HCT Co., Ltd.
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Tel. +82 31 634 6300 Fax. +82 31 645 6401

SAR TEST REPORT

Applicant Name: **SAMSUNG Electronics Co., Ltd.** 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677 Rep. of Korea	**Date of Issue:** Jul. 7, 2020 **Test Report No.:** HCT-SR-2006-FC017-R3 **Test Site: HCT CO., LTD.**

FCC ID: A3LSMN981B

Equipment Type:	**Mobile Phone**
Application Type	**Certification**
FCC Rule Part(s):	**CFR §2.1093**
Model Name:	**SM-N981B/DS**
Additional Model Name:	**SM-N981B**
Date of Test:	**May. 14, 2020 ~ Jun. 15. 2020, Jul. 03,2020**

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

Moon-Pyung, Choi
Test Engineer
SAR Team
Certification Division

Reviewed By

Yun-jeang, Heo
Technical Manager
SAR Team
Certification Division

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	Jun. 29, 2020	Initial Release
R1	Jul.03,2020	Revised page 8,25,38,Sec.11.4,12, 13 ,Appendix H, Plot 27,55,58
R2	Jul.06.2020	Revised Sec.11.4, sec 13, Appendix H and Plot #40
R3	Jul.07.2020	Revised Page 6,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.

Table of Contents

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

Company Name	HCT Co., Ltd.
Address	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Telephone	031-645-6300
Fax.	031-645-6401

2.2 Test Facilities

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

Korea	National Radio Research Agency (Designation No. KR0032)
	KOLAS (Testing No. KT197)

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SM-N981B/DS
Additional Model Name	SM-N981B
Equipment Type	Mobile Phone
FCC ID	A3LSMN981B
Application Type	Certification
Applicant	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 ㎒ ~ 848.8 ㎒	PCE	0.29	0.52	1.09	N/A
GSM/GPRS/EDGE 1900	1 850.2 ㎒ ~ 1 909.8 ㎒	PCE	0.08	0.58	1.15	0.97
WCDMA 850	826.4 ㎒ ~ 846.6 ㎒	PCE	0.19	0.40	0.96	N/A
WCDMA 1700	1 712.4 ㎒ ~ 1 752.6 ㎒	PCE	0.13	0.57	0.75	1.51
WCDMA 1900	1 852.4 ㎒ ~ 1 907.6 ㎒	PCE	0.10	0.69	**1.24**	1.42
LTE Band 2 (PCS)	1 850.7 ㎒ ~ 1 909.3 ㎒	PCE	0.11	0.60	1.17	1.38
LTE Band 4 (AWS)	1 710.7 ㎒ ~ 1 754.3 ㎒	PCE	N/A	N/A	N/A	N/A
LTE Band 5 (Cell)	824.7 ㎒ ~ 848.3 ㎒	PCE	0.20	0.37	0.73	N/A
LTE Band 12	699.7 ㎒ ~ 715.3 ㎒	PCE	< 0.1	0.16	0.28	N/A
LTE Band 13	779.5 ㎒ ~ 784.5 ㎒	PCE	< 0.1	0.13	0.26	N/A
LTE Band 17	706.5 ㎒ ~ 713.5 ㎒	PCE	N/A	N/A	N/A	N/A
LTE Band 25 (PCS)	1 850.7 ㎒ ~ 1 914.3 ㎒	PCE	0.12	0.68	0.95	1.10
LTE Band 26 (Cell)	814.7 ㎒ ~ 848.3 ㎒	PCE	0.21	0.38	0.73	N/A
LTE TDD Band 41	2 498.5 ㎒ ~ 2 687.5 ㎒	PCE	< 0.1	0.25	0.67	N/A
LTE Band 66 (AWS)	1 710.7 ㎒ ~ 1 779.3 ㎒	PCE	0.14	**0.72**	1.07	1.93
802.11b	2 412 ㎒ ~ 2 472 ㎒	DTS	0.44	0.11	0.28	N/A
U-NII-1	5 180 ㎒ ~ 5 240 ㎒	NII	N/A	N/A	N/A	N/A
U-NII-2A	5 260 ㎒ ~ 5 320 ㎒	NII	0.19	0.49	N/A	1.61
U-NII-2C	5 500 ㎒ ~ 5 720 ㎒	NII	0.16	0.31	N/A	0.92
U-NII-3	5 745 ㎒ ~ 5 825 ㎒	NII	0.11	0.24	0.48	N/A
Bluetooth	2 402 ㎒ ~ 2 480 ㎒	DSS	**0.95**	0.13	0.35	N/A
Simultaneous SAR per KDB 690783 D01v01r03			**1.33**	**1.597**	**1.594**	**3.645**

The Highest Reported SAR						
Band	Tx. Frequency	Equipment Class	Reported 10g SAR (W/kg)			
			10g Head	10g Body-Worn	10g Hotspot	10g Extremity
GSM/GPRS/EDGE 850	824.2 ㎒ ~ 848.8 ㎒	PCE	0.21	0.32	0.63	N/A
GSM/GPRS/EDGE 1900	1 850.2 ㎒ ~ 1 909.8 ㎒	PCE	0.05	0.36	0.61	0.97
WCDMA 850	826.4 ㎒ ~ 846.6 ㎒	PCE	0.15	0.40	0.55	N/A
WCDMA 1900	1 852.4 ㎒ ~ 1 907.6 ㎒	PCE	0.06	0.40	0.66	1.42
LTE Band 2 (PCS)	1 850.7 ㎒ ~ 1 909.3 ㎒	PCE	0.07	0.34	0.60	1.38
LTE Band 5 (Cell)	824.7 ㎒ ~ 848.3 ㎒	PCE	0.14	0.26	0.42	N/A
LTE TDD Band 41	2 498.5 ㎒ ~ 2 687.5 ㎒	PCE	0.03	0.13	0.32	N/A
Date(s) of Tests:	05/14/2020 ~ 06/15/2020					

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band & Mode	**Operating Mode**	**Tx Frequency**
GSM850	Voice / Data	824.2 ㎒ ~ 848.8 ㎒
GSM1900	Voice / Data	1 850.2 ㎒ ~ 1 909.8 ㎒
WCDMA 850	Voice / Data	826.4 ㎒ ~ 846.6 ㎒
WCDMA 1700	Voice / Data	1 712.4 ㎒ ~ 1 752.6 ㎒
WCDMA 1900	Voice / Data	1 852.4 ㎒ ~ 1 907.6 ㎒
LTE Band 2 (PCS)	Voice / Data	1 850.7 ㎒ ~ 1 909.3 ㎒
LTE Band 4 (AWS)	Voice / Data	1 710.7 ㎒ ~ 1 754.3 ㎒
LTE Band 5 (Cell)	Voice / Data	824.7 ㎒ ~ 848.3 ㎒
LTE Band 12	Voice / Data	699.7 ㎒ ~ 715.3 ㎒
LTE Band 13	Voice / Data	779.5 ㎒ ~ 784.5 ㎒
LTE Band 17	Voice / Data	706.5 ㎒ ~ 713.5 ㎒
LTE Band 25 (PCS)	Voice / Data	1 850.7 ㎒ ~ 1 914.3 ㎒
LTE Band 26 (Cell)	Voice / Data	814.7 ㎒ ~ 848.3 ㎒
LTE TDD Band 41	Voice / Data	2 498.5 ㎒ ~ 2 687.5 ㎒
LTE Band 66 (AWS)	Voice / Data	1 710.7 ㎒ ~ 1 779.3 ㎒
U-NII-1	Voice / Data	5 180 ㎒ ~ 5 240 ㎒
U-NII-2A	Voice / Data	5 260 ㎒ ~ 5 320 ㎒
U-NII-2C	Voice / Data	5 500 ㎒ ~ 5 720 ㎒
U-NII-3	Voice / Data	5 745 ㎒ ~ 5 825 ㎒
2.4 ㎓ WLAN	Voice / Data	2 412 ㎒ ~ 2 472 ㎒
Bluetooth / LE 5.0	Data	2 402 ㎒ ~ 2 480 ㎒
NFC	Data	13.56 ㎒

Device Description		
Device Dimension	Overall (Length x Width): 161 ㎜ x 75.2 ㎜ Overall Diagonal: 175 ㎜ Display Diagonal: 166 ㎜	
Battery Information	Standard (Li-ion Polymer Battery)	
	Battery Model Name: EB-BN-980ABY (SAMSUNG SDI)	
Ear-jack	Model Name: YBD-19HS-026(블랙) (ALMUS)	
HW version	REV0.1	
SW version	N981B.001	
Device Serial Numbers	**Mode**	**Serial Number**
	Main	SGF0057R / SGF0061R
	WLAN	TFA1974M / TFA1971M
	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 include 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
WCDMA Band 5 (850 ㎒)	Maximum	25.0 (AMR:4183 :24.0)	23.5	23.0	24.3
	Nominal	24.0 (AMR:4183 :23.0)	22.5	22.0	23.3
WCDMA Band 4 (1700 ㎒)	Maximum	23.5	23.5	21.0	23.5
	Nominal	22.5	22.5	20.0	22.5
WCDMA Band 2 (1900 ㎒)	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	23.5
	Nominal	22.5
LTE TDD Band 41 (HPUE)	Maximum	25.0

	Nominal	24.0
Mode / Band		Modulated Average (dBm)
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	Maximum	28.0	28.0	25.5	23.5	22.5	26.0	23.5	22.0	20.5
(Ear jack, Grip Sensor on, Hotspot)	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
WCDMA Band 4 (1700 ㎒)	Maximum	20.0	20.0	19.0	20.0
(Ear jack, Grip Sensor on, Hotspot)	Nominal	19.0	19.0	18.0	19.0
WCDMA Band 2 (1900 ㎒)	Maximum	20.0	18.5	18.0	18.5
(Ear jack, Grip Sensor on, Hotspot)	Nominal	19.0	17.5	17.0	17.5

Mode / Band		Modulated Average (dBm)		
		Grip Sensor on	Hotspot Mode	Ear jack
LTE Band 2 (PCS)	Maximum	19	19	19
	Nominal	18	18	18
LTE Band 4 (AWS)	Maximum	20	20	20
	Nominal	19	19	19
LTE Band 25 (PCS)	Maximum	19	19	19
	Nominal	18	18	18
LTE TDD Band 41	Maximum	22.5	22.5	22.5
	Nominal	21.5	21.5	21.5
LTE TDD Band 41 (HUPE)	Maximum	22.5	22.5	22.5
	Nominal	21.5	21.5	21.5
LTE Band 66 (AWS)	Maximum	20	20	20
	Nominal	19	19	19

4.3.3 Maximum 2.4 GHz, 5 GHz WIFI output power

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	17 (36ch: 16)	20		20	20	20 (36ch: 19)
	5300MHz	17 (64ch: 16)			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)	17 (100ch: 16)	20 (100ch: 19)		20 (100ch: 19)	20 (100ch: 19)	20 (100ch: 19)
	5800MHz	17			17	17	17	20		20	20	20
5GHZ (40MHz)	5200MHz				16 (38ch: 12)	16 (38ch: 12)	16 (38ch: 12)			19 (38ch: 15)	19 (38ch: 15)	19 (38ch: 15)
	5300MHz				16 (62ch: 12)	16 (62ch: 12)	16 (62ch: 12)			19 (62ch: 15)	19 (62ch: 15)	19 (62ch: 15)
	5500MHz				16 (102ch: 12)	16 (102ch: 12)	16 (102ch: 12)			19 (102ch: 15)	19 (102ch: 15)	19 (102ch: 15)
	5800MHz				16	16	16			19	19	19
5GHZ (80MHz)	5200MHz					12	11				15	14
	5300MHz					12	11				15	14
	5500MHz					15 (106ch: 12)	15 (106ch: 12)				18 (106ch: 15)	18 (106ch: 15)
	5800MHz					15	15				18	18

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

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

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	14	17		17	17	17
	5300MHz	14			14	14	14	17		17	17	17
	5500MHz	14			14	14	14	17		17	17	17
	5800MHz	14			14	14	14	17		17	17	17
5GHZ (40MHz)	5200MHz				14 (38ch: 12)	14 (38ch: 12)	14 (38ch: 12)			17 (38ch: 15)	17 (38ch: 15)	17 (38ch: 15)
	5300MHz				14 (62ch: 12)	14 (62ch: 12)	14 (62ch: 12)			17 (62ch: 15)	17 (62ch: 15)	17 (62ch: 15)
	5500MHz				14 (102ch: 12)	14 (102ch: 12)	14 (102ch: 12)			17 (102ch: 15)	17 (102ch: 15)	17 (102ch: 15)
	5800MHz				14	14	14			17	17	17
5GHZ (80MHz)	5200MHz					12	11				15	14
	5300MHz					12	11				15	14
	5500MHz					14 (106ch: 12)	14 (106ch: 12)				17 (106ch: 15)	17 (106ch: 15)
	5800MHz					14	14				17	17

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

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

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	13	16		16	16	16
	5300MHz	13			13	13	13	16		16	16	16
	5500MHz	13			13	13	13	16		16	16	16
	5800MHz	13			13	13	13	16		16	16	16
5GHZ (40MHz)	5200MHz				13 (38ch: 12)	13 (38ch: 12)	13 (38ch: 12)			16 (38ch: 15)	16 (38ch: 15)	16 (38ch: 15)
	5300MHz				13 (62ch: 12)	13 (62ch: 12)	13 (62ch: 12)			16 (62ch: 15)	16 (62ch: 15)	16 (62ch: 15)
	5500MHz				13 (102ch: 12)	13 (102ch: 12)	13 (102ch: 12)			16 (102ch: 15)	16 (102ch: 15)	16 (102ch: 15)
	5800MHz				13	13	13			16	16	16
5GHZ (80MHz)	5200MHz					12	11				15	14
	5300MHz					12	11				15	14
	5500MHz					13 (106ch: 12)	13 (106ch: 12				16 (106ch: 15)	16 (106ch: 15)
	5800MHz					13	13				16	16

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

4.3.6 Reduced 2.4 GHz, 5 GHz WIFI output power – RSDB with RCV on

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	13	16		16	16	16
	5300MHz	13			13	13	13	16		16	16	16
	5500MHz	13			13	13	13	16		16	16	16
	5800MHz	13			13	13	13	16		16	16	16
5GHZ (40MHz)	5200MHz				13 (38ch: 12)	13 (38ch: 12)	13 (38ch: 12)			16 (38ch: 15)	16 (38ch: 15)	16 (38ch: 15)
	5300MHz				13 (62ch: 12)	13 (62ch: 12)	13 (62ch: 12)			16 (62ch: 15)	16 (62ch: 15)	16 (62ch: 15)
	5500MHz				13 (102ch: 12)	13 (102ch: 12)	13 (102ch: 12)			16 (102ch: 15)	16 (102ch: 15)	16 (102ch: 15)
	5800MHz				13	13	13			16	16	16
5GHZ (80MHz)	5200MHz					12	11				15	14
	5300MHz					12	11				15	14
	5500MHz					13 (106ch: 12)	13 (106ch: 12)				16 (106ch: 15)	16 (106ch: 15)
	5800MHz					13	13				16	16

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

4.3.7 802.11ax RU Tx Power

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	10	13	16	17 (36ch: 16)			13	16	19	20 (36ch: 19)		
	5300MHz	10	13	16	17 (64ch: 16)			13	16	19	20 (64ch: 19)		
	5500MHz	10	13	16	17 (100ch: 16)			13	16	19	20 (100ch: 19)		
	5800MHz	14 (153,157ch:: 13) (161, 165ch: 12)	15 (153,157ch:: 14) (161, 165ch: 13)	16 (149ch: 17)	17			17 (153,157ch:: 16) (161, 165ch: 15)	18 (153,157ch:: 17) (161, 165ch: 16)	19 (149ch: 20)	20		
5GHZ (40MHz)	5200MHz	10	13	16	16	16 (38ch: 12)		13	16	19	19	19 (38ch: 15)	
	5300MHz	10	13	16	16	16 (62ch: 12)		13	16	19	19	19 (62ch: 15)	
	5500MHz	10	13	16 (102ch: 14)	16 (102ch: 14)	16 (102ch: 12)		13	16	19 (102ch: 17)	19 (102ch: 17)	19 (102ch: 15)	
	5800MHz	13 (159ch: 12)	15 (159ch: 13)	16	16	16		16 (159ch: 15)	18 (159ch: 16)	19	19	19	
5GHZ (80MHz)	5200MHz	10	12	12	12	12	11	13	15	15	15	15	14
	5300MHz	10	12	12	12	12	11	13	15	15	15	15	14
	5500MHz	10	13 (106ch: 12)	15 (106ch: 12)	15 (106ch: 14)	15 (106ch: 12)	15 (106ch: 12)	13	16 (106ch: 15)	18 (106ch: 15)	18 (106ch: 17)	18 (106ch: 15)	18 (106ch: 15)
	5800MHz	13	15	15	15	15	15	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

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	10	13	13	13			13	16	16	16		
	5300MHz	10	13	13	13			13	16	16	16		
	5500MHz	10	13	13	13			13	16	16	16		
	5800MHz	13 (161, 165ch: 12)	13	13	13			16 (161, 165ch: 15)	16	16	16		
5GHZ (40MHz)	5200MHz	10	13	13	13	13 (38ch: 12)		13	16	16	16	16 (38ch: 15)	
	5300MHz	10	13	13	13	13 (62ch: 12)		13	16	16	16	16 (62ch: 15)	
	5500MHz	10	13	13	13	13 (102ch: 12)		13	16	16	16	16 (102ch: 15)	
	5800MHz	13 (159ch: 12)	13	13	13	13		16 (159ch: 15)	16	16	16	16	
5GHZ (80MHz)	5200MHz	10	12	12	12	12	11	13	15	15	15	15	14
	5300MHz	10	12	12	12	12	11	13	15	15	15	15	14
	5500MHz	10	13 (106ch: 12)	13 (106ch: 12)	13	13 (106ch: 12)	13 (106ch: 12)	13	16 (106ch: 15)	16 (106ch: 15)	16	16 (106ch: 15)	16 (106ch: 15)
	5800MHz	13	13	13	13	13	13	16	16	16	16	16	16

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

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

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	10	13	13	13			13	16	16	16		
	5300MHz	10	13	13	13			13	16	16	16		
	5500MHz	10	13	13	13			13	16	16	16		
	5800MHz	13 (161, 165ch: 12)	13	13	13			16 (161, 165ch: 15)	16	16	16		
5GHZ (40MHz)	5200MHz	10	13	13	13	13 (38ch: 12)		13	16	16	16	16 (38ch: 15)	
	5300MHz	10	13	13	13	13 (62ch: 12)		13	16	16	16	16 (62ch: 15)	
	5500MHz	10	13	13	13	13 (102ch: 12)		13	16	16	16	16 (102ch: 15)	
	5800MHz	13 (159ch: 12)	13	13	13	13		16 (159ch: 15)	16	16	16	16	
5GHZ (80MHz)	5200MHz	10	12	12	12	12	11	13	15	15	15	15	14
	5300MHz	10	12	12	12	12	11	13	15	15	15	15	14
	5500MHz	10	13 (106ch: 12)	13 (106ch: 12)	13	13 (106ch: 12)	13 (106ch: 12)	13	16 (106ch: 15)	16 (106ch: 15)	16	16 (106ch: 15)	16 (106ch: 15)
	5800MHz	13	13	13	13	13	13	16	16	16	16	16	16

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

4.3.10 Reduced Power 11ax RU Tx power Tables in RSDB – RCV on

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	10	13	13	13			13	16	16	16		
	5300MHz	10	13	13	13			13	16	16	16		
	5500MHz	10	13	13	13			13	16	16	16		
	5800MHz	13 (161, 165ch: 12)	13	13	13			16 (161, 165ch: 15)	16	16	16		
5GHZ (40MHz)	5200MHz	10	13	13	13	13 (38ch: 12)		13	16	16	16	16 (38ch: 15)	
	5300MHz	10	13	13	13	13 (62ch: 12)		13	16	16	16	16 (62ch: 15)	
	5500MHz	10	13	13	13	13 (102ch: 12)		13	16	16	16	16 (102ch: 15)	
	5800MHz	13 (159ch: 12)	13	13	13	13		16 (159ch: 15)	16	16	16	16	
5GHZ (80MHz)	5200MHz	10	12	12	12	12	11	13	15	15	15	15	14
	5300MHz	10	12	12	12	12	11	13	15	15	15	15	14
	5500MHz	10	13 (106ch: 12)	13 (106ch: 12)	13	13 (106ch: 12)	13 (106ch: 12)	13	16 (106ch: 15)	16 (106ch: 15)	16	16 (106ch: 15)	16 (106ch: 15)
	5800MHz	13	13	13	13	13	13	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, ax
	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, ax
	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: b, 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, ax
	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, ax
	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: b, 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
	Nominal	8
Bluetooth LE 1Mbps, 125/500Kbps	Maximum	8
	Nominal	7

4.4 LTE Information

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

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

Ch. No.& Freq.(㎒)		Low		Mid		High
LTE Band 66 (AWS)	1.4 ㎒	1 710.7 (131979)		1 745 (132322)		1 779.3 (132665)
	3 ㎒	1 711.5 (131987)		1 745 (132322)		1 778.5 (132657)
	5 ㎒	1 712.5 (131997)		1 745 (132322)		1 777.5 (132647)
	10 ㎒	1 715.0 (132022)		1 745 (132322)		1 775.0 (132622)
	15 ㎒	1 717.5 (132047)		1 745 (132322)		1 772.5 (132597)
	20 ㎒	1 720.0 (132072)		1 745 (132322)		1 770.0 (132572)
LTE TDD Band 41	5 ㎒	2498.5(39675)	2545.8(40148)	2593.0(40620)	2640.3(41093)	2687.5(41565)
	10 ㎒	2501.0(39700)	2547.0(40160)	2593.0(40620)	2639.0(41080)	2685.0(41540)
	15 ㎒	2503.5(39725)	2548.3(41073)	2593.0(40620)	2637.8(41068)	2682.5(41515)
	20 ㎒	2506.0(39750)	2549.5(40185)	2593.0(40620)	2636.5(41055)	2680.0(41490)

UE Category	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 elCl, 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
WCDMA 850	Yes	Yes	Yes	Yes	Yes	No
WCDMA 1700	Yes	Yes	Yes	Yes	Yes	No
WCDMA 1900	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

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.

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 MIMO+ 5 GHz WiFi MIMO	Yes	Yes	N/A	Yes
GSM Voice + Bluetooth + 5 GHz WiFi SISO	Yes#	Yes	N/A	Yes
GSM Voice + Bluetooth + 5 GHz WiFi MIMO	Yes#	Yes	N/A	Yes
GSM Voice + Bluetooth	Yes#	Yes	N/A	Yes
GPRS + 2.4 GHz WiFi SISO	N/A	N/A	Yes	Yes
GPRS + 5 GHz WiFi SISO	N/A	N/A	Yes	Yes
GPRS + 2.4 GHz WiFi MIMO	N/A	N/A	Yes	Yes
GPRS + 5 GHz WiFi MIMO	N/A	N/A	Yes	Yes
GPRS + Bluetooth	N/A	N/A	Yes#	Yes
GPRS + Bluetooth+ 5 GHz WiFi SISO	N/A	N/A	Yes#	Yes
GPRS + Bluetooth+ 5 GHz WiFi MIMO	N/A	N/A	Yes#	Yes
GPRS + 2.4 GHz WiFi SISO + 5 GHz WiFi SISO	N/A	N/A	Yes	Yes
GPRS + 2.4 GHz WiFi MIMO + 5 GHz WiFi MIMO	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 Bluetooth	Yes#	Yes	Yes#	Yes
UMTS + 2.4 GHz Bluetooth+ 5 GHz WiFi SISO	Yes#	Yes	Yes#	Yes
UMTS + 2.4 GHz Bluetooth+ 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 SISO+ 5 GHz WiFi SISO	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 Bluetooth	Yes#	Yes	Yes#	Yes
LTE+ 2.4 GHz Bluetooth+ 5 GHz WiFi SISO	Yes#	Yes	Yes#	Yes
LTE+ 2.4 GHz Bluetooth+ 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 MIMO + 5 GHz WiFi MIMO	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.GHz 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 ac 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

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 ≤ ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45W/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 ㎒ ~ 713.5 ㎒) is covered by LTE Band 12 (699.7 ㎒ ~ 715.3 ㎒), LTE Band 4 (1 710.7 ㎒ ~ 1 754.3 ㎒) is covered by LTE Band 66 (1 710.7 ㎒ ~ 1 779.3 ㎒) 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.

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

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.

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

The Reported SAR for WLAN and Bluetooth

The Reported SAR = The Measured SAR x-$\frac{Maximum\ \ tune-up\ \ (mW)}{Measured\ \ Conducted\ \ Power(mW)}$ x 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 (d*W*) absorbed by (dissipated in) an incremental mass (d*m*) contained in a volume element (d*V*) 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:

σ = conductivity of the tissue-simulant material (S/m)

ρ = mass density of the tissue-simulant material (kg/㎥)

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.

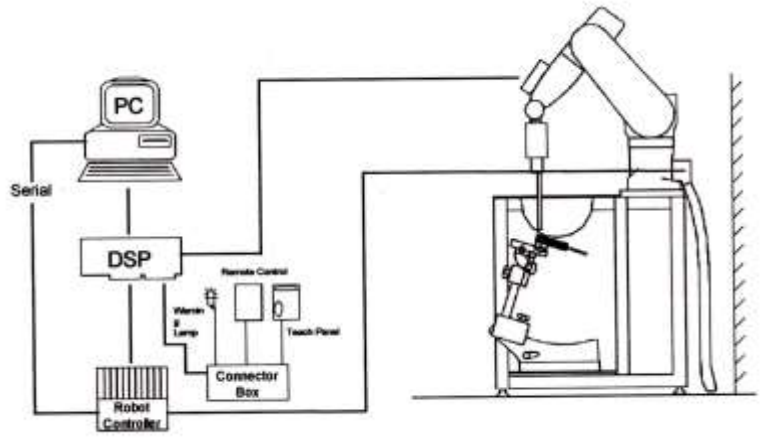


Figure 2. HCT SAR Lab. Test Measurement Set-up

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 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	$^1/_2 \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30°±1°	20°±1°
Maximum area scan Spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤15 mm 2-3 GHz: ≤12 mm	3-4 GHz: ≤12 mm 4-6 GHz: ≤10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan Spatial resolution: Δx_{zoom}, Δy_{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 st two Points closest to phantom surface	≤ 4 mm	3-4 GHz: ≤3 mm 4-5 GHz: ≤2.5 mm 5-6 GHz: ≤2 mm
		$\Delta z_{zoom}(n>1)$: between subsequent Points	≤1.5·$\Delta z_{zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3-4 GHz: ≥28 mm 4-5 GHz: ≥25 mm 5-6 GHz: ≥22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

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.

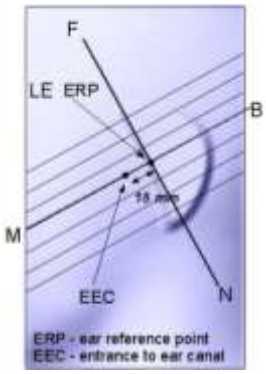


Figure 8-1
Close-up side view of ERP

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 than 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

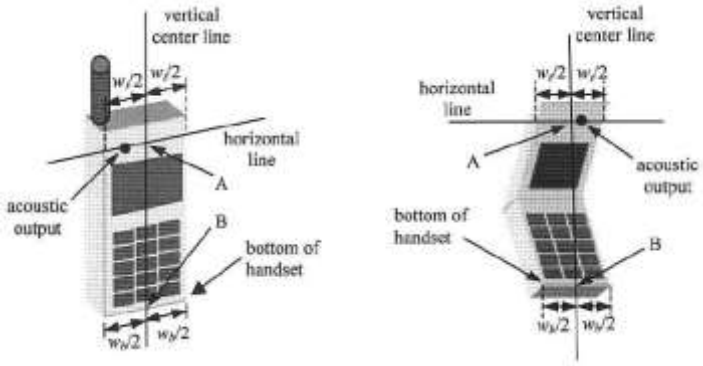


Figure 6-3. Handset vertical and horizontal reference lines

8.3 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameter; relative permittivity ε=3 and loss tangent σ =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.

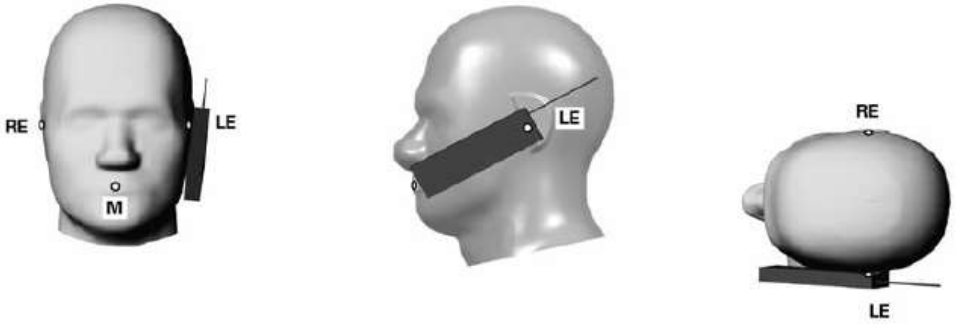


Figure 8.4 Cheek/ Touch position of the wireless device

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≥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 ≤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
ANT.1	WWAN (GSM 1900/ WCDMAB2/B4 LTE/B2/B4/B25/B66)	Rear	9	N/A	N/A	8
		Front	7	N/A	N/A	6
		Bottom	13	N/A	N/A	12
ANT.2	LTE 41 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 ≤ 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 ≤ 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 Cheek 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

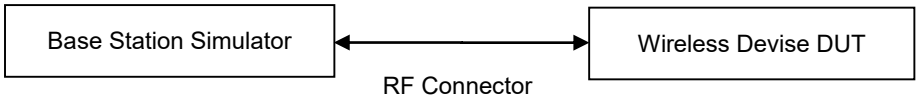
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control 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 ≤ 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	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Calculated Duty Cycle – Extended cyclic prefix in uplink x (T_s) x no of S + no of U

Table 4.2-2: Uplink-downlink configurations.

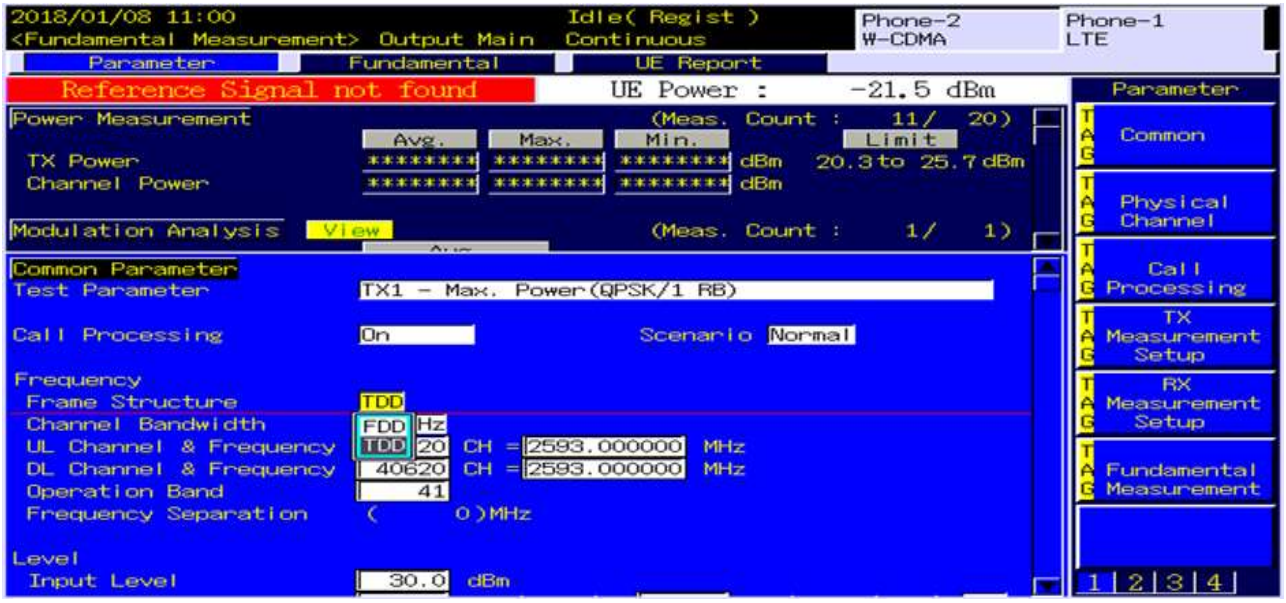
Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U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

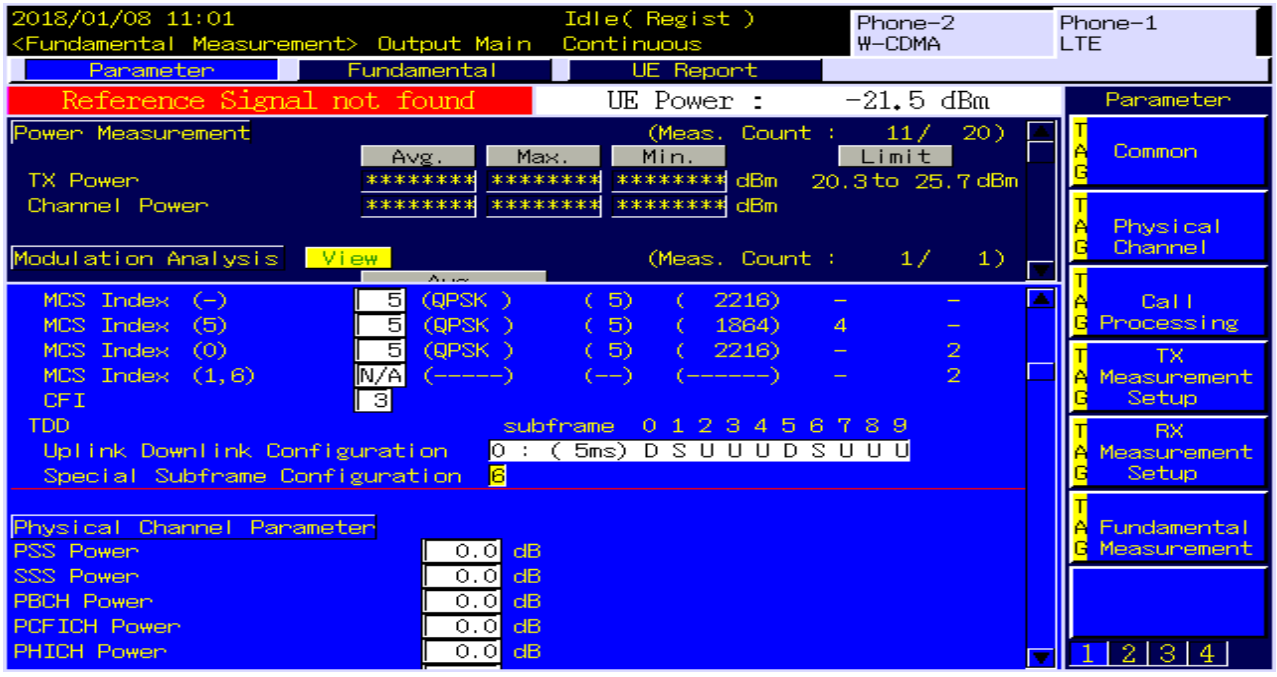
Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = (5120 x (1/(15000 x 2048)) x 2 + 0.006)/0.01 = 63.33 %
Where
T_s = 1/(15000 x 2048) seconds

HPUE :
Calculated Duty Cycle for Uplink-Downlink Configuration 1:
Calculated Duty Cycle =5120*(1/(15000*2048))*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.





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 ㎒ (5.47 ㎓ – 5.85 ㎓), 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 ㎓ – 5.65 ㎓ 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 nest 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 ≤ 0.4 W/kg for 1g SAR and ≤ 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 ≤ 0.8 W/kg for 1g SAR and ≤ 2.0 W/kg for 10g SAR or all test positions are measured.

10.5.5 2.4 ㎓ SAR test Requirements

SAR is measured for 2.4 ㎓ 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 ≤ 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 ㎓ 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 ㎓ band, the Initial Test Configuration Procedures should be followed.

