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Part 1: 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. 31, 2020 **Test Report No.:** HCT-SR-2007-FC007-R3 **Test Site: HCT CO., LTD.**

FCC ID: **A3LSMT878U**

Equipment Type:	**Tablet**
Application Type	**Certification**
FCC Rule Part(s):	**CFR §2.1093**
Model Name:	**SM-T878U**
Date of Test:	**06/03/2020~ 07/17/2020,** 07/31/2020

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

Bong-kyun, Park
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	07. 17, 2020	Initial Release
R1	07. 24, 2020	Revised page 4,7,262
R2	07. 29, 2020	Revised sec.18
R3	07. 31, 2020	Revised Sec.13

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.

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 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 616217 D04 SAR Tablets v01r02
- 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.

- Oct. 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- Oct. 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- Oct. 2016 TCB Workshop Notes (Device Holder Perturbations)
- Nov. 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)

2. Test Location

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

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SM-T878U
Equipment Type	Tablet
FCC ID	A3LSMT878U
Applicant	SAMSUNG Electronics Co., Ltd.

3.2 Attestation of test result of device under test

Band	Tx. Frequency	Equipment Class	SAR (W/kg)
			Reported 1g Body SAR
UMTS 850	826.4 MHz ~ 846.6 MHz	PCB	0.95
UMTS 1700	1 712.4 MHz ~ 1 752.6 MHz	PCB	0.98
UMTS 1900	1 852.4 MHz ~ 1 907.6 MHz	PCB	1.02
LTE Band 2	1 850.7 MHz ~ 1 909.3 MHz	PCB	N/A
LTE Band 4	1 710.7 MHz ~ 1 754.3 MHz	PCB	N/A
LTE Band 5 (Cell)	824.7 MHz ~ 848.3 MHz	PCB	N/A
LTE Band 7	2 502.5 MHz ~ 2 567.5 MHz	PCB	0.81
LTE Band 12	699.7 MHz ~ 715.3 MHz	PCB	0.74
LTE Band 13	779.5 MHz ~ 784.5 MHz	PCB	0.78
LTE Band 14	790.5 MHz ~ 795.5 MHz	PCB	0.79
LTE Band 25	1 850.7 MHz ~ 1 914.3 MHz	PCB	**1.10**
LTE Band 26	814.7 MHz ~ 848.3 MHz	PCB	0.66
LTE Band 30	2 307.5 MHz ~ 2 312.5 MHz	PCB	0.84
LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz	PCB	0.93
LTE Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz	PCB	1.06
LTE Band 71	665.5 MHz ~ 695.5 MHz	PCB	0.57
NR Band 2	1 852.5 MHz ~ 1 907.5 MHz	PCB	N/A
NR Band 5	826.5 MHz ~ 846.5 MHz	PCB	0.68
NR Band 25	1852.5 MHz ~ 1912.5 MHz	PCB	1.04
NR Band 41	2 506.02 MHz ~ 2 679.99 MHz	PCB	**1.10**
NR Band 66	1 712.5 MHz ~ 1 777.5 MHz	PCB	1.03
NR Band 71	665.5 MHz - 695.5 MHz	PCB	0.64
802.11b	2 412 MHz ~ 2 462 MHz	DTS	0.67
U-NII-1	5 180 MHz ~ 5 240 MHz	NII	N/A
U-NII-2A	5 260 MHz ~ 5 320 MHz	NII	**1.15**
U-NII-2C	5 500 MHz ~ 5 720 MHz	NII	0.88
U-NII-3	5 745 MHz ~ 5 825 MHz	NII	0.73
Bluetooth	2 402 MHz ~ 2 480 MHz	DSS	0.18
Simultaneous SAR per KDB 690783 D01v01r03			**1.59**
Date(s) of Tests:	06/03/2020~ 07/17/2020, 07/31/2020		

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band & Mode	**Operating Mode**	**Tx Frequency**
UMTS 850	Data	826.4 ㎒ ~ 846.6 ㎒
UMTS 1700	Data	1 712.4 ㎒ ~ 1 752.6 ㎒
UMTS 1900	Data	1 852.4 ㎒ ~ 1 907.6 ㎒
LTE Band 2	Data	1 850.7 ㎒ ~ 1 909.3 ㎒
LTE Band 4	Data	1 710.7 ㎒ ~ 1 754.3 ㎒
LTE Band 5 (Cell)	Data	824.7 ㎒ ~ 848.3 ㎒
LTE Band 7	Data	2 502.5 ㎒ ~ 2 567.5 ㎒
LTE Band 12	Data	699.7 ㎒ ~ 715.3 ㎒
LTE Band 13	Data	779.5 ㎒ ~ 784.5 ㎒
LTE Band 14	Data	790.5 ㎒ ~ 795.5 ㎒
LTE Band 25	Data	1 850.7 ㎒ ~ 1 914.3 ㎒
LTE Band 26	Data	814.7 ㎒ ~ 848.3 ㎒
LTE Band 30	Data	2 307.5 ㎒ ~ 2 312.5 ㎒
LTE TDD Band 41	Data	2 498.5 ㎒ ~ 2 687.5 ㎒
LTE Band 66 (AWS)	Data	1 710.7 ㎒ ~ 1 779.3 ㎒
LTE Band 71	Data	665.5 ㎒ ~ 695.5 ㎒
NR Band 2	Data	1 852.5 ㎒ ~ 1 907.5 ㎒
NR Band 5	Data	826.5 ㎒ ~ 846.5 ㎒
NR Band 25	Data	1852.5 ㎒ ~ 1912.5 ㎒
NR Band 41	Data	2 506.02 ㎒ ~ 2 679.99 ㎒
NR Band 66	Data	1 712.5 ㎒ ~ 1 777.5 ㎒
NR Band 71	Data	665.5 ㎒ - 695.5 ㎒
802.11b	Data	2 412 ㎒ ~ 2 462 ㎒
U-NII-1	Data	5 180 ㎒ ~ 5 240 ㎒
U-NII-2A	Data	5 260 ㎒ ~ 5 320 ㎒
U-NII-2C	Data	5 500 ㎒ ~ 5 720 ㎒
U-NII-3	Data	5 745 ㎒ ~ 5 825 ㎒
Bluetooth	Data	2 402 ㎒ ~ 2 480 ㎒
5G NR - n261	Data	27500 ㎒ - 28350 ㎒
5G NR - n260	Data	37000 ㎒ - 40000 ㎒

Device Description		
Device Dimension	Overall (Length x Width): 253.75 mm x 165.3 mm Overall Diagonal: 293 mm Display Diagonal: 277 mm	
Battery Options:	Standard (Li-ion Polymer Battery)	
	Battery Model Name: EB-BT875ABY (Samsung SDI)	
Ear-jack	Model Name : GHSS028-K8 (BUJEON)	
H/W Version	REV0.1	
S/W Version	T878U.001	
Device Serial Numbers:	**Mode**	**Serial Number**
	WCDMA 5, LTE5/12/13/14/26/71	R32N500K7SK
	WCDMA 2, LTE4/25/30/41/66	R32N500KA1X
	NR n2/25/41/66/71	R32N500L1MV
	WLAN	R32N500K85Y
	mmWave	R32N500KTRE
	The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.	

Time-Averaging Algorithm for RF Exposure Compliance

The equipment under test (EUT) contains:
a. Qualcomm® SM8250 modem supporting 2G/3G/4G WWAN technologies
b. Qualcomm® SDX55M modem supporting 5G NR
Both of Qualcomm® SM8250 and SDX55M modems are enabled with Qualcomm® Smart Transmit feature.
This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the Time-averaged RF exposure is in compliance with FCC requirements all the time.
Refer to Compliance Summary document for detailed description of Qualcomm® Smart Transmit feature

Note that WLAN operations are not enabled with Smart Transmit.
The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time averaged RF exposure of SAR_design_target or PD_design_target,
below the predefined time-averaged power limit (i.e., Plimit for sub-6 radio, and input.power.limit for 5G NR), for each characterized technology and band at A3LSMT878U_SAR_Report_Part 0.
Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit.
Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI). Note that the device uncertainty for sub-6GHz WWAN is 1.0dB for this EUT.

SAR Characterization

Device State Index (DSI)	0	1	Maximum Tune up Power	Maximum Tune up Power
Exposure Scenario	Body SAR	Body SAR		
Averaging Volume Spacing	1g SAR 8,17,23 mm	1g SAR 0 mm		
Mode/Band	P*Limit* (dBm)		Plimit (dBm)	Pmax (dBm)
UMTS Band 2	24.4	15.3	**13.5**	**23.5**
UMTS Band 4	25.5	14.6	**13.5**	**23.5**
UMTS Band 5	26.0	19.1	**17.5**	**23.5**
LTE Band 7	26.3	14.1	**12.0**	**22.0**
LTE Band 12	28.8	18.3	**16.0**	**24.8**
LTE Band 13	27.5	18.2	**16.0**	**24.0**
LTE Band 14	26.6	18.6	**16.0**	**24.5**
LTE Band 25	25.0	15.8	**14.0**	**24.0**
LTE Band 26	27.3	19.3	**16.0**	**24.5**
LTE Band 30	26.1	14.4	**12.5**	**22.3**
LTE Band 41	29.2	18.7	**14.0**	**24.5**
LTE Band 66	25.7	14.9	**14.0**	**24.0**
LTE Band 71	28.4	19.5	**14.0**	**24.8**
5G NR n5	28.3	19.3	**16.0**	**24.0**
5G NR n25	26.5	15.0	**14.0**	**24.0**
5G NR n41	24.1	16.2	**14.0**	**24.0**
5G NR n66	27.5	15.1	**14.0**	**24.0**
5G NR n71	30.8	18.9	**14.0**	**24.5**

1. when the Proximity sensor is triggered ,the Plimit for DSI=1 is set
2. When Pmax < Plimit, the DUT will operate at a power level up to Pmax.
3. When DSI=1, Plimit((Tune-up)< Plimit(cal), the DUT will operate at a power level up to Plimit as tune-up document
4. Maximum Tune up Power,P*max*. Is configured in NV settings in EUT to limit maximum transmitting power
5. Note all Plimit EFS and maximum tune up output power Pmax levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes.
6. Maximum tune up output power Pmax is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1dB device design uncertainty

.

The maximum time-averaged output power (dBm) for any 2G/3G/4G WWAN technology, band, and DSI = minimum of "Plimit EFS" and "Maximum tune up output power Pmax" + 1dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB Publication 447498 D01v06.

The purpose of this report (Part 1) is to demonstrate that the EUT meets FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels.

Measurement Condition: All conducted power and SAR measurements in this report were performed by setting Reserve_power_margin (Smart Transmit EFS entry) to 0dB.

4.2 Power Reduction for SAR

This device uses an independent fixed level power reduction mechanism for WLAN operations when 5G NR mmWave is active and also during activating in close proximity to the user's Body FCC KDB Publication 616217 D04v01r02 Sec.6 was used as a guideline for selection SAR test distances for device

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 Output Power (DSI=0)

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	3GPP HSDPA	3GPP HSUPA	DC-HSDPA
UMTS Band 5 (850 ㎒)	Maximum	24.5	24.0	24.0	24.0
	Nominal	23.5	23.0	23.0	23.0
UMTS Band 4 (1700 ㎒)	Maximum	24.5	24.0	24.0	24.0
	Nominal	23.5	23.0	23.0	23.0
UMTS Band 2 (1900 ㎒)	Maximum	24.5	24.0	24.0	24.0
	Nominal	23.5	23.0	23.0	23.0

Mode / Band		Modulated Average (dBm)
LTE Band 2 (PCS)	Maximum	25.0
	Nominal	24.0
LTE Band 4 (AWS)	Maximum	25.0
	Nominal	24.0
LTE Band 5 (Cell)	Maximum	25.5
	Nominal	24.5
LTE Band 7	Maximum	23.0
	Nominal	22.0
LTE Band 12	Maximum	25.8
	Nominal	24.8
LTE Band 13	Maximum	25.0
	Nominal	24.0
LTE Band 14	Maximum	25.5
	Nominal	24.5
LTE Band 25 (PCS)	Maximum	25.0
	Nominal	24.0
LTE Band 26 (Cell)	Maximum	25.5
	Nominal	24.5
LTE Band 30	Maximum	23.3
	Nominal	22.3

LTE Band 41 PC3	Maximum	25.5
	Nominal	24.5
LTE Band 41 PC2	Maximum	28.0
	Nominal	27.0
LTE Band 66 (AWS)	Maximum	25.0
	Nominal	24.0
LTE Band 71	Maximum	25.8
	Nominal	24.8

Mode / Band		Modulated Average (dBm)
NR Band n2 (PCS)	Maximum	25.0
	Nominal	24.0
NR Band n5 (Cell)	Maximum	25.0
	Nominal	24.0
NR Band n25	Maximum	25.0
	Nominal	24.0
NR Band n41	Maximum	25.0
	Nominal	24.0
NR Band n66	Maximum	25.0
	Nominal	24.0
NR Band n71	Maximum	25.5
	Nominal	24.5

4.3.2 Reduced Main Output Power – Proximity Sensor activated (DSI=1)

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	3GPP HSDPA	3GPP HSUPA	DC-HSDPA
UMTS Band 5 (850 ㎒)	Maximum	18.5	18.5	18.5	18.5
	Nominal	17.5	17.5	17.5	17.5
UMTS Band 4 (1700 ㎒)	Maximum	14.5	14.5	14.5	14.5
	Nominal	13.5	13.5	13.5	13.5
UMTS Band 2 (1900 ㎒)	Maximum	14.5	14.5	14.5	14.5
	Nominal	13.5	13.5	13.5	13.5

Mode / Band		Modulated Average (dBm)
LTE Band 2 (PCS)	Maximum	15.0
	Nominal	14.0
LTE Band 4 (AWS)	Maximum	15.0
	Nominal	14.0
LTE Band 5 (Cell)	Maximum	17.0
	Nominal	16.0
LTE Band 7	Maximum	13.0
	Nominal	12.0
LTE Band 12	Maximum	17.0
	Nominal	16.0
LTE Band 13	Maximum	17.0
	Nominal	16.0
LTE Band 14	Maximum	17.0
	Nominal	16.0
LTE Band 25 (PCS)	Maximum	15.0
	Nominal	14.0
LTE Band 26 (Cell)	Maximum	17.0
	Nominal	16.0
LTE Band 30	Maximum	13.5
	Nominal	12.5
LTE Band 41 PC2	Maximum	15.0
	Nominal	14.0
LTE Band 41 PC3	Maximum	15.0
	Nominal	14.0
LTE Band 66 (AWS)	Maximum	15.0
	Nominal	14.0
LTE Band 71	Maximum	15.0
	Nominal	14.0

Mode / Band		Modulated Average (dBm)
NR Band n2 (PCS)	Maximum	15.0
	Nominal	14.0
NR Band n5 (Cell)	Maximum	17.0
	Nominal	16.0
NR Band n25	Maximum	15.0
	Nominal	14.0
NR Band n41	Maximum	15.0
	Nominal	14.0
NR Band n66	Maximum	15.0
	Nominal	14.0
NR Band n71	Maximum	15.0
	Nominal	14.0

4.3.3 Maximum 2.4 GHz, 5 GHz WIFI output power

Mode	Band		SISO(ANT 1)						SISO(ANT 2)						MIMO					
			a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz			19	18	17	17	14		19	18	17	17	14		22	21	20	20	17
		11ch		19	17	16	16	14		19	17	16	16	14		22	20	19	19	17
5GHZ	5200MHz		17			16	16	10	17			16	16	10	20			19	19	13
	5300MHz		17			16	16	10	17			16	16	10	20			19	19	13
	5500MHz		17			16	16	10	17			16	16	10	20			19	19	13
	5800MHz		17			16	16	10	17			16	16	10	20			19	19	13
		165ch	16.5			15.5	15.5	10	16.5			15.5	15.5	10	19.5			18.5	18.5	13
5GHZ (40MHz)	5200MHz					16	14	10				16	14	10				19	17	13
	5300MHz					16	14	10				16	14	10				19	17	13
		62ch				12	12	10				12	12	10				15	15	13
	5500MHz					16	14	10				16	14	10				19	17	13
		102ch				12	12	10				12	12	10				15	15	13
	5800MHz					16	14	10				16	14	10				19	17	13
5GHZ (80MHz)	5200MHz						13	10					13	10					16	13
	5300MHz						13	10					13	10					16	13
	5500MHz						13	10					13	10					16	13
	5800MHz						13	10					13	10					16	13

4.3.4 Reduced 2.4 GHz, 5 GHz WIFI output power -Grip Active.

Mode	Band	SISO(ANT 1)						SISO(ANT 2)						MIMO					
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz		10	10	10	10	10		10	10	10	10	10		13	13	13	13	13
5GHZ	5200MHz	8			8	8	8	8			8	8	8	11			11	11	11
	5300MHz	8			8	8	8	8			8	8	8	11			11	11	11
	5500MHz	8			8	8	8	8			8	8	8	11			11	11	11
	5800MHz	8			8	8	8	8			8	8	8	11			11	11	11
5GHZ (40MHz)	5200MHz				8	8	8				8	8	8				11	11	11
	5300MHz				8	8	8				8	8	8				11	11	11
	5500MHz				8	8	8				8	8	8				11	11	11
	5800MHz				8	8	8				8	8	8				11	11	11
5GHZ (80MHz)	5200MHz					8	8					8	8					11	11
	5300MHz					8	8					8	8					11	11
	5500MHz					8	8					8	8					11	11
	5800MHz					8	8					8	8					11	11

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

Mode	Band	SISO(ANT 1)						SISO(ANT 2)						MIMO					
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz		16	15	14	14	12		16	15	14	14	12		19	18	17	17	15
5GHZ	5200MHz	14			13	13	10	14			13	13	10	17			16	16	13
	5300MHz	14			13	13	10	14			13	13	10	17			16	16	13
	5500MHz	14			13	13	10	14			13	13	10	17			16	16	13
	5800MHz	14			13	13	10	14			13	13	10	17			16	16	13
5GHZ (40MHz)	5200MHz				13	11	10				13	11	10				16	14	13
	5300MHz				13	11	10				13	11	10				16	14	13
	5500MHz				13	11	10				13	11	10				16	14	13
	5800MHz				13	11	10				13	11	10				16	14	13
5GHZ (80MHz)	5200MHz					10	10					10	10					13	13
	5300MHz					10	10					10	10					13	13
	5500MHz					10	10					10	10					13	13
	5800MHz					10	10					10	10					13	13

4.3.6 Reduced 2.4 GHz, 5 GHz WIFI output power -RSDB with Grip Active

Mode	Band	SISO(ANT 1)						SISO(ANT 2)						MIMO					
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz		8	8	8	8	8		8	8	8	8	8		11	11	11	11	11
5GHZ	5200MHz	6			6	6	6	6			6	6	6	9			9	9	9
	5300MHz	6			6	6	6	6			6	6	6	9			9	9	9
	5500MHz	6			6	6	6	6			6	6	6	9			9	9	9
	5800MHz	6			6	6	6	6			6	6	6	9			9	9	9
5GHZ (40MHz)	5200MHz				6	6	6				6	6	6				9	9	9
	5300MHz				6	6	6				6	6	6				9	9	9
	5500MHz				6	6	6				6	6	6				9	9	9
	5800MHz				6	6	6				6	6	6				9	9	9
5GHZ (80MHz)	5200MHz					6	6					6	6					9	9
	5300MHz					6	6					6	6					9	9
	5500MHz					6	6					6	6					9	9
	5800MHz					6	6					6	6					9	9

4.3.7 Reduced 2.4 GHz, 5 GHz WIFI output power -mmWave with Grip Active

Mode	Band	SISO(ANT 1)						SISO(ANT 2)						MIMO					
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz		8	8	8	8	8		8	8	8	8	8		11	11	11	11	11
5GHZ	5200MHz	7			7	7	7	7			7	7	7	10			10	10	10
	5300MHz	7			7	7	7	7			7	7	7	10			10	10	10
	5500MHz	7			7	7	7	7			7	7	7	10			10	10	10
	5800MHz	7			7	7	7	7			7	7	7	10			10	10	10
5GHZ (40MHz)	5200MHz				7	7	7				7	7	7				10	10	10
	5300MHz				7	7	7				7	7	7				10	10	10
	5500MHz				7	7	7				7	7	7				10	10	10
	5800MHz				7	7	7				7	7	7				10	10	10
5GHZ (80MHz)	5200MHz					7	7					7	7					10	10
	5300MHz					7	7					7	7					10	10
	5500MHz					7	7					7	7					10	10
	5800MHz					7	7					7	7					10	10

4.3.8 Reduced 2.4 GHz, 5 GHz WIFI output power -mmWave + RSDB with Grip Active

Mode	Band	SISO(ANT 1)						SISO(ANT 2)						MIMO					
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz		6	6	6	6	6		6	6	6	6	6		9	9	9	9	9
5GHZ	5200MHz	5			5	5	5	5			5	5	5	8			8	8	8
	5300MHz	5			5	5	5	5			5	5	5	8			8	8	8
	5500MHz	5			5	5	5	5			5	5	5	8			8	8	8
	5800MHz	5			5	5	5	5			5	5	5	8			8	8	8
5GHZ (40MHz)	5200MHz				5	5	5				5	5	5				8	8	8
	5300MHz				5	5	5				5	5	5				8	8	8
	5500MHz				5	5	5				5	5	5				8	8	8
	5800MHz				5	5	5				5	5	5				8	8	8
5GHZ (80MHz)	5200MHz					5	5					5	5					8	8
	5300MHz					5	5					5	5					8	8
	5500MHz					5	5					5	5					8	8
	5800MHz					5	5					5	5					8	8

4.3.9 802.11ax RU Power

Tones	SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
	2.4G	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***	***2.4G***	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	14	10	10	10	17	13	13	13
52T	14	10	10	10	17	13	13	13
106T	14	10	10	10	17	13	13	13
242T		10	10	10		13	13	13
484T			10	10			13	13
996T								

4.3.10 Reduced Power 802.11ax RU Tx power – Grip Active

Tones	SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
	2.4G	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***	***2.4G***	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	10	8	8	8	13	11	11	11
52T	10	8	8	8	13	11	11	11
106T	10	8	8	8	13	11	11	11
242T		8	8	8		11	11	11
484T			8	8			11	11
996T								

4.3.11 Reduced Power 802.11ax RU Tx power – RSDB

Tones	SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
	2.4G	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***	***2.4G***	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	12	10	10	10	15	13	13	13
52T	12	10	10	10	15	13	13	13
106T	12	10	10	10	15	13	13	13
242T		10	10	10		13	13	13
484T			10	10			13	13
996T								

4.3.12 Reduced Power 802.11ax RU Tx power – RSDB with Grip Active

Tones	SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
	2.4G	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***	***2.4G***	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	8	6	6	6	11	9	9	9
52T	8	6	6	6	11	9	9	9
106T	8	6	6	6	11	9	9	9
242T		6	6	6		9	9	9
484T			6	6			9	9
996T								

4.3.13 Reduced Power 802.11ax RU Tx power – mmWave with Grip Active

Tones	SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
	2.4G	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***	***2.4G***	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	8	7	7	7	11	10	10	10
52T	8	7	7	7	11	10	10	10
106T	8	7	7	7	11	10	10	10
242T		7	7	7		10	10	10
484T			7	7			10	10
996T								

4.3.14 Reduced Power 802.11ax RU Tx power – mmWave and RSDB with Grip Active

Tones	SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
	2.4G	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***	***2.4G***	***5G/20Mhz***	***5G/40Mhz***	***5G/80Mhz***
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	6	5	5	5	9	8	8	8
52T	6	5	5	5	9	8	8	8
106T	6	5	5	5	9	8	8	8
242T		5	5	5		8	8	8
484T			5	5			8	8
996T								

4.3.15 Simultaneous Dual Band (RSDB) Senario

	# TX	2.4GHz WIFI [dBm]		5GHz WIFI [dBm]		802.11 Modes
		Ant1	Ant2	Ant1	Ant2	
2.4 GHz + 5 GHz RSDB Only	2	16.0	-	-	14.0	2.4 GHz : b,g,n,ac,ax (b,g : CDD / n,ac,ax : CDD+STBC) 5 GHz : a,n,ac,ax (a : CDD / n,ac,ax : CDD+STBC)
	2	-	16.0	14.0	-	
	2	16.0	-	14.0	-	
	2	-	16.0	-	14.0	
2.4 GHz + 5 GHz RSDB & MIMO	3	16.0	16.0	14.0	-	2.4 GHz : b,g,n,ac,ax (b,g : CDD / n,ac,ax : CDD+STBC) 5 GHz : a,n,ac,ax (a : CDD / n,ac,ax : CDD+STBC)
	3	16.0	16.0	-	14.0	
	3	16.0	-	14.0	14.0	
	3	-	16.0	14.0	14.0	
2.4 GHz + 5 GHz RSDB & MIMO	4	16.0	16.0	14.0	14.0	2.4 GHz : b,g,n,ac,ax (b,g : CDD / n,ac,ax : CDD+STBC) 5 GHz : a,n,ac,ax (a : CDD / n,ac,ax : CDD+STBC)

4.3.16 Maximum Bluetooth Power

Mode / Band		Modulated Average (dBm)
Bluetooth 1Mbps	Maximum	15.0
	Nominal	14.0
Bluetooth EDR	Maximum	14.0
	Nominal	13.0
Bluetooth LE	Maximum	5.2
	Nominal	4.2

4.3.17 Reduced Bluetooth Power – Grip Active

Mode / Band		Modulated Average (dBm)
Bluetooth 1Mbps	Maximum	5.2
	Nominal	4.2
Bluetooth EDR	Maximum	5.2
	Nominal	4.2

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 7	2 502.5 ㎒ ~ 2 567.5 ㎒
	LTE Band 12	699.7 ㎒~ 715.3 ㎒
	LTE Band 13	779.5 ㎒ ~ 784.5 ㎒
	LTE Band 14	790.5 ㎒ ~ 795.5 ㎒
	LTE Band 25 (PCS)	1 850.7 ㎒ ~ 1 914.3 ㎒
	LTE Band 26 (Cell)	814.7 ㎒ ~ 848.3 ㎒
	LTE Band 30	2 307.5 ㎒ ~ 2 312.5 ㎒
	LTE TDD Band 41	2 498.5 ㎒ ~ 2 687.5 ㎒
	LTE Band 66 (AWS)	1 710.7 ㎒ ~ 1 779.3 ㎒
	LTE Band 71	665.5 ㎒ ~ 695.5 ㎒
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 7	5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒
	LTE Band 12	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒
	LTE Band 13	5 ㎒, 10 ㎒
	LTE Band 14	5 ㎒, 10 ㎒
	LTE Band 25 (PCS)	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒
	LTE Band 26 (Cell)	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒
	LTE Band 30	5 ㎒, 10 ㎒
	LTE TDD Band 41	5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒
	LTE Band 66 (AWS)	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒
	LTE Band 71	5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒

Mode		Low	Mid	High
		Freq.(㎒) (Ch. No.)	Freq.(㎒) (Ch. No.)	Freq.(㎒) (Ch. No.)
LTE Band 2	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	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	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 7	5 ㎒	2502.5 (20775)	2535 (21100)	2567.5 (21425)
	10 ㎒	2505 (20800)	2535 (21100)	2565 (21400)
	15 ㎒	2507.5 (20825)	2535 (21100)	2562.5 (21375)
	20 ㎒	2510 (20850)	2535 (21100)	2560 (21350)
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 14	5 ㎒	790.5 (23305)	793 (23330)	795.5 (23355)
	10 ㎒		793 (23330)	
LTE Band 25	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	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)
LTE Band 30	5 ㎒	2 307.5 (27685)	2 310 (27710)	2 312.5 (27735)
	10 ㎒		2 310 (27710)	

Mode		Low	Mid	High
		Freq.(㎒) (Ch. No.)	Freq.(㎒) (Ch. No.)	Freq.(㎒) (Ch. No.)
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 Band 71	5 ㎒	665.5 (133147)	680.5(133297)	695.5 (133447)
	10 ㎒	668 (133172)	680.5 (133297)	693 (133422)
	15 ㎒	670.5(133197)	680.5 (133297)	690.5 (133397)
	20 ㎒	673 (133222)	680.5 (133297)	688 (133372)
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)

Item.	Description
UE Category	LTE Rel.15, UE DL Cat.20 UL Cat.18 (DL up to 256QAM & UL up to 256QAM)
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	Intra-Band & Inter-band DL CA, Intra-Band UL CA, and LAA are supported. Wi-Fi offloading using LTE-U and LWA is not supported. The technical description includes all the possible carrier aggregation combinations.
LTE Release information	This device does not support full CA features on 3GPP Release 15 . It supports carrier aggregation, downlink MIMO, and LAA features. The following LTE Release 15 features are not supported Relay, HetNet, Enhanced MIMO, elCl, WiFi offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.

