24.16	24.50	24.24	24.28	24.43	0-1	1
		25	0	23.22	23.17	23.07	22.97	23.29	0-2	2
		25	12	23.23	23.14	22.97	22.92	23.25	0-2	2
		25	24	23.20	23.14	22.92	22.92	23.25	0-2	2
		50	0	23.15	23.10	22.94	22.86	23.20	0-2	2
	64QAM	1	0	23.44	23.50	23.43	22.78	23.65	0-2	2
		1	24	23.68	23.42	23.37	23.20	23.57	0-2	2
		1	49	23.65	23.42	23.30	23.16	23.55	0-2	2
		25	0	22.23	22.10	22.04	21.93	22.32	0-3	3
		25	12	22.21	22.12	22.01	21.89	22.27	0-3	3
		25	24	22.19	22.12	21.99	21.87	22.27	0-3	3
		50	0	22.16	22.15	22.01	21.90	22.26	0-3	3
	256QAM	1	0	19.86	19.93	20.14	19.69	20.28	0-5	5
		1	24	19.75	19.85	20.08	19.62	20.22	0-5	5
		1	49	19.77	19.88	20.07	19.64	20.24	0-5	5
		25	0	20.25	20.15	20.05	19.94	20.31	0-5	5
		25	12	20.23	20.13	20.03	19.91	20.29	0-5	5
		25	24	20.22	20.12	19.99	19.90	20.31	0-5	5
		50	0	20.20	20.19	20.03	19.95	20.30	0-5	5

LTE Band 41 15 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
15 MHz	QPSK	1	0	25.09	25.01	24.96	24.91	25.15	0	0
		1	36	25.08	24.94	24.81	24.84	25.05	0	0
		1	74	25.04	24.93	24.82	24.82	25.05	0	0
		36	0	24.19	24.04	23.96	23.92	24.23	0-1	1
		36	18	24.14	23.99	23.93	23.88	24.20	0-1	1
		36	39	24.14	23.99	23.86	23.86	24.19	0-1	1
		75	0	24.16	24.02	23.91	23.89	24.22	0-1	1
	16QAM	1	0	24.17	24.38	24.30	23.85	24.43	0-1	1
		1	36	24.12	24.23	24.14	23.59	24.22	0-1	1
		1	74	24.05	24.32	24.15	23.58	24.31	0-1	1
		36	0	23.15	23.01	22.92	22.96	23.24	0-2	2
		36	18	23.11	22.99	22.89	22.85	23.22	0-2	2
		36	39	23.09	22.98	22.82	22.83	23.20	0-2	2
		75	0	23.18	23.05	22.92	22.87	23.25	0-2	2
	64QAM	1	0	23.38	23.44	23.35	23.25	23.55	0-2	2
		1	36	23.40	23.33	23.15	23.15	23.34	0-2	2
		1	74	23.44	23.39	23.22	23.14	23.36	0-2	2
		36	0	22.18	22.10	21.98	21.91	22.26	0-3	3
		36	18	22.11	22.07	21.96	21.87	22.23	0-3	3
		36	39	22.09	22.07	21.90	21.84	22.21	0-3	3
		75	0	22.16	22.07	21.94	21.86	22.24	0-3	3
	256QAM	1	0	19.75	19.70	20.15	19.81	19.95	0-5	5
		1	36	19.70	20.17	20.00	19.74	19.83	0-5	5
		1	74	19.66	20.20	20.03	19.70	19.89	0-5	5
		36	0	20.15	20.09	19.96	19.93	20.32	0-5	5
		36	18	20.11	20.06	19.96	19.89	20.30	0-5	5
		36	39	20.10	20.06	19.90	19.88	20.28	0-5	5
		75	0	20.15	20.07	19.95	19.88	20.23	0-5	5

LTE Band 41 20 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	25.16	25.15	25.06	24.94	25.17	0	0
		1	49	25.05	24.99	24.88	24.79	25.02	0	0
		1	99	25.07	24.99	24.81	24.76	25.02	0	0
		50	0	24.15	24.09	23.98	23.91	24.22	0-1	1
		50	25	24.08	24.03	23.89	23.85	24.17	0-1	1
		50	49	24.08	24.04	23.86	23.83	24.16	0-1	1
	100	0	24.15	24.07	23.96	23.90	24.24	0-1	1	
	16QAM	1	0	24.32	24.36	24.47	23.95	24.54	0-1	1
		1	49	24.09	24.09	24.23	23.63	24.34	0-1	1
		1	99	24.17	24.12	24.19	23.76	24.33	0-1	1
		50	0	23.15	23.11	22.99	22.90	23.25	0-2	2
		50	25	23.14	23.07	22.90	22.85	23.16	0-2	2
		50	49	23.12	23.05	22.86	22.83	23.13	0-2	2
	100	0	23.21	23.14	23.01	22.93	23.25	0-2	2	
	64QAM	1	0	23.61	23.69	23.45	23.29	23.65	0-2	2
		1	49	23.68	23.56	23.34	23.04	23.48	0-2	2
		1	99	23.66	23.56	23.27	22.99	23.42	0-2	2
		50	0	22.23	22.14	22.05	21.93	22.28	0-3	3
		50	25	22.16	22.10	21.98	21.87	22.25	0-3	3
		50	49	22.14	22.08	21.95	21.85	22.21	0-3	3
	100	0	22.19	22.11	21.98	21.90	22.22	0-3	3	
	256QAM	1	0	19.93	19.96	20.27	19.97	20.46	0-5	5
		1	49	19.79	19.84	20.15	19.77	20.36	0-5	5
		1	99	19.83	19.88	20.10	19.82	20.39	0-5	5
50		0	20.26	20.17	20.10	19.96	20.32	0-5	5	
50		25	20.20	20.16	20.02	19.90	20.27	0-5	5	
50		49	20.18	20.13	19.97	19.86	20.23	0-5	5	
100	0	20.17	20.10	19.98	19.88	20.21	0-5	5		

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979Ch. 1710.7 MHz	132322 Ch. 1745 MHz	132665 Ch. 1779.3 MHz		
1.4 MHz	QPSK	1	0	23.12	22.48	22.79	0	0
		1	3	23.13	22.52	22.81	0	0
		1	5	23.15	22.49	22.84	0	0
		3	0	23.13	22.50	22.79	0	0
		3	1	23.26	22.61	22.94	0	0
		3	3	23.19	22.55	22.84	0	0
		6	0	22.18	21.53	21.83	0-1	1
	16QAM	1	0	22.29	21.64	21.95	0-1	1
		1	3	22.28	21.59	21.95	0-1	1
		1	5	22.36	21.73	22.05	0-1	1
		3	0	22.31	21.59	21.86	0-1	1
		3	1	22.49	21.69	22.08	0-1	1
		3	3	22.34	21.71	21.88	0-1	1
		6	0	21.27	20.63	20.96	0-2	2
	64QAM	1	0	21.31	20.69	21.04	0-2	2
		1	3	21.29	20.67	20.97	0-2	2
		1	5	21.30	20.73	21.04	0-2	2
		3	0	21.21	20.50	20.92	0-2	2
		3	1	21.42	20.67	21.05	0-2	2
		3	3	21.33	20.60	21.01	0-2	2
		6	0	20.20	19.52	19.94	0-3	3
	256QAM	1	0	18.31	17.58	17.89	0-5	5
		1	3	18.26	17.51	17.82	0-5	5
		1	5	18.27	17.66	17.90	0-5	5
		3	0	18.22	17.48	17.77	0-5	5
		3	1	18.28	17.58	17.93	0-5	5
		3	3	18.24	17.60	17.90	0-5	5
		6	0	18.22	17.39	17.75	0-5	5

LTE Band 66 \_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 MHz	132322 Ch. 1745 MHz	132657 Ch. 1778.5 MHz		
3 MHz	QPSK	1	0	23.07	22.52	22.81	0	0
		1	7	23.11	22.48	22.73	0	0
		1	14	23.21	22.56	22.86	0	0
		8	0	22.26	21.60	21.91	0-1	1
		8	3	22.27	21.62	21.87	0-1	1
		8	7	22.31	21.62	21.93	0-1	1
		15	0	22.32	21.59	21.90	0-1	1
	16QAM	1	0	22.31	21.76	22.11	0-1	1
		1	7	22.29	21.77	22.09	0-1	1
		1	14	22.34	21.76	22.04	0-1	1
		8	0	21.36	20.68	21.03	0-2	2
		8	3	21.29	20.62	20.99	0-2	2
		8	7	21.34	20.68	21.05	0-2	2
		15	0	21.33	20.61	21.00	0-2	2
	64QAM	1	0	21.35	20.68	21.07	0-2	2
		1	7	21.24	20.68	21.03	0-2	2
		1	14	21.30	20.65	21.08	0-2	2
		8	0	20.26	19.55	19.95	0-3	3
		8	3	20.25	19.63	19.91	0-3	3
		8	7	20.32	19.63	20.02	0-3	3
		15	0	20.34	19.61	20.00	0-3	3
	256QAM	1	0	18.22	17.67	17.86	0-5	5
		1	7	18.19	17.55	17.95	0-5	5
		1	14	18.30	17.57	17.94	0-5	5
		8	0	18.26	17.51	17.84	0-5	5
		8	3	18.26	17.50	17.81	0-5	5
		8	7	18.23	17.52	17.82	0-5	5
		15	0	18.25	17.50	17.83	0-5	5

LTE Band 66 \_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 MHz	132322Ch. 1745 MHz	132647 Ch. 1777.5 MHz		
5 MHz	QPSK	1	0	23.20	22.53	22.84	0	0
		1	12	23.12	22.49	22.76	0	0
		1	24	23.19	22.57	22.83	0	0
		12	0	22.31	21.65	21.94	0-1	1
		12	6	22.30	21.69	21.92	0-1	1
		12	11	22.30	21.69	21.93	0-1	1
		25	0	22.29	21.68	21.91	0-1	1
	16QAM	1	0	22.32	21.77	22.01	0-1	1
		1	12	22.29	21.69	21.94	0-1	1
		1	24	22.43	21.87	22.02	0-1	1
		12	0	21.32	20.70	21.02	0-2	2
		12	6	21.34	20.69	20.98	0-2	2
		12	11	21.32	20.67	20.99	0-2	2
		25	0	21.32	20.65	21.02	0-2	2
	64QAM	1	0	21.31	20.74	21.06	0-2	2
		1	12	21.27	20.66	20.92	0-2	2
		1	24	21.42	20.77	21.18	0-2	2
		12	0	20.32	19.64	19.93	0-3	3
		12	6	20.31	19.62	19.96	0-3	3
		12	11	20.32	19.64	19.96	0-3	3
		25	0	20.28	19.63	19.97	0-3	3
	256QAM	1	0	18.23	17.61	17.87	0-5	5
		1	12	18.07	17.55	17.63	0-5	5
		1	24	18.27	17.59	17.76	0-5	5
		12	0	18.22	17.55	17.84	0-5	5
		12	6	18.21	17.54	17.80	0-5	5
		12	11	18.23	17.54	17.80	0-5	5
		25	0	18.27	17.53	17.84	0-5	5

LTE Band 66 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 MHz	132322 Ch. 1745 MHz	132622 Ch. 1775 MHz		
10 MHz	QPSK	1	0	23.14	22.57	22.87	0	0
		1	24	23.15	22.54	22.82	0	0
		1	49	23.23	22.62	22.89	0	0
		25	0	22.24	21.66	21.90	0-1	1
		25	12	22.25	21.65	21.85	0-1	1
		25	24	22.26	21.63	21.90	0-1	1
	16QAM	50	0	22.23	21.62	21.85	0-1	1
		1	0	22.36	21.77	22.06	0-1	1
		1	24	22.15	21.75	21.92	0-1	1
		1	49	22.28	21.74	22.03	0-1	1
		25	0	21.30	20.75	20.95	0-2	2
		25	12	21.28	20.64	20.99	0-2	2
	64QAM	25	24	21.25	20.69	20.98	0-2	2
		50	0	21.26	20.63	20.89	0-2	2
		1	0	21.30	20.85	21.03	0-2	2
		1	24	21.36	20.74	21.00	0-2	2
		1	49	21.29	20.72	21.08	0-2	2
		25	0	20.26	19.58	19.89	0-3	3
	256QAM	25	12	20.19	19.61	19.92	0-3	3
		25	24	20.19	19.62	19.93	0-3	3
		50	0	20.26	19.65	19.93	0-3	3
		1	0	18.27	17.65	17.87	0-5	5
		1	24	18.16	17.65	17.89	0-5	5
		1	49	18.26	17.52	17.78	0-5	5
		25	0	18.24	17.55	17.82	0-5	5
		25	12	18.21	17.56	17.80	0-5	5
	25	24	18.19	17.57	17.82	0-5	5	
			50	0	18.25	17.62	17.87	0-5

LTE Band 66 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 MHz	132322 Ch. 1745 MHz	132597 Ch. 1772.5 MHz		
15 MHz	QPSK	1	0	23.11	22.63	22.83	0	0
		1	36	23.03	22.50	22.63	0	0
		1	74	23.22	22.61	22.86	0	0
		36	0	22.22	21.59	21.83	0-1	1
		36	18	22.21	21.60	21.85	0-1	1
		36	39	22.25	21.70	21.88	0-1	1
		75	0	22.23	21.65	21.84	0-1	1
	16QAM	1	0	22.41	21.92	22.04	0-1	1
		1	36	22.18	21.80	21.88	0-1	1
		1	74	22.39	21.90	22.13	0-1	1
		36	0	21.20	20.63	20.83	0-2	2
		36	18	21.20	20.63	20.84	0-2	2
		36	39	21.22	20.63	20.86	0-2	2
		75	0	21.19	20.66	20.87	0-2	2
	64QAM	1	0	21.31	20.81	20.97	0-2	2
		1	36	21.17	20.60	20.77	0-2	2
		1	74	21.40	20.83	21.11	0-2	2
		36	0	20.19	19.61	19.85	0-3	3
		36	18	20.16	19.62	19.86	0-3	3
		36	39	20.23	19.64	19.85	0-3	3
		75	0	20.19	19.65	19.84	0-3	3
	256QAM	1	0	18.26	17.50	17.83	0-5	5
		1	36	18.06	17.53	17.66	0-5	5
		1	74	18.11	17.58	17.80	0-5	5
		36	0	18.12	17.57	17.78	0-5	5
		36	18	18.13	17.57	17.81	0-5	5
		36	39	18.14	17.59	17.81	0-5	5
		75	0	18.15	17.58	17.80	0-5	5

LTE Band 66 \_ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	23.04	22.61	22.85	0	0
		1	49	23.06	22.57	22.75	0	0
		1	99	23.17	22.71	22.87	0	0
		50	0	22.15	21.60	21.78	0-1	1
		50	25	22.14	21.62	21.77	0-1	1
		50	49	22.12	21.62	21.85	0-1	1
	100	0	22.07	21.58	21.82	0-1	1	
	16QAM	1	0	22.32	21.93	22.11	0-1	1
		1	49	22.06	21.66	21.95	0-1	1
		1	99	22.34	21.81	22.14	0-1	1
		50	0	21.10	20.61	20.82	0-2	2
		50	25	21.16	20.61	20.85	0-2	2
		50	49	21.17	20.64	20.83	0-2	2
	100	0	21.08	20.62	20.85	0-2	2	
	64QAM	1	0	21.23	20.87	21.06	0-2	2
		1	49	21.25	20.73	21.03	0-2	2
		1	99	21.39	20.83	21.02	0-2	2
		50	0	20.13	19.63	19.86	0-3	3
		50	25	20.12	19.60	19.86	0-3	3
		50	49	20.17	19.65	19.83	0-3	3
	100	0	20.10	19.61	19.86	0-3	3	
	256QAM	1	0	18.25	17.68	17.90	0-5	5
		1	49	18.17	17.68	17.81	0-5	5
		1	99	18.28	17.78	17.90	0-5	5
50		0	18.11	17.61	17.81	0-5	5	
50		25	18.12	17.59	17.82	0-5	5	
50		49	18.13	17.64	17.84	0-5	5	
100	0	18.11	17.66	17.81	0-5	5		

The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

**11.3.2 LTE Reduced Conducted Power (Hotspot activated)**

LTE Band 2 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 MHz	18900 Ch. 1880 MHz	19193 Ch. 1909.3 MHz		
1.4 MHz	QPSK	1	0	18.92	18.45	18.96	0	0
		1	3	18.85	18.48	18.99	0	0
		1	5	18.89	18.42	18.96	0	0
		3	0	18.84	18.44	18.92	0	0
		3	1	19.01	18.58	19.08	0	0
		3	3	18.93	18.47	18.99	0	0
	16QAM	6	0	18.95	18.47	18.97	0-1	0
		1	0	19.12	18.69	19.20	0-1	0
		1	3	19.01	18.43	18.93	0-1	0
		1	5	19.06	18.73	19.07	0-1	0
		3	0	19.02	18.55	19.07	0-1	0
		3	1	19.14	18.70	19.22	0-1	0
	64QAM	3	3	19.00	18.64	19.09	0-1	0
		6	0	19.05	18.61	19.04	0-2	0
		1	0	19.03	18.61	19.14	0-2	0
		1	3	19.06	18.59	19.00	0-2	0
		1	5	19.11	18.71	19.15	0-2	0
		3	0	18.98	18.57	18.98	0-2	0
	256QAM	3	1	19.14	18.67	19.21	0-2	0
		3	3	18.96	18.54	18.98	0-2	0
		6	0	18.99	18.64	19.07	0-3	0
		1	0	17.47	17.02	17.59	0-5	1.5
		1	3	17.58	16.89	17.56	0-5	1.5
		1	5	17.52	17.13	17.64	0-5	1.5
	3	0	17.39	16.99	17.43	0-5	1.5	
	3	1	17.52	17.09	17.55	0-5	1.5	
	3	3	17.56	16.99	17.46	0-5	1.5	
	6	0	17.49	16.87	17.51	0-5	1.5	

LTE Band 2\_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 MHz	18900 Ch. 1880 MHz	19185 Ch. 1908.5 MHz		
3 MHz	QPSK	1	0	18.95	18.53	19.02	0	0
		1	7	18.88	18.47	18.97	0	0
		1	14	19.00	18.53	19.03	0	0
		8	0	19.04	18.65	19.10	0-1	0
		8	3	19.08	18.53	19.07	0-1	0
		8	7	19.03	18.62	19.07	0-1	0
	16QAM	15	0	19.08	18.62	19.11	0-1	0
		1	0	19.21	18.83	19.39	0-1	0
		1	7	19.17	18.78	19.21	0-1	0
		1	14	19.14	18.80	19.27	0-1	0
		8	0	19.07	18.70	19.13	0-2	0
		8	3	19.09	18.62	19.14	0-2	0
	64QAM	8	7	19.15	18.70	19.22	0-2	0
		15	0	19.06	18.63	19.14	0-2	0
		1	0	19.18	18.81	19.30	0-2	0
		1	7	18.98	18.74	19.26	0-2	0
		1	14	19.16	18.70	19.32	0-2	0
		8	0	19.09	18.64	19.13	0-3	0
	256QAM	8	3	19.03	18.55	19.13	0-3	0
		8	7	19.12	18.64	19.14	0-3	0
		15	0	19.10	18.66	19.16	0-3	0
		1	0	17.54	17.13	17.64	0-5	1.5
		1	7	17.48	17.03	17.56	0-5	1.5
		1	14	17.62	17.06	17.59	0-5	1.5
8		0	17.52	17.09	17.55	0-5	1.5	
8		3	17.50	17.01	17.59	0-5	1.5	
8	7	17.50	17.02	17.56	0-5	1.5		
15	0	17.52	17.10	17.58	0-5	1.5		

LTE Band 2\_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 MHz	18900 Ch. 1880 MHz	19175 Ch. 1907.5 MHz		
5 MHz	QPSK	1	0	19.02	18.62	19.15	0	0
		1	12	19.10	18.47	19.01	0	0
		1	24	19.01	18.60	19.09	0	0
		12	0	19.08	18.66	19.13	0-1	0
		12	6	19.11	18.63	19.14	0-1	0
		12	11	19.10	18.65	19.15	0-1	0
		25	0	19.08	18.67	19.15	0-1	0
	16QAM	1	0	19.25	18.77	19.41	0-1	0
		1	12	19.22	18.62	19.19	0-1	0
		1	24	19.22	18.84	19.30	0-1	0
		12	0	19.16	18.70	19.25	0-2	0
		12	6	19.09	18.64	19.22	0-2	0
		12	11	19.04	18.66	19.22	0-2	0
		25	0	19.07	18.65	19.21	0-2	0
	64QAM	1	0	19.25	18.84	19.35	0-2	0
		1	12	19.20	18.68	19.14	0-2	0
		1	24	19.19	18.71	19.29	0-2	0
		12	0	19.10	18.65	19.20	0-3	0
		12	6	19.10	18.63	19.21	0-3	0
		12	11	19.09	18.66	19.24	0-3	0
		25	0	19.09	18.65	19.19	0-3	0
	256QAM	1	0	17.64	17.20	17.79	0-5	1.5
		1	12	17.51	17.00	17.59	0-5	1.5
		1	24	17.72	17.18	17.66	0-5	1.5
		12	0	17.60	17.08	17.58	0-5	1.5
		12	6	17.53	17.05	17.58	0-5	1.5
		12	11	17.54	17.01	17.59	0-5	1.5
		25	0	17.61	17.13	17.66	0-5	1.5

LTE Band 2 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 MHz	18900 Ch. 1880 MHz	19150 Ch. 1905 MHz		
10 MHz	QPSK	1	0	19.01	18.63	19.13	0	0
		1	24	18.95	18.57	19.09	0	0
		1	49	19.02	18.65	19.13	0	0
		25	0	19.05	18.66	19.18	0-1	0
		25	12	19.05	18.63	19.18	0-1	0
		25	24	19.03	18.67	19.15	0-1	0
		50	0	19.06	18.58	19.09	0-1	0
	16QAM	1	0	19.38	18.87	19.41	0-1	0
		1	24	19.14	18.75	19.15	0-1	0
		1	49	19.17	18.79	19.44	0-1	0
		25	0	19.09	18.69	19.22	0-2	0
		25	12	19.07	18.70	19.18	0-2	0
		25	24	19.05	18.68	19.18	0-2	0
		50	0	19.07	18.59	19.09	0-2	0
	64QAM	1	0	19.22	18.95	19.40	0-2	0
		1	24	19.21	18.84	19.36	0-2	0
		1	49	19.21	18.82	19.28	0-2	0
		25	0	19.07	18.67	19.18	0-3	0
		25	12	19.01	18.67	19.18	0-3	0
		25	24	19.02	18.66	19.19	0-3	0
		50	0	19.08	18.67	19.15	0-3	0
	256QAM	1	0	17.63	17.32	17.75	0-5	1.5
		1	24	17.66	17.10	17.75	0-5	1.5
		1	49	17.67	17.35	17.71	0-5	1.5
		25	0	17.53	17.09	17.65	0-5	1.5
		25	12	17.51	17.11	17.61	0-5	1.5
		25	24	17.49	17.05	17.61	0-5	1.5
		50	0	17.53	17.12	17.65	0-5	1.5

LTE Band 2 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 MHz	18900 Ch. 1880 MHz	19125 Ch. 1902.5 MHz		
15 MHz	QPSK	1	0	19.01	18.66	19.11	0	0
		1	36	18.93	18.47	18.93	0	0
		1	74	19.05	18.57	19.06	0	0
		36	0	19.06	18.63	19.07	0-1	0
		36	18	19.06	18.62	19.07	0-1	0
		36	39	19.08	18.61	19.05	0-1	0
		75	0	19.07	18.61	19.03	0-1	0
	16QAM	1	0	19.25	18.88	19.44	0-1	0
		1	36	19.24	18.69	19.20	0-1	0
		1	74	19.23	18.75	19.28	0-1	0
		36	0	19.06	18.66	19.10	0-2	0
		36	18	19.08	18.63	19.09	0-2	0
		36	39	19.07	18.66	19.09	0-2	0
		75	0	19.05	18.61	19.09	0-2	0
	64QAM	1	0	19.16	18.84	19.26	0-2	0
		1	36	18.94	18.61	19.16	0-2	0
		1	74	19.16	18.85	19.26	0-2	0
		36	0	19.05	18.67	19.11	0-3	0
		36	18	19.09	18.65	19.09	0-3	0
		36	39	19.07	18.67	19.09	0-3	0
		75	0	19.03	18.61	19.09	0-3	0
	256QAM	1	0	17.63	17.23	17.73	0-5	1.5
		1	36	17.57	17.14	17.59	0-5	1.5
		1	74	17.69	17.24	17.63	0-5	1.5
		36	0	17.54	17.12	17.56	0-5	1.5
		36	18	17.53	17.12	17.58	0-5	1.5
		36	39	17.50	17.11	17.54	0-5	1.5
		75	0	17.55	17.12	17.60	0-5	1.5

LTE Band 2 \_ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	19.00	18.68	19.11	0	0
		1	49	18.94	18.57	19.00	0	0
		1	99	19.00	18.61	19.05	0	0
		50	0	19.01	18.65	19.09	0-1	0
		50	25	18.99	18.62	19.04	0-1	0
		50	49	19.03	18.60	19.00	0-1	0
		100	0	19.01	18.63	19.04	0-1	0
	16QAM	1	0	19.22	18.99	19.41	0-1	0
		1	49	19.01	18.68	19.11	0-1	0
		1	99	19.15	18.79	19.20	0-1	0
		50	0	18.99	18.65	19.05	0-2	0
		50	25	18.98	18.63	19.05	0-2	0
		50	49	19.00	18.61	19.02	0-2	0
		100	0	18.99	18.63	19.06	0-2	0
	64QAM	1	0	19.17	18.81	19.23	0-2	0
		1	49	19.28	18.78	19.14	0-2	0
		1	99	19.19	18.82	19.17	0-2	0
		50	0	19.04	18.69	19.11	0-3	0
		50	25	19.04	18.63	19.05	0-3	0
		50	49	18.99	18.64	19.02	0-3	0
		100	0	19.03	18.64	19.01	0-3	0
	256QAM	1	0	17.54	17.21	17.69	0-5	1.5
		1	49	17.56	17.19	17.58	0-5	1.5
		1	99	17.60	17.18	17.70	0-5	1.5
		50	0	17.50	17.12	17.56	0-5	1.5
		50	25	17.47	17.11	17.53	0-5	1.5
		50	49	17.48	17.08	17.50	0-5	1.5
		100	0	17.48	17.11	17.55	0-5	1.5

[ LTE Band 4 Conducted Power ]  
 LTE Band 4 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 MHz	20175 Ch. 1732.5 MHz	20393 Ch. 1754.3 MHz		
1.4 MHz	QPSK	1	0	20.28	19.79	19.55	0	0
		1	3	20.28	19.83	19.57	0	0
		1	5	20.23	19.84	19.59	0	0
		3	0	20.22	19.73	19.57	0	0
		3	1	20.35	19.93	19.66	0	0
		3	3	20.26	19.83	19.56	0	0
		6	0	20.25	19.79	19.59	0-1	0
	16QAM	1	0	20.49	20.01	19.74	0-1	0
		1	3	20.47	19.85	19.59	0-1	0
		1	5	20.43	20.01	19.77	0-1	0
		3	0	20.32	19.93	19.63	0-1	0
		3	1	20.43	20.08	19.82	0-1	0
		3	3	20.40	19.93	19.67	0-1	0
	64QAM	6	0	20.28	19.92	19.69	0-2	0
		1	0	20.43	19.97	19.64	0-2	0
		1	3	20.40	19.76	19.63	0-2	0
		1	5	20.37	19.97	19.72	0-2	0
		3	0	20.31	19.92	19.57	0-2	0
		3	1	20.35	20.02	19.73	0-2	0
		3	3	20.24	19.89	19.63	0-2	0
	256QAM	6	0	20.30	19.99	19.63	0-3	0
		1	0	18.35	17.99	17.71	0-5	2
		1	3	18.27	17.95	17.61	0-5	2
		1	5	18.37	17.91	17.70	0-5	2
		3	0	18.26	17.83	17.52	0-5	2
		3	1	18.40	17.88	17.58	0-5	2
		3	3	18.33	17.87	17.69	0-5	2
		6	0	18.27	17.79	17.54	0-5	2

LTE Band 4 \_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 MHz	20175 Ch. 1732.5 MHz	20385 Ch. 1753.5 MHz		
3 MHz	QPSK	1	0	20.19	19.84	19.56	0	0
		1	7	20.13	19.77	19.50	0	0
		1	14	20.24	19.82	19.58	0	0
		8	0	20.34	19.90	19.64	0-1	0
		8	3	20.28	19.89	19.57	0-1	0
		8	7	20.36	19.95	19.64	0-1	0
		15	0	20.35	19.95	19.67	0-1	0
	16QAM	1	0	20.45	20.11	19.84	0-1	0
		1	7	20.49	19.95	19.79	0-1	0
		1	14	20.49	20.03	19.77	0-1	0
		8	0	20.41	19.98	19.74	0-2	0
		8	3	20.31	19.98	19.64	0-2	0
		8	7	20.38	20.00	19.73	0-2	0
		15	0	20.37	19.93	19.68	0-2	0
	64QAM	1	0	20.32	20.04	19.74	0-2	0
		1	7	20.29	19.96	19.67	0-2	0
		1	14	20.38	20.02	19.74	0-2	0
		8	0	20.35	19.94	19.70	0-3	0
		8	3	20.40	19.94	19.70	0-3	0
		8	7	20.38	19.92	19.70	0-3	0
		15	0	20.38	19.95	19.66	0-3	0
	256QAM	1	0	18.37	17.91	17.56	0-5	2
		1	7	18.28	17.88	17.58	0-5	2
		1	14	18.35	17.96	17.64	0-5	2
		8	0	18.27	17.84	17.55	0-5	2
		8	3	18.24	17.81	17.56	0-5	2
		8	7	18.28	17.80	17.55	0-5	2
		15	0	18.31	17.87	17.53	0-5	2

LTE Band 4 \_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 MHz	20175 Ch. 1732.5 MHz	20375 Ch. 1752.5 MHz		
5 MHz	QPSK	1	0	20.24	19.89	19.54	0	0
		1	12	20.16	19.78	19.46	0	0
		1	24	20.24	19.83	19.52	0	0
		12	0	20.30	19.91	19.57	0-1	0
		12	6	20.36	19.95	19.58	0-1	0
		12	11	20.35	19.95	19.61	0-1	0
		25	0	20.31	19.94	19.59	0-1	0
	16QAM	1	0	20.49	20.12	19.67	0-1	0
		1	12	20.46	19.96	19.71	0-1	0
		1	24	20.48	20.06	19.84	0-1	0
		12	0	20.40	19.97	19.64	0-2	0
		12	6	20.39	19.97	19.64	0-2	0
		12	11	20.31	19.97	19.65	0-2	0
		25	0	20.34	19.91	19.63	0-2	0
	64QAM	1	0	20.49	20.02	19.55	0-2	0
		1	12	20.31	19.92	19.48	0-2	0
		1	24	20.43	19.99	19.70	0-2	0
		12	0	20.32	19.94	19.57	0-3	0
		12	6	20.32	19.96	19.57	0-3	0
		12	11	20.33	19.97	19.60	0-3	0
		25	0	20.36	19.94	19.62	0-3	0
	256QAM	1	0	18.34	17.87	17.61	0-5	2
		1	12	18.13	17.92	17.52	0-5	2
		1	24	18.35	17.90	17.57	0-5	2
		12	0	18.30	17.87	17.47	0-5	2
		12	6	18.27	17.85	17.51	0-5	2
		12	11	18.31	17.87	17.49	0-5	2
		25	0	18.31	17.87	17.55	0-5	2

LTE Band 4 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 MHz	20175 Ch. 1732.5 MHz	20350 Ch. 1750 MHz		
10 MHz	QPSK	1	0	20.23	19.93	19.56	0	0
		1	24	20.23	19.84	19.54	0	0
		1	49	20.26	19.94	19.64	0	0
		25	0	20.32	19.95	19.64	0-1	0
		25	12	20.29	19.89	19.62	0-1	0
		25	24	20.33	19.93	19.64	0-1	0
		50	0	20.27	19.87	19.62	0-1	0
	16QAM	1	0	20.47	20.13	19.89	0-1	0
		1	24	20.40	20.06	19.77	0-1	0
		1	49	20.42	20.13	19.80	0-1	0
		25	0	20.33	20.01	19.67	0-2	0
		25	12	20.28	19.92	19.71	0-2	0
		25	24	20.27	19.98	19.63	0-2	0
		50	0	20.34	19.93	19.63	0-2	0
	64QAM	1	0	20.47	20.13	19.77	0-2	0
		1	24	20.33	20.07	19.74	0-2	0
		1	49	20.49	20.07	19.79	0-2	0
		25	0	20.31	19.96	19.62	0-3	0
		25	12	20.31	19.92	19.63	0-3	0
		25	24	20.29	19.95	19.65	0-3	0
		50	0	20.33	19.99	19.69	0-3	0
	256QAM	1	0	18.35	17.91	17.61	0-5	2
		1	24	18.33	17.83	17.65	0-5	2
		1	49	18.39	17.94	17.72	0-5	2
		25	0	18.28	17.91	17.56	0-5	2
		25	12	18.22	17.89	17.56	0-5	2
		25	24	18.29	17.89	17.56	0-5	2
		50	0	18.33	17.95	17.64	0-5	2

LTE Band 4 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 MHz	20175 Ch. 1732.5 MHz	20325 Ch. 1747.5 MHz		
15 MHz	QPSK	1	0	20.24	19.94	19.62	0	0
		1	36	20.12	19.81	19.50	0	0
		1	74	20.29	19.91	19.66	0	0
		36	0	20.25	19.89	19.63	0-1	0
		36	18	20.32	19.92	19.63	0-1	0
		36	39	20.29	19.89	19.65	0-1	0
		75	0	20.28	19.90	19.62	0-1	0
	16QAM	1	0	20.46	20.06	19.90	0-1	0
		1	36	20.32	19.98	19.74	0-1	0
		1	74	20.44	20.14	19.99	0-1	0
		36	0	20.24	19.91	19.62	0-2	0
		36	18	20.26	19.95	19.63	0-2	0
		36	39	20.29	19.88	19.62	0-2	0
		75	0	20.26	19.94	19.63	0-2	0
	64QAM	1	0	20.42	19.95	19.77	0-2	0
		1	36	20.23	19.87	19.60	0-2	0
		1	74	20.47	20.11	19.82	0-2	0
		36	0	20.30	19.90	19.63	0-3	0
		36	18	20.29	19.90	19.66	0-3	0
		36	39	20.30	19.94	19.65	0-3	0
		75	0	20.29	19.92	19.64	0-3	0
	256QAM	1	0	18.37	17.93	17.68	0-5	2
		1	36	18.23	17.84	17.54	0-5	2
		1	74	18.47	18.09	17.71	0-5	2
		36	0	18.23	17.87	17.60	0-5	2
		36	18	18.27	17.91	17.63	0-5	2
		36	39	18.26	17.92	17.61	0-5	2
		75	0	18.24	17.90	17.62	0-5	2

LTE Band 4 \_ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 MHz		
20 MHz	QPSK	1	0	19.94	0	0
		1	49	19.85	0	0
		1	99	19.98	0	0
		50	0	19.89	0-1	0
		50	25	19.94	0-1	0
		50	49	19.94	0-1	0
	100	0	19.91	0-1	0	
	16QAM	1	0	20.14	0-1	0
		1	49	20.05	0-1	0
		1	99	20.15	0-1	0
		50	0	19.89	0-2	0
		50	25	19.94	0-2	0
		50	49	19.94	0-2	0
	100	0	19.89	0-2	0	
	64QAM	1	0	20.14	0-2	0
		1	49	20.09	0-2	0
		1	99	20.05	0-2	0
		50	0	19.95	0-3	0
		50	25	19.95	0-3	0
		50	49	19.94	0-3	0
	100	0	19.95	0-3	0	
	256QAM	1	0	17.98	0-5	2
		1	49	17.91	0-5	2
		1	99	18.08	0-5	2
50		0	17.95	0-5	2	
50		25	17.92	0-5	2	
50		49	17.95	0-5	2	
100	0	17.93	0-5	2		

[ LTE Band 25 Conducted Power ]  
 LTE Band 25 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 MHz	26365 Ch. 1882.5 MHz	26683 Ch. 1914.3 MHz		
1.4 MHz	QPSK	1	0	18.91	18.55	18.82	0	0
		1	3	18.98	18.53	18.87	0	0
		1	5	18.99	18.57	18.81	0	0
		3	0	18.97	18.48	18.77	0	0
		3	1	19.11	18.62	18.84	0	0
		3	3	19.02	18.55	18.90	0	0
	16QAM	6	0	18.98	18.55	18.79	0-1	0
		1	0	19.17	18.69	18.99	0-1	0
		1	3	18.89	18.64	18.69	0-1	0
		1	5	19.18	18.73	19.00	0-1	0
		3	0	19.01	18.60	18.82	0-1	0
		3	1	19.25	18.75	18.97	0-1	0
	64QAM	3	3	19.12	18.62	18.99	0-1	0
		6	0	19.02	18.61	18.92	0-2	0
		1	0	19.16	18.72	18.98	0-2	0
		1	3	19.05	18.58	18.84	0-2	0
		1	5	19.09	18.70	18.94	0-2	0
		3	0	19.00	18.56	18.85	0-2	0
	256QAM	3	1	19.19	18.68	18.98	0-2	0
		3	3	19.09	18.59	18.89	0-2	0
		6	0	18.95	18.59	18.83	0-3	0
		1	0	17.48	17.18	17.42	0-5	1.5
		1	3	17.57	17.18	17.36	0-5	1.5
		1	5	17.59	17.17	17.47	0-5	1.5
		3	0	17.57	17.05	17.37	0-5	1.5
		3	1	17.62	17.14	17.51	0-5	1.5
		3	3	17.56	17.18	17.48	0-5	1.5
		6	0	17.43	17.03	17.32	0-5	1.5

LTE Band 25 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 MHz	26365 Ch. 1882.5 MHz	26675 Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	18.95	18.54	18.85	0	0
		1	7	18.90	18.45	18.78	0	0
		1	14	19.00	18.55	18.80	0	0
		8	0	19.04	18.63	18.93	0-1	0
		8	3	19.02	18.59	18.86	0-1	0
		8	7	19.03	18.62	18.90	0-1	0
	16QAM	15	0	19.08	18.64	18.92	0-1	0
		1	0	19.21	18.75	19.08	0-1	0
		1	7	19.20	18.61	18.94	0-1	0
		1	14	19.04	18.77	19.03	0-1	0
		8	0	19.08	18.67	18.91	0-2	0
		8	3	19.00	18.64	18.91	0-2	0
	64QAM	8	7	19.10	18.62	18.90	0-2	0
		15	0	19.08	18.64	18.89	0-2	0
		1	0	19.17	18.70	18.99	0-2	0
		1	7	18.99	18.67	18.93	0-2	0
		1	14	19.03	18.61	19.03	0-2	0
		8	0	19.04	18.62	18.93	0-3	0
	256QAM	8	3	18.98	18.60	18.88	0-3	0
		8	7	19.11	18.62	18.89	0-3	0
		15	0	19.09	18.69	18.96	0-3	0
		1	0	17.53	17.27	17.47	0-5	1.5
		1	7	17.60	17.22	17.35	0-5	1.5
		1	14	17.59	17.14	17.39	0-5	1.5
		8	0	17.48	17.06	17.35	0-5	1.5
		8	3	17.45	17.12	17.35	0-5	1.5
		8	7	17.52	17.07	17.36	0-5	1.5
	15	0	17.52	17.09	17.40	0-5	1.5	