10.5.6 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 ㎓ and 5 ㎓ 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.2., 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 ㎓ and 5 ㎓ 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 ≤ 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 ≤ 1.2 W/kg for 1g SAR and ≤ 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

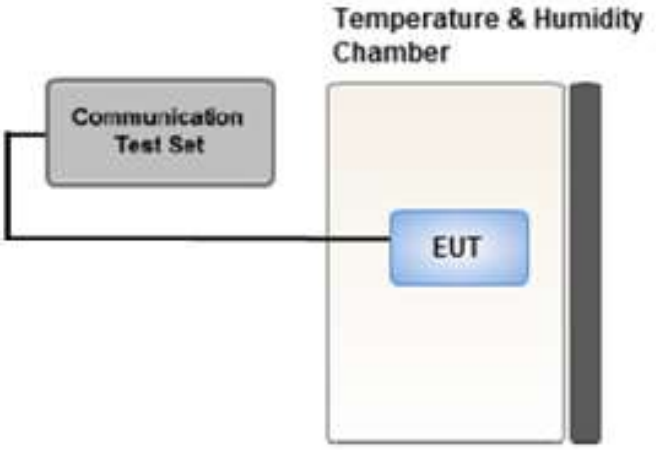
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base 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


Temperature & Humidity
Chamber
Communication
Test Set
EUT

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		34.00	34.00	32.00	30.50	29.00	27.00	25.00	23.50	22.00
Nominal		33.00	33.00	31.00	29.50	28.00	26.00	24.00	22.50	21.00
GSM 850	128	33.91	33.91	31.49	29.39	28.05	25.74	23.42	22.21	20.92
	190	33.94	33.96	31.61	29.60	28.19	25.83	23.62	22.21	20.99
	251	33.97	33.95	31.54	29.68	28.09	25.97	23.72	22.10	20.92
Maximum		31.00	31.00	28.50	26.50	25.00	26.00	24.00	22.50	21.00
Nominal		30.00	30.00	27.50	25.50	24.00	25.00	23.00	21.50	20.00
GSM 1900	512	30.47	30.46	27.93	25.79	23.70	24.65	22.63	20.94	19.32
	661	30.50	30.51	28.33	26.01	24.16	25.07	22.98	21.30	19.73
	810	30.47	30.46	28.25	26.15	24.26	25.10	23.07	21.40	19.74

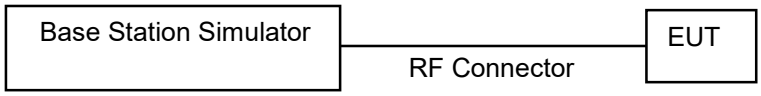
GSM Conducted output powers (Burst-Average)

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	24.88	24.88	25.47	25.13	25.04	16.71	17.40	17.95	17.91
	190	24.91	24.93	25.59	25.28	25.18	16.80	17.60	17.95	17.98
	251	24.94	24.92	25.52	25.42	25.08	16.94	17.70	17.84	17.91
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	21.44	21.43	21.91	21.53	20.69	15.62	16.61	16.68	16.31
	661	21.47	21.48	22.31	21.75	21.15	16.04	16.96	17.04	16.72
	810	21.44	21.43	22.23	21.89	21.25	16.07	17.05	17.14	16.73

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		28.00	28.00	25.50	23.50	22.50	26.00	23.50	22.00	20.50
Nominal		27.00	27.00	24.50	22.50	21.50	25.00	22.50	21.00	19.50
GSM 1900	512	26.84	26.85	24.09	22.64	20.88	24.24	21.97	20.33	18.83
	661	27.22	27.22	24.79	22.96	21.29	24.71	22.65	20.77	19.30
	810	27.27	27.27	24.85	23.02	21.27	24.74	22.51	20.73	19.19

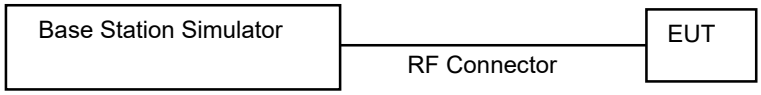
GSM Conducted output powers (Burst-Average)

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	17.81	17.82	18.07	18.38	17.87	15.21	15.95	16.07	15.82
	661	18.19	18.19	18.77	18.70	18.28	15.68	16.63	16.51	16.29
	810	18.24	18.24	18.83	18.76	18.26	15.71	16.49	16.47	16.18

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 Seonsor 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		28.00	28.00	25.50	23.50	22.50	26.00	23.50	22.00	20.50
Nominal		27.00	27.00	24.50	22.50	21.50	25.00	22.50	21.00	19.50
GSM 1900	512	26.88	26.85	24.18	22.67	20.93	24.25	22.02	20.35	18.84
	661	27.28	27.22	24.83	22.97	21.34	24.80	22.70	20.80	19.32
	810	27.29	27.37	24.88	23.06	21.27	24.83	22.54	20.78	19.19

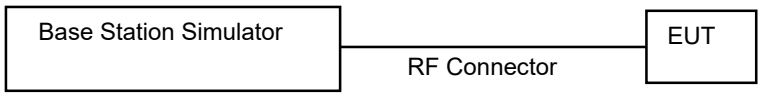
GSM Conducted output powers (Burst-Average)

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	17.85	17.82	18.16	18.41	17.92	15.22	16.00	16.09	15.83
	661	18.25	18.19	18.81	18.71	18.33	15.77	16.68	16.54	16.31
	810	18.26	18.34	18.86	18.80	18.26	15.80	16.52	16.52	16.18

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 WCDMA

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 WCDMA Maximum Conducted Output Power

WCDMA Band 5 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121	WCDMA Band 5 [dBm]			3GPP MPR
		Subtest	UL 4132 DL 4357	UL 4183 DL 4408	UL 4233 DL 4458	
99	WCDMA	12.2 kbps RMC	23.87	23.76	23.67	-
99		12.2 kbps AMR	23.89	21.77	23.66	-
5	HSDPA	Subtest 1	22.74	22.68	22.71	0
5		Subtest 2	22.13	22.12	22.02	0
5		Subtest 3	21.66	21.63	21.54	0.5
5		Subtest 4	21.12	21.10	21.03	0.5
6	HSUPA	Subtest 1	21.58	21.56	21.46	0
6		Subtest 2	19.62	19.59	19.52	2
6		Subtest 3	20.61	20.58	20.51	1
6		Subtest 4	19.57	19.58	19.49	2
6		Subtest 5	21.60	21.57	21.49	0
8	DC-HSDPA	Subtest 1	23.52	23.47	23.34	0
8		Subtest 2	22.55	22.49	22.40	0
8		Subtest 3	21.54	21.48	21.37	0.5
8		Subtest 4	21.50	21.46	21.34	0.5

WCDMA Average Conducted output powers

WCDMA Band 4 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121	WCDMA Band 5 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	WCDMA	12.2 kbps RMC	22.52	22.63	22.70	-
99		12.2 kbps AMR	22.69	22.69	22.78	-
5	HSDPA	Subtest 1	22.56	22.59	22.71	0
5		Subtest 2	22.45	22.58	22.77	0
5		Subtest 3	22.39	22.08	22.67	0.5
5		Subtest 4	21.48	21.60	21.76	0.5
6	HSUPA	Subtest 1	21.36	21.40	21.45	0
6		Subtest 2	17.87	18.01	18.00	2
6		Subtest 3	18.75	18.95	19.07	1
6		Subtest 4	18.37	18.49	18.60	2
6		Subtest 5	21.41	21.47	21.67	0
8	DC-HSDPA	Subtest 1	22.31	22.36	22.57	0
8		Subtest 2	22.33	22.31	22.57	0
8		Subtest 3	21.37	21.39	21.63	0.5
8		Subtest 4	21.35	21.41	21.59	0.5

WCDMA Average Conducted output powers

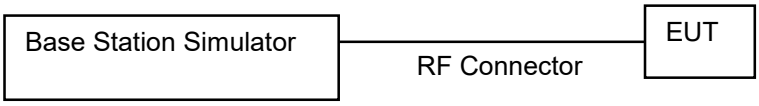
WCDMA Band 2 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121	WCDMA Band 2 [dBm]			3GPP MPR
		Subtest	UL 9262 DL 9662	UL 9400 DL 9800	UL 9538 DL 9938	
99	WCDMA	12.2 kbps RMC	21.61	21.72	21.52	-
99		12.2 kbps AMR	21.61	21.72	21.54	-
5	HSDPA	Subtest 1	21.52	21.62	21.46	0
5		Subtest 2	21.46	21.61	21.44	0
5		Subtest 3	21.47	21.58	21.43	0.5
5		Subtest 4	20.97	21.09	20.95	0.5
6	HSUPA	Subtest 1	20.23	20.45	20.28	0
6		Subtest 2	17.85	18.03	17.96	2
6		Subtest 3	18.61	18.63	18.53	1
6		Subtest 4	17.86	18.04	17.86	2
6		Subtest 5	20.28	20.47	20.31	0
8	DC-HSDPA	Subtest 1	21.53	21.75	21.56	0
8		Subtest 2	21.55	21.75	21.52	0
8		Subtest 3	21.53	21.72	21.55	0.5
8		Subtest 4	21.56	21.76	21.50	0.5

WCDMA Average 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 WCDMA Reduced Conducted Output Power (Hotspot mode activated)

When Power reduction is applied , MPR set to 0
WCDMA Band 4 Hotspot Back-off Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	WCDMA Band 2 [dBm] UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	3GPP MPR
99	WCDMA	12.2 kbps RMC	18.96	19.08	19.15	-
99		12.2 kbps AMR	18.98	19.11	19.15	-
5	HSDPA	Subtest 1	18.89	19.01	19.11	0
5		Subtest 2	18.87	18.89	19.10	0
5		Subtest 3	18.90	19.02	19.11	0
5		Subtest 4	18.80	18.99	19.11	0
6	HSUPA	Subtest 1	17.73	18.03	18.13	0
6		Subtest 2	17.87	18.00	18.09	0
6		Subtest 3	17.91	18.01	18.12	0
6		Subtest 4	17.89	18.06	18.10	0
6		Subtest 5	17.88	18.04	18.15	0
8	DC-HSDPA	Subtest 1	18.83	18.87	19.06	0
8		Subtest 2	18.80	18.86	19.04	0
8		Subtest 3	18.77	18.82	19.02	0
8		Subtest 4	18.80	18.82	19.02	0

WCDMA Average Conducted output powers

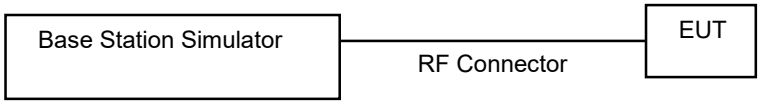
When Power reduction is applied , MPR set to 0
WCDMA Band 2 Hotspot Back-off Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	WCDMA Band 2 [dBm] UL 9262 DL 9662	UL 9400 DL 9800	UL 9538 DL 9938	3GPP MPR
99	WCDMA	12.2 kbps RMC	**18.12**	**18.25**	**18.04**	-
99		12.2 kbps AMR	**18.12**	**18.24**	**18.03**	-
5	HSDPA	Subtest 1	**17.97**	**18.17**	**17.96**	**0**
5		Subtest 2	**17.96**	**18.14**	**17.97**	**0**
5		Subtest 3	**17.98**	**18.13**	**17.98**	**0**
5		Subtest 4	**17.97**	**17.98**	**17.84**	**0**
6	HSUPA	Subtest 1	**16.75**	**16.89**	**16.76**	**0**
6		Subtest 2	**16.78**	**16.91**	**16.77**	**0**
6		Subtest 3	**16.78**	**16.92**	**16.76**	**0**
6		Subtest 4	**16.91**	**16.96**	**16.80**	**0**
6		Subtest 5	**16.78**	**16.92**	**16.78**	**0**
8	DC-HSDPA	Subtest 1	**18.18**	**18.29**	**18.13**	**0**
8		Subtest 2	**18.18**	**18.38**	**18.13**	**0**
8		Subtest 3	**18.17**	**18.37**	**18.11**	**0**
8		Subtest 4	**18.13**	**18.34**	**18.17**	**0**

WCDMA Average 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 WCDMA Reduced Conducted Output Power (Grip Seonsor on/ Ear-jack Activated)

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

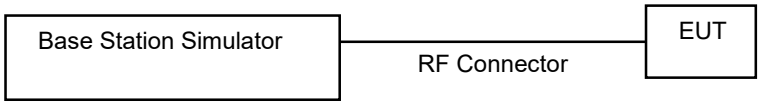
3GPP Release Version	Mode	3GPP 34.121	WCDMA Band 2 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	WCDMA	12.2 kbps RMC	19.00	19.14	19.20	-
99		12.2 kbps AMR	19.00	19.21	19.19	-
5	HSDPA	Subtest 1	18.97	19.10	19.20	0
5		Subtest 2	18.94	18.92	19.15	0
5		Subtest 3	18.98	19.06	19.12	0
5		Subtest 4	18.86	19.06	19.15	0
6	HSUPA	Subtest 1	17.83	18.06	18.17	0
6		Subtest 2	17.94	18.04	18.12	0
6		Subtest 3	18.00	18.07	18.22	0
6		Subtest 4	17.92	18.16	18.18	0
6		Subtest 5	17.91	18.14	18.16	0
8	DC-HSDPA	Subtest 1	18.87	18.96	19.16	0
8		Subtest 2	18.90	18.93	19.14	0
8		Subtest 3	18.80	18.83	19.09	0
8		Subtest 4	18.81	18.83	19.07	0

WCDMA Average Conducted output powers

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

3GPP Release Version	Mode	3GPP 34.121	WCDMA Band 2 [dBm]			3GPP MPR
		Subtest	UL 9262 DL 9662	UL 9400 DL 9800	UL 9538 DL 9938	
99	WCDMA	12.2 kbps RMC	18.18	18.29	18.14	-
99		12.2 kbps AMR	18.14	18.32	18.10	-
5	HSDPA	Subtest 1	18.01	18.18	17.99	0
5		Subtest 2	17.98	18.16	18.04	0
5		Subtest 3	18.06	18.16	18.06	0
5		Subtest 4	17.99	18.08	17.91	0
6	HSUPA	Subtest 1	16.78	16.93	16.83	0
6		Subtest 2	16.86	16.97	16.81	0
6		Subtest 3	16.83	16.96	16.85	0
6		Subtest 4	16.96	16.99	16.86	0
6		Subtest 5	16.81	16.99	16.82	0
8	DC-HSDPA	Subtest 1	18.24	18.33	18.21	0
8		Subtest 2	18.20	18.44	18.17	0
8		Subtest 3	18.25	18.38	18.20	0
8		Subtest 4	18.23	18.41	18.21	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 ㎒ 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 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 ㎒	18900 Ch. 1880 ㎒	19193 Ch. 1909.3 ㎒		
1.4 ㎒	QPSK	1	0	22.10	22.28	22.07	0	0
		1	3	22.15	22.34	22.14	0	0
		1	5	22.12	22.30	22.09	0	0
		3	0	22.06	22.25	22.09	0	0
		3	1	22.24	22.48	22.27	0	0
		3	3	22.14	22.39	22.13	0	0
		6	0	21.08	21.32	21.11	0-1	1
	16QAM	1	0	21.44	21.57	21.35	0-1	1
		1	3	21.16	21.41	21.33	0-1	1
		1	5	21.29	21.59	21.39	0-1	1
		3	0	21.22	21.40	21.18	0-1	1
		3	1	21.38	21.56	21.22	0-1	1
		3	3	21.27	21.52	21.28	0-1	1
		6	0	20.25	20.34	20.21	0-2	2
	64QAM	1	0	20.30	20.56	20.30	0-2	2
		1	3	20.07	20.34	20.18	0-2	2
		1	5	20.17	20.46	20.31	0-2	2
		3	0	20.15	20.37	20.16	0-2	2
		3	1	20.25	20.47	20.31	0-2	2
		3	3	20.19	20.43	20.26	0-2	2
		6	0	19.20	19.47	19.17	0-3	3
	256QAM	1	0	17.20	17.38	17.15	0-5	5
		1	3	17.04	17.17	17.08	0-5	5
		1	5	17.05	17.34	17.21	0-5	5
		3	0	17.03	17.22	17.08	0-5	5
		3	1	17.12	17.40	17.17	0-5	5
		3	3	17.12	17.34	17.18	0-5	5
		6	0	17.02	17.30	17.07	0-5	5

LTE Band 2 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 ㎒	18900 Ch. 1880 ㎒	19185 Ch. 1908.5 ㎒		
3 ㎒	QPSK	1	0	22.05	22.34	22.12	0	0
		1	7	22.04	22.27	22.17	0	0
		1	14	22.11	22.33	22.12	0	0
		8	0	21.16	21.37	21.20	0-1	1
		8	3	21.08	21.33	21.17	0-1	1
		8	7	21.15	21.37	21.23	0-1	1
		15	0	21.14	21.37	21.21	0-1	1
	16QAM	1	0	21.38	21.68	21.39	0-1	1
		1	7	21.37	21.50	21.34	0-1	1
		1	14	21.30	21.51	21.35	0-1	1
		8	0	20.24	20.44	20.21	0-2	2
		8	3	20.19	20.40	20.25	0-2	2
		8	7	20.24	20.44	20.26	0-2	2
		15	0	20.12	20.42	20.17	0-2	2
	64QAM	1	0	20.31	20.58	20.27	0-2	2
		1	7	20.15	20.47	20.32	0-2	2
		1	14	20.25	20.46	20.30	0-2	2
		8	0	19.13	19.40	19.19	0-3	3
		8	3	19.12	19.37	19.10	0-3	3
		8	7	19.19	19.41	19.20	0-3	3
		15	0	19.16	19.38	19.18	0-3	3
	256QAM	1	0	17.09	17.26	17.15	0-5	5
		1	7	17.00	17.32	17.14	0-5	5
		1	14	17.06	17.32	17.12	0-5	5
		8	0	17.05	17.27	17.11	0-5	5
		8	3	17.05	17.28	17.13	0-5	5
		8	7	17.01	17.35	17.15	0-5	5
		15	0	17.04	17.29	17.12	0-5	5

LTE Band 2 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 ㎒	18900 Ch. 1880 ㎒	19175 Ch. 1907.5 ㎒		
5 ㎒	QPSK	1	0	22.09	22.32	22.22	0	0
		1	12	22.05	22.30	22.22	0	0
		1	24	22.06	22.31	22.16	0	0
		12	0	21.13	21.37	21.23	0-1	1
		12	6	21.11	21.36	21.23	0-1	1
		12	11	21.14	21.36	21.21	0-1	1
		25	0	21.15	21.40	21.25	0-1	1
	16QAM	1	0	21.42	21.62	21.51	0-1	1
		1	12	21.42	21.59	21.46	0-1	1
		1	24	21.43	21.60	21.41	0-1	1
		12	0	20.23	20.43	20.26	0-2	2
		12	6	20.18	20.44	20.27	0-2	2
		12	11	20.10	20.45	20.25	0-2	2
		25	0	20.16	20.42	20.24	0-2	2
	64QAM	1	0	20.31	20.67	20.46	0-2	2
		1	12	20.24	20.49	20.20	0-2	2
		1	24	20.30	20.49	20.31	0-2	2
		12	0	19.18	19.45	19.26	0-3	3
		12	6	19.13	19.39	19.24	0-3	3
		12	11	19.11	19.40	19.24	0-3	3
		25	0	19.11	19.40	19.22	0-3	3
	256QAM	1	0	17.12	17.42	17.22	0-5	5
		1	12	17.09	17.30	17.12	0-5	5
		1	24	17.21	17.40	17.19	0-5	5
		12	0	17.10	17.36	17.16	0-5	5
		12	6	17.11	17.28	17.14	0-5	5
		12	11	17.07	17.32	17.13	0-5	5
		25	0	17.08	17.31	17.13	0-5	5

LTE Band 2 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 ㎒	18900 Ch. 1880 ㎒	19150 Ch. 1905 ㎒		
10 ㎒	QPSK	1	0	22.16	22.40	22.26	0	0
		1	24	22.11	22.38	22.20	0	0
		1	49	22.12	22.36	22.18	0	0
		25	0	21.18	21.46	21.31	0-1	1
		25	12	21.17	21.48	21.27	0-1	1
		25	24	21.18	21.44	21.27	0-1	1
		50	0	21.17	21.39	21.26	0-1	1
	16QAM	1	0	21.42	21.65	21.61	0-1	1
		1	24	21.20	21.65	21.46	0-1	1
		1	49	21.39	21.56	21.47	0-1	1
		25	0	20.23	20.53	20.31	0-2	2
		25	12	20.22	20.49	20.30	0-2	2
		25	24	20.23	20.42	20.29	0-2	2
		50	0	20.16	20.40	20.25	0-2	2
	64QAM	1	0	20.35	20.62	20.52	0-2	2
		1	24	20.41	20.55	20.45	0-2	2
		1	49	20.39	20.62	20.42	0-2	2
		25	0	19.19	19.44	19.29	0-3	3
		25	12	19.17	19.44	19.27	0-3	3
		25	24	19.14	19.40	19.21	0-3	3
		50	0	19.16	19.43	19.29	0-3	3
	256QAM	1	0	17.26	17.44	17.38	0-5	5
		1	24	17.07	17.32	17.21	0-5	5
		1	49	17.16	17.35	17.28	0-5	5
		25	0	17.12	17.35	17.17	0-5	5
		25	12	17.12	17.32	17.17	0-5	5
		25	24	17.05	17.32	17.14	0-5	5
		50	0	17.19	17.42	17.26	0-5	5

LTE Band 2 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 ㎒	18900 Ch. 1880 ㎒	19125 Ch. 1902.5 ㎒		
15 ㎒	QPSK	1	0	22.19	22.48	22.31	0	0
		1	36	22.13	22.39	22.20	0	0
		1	74	22.19	22.37	22.21	0	0
		36	0	21.22	21.41	21.28	0-1	1
		36	18	21.26	21.43	21.26	0-1	1
		36	39	21.23	21.41	21.25	0-1	1
		75	0	21.24	21.42	21.27	0-1	1
	16QAM	1	0	21.51	21.72	21.42	0-1	1
		1	36	21.40	21.57	21.48	0-1	1
		1	74	21.51	21.56	21.47	0-1	1
		36	0	20.23	20.44	20.27	0-2	2
		36	18	20.20	20.43	20.25	0-2	2
		36	39	20.22	20.43	20.24	0-2	2
		75	0	20.19	20.37	20.22	0-2	2
	64QAM	1	0	20.50	20.71	20.40	0-2	2
		1	36	20.22	20.59	20.37	0-2	2
		1	74	20.40	20.49	20.40	0-2	2
		36	0	19.21	19.43	19.28	0-3	3
		36	18	19.26	19.44	19.28	0-3	3
		36	39	19.23	19.38	19.24	0-3	3
		75	0	19.20	19.38	19.29	0-3	3
	256QAM	1	0	17.30	17.49	17.34	0-5	5
		1	36	17.12	17.34	17.19	0-5	5
		1	74	17.24	17.34	17.29	0-5	5
		36	0	17.21	17.40	17.23	0-5	5
		36	18	17.18	17.41	17.22	0-5	5
		36	39	17.18	17.39	17.20	0-5	5
		75	0	17.19	17.35	17.22	0-5	5

LTE Band 2 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	22.30	22.53	22.24	0	0
		1	49	22.28	22.42	22.23	0	0
		1	99	22.30	22.38	22.20	0	0
		50	0	21.34	21.43	21.29	0-1	1
		50	25	21.31	21.39	21.26	0-1	1
		50	49	21.29	21.38	21.23	0-1	1
		100	0	21.28	21.42	21.27	0-1	1
	16QAM	1	0	21.62	21.65	21.53	0-1	1
		1	49	21.35	21.55	21.40	0-1	1
		1	99	21.61	21.62	21.50	0-1	1
		50	0	20.32	20.42	20.29	0-2	2
		50	25	20.31	20.42	20.26	0-2	2
		50	49	20.31	20.41	20.24	0-2	2
		100	0	20.27	20.44	20.27	0-2	2
	64QAM	1	0	20.60	20.78	20.39	0-2	2
		1	49	20.43	20.54	20.39	0-2	2
		1	99	20.46	20.60	20.38	0-2	2
		50	0	19.33	19.46	19.32	0-3	3
		50	25	19.32	19.45	19.28	0-3	3
		50	49	19.31	19.38	19.27	0-3	3
		100	0	19.28	19.43	19.25	0-3	3
	256QAM	1	0	17.38	17.59	17.39	0-5	5
		1	49	17.29	17.35	17.24	0-5	5
		1	99	17.39	17.42	17.19	0-5	5
		50	0	17.33	17.45	17.30	0-5	5
		50	25	17.30	17.44	17.29	0-5	5
		50	49	17.29	17.40	17.25	0-5	5
		100	0	17.28	17.40	17.28	0-5	5

[LTE Band 4 Conducted Power]

LTE Band 4 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 ㎒	20175 Ch. 1732.5 ㎒	20393 Ch. 1754.3 ㎒		
1.4 ㎒	QPSK	1	0	22.53	22.53	22.59	0	0
		1	3	22.57	22.49	22.66	0	0
		1	5	22.56	22.52	22.65	0	0
		3	0	22.47	22.47	22.59	0	0
		3	1	22.63	22.61	22.72	0	0
		3	3	22.52	22.51	22.70	0	0
		6	0	21.55	21.51	21.65	0-1	1
	16QAM	1	0	21.80	21.72	21.87	0-1	1
		1	3	21.70	21.67	21.76	0-1	1
		1	5	21.76	21.67	21.86	0-1	1
		3	0	21.60	21.58	21.83	0-1	1
		3	1	21.72	21.67	21.87	0-1	1
		3	3	21.69	21.64	21.80	0-1	1
		6	0	20.74	20.60	20.85	0-2	2
	64QAM	1	0	20.74	20.71	20.91	0-2	2
		1	3	20.67	20.70	20.68	0-2	2
		1	5	20.82	20.70	20.92	0-2	2
		3	0	20.66	20.52	20.82	0-2	2
		3	1	20.85	20.71	20.92	0-2	2
		3	3	20.73	20.67	20.88	0-2	2
		6	0	19.62	19.55	19.80	0-3	3
	256QAM	1	0	17.54	17.61	17.72	0-5	5
		1	3	17.40	17.44	17.64	0-5	5
		1	5	17.58	17.59	17.69	0-5	5
		3	0	17.51	17.45	17.62	0-5	5
		3	1	17.57	17.64	17.74	0-5	5
		3	3	17.71	17.52	17.70	0-5	5
		6	0	17.56	17.54	17.61	0-5	5

LTE Band 4 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 ㎒	20175 Ch. 1732.5 ㎒	20385 Ch. 1753.5 ㎒		
3 ㎒	QPSK	1	0	22.49	22.51	22.59	0	0
		1	7	22.46	22.47	22.60	0	0
		1	14	22.48	22.55	22.68	0	0
		8	0	21.57	21.57	21.75	0-1	1
		8	3	21.53	21.53	21.73	0-1	1
		8	7	21.62	21.64	21.72	0-1	1
		15	0	21.57	21.60	21.74	0-1	1
	16QAM	1	0	21.77	21.80	21.98	0-1	1
		1	7	21.74	21.73	21.88	0-1	1
		1	14	21.67	21.78	22.03	0-1	1
		8	0	20.65	20.59	20.87	0-2	2
		8	3	20.65	20.59	20.82	0-2	2
		8	7	20.60	20.65	20.84	0-2	2
		15	0	20.56	20.63	20.80	0-2	2
	64QAM	1	0	20.74	20.78	21.06	0-2	2
		1	7	20.76	20.70	21.02	0-2	2
		1	14	20.73	20.69	21.05	0-2	2
		8	0	19.56	19.55	19.74	0-3	3
		8	3	19.60	19.52	19.72	0-3	3
		8	7	19.60	19.56	19.73	0-3	3
		15	0	19.61	19.57	19.79	0-3	3
	256QAM	1	0	17.52	17.55	17.58	0-5	5
		1	7	17.57	17.53	17.64	0-5	5
		1	14	17.57	17.56	17.62	0-5	5
		8	0	17.55	17.46	17.66	0-5	5
		8	3	17.52	17.50	17.63	0-5	5
		8	7	17.57	17.56	17.67	0-5	5
		15	0	17.51	17.50	17.60	0-5	5

LTE Band 4 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 ㎒	20175 Ch. 1732.5 ㎒	20375 Ch. 1752.5 ㎒		
5 ㎒	QPSK	1	0	22.51	22.56	22.66	0	0
		1	12	22.48	22.47	22.67	0	0
		1	24	22.53	22.56	22.67	0	0
		12	0	21.58	21.63	21.74	0-1	1
		12	6	21.57	21.62	21.76	0-1	1
		12	11	21.59	21.61	21.73	0-1	1
		25	0	21.60	21.60	21.76	0-1	1
	16QAM	1	0	21.70	21.76	21.95	0-1	1
		1	12	21.62	21.82	21.89	0-1	1
		1	24	21.68	21.86	21.93	0-1	1
		12	0	20.64	20.72	20.87	0-2	2
		12	6	20.66	20.64	20.85	0-2	2
		12	11	20.63	20.61	20.85	0-2	2
		25	0	20.69	20.61	20.78	0-2	2
	64QAM	1	0	20.81	20.76	20.97	0-2	2
		1	12	20.87	20.79	20.93	0-2	2
		1	24	20.82	20.76	21.02	0-2	2
		12	0	19.65	19.61	19.79	0-3	3
		12	6	19.61	19.62	19.82	0-3	3
		12	11	19.59	19.62	19.78	0-3	3
		25	0	19.61	19.57	19.78	0-3	3
	256QAM	1	0	17.66	17.62	17.82	0-5	5
		1	12	17.53	17.47	17.75	0-5	5
		1	24	17.60	17.71	17.81	0-5	5
		12	0	17.52	17.53	17.68	0-5	5
		12	6	17.51	17.55	17.66	0-5	5
		12	11	17.51	17.55	17.68	0-5	5
		25	0	17.53	17.53	17.68	0-5	5

LTE Band 4 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 ㎒	20175 Ch. 1732.5 ㎒	20350 Ch. 1750 ㎒		
10 ㎒	QPSK	1	0	22.56	22.54	22.77	0	0
		1	24	22.54	22.53	22.73	0	0
		1	49	22.55	22.61	22.75	0	0
		25	0	21.62	21.60	21.84	0-1	1
		25	12	21.61	21.60	21.82	0-1	1
		25	24	21.62	21.61	21.87	0-1	1
		50	0	21.54	21.63	21.74	0-1	1
	16QAM	1	0	21.77	21.80	21.98	0-1	1
		1	24	21.54	21.64	21.90	0-1	1
		1	49	21.63	21.91	22.04	0-1	1
		25	0	20.67	20.64	20.96	0-2	2
		25	12	20.64	20.64	20.88	0-2	2
		25	24	20.63	20.63	20.88	0-2	2
		50	0	20.55	20.65	20.80	0-2	2
	64QAM	1	0	20.82	20.71	21.06	0-2	2
		1	24	20.79	20.77	21.09	0-2	2
		1	49	20.82	20.86	21.09	0-2	2
		25	0	19.65	19.56	19.88	0-3	3
		25	12	19.58	19.57	19.84	0-3	3
		25	24	19.56	19.62	19.87	0-3	3
		50	0	19.59	19.63	19.82	0-3	3
	256QAM	1	0	17.55	17.57	17.77	0-5	5
		1	24	17.59	17.54	17.76	0-5	5
		1	49	17.57	17.66	17.77	0-5	5
		25	0	17.52	17.54	17.71	0-5	5
		25	12	17.51	17.51	17.73	0-5	5
		25	24	17.48	17.55	17.71	0-5	5
		50	0	17.53	17.59	17.75	0-5	5

LTE Band 4 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 ㎒	20175 Ch. 1732.5 ㎒	20325 Ch. 1747.5 ㎒		
15 ㎒	QPSK	1	0	22.50	22.56	22.75	0	0
		1	36	22.42	22.44	22.66	0	0
		1	74	22.51	22.64	22.70	0	0
		36	0	21.53	21.65	21.71	0-1	1
		36	18	21.55	21.63	21.74	0-1	1
		36	39	21.54	21.65	21.75	0-1	1
		75	0	21.54	21.61	21.75	0-1	1
	16QAM	1	0	21.69	21.71	22.02	0-1	1
		1	36	21.53	21.59	21.99	0-1	1
		1	74	21.73	21.80	21.98	0-1	1
		36	0	20.54	20.62	20.79	0-2	2
		36	18	20.60	20.61	20.81	0-2	2
		36	39	20.55	20.59	20.76	0-2	2
		75	0	20.49	20.57	20.76	0-2	2
	64QAM	1	0	20.72	20.77	21.04	0-2	2
		1	36	20.64	20.68	20.91	0-2	2
		1	74	20.77	20.82	20.95	0-2	2
		36	0	19.61	19.62	19.79	0-3	3
		36	18	19.58	19.66	19.75	0-3	3
		36	39	19.52	19.62	19.79	0-3	3
		75	0	19.51	19.59	19.79	0-3	3
	256QAM	1	0	17.65	17.62	17.89	0-5	5
		1	36	17.57	17.60	17.75	0-5	5
		1	74	17.68	17.55	17.77	0-5	5
		36	0	17.49	17.55	17.72	0-5	5
		36	18	17.54	17.61	17.70	0-5	5
		36	39	17.51	17.61	17.71	0-5	5
		75	0	17.49	17.58	17.67	0-5	5

LTE Band 4 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20175 Ch. 1732.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	22.58	0	0
		1	49	22.54	0	0
		1	99	22.67	0	0
		50	0	21.70	0-1	1
		50	25	21.63	0-1	1
		50	49	21.64	0-1	1
		100	0	21.63	0-1	1
	16QAM	1	0	21.72	0-1	1
		1	49	21.74	0-1	1
		1	99	21.94	0-1	1
		50	0	20.66	0-2	2
		50	25	20.62	0-2	2
		50	49	20.63	0-2	2
		100	0	20.63	0-2	2
	64QAM	1	0	20.68	0-2	2
		1	49	20.73	0-2	2
		1	99	20.94	0-2	2
		50	0	19.67	0-3	3
		50	25	19.62	0-3	3
		50	49	19.60	0-3	3
		100	0	19.56	0-3	3
	256QAM	1	0	17.66	0-5	5
		1	49	17.66	0-5	5
		1	99	17.76	0-5	5
		50	0	17.64	0-5	5
		50	25	17.61	0-5	5
		50	49	17.65	0-5	5
		100	0	17.63	0-5	5

[LTE Band 5 Conducted Power]

LTE Band 5 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20407 Ch. 824.7 ㎒	20525 Ch. 836.5 ㎒	20643 Ch. 848.3 ㎒		
1.4 ㎒	QPSK	1	0	24.05	24.06	23.81	0	0
		1	3	24.06	24.07	23.81	0	0
		1	5	24.03	24.09	23.80	0	0
		3	0	24.00	24.08	23.75	0	0
		3	1	24.19	24.19	23.87	0	0
		3	3	24.07	24.13	23.84	0	0
		6	0	23.02	23.09	22.80	0-1	1
	16QAM	1	0	23.10	23.35	23.02	0-1	1
		1	3	23.08	23.23	22.97	0-1	1
		1	5	23.20	23.20	22.99	0-1	1
		3	0	23.09	23.19	22.92	0-1	1
		3	1	23.16	23.30	23.02	0-1	1
		3	3	23.15	23.24	22.93	0-1	1
		6	0	22.11	22.18	21.87	0-2	2
	64QAM	1	0	22.13	22.28	21.90	0-2	2
		1	3	22.01	22.19	21.73	0-2	2
		1	5	22.26	22.30	21.91	0-2	2
		3	0	22.07	22.20	21.81	0-2	2
		3	1	22.14	22.41	21.98	0-2	2
		3	3	22.12	22.17	21.91	0-2	2
		6	0	21.00	21.17	20.85	0-3	3
	256QAM	1	0	19.06	19.25	18.94	0-5	5
		1	3	19.04	19.09	18.92	0-5	5
		1	5	19.12	19.20	19.00	0-5	5
		3	0	18.95	19.11	18.74	0-5	5
		3	1	19.05	19.23	18.86	0-5	5
		3	3	19.06	19.16	18.84	0-5	5
		6	0	18.96	19.11	18.77	0-5	5

LTE Band 5 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20415 Ch. 825.5 ㎒	20525 Ch. 836.5 ㎒	20635 Ch. 847.5 ㎒		
3 ㎒	QPSK	1	0	24.01	24.09	23.72	0	0
		1	7	23.98	23.99	23.69	0	0
		1	14	24.05	24.07	23.77	0	0
		8	0	23.15	23.17	22.86	0-1	1
		8	3	23.08	23.06	22.81	0-1	1
		8	7	23.13	23.09	22.87	0-1	1
		15	0	23.14	23.16	22.86	0-1	1
	16QAM	1	0	23.37	23.39	22.89	0-1	1
		1	7	23.25	23.21	22.88	0-1	1
		1	14	23.14	23.21	22.85	0-1	1
		8	0	22.18	22.16	21.84	0-2	2
		8	3	22.09	22.12	21.82	0-2	2
		8	7	22.11	22.17	21.91	0-2	2
		15	0	22.09	22.14	21.81	0-2	2
	64QAM	1	0	22.20	22.38	22.01	0-2	2
		1	7	22.17	22.20	21.94	0-2	2
		1	14	22.29	22.29	22.07	0-2	2
		8	0	21.02	21.11	20.81	0-3	3
		8	3	21.05	21.10	20.80	0-3	3
		8	7	21.08	21.09	20.85	0-3	3
		15	0	21.06	21.09	20.80	0-3	3
	256QAM	1	0	19.07	19.24	18.95	0-5	5
		1	7	18.97	18.99	18.84	0-5	5
		1	14	19.05	19.15	18.90	0-5	5
		8	0	18.97	19.06	18.77	0-5	5
		8	3	18.96	19.08	18.75	0-5	5
		8	7	19.00	19.05	18.76	0-5	5
		15	0	18.98	19.04	18.78	0-5	5

LTE Band 5 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20425 Ch. 826.5 ㎒	20525 Ch. 836.5 ㎒	20625 Ch. 846.5 ㎒		
5 ㎒	QPSK	1	0	24.02	24.19	23.87	0	0
		1	12	23.95	24.10	23.84	0	0
		1	24	24.04	24.15	23.95	0	0
		12	0	23.13	23.22	22.96	0-1	1
		12	6	23.15	23.21	22.97	0-1	1
		12	11	23.11	23.18	22.98	0-1	1
		25	0	23.11	23.21	22.95	0-1	1
	16QAM	1	0	23.26	23.37	23.02	0-1	1
		1	12	23.22	23.22	22.99	0-1	1
		1	24	23.28	23.40	23.03	0-1	1
		12	0	22.20	22.29	21.98	0-2	2
		12	6	22.17	22.24	21.96	0-2	2
		12	11	22.15	22.24	22.00	0-2	2
		25	0	22.12	22.21	21.95	0-2	2
	64QAM	1	0	22.36	22.39	22.00	0-2	2
		1	12	22.15	22.31	22.00	0-2	2
		1	24	22.32	22.36	22.06	0-2	2
		12	0	21.14	21.25	20.92	0-3	3
		12	6	21.15	21.24	20.97	0-3	3
		12	11	21.15	21.19	20.95	0-3	3
		25	0	21.09	21.19	20.92	0-3	3
	256QAM	1	0	19.15	19.33	18.92	0-5	5
		1	12	19.08	19.15	18.87	0-5	5
		1	24	19.22	19.24	18.98	0-5	5
		12	0	19.07	19.20	18.85	0-5	5
		12	6	19.06	19.15	18.85	0-5	5
		12	11	19.06	19.07	18.88	0-5	5
		25	0	19.07	19.13	18.89	0-5	5