Item.		Description
Frequency Range	NR Band n2 (PCS)	1 852.5 MHz ~ 1 907.5 MHz
	NR Band n5 (Cell)	826.5 MHz ~ 846.5 MHz
	NR Band n25	1852.5 MHz ~ 1912.5 MHz
	NR Band n41	2 506.02 MHz ~ 2 679.99 MHz
	NR Band n66 (AWS)	1 712.5 MHz ~ 1 777.5 MHz
	NR Band n71	665.5 MHz - 695.5 MHz
Channel Bandwidths	NR Band n2 (PCS)	5 MHz, 10 MHz, 15 MHz, 20 MHz
	NR Band n5 (Cell)	5 MHz, 10 MHz, 15 MHz, 20 MHz
	NR Band n25	5 MHz, 10 MHz, 15 MHz, 20 MHz
	NR Band n41	20 MHz, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz
	NR Band n66(AWS)	5 MHz, 10 MHz, 15 MHz, 20 MHz
	NR Band n71	5 MHz, 10 MHz, 15 MHz, 20 MHz

Ch. No.& Freq.(MHz)		Low		Mid		High	
NR Band n2 (PCS)	5 MHz	1852.5 (370500)		1880 (376000)		1907.5 (381500)	
	10 MHz	1855 (371000)		1880 (376000)		1905 (381000)	
	15 MHz	1857.5 (371500)		1880 (376000)		1902.5 (380500)	
	20 MHz	1860 (372000)		1880 (376000)		1900 (380000)	
NR Band n5 (Cell)	5 MHz	826.5 (165300)		836.5 (167300)		846.5 (169300)	
	10 MHz	829 (165800)				844 (168800)	
	15 MHz	831.5 (166300)		836.5 (167300)		841.5 (168300)	
	20 MHz	834 (166800)		836.5 (167300)		839 (167800)	
NR Band n25	5 MHz	1852.5(370500)		1882.5(376500)		1912.5(382500)	
	10 MHz	1855(371000)		1882.5(376500)		1910(382000)	
	15 MHz	1857.5(371500)		1882.5(376500)		1907.5(381500)	
	20 MHz	1860(372000)		1882.5(376500)		1905(381000)	
NR Band n71	5 MHz	665.5 (133100)		680.5 (136100)		695.5 (139100)	
	10 MHz	668 (133600)		680.5 (136100)		693 (138600)	
	15 MHz	670.5 (134100)				690.5 (138100)	
	20 MHz	673 (134600)		680.5 (136100)		688 (137600)	
NR Band n66 (AWS)	5 MHz	1712.5 (342500	1734.1 (346820)		1755.8 (351160)		1777.5 (355500)
	10 MHz	1715 (343000)	1735 (347000)		1755 (351000)		1775 (355000)
	15 MHz	1717.5 (343500	1735.8 (347160)		1754.1 (350820)		1772.5 (354500)
	20 MHz	1720 (344000)		1745 (349000)		1770 (354000)	
NR Band 41	20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)	2636.49 (527298)	2679.99 (535998)	
	40 MHz	2516.01 (503202)	2567.34 (513468)		2618.67 (523734)	2670 (534000)	
	50 MHz	2521.02 (504204)		2592.99 (518598)		2664.99 (532998)	
	60 MHz	2526 (505200)		2592.99 (518598)		2659.98 (531996)	
	80 MHz	2536.02 (507204)				2649.99 (529998)	
	90 MHz	2541 (508200)				2644.98 (528996)	
	100 MHz			2592.99 (518598)			

NR Band n71/n5/n2/n25/n66 SCS	15 kHz
NR Band n41 SCS	30 kHz
A-MPR disabled for SAR Testing.	Yes
Modulations Supported in UL	DFT-s-OFDM: pi/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations

4.5 SAR Test Configurations

Since the Dedicated Host Approach is applied, the standalone SAR test exclusion procedure in KDB447498 4.3.1 is applied in conjunction with KDB 616217 4.3 to determine the minimum test separation distance:

When the separation distance from the antenna to an adjacent edge is ≤ 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

When the separation distance from the antenna to an adjacent edge is > 5 mm, the actual antenna-to-edge separation distance is applied to determine SAR test exclusion

Maximum Power Condition: Sensor Inactive

Ant.	Band	Freq. [MHz]	Max. Power		Separation Distances (mm)					SAR Test Exclusion Thresholds (test separation distances <50mm threshold value <3					SAR Test Exclusion Thresholds (test separation distances >50mm Power (mW)				
			(dBm)	(mW)	Rear	Top	Left	Right	Bottom	Rear	Top	Left	Right	Bottom	Rear	Top	Left	Right	Bottom
Main 1	WCDMA B5	846.6	24.5	281.8	0	0	58.2	44.1	253.7	51.9	51.9	distances > 50 mm	5.9	distances > 50 mm	distances <50 mm	distances <50 mm	209.3	distances <50 mm	1312.7
Main 1	WCDMA B4	1752.6	24.5	281.8	0	0	58.2	44.1	253.7	74.6	74.6	distances > 50 mm	8.5	distances > 50 mm	distances <50 mm	distances <50 mm	195.3	distances <50 mm	2150.3
Main 1	WCDMA B2	1907.6	24.5	281.8	0	0	58.2	44.1	253.7	77.9	77.9	distances > 50 mm	8.8	distances > 50 mm	distances <50 mm	distances <50 mm	190.6	distances <50 mm	2145.6
Main 1	LTE Band 2	1909.3	25	316.2	0	0	58.2	44.1	253.7	87.4	87.4	distances > 50 mm	9.9	distances > 50 mm	distances <50 mm	distances <50 mm	190.6	distances <50 mm	2145.6
Main 1	LTE Band 4	1754.3	25	316.2	0	0	58.2	44.1	253.7	83.8	83.8	distances > 50 mm	9.5	distances > 50 mm	distances <50 mm	distances <50 mm	195.3	distances <50 mm	2150.3
Main 1	LTE Band 5	848.5	25.5	354.8	0	0	58.2	44.1	253.7	65.4	65.4	distances > 50 mm	7.4	distances > 50 mm	distances <50 mm	distances <50 mm	209.2	distances <50 mm	1315.1
Main 1	LTE Band 7	2567.5	25	316.2	0	0	58.2	44.1	253.7	101.3	101.3	distances > 50 mm	11.5	distances > 50 mm	distances <50 mm	distances <50 mm	175.6	distances <50 mm	2130.6
Main 1	LTE Band 12	715.3	25.8	380.2	0	0	58.2	44.1	253.7	64.3	64.3	distances > 50 mm	7.3	distances > 50 mm	distances <50 mm	distances <50 mm	216.5	distances <50 mm	1148.7
Main 1	LTE Band 13	784.5	25	316.2	0	0	58.2	44.1	253.7	56	56	distances > 50 mm	6.4	distances > 50 mm	distances <50 mm	distances <50 mm	212.2	distances <50 mm	1234.7
Main 1	LTE Band 14	795.5	25.5	354.8	0	0	58.2	44.1	253.7	63.3	63.3	distances > 50 mm	7.2	distances > 50 mm	distances <50 mm	distances <50 mm	211.7	distances <50 mm	1248.5
Main 1	LTE Band 25	1914.3	25	316.2	0	0	58.2	44.1	253.7	87.5	87.5	distances > 50 mm	9.9	distances > 50 mm	distances <50 mm	distances <50 mm	190.4	distances <50 mm	2145.4
Main 1	LTE Band 26	848.3	25.5	354.8	0	0	58.2	44.1	253.7	65.4	65.4	distances > 50 mm	7.4	distances > 50 mm	distances <50 mm	distances <50 mm	209.2	distances <50 mm	1314.9
Main 1	LTE Band 30	2312.5	23.3	213.8	0	0	58.2	44.1	253.7	65	65	distances > 50 mm	7.4	distances > 50 mm	distances <50 mm	distances <50 mm	180.6	distances <50 mm	2135.6
Main 1	LTE Band 41(PC2)	2687.5	28	631	0	0	58.2	44.1	253.7	206.9	206.9	distances > 50 mm	23.5	distances > 50 mm	distances <50 mm	distances <50 mm	173.5	distances <50 mm	2128.5
Main 1	LTE Band 41(PC3)	2687.5	25.5	354.8	0	0	58.2	44.1	253.7	116.3	116.3	distances > 50 mm	13.2	distances > 50 mm	distances <50 mm	distances <50 mm	173.5	distances <50 mm	2128.5
Main 1	LTE Band 66	1779.3	25	316.2	0	0	58.2	44.1	253.7	84.4	84.4	distances > 50 mm	9.6	distances > 50 mm	distances <50 mm	distances <50 mm	194.5	distances <50 mm	2149.5
Main 1	LTE Band 71	695.5	24.8	302	0	0	58.2	44.1	253.7	50.4	50.4	distances > 50 mm	5.7	distances > 50 mm	distances <50 mm	distances <50 mm	217.9	distances <50 mm	1124.4
Main 1	NR 2	1907.5	25	316.2	0	0	58.2	44.1	253.7	87.3	87.3	distances > 50 mm	9.9	distances > 50 mm	distances <50 mm	distances <50 mm	190.6	distances <50 mm	2145.6
Main 1	NR 5	846.5	25	316.2	0	0	58.2	44.1	253.7	58.2	58.2	distances > 50 mm	6.6	distances > 50 mm	distances <50 mm	distances <50 mm	209.3	distances <50 mm	1149.5
Main 1	NR 25	1912.5	25	316.2	0	0	58.2	44.1	253.7	87.5	87.5	distances > 50 mm	9.9	distances > 50 mm	distances <50 mm	distances <50 mm	190.5	distances <50 mm	2145.5
Main 2	NR 41	2679.99	25	316.2	0	0	44.1	108.9	253.7	103.5	103.5	11.7	distances > 50 mm	distances > 50 mm	distances <50 mm	distances <50 mm	distances <50 mm	680.6	2128.6
Main 1	NR 66	1777.5	25	316.2	0	0	58.2	44.1	253.7	84.3	84.3	distances > 50 mm	9.6	distances > 50 mm	distances <50 mm	distances <50 mm	194.5	distances <50 mm	2149.5
Main 1	NR 71	695.5	25.5	354.8	0	0	58.2	44.1	253.7	59.2	59.2	distances > 50 mm	6.7	distances > 50 mm	distances <50 mm	distances <50 mm	217.9	distances <50 mm	1124.4
WLAN 1	2.4 GHz	2462	20	100	0	0	148.9	0	241	31.4	31.4	distances > 50 mm	31.4	distances > 50 mm	distances <50 mm	distances <50 mm	1084.6	distances <50 mm	2005.6
WLAN 2	2.4 GHz	2462	20	100	0	0	0	123.3	241	31.4	31.4	31.4	distances > 50 mm	distances > 50 mm	distances <50 mm	distances <50 mm	distances <50 mm	828.6	2005.6
WLAN 1	5 GHz	5825	18	63.1	0	0	148.9	0	241	30.5	30.5	distances > 50 mm	30.5	distances > 50 mm	distances <50 mm	distances <50 mm	1051.2	distances <50 mm	1972.2
WLAN 2	5 GHz	5825	18	63.1	0	0	0	123.3	241	30.5	30.5	30.5	distances > 50 mm	distances > 50 mm	distances <50 mm	distances <50 mm	distances <50 mm	795.2	1972.2

Reduction Power Condition: Sensor Active

(Proximity sensor power reduction is not applied to the main band on the Right side and Bottom of the DUT.and the WLAN Band on theLeft side and Bottom of the DUT.)

Ant.	Band	Freq. [㎒]	Max. Power		Separation Distances (mm)					SAR Test Exclusion Thresholds (test separation distances <50mm threshold value <3					SAR Test Exclusion Thresholds (test separation distances >50mm Power (mW)				
			(dBm)	(mW)	Rear	Top	Left	Right	Bottom	Rear	Top	Left	Right	Bottom	Rear	Top	Left	Right	Bottom
Main 1	WCDMA B5	846.6	18.5	70.8	0	0	58.2	44.1	253.7	13.0	13.0	distances > 50 mm	1.5	distances > 50 mm	distances <50 mm	distances <50 mm	209.3	distances <50 mm	1312.7
Main 1	WCDMA B4	1752.6	14.5	28.2	0	0	58.2	44.1	253.7	7.5	7.5	distances > 50 mm	0.8	distances > 50 mm	distances <50 mm	distances <50 mm	195.3	distances <50 mm	2150.3
Main 1	WCDMA B2	1907.6	14.5	28.2	0	0	58.2	44.1	253.7	7.8	7.8	distances > 50 mm	0.9	distances > 50 mm	distances <50 mm	distances <50 mm	190.6	distances <50 mm	2145.6
Main 1	LTE Band 2	1909.3	15	31.6	0	0	58.2	44.1	253.7	8.7	8.7	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	190.6	distances <50 mm	2145.6
Main 1	LTE Band 4	1754.3	15	31.6	0	0	58.2	44.1	253.7	8.4	8.4	distances > 50 mm	0.9	distances > 50 mm	distances <50 mm	distances <50 mm	195.3	distances <50 mm	2150.3
Main 1	LTE Band 5	848.5	17	50.1	0	0	58.2	44.1	253.7	9.2	9.2	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	209.2	distances <50 mm	1315.1
Main 1	LTE Band 7	2567.5	13	20.0	0	0	58.2	44.1	253.7	6.4	6.4	distances > 50 mm	0.7	distances > 50 mm	distances <50 mm	distances <50 mm	175.6	distances <50 mm	2130.6
Main 1	LTE Band 12	715.3	17	50.1	0	0	58.2	44.1	253.7	8.5	8.5	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	216.5	distances <50 mm	1148.7
Main 1	LTE Band 13	784.5	17	50.1	0	0	58.2	44.1	253.7	8.9	8.9	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	212.2	distances <50 mm	1234.7
Main 1	LTE Band 14	795.5	17	50.1	0	0	58.2	44.1	253.7	8.9	8.9	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	211.7	distances <50 mm	1248.5
Main 1	LTE Band 25	1914.3	15	31.6	0	0	58.2	44.1	253.7	8.8	8.8	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	190.4	distances <50 mm	2145.4
Main 1	LTE Band 26	848.3	17	50.1	0	0	58.2	44.1	253.7	9.2	9.2	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	209.2	distances <50 mm	1314.9
Main 1	LTE Band 30	2312.5	13.5	22.4	0	0	58.2	44.1	253.7	6.8	6.8	distances > 50 mm	0.8	distances > 50 mm	distances <50 mm	distances <50 mm	180.6	distances <50 mm	2135.6
Main 1	LTE Band 41(PC2)	2687.5	15	31.6	0	0	58.2	44.1	253.7	10.4	10.4	distances > 50 mm	1.2	distances > 50 mm	distances <50 mm	distances <50 mm	173.5	distances <50 mm	2128.5
Main 1	LTE Band 41(PC3)	2687.5	15	31.6	0	0	58.2	44.1	253.7	10.4	10.4	distances > 50 mm	1.2	distances > 50 mm	distances <50 mm	distances <50 mm	173.5	distances <50 mm	2128.5
Main 1	LTE Band 66	1779.3	15	31.6	0	0	58.2	44.1	253.7	8.4	8.4	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	194.5	distances <50 mm	2149.5
Main 1	LTE Band 71	695.5	15	31.6	0	0	58.2	44.1	253.7	5.3	5.3	distances > 50 mm	0.6	distances > 50 mm	distances <50 mm	distances <50 mm	217.9	distances <50 mm	1124.4
Main 1	NR 2	1907.5	15	31.6	0	0	58.2	44.1	253.7	8.7	8.7	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	190.6	distances <50 mm	2145.6
Main 1	NR 5	846.5	17	50.1	0	0	58.2	44.1	253.7	9.2	9.2	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	209.3	distances <50 mm	1149.5
Main 1	NR 25	1912.5	15	31.6	0	0	58.2	44.1	253.7	8.7	8.7	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	190.5	distances <50 mm	2145.5
Main 2	NR 41	2679.99	12	15.8	0	0	44.1	108.9	253.7	5.2	5.2	0.6	distances > 50 mm	distances > 50 mm	distances <50 mm	distances <50 mm	distances <50 mm	680.6	2128.6
Main 1	NR 66	1777.5	15	31.6	0	0	58.2	44.1	253.7	8.4	8.4	distances > 50 mm	1.0	distances > 50 mm	distances <50 mm	distances <50 mm	194.5	distances <50 mm	2149.5
Main 1	NR 71	695.5	15	31.6	0	0	58.2	44.1	253.7	5.3	5.3	distances > 50 mm	0.6	distances > 50 mm	distances <50 mm	distances <50 mm	217.9	distances <50 mm	1124.4
WLAN 1	2.4 GHz	2462	11	12.6	0	0	148.9	0	241	4.0	4.0	distances > 50 mm	4.0	distances > 50 mm	distances <50 mm	distances <50 mm	1084.6	distances <50 mm	2005.6
WLAN 2	2.4 GHz	2462	11	12.6	0	0	0	123.3	241	4.0	4.0	4.0	distances > 50 mm	distances > 50 mm	distances <50 mm	distances <50 mm	distances <50 mm	828.6	2005.6
WLAN 1	5 GHz	5825	9	7.9	0	0	148.9	0	241	3.8	3.8	distances > 50 mm	3.8	distances > 50 mm	distances <50 mm	distances <50 mm	1051.2	distances <50 mm	1972.2
WLAN 2	5 GHz	5825	9	7.9	0	0	0	123.3	241	3.8	3.8	3.8	distances > 50 mm	distances > 50 mm	distances <50 mm	distances <50 mm	distances <50 mm	795.2	1972.2

SAR Test Configuration : Sensor Inactive

Ant.	Band	Freq. [MHz]	Max. Power		Separation Distances (mm)					Device Conifigurations for SAR Testing				
			(dBm)	(mW)	Rear	Top	Left	Right	Bottom	Rear	Top	Left	Right	Bottom
Main 1	WCDMA B5	846.6	24.5	281.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	WCDMA B4	1752.6	24.5	281.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	WCDMA B2	1907.6	24.5	281.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 2	1909.3	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 4	1754.3	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 5	848.5	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 7	2567.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 12	715.3	25.8	380.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 13	784.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 14	795.5	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 25	1914.3	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 26	848.3	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 30	2312.5	23.3	213.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 41(PC2)	2687.5	28	631	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 41(PC3)	2687.5	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 66	1779.3	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	LTE Band 71	695.5	24.8	302	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	NR 2	1907.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	NR 5	846.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	NR 25	1912.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 2	NR 41	2679.99	25	316.2	0	0	44.1	108.9	253.7	YES	YES	YES	NO	NO
Main 1	NR 66	1777.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
Main 1	NR 71	695.5	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	YES	YES	NO
WLAN 1	2.4 GHz	2462	20	100	0	0	148.9	0	241	YES	YES	NO	YES	NO
WLAN 2	2.4 GHz	2462	20	100	0	0	0	123.3	241	YES	YES	YES	NO	NO
WLAN 1	5 GHz	5825	18	63.1	0	0	148.9	0	241	YES	YES	NO	YES	NO
WLAN 2	5 GHz	5825	18	63.1	0	0	0	123.3	241	YES	YES	YES	NO	NO

SAR Test Configuration : Sensor active

Ant.	Band	Freq. [㎒]	Max. Power		Separation Distances (mm)					Device Conifigurations for SAR Testing				
			(dBm)	(mW)	Rear	Top	Left	Right	Bottom	Rear	Top	Left	Right	Bottom
Main 1	WCDMA B5	846.6	24.5	281.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	WCDMA B4	1752.6	24.5	281.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	WCDMA B2	1907.6	24.5	281.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 2	1909.3	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 4	1754.3	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 5	848.5	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 7	2567.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 12	715.3	25.8	380.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 13	784.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 14	795.5	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 25	1914.3	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 26	848.3	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 30	2312.5	23.3	213.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 41(PC2)	2687.5	28	631	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 41(PC3)	2687.5	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 66	1779.3	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	LTE Band 71	695.5	24.8	302	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	NR 2	1907.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	NR 5	846.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	NR 25	1912.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 2	NR 41	2679.99	25	316.2	0	0	44.1	108.9	253.7	YES	YES	YES	NO	NO
Main 1	NR 66	1777.5	25	316.2	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
Main 1	NR 71	695.5	25.5	354.8	0	0	58.2	44.1	253.7	YES	YES	NO	NO	NO
WLAN 1	2.4 GHz	2462	20	100	0	0	148.9	0	241	YES	YES	NO	YES	NO
WLAN 2	2.4 GHz	2462	20	100	0	0	0	123.3	241	YES	YES	YES	NO	NO
WLAN 1	5 GHz	5825	18	63.1	0	0	148.9	0	241	YES	YES	NO	YES	NO
WLAN 2	5 GHz	5825	18	63.1	0	0	0	123.3	241	YES	YES	YES	NO	NO

Antennas <50mm to adjacent edges: According to KDB 447498 D01v06, if the calculated threshold value >3 then SAR test is required.
Antennas >50mm to adjacent edges: According to KDB 447498 D01v06, if the power threshold is less than the output power, SAR is required.
Per FCC KDB 447498 D01v06, The SAR exclusion threshold for distance < 50 mm is defined by the following equation:

$$\frac{MaxPowerofChannel(mW)}{TestSeparationDistance(mm)} * \sqrt{Frequency(GHz)} \leq 3.0(1g\ \ SAR), 7.5(10g\ \ SAR)$$

Antennas >50mm to adjacent edges: According to KDB 447498 D01v06, if the power threshold is less than the output power , SAR is required.

Per KDB 447498 D01v06 Sec 4.3.1 b) For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B)
1) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·(f(MHz)/150)]} mW, for 100 MHz to 1500 MHz
2) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·10]} mW, for > 1500 MHz and ≤ 6 GHz

Additional Test Scenarios

Test Configurations	SAR Required	Note
Left Corner	Yes	2.4 GHz/ / 5 GHz/BT WLAN Ant 2
Right Corner	Yes	2.4 GHz/ / 5 GHz/BT WLAN Ant 1

Note; All test configurations are based on front view.
Per FCC KDB Publication 616217 D04v01r02, the rear surface and edges of tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Exclusion Threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configurations. The closet distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

Additional Guidance KDB inquiry:
- Additional SAR test for corner side – KDB guidance to identify that SAR test when sensor and Antenna is located near the corner side.

4.6 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	Body
UMTS + 2.4 GHz WiFi SISO	Yes
UMTS + 5 GHz WiFi SISO	Yes
UMTS + 2.4 GHz WiFi MIMO	Yes
UMTS + 5 GHz WiFi MIMO	Yes
UMTS + 2.4 GHz Bluetooth	Yes
UMTS + 2.4 GHz WIFI SISO + 5 GHz WiFi SISO	Yes
UMTS + 2.4 GHz WIFI MIMO + 5 GHz WiFi MIMO	Yes
UMTS + 2.4 GHz Bluetooth + 5 GHz WiFi SISO	Yes
UMTS + 2.4 GHz Bluetooth + 5 GHz WiFi MIMO	Yes
UMTS + 2.4 GHz SISO + 2.4 GHz Bluetooth + 5 GHz WiFi SISO	Yes
UMTS + 2.4 GHz SISO + 2.4 GHz Bluetooth + 5 GHz WiFi MIMO	Yes
LTE + 2.4 GHz WiFi SISO	Yes
LTE + 5 GHz WiFi SISO	Yes
LTE + 2.4 GHz WiFi MIMO	Yes
LTE + 5 GHz WiFi MIMO	Yes
LTE + 2.4 GHz Bluetooth	Yes
LTE + 2.4 GHz WIFI SISO + 5 GHz WiFi SISO	Yes
LTE + 2.4 GHz WIFI MIMO + 5 GHz WiFi MIMO	Yes
LTE + 2.4 GHz Bluetooth + 5 GHz WiFi SISO	Yes
LTE + 2.4 GHz Bluetooth + 5 GHz WiFi MIMO	Yes
LTE + 2.4 GHz SISO + 2.4 GHz Bluetooth + 5 GHz WiFi SISO	Yes
LTE + 2.4 GHz SISO + 2.4 GHz Bluetooth + 5 GHz WiFi MIMO	Yes
5G NR + 2.4 GHz WiFi SISO	Yes
5G NR + 5 GHz WiFi SISO	Yes
5G NR + 2.4 GHz WiFi MIMO	Yes
5G NR + 5 GHz WiFi MIMO	Yes
5G NR + 2.4 GHz Bluetooth	Yes
5G NR + 2.4 GHz WIFI SISO + 5 GHz WiFi SISO	Yes
5G NR + 2.4 GHz WIFI MIMO + 5 GHz WiFi MIMO	Yes
5G NR + 2.4 GHz Bluetooth + 5 GHz WiFi SISO	Yes
5G NR + 2.4 GHz Bluetooth + 5 GHz WiFi MIMO	Yes
5G NR + 2.4 GHz SISO + 2.4 GHz Bluetooth + 5 GHz WiFi SISO	Yes
5G NR + 2.4 GHz SISO + 2.4 GHz Bluetooth + 5 GHz WiFi MIMO	Yes

4.7 SAR Test Considerations

4.7.1 Un-Licensed Transmitter(s)

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) 1Tx antenna output
d) 256 QAM is supported
e) TDWR channels are supported.
f) Straddle channels are supported

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

4.7.3 Licensed Transmitter(s)

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.

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

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

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.

This device supports LTE Carrier Aggregation (CA) in the downlink 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.

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 suuprts 64QAMand 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 941225 D05v02r05. SAR was not required for 64QAMand 256QAM

since the highest maximum output power for 64QAMand 256QAM is ≤ 0.5 dB higher than the same configuration in QPSK and the reported SAR for QPSK configuration is ≤1.45 W/Kg, per section 5.2.4 fo FCC KDB941225 D05v02r05.
.
This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of an LTE Band falls completely within an LTE band with a larger transmission frequency range, both. LTE Bandhave the same target power and both LTE bands share the same transmission path and signal characteristics, SAR was only assessed for the band with the larger transmission frequency range.
LTE Band 4 (1 710.7 ㎒ ~ 1 754.3 ㎒) is covered by LTE Band 66 (1 710.7 ㎒ ~ 1 779.3 ㎒), LTE Band 2 (1 850.7 ㎒ ~ 1 909.3 ㎒) is covered by LTE Band 25 (1850.7 ㎒ ~ 1914.3 ㎒)and each both LTE bands have the same target powers.

This device supports both Power class 2(PC2) and Power class 3(PC3) for LTE Band 41. Per may 2017 TCB Workshop Notes, SAR tests were performed with Power class 3. Additionally, SAR testing for the power class 2 condition was evaluated for the highest configuration in power class 3 for each test configuration to confirm the results were scaleable linearly.
When Power reduction is applied for LTE Band 41 PC2, became the same power level as PC3.

This device supports LTE Carrier Aggregation (CA) for LTE Band 5, LTE Band 66 and LTE Band 41 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per 2017 Fall TCB Workshop Notes.

When the 5GNR is operational the total output power across the 5GNR transmitter and the LTE anchor channel can never exceed the maximum power for the individual transmitters. When the transmitters are operating at a reduced power (e.g. when the proximity sensor is triggered) the maximum total power across the two transmitters is limited to the maximum power for the individual transmitters at the reduced power setting. The SAR value for the simultaneous transmission case of LTE + 5GNR is therefore covered by the highest SAR value across the LTE and 5GNR transmitters measured and reported for the stand-alone test condition.

This device supports 5G NR for Bands n260, and n261. RF Exposure assessment and simultaneous transmission analysis for these bands can be found in SM-T878U_Part 1 Power Density Test Report.