LTE Band 25 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 MHz	26365 Ch. 1882.5 MHz	26665 Ch. 1912.5 MHz		
5 MHz	QPSK	1	0	19.08	18.61	18.94	0	0
		1	12	18.96	18.47	18.79	0	0
		1	24	19.03	18.57	18.90	0	0
		12	0	19.11	18.66	19.00	0-1	0
		12	6	19.13	18.69	18.98	0-1	0
		12	11	19.09	18.69	18.99	0-1	0
	16QAM	25	0	19.08	18.62	18.94	0-1	0
		1	0	19.23	18.84	19.12	0-1	0
		1	12	19.15	18.74	18.98	0-1	0
		1	24	19.07	18.80	19.10	0-1	0
		12	0	19.05	18.63	19.08	0-2	0
		12	6	19.05	18.65	19.04	0-2	0
	64QAM	12	11	19.05	18.67	18.99	0-2	0
		25	0	19.03	18.62	18.96	0-2	0
		1	0	19.10	18.74	19.12	0-2	0
		1	12	19.06	18.55	19.03	0-2	0
		1	24	19.19	18.72	19.14	0-2	0
		12	0	19.08	18.63	19.00	0-3	0
	256QAM	12	6	19.08	18.63	18.94	0-3	0
		12	11	19.08	18.64	18.99	0-3	0
		25	0	19.05	18.59	18.93	0-3	0
		1	0	17.69	17.22	17.54	0-5	1.5
		1	12	17.59	17.09	17.47	0-5	1.5
		1	24	17.63	17.22	17.59	0-5	1.5
		12	0	17.55	17.16	17.43	0-5	1.5
12		6	17.50	17.13	17.42	0-5	1.5	
12		11	17.51	17.12	17.41	0-5	1.5	
25		0	17.58	17.17	17.50	0-5	1.5	

LTE Band 25 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 MHz	26365 Ch. 1882.5 MHz	26640 Ch. 1910 MHz		
10 MHz	QPSK	1	0	19.04	18.62	19.08	0	0
		1	24	18.94	18.55	19.05	0	0
		1	49	19.05	18.64	19.09	0	0
		25	0	19.08	18.63	19.12	0-1	0
		25	12	19.04	18.62	19.08	0-1	0
		25	24	19.06	18.65	19.10	0-1	0
	16QAM	50	0	19.06	18.67	19.16	0-1	0
		1	0	19.32	18.91	19.27	0-1	0
		1	24	19.13	18.73	19.19	0-1	0
		1	49	19.18	18.69	19.28	0-1	0
		25	0	19.10	18.67	19.10	0-2	0
		25	12	19.04	18.66	19.09	0-2	0
	64QAM	25	24	19.02	18.58	19.09	0-2	0
		50	0	19.05	18.64	19.12	0-2	0
		1	0	19.19	18.75	19.16	0-2	0
		1	24	19.09	18.70	19.14	0-2	0
		1	49	19.26	18.76	19.10	0-2	0
		25	0	19.00	18.61	19.09	0-3	0
	256QAM	25	12	19.03	18.60	19.09	0-3	0
		25	24	19.01	18.57	19.09	0-3	0
		50	0	19.07	18.69	19.10	0-3	0
		1	0	17.66	17.35	17.80	0-5	1.5
		1	24	17.61	17.29	17.60	0-5	1.5
		1	49	17.73	17.18	17.63	0-5	1.5
	25	0	17.53	17.14	17.59	0-5	1.5	
	25	12	17.52	17.12	17.63	0-5	1.5	
	25	24	17.53	17.13	17.58	0-5	1.5	
	50	0	17.54	17.12	17.61	0-5	1.5	

LTE Band 25 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 MHz	26365 Ch. 1882.5 MHz	26615 Ch. 1907.5 MHz		
15	QPSK	1	0	19.02	18.67	19.12	0	0
		1	36	18.90	18.48	18.95	0	0
		1	74	19.00	18.61	19.13	0	0
		36	0	19.10	18.67	19.15	0-1	0
		36	18	19.06	18.62	19.12	0-1	0
		36	39	19.07	18.68	19.09	0-1	0
		75	0	19.08	18.64	19.17	0-1	0
	16QAM	1	0	19.13	18.76	19.28	0-1	0
		1	36	19.07	18.64	19.20	0-1	0
		1	74	19.14	18.75	19.24	0-1	0
		36	0	19.06	18.67	19.14	0-2	0
		36	18	19.02	18.64	19.13	0-2	0
		36	39	19.04	18.65	19.13	0-2	0
		75	0	19.03	18.63	19.11	0-2	0
	64QAM	1	0	19.24	18.77	19.21	0-2	0
		1	36	19.01	18.55	19.12	0-2	0
		1	74	19.10	18.75	19.29	0-2	0
		36	0	19.02	18.66	19.16	0-3	0
		36	18	19.03	18.64	19.16	0-3	0
		36	39	19.05	18.61	19.15	0-3	0
		75	0	18.98	18.62	19.12	0-3	0
	256QAM	1	0	17.60	17.31	17.68	0-5	1.5
		1	36	17.56	16.98	17.57	0-5	1.5
		1	74	17.65	17.06	17.62	0-5	1.5
		36	0	17.52	17.15	17.62	0-5	1.5
		36	18	17.56	17.16	17.63	0-5	1.5
		36	39	17.53	17.13	17.61	0-5	1.5
75		0	17.56	17.12	17.64	0-5	1.5	

LTE Band 25 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	18.96	18.67	19.03	0	0
		1	49	18.86	18.57	19.15	0	0
		1	99	18.97	18.63	19.10	0	0
		50	0	19.01	18.68	19.15	0-1	0
		50	25	19.00	18.66	19.11	0-1	0
		50	49	19.02	18.67	19.12	0-1	0
	100	0	19.02	18.66	19.14	0-1	0	
	16QAM	1	0	19.21	18.86	19.33	0-1	0
		1	49	18.97	18.74	19.24	0-1	0
		1	99	19.14	18.71	19.37	0-1	0
		50	0	19.00	18.67	19.13	0-2	0
		50	25	18.97	18.64	19.09	0-2	0
		50	49	18.95	18.64	19.09	0-2	0
	100	0	18.99	18.63	19.12	0-2	0	
	64QAM	1	0	19.13	18.77	19.24	0-2	0
		1	49	19.02	18.73	19.11	0-2	0
		1	99	18.97	18.76	19.26	0-2	0
		50	0	18.99	18.68	19.13	0-3	0
		50	25	18.97	18.66	19.15	0-3	0
		50	49	18.94	18.61	19.11	0-3	0
	100	0	18.97	18.64	19.12	0-3	0	
	256QAM	1	0	17.57	17.44	17.72	0-5	1.5
		1	49	17.45	17.28	17.66	0-5	1.5
		1	99	17.57	17.18	17.65	0-5	1.5
50		0	17.51	17.15	17.62	0-5	1.5	
50		25	17.43	17.15	17.61	0-5	1.5	
50		49	17.47	17.11	17.64	0-5	1.5	
100	0	17.49	17.12	17.63	0-5	1.5		

[ LTE Band 41 Conducted Power ] - Power Class 3  
 LTE Band 41 5 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
5 MHz	QPSK	1	0	22.98	22.88	22.78	22.67	23.08	0	0
		1	12	22.96	22.88	22.77	22.73	23.12	0	0
		1	24	22.97	22.92	22.80	22.74	23.10	0	0
		12	0	23.01	22.94	22.82	22.78	23.17	0-1	0
		12	6	23.00	22.95	22.79	22.75	23.17	0-1	0
		12	11	23.01	22.96	22.80	22.76	23.17	0-1	0
		25	0	22.98	22.95	22.82	22.78	23.13	0-1	0
	16QAM	1	0	22.76	22.83	22.76	22.67	23.20	0-1	0
		1	12	22.67	22.70	22.65	22.61	23.02	0-1	0
		1	24	22.79	22.78	22.68	22.65	23.10	0-1	0
		12	0	22.02	21.95	21.83	21.77	22.15	0-2	1
		12	6	22.01	21.96	21.79	21.71	22.16	0-2	1
		12	11	22.06	21.98	21.80	21.72	22.17	0-2	1
		25	0	21.98	21.96	21.81	21.77	22.13	0-2	1
	64QAM	1	0	22.09	22.04	21.95	21.80	22.24	0-2	1
		1	12	22.00	21.89	21.89	21.64	22.10	0-2	1
		1	24	22.08	21.96	21.94	21.67	22.18	0-2	1
		12	0	21.06	20.95	20.86	20.75	21.20	0-3	2
		12	6	21.06	20.97	20.79	20.74	21.22	0-3	2
		12	11	21.09	20.98	20.80	20.75	21.19	0-3	2
		25	0	21.02	20.95	20.84	20.77	21.16	0-3	2
	256QAM	1	0	18.94	18.76	18.70	18.67	18.98	0-5	3.2
		1	12	18.90	18.63	18.61	18.64	18.86	0-5	3.2
		1	24	18.91	18.63	18.63	18.64	18.90	0-5	3.2
		12	0	19.04	18.97	18.85	18.76	19.17	0-5	3.2
		12	6	19.03	19.00	18.83	18.72	19.19	0-5	3.2
		12	11	19.02	18.99	18.83	18.75	19.20	0-5	3.2
		25	0	19.04	18.97	18.87	18.81	19.18	0-5	3.2

LTE Band 41 10 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
10 MHz	QPSK	1	0	23.02	22.92	22.84	22.79	23.14	0	0
		1	24	22.88	22.81	22.70	22.67	23.01	0	0
		1	49	22.91	22.87	22.72	22.71	23.02	0	0
		25	0	22.96	22.94	22.82	22.80	23.12	0-1	0
		25	12	22.95	22.93	22.77	22.81	23.10	0-1	0
		25	24	22.94	22.92	22.76	22.79	23.11	0-1	0
		50	0	22.99	22.95	22.81	22.85	23.17	0-1	0
	16QAM	1	0	22.81	22.91	22.80	22.78	23.05	0-1	0
		1	24	22.73	22.85	22.67	22.64	22.94	0-1	0
		1	49	22.74	22.92	22.70	22.66	22.92	0-1	0
		25	0	22.00	21.94	21.84	21.80	22.15	0-2	1
		25	12	21.99	21.92	21.78	21.78	22.15	0-2	1
		25	24	21.98	21.92	21.77	21.79	22.14	0-2	1
		50	0	22.02	21.94	21.82	21.84	22.17	0-2	1
	64QAM	1	0	22.15	22.13	22.00	21.92	22.29	0-2	1
		1	24	22.05	22.05	21.89	21.88	22.17	0-2	1
		1	49	22.09	22.07	21.92	21.89	22.21	0-2	1
		25	0	21.02	20.97	20.84	20.80	21.16	0-3	2
		25	12	21.00	20.92	20.80	20.77	21.13	0-3	2
		25	24	20.99	20.95	20.78	20.76	21.15	0-3	2
		50	0	21.06	20.98	20.85	20.85	21.19	0-3	2
	256QAM	1	0	18.92	18.88	18.78	18.65	19.16	0-5	3.2
		1	24	18.83	18.78	18.66	18.51	19.04	0-5	3.2
		1	49	18.81	18.85	18.74	18.61	19.09	0-5	3.2
		25	0	19.05	19.00	18.89	18.85	19.21	0-5	3.2
		25	12	19.02	18.96	18.84	18.81	19.18	0-5	3.2
		25	24	19.03	18.98	18.85	18.82	19.19	0-5	3.2
		50	0	19.09	19.02	18.89	18.87	19.22	0-5	3.2

LTE Band 41 15 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
15 MHz	QPSK	1	0	23.01	22.95	22.88	22.76	23.15	0	0
		1	36	23.00	22.87	22.77	22.77	23.09	0	0
		1	74	22.95	22.92	22.74	22.75	23.05	0	0
		36	0	23.05	22.99	22.88	22.86	23.20	0-1	0
		36	18	23.00	22.96	22.83	22.81	23.18	0-1	0
		36	39	22.99	22.95	22.80	22.80	23.14	0-1	0
		75	0	22.99	22.96	22.83	22.83	23.16	0-1	0
	16QAM	1	0	23.07	22.92	22.93	22.74	22.95	0-1	0
		1	36	22.95	22.75	22.73	22.55	22.83	0-1	0
		1	74	22.99	22.83	22.71	22.62	22.85	0-1	0
		36	0	22.03	21.96	21.87	21.82	22.21	0-2	1
		36	18	22.01	21.94	21.81	21.79	22.19	0-2	1
		36	39	21.98	21.91	21.80	21.76	22.16	0-2	1
		75	0	22.02	21.95	21.83	21.79	22.16	0-2	1
	64QAM	1	0	22.22	22.12	21.93	21.93	22.28	0-2	1
		1	36	22.15	21.86	21.76	21.78	22.13	0-2	1
		1	74	22.15	22.00	21.80	21.91	22.15	0-2	1
		36	0	21.07	20.98	20.90	20.83	21.22	0-3	2
		36	18	21.03	20.95	20.82	20.78	21.17	0-3	2
		36	39	21.02	20.93	20.80	20.77	21.16	0-3	2
		75	0	21.05	20.96	20.85	20.82	21.20	0-3	2
	256QAM	1	0	19.06	18.95	18.78	18.72	19.10	0-5	3.2
		1	36	18.97	18.84	18.64	18.63	19.02	0-5	3.2
		1	74	18.95	18.92	18.66	18.59	19.08	0-5	3.2
		36	0	19.09	19.01	18.92	18.85	19.22	0-5	3.2
		36	18	19.07	18.98	18.86	18.81	19.18	0-5	3.2
		36	39	19.06	18.97	18.83	18.81	19.17	0-5	3.2
		75	0	19.04	18.96	18.82	18.81	19.18	0-5	3.2

LTE Band 41 20 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	23.02	22.98	22.91	22.85	23.16	0	0
		1	49	22.87	22.82	22.70	22.68	22.96	0	0
		1	99	22.93	22.87	22.68	22.72	22.98	0	0
		50	0	23.06	22.98	22.87	22.88	23.24	0-1	0
		50	25	23.00	22.93	22.79	22.84	23.20	0-1	0
		50	49	23.00	22.95	22.78	22.82	23.20	0-1	0
		100	0	22.99	22.95	22.82	22.82	23.17	0-1	0
	16QAM	1	0	23.01	22.86	22.94	22.83	23.17	0-1	0
		1	49	22.82	22.67	22.75	22.57	22.98	0-1	0
		1	99	22.83	22.77	22.76	22.62	23.03	0-1	0
		50	0	22.08	22.01	21.91	21.89	22.24	0-2	1
		50	25	22.01	21.94	21.83	21.83	22.19	0-2	1
		50	49	22.01	21.95	21.79	21.81	22.22	0-2	1
		100	0	22.06	22.01	21.89	21.86	22.25	0-2	1
	64QAM	1	0	22.32	22.15	22.16	21.97	22.37	0-2	1
		1	49	22.13	21.99	21.92	21.74	22.22	0-2	1
		1	99	22.13	22.05	21.91	21.75	22.25	0-2	1
		50	0	21.11	21.04	20.93	20.91	21.28	0-3	2
		50	25	21.05	20.97	20.85	20.86	21.22	0-3	2
		50	49	21.04	20.98	20.84	20.84	21.22	0-3	2
		100	0	21.02	20.97	20.84	20.82	21.20	0-3	2
	256QAM	1	0	19.06	19.14	18.94	18.74	19.35	0-5	3.2
		1	49	18.88	18.97	18.74	18.56	19.16	0-5	3.2
		1	99	18.91	18.95	18.75	18.60	19.23	0-5	3.2
		50	0	19.14	19.07	18.98	18.94	19.30	0-5	3.2
		50	25	19.09	19.01	18.90	18.90	19.26	0-5	3.2
		50	49	19.07	19.02	18.87	18.87	19.24	0-5	3.2
100		0	19.03	18.95	18.85	18.83	19.20	0-5	3.2	

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[ LTE Band 41 Conducted Power ] - Power Class 2  
 LTE Band 41 5 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
5 MHz	QPSK	1	0	23.12	22.95	22.84	22.74	23.16	0	0
		1	12	23.12	22.94	22.77	22.70	23.14	0	0
		1	24	23.08	22.94	22.82	22.77	23.14	0	0
		12	0	23.05	22.93	22.83	22.78	23.12	0-1	0
		12	6	23.04	22.91	22.84	22.79	23.10	0-1	0
		12	11	23.04	22.93	22.80	22.78	23.11	0-1	0
		25	0	23.05	22.92	22.81	22.77	23.14	0-1	0
	16QAM	1	0	23.11	23.05	23.14	22.96	23.38	0-1	0
		1	12	22.89	23.06	23.01	22.85	23.37	0-1	0
		1	24	23.10	23.05	23.14	22.96	23.37	0-1	0
		12	0	22.12	21.93	21.93	21.78	22.16	0-2	0
		12	6	22.09	21.89	21.81	21.77	22.15	0-2	0
		12	11	22.10	21.88	21.82	21.74	22.17	0-2	0
		25	0	22.10	21.93	21.75	21.78	22.17	0-2	0
	64QAM	1	0	22.53	22.37	22.16	21.98	22.49	0-2	0
		1	12	22.53	22.18	22.07	22.01	22.46	0-2	0
		1	24	22.53	22.39	22.19	22.04	22.51	0-2	0
		12	0	21.09	20.81	20.84	20.79	21.21	0-3	2
		12	6	21.07	20.79	20.85	20.80	21.17	0-3	2
		12	11	21.05	20.81	20.82	20.81	21.17	0-3	2
		25	0	21.07	20.90	20.83	20.71	21.09	0-3	2
	256QAM	1	0	18.64	18.69	18.93	18.35	18.93	0-5	2.7
		1	12	18.61	18.70	18.86	18.27	18.92	0-5	2.7
		1	24	18.64	18.66	18.86	18.42	18.94	0-5	2.7
		12	0	19.10	18.94	18.90	18.85	19.10	0-5	2.7
		12	6	19.08	18.89	18.90	18.82	19.08	0-5	2.7
		12	11	19.08	18.92	18.85	18.79	19.11	0-5	2.7
		25	0	19.08	18.98	18.84	18.81	19.16	0-5	2.7

LTE Band 41 10 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
10 MHz	QPSK	1	0	22.98	22.94	22.82	22.83	23.18	0	0
		1	24	22.90	22.90	22.77	22.81	23.13	0	0
		1	49	22.96	22.88	22.76	22.80	23.12	0	0
		25	0	22.95	22.88	22.77	22.81	23.14	0-1	0
		25	12	22.93	22.85	22.73	22.79	23.12	0-1	0
		25	24	22.91	22.84	22.71	22.76	23.11	0-1	0
		50	0	22.89	22.84	22.70	22.77	23.07	0-1	0
	16QAM	1	0	23.01	23.24	23.26	22.86	23.37	0-1	0
		1	24	22.76	23.35	23.03	22.71	23.38	0-1	0
		1	49	22.94	23.34	23.06	22.77	23.37	0-1	0
		25	0	21.99	21.93	21.76	21.83	22.13	0-2	0
		25	12	21.94	21.91	21.73	21.81	22.12	0-2	0
		25	24	21.94	21.89	21.70	21.78	22.11	0-2	0
		50	0	21.91	21.88	21.72	21.78	22.14	0-2	0
	64QAM	1	0	22.54	22.41	22.18	22.31	22.54	0-2	0
		1	24	22.48	22.33	22.13	22.28	22.52	0-2	0
		1	49	22.43	22.32	22.08	22.21	22.49	0-2	0
		25	0	20.98	20.89	20.79	20.80	21.17	0-3	2
		25	12	20.97	20.88	20.76	20.79	21.15	0-3	2
		25	24	20.96	20.87	20.75	20.76	21.15	0-3	2
		50	0	20.97	20.90	20.79	20.80	21.17	0-3	2
	256QAM	1	0	18.93	18.74	18.91	18.42	19.24	0-5	2.7
		1	24	18.87	18.64	18.88	18.34	19.23	0-5	2.7
		1	49	18.85	18.70	18.88	18.35	19.25	0-5	2.7
		25	0	19.01	18.93	18.84	18.83	19.17	0-5	2.7
		25	12	18.99	18.93	18.81	18.82	19.17	0-5	2.7
		25	24	18.98	18.91	18.79	18.79	19.16	0-5	2.7
		50	0	19.01	18.93	18.82	18.84	19.19	0-5	2.7

LTE Band 41 15 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
15 MHz	QPSK	1	0	23.05	22.97	22.87	22.83	23.17	0	0
		1	36	22.97	22.86	22.76	22.69	23.10	0	0
		1	74	23.00	22.93	22.77	22.77	23.10	0	0
		36	0	22.98	22.91	22.80	22.79	23.12	0-1	0
		36	18	22.95	22.88	22.75	22.78	23.09	0-1	0
		36	39	22.92	22.86	22.72	22.73	23.07	0-1	0
		75	0	22.94	22.88	22.76	22.76	23.11	0-1	0
	16QAM	1	0	23.18	23.07	23.20	23.03	23.38	0-1	0
		1	36	22.87	22.95	23.09	22.82	23.37	0-1	0
		1	74	23.08	22.99	23.08	22.91	23.32	0-1	0
		36	0	22.00	21.90	21.81	21.76	22.11	0-2	0
		36	18	21.99	21.87	21.74	21.76	22.08	0-2	0
		36	39	21.94	21.86	21.73	21.72	22.06	0-2	0
		75	0	21.95	21.89	21.82	21.75	22.13	0-2	0
	64QAM	1	0	22.13	22.28	22.22	22.12	22.49	0-2	0
		1	36	22.01	22.01	21.94	21.99	22.36	0-2	0
		1	74	22.05	22.24	22.11	22.03	22.42	0-2	0
		36	0	21.01	20.94	20.83	20.75	21.17	0-3	2
		36	18	21.00	20.93	20.74	20.75	21.15	0-3	2
		36	39	20.96	20.90	20.70	20.70	21.13	0-3	2
		75	0	21.00	20.90	20.77	20.75	21.16	0-3	2
	256QAM	1	0	18.84	18.74	18.91	18.50	18.76	0-5	2.7
		1	36	18.67	18.60	18.68	18.29	19.01	0-5	2.7
		1	74	18.74	18.69	18.81	18.43	19.01	0-5	2.7
		36	0	19.01	18.97	18.82	18.81	19.15	0-5	2.7
		36	18	18.99	18.96	18.81	18.81	19.13	0-5	2.7
		36	39	18.97	18.95	18.79	18.76	19.12	0-5	2.7
		75	0	18.98	18.92	18.81	18.77	19.15	0-5	2.7

LTE Band 41 20 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	23.10	23.05	22.96	22.98	23.26	0	0
		1	49	22.98	22.93	22.77	22.83	23.11	0	0
		1	99	23.00	22.93	22.75	22.81	23.09	0	0
		50	0	22.96	22.90	22.78	22.83	23.12	0-1	0
		50	25	22.90	22.84	22.71	22.76	23.06	0-1	0
		50	49	22.89	22.84	22.67	22.73	23.04	0-1	0
		100	0	22.94	22.90	22.76	22.81	23.11	0-1	0
	16QAM	1	0	22.91	23.36	23.29	22.97	23.37	0-1	0
		1	49	22.65	23.35	23.09	22.70	23.39	0-1	0
		1	99	22.73	23.34	23.09	22.80	23.39	0-1	0
		50	0	21.97	21.92	21.83	21.83	22.13	0-2	0
		50	25	21.95	21.87	21.73	21.76	22.07	0-2	0
		50	49	21.94	21.88	21.68	21.74	22.05	0-2	0
		100	0	22.01	21.95	21.83	21.84	22.18	0-2	0
	64QAM	1	0	22.49	22.55	22.35	22.21	22.62	0-2	0
		1	49	22.34	22.41	22.19	22.32	22.51	0-2	0
		1	99	22.32	22.45	22.15	22.27	22.47	0-2	0
		50	0	20.99	20.96	20.87	20.85	21.21	0-3	2
		50	25	20.95	20.92	20.81	20.78	21.16	0-3	2
		50	49	20.92	20.90	20.76	20.75	21.11	0-3	2
		100	0	20.98	20.92	20.79	20.80	21.16	0-3	2
	256QAM	1	0	18.97	18.88	19.09	18.59	19.37	0-5	2.7
		1	49	18.84	18.74	18.95	18.41	19.27	0-5	2.7
		1	99	18.83	18.80	18.93	18.44	19.30	0-5	2.7
		50	0	19.09	19.02	18.90	18.88	19.22	0-5	2.7
		50	25	19.04	18.96	18.85	18.83	19.19	0-5	2.7
		50	49	19.01	18.95	18.79	18.81	19.17	0-5	2.7
100		0	18.98	18.90	18.79	18.81	19.15	0-5	2.7	

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979 Ch. 1710.7 MHz	132322 Ch. 1745 MHz	132665 Ch. 1779.3 MHz		
1.4 MHz	QPSK	1	0	20.21	19.54	19.80	0	0
		1	3	20.20	19.50	19.86	0	0
		1	5	20.16	19.53	19.82	0	0
		3	0	20.18	19.46	19.81	0	0
		3	1	20.33	19.66	19.93	0	0
		3	3	20.19	19.54	19.83	0	0
		6	0	20.19	19.50	19.87	0-1	0
	16QAM	1	0	20.36	19.59	20.13	0-1	0
		1	3	20.10	19.55	20.02	0-1	0
		1	5	20.36	19.68	20.12	0-1	0
		3	0	20.22	19.59	19.93	0-1	0
		3	1	20.36	19.63	20.11	0-1	0
		3	3	20.33	19.65	20.08	0-1	0
		6	0	20.30	19.59	19.99	0-2	0
	64QAM	1	0	20.35	19.69	20.06	0-2	0
		1	3	20.31	19.49	20.01	0-2	0
		1	5	20.32	19.73	19.98	0-2	0
		3	0	20.23	19.51	19.89	0-2	0
		3	1	20.41	19.65	20.02	0-2	0
		3	3	20.28	19.52	19.91	0-2	0
		6	0	20.27	19.62	20.02	0-3	0
	256QAM	1	0	18.37	17.64	17.93	0-5	1.8
		1	3	18.16	17.49	17.87	0-5	1.8
		1	5	18.34	17.58	17.96	0-5	1.8
		3	0	18.21	17.50	17.83	0-5	1.8
		3	1	18.34	17.50	17.80	0-5	1.8
		3	3	18.30	17.59	17.95	0-5	1.8
		6	0	18.19	17.51	17.79	0-5	1.8

LTE Band 66 \_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 MHz	132322 Ch. 1745 MHz	132657 Ch. 1778.5 MHz		
3 MHz	QPSK	1	0	20.15	19.48	19.80	0	0
		1	7	20.10	19.44	19.75	0	0
		1	14	20.20	19.51	19.83	0	0
		8	0	20.28	19.59	19.89	0-1	0
		8	3	20.25	19.57	19.89	0-1	0
		8	7	20.25	19.61	19.91	0-1	0
		15	0	20.31	19.62	19.92	0-1	0
	16QAM	1	0	20.43	19.71	20.10	0-1	0
		1	7	20.36	19.70	19.97	0-1	0
		1	14	20.35	19.67	20.10	0-1	0
		8	0	20.30	19.67	20.04	0-2	0
		8	3	20.30	19.60	20.01	0-2	0
		8	7	20.31	19.66	20.02	0-2	0
		15	0	20.28	19.62	19.99	0-2	0
	64QAM	1	0	20.39	19.74	20.03	0-2	0
		1	7	20.36	19.64	20.08	0-2	0
		1	14	20.34	19.53	20.08	0-2	0
		8	0	20.28	19.64	19.99	0-3	0
		8	3	20.31	19.62	19.92	0-3	0
		8	7	20.29	19.64	20.04	0-3	0
		15	0	20.31	19.64	20.02	0-3	0
	256QAM	1	0	18.31	17.73	17.88	0-5	1.8
		1	7	18.36	17.53	17.78	0-5	1.8
		1	14	18.27	17.68	17.93	0-5	1.8
		8	0	18.24	17.54	17.85	0-5	1.8
		8	3	18.21	17.55	17.83	0-5	1.8
		8	7	18.23	17.52	17.83	0-5	1.8
		15	0	18.25	17.54	17.87	0-5	1.8

LTE Band 66 \_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 MHz	132322Ch. 1745 MHz	132647 Ch. 1777.5 MHz		
5 MHz	QPSK	1	0	20.08	19.46	19.72	0	0
		1	12	19.98	19.30	19.59	0	0
		1	24	20.03	19.42	19.67	0	0
		12	0	20.14	19.45	19.78	0-1	0
		12	6	20.11	19.51	19.76	0-1	0
		12	11	20.13	19.55	19.80	0-1	0
		25	0	20.14	19.47	19.76	0-1	0
	16QAM	1	0	20.28	19.59	19.87	0-1	0
		1	12	20.15	19.52	19.89	0-1	0
		1	24	20.22	19.62	19.92	0-1	0
		12	0	20.09	19.50	19.79	0-2	0
		12	6	20.15	19.51	19.83	0-2	0
		12	11	20.13	19.51	19.79	0-2	0
		25	0	20.14	19.47	19.88	0-2	0
	64QAM	1	0	20.16	19.46	19.85	0-2	0
		1	12	20.06	19.33	19.81	0-2	0
		1	24	20.12	19.56	19.99	0-2	0
		12	0	20.15	19.50	19.80	0-3	0
		12	6	20.13	19.47	19.77	0-3	0
		12	11	20.14	19.50	19.83	0-3	0
		25	0	20.09	19.46	19.79	0-3	0
	256QAM	1	0	18.12	17.54	17.80	0-5	1.8
		1	12	18.09	17.18	17.63	0-5	1.8
		1	24	18.15	17.59	17.64	0-5	1.8
		12	0	18.08	17.44	17.70	0-5	1.8
		12	6	18.02	17.45	17.70	0-5	1.8
		12	11	18.06	17.44	17.71	0-5	1.8
		25	0	18.11	17.49	17.77	0-5	1.8

LTE Band 66 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 MHz	132322 Ch. 1745 MHz	132622 Ch. 1775 MHz		
10 MHz	QPSK	1	0	20.10	19.40	19.70	0	0
		1	24	20.05	19.42	19.70	0	0
		1	49	20.13	19.51	19.75	0	0
		25	0	20.15	19.49	19.73	0-1	0
		25	12	20.12	19.48	19.76	0-1	0
		25	24	20.13	19.51	19.75	0-1	0
		50	0	20.15	19.55	19.70	0-1	0
	16QAM	1	0	20.39	19.54	19.83	0-1	0
		1	24	20.21	19.61	19.99	0-1	0
		1	49	20.25	19.66	20.02	0-1	0
		25	0	20.16	19.53	19.79	0-2	0
		25	12	20.12	19.43	19.81	0-2	0
		25	24	20.12	19.50	19.86	0-2	0
		50	0	20.14	19.45	19.76	0-2	0
	64QAM	1	0	20.26	19.67	19.86	0-2	0
		1	24	20.18	19.52	19.92	0-2	0
		1	49	20.15	19.44	19.94	0-2	0
		25	0	20.13	19.50	19.76	0-3	0
		25	12	20.09	19.47	19.80	0-3	0
		25	24	20.04	19.50	19.79	0-3	0
		50	0	20.18	19.52	19.81	0-3	0
	256QAM	1	0	18.14	17.57	17.67	0-5	1.8
		1	24	17.97	17.53	17.66	0-5	1.8
		1	49	18.19	17.47	17.76	0-5	1.8
		25	0	18.11	17.47	17.72	0-5	1.8
		25	12	18.08	17.41	17.68	0-5	1.8
		25	24	18.09	17.43	17.67	0-5	1.8
		50	0	18.13	17.51	17.75	0-5	1.8

LTE Band 66 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 MHz	132322 Ch. 1745 MHz	132597 Ch. 1772.5 MHz		
15 MHz	QPSK	1	0	20.10	19.56	19.72	0	0
		1	36	20.09	19.34	19.51	0	0
		1	74	20.07	19.55	19.73	0	0
		36	0	20.04	19.51	19.71	0-1	0
		36	18	20.04	19.50	19.72	0-1	0
		36	39	20.06	19.50	19.65	0-1	0
		75	0	20.05	19.50	19.65	0-1	0
	16QAM	1	0	20.26	19.70	19.91	0-1	0
		1	36	20.13	19.64	19.77	0-1	0
		1	74	20.27	19.79	19.99	0-1	0
		36	0	20.03	19.50	19.72	0-2	0
		36	18	20.05	19.46	19.72	0-2	0
		36	39	20.06	19.54	19.76	0-2	0
		75	0	20.08	19.54	19.72	0-2	0
	64QAM	1	0	20.10	19.61	19.88	0-2	0
		1	36	20.02	19.47	19.76	0-2	0
		1	74	20.33	19.73	20.01	0-2	0
		36	0	20.04	19.48	19.73	0-3	0
		36	18	20.07	19.51	19.74	0-3	0
		36	39	20.12	19.58	19.75	0-3	0
		75	0	20.06	19.51	19.69	0-3	0
	256QAM	1	0	18.20	17.55	17.70	0-5	1.8
		1	36	18.10	17.48	17.67	0-5	1.8
		1	74	18.16	17.49	17.64	0-5	1.8
		36	0	18.01	17.45	17.65	0-5	1.8
		36	18	18.01	17.47	17.67	0-5	1.8
		36	39	18.01	17.48	17.67	0-5	1.8
		75	0	18.05	17.50	17.67	0-5	1.8

LTE Band 66 \_ 20 Mhz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	19.91	19.50	19.66	0	0
		1	49	19.91	19.44	19.62	0	0
		1	99	20.07	19.52	19.76	0	0
		50	0	20.01	19.48	19.66	0-1	0
		50	25	20.00	19.47	19.65	0-1	0
		50	49	19.99	19.45	19.61	0-1	0
		100	0	19.96	19.47	19.68	0-1	0
	16QAM	1	0	20.35	19.84	19.99	0-1	0
		1	49	20.11	19.66	19.82	0-1	0
		1	99	20.32	19.82	20.13	0-1	0
		50	0	19.99	19.48	19.72	0-2	0
		50	25	20.01	19.52	19.70	0-2	0
		50	49	20.03	19.53	19.72	0-2	0
		100	0	19.96	19.52	19.70	0-2	0
	64QAM	1	0	20.24	19.77	20.00	0-2	0
		1	49	20.15	19.56	19.83	0-2	0
		1	99	20.38	19.72	19.91	0-2	0
		50	0	19.98	19.50	19.75	0-3	0
		50	25	20.03	19.53	19.74	0-3	0
		50	49	20.04	19.53	19.72	0-3	0
		100	0	19.96	19.50	19.70	0-3	0
	256QAM	1	0	18.12	17.65	17.84	0-5	1.8
		1	49	18.08	17.49	17.69	0-5	1.8
		1	99	18.18	17.57	17.77	0-5	1.8
		50	0	17.98	17.48	17.71	0-5	1.8
		50	25	18.00	17.50	17.69	0-5	1.8
		50	49	17.98	17.51	17.72	0-5	1.8
		100	0	17.97	17.48	17.68	0-5	1.8

Note : The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

**11.3.3 LTE Reduced Power (Grip sensor-on, Ear jack activated)**

LTE Band 2 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 MHz	18900 Ch. 1880 MHz	19193 Ch. 1909.3 MHz		
1.4 MHz	QPSK	1	0	18.88	18.41	18.90	0	0
		1	3	18.91	18.47	18.90	0	0
		1	5	18.89	18.39	18.92	0	0
		3	0	18.84	18.39	18.88	0	0
		3	1	19.05	18.52	19.06	0	0
		3	3	18.88	18.42	18.93	0	0
	16QAM	6	0	18.91	18.38	18.92	0-1	0
		1	0	18.97	18.61	19.09	0-1	0
		1	3	19.06	18.66	19.03	0-1	0
		1	5	19.08	18.60	19.25	0-1	0
		3	0	19.01	18.47	18.97	0-1	0
		3	1	19.10	18.63	19.20	0-1	0
	64QAM	3	3	19.02	18.55	19.05	0-1	0
		6	0	18.96	18.55	19.00	0-2	0
		1	0	19.09	18.58	19.15	0-2	0
		1	3	18.96	18.49	18.96	0-2	0
		1	5	19.03	18.63	19.12	0-2	0
		3	0	18.91	18.54	18.97	0-2	0
	256QAM	3	1	19.09	18.57	19.09	0-2	0
		3	3	18.92	18.44	18.94	0-2	0
		6	0	18.99	18.56	19.09	0-3	0
		1	0	17.61	17.05	17.56	0-5	1.5
		1	3	17.35	17.03	17.41	0-5	1.5
		1	5	17.42	16.95	17.53	0-5	1.5
	3	0	17.42	16.87	17.40	0-5	1.5	
	3	1	17.52	16.97	17.54	0-5	1.5	
	3	3	17.50	17.03	17.58	0-5	1.5	
	6	0	17.39	16.90	17.47	0-5	1.5	

LTE Band 2\_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 MHz	18900 Ch. 1880 MHz	19185 Ch. 1908.5 MHz		
3 MHz	QPSK	1	0	18.90	18.41	18.90	0	0
		1	7	18.89	18.38	18.88	0	0
		1	14	18.88	18.45	18.95	0	0
		8	0	18.95	18.52	19.01	0-1	0
		8	3	18.95	18.44	18.97	0-1	0
		8	7	18.98	18.51	19.02	0-1	0
		15	0	18.95	18.53	18.99	0-1	0
	16QAM	1	0	19.14	18.63	19.23	0-1	0
		1	7	19.01	18.62	19.12	0-1	0
		1	14	19.04	18.55	19.07	0-1	0
		8	0	19.02	18.63	19.10	0-2	0
		8	3	18.93	18.54	19.02	0-2	0
		8	7	19.00	18.55	19.05	0-2	0
		15	0	19.04	18.55	19.05	0-2	0
	64QAM	1	0	19.03	18.70	19.27	0-2	0
		1	7	19.08	18.57	19.06	0-2	0
		1	14	18.99	18.64	19.14	0-2	0
		8	0	19.03	18.53	19.01	0-3	0
		8	3	19.00	18.52	19.04	0-3	0
		8	7	18.95	18.52	19.05	0-3	0
		15	0	19.03	18.58	19.02	0-3	0
	256QAM	1	0	17.36	17.03	17.57	0-5	1.5
		1	7	17.41	16.97	17.54	0-5	1.5
		1	14	17.59	17.02	17.59	0-5	1.5
8		0	17.41	16.93	17.45	0-5	1.5	
8		3	17.36	16.91	17.46	0-5	1.5	
8		7	17.40	16.92	17.49	0-5	1.5	
15		0	17.41	16.91	17.44	0-5	1.5	

LTE Band 2\_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 MHz	18900 Ch. 1880 MHz	19175 Ch. 1907.5 MHz		
5 MHz	QPSK	1	0	18.89	18.48	18.99	0	0
		1	12	18.87	18.36	18.85	0	0
		1	24	18.91	18.40	18.96	0	0
		12	0	18.99	18.51	19.04	0-1	0
		12	6	18.99	18.54	19.04	0-1	0
		12	11	18.96	18.54	19.03	0-1	0
		25	0	18.95	18.53	19.06	0-1	0
	16QAM	1	0	19.10	18.73	19.14	0-1	0
		1	12	19.04	18.62	19.10	0-1	0
		1	24	19.14	18.74	19.30	0-1	0
		12	0	19.02	18.56	19.13	0-2	0
		12	6	19.01	18.61	19.13	0-2	0
		12	11	19.00	18.55	19.02	0-2	0
		25	0	18.96	18.52	19.03	0-2	0
	64QAM	1	0	19.04	18.63	19.16	0-2	0
		1	12	19.02	18.55	19.10	0-2	0
		1	24	19.08	18.68	19.19	0-2	0
		12	0	18.99	18.58	19.09	0-3	0
		12	6	18.96	18.57	19.05	0-3	0
		12	11	18.99	18.56	19.06	0-3	0
		25	0	18.94	18.56	19.09	0-3	0
	256QAM	1	0	17.59	17.01	17.65	0-5	1.5
		1	12	17.37	17.02	17.60	0-5	1.5
		1	24	17.56	17.14	17.55	0-5	1.5
		12	0	17.45	16.97	17.55	0-5	1.5
		12	6	17.44	16.94	17.48	0-5	1.5
		12	11	17.39	16.93	17.49	0-5	1.5
		25	0	17.46	17.00	17.53	0-5	1.5