LTE Band 5 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20525 Ch. 836.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	24.26	0	0
		1	24	24.12	0	0
		1	49	24.09	0	0
		25	0	23.23	0-1	1
		25	12	23.21	0-1	1
		25	24	23.17	0-1	1
		50	0	23.22	0-1	1
	16QAM	1	0	23.45	0-1	1
		1	24	23.21	0-1	1
		1	49	23.36	0-1	1
		25	0	22.27	0-2	2
		25	12	22.21	0-2	2
		25	24	22.16	0-2	2
		50	0	22.18	0-2	2
	64QAM	1	0	22.55	0-2	2
		1	24	22.32	0-2	2
		1	49	22.36	0-2	2
		25	0	21.25	0-3	3
		25	12	21.18	0-3	3
		25	24	21.11	0-3	3
		50	0	21.19	0-3	3
	256QAM	1	0	19.43	0-5	5
		1	24	19.18	0-5	5
		1	49	19.25	0-5	5
		25	0	19.22	0-5	5
		25	12	19.11	0-5	5
		25	24	19.07	0-5	5
		50	0	19.13	0-5	5

[LTE Band 12 Conducted Power]

LTE Band 12 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23017 Ch. 699.7 ㎒	23095 Ch. 707.5 ㎒	23173 Ch. 715.3 ㎒		
1.4 ㎒	QPSK	1	0	23.30	23.06	22.97	0	0
		1	3	23.29	23.03	22.93	0	0
		1	5	23.29	23.04	22.97	0	0
		3	0	23.26	23.03	22.93	0	0
		3	1	23.45	23.11	23.05	0	0
		3	3	23.30	23.07	22.94	0	0
		6	0	22.29	22.04	21.93	0-1	1
	16QAM	1	0	22.47	22.34	22.18	0-1	1
		1	3	22.36	22.15	22.04	0-1	1
		1	5	22.50	22.24	22.12	0-1	1
		3	0	22.31	22.10	22.00	0-1	1
		3	1	22.46	22.23	22.14	0-1	1
		3	3	22.31	22.20	22.03	0-1	1
		6	0	21.28	21.11	21.00	0-2	2
	64QAM	1	0	21.44	21.16	21.12	0-2	2
		1	3	21.27	21.08	20.94	0-2	2
		1	5	21.39	21.14	20.95	0-2	2
		3	0	21.19	21.03	20.95	0-2	2
		3	1	21.37	21.21	21.13	0-2	2
		3	3	21.21	21.09	20.98	0-2	2
		6	0	20.30	20.08	20.04	0-3	3
	256QAM	1	0	18.24	18.12	17.95	0-5	5
		1	3	18.29	18.00	17.93	0-5	5
		1	5	18.33	18.13	18.10	0-5	5
		3	0	18.14	18.01	17.98	0-5	5
		3	1	18.20	18.04	18.12	0-5	5
		3	3	18.30	18.08	18.08	0-5	5
		6	0	18.21	18.03	17.97	0-5	5

LTE Band 12 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23025 Ch. 700.5 ㎒	23095 Ch. 707.5 ㎒	23165 Ch. 714.5 ㎒		
3 ㎒	QPSK	1	0	23.20	23.01	22.91	0	0
		1	7	23.08	22.90	22.80	0	0
		1	14	23.22	22.96	22.93	0	0
		8	0	22.26	22.08	21.98	0-1	1
		8	3	22.20	22.01	21.92	0-1	1
		8	7	22.25	22.08	21.99	0-1	1
		15	0	22.27	22.06	21.99	0-1	1
	16QAM	1	0	22.33	22.24	22.02	0-1	1
		1	7	22.23	22.21	22.05	0-1	1
		1	14	22.47	22.32	22.09	0-1	1
		8	0	21.17	21.12	20.94	0-2	2
		8	3	21.22	21.08	20.92	0-2	2
		8	7	21.32	21.08	20.99	0-2	2
		15	0	21.24	21.14	21.00	0-2	2
	64QAM	1	0	21.28	21.21	21.05	0-2	2
		1	7	21.25	21.12	21.08	0-2	2
		1	14	21.43	21.17	21.08	0-2	2
		8	0	20.18	20.06	19.95	0-3	3
		8	3	20.14	20.01	19.95	0-3	3
		8	7	20.22	20.08	19.96	0-3	3
		15	0	20.23	20.02	19.97	0-3	3
	256QAM	1	0	18.24	18.19	17.99	0-5	5
		1	7	18.18	17.90	17.94	0-5	5
		1	14	18.28	18.12	17.99	0-5	5
		8	0	18.12	18.05	17.88	0-5	5
		8	3	18.17	17.98	17.87	0-5	5
		8	7	18.18	18.00	17.93	0-5	5
		15	0	18.11	17.98	17.86	0-5	5

LTE Band 12 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23035 Ch. 701.5 ㎒	23095 Ch. 707.5 ㎒	23155 Ch. 713.5 ㎒		
5 ㎒	QPSK	1	0	23.29	23.26	23.06	0	0
		1	12	23.23	23.09	22.90	0	0
		1	24	23.28	23.11	23.08	0	0
		12	0	22.39	22.22	22.10	0-1	1
		12	6	22.37	22.17	22.11	0-1	1
		12	11	22.31	22.19	22.08	0-1	1
		25	0	22.39	22.18	22.10	0-1	1
	16QAM	1	0	22.38	22.61	22.29	0-1	1
		1	12	22.32	22.45	22.21	0-1	1
		1	24	22.44	22.33	22.26	0-1	1
		12	0	21.33	21.29	21.13	0-2	2
		12	6	21.33	21.23	21.12	0-2	2
		12	11	21.35	21.21	21.12	0-2	2
		25	0	21.29	21.21	21.08	0-2	2
	64QAM	1	0	21.45	21.48	21.27	0-2	2
		1	12	21.35	21.21	21.11	0-2	2
		1	24	21.54	21.34	21.26	0-2	2
		12	0	20.29	20.26	20.13	0-3	3
		12	6	20.29	20.20	20.09	0-3	3
		12	11	20.28	20.19	20.09	0-3	3
		25	0	20.30	20.17	20.08	0-3	3
	256QAM	1	0	18.40	18.38	18.14	0-5	5
		1	12	18.23	18.13	17.99	0-5	5
		1	24	18.30	18.19	18.14	0-5	5
		12	0	18.27	18.20	18.06	0-5	5
		12	6	18.26	18.17	18.03	0-5	5
		12	11	18.30	18.13	18.04	0-5	5
		25	0	18.26	18.24	18.03	0-5	5

LTE Band 12 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23095 Ch. 707.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.30	0	0
		1	24	23.20	0	0
		1	49	23.07	0	0
		25	0	22.28	0-1	1
		25	12	22.23	0-1	1
		25	24	22.21	0-1	1
		50	0	22.22	0-1	1
	16QAM	1	0	22.53	0-1	1
		1	24	22.29	0-1	1
		1	49	22.42	0-1	1
		25	0	21.30	0-2	2
		25	12	21.23	0-2	2
		25	24	21.17	0-2	2
		50	0	21.21	0-2	2
	64QAM	1	0	21.45	0-2	2
		1	24	21.39	0-2	2
		1	49	21.31	0-2	2
		25	0	20.27	0-3	3
		25	12	20.22	0-3	3
		25	24	20.14	0-3	3
		50	0	20.22	0-3	3
	256QAM	1	0	18.53	0-5	5
		1	24	18.36	0-5	5
		1	49	18.20	0-5	5
		25	0	18.25	0-5	5
		25	12	18.16	0-5	5
		25	24	18.15	0-5	5
		50	0	18.19	0-5	5

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

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
5 ㎒	QPSK	1	0	23.78	0	0
		1	12	23.75	0	0
		1	24	23.81	0	0
		12	0	22.83	0-1	1
		12	6	22.85	0-1	1
		12	11	22.84	0-1	1
		25	0	22.83	0-1	1
	16QAM	1	0	23.05	0-1	1
		1	12	23.01	0-1	1
		1	24	23.22	0-1	1
		12	0	21.84	0-2	2
		12	6	21.83	0-2	2
		12	11	21.84	0-2	2
		25	0	21.83	0-2	2
	64QAM	1	0	21.93	0-2	2
		1	12	21.83	0-2	2
		1	24	22.06	0-2	2
		12	0	20.83	0-3	3
		12	6	20.84	0-3	3
		12	11	20.79	0-3	3
		25	0	20.78	0-3	3
	256QAM	1	0	18.92	0-5	5
		1	12	18.84	0-5	5
		1	24	19.10	0-5	5
		12	0	18.77	0-5	5
		12	6	18.74	0-5	5
		12	11	18.75	0-5	5
		25	0	18.75	0-5	5

LTE Band 13 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.59	0	0
		1	24	23.76	0	0
		1	49	23.80	0	0
		25	0	22.81	0-1	1
		25	12	22.84	0-1	1
		25	24	22.88	0-1	1
		50	0	22.84	0-1	1
	16QAM	1	0	22.95	0-1	1
		1	24	23.06	0-1	1
		1	49	23.13	0-1	1
		25	0	21.83	0-2	2
		25	12	21.86	0-2	2
		25	24	21.93	0-2	2
		50	0	21.85	0-2	2
	64QAM	1	0	21.94	0-2	2
		1	24	21.99	0-2	2
		1	49	21.98	0-2	2
		25	0	20.77	0-3	3
		25	12	20.84	0-3	3
		25	24	20.86	0-3	3
		50	0	20.84	0-3	3
	256QAM	1	0	18.87	0-5	5
		1	24	18.95	0-5	5
		1	49	18.79	0-5	5
		25	0	18.71	0-5	5
		25	12	18.81	0-5	5
		25	24	18.83	0-5	5
		50	0	18.81	0-5	5

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

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23790 Ch. 710 MHz	MPR Allowed Per 3GPP [dB]	MPR [dB]
5 ㎒	QPSK	1	0	23.19	0	0
		1	12	23.06	0	0
		1	24	23.11	0	0
		12	0	22.26	0-1	1
		12	6	22.20	0-1	1
		12	11	22.16	0-1	1
		25	0	22.19	0-1	1
	16QAM	1	0	22.60	0-1	1
		1	12	22.35	0-1	1
		1	24	22.44	0-1	1
		12	0	21.28	0-2	2
		12	6	21.24	0-2	2
		12	11	21.20	0-2	2
		25	0	21.23	0-2	2
	64QAM	1	0	21.36	0-2	2
		1	12	21.28	0-2	2
		1	24	21.34	0-2	2
		12	0	20.25	0-3	3
		12	6	20.19	0-3	3
		12	11	20.23	0-3	3
		25	0	20.18	0-3	3
	256QAM	1	0	18.29	0-5	5
		1	12	18.08	0-5	5
		1	24	18.31	0-5	5
		12	0	18.16	0-5	5
		12	6	18.19	0-5	5
		12	11	18.17	0-5	5
		25	0	18.17	0-5	5

LTE Band 17 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23790 Ch. 710 MHz	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.31	0	0
		1	24	23.17	0	0
		1	49	23.15	0	0
		25	0	22.33	0-1	1
		25	12	22.24	0-1	1
		25	24	22.20	0-1	1
		50	0	22.25	0-1	1
	16QAM	1	0	22.61	0-1	1
		1	24	22.36	0-1	1
		1	49	22.42	0-1	1
		25	0	21.31	0-2	2
		25	12	21.25	0-2	2
		25	24	21.26	0-2	2
		50	0	21.25	0-2	2
	64QAM	1	0	21.48	0-2	2
		1	24	21.46	0-2	2
		1	49	21.40	0-2	2
		25	0	20.32	0-3	3
		25	12	20.25	0-3	3
		25	24	20.25	0-3	3
		50	0	20.27	0-3	3
	256QAM	1	0	18.42	0-5	5
		1	24	18.34	0-5	5
		1	49	18.37	0-5	5
		25	0	18.25	0-5	5
		25	12	18.23	0-5	5
		25	24	18.19	0-5	5
		50	0	18.20	0-5	5

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

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 ㎒	26365 Ch. 1882.5 ㎒	26683 Ch. 1914.3 ㎒		
1.4 ㎒	QPSK	1	0	22.04	22.29	22.13	0	0
		1	3	22.08	22.33	22.20	0	0
		1	5	22.08	22.30	22.15	0	0
		3	0	22.04	22.27	22.13	0	0
		3	1	22.16	22.47	22.28	0	0
		3	3	22.05	22.32	22.18	0	0
		6	0	21.04	21.32	21.12	0-1	1
	16QAM	1	0	21.29	21.50	21.50	0-1	1
		1	3	21.20	21.29	21.33	0-1	1
		1	5	21.28	21.47	21.37	0-1	1
		3	0	21.10	21.40	21.31	0-1	1
		3	1	21.20	21.51	21.46	0-1	1
		3	3	21.19	21.48	21.31	0-1	1
		6	0	20.17	20.37	20.29	0-2	2
	64QAM	1	0	20.15	20.52	20.40	0-2	2
		1	3	20.20	20.44	20.28	0-2	2
		1	5	20.25	20.46	20.31	0-2	2
		3	0	20.11	20.33	20.25	0-2	2
		3	1	20.17	20.47	20.34	0-2	2
		3	3	20.16	20.47	20.31	0-2	2
		6	0	19.15	19.34	19.27	0-3	3
	256QAM	1	0	17.12	17.36	17.17	0-5	5
		1	3	16.89	17.19	17.04	0-5	5
		1	5	17.10	17.35	17.14	0-5	5
		3	0	16.99	17.26	17.11	0-5	5
		3	1	17.04	17.32	17.18	0-5	5
		3	3	17.11	17.31	17.25	0-5	5
		6	0	16.98	17.26	17.14	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	26675Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	21.98	22.28	22.17	0	0
		1	7	21.97	22.30	22.13	0	0
		1	14	22.02	22.29	22.14	0	0
		8	0	21.12	21.35	21.27	0-1	1
		8	3	21.04	21.35	21.19	0-1	1
		8	7	21.12	21.38	21.29	0-1	1
		15	0	21.08	21.37	21.25	0-1	1
	16QAM	1	0	21.19	21.61	21.44	0-1	1
		1	7	21.25	21.37	21.40	0-1	1
		1	14	21.28	21.50	21.35	0-1	1
		8	0	20.12	20.44	20.28	0-2	2
		8	3	20.12	20.39	20.29	0-2	2
		8	7	20.15	20.41	20.34	0-2	2
		15	0	20.13	20.38	20.27	0-2	2
	64QAM	1	0	20.26	20.48	20.38	0-2	2
		1	7	20.11	20.48	20.25	0-2	2
		1	14	20.21	20.44	20.35	0-2	2
		8	0	19.12	19.34	19.29	0-3	3
		8	3	19.07	19.35	19.22	0-3	3
		8	7	19.10	19.40	19.27	0-3	3
		15	0	19.08	19.37	19.24	0-3	3
	256QAM	1	0	17.07	17.23	17.18	0-5	5
		1	7	16.95	17.17	17.04	0-5	5
		1	14	17.06	17.33	17.20	0-5	5
		8	0	16.98	17.27	17.16	0-5	5
		8	3	16.97	17.29	17.16	0-5	5
		8	7	17.05	17.25	17.15	0-5	5
		15	0	16.98	17.30	17.14	0-5	5

LTE Band 25 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 ㎒	26365 Ch. 1882.5 ㎒	26665 Ch. 1912.5 ㎒		
5 ㎒	QPSK	1	0	22.07	22.33	22.16	0	0
		1	12	21.98	22.27	22.13	0	0
		1	24	22.01	22.28	22.18	0	0
		12	0	21.12	21.36	21.24	0-1	1
		12	6	21.13	21.35	21.22	0-1	1
		12	11	21.06	21.36	21.22	0-1	1
		25	0	21.11	21.38	21.22	0-1	1
	16QAM	1	0	21.33	21.59	21.38	0-1	1
		1	12	21.39	21.59	21.49	0-1	1
		1	24	21.34	21.52	21.44	0-1	1
		12	0	20.12	20.40	20.24	0-2	2
		12	6	20.11	20.34	20.23	0-2	2
		12	11	20.11	20.36	20.24	0-2	2
		25	0	20.15	20.42	20.22	0-2	2
	64QAM	1	0	20.23	20.53	20.37	0-2	2
		1	12	20.16	20.50	20.33	0-2	2
		1	24	20.24	20.52	20.51	0-2	2
		12	0	19.14	19.37	19.24	0-3	3
		12	6	19.07	19.38	19.20	0-3	3
		12	11	19.11	19.39	19.22	0-3	3
		25	0	19.09	19.36	19.21	0-3	3
	256QAM	1	0	17.03	17.45	17.23	0-5	5
		1	12	17.05	17.14	17.21	0-5	5
		1	24	17.06	17.37	17.19	0-5	5
		12	0	17.03	17.29	17.15	0-5	5
		12	6	16.95	17.27	17.12	0-5	5
		12	11	16.96	17.26	17.12	0-5	5
		25	0	17.02	17.27	17.12	0-5	5

LTE Band 25 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 ㎒	26365 Ch. 1882.5 ㎒	26640 Ch. 1910 ㎒		
10 ㎒	QPSK	1	0	22.10	22.40	22.20	0	0
		1	24	22.06	22.32	22.12	0	0
		1	49	22.08	22.36	22.17	0	0
		25	0	21.18	21.41	21.23	0-1	1
		25	12	21.15	21.36	21.19	0-1	1
		25	24	21.12	21.38	21.19	0-1	1
		50	0	21.11	21.39	21.20	0-1	1
	16QAM	1	0	21.44	21.55	21.45	0-1	1
		1	24	21.16	21.40	21.25	0-1	1
		1	49	21.38	21.49	21.37	0-1	1
		25	0	20.15	20.43	20.23	0-2	2
		25	12	20.13	20.39	20.18	0-2	2
		25	24	20.14	20.34	20.20	0-2	2
		50	0	20.14	20.35	20.19	0-2	2
	64QAM	1	0	20.37	20.50	20.43	0-2	2
		1	24	20.26	20.48	20.18	0-2	2
		1	49	20.29	20.52	20.34	0-2	2
		25	0	19.16	19.42	19.21	0-3	3
		25	12	19.13	19.34	19.15	0-3	3
		25	24	19.10	19.35	19.18	0-3	3
		50	0	19.13	19.39	19.19	0-3	3
	256QAM	1	0	17.15	17.35	17.19	0-5	5
		1	24	17.09	17.32	17.08	0-5	5
		1	49	17.16	17.36	17.19	0-5	5
		25	0	17.08	17.28	17.13	0-5	5
		25	12	17.09	17.28	17.09	0-5	5
		25	24	17.08	17.26	17.09	0-5	5
		50	0	17.17	17.38	17.18	0-5	5

LTE Band 25 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 ㎒	26365 Ch. 1882.5 ㎒	26615 Ch. 1907.5 ㎒		
15 MHz	QPSK	1	0	22.19	22.43	22.21	0	0
		1	36	22.08	22.27	22.07	0	0
		1	74	22.16	22.37	22.18	0	0
		36	0	21.18	21.40	21.22	0-1	1
		36	18	21.19	21.42	21.19	0-1	1
		36	39	21.17	21.40	21.20	0-1	1
		75	0	21.19	21.36	21.21	0-1	1
	16QAM	1	0	21.32	21.66	21.48	0-1	1
		1	36	21.31	21.48	21.31	0-1	1
		1	74	21.40	21.59	21.43	0-1	1
		36	0	20.14	20.38	20.21	0-2	2
		36	18	20.17	20.40	20.16	0-2	2
		36	39	20.16	20.40	20.15	0-2	2
		75	0	20.17	20.35	20.18	0-2	2
	64QAM	1	0	20.36	20.76	20.45	0-2	2
		1	36	20.08	20.49	20.28	0-2	2
		1	74	20.27	20.55	20.32	0-2	2
		36	0	19.16	19.39	19.18	0-3	3
		36	18	19.18	19.38	19.16	0-3	3
		36	39	19.16	19.32	19.20	0-3	3
		75	0	19.12	19.33	19.16	0-3	3
	256QAM	1	0	17.14	17.50	17.20	0-5	5
		1	36	17.00	17.42	17.13	0-5	5
		1	74	17.13	17.30	17.16	0-5	5
		36	0	17.18	17.38	17.18	0-5	5
		36	18	17.14	17.35	17.15	0-5	5
		36	39	17.14	17.35	17.12	0-5	5
		75	0	17.12	17.32	17.14	0-5	5

LTE Band 25 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	22.27	22.45	22.30	0	0
		1	49	22.19	22.35	22.19	0	0
		1	99	22.26	22.35	22.17	0	0
		50	0	21.28	21.37	21.25	0-1	1
		50	25	21.24	21.41	21.22	0-1	1
		50	49	21.27	21.42	21.25	0-1	1
		100	0	21.25	21.43	21.30	0-1	1
	16QAM	1	0	21.49	21.67	21.44	0-1	1
		1	49	21.25	21.45	21.32	0-1	1
		1	99	21.48	21.53	21.46	0-1	1
		50	0	20.26	20.40	20.28	0-2	2
		50	25	20.22	20.40	20.23	0-2	2
		50	49	20.24	20.41	20.22	0-2	2
		100	0	20.22	20.41	20.25	0-2	2
	64QAM	1	0	20.48	20.72	20.40	0-2	2
		1	49	20.41	20.51	20.39	0-2	2
		1	99	20.42	20.53	20.37	0-2	2
		50	0	19.26	19.45	19.27	0-3	3
		50	25	19.24	19.38	19.21	0-3	3
		50	49	19.22	19.37	19.17	0-3	3
		100	0	19.24	19.38	19.26	0-3	3
	256QAM	1	0	17.36	17.46	17.28	0-5	5
		1	49	17.21	17.36	17.20	0-5	5
		1	99	17.25	17.44	17.26	0-5	5
		50	0	17.26	17.41	17.30	0-5	5
		50	25	17.29	17.39	17.24	0-5	5
		50	49	17.25	17.37	17.24	0-5	5
		100	0	17.29	17.37	17.25	0-5	5

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

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26697 Ch. 814.7 ㎒	26865 Ch. 831.5 ㎒	27033 Ch. 848.3 ㎒		
1.4 ㎒	QPSK	1	0	23.29	23.64	23.36	0	0
		1	3	23.32	23.63	23.37	0	0
		1	5	23.34	23.69	23.44	0	0
		3	0	23.29	23.63	23.37	0	0
		3	1	23.43	23.79	23.57	0	0
		3	3	23.36	23.68	23.47	0	0
		6	0	22.31	22.63	22.37	0-1	1
	16QAM	1	0	22.47	22.80	22.66	0-1	1
		1	3	22.40	22.74	22.39	0-1	1
		1	5	22.53	22.83	22.61	0-1	1
		3	0	22.51	22.72	22.47	0-1	1
		3	1	22.58	22.82	22.64	0-1	1
		3	3	22.49	22.75	22.47	0-1	1
		6	0	21.44	21.72	21.50	0-2	2
	64QAM	1	0	21.48	21.84	21.59	0-2	2
		1	3	21.53	21.66	21.46	0-2	2
		1	5	21.60	21.85	21.54	0-2	2
		3	0	21.39	21.75	21.42	0-2	2
		3	1	21.46	21.84	21.49	0-2	2
		3	3	21.51	21.75	21.43	0-2	2
		6	0	20.43	20.73	20.46	0-3	3
	256QAM	1	0	18.46	18.83	18.40	0-5	5
		1	3	18.45	18.70	18.31	0-5	5
		1	5	18.58	18.85	18.42	0-5	5
		3	0	18.35	18.65	18.34	0-5	5
		3	1	18.41	18.83	18.47	0-5	5
		3	3	18.40	18.72	18.49	0-5	5
		6	0	18.32	18.66	18.31	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	23.43	23.74	23.42	0	0
		1	7	23.38	23.61	23.36	0	0
		1	14	23.46	23.67	23.45	0	0
		8	0	22.52	22.77	22.49	0-1	1
		8	3	22.48	22.71	22.46	0-1	1
		8	7	22.52	22.72	22.54	0-1	1
		15	0	22.52	22.76	22.52	0-1	1
	16QAM	1	0	22.74	22.91	22.66	0-1	1
		1	7	22.65	22.80	22.60	0-1	1
		1	14	22.77	23.00	22.63	0-1	1
		8	0	21.54	21.75	21.59	0-2	2
		8	3	21.56	21.79	21.52	0-2	2
		8	7	21.60	21.78	21.56	0-2	2
		15	0	21.48	21.75	21.50	0-2	2
	64QAM	1	0	21.66	21.96	21.63	0-2	2
		1	7	21.52	21.81	21.61	0-2	2
		1	14	21.71	21.91	21.59	0-2	2
		8	0	20.48	20.73	20.44	0-3	3
		8	3	20.45	20.72	20.49	0-3	3
		8	7	20.52	20.72	20.51	0-3	3
		15	0	20.50	20.76	20.50	0-3	3
	256QAM	1	0	18.60	18.89	18.53	0-5	5
		1	7	18.46	18.64	18.28	0-5	5
		1	14	18.60	18.77	18.55	0-5	5
		8	0	18.41	18.72	18.40	0-5	5
		8	3	18.44	18.70	18.41	0-5	5
		8	7	18.46	18.67	18.46	0-5	5
		15	0	18.41	18.66	18.39	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	23.39	23.66	23.44	0	0
		1	12	23.33	23.58	23.38	0	0
		1	24	23.44	23.62	23.55	0	0
		12	0	22.44	22.69	22.51	0-1	1
		12	6	22.49	22.68	22.53	0-1	1
		12	11	22.45	22.66	22.52	0-1	1
		25	0	22.44	22.65	22.52	0-1	1
	16QAM	1	0	22.55	22.83	22.51	0-1	1
		1	12	22.68	22.82	22.61	0-1	1
		1	24	22.85	22.82	22.68	0-1	1
		12	0	21.44	21.70	21.45	0-2	2
		12	6	21.41	21.69	21.56	0-2	2
		12	11	21.44	21.65	21.57	0-2	2
		25	0	21.43	21.66	21.49	0-2	2
	64QAM	1	0	21.47	21.86	21.62	0-2	2
		1	12	21.44	21.75	21.47	0-2	2
		1	24	21.64	21.81	21.65	0-2	2
		12	0	20.41	20.69	20.48	0-3	3
		12	6	20.37	20.64	20.47	0-3	3
		12	11	20.44	20.68	20.57	0-3	3
		25	0	20.39	20.62	20.46	0-3	3
	256QAM	1	0	18.33	18.77	18.46	0-5	5
		1	12	18.42	18.49	18.42	0-5	5
		1	24	18.54	18.74	18.58	0-5	5
		12	0	18.36	18.65	18.44	0-5	5
		12	6	18.36	18.61	18.43	0-5	5
		12	11	18.40	18.60	18.48	0-5	5
		25	0	18.31	18.64	18.45	0-5	5

LTE Band 26 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26740 Ch. 819 ㎒	26865 Ch. 831.5 ㎒	26990 Ch. 844 ㎒		
10 ㎒	QPSK	1	0	23.51	23.72	23.56	0	0
		1	24	23.53	23.67	23.56	0	0
		1	49	23.55	23.58	23.63	0	0
		25	0	22.58	22.76	22.57	0-1	1
		25	12	22.56	22.70	22.61	0-1	1
		25	24	22.61	22.67	22.65	0-1	1
		50	0	22.57	22.71	22.67	0-1	1
	16QAM	1	0	22.73	22.98	22.72	0-1	1
		1	24	22.61	22.79	22.61	0-1	1
		1	49	22.87	22.88	22.89	0-1	1
		25	0	21.56	21.75	21.59	0-2	2
		25	12	21.55	21.71	21.61	0-2	2
		25	24	21.59	21.67	21.66	0-2	2
		50	0	21.54	21.69	21.61	0-2	2
	64QAM	1	0	21.58	21.95	21.66	0-2	2
		1	24	21.69	21.81	21.66	0-2	2
		1	49	21.78	21.74	21.85	0-2	2
		25	0	20.51	20.66	20.55	0-3	3
		25	12	20.55	20.71	20.55	0-3	3
		25	24	20.52	20.69	20.64	0-3	3
		50	0	20.60	20.74	20.66	0-3	3
	256QAM	1	0	18.60	18.81	18.58	0-5	5
		1	24	18.69	18.79	18.68	0-5	5
		1	49	18.75	18.77	18.85	0-5	5
		25	0	18.54	18.69	18.53	0-5	5
		25	12	18.50	18.66	18.55	0-5	5
		25	24	18.53	18.66	18.62	0-5	5
		50	0	18.51	18.68	18.59	0-5	5

LTE Band 26 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					26865 Ch. 831.5 ㎒			
15 ㎒	QPSK	1	0		23.79		0	0
		1	36		23.61		0	0
		1	74		23.60		0	0
		36	0		22.81		0-1	1
		36	18		22.75		0-1	1
		36	39		22.68		0-1	1
		75	0		22.75		0-1	1
	16QAM	1	0		23.08		0-1	1
		1	36		22.82		0-1	1
		1	74		22.81		0-1	1
		36	0		21.81		0-2	2
		36	18		21.75		0-2	2
		36	39		21.63		0-2	2
		75	0		21.70		0-2	2
	64QAM	1	0		21.94		0-2	2
		1	36		21.78		0-2	2
		1	74		21.78		0-2	2
		36	0		20.77		0-3	3
		36	18		20.73		0-3	3
		36	39		20.63		0-3	3
		75	0		20.67		0-3	3
	256QAM	1	0		18.87		0-5	5
		1	36		18.79		0-5	5
		1	74		18.68		0-5	5
		36	0		18.76		0-5	5
		36	18		18.75		0-5	5
		36	39		18.63		0-5	5
		75	0		18.67		0-5	5

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

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39675 Ch. 2498.5 ㎒	40148 Ch. 2545.8 ㎒	40620 Ch. 2593.0 ㎒	41093 Ch. 2640.3 ㎒	41565 Ch. 2687.5 ㎒		
5 ㎒	QPSK	1	0	22.32	22.28	22.50	22.28	22.00	0	0
		1	12	22.26	22.26	22.47	22.35	22.06	0	0
		1	24	22.38	22.26	22.54	22.32	22.05	0	0
		12	0	21.42	21.43	21.63	21.37	21.13	0-1	1
		12	6	21.43	21.39	21.59	21.31	21.08	0-1	1
		12	11	21.44	21.41	21.63	21.33	21.11	0-1	1
		25	0	21.44	21.40	21.63	21.33	21.12	0-1	1
	16QAM	1	0	21.29	21.41	21.55	21.36	21.12	0-1	1
		1	12	21.17	21.31	21.45	21.30	21.09	0-1	1
		1	24	21.30	21.43	21.50	21.29	21.07	0-1	1
		12	0	20.38	20.36	20.56	20.27	20.07	0-2	2
		12	6	20.38	20.32	20.50	20.22	20.01	0-2	2
		12	11	20.40	20.35	20.53	20.28	20.06	0-2	2
		25	0	20.38	20.37	20.58	20.28	20.06	0-2	2
	64QAM	1	0	20.41	20.49	20.62	20.37	20.17	0-2	2
		1	12	20.29	20.39	20.54	20.26	20.10	0-2	2
		1	24	20.42	20.56	20.58	20.35	20.18	0-2	2
		12	0	19.33	19.34	19.58	19.30	19.02	0-3	3
		12	6	19.34	19.35	19.52	19.28	18.99	0-3	3
		12	11	19.35	19.38	19.57	19.26	19.03	0-3	3
		25	0	19.38	19.37	19.58	19.28	19.05	0-3	3
	256QAM	1	0	17.65	17.23	17.43	17.65	16.86	0-5	5
		1	12	17.56	17.06	17.42	17.37	16.89	0-5	5
		1	24	17.29	17.18	17.45	17.16	16.84	0-5	5
		12	0	17.67	17.38	17.58	17.59	17.07	0-5	5
		12	6	17.60	17.41	17.56	17.43	17.01	0-5	5
		12	11	17.52	17.41	17.58	17.31	17.04	0-5	5
		25	0	17.62	17.47	17.68	17.45	17.15	0-5	5

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 ㎒	40160 Ch. 2547 ㎒	40620 Ch. 2593 ㎒	41080 Ch. 2639 ㎒	41540 Ch. 2685 ㎒		
10 ㎒	QPSK	1	0	22.40	22.46	22.64	22.39	22.08	0	0
		1	24	22.25	22.31	22.47	22.24	21.90	0	0
		1	49	22.31	22.35	22.49	22.25	21.97	0	0
		25	0	21.41	21.44	21.66	21.39	21.15	0-1	1
		25	12	21.39	21.41	21.63	21.39	21.14	0-1	1
		25	24	21.39	21.42	21.61	21.35	21.09	0-1	1
		50	0	21.41	21.42	21.65	21.40	21.18	0-1	1
	16QAM	1	0	21.29	21.32	21.53	21.43	20.91	0-1	1
		1	24	21.17	21.22	21.44	21.27	20.77	0-1	1
		1	49	21.22	21.26	21.57	21.34	20.86	0-1	1
		25	0	20.37	20.40	20.62	20.37	20.14	0-2	2
		25	12	20.37	20.38	20.59	20.35	20.13	0-2	2
		25	24	20.36	20.39	20.56	20.32	20.08	0-2	2
		50	0	20.38	20.40	20.62	20.40	20.14	0-2	2
	64QAM	1	0	20.49	20.55	20.67	20.49	20.25	0-2	2
		1	24	20.39	20.44	20.51	20.35	20.10	0-2	2
		1	49	20.51	20.50	20.61	20.38	20.20	0-2	2
		25	0	19.35	19.38	19.60	19.34	19.11	0-3	3
		25	12	19.31	19.35	19.55	19.34	19.08	0-3	3
		25	24	19.33	19.38	19.56	19.30	19.06	0-3	3
		50	0	19.41	19.41	19.65	19.43	19.18	0-3	3
	256QAM	1	0	17.72	17.26	17.58	17.80	17.00	0-5	5
		1	24	17.54	17.15	17.37	17.40	16.85	0-5	5
		1	49	17.22	17.20	17.38	17.15	16.90	0-5	5
		25	0	17.70	17.46	17.68	17.80	17.17	0-5	5
		25	12	17.59	17.40	17.63	17.55	17.14	0-5	5
		25	24	17.43	17.44	17.65	17.40	17.13	0-5	5
		50	0	17.56	17.50	17.72	17.55	17.22	0-5	5

LTE Band 41 _ 15 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	22.31	22.42	22.59	22.35	22.08	0	0
		1	36	22.22	22.33	22.47	22.33	22.08	0	0
		1	74	22.29	22.39	22.55	22.30	22.06	0	0
		36	0	21.37	21.48	21.68	21.42	21.15	0-1	1
		36	18	21.36	21.45	21.64	21.34	21.09	0-1	1
		36	39	21.34	21.42	21.60	21.34	21.07	0-1	1
		75	0	21.37	21.44	21.64	21.35	21.13	0-1	1
	16QAM	1	0	21.42	21.60	21.66	21.44	21.04	0-1	1
		1	36	21.22	21.39	21.43	21.32	20.99	0-1	1
		1	74	21.37	21.56	21.46	21.31	21.00	0-1	1
		36	0	20.34	20.44	20.63	20.40	20.11	0-2	2
		36	18	20.32	20.42	20.60	20.34	20.03	0-2	2
		36	39	20.31	20.39	20.58	20.34	20.06	0-2	2
		75	0	20.37	20.44	20.63	20.38	20.12	0-2	2
	64QAM	1	0	20.48	20.65	20.82	20.66	20.20	0-2	2
		1	36	20.25	20.42	20.57	20.50	20.04	0-2	2
		1	74	20.48	20.61	20.73	20.56	20.05	0-2	2
		36	0	19.34	19.41	19.63	19.38	19.14	0-3	3
		36	18	19.32	19.42	19.61	19.32	19.10	0-3	3
		36	39	19.29	19.38	19.58	19.31	19.08	0-3	3
		75	0	19.37	19.42	19.64	19.37	19.14	0-3	3
	256QAM	1	0	17.20	17.31	17.49	17.31	16.91	0-5	5
		1	36	17.49	17.12	17.29	17.29	16.87	0-5	5
		1	74	17.14	17.27	17.40	17.09	16.79	0-5	5
		36	0	17.59	17.46	17.68	17.53	17.16	0-5	5
		36	18	17.59	17.46	17.65	17.40	17.10	0-5	5
		36	39	17.39	17.42	17.61	17.38	17.12	0-5	5
		75	0	17.39	17.44	17.64	17.37	17.11	0-5	5