NR implementation of n2/5/25/71/66 and n41 is limited to EN-DC operations only, with LTE Bands acting as the anchor band. SAR tests were performed separately for NR Bands and LTE Anchor Bands. Refer to technical operational descripton document in detail.

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 *-$\frac{Maximum\ tune{-}up\ (mW)}{Measured\ Conducted\ Power(mW)}$

FCC KDB 447498 D01v06 General RF Exposure Guidance introduces a new formula for calculating the SAR a Peak Location Separation Ratio(SPLSR) between pairs of simultaneously transmitting antennas:
$SPLSR_i$=$(SAR_1 + SAR_2)^{1.5}/R_i$
Where:
SAR_1 is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR_2 is the highest measured of estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

$Ri_i$is the separation distance between the pair of simultaneous transmitting antennas, When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(\mathrm{X}_1 - \mathrm{X}_2)^2 + (\mathrm{Y}_1 - \mathrm{Y}_2)^2 + (\mathrm{Z}_1 - \mathrm{Z}_2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum 1-g of SAR> 1.6 W/kg and with the sum 10-g of SAR >4W/Kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:
$(SAR_1 + SAR_2)^{1.5}/R_i \leq 0.04$ for 1g SAR and $(SAR_1 + SAR_2)^{1.5}/R_i \leq 0.1$ for 10g SAR.

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.

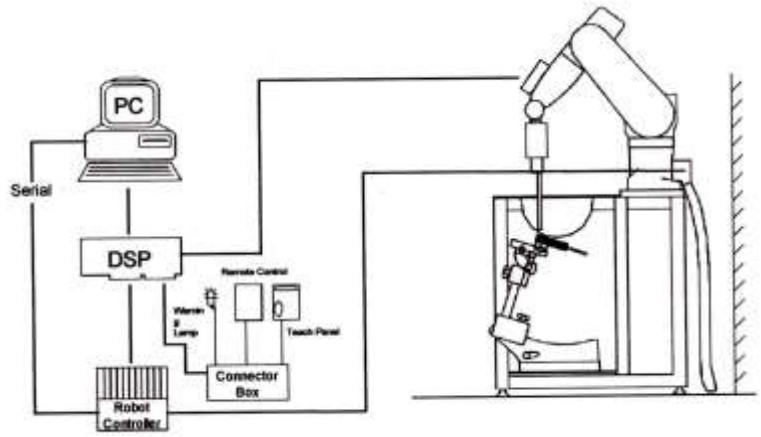


Figure 2. HCT SAR Lab. Test Measurement Set-up

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.

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	$\leq 1.5 \cdot \Delta z_{zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3-4 GHz: ≥28 mm 4-5 GHz: ≥25 mm 5-6 GHz: ≥22 mm

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

8. Description of Test Position

8.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity ε and loss tangent δ=0.02.

8.2 SAR Testing for Tablet Per KDB Publication 616217 D04v01r02

Per FCC KDB Publication 616217 D04v01r02, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Exclusion Threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configuration. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

8.3 Proximity Sensor Considerations.

This device uses a sensor to reduce output powers in certain use conditions when the device is used close the user's body.

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 Section 8 and additional FCC guidance were 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 evaluation is provided in a separate document.

The required separation distance to evaluate SAR at full powers were:

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR [mm]
Main Ant 1	Rear	18	N/A	N/A	17
	Right Side	9	N/A	N/A	8
	Top	24	N/A	N/A	23
Main Ant 2	Rear	5	N/A	N/A	4
	Top	8	N/A	N/A	7
WLAN /BT Ant 1	Rear	11	N/A	N/A	10
	Right	9	N/A	N/A	8
	Right Corner	14	N/A	N/A	13
	Top	16	N/A	N/A	15
WLAN /BT Ant 2	Rear	12	N/A	N/A	11
	Left	8	N/A	N/A	7
	Left Corner	9	N/A	N/A	8
	Top	9	N/A	N/A	8

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 * (Head)	1.60	8.00
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.40
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.00	20.00

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 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 UMTS

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 12.2kbps 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 12.2kbps 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.
   The required channel and offset combination with the highest maximum output power is required for SAR.

   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.

   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. The configuration with the highest duty cycle was used for Power class 3(uplink- downlink configuration 0 at 63.3%). Power class 2(HPUE) does not support uplink-downlink configuration 0 and 6, therefore the highest available duty cycle was used for Power class 2(uplink-downlink configuration 1 at 43.3%).
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 # of S + # 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 %

10.5 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 2.4 ㎓ SAR test Requirements

SAR is measured for 2.4 ㎓ 802.11b DSSS using either the fixed test position 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.

10.5.5 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 GHz and 5 GHz bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate and lowest order 802.11 a/g/n/ac mode. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11 ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.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.

10.5.6 Initial Test Configuration Procedure

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

When the reported SAR is ≤ 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.

10.5.7 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.

11. Output Power Specifications

Licensed bands

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

Test Overview

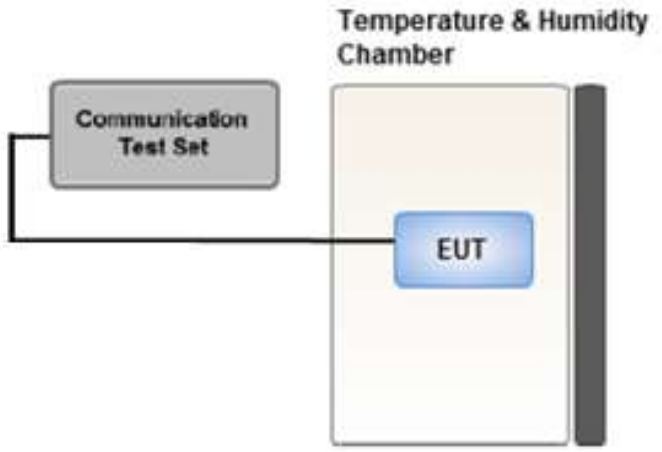
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base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

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

Test Procedure

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

Test setup



11.1 UMTS Maximum Conducted Output Power

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.

11.1.1 UMTS Maximum Conducted Output Power

WCDMA Band 2

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	23.31	23.59	23.75	-
5	HSDPA	Subtest 1	22.29	22.46	22.63	0
5		Subtest 2	22.34	22.43	22.62	0
5		Subtest 3	21.93	21.98	22.13	0.5
5		Subtest 4	21.92	21.89	22.12	0.5
6	HSUPA	Subtest 1	22.33	22.46	22.61	0
6		Subtest 2	20.54	20.46	20.61	2
6		Subtest 3	21.44	21.44	21.60	1
6		Subtest 4	20.53	20.46	20.60	2
6		Subtest 5	22.36	22.45	22.63	0
8	DC-HSDPA	Subtest 1	22.31	22.42	22.62	0
8		Subtest 2	22.41	22.45	22.60	0
8		Subtest 3	21.95	21.87	22.10	0.5
8		Subtest 4	21.95	21.87	22.07	0.5

WCDMA Average Conducted output powers

WCDMA Band 4

3GPP Release Version	Mode	3GPP 34.121	WCDMA Band 4 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	WCDMA	12.2 kbps RMC	23.99	23.80	23.87	-
5	HSDPA	Subtest 1	22.89	22.72	22.83	0
5		Subtest 2	22.87	22.70	22.84	0
5		Subtest 3	22.37	22.23	22.33	0.5
5		Subtest 4	22.37	22.21	22.32	0.5
6	HSUPA	Subtest 1	22.86	22.70	22.82	0
6		Subtest 2	20.87	20.70	20.80	2
6		Subtest 3	21.86	21.68	21.81	1
6		Subtest 4	20.87	20.70	20.79	2
6		Subtest 5	22.85	22.71	22.80	0
8	DC-HSDPA	Subtest 1	22.75	22.66	22.74	0
8		Subtest 2	22.77	22.64	22.68	0
8		Subtest 3	22.32	22.07	22.28	0.5
8		Subtest 4	22.26	22.11	22.22	0.5

WCDMA Average Conducted output powers

WCDMA Band 5

3GPP Release Version	Mode	3GPP 34.121 Subtest	WCDMA Band 5 [dBm] UL 4132 DL 4357	UL 4183 DL 4408	UL 4233 DL 4458	3GPP MPR
99	WCDMA	12.2 kbps RMC	23.68	23.71	23.59	-
5	HSDPA	Subtest 1	22.51	22.55	22.42	0
5		Subtest 2	22.49	22.53	22.40	0
5		Subtest 3	22.01	22.05	21.91	0.5
5		Subtest 4	21.99	22.02	21.92	0.5
6	HSUPA	Subtest 1	22.48	22.53	22.40	0
6		Subtest 2	20.50	20.55	20.43	2
6		Subtest 3	21.50	21.51	21.42	1
6		Subtest 4	20.48	20.54	20.44	2
6		Subtest 5	22.49	22.52	22.41	0
8	DC-HSDPA	Subtest 1	22.51	22.57	22.36	0
8		Subtest 2	22.51	22.52	22.33	0
8		Subtest 3	22.01	22.03	21.88	0.5
8		Subtest 4	22.00	22.03	21.87	0.5

WCDMA Average Conducted output powers

11.1.2 UMTS Reduced Conducted Output Power – Proximity Sensor activated

WCDMA Band 2
When Power reduction is applied , MPR set to 0

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	13.69	13.56	13.72	-
5	HSDPA	Subtest 1	12.58	12.49	12.63	0
5		Subtest 2	12.57	12.49	12.64	0
5		Subtest 3	12.09	11.99	12.13	0
5		Subtest 4	12.09	11.98	12.14	0
6	HSUPA	Subtest 1	12.36	12.19	12.33	0
6		Subtest 2	10.36	10.21	10.36	0
6		Subtest 3	11.37	11.21	11.34	0
6		Subtest 4	10.38	10.20	10.34	0
6		Subtest 5	12.35	12.17	12.32	0
8	DC-HSDPA	Subtest 1	12.69	12.40	12.60	0
8		Subtest 2	12.67	12.41	12.61	0
8		Subtest 3	12.18	11.92	12.11	0
8		Subtest 4	12.17	11.92	12.11	0

WCDMA Average Conducted output powers

WCDMA Band 4

3GPP Release Version	Mode	3GPP 34.121 Subtest	WCDMA Band 4 [dBm] UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	3GPP MPR
99	WCDMA	12.2 kbps RMC	13.95	13.73	13.82	-
5	HSDPA	Subtest 1	12.90	12.70	12.85	0
5		Subtest 2	12.89	12.72	12.84	0
5		Subtest 3	12.39	12.22	12.33	0
5		Subtest 4	12.40	12.23	12.33	0
6	HSUPA	Subtest 1	12.70	12.56	12.74	0
6		Subtest 2	10.70	10.59	10.73	0
6		Subtest 3	11.70	11.57	11.73	0
6		Subtest 4	10.69	10.56	10.74	0
6		Subtest 5	12.69	12.58	12.73	0
8	DC-HSDPA	Subtest 1	12.80	12.59	12.68	0
8		Subtest 2	12.71	12.62	12.69	0
8		Subtest 3	12.20	12.12	12.20	0
8		Subtest 4	12.20	12.12	12.19	0

WCDMA Average Conducted output powers

WCDMA Band 5

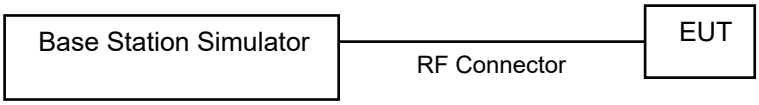
3GPP Release Version	Mode	3GPP 34.121 Subtest	WCDMA Band 5 [dBm] UL 4132 DL 4357	UL 4183 DL 4408	UL 4233 DL 4458	3GPP MPR
99	WCDMA	12.2 kbps RMC	17.67	17.70	17.56	-
5	HSDPA	Subtest 1	16.49	16.53	16.42	0
5		Subtest 2	16.50	16.55	16.41	0
5		Subtest 3	16.01	16.04	15.95	0
5		Subtest 4	16.00	16.02	15.92	0
6	HSUPA	Subtest 1	16.49	16.52	16.45	0
6		Subtest 2	14.51	14.54	14.41	0
6		Subtest 3	15.49	15.54	15.43	0
6		Subtest 4	14.50	14.55	14.43	0
6		Subtest 5	16.48	16.53	16.40	0
8	DC-HSDPA	Subtest 1	16.51	16.51	16.41	0
8		Subtest 2	16.52	16.52	16.40	0
8		Subtest 3	16.03	16.00	15.91	0
8		Subtest 4	16.04	16.02	15.90	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.

It is expected by the manufacturer that MPR for some HSPA Subtests may be up to 2 dB more than specified by 3GPP, But also as low as 1 dB according to the chipset implementation in this model to match manufacturer.



11.2.1 LTE Maximum Conducted Power

[LTE Band 2 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	24.08	23.91	23.96	0	0
		1	3	24.10	24.00	24.07	0	0
		1	5	24.00	23.90	23.97	0	0
		3	0	24.08	23.89	24.03	0	0
		3	1	24.12	23.99	24.05	0	0
		3	3	24.03	23.90	24.03	0	0
		6	0	23.12	22.97	23.08	0-1	1
	16QAM	1	0	23.42	23.31	23.33	0-1	1
		1	3	23.47	23.44	23.33	0-1	1
		1	5	23.40	23.25	23.29	0-1	1
		3	0	23.20	23.11	23.22	0-1	1
		3	1	23.28	23.21	23.20	0-1	1
		3	3	23.20	23.20	23.16	0-1	1
		6	0	22.19	22.00	22.19	0-2	2
	64QAM	1	0	22.07	22.10	22.30	0-2	2
		1	3	22.13	22.25	22.29	0-2	2
		1	5	22.19	22.22	22.18	0-2	2
		3	0	22.03	22.11	22.20	0-2	2
		3	1	22.08	22.18	22.21	0-2	2
		3	3	22.05	22.17	22.19	0-2	2
		6	0	20.97	21.05	21.11	0-3	3
	256QAM	1	0	19.25	19.07	19.24	0-5	5
		1	3	19.28	19.22	19.27	0-5	5
		1	5	19.12	19.12	19.19	0-5	5
		3	0	19.25	19.09	19.21	0-5	5
		3	1	19.29	19.19	19.24	0-5	5
		3	3	19.23	19.17	19.24	0-5	5
		6	0	19.19	19.01	19.12	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	24.17	24.01	24.15	0	0
		1	7	24.07	24.05	24.05	0	0
		1	14	24.05	24.04	24.08	0	0
		8	0	23.24	23.09	23.21	0-1	1
		8	3	23.24	23.07	23.22	0-1	1
		8	7	23.18	23.05	23.16	0-1	1
		15	0	23.19	23.04	23.17	0-1	1
	16QAM	1	0	23.41	23.28	23.41	0-1	1
		1	7	23.50	23.49	23.41	0-1	1
		1	14	23.42	23.36	23.44	0-1	1
		8	0	22.33	22.13	22.27	0-2	2
		8	3	22.34	22.22	22.32	0-2	2
		8	7	22.28	22.13	22.24	0-2	2
		15	0	22.23	22.05	22.20	0-2	2
	64QAM	1	0	22.13	22.26	22.39	0-2	2
		1	7	22.29	22.27	22.31	0-2	2
		1	14	22.29	22.18	22.27	0-2	2
		8	0	21.12	21.10	21.29	0-3	3
		8	3	21.24	21.11	21.30	0-3	3
		8	7	21.18	21.11	21.20	0-3	3
		15	0	21.16	21.09	21.23	0-3	3
	256QAM	1	0	19.29	19.22	19.30	0-5	5
		1	7	19.30	19.11	19.31	0-5	5
		1	14	19.19	19.21	19.14	0-5	5
		8	0	19.32	19.11	19.27	0-5	5
		8	3	19.28	19.14	19.28	0-5	5
		8	7	19.16	19.06	19.20	0-5	5
		15	0	19.27	19.14	19.22	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	24.07	23.93	23.98	0	0
		1	12	24.15	24.04	24.12	0	0
		1	24	24.00	23.93	24.01	0	0
		12	0	23.20	23.05	23.12	0-1	1
		12	6	23.22	23.10	23.18	0-1	1
		12	11	23.18	23.10	23.14	0-1	1
		25	0	23.18	23.06	23.09	0-1	1
	16QAM	1	0	23.50	23.27	23.48	0-1	1
		1	12	23.51	23.45	23.63	0-1	1
		1	24	23.37	23.32	23.33	0-1	1
		12	0	22.25	22.10	22.15	0-2	2
		12	6	22.24	22.13	22.27	0-2	2
		12	11	22.23	22.13	22.17	0-2	2
		25	0	22.18	22.00	22.14	0-2	2
	64QAM	1	0	21.99	22.18	22.18	0-2	2
		1	12	22.24	22.32	22.24	0-2	2
		1	24	22.22	22.20	22.23	0-2	2
		12	0	21.11	21.11	21.22	0-3	3
		12	6	21.30	21.07	21.16	0-3	3
		12	11	21.16	21.06	21.20	0-3	3
		25	0	21.13	21.06	21.10	0-3	3
	256QAM	1	0	19.18	19.14	19.14	0-5	5
		1	12	19.24	19.25	19.32	0-5	5
		1	24	19.29	19.11	19.26	0-5	5
		12	0	19.23	19.11	19.20	0-5	5
		12	6	19.20	19.09	19.19	0-5	5
		12	11	19.17	19.14	19.14	0-5	5
		25	0	19.14	19.10	19.12	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	23.68	23.98	24.11	0	0
		1	24	24.11	23.99	24.10	0	0
		1	49	23.79	23.79	24.07	0	0
		25	0	23.11	22.95	23.02	0-1	1
		25	12	23.16	23.03	23.16	0-1	1
		25	24	22.98	22.95	23.14	0-1	1
		50	0	23.07	23.00	23.04	0-1	1
	16QAM	1	0	23.17	23.04	23.49	0-1	1
		1	24	23.57	23.48	23.54	0-1	1
		1	49	23.23	23.05	23.51	0-1	1
		25	0	22.08	22.00	21.93	0-2	2
		25	12	22.14	22.07	22.12	0-2	2
		25	24	22.07	22.05	22.07	0-2	2
		50	0	22.12	21.99	21.96	0-2	2
	64QAM	1	0	21.78	21.83	22.34	0-2	2
		1	24	22.24	22.19	22.42	0-2	2
		1	49	21.96	21.98	22.39	0-2	2
		25	0	21.14	20.91	21.04	0-3	3
		25	12	21.21	21.09	21.13	0-3	3
		25	24	21.05	21.01	21.11	0-3	3
		50	0	21.10	21.01	21.11	0-3	3
	256QAM	1	0	18.86	18.78	18.85	0-5	5
		1	24	19.33	19.27	19.30	0-5	5
		1	49	19.13	18.94	19.16	0-5	5
		25	0	19.17	18.97	19.00	0-5	5
		25	12	19.27	19.07	19.23	0-5	5
		25	24	19.12	19.09	19.13	0-5	5
		50	0	19.03	18.99	19.04	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	23.75	23.88	23.91	0	0
		1	36	23.91	23.87	23.96	0	0
		1	74	23.76	23.83	23.91	0	0
		36	0	23.06	22.84	22.93	0-1	1
		36	18	23.13	22.93	23.01	0-1	1
		36	39	23.06	23.00	23.02	0-1	1
		75	0	23.08	22.93	23.12	0-1	1
	16QAM	1	0	23.01	23.24	23.18	0-1	1
		1	36	23.17	23.25	23.32	0-1	1
		1	74	23.19	23.26	23.39	0-1	1
		36	0	21.99	21.90	21.95	0-2	2
		36	18	22.11	21.95	21.98	0-2	2
		36	39	22.06	22.09	22.09	0-2	2
		75	0	22.07	21.89	22.10	0-2	2
	64QAM	1	0	21.90	22.07	22.13	0-2	2
		1	36	22.16	22.21	22.15	0-2	2
		1	74	22.19	22.15	22.22	0-2	2
		36	0	21.05	20.88	21.00	0-3	3
		36	18	21.12	20.98	21.04	0-3	3
		36	39	21.15	21.02	21.14	0-3	3
		75	0	21.11	20.86	21.10	0-3	3
	256QAM	1	0	19.01	18.83	18.97	0-5	5
		1	36	19.07	19.07	19.17	0-5	5
		1	74	19.05	19.06	19.16	0-5	5
		36	0	18.96	18.88	18.97	0-5	5
		36	18	19.07	18.92	19.03	0-5	5
		36	39	19.03	19.08	19.08	0-5	5
		75	0	19.05	18.98	19.15	0-5	5