LTE Band 2 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 MHz	18900 Ch. 1880 MHz	19150 Ch. 1905 MHz		
10 MHz	QPSK	1	0	18.93	18.44	19.01	0	0
		1	24	18.86	18.44	18.97	0	0
		1	49	18.88	18.48	18.96	0	0
		25	0	18.97	18.52	19.06	0-1	0
		25	12	18.97	18.55	19.06	0-1	0
		25	24	18.96	18.51	19.02	0-1	0
		50	0	18.94	18.49	18.98	0-1	0
	16QAM	1	0	19.06	18.69	19.22	0-1	0
		1	24	19.02	18.55	19.15	0-1	0
		1	49	19.16	18.62	19.13	0-1	0
		25	0	18.97	18.58	19.07	0-2	0
		25	12	18.90	18.57	19.03	0-2	0
		25	24	18.95	18.59	19.08	0-2	0
		50	0	18.95	18.57	19.01	0-2	0
	64QAM	1	0	19.03	18.78	19.25	0-2	0
		1	24	19.00	18.59	19.15	0-2	0
		1	49	19.00	18.73	19.12	0-2	0
		25	0	18.94	18.54	19.06	0-3	0
		25	12	18.93	18.50	19.01	0-3	0
		25	24	18.91	18.52	19.03	0-3	0
		50	0	18.96	18.59	19.01	0-3	0
	256QAM	1	0	17.51	17.21	17.71	0-5	1.5
		1	24	17.36	17.04	17.56	0-5	1.5
		1	49	17.55	17.14	17.62	0-5	1.5
		25	0	17.39	16.98	17.52	0-5	1.5
		25	12	17.40	17.00	17.47	0-5	1.5
		25	24	17.45	16.94	17.50	0-5	1.5
		50	0	17.44	17.00	17.50	0-5	1.5

LTE Band 2 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 MHz	18900 Ch. 1880 MHz	19125 Ch. 1902.5 MHz		
15 MHz	QPSK	1	0	18.94	18.55	19.04	0	0
		1	36	18.77	18.42	18.84	0	0
		1	74	18.95	18.53	18.96	0	0
		36	0	18.94	18.50	18.94	0-1	0
		36	18	18.96	18.49	18.99	0-1	0
		36	39	18.94	18.54	18.95	0-1	0
		75	0	18.94	18.49	18.97	0-1	0
	16QAM	1	0	19.17	18.89	19.16	0-1	0
		1	36	18.99	18.67	19.03	0-1	0
		1	74	19.24	18.75	19.19	0-1	0
		36	0	18.96	18.55	19.00	0-2	0
		36	18	18.97	18.54	18.96	0-2	0
		36	39	18.93	18.49	18.96	0-2	0
		75	0	18.97	18.50	18.96	0-2	0
	64QAM	1	0	18.98	18.80	19.21	0-2	0
		1	36	18.87	18.38	19.01	0-2	0
		1	74	19.06	18.58	19.28	0-2	0
		36	0	18.93	18.57	19.00	0-3	0
		36	18	18.96	18.52	18.96	0-3	0
		36	39	18.95	18.58	18.98	0-3	0
		75	0	18.92	18.55	18.98	0-3	0
	256QAM	1	0	17.46	17.10	17.66	0-5	1.5
		1	36	17.49	17.03	17.43	0-5	1.5
		1	74	17.46	16.99	17.52	0-5	1.5
		36	0	17.43	16.98	17.46	0-5	1.5
		36	18	17.40	17.04	17.45	0-5	1.5
		36	39	17.45	16.95	17.43	0-5	1.5
		75	0	17.44	17.02	17.48	0-5	1.5

LTE Band 2\_ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	18.84	18.54	18.97	0	0
		1	49	18.77	18.44	18.85	0	0
		1	99	18.82	18.44	18.92	0	0
		50	0	18.86	18.47	18.88	0-1	0
		50	25	18.85	18.45	18.84	0-1	0
		50	49	18.86	18.45	18.85	0-1	0
		100	0	18.85	18.50	18.92	0-1	0
	16QAM	1	0	19.19	18.82	19.27	0-1	0
		1	49	18.92	18.69	18.96	0-1	0
		1	99	18.95	18.66	19.20	0-1	0
		50	0	18.86	18.48	18.94	0-2	0
		50	25	18.83	18.48	18.90	0-2	0
		50	49	18.84	18.44	18.87	0-2	0
		100	0	18.83	18.50	18.89	0-2	0
	64QAM	1	0	18.97	18.85	19.17	0-2	0
		1	49	18.94	18.69	19.03	0-2	0
		1	99	19.05	18.70	19.15	0-2	0
		50	0	18.85	18.53	18.97	0-3	0
		50	25	18.88	18.50	18.89	0-3	0
		50	49	18.84	18.47	18.93	0-3	0
		100	0	18.87	18.47	18.90	0-3	0
	256QAM	1	0	17.55	17.12	17.56	0-5	1.5
		1	49	17.43	17.22	17.40	0-5	1.5
		1	99	17.51	17.24	17.51	0-5	1.5
		50	0	17.36	17.02	17.44	0-5	1.5
		50	25	17.33	16.99	17.40	0-5	1.5
		50	49	17.36	16.98	17.37	0-5	1.5
		100	0	17.36	17.00	17.42	0-5	1.5

[ LTE Band 4 Conducted Power ]

LTE Band 4 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 MHz	20175 Ch. 1732.5 MHz	20393 Ch. 1754.3 MHz		
1.4 MHz	QPSK	1	0	20.07	19.68	19.40	0	0
		1	3	20.08	19.68	19.40	0	0
		1	5	20.11	19.70	19.40	0	0
		3	0	20.07	19.64	19.40	0	0
		3	1	20.25	19.77	19.46	0	0
		3	3	20.12	19.68	19.47	0	0
		6	0	20.06	19.67	19.42	0-1	0
	16QAM	1	0	20.38	19.92	19.59	0-1	0
		1	3	20.07	19.81	19.41	0-1	0
		1	5	20.34	19.85	19.67	0-1	0
		3	0	20.13	19.79	19.51	0-1	0
		3	1	20.28	20.00	19.65	0-1	0
		3	3	20.27	19.85	19.57	0-1	0
		6	0	20.26	19.83	19.62	0-2	0
	64QAM	1	0	20.27	19.84	19.55	0-2	0
		1	3	20.14	19.74	19.53	0-2	0
		1	5	20.30	19.78	19.50	0-2	0
		3	0	20.21	19.74	19.44	0-2	0
		3	1	20.30	19.89	19.65	0-2	0
		3	3	20.19	19.70	19.57	0-2	0
		6	0	20.26	19.82	19.52	0-3	0
	256QAM	1	0	18.19	17.84	17.56	0-5	2
		1	3	18.11	17.75	17.41	0-5	2
		1	5	18.21	17.86	17.46	0-5	2
		3	0	18.11	17.69	17.41	0-5	2
		3	1	18.12	17.72	17.46	0-5	2
		3	3	18.21	17.78	17.49	0-5	2
		6	0	18.15	17.70	17.39	0-5	2

LTE Band 4 \_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 MHz	20175 Ch. 1732.5 MHz	20385 Ch. 1753.5 MHz		
3 MHz	QPSK	1	0	20.04	19.73	19.43	0	0
		1	7	20.12	19.64	19.33	0	0
		1	14	20.15	19.73	19.46	0	0
		8	0	20.20	19.77	19.52	0-1	0
		8	3	20.19	19.75	19.49	0-1	0
		8	7	20.20	19.82	19.54	0-1	0
		15	0	20.24	19.79	19.55	0-1	0
	16QAM	1	0	20.25	20.04	19.68	0-1	0
		1	7	20.23	19.92	19.60	0-1	0
		1	14	20.31	19.96	19.70	0-1	0
		8	0	20.27	19.91	19.60	0-2	0
		8	3	20.27	19.81	19.60	0-2	0
		8	7	20.28	19.88	19.63	0-2	0
		15	0	20.30	19.83	19.55	0-2	0
	64QAM	1	0	20.40	19.97	19.63	0-2	0
		1	7	20.25	19.68	19.52	0-2	0
		1	14	20.24	19.83	19.59	0-2	0
		8	0	20.24	19.83	19.56	0-3	0
		8	3	20.21	19.77	19.54	0-3	0
		8	7	20.29	19.85	19.55	0-3	0
		15	0	20.27	19.82	19.54	0-3	0
	256QAM	1	0	18.24	17.90	17.59	0-5	2
		1	7	18.22	17.62	17.29	0-5	2
		1	14	18.27	17.63	17.42	0-5	2
		8	0	18.15	17.71	17.44	0-5	2
		8	3	18.18	17.63	17.44	0-5	2
		8	7	18.20	17.73	17.44	0-5	2
		15	0	18.17	17.73	17.48	0-5	2

LTE Band 4 \_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 MHz	20175 Ch. 1732.5 MHz	20375 Ch. 1752.5 MHz		
5 MHz	QPSK	1	0	20.11	19.73	19.40	0	0
		1	12	20.01	19.67	19.32	0	0
		1	24	20.12	19.76	19.39	0	0
		12	0	20.22	19.84	19.46	0-1	0
		12	6	20.20	19.81	19.46	0-1	0
		12	11	20.22	19.85	19.50	0-1	0
		25	0	20.21	19.82	19.48	0-1	0
	16QAM	1	0	20.37	19.95	19.51	0-1	0
		1	12	20.31	19.94	19.54	0-1	0
		1	24	20.42	19.92	19.69	0-1	0
		12	0	20.24	19.83	19.48	0-2	0
		12	6	20.23	19.86	19.47	0-2	0
		12	11	20.21	19.84	19.47	0-2	0
		25	0	20.26	19.81	19.54	0-2	0
	64QAM	1	0	20.26	19.92	19.56	0-2	0
		1	12	20.12	19.71	19.38	0-2	0
		1	24	20.43	19.97	19.55	0-2	0
		12	0	20.26	19.86	19.54	0-3	0
		12	6	20.26	19.82	19.43	0-3	0
		12	11	20.29	19.85	19.48	0-3	0
		25	0	20.27	19.83	19.47	0-3	0
	256QAM	1	0	18.12	17.88	17.46	0-5	2
		1	12	18.15	17.75	17.46	0-5	2
		1	24	18.31	17.84	17.51	0-5	2
		12	0	18.20	17.73	17.35	0-5	2
		12	6	18.18	17.69	17.39	0-5	2
		12	11	18.17	17.74	17.39	0-5	2
		25	0	18.23	17.76	17.39	0-5	2

LTE Band 4 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 MHz	20175 Ch. 1732.5 MHz	20350 Ch. 1750 MHz		
10 MHz	QPSK	1	0	20.09	19.75	19.46	0	0
		1	24	20.12	19.73	19.45	0	0
		1	49	20.20	19.84	19.52	0	0
		25	0	20.22	19.87	19.56	0-1	0
		25	12	20.20	19.81	19.54	0-1	0
		25	24	20.21	19.83	19.54	0-1	0
		50	0	20.22	19.78	19.52	0-1	0
	16QAM	1	0	20.32	20.08	19.70	0-1	0
		1	24	20.22	19.97	19.63	0-1	0
		1	49	20.38	19.92	19.70	0-1	0
		25	0	20.26	19.84	19.50	0-2	0
		25	12	20.21	19.82	19.59	0-2	0
		25	24	20.20	19.81	19.60	0-2	0
		50	0	20.19	19.81	19.53	0-2	0
	64QAM	1	0	20.43	20.04	19.61	0-2	0
		1	24	20.24	19.96	19.55	0-2	0
		1	49	20.42	19.95	19.62	0-2	0
		25	0	20.21	19.84	19.54	0-3	0
		25	12	20.18	19.85	19.50	0-3	0
		25	24	20.17	19.82	19.59	0-3	0
		50	0	20.22	19.82	19.56	0-3	0
	256QAM	1	0	18.28	17.92	17.52	0-5	2
		1	24	18.12	17.79	17.66	0-5	2
		1	49	18.27	17.85	17.61	0-5	2
		25	0	18.20	17.75	17.45	0-5	2
		25	12	18.14	17.73	17.50	0-5	2
		25	24	18.16	17.77	17.46	0-5	2
		50	0	18.25	17.82	17.54	0-5	2

LTE Band 4 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 MHz	20175 Ch. 1732.5 MHz	20325 Ch. 1747.5 MHz		
15 MHz	QPSK	1	0	20.01	19.77	19.48	0	0
		1	36	19.99	19.68	19.39	0	0
		1	74	20.15	19.81	19.54	0	0
		36	0	20.13	19.77	19.51	0-1	0
		36	18	20.16	19.81	19.51	0-1	0
		36	39	20.17	19.82	19.51	0-1	0
		75	0	20.16	19.78	19.51	0-1	0
	16QAM	1	0	20.23	19.92	19.57	0-1	0
		1	36	20.15	19.97	19.50	0-1	0
		1	74	20.38	20.11	19.72	0-1	0
		36	0	20.10	19.81	19.48	0-2	0
		36	18	20.10	19.83	19.51	0-2	0
		36	39	20.14	19.82	19.51	0-2	0
		75	0	20.11	19.80	19.50	0-2	0
	64QAM	1	0	20.24	19.91	19.72	0-2	0
		1	36	20.15	19.84	19.52	0-2	0
		1	74	20.34	19.96	19.72	0-2	0
		36	0	20.12	19.82	19.55	0-3	0
		36	18	20.16	19.83	19.52	0-3	0
		36	39	20.19	19.83	19.57	0-3	0
		75	0	20.16	19.80	19.52	0-3	0
	256QAM	1	0	18.22	17.81	17.62	0-5	2
		1	36	18.09	17.80	17.58	0-5	2
		1	74	18.23	17.88	17.57	0-5	2
		36	0	18.09	17.74	17.51	0-5	2
		36	18	18.12	17.75	17.46	0-5	2
		36	39	18.10	17.78	17.49	0-5	2
		75	0	18.11	17.79	17.50	0-5	2

LTE Band 4 \_ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 MHz		
20 MHz	QPSK	1	0	19.68	0	0
		1	49	19.69	0	0
		1	99	19.79	0	0
		50	0	19.73	0-1	0
		50	25	19.75	0-1	0
		50	49	19.79	0-1	0
		100	0	19.79	0-1	0
	16QAM	1	0	20.01	0-1	0
		1	49	19.88	0-1	0
		1	99	19.95	0-1	0
		50	0	19.75	0-2	0
		50	25	19.81	0-2	0
		50	49	19.78	0-2	0
		100	0	19.76	0-2	0
	64QAM	1	0	20.05	0-2	0
		1	49	19.98	0-2	0
		1	99	19.97	0-2	0
		50	0	19.78	0-3	0
		50	25	19.82	0-3	0
		50	49	19.82	0-3	0
		100	0	19.77	0-3	0
	256QAM	1	0	17.71	0-5	2
		1	49	17.80	0-5	2
		1	99	17.91	0-5	2
		50	0	17.81	0-5	2
		50	25	17.84	0-5	2
		50	49	17.80	0-5	2
		100	0	17.80	0-5	2

[ LTE Band 25 Conducted Power ]  
 LTE Band 25 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 MHz	26365 Ch. 1882.5 MHz	26683 Ch. 1914.3 MHz		
1.4 MHz	QPSK	1	0	18.86	18.39	18.72	0	0
		1	3	18.84	18.43	18.69	0	0
		1	5	18.90	18.43	18.67	0	0
		3	0	18.80	18.35	18.64	0	0
		3	1	18.95	18.53	18.81	0	0
		3	3	18.84	18.44	18.71	0	0
	16QAM	6	0	18.85	18.42	18.68	0-1	0
		1	0	18.98	18.59	18.85	0-1	0
		1	3	18.84	18.54	18.67	0-1	0
		1	5	19.05	18.61	18.83	0-1	0
		3	0	18.90	18.43	18.67	0-1	0
		3	1	19.08	18.68	18.89	0-1	0
	64QAM	3	3	19.02	18.50	18.76	0-1	0
		6	0	18.94	18.43	18.77	0-2	0
		1	0	19.00	18.61	18.78	0-2	0
		1	3	18.91	18.45	18.73	0-2	0
		1	5	19.01	18.58	18.83	0-2	0
		3	0	18.88	18.44	18.71	0-2	0
	256QAM	3	1	19.05	18.50	18.81	0-2	0
		3	3	18.99	18.37	18.77	0-2	0
		6	0	18.96	18.55	18.79	0-3	0
		1	0	17.48	16.99	17.35	0-5	1.5
		1	3	17.27	17.04	17.27	0-5	1.5
		1	5	17.48	17.00	17.24	0-5	1.5
		3	0	17.35	16.94	17.22	0-5	1.5
		3	1	17.40	17.00	17.31	0-5	1.5
		3	3	17.42	17.09	17.22	0-5	1.5
		6	0	17.37	16.94	17.20	0-5	1.5

LTE Band 25 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 MHz	26365 Ch. 1882.5 MHz	26675 Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	18.80	18.43	18.66	0	0
		1	7	18.73	18.36	18.64	0	0
		1	14	18.84	18.46	18.76	0	0
		8	0	18.93	18.52	18.78	0-1	0
		8	3	18.92	18.51	18.77	0-1	0
		8	7	18.92	18.49	18.79	0-1	0
	16QAM	15	0	18.97	18.56	18.83	0-1	0
		1	0	19.03	18.68	18.94	0-1	0
		1	7	19.06	18.58	18.78	0-1	0
		1	14	19.04	18.50	18.91	0-1	0
		8	0	18.98	18.46	18.81	0-2	0
		8	3	18.94	18.49	18.80	0-2	0
	64QAM	8	7	18.97	18.54	18.82	0-2	0
		15	0	18.93	18.52	18.80	0-2	0
		1	0	19.04	18.52	18.93	0-2	0
		1	7	18.95	18.44	18.88	0-2	0
		1	14	19.01	18.53	18.86	0-2	0
		8	0	18.88	18.52	18.78	0-3	0
	256QAM	8	3	18.90	18.48	18.73	0-3	0
		8	7	18.91	18.55	18.78	0-3	0
		15	0	18.94	18.51	18.84	0-3	0
		1	0	17.48	17.17	17.40	0-5	1.5
		1	7	17.45	17.00	17.37	0-5	1.5
		1	14	17.44	16.99	17.32	0-5	1.5
		8	0	17.43	17.00	17.24	0-5	1.5
		8	3	17.38	17.00	17.24	0-5	1.5
		8	7	17.42	16.97	17.27	0-5	1.5
15		0	17.42	16.97	17.26	0-5	1.5	

LTE Band 25 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 MHz	26365 Ch. 1882.5 MHz	26665 Ch. 1912.5 MHz		
5 MHz	QPSK	1	0	18.89	18.53	18.80	0	0
		1	12	18.81	18.39	18.75	0	0
		1	24	18.91	18.43	18.78	0	0
		12	0	18.99	18.57	18.85	0-1	0
		12	6	18.97	18.54	18.87	0-1	0
		12	11	18.97	18.56	18.88	0-1	0
	16QAM	25	0	18.96	18.52	18.84	0-1	0
		1	0	19.07	18.74	18.92	0-1	0
		1	12	18.99	18.56	18.92	0-1	0
		1	24	19.11	18.76	19.05	0-1	0
		12	0	18.98	18.52	18.82	0-2	0
		12	6	18.98	18.52	18.87	0-2	0
	64QAM	12	11	18.93	18.49	18.80	0-2	0
		25	0	18.96	18.50	18.82	0-2	0
		1	0	19.02	18.46	18.90	0-2	0
		1	12	18.94	18.35	18.80	0-2	0
		1	24	19.05	18.55	18.87	0-2	0
		12	0	18.94	18.55	18.88	0-3	0
	256QAM	12	6	18.93	18.50	18.81	0-3	0
		12	11	18.97	18.52	18.83	0-3	0
		25	0	18.94	18.47	18.87	0-3	0
		1	0	17.43	17.11	17.38	0-5	1.5
		1	12	17.39	16.90	17.32	0-5	1.5
		1	24	17.45	17.18	17.46	0-5	1.5
		12	0	17.45	17.01	17.31	0-5	1.5
	12	6	17.42	16.99	17.29	0-5	1.5	
	12	11	17.38	16.98	17.32	0-5	1.5	
	25	0	17.44	17.02	17.34	0-5	1.5	

LTE Band 25 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 MHz	26365 Ch. 1882.5 MHz	26640 Ch. 1910 MHz		
10 MHz	QPSK	1	0	18.92	18.49	18.96	0	0
		1	24	18.88	18.45	18.89	0	0
		1	49	18.93	18.48	18.94	0	0
		25	0	18.96	18.54	19.00	0-1	0
		25	12	18.94	18.52	19.00	0-1	0
		25	24	18.93	18.51	18.98	0-1	0
	16QAM	50	0	18.99	18.53	19.01	0-1	0
		1	0	19.10	18.60	19.17	0-1	0
		1	24	19.02	18.52	19.05	0-1	0
		1	49	19.03	18.66	19.00	0-1	0
		25	0	18.93	18.54	18.99	0-2	0
		25	12	18.93	18.51	18.95	0-2	0
	64QAM	25	24	18.97	18.48	19.00	0-2	0
		50	0	18.98	18.57	19.02	0-2	0
		1	0	19.11	18.67	19.14	0-2	0
		1	24	19.08	18.60	19.08	0-2	0
		1	49	19.12	18.65	19.04	0-2	0
		25	0	18.88	18.50	19.00	0-3	0
	256QAM	25	12	18.90	18.47	18.96	0-3	0
		25	24	18.95	18.49	18.97	0-3	0
		50	0	18.99	18.52	19.02	0-3	0
		1	0	17.48	17.15	17.45	0-5	1.5
		1	24	17.49	17.05	17.44	0-5	1.5
		1	49	17.44	17.09	17.45	0-5	1.5
	25	0	17.46	17.01	17.43	0-5	1.5	
	25	12	17.42	16.98	17.49	0-5	1.5	
	25	24	17.42	17.00	17.48	0-5	1.5	
	50	0	17.45	17.02	17.48	0-5	1.5	

LTE Band 25 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 MHz	26365 Ch. 1882.5 MHz	26615 Ch. 1907.5 MHz		
15 MHz	QPSK	1	0	19.05	18.67	19.14	0	0
		1	36	18.89	18.48	18.99	0	0
		1	74	19.01	18.58	19.10	0	0
		36	0	19.10	18.70	19.17	0-1	0
		36	18	19.11	18.70	19.16	0-1	0
		36	39	19.07	18.68	19.13	0-1	0
		75	0	19.05	18.65	19.15	0-1	0
	16QAM	1	0	19.17	18.79	19.27	0-1	0
		1	36	19.02	18.78	19.18	0-1	0
		1	74	19.15	18.76	19.29	0-1	0
		36	0	19.02	18.67	19.16	0-2	0
		36	18	19.03	18.63	19.16	0-2	0
		36	39	19.03	18.62	19.09	0-2	0
		75	0	19.03	18.63	19.13	0-2	0
	64QAM	1	0	19.11	18.80	19.31	0-2	0
		1	36	19.03	18.71	19.17	0-2	0
		1	74	19.18	18.78	19.33	0-2	0
		36	0	19.05	18.67	19.19	0-3	0
		36	18	19.05	18.65	19.13	0-3	0
		36	39	19.05	18.62	19.15	0-3	0
		75	0	18.99	18.60	19.12	0-3	0
	256QAM	1	0	17.61	17.29	17.77	0-5	1.5
		1	36	17.48	17.04	17.52	0-5	1.5
		1	74	17.56	17.20	17.70	0-5	1.5
		36	0	17.53	17.14	17.60	0-5	1.5
		36	18	17.52	17.12	17.63	0-5	1.5
		36	39	17.52	17.09	17.61	0-5	1.5
75		0	17.54	17.14	17.63	0-5	1.5	

LTE Band 25 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	18.95	18.68	19.09	0	0
		1	49	18.85	18.57	19.14	0	0
		1	99	18.94	18.63	19.13	0	0
		50	0	19.01	18.72	19.16	0-1	0
		50	25	19.00	18.66	19.11	0-1	0
		50	49	19.01	18.66	19.11	0-1	0
	100	0	19.01	18.66	19.14	0-1	0	
	16QAM	1	0	19.16	18.91	19.37	0-1	0
		1	49	18.96	18.78	19.15	0-1	0
		1	99	19.13	18.81	19.33	0-1	0
		50	0	18.97	18.66	19.12	0-2	0
		50	25	18.97	18.64	19.15	0-2	0
		50	49	18.94	18.64	19.12	0-2	0
	100	0	18.98	18.65	19.12	0-2	0	
	64QAM	1	0	19.21	18.78	19.27	0-2	0
		1	49	19.08	18.71	19.19	0-2	0
		1	99	19.15	18.78	19.27	0-2	0
		50	0	18.99	18.66	19.13	0-3	0
		50	25	18.99	18.64	19.15	0-3	0
		50	49	18.96	18.65	19.11	0-3	0
	100	0	18.97	18.65	19.10	0-3	0	
	256QAM	1	0	17.48	17.26	17.95	0-5	1.5
		1	49	17.55	17.12	17.59	0-5	1.5
		1	99	17.48	17.34	17.74	0-5	1.5
50		0	17.48	17.13	17.61	0-5	1.5	
50		25	17.47	17.11	17.58	0-5	1.5	
50		49	17.48	17.13	17.60	0-5	1.5	
100	0	17.48	17.12	17.64	0-5	1.5		

[ LTE Band 41 Conducted Power ] - Power Class 3  
 LTE Band 41 5 MHz Bandwidth

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
5 MHz	QPSK	1	0	22.90	22.85	22.73	22.81	23.26	0	0
		1	12	22.91	22.92	22.73	22.83	23.29	0	0
		1	24	22.95	22.89	22.76	22.92	23.29	0	0
		12	0	22.98	22.90	22.79	22.97	23.34	0-1	0
		12	6	22.94	22.90	22.81	22.96	23.32	0-1	0
		12	11	22.95	22.90	22.80	22.97	23.33	0-1	0
		25	0	22.95	22.90	22.78	22.98	23.32	0-1	0
	16QAM	1	0	23.00	22.90	22.77	22.79	23.18	0-1	0
		1	12	22.95	22.89	22.60	22.67	23.11	0-1	0
		1	24	22.98	22.86	22.68	22.76	23.12	0-1	0
		12	0	21.97	21.91	21.80	21.93	22.36	0-2	1
		12	6	21.94	21.89	21.82	21.92	22.30	0-2	1
		12	11	21.94	21.92	21.83	21.95	22.32	0-2	1
	64QAM	25	0	21.96	21.88	21.76	21.95	22.31	0-2	1
		1	0	22.15	21.93	21.90	21.98	22.37	0-2	1
		1	12	22.12	21.88	21.78	21.71	22.18	0-2	1
		1	24	22.16	21.94	21.85	21.93	22.30	0-2	1
		12	0	20.99	20.94	20.80	20.98	21.33	0-3	2
		12	6	20.95	20.91	20.82	20.96	21.30	0-3	2
		12	11	20.98	20.91	20.84	20.99	21.31	0-3	2
	256QAM	25	0	20.96	20.91	20.80	20.96	21.31	0-3	2
		1	0	18.79	18.70	18.51	18.78	19.19	0-5	3.2
		1	12	18.71	18.70	18.52	18.70	19.21	0-5	3.2
		1	24	18.73	18.62	18.51	18.77	19.18	0-5	3.2
		12	0	19.01	18.92	18.82	18.94	19.32	0-5	3.2
		12	6	18.99	18.92	18.83	18.96	19.29	0-5	3.2
		12	11	19.00	18.93	18.83	18.97	19.31	0-5	3.2
	25	0	19.01	18.93	18.80	19.01	19.34	0-5	3.2	

LTE Band 41 10 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
10 MHz	QPSK	1	0	23.31	22.93	22.84	22.92	23.30	0	0
		1	24	23.20	22.81	22.70	22.81	23.17	0	0
		1	49	22.94	22.86	22.70	22.85	23.18	0	0
		25	0	23.01	22.92	22.81	22.94	23.28	0-1	0
		25	12	23.00	22.91	22.77	22.90	23.26	0-1	0
		25	24	22.99	22.89	22.76	22.92	23.26	0-1	0
		50	0	23.02	22.94	22.81	22.96	23.35	0-1	0
	16QAM	1	0	23.06	23.07	22.90	22.89	23.20	0-1	0
		1	24	22.93	23.00	22.78	22.70	23.11	0-1	0
		1	49	23.01	23.04	22.81	22.78	23.12	0-1	0
		25	0	22.01	21.92	21.82	21.99	22.34	0-2	1
		25	12	22.00	21.89	21.79	21.95	22.31	0-2	1
		25	24	21.98	21.90	21.77	21.95	22.30	0-2	1
		50	0	22.03	21.94	21.80	21.96	22.31	0-2	1
	64QAM	1	0	22.17	22.12	21.96	22.09	22.38	0-2	1
		1	24	22.03	22.05	21.83	21.97	22.32	0-2	1
		1	49	22.08	22.11	21.85	22.10	22.33	0-2	1
		25	0	21.01	20.94	20.84	20.97	21.33	0-3	2
		25	12	20.98	20.91	20.81	20.91	21.29	0-3	2
		25	24	20.98	20.92	20.81	20.93	21.29	0-3	2
		50	0	21.05	20.98	20.85	20.99	21.35	0-3	2
	256QAM	1	0	18.90	18.90	18.81	18.87	19.23	0-5	3.2
		1	24	18.76	18.78	18.70	18.75	19.09	0-5	3.2
		1	49	18.82	18.85	18.75	18.82	19.16	0-5	3.2
		25	0	19.05	18.99	18.89	19.00	19.33	0-5	3.2
		25	12	19.03	18.95	18.81	18.94	19.31	0-5	3.2
		25	24	19.03	18.98	18.85	18.97	19.32	0-5	3.2
		50	0	19.09	19.02	18.89	19.04	19.37	0-5	3.2

LTE Band 41 15 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
15 MHz	QPSK	1	0	22.97	23.10	22.98	22.99	23.26	0	0
		1	36	23.01	23.09	22.93	22.85	23.21	0	0
		1	74	22.96	23.05	22.85	22.88	23.15	0	0
		36	0	23.05	23.14	22.99	22.99	23.31	0-1	0
		36	18	23.01	23.09	22.93	22.96	23.28	0-1	0
		36	39	23.01	23.10	22.91	22.94	23.26	0-1	0
		75	0	23.02	23.11	22.94	22.96	23.27	0-1	0
	16QAM	1	0	22.98	22.99	22.81	22.94	23.19	0-1	0
		1	36	22.81	22.92	22.68	22.68	23.10	0-1	0
		1	74	22.87	22.96	22.72	22.78	23.12	0-1	0
		36	0	22.05	22.12	21.93	21.93	22.31	0-2	1
		36	18	22.04	22.08	21.95	21.89	22.26	0-2	1
		36	39	22.02	22.09	21.91	21.88	22.26	0-2	1
	64QAM	75	0	22.06	22.11	21.96	21.92	22.27	0-2	1
		1	0	22.21	22.11	22.09	22.08	22.39	0-2	1
		1	36	22.06	22.01	21.93	21.94	22.35	0-2	1
		1	74	22.07	22.08	21.98	21.98	22.31	0-2	1
		36	0	21.13	21.14	21.00	20.96	21.33	0-3	2
		36	18	21.11	21.09	20.96	20.94	21.28	0-3	2
		36	39	21.09	21.11	20.93	20.91	21.27	0-3	2
	256QAM	75	0	21.12	21.14	20.98	20.95	21.30	0-3	2
		1	0	19.04	19.17	18.89	18.87	19.19	0-5	3.2
		1	36	18.82	19.16	18.79	18.66	19.10	0-5	3.2
		1	74	18.94	19.15	18.78	18.77	19.15	0-5	3.2
		36	0	19.19	19.16	19.05	18.99	19.35	0-5	3.2
		36	18	19.16	19.12	18.99	18.95	19.32	0-5	3.2
		36	39	19.14	19.14	18.97	18.93	19.32	0-5	3.2
	75	0	19.12	19.12	18.99	18.93	19.29	0-5	3.2	

LTE Band 41 20 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	23.22	23.08	23.02	23.01	23.32	0	0
		1	49	23.05	22.91	22.81	22.82	23.13	0	0
		1	99	23.10	22.96	22.81	22.85	23.14	0	0
		50	0	23.23	23.10	23.01	23.01	23.35	0-1	0
		50	25	23.17	23.06	22.94	22.94	23.37	0-1	0
		50	49	23.17	23.07	22.91	22.95	23.36	0-1	0
		100	0	23.18	23.06	22.94	22.97	23.35	0-1	0
	16QAM	1	0	23.15	23.09	22.92	22.94	23.20	0-1	0
		1	49	22.93	22.93	22.69	22.72	22.97	0-1	0
		1	99	23.02	22.99	22.69	22.77	23.01	0-1	0
		50	0	22.23	22.12	22.04	22.00	22.39	0-2	1
		50	25	22.16	22.07	21.95	21.92	22.34	0-2	1
		50	49	22.15	22.07	21.92	21.93	22.33	0-2	1
		100	0	22.25	22.11	21.99	22.02	22.38	0-2	1
	64QAM	1	0	22.38	22.28	22.22	22.30	22.37	0-2	1
		1	49	22.20	22.09	22.03	22.14	22.28	0-2	1
		1	99	22.22	22.14	22.01	22.12	22.30	0-2	1
		50	0	21.25	21.13	21.06	21.04	21.40	0-3	2
		50	25	21.18	21.09	20.97	20.98	21.36	0-3	2
		50	49	21.18	21.08	20.94	20.98	21.34	0-3	2
		100	0	21.17	21.05	20.95	21.00	21.34	0-3	2
	256QAM	1	0	19.21	19.24	19.11	18.96	19.34	0-5	3.2
		1	49	19.04	19.07	18.93	18.81	19.22	0-5	3.2
		1	99	19.06	19.06	18.97	18.85	19.27	0-5	3.2
		50	0	19.27	19.17	19.08	19.09	19.34	0-5	3.2
		50	25	19.22	19.13	19.01	19.02	19.38	0-5	3.2
		50	49	19.20	19.13	18.98	19.03	19.36	0-5	3.2
		100	0	19.17	19.07	18.94	19.00	19.32	0-5	3.2

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[ LTE Band 41 Conducted Power ] - Power Class 2  
 LTE Band 41 5 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
5 MHz	QPSK	1	0	23.04	22.92	22.83	22.79	23.17	0	0
		1	12	22.95	22.89	22.78	22.77	23.15	0	0
		1	24	23.01	22.91	22.80	22.82	23.14	0	0
		12	0	23.00	22.91	22.80	22.81	23.13	0-1	0
		12	6	23.01	22.88	22.80	22.80	23.13	0-1	0
		12	11	23.00	22.91	22.78	22.82	23.12	0-1	0
		25	0	22.99	22.90	22.77	22.80	23.15	0-1	0
	16QAM	1	0	23.38	23.22	23.16	23.00	23.38	0-1	0
		1	12	23.39	23.24	23.11	22.91	23.39	0-1	0
		1	24	23.37	23.24	23.13	22.99	23.31	0-1	0
		12	0	21.98	21.92	21.86	21.85	22.19	0-2	0
		12	6	22.08	21.90	21.84	21.79	22.17	0-2	0
		12	11	22.11	21.90	21.81	21.78	22.18	0-2	0
	64QAM	25	0	21.97	21.89	21.81	21.79	22.18	0-2	0
		1	0	22.45	22.28	22.04	22.03	22.53	0-2	0
		1	12	22.37	22.07	21.83	22.06	22.51	0-2	0
		1	24	22.48	22.30	22.06	22.07	22.54	0-2	0
		12	0	20.93	20.97	20.87	20.81	21.07	0-3	2
		12	6	21.04	20.95	20.72	20.81	21.22	0-3	2
		12	11	21.03	20.95	20.69	20.83	21.21	0-3	2
	256QAM	25	0	21.01	20.91	20.79	20.73	21.13	0-3	2
		1	0	18.75	18.77	18.58	18.38	18.96	0-5	2.7
		1	12	18.78	18.82	18.54	18.33	18.96	0-5	2.7
		1	24	18.79	18.77	18.51	18.43	18.97	0-5	2.7
		12	0	19.06	18.88	18.85	18.87	19.16	0-5	2.7
		12	6	19.04	18.84	18.78	18.83	19.12	0-5	2.7
		12	11	18.99	18.84	18.77	18.81	19.15	0-5	2.7
	25	0	19.05	18.92	18.83	18.82	19.18	0-5	2.7	

LTE Band 41 10 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
10 MHz	QPSK	1	0	23.05	22.96	22.89	22.89	23.20	0	0
		1	24	23.03	22.92	22.80	22.84	23.15	0	0
		1	49	23.04	22.92	22.81	22.83	23.15	0	0
		25	0	23.02	22.91	22.82	22.83	23.18	0-1	0
		25	12	23.00	22.89	22.79	22.80	23.14	0-1	0
		25	24	22.98	22.88	22.77	22.77	23.14	0-1	0
		50	0	22.95	22.88	22.77	22.79	23.11	0-1	0
	16QAM	1	0	22.87	23.32	23.21	22.87	23.38	0-1	0
		1	24	22.67	23.21	23.08	22.73	23.36	0-1	0
		1	49	22.76	23.23	23.11	22.79	23.37	0-1	0
		25	0	22.04	21.90	21.81	21.82	22.18	0-2	0
		25	12	22.04	21.90	21.78	21.84	22.16	0-2	0
		25	24	21.99	21.87	21.75	21.81	22.14	0-2	0
		50	0	21.95	21.93	21.78	21.79	22.13	0-2	0
	64QAM	1	0	22.53	22.30	22.23	22.04	22.60	0-2	0
		1	24	22.48	22.27	22.18	22.31	22.55	0-2	0
		1	49	22.42	22.24	22.13	22.24	22.51	0-2	0
		25	0	21.05	20.94	20.85	20.83	21.22	0-3	2
		25	12	20.98	20.92	20.82	20.82	21.20	0-3	2
		25	24	20.94	20.91	20.80	20.79	21.20	0-3	2
		50	0	21.02	20.95	20.84	20.82	21.20	0-3	2
	256QAM	1	0	18.62	19.00	18.95	18.47	18.88	0-5	2.7
		1	24	18.62	19.01	18.91	18.38	19.26	0-5	2.7
		1	49	18.64	19.03	18.91	18.39	19.29	0-5	2.7
		25	0	19.08	18.99	18.87	18.86	19.24	0-5	2.7
		25	12	19.07	18.95	18.85	18.85	19.20	0-5	2.7
		25	24	19.04	18.94	18.84	18.82	19.20	0-5	2.7
		50	0	19.05	18.98	18.88	18.85	19.24	0-5	2.7