LTE Band 41 _ 20 ㎒ 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 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	22.33	22.43	22.67	22.41	22.13	0	0
		1	49	22.16	22.24	22.47	22.22	21.93	0	0
		1	99	22.24	22.30	22.50	22.23	21.99	0	0
		50	0	21.43	21.46	21.72	21.43	21.20	0-1	1
		50	25	21.37	21.42	21.66	21.39	21.14	0-1	1
		50	49	21.36	21.41	21.63	21.32	21.07	0-1	1
		100	0	21.36	21.44	21.68	21.38	21.13	0-1	1
	16QAM	1	0	21.40	21.43	21.66	21.47	21.15	0-1	1
		1	49	21.23	21.24	21.43	21.28	20.93	0-1	1
		1	99	21.33	21.32	21.46	21.33	21.03	0-1	1
		50	0	20.41	20.43	20.69	20.44	20.17	0-2	2
		50	25	20.37	20.39	20.61	20.39	20.12	0-2	2
		50	49	20.34	20.38	20.58	20.34	20.06	0-2	2
		100	0	20.40	20.48	20.70	20.43	20.15	0-2	2
	64QAM	1	0	20.53	20.63	20.71	20.60	20.24	0-2	2
		1	49	20.37	20.44	20.57	20.54	20.05	0-2	2
		1	99	20.43	20.52	20.60	20.55	20.07	0-2	2
		50	0	19.44	19.49	19.72	19.46	19.19	0-3	3
		50	25	19.39	19.42	19.65	19.42	19.16	0-3	3
		50	49	19.37	19.43	19.62	19.36	19.11	0-3	3
		100	0	19.35	19.42	19.64	19.34	19.10	0-3	3
	256QAM	1	0	17.79	17.29	17.89	17.99	16.98	0-5	5
		1	49	17.43	17.15	17.32	17.33	16.80	0-5	5
		1	99	17.19	17.14	17.35	17.12	16.82	0-5	5
		50	0	17.81	17.55	17.80	17.88	17.28	0-5	5
		50	25	17.61	17.51	17.72	17.56	17.23	0-5	5
		50	49	17.45	17.51	17.70	17.45	17.16	0-5	5
		100	0	17.55	17.47	17.68	17.51	17.13	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 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39675 Ch. 2498.5 ㎒	40148 Ch. 2545.8 ㎒	40620 Ch. 2593.0 ㎒	41093 Ch. 2640.3 ㎒	41565 Ch. 2687.5 ㎒		
5 ㎒	QPSK	1	0	24.11	24.14	24.35	24.01	23.75	0	0
		1	12	24.13	24.08	24.30	24.10	23.85	0	0
		1	24	24.21	24.21	24.34	24.10	23.82	0	0
		12	0	23.28	23.33	23.45	23.22	22.99	0-1	1
		12	6	23.29	23.35	23.45	23.17	22.95	0-1	1
		12	11	23.30	23.36	23.44	23.18	22.96	0-1	1
		25	0	23.25	23.29	23.52	23.17	22.99	0-1	1
	16QAM	1	0	23.05	23.27	23.25	23.04	22.80	0-1	1
		1	12	22.94	23.17	23.10	22.98	22.71	0-1	1
		1	24	23.08	23.26	23.34	22.96	22.71	0-1	1
		12	0	22.25	22.31	22.43	22.22	21.99	0-2	2
		12	6	22.28	22.31	22.42	22.16	21.91	0-2	2
		12	11	22.30	22.30	22.41	22.13	21.93	0-2	2
		25	0	22.24	22.27	22.47	22.16	21.94	0-2	2
	64QAM	1	0	22.28	22.39	22.49	22.32	21.91	0-2	2
		1	12	22.15	22.28	22.37	22.31	21.90	0-2	2
		1	24	22.22	22.38	22.40	22.29	21.88	0-2	2
		12	0	21.23	21.31	21.42	21.23	20.97	0-3	3
		12	6	21.27	21.33	21.38	21.16	20.91	0-3	3
		12	11	21.26	21.33	21.45	21.18	20.96	0-3	3
		25	0	21.26	21.32	21.44	21.19	20.95	0-3	3
	256QAM	1	0	19.03	19.11	19.30	19.12	18.70	0-5	5
		1	12	18.90	18.94	19.17	19.08	18.69	0-5	5
		1	24	19.00	19.09	19.24	18.99	18.72	0-5	5
		12	0	19.18	19.24	19.40	19.17	18.95	0-5	5
		12	6	19.21	19.22	19.36	19.13	18.90	0-5	5
		12	11	19.21	19.25	19.38	19.13	18.91	0-5	5
		25	0	19.24	19.31	19.47	19.18	18.98	0-5	5

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 ㎒	40160 Ch. 2547 ㎒	40620 Ch. 2593 ㎒	41080 Ch. 2639 ㎒	41540 Ch. 2685 ㎒		
10 ㎒	QPSK	1	0	24.04	24.23	24.32	24.12	23.85	0	0
		1	24	23.98	24.09	24.23	24.00	23.79	0	0
		1	49	24.05	24.16	24.29	24.07	23.78	0	0
		25	0	23.17	23.28	23.47	23.21	23.01	0-1	1
		25	12	23.15	23.24	23.44	23.19	23.00	0-1	1
		25	24	23.15	23.25	23.44	23.16	22.98	0-1	1
		50	0	23.24	23.31	23.53	23.26	23.10	0-1	1
	16QAM	1	0	23.01	23.10	23.26	23.23	22.71	0-1	1
		1	24	22.88	23.01	23.11	23.10	22.55	0-1	1
		1	49	22.96	22.98	23.21	23.08	22.66	0-1	1
		25	0	22.18	22.31	22.41	22.23	22.00	0-2	2
		25	12	22.16	22.25	22.39	22.20	21.99	0-2	2
		25	24	22.18	22.25	22.37	22.17	21.95	0-2	2
		50	0	22.20	22.28	22.48	22.23	22.04	0-2	2
	64QAM	1	0	22.28	22.34	22.43	22.20	22.01	0-2	2
		1	24	22.13	22.36	22.34	22.07	21.88	0-2	2
		1	49	22.19	22.46	22.37	22.16	21.95	0-2	2
		25	0	21.20	21.30	21.45	21.21	20.99	0-3	3
		25	12	21.17	21.26	21.41	21.17	20.95	0-3	3
		25	24	21.20	21.28	21.41	21.17	20.94	0-3	3
		50	0	21.23	21.30	21.49	21.28	21.05	0-3	3
	256QAM	1	0	19.03	19.08	19.27	18.95	18.83	0-5	5
		1	24	18.89	18.99	19.16	18.95	18.72	0-5	5
		1	49	18.99	19.14	19.21	19.03	18.77	0-5	5
		25	0	19.22	19.30	19.49	19.25	19.04	0-5	5
		25	12	19.16	19.26	19.43	19.21	19.01	0-5	5
		25	24	19.19	19.28	19.41	19.20	18.99	0-5	5
		50	0	19.25	19.34	19.52	19.31	19.07	0-5	5

LTE Band 41 _ 15 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	24.03	24.27	24.41	24.14	23.95	0	0
		1	36	23.96	24.16	24.28	24.16	23.95	0	0
		1	74	24.12	24.20	24.35	24.11	23.88	0	0
		36	0	23.20	23.35	23.53	23.28	23.05	0-1	1
		36	18	23.20	23.34	23.51	23.22	22.99	0-1	1
		36	39	23.19	23.31	23.48	23.23	23.02	0-1	1
		75	0	23.21	23.35	23.54	23.26	23.14	0-1	1
	16QAM	1	0	23.15	23.27	23.34	23.14	22.84	0-1	1
		1	36	23.05	23.12	23.22	23.02	22.75	0-1	1
		1	74	23.22	23.18	23.27	23.02	22.78	0-1	1
		36	0	22.22	22.37	22.52	22.25	22.03	0-2	2
		36	18	22.20	22.34	22.49	22.21	21.96	0-2	2
		36	39	22.22	22.31	22.44	22.21	21.96	0-2	2
		75	0	22.23	22.33	22.48	22.23	22.05	0-2	2
	64QAM	1	0	22.34	22.38	22.45	22.32	21.98	0-2	2
		1	36	22.16	22.20	22.39	22.18	21.86	0-2	2
		1	74	22.29	22.21	22.49	22.18	21.85	0-2	2
		36	0	21.26	21.38	21.54	21.28	21.05	0-3	3
		36	18	21.22	21.36	21.50	21.21	20.99	0-3	3
		36	39	21.23	21.33	21.48	21.23	21.02	0-3	3
		75	0	21.29	21.38	21.53	21.26	21.05	0-3	3
	256QAM	1	0	19.15	19.24	19.35	19.18	18.88	0-5	5
		1	36	18.99	18.96	19.12	19.16	18.79	0-5	5
		1	74	19.11	19.14	19.30	19.10	18.76	0-5	5
		36	0	19.21	19.36	19.50	19.27	19.04	0-5	5
		36	18	19.21	19.34	19.46	19.20	19.01	0-5	5
		36	39	19.21	19.31	19.46	19.23	19.00	0-5	5
		75	0	19.21	19.32	19.48	19.25	19.04	0-5	5

LTE Band 41 _ 20 ㎒ 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 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	24.08	24.28	24.46	24.39	24.06	0	0
		1	49	23.98	24.12	24.29	24.20	23.85	0	0
		1	99	24.09	24.18	24.33	24.21	23.91	0	0
		50	0	23.31	23.43	23.64	23.44	23.21	0-1	1
		50	25	23.29	23.39	23.58	23.38	23.05	0-1	1
		50	49	23.28	23.40	23.57	23.36	23.14	0-1	1
		100	0	23.27	23.40	23.61	23.39	23.25	0-1	1
	16QAM	1	0	22.96	23.29	23.34	23.39	23.00	0-1	1
		1	49	22.85	23.09	23.13	23.20	22.82	0-1	1
		1	99	22.97	23.09	23.18	23.20	22.89	0-1	1
		50	0	22.28	22.38	22.59	22.39	22.14	0-2	2
		50	25	22.27	22.32	22.52	22.35	22.08	0-2	2
		50	49	22.25	22.33	22.51	22.33	22.04	0-2	2
		100	0	22.28	22.39	22.57	22.33	22.11	0-2	2
	64QAM	1	0	22.19	22.40	22.53	22.17	22.10	0-2	2
		1	49	22.12	22.23	22.36	21.96	21.99	0-2	2
		1	99	22.25	22.22	22.38	21.89	22.04	0-2	2
		50	0	21.30	21.40	21.59	21.34	21.13	0-3	3
		50	25	21.27	21.34	21.51	21.29	21.11	0-3	3
		50	49	21.27	21.35	21.51	21.26	21.05	0-3	3
		100	0	21.21	21.35	21.52	21.29	21.07	0-3	3
	256QAM	1	0	19.04	19.26	19.40	19.20	18.92	0-5	5
		1	49	18.97	19.08	19.21	18.97	18.73	0-5	5
		1	99	19.03	19.15	19.26	19.05	18.79	0-5	5
		50	0	19.30	19.41	19.58	19.39	19.16	0-5	5
		50	25	19.27	19.37	19.52	19.34	19.10	0-5	5
		50	49	19.28	19.36	19.49	19.29	19.07	0-5	5
		100	0	19.20	19.35	19.51	19.27	19.05	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 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979Ch. 1710.7 ㎒	132322 Ch. 1745 ㎒	132665 Ch. 1779.3 ㎒		
1.4 ㎒	QPSK	1	0	22.55	22.63	22.51	0	0
		1	3	22.59	22.68	22.51	0	0
		1	5	22.52	22.68	22.46	0	0
		3	0	22.54	22.66	22.44	0	0
		3	1	22.67	22.73	22.63	0	0
		3	3	22.60	22.72	22.52	0	0
		6	0	21.55	21.72	21.47	0-1	1
	16QAM	1	0	21.71	21.89	21.69	0-1	1
		1	3	21.68	21.80	21.42	0-1	1
		1	5	21.81	22.01	21.75	0-1	1
		3	0	21.63	21.84	21.50	0-1	1
		3	1	21.83	21.89	21.68	0-1	1
		3	3	21.76	21.89	21.65	0-1	1
		6	0	20.73	20.85	20.54	0-2	2
	64QAM	1	0	20.77	20.91	20.62	0-2	2
		1	3	20.63	20.90	20.60	0-2	2
		1	5	20.78	20.88	20.68	0-2	2
		3	0	20.65	20.87	20.50	0-2	2
		3	1	20.74	20.94	20.65	0-2	2
		3	3	20.66	20.90	20.56	0-2	2
		6	0	19.64	19.82	19.60	0-3	3
	256QAM	1	0	17.61	17.64	17.65	0-5	5
		1	3	17.62	17.67	17.47	0-5	5
		1	5	17.74	17.70	17.57	0-5	5
		3	0	17.58	17.61	17.47	0-5	5
		3	1	17.65	17.74	17.57	0-5	5
		3	3	17.71	17.73	17.57	0-5	5
		6	0	17.65	17.68	17.44	0-5	5

LTE Band 66 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 ㎒	132322 Ch. 1745 ㎒	132657 Ch. 1778.5 ㎒		
3 ㎒	QPSK	1	0	22.59	22.70	22.51	0	0
		1	7	22.57	22.65	22.51	0	0
		1	14	22.64	22.78	22.55	0	0
		8	0	21.71	21.82	21.59	0-1	1
		8	3	21.60	21.78	21.54	0-1	1
		8	7	21.73	21.79	21.60	0-1	1
		15	0	21.71	21.77	21.59	0-1	1
	16QAM	1	0	21.93	22.00	21.69	0-1	1
		1	7	21.85	22.05	21.68	0-1	1
		1	14	21.75	21.96	21.78	0-1	1
		8	0	20.77	20.91	20.61	0-2	2
		8	3	20.74	20.87	20.56	0-2	2
		8	7	20.80	20.91	20.64	0-2	2
		15	0	20.75	20.85	20.60	0-2	2
	64QAM	1	0	20.92	21.07	20.61	0-2	2
		1	7	20.74	20.93	20.62	0-2	2
		1	14	20.85	20.99	20.72	0-2	2
		8	0	19.78	19.87	19.59	0-3	3
		8	3	19.66	19.80	19.58	0-3	3
		8	7	19.70	19.88	19.62	0-3	3
		15	0	19.73	19.85	19.62	0-3	3
	256QAM	1	0	17.77	17.85	17.54	0-5	5
		1	7	17.58	17.77	17.50	0-5	5
		1	14	17.72	17.74	17.62	0-5	5
		8	0	17.64	17.71	17.50	0-5	5
		8	3	17.60	17.73	17.55	0-5	5
		8	7	17.66	17.76	17.51	0-5	5
		15	0	17.69	17.73	17.54	0-5	5

LTE Band 66 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 ㎒	132322Ch. 1745 ㎒	132647 Ch. 1777.5 ㎒		
5 ㎒	QPSK	1	0	22.69	22.82	22.64	0	0
		1	12	22.70	22.75	22.53	0	0
		1	24	22.72	22.78	22.58	0	0
		12	0	21.76	21.84	21.66	0-1	1
		12	6	21.73	21.84	21.61	0-1	1
		12	11	21.67	21.82	21.65	0-1	1
		25	0	21.74	21.85	21.67	0-1	1
	16QAM	1	0	21.83	22.15	21.85	0-1	1
		1	12	21.84	22.02	21.81	0-1	1
		1	24	21.94	22.12	21.83	0-1	1
		12	0	20.81	20.92	20.70	0-2	2
		12	6	20.78	20.90	20.74	0-2	2
		12	11	20.78	20.90	20.71	0-2	2
		25	0	20.80	20.90	20.70	0-2	2
	64QAM	1	0	21.02	21.05	20.91	0-2	2
		1	12	20.96	21.13	20.91	0-2	2
		1	24	20.94	21.07	20.85	0-2	2
		12	0	19.78	19.91	19.72	0-3	3
		12	6	19.77	19.92	19.75	0-3	3
		12	11	19.75	19.87	19.70	0-3	3
		25	0	19.75	19.90	19.71	0-3	3
	256QAM	1	0	17.67	17.86	17.61	0-5	5
		1	12	17.61	17.88	17.57	0-5	5
		1	24	17.75	17.81	17.69	0-5	5
		12	0	17.71	17.79	17.59	0-5	5
		12	6	17.66	17.77	17.55	0-5	5
		12	11	17.69	17.79	17.55	0-5	5
		25	0	17.72	17.77	17.61	0-5	5

LTE Band 66 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 ㎒	132322 Ch. 1745 ㎒	132622 Ch. 1775 ㎒		
10 ㎒	QPSK	1	0	22.65	22.84	22.71	0	0
		1	24	22.68	22.82	22.62	0	0
		1	49	22.70	22.85	22.67	0	0
		25	0	21.74	21.90	21.73	0-1	1
		25	12	21.76	21.90	21.76	0-1	1
		25	24	21.73	21.90	21.75	0-1	1
		50	0	21.74	21.84	21.68	0-1	1
	16QAM	1	0	21.97	22.10	22.00	0-1	1
		1	24	21.83	22.10	21.86	0-1	1
		1	49	21.95	22.18	21.96	0-1	1
		25	0	20.83	20.96	20.84	0-2	2
		25	12	20.81	20.98	20.81	0-2	2
		25	24	20.77	20.95	20.80	0-2	2
		50	0	20.76	20.83	20.72	0-2	2
	64QAM	1	0	21.07	21.04	21.01	0-2	2
		1	24	20.95	21.25	20.91	0-2	2
		1	49	20.94	21.15	20.94	0-2	2
		25	0	19.77	19.96	19.81	0-3	3
		25	12	19.76	19.92	19.76	0-3	3
		25	24	19.69	19.92	19.76	0-3	3
		50	0	19.71	19.82	19.75	0-3	3
	256QAM	1	0	17.83	17.97	17.79	0-5	5
		1	24	17.78	17.92	17.68	0-5	5
		1	49	17.87	18.00	17.74	0-5	5
		25	0	17.72	17.75	17.65	0-5	5
		25	12	17.68	17.77	17.63	0-5	5
		25	24	17.65	17.81	17.64	0-5	5
		50	0	17.71	17.89	17.71	0-5	5

LTE Band 66 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 ㎒	132322 Ch. 1745 ㎒	132597 Ch. 1772.5 ㎒		
15 ㎒	QPSK	1	0	22.62	22.87	22.78	0	0
		1	36	22.61	22.78	22.61	0	0
		1	74	22.62	22.87	22.69	0	0
		36	0	21.69	21.93	21.76	0-1	1
		36	18	21.70	21.85	21.79	0-1	1
		36	39	21.74	21.84	21.74	0-1	1
		75	0	21.64	21.90	21.78	0-1	1
	16QAM	1	0	21.79	22.04	21.96	0-1	1
		1	36	21.81	22.09	21.82	0-1	1
		1	74	21.83	22.20	21.90	0-1	1
		36	0	20.65	20.88	20.77	0-2	2
		36	18	20.64	20.91	20.75	0-2	2
		36	39	20.67	20.92	20.75	0-2	2
		75	0	20.62	20.88	20.75	0-2	2
	64QAM	1	0	20.89	21.06	21.06	0-2	2
		1	36	20.75	21.03	20.82	0-2	2
		1	74	20.85	21.08	20.85	0-2	2
		36	0	19.69	19.91	19.83	0-3	3
		36	18	19.69	19.91	19.77	0-3	3
		36	39	19.67	19.89	19.74	0-3	3
		75	0	19.62	19.85	19.75	0-3	3
	256QAM	1	0	17.80	17.97	17.82	0-5	5
		1	36	17.65	17.90	17.66	0-5	5
		1	74	17.82	17.99	17.76	0-5	5
		36	0	17.64	17.82	17.73	0-5	5
		36	18	17.66	17.83	17.73	0-5	5
		36	39	17.62	17.84	17.70	0-5	5
		75	0	17.59	17.83	17.68	0-5	5

LTE Band 66 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	22.65	22.93	22.86	0	0
		1	49	22.62	22.83	22.80	0	0
		1	99	22.68	22.88	22.82	0	0
		50	0	21.67	21.89	21.86	0-1	1
		50	25	21.72	21.87	21.84	0-1	1
		50	49	21.75	21.88	21.84	0-1	1
		100	0	21.69	21.89	21.89	0-1	1
	16QAM	1	0	21.95	22.12	22.09	0-1	1
		1	49	21.74	21.88	21.92	0-1	1
		1	99	21.94	21.99	22.06	0-1	1
		50	0	20.71	20.88	20.91	0-2	2
		50	25	20.65	20.91	20.85	0-2	2
		50	49	20.68	20.89	20.86	0-2	2
		100	0	20.64	20.86	20.86	0-2	2
	64QAM	1	0	20.92	21.12	21.06	0-2	2
		1	49	20.73	21.07	21.07	0-2	2
		1	99	20.88	21.03	20.99	0-2	2
		50	0	19.68	19.93	19.89	0-3	3
		50	25	19.68	19.91	19.86	0-3	3
		50	49	19.70	19.91	19.89	0-3	3
		100	0	19.69	19.88	19.84	0-3	3
	256QAM	1	0	17.78	17.97	17.96	0-5	5
		1	49	17.73	17.88	17.84	0-5	5
		1	99	17.74	17.94	17.87	0-5	5
		50	0	17.66	17.88	17.84	0-5	5
		50	25	17.68	17.87	17.87	0-5	5
		50	49	17.64	17.91	17.85	0-5	5
		100	0	17.65	17.85	17.86	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 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 ㎒	18900 Ch. 1880 ㎒	19193 Ch. 1909.3 ㎒		
1.4 ㎒	QPSK	1	0	18.55	18.70	18.51	0	0
		1	3	18.54	18.71	18.48	0	0
		1	5	18.56	18.68	18.46	0	0
		3	0	18.50	18.68	18.39	0	0
		3	1	18.65	18.82	18.49	0	0
		3	3	18.57	18.74	18.50	0	0
		6	0	18.54	18.66	18.45	0-1	0
	16QAM	1	0	18.80	18.93	18.66	0-1	0
		1	3	18.52	18.82	18.39	0-1	0
		1	5	18.76	18.86	18.64	0-1	0
		3	0	18.58	18.80	18.55	0-1	0
		3	1	18.72	18.93	18.72	0-1	0
		3	3	18.72	18.90	18.59	0-1	0
		6	0	18.63	18.76	18.54	0-2	0
	64QAM	1	0	18.74	18.84	18.67	0-2	0
		1	3	18.53	18.75	18.60	0-2	0
		1	5	18.73	18.89	18.52	0-2	0
		3	0	18.59	18.79	18.53	0-2	0
		3	1	18.75	18.95	18.65	0-2	0
		3	3	18.67	18.74	18.52	0-2	0
		6	0	18.60	18.79	18.50	0-3	0
	256QAM	1	0	17.09	17.22	17.08	0-5	1.3
		1	3	16.86	17.18	16.80	0-5	1.3
		1	5	17.08	17.26	17.00	0-5	1.3
		3	0	16.94	17.16	16.91	0-5	1.3
		3	1	17.03	17.16	16.99	0-5	1.3
		3	3	17.13	17.27	16.97	0-5	1.3
		6	0	17.01	17.23	16.93	0-5	1.3

LTE Band 2 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 ㎒	18900 Ch. 1880 ㎒	19185 Ch. 1908.5 ㎒		
3 ㎒	QPSK	1	0	18.51	18.72	18.49	0	0
		1	7	18.49	18.71	18.48	0	0
		1	14	18.52	18.73	18.52	0	0
		8	0	18.61	18.80	18.57	0-1	0
		8	3	18.53	18.71	18.51	0-1	0
		8	7	18.63	18.78	18.56	0-1	0
		15	0	18.61	18.81	18.55	0-1	0
	16QAM	1	0	18.89	18.95	18.77	0-1	0
		1	7	18.86	18.96	18.66	0-1	0
		1	14	18.88	18.93	18.73	0-1	0
		8	0	18.64	18.86	18.57	0-2	0
		8	3	18.66	18.85	18.55	0-2	0
		8	7	18.63	18.82	18.58	0-2	0
		15	0	18.63	18.85	18.54	0-2	0
	64QAM	1	0	18.87	18.96	18.77	0-2	0
		1	7	18.67	18.88	18.65	0-2	0
		1	14	18.68	18.90	18.66	0-2	0
		8	0	18.64	18.84	18.54	0-3	0
		8	3	18.61	18.80	18.52	0-3	0
		8	7	18.58	18.78	18.56	0-3	0
		15	0	18.66	18.83	18.55	0-3	0
	256QAM	1	0	17.15	17.38	17.10	0-5	1.3
		1	7	16.99	17.34	17.05	0-5	1.3
		1	14	17.14	17.18	17.04	0-5	1.3
		8	0	17.03	17.18	16.96	0-5	1.3
		8	3	17.03	17.23	16.93	0-5	1.3
		8	7	17.07	17.24	16.98	0-5	1.3
		15	0	17.03	17.17	16.96	0-5	1.3

LTE Band 2 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 ㎒	18900 Ch. 1880 ㎒	19175 Ch. 1907.5 ㎒		
5 ㎒	QPSK	1	0	18.59	18.82	18.48	0	0
		1	12	18.53	18.77	18.49	0	0
		1	24	18.54	18.76	18.48	0	0
		12	0	18.61	18.81	18.58	0-1	0
		12	6	18.62	18.83	18.58	0-1	0
		12	11	18.63	18.79	18.57	0-1	0
		25	0	18.63	18.80	18.54	0-1	0
	16QAM	1	0	18.73	18.96	18.72	0-1	0
		1	12	18.79	18.94	18.67	0-1	0
		1	24	18.81	18.93	18.77	0-1	0
		12	0	18.65	18.85	18.59	0-2	0
		12	6	18.62	18.86	18.57	0-2	0
		12	11	18.64	18.83	18.56	0-2	0
		25	0	18.62	18.83	18.55	0-2	0
	64QAM	1	0	18.88	18.95	18.74	0-2	0
		1	12	18.75	18.93	18.61	0-2	0
		1	24	18.72	18.93	18.69	0-2	0
		12	0	18.64	18.86	18.58	0-3	0
		12	6	18.63	18.88	18.60	0-3	0
		12	11	18.61	18.82	18.55	0-3	0
		25	0	18.63	18.88	18.52	0-3	0
	256QAM	1	0	17.08	17.35	17.15	0-5	1.3
		1	12	17.04	17.33	17.10	0-5	1.3
		1	24	17.11	17.28	17.15	0-5	1.3
		12	0	17.06	17.28	17.01	0-5	1.3
		12	6	17.06	17.25	17.00	0-5	1.3
		12	11	17.05	17.21	16.97	0-5	1.3
		25	0	17.06	17.24	16.97	0-5	1.3

LTE Band 2 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 ㎒	18900 Ch. 1880 ㎒	19150 Ch. 1905 ㎒		
10 ㎒	QPSK	1	0	18.63	18.85	18.61	0	0
		1	24	18.60	18.78	18.57	0	0
		1	49	18.58	18.78	18.57	0	0
		25	0	18.66	18.85	18.61	0-1	0
		25	12	18.66	18.83	18.62	0-1	0
		25	24	18.63	18.80	18.57	0-1	0
		50	0	18.66	18.82	18.58	0-1	0
	16QAM	1	0	18.90	18.99	18.88	0-1	0
		1	24	18.68	18.88	18.69	0-1	0
		1	49	18.86	18.97	18.69	0-1	0
		25	0	18.70	18.89	18.64	0-2	0
		25	12	18.67	18.86	18.60	0-2	0
		25	24	18.65	18.81	18.56	0-2	0
		50	0	18.63	18.85	18.63	0-2	0
	64QAM	1	0	18.84	18.89	18.88	0-2	0
		1	24	18.72	18.88	18.81	0-2	0
		1	49	18.81	18.96	18.78	0-2	0
		25	0	18.71	18.93	18.63	0-3	0
		25	12	18.64	18.86	18.57	0-3	0
		25	24	18.64	18.78	18.56	0-3	0
		50	0	18.61	18.83	18.64	0-3	0
	256QAM	1	0	17.18	17.35	17.17	0-5	1.3
		1	24	17.16	17.41	17.06	0-5	1.3
		1	49	17.23	17.29	17.02	0-5	1.3
		25	0	17.09	17.28	17.03	0-5	1.3
		25	12	17.06	17.26	17.02	0-5	1.3
		25	24	17.10	17.26	17.00	0-5	1.3
		50	0	17.15	17.34	17.12	0-5	1.3

LTE Band 2 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 ㎒	18900 Ch. 1880 ㎒	19125 Ch. 1902.5 ㎒		
15 ㎒	QPSK	1	0	18.73	18.88	18.61	0	0
		1	36	18.60	18.76	18.51	0	0
		1	74	18.66	18.78	18.56	0	0
		36	0	18.72	18.87	18.63	0-1	0
		36	18	18.71	18.85	18.62	0-1	0
		36	39	18.71	18.85	18.60	0-1	0
		75	0	18.72	18.84	18.61	0-1	0
	16QAM	1	0	18.91	18.95	18.84	0-1	0
		1	36	18.74	18.96	18.86	0-1	0
		1	74	18.94	18.89	18.81	0-1	0
		36	0	18.71	18.88	18.63	0-2	0
		36	18	18.70	18.85	18.63	0-2	0
		36	39	18.69	18.81	18.60	0-2	0
		75	0	18.67	18.78	18.59	0-2	0
	64QAM	1	0	18.89	18.97	18.79	0-2	0
		1	36	18.69	18.91	18.72	0-2	0
		1	74	18.84	18.96	18.78	0-2	0
		36	0	18.74	18.88	18.61	0-3	0
		36	18	18.72	18.85	18.64	0-3	0
		36	39	18.68	18.79	18.61	0-3	0
		75	0	18.69	18.79	18.59	0-3	0
	256QAM	1	0	17.30	17.40	17.20	0-5	1.3
		1	36	17.05	17.38	16.96	0-5	1.3
		1	74	17.12	17.41	17.11	0-5	1.3
		36	0	17.24	17.34	17.06	0-5	1.3
		36	18	17.22	17.31	17.09	0-5	1.3
		36	39	17.17	17.34	17.09	0-5	1.3
		75	0	17.17	17.29	17.10	0-5	1.3

LTE Band 2 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	18.75	18.92	18.70	0	0
		1	49	18.71	18.82	18.58	0	0
		1	99	18.73	18.78	18.57	0	0
		50	0	18.79	18.86	18.65	0-1	0
		50	25	18.78	18.85	18.60	0-1	0
		50	49	18.75	18.85	18.62	0-1	0
		100	0	18.76	18.86	18.88	0-1	0
	16QAM	1	0	18.90	18.94	18.74	0-1	0
		1	49	18.82	18.96	18.77	0-1	0
		1	99	18.97	18.96	18.74	0-1	0
		50	0	18.73	18.88	18.64	0-2	0
		50	25	18.76	18.84	18.61	0-2	0
		50	49	18.76	18.83	18.61	0-2	0
		100	0	18.73	18.85	18.60	0-2	0
	64QAM	1	0	18.99	18.94	18.79	0-2	0
		1	49	18.90	18.90	18.81	0-2	0
		1	99	18.91	18.87	18.78	0-2	0
		50	0	18.78	18.86	18.70	0-3	0
		50	25	18.77	18.83	18.64	0-3	0
		50	49	18.75	18.84	18.62	0-3	0
		100	0	18.74	18.87	18.60	0-3	0
	256QAM	1	0	17.35	17.51	17.20	0-5	1.3
		1	49	17.26	17.43	17.16	0-5	1.3
		1	99	17.24	17.45	17.19	0-5	1.3
		50	0	17.27	17.34	17.16	0-5	1.3
		50	25	17.27	17.36	17.15	0-5	1.3
		50	49	17.29	17.33	17.12	0-5	1.3
		100	0	17.24	17.35	17.12	0-5	1.3

[LTE Band 4 Conducted Power]

LTE Band 4 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 ㎒	20175 Ch. 1732.5 ㎒	20393 Ch. 1754.3 ㎒		
1.4 ㎒	QPSK	1	0	18.95	18.92	19.17	0	0
		1	3	18.99	18.99	19.15	0	0
		1	5	18.98	18.99	19.14	0	0
		3	0	19.02	18.92	19.08	0	0
		3	1	19.15	19.02	19.24	0	0
		3	3	19.09	18.99	19.17	0	0
		6	0	19.01	18.98	19.16	0-1	0
	16QAM	1	0	19.28	19.15	19.42	0-1	0
		1	3	19.11	18.89	19.11	0-1	0
		1	5	19.20	19.09	19.45	0-1	0
		3	0	19.10	18.97	19.25	0-1	0
		3	1	19.16	19.19	19.33	0-1	0
		3	3	19.13	19.14	19.27	0-1	0
		6	0	19.11	18.98	19.23	0-2	0
	64QAM	1	0	19.22	19.04	19.35	0-2	0
		1	3	19.10	19.11	19.26	0-2	0
		1	5	19.20	19.11	19.25	0-2	0
		3	0	19.12	19.01	19.23	0-2	0
		3	1	19.20	19.19	19.27	0-2	0
		3	3	19.10	19.00	19.24	0-2	0
		6	0	19.10	19.01	19.17	0-3	0
	256QAM	1	0	17.62	17.49	17.60	0-5	1.3
		1	3	17.58	17.40	17.44	0-5	1.3
		1	5	17.62	17.46	17.72	0-5	1.3
		3	0	17.49	17.40	17.59	0-5	1.3
		3	1	17.60	17.57	17.68	0-5	1.3
		3	3	17.64	17.56	17.65	0-5	1.3
		6	0	17.53	17.44	17.59	0-5	1.3

LTE Band 4 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 ㎒	20175 Ch. 1732.5 ㎒	20385 Ch. 1753.5 ㎒		
3 ㎒	QPSK	1	0	18.99	18.94	19.14	0	0
		1	7	18.97	18.93	19.13	0	0
		1	14	19.01	18.98	19.17	0	0
		8	0	19.02	19.04	19.23	0-1	0
		8	3	18.98	19.04	19.21	0-1	0
		8	7	19.03	19.09	19.19	0-1	0
		15	0	19.05	19.03	19.17	0-1	0
	16QAM	1	0	19.25	19.14	19.39	0-1	0
		1	7	19.30	19.06	19.34	0-1	0
		1	14	19.21	19.24	19.35	0-1	0
		8	0	19.09	19.08	19.27	0-2	0
		8	3	19.02	19.02	19.24	0-2	0
		8	7	19.06	19.05	19.26	0-2	0
		15	0	19.06	18.99	19.23	0-2	0
	64QAM	1	0	19.20	19.09	19.31	0-2	0
		1	7	19.07	19.12	19.28	0-2	0
		1	14	19.09	19.11	19.43	0-2	0
		8	0	19.02	19.02	19.21	0-3	0
		8	3	18.99	18.99	19.20	0-3	0
		8	7	19.03	19.06	19.21	0-3	0
		15	0	19.08	19.02	19.23	0-3	0
	256QAM	1	0	17.57	17.54	17.71	0-5	1.3
		1	7	17.57	17.58	17.59	0-5	1.3
		1	14	17.53	17.54	17.62	0-5	1.3
		8	0	17.49	17.43	17.60	0-5	1.3
		8	3	17.48	17.46	17.60	0-5	1.3
		8	7	17.47	17.53	17.64	0-5	1.3
		15	0	17.45	17.48	17.60	0-5	1.3

LTE Band 4 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 ㎒	20175 Ch. 1732.5 ㎒	20375 Ch. 1752.5 ㎒		
5 ㎒	QPSK	1	0	18.95	18.94	19.19	0	0
		1	12	18.96	18.94	19.13	0	0
		1	24	19.01	19.02	19.19	0	0
		12	0	19.03	19.07	19.21	0-1	0
		12	6	19.01	19.05	19.19	0-1	0
		12	11	19.04	19.01	19.21	0-1	0
		25	0	19.06	19.07	19.26	0-1	0
	16QAM	1	0	19.27	19.25	19.36	0-1	0
		1	12	19.17	19.09	19.35	0-1	0
		1	24	19.33	19.15	19.54	0-1	0
		12	0	19.06	19.05	19.24	0-2	0
		12	6	19.05	19.03	19.23	0-2	0
		12	11	19.05	19.08	19.23	0-2	0
		25	0	19.03	19.04	19.24	0-2	0
	64QAM	1	0	19.26	19.19	19.49	0-2	0
		1	12	18.98	19.09	19.36	0-2	0
		1	24	19.12	19.19	19.34	0-2	0
		12	0	19.08	19.03	19.22	0-3	0
		12	6	19.06	19.06	19.27	0-3	0
		12	11	19.03	19.02	19.22	0-3	0
		25	0	19.05	19.01	19.23	0-3	0
	256QAM	1	0	17.61	17.57	17.79	0-5	1.3
		1	12	17.50	17.46	17.73	0-5	1.3
		1	24	17.62	17.62	17.71	0-5	1.3
		12	0	17.50	17.50	17.64	0-5	1.3
		12	6	17.45	17.47	17.63	0-5	1.3
		12	11	17.48	17.53	17.61	0-5	1.3
		25	0	17.49	17.51	17.64	0-5	1.3

LTE Band 4 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 ㎒	20175 Ch. 1732.5 ㎒	20350 Ch. 1750 ㎒		
10 ㎒	QPSK	1	0	19.03	19.05	19.16	0	0
		1	24	19.02	19.03	19.20	0	0
		1	49	18.98	19.07	19.18	0	0
		25	0	19.07	19.06	19.29	0-1	0
		25	12	19.04	19.04	19.26	0-1	0
		25	24	19.02	19.08	19.26	0-1	0
		50	0	18.99	19.10	19.20	0-1	0
	16QAM	1	0	19.40	19.24	19.40	0-1	0
		1	24	19.10	19.10	19.47	0-1	0
		1	49	19.25	19.27	19.50	0-1	0
		25	0	19.08	19.06	19.32	0-2	0
		25	12	19.03	19.04	19.33	0-2	0
		25	24	19.03	19.09	19.28	0-2	0
		50	0	19.00	19.09	19.26	0-2	0
	64QAM	1	0	19.26	19.07	19.43	0-2	0
		1	24	19.27	19.25	19.51	0-2	0
		1	49	19.25	19.32	19.37	0-2	0
		25	0	19.08	19.03	19.29	0-3	0
		25	12	19.04	19.05	19.25	0-3	0
		25	24	19.00	19.08	19.25	0-3	0
		50	0	19.03	19.14	19.25	0-3	0
	256QAM	1	0	17.64	17.58	17.83	0-5	1.3
		1	24	17.53	17.64	17.78	0-5	1.3
		1	49	17.56	17.73	17.80	0-5	1.3
		25	0	17.51	17.55	17.67	0-5	1.3
		25	12	17.48	17.56	17.72	0-5	1.3
		25	24	17.45	17.55	17.69	0-5	1.3
		50	0	17.52	17.62	17.74	0-5	1.3