LTE Band 2 _ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	24.08	23.97	24.06	0	0
		1	49	23.96	23.80	23.83	0	0
		1	99	23.97	23.93	23.94	0	0
		50	0	23.06	22.88	22.97	0-1	1
		50	25	23.12	23.01	23.13	0-1	1
		50	49	23.15	23.06	23.09	0-1	1
		100	0	23.11	23.03	23.08	0-1	1
	16QAM	1	0	23.36	23.30	23.27	0-1	1
		1	49	23.28	23.35	23.42	0-1	1
		1	99	23.32	23.25	23.35	0-1	1
		50	0	22.07	21.94	21.93	0-2	2
		50	25	22.12	22.01	22.09	0-2	2
		50	49	22.11	21.99	22.15	0-2	2
		100	0	22.10	22.04	22.11	0-2	2
	64QAM	1	0	22.19	22.18	22.23	0-2	2
		1	49	22.27	22.23	22.41	0-2	2
		1	99	22.27	22.24	22.33	0-2	2
		50	0	21.09	20.99	20.98	0-3	3
		50	25	21.13	21.02	21.11	0-3	3
		50	49	21.18	21.01	21.15	0-3	3
		100	0	21.13	20.95	20.98	0-3	3
	256QAM	1	0	18.86	18.82	19.10	0-5	5
		1	49	19.11	19.17	19.20	0-5	5
		1	99	19.01	19.04	19.03	0-5	5
		50	0	19.06	18.96	19.03	0-5	5
		50	25	19.20	18.99	19.10	0-5	5
		50	49	19.11	19.03	19.17	0-5	5
		100	0	19.08	19.05	19.05	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	23.94	24.08	23.99	0	0
		1	3	24.10	24.13	24.04	0	0
		1	5	24.02	24.05	23.94	0	0
		3	0	23.96	24.04	24.00	0	0
		3	1	24.03	24.14	24.00	0	0
		3	3	24.00	24.07	23.97	0	0
		6	0	23.10	23.12	23.03	0-1	1
	16QAM	1	0	23.29	23.53	23.35	0-1	1
		1	3	23.45	23.52	23.41	0-1	1
		1	5	23.37	23.40	23.27	0-1	1
		3	0	23.16	23.23	23.15	0-1	1
		3	1	23.30	23.30	23.26	0-1	1
		3	3	23.24	23.24	23.16	0-1	1
		6	0	22.14	22.19	22.14	0-2	2
	64QAM	1	0	21.90	22.27	22.00	0-2	2
		1	3	22.00	22.39	22.20	0-2	2
		1	5	21.91	22.28	22.09	0-2	2
		3	0	21.86	22.23	22.04	0-2	2
		3	1	21.92	22.30	22.11	0-2	2
		3	3	21.75	22.23	22.01	0-2	2
		6	0	20.68	21.09	20.94	0-3	3
	256QAM	1	0	19.18	19.21	19.18	0-5	5
		1	3	19.27	19.28	19.24	0-5	5
		1	5	19.18	19.22	19.17	0-5	5
		3	0	19.21	19.25	19.27	0-5	5
		3	1	19.21	19.37	19.23	0-5	5
		3	3	19.18	19.27	19.18	0-5	5
		6	0	19.17	19.24	19.08	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	24.01	24.19	24.08	0	0
		1	7	24.10	24.19	24.10	0	0
		1	14	24.02	24.10	24.00	0	0
		8	0	23.19	23.25	23.15	0-1	1
		8	3	23.19	23.21	23.16	0-1	1
		8	7	23.16	23.15	23.11	0-1	1
		15	0	23.16	23.24	23.12	0-1	1
	16QAM	1	0	23.44	23.41	23.38	0-1	1
		1	7	23.59	23.61	23.40	0-1	1
		1	14	23.40	23.45	23.38	0-1	1
		8	0	22.31	22.34	22.24	0-2	2
		8	3	22.24	22.32	22.29	0-2	2
		8	7	22.22	22.33	22.22	0-2	2
		15	0	22.17	22.24	22.15	0-2	2
	64QAM	1	0	21.99	22.21	22.21	0-2	2
		1	7	21.97	22.41	22.20	0-2	2
		1	14	21.89	22.26	22.24	0-2	2
		8	0	20.82	21.22	21.12	0-3	3
		8	3	20.86	21.31	21.14	0-3	3
		8	7	20.81	21.23	21.13	0-3	3
		15	0	20.81	21.27	21.11	0-3	3
	256QAM	1	0	19.23	19.42	19.22	0-5	5
		1	7	19.34	19.28	19.32	0-5	5
		1	14	19.26	19.34	19.23	0-5	5
		8	0	19.23	19.30	19.19	0-5	5
		8	3	19.27	19.33	19.24	0-5	5
		8	7	19.22	19.24	19.16	0-5	5
		15	0	19.22	19.28	19.21	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	23.94	24.09	24.00	0	0
		1	12	24.05	24.18	24.08	0	0
		1	24	23.95	24.06	23.93	0	0
		12	0	23.15	23.18	23.13	0-1	1
		12	6	23.19	23.27	23.18	0-1	1
		12	11	23.16	23.18	23.18	0-1	1
		25	0	23.14	23.22	23.04	0-1	1
	16QAM	1	0	23.42	23.44	23.39	0-1	1
		1	12	23.46	23.50	23.56	0-1	1
		1	24	23.40	23.36	23.32	0-1	1
		12	0	22.18	22.26	22.17	0-2	2
		12	6	22.30	22.33	22.21	0-2	2
		12	11	22.28	22.31	22.21	0-2	2
		25	0	22.15	22.21	22.05	0-2	2
	64QAM	1	0	21.82	22.05	22.07	0-2	2
		1	12	21.85	22.36	22.30	0-2	2
		1	24	21.83	22.34	22.25	0-2	2
		12	0	20.76	21.30	21.08	0-3	3
		12	6	20.83	21.33	21.15	0-3	3
		12	11	20.80	21.30	21.24	0-3	3
		25	0	20.76	21.18	21.12	0-3	3
	256QAM	1	0	19.09	19.09	19.21	0-5	5
		1	12	19.31	19.36	19.33	0-5	5
		1	24	19.21	19.29	19.21	0-5	5
		12	0	19.18	19.19	19.17	0-5	5
		12	6	19.28	19.25	19.19	0-5	5
		12	11	19.17	19.26	19.16	0-5	5
		25	0	19.20	19.28	19.10	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	23.69	23.81	23.73	0	0
		1	24	24.16	24.03	23.93	0	0
		1	49	23.77	23.82	23.80	0	0
		25	0	23.02	23.03	23.10	0-1	1
		25	12	23.18	23.20	23.09	0-1	1
		25	24	23.09	23.14	23.06	0-1	1
		50	0	23.07	23.07	23.13	0-1	1
	16QAM	1	0	23.18	23.04	23.22	0-1	1
		1	24	23.60	23.48	23.38	0-1	1
		1	49	23.20	23.21	23.09	0-1	1
		25	0	22.11	22.12	22.08	0-2	2
		25	12	22.18	22.26	22.14	0-2	2
		25	24	22.07	22.11	22.07	0-2	2
		50	0	22.08	22.02	22.06	0-2	2
	64QAM	1	0	21.77	21.52	21.95	0-2	2
		1	24	21.98	22.39	22.35	0-2	2
		1	49	21.57	22.28	21.93	0-2	2
		25	0	20.73	21.04	20.99	0-3	3
		25	12	20.86	21.34	21.21	0-3	3
		25	24	20.77	21.16	21.06	0-3	3
		50	0	20.72	21.09	21.07	0-3	3
	256QAM	1	0	18.98	18.85	18.77	0-5	5
		1	24	19.28	19.42	19.32	0-5	5
		1	49	19.23	19.18	19.07	0-5	5
		25	0	19.11	19.05	18.96	0-5	5
		25	12	19.24	19.26	19.17	0-5	5
		25	24	19.10	19.12	19.12	0-5	5
		50	0	19.09	19.09	19.02	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	23.74	23.89	23.85	0	0
		1	36	23.96	23.89	23.97	0	0
		1	74	24.06	23.85	23.88	0	0
		36	0	23.04	23.05	22.91	0-1	1
		36	18	23.15	23.20	23.06	0-1	1
		36	39	23.09	23.12	23.09	0-1	1
		75	0	23.08	23.06	22.98	0-1	1
	16QAM	1	0	23.19	23.10	23.09	0-1	1
		1	36	23.24	23.28	23.29	0-1	1
		1	74	23.11	23.27	23.25	0-1	1
		36	0	22.02	22.11	22.01	0-2	2
		36	18	22.17	22.21	22.05	0-2	2
		36	39	22.17	22.09	22.14	0-2	2
		75	0	22.08	22.07	22.03	0-2	2
	64QAM	1	0	22.08	21.59	21.93	0-2	2
		1	36	21.97	22.40	22.19	0-2	2
		1	74	21.71	22.25	22.19	0-2	2
		36	0	20.92	21.02	20.99	0-3	3
		36	18	20.84	21.18	21.06	0-3	3
		36	39	20.93	21.17	21.06	0-3	3
		75	0	20.93	21.16	20.99	0-3	3
	256QAM	1	0	18.95	18.98	19.04	0-5	5
		1	36	19.19	19.33	19.23	0-5	5
		1	74	19.35	19.04	19.11	0-5	5
		36	0	19.06	19.05	19.05	0-5	5
		36	18	19.13	19.20	19.07	0-5	5
		36	39	19.11	19.17	19.10	0-5	5
		75	0	19.07	19.14	19.04	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	23.80	0	0
		1	49	24.07	0	0
		1	99	23.72	0	0
		50	0	23.10	0-1	1
		50	25	23.14	0-1	1
		50	49	23.14	0-1	1
		100	0	23.07	0-1	1
	16QAM	1	0	22.97	0-1	1
		1	49	23.33	0-1	1
		1	99	23.29	0-1	1
		50	0	22.06	0-2	2
		50	25	22.16	0-2	2
		50	49	22.14	0-2	2
		100	0	22.08	0-2	2
	64QAM	1	0	21.32	0-2	2
		1	49	22.33	0-2	2
		1	99	22.22	0-2	2
		50	0	21.06	0-3	3
		50	25	21.18	0-3	3
		50	49	21.14	0-3	3
		100	0	21.04	0-3	3
	256QAM	1	0	18.94	0-5	5
		1	49	19.32	0-5	5
		1	99	18.90	0-5	5
		50	0	19.16	0-5	5
		50	25	19.16	0-5	5
		50	49	19.14	0-5	5
		100	0	19.14	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	24.30	24.41	24.38	0	0
		1	3	24.46	24.51	24.39	0	0
		1	5	24.37	24.44	24.34	0	0
		3	0	24.37	24.47	24.29	0	0
		3	1	24.43	24.48	24.37	0	0
		3	3	24.40	24.43	24.34	0	0
		6	0	23.52	23.54	23.37	0-1	1
	16QAM	1	0	23.77	23.78	23.74	0-1	1
		1	3	23.93	23.97	23.79	0-1	1
		1	5	23.88	23.92	23.71	0-1	1
		3	0	23.60	23.66	23.54	0-1	1
		3	1	23.68	23.68	23.54	0-1	1
		3	3	23.58	23.70	23.58	0-1	1
		6	0	22.56	22.70	22.43	0-2	2
	64QAM	1	0	22.63	22.67	22.53	0-2	2
		1	3	22.69	22.85	22.69	0-2	2
		1	5	22.65	22.73	22.60	0-2	2
		3	0	22.54	22.64	22.46	0-2	2
		3	1	22.66	22.73	22.53	0-2	2
		3	3	22.62	22.66	22.56	0-2	2
		6	0	21.55	21.58	21.42	0-3	3
	256QAM	1	0	19.55	19.69	19.51	0-5	5
		1	3	19.69	19.80	19.61	0-5	5
		1	5	19.69	19.71	19.48	0-5	5
		3	0	19.66	19.66	19.52	0-5	5
		3	1	19.70	19.70	19.55	0-5	5
		3	3	19.67	19.70	19.54	0-5	5
		6	0	19.54	19.53	19.40	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	24.38	24.51	24.34	0	0
		1	7	24.45	24.52	24.49	0	0
		1	14	24.47	24.53	24.42	0	0
		8	0	23.51	23.54	23.43	0-1	1
		8	3	23.65	23.59	23.46	0-1	1
		8	7	23.70	23.61	23.45	0-1	1
		15	0	23.62	23.60	23.48	0-1	1
	16QAM	1	0	23.82	23.92	23.81	0-1	1
		1	7	23.93	24.14	23.79	0-1	1
		1	14	23.87	23.95	23.74	0-1	1
		8	0	22.62	22.67	22.52	0-2	2
		8	3	22.73	22.71	22.54	0-2	2
		8	7	22.67	22.75	22.63	0-2	2
		15	0	22.58	22.55	22.44	0-2	2
	64QAM	1	0	22.63	22.68	22.61	0-2	2
		1	7	22.75	22.86	22.60	0-2	2
		1	14	22.71	22.87	22.55	0-2	2
		8	0	21.55	21.64	21.46	0-3	3
		8	3	21.73	21.68	21.54	0-3	3
		8	7	21.64	21.69	21.50	0-3	3
		15	0	21.62	21.69	21.53	0-3	3
	256QAM	1	0	19.64	19.55	19.51	0-5	5
		1	7	19.69	19.73	19.56	0-5	5
		1	14	19.78	19.75	19.70	0-5	5
		8	0	19.63	19.65	19.41	0-5	5
		8	3	19.65	19.70	19.53	0-5	5
		8	7	19.69	19.69	19.57	0-5	5
		15	0	19.60	19.63	19.48	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	24.33	24.58	24.40	0	0
		1	12	24.52	24.53	24.37	0	0
		1	24	24.44	24.46	24.30	0	0
		12	0	23.53	23.60	23.46	0-1	1
		12	6	23.59	23.54	23.46	0-1	1
		12	11	23.64	23.59	23.53	0-1	1
		25	0	23.64	23.66	23.53	0-1	1
	16QAM	1	0	23.79	23.94	23.82	0-1	1
		1	12	23.88	23.85	23.89	0-1	1
		1	24	23.83	23.89	23.86	0-1	1
		12	0	22.63	22.65	22.56	0-2	2
		12	6	22.71	22.72	22.58	0-2	2
		12	11	22.71	22.73	22.60	0-2	2
		25	0	22.57	22.54	22.44	0-2	2
	64QAM	1	0	22.68	22.75	22.61	0-2	2
		1	12	22.91	22.83	22.66	0-2	2
		1	24	22.66	22.78	22.52	0-2	2
		12	0	21.62	21.65	21.56	0-3	3
		12	6	21.71	21.60	21.54	0-3	3
		12	11	21.67	21.69	21.55	0-3	3
		25	0	21.57	21.56	21.43	0-3	3
	256QAM	1	0	19.58	19.66	19.54	0-5	5
		1	12	19.74	19.82	19.70	0-5	5
		1	24	19.68	19.69	19.50	0-5	5
		12	0	19.58	19.63	19.47	0-5	5
		12	6	19.68	19.61	19.51	0-5	5
		12	11	19.67	19.66	19.53	0-5	5
		25	0	19.58	19.57	19.56	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	24.59	0	0
		1	24	24.50	0	0
		1	49	24.43	0	0
		25	0	23.61	0-1	1
		25	12	23.60	0-1	1
		25	24	23.62	0-1	1
		50	0	23.52	0-1	1
	16QAM	1	0	24.06	0-1	1
		1	24	23.83	0-1	1
		1	49	23.91	0-1	1
		25	0	22.55	0-2	2
		25	12	22.57	0-2	2
		25	24	22.58	0-2	2
		50	0	22.44	0-2	2
	64QAM	1	0	22.86	0-2	2
		1	24	22.80	0-2	2
		1	49	22.78	0-2	2
		25	0	21.67	0-3	3
		25	12	21.69	0-3	3
		25	24	21.53	0-3	3
		50	0	21.53	0-3	3
	256QAM	1	0	19.38	0-5	5
		1	24	19.86	0-5	5
		1	49	19.55	0-5	5
		25	0	19.56	0-5	5
		25	12	19.64	0-5	5
		25	24	19.66	0-5	5
		50	0	19.55	0-5	5

[LTE Band 7 Conducted Power]

LTE Band 7 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20775 Ch. 2502.5 ㎒	21100 Ch. 2535 ㎒	21425 Ch. 2567.5 ㎒		
5 ㎒	QPSK	1	0	21.98	21.86	21.93	0	0
		1	12	22.07	21.99	22.04	0	0
		1	24	21.96	21.86	21.94	0	0
		12	0	21.04	20.97	20.99	0-1	1
		12	6	21.12	20.99	21.08	0-1	1
		12	11	21.03	20.94	21.03	0-1	1
		25	0	21.05	20.94	21.03	0-1	1
	16QAM	1	0	21.39	21.15	21.32	0-1	1
		1	12	21.46	21.24	21.16	0-1	1
		1	24	21.39	21.11	21.18	0-1	1
		12	0	20.19	20.10	20.09	0-2	2
		12	6	20.14	20.08	20.14	0-2	2
		12	11	20.08	20.03	20.08	0-2	2
		25	0	20.02	19.96	20.05	0-2	2
	64QAM	1	0	20.24	20.19	20.20	0-2	2
		1	12	20.29	20.16	20.21	0-2	2
		1	24	20.19	20.17	20.25	0-2	2
		12	0	19.12	19.04	19.12	0-3	3
		12	6	19.19	19.04	19.10	0-3	3
		12	11	19.06	19.06	19.11	0-3	3
		25	0	19.05	18.95	18.98	0-3	3
	256QAM	1	0	17.06	16.99	17.09	0-5	5
		1	12	17.29	17.07	17.18	0-5	5
		1	24	17.00	17.09	17.15	0-5	5
		12	0	17.09	16.99	17.03	0-5	5
		12	6	17.10	17.01	17.06	0-5	5
		12	11	17.11	16.96	17.03	0-5	5
		25	0	17.03	17.00	16.99	0-5	5

LTE Band 7 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20800 Ch. 2505 ㎒	21100 Ch. 2535 ㎒	21400 Ch. 2565 ㎒		
10 ㎒	QPSK	1	0	22.05	21.89	21.98	0	0
		1	24	21.91	21.67	21.87	0	0
		1	49	21.88	21.96	21.86	0	0
		25	0	21.02	20.97	21.01	0-1	1
		25	12	21.01	21.04	21.02	0-1	1
		25	24	20.93	21.00	21.01	0-1	1
		50	0	20.98	20.99	21.01	0-1	1
	16QAM	1	0	21.47	21.33	21.39	0-1	1
		1	24	21.27	21.45	21.55	0-1	1
		1	49	21.24	21.43	21.41	0-1	1
		25	0	20.07	19.91	19.98	0-2	2
		25	12	20.10	20.02	20.07	0-2	2
		25	24	19.98	19.95	19.95	0-2	2
		50	0	20.00	19.95	19.98	0-2	2
	64QAM	1	0	20.30	19.86	20.20	0-2	2
		1	24	20.13	20.14	20.11	0-2	2
		1	49	20.17	20.16	20.32	0-2	2
		25	0	19.04	18.97	19.06	0-3	3
		25	12	19.12	19.04	18.98	0-3	3
		25	24	19.08	19.04	19.03	0-3	3
		50	0	19.00	18.99	18.98	0-3	3
	256QAM	1	0	16.97	16.85	16.89	0-5	5
		1	24	17.01	17.02	17.04	0-5	5
		1	49	17.16	16.93	16.95	0-5	5
		25	0	17.06	16.89	17.01	0-5	5
		25	12	17.08	16.94	17.07	0-5	5
		25	24	16.97	16.89	16.99	0-5	5
		50	0	17.02	16.93	16.96	0-5	5

LTE Band 7 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20825 Ch. 2507.5 ㎒	21100 Ch. 2535 ㎒	21375 Ch. 2562.5 ㎒		
15 ㎒	QPSK	1	0	22.03	21.81	21.99	0	0
		1	36	21.96	21.69	21.88	0	0
		1	74	21.80	21.75	21.93	0	0
		36	0	21.08	20.95	21.09	0-1	1
		36	18	21.05	20.96	21.05	0-1	1
		36	39	21.00	21.00	21.01	0-1	1
		75	0	21.01	20.95	20.99	0-1	1
	16QAM	1	0	21.30	21.28	21.38	0-1	1
		1	36	21.22	21.35	21.21	0-1	1
		1	74	20.98	21.16	21.33	0-1	1
		36	0	20.10	19.92	20.03	0-2	2
		36	18	20.05	19.96	19.97	0-2	2
		36	39	20.01	20.02	20.02	0-2	2
		75	0	19.99	19.95	20.06	0-2	2
	64QAM	1	0	20.31	20.04	20.20	0-2	2
		1	36	20.13	20.07	20.03	0-2	2
		1	74	19.96	20.14	20.18	0-2	2
		36	0	19.10	18.95	19.12	0-3	3
		36	18	19.12	18.98	19.06	0-3	3
		36	39	19.05	18.97	19.13	0-3	3
		75	0	18.98	18.93	18.98	0-3	3
	256QAM	1	0	16.96	16.86	16.99	0-5	5
		1	36	17.14	17.08	17.11	0-5	5
		1	74	17.04	16.93	17.01	0-5	5
		36	0	17.00	16.86	17.07	0-5	5
		36	18	17.01	17.01	17.03	0-5	5
		36	39	16.97	16.81	16.94	0-5	5
		75	0	16.98	16.90	16.96	0-5	5

LTE Band 7 _ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 MHz	21100 Ch. 2535 MHz	21350 Ch. 2560 MHz		
20 MHz	QPSK	1	0	21.93	21.84	21.87	0	0
		1	49	21.95	21.82	21.94	0	0
		1	99	21.82	21.79	21.81	0	0
		50	0	21.08	20.97	21.03	0-1	1
		50	25	21.09	21.01	21.00	0-1	1
		50	49	20.99	20.93	21.03	0-1	1
		100	0	20.97	20.91	20.94	0-1	1
	16QAM	1	0	21.34	21.18	21.37	0-1	1
		1	49	21.15	21.17	21.20	0-1	1
		1	99	21.23	21.24	21.17	0-1	1
		50	0	20.03	19.90	19.95	0-2	2
		50	25	20.03	19.99	20.05	0-2	2
		50	49	19.99	19.92	19.99	0-2	2
		100	0	19.95	19.94	19.94	0-2	2
	64QAM	1	0	20.37	20.07	20.10	0-2	2
		1	49	20.14	20.12	20.18	0-2	2
		1	99	20.14	20.14	20.18	0-2	2
		50	0	19.11	18.91	19.11	0-3	3
		50	25	19.02	19.02	19.01	0-3	3
		50	49	18.99	19.02	19.04	0-3	3
		100	0	18.99	18.85	18.92	0-3	3
	256QAM	1	0	16.80	16.80	17.01	0-5	5
		1	49	17.12	16.97	17.07	0-5	5
		1	99	16.81	16.84	16.72	0-5	5
		50	0	16.89	16.75	17.01	0-5	5
		50	25	17.06	16.94	17.00	0-5	5
		50	49	16.95	16.84	16.87	0-5	5
		100	0	17.00	16.95	16.99	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	24.61	24.73	24.66	0	0
		1	3	24.75	24.79	24.84	0	0
		1	5	24.66	24.75	24.80	0	0
		3	0	24.61	24.73	24.73	0	0
		3	1	24.81	24.83	24.70	0	0
		3	3	24.68	24.79	24.68	0	0
		6	0	23.77	23.82	23.81	0-1	1
	16QAM	1	0	23.97	24.11	24.11	0-1	1
		1	3	24.14	24.19	24.26	0-1	1
		1	5	24.06	24.03	24.05	0-1	1
		3	0	23.82	23.91	23.90	0-1	1
		3	1	23.96	23.97	23.85	0-1	1
		3	3	23.90	23.97	23.95	0-1	1
		6	0	22.81	22.84	22.88	0-2	2
	64QAM	1	0	22.91	23.05	22.95	0-2	2
		1	3	23.12	23.04	23.16	0-2	2
		1	5	22.95	23.02	23.01	0-2	2
		3	0	22.85	22.93	22.89	0-2	2
		3	1	22.95	22.96	22.95	0-2	2
		3	3	22.94	22.89	22.98	0-2	2
		6	0	21.87	21.85	21.83	0-3	3
	256QAM	1	0	19.78	19.84	19.82	0-5	5
		1	3	20.05	20.09	19.99	0-5	5
		1	5	19.84	19.96	19.99	0-5	5
		3	0	19.85	19.94	19.91	0-5	5
		3	1	19.93	20.04	19.95	0-5	5
		3	3	19.89	19.98	19.96	0-5	5
		6	0	19.82	19.81	19.83	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	24.94	24.87	24.86	0	0
		1	7	24.79	24.79	24.75	0	0
		1	14	24.76	24.81	24.84	0	0
		8	0	23.90	23.92	23.87	0-1	1
		8	3	23.91	23.93	23.84	0-1	1
		8	7	23.85	23.90	23.92	0-1	1
		15	0	24.08	23.92	23.90	0-1	1
	16QAM	1	0	24.28	24.08	24.26	0-1	1
		1	7	24.26	24.27	24.19	0-1	1
		1	14	24.24	24.22	24.23	0-1	1
		8	0	23.00	22.98	22.97	0-2	2
		8	3	23.08	23.02	23.02	0-2	2
		8	7	22.98	23.00	23.00	0-2	2
		15	0	23.00	22.92	22.86	0-2	2
	64QAM	1	0	23.01	23.08	23.04	0-2	2
		1	7	23.11	23.10	22.97	0-2	2
		1	14	23.05	23.08	23.14	0-2	2
		8	0	21.96	21.92	21.94	0-3	3
		8	3	21.99	22.01	21.92	0-3	3
		8	7	21.95	21.98	21.91	0-3	3
		15	0	21.92	22.04	21.93	0-3	3
	256QAM	1	0	20.02	20.03	19.95	0-5	5
		1	7	20.11	20.14	19.98	0-5	5
		1	14	20.04	20.02	20.01	0-5	5
		8	0	19.98	19.95	19.95	0-5	5
		8	3	20.00	20.08	19.89	0-5	5
		8	7	19.97	20.02	20.05	0-5	5
		15	0	24.94	24.87	24.86	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	24.78	24.86	24.80	0	0
		1	12	24.78	24.79	24.86	0	0
		1	24	24.80	24.89	24.84	0	0
		12	0	23.87	23.90	23.88	0-1	1
		12	6	23.98	24.00	23.90	0-1	1
		12	11	23.94	23.94	23.95	0-1	1
		25	0	23.92	23.96	23.93	0-1	1
	16QAM	1	0	24.23	24.18	24.20	0-1	1
		1	12	24.24	24.19	24.47	0-1	1
		1	24	24.24	24.34	24.16	0-1	1
		12	0	22.96	22.91	23.00	0-2	2
		12	6	22.97	23.06	22.95	0-2	2
		12	11	22.99	22.95	23.09	0-2	2
		25	0	22.95	22.99	22.82	0-2	2
	64QAM	1	0	22.99	23.15	23.17	0-2	2
		1	12	23.09	23.08	22.97	0-2	2
		1	24	23.03	23.01	23.27	0-2	2
		12	0	21.86	22.01	21.96	0-3	3
		12	6	21.97	22.03	21.95	0-3	3
		12	11	21.96	22.00	22.01	0-3	3
		25	0	21.89	21.96	21.94	0-3	3
	256QAM	1	0	19.94	20.04	20.02	0-5	5
		1	12	20.09	19.99	20.09	0-5	5
		1	24	20.00	19.99	20.08	0-5	5
		12	0	19.92	19.96	19.90	0-5	5
		12	6	19.97	20.01	19.93	0-5	5
		12	11	19.92	19.87	19.93	0-5	5
		25	0	19.94	19.95	19.85	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	24.87	0	0
		1	24	24.84	0	0
		1	49	24.86	0	0
		25	0	23.98	0-1	1
		25	12	23.96	0-1	1
		25	24	23.93	0-1	1
		50	0	23.88	0-1	1
	16QAM	1	0	24.26	0-1	1
		1	24	24.40	0-1	1
		1	49	24.26	0-1	1
		25	0	22.93	0-2	2
		25	12	23.03	0-2	2
		25	24	22.92	0-2	2
		50	0	22.89	0-2	2
	64QAM	1	0	23.01	0-2	2
		1	24	23.15	0-2	2
		1	49	23.06	0-2	2
		25	0	21.84	0-3	3
		25	12	21.98	0-3	3
		25	24	21.96	0-3	3
		50	0	21.85	0-3	3
	256QAM	1	0	19.52	0-5	5
		1	24	20.12	0-5	5
		1	49	20.08	0-5	5
		25	0	19.83	0-5	5
		25	12	20.06	0-5	5
		25	24	19.96	0-5	5
		50	0	19.96	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	24.06	0	0
		1	12	24.04	0	0
		1	24	24.14	0	0
		12	0	23.14	0-1	1
		12	6	23.25	0-1	1
		12	11	23.30	0-1	1
		25	0	23.20	0-1	1
	16QAM	1	0	23.41	0-1	1
		1	12	23.50	0-1	1
		1	24	23.48	0-1	1
		12	0	22.25	0-2	2
		12	6	22.37	0-2	2
		12	11	22.30	0-2	2
		25	0	22.28	0-2	2
	64QAM	1	0	22.38	0-2	2
		1	12	22.42	0-2	2
		1	24	22.48	0-2	2
		12	0	21.20	0-3	3
		12	6	21.34	0-3	3
		12	11	21.40	0-3	3
		25	0	21.26	0-3	3
	256QAM	1	0	19.20	0-5	5
		1	12	19.14	0-5	5
		1	24	19.47	0-5	5
		12	0	19.19	0-5	5
		12	6	19.25	0-5	5
		12	11	19.29	0-5	5
		25	0	19.22	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	24.00	0	0
		1	24	23.97	0	0
		1	49	24.17	0	0
		25	0	23.16	0-1	1
		25	12	23.21	0-1	1
		25	24	23.30	0-1	1
		50	0	23.24	0-1	1
	16QAM	1	0	23.44	0-1	1
		1	24	23.66	0-1	1
		1	49	23.66	0-1	1
		25	0	22.27	0-2	2
		25	12	22.33	0-2	2
		25	24	22.30	0-2	2
		50	0	22.24	0-2	2
	64QAM	1	0	22.35	0-2	2
		1	24	22.59	0-2	2
		1	49	22.60	0-2	2
		25	0	21.19	0-3	3
		25	12	21.35	0-3	3
		25	24	21.37	0-3	3
		50	0	21.24	0-3	3
	256QAM	1	0	18.99	0-5	5
		1	24	19.28	0-5	5
		1	49	19.38	0-5	5
		25	0	19.20	0-5	5
		25	12	19.33	0-5	5
		25	24	19.29	0-5	5
		50	0	19.23	0-5	5

[LTE Band 14 Conducted Power]
LTE Band 14 _ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23305 Ch. 790.5 MHz	23330 Ch. 793 MHz	23355 Ch. 795.5 MHz		
5 MHz	QPSK	1	0	24.22	24.13	24.13	0	0
		1	12	24.19	24.14	24.21	0	0
		1	24	24.12	24.06	24.08	0	0
		12	0	23.32	23.23	23.22	0-1	1
		12	6	23.32	23.20	23.24	0-1	1
		12	11	23.24	23.22	23.19	0-1	1
		25	0	23.26	23.25	23.15	0-1	1
	16QAM	1	0	23.53	23.42	23.49	0-1	1
		1	12	23.65	23.53	23.59	0-1	1
		1	24	23.48	23.48	23.30	0-1	1
		12	0	22.37	22.33	22.30	0-2	2
		12	6	22.38	22.31	22.31	0-2	2
		12	11	22.33	22.34	22.21	0-2	2
		25	0	22.30	22.26	22.21	0-2	2
	64QAM	1	0	22.47	22.37	22.38	0-2	2
		1	12	22.47	22.53	22.44	0-2	2
		1	24	22.28	22.40	22.45	0-2	2
		12	0	21.45	21.32	21.31	0-3	3
		12	6	21.35	21.26	21.32	0-3	3
		12	11	21.28	21.23	21.28	0-3	3
		25	0	21.25	21.24	21.22	0-3	3
	256QAM	1	0	19.46	19.24	19.26	0-5	5
		1	12	19.41	19.44	19.41	0-5	5
		1	24	19.36	19.22	19.36	0-5	5
		12	0	19.35	19.27	19.27	0-5	5
		12	6	19.35	19.30	19.30	0-5	5
		12	11	19.27	19.10	19.16	0-5	5
		25	0	19.27	19.24	19.17	0-5	5

LTE Band 14 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23330 Ch. 793 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	24.20	0	0
		1	24	24.00	0	0
		1	49	24.13	0	0
		25	0	23.17	0-1	1
		25	12	23.28	0-1	1
		25	24	23.20	0-1	1
		50	0	23.20	0-1	1
	16QAM	1	0	23.56	0-1	1
		1	24	23.60	0-1	1
		1	49	23.47	0-1	1
		25	0	22.21	0-2	2
		25	12	22.28	0-2	2
		25	24	22.19	0-2	2
		50	0	22.22	0-2	2
	64QAM	1	0	22.57	0-2	2
		1	24	22.82	0-2	2
		1	49	22.48	0-2	2
		25	0	21.08	0-3	3
		25	12	21.42	0-3	3
		25	24	21.14	0-3	3
		50	0	21.24	0-3	3
	256QAM	1	0	18.98	0-5	5
		1	24	19.42	0-5	5
		1	49	19.19	0-5	5
		25	0	19.19	0-5	5
		25	12	19.37	0-5	5
		25	24	19.15	0-5	5
		50	0	19.13	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	24.04	24.01	23.89	0	0
		1	3	24.07	24.03	24.01	0	0
		1	5	24.03	23.98	23.82	0	0
		3	0	24.03	23.99	23.92	0	0
		3	1	24.12	23.97	23.89	0	0
		3	3	24.06	23.95	23.83	0	0
		6	0	23.19	23.03	23.07	0-1	1
	16QAM	1	0	23.23	23.23	23.24	0-1	1
		1	3	23.54	23.43	23.41	0-1	1
		1	5	23.45	23.39	23.26	0-1	1
		3	0	23.21	23.21	23.12	0-1	1
		3	1	23.30	23.22	23.20	0-1	1
		3	3	23.26	23.08	23.05	0-1	1
		6	0	22.24	22.16	22.16	0-2	2
	64QAM	1	0	22.07	22.16	21.57	0-2	2
		1	3	22.24	22.20	21.48	0-2	2
		1	5	22.14	22.21	21.32	0-2	2
		3	0	22.06	22.14	21.42	0-2	2
		3	1	22.09	22.25	21.36	0-2	2
		3	3	22.11	22.10	21.31	0-2	2
		6	0	21.02	21.04	20.30	0-3	3
	256QAM	1	0	19.20	19.13	19.08	0-5	5
		1	3	19.32	19.27	19.32	0-5	5
		1	5	19.22	19.15	19.12	0-5	5
		3	0	19.25	19.13	19.16	0-5	5
		3	1	19.31	19.22	19.22	0-5	5
		3	3	19.20	19.17	19.18	0-5	5
		6	0	19.17	19.03	19.04	0-5	5