LTE Band 41 15 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
15 MHz	QPSK	1	0	23.09	23.03	22.94	22.81	23.21	0	0
		1	36	22.98	22.94	22.77	22.66	23.12	0	0
		1	74	23.07	22.97	22.81	22.75	23.12	0	0
		36	0	23.03	22.95	22.84	22.79	23.14	0-1	0
		36	18	23.01	22.93	22.80	22.79	23.10	0-1	0
		36	39	22.97	22.92	22.76	22.74	23.08	0-1	0
		75	0	23.01	22.92	22.79	22.76	23.12	0-1	0
	16QAM	1	0	23.07	23.20	23.09	22.96	23.39	0-1	0
		1	36	22.85	23.12	22.94	22.60	23.18	0-1	0
		1	74	23.07	23.12	22.98	22.76	23.11	0-1	0
		36	0	22.04	21.92	21.88	21.73	22.16	0-2	0
		36	18	22.03	21.89	21.85	21.73	22.08	0-2	0
		36	39	21.97	21.88	21.81	21.68	22.09	0-2	0
		75	0	22.05	21.96	21.83	21.76	22.15	0-2	0
	64QAM	1	0	22.62	22.52	22.12	22.22	22.70	0-2	0
		1	36	22.52	22.47	21.99	22.06	22.69	0-2	0
		1	74	22.54	22.48	22.02	22.14	22.66	0-2	0
		36	0	21.01	20.94	20.86	20.80	21.13	0-3	2
		36	18	21.01	20.91	20.81	20.75	21.10	0-3	2
		36	39	20.96	20.90	20.78	20.70	21.08	0-3	2
		75	0	21.02	20.96	20.82	20.78	21.14	0-3	2
	256QAM	1	0	18.73	18.80	18.82	18.78	19.26	0-5	2.7
		1	36	18.63	18.75	18.67	18.61	19.19	0-5	2.7
		1	74	18.67	18.76	18.70	18.71	19.22	0-5	2.7
		36	0	19.06	18.99	18.88	18.82	19.18	0-5	2.7
		36	18	19.06	18.97	18.85	18.82	19.17	0-5	2.7
		36	39	19.01	18.96	18.81	18.78	19.16	0-5	2.7
		75	0	19.03	18.98	18.84	18.79	19.15	0-5	2.7

LTE Band 41 20 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	23.15	23.06	22.99	22.89	23.23	0	0
		1	49	22.99	22.96	22.82	22.73	23.11	0	0
		1	99	23.03	22.96	22.80	22.77	23.07	0	0
		50	0	22.98	22.93	22.83	22.79	23.11	0-1	0
		50	25	22.92	22.87	22.76	22.73	23.04	0-1	0
		50	49	22.91	22.87	22.71	22.72	23.03	0-1	0
		100	0	22.99	22.93	22.79	22.77	23.10	0-1	0
	16QAM	1	0	23.33	23.38	23.32	23.34	23.35	0-1	0
		1	49	22.85	23.23	23.12	23.05	23.39	0-1	0
		1	99	23.02	23.27	23.12	23.18	23.38	0-1	0
		50	0	22.01	21.97	21.87	21.79	22.13	0-2	0
		50	25	21.94	21.87	21.77	21.74	22.07	0-2	0
		50	49	21.93	21.86	21.72	21.70	22.03	0-2	0
		100	0	22.03	21.98	21.86	21.82	22.16	0-2	0
	64QAM	1	0	22.72	22.44	22.37	22.42	22.63	0-2	0
		1	49	22.60	22.32	22.23	22.26	22.50	0-2	0
		1	99	22.56	22.31	22.18	22.23	22.46	0-2	0
		50	0	21.06	20.99	20.90	20.85	21.21	0-3	2
		50	25	21.00	20.95	20.85	20.79	21.15	0-3	2
		50	49	20.97	20.93	20.78	20.77	21.14	0-3	2
		100	0	21.01	20.96	20.82	20.77	21.14	0-3	2
	256QAM	1	0	19.12	18.64	19.12	19.07	19.35	0-5	2.7
		1	49	19.01	19.11	18.99	18.90	19.27	0-5	2.7
		1	99	18.98	19.14	18.95	18.95	19.29	0-5	2.7
50		0	19.10	19.06	18.95	18.87	19.21	0-5	2.7	
50		25	19.05	18.99	18.89	18.83	19.17	0-5	2.7	
50		49	19.02	18.98	18.82	18.79	19.16	0-5	2.7	
100		0	19.01	18.97	18.83	18.79	19.14	0-5	2.7	

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979Ch. 1710.7 MHz	132322 Ch. 1745 MHz	132665 Ch. 1779.3 MHz		
1.4 MHz	QPSK	1	0	20.03	19.38	19.71	0	0
		1	3	20.06	19.37	19.76	0	0
		1	5	20.07	19.38	19.70	0	0
		3	0	20.02	19.34	19.67	0	0
		3	1	20.23	19.43	19.84	0	0
		3	3	20.11	19.46	19.71	0	0
		6	0	20.06	19.39	19.71	0-1	0
	16QAM	1	0	20.32	19.57	19.96	0-1	0
		1	3	20.16	19.47	19.81	0-1	0
		1	5	20.23	19.63	19.95	0-1	0
		3	0	20.14	19.48	19.84	0-1	0
		3	1	20.34	19.59	19.94	0-1	0
		3	3	20.15	19.52	19.88	0-1	0
		6	0	20.13	19.45	19.86	0-2	0
	64QAM	1	0	20.17	19.46	19.91	0-2	0
		1	3	20.21	19.40	19.75	0-2	0
		1	5	20.30	19.51	19.93	0-2	0
		3	0	20.14	19.41	19.80	0-2	0
		3	1	20.19	19.49	19.98	0-2	0
		3	3	20.17	19.54	19.83	0-2	0
		6	0	20.19	19.43	19.81	0-3	0
	256QAM	1	0	18.18	17.46	17.77	0-5	1.8
		1	3	18.17	17.40	17.67	0-5	1.8
		1	5	18.17	17.59	17.88	0-5	1.8
		3	0	18.10	17.34	17.64	0-5	1.8
		3	1	18.13	17.45	17.76	0-5	1.8
		3	3	18.15	17.53	17.83	0-5	1.8
		6	0	18.13	17.36	17.69	0-5	1.8

LTE Band 66 \_ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 MHz	132322 Ch. 1745 MHz	132657 Ch. 1778.5 MHz		
3 MHz	QPSK	1	0	20.03	19.34	19.74	0	0
		1	7	19.99	19.28	19.63	0	0
		1	14	20.08	19.41	19.77	0	0
		8	0	20.14	19.42	19.81	0-1	0
		8	3	20.14	19.44	19.77	0-1	0
		8	7	20.16	19.46	19.82	0-1	0
		15	0	20.17	19.48	19.82	0-1	0
	16QAM	1	0	20.25	19.65	19.88	0-1	0
		1	7	20.13	19.54	19.89	0-1	0
		1	14	20.22	19.56	19.97	0-1	0
		8	0	20.21	19.48	19.82	0-2	0
		8	3	20.20	19.47	19.85	0-2	0
		8	7	20.21	19.50	19.91	0-2	0
		15	0	20.21	19.45	19.81	0-2	0
	64QAM	1	0	20.25	19.53	19.98	0-2	0
		1	7	20.17	19.48	19.78	0-2	0
		1	14	20.21	19.54	19.91	0-2	0
		8	0	20.16	19.40	19.84	0-3	0
		8	3	20.17	19.47	19.84	0-3	0
		8	7	20.18	19.46	19.82	0-3	0
		15	0	20.15	19.50	19.89	0-3	0
	256QAM	1	0	18.15	17.44	17.71	0-5	1.8
		1	7	18.19	17.41	17.71	0-5	1.8
		1	14	18.18	17.47	17.76	0-5	1.8
		8	0	18.12	17.39	17.69	0-5	1.8
		8	3	18.12	17.32	17.70	0-5	1.8
		8	7	18.16	17.36	17.67	0-5	1.8
15		0	18.17	17.36	17.69	0-5	1.8	

LTE Band 66 \_ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 MHz	132322Ch. 1745 MHz	132647 Ch. 1777.5 MHz		
5 MHz	QPSK	1	0	20.01	19.39	19.70	0	0
		1	12	19.97	19.33	19.60	0	0
		1	24	20.03	19.44	19.73	0	0
		12	0	20.15	19.51	19.78	0-1	0
		12	6	20.10	19.51	19.78	0-1	0
		12	11	20.10	19.52	19.80	0-1	0
		25	0	20.12	19.46	19.78	0-1	0
	16QAM	1	0	20.21	19.51	19.79	0-1	0
		1	12	20.23	19.65	19.91	0-1	0
		1	24	20.29	19.61	19.99	0-1	0
		12	0	20.15	19.49	19.80	0-2	0
		12	6	20.16	19.50	19.83	0-2	0
		12	11	20.16	19.43	19.79	0-2	0
		25	0	20.16	19.52	19.82	0-2	0
	64QAM	1	0	20.29	19.55	19.82	0-2	0
		1	12	20.24	19.54	19.93	0-2	0
		1	24	20.25	19.56	19.99	0-2	0
		12	0	20.15	19.51	19.82	0-3	0
		12	6	20.12	19.48	19.81	0-3	0
		12	11	20.11	19.44	19.80	0-3	0
		25	0	20.14	19.44	19.81	0-3	0
	256QAM	1	0	18.17	17.48	17.71	0-5	1.8
		1	12	18.09	17.51	17.64	0-5	1.8
		1	24	18.16	17.55	17.71	0-5	1.8
		12	0	18.08	17.46	17.71	0-5	1.8
		12	6	18.07	17.42	17.67	0-5	1.8
		12	11	18.07	17.40	17.70	0-5	1.8
		25	0	18.09	17.43	17.74	0-5	1.8

LTE Band 66 \_ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 MHz	132322 Ch. 1745 MHz	132622 Ch. 1775 MHz		
10 MHz	QPSK	1	0	20.06	19.43	19.68	0	0
		1	24	20.01	19.40	19.67	0	0
		1	49	20.06	19.46	19.76	0	0
		25	0	20.14	19.48	19.77	0-1	0
		25	12	20.11	19.48	19.75	0-1	0
		25	24	20.12	19.48	19.71	0-1	0
		50	0	20.14	19.45	19.71	0-1	0
	16QAM	1	0	20.27	19.67	19.86	0-1	0
		1	24	20.17	19.54	19.88	0-1	0
		1	49	20.24	19.60	20.02	0-1	0
		25	0	20.15	19.48	19.78	0-2	0
		25	12	20.11	19.46	19.74	0-2	0
		25	24	20.11	19.49	19.83	0-2	0
		50	0	20.13	19.49	19.75	0-2	0
	64QAM	1	0	20.18	19.67	19.85	0-2	0
		1	24	20.16	19.55	19.82	0-2	0
		1	49	20.21	19.58	19.97	0-2	0
		25	0	20.10	19.46	19.76	0-3	0
		25	12	20.07	19.44	19.75	0-3	0
		25	24	20.04	19.44	19.76	0-3	0
		50	0	20.08	19.51	19.77	0-3	0
	256QAM	1	0	18.14	17.52	17.80	0-5	1.8
		1	24	18.08	17.48	17.77	0-5	1.8
		1	49	18.18	17.59	17.87	0-5	1.8
		25	0	18.06	17.42	17.66	0-5	1.8
		25	12	18.03	17.40	17.65	0-5	1.8
		25	24	18.08	17.41	17.67	0-5	1.8
		50	0	18.08	17.47	17.75	0-5	1.8

LTE Band 66 \_ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 MHz	132322 Ch. 1745 MHz	132597 Ch. 1772.5 MHz		
15 MHz	QPSK	1	0	19.97	19.46	19.70	0	0
		1	36	19.82	19.36	19.56	0	0
		1	74	20.01	19.50	19.72	0	0
		36	0	20.02	19.45	19.67	0-1	0
		36	18	20.03	19.48	19.66	0-1	0
		36	39	20.05	19.45	19.66	0-1	0
		75	0	20.03	19.44	19.64	0-1	0
	16QAM	1	0	20.31	19.73	19.96	0-1	0
		1	36	20.21	19.59	19.77	0-1	0
		1	74	20.37	19.71	20.03	0-1	0
		36	0	20.04	19.44	19.64	0-2	0
		36	18	20.03	19.48	19.69	0-2	0
		36	39	20.06	19.48	19.70	0-2	0
		75	0	20.04	19.46	19.69	0-2	0
	64QAM	1	0	20.12	19.55	19.90	0-2	0
		1	36	19.92	19.49	19.67	0-2	0
		1	74	20.15	19.69	19.88	0-2	0
		36	0	20.01	19.47	19.70	0-3	0
		36	18	20.02	19.49	19.71	0-3	0
		36	39	20.02	19.51	19.74	0-3	0
		75	0	20.04	19.49	19.72	0-3	0
	256QAM	1	0	18.06	17.54	17.74	0-5	1.8
		1	36	17.95	17.26	17.55	0-5	1.8
		1	74	18.23	17.56	17.74	0-5	1.8
		36	0	17.98	17.42	17.62	0-5	1.8
		36	18	17.95	17.47	17.67	0-5	1.8
		36	39	18.03	17.44	17.66	0-5	1.8
		75	0	18.01	17.49	17.66	0-5	1.8

LTE Band 66 \_ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	19.88	19.43	19.67	0	0
		1	49	19.90	19.44	19.65	0	0
		1	99	20.02	19.42	19.71	0	0
		50	0	20.00	19.43	19.63	0-1	0
		50	25	19.96	19.44	19.66	0-1	0
		50	49	20.01	19.50	19.67	0-1	0
		100	0	19.95	19.42	19.66	0-1	0
	16QAM	1	0	20.24	19.75	20.04	0-1	0
		1	49	20.09	19.58	19.84	0-1	0
		1	99	20.31	19.73	19.96	0-1	0
		50	0	19.95	19.49	19.67	0-2	0
		50	25	19.98	19.46	19.66	0-2	0
		50	49	19.97	19.50	19.70	0-2	0
		100	0	19.94	19.43	19.69	0-2	0
	64QAM	1	0	20.28	19.60	19.88	0-2	0
		1	49	20.08	19.72	19.76	0-2	0
		1	99	20.40	19.76	19.97	0-2	0
		50	0	19.99	19.48	19.66	0-3	0
		50	25	19.96	19.48	19.69	0-3	0
		50	49	19.99	19.52	19.73	0-3	0
		100	0	19.92	19.45	19.66	0-3	0
	256QAM	1	0	18.12	17.59	17.78	0-5	1.8
		1	49	18.04	17.53	17.78	0-5	1.8
		1	99	18.09	17.55	17.92	0-5	1.8
		50	0	17.95	17.45	17.70	0-5	1.8
		50	25	17.94	17.48	17.69	0-5	1.8
		50	49	17.99	17.48	17.70	0-5	1.8
		100	0	17.95	17.49	17.67	0-5	1.8

Note : The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

### 11.4 WIFI Conducted Power measurement method

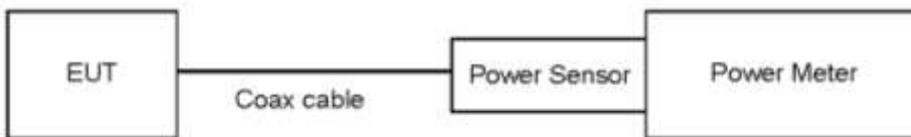
Un-Licensed bands (DTS Band)

Test Description	Test Procedure Used
Conducted Output Power	- KDB 558074 v05 - Section 8.3.2.3 - ANSI 63.10-2013 - Section 11.9.2.3

Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add  $10 \log(1/x)$ , where  $x$  is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test setup



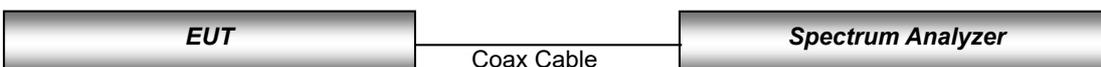
Un-Licensed bands (NII Band)

Test Description	Test Procedure Used
Conducted Output Power	- KDB 789033 D02 v02r01 - Section E.3.a

Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add  $10 \log(1/x)$ , where  $x$  is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test setup



**11.4.1 IEEE 802.11 (2.4 GHz) Maximum Conducted Power**

Mode	Frequency [MHz]	Channel	IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			Ant.1	Ant.2	MIMO
802.11b	2 412	1	19.05	19.44	
	2 437	6	18.77	19.06	
	2 462	11	18.96	19.45	
	2 467	12	9.05	9.01	
	2 472	13	5.35	5.21	
802.11g	2 412	1	15.46	15.20	18.35
	2 437	6	16.81	16.61	19.72
	2 462	11	15.39	15.19	18.30
	2 467	12	10.13	10.11	13.13
	2 472	13	6.74	6.44	9.60
802.11n (HT20)	2 412	1	14.32	14.16	17.25
	2 437	6	16.83	16.34	19.60
	2 462	11	14.29	14.03	17.17
	2 467	12	10.08	10.15	13.13
	2 472	13	6.83	6.53	9.69
802.11ax(SU)	2 412	1	14.19	13.89	17.05
	2 437	6	15.52	15.80	18.67
	2 462	11	13.18	13.28	16.24
	2 467	12	10.22	9.94	13.09
	2 472	13	6.90	6.72	9.82

**11.4.2 IEEE 802.11 (2.4 GHz) Conducted Power (Power Back-off when triggered by RCV, or RSDB only)**

Mode	Frequency [MHz]	Channel	IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			Ant.1	Ant.2	MIMO
802.11b	2 412	1	15.67	16.02	
	2 437	6	15.61	15.55	
	2 462	11	15.64	15.65	
	2 467	12	9.85	9.88	
	2 472	13	6.19	5.91	
802.11g	2 412	1	14.38	14.27	17.34
	2 437	6	15.15	14.94	18.06
	2 462	11	14.23	14.28	17.27
	2 467	12	9.61	9.22	12.43
	2 472	13	5.79	5.18	8.51
802.11n (HT20)	2 412	1	13.42	13.39	16.42
	2 437	6	14.94	14.82	17.89
	2 462	11	13.34	13.41	16.39
	2 467	12	9.70	9.57	12.65
	2 472	13	5.80	5.33	8.58
802.11ax(SU)	2 412	1	14.10	13.86	16.99
	2 437	6	15.51	15.56	18.55
	2 462	11	13.16	13.05	16.12
	2 467	12	10.30	10.21	13.27
	2 472	13	6.72	6.45	9.60

**11.4.3 IEEE 802.11 (2.4 GHz) Conducted Power  
(RSDB Mode Power Back-off on when triggered by RCV on (Reduced Power))**

Mode	Frequency [MHz]	Channel	IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			Ant.1	Ant.2	MIMO
802.11b	2 412	1	12.49	13.31	
	2 437	6	12.48	12.41	
	2 462	11	12.57	13.05	
	2 467	12	9.85	9.88	
	2 472	13	6.19	5.91	
802.11g	2 412	1	12.43	12.43	15.44
	2 437	6	11.90	11.67	14.80
	2 462	11	12.25	12.55	15.41
	2 467	12	9.61	9.22	12.43
	2 472	13	5.79	5.18	8.51
802.11n (HT20)	2 412	1	12.34	12.66	15.51
	2 437	6	11.86	11.85	14.87
	2 462	11	12.26	12.48	15.38
	2 467	12	9.70	9.57	12.65
	2 472	13	5.80	5.33	8.58
802.11ax(SU)	2 412	1	12.69	12.98	15.85
	2 437	6	12.62	12.86	15.75
	2 462	11	12.74	12.96	15.86
	2 467	12	10.22	9.94	13.09
	2 472	13	6.90	6.72	9.82

**11.4.3 IEEE 802.11 (5 GHz) Maximum Conducted Power**

Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm]		
			Ant. 1	Ant. 2	MIMO
802.11a (20 MHz BW)	5 180	36	16.87	17.45	20.18
	5 200	40	16.99	17.46	20.24
	5 240	48	16.94	17.45	20.22
	5 260	52	17.11	17.47	20.30
	5 300	60	17.10	17.29	20.21
	5 320	64	15.92	16.04	18.99
	5 500	100	14.98	16.16	18.62
	5 600	120	16.20	17.21	19.74
	5 720	144	17.38	17.35	20.37
	5 745	149	17.65	17.39	20.53
	5 785	157	17.82	17.40	20.63
5 825	165	17.71	17.39	20.56	
802.11n (20MHz BW)	5 180	36	17.01	17.19	20.11
	5 200	40	17.04	17.24	20.15
	5 240	48	17.12	17.29	20.21
	5 260	52	17.12	17.32	20.23
	5 300	60	17.13	17.19	20.17
	5 320	64	16.03	15.97	19.01
	5 500	100	15.14	15.10	18.13
	5 600	120	16.24	17.17	19.74
	5 720	144	17.35	17.27	20.32
	5 745	149	17.57	17.37	20.48
	5 785	157	17.75	17.47	20.62
5 825	165	17.71	17.23	20.49	
Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm]		
			Ant. 1	Ant. 2	MIMO
802.11ac (20 MHz BW)	5 180	36	16.94	17.28	20.13
	5 200	40	16.99	17.23	20.12
	5 240	48	17.08	17.26	20.18
	5 260	52	17.19	17.40	20.30
	5 300	60	17.16	17.25	20.22
	5 320	64	15.97	15.97	18.98
	5 500	100	15.07	14.92	18.01
	5 600	120	16.27	17.15	19.74
	5 720	144	17.45	17.29	20.38
	5 745	149	17.72	17.53	20.64
	5 785	157	17.83	17.44	20.65
5 825	165	17.81	17.20	20.52	

Frequency [MHz]	Channel	IEEE 802.11 ax (SU 20 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
5 180	36			19.45
5 200	40			20.34
5 240	48			20.61
5 260	52			20.71
5 300	60			20.60
5 320	64			19.53
5 500	100			17.64
5 600	120			20.75
5 720	144			20.86
5 745	149			20.85
5 785	157			20.86
5 825	165			20.92

**11.4.4 IEEE 802.11 (5 GHz) Reduced Conducted Power (RCV ON )**

Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Reduced Average Conducted Power [dBm]		
			Ant. 1	Ant. 2	MIMO
802.11n (40 MHz BW)	5190	38	12.57	12.42	15.51
	5230	46	14.14	13.03	16.63
	5270	54	13.80	13.07	16.46
	5310	62	12.57	12.09	15.35
	5510	102	11.46	12.35	14.94
	5590	118	14.36	13.06	16.77
	5710	142	14.65	13.30	17.04
	5755	151	14.69	13.38	17.09
	5795	159	14.66	13.24	17.02
802.11ac (80 MHz BW)	5210	42	12.68	12.42	15.56
	5290	58	12.52	12.50	15.52
	5530	106	11.23	12.40	14.86
	5610	122	14.30	13.06	16.73
	5690	138	14.47	13.17	16.88
	5775	155	14.53	13.02	16.85

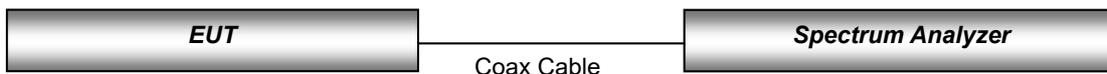
**11.4.5 IEEE 802.11 (5 GHz) Conducted Power (RSDB, RSDB RCV On)**

Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average Conducted Power [dBm]		
			Ant. 1	Ant. 2	MIMO
802.11n (40 MHz BW)	5190	38	12.57	12.42	15.51
	5230	46	13.18	12.04	15.66
	5270	54	13.00	12.11	15.59
	5310	62	12.57	12.09	15.35
	5 510	102	11.46	12.35	14.94
	5 590	118	13.13	12.03	15.63
	5 710	142	13.61	12.35	16.04
	5 755	151	13.61	12.35	16.04
802.11ac (80 MHz BW)	5 795	159	13.60	12.29	16.00
	5 210	42	12.68	12.42	15.56
	5 290	58	12.52	12.50	15.52
	5530	106	11.23	12.40	14.86
	5610	122	13.20	12.45	15.85
	5690	138	13.38	12.53	15.99
	5775	155	13.51	12.54	16.06

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission mode with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

**Test Configuration**



### 11.5 Bluetooth Conducted Power

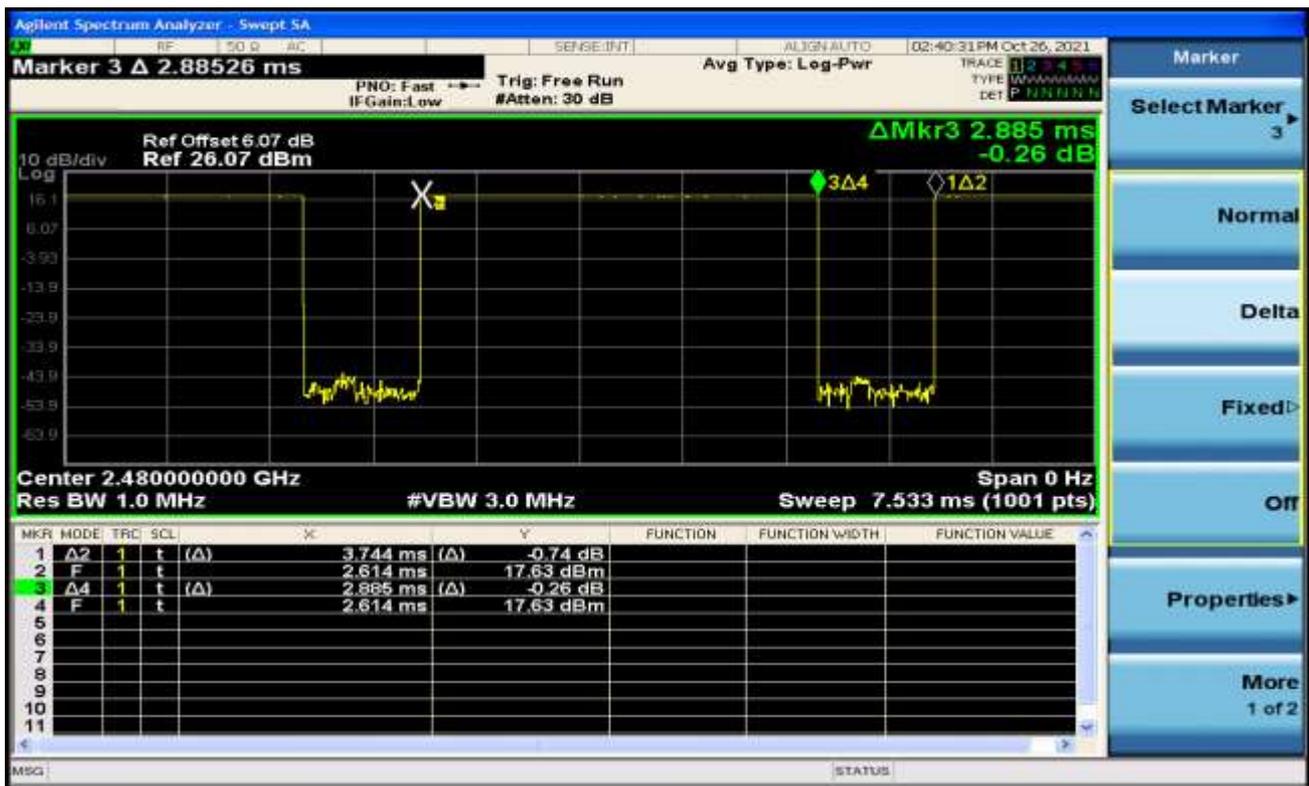
The Burst averaged-conducted power

Mode	Channel	Bluetooth Power [dBm]
DH5	0	16.10
	39	16.94
	78	17.40
2-DH5	0	10.10
	39	10.68
	78	11.22
3-DH5	0	10.18
	39	10.70
	78	11.36

Per October 2016 TCB Workshop Notes:

When call box and Bluetooth protocol are used for Bluetooth SAR measurement, time-domain plot is required to identify duty factor for supporting the test setup and result.

Bluetooth duty cycle was measured using Bluetooth tester equipment (CBT / R&S) with Bluetooth DH5 mode.



Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (2.885 / 3.744) = 0.771 \text{ (DH5)}$$

Duty factor= 1/Duty cycle : 1.298

## 12. System Verification

### 12.1 Tissue Verification

The body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity $\sigma$ (S/m)	Measured Dielectric Constant, $\epsilon_r$	Target Conductivity $\sigma$ (S/m)	Target Dielectric Constant, $\epsilon_r$	% dev $\sigma$	% dev $\epsilon$
10/06/2021	20.7	750H	705	0.873	43.130	0.889	42.174	-1.80	2.27
			710	0.875	43.109	0.890	42.148	-1.69	2.28
			750	0.890	42.959	0.893	41.940	-0.34	2.43
10/07/2021	21.1	750H	750	0.900	42.942	0.893	41.940	0.78	2.39
			785	0.915	42.846	0.896	41.758	2.12	2.61
10/06/2021	20.8	835H	820	0.908	41.811	0.899	41.577	1.00	0.56
			835	0.926	41.580	0.900	41.500	2.89	0.19
			850	0.938	41.401	0.916	41.500	2.40	-0.24
10/02/2021	20.1	835H	820	0.924	41.225	0.899	41.577	2.78	-0.85
			835	0.936	41.004	0.900	41.500	4.00	-1.20
			850	0.948	40.794	0.916	41.500	3.49	-1.70
10/08/2021	22.4	835H	820	0.900	41.726	0.899	41.577	0.11	0.36
			835	0.917	41.470	0.900	41.500	1.89	-0.07
			850	0.924	41.264	0.916	41.500	0.87	-0.57
10/18/2021	22.3	835H	820	0.916	41.256	0.899	41.577	1.89	-0.77
			835	0.935	41.039	0.900	41.500	3.89	-1.11
			850	0.948	40.768	0.916	41.500	3.49	-1.76
10/02/2021	20.6	1800H	1710	1.289	40.225	1.348	40.144	-4.38	0.20
			1750	1.326	40.159	1.371	40.080	-3.28	0.20
			1800	1.374	39.987	1.400	40.000	-1.86	-0.03
10/20/2021	22.1	1800H	1710	1.294	40.962	1.348	40.144	-4.01	2.04
			1750	1.322	40.868	1.371	40.080	-3.57	1.97
			1800	1.382	40.697	1.400	40.000	-1.29	1.74
10/14/2021	22.2	1800H	1710	1.305	40.739	1.348	40.144	-3.19	1.48
			1750	1.346	40.546	1.371	40.080	-1.82	1.16
			1800	1.398	40.316	1.400	40.000	-0.14	0.79
10/15/2021	21.1	1800H	1710	1.344	40.979	1.348	40.144	-0.30	2.08
			1750	1.382	40.854	1.371	40.080	0.80	1.93
			1800	1.447	40.697	1.400	40.000	3.36	1.74
10/12/2021	20.5	1900H	1850	1.338	40.987	1.400	40.000	-4.43	2.47
			1900	1.383	40.837	1.400	40.000	-1.21	2.09
			1910	1.395	40.812	1.400	40.000	-0.36	2.03
10/13/2021	22.9	1900H	1850	1.384	40.448	1.400	40.000	-1.14	1.12
			1900	1.430	40.261	1.400	40.000	2.14	0.65
			1910	1.439	40.256	1.400	40.000	2.79	0.64
10/01/2021	20.8	1900H	1850	1.375	41.278	1.400	40.000	-1.79	3.19
			1900	1.407	41.041	1.400	40.000	0.50	2.60
			1910	1.412	41.031	1.400	40.000	0.86	2.58
10/21/2021	21.9	1900H	1850	1.374	41.503	1.400	40.000	-1.86	3.76
			1900	1.427	41.364	1.400	40.000	1.93	3.41
			1910	1.437	41.338	1.400	40.000	2.64	3.35

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity $\sigma$ (S/m)	Measured Dielectric Constant, $\epsilon_r$	Target Conductivity $\sigma$ (S/m)	Target Dielectric Constant, $\epsilon_r$	% dev $\sigma$	% dev $\epsilon$
10/07/2021	20.4	1900H	1850	1.357	41.440	1.400	40.000	-3.07	3.60
			1900	1.408	41.261	1.400	40.000	0.57	3.15
			1910	1.420	41.195	1.400	40.000	1.43	2.99
10/08/2021	20.5	1900H	1850	1.356	41.456	1.400	40.000	-3.14	3.64
			1900	1.407	41.250	1.400	40.000	0.50	3.13
			1910	1.416	41.204	1.400	40.000	1.14	3.01
10/01/2021	20.2	1900H	1850	1.334	41.684	1.400	40.000	-4.71	4.21
			1900	1.399	41.489	1.400	40.000	-0.07	3.72
			1910	1.394	41.447	1.400	40.000	-0.43	3.62
10/19 /2021	22.4	1900H	1850	1.331	41.426	1.400	40.000	-4.93	3.57
			1900	1.351	41.234	1.400	40.000	-3.50	3.09
			1910	1.361	41.223	1.400	40.000	-2.79	3.06
10/08/2021	20.7	2450H	2400	1.752	38.073	1.756	39.290	-0.23	-3.10
			2450	1.827	37.895	1.800	39.200	1.50	-3.33
			2500	1.885	37.724	1.855	39.140	1.62	-3.62
10/02/2021	20.3	2450H	2400	1.742	38.031	1.756	39.290	-0.80	-3.20
			2450	1.796	37.868	1.800	39.200	-0.22	-3.40
			2500	1.841	37.721	1.855	39.140	-0.75	-3.63
10/06/2021	19.0	2450H	2400	1.767	38.086	1.756	39.290	0.63	-3.06
			2450	1.821	37.898	1.800	39.200	1.17	-3.32
			2500	1.881	37.717	1.855	39.140	1.40	-3.64
10/07/2021	19.9	2450H	2400	1.769	38.101	1.756	39.290	0.74	-3.03
			2450	1.822	37.848	1.800	39.200	1.22	-3.45
			2500	1.883	37.726	1.855	39.140	1.51	-3.61
10/01/2021	20.5	2600H	2500	1.849	38.305	1.855	39.140	-0.32	-2.13
			2600	1.958	37.812	1.964	39.010	-0.31	-3.07
			2690	2.056	37.566	2.062	38.894	-0.29	-3.41

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity $\sigma$ (S/m)	Measured Dielectric Constant, $\epsilon_r$	Target Conductivity $\sigma$ (S/m)	Target Dielectric Constant, $\epsilon_r$	% dev $\sigma$	% dev $\epsilon$
10/13/2021	20.3	5180H-5320H	5180	4.623	35.973	4.635	36.010	-0.26	-0.10
			5250	4.711	35.796	4.706	35.930	0.11	-0.37
			5280	4.749	35.801	4.737	35.894	0.25	-0.26
10/14/2021	19.1	5500H-5600H	5320	4.794	35.817	4.778	35.846	0.33	-0.08
			5500	4.973	35.619	4.963	35.640	0.20	-0.06
			5600	5.017	35.412	5.065	35.530	-0.95	-0.33
10/15/2021	20.0	5750H-5825H	5750	5.271	35.217	5.219	35.360	1.00	-0.40
			5800	5.254	35.216	5.270	35.300	-0.30	-0.24
			5825	5.279	35.217	5.296	35.270	-0.32	-0.15
10/12/2021	23.2	5180H-5320H	5180	4.643	36.008	4.635	36.010	0.17	-0.01
			5250	4.726	35.870	4.706	35.930	0.42	-0.17
			5280	4.759	35.883	4.737	35.894	0.46	-0.03
10/13/2021	23.0	5500H-5600H	5320	4.804	35.809	4.778	35.846	0.54	-0.10
			5500	4.972	35.737	4.963	35.640	0.18	0.27
			5600	5.014	35.452	5.065	35.530	-1.01	-0.22
10/14/2021	21.9	5750H-5825H	5750	5.269	35.327	5.219	35.360	0.96	-0.09
			5800	5.215	35.372	5.270	35.300	-1.04	0.20
			5825	5.215	35.324	5.296	35.270	-1.53	0.15
10/15/2021	21.6	5180H-5320H	5180	4.643	36.064	4.635	36.010	0.17	0.15
			5250	4.724	35.836	4.706	35.930	0.38	-0.26
			5280	4.750	35.815	4.737	35.894	0.27	-0.22
10/18/2021	22.3	5500H-5600H	5320	4.822	35.864	4.778	35.846	0.92	0.05
			5500	4.986	35.725	4.963	35.640	0.46	0.24
			5600	5.021	35.446	5.065	35.530	-0.87	-0.24
10/19/2021	23.6	5750H-5825H	5750	5.271	35.367	5.219	35.360	1.00	0.02
			5800	5.248	35.336	5.270	35.300	-0.42	0.10
			5825	5.246	35.288	5.296	35.270	-0.94	0.05

### 12.2 System Verification

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR <sub>1g</sub> (SPEAG)	50mW Measured SAR <sub>1g</sub>	1 W Normalized SAR <sub>1g</sub>	Deviation	Limit
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	10/06/2021	3903	1014	Head	20.9	20.7	8.39	0.430	8.6	+ 2.50	± 10
750	10/07/2021	3903		Head	21.2	21.1	8.39	0.435	8.7	+ 3.69	± 10
835	10/06/2021	3972	4d165	Head	20.8	20.8	9.69	0.495	9.9	+ 2.17	± 10
835	10/02/2021	3903		Head	20.2	20.1	9.69	0.510	10.2	+ 5.26	± 10
835	10/08/2021	3903		Head	22.6	22.4	9.69	0.500	10	+ 3.20	± 10
835	10/18/2021	3972		Head	22.4	22.3	9.69	0.500	10	+ 3.20	± 10
1 800	10/02/2021	3972		2d015	Head	20.7	20.6	38.5	1.910	38.2	- 0.78
1 800	10/14/2021	3972	Head		22.3	22.2	38.5	2.070	41.4	+ 7.53	± 10
1 900	10/12/2021	3972	5d032	Head	20.6	20.5	39.9	2.060	41.2	+ 3.26	± 10
1 900	10/01/2021	3903		Head	20.9	20.8	39.9	1.990	39.8	- 0.25	± 10
1 900	10/07/2021	3972		Head	20.5	20.4	39.9	2.100	42	+ 5.26	± 10
1 900	10/01/2021	3972		Head	20.3	20.2	39.9	2.020	40.4	+ 1.25	± 10
2 450	10/08/2021	3076	965	Head	20.9	20.7	53.4	2.570	51.4	- 3.75	± 10
2 450	10/02/2021	7679		Head	20.4	20.3	53.4	2.560	51.2	- 4.12	± 10
2 450	10/06/2021	7679		Head	19.0	19.0	53.4	2.590	51.8	- 3.00	± 10
2 450	10/07/2021	7679		Head	20.1	19.9	53.4	2.590	51.8	- 3.00	± 10
2 600	10/01/2021	7679	1106	Head	20.5	20.5	56.5	2.610	52.2	- 7.61	± 10
5 250	10/13/2021	7370	1107	Head	20.3	20.2	81.6	3.830	76.6	- 6.13	± 10
5 600	10/14/2021	7370		Head	19.1	19.1	84.0	4.240	84.8	+ 0.95	± 10
5 750	10/15/2021	7370		Head	20.0	20.0	80.9	3.850	77	- 4.82	± 10
5 250	10/12/2021	7679		Head	23.4	23.2	81.6	3.770	75.4	- 7.60	± 10
5 600	10/13/2021	7679		Head	23.1	23.0	84.0	4.200	84	+ 0.00	± 10
5 750	10/14/2021	7679		Head	22.0	21.9	80.9	4.050	81	+ 0.12	± 10
5 250	10/15/2021	7679		Head	21.8	21.6	81.6	3.830	76.6	- 6.13	± 10
5 600	10/18/2021	7679		Head	22.3	22.3	84.0	4.180	83.6	- 0.48	± 10
5 750	10/19/2021	7679		Head	23.8	23.6	80.9	4.030	80.6	- 0.37	± 10

### System Verification Results – Extremity SAR

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR <sub>10g</sub> (SPEAG)	50mW Measured SAR <sub>10g</sub>	1 W Normalized SAR <sub>10g</sub>	Deviation	Limit
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
1 800	10/20/2021	3972	2d015	Head	22.3	22.1	20.0	1.030	20.6	+ 3.00	± 10
1 900	10/15/2021	3972	5d032	Head	21.2	21.1	20.7	1.120	22.4	+ 8.21	± 10
1 900	10/13/2021	3972		Head	23.0	22.9	20.7	1.100	22	+ 6.28	± 10
1 900	10/08/2021	3972		Head	20.5	20.5	20.7	1.080	21.6	+ 4.35	± 10
1 900	10/19/2021	3972		Head	22.4	22.4	20.7	1.040	20.8	+ 0.48	± 10
1 900	10/21/2021	3972		Head	22.0	21.0	20.7	1.060	21.2	+ 2.42	± 10
5 250	10/13/2021	7370		1107	Head	20.3	20.2	23.4	1.110	22.2	- 5.13
5 600	10/14/2021	7370	Head		19.1	19.1	23.0	1.210	24.2	+ 5.22	± 10
5 250	10/15/2021	7679	Head		21.8	21.6	23.4	1.130	22.6	- 3.42	± 10
5 600	10/18/2021	7679	Head		22.3	22.3	23.0	1.220	24.4	+ 6.09	± 10

### 12.3 System Verification Procedure

SAR measurement was prior to assessment; the system is verified to the  $\pm 10\%$  of the specifications at each frequency band by using the system verification kit. (Graphic Plots Attached)

- Cabling the system, using the verification kit equipment.
- Generate about 50 mW Input level from the signal generator to the Dipole Antenna.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;

SAR Verification was performed according to the FCC KDB 865664 D01v01r04.