LTE Band 4 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 ㎒	20175 Ch. 1732.5 ㎒	20325 Ch. 1747.5 ㎒		
15 ㎒	QPSK	1	0	19.02	19.10	19.27	0	0
		1	36	18.98	18.97	19.12	0	0
		1	74	19.07	19.09	19.25	0	0
		36	0	18.99	19.08	19.21	0-1	0
		36	18	19.00	19.09	19.18	0-1	0
		36	39	19.03	19.06	19.22	0-1	0
		75	0	19.02	19.08	19.20	0-1	0
	16QAM	1	0	19.27	19.20	19.46	0-1	0
		1	36	19.17	19.19	19.38	0-1	0
		1	74	19.27	19.49	19.49	0-1	0
		36	0	19.04	19.05	19.27	0-2	0
		36	18	19.00	19.10	19.24	0-2	0
		36	39	19.01	19.13	19.26	0-2	0
		75	0	19.02	19.09	19.23	0-2	0
	64QAM	1	0	19.37	19.22	19.53	0-2	0
		1	36	19.16	19.14	19.44	0-2	0
		1	74	19.26	19.37	19.51	0-2	0
		36	0	19.04	19.09	19.23	0-3	0
		36	18	19.03	19.10	19.27	0-3	0
		36	39	19.03	19.12	19.24	0-3	0
		75	0	18.97	19.09	19.24	0-3	0
	256QAM	1	0	17.64	17.52	17.85	0-5	1.3
		1	36	17.29	17.53	17.52	0-5	1.3
		1	74	17.63	17.79	17.81	0-5	1.3
		36	0	17.50	17.58	17.71	0-5	1.3
		36	18	17.47	17.58	17.68	0-5	1.3
		36	39	17.51	17.57	17.70	0-5	1.3
		75	0	17.44	17.54	17.68	0-5	1.3

LTE Band 4 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]] 20175 Ch. 1732.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	19.09	0	0
		1	49	19.09	0	0
		1	99	19.14	0	0
		50	0	19.08	0-1	0
		50	25	19.07	0-1	0
		50	49	19.12	0-1	0
		100	0	19.09	0-1	0
	16QAM	1	0	19.22	0-1	0
		1	49	19.12	0-1	0
		1	99	19.47	0-1	0
		50	0	19.09	0-2	0
		50	25	19.08	0-2	0
		50	49	19.09	0-2	0
		100	0	19.08	0-2	0
	64QAM	1	0	19.27	0-2	0
		1	49	19.29	0-2	0
		1	99	19.43	0-2	0
		50	0	19.08	0-3	0
		50	25	19.12	0-3	0
		50	49	19.13	0-3	0
		100	0	19.07	0-3	0
	256QAM	1	0	17.66	0-5	1.3
		1	49	17.59	0-5	1.3
		1	99	17.72	0-5	1.3
		50	0	17.61	0-5	1.3
		50	25	17.59	0-5	1.3
		50	49	17.61	0-5	1.3
		100	0	17.59	0-5	1.3

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

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 ㎒	26365 Ch. 1882.5 ㎒	26683 Ch. 1914.3 ㎒		
1.4 ㎒	QPSK	1	0	18.57	18.73	18.53	0	0
		1	3	18.60	18.72	18.54	0	0
		1	5	18.54	18.72	18.50	0	0
		3	0	18.53	18.65	18.44	0	0
		3	1	18.67	18.84	18.63	0	0
		3	3	18.57	18.69	18.51	0	0
		6	0	18.58	18.71	18.48	0-1	0
	16QAM	1	0	18.67	18.91	18.72	0-1	0
		1	3	18.59	18.68	18.47	0-1	0
		1	5	18.66	18.85	18.66	0-1	0
		3	0	18.58	18.75	18.56	0-1	0
		3	1	18.71	18.92	18.65	0-1	0
		3	3	18.70	18.85	18.59	0-1	0
		6	0	18.62	18.80	18.53	0-2	0
	64QAM	1	0	18.79	18.89	18.63	0-2	0
		1	3	18.59	18.82	18.58	0-2	0
		1	5	18.71	18.84	18.61	0-2	0
		3	0	18.57	18.67	18.54	0-2	0
		3	1	18.71	18.87	18.60	0-2	0
		3	3	18.62	18.64	18.47	0-2	0
		6	0	18.53	18.72	18.53	0-3	0
	256QAM	1	0	17.05	17.16	17.08	0-5	1.3
		1	3	16.95	17.04	16.97	0-5	1.3
		1	5	17.12	17.28	17.00	0-5	1.3
		3	0	17.00	17.15	16.88	0-5	1.3
		3	1	17.07	17.24	17.03	0-5	1.3
		3	3	17.05	17.25	17.00	0-5	1.3
		6	0	16.97	17.15	16.85	0-5	1.3

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	26675Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	18.55	18.71	18.48	0	0
		1	7	18.46	18.64	18.44	0	0
		1	14	18.56	18.69	18.46	0	0
		8	0	18.58	18.75	18.51	0-1	0
		8	3	18.51	18.67	18.49	0-1	0
		8	7	18.59	18.74	18.54	0-1	0
		15	0	18.57	18.77	18.53	0-1	0
	16QAM	1	0	18.78	18.88	18.68	0-1	0
		1	7	18.77	18.80	18.67	0-1	0
		1	14	18.73	18.88	18.61	0-1	0
		8	0	18.64	18.76	18.55	0-2	0
		8	3	18.58	18.75	18.47	0-2	0
		8	7	18.61	18.74	18.58	0-2	0
		15	0	18.59	18.72	18.51	0-2	0
	64QAM	1	0	18.65	18.94	18.63	0-2	0
		1	7	18.57	18.77	18.55	0-2	0
		1	14	18.66	18.75	18.65	0-2	0
		8	0	18.59	18.71	18.53	0-3	0
		8	3	18.54	18.71	18.48	0-3	0
		8	7	18.57	18.73	18.51	0-3	0
		15	0	18.58	18.72	18.53	0-3	0
	256QAM	1	0	17.13	17.25	17.05	0-5	1.3
		1	7	16.91	17.04	16.87	0-5	1.3
		1	14	17.04	17.18	17.12	0-5	1.3
		8	0	16.96	17.14	16.92	0-5	1.3
		8	3	16.93	17.15	16.90	0-5	1.3
		8	7	16.94	17.20	16.95	0-5	1.3
		15	0	16.96	17.17	16.92	0-5	1.3

LTE Band 25 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 ㎒	26365 Ch. 1882.5 ㎒	26665 Ch. 1912.5 ㎒		
5 ㎒	QPSK	1	0	18.53	18.73	18.49	0	0
		1	12	18.44	18.69	18.46	0	0
		1	24	18.50	18.68	18.51	0	0
		12	0	18.56	18.79	18.52	0-1	0
		12	6	18.53	18.72	18.58	0-1	0
		12	11	18.53	18.73	18.53	0-1	0
		25	0	18.54	18.74	18.53	0-1	0
	16QAM	1	0	18.73	18.98	18.76	0-1	0
		1	12	18.73	18.93	18.66	0-1	0
		1	24	18.63	18.86	18.73	0-1	0
		12	0	18.56	18.76	18.54	0-2	0
		12	6	18.58	18.71	18.50	0-2	0
		12	11	18.60	18.74	18.56	0-2	0
		25	0	18.60	18.75	18.56	0-2	0
	64QAM	1	0	18.73	18.97	18.64	0-2	0
		1	12	18.53	18.81	18.66	0-2	0
		1	24	18.79	18.88	18.78	0-2	0
		12	0	18.57	18.74	18.63	0-3	0
		12	6	18.59	18.80	18.54	0-3	0
		12	11	18.56	18.73	18.53	0-3	0
		25	0	18.54	18.75	18.48	0-3	0
	256QAM	1	0	16.95	17.35	16.99	0-5	1.3
		1	12	16.85	17.27	16.94	0-5	1.3
		1	24	16.97	17.30	16.97	0-5	1.3
		12	0	17.01	17.23	16.95	0-5	1.3
		12	6	17.00	17.25	16.99	0-5	1.3
		12	11	16.95	17.25	16.97	0-5	1.3
		25	0	16.97	17.22	16.90	0-5	1.3

LTE Band 25 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 ㎒	26365 Ch. 1882.5 ㎒	26640 Ch. 1910 ㎒		
10 ㎒	QPSK	1	0	18.64	18.70	18.60	0	0
		1	24	18.58	18.71	18.51	0	0
		1	49	18.62	18.69	18.57	0	0
		25	0	18.63	18.75	18.62	0-1	0
		25	12	18.62	18.75	18.61	0-1	0
		25	24	18.63	18.73	18.61	0-1	0
		50	0	18.62	18.73	18.63	0-1	0
	16QAM	1	0	18.78	18.95	18.81	0-1	0
		1	24	18.61	18.81	18.72	0-1	0
		1	49	18.78	18.84	18.82	0-1	0
		25	0	18.67	18.76	18.65	0-2	0
		25	12	18.62	18.74	18.59	0-2	0
		25	24	18.63	18.74	18.60	0-2	0
		50	0	18.60	18.69	18.62	0-2	0
	64QAM	1	0	18.81	18.93	18.74	0-2	0
		1	24	18.77	18.92	18.63	0-2	0
		1	49	18.83	18.80	18.70	0-2	0
		25	0	18.60	18.79	18.58	0-3	0
		25	12	18.60	18.71	18.56	0-3	0
		25	24	18.57	18.70	18.58	0-3	0
		50	0	18.61	18.76	18.62	0-3	0
	256QAM	1	0	17.16	17.23	17.09	0-5	1.3
		1	24	17.01	17.17	17.07	0-5	1.3
		1	49	17.12	17.14	17.09	0-5	1.3
		25	0	16.99	17.17	17.01	0-5	1.3
		25	12	17.02	17.15	17.04	0-5	1.3
		25	24	16.97	17.15	17.02	0-5	1.3
		50	0	17.10	17.23	17.12	0-5	1.3

LTE Band 25 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 ㎒	26365 Ch. 1882.5 ㎒	26615 Ch. 1907.5 ㎒		
15	QPSK	1	0	18.64	18.77	18.55	0	0
		1	36	18.53	18.65	18.42	0	0
		1	74	18.58	18.68	18.52	0	0
		36	0	18.63	18.76	18.55	0-1	0
		36	18	18.62	18.76	18.53	0-1	0
		36	39	18.63	18.76	18.56	0-1	0
		75	0	18.63	18.71	18.54	0-1	0
	16QAM	1	0	18.76	18.89	18.71	0-1	0
		1	36	18.60	18.77	18.60	0-1	0
		1	74	18.78	18.81	18.59	0-1	0
		36	0	18.61	18.76	18.55	0-2	0
		36	18	18.61	18.75	18.50	0-2	0
		36	39	18.60	18.73	18.49	0-2	0
		75	0	18.58	18.68	18.51	0-2	0
	64QAM	1	0	18.79	18.89	18.73	0-2	0
		1	36	18.48	18.82	18.52	0-2	0
		1	74	18.75	18.80	18.65	0-2	0
		36	0	18.63	18.75	18.58	0-3	0
		36	18	18.61	18.76	18.52	0-3	0
		36	39	18.61	18.69	18.53	0-3	0
		75	0	18.56	18.69	18.47	0-3	0
	256QAM	1	0	17.18	17.32	17.13	0-5	1.3
		1	36	17.15	17.12	16.89	0-5	1.3
		1	74	17.06	17.30	17.07	0-5	1.3
		36	0	17.08	17.26	17.01	0-5	1.3
		36	18	17.11	17.23	17.01	0-5	1.3
		36	39	17.09	17.20	16.97	0-5	1.3
		75	0	17.07	17.19	16.95	0-5	1.3

LTE Band 25 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	18.66	18.83	18.61	0	0
		1	49	18.60	18.70	18.46	0	0
		1	99	18.62	18.67	18.50	0	0
		50	0	18.65	18.77	18.60	0-1	0
		50	25	18.63	18.75	18.53	0-1	0
		50	49	18.62	18.78	18.56	0-1	0
		100	0	18.66	18.73	18.56	0-1	0
	16QAM	1	0	18.94	18.79	18.79	0-1	0
		1	49	18.72	18.76	18.62	0-1	0
		1	99	18.85	18.97	18.71	0-1	0
		50	0	18.63	18.77	18.55	0-2	0
		50	25	18.60	18.71	18.52	0-2	0
		50	49	18.64	18.71	18.55	0-2	0
		100	0	18.64	18.74	18.50	0-2	0
	64QAM	1	0	18.82	18.90	18.74	0-2	0
		1	49	18.78	18.91	18.60	0-2	0
		1	99	18.87	18.83	18.64	0-2	0
		50	0	18.66	18.78	18.57	0-3	0
		50	25	18.68	18.76	18.54	0-3	0
		50	49	18.61	18.75	18.51	0-3	0
		100	0	18.61	18.74	18.52	0-3	0
	256QAM	1	0	17.26	17.40	17.14	0-5	1.3
		1	49	17.09	17.22	16.96	0-5	1.3
		1	99	17.11	17.29	16.99	0-5	1.3
		50	0	17.18	17.28	17.05	0-5	1.3
		50	25	17.17	17.25	17.05	0-5	1.3
		50	49	17.14	17.25	17.04	0-5	1.3
		100	0	17.15	17.25	17.01	0-5	1.3

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

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39675 Ch. 2498.5 ㎒	40148 Ch. 2545.8 ㎒	40620 Ch. 2593.0 ㎒	41093 Ch. 2640.3 ㎒	41565 Ch. 2687.5 ㎒		
5 ㎒	QPSK	1	0	21.23	21.29	21.38	21.07	20.86	0	0
		1	12	21.22	21.22	21.44	21.13	20.92	0	0
		1	24	21.28	21.32	21.44	21.13	20.93	0	0
		12	0	21.27	21.33	21.47	21.14	20.98	0-1	0
		12	6	21.30	21.32	21.42	21.14	20.94	0-1	0
		12	11	21.32	21.35	21.44	21.15	20.95	0-1	0
		25	0	21.28	21.35	21.49	21.16	20.98	0-1	0
	16QAM	1	0	21.17	21.20	21.34	21.08	20.84	0-1	0
		1	12	21.06	21.08	21.25	21.01	20.80	0-1	0
		1	24	21.16	21.21	21.29	21.06	20.85	0-1	0
		12	0	20.22	20.24	20.41	20.11	19.92	0-2	1
		12	6	20.24	20.22	20.33	20.08	19.88	0-2	1
		12	11	20.28	20.26	20.37	20.11	19.92	0-2	1
		25	0	20.22	20.32	20.46	20.13	19.92	0-2	1
	64QAM	1	0	20.17	20.32	20.54	20.17	19.95	0-2	1
		1	12	20.01	20.19	20.48	20.13	19.94	0-2	1
		1	24	20.18	20.34	20.54	20.16	19.96	0-2	1
		12	0	19.13	19.24	19.37	19.07	18.93	0-3	2
		12	6	19.14	19.23	19.34	19.09	18.89	0-3	2
		12	11	19.17	19.24	19.37	19.08	18.91	0-3	2
		25	0	19.29	19.30	19.42	19.11	18.92	0-3	2
	256QAM	1	0	17.39	17.13	17.40	17.70	16.78	0-5	4
		1	12	17.29	17.05	17.24	17.43	16.83	0-5	4
		1	24	17.07	17.17	17.26	17.12	16.75	0-5	4
		12	0	17.46	17.32	17.47	17.67	16.95	0-5	4
		12	6	17.39	17.32	17.43	17.52	16.90	0-5	4
		12	11	17.33	17.32	17.41	17.38	16.89	0-5	4
		25	0	17.37	17.37	17.52	17.53	16.99	0-5	4

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 ㎒	40160 Ch. 2547 ㎒	40620 Ch. 2593 ㎒	41080 Ch. 2639 ㎒	41540 Ch. 2685 ㎒		
10 ㎒	QPSK	1	0	21.20	21.36	21.46	21.21	20.95	0	0
		1	24	21.11	21.22	21.34	21.07	20.84	0	0
		1	49	21.18	21.25	21.37	21.11	20.87	0	0
		25	0	21.24	21.33	21.49	21.22	21.00	0-1	0
		25	12	21.21	21.29	21.46	21.21	20.99	0-1	0
		25	24	21.21	21.31	21.44	21.19	20.96	0-1	0
		50	0	21.23	21.29	21.49	21.25	21.03	0-1	0
	16QAM	1	0	21.14	21.23	21.31	21.17	20.92	0-1	0
		1	24	21.01	21.05	21.26	21.02	20.81	0-1	0
		1	49	21.19	21.10	21.31	21.09	20.90	0-1	0
		25	0	20.19	20.28	20.44	20.18	19.98	0-2	1
		25	12	20.17	20.28	20.42	20.15	19.97	0-2	1
		25	24	20.19	20.27	20.40	20.12	19.93	0-2	1
		50	0	20.21	20.29	20.47	20.20	19.99	0-2	1
	64QAM	1	0	20.23	20.38	20.50	20.26	20.05	0-2	1
		1	24	20.14	20.32	20.37	20.10	19.91	0-2	1
		1	49	20.28	20.35	20.41	20.20	19.98	0-2	1
		25	0	19.19	19.30	19.45	19.17	18.98	0-3	2
		25	12	19.16	19.24	19.40	19.15	18.93	0-3	2
		25	24	19.19	19.24	19.40	19.14	18.93	0-3	2
		50	0	19.24	19.30	19.50	19.24	19.02	0-3	2
	256QAM	1	0	17.44	17.18	17.55	17.77	16.79	0-5	4
		1	24	17.34	16.97	17.20	17.41	16.69	0-5	4
		1	49	17.01	17.05	17.21	16.93	16.73	0-5	4
		25	0	17.56	17.36	17.52	17.83	17.02	0-5	4
		25	12	17.46	17.31	17.47	17.58	16.99	0-5	4
		25	24	17.28	17.33	17.49	17.29	17.00	0-5	4
		50	0	17.43	17.39	17.57	17.58	17.11	0-5	4

LTE Band 41 _ 15 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	21.17	21.37	21.50	21.22	20.98	0	0
		1	36	21.10	21.24	21.39	21.21	20.97	0	0
		1	74	21.23	21.30	21.41	21.16	20.94	0	0
		36	0	21.20	21.35	21.51	21.25	21.05	0-1	0
		36	18	21.20	21.33	21.46	21.19	20.99	0-1	0
		36	39	21.19	21.30	21.42	21.18	20.97	0-1	0
		75	0	21.21	21.32	21.46	21.19	21.03	0-1	0
	16QAM	1	0	21.21	21.39	21.51	21.27	20.93	0-1	0
		1	36	21.05	21.13	21.32	21.14	20.93	0-1	0
		1	74	21.24	21.23	21.41	21.09	20.83	0-1	0
		36	0	20.15	20.33	20.47	20.23	20.00	0-2	1
		36	18	20.17	20.29	20.43	20.17	19.95	0-2	1
		36	39	20.16	20.25	20.42	20.17	19.95	0-2	1
		75	0	20.20	20.34	20.47	20.22	20.02	0-2	1
	64QAM	1	0	20.22	20.44	20.51	20.35	20.12	0-2	1
		1	36	20.10	20.17	20.29	20.24	19.98	0-2	1
		1	74	20.26	20.34	20.39	20.26	20.00	0-2	1
		36	0	19.17	19.30	19.44	19.20	19.01	0-3	2
		36	18	19.17	19.28	19.42	19.15	18.95	0-3	2
		36	39	19.17	19.27	19.42	19.15	18.96	0-3	2
		75	0	19.20	19.33	19.48	19.22	19.03	0-3	2
	256QAM	1	0	17.09	17.15	17.36	17.39	16.87	0-5	4
		1	36	17.43	17.01	17.28	17.36	16.87	0-5	4
		1	74	17.01	17.17	17.31	16.97	16.81	0-5	4
		36	0	17.49	17.35	17.49	17.57	17.04	0-5	4
		36	18	17.52	17.35	17.47	17.44	16.99	0-5	4
		36	39	17.23	17.32	17.44	17.22	17.00	0-5	4
		75	0	17.31	17.34	17.46	17.25	17.02	0-5	4

LTE Band 41 _ 20 ㎒ 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 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	21.23	21.42	21.56	21.35	21.02	0	0
		1	49	21.10	21.21	21.35	21.15	20.81	0	0
		1	99	21.18	21.24	21.37	21.16	21.00	0	0
		50	0	21.23	21.35	21.55	21.26	21.07	0-1	0
		50	25	21.21	21.30	21.46	21.22	21.03	0-1	0
		50	49	21.21	21.29	21.44	21.17	20.97	0-1	0
		100	0	21.21	21.34	21.50	21.21	21.01	0-1	0
	16QAM	1	0	21.07	21.46	21.52	21.30	21.02	0-1	0
		1	49	20.98	21.24	21.30	21.12	20.80	0-1	0
		1	99	21.10	21.26	21.36	21.15	20.78	0-1	0
		50	0	20.26	20.35	20.52	20.31	20.05	0-2	1
		50	25	20.23	20.28	20.45	20.25	20.02	0-2	1
		50	49	20.23	20.27	20.44	20.22	19.96	0-2	1
		100	0	20.27	20.36	20.52	20.28	20.03	0-2	1
	64QAM	1	0	20.26	20.45	20.56	20.30	20.08	0-2	1
		1	49	20.13	20.30	20.43	20.14	19.93	0-2	1
		1	99	20.27	20.33	20.46	20.18	19.96	0-2	1
		50	0	19.25	19.38	19.55	19.30	19.07	0-3	2
		50	25	19.24	19.30	19.48	19.25	19.02	0-3	2
		50	49	19.24	19.30	19.45	19.21	18.99	0-3	2
		100	0	19.21	19.31	19.48	19.19	18.99	0-3	2
	256QAM	1	0	17.77	17.54	17.98	18.13	16.95	0-5	4
		1	49	17.46	17.09	17.23	17.48	16.78	0-5	4
		1	99	17.14	17.11	17.26	17.08	16.85	0-5	4
		50	0	17.70	17.48	17.73	17.91	17.16	0-5	4
		50	25	17.56	17.43	17.57	17.59	17.11	0-5	4
		50	49	17.42	17.45	17.55	17.30	17.09	0-5	4
		100	0	17.49	17.37	17.52	17.53	17.02	0-5	4

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 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39675 Ch. 2498.5 ㎒	40148 Ch. 2545.8 ㎒	40620 Ch. 2593.0 ㎒	41093 Ch. 2640.3 ㎒	41565 Ch. 2687.5 ㎒		
5 ㎒	QPSK	1	0	21.14	21.26	21.39	21.06	20.89	0	0
		1	12	21.11	21.19	21.37	21.14	20.98	0	0
		1	24	21.23	21.29	21.40	21.13	20.91	0	0
		12	0	21.22	21.31	21.45	21.15	20.95	0-1	0
		12	6	21.24	21.31	21.41	21.12	20.90	0-1	0
		12	11	21.25	21.33	21.42	21.14	20.92	0-1	0
		25	0	21.24	21.32	21.46	21.15	20.96	0-1	0
	16QAM	1	0	21.04	21.25	21.32	21.08	20.81	0-1	0
		1	12	20.94	21.07	21.24	20.99	20.83	0-1	0
		1	24	21.16	21.21	21.27	21.05	20.79	0-1	0
		12	0	20.17	20.26	20.36	20.11	19.92	0-2	1
		12	6	20.19	20.25	20.31	20.05	19.86	0-2	1
		12	11	20.22	20.28	20.37	20.08	19.87	0-2	1
		25	0	20.20	20.30	20.42	20.12	19.91	0-2	1
	64QAM	1	0	20.06	20.31	20.50	20.23	20.07	0-2	1
		1	12	20.03	20.16	20.41	20.18	20.11	0-2	1
		1	24	20.18	20.32	20.43	20.20	20.01	0-2	1
		12	0	19.11	19.25	19.40	19.06	18.89	0-3	2
		12	6	19.14	19.26	19.34	19.04	18.85	0-3	2
		12	11	19.21	19.27	19.34	19.06	18.86	0-3	2
		25	0	19.20	19.29	19.42	19.12	18.91	0-3	2
	256QAM	1	0	17.40	17.16	17.42	17.62	16.76	0-5	4
		1	12	17.32	17.01	17.23	17.42	16.75	0-5	4
		1	24	17.08	17.06	17.30	16.95	16.73	0-5	4
		12	0	17.50	17.30	17.40	17.61	16.92	0-5	4
		12	6	17.44	17.31	17.38	17.47	16.86	0-5	4
		12	11	17.36	17.31	17.40	17.34	16.89	0-5	4
		25	0	17.43	17.36	17.51	17.50	17.00	0-5	4

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 ㎒	40160 Ch. 2547 ㎒	40620 Ch. 2593 ㎒	41080 Ch. 2639 ㎒	41540 Ch. 2685 ㎒		
10 ㎒	QPSK	1	0	21.17	21.36	21.46	21.19	20.93	0	0
		1	24	21.08	21.21	21.32	21.05	20.80	0	0
		1	49	21.15	21.24	21.35	21.09	20.84	0	0
		25	0	21.21	21.34	21.48	21.20	20.98	0-1	0
		25	12	21.19	21.29	21.45	21.17	20.95	0-1	0
		25	24	21.21	21.30	21.43	21.15	20.92	0-1	0
		50	0	21.21	21.30	21.50	21.22	21.02	0-1	0
	16QAM	1	0	21.18	21.20	21.28	21.13	20.95	0-1	0
		1	24	21.08	21.09	21.19	21.03	20.80	0-1	0
		1	49	21.17	21.11	21.29	21.13	20.89	0-1	0
		25	0	20.18	20.28	20.44	20.17	19.93	0-2	1
		25	12	20.16	20.25	20.42	20.17	19.92	0-2	1
		25	24	20.18	20.25	20.40	20.14	19.89	0-2	1
		50	0	20.21	20.27	20.47	20.20	19.96	0-2	1
	64QAM	1	0	20.25	20.45	20.47	20.21	19.92	0-2	1
		1	24	20.18	20.28	20.36	20.12	19.86	0-2	1
		1	49	20.26	20.31	20.42	20.18	19.88	0-2	1
		25	0	19.19	19.29	19.46	19.17	18.94	0-3	2
		25	12	19.17	19.24	19.42	19.15	18.94	0-3	2
		25	24	19.20	19.27	19.41	19.13	18.93	0-3	2
		50	0	19.22	19.31	19.49	19.21	19.02	0-3	2
	256QAM	1	0	17.47	17.29	17.58	17.81	16.67	0-5	4
		1	24	17.36	17.08	17.19	17.39	16.58	0-5	4
		1	49	17.03	17.10	17.23	16.95	16.67	0-5	4
		25	0	17.55	17.36	17.51	17.80	17.03	0-5	4
		25	12	17.45	17.31	17.47	17.55	17.01	0-5	4
		25	24	17.27	17.33	17.48	17.25	16.99	0-5	4
		50	0	17.44	17.41	17.56	17.55	17.09	0-5	4

LTE Band 41 _ 15 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	21.19	21.39	21.52	21.24	20.98	0	0
		1	36	21.11	21.24	21.40	21.23	20.97	0	0
		1	74	21.23	21.31	21.41	21.14	20.94	0	0
		36	0	21.21	21.36	21.52	21.24	21.03	0-1	0
		36	18	21.22	21.35	21.49	21.17	20.97	0-1	0
		36	39	21.20	21.30	21.44	21.16	20.95	0-1	0
		75	0	21.23	21.33	21.48	21.19	21.01	0-1	0
	16QAM	1	0	21.17	21.36	21.52	21.22	21.00	0-1	0
		1	36	20.92	21.14	21.29	21.09	20.97	0-1	0
		1	74	21.09	21.32	21.45	21.11	20.97	0-1	0
		36	0	20.17	20.32	20.48	20.20	20.01	0-2	1
		36	18	20.18	20.31	20.47	20.15	19.94	0-2	1
		36	39	20.18	20.28	20.43	20.15	19.94	0-2	1
		75	0	20.23	20.33	20.48	20.22	20.01	0-2	1
	64QAM	1	0	20.41	20.51	20.64	20.15	20.12	0-2	1
		1	36	20.25	20.25	20.45	20.04	20.06	0-2	1
		1	74	20.43	20.44	20.49	19.95	19.98	0-2	1
		36	0	19.17	19.32	19.48	19.22	19.01	0-3	2
		36	18	19.18	19.30	19.44	19.16	18.96	0-3	2
		36	39	19.17	19.26	19.41	19.17	18.94	0-3	2
		75	0	19.22	19.33	19.49	19.20	19.03	0-3	2
	256QAM	1	0	17.08	17.32	17.44	17.47	16.98	0-5	4
		1	36	17.37	17.05	17.26	17.44	16.90	0-5	4
		1	74	16.99	17.15	17.25	17.04	16.84	0-5	4
		36	0	17.48	17.36	17.50	17.62	17.03	0-5	4
		36	18	17.50	17.34	17.47	17.50	17.00	0-5	4
		36	39	17.25	17.32	17.46	17.20	16.98	0-5	4
		75	0	17.31	17.33	17.49	17.31	17.00	0-5	4

LTE Band 41 _ 20 ㎒ 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 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	21.17	21.35	21.55	21.29	21.02	0	0
		1	49	21.07	21.19	21.35	21.09	20.80	0	0
		1	99	21.17	21.21	21.35	21.12	20.85	0	0
		50	0	21.24	21.37	21.55	21.22	21.05	0-1	0
		50	25	21.22	21.30	21.47	21.16	20.97	0-1	0
		50	49	21.22	21.30	21.45	21.12	20.92	0-1	0
		100	0	21.21	21.32	21.50	21.18	20.98	0-1	0
	16QAM	1	0	21.12	21.30	21.53	21.37	21.04	0-1	0
		1	49	21.00	21.10	21.33	21.20	20.70	0-1	0
		1	99	21.19	21.15	21.36	21.21	20.79	0-1	0
		50	0	20.21	20.37	20.51	20.23	20.00	0-2	1
		50	25	20.20	20.30	20.44	20.16	19.96	0-2	1
		50	49	20.19	20.28	20.42	20.15	19.92	0-2	1
		100	0	20.24	20.36	20.52	20.20	20.00	0-2	1
	64QAM	1	0	20.20	20.44	20.56	20.10	20.11	0-2	1
		1	49	20.15	20.31	20.37	19.91	19.88	0-2	1
		1	99	20.31	20.33	20.44	19.96	19.94	0-2	1
		50	0	19.25	19.37	19.52	19.23	19.01	0-3	2
		50	25	19.22	19.31	19.47	19.18	18.96	0-3	2
		50	49	19.25	19.30	19.44	19.14	18.94	0-3	2
		100	0	19.20	19.30	19.47	19.19	18.95	0-3	2
	256QAM	1	0	17.58	17.39	17.85	18.29	16.88	0-5	4
		1	49	17.31	17.03	17.16	17.65	16.77	0-5	4
		1	99	17.05	17.08	17.17	17.04	16.81	0-5	4
		50	0	17.73	17.47	17.72	18.14	17.12	0-5	4
		50	25	17.59	17.40	17.57	17.81	17.12	0-5	4
		50	49	17.43	17.41	17.55	17.50	17.03	0-5	4
		100	0	17.50	17.36	17.51	17.74	16.97	0-5	4

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

[LTE Band 66 Conducted Power]

LTE Band 66 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979Ch. 1710.7 ㎒	132322 Ch. 1745 ㎒	132665 Ch. 1779.3 ㎒		
1.4 ㎒	QPSK	1	0	19.03	19.09	18.93	0	0
		1	3	19.05	19.14	18.92	0	0
		1	5	18.99	19.13	18.94	0	0
		3	0	19.00	19.04	18.87	0	0
		3	1	19.11	19.30	19.06	0	0
		3	3	19.03	19.15	18.92	0	0
		6	0	19.01	19.11	18.93	0-1	0
	16QAM	1	0	19.25	19.33	19.12	0-1	0
		1	3	19.12	19.34	19.12	0-1	0
		1	5	19.24	19.31	19.14	0-1	0
		3	0	19.14	19.14	18.92	0-1	0
		3	1	19.22	19.30	19.04	0-1	0
		3	3	19.06	19.22	19.03	0-1	0
		6	0	19.07	19.22	18.98	0-2	0
	64QAM	1	0	19.23	19.39	19.11	0-2	0
		1	3	19.14	19.23	18.94	0-2	0
		1	5	19.29	19.37	19.12	0-2	0
		3	0	19.12	19.16	19.00	0-2	0
		3	1	19.24	19.33	19.14	0-2	0
		3	3	19.13	19.21	19.09	0-2	0
		6	0	19.10	19.26	19.06	0-3	0
	256QAM	1	0	17.55	17.68	17.44	0-5	1.3
		1	3	17.58	17.56	17.26	0-5	1.3
		1	5	17.49	17.65	17.39	0-5	1.3
		3	0	17.57	17.63	17.26	0-5	1.3
		3	1	17.69	17.72	17.49	0-5	1.3
		3	3	17.62	17.62	17.43	0-5	1.3
		6	0	17.51	17.60	17.40	0-5	1.3

LTE Band 66 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 ㎒	132322 Ch. 1745 ㎒	132657 Ch. 1778.5 ㎒		
3 ㎒	QPSK	1	0	19.05	19.13	18.93	0	0
		1	7	18.97	19.14	18.90	0	0
		1	14	19.07	19.12	18.92	0	0
		8	0	19.12	19.23	19.00	0-1	0
		8	3	19.02	19.15	18.90	0-1	0
		8	7	19.11	19.22	19.00	0-1	0
		15	0	19.09	19.20	19.00	0-1	0
	16QAM	1	0	19.29	19.45	19.23	0-1	0
		1	7	19.33	19.27	19.10	0-1	0
		1	14	19.22	19.33	19.21	0-1	0
		8	0	19.11	19.23	19.01	0-2	0
		8	3	19.06	19.23	19.02	0-2	0
		8	7	19.12	19.30	19.04	0-2	0
		15	0	19.09	19.28	19.05	0-2	0
	64QAM	1	0	19.24	19.38	19.17	0-2	0
		1	7	19.16	19.40	19.14	0-2	0
		1	14	19.28	19.38	19.19	0-2	0
		8	0	19.04	19.24	19.03	0-3	0
		8	3	19.06	19.22	19.00	0-3	0
		8	7	19.06	19.24	18.99	0-3	0
		15	0	19.11	19.24	19.02	0-3	0
	256QAM	1	0	17.55	17.68	17.40	0-5	1.3
		1	7	17.61	17.67	17.38	0-5	1.3
		1	14	17.58	17.72	17.39	0-5	1.3
		8	0	17.54	17.56	17.36	0-5	1.3
		8	3	17.54	17.61	17.39	0-5	1.3
		8	7	17.53	17.62	17.45	0-5	1.3
		15	0	17.54	17.61	17.37	0-5	1.3

LTE Band 66 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 ㎒	132322Ch. 1745 ㎒	132647 Ch. 1777.5 ㎒		
5 ㎒	QPSK	1	0	19.08	19.20	19.02	0	0
		1	12	19.00	19.11	18.94	0	0
		1	24	19.04	19.15	18.96	0	0
		12	0	19.05	19.18	19.01	0-1	0
		12	6	19.10	19.17	19.01	0-1	0
		12	11	19.13	19.19	18.99	0-1	0
		25	0	19.11	19.21	19.02	0-1	0
	16QAM	1	0	19.28	19.40	19.29	0-1	0
		1	12	19.27	19.39	19.17	0-1	0
		1	24	19.34	19.38	19.29	0-1	0
		12	0	19.12	19.26	19.07	0-2	0
		12	6	19.13	19.26	19.12	0-2	0
		12	11	19.08	19.21	19.07	0-2	0
		25	0	19.13	19.26	19.07	0-2	0
	64QAM	1	0	19.28	19.35	19.21	0-2	0
		1	12	19.21	19.21	19.24	0-2	0
		1	24	19.29	19.49	19.23	0-2	0
		12	0	19.09	19.25	19.09	0-3	0
		12	6	19.13	19.26	19.06	0-3	0
		12	11	19.11	19.22	19.05	0-3	0
		25	0	19.09	19.23	19.08	0-3	0
	256QAM	1	0	17.59	17.71	17.58	0-5	1.3
		1	12	17.57	17.60	17.44	0-5	1.3
		1	24	17.62	17.61	17.48	0-5	1.3
		12	0	17.55	17.64	17.47	0-5	1.3
		12	6	17.55	17.65	17.47	0-5	1.3
		12	11	17.54	17.62	17.43	0-5	1.3
		25	0	17.57	17.64	17.44	0-5	1.3

LTE Band 66 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 ㎒	132322 Ch. 1745 ㎒	132622 Ch. 1775 ㎒		
10 ㎒	QPSK	1	0	19.09	19.22	19.07	0	0
		1	24	19.04	19.15	19.03	0	0
		1	49	19.08	19.19	19.05	0	0
		25	0	19.12	19.21	19.12	0-1	0
		25	12	19.10	19.25	19.10	0-1	0
		25	24	19.10	19.21	19.10	0-1	0
		50	0	19.10	19.19	19.02	0-1	0
	16QAM	1	0	19.25	19.55	19.44	0-1	0
		1	24	19.17	19.45	19.32	0-1	0
		1	49	19.21	19.47	19.31	0-1	0
		25	0	19.13	19.26	19.18	0-2	0
		25	12	19.08	19.25	19.11	0-2	0
		25	24	19.05	19.24	19.15	0-2	0
		50	0	19.05	19.17	19.01	0-2	0
	64QAM	1	0	19.19	19.51	19.39	0-2	0
		1	24	19.15	19.43	19.26	0-2	0
		1	49	19.09	19.40	19.26	0-2	0
		25	0	19.11	19.22	19.15	0-3	0
		25	12	19.08	19.25	19.10	0-3	0
		25	24	19.06	19.23	19.06	0-3	0
		50	0	19.09	19.20	19.09	0-3	0
	256QAM	1	0	17.61	17.81	17.60	0-5	1.3
		1	24	17.67	17.79	17.61	0-5	1.3
		1	49	17.57	17.84	17.58	0-5	1.3
		25	0	17.56	17.67	17.47	0-5	1.3
		25	12	17.51	17.62	17.51	0-5	1.3
		25	24	17.50	17.63	17.47	0-5	1.3
		50	0	17.58	17.71	17.53	0-5	1.3