LTE Band 25 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 ㎒	26365 Ch. 1882.5 ㎒	26675Ch. 1913.5 ㎒		
3 ㎒	QPSK	1	0	24.03	23.92	23.99	0	0
		1	7	24.05	23.99	24.06	0	0
		1	14	24.09	24.05	23.87	0	0
		8	0	23.20	23.00	23.05	0-1	1
		8	3	23.26	23.15	23.11	0-1	1
		8	7	23.20	23.14	23.19	0-1	1
		15	0	23.23	23.17	23.11	0-1	1
	16QAM	1	0	23.41	23.22	23.32	0-1	1
		1	7	23.44	23.49	23.30	0-1	1
		1	14	23.50	23.43	23.14	0-1	1
		8	0	22.30	22.13	22.15	0-2	2
		8	3	22.27	22.23	22.22	0-2	2
		8	7	22.24	22.24	22.24	0-2	2
		15	0	22.20	22.16	22.12	0-2	2
	64QAM	1	0	22.08	22.14	21.83	0-2	2
		1	7	22.21	22.21	21.60	0-2	2
		1	14	22.41	22.34	21.34	0-2	2
		8	0	21.03	21.10	20.69	0-3	3
		8	3	21.16	21.23	20.65	0-3	3
		8	7	21.18	21.20	20.45	0-3	3
		15	0	21.14	21.21	20.56	0-3	3
	256QAM	1	0	19.25	19.03	19.14	0-5	5
		1	7	19.29	19.15	19.28	0-5	5
		1	14	19.31	19.17	19.27	0-5	5
		8	0	19.18	19.06	19.13	0-5	5
		8	3	19.27	19.11	19.13	0-5	5
		8	7	19.24	19.11	19.22	0-5	5
		15	0	19.23	19.09	19.11	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	24.00	23.91	23.98	0	0
		1	12	24.09	24.00	24.02	0	0
		1	24	24.05	24.03	23.82	0	0
		12	0	23.20	23.05	23.09	0-1	1
		12	6	23.16	23.16	23.14	0-1	1
		12	11	23.19	23.10	23.23	0-1	1
		25	0	23.21	23.10	23.10	0-1	1
	16QAM	1	0	23.30	23.19	23.38	0-1	1
		1	12	23.43	23.47	23.43	0-1	1
		1	24	23.43	23.41	23.21	0-1	1
		12	0	22.24	22.09	22.09	0-2	2
		12	6	22.22	22.19	22.19	0-2	2
		12	11	22.23	22.18	22.20	0-2	2
		25	0	22.19	22.10	22.16	0-2	2
	64QAM	1	0	21.98	22.14	22.15	0-2	2
		1	12	22.31	22.19	21.81	0-2	2
		1	24	22.36	22.36	21.36	0-2	2
		12	0	21.11	21.08	20.96	0-3	3
		12	6	21.27	21.19	20.87	0-3	3
		12	11	21.21	21.17	20.70	0-3	3
		25	0	21.17	21.10	20.68	0-3	3
	256QAM	1	0	19.25	19.10	19.17	0-5	5
		1	12	19.28	19.21	19.19	0-5	5
		1	24	19.24	19.26	19.22	0-5	5
		12	0	19.17	19.04	19.09	0-5	5
		12	6	19.22	19.12	19.10	0-5	5
		12	11	19.20	19.13	19.15	0-5	5
		25	0	19.17	19.05	19.13	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	23.92	23.94	24.11	0	0
		1	24	24.07	23.95	23.90	0	0
		1	49	23.73	23.80	24.06	0	0
		25	0	23.14	23.00	22.96	0-1	1
		25	12	23.21	23.16	23.13	0-1	1
		25	24	23.09	23.07	23.14	0-1	1
		50	0	23.15	23.10	23.15	0-1	1
	16QAM	1	0	23.32	23.13	23.49	0-1	1
		1	24	23.55	23.43	23.46	0-1	1
		1	49	23.27	23.21	23.40	0-1	1
		25	0	22.10	21.99	21.96	0-2	2
		25	12	22.20	22.15	22.19	0-2	2
		25	24	22.16	22.09	22.11	0-2	2
		50	0	22.17	22.07	22.03	0-2	2
	64QAM	1	0	21.86	21.82	22.27	0-2	2
		1	24	22.21	22.41	22.28	0-2	2
		1	49	22.07	22.09	21.62	0-2	2
		25	0	21.10	21.02	21.03	0-3	3
		25	12	21.33	21.18	21.17	0-3	3
		25	24	21.21	21.13	20.95	0-3	3
		50	0	21.18	21.09	21.03	0-3	3
	256QAM	1	0	19.02	18.73	18.91	0-5	5
		1	24	19.27	19.23	19.13	0-5	5
		1	49	19.06	19.01	18.96	0-5	5
		25	0	19.16	18.95	19.10	0-5	5
		25	12	19.20	19.12	19.17	0-5	5
		25	24	19.19	19.07	19.21	0-5	5
		50	0	19.18	19.06	19.10	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	23.78	24.08	24.07	0	0
		1	36	24.10	23.96	23.98	0	0
		1	74	23.90	24.05	23.92	0	0
		36	0	23.16	22.98	23.00	0-1	1
		36	18	23.20	23.12	23.21	0-1	1
		36	39	23.15	23.11	23.19	0-1	1
		75	0	23.11	23.09	22.99	0-1	1
	16QAM	1	0	23.21	23.44	23.43	0-1	1
		1	36	23.31	23.30	23.24	0-1	1
		1	74	23.39	23.30	23.43	0-1	1
		36	0	22.16	21.99	22.10	0-2	2
		36	18	22.22	22.17	22.18	0-2	2
		36	39	22.23	22.13	22.21	0-2	2
		75	0	22.15	22.08	22.04	0-2	2
	64QAM	1	0	22.01	22.27	22.32	0-2	2
		1	36	22.42	22.29	22.34	0-2	2
		1	74	22.17	22.28	21.69	0-2	2
		36	0	21.17	21.04	21.06	0-3	3
		36	18	21.20	21.20	21.14	0-3	3
		36	39	21.19	21.17	21.13	0-3	3
		75	0	21.16	21.07	21.15	0-3	3
	256QAM	1	0	19.01	18.94	19.03	0-5	5
		1	36	19.21	19.25	19.32	0-5	5
		1	74	19.09	19.07	19.08	0-5	5
		36	0	19.16	18.98	19.02	0-5	5
		36	18	19.24	19.16	19.09	0-5	5
		36	39	19.16	19.02	19.09	0-5	5
		75	0	19.15	19.13	19.04	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	24.10	24.11	24.10	0	0
		1	49	24.02	23.96	24.18	0	0
		1	99	23.96	24.00	24.07	0	0
		50	0	23.16	23.05	23.14	0-1	1
		50	25	23.18	23.17	23.18	0-1	1
		50	49	23.13	23.06	23.19	0-1	1
		100	0	23.03	23.06	23.10	0-1	1
	16QAM	1	0	23.50	23.32	23.36	0-1	1
		1	49	23.42	23.38	23.27	0-1	1
		1	99	23.48	23.46	23.43	0-1	1
		50	0	22.18	22.06	22.13	0-2	2
		50	25	22.18	22.11	22.14	0-2	2
		50	49	22.13	22.11	22.25	0-2	2
		100	0	22.10	22.01	22.11	0-2	2
	64QAM	1	0	22.13	22.21	22.30	0-2	2
		1	49	22.45	22.38	22.41	0-2	2
		1	99	22.26	22.34	21.78	0-2	2
		50	0	21.24	21.07	21.14	0-3	3
		50	25	21.21	21.18	21.10	0-3	3
		50	49	21.14	21.14	21.15	0-3	3
		100	0	21.10	21.03	21.09	0-3	3
	256QAM	1	0	18.71	18.76	18.80	0-5	5
		1	49	19.25	19.24	19.28	0-5	5
		1	99	18.98	18.94	19.03	0-5	5
		50	0	19.11	18.97	18.99	0-5	5
		50	25	19.19	19.14	19.14	0-5	5
		50	49	19.16	19.10	19.21	0-5	5
		100	0	19.13	19.09	18.99	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	24.29	24.27	24.24	0	0
		1	3	24.37	24.33	24.21	0	0
		1	5	24.31	24.22	24.11	0	0
		3	0	24.27	24.17	24.19	0	0
		3	1	24.34	24.34	24.20	0	0
		3	3	24.29	24.32	24.22	0	0
		6	0	23.40	23.32	23.29	0-1	1
	16QAM	1	0	23.60	23.55	23.58	0-1	1
		1	3	23.78	23.59	23.71	0-1	1
		1	5	23.64	23.55	23.63	0-1	1
		3	0	23.51	23.41	23.36	0-1	1
		3	1	23.52	23.59	23.41	0-1	1
		3	3	23.63	23.45	23.41	0-1	1
		6	0	22.42	22.35	22.36	0-2	2
	64QAM	1	0	22.00	22.47	22.49	0-2	2
		1	3	22.17	22.55	22.54	0-2	2
		1	5	22.08	22.47	22.44	0-2	2
		3	0	21.93	22.38	22.40	0-2	2
		3	1	22.01	22.42	22.39	0-2	2
		3	3	22.09	22.43	22.40	0-2	2
		6	0	20.89	21.33	21.31	0-3	3
	256QAM	1	0	19.46	19.34	19.33	0-5	5
		1	3	19.55	19.50	19.51	0-5	5
		1	5	19.50	19.39	19.28	0-5	5
		3	0	19.50	19.42	19.34	0-5	5
		3	1	19.56	19.58	19.45	0-5	5
		3	3	19.56	19.46	19.43	0-5	5
		6	0	19.42	19.28	19.29	0-5	5

LTE Band 26 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26705 Ch. 815.5 ㎒	26865 Ch. 831.5 ㎒	27025 Ch. 847.5 ㎒		
3 ㎒	QPSK	1	0	24.23	24.27	24.35	0	0
		1	7	24.38	24.27	24.19	0	0
		1	14	24.35	24.37	24.21	0	0
		8	0	23.37	23.30	23.30	0-1	1
		8	3	23.48	23.37	23.34	0-1	1
		8	7	23.48	23.39	23.30	0-1	1
		15	0	23.43	23.37	23.35	0-1	1
	16QAM	1	0	23.58	23.74	23.55	0-1	1
		1	7	23.74	23.52	23.69	0-1	1
		1	14	23.78	23.67	23.57	0-1	1
		8	0	22.47	22.46	22.44	0-2	2
		8	3	22.62	22.49	22.51	0-2	2
		8	7	22.58	22.48	22.42	0-2	2
		15	0	22.50	22.36	22.37	0-2	2
	64QAM	1	0	22.04	22.55	22.63	0-2	2
		1	7	22.10	22.57	22.55	0-2	2
		1	14	22.33	22.55	22.48	0-2	2
		8	0	20.99	21.38	21.37	0-3	3
		8	3	21.04	21.49	21.36	0-3	3
		8	7	21.00	21.43	21.44	0-3	3
		15	0	21.07	21.41	21.43	0-3	3
	256QAM	1	0	19.47	19.55	19.41	0-5	5
		1	7	19.55	19.55	19.49	0-5	5
		1	14	19.30	19.49	19.35	0-5	5
		8	0	19.39	19.42	19.36	0-5	5
		8	3	19.48	19.39	19.48	0-5	5
		8	7	19.52	19.38	19.39	0-5	5
		15	0	19.44	19.44	19.43	0-5	5

LTE Band 26 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26715 Ch. 816.5 ㎒	26865 Ch. 831.5 ㎒	27015 Ch. 846.5 ㎒		
5 ㎒	QPSK	1	0	24.24	24.33	24.33	0	0
		1	12	24.40	24.34	24.32	0	0
		1	24	24.26	24.36	24.30	0	0
		12	0	23.39	23.39	23.33	0-1	1
		12	6	23.53	23.37	23.38	0-1	1
		12	11	23.43	23.38	23.38	0-1	1
		25	0	23.42	23.32	23.29	0-1	1
	16QAM	1	0	23.54	23.63	23.61	0-1	1
		1	12	23.69	23.60	23.61	0-1	1
		1	24	23.73	23.74	23.72	0-1	1
		12	0	22.41	22.37	22.36	0-2	2
		12	6	22.50	22.45	22.47	0-2	2
		12	11	22.54	22.46	22.46	0-2	2
		25	0	22.46	22.37	22.32	0-2	2
	64QAM	1	0	22.07	22.58	22.66	0-2	2
		1	12	22.17	22.65	22.57	0-2	2
		1	24	22.29	22.51	22.52	0-2	2
		12	0	21.02	21.39	21.36	0-3	3
		12	6	21.10	21.43	21.37	0-3	3
		12	11	21.08	21.45	21.42	0-3	3
		25	0	21.00	21.35	21.29	0-3	3
	256QAM	1	0	19.44	19.29	19.29	0-5	5
		1	12	19.60	19.59	19.51	0-5	5
		1	24	19.59	19.50	19.42	0-5	5
		12	0	19.44	19.35	19.33	0-5	5
		12	6	19.51	19.38	19.38	0-5	5
		12	11	19.45	19.40	19.43	0-5	5
		25	0	19.42	19.34	19.31	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	24.47	24.38	24.40	0	0
		1	24	24.30	24.27	24.27	0	0
		1	49	24.32	24.44	24.31	0	0
		25	0	23.30	23.29	23.32	0-1	1
		25	12	23.49	23.29	23.38	0-1	1
		25	24	23.31	23.34	23.30	0-1	1
		50	0	23.44	23.31	23.26	0-1	1
	16QAM	1	0	23.84	23.64	23.84	0-1	1
		1	24	23.70	23.74	23.79	0-1	1
		1	49	23.64	23.69	23.70	0-1	1
		25	0	22.30	22.25	22.24	0-2	2
		25	12	22.50	22.35	22.35	0-2	2
		25	24	22.45	22.40	22.27	0-2	2
		50	0	22.37	22.31	22.29	0-2	2
	64QAM	1	0	22.63	22.53	22.65	0-2	2
		1	24	22.65	22.52	22.55	0-2	2
		1	49	22.55	22.55	22.30	0-2	2
		25	0	21.30	21.26	21.25	0-3	3
		25	12	21.48	21.39	21.42	0-3	3
		25	24	21.41	21.37	21.32	0-3	3
		50	0	21.41	21.31	21.25	0-3	3
	256QAM	1	0	19.29	19.18	18.91	0-5	5
		1	24	19.44	19.45	19.40	0-5	5
		1	49	19.45	19.41	19.44	0-5	5
		25	0	19.32	19.28	19.31	0-5	5
		25	12	19.49	19.39	19.46	0-5	5
		25	24	19.41	19.40	19.39	0-5	5
		50	0	19.41	19.19	19.29	0-5	5

LTE Band 26 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 26865 Ch. 831.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
15 ㎒	QPSK	1	0	24.25	0	0
		1	36	24.18	0	0
		1	74	24.11	0	0
		36	0	23.27	0-1	1
		36	18	23.31	0-1	1
		36	39	23.23	0-1	1
		75	0	23.17	0-1	1
	16QAM	1	0	23.57	0-1	1
		1	36	23.60	0-1	1
		1	74	23.43	0-1	1
		36	0	22.29	0-2	2
		36	18	22.29	0-2	2
		36	39	22.29	0-2	2
		75	0	22.26	0-2	2
	64QAM	1	0	22.50	0-2	2
		1	36	22.46	0-2	2
		1	74	22.44	0-2	2
		36	0	21.29	0-3	3
		36	18	21.31	0-3	3
		36	39	21.29	0-3	3
		75	0	21.24	0-3	3
	256QAM	1	0	19.15	0-5	5
		1	36	19.37	0-5	5
		1	74	19.19	0-5	5
		36	0	19.29	0-5	5
		36	18	19.35	0-5	5
		36	39	19.25	0-5	5
		75	0	19.14	0-5	5

[LTE Band 30 Conducted Power]
LTE Band 30 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				27685 Ch. 2307.5 ㎒	27710 Ch. 2310 ㎒	27735 Ch. 2312.5 ㎒		
5 ㎒	QPSK	1	0	22.29	22.30	22.39	0	0
		1	12	22.43	22.55	22.49	0	0
		1	24	22.46	22.42	22.36	0	0
		12	0	21.49	21.47	21.52	0-1	1
		12	6	21.61	21.56	21.56	0-1	1
		12	11	21.56	21.55	21.56	0-1	1
		25	0	21.56	21.52	21.51	0-1	1
	16QAM	1	0	21.68	21.61	21.68	0-1	1
		1	12	21.84	21.84	21.83	0-1	1
		1	24	21.81	21.71	21.70	0-1	1
		12	0	20.63	20.57	20.57	0-2	2
		12	6	20.64	20.62	20.65	0-2	2
		12	11	20.66	20.59	20.70	0-2	2
		25	0	20.63	20.55	20.50	0-2	2
	64QAM	1	0	20.70	20.72	20.57	0-2	2
		1	12	20.77	20.75	20.77	0-2	2
		1	24	20.66	20.68	20.79	0-2	2
		12	0	19.57	19.53	19.51	0-3	3
		12	6	19.62	19.66	19.64	0-3	3
		12	11	19.60	19.62	19.69	0-3	3
		25	0	19.61	19.58	19.56	0-3	3
	256QAM	1	0	17.45	17.61	17.63	0-5	5
		1	12	17.53	17.68	17.69	0-5	5
		1	24	17.77	17.61	17.38	0-5	5
		12	0	17.54	17.45	17.50	0-5	5
		12	6	17.63	17.56	17.54	0-5	5
		12	11	17.54	17.52	17.56	0-5	5
		25	0	17.57	17.47	17.53	0-5	5

LTE Band 30 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 27710 Ch. 2310 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	22.49	0	0
		1	24	22.46	0	0
		1	49	22.43	0	0
		25	0	21.44	0-1	1
		25	12	21.53	0-1	1
		25	24	21.51	0-1	1
		50	0	21.49	0-1	1
	16QAM	1	0	21.90	0-1	1
		1	24	21.89	0-1	1
		1	49	21.89	0-1	1
		25	0	20.49	0-2	2
		25	12	20.55	0-2	2
		25	24	20.52	0-2	2
		50	0	20.48	0-2	2
	64QAM	1	0	20.69	0-2	2
		1	24	20.69	0-2	2
		1	49	20.81	0-2	2
		25	0	19.34	0-3	3
		25	12	19.58	0-3	3
		25	24	19.57	0-3	3
		50	0	19.51	0-3	3
	256QAM	1	0	17.43	0-5	5
		1	24	17.76	0-5	5
		1	49	17.28	0-5	5
		25	0	17.39	0-5	5
		25	12	17.61	0-5	5
		25	24	17.54	0-5	5
		50	0	17.45	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	24.48	24.33	24.64	24.64	24.38	0	0
		1	12	24.39	24.40	24.70	24.63	24.37	0	0
		1	24	24.43	24.38	24.63	24.56	24.32	0	0
		12	0	23.53	23.50	23.74	23.73	23.46	0-1	1
		12	6	23.53	23.57	23.86	23.76	23.48	0-1	1
		12	11	23.55	23.56	23.81	23.72	23.51	0-1	1
		25	0	23.53	23.53	23.83	23.75	23.23	0-1	1
	16QAM	1	0	23.51	23.40	23.79	23.78	22.53	0-1	1
		1	12	23.50	23.49	23.83	23.73	23.51	0-1	1
		1	24	23.50	23.43	23.75	23.72	23.45	0-1	1
		12	0	22.46	22.51	22.73	22.71	22.40	0-2	2
		12	6	22.50	22.51	22.79	22.71	22.45	0-2	2
		12	11	22.44	22.48	22.75	22.70	22.41	0-2	2
		25	0	22.55	22.56	22.88	22.81	22.56	0-2	2
	64QAM	1	0	22.19	22.08	22.41	22.38	22.17	0-2	2
		1	12	22.19	22.17	22.49	22.35	22.11	0-2	2
		1	24	22.17	22.12	22.44	22.33	22.09	0-2	2
		12	0	21.46	21.46	21.72	21.72	21.49	0-3	3
		12	6	21.53	21.52	21.83	21.75	21.51	0-3	3
		12	11	21.50	21.47	21.76	21.69	21.45	0-3	3
		25	0	21.55	21.55	21.86	21.78	21.47	0-3	3
	256QAM	1	0	19.37	19.28	19.59	19.59	19.37	0-5	5
		1	12	19.32	19.29	19.68	19.56	19.35	0-5	5
		1	24	19.23	19.31	19.53	19.54	19.29	0-5	5
		12	0	19.64	19.63	19.88	19.87	19.66	0-5	5
		12	6	19.66	19.65	19.91	19.93	19.66	0-5	5
		12	11	19.59	19.64	19.91	19.89	19.65	0-5	5
		25	0	19.56	19.54	19.84	19.84	19.58	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	24.45	24.24	24.59	24.38	24.25	0	0
		1	24	24.39	24.38	24.69	24.65	24.35	0	0
		1	49	24.33	24.25	24.50	24.29	24.00	0	0
		25	0	23.54	23.48	23.70	23.68	23.45	0-1	1
		25	12	23.53	23.56	23.83	23.76	23.52	0-1	1
		25	24	23.48	23.46	23.75	23.64	23.45	0-1	1
		50	0	23.46	23.49	23.74	23.68	23.45	0-1	1
	16QAM	1	0	23.60	23.32	23.63	23.57	23.35	0-1	1
		1	24	23.58	23.58	23.90	23.75	23.57	0-1	1
		1	49	23.48	23.30	23.58	23.52	23.25	0-1	1
		25	0	22.53	22.47	22.70	22.69	22.45	0-2	2
		25	12	22.54	22.59	22.84	22.76	22.54	0-2	2
		25	24	22.53	22.47	22.74	22.65	22.40	0-2	2
		50	0	22.51	22.55	22.83	22.75	22.49	0-2	2
	64QAM	1	0	22.16	21.77	22.11	22.25	21.94	0-2	2
		1	24	22.05	22.11	22.41	22.41	22.08	0-2	2
		1	49	22.08	21.83	22.12	22.16	21.83	0-2	2
		25	0	21.53	21.47	21.69	21.69	21.45	0-3	3
		25	12	21.51	21.55	21.84	21.75	21.52	0-3	3
		25	24	21.46	21.45	21.72	21.66	21.43	0-3	3
		50	0	21.54	21.55	21.87	21.76	21.52	0-3	3
	256QAM	1	0	19.06	18.98	19.27	19.59	19.32	0-5	5
		1	24	19.23	19.31	19.56	19.73	19.46	0-5	5
		1	49	18.98	19.06	19.32	19.50	19.23	0-5	5
		25	0	19.54	19.55	19.79	19.79	19.55	0-5	5
		25	12	19.61	19.63	19.94	19.90	19.67	0-5	5
		25	24	19.46	19.48	19.80	19.76	19.50	0-5	5
		50	0	19.54	19.58	19.86	19.79	19.58	0-5	5

LTE Band 41 _ 15 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 MHz	40173 Ch. 2548.3 MHz	40620 Ch. 2593.0 MHz	41068 Ch. 2637.8 MHz	41515 Ch. 2682.5 MHz		
15 MHz	QPSK	1	0	24.48	24.19	24.55	24.55	24.17	0	0
		1	36	24.36	24.35	24.68	24.53	24.35	0	0
		1	74	24.35	24.22	24.48	24.32	24.27	0	0
		36	0	23.53	23.36	23.69	23.72	23.45	0-1	1
		36	18	23.54	23.54	23.83	23.74	23.49	0-1	1
		36	39	23.45	23.46	23.78	23.63	23.49	0-1	1
		75	0	23.48	23.43	23.79	23.69	23.45	0-1	1
	16QAM	1	0	23.53	23.28	23.61	23.65	23.28	0-1	1
		1	36	23.36	23.39	23.74	23.66	23.38	0-1	1
		1	74	23.37	23.23	23.61	23.45	23.36	0-1	1
		36	0	22.53	22.33	22.66	22.71	22.40	0-2	2
		36	18	22.49	22.48	22.79	22.68	22.47	0-2	2
		36	39	22.43	22.41	22.74	22.61	22.43	0-2	2
		75	0	22.47	22.45	22.81	22.71	22.48	0-2	2
	64QAM	1	0	22.21	21.89	22.24	22.31	21.95	0-2	2
		1	36	22.16	22.15	22.48	22.40	22.16	0-2	2
		1	74	22.06	21.95	22.28	22.09	22.02	0-2	2
		36	0	21.54	21.41	21.74	21.77	21.49	0-3	3
		36	18	21.52	21.55	21.90	21.75	21.56	0-3	3
		36	39	21.48	21.46	21.82	21.65	21.53	0-3	3
		75	0	21.49	21.50	21.81	21.72	21.49	0-3	3
	256QAM	1	0	19.23	19.07	19.44	19.59	19.14	0-5	5
		1	36	19.29	19.34	19.63	19.61	19.31	0-5	5
		1	74	19.16	19.15	19.49	19.35	19.25	0-5	5
		36	0	19.47	19.36	19.70	19.74	19.44	0-5	5
		36	18	19.52	19.53	19.85	19.80	19.55	0-5	5
		36	39	19.47	19.48	19.81	19.66	19.51	0-5	5
		75	0	19.44	19.50	19.81	19.73	19.48	0-5	5

LTE Band 41 _ 20 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	24.48	24.37	24.42	24.45	24.10	0	0
		1	49	24.37	24.40	24.71	24.58	24.36	0	0
		1	99	24.30	24.47	24.38	24.11	24.18	0	0
		50	0	23.51	23.40	23.67	23.71	23.34	0-1	1
		50	25	23.48	23.51	23.87	23.76	23.52	0-1	1
		50	49	23.40	23.52	23.77	23.58	23.47	0-1	1
		100	0	23.41	23.40	23.75	23.66	23.37	0-1	1
	16QAM	1	0	23.57	23.50	23.43	23.48	23.06	0-1	1
		1	49	23.40	23.45	23.76	23.68	23.45	0-1	1
		1	99	23.40	23.47	23.45	23.18	23.26	0-1	1
		50	0	22.60	22.40	22.67	22.75	22.32	0-2	2
		50	25	22.58	22.53	22.91	22.76	22.58	0-2	2
		50	49	22.51	22.55	22.75	22.63	22.48	0-2	2
		100	0	22.48	22.48	22.81	22.70	22.39	0-2	2
	64QAM	1	0	22.23	22.11	22.10	22.21	21.78	0-2	2
		1	49	22.08	22.14	22.45	22.34	22.13	0-2	2
		1	99	22.06	22.15	22.12	21.88	21.98	0-2	2
		50	0	21.62	21.50	21.74	21.77	21.38	0-3	3
		50	25	21.59	21.59	21.93	21.82	21.59	0-3	3
		50	49	21.52	21.58	21.82	21.65	21.55	0-3	3
		100	0	21.50	21.48	21.82	21.66	21.39	0-3	3
	256QAM	1	0	19.07	18.94	19.28	19.40	18.99	0-5	5
		1	49	19.30	19.35	19.66	19.54	19.33	0-5	5
		1	99	19.01	18.95	19.32	19.06	19.15	0-5	5
		50	0	19.52	19.43	19.75	19.78	19.42	0-5	5
		50	25	19.58	19.58	19.91	19.82	19.59	0-5	5
		50	49	19.50	19.52	19.82	19.65	19.58	0-5	5
		100	0	19.48	19.44	19.78	19.67	19.39	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	27.14	27.20	27.34	27.47	27.25	0	0
		1	12	27.15	27.27	27.43	27.48	27.26	0	0
		1	24	27.25	27.26	27.39	27.44	27.21	0	0
		12	0	26.20	26.36	26.54	26.66	26.41	0-1	1
		12	6	26.24	26.47	26.57	26.67	26.43	0-1	1
		12	11	26.23	26.37	26.55	26.59	26.41	0-1	1
		25	0	26.16	26.39	26.55	26.56	26.38	0-1	1
	16QAM	1	0	26.34	26.55	26.69	26.81	26.61	0-1	1
		1	12	26.40	26.64	26.78	26.77	26.63	0-1	1
		1	24	26.52	26.58	26.73	26.73	26.52	0-1	1
		12	0	25.19	25.37	25.56	25.61	25.39	0-2	2
		12	6	25.27	25.44	25.57	25.65	25.43	0-2	2
		12	11	25.28	25.40	25.53	25.60	25.40	0-2	2
		25	0	25.26	25.47	25.63	25.64	25.49	0-2	2
	64QAM	1	0	24.12	24.66	24.97	24.70	24.77	0-2	2
		1	12	24.22	24.65	25.02	24.59	24.78	0-2	2
		1	24	24.34	24.69	25.01	24.57	24.78	0-2	2
		12	0	23.21	23.72	24.05	23.73	23.82	0-3	3
		12	6	23.29	23.77	24.19	23.74	23.86	0-3	3
		12	11	23.32	23.76	24.16	23.70	23.83	0-3	3
		25	0	23.26	23.79	24.10	23.71	23.81	0-3	3
	256QAM	1	0	22.36	22.36	22.51	22.61	22.43	0-5	5
		1	12	22.34	22.40	22.54	22.63	22.42	0-5	5
		1	24	22.33	22.37	22.51	22.58	22.36	0-5	5
		12	0	22.50	22.52	22.67	22.77	22.55	0-5	5
		12	6	22.53	22.61	22.73	22.79	22.60	0-5	5
		12	11	22.50	22.55	22.70	22.75	22.53	0-5	5
		25	0	22.41	22.46	22.61	22.67	22.46	0-5	5