### 13. SAR Test Data Summary

#### 13.1 SAR Measurement Results

GSM 850 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.										
836.6	190	GSM	34.00	33.45	-0.12	Left Cheek	1:8.3	0.103	1.135	0.117	-
836.6	190	GSM	34.00	33.45	-0.12	Left Tilt	1:8.3	0.085	1.135	0.096	-
836.6	190	GSM	34.00	33.45	-0.16	Right Cheek	1:8.3	0.063	1.135	0.072	-
836.6	190	GSM	34.00	33.45	0.05	Right Tilt	1:8.3	0.074	1.135	0.084	-
836.6	190	GPRS 3Tx	30.50	29.65	-0.02	Left Cheek	1:2.77	0.144	1.216	<b>0.175</b>	1
836.6	190	GPRS 3Tx	30.50	29.65	-0.10	Left Tilt	1:2.77	0.107	1.216	0.130	-
836.6	190	GPRS 3Tx	30.50	29.65	0.15	Right Cheek	1:2.77	0.097	1.216	0.118	-
836.6	190	GPRS 3Tx	30.50	29.65	-0.14	Right Tilt	1:2.77	0.091	1.216	0.111	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg Averaged over 1 gram					

GSM 1900 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.										
1 880	661	GSM	31.0	30.61	-0.12	Left Cheek	1:8.3	0.045	1.094	0.049	-
1 880	661	GSM	31.0	30.61	0.18	Left Tilt	1:8.3	0.042	1.094	0.046	-
1 880	661	GSM	31.0	30.61	0.19	Right Cheek	1:8.3	0.058	1.094	0.063	-
1 880	661	GSM	31.0	30.61	0.14	Right Tilt	1:8.3	0.043	1.094	0.047	-
1 909.8	810	GPRS 2Tx	28.5	27.81	-0.02	Left Cheek	1:4.15	0.058	1.172	0.068	-
1 909.8	810	GPRS 2Tx	28.5	27.81	-0.01	Left Tilt	1:4.15	0.054	1.172	0.063	-
1 909.8	810	GPRS 2Tx	28.5	27.81	-0.15	Right Cheek	1:4.15	0.083	1.172	<b>0.097</b>	2
1 909.8	810	GPRS 2Tx	28.5	27.81	-0.09	Right Tilt	1:4.15	0.054	1.172	0.063	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg Averaged over 1 gram					

UMTS 850 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(W/kg)		(W/kg)	
836.6	4183	RMC	25.0	24.65	-0.01	Left Cheek	1:1	0.133	1.084	<b>0.144</b>	3
836.6	4183	RMC	25.0	24.65	0.12	Left Tilt	1:1	0.071	1.084	0.077	-
836.6	4183	RMC	25.0	24.65	-0.07	Right Cheek	1:1	0.099	1.084	0.107	-
836.6	4183	RMC	25.0	24.65	-0.06	Right Tilt	1:1	0.092	1.084	0.100	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg (mW/g) Averaged over 1 gram					

UMTS 1700 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(W/kg)		(W/kg)	
1 732.4	1412	RMC	23.5	23.17	0.17	Left Cheek	1:1	0.072	1.079	0.078	-
1 732.4	1412	RMC	23.5	23.17	0.18	Left Tilt	1:1	0.052	1.079	0.056	-
1 732.4	1412	RMC	23.5	23.17	0.03	Right Cheek	1:1	0.122	1.079	<b>0.132</b>	4
1 732.4	1412	RMC	23.5	23.17	0.09	Right Tilt	1:1	0.076	1.079	0.082	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg (mW/g) Averaged over 1 gram					

UMTS 1900 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(W/kg)		(W/kg)	
1 880	9400	RMC	23.5	22.87	-0.19	Left Cheek	1:1	0.047	1.156	0.054	-
1 880	9400	RMC	23.5	22.87	0.16	Left Tilt	1:1	0.044	1.156	0.051	-
1 880	9400	RMC	23.5	22.87	0.13	Right Cheek	1:1	0.065	1.156	<b>0.075</b>	5
1 880	9400	RMC	23.5	22.87	-0.16	Right Tilt	1:1	0.062	1.156	0.072	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg (mW/g) Averaged over 1 gram					

LTE Band 2 Head SAR															
Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.														
1 900	19100	QPSK	20	23.0	22.58	0.19	Left Cheek	0	1	0	1:1	0.085	1.102	0.094	-
1 900	19100	QPSK	20	22.0	21.57	0.12	Left Cheek	1	50	0	1:1	0.067	1.104	0.074	-
1 900	19100	QPSK	20	23.0	22.58	-0.07	Left Tilt	0	1	0	1:1	0.067	1.102	0.074	-
1 900	19100	QPSK	20	22.0	21.57	0.12	Left Tilt	1	50	0	1:1	0.053	1.104	0.059	-
1 900	19100	QPSK	20	23.0	22.58	-0.13	Right Cheek	0	1	0	1:1	0.089	1.102	<b>0.098</b>	6
1 900	19100	QPSK	20	22.0	21.57	-0.05	Right Cheek	1	50	0	1:1	0.072	1.104	0.079	-
1 900	19100	QPSK	20	23.0	22.58	0.06	Right Tilt	0	1	0	1:1	0.062	1.102	0.068	-
1 900	19100	QPSK	20	22.0	21.57	0.03	Right Tilt	1	50	0	1:1	0.048	1.104	0.053	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE Band 5 Head SAR															
Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.														
836.5	20525	QPSK	10	25.0	24.78	-0.16	Left Cheek	0	1	0	1:1	0.141	1.052	<b>0.148</b>	7
836.5	20525	QPSK	10	24.0	22.71	0.15	Left Cheek	1	25	0	1:1	0.092	1.346	0.124	-
836.5	20525	QPSK	10	25.0	24.78	-0.08	Left Tilt	0	1	0	1:1	0.060	1.052	0.063	-
836.5	20525	QPSK	10	24.0	22.71	-0.11	Left Tilt	1	25	0	1:1	0.038	1.346	0.051	-
836.5	20525	QPSK	10	25.0	24.78	-0.14	Right Cheek	0	1	0	1:1	0.091	1.052	0.096	-
836.5	20525	QPSK	10	24.0	22.71	0.08	Right Cheek	1	25	0	1:1	0.059	1.346	0.079	-
836.5	20525	QPSK	10	25.0	24.78	-0.07	Right Tilt	0	1	0	1:1	0.074	1.052	0.078	-
836.5	20525	QPSK	10	24.0	22.71	-0.05	Right Tilt	1	25	0	1:1	0.048	1.346	0.065	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE Band 12 Head SAR															
Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.														
707.5	23095	QPSK	10	24.5	24.29	-0.19	Left Cheek	0	1	0	1:1	0.061	1.050	<b>0.064</b>	8
707.5	23095	QPSK	10	23.5	22.86	-0.05	Left Cheek	1	25	0	1:1	0.044	1.159	0.051	-
707.5	23095	QPSK	10	24.5	24.29	-0.02	Left Tilt	0	1	0	1:1	0.028	1.050	0.029	-
707.5	23095	QPSK	10	23.5	22.86	-0.16	Left Tilt	1	25	0	1:1	0.020	1.159	0.023	-
707.5	23095	QPSK	10	24.5	24.29	-0.19	Right Cheek	0	1	0	1:1	0.049	1.050	0.051	-
707.5	23095	QPSK	10	23.5	22.86	0.12	Right Cheek	1	25	0	1:1	0.036	1.159	0.042	-
707.5	23095	QPSK	10	24.5	24.29	0.06	Right Tilt	0	1	0	1:1	0.030	1.050	0.032	-
707.5	23095	QPSK	10	23.5	22.86	-0.05	Right Tilt	1	25	0	1:1	0.022	1.159	0.025	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

**LTE Band 13 Head SAR**

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.														
782	23230	QPSK	10	25.0	24.11	0.12	Left Cheek	0	1	49	1:1	0.086	1.227	<b>0.106</b>	9
782	23230	QPSK	10	24.0	22.70	0.04	Left Cheek	1	25	24	1:1	0.060	1.349	0.081	-
782	23230	QPSK	10	25.0	24.11	-0.08	Left Tilt	0	1	49	1:1	0.038	1.227	0.047	-
782	23230	QPSK	10	24.0	22.70	0.06	Left Tilt	1	25	24	1:1	0.026	1.349	0.035	-
782	23230	QPSK	10	25.0	24.11	0.19	Right Cheek	0	1	49	1:1	0.054	1.227	0.066	-
782	23230	QPSK	10	24.0	22.70	-0.18	Right Cheek	1	25	24	1:1	0.037	1.349	0.050	-
782	23230	QPSK	10	25.0	24.11	-0.10	Right Tilt	0	1	49	1:1	0.026	1.227	0.032	-
782	23230	QPSK	10	24.0	22.70	-0.07	Right Tilt	1	25	24	1:1	0.018	1.349	0.024	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram								

**LTE Band 25 Head SAR**

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.														
1 905	26590	QPSK	20	23.0	22.70	0.10	Left Cheek	0	1	0	1:1	0.075	1.072	0.080	-
1 905	26590	QPSK	20	22.0	21.66	0.14	Left Cheek	1	50	0	1:1	0.053	1.081	0.057	-
1 905	26590	QPSK	20	23.0	22.70	0.01	Left Tilt	0	1	0	1:1	0.072	1.072	0.077	-
1 905	26590	QPSK	20	22.0	21.66	0.18	Left Tilt	1	50	0	1:1	0.053	1.081	0.057	-
1 905	26590	QPSK	20	23.0	22.70	-0.11	Right Cheek	0	1	0	1:1	0.098	1.072	<b>0.105</b>	10
1 905	26590	QPSK	20	22.0	21.66	0.15	Right Cheek	1	50	0	1:1	0.082	1.081	0.089	-
1 905	26590	QPSK	20	23.0	22.70	-0.09	Right Tilt	0	1	0	1:1	0.056	1.072	0.060	-
1 905	26590	QPSK	20	22.0	21.66	-0.04	Right Tilt	1	50	0	1:1	0.042	1.081	0.045	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram								

**LTE Band 26 Head SAR**

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.														
831.5	26865	QPSK	15	25.0	24.15	-0.09	Left Cheek	0	1	0	1:1	0.100	1.216	<b>0.122</b>	11
831.5	26865	QPSK	15	24.0	22.64	-0.12	Left Cheek	1	36	0	1:1	0.073	1.368	0.100	-
831.5	26865	QPSK	15	25.0	24.15	-0.12	Left Tilt	0	1	0	1:1	0.055	1.216	0.067	-
831.5	26865	QPSK	15	24.0	22.64	0.03	Left Tilt	1	36	0	1:1	0.041	1.368	0.056	-
831.5	26865	QPSK	15	25.0	24.15	0.12	Right Cheek	0	1	0	1:1	0.060	1.216	0.073	-
831.5	26865	QPSK	15	24.0	22.64	0.16	Right Cheek	1	36	0	1:1	0.045	1.368	0.062	-
831.5	26865	QPSK	15	25.0	24.15	-0.08	Right Tilt	0	1	0	1:1	0.053	1.216	0.064	-
831.5	26865	QPSK	15	24.0	22.64	0.15	Right Tilt	1	36	0	1:1	0.041	1.368	0.056	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram								

**LTE TDD Band 41 Head SAR**

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.														
2 680	41490	QPSK	20	24.4	24.09	-0.10	Left Cheek	0	1	0	1:1.58	0.014	1.074	0.015	
2 680	41490	QPSK	20	23.4	23.25	0.01	Left Cheek	1	50	0	1:1.58	0.00953	1.035	0.010	-
2 680	41490	QPSK	20	24.4	24.09	-0.18	Left Tilt	0	1	0	1:1.58	0.058	1.074	<b>0.062</b>	12
2 680	41490	QPSK	20	23.4	23.25	-0.13	Left Tilt	1	50	0	1:1.58	0.044	1.035	0.046	-
2 680	41490	QPSK	20	24.4	24.09	0.10	Right Cheek	0	1	0	1:1.58	0.039	1.074	0.042	-
2 680	41490	QPSK	20	23.4	23.25	0.10	Right Cheek	1	50	0	1:1.58	0.027	1.035	0.028	-
2 680	41490	QPSK	20	24.4	24.09	-0.10	Right Tilt	0	1	0	1:1.58	0.034	1.074	0.037	-
2 680	41490	QPSK	20	23.4	23.25	0.10	Right Tilt	1	50	0	1:1.58	0.027	1.035	0.028	-
<b>Power class 2 (HPUE)</b>															
2 680.0	41490	QPSK	20	25.7	25.17	0.11	Left Tilt	0	1	0	1:2.31	0.049	1.130	0.055	*
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram								

Note: \* Data entry indicate LTE 41 Power Class 2(HPUE)

**LTE Band 66 Head SAR**

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.														
1 720	132072	QPSK	20	23.7	23.17	0.11	Left Cheek	0	1	99	1:1	0.079	1.130	0.089	-
1 720	132072	QPSK	20	22.7	22.15	0.10	Left Cheek	1	50	0	1:1	0.059	1.135	0.067	-
1 720	132072	QPSK	20	23.7	23.17	0.11	Left Tilt	0	1	99	1:1	0.073	1.130	0.082	-
1 720	132072	QPSK	20	22.7	22.15	0.15	Left Tilt	1	50	0	1:1	0.058	1.135	0.066	-
1 720	132072	QPSK	20	23.7	23.17	0.06	Right Cheek	0	1	99	1:1	0.111	1.130	<b>0.125</b>	13
1 720	132072	QPSK	20	22.7	22.15	0.15	Right Cheek	1	50	0	1:1	0.086	1.135	0.098	-
1 720	132072	QPSK	20	23.7	23.17	-0.02	Right Tilt	0	1	99	1:1	0.073	1.130	0.082	-
1 720	132072	QPSK	20	22.7	22.15	-0.01	Right Tilt	1	50	0	1:1	0.057	1.135	0.065	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram								

**DTS Head SAR – RCV on**

Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.															
2 412	1	802.11b	20	1	17.0	15.67	0.18	Left Cheek	Ant1	99.1	0.343	0.202	1.358	1.009	0.277	-
2 412	1	802.11b	20	1	17.0	15.67	0.05	Left Tilt	Ant1	99.1	0.419	0.253	1.358	1.009	0.347	-
2 412	1	802.11b	20	1	17.0	15.67	-0.09	Right Cheek	Ant1	99.1	0.687	0.336	1.358	1.009	0.460	-
2 412	1	802.11b	20	1	17.0	15.67	0.12	Right Tilt	Ant1	99.1	0.874	0.430	1.358	1.009	0.589	-
2 412	1	802.11b	20	1	17.0	16.02		Left Cheek	Ant2	99.1	0					-
2 412	1	802.11b	20	1	17.0	16.02	0.13	Left Tilt	Ant2	99.1	0.0114	0.00191	1.253	1.009	0.002	-
2 412	1	802.11b	20	1	17.0	16.02		Right Cheek	Ant2	99.1	0					-
2 412	1	802.11b	20	1	17.0	16.02	0.09	Right Tilt	Ant2	99.1	0.0292	0.01	1.253	1.009	0.013	-
2 437	6	802.11g	20	6	20.0	18.06	0.03	Left Cheek	MIMO	93.5	0.436	0.270	1.607	1.069	0.464	-
2 437	6	802.11g	20	6	20.0	18.06	0.12	Left Tilt	MIMO	93.5	0.621	0.408	1.607	1.069	0.701	-
2 437	6	802.11g	20	6	20.0	18.06	0.07	Right Cheek	MIMO	93.5	0.756	0.355	1.607	1.069	0.610	-
2 437	6	802.11g	20	6	20.0	18.06	-0.06	Right Tilt	MIMO	93.5	0.92	0.516	1.607	1.069	<b>0.886</b>	14
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Head 1.6 W/kg Averaged over 1 gram					

**DTS Head SAR –RSDB with RCV On**

Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.															
2 462	11	802.11b	20	1	14.0	12.57	-0.03	Left Cheek	Ant1	99.1	0.261	0.153	1.390	1.009	0.215	-
2 462	11	802.11b	20	1	14.0	12.57	0.12	Left Tilt	Ant1	99.1	0.338	0.214	1.390	1.009	0.300	-
2 462	11	802.11b	20	1	14.0	12.57	-0.17	Right Cheek	Ant1	99.1	0.389	0.183	1.390	1.009	0.257	-
2 462	11	802.11b	20	1	14.0	12.57	-0.09	Right Tilt	Ant1	99.1	0.554	0.282	1.390	1.009	<b>0.396</b>	15
2 412	1	802.11b	20	1	14.0	13.31		Left Cheek	Ant2	99.1	0					-
2 412	1	802.11b	20	1	14.0	13.31	0.01	Left Tilt	Ant2	99.1	0.0142	0.00000345	1.172	1.009	0.000	-
2 412	1	802.11b	20	1	14.0	13.31		Right Cheek	Ant2	99.1	0					-
2 412	1	802.11b	20	1	14.0	13.31	0.07	Right Tilt	Ant2	99.1	0.014	0.00393	1.172	1.009	0.005	-
2 412	1	802.11g	20	6	17.0	15.44	0.14	Left Cheek	MIMO	93.5	0.209	0.126	1.435	1.069	0.193	-
2 412	1	802.11g	20	6	17.0	15.44	-0.19	Left Tilt	MIMO	93.5	0.253	0.182	1.435	1.069	0.279	-
2 412	1	802.11g	20	6	17.0	15.44	0.06	Right Cheek	MIMO	93.5	0.399	0.186	1.435	1.069	0.285	-
2 412	1	802.11g	20	6	17.0	15.44	-0.11	Right Tilt	MIMO	93.5	0.455	0.239	1.435	1.069	0.367	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Head 1.6 W/kg Averaged over 1 gram					

**NII Head SAR RCV on**

Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Pl ot No
Mhz	Ch.															
5 270	54	802.11n	40	MCS0	15.0	13.80	0.08	Left Cheek	Ant1	90.3	0.218	0.054	1.318	1.107	0.079	-
5 270	54	802.11n	40	MCS0	15.0	13.80	-0.12	Left Tilt	Ant1	90.3	0.121	0.028	1.318	1.107	0.041	-
5 270	54	802.11n	40	MCS0	15.0	13.80	0.11	Right Cheek	Ant1	90.3	0.519	0.179	1.318	1.107	0.261	-
5 270	54	802.11n	40	MCS0	15.0	13.80	-0.18	Right Tilt	Ant1	90.3	0.295	0.107	1.318	1.107	0.156	-
5 270	54	802.11n	40	MCS0	15.0	13.07	0.11	Left Cheek	Ant2	90.3	0.111	0.043	1.560	1.107	0.074	-
5 270	54	802.11n	40	MCS0	15.0	13.07	0.14	Left Tilt	Ant2	90.3	0.129	0.057	1.560	1.107	0.098	-
5 270	54	802.11n	40	MCS0	15.0	13.07	-0.09	Right Cheek	Ant2	90.3	0.164	0.042	1.560	1.107	0.073	-
5 270	54	802.11n	40	MCS0	15.0	13.07	0.13	Right Tilt	Ant2	90.3	0.165	0.053	1.560	1.107	0.092	-
5 270	54	802.11n	40	MCS8	18.0	16.46	-0.17	Left Cheek	MIMO	90.3	0.196	0.046	1.560	1.107	0.079	-
5 270	54	802.11n	40	MCS8	18.0	16.46	0.07	Left Tilt	MIMO	90.3	0.156	0.067	1.560	1.107	0.116	-
5 270	54	802.11n	40	MCS8	18.0	16.46	-0.10	Right Cheek	MIMO	90.3	0.553	0.227	1.560	1.107	<b>0.392</b>	16
5 270	54	802.11n	40	MCS8	18.0	16.46	-0.03	Right Tilt	MIMO	90.3	0.427	0.181	1.560	1.107	0.313	-
5 690	138	802.11ac	80	MCS0	15.0	14.47	0.01	Left Cheek	Ant1	91.0	0.207	0.044	1.130	1.099	0.055	-
5 690	138	802.11ac	80	MCS0	15.0	14.47	0.10	Left Tilt	Ant1	91.0	0.206	0.050	1.130	1.099	0.062	-
5 690	138	802.11ac	80	MCS0	15.0	14.47	0.11	Right Cheek	Ant1	91.0	0.719	0.232	1.130	1.099	0.288	-
5 690	138	802.11ac	80	MCS0	15.0	14.47	-0.17	Right Tilt	Ant1	91.0	0.386	0.127	1.130	1.099	0.158	-
5 690	138	802.11ac	80	MCS0	15.0	13.17		Left Cheek	Ant2	91.0	0					-
5 690	138	802.11ac	80	MCS0	15.0	13.17	-0.09	Left Tilt	Ant2	91.0	0.305	0.049	1.524	1.099	0.082	-
5 690	138	802.11ac	80	MCS0	15.0	13.17	0.01	Right Cheek	Ant2	91.0	0.176	0.014	1.524	1.099	0.023	-
5 690	138	802.11ac	80	MCS0	15.0	13.17	-0.12	Right Tilt	Ant2	91.0	0.107	0.013	1.524	1.099	0.022	-
5 690	138	802.11ac	80	MCS0	18.0	16.88	0.01	Left Cheek	MIMO	91.0	0.202	0.046	1.524	1.099	0.077	-
5 690	138	802.11ac	80	MCS0	18.0	16.88	0.10	Left Tilt	MIMO	91.0	0.261	0.053	1.524	1.099	0.089	-
5 690	138	802.11ac	80	MCS0	18.0	16.88	-0.10	Right Cheek	MIMO	91.0	0.618	0.219	1.524	1.099	0.367	-
5 690	138	802.11ac	80	MCS0	18.0	16.88	-0.12	Right Tilt	MIMO	91.0	0.442	0.129	1.524	1.099	0.216	-
5 775	155	802.11ac	80	MCS0	15.0	14.53	0.01	Left Cheek	Ant1	91.0	0.180	0.044	1.114	1.099	0.054	-
5 775	155	802.11ac	80	MCS0	15.0	14.53	0.01	Left Tilt	Ant1	91.0	0.262	0.049	1.114	1.099	0.060	-
5 775	155	802.11ac	80	MCS0	15.0	14.53	0.02	Right Cheek	Ant1	91.0	0.855	<b>0.232</b>	1.114	1.099	0.284	17
5 775	155	802.11ac	80	MCS0	15.0	14.53	-0.10	Right Tilt	Ant1	91.0	0.653	0.188	1.114	1.099	0.230	-
5 775	155	802.11ac	80	MCS0	15.0	13.02	0.01	Left Cheek	Ant2	91.0	0.178	0.041	1.578	1.099	0.071	-
5 775	155	802.11ac	80	MCS0	15.0	13.02	0.01	Left Tilt	Ant2	91.0	0.195	0.034	1.578	1.099	0.059	-
5 775	155	802.11ac	80	MCS0	15.0	13.02	0.12	Right Cheek	Ant2	91.0	0.076	0.018	1.578	1.099	0.031	-
5 775	155	802.11ac	80	MCS0	15.0	13.02	0.17	Right Tilt	Ant2	91.0	0.124	0.015	1.578	1.099	0.026	-
5 775	155	802.11ac	80	MCS0	18.0	16.85	0.01	Left Cheek	MIMO	91.0	0.102	0.031	1.578	1.099	0.054	-
5 775	155	802.11ac	80	MCS0	18.0	16.85	0.01	Left Tilt	MIMO	91.0	0.224	0.035	1.578	1.099	0.061	-
5 775	155	802.11ac	80	MCS0	18.0	16.85	-0.12	Right Cheek	MIMO	91.0	0.485	0.173	1.578	1.099	0.300	-
5 775	155	802.11ac	80	MCS0	18.0	16.85	-0.14	Right Tilt	MIMO	91.0	0.461	0.124	1.578	1.099	0.215	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

The output of RCV on in the 5GHz WLAN mode of this device is higher than that in the 5GHz WLAN RSDB with RCV on mode. The higher output RCV on Head SAR measurement results of the 5GHz WLAN mode were applied to the SAR simultaneous transmission analysis instead of the Head SAR results of the 5GHz WLAN mode RSDB-RCV on mode. It was confirmed that this product satisfies the FCC SAR limit through simultaneous transmission evaluation of RSDB with RCV on mode applying the head SAR measurement result with higher output power.

DSS Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.		(dBm)	(dBm)	(dB)		(W/kg)		(Duty)	(W/kg)	
2 480	78	Bluetooth DH5	17.5	17.40	-0.14	Left Cheek	0.462	1.023	1.298	0.613	-
2 402	0	Bluetooth DH5	17.5	16.10	-0.18	Left Tilt	0.247	1.380	1.298	0.442	-
2 441	39	Bluetooth DH5	17.5	16.94	-0.12	Left Tilt	0.302	1.138	1.298	0.446	-
2 480	78	Bluetooth DH5	17.5	17.40	0.05	Left Tilt	0.678	1.023	1.298	0.900	-
2 402	0	Bluetooth DH5	17.5	16.10	0.12	Right Cheek	0.308	1.380	1.298	0.552	-
2 441	39	Bluetooth DH5	17.5	16.94	-0.10	Right Cheek	0.416	1.138	1.298	0.614	-
2 480	78	Bluetooth DH5	17.5	17.40	0.14	Right Cheek	0.611	1.023	1.298	0.811	-
2 402	0	Bluetooth DH5	17.5	16.10	-0.12	Right Tilt	0.326	1.380	1.298	0.584	-
2 441	39	Bluetooth DH5	17.5	16.94	-0.11	Right Tilt	0.462	1.138	1.298	0.682	-
2 480	78	Bluetooth DH5	17.5	17.40	-0.18	Right Tilt	0.712	1.023	1.298	<b>0.945</b>	18
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg (mW/g) Averaged over 1 gram					

### 13.2 Body-worn SAR Measurement Results

GSM/ UMTS Body-Worn SAR													
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance (mm)	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.	
Mhz	Ch.		(dB)	(dB)	(dB)				(W/kg)		(W/kg)		
836.6	190	GSM 850 Voice	34.0	33.45	-0.10	Rear	1:8.3	15	0.261	1.135	0.296	-	
836.6	190	GSM 850 Voice	34.0	33.45	-0.09	Front	1:8.3	15	0.235	1.135	0.267	-	
836.6	190	GSM850 GPRS 3Tx	30.5	29.65	-0.06	Rear	1:2.77	15	0.294	1.216	<b>0.358</b>	19	
836.6	190	GSM850 GPRS 3Tx	30.5	29.65	0.04	Front	1:2.77	15	0.293	1.216	0.356	-	
1 880	661	GSM 1900 Voice	31.0	30.61	0.11	Rear	1:8.3	15	0.307	1.094	0.336	-	
1 880	661	GSM 1900 Voice	31.0	30.61	0.06	Front	1:8.3	15	0.244	1.094	0.267	-	
1 909.8	810	GSM1900 GPRS 2Tx	28.5	27.81	0.09	Rear	1:4.15	15	0.453	1.172	<b>0.531</b>	20	
1 909.8	810	GSM1900 GPRS 2Tx	28.5	27.81	-0.01	Front	1:4.15	15	0.364	1.172	0.427	-	
836.6	4183	UMTS850	RMC	25.0	24.65	-0.07	Rear	1:1	15	0.247	1.084	<b>0.268</b>	21
836.6	4183	UMTS850	RMC	25.0	24.65	0.03	Front	1:1	15	0.210	1.084	0.228	-
1 732.4	1412	UMTS1700	RMC	23.5	23.17	-0.03	Rear	1:1	15	0.444	1.079	<b>0.479</b>	22
1 732.4	1412	UMTS1700	RMC	23.5	23.17	-0.06	Front	1:1	15	0.346	1.079	0.373	-
1 880	9400	UMTS1900	RMC	23.5	22.87	-0.18	Rear	1:1	15	0.384	1.156	<b>0.444</b>	23
1 880	9400	UMTS1900	RMC	23.5	22.87	0.02	Front	1:1	15	0.314	1.156	0.363	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

LTE Body-Worn SAR																
Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.															
1 900	19100	LTE 2 QPSK	20	23.0	22.58	0.06	Rear	0	1	0	1:1	15	0.635	1.104	<b>0.700</b>	24
1 900	19100		20	22.0	21.57	0.14	Rear	1	50	0	1:1	15	0.536	1.102	0.592	
1 900	19100		20	23.0	22.58	0.09	Front	0	1	0	1:1	15	0.616	1.102	0.679	-
1 900	19100		20	22.0	21.57	0.07	Front	1	50	0	1:1	15	0.485	1.104	0.535	-
836.5	20525	LTE 5 QPSK	10	25.0	24.78	-0.15	Rear	0	1	0	1:1	15	0.375	1.052	<b>0.394</b>	25
836.5	20525		10	24.0	22.71	-0.09	Rear	1	25	0	1:1	15	0.243	1.346	0.327	-
836.5	20525		10	25.0	24.78	0.01	Front	0	1	0	1:1	15	0.231	1.052	0.243	-
836.5	20525		10	24.0	22.71	-0.03	Front	1	25	0	1:1	15	0.152	1.346	0.205	-
707.5	23095	LTE 12 QPSK	10	24.5	24.29	-0.13	Rear	0	1	0	1:1	15	0.074	1.050	<b>0.078</b>	26
707.5	23095		10	23.5	22.86	-0.07	Rear	1	25	0	1:1	15	0.055	1.159	0.064	-
707.5	23095		10	24.5	24.29	-0.03	Front	0	1	0	1:1	15	0.055	1.050	0.058	-
707.5	23095		10	23.5	22.86	-0.14	Front	1	25	0	1:1	15	0.025	1.159	0.029	-
782	23230	LTE 13 QPSK	10	25.0	24.11	-0.01	Rear	0	1	49	1:1	15	0.187	1.227	<b>0.229</b>	27
782	23230		10	24.0	22.70	-0.06	Rear	1	25	24	1:1	15	0.131	1.349	0.177	-
782	23230		10	25.0	24.11	-0.02	Front	0	1	49	1:1	15	0.133	1.227	0.163	-
782	23230		10	24.0	22.70	-0.04	Front	1	25	24	1:1	15	0.106	1.349	0.143	-
1 905	26590	LTE 25 QPSK	20	23.0	22.70	-0.03	Rear	0	1	0	1:1	15	0.518	1.072	<b>0.555</b>	28
1 905	26590		20	22.0	21.66	0.07	Rear	1	50	0	1:1	15	0.418	1.081	0.452	-
1 905	26590		20	23.0	22.70	0.02	Front	0	1	0	1:1	15	0.405	1.072	0.434	-
1 905	26590		20	22.0	21.66	0.05	Front	1	50	0	1:1	15	0.327	1.081	0.353	-
831.5	26865	LTE 26 QPSK	15	25.0	24.15	-0.03	Rear	0	1	0	1:1	15	0.237	1.216	<b>0.288</b>	29
831.5	26865		15	24.0	22.64	-0.09	Rear	1	36	0	1:1	15	0.170	1.368	0.233	-
831.5	26865		15	25.0	24.15	0.01	Front	0	1	0	1:1	15	0.190	1.216	0.231	-
831.5	26865		15	24.0	22.64	0.04	Front	1	36	0	1:1	15	0.146	1.368	0.200	-
2 680	41490	LTE 41 QPSK	20	24.4	24.09	-0.17	Rear	0	1	0	1:1.58	15	0.434	1.074	<b>0.466</b>	30
2 680	41490		20	23.4	23.25	0.12	Rear	1	50	0	1:1.58	15	0.364	1.035	0.377	-
2 680	41490		20	24.4	24.09	0.04	Front	0	1	0	1:1.58	15	0.305	1.074	0.328	-
2 680	41490		20	23.4	23.25	-0.05	Front	1	50	0	1:1.58	15	0.254	1.035	0.263	-
<b>Power class 2 (HPUE)</b>																
2 680.0	41490	QPSK	20	25.7	25.17	0.02	Rear	0	1	0	1:2.31	15	0.352	1.130	0.398	*
1 720	132072	LTE 66 QPSK	20	23.7	23.17	0.10	Rear	0	1	99	1:1	15	0.492	1.130	<b>0.556</b>	31
1 720	132072		20	22.7	22.15	0.08	Rear	1	50	0	1:1	15	0.406	1.135	0.461	-
1 720	132072		20	23.7	23.17	0.05	Front	0	1	99	1:1	15	0.400	1.130	0.452	-
1 720	132072		20	22.7	22.15	0.10	Front	1	50	0	1:1	15	0.331	1.135	0.376	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram									

Note: \* Data entry indicate LTE 41 Power Class 2(HPUE)

DTS Body-Worn SAR																	
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.																
2 412	1	802.11b	20	1	20.0	19.05	0.07	Rear	Ant1	99.1	15	0.202	0.118	1.245	1.009	0.148	-
2 412	1	802.11b	20	1	20.0	19.05	0.03	Front	Ant1	99.1	15	0.106	0.061	1.245	1.009	0.077	-
2 462	11	802.11b	20	1	20.0	19.45	-0.09	Rear	Ant2	99.1	15	0.191	0.094	1.135	1.009	0.108	-
2 462	11	802.11b	20	1	20.0	19.45	0.06	Front	Ant2	99.1	15	0.022	0.00853	1.135	1.009	0.010	-
2 437	6	802.11g	20	6	20.0	19.72	-0.11	Rear	MIMO	93.5	15	0.302	0.198	1.094	1.069	<b>0.232</b>	32
2 437	6	802.11g	20	6	20.0	19.72	-0.18	Front	MIMO	93.5	15	0.0311	0.010	1.094	1.069	0.012	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

DTS Body-Worn SAR – RSDB																	
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.																
2 412	1	802.11b	20	1	17.0	15.67	0.01	Rear	Ant1	99.1	15	0.0899	0.054	1.358	1.009	0.074	-
2 412	1	802.11b	20	1	17.0	15.67	0.01	Front	Ant1	99.1	15	0.0579	0.036	1.358	1.009	0.049	-
2 412	1	802.11b	20	1	17.0	16.02	0.02	Rear	Ant2	99.1	15	0.0851	0.048	1.253	1.009	0.061	-
2 412	1	802.11b	20	1	17.0	16.02	0.01	Front	Ant2	99.1	15	0.005	0.000483	1.253	1.009	0.001	-
2 437	6	802.11g	20	6	20.0	17.76	0.01	Rear	MIMO	93.5	15	0.147	0.086	1.722	1.069	<b>0.158</b>	33
2 437	6	802.11g	20	6	20.0	17.76	0.01	Front	MIMO	93.5	15	0.0625	0.035	1.722	1.069	0.064	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

NII Body-Worn SAR																	
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																
5 260	52	802.11a	20	6	18.0	17.11	0.12	Rear	Ant1	86.0	15	0.204	0.094	1.227	1.163	0.134	-
5 260	52	802.11a	20	6	18.0	17.11	0.01	Front	Ant1	86.0	15	0.0792	0.029	1.227	1.163	0.041	-
5 720	144	802.11a	20	6	18.0	17.38	-0.14	Rear	Ant1	86.0	15	0.417	0.185	1.153	1.163	0.248	-
5 720	144	802.11a	20	6	18.0	17.38	0.01	Front	Ant1	86.0	15	0.0939	0.040	1.153	1.163	0.054	-
5 785	157	802.11a	20	6	18.0	17.82	-0.15	Rear	Ant1	86.0	15	0.379	0.172	1.042	1.163	0.208	-
5 785	157	802.11a	20	6	18.0	17.82	0.01	Front	Ant1	86.0	15	0.0944	0.036	1.042	1.163	0.044	-
5 260	52	802.11a	20	6	18.0	17.47	-0.12	Rear	Ant2	86.0	15	0.847	0.391	1.130	1.163	0.514	-
5 260	52	802.11a	20	6	18.0	17.47	0.01	Front	Ant2	86.0	15	0.0245	0.00806	1.130	1.163	0.011	-
5 720	144	802.11a	20	6	18.0	17.35	0.01	Rear	Ant2	86.0	15	0.618	0.268	1.161	1.163	0.362	-
5 720	144	802.11a	20	6	18.0	17.35	-0.01	Front	Ant2	86.0	15	0.0266	0.00511	1.161	1.163	0.007	-
5 785	157	802.11a	20	6	18.0	17.40	0.08	Rear	Ant2	86.0	15	0.485	0.205	1.148	1.163	0.274	-
5 785	157	802.11a	20	6	18.0	17.40	-0.05	Front	Ant2	86.0	15	0.00178	0.000495	1.148	1.163	0.001	-
5 260	52	802.11a	20	6	21.0	20.30	0.05	Rear	MIMO	86.0	15	0.993	0.463	1.227	1.163	<b>0.661</b>	35
5 260	52	802.11a	20	6	21.0	20.30	0.01	Front	MIMO	86.0	15	0.0933	0.042	1.227	1.163	0.060	-
5 720	144	802.11a	20	6	21.0	20.37	-0.11	Rear	MIMO	86.0	15	0.813	0.350	1.161	1.163	0.473	-
5 720	144	802.11a	20	6	21.0	20.37	0.01	Front	MIMO	86.0	15	0.102	0.026	1.161	1.163	0.035	-
5 785	157	802.11a	20	6	21.0	20.63	-0.14	Rear	MIMO	86.0	15	0.743	0.317	1.148	1.163	0.423	-
5 785	157	802.11a	20	6	21.0	20.63	-0.01	Front	MIMO	86.0	15	0.0696	0.023	1.148	1.163	0.031	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