LTE Band 66 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 ㎒	132322 Ch. 1745 ㎒	132597 Ch. 1772.5 ㎒		
15 ㎒	QPSK	1	0	19.04	19.21	19.13	0	0
		1	36	18.96	19.12	18.99	0	0
		1	74	19.01	19.22	19.10	0	0
		36	0	19.02	19.14	19.11	0-1	0
		36	18	19.01	19.21	19.10	0-1	0
		36	39	19.03	19.16	19.06	0-1	0
		75	0	18.98	19.16	19.09	0-1	0
	16QAM	1	0	19.37	19.52	19.50	0-1	0
		1	36	19.01	19.43	19.33	0-1	0
		1	74	19.18	19.46	19.27	0-1	0
		36	0	18.97	19.23	19.09	0-2	0
		36	18	18.98	19.20	19.10	0-2	0
		36	39	18.97	19.21	19.12	0-2	0
		75	0	18.97	19.22	19.10	0-2	0
	64QAM	1	0	19.30	19.44	19.35	0-2	0
		1	36	19.04	19.31	19.18	0-2	0
		1	74	19.15	19.42	19.29	0-2	0
		36	0	19.05	19.24	19.14	0-3	0
		36	18	19.00	19.29	19.13	0-3	0
		36	39	18.99	19.23	19.13	0-3	0
		75	0	18.95	19.18	19.09	0-3	0
	256QAM	1	0	17.63	17.68	17.69	0-5	1.3
		1	36	17.42	17.66	17.54	0-5	1.3
		1	74	17.62	17.76	17.60	0-5	1.3
		36	0	17.52	17.69	17.57	0-5	1.3
		36	18	17.51	17.72	17.58	0-5	1.3
		36	39	17.51	17.68	17.54	0-5	1.3
		75	0	17.46	17.65	17.52	0-5	1.3

LTE Band 66 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	19.00	19.21	19.23	0	0
		1	49	18.93	19.19	19.16	0	0
		1	99	18.99	19.24	19.17	0	0
		50	0	19.00	19.20	19.19	0-1	0
		50	25	19.02	19.20	19.15	0-1	0
		50	49	19.06	19.22	19.13	0-1	0
		100	0	19.02	19.20	19.14	0-1	0
	16QAM	1	0	19.23	19.46	19.36	0-1	0
		1	49	19.02	19.35	19.34	0-1	0
		1	99	19.23	19.47	19.41	0-1	0
		50	0	19.00	19.21	19.18	0-2	0
		50	25	19.01	19.18	19.19	0-2	0
		50	49	18.99	19.24	19.15	0-2	0
		100	0	18.95	19.22	19.16	0-2	0
	64QAM	1	0	19.30	19.44	19.40	0-2	0
		1	49	18.97	19.44	19.39	0-2	0
		1	99	19.11	19.42	19.33	0-2	0
		50	0	19.00	19.20	19.21	0-3	0
		50	25	19.00	19.24	19.18	0-3	0
		50	49	19.02	19.22	19.18	0-3	0
		100	0	18.99	19.19	19.19	0-3	0
	256QAM	1	0	17.66	17.81	17.78	0-5	1.3
		1	49	17.57	17.75	17.63	0-5	1.3
		1	99	17.53	17.82	17.73	0-5	1.3
		50	0	17.51	17.69	17.70	0-5	1.3
		50	25	17.52	17.68	17.64	0-5	1.3
		50	49	17.53	17.69	17.65	0-5	1.3
		100	0	17.51	17.70	17.67	0-5	1.3

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 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 ㎒	18900 Ch. 1880 ㎒	19193 Ch. 1909.3 ㎒		
1.4 ㎒	QPSK	1	0	18.57	18.71	18.61	0	0
		1	3	18.57	18.78	18.55	0	0
		1	5	18.58	18.76	18.47	0	0
		3	0	18.55	18.78	18.41	0	0
		3	1	18.75	18.84	18.52	0	0
		3	3	18.61	18.83	18.57	0	0
		6	0	18.63	18.73	18.53	0-1	0
	16QAM	1	0	18.81	18.88	18.69	0-1	0
		1	3	18.57	18.91	18.42	0-1	0
		1	5	18.83	18.90	18.74	0-1	0
		3	0	18.68	18.87	18.60	0-1	0
		3	1	18.78	18.98	18.81	0-1	0
		3	3	18.81	18.87	18.63	0-1	0
		6	0	18.68	18.82	18.63	0-2	0
	64QAM	1	0	18.79	18.87	18.70	0-2	0
		1	3	18.58	18.83	18.63	0-2	0
		1	5	18.81	18.92	18.56	0-2	0
		3	0	18.64	18.82	18.57	0-2	0
		3	1	18.82	18.86	18.68	0-2	0
		3	3	18.74	18.81	18.61	0-2	0
		6	0	18.67	18.82	18.51	0-3	0
	256QAM	1	0	17.11	17.28	17.16	0-5	1.3
		1	3	16.94	17.25	16.88	0-5	1.3
		1	5	17.12	17.33	17.01	0-5	1.3
		3	0	17.01	17.26	16.95	0-5	1.3
		3	1	17.04	17.26	17.08	0-5	1.3
		3	3	17.14	17.35	16.98	0-5	1.3
		6	0	17.06	17.25	16.96	0-5	1.3

LTE Band 2 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 ㎒	18900 Ch. 1880 ㎒	19185 Ch. 1908.5 ㎒		
3 ㎒	QPSK	1	0	18.61	18.75	18.52	0	0
		1	7	18.52	18.75	18.49	0	0
		1	14	18.58	18.77	18.60	0	0
		8	0	18.63	18.88	18.62	0-1	0
		8	3	18.60	18.78	18.61	0-1	0
		8	7	18.69	18.82	18.63	0-1	0
		15	0	18.68	18.85	18.61	0-1	0
	16QAM	1	0	18.91	18.90	18.78	0-1	0
		1	7	18.87	18.97	18.67	0-1	0
		1	14	18.92	18.96	18.83	0-1	0
		8	0	18.68	18.92	18.60	0-2	0
		8	3	18.70	18.92	18.61	0-2	0
		8	7	18.73	18.84	18.68	0-2	0
		15	0	18.73	18.87	18.61	0-2	0
	64QAM	1	0	18.95	18.98	18.78	0-2	0
		1	7	18.77	18.90	18.68	0-2	0
		1	14	18.69	18.93	18.70	0-2	0
		8	0	18.71	18.92	18.57	0-3	0
		8	3	18.64	18.90	18.61	0-3	0
		8	7	18.68	18.79	18.65	0-3	0
		15	0	18.67	18.84	18.61	0-3	0
	256QAM	1	0	17.21	17.43	17.14	0-5	1.3
		1	7	17.01	17.43	17.08	0-5	1.3
		1	14	17.18	17.24	17.13	0-5	1.3
		8	0	17.06	17.24	17.06	0-5	1.3
		8	3	17.04	17.28	17.03	0-5	1.3
		8	7	17.12	17.28	17.06	0-5	1.3
		15	0	17.08	17.22	16.97	0-5	1.3

LTE Band 2 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 ㎒	18900 Ch. 1880 ㎒	19175 Ch. 1907.5 ㎒		
5 ㎒	QPSK	1	0	18.60	18.84	18.56	0	0
		1	12	18.59	18.80	18.50	0	0
		1	24	18.61	18.86	18.57	0	0
		12	0	18.64	18.86	18.65	0-1	0
		12	6	18.70	18.86	18.63	0-1	0
		12	11	18.66	18.81	18.63	0-1	0
		25	0	18.68	18.90	18.59	0-1	0
	16QAM	1	0	18.75	18.87	18.76	0-1	0
		1	12	18.83	18.75	18.69	0-1	0
		1	24	18.88	18.76	18.78	0-1	0
		12	0	18.66	18.87	18.63	0-2	0
		12	6	18.71	18.87	18.64	0-2	0
		12	11	18.67	18.86	18.63	0-2	0
		25	0	18.71	18.85	18.56	0-2	0
	64QAM	1	0	18.98	18.96	18.84	0-2	0
		1	12	18.85	18.95	18.71	0-2	0
		1	24	18.79	18.94	18.79	0-2	0
		12	0	18.69	18.88	18.61	0-3	0
		12	6	18.68	18.94	18.65	0-3	0
		12	11	18.66	18.86	18.62	0-3	0
		25	0	18.70	18.98	18.59	0-3	0
	256QAM	1	0	17.09	17.40	17.24	0-5	1.3
		1	12	17.12	17.43	17.18	0-5	1.3
		1	24	17.19	17.32	17.21	0-5	1.3
		12	0	17.08	17.37	17.09	0-5	1.3
		12	6	17.13	17.26	17.05	0-5	1.3
		12	11	17.09	17.31	17.00	0-5	1.3
		25	0	17.14	17.27	17.03	0-5	1.3

LTE Band 2 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 ㎒	18900 Ch. 1880 ㎒	19150 Ch. 1905 ㎒		
10 ㎒	QPSK	1	0	18.67	18.92	18.67	0	0
		1	24	18.63	18.80	18.66	0	0
		1	49	18.66	18.80	18.64	0	0
		25	0	18.76	18.86	18.67	0-1	0
		25	12	18.75	18.84	18.67	0-1	0
		25	24	18.70	18.87	18.60	0-1	0
		50	0	18.72	18.91	18.64	0-1	0
	16QAM	1	0	18.98	18.88	18.98	0-1	0
		1	24	18.71	18.91	18.73	0-1	0
		1	49	18.88	18.97	18.72	0-1	0
		25	0	18.76	18.97	18.70	0-2	0
		25	12	18.68	18.93	18.69	0-2	0
		25	24	18.71	18.86	18.57	0-2	0
		50	0	18.67	18.93	18.69	0-2	0
	64QAM	1	0	18.86	18.85	18.92	0-2	0
		1	24	18.76	18.86	18.87	0-2	0
		1	49	18.90	18.89	18.79	0-2	0
		25	0	18.79	18.91	18.66	0-3	0
		25	12	18.70	18.88	18.66	0-3	0
		25	24	18.66	18.86	18.65	0-3	0
		50	0	18.70	18.84	18.66	0-3	0
	256QAM	1	0	17.21	17.38	17.23	0-5	1.3
		1	24	17.26	17.45	17.16	0-5	1.3
		1	49	17.30	17.30	17.09	0-5	1.3
		25	0	17.15	17.37	17.06	0-5	1.3
		25	12	17.09	17.36	17.07	0-5	1.3
		25	24	17.15	17.34	17.02	0-5	1.3
		50	0	17.17	17.35	17.18	0-5	1.3

LTE Band 2 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 ㎒	18900 Ch. 1880 ㎒	19125 Ch. 1902.5 ㎒		
15 ㎒	QPSK	1	0	18.83	18.91	18.67	0	0
		1	36	18.66	18.82	18.58	0	0
		1	74	18.71	18.82	18.61	0	0
		36	0	18.77	18.95	18.72	0-1	0
		36	18	18.81	18.90	18.68	0-1	0
		36	39	18.78	18.92	18.66	0-1	0
		75	0	18.76	18.94	18.67	0-1	0
	16QAM	1	0	18.83	18.84	18.87	0-1	0
		1	36	18.84	18.84	18.96	0-1	0
		1	74	18.99	18.99	18.84	0-1	0
		36	0	18.78	18.98	18.65	0-2	0
		36	18	18.73	18.94	18.65	0-2	0
		36	39	18.71	18.86	18.66	0-2	0
		75	0	18.72	18.84	18.64	0-2	0
	64QAM	1	0	18.90	18.86	18.84	0-2	0
		1	36	18.71	18.97	18.77	0-2	0
		1	74	18.88	18.85	18.83	0-2	0
		36	0	18.79	18.89	18.69	0-3	0
		36	18	18.77	18.94	18.66	0-3	0
		36	39	18.72	18.89	18.64	0-3	0
		75	0	18.70	18.88	18.64	0-3	0
	256QAM	1	0	17.40	17.48	17.27	0-5	1.3
		1	36	17.06	17.42	17.04	0-5	1.3
		1	74	17.13	17.42	17.17	0-5	1.3
		36	0	17.34	17.43	17.16	0-5	1.3
		36	18	17.28	17.38	17.15	0-5	1.3
		36	39	17.24	17.39	17.19	0-5	1.3
		75	0	17.20	17.32	17.19	0-5	1.3

LTE Band 2 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	18.82	18.87	18.73	0	0
		1	49	18.76	18.91	18.66	0	0
		1	99	18.77	18.82	18.61	0	0
		50	0	18.83	18.96	18.71	0-1	0
		50	25	18.85	18.89	18.65	0-1	0
		50	49	18.84	18.95	18.66	0-1	0
		100	0	18.80	18.94	18.68	0-1	0
	16QAM	1	0	18.91	18.88	18.79	0-1	0
		1	49	18.90	18.83	18.82	0-1	0
		1	99	18.91	18.85	18.83	0-1	0
		50	0	18.82	18.89	18.69	0-2	0
		50	25	18.80	18.91	18.67	0-2	0
		50	49	18.80	18.85	18.71	0-2	0
		100	0	18.81	18.93	18.61	0-2	0
	64QAM	1	0	18.91	18.87	18.84	0-2	0
		1	49	18.96	18.95	18.87	0-2	0
		1	99	18.98	18.97	18.85	0-2	0
		50	0	18.85	18.96	18.78	0-3	0
		50	25	18.78	18.90	18.66	0-3	0
		50	49	18.83	18.92	18.70	0-3	0
		100	0	18.77	18.91	18.65	0-3	0
	256QAM	1	0	17.42	17.54	17.21	0-5	1.3
		1	49	17.28	17.49	17.22	0-5	1.3
		1	99	17.30	17.51	17.21	0-5	1.3
		50	0	17.29	17.43	17.25	0-5	1.3
		50	25	17.32	17.42	17.18	0-5	1.3
		50	49	17.32	17.43	17.19	0-5	1.3
		100	0	17.26	17.38	17.21	0-5	1.3

[LTE Band 4 Conducted Power]

LTE Band 4 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 ㎒	20175 Ch. 1732.5 ㎒	20393 Ch. 1754.3 ㎒		
1.4 ㎒	QPSK	1	0	18.98	19.01	19.20	0	0
		1	3	19.06	19.05	19.22	0	0
		1	5	18.99	19.09	19.24	0	0
		3	0	19.11	18.99	19.14	0	0
		3	1	19.16	19.08	19.25	0	0
		3	3	19.17	19.09	19.20	0	0
		6	0	19.04	18.99	19.24	0-1	0
	16QAM	1	0	19.29	19.16	19.46	0-1	0
		1	3	19.18	18.96	19.17	0-1	0
		1	5	19.21	19.17	19.55	0-1	0
		3	0	19.19	19.00	19.34	0-1	0
		3	1	19.20	19.28	19.42	0-1	0
		3	3	19.15	19.19	19.33	0-1	0
		6	0	19.14	19.06	19.30	0-2	0
	64QAM	1	0	19.25	19.10	19.41	0-2	0
		1	3	19.15	19.12	19.31	0-2	0
		1	5	19.29	19.18	19.27	0-2	0
		3	0	19.22	19.07	19.32	0-2	0
		3	1	19.21	19.27	19.28	0-2	0
		3	3	19.14	19.08	19.27	0-2	0
		6	0	19.13	19.05	19.24	0-3	0
	256QAM	1	0	17.72	17.58	17.61	0-5	1.3
		1	3	17.62	17.46	17.54	0-5	1.3
		1	5	17.70	17.50	17.77	0-5	1.3
		3	0	17.55	17.45	17.63	0-5	1.3
		3	1	17.64	17.66	17.78	0-5	1.3
		3	3	17.67	17.59	17.69	0-5	1.3
		6	0	17.59	17.46	17.66	0-5	1.3

LTE Band 4 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 ㎒	20175 Ch. 1732.5 ㎒	20385 Ch. 1753.5 ㎒		
3 ㎒	QPSK	1	0	19.06	18.95	19.17	0	0
		1	7	18.98	19.02	19.16	0	0
		1	14	19.02	19.01	19.24	0	0
		8	0	19.04	19.13	19.31	0-1	0
		8	3	19.05	19.09	19.23	0-1	0
		8	7	19.06	19.19	19.27	0-1	0
		15	0	19.07	19.05	19.20	0-1	0
	16QAM	1	0	19.33	19.17	19.49	0-1	0
		1	7	19.33	19.08	19.39	0-1	0
		1	14	19.28	19.33	19.43	0-1	0
		8	0	19.16	19.10	19.33	0-2	0
		8	3	19.03	19.11	19.30	0-2	0
		8	7	19.15	19.13	19.29	0-2	0
		15	0	19.14	19.08	19.27	0-2	0
	64QAM	1	0	19.22	19.11	19.32	0-2	0
		1	7	19.14	19.13	19.31	0-2	0
		1	14	19.16	19.13	19.48	0-2	0
		8	0	19.03	19.03	19.23	0-3	0
		8	3	19.00	19.05	19.29	0-3	0
		8	7	19.04	19.11	19.23	0-3	0
		15	0	19.18	19.03	19.26	0-3	0
	256QAM	1	0	17.67	17.64	17.78	0-5	1.3
		1	7	17.61	17.65	17.62	0-5	1.3
		1	14	17.55	17.57	17.72	0-5	1.3
		8	0	17.50	17.51	17.64	0-5	1.3
		8	3	17.54	17.52	17.62	0-5	1.3
		8	7	17.54	17.57	17.65	0-5	1.3
		15	0	17.48	17.57	17.63	0-5	1.3

LTE Band 4 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 ㎒	20175 Ch. 1732.5 ㎒	20375 Ch. 1752.5 ㎒		
5 ㎒	QPSK	1	0	18.97	18.99	19.25	0	0
		1	12	19.03	18.95	19.22	0	0
		1	24	19.07	19.08	19.21	0	0
		12	0	19.08	19.12	19.30	0-1	0
		12	6	19.05	19.12	19.21	0-1	0
		12	11	19.07	19.11	19.25	0-1	0
		25	0	19.14	19.15	19.28	0-1	0
	16QAM	1	0	19.37	19.29	19.38	0-1	0
		1	12	19.18	19.13	19.40	0-1	0
		1	24	19.41	19.23	19.55	0-1	0
		12	0	19.12	19.07	19.25	0-2	0
		12	6	19.11	19.11	19.26	0-2	0
		12	11	19.07	19.11	19.33	0-2	0
		25	0	19.06	19.07	19.29	0-2	0
	64QAM	1	0	19.35	19.27	19.56	0-2	0
		1	12	19.05	19.17	19.39	0-2	0
		1	24	19.19	19.27	19.35	0-2	0
		12	0	19.12	19.11	19.23	0-3	0
		12	6	19.11	19.07	19.37	0-3	0
		12	11	19.12	19.09	19.25	0-3	0
		25	0	19.11	19.11	19.25	0-3	0
	256QAM	1	0	17.68	17.67	17.89	0-5	1.3
		1	12	17.54	17.47	17.79	0-5	1.3
		1	24	17.64	17.67	17.81	0-5	1.3
		12	0	17.52	17.54	17.74	0-5	1.3
		12	6	17.48	17.51	17.67	0-5	1.3
		12	11	17.52	17.54	17.62	0-5	1.3
		25	0	17.59	17.54	17.65	0-5	1.3

LTE Band 4 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 ㎒	20175 Ch. 1732.5 ㎒	20350 Ch. 1750 ㎒		
10 ㎒	QPSK	1	0	19.12	19.06	19.17	0	0
		1	24	19.03	19.10	19.28	0	0
		1	49	18.99	19.15	19.23	0	0
		25	0	19.13	19.07	19.31	0-1	0
		25	12	19.14	19.05	19.33	0-1	0
		25	24	19.09	19.13	19.33	0-1	0
		50	0	19.07	19.14	19.26	0-1	0
	16QAM	1	0	19.46	19.25	19.42	0-1	0
		1	24	19.17	19.18	19.50	0-1	0
		1	49	19.29	19.33	19.58	0-1	0
		25	0	19.16	19.10	19.35	0-2	0
		25	12	19.07	19.09	19.42	0-2	0
		25	24	19.12	19.14	19.35	0-2	0
		50	0	19.02	19.18	19.32	0-2	0
	64QAM	1	0	19.31	19.16	19.51	0-2	0
		1	24	19.29	19.28	19.54	0-2	0
		1	49	19.27	19.40	19.38	0-2	0
		25	0	19.12	19.04	19.38	0-3	0
		25	12	19.11	19.15	19.27	0-3	0
		25	24	19.10	19.15	19.26	0-3	0
		50	0	19.06	19.22	19.28	0-3	0
	256QAM	1	0	17.70	17.68	17.90	0-5	1.3
		1	24	17.58	17.69	17.82	0-5	1.3
		1	49	17.59	17.77	17.90	0-5	1.3
		25	0	17.57	17.64	17.77	0-5	1.3
		25	12	17.53	17.62	17.74	0-5	1.3
		25	24	17.52	17.62	17.79	0-5	1.3
		50	0	17.60	17.63	17.77	0-5	1.3

LTE Band 4 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 ㎒	20175 Ch. 1732.5 ㎒	20325 Ch. 1747.5 ㎒		
15 ㎒	QPSK	1	0	19.05	19.17	19.34	0	0
		1	36	19.08	19.04	19.21	0	0
		1	74	19.15	19.11	19.27	0	0
		36	0	19.08	19.12	19.25	0-1	0
		36	18	19.03	19.13	19.26	0-1	0
		36	39	19.05	19.07	19.30	0-1	0
		75	0	19.06	19.14	19.28	0-1	0
	16QAM	1	0	19.37	19.30	19.55	0-1	0
		1	36	19.26	19.24	19.48	0-1	0
		1	74	19.28	19.55	19.52	0-1	0
		36	0	19.10	19.15	19.32	0-2	0
		36	18	19.04	19.11	19.34	0-2	0
		36	39	19.03	19.15	19.33	0-2	0
		75	0	19.05	19.16	19.30	0-2	0
	64QAM	1	0	19.38	19.23	19.63	0-2	0
		1	36	19.22	19.18	19.45	0-2	0
		1	74	19.33	19.39	19.54	0-2	0
		36	0	19.09	19.13	19.33	0-3	0
		36	18	19.13	19.20	19.32	0-3	0
		36	39	19.05	19.13	19.28	0-3	0
		75	0	19.06	19.15	19.27	0-3	0
	256QAM	1	0	17.72	17.53	17.93	0-5	1.3
		1	36	17.32	17.57	17.54	0-5	1.3
		1	74	17.71	17.84	17.89	0-5	1.3
		36	0	17.57	17.68	17.81	0-5	1.3
		36	18	17.57	17.64	17.78	0-5	1.3
		36	39	17.55	17.59	17.73	0-5	1.3
		75	0	17.51	17.57	17.74	0-5	1.3

LTE Band 4 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]] 20175 Ch. 1732.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	19.15	0	0
		1	49	19.13	0	0
		1	99	19.17	0	0
		50	0	19.11	0-1	0
		50	25	19.17	0-1	0
		50	49	19.17	0-1	0
		100	0	19.17	0-1	0
	16QAM	1	0	19.28	0-1	0
		1	49	19.21	0-1	0
		1	99	19.52	0-1	0
		50	0	19.15	0-2	0
		50	25	19.10	0-2	0
		50	49	19.15	0-2	0
		100	0	19.17	0-2	0
	64QAM	1	0	19.37	0-2	0
		1	49	19.39	0-2	0
		1	99	19.44	0-2	0
		50	0	19.11	0-3	0
		50	25	19.14	0-3	0
		50	49	19.18	0-3	0
		100	0	19.17	0-3	0
	256QAM	1	0	17.67	0-5	1.3
		1	49	17.61	0-5	1.3
		1	99	17.82	0-5	1.3
		50	0	17.68	0-5	1.3
		50	25	17.63	0-5	1.3
		50	49	17.71	0-5	1.3
		100	0	17.68	0-5	1.3

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

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 ㎒	26365 Ch. 1882.5 ㎒	26683 Ch. 1914.3 ㎒		
1.4 ㎒	QPSK	1	0	18.67	18.77	18.55	0	0
		1	3	18.62	18.80	18.64	0	0
		1	5	18.57	18.81	18.60	0	0
		3	0	18.57	18.73	18.52	0	0
		3	1	18.70	18.87	18.66	0	0
		3	3	18.66	18.70	18.57	0	0
		6	0	18.62	18.74	18.56	0-1	0
	16QAM	1	0	18.70	18.93	18.77	0-1	0
		1	3	18.60	18.69	18.54	0-1	0
		1	5	18.68	18.90	18.69	0-1	0
		3	0	18.67	18.76	18.57	0-1	0
		3	1	18.74	18.93	18.66	0-1	0
		3	3	18.78	18.86	18.62	0-1	0
		6	0	18.72	18.88	18.56	0-2	0
	64QAM	1	0	18.89	18.94	18.67	0-2	0
		1	3	18.69	18.84	18.65	0-2	0
		1	5	18.81	18.89	18.64	0-2	0
		3	0	18.59	18.77	18.56	0-2	0
		3	1	18.81	18.94	18.62	0-2	0
		3	3	18.67	18.72	18.53	0-2	0
		6	0	18.58	18.75	18.54	0-3	0
	256QAM	1	0	17.14	17.23	17.18	0-5	1.3
		1	3	16.96	17.14	17.05	0-5	1.3
		1	5	17.20	17.30	17.04	0-5	1.3
		3	0	17.02	17.19	16.91	0-5	1.3
		3	1	17.13	17.27	17.10	0-5	1.3
		3	3	17.11	17.35	17.10	0-5	1.3
		6	0	16.98	17.16	16.92	0-5	1.3

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	26675Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	18.61	18.80	18.50	0	0
		1	7	18.47	18.74	18.48	0	0
		1	14	18.66	18.79	18.54	0	0
		8	0	18.68	18.76	18.57	0-1	0
		8	3	18.59	18.72	18.53	0-1	0
		8	7	18.62	18.82	18.60	0-1	0
		15	0	18.61	18.85	18.63	0-1	0
	16QAM	1	0	18.86	18.94	18.72	0-1	0
		1	7	18.84	18.82	18.72	0-1	0
		1	14	18.81	18.91	18.63	0-1	0
		8	0	18.71	18.81	18.64	0-2	0
		8	3	18.68	18.85	18.56	0-2	0
		8	7	18.67	18.77	18.61	0-2	0
		15	0	18.63	18.77	18.56	0-2	0
	64QAM	1	0	18.70	18.79	18.68	0-2	0
		1	7	18.66	18.85	18.64	0-2	0
		1	14	18.73	18.76	18.68	0-2	0
		8	0	18.62	18.75	18.54	0-3	0
		8	3	18.61	18.73	18.54	0-3	0
		8	7	18.64	18.76	18.54	0-3	0
		15	0	18.60	18.77	18.54	0-3	0
	256QAM	1	0	17.14	17.26	17.07	0-5	1.3
		1	7	16.99	17.05	16.97	0-5	1.3
		1	14	17.12	17.22	17.17	0-5	1.3
		8	0	17.00	17.17	16.94	0-5	1.3
		8	3	17.00	17.21	16.99	0-5	1.3
		8	7	16.97	17.26	17.04	0-5	1.3
		15	0	16.99	17.25	16.99	0-5	1.3

LTE Band 25 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 ㎒	26365 Ch. 1882.5 ㎒	26665 Ch. 1912.5 ㎒		
5 ㎒	QPSK	1	0	18.61	18.76	18.53	0	0
		1	12	18.48	18.79	18.47	0	0
		1	24	18.59	18.71	18.59	0	0
		12	0	18.65	18.81	18.60	0-1	0
		12	6	18.54	18.79	18.60	0-1	0
		12	11	18.61	18.80	18.54	0-1	0
		25	0	18.57	18.84	18.59	0-1	0
	16QAM	1	0	18.79	18.89	18.83	0-1	0
		1	12	18.80	18.88	18.68	0-1	0
		1	24	18.73	18.94	18.80	0-1	0
		12	0	18.59	18.84	18.63	0-2	0
		12	6	18.61	18.75	18.55	0-2	0
		12	11	18.65	18.84	18.63	0-2	0
		25	0	18.65	18.78	18.58	0-2	0
	64QAM	1	0	18.74	18.79	18.70	0-2	0
		1	12	18.57	18.84	18.67	0-2	0
		1	24	18.85	18.94	18.85	0-2	0
		12	0	18.66	18.82	18.64	0-3	0
		12	6	18.62	18.84	18.58	0-3	0
		12	11	18.57	18.75	18.57	0-3	0
		25	0	18.62	18.76	18.58	0-3	0
	256QAM	1	0	16.96	17.43	17.04	0-5	1.3
		1	12	16.89	17.29	17.03	0-5	1.3
		1	24	16.99	17.37	17.03	0-5	1.3
		12	0	17.03	17.25	17.01	0-5	1.3
		12	6	17.03	17.29	17.08	0-5	1.3
		12	11	16.97	17.30	16.99	0-5	1.3
		25	0	17.01	17.31	16.93	0-5	1.3

LTE Band 25 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 ㎒	26365 Ch. 1882.5 ㎒	26640 Ch. 1910 ㎒		
10 ㎒	QPSK	1	0	18.74	18.73	18.65	0	0
		1	24	18.59	18.72	18.56	0	0
		1	49	18.67	18.78	18.59	0	0
		25	0	18.67	18.81	18.64	0-1	0
		25	12	18.67	18.77	18.70	0-1	0
		25	24	18.72	18.75	18.71	0-1	0
		50	0	18.64	18.75	18.73	0-1	0
	16QAM	1	0	18.85	18.79	18.82	0-1	0
		1	24	18.67	18.91	18.79	0-1	0
		1	49	18.88	18.88	18.90	0-1	0
		25	0	18.74	18.81	18.67	0-2	0
		25	12	18.67	18.84	18.68	0-2	0
		25	24	18.69	18.79	18.67	0-2	0
		50	0	18.70	18.71	18.68	0-2	0
	64QAM	1	0	18.90	18.89	18.83	0-2	0
		1	24	18.82	18.96	18.68	0-2	0
		1	49	18.86	18.85	18.76	0-2	0
		25	0	18.62	18.80	18.61	0-3	0
		25	12	18.62	18.78	18.59	0-3	0
		25	24	18.64	18.76	18.59	0-3	0
		50	0	18.69	18.77	18.69	0-3	0
	256QAM	1	0	17.20	17.24	17.16	0-5	1.3
		1	24	17.04	17.22	17.17	0-5	1.3
		1	49	17.17	17.16	17.15	0-5	1.3
		25	0	17.03	17.27	17.02	0-5	1.3
		25	12	17.07	17.21	17.13	0-5	1.3
		25	24	17.03	17.23	17.05	0-5	1.3
		50	0	17.14	17.29	17.17	0-5	1.3

LTE Band 25 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 ㎒	26365 Ch. 1882.5 ㎒	26615 Ch. 1907.5 ㎒		
15 MHz	QPSK	1	0	18.72	18.82	18.62	0	0
		1	36	18.63	18.69	18.49	0	0
		1	74	18.64	18.69	18.55	0	0
		36	0	18.66	18.78	18.63	0-1	0
		36	18	18.64	18.82	18.62	0-1	0
		36	39	18.67	18.82	18.65	0-1	0
		75	0	18.69	18.81	18.56	0-1	0
	16QAM	1	0	18.78	18.88	18.80	0-1	0
		1	36	18.69	18.78	18.70	0-1	0
		1	74	18.83	18.90	18.65	0-1	0
		36	0	18.65	18.86	18.58	0-2	0
		36	18	18.65	18.78	18.59	0-2	0
		36	39	18.66	18.78	18.51	0-2	0
		75	0	18.68	18.77	18.52	0-2	0
	64QAM	1	0	18.81	18.92	18.81	0-2	0
		1	36	18.56	18.88	18.60	0-2	0
		1	74	18.76	18.89	18.74	0-2	0
		36	0	18.72	18.77	18.63	0-3	0
		36	18	18.67	18.86	18.54	0-3	0
		36	39	18.64	18.70	18.62	0-3	0
		75	0	18.58	18.71	18.51	0-3	0
	256QAM	1	0	17.22	17.40	17.20	0-5	1.3
		1	36	17.25	17.20	16.96	0-5	1.3
		1	74	17.11	17.34	17.13	0-5	1.3
		36	0	17.13	17.27	17.09	0-5	1.3
		36	18	17.12	17.33	17.10	0-5	1.3
		36	39	17.12	17.23	17.05	0-5	1.3
		75	0	17.10	17.25	17.05	0-5	1.3

LTE Band 25 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	18.67	18.87	18.68	0	0
		1	49	18.67	18.72	18.51	0	0
		1	99	18.66	18.74	18.51	0	0
		50	0	18.71	18.86	18.64	0-1	0
		50	25	18.67	18.84	18.63	0-1	0
		50	49	18.65	18.79	18.59	0-1	0
		100	0	18.71	18.74	18.62	0-1	0
	16QAM	1	0	18.87	18.88	18.80	0-1	0
		1	49	18.74	18.81	18.64	0-1	0
		1	99	18.90	18.89	18.80	0-1	0
		50	0	18.70	18.80	18.65	0-2	0
		50	25	18.70	18.77	18.53	0-2	0
		50	49	18.69	18.76	18.65	0-2	0
		100	0	18.72	18.82	18.54	0-2	0
	64QAM	1	0	18.89	18.97	18.84	0-2	0
		1	49	18.80	18.93	18.65	0-2	0
		1	99	18.89	18.88	18.68	0-2	0
		50	0	18.74	18.86	18.63	0-3	0
		50	25	18.77	18.81	18.64	0-3	0
		50	49	18.62	18.83	18.56	0-3	0
		100	0	18.63	18.84	18.61	0-3	0
	256QAM	1	0	17.35	17.48	17.16	0-5	1.3
		1	49	17.17	17.29	17.05	0-5	1.3
		1	99	17.12	17.30	17.04	0-5	1.3
		50	0	17.20	17.29	17.14	0-5	1.3
		50	25	17.24	17.33	17.11	0-5	1.3
		50	49	17.19	17.26	17.13	0-5	1.3
		100	0	17.24	17.33	17.06	0-5	1.3

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

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39675 Ch. 2498.5 ㎒	40148 Ch. 2545.8 ㎒	40620 Ch. 2593.0 ㎒	41093 Ch. 2640.3 ㎒	41565 Ch. 2687.5 ㎒		
5 ㎒	QPSK	1	0	21.25	21.39	21.40	21.17	20.91	0	0
		1	12	21.25	21.23	21.45	21.14	20.95	0	0
		1	24	21.29	21.42	21.52	21.23	20.97	0	0
		12	0	21.33	21.43	21.53	21.22	21.06	0-1	0
		12	6	21.37	21.40	21.46	21.17	20.98	0-1	0
		12	11	21.34	21.45	21.50	21.25	21.04	0-1	0
		25	0	21.33	21.37	21.51	21.22	21.00	0-1	0
	16QAM	1	0	21.20	21.29	21.43	21.16	20.86	0-1	0
		1	12	21.07	21.16	21.26	21.09	20.89	0-1	0
		1	24	21.20	21.25	21.39	21.16	20.95	0-1	0
		12	0	20.23	20.28	20.42	20.20	19.96	0-2	1
		12	6	20.32	20.27	20.37	20.11	19.97	0-2	1
		12	11	20.35	20.32	20.45	20.14	19.95	0-2	1
		25	0	20.27	20.41	20.56	20.23	19.95	0-2	1
	64QAM	1	0	20.25	20.34	20.63	20.22	19.97	0-2	1
		1	12	20.10	20.29	20.50	20.20	19.96	0-2	1
		1	24	20.24	20.37	20.55	20.23	20.02	0-2	1
		12	0	19.16	19.34	19.43	19.16	19.00	0-3	2
		12	6	19.18	19.33	19.44	19.13	18.92	0-3	2
		12	11	19.27	19.29	19.46	19.12	19.01	0-3	2
		25	0	19.30	19.39	19.48	19.18	18.96	0-3	2
	256QAM	1	0	17.47	17.18	17.47	17.74	16.83	0-5	4
		1	12	17.36	17.15	17.32	17.48	16.87	0-5	4
		1	24	17.08	17.22	17.32	17.22	16.80	0-5	4
		12	0	17.51	17.35	17.49	17.69	16.97	0-5	4
		12	6	17.42	17.34	17.51	17.62	16.99	0-5	4
		12	11	17.37	17.39	17.51	17.41	16.94	0-5	4
		25	0	17.39	17.40	17.58	17.58	17.07	0-5	4