LTE Band 41 _ 10 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 MHz	40160 Ch. 2547 MHz	40620 Ch. 2593 MHz	41080 Ch. 2639 MHz	41540 Ch. 2685 MHz		
10 MHz	QPSK	1	0	27.24	27.09	27.25	27.32	27.11	0	0
		1	24	27.20	27.27	27.43	27.39	27.29	0	0
		1	49	27.20	27.07	27.20	27.19	27.01	0	0
		25	0	26.22	26.40	26.46	26.61	26.41	0-1	1
		25	12	26.32	26.46	26.60	26.67	26.45	0-1	1
		25	24	26.32	26.36	26.49	26.55	26.34	0-1	1
		50	0	26.12	26.38	26.49	26.49	26.38	0-1	1
	16QAM	1	0	26.29	26.41	26.60	26.72	26.48	0-1	1
		1	24	26.42	26.68	26.91	26.78	26.77	0-1	1
		1	49	26.54	26.40	26.56	26.64	26.41	0-1	1
		25	0	25.36	25.38	25.48	25.60	25.38	0-2	2
		25	12	25.40	25.47	25.59	25.71	25.50	0-2	2
		25	24	25.37	25.37	25.54	25.56	25.38	0-2	2
		50	0	25.28	25.42	25.59	25.62	25.42	0-2	2
	64QAM	1	0	24.12	24.61	24.84	24.70	24.67	0-2	2
		1	24	24.28	24.67	24.94	24.59	24.77	0-2	2
		1	49	24.42	24.67	24.97	24.49	24.71	0-2	2
		25	0	23.22	23.70	24.01	23.76	23.79	0-3	3
		25	12	23.33	23.73	24.10	23.76	23.90	0-3	3
		25	24	23.39	23.79	24.07	23.69	23.85	0-3	3
		50	0	23.34	23.83	24.11	23.75	23.85	0-3	3
	256QAM	1	0	22.15	22.09	22.26	22.40	22.22	0-5	5
		1	24	22.33	22.37	22.52	22.61	22.45	0-5	5
		1	49	22.10	22.17	22.30	22.36	22.15	0-5	5
		25	0	22.38	22.43	22.54	22.67	22.45	0-5	5
		25	12	22.45	22.50	22.63	22.74	22.52	0-5	5
		25	24	22.33	22.43	22.53	22.60	22.40	0-5	5
		50	0	22.41	22.47	22.54	22.69	22.44	0-5	5

LTE Band 41 _ 15 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 MHz	40173 Ch. 2548.3 MHz	40620 Ch. 2593.0 MHz	41068 Ch. 2637.8 MHz	41515 Ch. 2682.5 MHz		
15 MHz	QPSK	1	0	27.28	27.05	27.24	27.46	27.03	0	0
		1	36	27.21	27.24	27.39	27.43	27.26	0	0
		1	74	27.22	27.00	27.26	27.20	27.23	0	0
		36	0	26.26	26.23	26.40	26.57	26.33	0-1	1
		36	18	26.33	26.36	26.53	26.58	26.38	0-1	1
		36	39	26.31	26.26	26.47	26.47	26.41	0-1	1
		75	0	26.08	26.29	26.50	26.53	26.36	0-1	1
	16QAM	1	0	26.34	26.41	26.55	26.82	26.42	0-1	1
		1	36	26.48	26.62	26.75	26.90	26.60	0-1	1
		1	74	26.59	26.34	26.64	26.57	26.59	0-1	1
		36	0	25.18	25.21	25.38	25.54	25.31	0-2	2
		36	18	25.32	25.29	25.52	25.56	25.36	0-2	2
		36	39	25.27	25.23	25.45	25.46	25.31	0-2	2
		75	0	25.30	25.31	25.51	25.57	25.38	0-2	2
	64QAM	1	0	24.13	24.74	24.95	24.92	24.73	0-2	2
		1	36	24.30	24.76	25.02	24.78	24.79	0-2	2
		1	74	24.46	24.91	25.24	24.66	24.90	0-2	2
		36	0	23.32	23.83	24.15	23.90	23.89	0-3	3
		36	18	23.38	23.89	24.22	23.84	23.97	0-3	3
		36	39	23.47	23.93	24.20	23.77	23.98	0-3	3
		75	0	23.43	23.89	24.15	23.87	23.92	0-3	3
	256QAM	1	0	22.17	22.08	22.29	22.56	22.18	0-5	5
		1	36	22.28	22.31	22.50	22.55	22.35	0-5	5
		1	74	22.16	22.09	22.34	22.28	22.32	0-5	5
		36	0	22.28	22.29	22.43	22.66	22.39	0-5	5
		36	18	22.35	22.43	22.61	22.67	22.48	0-5	5
		36	39	22.29	22.28	22.53	22.51	22.44	0-5	5
		75	0	22.36	22.32	22.52	22.58	22.43	0-5	5

LTE Band 41 _ 20 MHz Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	27.30	27.22	27.11	27.35	26.92	0	0
		1	49	27.22	27.28	27.43	27.50	27.29	0	0
		1	99	27.18	27.19	27.10	26.97	27.11	0	0
		50	0	26.35	26.26	26.36	26.58	26.26	0-1	1
		50	25	26.38	26.32	26.52	26.62	26.40	0-1	1
		50	49	26.32	26.32	26.45	26.44	26.38	0-1	1
		100	0	26.13	26.26	26.45	26.56	26.33	0-1	1
	16QAM	1	0	26.35	26.71	26.36	26.61	26.29	0-1	1
		1	49	26.44	26.57	26.72	26.86	26.60	0-1	1
		1	99	26.55	26.59	26.40	26.33	26.48	0-1	1
		50	0	25.35	25.30	25.39	25.60	25.33	0-2	2
		50	25	25.36	25.38	25.57	25.64	25.45	0-2	2
		50	49	25.32	25.36	25.50	25.47	25.40	0-2	2
		100	0	25.26	25.29	25.46	25.56	25.40	0-2	2
	64QAM	1	0	24.16	24.81	24.72	24.64	24.36	0-2	2
		1	49	24.30	24.75	25.08	24.73	24.77	0-2	2
		1	99	24.41	24.91	25.08	24.26	24.71	0-2	2
		50	0	23.43	23.87	24.19	23.95	23.83	0-3	3
		50	25	23.51	23.99	24.22	23.97	23.95	0-3	3
		50	49	23.55	24.03	24.25	23.81	24.03	0-3	3
		100	0	23.37	23.90	24.07	23.85	23.77	0-3	3
	256QAM	1	0	22.03	21.96	22.20	22.49	22.08	0-5	5
		1	49	22.29	22.33	22.51	22.56	22.34	0-5	5
		1	99	22.03	21.90	22.19	22.00	22.15	0-5	5
		50	0	22.32	22.27	22.45	22.68	22.39	0-5	5
		50	25	22.43	22.47	22.67	22.66	22.49	0-5	5
		50	49	22.35	22.29	22.55	22.56	22.46	0-5	5
		100	0	22.29	22.29	22.47	22.56	22.38	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	23.86	23.98	23.86	0	0
		1	3	23.93	23.99	23.94	0	0
		1	5	23.85	23.98	23.84	0	0
		3	0	23.89	23.93	23.88	0	0
		3	1	23.92	23.96	23.92	0	0
		3	3	23.92	23.93	23.88	0	0
		6	0	23.00	23.02	22.88	0-1	1
	16QAM	1	0	23.28	23.36	23.23	0-1	1
		1	3	23.30	23.41	23.49	0-1	1
		1	5	23.21	23.23	23.18	0-1	1
		3	0	23.08	23.11	23.01	0-1	1
		3	1	23.18	23.15	23.07	0-1	1
		3	3	23.04	23.13	23.00	0-1	1
		6	0	22.14	22.11	21.96	0-2	2
	64QAM	1	0	21.75	22.12	21.73	0-2	2
		1	3	21.90	22.31	21.77	0-2	2
		1	5	21.79	22.13	21.60	0-2	2
		3	0	21.67	22.13	21.62	0-2	2
		3	1	21.70	22.16	21.65	0-2	2
		3	3	21.63	22.12	21.57	0-2	2
		6	0	20.61	21.07	20.50	0-3	3
	256QAM	1	0	19.20	19.18	19.08	0-5	5
		1	3	19.22	19.22	19.10	0-5	5
		1	5	19.12	19.13	19.12	0-5	5
		3	0	19.15	19.21	19.11	0-5	5
		3	1	19.19	19.20	19.18	0-5	5
		3	3	19.13	19.11	19.08	0-5	5
		6	0	19.06	19.14	18.93	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	23.88	24.02	24.02	0	0
		1	7	23.91	24.03	23.98	0	0
		1	14	23.92	24.02	23.93	0	0
		8	0	23.08	23.11	23.08	0-1	1
		8	3	23.11	23.15	23.12	0-1	1
		8	7	23.00	23.10	23.01	0-1	1
		15	0	23.04	23.12	23.05	0-1	1
	16QAM	1	0	23.25	23.35	23.20	0-1	1
		1	7	23.26	23.47	23.33	0-1	1
		1	14	23.33	23.30	23.33	0-1	1
		8	0	22.18	22.17	22.18	0-2	2
		8	3	22.22	22.24	22.18	0-2	2
		8	7	22.10	22.20	22.07	0-2	2
		15	0	22.13	22.12	22.05	0-2	2
	64QAM	1	0	21.79	22.31	21.95	0-2	2
		1	7	21.79	22.24	21.84	0-2	2
		1	14	21.82	22.23	21.73	0-2	2
		8	0	20.67	21.12	20.75	0-3	3
		8	3	20.69	21.17	20.77	0-3	3
		8	7	20.67	21.12	20.70	0-3	3
		15	0	20.66	21.14	20.75	0-3	3
	256QAM	1	0	19.23	19.26	19.22	0-5	5
		1	7	19.22	19.17	19.17	0-5	5
		1	14	19.15	19.16	19.18	0-5	5
		8	0	19.18	19.16	19.10	0-5	5
		8	3	19.22	19.20	19.11	0-5	5
		8	7	19.07	19.17	19.02	0-5	5
		15	0	19.17	19.15	19.07	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	23.89	23.94	23.94	0	0
		1	12	23.92	24.11	23.96	0	0
		1	24	23.77	24.00	23.87	0	0
		12	0	23.12	23.08	23.06	0-1	1
		12	6	23.15	23.11	23.04	0-1	1
		12	11	23.03	23.08	23.03	0-1	1
		25	0	23.08	23.12	23.02	0-1	1
	16QAM	1	0	23.33	23.43	23.32	0-1	1
		1	12	23.28	23.48	23.21	0-1	1
		1	24	23.30	23.46	23.27	0-1	1
		12	0	22.15	22.13	22.09	0-2	2
		12	6	22.14	22.12	22.11	0-2	2
		12	11	22.12	22.13	22.10	0-2	2
		25	0	22.12	22.10	21.96	0-2	2
	64QAM	1	0	21.77	22.20	22.17	0-2	2
		1	12	21.78	22.32	21.87	0-2	2
		1	24	21.65	22.14	21.65	0-2	2
		12	0	20.65	21.12	20.99	0-3	3
		12	6	20.76	21.10	20.90	0-3	3
		12	11	20.74	21.14	20.79	0-3	3
		25	0	20.67	21.08	20.82	0-3	3
	256QAM	1	0	19.21	19.21	19.11	0-5	5
		1	12	19.17	19.26	19.20	0-5	5
		1	24	19.12	19.24	19.13	0-5	5
		12	0	19.17	19.15	19.13	0-5	5
		12	6	19.19	19.16	19.09	0-5	5
		12	11	19.11	19.16	19.10	0-5	5
		25	0	19.15	19.13	19.04	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	23.57	23.83	23.62	0	0
		1	24	23.88	24.01	23.95	0	0
		1	49	23.29	23.95	23.75	0	0
		25	0	23.07	22.96	22.97	0-1	1
		25	12	23.18	23.14	23.07	0-1	1
		25	24	23.02	23.11	22.99	0-1	1
		50	0	23.05	23.08	23.00	0-1	1
	16QAM	1	0	23.21	23.28	23.00	0-1	1
		1	24	23.52	23.37	23.54	0-1	1
		1	49	23.12	23.15	23.13	0-1	1
		25	0	22.00	22.00	21.98	0-2	2
		25	12	22.14	22.06	22.11	0-2	2
		25	24	22.03	22.05	21.97	0-2	2
		50	0	21.99	22.11	22.01	0-2	2
	64QAM	1	0	21.79	21.95	21.73	0-2	2
		1	24	21.97	22.21	22.19	0-2	2
		1	49	21.77	21.90	21.72	0-2	2
		25	0	20.75	21.04	20.97	0-3	3
		25	12	20.78	21.12	21.13	0-3	3
		25	24	20.84	20.98	20.91	0-3	3
		50	0	20.70	21.09	21.04	0-3	3
	256QAM	1	0	18.82	19.02	18.86	0-5	5
		1	24	19.16	19.30	19.08	0-5	5
		1	49	19.30	19.10	18.90	0-5	5
		25	0	19.07	19.05	18.98	0-5	5
		25	12	19.17	19.04	19.19	0-5	5
		25	24	19.07	19.09	19.05	0-5	5
		50	0	19.11	19.12	19.04	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	23.96	23.94	23.95	0	0
		1	36	23.79	23.85	23.99	0	0
		1	74	23.42	23.77	23.94	0	0
		36	0	23.01	23.10	22.95	0-1	1
		36	18	23.06	23.06	23.05	0-1	1
		36	39	23.10	23.09	23.01	0-1	1
		75	0	23.06	23.11	23.10	0-1	1
	16QAM	1	0	23.30	23.14	23.33	0-1	1
		1	36	23.26	23.20	23.28	0-1	1
		1	74	23.16	23.07	23.18	0-1	1
		36	0	22.02	22.05	21.94	0-2	2
		36	18	22.09	22.03	22.07	0-2	2
		36	39	22.03	22.09	22.00	0-2	2
		75	0	22.11	22.06	21.99	0-2	2
	64QAM	1	0	22.01	22.00	21.98	0-2	2
		1	36	21.88	22.21	22.18	0-2	2
		1	74	22.06	22.12	21.96	0-2	2
		36	0	20.77	21.14	21.05	0-3	3
		36	18	20.96	21.10	21.09	0-3	3
		36	39	21.05	21.05	21.04	0-3	3
		75	0	20.93	21.16	21.05	0-3	3
	256QAM	1	0	18.97	18.98	18.94	0-5	5
		1	36	19.21	19.21	19.09	0-5	5
		1	74	18.99	19.03	18.95	0-5	5
		36	0	18.99	19.06	19.08	0-5	5
		36	18	19.17	19.06	19.09	0-5	5
		36	39	18.97	19.04	19.00	0-5	5
		75	0	19.05	19.11	19.08	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	23.71	23.89	24.03	0	0
		1	49	23.62	23.93	23.87	0	0
		1	99	23.54	23.76	23.93	0	0
		50	0	22.98	23.03	22.95	0-1	1
		50	25	23.18	23.11	22.96	0-1	1
		50	49	23.02	22.99	22.97	0-1	1
		100	0	23.00	23.05	22.92	0-1	1
	16QAM	1	0	23.00	23.03	23.26	0-1	1
		1	49	23.20	23.31	23.18	0-1	1
		1	99	22.99	23.07	23.31	0-1	1
		50	0	21.97	21.99	21.91	0-2	2
		50	25	22.16	22.13	22.06	0-2	2
		50	49	22.05	22.02	22.01	0-2	2
		100	0	22.04	22.09	21.92	0-2	2
	64QAM	1	0	21.84	21.96	21.53	0-2	2
		1	49	22.11	22.21	22.19	0-2	2
		1	99	21.96	21.88	22.06	0-2	2
		50	0	20.89	21.04	21.01	0-3	3
		50	25	21.01	21.18	21.04	0-3	3
		50	49	21.04	21.07	21.05	0-3	3
		100	0	21.01	21.08	21.02	0-3	3
	256QAM	1	0	18.81	18.84	18.74	0-5	5
		1	49	19.04	19.17	19.08	0-5	5
		1	99	19.10	19.10	18.91	0-5	5
		50	0	19.00	18.99	18.97	0-5	5
		50	25	19.17	19.08	18.99	0-5	5
		50	49	18.93	19.06	18.98	0-5	5
		100	0	19.06	19.07	19.03	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.

[LTE Band 71 Conducted Power]

LTE Band 71 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133147 Ch. 665.5 ㎒	133297Ch. 680.5 ㎒	133447 Ch. 695.5 ㎒		
5 ㎒	QPSK	1	0	24.11	24.68	24.67	0	0
		1	12	24.77	24.85	24.70	0	0
		1	24	24.58	24.77	24.22	0	0
		12	0	24.03	23.76	23.72	0-1	1
		12	6	24.00	23.85	23.89	0-1	1
		12	11	24.03	23.89	23.83	0-1	1
		25	0	23.92	23.81	23.74	0-1	1
	16QAM	1	0	22.97	24.02	23.89	0-1	1
		1	12	24.19	24.25	24.04	0-1	1
		1	24	24.14	24.13	23.60	0-1	1
		12	0	22.99	22.89	22.86	0-2	2
		12	6	23.15	22.93	22.94	0-2	2
		12	11	23.06	22.95	22.88	0-2	2
		25	0	23.01	22.90	22.76	0-2	2
	64QAM	1	0	21.80	22.96	22.41	0-2	2
		1	12	22.53	23.03	22.62	0-2	2
		1	24	22.41	23.00	21.84	0-2	2
		12	0	21.05	21.82	21.79	0-3	3
		12	6	21.66	21.97	21.87	0-3	3
		12	11	21.78	21.89	21.45	0-3	3
		25	0	21.34	21.89	21.34	0-3	3
	256QAM	1	0	19.99	19.79	19.79	0-5	5
		1	12	20.15	20.02	19.89	0-5	5
		1	24	20.10	19.97	19.83	0-5	5
		12	0	20.02	19.78	19.72	0-5	5
		12	6	20.08	19.90	19.88	0-5	5
		12	11	20.08	19.87	19.83	0-5	5
		25	0	19.98	19.84	19.77	0-5	5

LTE Band 71 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133172 Ch. 668 ㎒	133297 Ch. 680.5 ㎒	133422 Ch. 693 ㎒		
10 ㎒	QPSK	1	0	24.12	24.78	24.50	0	0
		1	24	24.52	24.91	24.60	0	0
		1	49	23.95	24.60	24.24	0	0
		25	0	23.94	23.82	23.66	0-1	1
		25	12	23.79	23.89	23.80	0-1	1
		25	24	23.04	23.87	23.71	0-1	1
		50	0	23.32	23.79	23.67	0-1	1
	16QAM	1	0	23.49	24.31	24.06	0-1	1
		1	24	23.83	24.21	24.14	0-1	1
		1	49	23.30	24.18	23.81	0-1	1
		25	0	23.06	22.86	22.74	0-2	2
		25	12	22.86	22.92	22.76	0-2	2
		25	24	22.21	22.82	22.85	0-2	2
		50	0	22.36	22.76	22.70	0-2	2
	64QAM	1	0	21.39	22.56	22.17	0-2	2
		1	24	21.98	23.01	22.22	0-2	2
		1	49	21.39	22.91	22.02	0-2	2
		25	0	21.24	21.74	20.99	0-3	3
		25	12	20.99	21.92	21.29	0-3	3
		25	24	20.31	21.78	21.42	0-3	3
		50	0	20.53	21.82	21.16	0-3	3
	256QAM	1	0	19.90	19.67	19.64	0-5	5
		1	24	19.98	20.03	19.95	0-5	5
		1	49	19.66	19.72	19.46	0-5	5
		25	0	20.02	19.62	19.71	0-5	5
		25	12	20.03	19.88	19.81	0-5	5
		25	24	19.92	19.90	19.71	0-5	5
		50	0	19.99	19.83	19.70	0-5	5

LTE Band 71 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 133297 Ch. 680.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
15 ㎒	QPSK	1	0	24.29	0	0
		1	36	24.76	0	0
		1	74	24.64	0	0
		36	0	23.85	0-1	1
		36	18	23.86	0-1	1
		36	39	23.78	0-1	1
		75	0	23.85	0-1	1
	16QAM	1	0	23.79	0-1	1
		1	36	24.12	0-1	1
		1	74	24.37	0-1	1
		36	0	22.84	0-2	2
		36	18	22.85	0-2	2
		36	39	22.79	0-2	2
		75	0	22.85	0-2	2
	64QAM	1	0	21.96	0-2	2
		1	36	22.89	0-2	2
		1	74	22.46	0-2	2
		36	0	21.28	0-3	3
		36	18	21.88	0-3	3
		36	39	21.81	0-3	3
		75	0	21.49	0-3	3
	256QAM	1	0	19.70	0-5	5
		1	36	20.13	0-5	5
		1	74	19.91	0-5	5
		36	0	19.79	0-5	5
		36	18	19.93	0-5	5
		36	39	19.81	0-5	5
		75	0	19.81	0-5	5

LTE Band 71 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 133297 Ch. 680.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	24.54	0	0
		1	49	**24.72**	0	0
		1	99	24.58	0	0
		50	0	**23.83**	0-1	1
		50	25	23.80	0-1	1
		50	49	23.71	0-1	1
		100	0	23.77	0-1	1
	16QAM	1	0	23.81	0-1	1
		1	49	24.12	0-1	1
		1	99	24.16	0-1	1
		50	0	22.80	0-2	2
		50	25	22.84	0-2	2
		50	49	22.82	0-2	2
		100	0	22.77	0-2	2
	64QAM	1	0	21.88	0-2	2
		1	49	22.95	0-2	2
		1	99	22.00	0-2	2
		50	0	21.54	0-3	3
		50	25	21.80	0-3	3
		50	49	21.15	0-3	3
		100	0	21.10	0-3	3
	256QAM	1	0	19.60	0-5	5
		1	49	20.04	0-5	5
		1	99	19.56	0-5	5
		50	0	19.75	0-5	5
		50	25	19.91	0-5	5
		50	49	19.83	0-5	5
		100	0	19.80	0-5	5

11.2.2 LTE Reduced Conducted Power (Grip activated)

[LTE Band 2 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	14.03	14.07	14.10	0	0
		1	3	14.05	14.15	14.09	0	0
		1	5	14.04	14.06	14.05	0	0
		3	0	14.06	14.06	14.11	0	0
		3	1	14.13	14.10	14.18	0	0
		3	3	14.02	14.07	14.02	0	0
		6	0	14.18	14.16	14.16	0-1	0
	16QAM	1	0	14.44	14.29	14.45	0-1	0
		1	3	14.41	14.49	14.48	0-1	0
		1	5	14.32	14.39	14.41	0-1	0
		3	0	14.25	14.28	14.24	0-1	0
		3	1	14.30	14.31	14.33	0-1	0
		3	3	14.25	14.26	14.29	0-1	0
		6	0	14.17	14.26	14.23	0-2	0
	64QAM	1	0	14.36	14.30	14.37	0-2	0
		1	3	14.45	14.46	14.43	0-2	0
		1	5	14.26	14.28	14.21	0-2	0
		3	0	14.20	14.22	14.22	0-2	0
		3	1	14.31	14.24	14.36	0-2	0
		3	3	14.27	14.22	14.20	0-2	0
		6	0	14.22	14.17	14.21	0-3	0
	256QAM	1	0	14.22	14.20	14.28	0-5	0
		1	3	14.27	14.27	14.34	0-5	0
		1	5	14.22	14.17	14.22	0-5	0
		3	0	14.21	14.19	14.25	0-5	0
		3	1	14.21	14.23	14.36	0-5	0
		3	3	14.05	14.28	14.29	0-5	0
		6	0	14.13	14.16	14.14	0-5	0

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	14.06	14.01	14.15	0	0
		1	7	14.04	14.12	14.18	0	0
		1	14	14.05	14.12	14.16	0	0
		8	0	14.25	14.21	14.31	0-1	0
		8	3	14.26	14.27	14.28	0-1	0
		8	7	14.20	14.24	14.20	0-1	0
		15	0	14.22	14.23	14.24	0-1	0
	16QAM	1	0	14.46	14.44	14.52	0-1	0
		1	7	14.45	14.69	14.49	0-1	0
		1	14	14.40	14.47	14.42	0-1	0
		8	0	14.32	14.29	14.38	0-2	0
		8	3	14.33	14.35	14.41	0-2	0
		8	7	14.29	14.33	14.31	0-2	0
		15	0	14.27	14.25	14.31	0-2	0
	64QAM	1	0	14.41	14.35	14.40	0-2	0
		1	7	14.37	14.37	14.45	0-2	0
		1	14	14.29	14.30	14.37	0-2	0
		8	0	14.25	14.23	14.32	0-3	0
		8	3	14.31	14.19	14.35	0-3	0
		8	7	14.23	14.18	14.30	0-3	0
		15	0	14.27	14.24	14.30	0-3	0
	256QAM	1	0	14.37	14.23	14.31	0-5	0
		1	7	14.40	14.41	14.25	0-5	0
		1	14	14.20	14.31	14.36	0-5	0
		8	0	14.25	14.12	14.34	0-5	0
		8	3	14.30	14.18	14.29	0-5	0
		8	7	14.21	14.24	14.20	0-5	0
		15	0	14.25	14.24	14.25	0-5	0

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	14.03	13.98	14.02	0	0
		1	12	14.11	14.20	14.16	0	0
		1	24	13.95	14.10	14.06	0	0
		12	0	14.18	14.18	14.23	0-1	0
		12	6	14.28	14.28	14.27	0-1	0
		12	11	14.22	14.25	14.28	0-1	0
		25	0	14.18	14.25	14.19	0-1	0
	16QAM	1	0	14.34	14.37	14.45	0-1	0
		1	12	14.54	14.40	14.46	0-1	0
		1	24	14.30	14.44	14.36	0-1	0
		12	0	14.33	14.24	14.25	0-2	0
		12	6	14.27	14.34	14.32	0-2	0
		12	11	14.29	14.29	14.33	0-2	0
		25	0	14.19	14.25	14.16	0-2	0
	64QAM	1	0	14.38	14.18	14.35	0-2	0
		1	12	14.43	14.40	14.51	0-2	0
		1	24	14.27	14.32	14.36	0-2	0
		12	0	14.28	14.25	14.31	0-3	0
		12	6	14.33	14.22	14.24	0-3	0
		12	11	14.30	14.26	14.23	0-3	0
		25	0	14.21	14.20	14.23	0-3	0
	256QAM	1	0	14.34	14.25	14.15	0-5	0
		1	12	14.25	14.30	14.41	0-5	0
		1	24	14.25	14.20	14.21	0-5	0
		12	0	14.24	14.16	14.28	0-5	0
		12	6	14.29	14.16	14.23	0-5	0
		12	11	14.15	14.14	14.21	0-5	0
		25	0	14.20	14.18	14.12	0-5	0

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	13.85	13.87	14.14	0	0
		1	24	13.89	14.16	14.16	0	0
		1	49	13.68	13.89	14.21	0	0
		25	0	14.15	14.05	14.11	0-1	0
		25	12	14.20	14.24	14.23	0-1	0
		25	24	14.15	14.11	14.15	0-1	0
		50	0	14.12	14.14	14.23	0-1	0
	16QAM	1	0	14.35	14.26	14.65	0-1	0
		1	24	14.48	14.50	14.67	0-1	0
		1	49	14.29	14.30	14.58	0-1	0
		25	0	14.17	14.03	14.10	0-2	0
		25	12	14.19	14.25	14.29	0-2	0
		25	24	14.18	14.19	14.17	0-2	0
		50	0	14.14	14.22	14.11	0-2	0
	64QAM	1	0	14.07	14.01	14.44	0-2	0
		1	24	14.40	14.21	14.30	0-2	0
		1	49	14.07	14.11	14.49	0-2	0
		25	0	14.18	14.03	14.05	0-3	0
		25	12	14.25	14.21	14.13	0-3	0
		25	24	14.12	14.21	14.17	0-3	0
		50	0	14.14	14.16	14.12	0-3	0
	256QAM	1	0	13.74	13.85	13.96	0-5	0
		1	24	14.25	14.30	14.31	0-5	0
		1	49	13.98	13.93	14.06	0-5	0
		25	0	14.09	14.05	14.08	0-5	0
		25	12	14.28	14.14	14.18	0-5	0
		25	24	14.13	14.04	14.21	0-5	0
		50	0	14.12	14.17	14.09	0-5	0