**NII Body-Worn SAR - RSDB**

Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																
5 270	54	802.11n	40	MCS0	14.0	13.00	0.01	Rear	Ant1	90.3	15	0.0924	0.032	1.259	1.107	0.045	-
5 270	54	802.11n	40	MCS0	14.0	13.00	0.01	Front	Ant1	90.3	15	0.0307	0.010	1.259	1.107	0.014	-
5 690	138	802.11ac	80	MCS0	14.0	13.38	0.01	Rear	Ant1	91.0	15	0.089	0.033	1.153	1.099	0.042	-
5 690	138	802.11ac	80	MCS0	14.0	13.38	0.01	Front	Ant1	91.0	15	0.023	0.00727	1.153	1.099	0.009	-
5 775	155	802.11ac	80	MCS0	14.0	13.51	0.08	Rear	Ant1	91.0	15	0.079	0.030	1.119	1.099	0.037	-
5 775	155	802.11ac	80	MCS0	14.0	13.51	0.01	Front	Ant1	91.0	15	0.008	0.0000262	1.119	1.099	0.000	-
5 270	54	802.11n	40	MCS0	14.0	12.11	-0.19	Rear	Ant2	90.3	15	0.366	0.158	1.545	1.107	0.270	-
5 270	54	802.11n	40	MCS0	14.0	12.11	0.01	Front	Ant2	90.3	15	0.0342	0.00388	1.545	1.107	0.007	-
5 690	138	802.11ac	80	MCS0	14.0	12.53	-0.14	Rear	Ant2	91.0	15	0.255	0.101	1.403	1.099	0.156	-
5 690	138	802.11ac	80	MCS0	14.0	12.53	-0.15	Front	Ant2	91.0	15	0.0178	0.010	1.403	1.099	0.015	-
5 775	155	802.11ac	80	MCS0	14.0	12.54	0.01	Rear	Ant2	91.0	15	0.224	0.086	1.400	1.099	0.132	-
5 775	155	802.11ac	80	MCS0	14.0	12.54	0.01	Front	Ant2	91.0	15	0.006	0.0000102	1.400	1.099	0.000	-
5 270	54	802.11n	40	MCS0	17.0	15.59	-0.06	Rear	MIMO	90.3	15	0.532	0.226	1.545	1.107	<b>0.387</b>	36
5 270	54	802.11n	40	MCS0	17.0	15.59	0.01	Front	MIMO	90.3	15	0.0268	0.00931	1.545	1.107	0.016	-
5 690	138	802.11ac	80	MCS0	17.0	15.99	-0.15	Rear	MIMO	91.0	15	0.274	0.106	1.403	1.099	0.163	-
5 690	138	802.11ac	80	MCS0	17.0	15.99		Front	MIMO	91.0	15	0.0389					-
5 775	155	802.11ac	80	MCS0	17.0	16.06	0.07	Rear	MIMO	91.0	15	0.27	0.105	1.400	1.099	0.162	-
5 775	155	802.11ac	80	MCS0	17.0	16.06	0.01	Front	MIMO	91.0	15	0.034	0.00193	1.400	1.099	0.003	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

**DSS Body-Worn SAR**

Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Distance	Meas. SAR	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.		(dBm)	(dBm)	(dB)		(mm)	(W/kg)				
2 480	78	Bluetooth DH5	17.50	17.40	0.11	Rear	15	0.123	1.023	1.298	<b>0.163</b>	37
2 480	78	Bluetooth DH5	17.50	17.40	0.09	Front	15	0.070	1.023	1.298	0.093	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg (mW/g) Averaged over 1 gram				

### 13.3 Hotspot SAR Measurement Results

GSM 850 Hotspot SAR												
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.		(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
836.6	190	GPRS 3Tx	30.5	29.65	0.06	Rear	1:2.77	10	0.513	1.216	<b>0.624</b>	38
836.6	190	GPRS 3Tx	30.5	29.65	0.07	Front	1:2.77	10	0.430	1.216	0.523	-
836.6	190	GPRS 3Tx	30.5	29.65	0.07	Left	1:2.77	10	0.238	1.216	0.289	-
836.6	190	GPRS 3Tx	30.5	29.65	0.10	Right	1:2.77	10	0.076	1.216	0.092	-
836.6	190	GPRS 3Tx	30.5	29.65	0.16	Bottom	1:2.77	10	0.394	1.216	0.479	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

GSM 1900 Hotspot SAR												
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.		(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
1 880	661	GPRS 4Tx	22.5	20.8	0.14	Rear	1:2.075	10	0.283	1.479	0.419	-
1 880	661	GPRS 4Tx	22.5	20.8	0.19	Front	1:2.075	10	0.228	1.479	0.337	-
1 880	661	GPRS 4Tx	22.5	20.8	-0.08	Left	1:2.075	10	0.029	1.479	0.043	-
1 880	661	GPRS 4Tx	22.5	20.8	0.17	Right	1:2.075	10	0.039	1.479	0.058	-
1 850.2	512	GPRS 4Tx	22.5	21.06	0.12	Bottom	1:2.075	10	0.543	1.393	0.756	-
1 880	661	GPRS 4Tx	22.5	20.80	0.19	Bottom	1:2.075	10	0.566	1.479	0.837	-
1 909.8	810	GPRS 4Tx	22.5	20.83	0.10	Bottom	1:2.075	10	0.746	1.469	<b>1.096</b>	39
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

**UMTS850 Hotspot SAR**

Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.		(dB)	(dB)	(dB)						(W/kg)	
836.6	4183	RMC	25.0	24.65	-0.05	Rear	1:1	10	0.462	1.084	<b>0.501</b>	40
836.6	4183	RMC	25.0	24.65	0.01	Front	1:1	10	0.349	1.084	0.378	-
836.6	4183	RMC	25.0	24.65	0.01	Left	1:1	10	0.189	1.084	0.205	-
836.6	4183	RMC	25.0	24.65	0.05	Right	1:1	10	0.092	1.084	0.100	-
836.6	4183	RMC	25.0	24.65	0.17	Bottom	1:1	10	0.303	1.084	0.328	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

**UMTS1700 Hotspot SAR**

Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.		(dB)	(dB)	(dB)						(W/kg)	
1 732.4	1412	RMC	20.00	19.64	0.04	Rear	1:1	10	0.523	1.086	0.568	-
1 732.4	1412	RMC	20.00	19.64	0.01	Front	1:1	10	0.395	1.086	0.429	-
1 732.4	1412	RMC	20.00	19.64	0.11	Left	1:1	10	0.035	1.086	0.038	-
1 732.4	1412	RMC	20.00	19.64	0.12	Right	1:1	10	0.061	1.086	0.066	-
1 712.4	1312	RMC	20.00	19.36	0.18	Bottom	1:1	10	0.819	1.159	<b>0.949</b>	41
1 732.4	1412	RMC	20.00	19.64	0.15	Bottom	1:1	10	0.795	1.086	0.864	-
1 752.8	1513	RMC	20.00	19.73	0.14	Bottom	1:1	10	0.733	1.064	0.780	-
1 712.4	1312	RMC	20.00	19.36	0.15	Bottom	1:1	10	0.818	1.159	0.948	*
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

Note: \* Data entry indicate Variability measurement.

**UMTS1900 Hotspot SAR**

Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.		(dB)	(dB)	(dB)						(W/kg)	
1 880	9400	RMC	20.00	19.26	0.06	Rear	1:1	10	0.426	1.186	0.505	-
1 880	9400	RMC	20.00	19.26	-0.05	Front	1:1	10	0.329	1.186	0.390	-
1 880	9400	RMC	20.00	19.26	0.18	Left	1:1	10	0.034	1.186	0.040	-
1 880	9400	RMC	20.00	19.26	0.11	Right	1:1	10	0.035	1.186	0.042	-
1 852.4	9262	RMC	20.00	18.98	-0.06	Bottom	1:1	10	0.746	1.265	0.943	-
1 880	9400	RMC	20.00	19.26	0.12	Bottom	1:1	10	0.743	1.186	0.881	-
1 907.6	9538	RMC	20.00	18.86	0.09	Bottom	1:1	10	0.806	1.300	1.048	-
1 907.6	9538	RMC	20.00	18.86	0.18	Bottom	1:1	10	0.828	1.300	<b>1.077</b>	42*
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

Note: \* Data entry indicate Variability measurement.



**LTE Band 2 Hotspot SAR**

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.															
1900	19100	QPSK	20	19.5	19.11	0.11	Rear	0	1	0	1:1	10	0.342	1.094	0.374	-
1900	19100	QPSK	20	19.5	19.09	0.13	Rear	0	50	0	1:1	10	0.398	1.099	0.437	-
1900	19100	QPSK	20	19.5	19.11	0.12	Front	0	1	0	1:1	10	0.323	1.094	0.353	-
1900	19100	QPSK	20	19.5	19.09	1.75	Front	0	50	0	1:1	10	0.321	1.099	0.353	-
1900	19100	QPSK	20	19.5	19.11	0.15	Left	0	1	0	1:1	10	0.031	1.094	0.034	-
1900	19100	QPSK	20	19.5	19.09	-0.07	Left	0	50	0	1:1	10	0.031	1.099	0.034	-
1900	19100	QPSK	20	19.5	19.11	-0.17	Right	0	1	0	1:1	10	0.052	1.094	0.057	-
1900	19100	QPSK	20	19.5	19.09	-0.16	Right	0	50	0	1:1	10	0.052	1.099	0.057	-
1860	18700	QPSK	20	19.5	19.00	-0.14	Bottom	0	1	0	1:1	10	0.553	1.122	0.620	-
1880	18900	QPSK	20	19.5	18.68	-0.18	Bottom	0	1	0	1:1	10	0.559	1.208	0.675	-
1900	19100	QPSK	20	19.5	19.11	-0.01	Bottom	0	1	0	1:1	10	0.921	1.094	<b>1.008</b>	43
1860	18700	QPSK	20	19.5	19.01	-0.17	Bottom	0	50	0	1:1	10	0.550	1.119	0.615	-
1880	18900	QPSK	20	19.5	18.65	-0.18	Bottom	0	50	0	1:1	10	0.556	1.216	0.676	-
1900	19100	QPSK	20	19.5	19.09	-0.02	Bottom	0	50	0	1:1	10	0.914	1.099	1.004	-
1900	19100	QPSK	20	19.5	19.04	-0.16	Bottom	0	100	0	1:1	10	0.593	1.112	0.659	-
1900	19100	QPSK	20	19.5	19.11	-0.14	Bottom	0	1	0	1:1	10	0.864	1.094	0.945	*
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 10 gram								

Note: \* Data entry indicate Variability measurement.

LTE Band 5 Hotspot SAR																
Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.															
836.5	20525	QPSK	10	25.0	24.78	0.06	Rear	0	1	0	1:1	10	0.613	1.052	<b>0.645</b>	44
836.5	20525	QPSK	10	24.0	22.71	-0.06	Rear	1	25	0	1:1	10	0.406	1.346	0.546	-
836.5	20525	QPSK	10	25.0	24.78	0.09	Front	0	1	0	1:1	10	0.384	1.052	0.404	-
836.5	20525	QPSK	10	24.0	22.71	0.04	Front	1	25	0	1:1	10	0.252	1.346	0.339	-
836.5	20525	QPSK	10	25.0	24.78	-0.05	Left	0	1	0	1:1	10	0.174	1.052	0.183	-
836.5	20525	QPSK	10	24.0	22.71	-0.07	Left	1	25	0	1:1	10	0.113	1.346	0.152	-
836.5	20525	QPSK	10	25.0	24.78	-0.16	Right	0	1	0	1:1	10	0.080	1.052	0.084	-
836.5	20525	QPSK	10	24.0	22.71	-0.14	Right	1	25	0	1:1	10	0.052	1.346	0.070	-
836.5	20525	QPSK	10	25.0	24.78	0.04	Bottom	0	1	0	1:1	10	0.337	1.052	0.355	-
836.5	20525	QPSK	10	24.0	22.71	-0.07	Bottom	1	25	0	1:1	10	0.219	1.346	0.295	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram									

LTE Band 12 Hotspot SAR																
Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.															
707.5	23095	QPSK	10	24.5	24.29	0.01	Rear	0	1	0	1:1	10	0.209	1.050	<b>0.219</b>	45
707.5	23095	QPSK	10	23.5	22.86	-0.05	Rear	1	25	0	1:1	10	0.156	1.159	0.181	-
707.5	23095	QPSK	10	24.5	24.29	-0.05	Front	0	1	0	1:1	10	0.099	1.050	0.104	-
707.5	23095	QPSK	10	23.5	22.86	-0.03	Front	1	25	0	1:1	10	0.074	1.159	0.086	-
707.5	23095	QPSK	10	24.5	24.29	0.06	Left	0	1	0	1:1	10	0.102	1.050	0.107	-
707.5	23095	QPSK	10	23.5	22.86	0.02	Left	1	25	0	1:1	10	0.077	1.159	0.089	-
707.5	23095	QPSK	10	24.5	24.29	-0.02	Right	0	1	0	1:1	10	0.053	1.050	0.056	-
707.5	23095	QPSK	10	23.5	22.86	0.05	Right	1	25	0	1:1	10	0.038	1.159	0.044	-
707.5	23095	QPSK	10	24.5	24.29	-0.09	Bottom	0	1	0	1:1	10	0.102	1.050	0.107	-
707.5	23095	QPSK	10	23.5	22.86	-0.01	Bottom	1	25	0	1:1	10	0.077	1.159	0.089	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram									

**LTE Band 13 Hotspot SAR**

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.															
782	23230	QPSK	10	25.0	24.11	-0.04	Rear	0	1	49	1:1	10	0.253	1.227	<b>0.310</b>	46
782	23230	QPSK	10	24.0	22.70	-0.04	Rear	1	25	24	1:1	10	0.179	1.349	0.241	-
782	23230	QPSK	10	25.0	24.11	-0.05	Front	0	1	49	1:1	10	0.183	1.227	0.225	-
782	23230	QPSK	10	24.0	22.70	0.02	Front	1	25	24	1:1	10	0.159	1.349	0.214	-
782	23230	QPSK	10	25.0	24.11	-0.01	Left	0	1	49	1:1	10	0.138	1.227	0.169	-
782	23230	QPSK	10	24.0	22.70	-0.07	Left	1	25	24	1:1	10	0.088	1.349	0.119	-
782	23230	QPSK	10	25.0	24.11	0.02	Right	0	1	49	1:1	10	0.059	1.227	0.072	-
782	23230	QPSK	10	24.0	22.70	-0.02	Right	1	25	24	1:1	10	0.048	1.349	0.065	-
782	23230	QPSK	10	25.0	24.11	0.02	Bottom	0	1	49	1:1	10	0.184	1.227	0.226	-
782	23230	QPSK	10	24.0	22.70	-0.01	Bottom	1	25	24	1:1	10	0.129	1.349	0.174	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

**LTE Band 25 Hotspot SAR**

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.															
1 905	26590	QPSK	20	19.5	19.15	-0.13	Rear	0	1	49	1:1	10	0.374	1.084	0.405	-
1 905	26590	QPSK	20	19.5	19.15	0.05	Rear	0	50	0	1:1	10	0.378	1.084	0.410	-
1 905	26590	QPSK	20	19.5	19.15	-0.01	Front	0	1	49	1:1	10	0.377	1.084	0.409	-
1 905	26590	QPSK	20	19.5	19.15	0.13	Front	0	50	0	1:1	10	0.399	1.084	0.432	-
1 905	26590	QPSK	20	19.5	19.15	0.11	Left	0	1	49	1:1	10	0.043	1.084	0.047	-
1 905	26590	QPSK	20	19.5	19.15	0.14	Left	0	50	0	1:1	10	0.045	1.084	0.049	-
1 905	26590	QPSK	20	19.5	19.15	0.16	Right	0	1	49	1:1	10	0.047	1.084	0.051	-
1 905	26590	QPSK	20	19.5	19.15	0.01	Right	0	50	0	1:1	10	0.049	1.084	0.053	-
1 860	26140	QPSK	20	19.5	18.97	0.17	Bottom	0	1	99	1:1	10	0.801	1.130	0.905	-
1 882.5	26365	QPSK	20	19.5	18.67	0.11	Bottom	0	1	0	1:1	10	0.778	1.211	0.942	-
1 905	26590	QPSK	20	19.5	19.15	0.13	Bottom	0	1	49	1:1	10	0.934	1.084	1.012	-
1 860	26140	QPSK	20	19.5	19.02	0.18	Bottom	0	50	49	1:1	10	0.812	1.117	0.907	-
1 882.5	26365	QPSK	20	19.5	18.68	0.13	Bottom	0	50	0	1:1	10	0.793	1.208	0.958	-
1 905	26590	QPSK	20	19.5	19.15	0.17	Bottom	0	50	0	1:1	10	<b>0.955</b>	1.084	1.035	47
1 905	26590	QPSK	20	19.5	19.14	0.15	Bottom	0	100	0	1:1	10	0.954	1.086	<b>1.036</b>	48
1 905	26590	QPSK	20	19.5	19.15	0.11	Bottom	0	50	0	1:1	10	0.952	1.084	1.032	*
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

Note: \* Data entry indicate Variability measurement.

**LTE Band 26 Hotspot SAR**

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.															
831.5	26865	QPSK	15	25.0	24.15	0.03	Rear	0	1	0	1:1	10	0.380	1.216	<b>0.462</b>	49
831.5	26865	QPSK	15	24.0	22.64	-0.17	Rear	1	36	0	1:1	10	0.293	1.368	0.401	-
831.5	26865	QPSK	15	25.0	24.15	-0.02	Front	0	1	0	1:1	10	0.284	1.216	0.345	-
831.5	26865	QPSK	15	24.0	22.64	-0.01	Front	1	36	0	1:1	10	0.220	1.368	0.301	-
831.5	26865	QPSK	15	25.0	24.15	-0.05	Left	0	1	0	1:1	10	0.143	1.216	0.174	-
831.5	26865	QPSK	15	24.0	22.64	-0.11	Left	1	36	0	1:1	10	0.108	1.368	0.148	-
831.5	26865	QPSK	15	25.0	24.15	-0.15	Right	0	1	0	1:1	10	0.068	1.216	0.083	-
831.5	26865	QPSK	15	24.0	22.64	-0.15	Right	1	36	0	1:1	10	0.051	1.368	0.070	-
831.5	26865	QPSK	15	25.0	24.15	0.03	Bottom	0	1	0	1:1	10	0.279	1.216	0.339	-
831.5	26865	QPSK	15	24.0	22.64	0.03	Bottom	1	36	0	1:1	10	0.208	1.368	0.285	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

**LTE TDD Band 41 Hotspot SAR**

Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.															
2 680	41490	QPSK	20	23.4	23.16	-0.14	Rear	0	1	0	1:1.58	10	0.425	1.057	0.449	-
2 680	41490	QPSK	20	23.4	23.24	0.12	Rear	0	50	0	1:1.58	10	0.433	1.038	0.449	-
2 680	41490	QPSK	20	23.4	23.16	-0.18	Front	0	1	0	1:1.58	10	0.321	1.057	0.339	-
2 680	41490	QPSK	20	23.4	23.24	-0.08	Front	0	50	0	1:1.58	10	0.322	1.038	0.334	-
2 680	41490	QPSK	20	23.4	23.16	-0.01	Right	0	1	0	1:1.58	10	0.310	1.057	0.328	-
2 680	41490	QPSK	20	23.4	23.24	-0.14	Right	0	50	0	1:1.58	10	0.221	1.038	0.229	-
2 680	41490	QPSK	20	23.4	23.16	0.15	Bottom	0	1	0	1:1.58	10	0.547	1.057	<b>0.578</b>	50
2 680	41490	QPSK	20	23.4	23.24	-0.11	Bottom	0	50	0	1:1.58	10	0.502	1.038	0.521	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

LTE Band 66 Hotspot SAR																
Frequency		Mode	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.															
1 720	132072	QPSK	20	20.5	20.07	-0.05	Rear	0	1	99	1:1	10	0.433	1.104	0.478	-
1 720	132072	QPSK	20	20.5	20.01	0.01	Rear	0	50	0	1:1	10	0.437	1.119	0.489	-
1 720	132072	QPSK	20	20.5	20.07	0.03	Front	0	1	99	1:1	10	0.422	1.104	0.466	-
1 720	132072	QPSK	20	20.5	20.01	0.01	Front	0	50	0	1:1	10	0.379	1.119	0.424	-
1 720	132072	QPSK	20	20.5	20.07	0.07	Left	0	1	99	1:1	10	0.057	1.104	0.063	-
1 720	132072	QPSK	20	20.5	20.01	0.10	Left	0	50	0	1:1	10	0.059	1.119	0.066	-
1 720	132072	QPSK	20	20.5	20.07	0.09	Right	0	1	99	1:1	10	0.084	1.104	0.093	-
1 720	132072	QPSK	20	20.5	20.01	0.17	Right	0	50	0	1:1	10	0.092	1.119	0.103	-
1 720	132072	QPSK	20	20.5	20.07	0.16	Bottom	0	1	99	1:1	10	0.839	1.104	0.926	-
1 745	132322	QPSK	20	20.5	19.52	0.17	Bottom	0	1	99	1:1	10	0.728	1.253	0.912	-
1 770	132572	QPSK	20	20.5	19.76	0.14	Bottom	0	1	99	1:1	10	0.750	1.186	0.889	-
1 720	132072	QPSK	20	20.5	20.01	0.12	Bottom	0	50	0	1:1	10	0.846	1.119	0.947	-
1 745	132322	QPSK	20	20.5	19.48	0.10	Bottom	0	50	0	1:1	10	0.737	1.265	0.932	-
1 770	132572	QPSK	20	20.5	19.66	0.17	Bottom	0	50	0	1:1	10	0.743	1.213	0.901	-
1 720	132072	QPSK	20	20.5	19.96	0.17	Bottom	0	100	0	1:1	10	0.857	1.132	<b>0.970</b>	51
1 720	132072	QPSK	20	20.5	19.96	0.16	Bottom	0	100	0	1:1	10	0.853	1.132	0.966	*
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

Note: \* Data entry indicate Variability measurement.

DTS Hotspot SAR																	
*Frequency		Mode	Band width (MHz)	Data Rate (Mbps )	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																
2 412	1	802.11b	20	1	20.0	19.05	-0.02	Rear	Ant1	99.1	10	0.414	0.238	1.245	1.009	0.299	-
2 412	1	802.11b	20	1	20.0	19.05	0.08	Front	Ant1	99.1	10	0.227	0.125	1.245	1.009	0.157	-
2 412	1	802.11b	20	1	20.0	19.05	0.04	Left	Ant1	99.1	10	0.0896	0.053	1.245	1.009	0.067	-
2 412	1	802.11b	20	1	20.0	19.05	0.05	Top	Ant1	99.1	10	0.557	0.349	1.245	1.009	0.438	-
2 462	11	802.11b	20	1	20.0	19.45	0.11	Rear	Ant2	99.1	10	0.52	0.314	1.135	1.009	0.360	-
2 462	11	802.11b	20	1	20.0	19.45	0.09	Front	Ant2	99.1	10	0.0581	0.025	1.135	1.009	0.029	-
2 462	11	802.11b	20	1	20.0	19.45	0.11	Left	Ant2	99.1	10	0.105	0.058	1.135	1.009	0.066	-
2 462	11	802.11b	20	1	20.0	19.45	0.10	Top	Ant2	99.1	10	0.0814	0.045	1.135	1.009	0.052	-
2 437	6	802.11g	20	6	20.0	19.72	0.10	Rear	MIMO	93.5	10	0.614	0.388	1.094	1.069	0.454	-
2 437	6	802.11g	20	6	20.0	19.72	-0.05	Front	MIMO	93.5	10	0.0668	0.025	1.094	1.069	0.029	-
2 437	6	802.11g	20	6	20.0	19.72	0.08	Left	MIMO	93.5	10	0.171	0.102	1.094	1.069	0.119	-
2 437	6	802.11g	20	6	20.0	19.72	0.09	Top	MIMO	93.5	10	0.709	0.433	1.094	1.069	<b>0.506</b>	52
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

DTS Hotspot SAR RSDB																	
*Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																
2 412	1	802.11b	20	1	17.0	15.67	0.01	Rear	Ant1	99.1	10	0.203	0.121	1.358	1.009	0.166	-
2 412	1	802.11b	20	1	17.0	15.67	0.01	Front	Ant1	99.1	10	0.11	0.067	1.358	1.009	0.092	-
2 412	1	802.11b	20	1	17.0	15.67	0.03	Left	Ant1	99.1	10	0.036	0.020	1.358	1.009	0.027	-
2 412	1	802.11b	20	1	17.0	15.67	0.16	Top	Ant1	99.1	10	0.279	0.171	1.358	1.009	0.234	-
2 412	1	802.11b	20	1	17.0	16.02	-0.09	Rear	Ant2	99.1	10	0.275	0.149	1.253	1.009	0.188	-
2 412	1	802.11b	20	1	17.0	16.02	0.01	Front	Ant2	99.1	10	0.0188	0.00349	1.253	1.009	0.004	-
2 412	1	802.11b	20	1	17.0	16.02	0.05	Left	Ant2	99.1	10	0.0668	0.030	1.253	1.009	0.038	-
2 412	1	802.11b	20	1	17.0	16.02	0.14	Top	Ant2	99.1	10	0.0514	0.020	1.253	1.009	0.025	-
2 437	6	802.11g	20	6	20.0	18.06	-0.10	Rear	MIMO	93.5	10	0.307	0.182	1.607	1.069	0.313	-
2 437	6	802.11g	20	6	20.0	18.06	0.01	Front	MIMO	93.5	10	0.135	0.071	1.607	1.069	0.122	-
2 437	6	802.11g	20	6	20.0	18.06	0.03	Left	MIMO	93.5	10	0.075	0.038	1.607	1.069	0.065	-
2 437	6	802.11g	20	6	20.0	18.06	0.09	Top	MIMO	93.5	10	0.451	0.270	1.607	1.069	<b>0.464</b>	53
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram							

**5 GHz WLAN Hotspot SAR**

Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Distance	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.																
5 785	157	802.11a	20	6	18.0	17.82	-0.09	Rear	Ant1	86.0	10	0.664	0.285	1.042	1.076	0.320	-
5 785	157	802.11a	20	6	18.0	17.82	-0.01	Front	Ant1	86.0	10	0.158	0.071	1.042	1.076	0.080	-
5 785	157	802.11a	20	6	18.0	17.82	0.04	Left	Ant1	86.0	10	0.288	0.118	1.042	1.076	0.132	-
5 785	157	802.11a	20	6	18.0	17.82	-0.17	Top	Ant1	86.0	10	0.209	0.093	1.042	1.076	0.104	-
5 785	157	802.11a	20	6	18.0	17.40	-0.15	Rear	Ant2	86.0	10	0.914	0.370	1.148	1.076	0.457	-
5 785	157	802.11a	20	6	18.0	17.40	-0.01	Front	Ant2	86.0	10	0.0376	0.013	1.148	1.076	0.016	-
5 785	157	802.11a	20	6	18.0	17.40	0.17	Left	Ant2	86.0	10	0.231	0.091	1.148	1.076	0.121	-
5 785	157	802.11a	20	6	18.0	17.40	-0.15	Top	Ant2	86.0	10	0.0579	0.015	1.148	1.076	0.019	-
5 785	157	802.11a	20	6	21.0	20.63	-0.19	Rear	MIMO	86.0	10	1.27	0.499	1.148	1.076	<b>0.616</b>	55
5 785	157	802.11a	20	6	21.0	20.63	-0.01	Front	MIMO	86.0	10	0.128	0.049	1.148	1.076	0.061	-
5 785	157	802.11a	20	6	21.0	20.63	0.14	Left	MIMO	86.0	10	0.257	0.113	1.148	1.076	0.140	-
5 785	157	802.11a	20	6	21.0	20.63	-0.10	Top	MIMO	86.0	10	0.225	0.097	1.148	1.076	0.120	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Body 1.6 W/kg Averaged over 1 gram						

**5 GHz WLAN Hotspot SAR - RSDB**

Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Distance	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.																
5 775	155	802.11ac	80	MCS0	14.0	13.51	-0.15	Rear	Ant1	91.0	10	0.131	0.044	1.119	1.099	0.054	-
5 775	155	802.11ac	80	MCS0	14.0	13.51	0.01	Front	Ant1	91.0	10	0.065	0.00828	1.119	1.099	0.010	-
5 775	155	802.11ac	80	MCS0	14.0	13.51	0.16	Left	Ant1	91.0	10	0.139	0.050	1.119	1.099	0.061	-
5 775	155	802.11ac	80	MCS0	14.0	13.51	0.10	Top	Ant1	91.0	10	0.095	0.027	1.119	1.099	0.033	-
5 775	155	802.11ac	80	MCS0	14.0	12.54	-0.13	Rear	Ant2	91.0	10	0.274	0.125	1.400	1.099	0.192	-
5 775	155	802.11ac	80	MCS0	14.0	12.54	0.01	Front	Ant2	91.0	10	0.0233	0.00267	1.400	1.099	0.004	-
5 775	155	802.11ac	80	MCS0	14.0	12.54	0.14	Left	Ant2	91.0	10	0.113	0.050	1.400	1.099	0.077	-
5 775	155	802.11ac	80	MCS0	14.0	12.54	-0.12	Top	Ant2	91.0	10	0.0414	0.00814	1.400	1.099	0.013	-
5 775	155	802.11ac	80	MCS0	17.0	16.06	-0.14	Rear	MIMO	91.0	10	0.335	0.135	1.400	1.099	<b>0.208</b>	56
5 775	155	802.11ac	80	MCS0	17.0	16.06	0.01	Front	MIMO	91.0	10	0.0318	0.00506	1.400	1.099	0.008	-
5 775	155	802.11ac	80	MCS0	17.0	16.06	0.12	Left	MIMO	91.0	10	0.149	0.056	1.400	1.099	0.086	-
5 775	155	802.11ac	80	MCS0	17.0	16.06	-0.13	Top	MIMO	91.0	10	0.13	0.050	1.400	1.099	0.077	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Body 1.6 W/kg Averaged over 1 gram						

**DSS Tethering SAR**

Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Distance	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.		(dBm)	(dBm)	(dB)		(mm)	(W/kg)		(Duty)	(W/kg)	
2 480	78	Bluetooth DH5	17.50	17.40	0.08	Rear	10	0.253	1.023	1.298	0.336	-
2 480	78	Bluetooth DH5	17.50	17.40	0.17	Front	10	0.126	1.023	1.298	0.167	-
2 480	78	Bluetooth DH5	17.50	17.40	0.11	Left	10	0.041	1.023	1.298	0.054	-
2 480	78	Bluetooth DH5	17.50	17.40	0.02	Top	10	0.329	1.023	1.298	<b>0.437</b>	57
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg (mW/g) Averaged over 1 gram					

### 13.4 Phablet SAR Measurement Considerations

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

As a result of scaling up the SAR value of the hotspot mode of GSM1900/UMTS1700/UMTS1900/LTE B2/B66 of this EUT to the maximum output Power including tolerance > 1.2W/kg, the Tablet SAR measurement was performed.

Because the Scaled Up SAR result of GSM1900/UMTS1700/UMTS1900/LTE B2/B25/B66 's Hotspot mode exceeded 1.2 W/kg, Phablet SAR were performed.

### 13.5 Phablet SAR Measurement Results

GSM 1900 Phablet SAR 10g													
Frequency		Mode	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.												
1 909.8	810	GPRS 2Tx	28.5	27.81	-0.04	Rear	OFF	1:4.15	8	0.426	1.172	0.499	-
1 909.8	810	GPRS 2Tx	28.5	27.81	0.11	Front	OFF	1:4.15	6	0.557	1.172	0.653	-
1 909.8	810	GPRS 2Tx	28.5	27.81	0.18	Bottom	OFF	1:4.15	12	0.510	1.172	0.598	-
1 909.8	810	GPRS 2Tx	28.5	27.81	0.11	Left	N/A	1:4.15	0	0.117	1.172	0.137	-
1 909.8	810	GPRS 2Tx	28.5	27.81	0.13	Right	N/A	1:4.15	0	0.182	1.172	0.213	-
1 880	661	GPRS 4Tx	22.5	20.82	0.18	Rear	ON	1:2.07	0	0.565	1.472	0.832	-
1 880	661	GPRS 4Tx	22.5	20.82	0.01	Front	ON	1:2.07	0	0.732	1.472	1.078	-
1 880	661	GPRS 4Tx	22.5	20.82	0.13	Bottom	ON	1:2.07	0	0.902	1.472	<b>1.328</b>	58
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Hand 4.0 W/kg Averaged over 10 gram						

UMTS1700 Phablet SAR 10g													
Frequency		Mode	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.												
1732.4	1412	RMC	23.5	23.17	0.08	Rear	OFF	1:1	8	0.883	1.079	0.953	-
1732.4	1412	RMC	23.5	23.17	0.05	Front	OFF	1:1	6	0.785	1.079	0.847	-
1732.4	1412	RMC	23.5	23.17	0.04	Bottom	OFF	1:1	12	0.711	1.079	0.767	-
1732.4	1412	RMC	23.5	23.17	-0.07	Left	N/A	1:1	0	0.208	1.079	0.224	-
1732.4	1412	RMC	23.5	23.17	0.05	Right	N/A	1:1	0	0.145	1.079	0.156	-
1732.4	1412	RMC	20.0	19.55	-0.14	Rear	ON	1:1	0	1.160	1.109	1.287	-
1732.4	1412	RMC	20.0	19.55	0.01	Front	ON	1:1	0	1.150	1.109	1.276	-
1732.4	1412	RMC	20.0	19.55	0.01	Bottom	ON	1:1	0	1.690	1.109	<b>1.875</b>	59
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Hand 4.0 W/kg Averaged over 10 gram						

UMTS1900 Phablet SAR 10g													
Frequency		Mode	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.												
1 880.0	9400	RMC	23.5	22.87	0.03	Rear	OFF	1:1	8	0.665	1.156	0.769	-
1 880.0	9400	RMC	23.5	22.87	-0.04	Front	OFF	1:1	6	0.783	1.156	0.905	-
1 880.0	9400	RMC	23.5	22.87	0.16	Bottom	OFF	1:1	12	0.816	1.156	0.943	-
1 880.0	9400	RMC	23.5	22.87	0.06	Left	N/A	1:1	0	0.156	1.156	0.180	-
1 880.0	9400	RMC	23.5	22.87	0.18	Right	N/A	1:1	0	0.210	1.156	0.243	-
1 880.0	9400	RMC	20.0	19.28	0.14	Rear	ON	1:1	0	0.905	1.180	1.068	-
1 880.0	9400	RMC	20.0	19.28	0.01	Front	ON	1:1	0	0.750	1.180	0.885	-
1 880.0	9400	RMC	20.0	19.28	0.11	Bottom	ON	1:1	0	1.490	1.180	<b>1.759</b>	60
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Hand 4.0 W/kg Averaged over 10 gram						

LTE Band 2 Phablet SAR 10g																	
Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																
1 900	19100	QPSK	20	23.0	22.58	-0.02	Rear	8	0	1	0	1:1	8	0.496	1.102	0.547	-
1 900	19100	QPSK	20	22.0	21.57	0.01	Rear	8	1	50	0	1:1	8	0.484	1.104	0.534	-
1 900	19100	QPSK	20	23.0	22.58	-0.02	Front	6	0	1	0	1:1	6	0.659	1.102	0.726	-
1 900	19100	QPSK	20	22.0	21.57	-0.10	Front	6	1	50	0	1:1	6	0.511	1.104	0.564	-
1 900	19100	QPSK	20	23.0	22.58	0.12	Bottom	12	0	1	0	1:1	12	0.336	1.102	0.370	-
1 900	19100	QPSK	20	22.0	21.57	0.05	Bottom	12	1	50	0	1:1	12	0.326	1.104	0.360	-
1 900	19100	QPSK	20	23.0	22.58	-0.17	Left	N/A	0	1	0	1:1	0	0.208	1.102	0.229	-
1 900	19100	QPSK	20	22.0	21.57	-0.17	Left	N/A	1	50	0	1:1	0	0.162	1.104	0.179	-
1 900	19100	QPSK	20	23.0	22.58	0.12	Right	N/A	0	1	0	1:1	0	0.302	1.102	0.333	-
1 900	19100	QPSK	20	22.0	21.57	0.11	Right	N/A	1	50	0	1:1	0	0.233	1.104	0.257	-
1 900	19100	QPSK	20	19.5	18.97	0.01	Rear	ON	0	1	0	1:1	0	0.977	1.130	1.104	-
1 900	19100	QPSK	20	19.5	18.88	-0.14	Rear	ON	0	50	0	1:1	0	1.070	1.153	1.234	-
1 900	19100	QPSK	20	19.5	18.97	0.01	Front	ON	0	1	0	1:1	0	1.020	1.130	1.153	-
1 900	19100	QPSK	20	19.5	18.88	0.01	Front	ON	0	50	0	1:1	0	1.010	1.153	1.165	-
1 900	19100	QPSK	20	19.5	18.97	0.14	Bottom	ON	0	1	0	1:1	0	1.520	1.130	1.718	-
1 860	18700	QPSK	20	19.5	18.86	0.16	Bottom	ON	0	50	0	1:1	0	1.470	1.159	1.704	-
1 880	18900	QPSK	20	19.5	18.47	0.19	Bottom	ON	0	50	0	1:1	0	1.410	1.268	1.788	-
1 900	19100	QPSK	20	19.5	18.88	0.10	Bottom	ON	0	50	0	1:1	0	1.780	1.153	<b>2.052</b>	61
1 900	19100	QPSK	20	19.5	18.92	0.14	Bottom	ON	0	100	0	1:1	0	1.470	1.143	1.680	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Hand 4.0 W/kg Averaged over 10 gram									

LTE Band 25 Phablet SAR 10g																	
Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																
1 905	26590	QPSK	20	23.0	22.70	0.03	Rear	OFF	0	1	0	1:1	8	0.743	1.072	0.796	-
1 905	26590	QPSK	20	22.0	21.66	0.01	Rear	OFF	1	50	0	1:1	8	0.594	1.081	0.642	-
1 905	26590	QPSK	20	23.0	22.70	0.11	Front	OFF	0	1	0	1:1	6	0.823	1.072	0.882	-
1 905	26590	QPSK	20	22.0	21.66	0.09	Front	OFF	1	50	0	1:1	6	0.658	1.081	0.712	-
1 905	26590	QPSK	20	23.0	22.70	0.02	Bottom	OFF	0	1	0	1:1	12	0.806	1.072	0.864	-
1 905	26590	QPSK	20	22.0	21.66	0.09	Bottom	OFF	1	50	0	1:1	12	0.639	1.081	0.691	-
1 905	26590	QPSK	20	23.0	22.70	0.14	Left	N/A	0	1	0	1:1	0	0.166	1.072	0.178	-
1 905	26590	QPSK	20	22.0	21.66	0.14	Left	N/A	1	50	0	1:1	0	0.132	1.081	0.143	-
1 905	26590	QPSK	20	23.0	22.70	0.10	Right	N/A	0	1	0	1:1	0	0.273	1.072	0.293	-
1 905	26590	QPSK	20	22.0	21.66	0.11	Right	N/A	1	50	0	1:1	0	0.215	1.081	0.233	-
1 905	26590	QPSK	20	19.5	19.14	0.11	Rear	ON	0	1	49	1:1	0	0.992	1.086	1.078	-
1 905	26590	QPSK	20	19.5	19.16	0.17	Rear	ON	0	50	0	1:1	0	1.030	1.081	1.114	-
1 905	26590	QPSK	20	19.5	19.14	0.01	Front	ON	0	1	49	1:1	0	0.930	1.086	1.010	-
1 905	26590	QPSK	20	19.5	19.16	0.01	Front	ON	0	50	0	1:1	0	0.974	1.081	1.053	-
1 905	26590	QPSK	20	19.5	19.14	0.11	Bottom	ON	0	1	49	1:1	0	1.220	1.086	1.325	-
1 905	26590	QPSK	20	19.5	19.16	0.16	Bottom	ON	0	50	0	1:1	0	1.300	1.081	<b>1.406</b>	62
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Hand 4.0 W/kg Averaged over 10 gram								