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 ㎒	40160 Ch. 2547 ㎒	40620 Ch. 2593 ㎒	41080 Ch. 2639 ㎒	41540 Ch. 2685 ㎒		
10 ㎒	QPSK	1	0	21.28	21.38	21.48	21.30	20.98	0	0
		1	24	21.12	21.23	21.40	21.17	20.89	0	0
		1	49	21.28	21.34	21.40	21.15	20.89	0	0
		25	0	21.33	21.43	21.50	21.30	21.05	0-1	0
		25	12	21.22	21.33	21.55	21.31	21.09	0-1	0
		25	24	21.28	21.33	21.52	21.24	21.04	0-1	0
		50	0	21.33	21.34	21.55	21.29	21.13	0-1	0
	16QAM	1	0	21.24	21.27	21.40	21.21	20.95	0-1	0
		1	24	21.10	21.09	21.30	21.04	20.84	0-1	0
		1	49	21.29	21.17	21.36	21.18	20.91	0-1	0
		25	0	20.29	20.36	20.49	20.22	20.08	0-2	1
		25	12	20.21	20.33	20.46	20.22	20.01	0-2	1
		25	24	20.23	20.33	20.47	20.15	19.95	0-2	1
		50	0	20.28	20.34	20.52	20.30	20.03	0-2	1
	64QAM	1	0	20.24	20.40	20.52	20.34	20.13	0-2	1
		1	24	20.15	20.42	20.38	20.19	19.99	0-2	1
		1	49	20.29	20.42	20.45	20.23	20.08	0-2	1
		25	0	19.21	19.34	19.47	19.25	19.00	0-3	2
		25	12	19.24	19.31	19.41	19.18	19.03	0-3	2
		25	24	19.29	19.30	19.42	19.15	18.98	0-3	2
		50	0	19.34	19.32	19.55	19.31	19.10	0-3	2
	256QAM	1	0	17.52	17.19	17.60	17.87	16.86	0-5	4
		1	24	17.40	16.99	17.27	17.44	16.76	0-5	4
		1	49	17.02	17.11	17.31	16.95	16.80	0-5	4
		25	0	17.64	17.42	17.53	17.88	17.04	0-5	4
		25	12	17.50	17.41	17.52	17.61	17.00	0-5	4
		25	24	17.30	17.40	17.59	17.33	17.06	0-5	4
		50	0	17.51	17.40	17.64	17.59	17.19	0-5	4

LTE Band 41 _ 15 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	21.26	21.39	21.56	21.32	21.08	0	0
		1	36	21.20	21.27	21.46	21.26	21.06	0	0
		1	74	21.30	21.32	21.49	21.20	20.96	0	0
		36	0	21.23	21.39	21.54	21.32	21.09	0-1	0
		36	18	21.24	21.37	21.56	21.21	21.04	0-1	0
		36	39	21.25	21.39	21.45	21.26	21.04	0-1	0
		75	0	21.27	21.39	21.51	21.20	21.13	0-1	0
	16QAM	1	0	21.27	21.40	21.58	21.30	21.01	0-1	0
		1	36	21.14	21.19	21.34	21.24	20.96	0-1	0
		1	74	21.33	21.24	21.46	21.18	20.90	0-1	0
		36	0	20.20	20.42	20.49	20.29	20.10	0-2	1
		36	18	20.26	20.38	20.52	20.22	19.96	0-2	1
		36	39	20.19	20.27	20.51	20.25	19.98	0-2	1
		75	0	20.23	20.38	20.56	20.27	20.12	0-2	1
	64QAM	1	0	20.28	20.54	20.61	20.40	20.19	0-2	1
		1	36	20.13	20.20	20.36	20.25	20.07	0-2	1
		1	74	20.28	20.44	20.49	20.30	20.01	0-2	1
		36	0	19.25	19.35	19.50	19.27	19.08	0-3	2
		36	18	19.23	19.36	19.51	19.19	18.96	0-3	2
		36	39	19.19	19.31	19.49	19.17	19.05	0-3	2
		75	0	19.28	19.35	19.52	19.28	19.09	0-3	2
	256QAM	1	0	17.12	17.24	17.38	17.44	16.93	0-5	4
		1	36	17.45	17.09	17.33	17.40	16.94	0-5	4
		1	74	17.04	17.24	17.39	17.00	16.88	0-5	4
		36	0	17.53	17.44	17.54	17.63	17.08	0-5	4
		36	18	17.59	17.39	17.51	17.51	17.04	0-5	4
		36	39	17.33	17.34	17.53	17.30	17.02	0-5	4
		75	0	17.38	17.39	17.49	17.29	17.07	0-5	4

LTE Band 41 _ 20 ㎒ 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 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	21.30	21.49	21.63	21.40	21.05	0	0
		1	49	21.13	21.30	21.45	21.24	20.83	0	0
		1	99	21.28	21.26	21.43	21.25	21.03	0	0
		50	0	21.25	21.39	21.64	21.31	21.12	0-1	0
		50	25	21.29	21.31	21.50	21.29	21.07	0-1	0
		50	49	21.22	21.39	21.45	21.27	21.01	0-1	0
		100	0	21.28	21.36	21.58	21.29	21.10	0-1	0
	16QAM	1	0	21.14	21.50	21.58	21.38	21.04	0-1	0
		1	49	21.04	21.25	21.35	21.22	20.90	0-1	0
		1	99	21.15	21.29	21.38	21.18	20.80	0-1	0
		50	0	20.30	20.43	20.55	20.34	20.13	0-2	1
		50	25	20.32	20.33	20.54	20.30	20.10	0-2	1
		50	49	20.25	20.28	20.49	20.25	19.99	0-2	1
		100	0	20.28	20.42	20.62	20.29	20.08	0-2	1
	64QAM	1	0	20.29	20.49	20.60	20.37	20.16	0-2	1
		1	49	20.14	20.31	20.49	20.20	19.95	0-2	1
		1	99	20.28	20.38	20.48	20.27	19.98	0-2	1
		50	0	19.33	19.41	19.61	19.39	19.14	0-3	2
		50	25	19.26	19.32	19.51	19.35	19.12	0-3	2
		50	49	19.27	19.36	19.46	19.22	19.00	0-3	2
		100	0	19.26	19.34	19.51	19.21	19.02	0-3	2
	256QAM	1	0	17.84	17.55	18.08	18.14	16.98	0-5	4
		1	49	17.49	17.10	17.29	17.57	16.85	0-5	4
		1	99	17.20	17.17	17.27	17.09	16.88	0-5	4
		50	0	17.74	17.53	17.77	17.96	17.26	0-5	4
		50	25	17.57	17.51	17.64	17.69	17.17	0-5	4
		50	49	17.43	17.47	17.57	17.39	17.18	0-5	4
		100	0	17.57	17.40	17.59	17.55	17.09	0-5	4

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 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39675 Ch. 2498.5 ㎒	40148 Ch. 2545.8 ㎒	40620 Ch. 2593.0 ㎒	41093 Ch. 2640.3 ㎒	41565 Ch. 2687.5 ㎒		
5 ㎒	QPSK	1	0	21.20	21.31	21.41	21.11	20.92	0	0
		1	12	21.19	21.21	21.39	21.17	20.99	0	0
		1	24	21.31	21.39	21.48	21.14	21.01	0	0
		12	0	21.26	21.32	21.51	21.23	20.97	0-1	0
		12	6	21.30	21.40	21.48	21.18	21.00	0-1	0
		12	11	21.34	21.43	21.44	21.18	20.97	0-1	0
		25	0	21.32	21.40	21.47	21.20	21.03	0-1	0
	16QAM	1	0	21.12	21.30	21.36	21.10	20.87	0-1	0
		1	12	20.98	21.12	21.25	21.04	20.89	0-1	0
		1	24	21.23	21.31	21.37	21.11	20.80	0-1	0
		12	0	20.27	20.35	20.41	20.13	19.93	0-2	1
		12	6	20.20	20.35	20.39	20.11	19.94	0-2	1
		12	11	20.23	20.36	20.47	20.10	19.93	0-2	1
		25	0	20.22	20.32	20.47	20.13	19.92	0-2	1
	64QAM	1	0	20.13	20.33	20.58	20.30	20.13	0-2	1
		1	12	20.07	20.19	20.42	20.23	20.15	0-2	1
		1	24	20.26	20.40	20.46	20.23	20.02	0-2	1
		12	0	19.13	19.28	19.50	19.14	18.93	0-3	2
		12	6	19.16	19.29	19.36	19.14	18.95	0-3	2
		12	11	19.26	19.34	19.39	19.16	18.91	0-3	2
		25	0	19.30	19.31	19.45	19.14	19.01	0-3	2
	256QAM	1	0	17.46	17.25	17.50	17.67	16.84	0-5	4
		1	12	17.33	17.10	17.29	17.52	16.77	0-5	4
		1	24	17.18	17.13	17.39	17.02	16.78	0-5	4
		12	0	17.56	17.33	17.49	17.65	16.94	0-5	4
		12	6	17.52	17.35	17.44	17.55	16.95	0-5	4
		12	11	17.41	17.33	17.47	17.41	16.96	0-5	4
		25	0	17.48	17.44	17.54	17.59	17.07	0-5	4

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 ㎒	40160 Ch. 2547 ㎒	40620 Ch. 2593 ㎒	41080 Ch. 2639 ㎒	41540 Ch. 2685 ㎒		
10 ㎒	QPSK	1	0	21.24	21.45	21.51	21.22	21.00	0	0
		1	24	21.12	21.22	21.41	21.15	20.89	0	0
		1	49	21.17	21.31	21.37	21.19	20.92	0	0
		25	0	21.24	21.44	21.49	21.30	21.02	0-1	0
		25	12	21.23	21.33	21.53	21.23	20.97	0-1	0
		25	24	21.28	21.40	21.51	21.24	20.98	0-1	0
		50	0	21.30	21.37	21.52	21.24	21.09	0-1	0
	16QAM	1	0	21.24	21.27	21.34	21.22	21.03	0-1	0
		1	24	21.15	21.10	21.21	21.09	20.88	0-1	0
		1	49	21.27	21.18	21.34	21.19	20.98	0-1	0
		25	0	20.24	20.35	20.48	20.27	19.95	0-2	1
		25	12	20.25	20.30	20.45	20.25	19.96	0-2	1
		25	24	20.26	20.35	20.46	20.17	19.94	0-2	1
		50	0	20.27	20.30	20.54	20.25	20.03	0-2	1
	64QAM	1	0	20.34	20.46	20.57	20.28	20.01	0-2	1
		1	24	20.25	20.37	20.44	20.18	19.95	0-2	1
		1	49	20.32	20.37	20.50	20.24	19.94	0-2	1
		25	0	19.20	19.39	19.47	19.18	18.96	0-3	2
		25	12	19.24	19.34	19.52	19.19	19.00	0-3	2
		25	24	19.29	19.30	19.42	19.21	18.99	0-3	2
		50	0	19.23	19.33	19.50	19.27	19.09	0-3	2
	256QAM	1	0	17.53	17.36	17.67	17.82	16.70	0-5	4
		1	24	17.42	17.15	17.24	17.46	16.59	0-5	4
		1	49	17.07	17.14	17.26	17.01	16.71	0-5	4
		25	0	17.65	17.45	17.57	17.81	17.11	0-5	4
		25	12	17.46	17.39	17.51	17.65	17.02	0-5	4
		25	24	17.30	17.40	17.56	17.29	17.01	0-5	4
		50	0	17.47	17.46	17.65	17.59	17.16	0-5	4

LTE Band 41 _ 15 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	21.26	21.40	21.59	21.33	21.04	0	0
		1	36	21.21	21.34	21.49	21.24	20.98	0	0
		1	74	21.26	21.36	21.51	21.17	21.00	0	0
		36	0	21.31	21.38	21.62	21.30	21.04	0-1	0
		36	18	21.31	21.43	21.56	21.24	21.02	0-1	0
		36	39	21.21	21.40	21.52	21.20	21.04	0-1	0
		75	0	21.33	21.34	21.57	21.25	21.07	0-1	0
	16QAM	1	0	21.25	21.46	21.57	21.25	21.02	0-1	0
		1	36	20.95	21.22	21.37	21.15	21.01	0-1	0
		1	74	21.17	21.38	21.53	21.17	20.98	0-1	0
		36	0	20.18	20.40	20.58	20.30	20.03	0-2	1
		36	18	20.23	20.34	20.50	20.24	19.95	0-2	1
		36	39	20.20	20.38	20.47	20.21	20.01	0-2	1
		75	0	20.33	20.34	20.53	20.27	20.05	0-2	1
	64QAM	1	0	20.47	20.52	20.68	20.18	20.20	0-2	1
		1	36	20.30	20.35	20.54	20.12	20.08	0-2	1
		1	74	20.48	20.54	20.52	19.98	20.07	0-2	1
		36	0	19.22	19.39	19.57	19.24	19.07	0-3	2
		36	18	19.19	19.35	19.54	19.21	19.02	0-3	2
		36	39	19.22	19.29	19.44	19.24	18.98	0-3	2
		75	0	19.26	19.40	19.59	19.30	19.13	0-3	2
	256QAM	1	0	17.12	17.41	17.48	17.54	17.03	0-5	4
		1	36	17.39	17.08	17.33	17.50	16.97	0-5	4
		1	74	17.04	17.20	17.29	17.09	16.89	0-5	4
		36	0	17.49	17.41	17.57	17.72	17.08	0-5	4
		36	18	17.57	17.36	17.55	17.51	17.04	0-5	4
		36	39	17.34	17.39	17.49	17.27	17.08	0-5	4
		75	0	17.41	17.41	17.54	17.40	17.09	0-5	4

LTE Band 41 _ 20 ㎒ 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 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	21.23	21.40	21.58	21.30	21.12	0	0
		1	49	21.12	21.20	21.41	21.16	20.89	0	0
		1	99	21.21	21.23	21.41	21.17	20.89	0	0
		50	0	21.29	21.46	21.58	21.26	21.07	0-1	0
		50	25	21.25	21.38	21.50	21.26	20.99	0-1	0
		50	49	21.29	21.38	21.46	21.13	21.00	0-1	0
		100	0	21.28	21.37	21.59	21.25	21.07	0-1	0
	16QAM	1	0	21.16	21.40	21.55	21.44	21.09	0-1	0
		1	49	21.05	21.16	21.40	21.21	20.80	0-1	0
		1	99	21.27	21.22	21.39	21.25	20.84	0-1	0
		50	0	20.31	20.38	20.57	20.28	20.04	0-2	1
		50	25	20.23	20.38	20.53	20.19	19.99	0-2	1
		50	49	20.23	20.35	20.44	20.18	19.93	0-2	1
		100	0	20.27	20.45	20.59	20.22	20.08	0-2	1
	64QAM	1	0	20.30	20.52	20.64	20.17	20.21	0-2	1
		1	49	20.24	20.40	20.44	19.94	19.91	0-2	1
		1	99	20.33	20.40	20.52	20.00	19.95	0-2	1
		50	0	19.27	19.44	19.55	19.29	19.02	0-3	2
		50	25	19.25	19.39	19.57	19.22	19.01	0-3	2
		50	49	19.26	19.35	19.48	19.20	18.98	0-3	2
		100	0	19.21	19.31	19.50	19.21	18.99	0-3	2
	256QAM	1	0	17.64	17.48	17.86	18.33	16.93	0-5	4
		1	49	17.34	17.11	17.18	17.72	16.81	0-5	4
		1	99	17.08	17.16	17.21	17.07	16.91	0-5	4
		50	0	17.80	17.56	17.74	18.23	17.15	0-5	4
		50	25	17.61	17.47	17.67	17.85	17.17	0-5	4
		50	49	17.46	17.45	17.59	17.54	17.07	0-5	4
		100	0	17.52	17.42	17.56	17.75	17.05	0-5	4

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

[LTE Band 66 Conducted Power]

LTE Band 66 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979Ch. 1710.7 ㎒	132322 Ch. 1745 ㎒	132665 Ch. 1779.3 ㎒		
1.4 ㎒	QPSK	1	0	19.08	19.13	19.00	0	0
		1	3	19.06	19.18	18.97	0	0
		1	5	19.02	19.18	18.98	0	0
		3	0	19.03	19.12	18.92	0	0
		3	1	19.20	19.34	19.11	0	0
		3	3	19.04	19.25	19.02	0	0
		6	0	19.11	19.14	19.00	0-1	0
	16QAM	1	0	19.28	19.42	19.16	0-1	0
		1	3	19.17	19.43	19.21	0-1	0
		1	5	19.32	19.39	19.17	0-1	0
		3	0	19.23	19.17	18.98	0-1	0
		3	1	19.32	19.32	19.10	0-1	0
		3	3	19.11	19.32	19.07	0-1	0
		6	0	19.15	19.23	19.08	0-2	0
	64QAM	1	0	19.26	19.42	19.20	0-2	0
		1	3	19.16	19.30	18.96	0-2	0
		1	5	19.31	19.38	19.13	0-2	0
		3	0	19.19	19.19	19.09	0-2	0
		3	1	19.25	19.38	19.23	0-2	0
		3	3	19.20	19.28	19.13	0-2	0
		6	0	19.12	19.31	19.09	0-3	0
	256QAM	1	0	17.58	17.77	17.49	0-5	1.3
		1	3	17.67	17.57	17.34	0-5	1.3
		1	5	17.54	17.67	17.44	0-5	1.3
		3	0	17.65	17.64	17.27	0-5	1.3
		3	1	17.75	17.76	17.55	0-5	1.3
		3	3	17.71	17.66	17.53	0-5	1.3
		6	0	17.59	17.63	17.47	0-5	1.3

LTE Band 66 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 ㎒	132322 Ch. 1745 ㎒	132657 Ch. 1778.5 ㎒		
3 ㎒	QPSK	1	0	19.09	19.16	18.98	0	0
		1	7	18.99	19.24	19.00	0	0
		1	14	19.12	19.16	19.02	0	0
		8	0	19.15	19.32	19.08	0-1	0
		8	3	19.10	19.19	18.97	0-1	0
		8	7	19.16	19.27	19.02	0-1	0
		15	0	19.11	19.27	19.04	0-1	0
	16QAM	1	0	19.31	19.46	19.27	0-1	0
		1	7	19.39	19.33	19.18	0-1	0
		1	14	19.31	19.37	19.23	0-1	0
		8	0	19.13	19.31	19.09	0-2	0
		8	3	19.08	19.27	19.06	0-2	0
		8	7	19.15	19.31	19.06	0-2	0
		15	0	19.14	19.31	19.08	0-2	0
	64QAM	1	0	19.31	19.45	19.26	0-2	0
		1	7	19.22	19.42	19.23	0-2	0
		1	14	19.37	19.43	19.21	0-2	0
		8	0	19.14	19.27	19.06	0-3	0
		8	3	19.07	19.27	19.02	0-3	0
		8	7	19.09	19.34	19.02	0-3	0
		15	0	19.14	19.27	19.08	0-3	0
	256QAM	1	0	17.60	17.69	17.48	0-5	1.3
		1	7	17.68	17.72	17.40	0-5	1.3
		1	14	17.68	17.74	17.46	0-5	1.3
		8	0	17.58	17.66	17.43	0-5	1.3
		8	3	17.60	17.71	17.43	0-5	1.3
		8	7	17.57	17.71	17.49	0-5	1.3
		15	0	17.61	17.68	17.43	0-5	1.3

LTE Band 66 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 ㎒	132322Ch. 1745 ㎒	132647 Ch. 1777.5 ㎒		
5 ㎒	QPSK	1	0	19.18	19.26	19.09	0	0
		1	12	19.03	19.21	19.03	0	0
		1	24	19.05	19.16	19.00	0	0
		12	0	19.08	19.24	19.11	0-1	0
		12	6	19.18	19.23	19.07	0-1	0
		12	11	19.23	19.20	19.05	0-1	0
		25	0	19.19	19.30	19.04	0-1	0
	16QAM	1	0	19.33	19.43	19.36	0-1	0
		1	12	19.36	19.43	19.27	0-1	0
		1	24	19.43	19.39	19.31	0-1	0
		12	0	19.13	19.27	19.12	0-2	0
		12	6	19.20	19.28	19.20	0-2	0
		12	11	19.12	19.24	19.15	0-2	0
		25	0	19.14	19.33	19.10	0-2	0
	64QAM	1	0	19.36	19.42	19.22	0-2	0
		1	12	19.23	19.25	19.31	0-2	0
		1	24	19.38	19.57	19.28	0-2	0
		12	0	19.12	19.26	19.12	0-3	0
		12	6	19.14	19.31	19.09	0-3	0
		12	11	19.19	19.31	19.10	0-3	0
		25	0	19.14	19.24	19.16	0-3	0
	256QAM	1	0	17.69	17.73	17.67	0-5	1.3
		1	12	17.58	17.65	17.49	0-5	1.3
		1	24	17.68	17.63	17.52	0-5	1.3
		12	0	17.57	17.65	17.57	0-5	1.3
		12	6	17.60	17.70	17.54	0-5	1.3
		12	11	17.61	17.70	17.44	0-5	1.3
		25	0	17.63	17.65	17.47	0-5	1.3

LTE Band 66 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 ㎒	132322 Ch. 1745 ㎒	132622 Ch. 1775 ㎒		
10 ㎒	QPSK	1	0	19.11	19.30	19.12	0	0
		1	24	19.13	19.17	19.07	0	0
		1	49	19.14	19.25	19.12	0	0
		25	0	19.18	19.22	19.14	0-1	0
		25	12	19.18	19.34	19.16	0-1	0
		25	24	19.12	19.31	19.17	0-1	0
		50	0	19.19	19.27	19.10	0-1	0
	16QAM	1	0	19.35	19.64	19.48	0-1	0
		1	24	19.18	19.55	19.34	0-1	0
		1	49	19.30	19.55	19.34	0-1	0
		25	0	19.21	19.35	19.21	0-2	0
		25	12	19.11	19.31	19.14	0-2	0
		25	24	19.10	19.33	19.16	0-2	0
		50	0	19.10	19.23	19.07	0-2	0
	64QAM	1	0	19.29	19.53	19.47	0-2	0
		1	24	19.17	19.51	19.27	0-2	0
		1	49	19.19	19.41	19.36	0-2	0
		25	0	19.12	19.30	19.16	0-3	0
		25	12	19.16	19.29	19.20	0-3	0
		25	24	19.15	19.33	19.16	0-3	0
		50	0	19.15	19.21	19.17	0-3	0
	256QAM	1	0	17.62	17.87	17.62	0-5	1.3
		1	24	17.72	17.86	17.71	0-5	1.3
		1	49	17.67	17.90	17.68	0-5	1.3
		25	0	17.61	17.72	17.51	0-5	1.3
		25	12	17.54	17.65	17.53	0-5	1.3
		25	24	17.52	17.67	17.56	0-5	1.3
		50	0	17.60	17.81	17.63	0-5	1.3

LTE Band 66 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 ㎒	132322 Ch. 1745 ㎒	132597 Ch. 1772.5 ㎒		
15 ㎒	QPSK	1	0	19.08	19.30	19.22	0	0
		1	36	19.00	19.21	19.03	0	0
		1	74	19.10	19.29	19.20	0	0
		36	0	19.08	19.17	19.12	0-1	0
		36	18	19.09	19.23	19.14	0-1	0
		36	39	19.08	19.24	19.07	0-1	0
		75	0	19.01	19.24	19.12	0-1	0
	16QAM	1	0	19.39	19.62	19.57	0-1	0
		1	36	19.05	19.50	19.34	0-1	0
		1	74	19.24	19.47	19.35	0-1	0
		36	0	18.98	19.26	19.16	0-2	0
		36	18	19.07	19.23	19.16	0-2	0
		36	39	19.02	19.31	19.19	0-2	0
		75	0	19.02	19.26	19.19	0-2	0
	64QAM	1	0	19.36	19.45	19.45	0-2	0
		1	36	19.06	19.36	19.20	0-2	0
		1	74	19.22	19.43	19.33	0-2	0
		36	0	19.06	19.28	19.15	0-3	0
		36	18	19.07	19.31	19.14	0-3	0
		36	39	19.08	19.30	19.15	0-3	0
		75	0	19.01	19.27	19.19	0-3	0
	256QAM	1	0	17.71	17.76	17.70	0-5	1.3
		1	36	17.47	17.68	17.62	0-5	1.3
		1	74	17.67	17.81	17.66	0-5	1.3
		36	0	17.56	17.77	17.60	0-5	1.3
		36	18	17.61	17.78	17.60	0-5	1.3
		36	39	17.55	17.77	17.58	0-5	1.3
		75	0	17.51	17.72	17.61	0-5	1.3

LTE Band 66 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	19.04	19.31	19.26	0	0
		1	49	19.00	19.24	19.17	0	0
		1	99	19.07	19.29	19.22	0	0
		50	0	19.03	19.29	19.27	0-1	0
		50	25	19.03	19.30	19.17	0-1	0
		50	49	19.08	19.29	19.15	0-1	0
		100	0	19.09	19.27	19.19	0-1	0
	16QAM	1	0	19.26	19.56	19.39	0-1	0
		1	49	19.09	19.44	19.44	0-1	0
		1	99	19.27	19.55	19.45	0-1	0
		50	0	19.07	19.29	19.20	0-2	0
		50	25	19.08	19.27	19.23	0-2	0
		50	49	19.08	19.33	19.25	0-2	0
		100	0	19.00	19.25	19.19	0-2	0
	64QAM	1	0	19.40	19.47	19.48	0-2	0
		1	49	19.06	19.49	19.46	0-2	0
		1	99	19.13	19.50	19.38	0-2	0
		50	0	19.09	19.22	19.23	0-3	0
		50	25	19.09	19.28	19.27	0-3	0
		50	49	19.09	19.29	19.28	0-3	0
		100	0	19.07	19.29	19.25	0-3	0
	256QAM	1	0	17.74	17.86	17.85	0-5	1.3
		1	49	17.65	17.83	17.68	0-5	1.3
		1	99	17.60	17.83	17.80	0-5	1.3
		50	0	17.52	17.73	17.78	0-5	1.3
		50	25	17.62	17.71	17.74	0-5	1.3
		50	49	17.60	17.73	17.73	0-5	1.3
		100	0	17.52	17.73	17.73	0-5	1.3

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.

11.3.4 LTE Down-link Carrier Aggregation Conducted Powers

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers(CCs) supported by test product implementation. For those configurations required by April 2018 TCBC Workshop notes, 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(s)(SCC) on the downlink only.

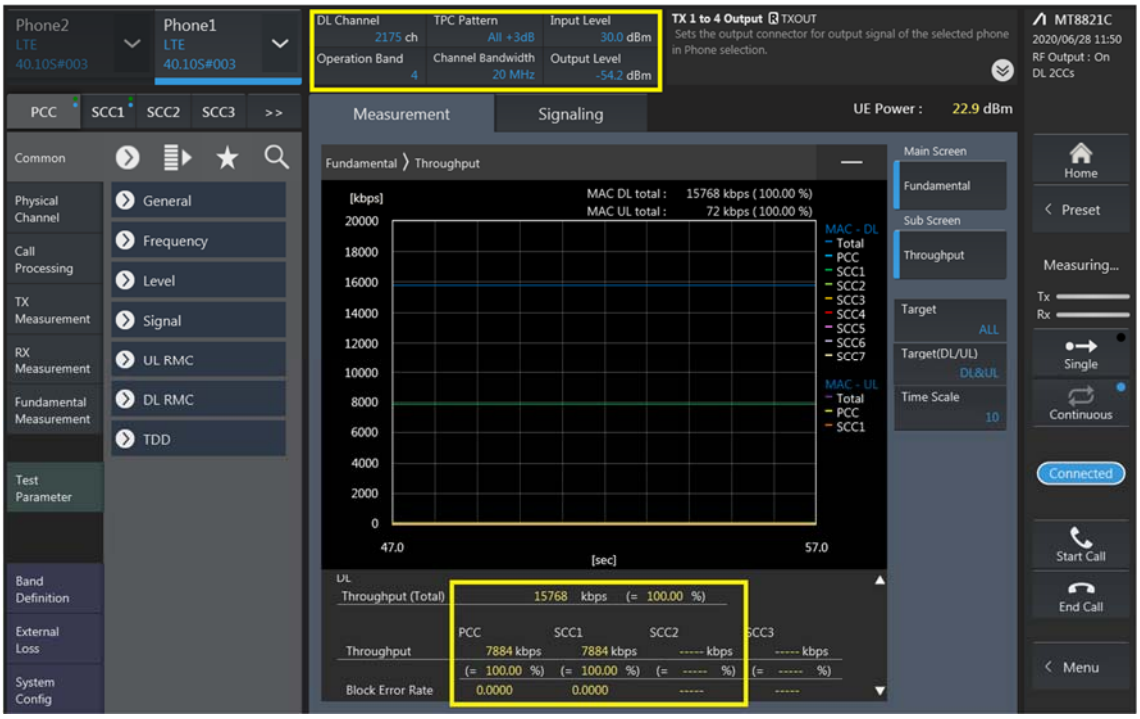
Downlink Carrier aggregation:

1. This device only supports downlink carrier aggregation. For every supported combination of downlink carrier aggregation, power measurements were performed with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.
2. All control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
3. Per FCC KDB publication 941225 D05A v01r02, Section C)3)b)ii), PCC uplink channel was selected at downlink carrier aggregation combinations. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
4. For continuous intra-band carrier aggregation, the downlink channel spacing between the component carriers was set to multiple of 300kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521.
5. For non-continuous intra-band carrier aggregation, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
6. All selected downlink channels remained fully within the downlink transmission band of the respective component carrier.

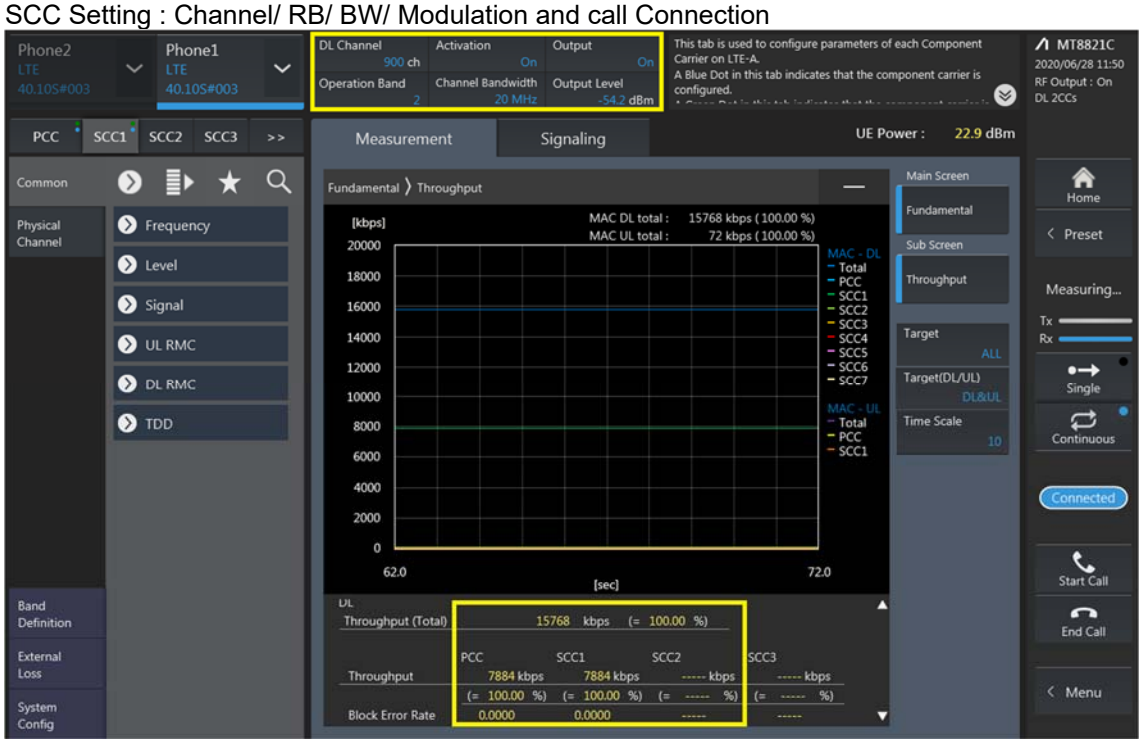
Power Measurement setup

LTE Down Link 2CA Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



SCC Setting : Channel/ RB/ BW/ Modulation and call Connection



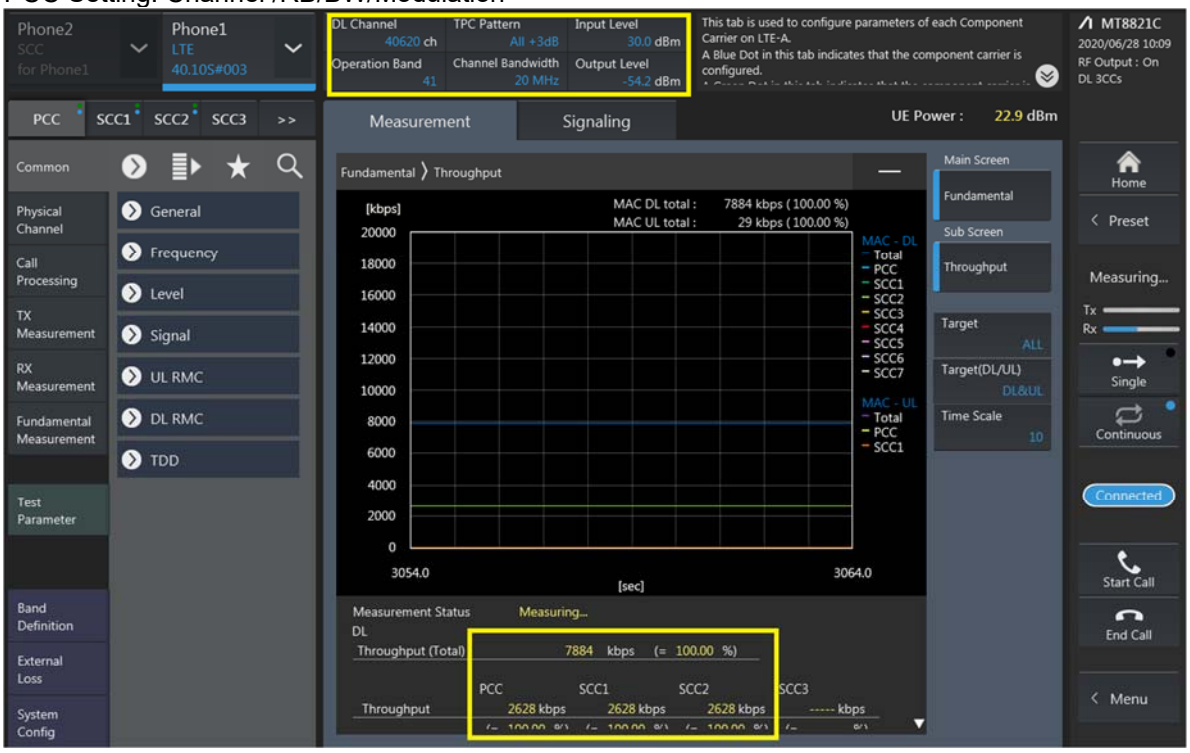
2CA Downlink Carrier aggregation conducted Powers