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	13.85	14.01	14.05	0	0
		1	36	14.00	14.08	14.05	0	0
		1	74	13.89	14.01	14.05	0	0
		36	0	14.11	14.08	14.10	0-1	0
		36	18	14.20	14.22	14.17	0-1	0
		36	39	14.16	14.13	14.26	0-1	0
		75	0	14.14	14.15	14.08	0-1	0
	16QAM	1	0	14.33	14.49	14.47	0-1	0
		1	36	14.39	14.42	14.52	0-1	0
		1	74	14.31	14.42	14.44	0-1	0
		36	0	14.09	14.08	14.14	0-2	0
		36	18	14.17	14.21	14.14	0-2	0
		36	39	14.15	14.23	14.20	0-2	0
		75	0	14.15	14.15	14.03	0-2	0
	64QAM	1	0	13.95	14.29	14.25	0-2	0
		1	36	14.28	14.22	14.36	0-2	0
		1	74	14.23	14.35	14.27	0-2	0
		36	0	14.11	13.99	14.08	0-3	0
		36	18	14.11	14.01	14.13	0-3	0
		36	39	14.14	14.14	14.28	0-3	0
		75	0	14.06	14.05	14.05	0-3	0
	256QAM	1	0	14.01	14.06	14.10	0-5	0
		1	36	14.21	14.14	14.25	0-5	0
		1	74	14.14	14.17	14.31	0-5	0
		36	0	14.07	13.97	13.96	0-5	0
		36	18	14.11	14.08	14.11	0-5	0
		36	39	14.17	14.15	14.08	0-5	0
		75	0	14.08	14.09	14.04	0-5	0

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	14.04	14.09	14.04	0	0
		1	49	13.95	14.03	14.17	0	0
		1	99	13.93	14.02	14.06	0	0
		50	0	14.00	14.00	14.01	0-1	0
		50	25	14.15	14.21	14.18	0-1	0
		50	49	14.11	14.16	14.09	0-1	0
		100	0	14.11	14.12	14.17	0-1	0
	16QAM	1	0	14.40	14.29	14.45	0-1	0
		1	49	14.43	14.54	14.48	0-1	0
		1	99	14.39	14.35	14.44	0-1	0
		50	0	13.98	14.02	14.00	0-2	0
		50	25	14.13	14.20	14.20	0-2	0
		50	49	14.14	14.11	14.18	0-2	0
		100	0	14.16	14.18	14.11	0-2	0
	64QAM	1	0	14.22	14.22	14.27	0-2	0
		1	49	14.15	14.26	14.28	0-2	0
		1	99	14.31	14.25	14.30	0-2	0
		50	0	13.94	13.91	14.06	0-3	0
		50	25	14.11	14.11	14.23	0-3	0
		50	49	14.10	14.10	14.19	0-3	0
		100	0	14.04	14.05	14.05	0-3	0
	256QAM	1	0	13.72	13.73	13.85	0-5	0
		1	49	14.16	14.15	14.21	0-5	0
		1	99	14.03	14.02	14.12	0-5	0
		50	0	13.90	13.92	13.98	0-5	0
		50	25	14.09	14.10	14.19	0-5	0
		50	49	13.99	14.08	14.07	0-5	0
		100	0	14.00	14.07	14.04	0-5	0

[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	13.93	13.88	14.02	0	0
		1	3	14.03	13.95	14.02	0	0
		1	5	13.92	13.90	14.04	0	0
		3	0	13.94	13.87	14.04	0	0
		3	1	13.98	13.91	14.10	0	0
		3	3	13.93	13.98	14.08	0	0
		6	0	14.00	13.97	14.14	0-1	0
	16QAM	1	0	14.15	14.26	14.30	0-1	0
		1	3	14.24	14.21	14.45	0-1	0
		1	5	14.30	14.18	14.28	0-1	0
		3	0	14.21	14.12	14.23	0-1	0
		3	1	14.22	14.19	14.34	0-1	0
		3	3	14.20	14.25	14.22	0-1	0
		6	0	14.16	14.04	14.20	0-2	0
	64QAM	1	0	14.29	14.17	14.36	0-2	0
		1	3	14.45	14.28	14.49	0-2	0
		1	5	14.42	14.22	14.31	0-2	0
		3	0	14.16	14.09	14.24	0-2	0
		3	1	14.20	14.12	14.37	0-2	0
		3	3	14.17	14.05	14.16	0-2	0
		6	0	14.18	14.00	14.20	0-3	0
	256QAM	1	0	14.24	14.00	14.21	0-5	0
		1	3	14.27	14.19	14.41	0-5	0
		1	5	14.19	14.01	14.22	0-5	0
		3	0	14.26	14.08	14.19	0-5	0
		3	1	14.26	14.07	14.30	0-5	0
		3	3	14.18	14.15	14.21	0-5	0
		6	0	14.06	13.96	14.17	0-5	0

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	14.03	13.95	14.06	0	0
		1	7	13.96	14.02	14.06	0	0
		1	14	14.05	14.04	14.13	0	0
		8	0	14.16	14.07	14.19	0-1	0
		8	3	14.09	14.06	14.18	0-1	0
		8	7	14.17	14.13	14.19	0-1	0
		15	0	14.18	14.02	14.15	0-1	0
	16QAM	1	0	14.31	14.25	14.36	0-1	0
		1	7	14.32	14.29	14.39	0-1	0
		1	14	14.42	14.28	14.51	0-1	0
		8	0	14.27	14.11	14.27	0-2	0
		8	3	14.30	14.19	14.38	0-2	0
		8	7	14.19	14.22	14.27	0-2	0
		15	0	14.22	14.08	14.16	0-2	0
	64QAM	1	0	14.43	14.20	14.33	0-2	0
		1	7	14.29	14.30	14.45	0-2	0
		1	14	14.26	14.23	14.47	0-2	0
		8	0	14.22	14.09	14.24	0-3	0
		8	3	14.21	14.04	14.35	0-3	0
		8	7	14.19	14.13	14.26	0-3	0
		15	0	14.23	14.02	14.23	0-3	0
	256QAM	1	0	14.29	14.11	14.30	0-5	0
		1	7	14.24	14.13	14.29	0-5	0
		1	14	14.20	14.12	14.33	0-5	0
		8	0	14.21	14.06	14.17	0-5	0
		8	3	14.26	14.04	14.37	0-5	0
		8	7	14.13	14.05	14.25	0-5	0
		15	0	14.22	14.06	14.21	0-5	0

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	14.00	13.89	13.98	0	0
		1	12	13.99	14.14	14.16	0	0
		1	24	13.96	13.99	14.12	0	0
		12	0	14.11	14.04	14.09	0-1	0
		12	6	14.20	14.08	14.18	0-1	0
		12	11	14.16	14.15	14.29	0-1	0
		25	0	14.12	14.09	14.14	0-1	0
	16QAM	1	0	14.43	14.19	14.46	0-1	0
		1	12	14.30	14.28	14.49	0-1	0
		1	24	14.32	14.21	14.54	0-1	0
		12	0	14.15	14.13	14.26	0-2	0
		12	6	14.23	14.17	14.32	0-2	0
		12	11	14.18	14.25	14.33	0-2	0
		25	0	14.14	14.10	14.21	0-2	0
	64QAM	1	0	14.24	14.19	14.32	0-2	0
		1	12	14.37	14.33	14.52	0-2	0
		1	24	14.23	14.36	14.28	0-2	0
		12	0	14.22	14.07	14.18	0-3	0
		12	6	14.24	14.10	14.32	0-3	0
		12	11	14.20	14.07	14.24	0-3	0
		25	0	14.11	14.02	14.22	0-3	0
	256QAM	1	0	14.20	14.17	14.22	0-5	0
		1	12	14.28	14.10	14.34	0-5	0
		1	24	14.04	14.15	14.29	0-5	0
		12	0	14.22	14.06	14.13	0-5	0
		12	6	14.16	14.02	14.27	0-5	0
		12	11	14.18	14.10	14.20	0-5	0
		25	0	14.15	13.96	14.21	0-5	0

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	13.64	13.73	13.83	0	0
		1	24	14.01	14.00	14.05	0	0
		1	49	13.65	13.63	13.83	0	0
		25	0	14.09	13.98	14.00	0-1	0
		25	12	14.18	14.04	14.19	0-1	0
		25	24	14.03	14.07	14.14	0-1	0
		50	0	14.09	14.01	14.18	0-1	0
	16QAM	1	0	14.19	14.38	14.39	0-1	0
		1	24	14.51	14.56	14.57	0-1	0
		1	49	14.34	14.22	14.36	0-1	0
		25	0	14.09	13.92	14.07	0-2	0
		25	12	14.19	14.09	14.29	0-2	0
		25	24	14.13	14.05	14.19	0-2	0
		50	0	14.09	14.02	14.20	0-2	0
	64QAM	1	0	14.00	13.92	13.97	0-2	0
		1	24	14.36	14.18	14.45	0-2	0
		1	49	13.84	14.14	14.18	0-2	0
		25	0	14.13	13.94	14.00	0-3	0
		25	12	14.25	13.93	14.14	0-3	0
		25	24	14.11	14.01	14.14	0-3	0
		50	0	14.09	13.95	14.13	0-3	0
	256QAM	1	0	14.01	13.83	13.87	0-5	0
		1	24	14.06	14.26	14.33	0-5	0
		1	49	13.98	13.92	14.02	0-5	0
		25	0	14.05	14.02	14.00	0-5	0
		25	12	14.23	14.06	14.13	0-5	0
		25	24	14.09	13.93	14.03	0-5	0
		50	0	14.07	13.99	14.13	0-5	0

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	13.82	13.79	13.79	0	0
		1	36	13.92	13.94	14.09	0	0
		1	74	13.71	13.70	13.86	0	0
		36	0	14.07	13.96	14.04	0-1	0
		36	18	14.11	14.07	14.12	0-1	0
		36	39	14.09	14.12	14.15	0-1	0
		75	0	14.06	14.04	14.06	0-1	0
	16QAM	1	0	14.38	14.29	14.43	0-1	0
		1	36	14.45	14.49	14.49	0-1	0
		1	74	14.23	14.29	14.26	0-1	0
		36	0	14.13	13.98	14.02	0-2	0
		36	18	14.13	13.99	13.98	0-2	0
		36	39	14.12	14.04	14.14	0-2	0
		75	0	14.08	14.04	14.10	0-2	0
	64QAM	1	0	14.17	13.86	14.06	0-2	0
		1	36	14.20	14.19	14.33	0-2	0
		1	74	14.07	14.11	14.23	0-2	0
		36	0	13.99	13.96	14.02	0-3	0
		36	18	14.12	14.07	14.13	0-3	0
		36	39	14.05	14.02	14.22	0-3	0
		75	0	14.05	14.02	14.04	0-3	0
	256QAM	1	0	13.97	13.85	14.04	0-5	0
		1	36	14.14	14.12	14.16	0-5	0
		1	74	14.01	13.93	14.19	0-5	0
		36	0	14.01	13.90	13.92	0-5	0
		36	18	14.12	13.95	14.11	0-5	0
		36	39	14.01	14.04	14.08	0-5	0
		75	0	13.86	14.00	14.08	0-5	0

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	13.63	0	0
		1	49	13.85	0	0
		1	99	13.67	0	0
		50	0	13.96	0-1	0
		50	25	14.04	0-1	0
		50	49	14.03	0-1	0
		100	0	14.05	0-1	0
	16QAM	1	0	14.20	0-1	0
		1	49	14.36	0-1	0
		1	99	14.19	0-1	0
		50	0	13.93	0-2	0
		50	25	14.07	0-2	0
		50	49	14.08	0-2	0
		100	0	14.09	0-2	0
	64QAM	1	0	13.93	0-2	0
		1	49	14.18	0-2	0
		1	99	14.13	0-2	0
		50	0	13.90	0-3	0
		50	25	14.04	0-3	0
		50	49	13.93	0-3	0
		100	0	13.98	0-3	0
	256QAM	1	0	13.88	0-5	0
		1	49	14.08	0-5	0
		1	99	13.92	0-5	0
		50	0	13.84	0-5	0
		50	25	14.10	0-5	0
		50	49	13.99	0-5	0
		100	0	13.94	0-5	0

[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	15.85	16.01	15.77	0	0
		1	3	16.02	16.01	15.80	0	0
		1	5	15.93	15.95	15.76	0	0
		3	0	15.98	16.00	15.72	0	0
		3	1	16.02	15.96	15.82	0	0
		3	3	16.00	15.96	15.75	0	0
		6	0	16.05	16.03	15.84	0-1	0
	16QAM	1	0	16.22	16.33	16.13	0-1	0
		1	3	16.43	16.40	16.18	0-1	0
		1	5	16.37	16.25	16.26	0-1	0
		3	0	16.16	16.15	15.95	0-1	0
		3	1	16.16	16.23	16.02	0-1	0
		3	3	16.12	16.21	15.89	0-1	0
		6	0	16.11	16.07	15.91	0-2	0
	64QAM	1	0	16.19	16.24	16.05	0-2	0
		1	3	16.26	16.29	16.12	0-2	0
		1	5	16.21	16.21	16.05	0-2	0
		3	0	16.14	16.08	15.90	0-2	0
		3	1	16.22	16.18	15.95	0-2	0
		3	3	16.16	16.10	15.93	0-2	0
		6	0	16.10	16.10	15.85	0-3	0
	256QAM	1	0	16.03	16.11	15.98	0-5	0
		1	3	16.28	16.27	16.00	0-5	0
		1	5	16.17	16.04	15.97	0-5	0
		3	0	16.14	16.10	15.90	0-5	0
		3	1	16.25	16.15	16.03	0-5	0
		3	3	16.15	16.16	16.02	0-5	0
		6	0	16.02	16.08	15.88	0-5	0

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	15.97	16.08	15.83	0	0
		1	7	16.04	16.04	15.91	0	0
		1	14	16.12	16.00	15.81	0	0
		8	0	16.07	16.10	15.95	0-1	0
		8	3	16.17	16.14	16.02	0-1	0
		8	7	16.10	16.07	15.91	0-1	0
		15	0	16.17	16.16	15.90	0-1	0
	16QAM	1	0	16.31	16.36	16.13	0-1	0
		1	7	16.44	16.50	16.13	0-1	0
		1	14	16.53	16.40	16.26	0-1	0
		8	0	16.13	16.18	16.02	0-2	0
		8	3	16.26	16.22	16.12	0-2	0
		8	7	16.18	16.19	16.04	0-2	0
		15	0	16.16	16.12	15.93	0-2	0
	64QAM	1	0	16.16	16.29	16.04	0-2	0
		1	7	16.26	16.32	16.09	0-2	0
		1	14	16.15	16.28	15.96	0-2	0
		8	0	16.11	16.14	15.96	0-3	0
		8	3	16.18	16.21	16.04	0-3	0
		8	7	16.20	16.15	15.95	0-3	0
		15	0	16.21	16.15	15.96	0-3	0
	256QAM	1	0	16.16	16.32	16.05	0-5	0
		1	7	16.17	16.19	16.06	0-5	0
		1	14	16.20	16.23	16.03	0-5	0
		8	0	16.07	16.20	15.96	0-5	0
		8	3	16.21	16.24	15.97	0-5	0
		8	7	16.16	16.14	15.95	0-5	0
		15	0	16.14	16.12	15.96	0-5	0

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	16.00	15.94	15.87	0	0
		1	12	16.03	16.04	15.86	0	0
		1	24	16.01	15.90	15.83	0	0
		12	0	16.10	16.05	15.89	0-1	0
		12	6	16.20	16.14	15.96	0-1	0
		12	11	16.17	16.11	15.98	0-1	0
		25	0	16.15	16.12	15.98	0-1	0
	16QAM	1	0	16.34	16.22	16.02	0-1	0
		1	12	16.57	16.35	16.27	0-1	0
		1	24	16.34	16.29	16.15	0-1	0
		12	0	16.13	16.14	15.98	0-2	0
		12	6	16.26	16.19	15.95	0-2	0
		12	11	16.24	16.17	15.98	0-2	0
		25	0	16.15	16.11	15.91	0-2	0
	64QAM	1	0	16.19	16.21	16.09	0-2	0
		1	12	16.30	16.35	16.11	0-2	0
		1	24	16.32	16.20	15.86	0-2	0
		12	0	16.12	16.10	15.98	0-3	0
		12	6	16.20	16.17	16.06	0-3	0
		12	11	16.43	16.18	16.04	0-3	0
		25	0	16.09	16.10	15.90	0-3	0
	256QAM	1	0	16.13	16.21	15.96	0-5	0
		1	12	16.30	16.34	16.05	0-5	0
		1	24	16.22	16.10	16.02	0-5	0
		12	0	16.10	16.07	15.96	0-5	0
		12	6	16.20	16.14	15.96	0-5	0
		12	11	16.15	16.07	15.98	0-5	0
		25	0	16.19	16.12	15.88	0-5	0

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	15.99	0	0
		1	24	15.94	0	0
		1	49	15.89	0	0
		25	0	16.17	0-1	0
		25	12	16.20	0-1	0
		25	24	16.18	0-1	0
		50	0	15.95	0-1	0
	16QAM	1	0	16.56	0-1	0
		1	24	16.45	0-1	0
		1	49	16.34	0-1	0
		25	0	16.17	0-2	0
		25	12	16.12	0-2	0
		25	24	16.10	0-2	0
		50	0	15.96	0-2	0
	64QAM	1	0	16.31	0-2	0
		1	24	16.26	0-2	0
		1	49	16.08	0-2	0
		25	0	16.11	0-3	0
		25	12	16.18	0-3	0
		25	24	16.05	0-3	0
		50	0	16.04	0-3	0
	256QAM	1	0	15.88	0-5	0
		1	24	16.41	0-5	0
		1	49	15.85	0-5	0
		25	0	16.05	0-5	0
		25	12	16.16	0-5	0
		25	24	16.04	0-5	0
		50	0	15.94	0-5	0

[LTE Band 7 Conducted Power]

LTE Band 7 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20775 Ch. 2502.5 ㎒	21100 Ch. 2535 ㎒	21425 Ch. 2567.5 ㎒		
5 ㎒	QPSK	1	0	12.04	12.01	12.06	0	0
		1	12	11.94	11.91	12.11	0	0
		1	24	11.94	11.91	12.08	0	0
		12	0	12.02	11.88	12.13	0-1	0
		12	6	12.05	12.04	12.14	0-1	0
		12	11	12.06	12.05	12.13	0-1	0
		25	0	12.05	12.01	12.07	0-1	0
	16QAM	1	0	12.40	12.19	12.27	0-1	0
		1	12	12.42	12.43	12.43	0-1	0
		1	24	12.28	12.44	12.55	0-1	0
		12	0	12.07	11.97	12.12	0-2	0
		12	6	12.13	12.10	12.23	0-2	0
		12	11	12.13	12.08	12.18	0-2	0
		25	0	12.04	11.97	12.10	0-2	0
	64QAM	1	0	12.25	12.16	12.22	0-2	0
		1	12	12.26	12.17	12.27	0-2	0
		1	24	12.21	12.14	12.27	0-2	0
		12	0	12.11	12.03	12.15	0-3	0
		12	6	12.08	12.08	12.21	0-3	0
		12	11	12.07	12.00	12.14	0-3	0
		25	0	12.03	11.95	12.09	0-3	0
	256QAM	1	0	12.18	11.86	12.01	0-5	0
		1	12	12.29	12.22	12.30	0-5	0
		1	24	12.14	12.11	12.11	0-5	0
		12	0	12.01	11.88	12.04	0-5	0
		12	6	12.06	12.06	12.07	0-5	0
		12	11	12.02	11.98	12.10	0-5	0
		25	0	12.04	11.94	12.07	0-5	0

LTE Band 7 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20800 Ch. 2505 ㎒	21100 Ch. 2535 ㎒	21400 Ch. 2565 ㎒		
10 ㎒	QPSK	1	0	11.99	11.96	12.11	0	0
		1	24	11.91	11.75	11.91	0	0
		1	49	11.90	11.98	12.08	0	0
		25	0	12.10	12.04	12.08	0-1	0
		25	12	12.07	12.02	12.10	0-1	0
		25	24	12.01	12.06	12.17	0-1	0
		50	0	12.00	11.99	11.92	0-1	0
	16QAM	1	0	12.43	12.39	12.47	0-1	0
		1	24	12.25	12.15	12.38	0-1	0
		1	49	12.29	12.34	12.41	0-1	0
		25	0	12.09	11.94	12.09	0-2	0
		25	12	12.07	12.03	12.12	0-2	0
		25	24	11.99	12.05	12.16	0-2	0
		50	0	11.93	11.88	11.93	0-2	0
	64QAM	1	0	12.09	12.02	12.19	0-2	0
		1	24	12.18	12.06	12.30	0-2	0
		1	49	12.25	12.10	12.40	0-2	0
		25	0	12.08	11.99	12.06	0-3	0
		25	12	12.03	12.03	12.07	0-3	0
		25	24	11.99	12.01	12.15	0-3	0
		50	0	11.99	12.00	12.02	0-3	0
	256QAM	1	0	11.93	11.68	11.74	0-5	0
		1	24	12.02	12.19	12.27	0-5	0
		1	49	11.86	12.07	12.01	0-5	0
		25	0	11.98	11.83	11.98	0-5	0
		25	12	12.11	12.03	12.11	0-5	0
		25	24	11.86	11.84	12.04	0-5	0
		50	0	11.97	11.94	11.98	0-5	0

LTE Band 7 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20825 Ch. 2507.5 ㎒	21100 Ch. 2535 ㎒	21375 Ch. 2562.5 ㎒		
15 ㎒	QPSK	1	0	12.00	11.85	11.95	0	0
		1	36	11.87	11.82	12.01	0	0
		1	74	11.78	11.93	11.87	0	0
		36	0	12.08	11.96	12.07	0-1	0
		36	18	12.07	11.99	12.08	0-1	0
		36	39	12.03	11.96	12.11	0-1	0
		75	0	12.01	11.95	12.10	0-1	0
	16QAM	1	0	12.34	12.17	12.32	0-1	0
		1	36	12.32	12.07	12.22	0-1	0
		1	74	12.24	12.20	12.30	0-1	0
		36	0	12.07	12.04	12.09	0-2	0
		36	18	12.06	12.10	12.09	0-2	0
		36	39	12.00	12.04	12.12	0-2	0
		75	0	11.94	12.00	12.02	0-2	0
	64QAM	1	0	12.22	12.00	12.15	0-2	0
		1	36	12.21	12.12	12.21	0-2	0
		1	74	12.19	12.11	12.27	0-2	0
		36	0	12.05	11.96	12.13	0-3	0
		36	18	12.06	12.01	12.17	0-3	0
		36	39	12.01	11.97	12.19	0-3	0
		75	0	11.98	11.94	12.18	0-3	0
	256QAM	1	0	11.78	11.83	11.89	0-5	0
		1	36	12.11	12.17	11.98	0-5	0
		1	74	12.24	12.08	12.05	0-5	0
		36	0	11.91	11.78	11.95	0-5	0
		36	18	12.03	12.06	12.10	0-5	0
		36	39	11.94	11.96	12.13	0-5	0
		75	0	11.97	11.93	12.05	0-5	0

LTE Band 7 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 ㎒	21100 Ch. 2535 ㎒	21350 Ch. 2560 ㎒		
20 ㎒	QPSK	1	0	11.97	11.80	11.95	0	0
		1	49	11.96	11.98	11.96	0	0
		1	99	11.82	11.95	11.96	0	0
		50	0	12.03	11.99	12.04	0-1	0
		50	25	11.97	12.05	12.01	0-1	0
		50	49	11.93	11.99	12.04	0-1	0
		100	0	11.96	11.99	11.97	0-1	0
	16QAM	1	0	12.39	12.28	12.29	0-1	0
		1	49	12.24	12.18	12.21	0-1	0
		1	99	12.21	12.12	12.17	0-1	0
		50	0	12.07	11.96	12.10	0-2	0
		50	25	11.95	11.99	12.03	0-2	0
		50	49	12.01	11.97	12.12	0-2	0
		100	0	11.88	11.98	11.95	0-2	0
	64QAM	1	0	12.18	12.09	12.24	0-2	0
		1	49	12.06	11.97	12.28	0-2	0
		1	99	12.18	12.16	12.23	0-2	0
		50	0	12.03	11.90	12.15	0-3	0
		50	25	12.07	12.03	12.10	0-3	0
		50	49	12.02	11.98	12.16	0-3	0
		100	0	11.94	11.90	11.99	0-3	0
	256QAM	1	0	11.67	11.68	11.71	0-5	0
		1	49	12.06	12.08	12.32	0-5	0
		1	99	11.83	11.85	12.10	0-5	0
		50	0	11.91	11.86	11.94	0-5	0
		50	25	11.95	12.00	12.01	0-5	0
		50	49	11.86	11.97	12.03	0-5	0
		100	0	11.88	11.98	11.93	0-5	0

[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	15.83	15.66	15.53	0	0
		1	3	15.90	15.77	15.53	0	0
		1	5	15.86	15.64	15.47	0	0
		3	0	15.89	15.67	15.52	0	0
		3	1	15.88	15.71	15.55	0	0
		3	3	15.86	15.72	15.42	0	0
		6	0	15.94	15.76	15.62	0-1	0
	16QAM	1	0	16.25	16.02	15.85	0-1	0
		1	3	16.07	16.00	15.65	0-1	0
		1	5	16.07	15.90	15.59	0-1	0
		3	0	16.09	15.82	15.68	0-1	0
		3	1	16.18	15.84	15.72	0-1	0
		3	3	16.18	15.95	15.75	0-1	0
		6	0	15.92	15.76	15.69	0-2	0
	64QAM	1	0	16.09	15.92	15.79	0-2	0
		1	3	16.26	16.02	16.00	0-2	0
		1	5	16.10	15.97	15.82	0-2	0
		3	0	15.99	15.82	15.64	0-2	0
		3	1	16.07	15.91	15.66	0-2	0
		3	3	16.08	15.86	15.68	0-2	0
		6	0	15.94	15.79	15.64	0-3	0
	256QAM	1	0	16.00	15.88	15.69	0-5	0
		1	3	16.07	15.96	15.67	0-5	0
		1	5	16.07	15.84	15.70	0-5	0
		3	0	16.08	15.91	15.63	0-5	0
		3	1	16.10	15.88	15.73	0-5	0
		3	3	16.10	15.85	15.58	0-5	0
		6	0	15.95	15.82	15.52	0-5	0

LTE Band 12 _ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23025 Ch. 700.5 MHz	23095 Ch. 707.5 MHz	23165 Ch. 714.5 MHz		
3 MHz	QPSK	1	0	15.94	15.81	15.65	0	0
		1	7	15.89	15.71	15.63	0	0
		1	14	15.93	15.76	15.52	0	0
		8	0	16.04	15.91	15.71	0-1	0
		8	3	16.00	15.89	15.74	0-1	0
		8	7	15.98	15.80	15.63	0-1	0
		15	0	16.06	15.89	15.66	0-1	0
	16QAM	1	0	16.36	16.11	16.01	0-1	0
		1	7	16.14	16.07	15.89	0-1	0
		1	14	16.18	16.05	15.93	0-1	0
		8	0	16.17	15.96	15.82	0-2	0
		8	3	16.11	15.96	15.79	0-2	0
		8	7	16.07	15.94	15.74	0-2	0
		15	0	15.99	15.87	15.67	0-2	0
	64QAM	1	0	16.32	16.04	15.99	0-2	0
		1	7	16.21	16.04	15.93	0-2	0
		1	14	16.11	16.05	16.03	0-2	0
		8	0	16.07	15.85	15.74	0-3	0
		8	3	16.07	15.91	15.70	0-3	0
		8	7	16.00	15.90	15.71	0-3	0
		15	0	16.08	15.89	15.80	0-3	0
	256QAM	1	0	16.19	16.06	15.83	0-5	0
		1	7	16.17	15.87	15.60	0-5	0
		1	14	16.11	15.91	15.77	0-5	0
		8	0	16.10	15.94	15.73	0-5	0
		8	3	16.05	15.92	15.80	0-5	0
		8	7	16.03	15.82	15.68	0-5	0
		15	0	16.03	15.86	15.80	0-5	0