LTE Band 66 Phablet SAR 10g																	
Frequency		Mode	Band Width	Tune-Up Limit (dB)	Meas. Power (dB)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																
1 720	132072	QPSK	20	23.7	23.17	0.03	Rear	OFF	0	1	99	1:1	8	0.820	1.130	0.927	-
1 720	132072	QPSK	20	22.7	22.15	0.06	Rear	OFF	1	50	0	1:1	8	0.674	1.135	0.765	-
1 720	132072	QPSK	20	23.7	23.17	0.09	Front	OFF	0	1	99	1:1	6	0.888	1.130	1.003	-
1 720	132072	QPSK	20	22.7	22.15	0.06	Front	OFF	1	50	0	1:1	6	0.722	1.135	0.819	-
1 720	132072	QPSK	20	23.7	23.17	0.11	Bottom	OFF	0	1	99	1:1	12	0.609	1.130	0.688	-
1 720	132072	QPSK	20	22.7	22.15	0.11	Bottom	OFF	1	50	0	1:1	12	0.504	1.135	0.572	-
1 720	132072	QPSK	20	23.7	23.17	0.19	Left	N/A	0	1	99	1:1	0	0.162	1.130	0.183	-
1 720	132072	QPSK	20	22.7	22.15	0.17	Left	N/A	1	50	0	1:1	0	0.131	1.135	0.149	-
1 720	132072	QPSK	20	23.7	23.17	0.19	Right	N/A	0	1	99	1:1	0	0.268	1.130	0.303	-
1 720	132072	QPSK	20	22.7	22.15	0.18	Right	N/A	1	50	0	1:1	0	0.216	1.135	0.246	-
1 720	132072	QPSK	20	20.5	20.02	0.04	Rear	ON	0	1	99	1:1	0	1.220	1.117	1.363	-
1 720	132072	QPSK	20	20.5	20.01	-0.01	Rear	ON	0	50	49	1:1	0	1.260	1.119	1.410	-
1 720	132072	QPSK	20	20.5	20.02	-0.01	Front	ON	0	1	99	1:1	0	1.240	1.117	1.385	-
1 720	132072	QPSK	20	20.5	20.01	0.19	Front	ON	0	50	49	1:1	0	1.260	1.119	1.410	-
1 720	132072	QPSK	20	20.5	20.02	0.11	Bottom	ON	1	99	1:1	1:1	0	1.740	1.117	1.944	-
1 745	132322	QPSK	20	20.5	19.44	-0.06	Bottom	ON	1	49	1:1	1:1	0	1.770	1.276	2.259	-
1 770	132572	QPSK	20	20.5	19.71	0.02	Bottom	ON	1	99	1:1	1:1	0	1.810	1.199	2.170	-
1 720	132072	QPSK	20	20.5	20.01	0.17	Bottom	ON	50	49	1:1	1:1	0	1.790	1.119	2.003	-
1 745	132322	QPSK	20	20.5	19.50	-0.01	Bottom	ON	50	49	1:1	1:1	0	1.820	1.259	2.291	-
1 770	132572	QPSK	20	20.5	19.67	-0.04	Bottom	ON	50	49	1:1	1:1	0	1.860	1.211	2.252	-
1 770	132572	QPSK	20	20.5	19.66	0.05	Bottom	ON	100	0	1:1	1:1	0	1.890	1.213	<b>2.293</b>	63
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Hand 4.0 W/kg Averaged over 10 gram								

5 GHz WLAN Phablet SAR 10g																	
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																
5 260	52	802.11a	20	6	18.0	17.11	0.01	Rear	Ant1	86.0	0	2.56	0.273	1.227	1.076	0.361	
5 260	52	802.11a	20	6	18.0	17.11	0.01	Front	Ant1	86.0	0	3.44	0.268	1.227	1.076	0.382	-
5 260	52	802.11a	20	6	18.0	17.11	0.19	Left	Ant1	86.0	0	7.75	0.535	1.227	1.076	0.763	-
5 260	52	802.11a	20	6	18.0	17.11	-0.14	Top	Ant1	86.0	0	1.95	0.136	1.227	1.076	0.180	-
5 720	144	802.11a	20	6	18.0	17.38	-0.10	Rear	Ant1	86.0	0	6.1	0.541	1.153	1.076	0.725	
5 720	144	802.11a	20	6	18.0	17.38	0.08	Front	Ant1	86.0	0	3.58	0.302	1.153	1.076	0.375	-
5 720	144	802.11a	20	6	18.0	17.38	0.16	Left	Ant1	86.0	0	5.08	0.529	1.153	1.076	0.709	-
5 720	144	802.11a	20	6	18.0	17.38	0.15	Top	Ant1	86.0	0	1.81	0.220	1.153	1.076	0.273	-
5 260	52	802.11a	20	6	18.0	17.47	-0.10	Rear	Ant2	86.0	0	21.4	1.280	1.130	1.076	<b>1.556</b>	64
5 260	52	802.11a	20	6	18.0	17.47	0.01	Front	Ant2	86.0	0	0.375	0.046	1.130	1.076	0.056	-
5 260	52	802.11a	20	6	18.0	17.47	-0.18	Left	Ant2	86.0	0	2.47	0.245	1.130	1.076	0.298	-
5 260	52	802.11a	20	6	18.0	17.47	0.12	Top	Ant2	86.0	0	0.767	0.113	1.130	1.076	0.149	-
5 720	144	802.11a	20	6	18.0	17.35	0.15	Rear	Ant2	86.0	0	7.74	0.873	1.161	1.076	1.091	-
5 720	144	802.11a	20	6	18.0	17.35	0.01	Front	Ant2	86.0	0	0.372	0.030	1.161	1.076	0.037	-
5 720	144	802.11a	20	6	18.0	17.35	0.11	Left	Ant2	86.0	0	1.84	0.155	1.161	1.076	0.194	-
5 720	144	802.11a	20	6	18.0	17.35	0.10	Top	Ant2	86.0	0	0.391	0.039	1.161	1.076	0.049	-
5 260	52	802.11a	20	6	21.0	20.30	0.16	Rear	MIMO	86.0	0	14.2	1.170	1.227	1.076	1.545	-
5 260	52	802.11a	20	6	21.0	20.30	0.01	Front	MIMO	86.0	0	1.61	0.211	1.227	1.076	0.279	-
5 260	52	802.11a	20	6	21.0	20.30	-0.02	Left	MIMO	86.0	0	7.23	0.629	1.227	1.076	0.831	-
5 260	52	802.11a	20	6	21.0	20.30	0.12	Top	MIMO	86.0	0	1.5	0.256	1.227	1.076	0.338	-
5 720	144	802.11a	20	6	21.0	20.37	-0.17	Rear	MIMO	86.0	0	13.8	1.100	1.161	1.076	1.375	-
5 720	144	802.11a	20	6	21.0	20.37	0.01	Front	MIMO	86.0	0	3.98	0.355	1.161	1.076	0.444	-
5 720	144	802.11a	20	6	21.0	20.37	0.19	Left	MIMO	86.0	0	9.14	0.607	1.161	1.076	0.759	-
5 720	144	802.11a	20	6	21.0	20.37	0.15	Top	MIMO	86.0	0	2.14	0.275	1.161	1.076	0.344	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Hand 4.0 W/kg Averaged over 10 gram					

5 GHz WLAN Phablet SAR 10g - RSDB																	
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.																
5 270	54	802.11n	40	MCS0	14.0	13.00	0.01	Rear	Ant1	90.3	0	1.39	0.105	1.259	1.107	0.146	
5 270	54	802.11n	40	MCS0	14.0	13.00	0.01	Front	Ant1	90.3	0	1.07	0.073	1.259	1.107	0.102	-
5 270	54	802.11n	40	MCS0	14.0	13.00	0.01	Left	Ant1	90.3	0	2.13	0.129	1.259	1.107	0.180	-
5 270	54	802.11n	40	MCS0	14.0	13.00	0.17	Top	Ant1	90.3	0	0.563	0.053	1.259	1.107	0.074	-
5 690	138	802.11ac	80	MCS0	14.0	13.38	0.01	Rear	Ant1	91.0	0	1.15	0.098	1.153	1.099	0.124	
5 690	138	802.11ac	80	MCS0	14.0	13.38	0.01	Front	Ant1	91.0	0	1.68	0.085	1.153	1.099	0.108	-
5 690	138	802.11ac	80	MCS0	14.0	13.38	0.01	Left	Ant1	91.0	0	2.61	0.191	1.153	1.099	0.242	-
5 690	138	802.11ac	80	MCS0	14.0	13.38	0.01	Top	Ant1	91.0	0	0.861	0.047	1.153	1.099	0.060	-
5 270	54	802.11n	40	MCS0	14.0	12.11	0.01	Rear	Ant2	90.3	0	7.41	0.570	1.545	1.107	<b>0.975</b>	65
5 270	54	802.11n	40	MCS0	14.0	12.11	0.01	Front	Ant2	90.3	0	0.0926	0.0094	1.545	1.107	0.016	-
5 270	54	802.11n	40	MCS0	14.0	12.11	0.01	Left	Ant2	90.3	0	0.854	0.086	1.545	1.107	0.147	-
5 270	54	802.11n	40	MCS0	14.0	12.11	0.10	Top	Ant2	90.3	0	0.376	0.044	1.545	1.107	0.075	-
5 690	138	802.11ac	80	MCS0	14.0	12.53	0.01	Rear	Ant2	91.0	0	3.06	0.412	1.403	1.099	0.635	-
5 690	138	802.11ac	80	MCS0	14.0	12.53	0.01	Front	Ant2	91.0	0	0.185	0.000267	1.403	1.099	0.000	-
5 690	138	802.11ac	80	MCS0	14.0	12.53	0.01	Left	Ant2	91.0	0	0.817	0.043	1.403	1.099	0.066	-
5 690	138	802.11ac	80	MCS0	14.0	12.53	0.07	Top	Ant2	91.0	0	0.151	0.014	1.403	1.099	0.022	-
5 270	54	802.11n	40	MCS0	17.0	15.59	0.01	Rear	MIMO	90.3	0	3.52	0.467	1.545	1.107	0.799	-
5 270	54	802.11n	40	MCS0	17.0	15.59	0.01	Front	MIMO	90.3	0	1.35	0.076	1.545	1.107	0.130	-
5 270	54	802.11n	40	MCS0	17.0	15.59	-0.16	Left	MIMO	90.3	0	0.788	0.237	1.545	1.107	0.405	-
5 270	54	802.11n	40	MCS0	17.0	15.59	0.13	Top	MIMO	90.3	0	0.953	0.066	1.545	1.107	0.113	-
5 690	138	802.11ac	80	MCS0	17.0	15.99	0.01	Rear	MIMO	91.0	0	8.81	0.461	1.403	1.099	0.711	-
5 690	138	802.11ac	80	MCS0	17.0	15.99	0.01	Front	MIMO	91.0	0	0.986	0.062	1.403	1.099	0.096	-
5 690	138	802.11ac	80	MCS0	17.0	15.99	0.01	Left	MIMO	91.0	0	2.74	0.218	1.403	1.099	0.336	-
5 690	138	802.11ac	80	MCS0	17.0	15.99	0.12	Top	MIMO	91.0	0	0.692	0.056	1.403	1.099	0.086	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Hand 4.0 W/kg Averaged over 10 gram					

## 13.6 SAR Test Notes

### General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Procedure.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB 648474 D04v01r03, SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was  $\leq 1.2$  W/kg, no additional SAR evaluation using a headset cable were required.
8. Per KDB 648474 D04v01r03, this device is considered a "Phablet" since the diagonal dimension is  $> 160$  mm and  $< 200$  mm. When hotspot mode applies, extremity SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (with tolerance) is 1 g SAR  $> 1.2$  W/kg.
9. Per FCC KDB 865664 D01v01r04, variability SAR measurement were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg for 1g SAR and  $>2$  for 10g SAR Please see Section 15 for variability analysis.
10. This device utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
11. During SAR testing for the Hotspot conditions per KDB 941225 D06v02r01, the actual portable hotspot operation (with actual simultaneous transmission of a transmitter with WiFi) was not activated.

### GSM/GPRS Test Notes:

1. This EUT'S GSM and GPRS device class is B..
2. Justification for reduced test configurations per KDB 941225 D01v03r01: The source-based time-averaged output power was evaluated for all multi-slot operations. The multi-slot configuration with the highest frame averaged output power including tolerance was evaluated for SAR.
3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is  $\leq 0.8$  W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is 1/2 dB, instead of the middle channel, the highest output power channel must be used.
4. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.

### UMTSNotes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTSSAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB

Publication 941225 D01v03r01.

3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is  $\leq 0.8$  W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.

#### LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Consideration for LTE Devices in FCC KDB 941225 D05v02r05.
2. According to FCC KDB 941225 D05v02r05:  
When the reported SAR is  $\leq 0.8$  W/kg, testing of the 100% RB allocation and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the 1RB, 50%RB and 100%RB allocation with highest output power for that channel.  
Only one channel, and as reported SAR values for 1RB allocation and 50%RB allocation were less than 1.45W/Kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to target MPR is indicated alongside the SAR results.
4. When Power reduction is applied , MPR is 0
5. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator.
6. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) LTE TDD Band 41 SAR measured at the highest output power channel for each test configuration is  $\leq 0.6$  W/kg then testing at the other channels is not required for such test configurations.
7. TDD LTE (Power Class 3) was tested using UL-DL configuration 0 with 6 UL sub frames and 2S sub frames using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633(cf=1.58).
8. Per KDB 941225 D05Av01r02, SAR for LTE Carrier Aggregation operations was not needed because the maximum average output power in LTE CA mode was not  $> 0.25$  dB higher than the maximum output power when downlink CA was not activated.
9. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The Highest available duty cycle for Power Class 2 operations is 43.3% using UL-DL configuration 1. Per May TCB Workshop notes, 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 configuration for each exposure conditions.
10. SAR test reduction is applied using the following criteria:  
Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is  $>0.8$  W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are  $>0.8$  W/kg, testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation  $<1.45$  W/kg. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is  $<1.45$  W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is  $<1.45$  W/kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

**WLAN Notes:**

1. For held-to-ear and hotspot operations, the initial test position procedures were applied. For initial test position, the highest extrapolated peak SAR will be used. When reported SAR for the initial test position is  $\leq 0.4$  W/kg for 1g SAR and  $\leq 1.0$  W/kg for 10g SAR, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR results is  $\leq 0.8$  W/kg for 1g SAR and  $\leq 2.0$  W/kg for 10g SAR or all test position are measured.
2. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHz WiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11 g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR.
3. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHz WiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission mode were not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1g SAR and less than 3.0 W/kg for 10 g SAR.
4. When the maximum reported 1g averaged SAR is  $\leq 0.8$  W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was  $\leq 1.20$  W/kg or all test channels were measured.
5. The device was configured to transmit continuously at the required data rated, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.
6. Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is  $< 1.6$  W/kg, no additional SAR Measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

**Bluetooth Notes:**

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests mode type. Per October 2016 TCBC Workshop Notes, the reported SAR was scaled to 100% transmission duty factor to determine compliance. Please see sec.11 for the time-domain plot and calculation for duty factor of the device.
2. Head and Bluetooth tethering SAR were evaluated for BT BR tethering applications.

## 14. Simultaneous SAR Analysis

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per KDB Publication 447498 D01v06 4.3.2, simultaneous transmission SAR test exclusion may be applied when the sum of 1g SAR and 10g SAR for all the simultaneous transmitting antennas in a specific physical test configuration is  $\leq 1.6$ W/kg for 1g SAR and  $\leq 4$  W/kg for 10g SAR. The different test positions in an exposure condition may be considered collectively to determine SAR exclusion according to the sum of 1g or 10g SAR.

### 14.1 Head SAR Simultaneous Transmission Analysis.

Band	Configuration	Main	5GHz SISO Ant1 SAR (W/kg)	5 GHz SISO Ant2 SAR (W/kg)	2.4GHz SISO Ant1 SAR (W/kg)	2.4 GHz SISO Ant2 SAR (W/kg)	BT	∑ 1-g SAR	SPLSR					
		1	2	3	4	5	6	1+2	1+3	1+4	1+5	1+6	1+4+5	Yes/No
GSM850	Left Touch	0.175	0.079	0.074	0.277	0.000	0.613	0.254	0.249	0.452	0.175	0.788	0.452	NO
	Left Tilt	0.130	0.062	0.098	0.347	0.002	0.900	0.192	0.228	0.477	0.132	1.03	0.479	NO
	Right Touch	0.118	0.288	0.073	0.460	0.000	0.811	0.406	0.191	0.578	0.118	0.929	0.578	NO
	Right Tilt	0.111	0.230	0.092	0.589	0.013	0.945	0.341	0.203	0.700	0.124	1.056	0.713	NO
GSM1900	Left Touch	0.068	0.079	0.074	0.277	0.000	0.613	0.147	0.142	0.345	0.068	0.681	0.345	NO
	Left Tilt	0.063	0.062	0.098	0.347	0.002	0.900	0.125	0.161	0.410	0.065	0.963	0.412	NO
	Right Touch	0.097	0.288	0.073	0.460	0.000	0.811	0.385	0.170	0.557	0.097	0.908	0.557	NO
	Right Tilt	0.063	0.230	0.092	0.589	0.013	0.945	0.293	0.155	0.652	0.076	1.008	0.665	NO
UMTS Band 2	Left Touch	0.054	0.079	0.074	0.277	0.000	0.613	0.133	0.128	0.331	0.054	0.667	0.331	NO
	Left Tilt	0.051	0.062	0.098	0.347	0.002	0.900	0.113	0.149	0.398	0.053	0.951	0.400	NO
	Right Touch	0.075	0.288	0.073	0.460	0.000	0.811	0.363	0.148	0.535	0.075	0.886	0.535	NO
	Right Tilt	0.072	0.230	0.092	0.589	0.013	0.945	0.302	0.164	0.661	0.085	1.017	0.674	NO
UMTS Band 4	Left Touch	0.078	0.079	0.074	0.277	0.000	0.613	0.157	0.152	0.355	0.078	0.691	0.355	NO
	Left Tilt	0.056	0.062	0.098	0.347	0.002	0.900	0.118	0.154	0.403	0.058	0.956	0.405	NO
	Right Touch	0.132	0.288	0.073	0.460	0.000	0.811	0.420	0.205	0.592	0.132	0.943	0.592	NO
	Right Tilt	0.082	0.230	0.092	0.589	0.013	0.945	0.312	0.174	0.671	0.095	1.027	0.684	NO
UMTS Band 5	Left Touch	0.144	0.079	0.074	0.277	0.000	0.613	0.223	0.218	0.421	0.144	0.757	0.421	NO
	Left Tilt	0.077	0.062	0.098	0.347	0.002	0.900	0.139	0.175	0.424	0.079	0.977	0.426	NO
	Right Touch	0.107	0.288	0.073	0.460	0.000	0.811	0.395	0.180	0.567	0.107	0.918	0.567	NO
	Right Tilt	0.100	0.230	0.092	0.589	0.013	0.945	0.330	0.192	0.689	0.113	1.045	0.702	NO
LTE 2	Left Touch	0.094	0.079	0.074	0.277	0.000	0.613	0.173	0.168	0.371	0.094	0.707	0.371	NO
	Left Tilt	0.074	0.062	0.098	0.347	0.002	0.900	0.136	0.172	0.421	0.076	0.974	0.423	NO
	Right Touch	0.098	0.288	0.073	0.460	0.000	0.811	0.386	0.171	0.558	0.098	0.909	0.558	NO
	Right Tilt	0.068	0.230	0.092	0.589	0.013	0.945	0.298	0.160	0.657	0.081	1.013	0.670	NO
LTE 5	Left Touch	0.148	0.079	0.074	0.277	0.000	0.613	0.227	0.222	0.425	0.148	0.761	0.425	NO
	Left Tilt	0.063	0.062	0.098	0.347	0.002	0.900	0.125	0.161	0.410	0.065	0.963	0.412	NO
	Right Touch	0.096	0.288	0.073	0.460	0.000	0.811	0.384	0.169	0.556	0.096	0.907	0.556	NO
	Right Tilt	0.078	0.230	0.092	0.589	0.013	0.945	0.308	0.170	0.667	0.091	1.023	0.680	NO
LTE 12	Left Touch	0.064	0.079	0.074	0.277	0.000	0.613	0.143	0.138	0.341	0.064	0.677	0.341	NO
	Left Tilt	0.029	0.062	0.098	0.347	0.002	0.900	0.091	0.127	0.376	0.031	0.929	0.378	NO
	Right Touch	0.051	0.288	0.073	0.460	0.000	0.811	0.339	0.124	0.511	0.051	0.862	0.511	NO
	Right Tilt	0.032	0.230	0.092	0.589	0.013	0.945	0.262	0.124	0.621	0.045	0.977	0.634	NO
LTE13	Left Touch	0.106	0.079	0.074	0.277	0.000	0.613	0.185	0.180	0.383	0.106	0.719	0.383	NO
	Left Tilt	0.047	0.062	0.098	0.347	0.002	0.900	0.109	0.145	0.394	0.049	0.947	0.396	NO
	Right Touch	0.066	0.288	0.073	0.460	0.000	0.811	0.354	0.139	0.526	0.066	0.877	0.526	NO
	Right Tilt	0.032	0.230	0.092	0.589	0.013	0.945	0.262	0.124	0.621	0.045	0.977	0.634	NO

Band	Configuration	Main	5GHz SISO Ant1 SAR (W/kg)	5 GHz SISO Ant2 SAR (W/kg)	2.4GHz SISO Ant1 SAR (W/kg)	2.4 GHz SISO Ant2 SAR (W/kg)	BT	$\sum$ 1-g SAR	SPLSR					
		1	2	3	4	5	6	1+2	1+3	1+4	1+5	1+6	1+4+5	Yes/No
LTE 25	Left Touch	0.080	0.079	0.074	0.277	0.000	0.613	0.159	0.154	0.357	0.080	0.693	0.357	NO
	Left Tilt	0.077	0.062	0.098	0.347	0.002	0.900	0.139	0.175	0.424	0.079	0.977	0.426	NO
	Right Touch	0.105	0.288	0.073	0.460	0.000	0.811	0.393	0.178	0.565	0.105	0.916	0.565	NO
	Right Tilt	0.060	0.230	0.092	0.589	0.013	0.945	0.290	0.152	0.649	0.073	1.005	0.662	NO
LTE 26	Left Touch	0.122	0.079	0.074	0.277	0.000	0.613	0.201	0.196	0.399	0.122	0.735	0.399	NO
	Left Tilt	0.067	0.062	0.098	0.347	0.002	0.900	0.129	0.165	0.414	0.069	0.967	0.416	NO
	Right Touch	0.073	0.288	0.073	0.460	0.000	0.811	0.361	0.146	0.533	0.073	0.884	0.533	NO
	Right Tilt	0.064	0.230	0.092	0.589	0.013	0.945	0.294	0.156	0.653	0.077	1.009	0.666	NO
LTE 41(PC3)	Left Touch	0.015	0.079	0.074	0.277	0.000	0.613	0.094	0.089	0.292	0.015	0.628	0.292	NO
	Left Tilt	0.062	0.062	0.098	0.347	0.002	0.900	0.124	0.160	0.409	0.064	0.962	0.411	NO
	Right Touch	0.042	0.288	0.073	0.460	0.000	0.811	0.330	0.115	0.502	0.042	0.853	0.502	NO
	Right Tilt	0.037	0.230	0.092	0.589	0.013	0.945	0.267	0.129	0.626	0.050	0.982	0.639	NO
LTE 41(PC2)	Left Touch		0.079	0.074	0.277	0.000	0.613	0.079	0.074	0.277	0.000	0.613	0.277	NO
	Left Tilt	0.055	0.062	0.098	0.347	0.002	0.900	0.117	0.153	0.402	0.057	0.955	0.404	NO
	Right Touch		0.288	0.073	0.460	0.000	0.811	0.288	0.073	0.460	0.000	0.811	0.460	NO
	Right Tilt		0.230	0.092	0.589	0.013	0.945	0.230	0.092	0.589	0.013	0.945	0.602	NO
LTE 66	Left Touch	0.089	0.079	0.074	0.277	0.000	0.613	0.168	0.163	0.366	0.089	0.702	0.366	NO
	Left Tilt	0.082	0.062	0.098	0.347	0.002	0.900	0.144	0.180	0.429	0.084	0.982	0.431	NO
	Right Touch	0.125	0.288	0.073	0.460	0.000	0.811	0.413	0.198	0.585	0.125	0.936	0.585	NO
	Right Tilt	0.082	0.230	0.092	0.589	0.013	0.945	0.312	0.174	0.671	0.095	1.027	0.684	NO

**Simultaneous Transmission Summation Scenario with 5 GHz WLAN & BT**

Band	Configuration	Main	5GHz MIMO RCV SAR (W/kg)	Bluetooth	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	SPLSR
		1	2	3	1+2	1+3	1+2+3	Yes/No
GSM850	Left Touch	0.175	0.079	0.613	0.254	0.788	0.867	NO
	Left Tilt	0.13	0.116	0.900	0.246	1.03	1.146	NO
	Right Touch	0.118	0.392	0.811	0.51	0.929	1.321	NO
	Right Tilt	0.111	0.313	0.945	0.424	1.056	1.369	NO
GSM1900	Left Touch	0.068	0.079	0.613	0.147	0.681	0.760	NO
	Left Tilt	0.063	0.116	0.900	0.179	0.963	1.079	NO
	Right Touch	0.097	0.392	0.811	0.489	0.908	1.300	NO
	Right Tilt	0.063	0.313	0.945	0.376	1.008	1.321	NO
UMTS Band 2	Left Touch	0.054	0.079	0.613	0.133	0.667	0.746	NO
	Left Tilt	0.051	0.116	0.900	0.167	0.951	1.067	NO
	Right Touch	0.075	0.392	0.811	0.467	0.886	1.278	NO
	Right Tilt	0.072	0.313	0.945	0.385	1.017	1.330	NO
UMTS Band 4	Left Touch	0.078	0.079	0.613	0.157	0.691	0.770	NO
	Left Tilt	0.056	0.116	0.900	0.172	0.956	1.072	NO
	Right Touch	0.132	0.392	0.811	0.524	0.943	1.335	NO
	Right Tilt	0.082	0.313	0.945	0.395	1.027	1.340	NO
UMTS Band 5	Left Touch	0.144	0.079	0.613	0.223	0.757	0.836	NO
	Left Tilt	0.077	0.116	0.900	0.193	0.977	1.093	NO
	Right Touch	0.107	0.392	0.811	0.499	0.918	1.310	NO
	Right Tilt	0.100	0.313	0.945	0.413	1.045	1.358	NO
LTE 2	Left Touch	0.094	0.079	0.613	0.173	0.707	0.786	NO
	Left Tilt	0.074	0.116	0.900	0.19	0.974	1.090	NO
	Right Touch	0.098	0.392	0.811	0.49	0.909	1.301	NO
	Right Tilt	0.068	0.313	0.945	0.381	1.013	1.326	NO

Simultaneous Transmission Summation Scenario with 5 GHz WLAN & BT								
Band	Configuration	Main	5GHz MIMO RCV SAR (W/kg)	Bluetooth	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	SPLSR
		1	2	3	1+2	1+3	1+2+3	Yes/No
LTE 5	Left Touch	0.148	0.079	0.613	0.227	0.761	0.84	NO
	Left Tilt	0.063	0.116	0.900	0.179	0.963	1.079	NO
	Right Touch	0.096	0.392	0.811	0.488	0.907	1.299	NO
	Right Tilt	0.078	0.313	0.945	0.391	1.023	1.336	NO
LTE 12	Left Touch	0.064	0.079	0.613	0.143	0.677	0.756	NO
	Left Tilt	0.029	0.116	0.900	0.145	0.929	1.045	NO
	Right Touch	0.051	0.392	0.811	0.443	0.862	1.254	NO
	Right Tilt	0.032	0.313	0.945	0.345	0.977	1.290	NO
LTE13	Left Touch	0.106	0.079	0.613	0.185	0.719	0.798	NO
	Left Tilt	0.047	0.116	0.900	0.163	0.947	1.063	NO
	Right Touch	0.066	0.392	0.811	0.458	0.877	1.269	NO
	Right Tilt	0.032	0.313	0.945	0.345	0.977	1.290	NO
LTE 25	Left Touch	0.08	0.079	0.613	0.159	0.693	0.772	NO
	Left Tilt	0.077	0.116	0.900	0.193	0.977	1.093	NO
	Right Touch	0.105	0.392	0.811	0.497	0.916	1.308	NO
	Right Tilt	0.06	0.313	0.945	0.373	1.005	1.318	NO
LTE 26	Left Touch	0.122	0.079	0.613	0.201	0.735	0.814	NO
	Left Tilt	0.067	0.116	0.900	0.183	0.967	1.083	NO
	Right Touch	0.073	0.392	0.811	0.465	0.884	1.276	NO
	Right Tilt	0.064	0.313	0.945	0.377	1.009	1.322	NO
LTE 41(PC3)	Left Touch	0.015	0.079	0.613	0.094	0.628	0.707	NO
	Left Tilt	0.062	0.116	0.900	0.178	0.962	1.078	NO
	Right Touch	0.042	0.392	0.811	0.434	0.853	1.245	NO
	Right Tilt	0.037	0.313	0.945	0.35	0.982	1.295	NO
LTE 41(PC2)	Left Touch		0.079	0.613	0.079	0.613	0.692	NO
	Left Tilt	0.055	0.116	0.900	0.171	0.955	1.071	NO
	Right Touch		0.392	0.811	0.392	0.811	1.203	NO
	Right Tilt		0.313	0.945	0.313	0.945	1.258	NO
LTE 66	Left Touch	0.089	0.079	0.613	0.168	0.702	0.781	NO
	Left Tilt	0.082	0.116	0.900	0.198	0.982	1.098	NO
	Right Touch	0.125	0.392	0.811	0.517	0.936	1.328	NO
	Right Tilt	0.082	0.313	0.945	0.395	1.027	1.340	NO

The output of RCV on in the 5GHz WLAN mode of this device is higher than that in the 5GHz WLAN RSDB with RCV on mode. The higher output RCV on Head SAR measurement results of the 5GHz WLAN mode were applied to the SAR simultaneous transmission analysis instead of the Head SAR results of the 5GHz WLAN mode RSDB with RCV on mode. It was confirmed that this product satisfies the FCC SAR limit through simultaneous transmission evaluation of RSDB with RCV on mode applying the head SAR measurement result with higher output power.

Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN (RSDB with RCV on)						
Band	Configuration	Main	2.4 GHz RCV MIMO SAR (W/kg)	5 GHz RCV MIMO SAR (W/kg)	$\sum$ 1-g SAR	SPLSR
		1	2	3	1+2+3	Yes/No
GSM850	Left Touch	0.175	0.193	0.079	0.447	NO
	Left Tilt	0.13	0.279	0.116	0.525	NO
	Right Touch	0.118	0.285	0.392	0.795	NO
	Right Tilt	0.111	0.367	0.313	0.791	NO
GSM1900	Left Touch	0.068	0.193	0.079	0.34	NO
	Left Tilt	0.063	0.279	0.116	0.458	NO
	Right Touch	0.097	0.285	0.392	0.774	NO
	Right Tilt	0.063	0.367	0.313	0.743	NO
UMTS Band 2	Left Touch	0.054	0.193	0.079	0.326	NO
	Left Tilt	0.051	0.279	0.116	0.446	NO
	Right Touch	0.075	0.285	0.392	0.752	NO
	Right Tilt	0.072	0.367	0.313	0.752	NO
UMTS Band 4	Left Touch	0.078	0.193	0.079	0.35	NO
	Left Tilt	0.056	0.279	0.116	0.451	NO
	Right Touch	0.132	0.285	0.392	0.809	NO
	Right Tilt	0.082	0.367	0.313	0.762	NO
UMTS Band 5	Left Touch	0.144	0.193	0.079	0.416	NO
	Left Tilt	0.077	0.279	0.116	0.472	NO
	Right Touch	0.107	0.285	0.392	0.784	NO
	Right Tilt	0.100	0.367	0.313	0.78	NO
LTE 2	Left Touch	0.094	0.193	0.079	0.366	NO
	Left Tilt	0.074	0.279	0.116	0.469	NO
	Right Touch	0.098	0.285	0.392	0.775	NO
	Right Tilt	0.068	0.367	0.313	0.748	NO
LTE 5	Left Touch	0.148	0.193	0.079	0.42	NO
	Left Tilt	0.063	0.279	0.116	0.458	NO
	Right Touch	0.096	0.285	0.392	0.773	NO
	Right Tilt	0.078	0.367	0.313	0.758	NO

Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN (RSDb with RCV on)						
Band	Configuration	Main	2.4 GHz RCV MIMO SAR (W/kg)	5 GHz RCV MIMO SAR (W/kg)	$\sum$ 1-g SAR	SPLSR
		1	2	3	1+2+3	Yes/No
LTE 12	Left Touch	0.064	0.193	0.079	0.336	NO
	Left Tilt	0.029	0.279	0.116	0.424	NO
	Right Touch	0.051	0.285	0.392	0.728	NO
	Right Tilt	0.032	0.367	0.313	0.712	NO
LTE13	Left Touch	0.106	0.193	0.079	0.378	NO
	Left Tilt	0.047	0.279	0.116	0.442	NO
	Right Touch	0.066	0.285	0.392	0.743	NO
	Right Tilt	0.032	0.367	0.313	0.712	NO
LTE 25	Left Touch	0.08	0.193	0.079	0.352	NO
	Left Tilt	0.077	0.279	0.116	0.472	NO
	Right Touch	0.105	0.285	0.392	0.782	NO
	Right Tilt	0.06	0.367	0.313	0.74	NO
LTE 26	Left Touch	0.122	0.193	0.079	0.394	NO
	Left Tilt	0.067	0.279	0.116	0.462	NO
	Right Touch	0.073	0.285	0.392	0.75	NO
	Right Tilt	0.064	0.367	0.313	0.744	NO
LTE 41(PC3)	Left Touch	0.015	0.193	0.079	0.287	NO
	Left Tilt	0.062	0.279	0.116	0.457	NO
	Right Touch	0.042	0.285	0.392	0.719	NO
	Right Tilt	0.037	0.367	0.313	0.717	NO
LTE 41(PC2)	Left Touch		0.193	0.079	0.272	NO
	Left Tilt	0.055	0.279	0.116	0.450	NO
	Right Touch		0.285	0.392	0.677	NO
	Right Tilt		0.367	0.313	0.68	NO
LTE 66	Left Touch	0.089	0.193	0.079	0.361	NO
	Left Tilt	0.082	0.279	0.116	0.477	NO
	Right Touch	0.125	0.285	0.392	0.802	NO
	Right Tilt	0.082	0.367	0.313	0.762	NO

### 14.2 Body-Worn SAR Simultaneous Transmission Analysis.

Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN&BT														
Band	Configuration	Main	5GHz	5 GHz	2.4GH	2.4 GHz	BT	∑ 1-g	SP LS R					
			SISO Ant1 SAR (W/kg)	SISO Ant2 SAR (W/kg)	z SISO Ant1 SAR (W/kg)	SISO Ant2 SAR (W/kg)		SAR	SAR	SAR	SAR	SAR		
		1	2	3	4	5	6	1+2	1+3	1+4	1+5	1+6	1+4+5	Yes /No
GSM850	Rear	0.358	0.248	0.514	0.148	0.108	0.163	0.606	0.872	0.506	0.466	0.521	0.614	NO
	Front	0.356	0.054	0.011	0.077	0.010	0.093	0.410	0.367	0.433	0.366	0.449	0.443	NO
GSM1900	Rear	0.531	0.248	0.514	0.148	0.108	0.163	0.779	1.045	0.679	0.639	0.694	0.787	NO
	Front	0.427	0.054	0.011	0.077	0.010	0.093	0.481	0.438	0.504	0.437	0.52	0.514	NO
WCDMA2	Rear	0.444	0.248	0.514	0.148	0.108	0.163	0.692	0.958	0.592	0.552	0.607	0.700	NO
	Front	0.363	0.054	0.011	0.077	0.010	0.093	0.417	0.374	0.440	0.373	0.456	0.450	NO
WCDMA4	Rear	0.479	0.248	0.514	0.148	0.108	0.163	0.727	0.993	0.627	0.587	0.642	0.735	NO
	Front	0.373	0.054	0.011	0.077	0.010	0.093	0.427	0.384	0.450	0.383	0.466	0.460	NO
WCDMA5	Rear	0.268	0.248	0.514	0.148	0.108	0.163	0.516	0.782	0.416	0.376	0.431	0.524	NO
	Front	0.228	0.054	0.011	0.077	0.010	0.093	0.282	0.239	0.305	0.238	0.321	0.315	NO
LTE 2	Rear	0.7	0.248	0.514	0.148	0.108	0.163	0.948	1.214	0.848	0.808	0.863	0.956	NO
	Front	0.679	0.054	0.011	0.077	0.010	0.093	0.733	0.690	0.756	0.689	0.772	0.766	NO
LTE 5	Rear	0.394	0.248	0.514	0.148	0.108	0.163	0.642	0.908	0.542	0.502	0.557	0.650	NO
	Front	0.243	0.054	0.011	0.077	0.010	0.093	0.297	0.254	0.320	0.253	0.336	0.330	NO
LTE 12/17	Rear	0.078	0.248	0.514	0.148	0.108	0.163	0.326	0.592	0.226	0.186	0.241	0.334	NO
	Front	0.058	0.054	0.011	0.077	0.010	0.093	0.112	0.069	0.135	0.068	0.151	0.145	NO
LTE 13	Rear	0.23	0.248	0.514	0.148	0.108	0.163	0.478	0.744	0.378	0.338	0.393	0.486	NO
	Front	0.163	0.054	0.011	0.077	0.010	0.093	0.217	0.174	0.240	0.173	0.256	0.250	NO
LTE 25	Rear	0.555	0.248	0.514	0.148	0.108	0.163	0.803	1.069	0.703	0.663	0.718	0.811	NO
	Front	0.434	0.054	0.011	0.077	0.010	0.093	0.488	0.445	0.511	0.444	0.527	0.521	NO
LTE 26	Rear	0.288	0.248	0.514	0.148	0.108	0.163	0.536	0.802	0.436	0.396	0.451	0.544	NO
	Front	0.231	0.054	0.011	0.077	0.010	0.093	0.285	0.242	0.308	0.241	0.324	0.318	NO
LTE 41(PC3)	Rear	0.466	0.248	0.514	0.148	0.108	0.163	0.714	0.980	0.614	0.574	0.629	0.722	NO
	Front	0.328	0.054	0.011	0.077	0.010	0.093	0.382	0.339	0.405	0.338	0.421	0.415	NO
LTE 41(PC2)	Rear	0.398	0.248	0.514	0.148	0.108	0.163	0.646	0.912	0.546	0.506	0.561	0.654	NO
	Front		0.054	0.011	0.077	0.010	0.093	0.054	0.011	0.077	0.010	0.093	0.087	NO
LTE 4/66	Rear	0.556	0.248	0.514	0.148	0.108	0.163	0.804	1.070	0.704	0.664	0.719	0.812	NO
	Front	0.452	0.054	0.011	0.077	0.010	0.093	0.506	0.463	0.529	0.462	0.545	0.539	NO