LTE Downlink 2CA Maximum Conducted Power

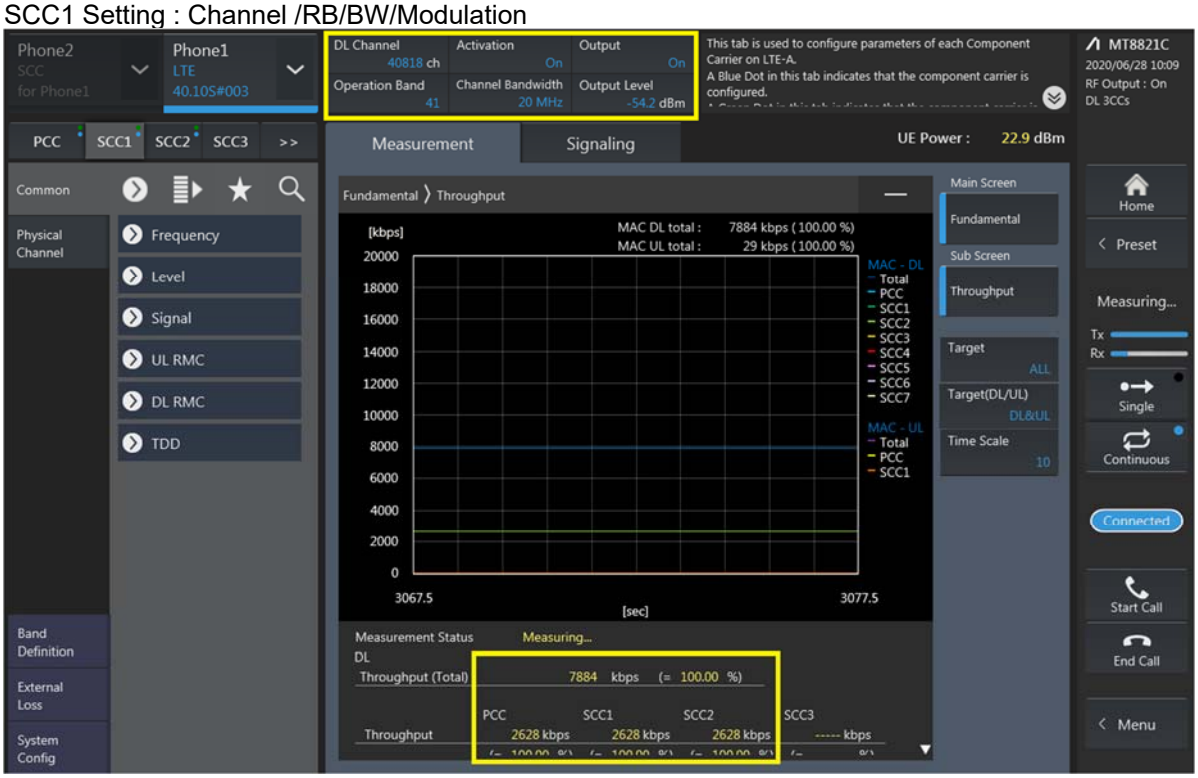
Combination	PCC									SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled(dBm) (2)	Deviaion (2)-(1)
2A-2A	2	20	18900	1880	900	1960	QPSK	1	0	2	20	1100	1980	22.53	22.4	-0.13
2C	2	20	18900	1880	900	1960	QPSK	1	0	2	20	1098	1979.8	22.53	22.38	-0.15
2A-4A(0,2)	2	20	18900	1880	900	1960	QPSK	1	0	4	20	2175	2132.5	22.53	22.37	-0.16
2A-4A(1)	2	10	18900	1880	900	1960	QPSK	1	0	4	10	2175	21325	22.4	22.41	0.01
2A-4A(0,2)	4	10	20350	1750	2350	2150	QPSK	1	0	2	20	900	1960	22.77	22.69	-0.08
2A-4A(1)	4	10	20350	1750	2350	2150	QPSK	1	0	2	10	900	1960	22.77	22.68	-0.09
2A-5A(0)	2	20	18900	1880	900	1960	QPSK	1	0	5	10	2525	881.5	22.53	22.33	-0.2
2A-5A(1)	2	10	18900	1880	900	1960	QPSK	1	0	5	10	2525	881.5	22.4	22.24	-0.16
2A-5A(0)	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	24.26	24.26	0
2A-5A(1)	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	10	900	1960	24.26	24.31	0.05
2A-12A(0,1)	2	20	18900	1880	900	1960	QPSK	1	0	12	10	5095	737.5	22.53	22.35	-0.18
2A-12A(2)	2	10	18900	1880	900	1960	QPSK	1	0	12	10	5095	737.5	22.4	22.33	-0.07
2A-12A(0,1)	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	23.3	23.3	0
2A-12A(2)	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	10	900	1960	23.3	23.29	-0.01
2A-13A(0)	2	20	18900	1880	900	1960	QPSK	1	0	13	10	5230	751	22.53	22.35	-0.18
2A-13A(1)	2	10	18900	1880	900	1960	QPSK	1	0	13	10	5230	751	22.4	22.34	-0.06
2A-13A(0)	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	23.8	23.67	-0.13
2A-13A(1)	13	10	23230	782	5230	751	QPSK	1	49	2	10	900	1960	23.8	23.69	-0.11
2A-17A	2	10	18900	1880	900	1960	QPSK	1	49	17	10	5790	740	22.4	22.34	-0.06
2A-17A	17	10	23790	710	5790	740	QPSK	1	0	2	10	900	1960	23.31	23.34	0.03
2A-66A(0,2)	2	20	18900	1880	900	1960	QPSK	1	0	66	20	66786	2145	22.53	22.38	-0.15
2A-66A(1)	2	10	18900	1880	900	1960	QPSK	1	0	66	10	66786	2145	22.4	22.29	-0.11
2A-66A(0,2)	66	20	132322	1745	66786	2145	QPSK	1	0	2	20	900	1960	22.93	22.89	-0.04
2A-66A(1)	66	10	132322	1745	66786	2145	QPSK	1	49	2	10	900	1960	22.85	22.77	-0.08
4A-4A(0)	4	10	20350	1750	2350	2150	QPSK	1	0	4	20	2050	2120	22.77	22.77	0
4A-4A(1)	4	10	20350	1750	2350	2150	QPSK	1	0	4	10	2000	2115	22.77	22.79	0.02
4A-5A(0,1)	4	10	20350	1750	2350	2150	QPSK	1	0	5	10	2525	881.5	22.77	22.75	-0.02
4A-5A(0)	5	10	20525	836.5	2525	881.5	QPSK	1	0	4	10	2175	2132.5	24.26	24.3	0.04
4A-5A(1)	5	10	20525	836.5	2525	881.5	QPSK	1	0	4	20	2175	2132.5	24.26	24.33	0.07
4A-12A(0,1,2,3,4)	4	10	20350	1750	2350	2150	QPSK	1	0	12	10	5095	737.5	22.77	22.75	-0.02
4A-12A(5)	4	10	20350	1750	2350	2150	QPSK	1	0	12	5	5095	737.5	22.77	22.71	-0.06
4A-12A(0,3)	12	10	23095	707.5	5095	737.5	QPSK	1	0	4	10	2175	2132.5	23.3	23.3	0
4A-12A(1,2,4)	12	10	2309	707.5	5095	737.5	QPSK	1	0	4	20	2175	2132.5	23.3	23.34	0.04
4A-12A(5)	12	5	23035	701.5	5035	731.5	QPSK	1	0	4	15	2175	2132.5	23.29	23.29	0
4A-13A(0,1)	4	10	20350	1750	2350	2150	QPSK	1	0	13	10	5230	751	22.77	22.78	0.01
4A-13A(0)	13	10	23230	782	5230	751	QPSK	1	49	4	20	2175	2132.5	23.8	23.65	-0.15
4A-13A(1)	13	10	23230	782	5230	751	QPSK	1	49	4	10	2175	2132.5	23.8	23.69	-0.11
4A-17A	4	10	20350	1750	2350	2150	QPSK	1	0	17	10	5790	740	22.77	22.77	0
4A-17A	17	10	23790	710	5790	740	QPSK	1	0	4	10	2175	2132.5	23.31	23.33	0.02
5A-41A	5	10	20525	836.5	2525	881.5	QPSK	1	0	41	20	40620	40620	24.26	24.23	-0.03
5A-41A	41	20	40620	2593	40620	2593	QPSK	1	0	5	10	2525	881.5	22.67	22.59	-0.08
5A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	66	20	66786	2145	24.26	24.21	-0.05
5A-66A	66	20	132322	1745	66786	2145	QPSK	1	0	5	10	2525	881.5	22.93	22.89	-0.04
12A-66A(0,3)	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	10	66786	2145	23.3	23.34	0.04
12A-66A(1,2,4)	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	20	66786	2145	23.3	23.28	-0.02
12A-66A(5)	12	5	23035	701.5	5035	731.5	QPSK	1	0	66	15	66786	2145	23.29	23.33	0.04
12A-66A(0,3)	66	10	132322	1745	66786	2145	QPSK	1	49	12	10	5095	737.5	22.85	22.84	-0.01
12A-66A(1,2,4)	66	20	132322	1745	66786	2145	QPSK	1	0	12	10	5095	737.5	22.93	22.83	-0.1
12A-66A(5)	66	15	132322	1745	66786	2145	QPSK	1	0	12	5	5095	737.5	22.87	22.85	-0.02
26A-41A	26	15	26865	831.5	8865	876.5	QPSK	1	0	41	20	40620	2593	23.79	23.75	-0.04
26A-41A(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	26	15	8865	876.5	22.67	22.65	-0.02
26A-41A(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	26	15	8865	876.5	24.46	24.44	-0.02
41A-41A(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	22.67	22.69	0.02
41A-41A(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41490	2680	24.46	24.45	-0.01
41C(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	22.67	22.64	-0.03
41C(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	24.46	24.48	0.02
66A-66A	66	20	132322	1745	66786	2145	QPSK	1	0	66	20	67236	2190	22.93	22.88	-0.05
66B	66	15	132322	1745	66786	2145	QPSK	1	0	66	5	66879	2154.3	22.87	22.87	0
66C	66	20	132322	1745	66786	2145	QPSK	1	0	66	20	66984	2164.8	22.93	22.88	-0.05

LTE Down Link 3CA Call Setup

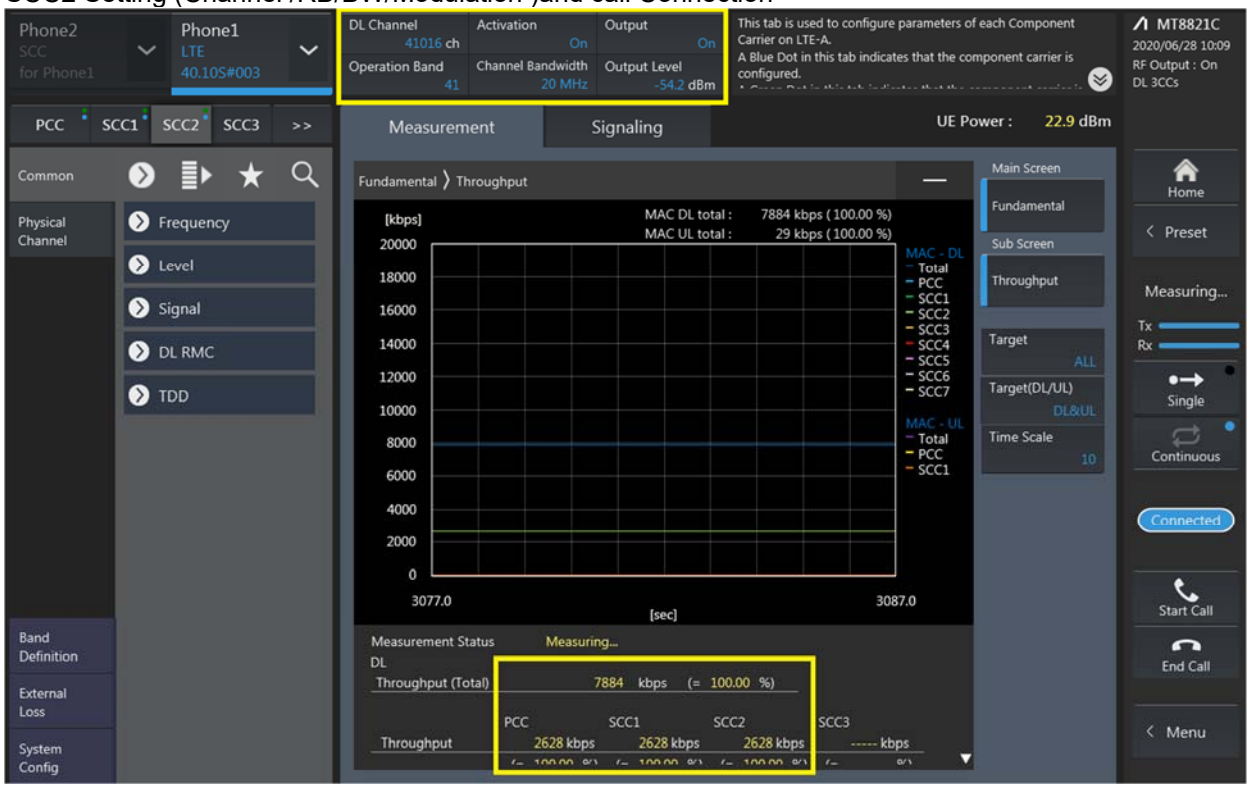
PCC Setting: Channel /RB/BW/Modulation



SCC1 Setting : Channel /RB/BW/Modulation



SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



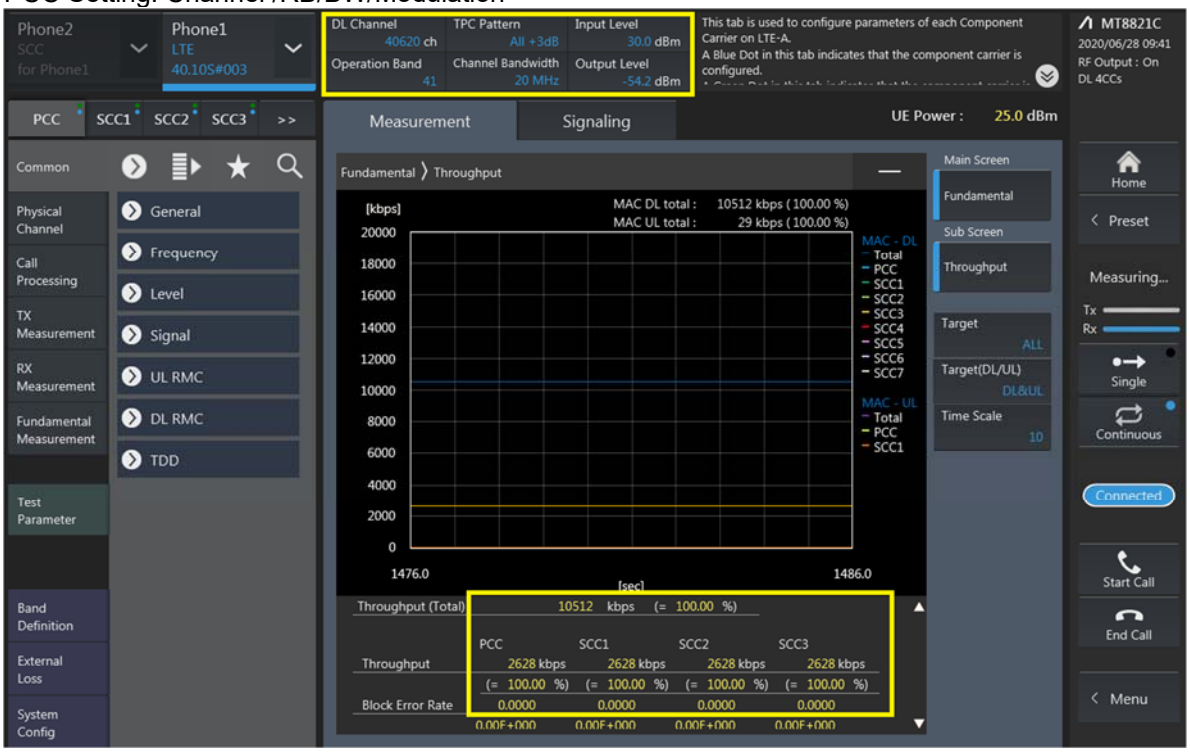
3CA Downlink Carrier aggregation conducted Powers

LTE Downlink 3CA Maximum Conducted Power

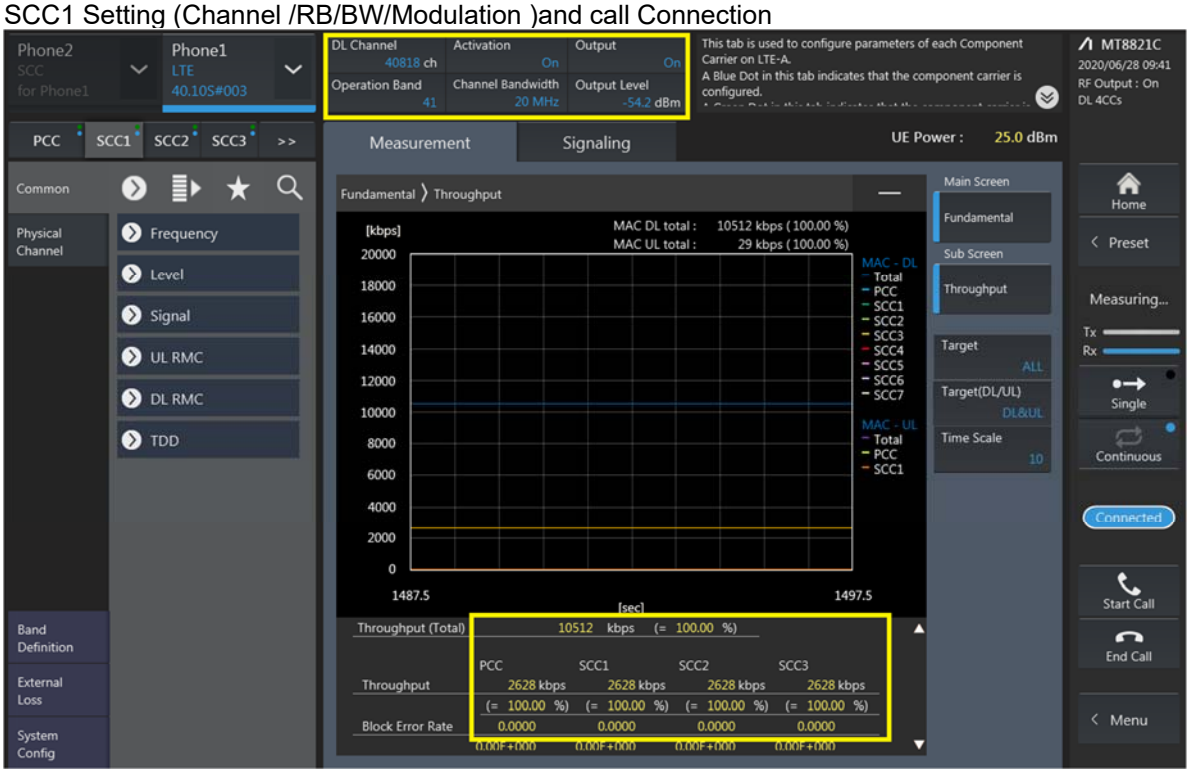
Combination	PCC									SCC				SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled(dBm) (2)	Deviaion (2)-(1)
2A-4A-5A	2	20	18900	1880	900	1960	QPSK	1	0	4	20	2175	2132.5	5	10	2525	881.5	22.53	22.45	-0.08
2A-4A-5A	4	10	20350	1750	2350	2150	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	22.77	22.67	-0.1
2A-4A-5A	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	24.26	24.31	0.05
2A-4A-13A	2	20	18900	1880	900	1960	QPSK	1	0	4	20	2175	2132.5	13	10	5230	751	22.53	22.47	-0.06
2A-4A-13A	4	10	20350	1750	2350	2150	QPSK	1	0	2	20	900	1960	13	10	5230	751	22.77	22.8	0.03
2A-4A-13A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	23.8	23.68	-0.12
4A-4A-12A	4	10	20350	1750	2350	2150	QPSK	1	0	4	20	2050	2120	12	10	5095	737.5	22.77	22.77	0
4A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	23.3	23.37	0.07
4A-4A-17A	4	10	20350	1750	2350	2150	QPSK	1	0	4	20	2050	2120	17	10	5790	740	22.77	22.82	0.05
4A-4A-17A	17	10	23790	710	5790	740	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	23.31	23.35	0.04
5A-66A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.26	24.2	-0.06
5A-66A-66A	66	20	132322	1745	66786	2145	QPSK	1	0	66	20	67236	2190	5	10	2525	881.5	22.93	22.89	-0.04
12A-66A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	23.3	23.31	0.01
12A-66A-66A	66	20	132322	1745	66786	2145	QPSK	1	0	66	20	67236	2190	12	10	5095	737.5	22.93	22.82	-0.11
41A-41C(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41292	2660.2	41	20	41490	2680	22.67	22.66	-0.01
41A-41C(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41292	2660.2	41	20	41490	2680	24.46	24.49	0.03
41C-41A(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41490	2680	22.67	22.65	-0.02
41C-41A(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41490	2680	24.46	24.5	0.04
41D(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41016	2632.6	22.67	22.7	0.03
41D(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41016	2632.6	24.46	24.52	0.06

LTE Down Link 4CA Call Setup

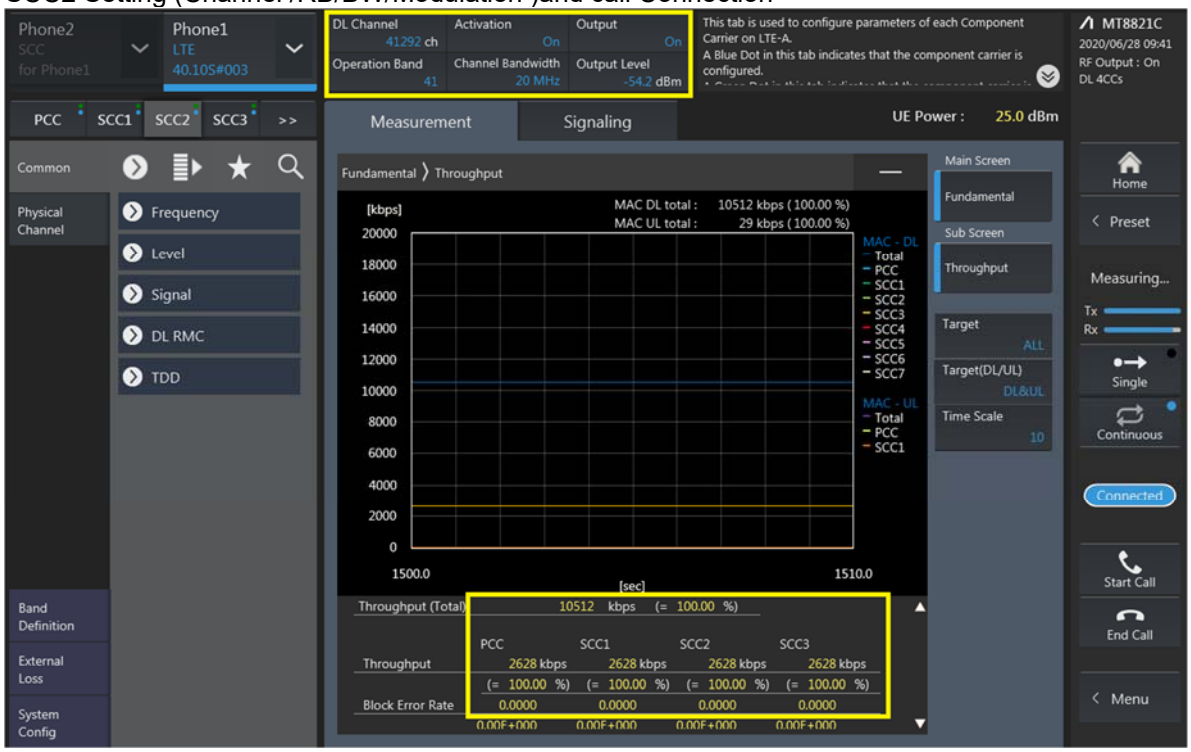
PCC Setting: Channel /RB/BW/Modulation



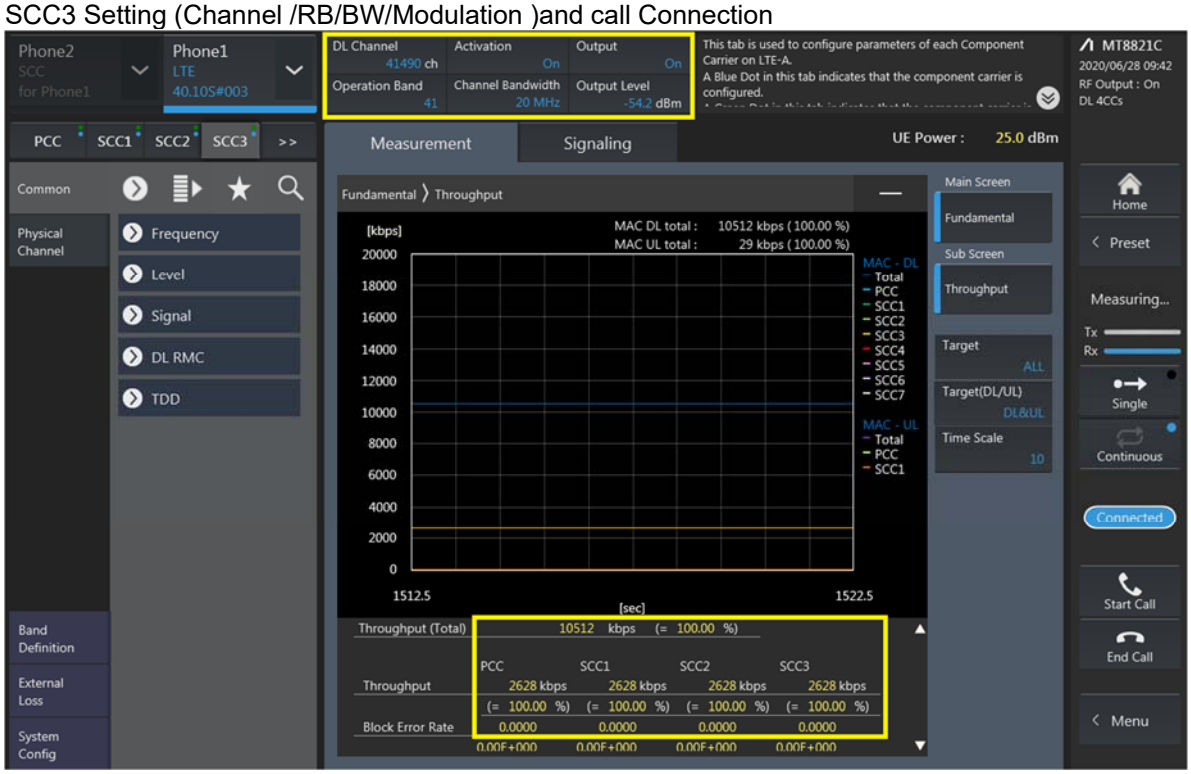
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



SCC3 Setting (Channel /RB/BW/Modulation)and call Connection



4CA Downlink Carrier aggregation conducted Powers

LTE Downlink 4CA Maximum Conducted Power

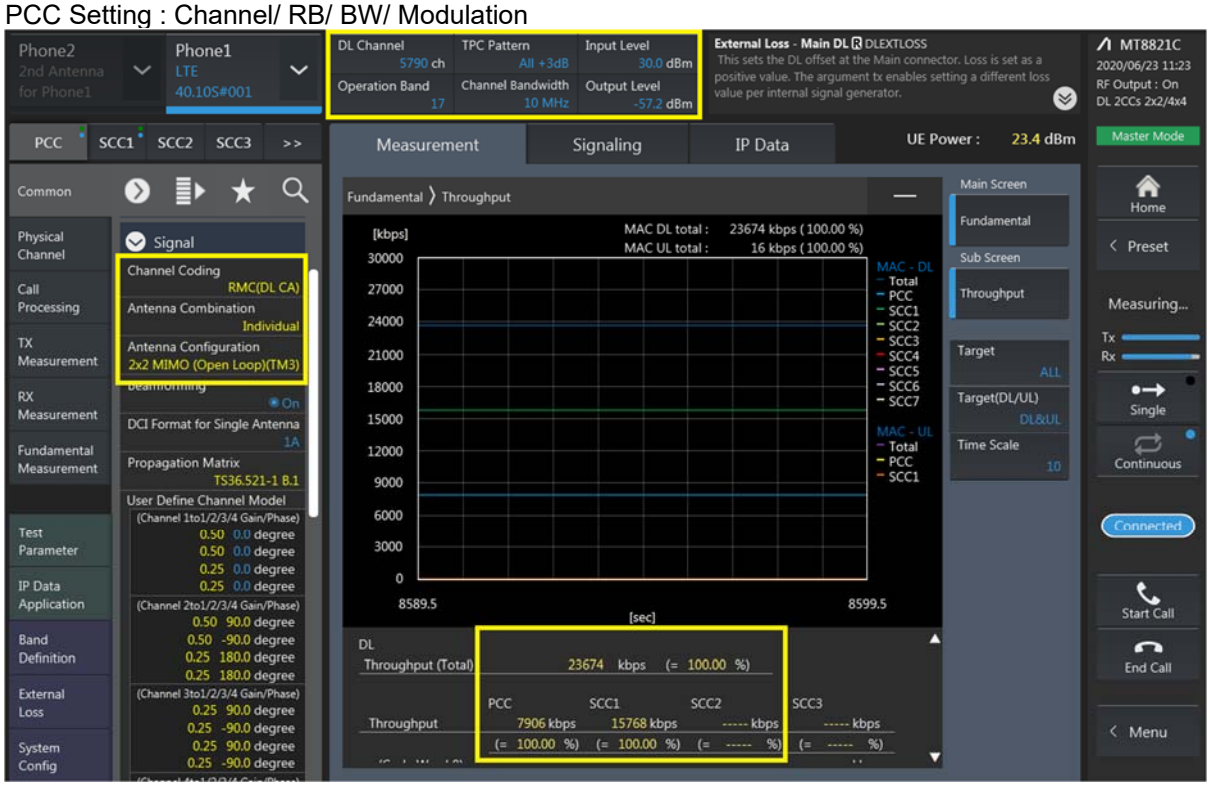
Combination	PCC									SCC				SCC				SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled(dBm) (2)	Deviaion (2)-(1)
41C-41C(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41292	2660.2	41	20	41490	2680	22.67	22.7	0.03
41C-41C(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41292	2660.2	41	20	41490	2680	24.46	24.36	-0.1
41A-41D(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	22.67	22.65	-0.02
41A-41D(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	24.46	24.46	0
41D-41A(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41016	2632.6	41	20	41490	2680	22.67	22.67	0
41D-41A(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41016	2632.6	41	20	41490	2680	24.46	24.45	-0.01
41E(PC3)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41016	2632.6	41	20	41214	2652.4	22.67	22.69	0.02
41E(PC2)	41	20	40620	2593	40620	2593	QPSK	1	0	41	20	40818	2612.8	41	20	41016	2632.6	41	20	41214	2652.4	24.46	24.53	0.07

LTE 4X4 MIMO Downlink Standalone Conducted Power(Per TCBC Workshop note May 2017)
SAR test exclusion for LTE DL 4x4 MIMO should be determined by
–UL power measurements with and without DL MIMO
–using the highest UL output power configuration without DL MIMO to confirm that UL output with DL MIMO is < ¼ dB higher
–for DL MIMO with carrier aggregation, the same SAR test exclusion procedure should be considered

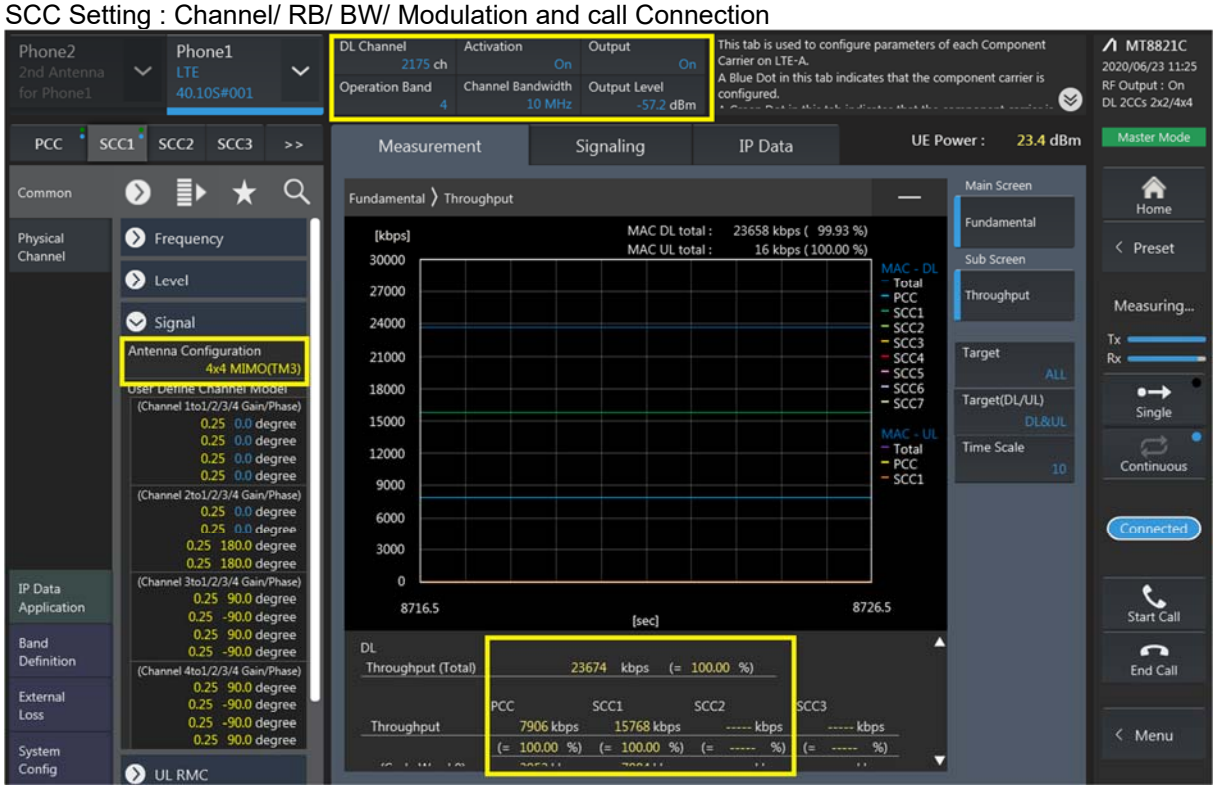
LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modultaion	RB Size	RB offset	4X4 DL MIMO Tx Power[dBm]	Single Ant Tx Power[dBm]	Target Power [dBm]
2	20	18900	1880	QPSK	1	0	22.51	22.53	22
4	10	20350	1750	QPSK	1	0	22.67	22.77	22.7
5	10	20525	836.5	QPSK	1	0	24.30	24.26	24
12	10	23095	707.5	QPSK	1	0	23.24	23.30	23.5
13	10	23230	782	QPSK	1	49	23.74	23.80	24
66	20	132322	1745	QPSK	1	0	22.87	22.93	22.7

LTE Down Link 2CA 4x4 MIMO Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



SCC Setting : Channel/ RB/ BW/ Modulation and call Connection



LTE Downlink 2CA 4X4 MIMO Maximum Conducted Power

Combination	PCC									SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled(dBm) (2)	Deviaion (2)-(1)
2A-[4A](0,2)	2	20	18900	1880	900	1960	QPSK	1	0	4	20	2175	2132.5	22.53	22.66	0.13
2A-[4A](1)	2	10	18900	1880	900	1960	QPSK	1	0	4	10	2175	21325	22.4	22.49	0.09
2A-[4A](0,2)	4	10	20350	1750	2350	2150	QPSK	1	0	2	20	900	1960	22.77	22.83	0.06
2A-[4A](1)	4	10	20350	1750	2350	2150	QPSK	1	0	2	10	900	1960	22.77	22.84	0.07
2A-[66A](0,2)	2	20	18900	1880	900	1960	QPSK	1	0	66	20	66786	2145	22.53	22.63	0.1
2A-[66A](1)	2	10	18900	1880	900	1960	QPSK	1	0	66	10	66786	2145	22.4	22.47	0.07
2A-[66A](0,2)	66	20	132322	1745	66786	2145	QPSK	1	0	2	20	900	1960	22.93	23	0.07
2A-[66A](1)	66	10	132322	1745	66786	2145	QPSK	1	49	2	10	900	1960	22.85	22.98	0.13
4A-[4A](0)	4	10	20350	1750	2350	2150	QPSK	1	0	4	20	2050	2120	22.77	22.75	-0.02
4A-[4A](1)	4	10	20350	1750	2350	2150	QPSK	1	0	4	10	2000	2115	22.77	22.81	0.04
[4A]-4A(0)	4	10	20350	1750	2350	2150	QPSK	1	0	4	20	2050	2120	22.77	22.8	0.03
[4A]-4A(1)	4	10	20350	1750	2350	2150	QPSK	1	0	4	10	2000	2115	22.77	22.8	0.03
[4A]-[4A](0)	4	10	20350	1750	2350	2150	QPSK	1	0	4	20	2050	2120	22.77	22.82	0.05
[4A]-[4A](1)	4	10	20350	1750	2350	2150	QPSK	1	0	4	10	2000	2115	22.77	22.85	0.08
[4A]-5A(0,1)	4	10	20350	1750	2350	2150	QPSK	1	0	5	10	2525	881.5	22.77	22.8	0.03
[4A]-5A(0)	5	10	20525	836.5	2525	881.5	QPSK	1	0	4	10	2175	2132.5	24.26	24.35	0.09
[4A]-5A(1)	5	10	20525	836.5	2525	881.5	QPSK	1	0	4	20	2175	2132.5	24.26	24.37	0.11
[4A]-12A(0,1,2,3,4)	4	10	20350	1750	2350	2150	QPSK	1	0	12	10	5095	737.5	22.77	22.79	0.02
[4A]-12A(5)	4	10	20350	1750	2350	2150	QPSK	1	0	12	5	5095	737.5	22.77	22.81	0.04
[4A]-12A(0,3)	12	10	23095	707.5	5095	737.5	QPSK	1	0	4	10	2175	2132.5	23.3	23.4	0.1
[4A]-12A(1,2,4)	12	10	23095	707.5	5095	737.5	QPSK	1	0	4	20	2175	2132.5	23.3	23.42	0.12
[4A]-12A(5)	12	5	23035	701.5	5035	731.5	QPSK	1	0	4	15	2175	2132.5	23.29	23.37	0.08
[4A]-13A(0,1)	4	10	20350	1750	2350	2150	QPSK	1	0	13	10	5230	751	22.77	22.66	-0.11
[4A]-13A(0)	13	10	23230	782	5230	751	QPSK	1	49	4	20	2175	2132.5	23.8	23.89	0.09
[4A]-13A(1)	13	10	23230	782	5230	751	QPSK	1	49	4	10	2175	2132.5	23.8	23.87	0.07
[4A]-17A	4	10	20350	1750	2350	2150	QPSK	1	0	17	10	5790	740	22.77	22.72	-0.05
[4A]-17A	17	10	23790	710	5790	740	QPSK	1	0	4	10	2175	2132.5	23.31	23.45	0.14
5A-[66A]	5	10	20525	836.5	2525	881.5	QPSK	1	0	66	20	66786	2145	24.26	24.24	-0.02
5A-[66A]	66	20	132322	1745	66786	2145	QPSK	1	0	5	10	2525	881.5	22.93	22.87	-0.06
12A-[66A](0,3)	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	10	66786	2145	23.3	23.34	0.04
12A-[66A](1,2,4)	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	20	66786	2145	23.3	23.37	0.07
12A-[66A](5)	12	5	23035	701.5	5035	731.5	QPSK	1	0	66	15	66786	2145	23.29	23.27	-0.02
12A-[66A](0,3)	66	10	132322	1745	66786	2145	QPSK	1	49	12	10	5095	737.5	22.85	22.89	0.04
12A-[66A](1,2,4)	66	20	132322	1745	66786	2145	QPSK	1	0	12	10	5095	737.5	22.93	22.92	-0.01
12A-[66A](5)	66	15	132322	1745	66786	2145	QPSK	1	0	12	5	5095	737.5	22.87	22.97	0.1
66A-[66A]	66	20	132322	1745	66786	2145	QPSK	1	0	66	20	67236	2190	22.93	22.87	-0.06
[66A]-66A	66	20	132322	1745	66786	2145	QPSK	1	0	66	20	67236	2190	22.93	22.99	0.06
[66A]-[66A]	66	20	132322	1745	66786	2145	QPSK	1	0	66	20	67236	2190	22.93	23.02	0.09