Simultaneous Transmission Summation Scenario with 5 GHz WLAN & Bluetooth						
Band	Configuration	Main	5GHz MIMO SAR (W/kg)	BT	$\Sigma$ 1-g SAR	SPLSR
		1	2	3	1+2+3	Yes/No
GSM850	Rear	0.358	0.661	0.163	1.182	NO
	Front	0.356	0.060	0.093	0.509	NO
GSM1900	Rear	0.531	0.661	0.163	1.355	NO
	Front	0.427	0.060	0.093	0.580	NO
UMTS Band 2	Rear	0.444	0.661	0.163	1.268	NO
	Front	0.363	0.060	0.093	0.516	NO
UMTS Band 4	Rear	0.479	0.661	0.163	1.303	NO
	Front	0.373	0.060	0.093	0.526	NO
UMTS Band 5	Rear	0.268	0.661	0.163	1.092	NO
	Front	0.228	0.060	0.093	0.381	NO
LTE 2	Rear	0.700	0.661	0.163	1.524	NO
	Front	0.679	0.060	0.093	0.832	NO
LTE 5	Rear	0.394	0.661	0.163	1.218	NO
	Front	0.243	0.060	0.093	0.396	NO
LTE 12	Rear	0.078	0.661	0.163	0.902	NO
	Front	0.058	0.060	0.093	0.211	NO
LTE 13	Rear	0.230	0.661	0.163	1.054	NO
	Front	0.163	0.060	0.093	0.316	NO
LTE 25	Rear	0.555	0.661	0.163	1.379	NO
	Front	0.434	0.060	0.093	0.587	NO
LTE 26	Rear	0.288	0.661	0.163	1.112	NO
	Front	0.231	0.060	0.093	0.384	NO
LTE 41(PC3)	Rear	0.466	0.661	0.163	1.290	NO
	Front	0.328	0.060	0.093	0.481	NO
LTE 41(PC2)	Rear	0.398	0.661	0.163	1.222	NO
	Front		0.060	0.093	0.153	NO
LTE 66	Rear	0.556	0.661	0.163	1.380	NO
	Front	0.452	0.060	0.093	0.605	NO

Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN						
Band	Configuration	Main	2.4GHz RSDB MIMO SAR (W/kg)	5GHz RSDB MIMO SAR (W/kg)	$\Sigma$ 1-g SAR	SPLSR
		1	2	3	1+2+3	Yes/No
GSM850	Rear	0.358	0.158	0.387	0.903	NO
	Front	0.356	0.064	0.016	0.436	NO
GSM1900	Rear	0.531	0.158	0.387	1.076	NO
	Front	0.427	0.064	0.016	0.507	NO
UMTS Band 2	Rear	0.444	0.158	0.387	0.989	NO
	Front	0.363	0.064	0.016	0.443	NO
UMTS Band 4	Rear	0.479	0.158	0.387	1.024	NO
	Front	0.373	0.064	0.016	0.453	NO
UMTS Band 5	Rear	0.268	0.158	0.387	0.813	NO
	Front	0.228	0.064	0.016	0.308	NO
LTE 2	Rear	0.700	0.158	0.387	1.245	NO
	Front	0.679	0.064	0.016	0.759	NO
LTE 5	Rear	0.394	0.158	0.387	0.939	NO
	Front	0.243	0.064	0.016	0.323	NO
LTE 12	Rear	0.078	0.158	0.387	0.623	NO
	Front	0.058	0.064	0.016	0.138	NO
LTE 13	Rear	0.230	0.158	0.387	0.775	NO
	Front	0.163	0.064	0.016	0.243	NO
LTE 25	Rear	0.555	0.158	0.387	1.100	NO
	Front	0.434	0.064	0.016	0.514	NO
LTE 26	Rear	0.288	0.158	0.387	0.833	NO
	Front	0.231	0.064	0.016	0.311	NO
LTE 41(PC3)	Rear	0.466	0.158	0.387	1.011	NO
	Front	0.328	0.064	0.016	0.408	NO
LTE 41(PC2)	Rear	0.398	0.158	0.387	0.943	NO
	Front		0.064	0.016	0.080	NO
LTE 66	Rear	0.556	0.158	0.387	1.101	NO
	Front	0.452	0.064	0.016	0.532	NO

### 14.3 Hotspot SAR Simultaneous Transmission Analysis.

Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN&BT														
Band	Configuration	Main	5GHz SISO Ant1 SAR (W/kg)	5 GHz SISO Ant2 SAR (W/kg)	2.4GHz SISO Ant1 SAR (W/kg)	2.4 GHz SISO Ant2 SAR (W/kg)	BT	$\Sigma$ 1-g SAR	SPLSR					
		1	2	3	4	5	6	1+2	1+3	1+4	1+5	1+6	1+4+5	Yes/No
GSM850	Rear	0.624	0.320	0.457	0.299	0.360	0.336	0.944	1.081	0.923	0.984	0.960	1.283	NO
	Front	0.523	0.080	0.016	0.157	0.029	0.167	0.603	0.539	0.680	0.552	0.690	0.709	NO
	Left	0.289	0.132	0.121	0.067	0.066	0.054	0.421	0.410	0.356	0.355	0.343	0.422	NO
	Right	0.092						0.092	0.092	0.092	0.092	0.092	0.092	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.479						0.479	0.479	0.479	0.479	0.479	0.479	0.479
GSM1900	Rear	0.419	0.320	0.457	0.299	0.360	0.336	0.739	0.876	0.718	0.779	0.755	1.078	NO
	Front	0.337	0.080	0.016	0.157	0.029	0.167	0.417	0.353	0.494	0.366	0.504	0.523	NO
	Left	0.043	0.132	0.121	0.067	0.066	0.054	0.175	0.164	0.110	0.109	0.097	0.176	NO
	Right	0.058						0.058	0.058	0.058	0.058	0.058	0.058	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	1.096						1.096	1.096	1.096	1.096	1.096	1.096	1.096
WCDMA2	Rear	0.505	0.320	0.457	0.299	0.360	0.336	0.825	0.962	0.804	0.865	0.841	1.164	NO
	Front	0.390	0.080	0.016	0.157	0.029	0.167	0.470	0.406	0.547	0.419	0.557	0.576	NO
	Left	0.040	0.132	0.121	0.067	0.066	0.054	0.172	0.161	0.107	0.106	0.094	0.173	NO
	Right	0.042						0.042	0.042	0.042	0.042	0.042	0.042	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	1.077						1.077	1.077	1.077	1.077	1.077	1.077	1.077
WCDMA4	Rear	0.568	0.320	0.457	0.299	0.360	0.336	0.888	1.025	0.867	0.928	0.904	1.227	NO
	Front	0.429	0.080	0.016	0.157	0.029	0.167	0.509	0.445	0.586	0.458	0.596	0.615	NO
	Left	0.038	0.132	0.121	0.067	0.066	0.054	0.170	0.159	0.105	0.104	0.092	0.171	NO
	Right	0.066						0.066	0.066	0.066	0.066	0.066	0.066	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.949						0.949	0.949	0.949	0.949	0.949	0.949	0.949
WCDMA5	Rear	0.501	0.320	0.457	0.299	0.360	0.336	0.821	0.958	0.800	0.861	0.837	1.160	NO
	Front	0.378	0.080	0.016	0.157	0.029	0.167	0.458	0.394	0.535	0.407	0.545	0.564	NO
	Left	0.205	0.132	0.121	0.067	0.066	0.054	0.337	0.326	0.272	0.271	0.259	0.338	NO
	Right	0.100						0.100	0.100	0.100	0.100	0.100	0.100	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.328						0.328	0.328	0.328	0.328	0.328	0.328	0.328
LTE 2	Rear	0.437	0.320	0.457	0.299	0.360	0.336	0.757	0.894	0.736	0.797	0.773	1.096	NO
	Front	0.353	0.080	0.016	0.157	0.029	0.167	0.433	0.369	0.510	0.382	0.520	0.539	NO
	Left	0.034	0.132	0.121	0.067	0.066	0.054	0.166	0.155	0.101	0.100	0.088	0.167	NO
	Right	0.057						0.057	0.057	0.057	0.057	0.057	0.057	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	1.008						1.008	1.008	1.008	1.008	1.008	1.008	1.008

Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN&BT														
Band	Configuration	Main	5GHz SISO Ant1 SAR (W/kg)	5 GHz SISO Ant2 SAR (W/kg)	2.4GHz SISO Ant1 SAR (W/kg)	2.4 GHz SISO Ant2 SAR (W/kg)	BT	∑ 1-g SAR	SPLSR					
		1	2	3	4	5	6	1+2	1+3	1+4	1+5	1+6	1+4+5	Yes/No
LTE 5	Rear	0.645	0.320	0.457	0.299	0.360	0.336	0.965	1.102	0.944	1.005	0.981	1.304	NO
	Front	0.404	0.080	0.016	0.157	0.029	0.167	0.484	0.420	0.561	0.433	0.571	0.590	NO
	Left	0.183	0.132	0.121	0.067	0.066	0.054	0.315	0.304	0.250	0.249	0.237	0.316	NO
	Right	0.084						0.084	0.084	0.084	0.084	0.084	0.084	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.355						0.355	0.355	0.355	0.355	0.355	0.355	0.355
LTE 12/17	Rear	0.219	0.320	0.457	0.299	0.360	0.336	0.539	0.676	0.518	0.579	0.555	0.878	NO
	Front	0.104	0.080	0.016	0.157	0.029	0.167	0.184	0.120	0.261	0.133	0.271	0.290	NO
	Left	0.107	0.132	0.121	0.067	0.066	0.054	0.239	0.228	0.174	0.173	0.161	0.240	NO
	Right	0.056						0.056	0.056	0.056	0.056	0.056	0.056	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.107						0.107	0.107	0.107	0.107	0.107	0.107	0.107
LTE 13	Rear	0.310	0.320	0.457	0.299	0.360	0.336	0.630	0.767	0.609	0.670	0.646	0.969	NO
	Front	0.225	0.080	0.016	0.157	0.029	0.167	0.305	0.241	0.382	0.254	0.392	0.411	NO
	Left	0.169	0.132	0.121	0.067	0.066	0.054	0.301	0.290	0.236	0.235	0.223	0.302	NO
	Right	0.072						0.072	0.072	0.072	0.072	0.072	0.072	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.226						0.226	0.226	0.226	0.226	0.226	0.226	0.226
LTE 25	Rear	0.410	0.320	0.457	0.299	0.360	0.336	0.730	0.867	0.709	0.770	0.746	1.069	NO
	Front	0.432	0.080	0.016	0.157	0.029	0.167	0.512	0.448	0.589	0.461	0.599	0.618	NO
	Left	0.049	0.132	0.121	0.067	0.066	0.054	0.181	0.170	0.116	0.115	0.103	0.182	NO
	Right	0.053						0.053	0.053	0.053	0.053	0.053	0.053	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	1.036						1.036	1.036	1.036	1.036	1.036	1.036	1.036
LTE 26	Rear	0.462	0.320	0.457	0.299	0.360	0.336	0.782	0.919	0.761	0.822	0.798	1.121	NO
	Front	0.345	0.080	0.016	0.157	0.029	0.167	0.425	0.361	0.502	0.374	0.512	0.531	NO
	Left	0.174	0.132	0.121	0.067	0.066	0.054	0.306	0.295	0.241	0.240	0.228	0.307	NO
	Right	0.083						0.083	0.083	0.083	0.083	0.083	0.083	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.339						0.339	0.339	0.339	0.339	0.339	0.339	0.339
LTE 41(PC3)	Rear	0.449	0.320	0.457	0.299	0.360	0.336	0.769	0.906	0.748	0.809	0.785	1.108	NO
	Front	0.339	0.080	0.016	0.157	0.029	0.167	0.419	0.355	0.496	0.368	0.506	0.525	NO
	Left		0.132	0.121	0.067	0.066	0.054	0.132	0.121	0.067	0.066	0.054	0.133	NO
	Right	0.328						0.328	0.328	0.328	0.328	0.328	0.328	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.578						0.578	0.578	0.578	0.578	0.578	0.578	0.578

**Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN&BT**

Band	Configuration	Main	5GHz SISO Ant1 SAR (W/kg)	5 GHz SISO Ant2 SAR (W/kg)	2.4GHz SISO Ant1 SAR (W/kg)	2.4 GHz SISO Ant2 SAR (W/kg)	BT	$\Sigma$ 1-g SAR	SPLSR					
		1	2	3	4	5	6	1+2	1+3	1+4	1+5	1+6	1+4+5	Yes/No
LTE 41(PC2)	Rear		0.320	0.457	0.299	0.360	0.336	0.320	0.457	0.299	0.360	0.336	0.659	NO
	Front		0.080	0.016	0.157	0.029	0.167	0.080	0.016	0.157	0.029	0.167	0.186	NO
	Left		0.132	0.121	0.067	0.066	0.054	0.132	0.121	0.067	0.066	0.054	0.133	NO
	Right							0.000	0.000	0.000	0.000	0.000	0.000	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom							0.000	0.000	0.000	0.000	0.000	0.000	NO
LTE 4/66	Rear	0.489	0.320	0.457	0.299	0.360	0.336	0.809	0.946	0.788	0.849	0.825	1.148	NO
	Front	0.466	0.080	0.016	0.157	0.029	0.167	0.546	0.482	0.623	0.495	0.633	0.652	NO
	Left	0.066	0.132	0.121	0.067	0.066	0.054	0.198	0.187	0.133	0.132	0.120	0.199	NO
	Right	0.103						0.103	0.103	0.103	0.103	0.103	0.103	NO
	Top		0.104	0.019	0.438	0.052	0.437	0.104	0.019	0.438	0.052	0.437	0.490	NO
	Bottom	0.970						0.970	0.970	0.970	0.970	0.970	0.970	NO

Simultaneous Transmission Summation Scenario with 5 GHz MIMO WLAN & BT							
Band	Configuration	Main	5GHz MIMO SAR (W/kg)	Bluetooth	$\sum$ 1-g SAR	$\sum$ 1-g SAR	SPLSR
		1	2	3	1+2	1+2+3	Yes/No
GSM850	Rear	0.624	0.616	0.336	1.240	1.576	NO
	Front	0.523	0.061	0.167	0.584	0.751	NO
	Left	0.289	0.140	0.054	0.429	0.483	NO
	Right	0.092			0.092	0.092	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.479			0.479	0.479	NO
GSM1900	Rear	0.419	0.616	0.336	1.035	1.371	NO
	Front	0.337	0.061	0.167	0.398	0.565	NO
	Left	0.043	0.140	0.054	0.183	0.237	NO
	Right	0.058			0.058	0.058	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	1.096			1.096	1.096	NO
UMTS Band 2	Rear	0.505	0.616	0.336	1.121	1.457	NO
	Front	0.390	0.061	0.167	0.451	0.618	NO
	Left	0.040	0.140	0.054	0.180	0.234	NO
	Right	0.042			0.042	0.042	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	1.077			1.077	1.077	NO
UMTS Band 4	Rear	0.568	0.616	0.336	1.184	1.520	NO
	Front	0.429	0.061	0.167	0.490	0.657	NO
	Left	0.038	0.140	0.054	0.178	0.232	NO
	Right	0.066			0.066	0.066	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.949			0.949	0.949	NO
UMTS Band 5	Rear	0.501	0.616	0.336	1.117	1.453	NO
	Front	0.378	0.061	0.167	0.439	0.606	NO
	Left	0.205	0.140	0.054	0.345	0.399	NO
	Right	0.100			0.100	0.100	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.328			0.328	0.328	NO

Simultaneous Transmission Summation Scenario with 5 GHz MIMO WLAN & BT							
Band	Configuration	Main	5GHz MIMO SAR (W/kg)	Bluetooth	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	SPLSR
		1	2	3	1+2	1+2+3	Yes/No
LTE 2	Rear	0.437	0.616	0.336	1.053	1.389	NO
	Front	0.353	0.061	0.167	0.414	0.581	NO
	Left	0.034	0.140	0.054	0.174	0.228	NO
	Right	0.057			0.057	0.057	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	1.008			1.008	1.008	NO
LTE 5	Rear	0.645	0.616	0.336	1.261	1.597	NO
	Front	0.404	0.061	0.167	0.465	0.632	NO
	Left	0.183	0.140	0.054	0.323	0.377	NO
	Right	0.084			0.084	0.084	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.355			0.355	0.355	NO
LTE 12	Rear	0.219	0.616	0.336	0.835	1.171	NO
	Front	0.104	0.061	0.167	0.165	0.332	NO
	Left	0.107	0.140	0.054	0.247	0.301	NO
	Right	0.056			0.056	0.056	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.107			0.107	0.107	NO
LTE 13	Rear	0.310	0.616	0.336	0.926	1.262	NO
	Front	0.225	0.061	0.167	0.286	0.453	NO
	Left	0.169	0.140	0.054	0.309	0.363	NO
	Right	0.072			0.072	0.072	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.226			0.226	0.226	NO
LTE 25	Rear	0.410	0.616	0.336	1.026	1.362	NO
	Front	0.432	0.061	0.167	0.493	0.660	NO
	Left	0.049	0.140	0.054	0.189	0.243	NO
	Right	0.053			0.053	0.053	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	1.036			1.036	1.036	NO

Simultaneous Transmission Summation Scenario with 5 GHz MIMO WLAN & BT							
Band	Configuration	Main	5GHz MIMO SAR (W/kg)	Bluetooth	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	SPLSR
		1	2	3	1+2	1+2+3	Yes/No
LTE 26	Rear	0.462	0.616	0.336	1.078	1.414	NO
	Front	0.345	0.061	0.167	0.406	0.573	NO
	Left	0.174	0.140	0.054	0.314	0.368	NO
	Right	0.083			0.083	0.083	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.339			0.339	0.339	NO
LTE 41(PC3)	Rear	0.449	0.616	0.336	1.065	1.401	NO
	Front	0.339	0.061	0.167	0.400	0.567	NO
	Left		0.140	0.054	0.140	0.194	NO
	Right	0.328			0.328	0.328	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.578			0.578	0.578	NO
LTE 41(PC2)	Rear		0.616	0.336	0.616	0.952	NO
	Front		0.061	0.167	0.061	0.228	NO
	Left		0.140	0.054	0.140	0.194	NO
	Right				0.000	0.000	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom				0.000	0.000	NO
LTE 66	Rear	0.489	0.616	0.336	1.105	1.441	NO
	Front	0.466	0.061	0.167	0.527	0.694	NO
	Left	0.066	0.140	0.054	0.206	0.260	NO
	Right	0.103			0.103	0.103	NO
	Top		0.120	0.437	0.120	0.557	NO
	Bottom	0.970			0.970	0.970	NO

Simultaneous Transmission Summation Scenario with 2.4 GHz MIMO WLAN & 5 GHz MIMO WLAN(RSDB)						
Band	Configuration	Main	2.4GHz RSDB MIMO SAR (W/kg)	5GHz RSDB MIMO SAR (W/kg)	$\sum$ 1-g SAR	SPLSR
		1	2	3	1+2+3	Yes/No
GSM850	Rear	0.624	0.313	0.208	1.145	NO
	Front	0.523	0.122	0.008	0.653	NO
	Left	0.289	0.065	0.086	0.440	NO
	Right	0.092			0.092	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.479			0.479	NO
GSM1900	Rear	0.419	0.313	0.208	0.940	NO
	Front	0.337	0.122	0.008	0.467	NO
	Left	0.043	0.065	0.086	0.194	NO
	Right	0.058			0.058	NO
	Top		0.464	0.077	0.541	NO
	Bottom	1.096			1.096	NO
UMTS Band 2	Rear	0.505	0.313	0.208	1.026	NO
	Front	0.390	0.122	0.008	0.520	NO
	Left	0.040	0.065	0.086	0.191	NO
	Right	0.042			0.042	NO
	Top		0.464	0.077	0.541	NO
	Bottom	1.077			1.077	NO
UMTS Band 4	Rear	0.568	0.313	0.208	1.089	NO
	Front	0.429	0.122	0.008	0.559	NO
	Left	0.038	0.065	0.086	0.189	NO
	Right	0.066			0.066	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.949			0.949	NO
UMTS Band 5	Rear	0.501	0.313	0.208	1.022	NO
	Front	0.378	0.122	0.008	0.508	NO
	Left	0.205	0.065	0.086	0.356	NO
	Right	0.100			0.100	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.328			0.328	NO

Simultaneous Transmission Summation Scenario with 2.4 GHz MIMO WLAN & 5 GHz MIMO WLAN						
Band	Configuration	Main	2.4GHz RSDB MIMO SAR (W/kg)	5GHz RSDB MIMO SAR (W/kg)	$\sum$ 1-g SAR	SPLSR
		1	2	3	1+2+3	Yes/No
LTE 2	Rear	0.437	0.313	0.208	0.958	NO
	Front	0.353	0.122	0.008	0.483	NO
	Left	0.034	0.065	0.086	0.185	NO
	Right	0.057			0.057	NO
	Top		0.464	0.077	0.541	NO
	Bottom	1.008			1.008	NO
LTE 5	Rear	0.645	0.313	0.208	1.166	NO
	Front	0.404	0.122	0.008	0.534	NO
	Left	0.183	0.065	0.086	0.334	NO
	Right	0.084			0.084	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.355			0.355	NO
LTE 12	Rear	0.219	0.313	0.208	0.740	NO
	Front	0.104	0.122	0.008	0.234	NO
	Left	0.107	0.065	0.086	0.258	NO
	Right	0.056			0.056	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.107			0.107	NO
LTE 13	Rear	0.31	0.313	0.208	0.831	NO
	Front	0.225	0.122	0.008	0.355	NO
	Left	0.169	0.065	0.086	0.320	NO
	Right	0.072			0.072	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.226			0.226	NO
LTE 25	Rear	0.41	0.313	0.208	0.931	NO
	Front	0.432	0.122	0.008	0.562	NO
	Left	0.049	0.065	0.086	0.200	NO
	Right	0.053			0.053	NO
	Top		0.464	0.077	0.541	NO
	Bottom	1.036			1.036	NO

Simultaneous Transmission Summation Scenario with 2.4 GHz MIMO WLAN & 5 GHz MIMO WLAN						
Band	Configuration	Main	2.4GHz RSDB MIMO SAR (W/kg)	5GHz RSDB MIMO SAR (W/kg)	$\Sigma$ 1-g SAR	SPLSR
		1	2	3	1+2+3	Yes/No
LTE 26	Rear	0.462	0.313	0.208	0.983	NO
	Front	0.345	0.122	0.008	0.475	NO
	Left	0.174	0.065	0.086	0.325	NO
	Right	0.083			0.083	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.339			0.339	NO
LTE 41(PC3)	Rear	0.449	0.313	0.208	0.97	NO
	Front	0.339	0.122	0.008	0.469	NO
	Left		0.065	0.086	0.151	NO
	Right	0.328			0.328	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.578			0.578	NO
LTE 41(PC2)	Rear		0.313	0.208	0.521	NO
	Front		0.122	0.008	0.130	NO
	Left		0.065	0.086	0.151	NO
	Right				0.000	NO
	Top		0.464	0.077	0.541	NO
	Bottom				0.000	NO
LTE 66	Rear	0.489	0.313	0.208	1.010	NO
	Front	0.466	0.122	0.008	0.596	NO
	Left	0.066	0.065	0.086	0.217	NO
	Right	0.103			0.103	NO
	Top		0.464	0.077	0.541	NO
	Bottom	0.970			0.970	NO

14.4 Phablet SAR Simultaneous Transmission Analysis

Phablet 10g SAR Simultaneous Transmission Scenario with 5 GHz WLAN									
Band	Configuration	Main	5GHz SISO Ant1 SAR (W/kg)	5GHz SISO Ant2 SAR (W/kg)	5GHz MIMO SAR (W/kg)	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	SPLSR
		1	2	3	4	1+2	1+3	1+4	Yes/No
GSM1900	Rear	0.832	0.725	1.556	1.545	1.557	2.388	2.377	NO
	Front	1.078	0.382	0.056	0.444	1.46	1.134	1.522	NO
	Left	0.137	0.763	0.298	0.831	0.9	0.435	0.968	NO
	Right	0.213				0.213	0.213	0.213	NO
	Top		0.273	0.149	0.344	0.273	0.149	0.344	NO
	Bottom	1.328				1.328	1.328	1.328	NO
UMTS Band 2	Rear	1.068	0.725	1.556	1.545	1.793	2.624	2.613	NO
	Front	0.905	0.382	0.056	0.444	1.287	0.961	1.349	NO
	Left	0.18	0.763	0.298	0.831	0.943	0.478	1.011	NO
	Right	0.243				0.243	0.243	0.243	NO
	Top		0.273	0.149	0.344	0.273	0.149	0.344	NO
	Bottom	1.759				1.759	1.759	1.759	NO
UMTS Band 4	Rear	1.287	0.725	1.556	1.545	2.012	2.843	2.832	NO
	Front	1.276	0.382	0.056	0.444	1.658	1.332	1.72	NO
	Left	0.224	0.763	0.298	0.831	0.987	0.522	1.055	NO
	Right	0.156				0.156	0.156	0.156	NO
	Top		0.273	0.149	0.344	0.273	0.149	0.344	NO
	Bottom	1.875				1.875	1.875	1.875	NO
LTE 2	Rear	1.234	0.725	1.556	1.545	1.959	2.79	2.779	NO
	Front	1.165	0.382	0.056	0.444	1.547	1.221	1.609	NO
	Left	0.229	0.763	0.298	0.831	0.992	0.527	1.06	NO
	Right	0.333				0.333	0.333	0.333	NO
	Top		0.273	0.149	0.344	0.273	0.149	0.344	NO
	Bottom	2.052				2.052	2.052	2.052	NO
LTE 25	Rear	1.114	0.725	1.556	1.545	1.839	2.67	2.659	NO
	Front	1.053	0.382	0.056	0.444	1.435	1.109	1.497	NO
	Left	0.178	0.763	0.298	0.831	0.941	0.476	1.009	NO
	Right	0.293				0.293	0.293	0.293	NO
	Top		0.273	0.149	0.344	0.273	0.149	0.344	NO
	Bottom	1.406				1.406	1.406	1.406	NO

**Phablet 10g SAR Simultaneous Transmission Scenario with 5 GHz WLAN**

Band	Configurati on	Main	5GHz SISO Ant1 SAR (W/kg)	5GHz SISO Ant2 SAR (W/kg)	5GHz MIMO SAR (W/kg)	$\sum$ 1-g SAR	$\sum$ 1-g SAR	$\sum$ 1-g SAR	SPLSR
		1	2	3	4	1+2	1+3	1+4	Yes/No
LTE 4/66	Rear	1.41	0.725	1.556	1.545	2.135	2.966	2.955	NO
	Front	1.41	0.382	0.056	0.444	1.792	1.466	1.854	NO
	Left	0.183	0.763	0.298	0.831	0.946	0.481	1.014	NO
	Right	0.303				0.303	0.303	0.303	NO
	Top		0.273	0.149	0.344	0.273	0.149	0.344	NO
	Bottom	2.293				2.293	2.293	2.293	NO

## 14.5 Simultaneous Transmission Conclusion

The above numerical summed SAR Results are sufficient to determine that simultaneous transmission cases will not exceed the SAR Limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE1528-2013.

## 15. SAR Measurement Variability and Uncertainty

In accordance with KDB procedure 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz, SAR additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement variability was assessed using the following procedures for each frequency band:

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg for 1g SAR or < 2.0 W/kg for 10g SAR; steps 2) through 4) do not apply.
- 2) When the original highest measured 1g SAR is  $\geq 0.80$  W/kg or 10g SAR  $\geq 2.0$ W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is  $\geq 1.45$  W/kg for 1g SAR or  $\geq 3.625$  W/kg for 10g SAR (~ 10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is  $\geq 1.5$  W/kg for 1g SAR or  $\geq 3.75$  W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Hotspot SAR measurement variability Results

Frequency		Mode/Band	Configuration	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
MHz	Channel					
1 712.4	1312	UMTS Band 4	Bottom	0.819	0.818	1.00
1 907.6	9538	UMTS Band 2	Bottom	0.806	0.828	0.97
1 900	19100	LTE Band 2	Bottom	0.921	0.864	1.07
1 905	26590	LTE Band 25	Bottom	0.955	0.952	1.00
1720	132072	LTE Band 66	Bottom	0.857	0.853	1.00

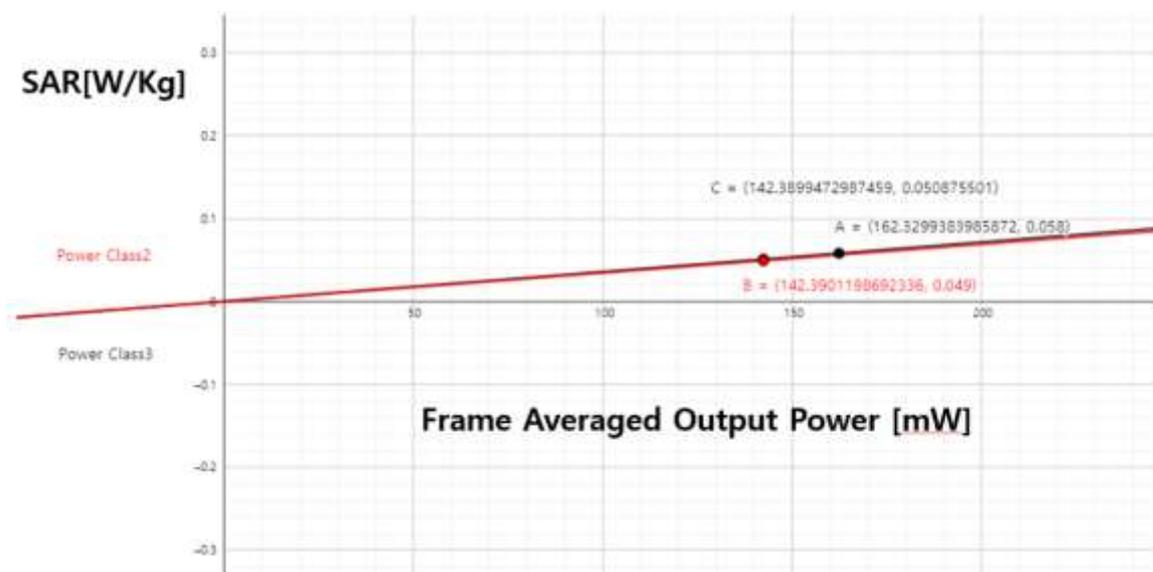
### 16. LTE Band 41 Power Class 2 and Power class 3 Linearity

This Device Supports Power Class 2 and Power Class 3 operations for LTE band 41. The Highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL Configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power class 3. SAR with power class 2 at the highest power and available duty factor was additionally performed for the power class 2 configuration with the Highest SAR for each exposure condition.

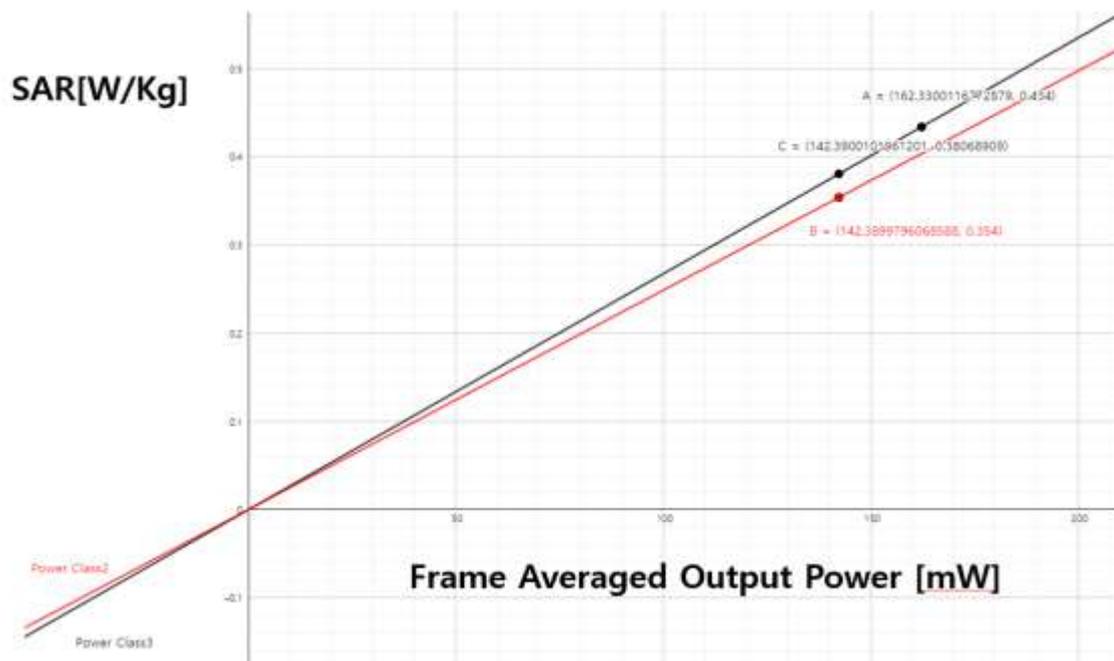
The linearity between the power class 3 and Power class 2 SAR Results and the respective frame averaged powers was calculated to determine the results were linear.

Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes as less than 10 % and all reported SAR values were < 1.4 W/kg

LTE Band 41 Head Linearity Data Table		
Configurations	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	24.4	25.7
Measured Output Power[dBm]	24.09	25.17
Measured SAR[W/kg]	0.058	0.049
Measured Power[mW]	256.45	328.85
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	162.33	142.39
deviation from expected linearity(%)	-	3.83



LTE Band Body Worn Linearity Data Table		
Configurations	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	24.4	25.7
Measured Output Power[dBm]	24.09	25.17
Measured SAR[W/kg]	0.434	0.354
Measured Power[mW]	256.45	328.85
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	162.33	142.39
deviation from expected linearity(%)	-	7.54



When Power reduction is applied to LTE B41 PC 2(HPUE), The power level of LTE B41 PC2 became same as the reduction power of LTE B41 PC3, therefore Hotspot SAR linearity were not required.

## 17. Measurement Uncertainty

The measured SAR was  $<1.5$  W/Kg for 1g SAR and  $<3.75$  W/Kg For 10g SAR for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

### 18. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	Triple Modular Phantom	-	N/A	N/A	N/A
SPEAG	SAM Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F08/5AJ0A1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5SD0A1/ C/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F08/5AJ0A1/A/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5SD0A1/ A/ 01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1203 0309	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1338 1332	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-0008	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	SE UKS 030 AA	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	01/26/2021	Annual	01/26/2022
TESTO	175-H1/Thermometer	40332651310	01/26/2021	Annual	01/26/2022
TESTO	175-H1/Thermometer	40331949309	01/26/2021	Annual	01/26/2022
TESTO	175-H1/Thermometer	83348029	05/06/2021	Annual	05/06/2022
SPEAG	DAE4	1422	05/19/2021	Annual	05/19/2022
SPEAG	DAE4	869	03/29/2021	Annual	03/29/2022
SPEAG	DAE4	1417	02/22/2021	Annual	02/22/2022
SPEAG	DAE4	1686	06/21/2021	Annual	06/21/2022
SPEAG	E-Field Probe EX3DV4	3903	03/24/2021	Annual	03/24/2022
SPEAG	E-Field Probe ES3DV3	3972	05/21/2021	Annual	05/21/2022
SPEAG	E-Field Probe ES3DV3	3076	07/28/2021	Annual	07/28/2022
SPEAG	E-Field Probe EX3DV4	7679	09/10/2021	Annual	09/10/2022
SPEAG	E-Field Probe EX3DV4	7370	08/26/2021	Annual	08/26/2022
SPEAG	Dipole D750V3	1014	06/01/2021	Annual	06/01/2022
SPEAG	Dipole D835V2	4d165	08/03/2021	Annual	08/03/2022
SPEAG	Dipole D1800V2	2d015	07/30/2021	Annual	07/30/2022
SPEAG	Dipole D1900V2	5d032	01/28/2021	Annual	01/28/2022
SPEAG	Dipole D2450V2	965	06/15/2021	Annual	06/15/2022
SPEAG	Dipole D2600V2	1106	07/30/2021	Annual	07/30/2022
SPEAG	Dipole D5GHzV2	1107	07/22/2021	Annual	07/22/2022
Agilent	Power Meter E4419B	MY41291386	10/23/2020	Annual	10/23/2021
Agilent	Power Meter E4419B	MY41291386	10/06/2021	Annual	10/06/2022
Agilent	Power Meter N1911A	MY45101406	07/08/2021	Annual	07/08/2022
Agilent	Power Sensor 8481A	SG1091286	10/05/2020	Annual	10/05/2021
Agilent	Power Sensor 8481A	SG1091286	10/06/2021	Annual	10/06/2022
Agilent	Power Sensor 8481A	MY41090675	10/05/2020	Annual	10/05/2021
Agilent	Power Sensor 8481A	MY41090675	10/06/2021	Annual	10/06/2022
Agilent	Power Sensor N1921A	MY55220026	08/05/2021	Annual	08/05/2022
SPEAG	DAKS 3.5	1038	03/17/2021	Annual	03/17/2022
ROHDE&SCHWARZ	Signal Generator SMB100A	177633	07/05/2021	Annual	07/05/2022

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
H.P	Network Analyzer /8753ES	JP39240221	01/11/2021	Annual	01/11/2022
Agilent	WIRELESS COMMUNICATION E5515C	GB44051865	05/28/2021	Annual	05/28/2022
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/23/2021	Annual	07/23/2022
R&S	Wireless Communication Test Set CMW500	115733	04/15/2021	Annual	04/15/2022
Agilent	Signal Generator N5182A	MY47070230	01/26/2021	Annual	01/26/2022
Agilent	11636B/Power Divider	58698	02/26/2021	Annual	02/26/2022
EMPOWER	RF Power Amplifier	1084	06/25/2021	Annual	06/25/2022
EMPOWER	RF Power Amplifier	1041D/C0508	06/24/2021	Annual	06/24/2022
MICRO LAB	LP Filter / LA-15N	10453	10/05/2020	Annual	10/05/2021
MICRO LAB	LP Filter / LA-15N	10453	10/06/2021	Annual	10/06/2022
MICRO LAB	LP Filter / LA-30N	-	10/05/2020	Annual	10/05/2021
MICRO LAB	LP Filter / LA-30N	-	10/06/2021	Annual	10/06/2022
MICRO LAB	LP Filter / LA-60N	32011	10/05/2020	Annual	10/05/2021
MICRO LAB	LP Filter / LA-60N	32011	10/06/2021	Annual	10/06/2022
HP	Attenuator (3dB) 333340A	02427	09/06/2021	Annual	09/06/2022
HP	Attenuator (20dB) 8493C	09271	09/06/2021	Annual	09/17/2022
Agilent	Directional Bridge 86205A	3140A03878	05/28/2021	Annual	05/28/2022
Agilent	MXA Signal Analyzer N9020A	MY50510407	10/23/2020	Annual	10/23/2021
Agilent	MXA Signal Analyzer N9020A	MY50510407	10/22/2021	Annual	10/22/2022
HP	Dual Directional Coupler	16072	10/05/2020	Annual	10/05/2021
HP	Dual Directional Coupler	16072	10/05/2021	Annual	10/05/2022
Anritsu	Radio Communication Tester MT8820C	6201074225	02/26/2021	Annual	02/26/2022
Anritsu	Radio Communication Tester MT8820C	6200695605	04/15/2021	Annual	04/15/2022
Anritsu	Radio Communication Tester MT8821C	6201502997	07/08/2021	Annual	07/08/2022
Anritsu	Radio Communication Tester MT8821C	6262044720	12/22/2020	Annual	12/22/2021
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	02/26/2021	Annual	02/26/2022

\* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

## 19. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

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[29] FCC General RF Exposure Guidance and SAR procedures for Dongles, KDB 447498 D01,D02.

## Appendix A. DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information & setup photo file no. as follows:

Report No.
HCT-SR-2110-FC012-P-R1