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	15.93	15.84	15.69	0	0
		1	12	15.90	15.75	15.67	0	0
		1	24	15.82	15.67	15.50	0	0
		12	0	16.06	15.94	15.76	0-1	0
		12	6	16.05	15.94	15.71	0-1	0
		12	11	15.94	15.84	15.72	0-1	0
		25	0	16.01	15.87	15.71	0-1	0
	16QAM	1	0	16.09	16.15	15.94	0-1	0
		1	12	16.06	16.13	15.87	0-1	0
		1	24	16.22	15.95	15.66	0-1	0
		12	0	16.08	15.99	15.79	0-2	0
		12	6	16.09	15.94	15.78	0-2	0
		12	11	15.99	15.96	15.73	0-2	0
		25	0	16.00	15.82	15.68	0-2	0
	64QAM	1	0	16.14	16.13	16.00	0-2	0
		1	12	16.13	16.08	15.75	0-2	0
		1	24	16.11	15.88	15.81	0-2	0
		12	0	16.09	15.96	15.86	0-3	0
		12	6	16.08	15.92	15.79	0-3	0
		12	11	16.06	15.85	15.79	0-3	0
		25	0	15.99	15.87	15.71	0-3	0
	256QAM	1	0	16.12	16.04	15.97	0-5	0
		1	12	16.07	15.90	15.71	0-5	0
		1	24	15.99	15.98	15.60	0-5	0
		12	0	16.04	15.91	15.76	0-5	0
		12	6	16.03	15.91	15.77	0-5	0
		12	11	16.01	15.89	15.70	0-5	0
		25	0	15.99	15.90	15.69	0-5	0

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	15.85	0	0
		1	24	15.68	0	0
		1	49	15.59	0	0
		25	0	15.87	0-1	0
		25	12	15.85	0-1	0
		25	24	15.78	0-1	0
		50	0	15.80	0-1	0
	16QAM	1	0	16.26	0-1	0
		1	24	16.20	0-1	0
		1	49	16.03	0-1	0
		25	0	15.86	0-2	0
		25	12	15.89	0-2	0
		25	24	15.66	0-2	0
		50	0	15.66	0-2	0
	64QAM	1	0	16.12	0-2	0
		1	24	16.17	0-2	0
		1	49	15.95	0-2	0
		25	0	15.83	0-3	0
		25	12	15.97	0-3	0
		25	24	15.82	0-3	0
		50	0	15.72	0-3	0
	256QAM	1	0	15.62	0-5	0
		1	24	15.89	0-5	0
		1	49	15.64	0-5	0
		25	0	15.83	0-5	0
		25	12	15.96	0-5	0
		25	24	15.64	0-5	0
		50	0	15.78	0-5	0

[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	16.01	0	0
		1	12	16.06	0	0
		1	24	16.09	0	0
		12	0	16.13	0-1	0
		12	6	16.14	0-1	0
		12	11	16.19	0-1	0
		25	0	16.18	0-1	0
	16QAM	1	0	16.35	0-1	0
		1	12	16.38	0-1	0
		1	24	16.33	0-1	0
		12	0	16.09	0-2	0
		12	6	16.22	0-2	0
		12	11	16.16	0-2	0
		25	0	16.06	0-2	0
	64QAM	1	0	16.27	0-2	0
		1	12	16.28	0-2	0
		1	24	16.18	0-2	0
		12	0	16.13	0-3	0
		12	6	16.11	0-3	0
		12	11	16.26	0-3	0
		25	0	16.10	0-3	0
	256QAM	1	0	15.83	0-5	0
		1	12	16.43	0-5	0
		1	24	16.36	0-5	0
		12	0	16.09	0-5	0
		12	6	16.11	0-5	0
		12	11	16.22	0-5	0
		25	0	16.09	0-5	0

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	16.05	0	0
		1	24	16.04	0	0
		1	49	16.09	0	0
		25	0	16.08	0-1	0
		25	12	16.09	0-1	0
		25	24	16.25	0-1	0
		50	0	16.28	0-1	0
	16QAM	1	0	16.08	0-1	0
		1	24	16.42	0-1	0
		1	49	16.33	0-1	0
		25	0	16.14	0-2	0
		25	12	16.17	0-2	0
		25	24	16.16	0-2	0
		50	0	16.12	0-2	0
	64QAM	1	0	16.15	0-2	0
		1	24	16.23	0-2	0
		1	49	16.15	0-2	0
		25	0	16.07	0-3	0
		25	12	16.16	0-3	0
		25	24	16.27	0-3	0
		50	0	16.06	0-3	0
	256QAM	1	0	16.32	0-5	0
		1	24	16.40	0-5	0
		1	49	15.92	0-5	0
		25	0	15.98	0-5	0
		25	12	16.10	0-5	0
		25	24	16.07	0-5	0
		50	0	16.18	0-5	0

[LTE Band 14 Conducted Power]
LTE Band 14 _ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23305 Ch. 790.5 MHz	23330 Ch. 793 MHz	23355 Ch. 795.5 MHz		
5 MHz	QPSK	1	0	15.87	15.81	15.74	0	0
		1	12	15.88	15.74	16.08	0	0
		1	24	15.72	15.79	15.67	0	0
		12	0	15.98	15.97	15.87	0-1	0
		12	6	15.98	16.03	15.91	0-1	0
		12	11	15.92	15.90	15.84	0-1	0
		25	0	15.96	15.94	15.79	0-1	0
	16QAM	1	0	16.25	16.16	15.94	0-1	0
		1	12	16.19	16.36	16.46	0-1	0
		1	24	16.14	16.33	16.14	0-1	0
		12	0	16.12	15.99	15.94	0-2	0
		12	6	16.10	16.05	15.95	0-2	0
		12	11	15.95	15.92	15.75	0-2	0
		25	0	15.96	15.94	15.77	0-2	0
	64QAM	1	0	16.06	16.10	16.08	0-2	0
		1	12	16.13	16.04	15.78	0-2	0
		1	24	15.70	16.03	15.77	0-2	0
		12	0	16.06	15.99	16.01	0-3	0
		12	6	16.10	16.03	15.90	0-3	0
		12	11	15.97	15.90	15.95	0-3	0
		25	0	16.04	15.92	15.87	0-3	0
	256QAM	1	0	15.95	15.99	15.95	0-5	0
		1	12	16.04	16.17	16.20	0-5	0
		1	24	16.08	16.00	15.94	0-5	0
		12	0	15.98	15.96	15.94	0-5	0
		12	6	16.06	16.01	15.88	0-5	0
		12	11	15.97	15.87	15.89	0-5	0
		25	0	16.02	15.94	15.87	0-5	0

LTE Band 13 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23330 Ch. 793 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	16.03	0	0
		1	24	15.61	0	0
		1	49	15.74	0	0
		25	0	15.87	0-1	0
		25	12	16.08	0-1	0
		25	24	15.82	0-1	0
		50	0	15.90	0-1	0
	16QAM	1	0	16.37	0-1	0
		1	24	16.28	0-1	0
		1	49	16.03	0-1	0
		25	0	15.81	0-2	0
		25	12	15.95	0-2	0
		25	24	15.78	0-2	0
		50	0	15.92	0-2	0
	64QAM	1	0	16.13	0-2	0
		1	24	16.20	0-2	0
		1	49	15.88	0-2	0
		25	0	15.87	0-3	0
		25	12	15.94	0-3	0
		25	24	15.86	0-3	0
		50	0	15.90	0-3	0
	256QAM	1	0	15.61	0-5	0
		1	24	16.20	0-5	0
		1	49	15.78	0-5	0
		25	0	15.90	0-5	0
		25	12	16.11	0-5	0
		25	24	15.96	0-5	0
		50	0	15.87	0-5	0

[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	14.00	14.03	14.09	0	0
		1	3	14.05	14.12	14.10	0	0
		1	5	14.01	14.11	14.04	0	0
		3	0	14.04	14.07	13.98	0	0
		3	1	14.12	14.10	14.04	0	0
		3	3	14.03	14.06	14.06	0	0
		6	0	14.18	14.19	14.14	0-1	0
	16QAM	1	0	14.45	14.40	14.47	0-1	0
		1	3	14.40	14.43	14.46	0-1	0
		1	5	14.43	14.45	14.30	0-1	0
		3	0	14.23	14.28	14.28	0-1	0
		3	1	14.28	14.31	14.28	0-1	0
		3	3	14.28	14.28	14.33	0-1	0
		6	0	14.16	14.17	14.18	0-2	0
	64QAM	1	0	14.33	14.37	14.17	0-2	0
		1	3	14.42	14.36	14.41	0-2	0
		1	5	14.33	14.25	14.27	0-2	0
		3	0	14.28	14.25	14.10	0-2	0
		3	1	14.27	14.29	14.31	0-2	0
		3	3	14.25	14.24	14.11	0-2	0
		6	0	14.25	14.18	14.07	0-3	0
	256QAM	1	0	14.17	14.22	14.10	0-5	0
		1	3	14.38	14.32	14.31	0-5	0
		1	5	14.36	14.31	14.19	0-5	0
		3	0	14.25	14.24	14.20	0-5	0
		3	1	14.37	14.27	14.22	0-5	0
		3	3	14.30	14.24	14.23	0-5	0
		6	0	14.25	14.13	14.07	0-5	0

LTE Band 25 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 ㎒	26365 Ch. 1882.5 ㎒	26675Ch. 1913.5 ㎒		
3 ㎒	QPSK	1	0	14.10	14.09	14.05	0	0
		1	7	14.09	14.11	14.09	0	0
		1	14	14.12	14.13	14.11	0	0
		8	0	14.23	14.21	14.19	0-1	0
		8	3	14.24	14.29	14.22	0-1	0
		8	7	14.17	14.26	14.23	0-1	0
		15	0	14.22	14.23	14.24	0-1	0
	16QAM	1	0	14.44	14.45	14.43	0-1	0
		1	7	14.41	14.44	14.59	0-1	0
		1	14	14.39	14.52	14.42	0-1	0
		8	0	14.33	14.31	14.33	0-2	0
		8	3	14.32	14.34	14.33	0-2	0
		8	7	14.34	14.31	14.31	0-2	0
		15	0	14.23	14.26	14.23	0-2	0
	64QAM	1	0	14.48	14.32	14.25	0-2	0
		1	7	14.37	14.30	14.35	0-2	0
		1	14	14.43	14.31	14.44	0-2	0
		8	0	14.24	14.14	14.16	0-3	0
		8	3	14.25	14.29	14.21	0-3	0
		8	7	14.30	14.29	14.20	0-3	0
		15	0	14.32	14.19	14.27	0-3	0
	256QAM	1	0	14.34	14.29	14.22	0-5	0
		1	7	14.36	14.37	14.20	0-5	0
		1	14	14.42	14.43	14.36	0-5	0
		8	0	14.35	14.22	14.21	0-5	0
		8	3	14.37	14.20	14.23	0-5	0
		8	7	14.30	14.31	14.20	0-5	0
		15	0	14.30	14.25	14.22	0-5	0

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	14.02	14.06	14.08	0	0
		1	12	14.07	14.11	14.05	0	0
		1	24	14.11	14.06	14.12	0	0
		12	0	14.18	14.10	14.16	0-1	0
		12	6	14.28	14.29	14.15	0-1	0
		12	11	14.23	14.27	14.22	0-1	0
		25	0	14.20	14.20	14.11	0-1	0
	16QAM	1	0	14.35	14.44	14.36	0-1	0
		1	12	14.46	14.49	14.49	0-1	0
		1	24	14.36	14.32	14.41	0-1	0
		12	0	14.29	14.23	14.23	0-2	0
		12	6	14.26	14.32	14.20	0-2	0
		12	11	14.25	14.32	14.29	0-2	0
		25	0	14.26	14.27	14.10	0-2	0
	64QAM	1	0	14.42	14.27	14.28	0-2	0
		1	12	14.40	14.45	14.31	0-2	0
		1	24	14.52	14.33	14.37	0-2	0
		12	0	14.28	14.23	14.16	0-3	0
		12	6	14.36	14.22	14.15	0-3	0
		12	11	14.32	14.28	14.25	0-3	0
		25	0	14.25	14.13	14.13	0-3	0
	256QAM	1	0	14.33	14.26	14.32	0-5	0
		1	12	14.32	14.36	14.32	0-5	0
		1	24	14.43	14.30	14.36	0-5	0
		12	0	14.22	14.17	14.08	0-5	0
		12	6	14.31	14.19	14.07	0-5	0
		12	11	14.29	14.26	14.21	0-5	0
		25	0	14.25	14.17	14.14	0-5	0

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	13.82	13.82	14.05	0	0
		1	24	14.05	14.07	14.09	0	0
		1	49	13.81	13.83	14.07	0	0
		25	0	14.12	14.07	14.00	0-1	0
		25	12	14.18	14.22	14.11	0-1	0
		25	24	14.14	14.19	14.13	0-1	0
		50	0	14.18	14.12	14.04	0-1	0
	16QAM	1	0	14.39	14.24	14.75	0-1	0
		1	24	14.38	14.55	14.56	0-1	0
		1	49	14.19	14.36	14.60	0-1	0
		25	0	14.15	13.98	14.06	0-2	0
		25	12	14.27	14.19	14.23	0-2	0
		25	24	14.22	14.15	14.23	0-2	0
		50	0	14.16	14.18	14.08	0-2	0
	64QAM	1	0	14.24	14.10	14.30	0-2	0
		1	24	14.36	14.43	14.27	0-2	0
		1	49	14.07	14.17	14.42	0-2	0
		25	0	14.21	14.09	14.02	0-3	0
		25	12	14.32	14.24	14.14	0-3	0
		25	24	14.10	14.20	14.14	0-3	0
		50	0	14.26	14.13	14.13	0-3	0
	256QAM	1	0	14.03	14.08	13.88	0-5	0
		1	24	14.39	14.47	14.03	0-5	0
		1	49	14.19	14.15	14.08	0-5	0
		25	0	14.16	14.13	14.07	0-5	0
		25	12	14.31	14.14	14.17	0-5	0
		25	24	14.24	14.19	14.20	0-5	0
		50	0	14.26	14.12	14.07	0-5	0

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	13.86	14.09	14.02	0	0
		1	36	13.95	14.07	14.00	0	0
		1	74	13.90	14.02	13.94	0	0
		36	0	14.11	14.10	14.01	0-1	0
		36	18	14.18	14.19	14.12	0-1	0
		36	39	14.10	14.14	14.12	0-1	0
		75	0	14.18	14.08	14.15	0-1	0
	16QAM	1	0	14.40	14.54	14.51	0-1	0
		1	36	14.36	14.43	14.43	0-1	0
		1	74	14.37	14.48	14.50	0-1	0
		36	0	14.16	14.17	14.10	0-2	0
		36	18	14.17	14.24	14.12	0-2	0
		36	39	14.12	14.15	14.18	0-2	0
		75	0	14.19	14.19	14.07	0-2	0
	64QAM	1	0	14.08	14.34	14.27	0-2	0
		1	36	14.29	14.39	14.43	0-2	0
		1	74	14.36	14.40	14.42	0-2	0
		36	0	14.16	14.11	14.06	0-3	0
		36	18	14.24	14.12	14.22	0-3	0
		36	39	14.25	14.22	14.21	0-3	0
		75	0	14.24	14.19	14.16	0-3	0
	256QAM	1	0	13.86	13.99	14.00	0-5	0
		1	36	14.34	14.32	14.38	0-5	0
		1	74	14.16	14.16	14.15	0-5	0
		36	0	14.18	14.04	14.04	0-5	0
		36	18	14.24	14.18	14.27	0-5	0
		36	39	14.17	14.25	14.23	0-5	0
		75	0	14.18	14.08	14.19	0-5	0

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	14.04	14.02	14.02	0	0
		1	49	13.91	13.85	14.08	0	0
		1	99	14.05	14.10	14.00	0	0
		50	0	14.10	14.12	14.15	0-1	0
		50	25	14.22	14.23	14.17	0-1	0
		50	49	14.13	14.19	14.17	0-1	0
		100	0	14.10	14.11	14.10	0-1	0
	16QAM	1	0	14.55	14.48	14.60	0-1	0
		1	49	14.38	14.39	14.44	0-1	0
		1	99	14.57	14.42	14.34	0-1	0
		50	0	14.15	14.18	14.17	0-2	0
		50	25	14.21	14.25	14.15	0-2	0
		50	49	14.23	14.26	14.21	0-2	0
		100	0	14.09	14.16	14.10	0-2	0
	64QAM	1	0	14.41	14.38	14.34	0-2	0
		1	49	14.50	14.40	14.45	0-2	0
		1	99	14.50	14.51	14.41	0-2	0
		50	0	14.26	14.18	14.21	0-3	0
		50	25	14.28	14.16	14.28	0-3	0
		50	49	14.24	14.31	14.20	0-3	0
		100	0	14.18	14.10	14.14	0-3	0
	256QAM	1	0	13.83	13.91	13.89	0-5	0
		1	49	14.34	14.23	14.21	0-5	0
		1	99	13.91	14.04	14.06	0-5	0
		50	0	14.04	14.00	14.00	0-5	0
		50	25	14.29	14.17	14.23	0-5	0
		50	49	14.18	14.23	14.12	0-5	0
		100	0	14.16	14.11	14.16	0-5	0

[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	15.76	15.86	15.71	0	0
		1	3	15.95	16.06	15.82	0	0
		1	5	15.80	15.98	15.75	0	0
		3	0	15.79	15.94	15.74	0	0
		3	1	15.95	16.00	15.76	0	0
		3	3	15.83	16.00	15.69	0	0
		6	0	15.99	15.94	15.86	0-1	0
	16QAM	1	0	15.95	16.16	16.13	0-1	0
		1	3	16.23	16.41	16.28	0-1	0
		1	5	16.02	16.29	16.15	0-1	0
		3	0	15.94	16.14	15.92	0-1	0
		3	1	16.12	16.10	16.03	0-1	0
		3	3	16.11	16.15	15.95	0-1	0
		6	0	15.97	16.05	15.85	0-2	0
	64QAM	1	0	16.09	16.16	16.02	0-2	0
		1	3	16.19	16.35	16.17	0-2	0
		1	5	16.07	16.26	15.95	0-2	0
		3	0	15.95	16.06	15.99	0-2	0
		3	1	16.11	16.12	16.04	0-2	0
		3	3	16.03	16.14	15.94	0-2	0
		6	0	15.97	16.02	15.93	0-3	0
	256QAM	1	0	15.97	16.18	15.90	0-5	0
		1	3	16.10	16.25	16.11	0-5	0
		1	5	16.04	16.18	16.00	0-5	0
		3	0	15.97	16.09	15.93	0-5	0
		3	1	16.06	16.20	15.98	0-5	0
		3	3	16.10	16.24	15.88	0-5	0
		6	0	15.96	16.01	15.88	0-5	0

LTE Band 26 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26705 Ch. 815.5 ㎒	26865 Ch. 831.5 ㎒	27025 Ch. 847.5 ㎒		
3 ㎒	QPSK	1	0	15.83	15.93	15.84	0	0
		1	7	15.93	16.08	15.86	0	0
		1	14	15.93	16.07	15.84	0	0
		8	0	15.95	16.11	15.95	0-1	0
		8	3	16.10	16.12	15.96	0-1	0
		8	7	16.03	16.11	15.95	0-1	0
		15	0	16.00	16.07	15.96	0-1	0
	16QAM	1	0	16.12	16.27	16.20	0-1	0
		1	7	16.21	16.29	16.23	0-1	0
		1	14	16.10	16.34	16.18	0-1	0
		8	0	16.07	16.10	16.02	0-2	0
		8	3	16.17	16.18	16.12	0-2	0
		8	7	16.08	16.16	16.03	0-2	0
		15	0	16.07	16.08	15.96	0-2	0
	64QAM	1	0	16.13	16.27	16.09	0-2	0
		1	7	16.18	16.37	16.09	0-2	0
		1	14	16.12	16.22	16.08	0-2	0
		8	0	16.03	16.17	15.94	0-3	0
		8	3	16.09	16.13	16.00	0-3	0
		8	7	16.05	16.11	15.95	0-3	0
		15	0	16.05	16.10	15.99	0-3	0
	256QAM	1	0	16.06	16.12	16.02	0-5	0
		1	7	16.15	16.16	16.00	0-5	0
		1	14	16.12	16.20	15.98	0-5	0
		8	0	16.02	16.16	15.93	0-5	0
		8	3	16.10	16.15	15.98	0-5	0
		8	7	16.07	16.22	15.94	0-5	0
		15	0	16.02	16.07	15.97	0-5	0

LTE Band 26 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26715 Ch. 816.5 ㎒	26865 Ch. 831.5 ㎒	27015 Ch. 846.5 ㎒		
5 ㎒	QPSK	1	0	15.83	16.05	15.87	0	0
		1	12	15.96	15.99	15.94	0	0
		1	24	15.92	16.06	15.86	0	0
		12	0	16.00	16.02	15.90	0-1	0
		12	6	16.07	15.98	16.03	0-1	0
		12	11	16.05	16.12	15.96	0-1	0
		25	0	16.00	16.05	15.87	0-1	0
	16QAM	1	0	15.97	16.28	16.19	0-1	0
		1	12	16.21	16.23	16.15	0-1	0
		1	24	16.29	16.43	16.16	0-1	0
		12	0	15.98	16.14	15.89	0-2	0
		12	6	16.06	16.19	16.03	0-2	0
		12	11	16.12	16.10	15.97	0-2	0
		25	0	15.99	16.06	15.88	0-2	0
	64QAM	1	0	15.95	16.29	16.19	0-2	0
		1	12	16.11	16.27	16.05	0-2	0
		1	24	16.19	16.32	16.10	0-2	0
		12	0	15.99	16.10	15.90	0-3	0
		12	6	16.09	16.12	16.05	0-3	0
		12	11	16.04	16.22	16.01	0-3	0
		25	0	15.99	16.01	15.85	0-3	0
	256QAM	1	0	15.86	16.06	16.05	0-5	0
		1	12	16.18	16.31	16.11	0-5	0
		1	24	16.04	16.13	15.94	0-5	0
		12	0	15.93	16.05	15.84	0-5	0
		12	6	16.03	16.19	16.02	0-5	0
		12	11	15.99	16.14	15.90	0-5	0
		25	0	15.97	16.10	15.88	0-5	0

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	15.94	16.03	15.92	0	0
		1	24	15.99	16.09	15.87	0	0
		1	49	16.01	15.93	15.72	0	0
		25	0	15.93	15.99	15.82	0-1	0
		25	12	16.04	16.04	15.97	0-1	0
		25	24	16.04	16.06	15.90	0-1	0
		50	0	16.02	16.03	15.79	0-1	0
	16QAM	1	0	16.39	16.28	16.56	0-1	0
		1	24	16.44	16.50	16.37	0-1	0
		1	49	16.31	16.44	16.23	0-1	0
		25	0	15.94	15.97	15.80	0-2	0
		25	12	16.06	16.07	15.99	0-2	0
		25	24	15.92	16.09	15.94	0-2	0
		50	0	16.02	15.97	15.87	0-2	0
	64QAM	1	0	16.21	16.24	16.17	0-2	0
		1	24	16.14	16.39	16.27	0-2	0
		1	49	16.11	16.35	16.01	0-2	0
		25	0	15.92	16.00	15.88	0-3	0
		25	12	16.10	16.13	16.05	0-3	0
		25	24	16.03	16.10	15.93	0-3	0
		50	0	15.99	15.98	15.86	0-3	0
	256QAM	1	0	15.88	15.73	15.57	0-5	0
		1	24	16.09	16.17	16.22	0-5	0
		1	49	16.12	16.04	16.09	0-5	0
		25	0	15.99	16.00	15.87	0-5	0
		25	12	16.01	16.10	16.04	0-5	0
		25	24	16.03	16.09	15.92	0-5	0
		50	0	16.10	15.96	15.83	0-5	0

LTE Band 26 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 26865 Ch. 831.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
15 ㎒	QPSK	1	0	15.93	0	0
		1	36	15.80	0	0
		1	74	15.94	0	0
		36	0	15.97	0-1	0
		36	18	15.99	0-1	0
		36	39	16.00	0-1	0
		75	0	15.94	0-1	0
	16QAM	1	0	16.26	0-1	0
		1	36	16.43	0-1	0
		1	74	16.32	0-1	0
		36	0	15.90	0-2	0
		36	18	15.93	0-2	0
		36	39	15.98	0-2	0
		75	0	15.87	0-2	0
	64QAM	1	0	16.09	0-2	0
		1	36	16.21	0-2	0
		1	74	16.08	0-2	0
		36	0	15.98	0-3	0
		36	18	15.99	0-3	0
		36	39	15.96	0-3	0
		75	0	15.87	0-3	0
	256QAM	1	0	15.91	0-5	0
		1	36	15.98	0-5	0
		1	74	15.97	0-5	0
		36	0	15.94	0-5	0
		36	18	16.01	0-5	0
		36	39	15.97	0-5	0
		75	0	15.90	0-5	0

[LTE Band 30 Conducted Power]
LTE Band 30 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				27685 Ch. 2307.5 ㎒	27710 Ch. 2310 ㎒	27735 Ch. 2312.5 ㎒		
5 ㎒	QPSK	1	0	12.54	12.52	12.52	0	0
		1	12	12.62	12.64	12.68	0	0
		1	24	12.52	12.58	12.51	0	0
		12	0	12.70	12.69	12.71	0-1	0
		12	6	12.79	12.68	12.69	0-1	0
		12	11	12.78	12.71	12.72	0-1	0
		25	0	12.73	12.70	12.62	0-1	0
	16QAM	1	0	12.94	12.91	12.96	0-1	0
		1	12	12.96	13.00	13.03	0-1	0
		1	24	13.00	12.84	12.93	0-1	0
		12	0	12.79	12.74	12.76	0-2	0
		12	6	12.83	12.78	12.74	0-2	0
		12	11	12.79	12.81	12.77	0-2	0
		25	0	12.72	12.68	12.70	0-2	0
	64QAM	1	0	12.83	12.76	12.87	0-2	0
		1	12	12.93	12.91	12.91	0-2	0
		1	24	12.82	12.92	12.85	0-2	0
		12	0	12.78	12.71	12.74	0-3	0
		12	6	12.76	12.73	12.73	0-3	0
		12	11	12.77	12.73	12.77	0-3	0
		25	0	12.71	12.62	12.70	0-3	0
	256QAM	1	0	12.59	12.66	12.61	0-5	0
		1	12	12.77	12.89	12.80	0-5	0
		1	24	12.73	12.76	12.76	0-5	0
		12	0	12.65	12.64	12.65	0-5	0
		12	6	12.76	12.65	12.66	0-5	0
		12	11	12.67	12.66	12.68	0-5	0
		25	0	12.72	12.59	12.65	0-5	0

LTE Band 30 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 27710 Ch. 2310 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	12.69	0	0
		1	24	12.67	0	0
		1	49	12.61	0	0
		25	0	12.60	0-1	0
		25	12	12.65	0-1	0
		25	24	12.64	0-1	0
		50	0	12.63	0-1	0
	16QAM	1	0	13.05	0-1	0
		1	24	13.19	0-1	0
		1	49	13.20	0-1	0
		25	0	12.69	0-2	0
		25	12	12.68	0-2	0
		25	24	12.70	0-2	0
		50	0	12.64	0-2	0
	64QAM	1	0	12.88	0-2	0
		1	24	12.91	0-2	0
		1	49	12.93	0-2	0
		25	0	12.69	0-3	0
		25	12	12.58	0-3	0
		25	24	12.66	0-3	0
		50	0	12.62	0-3	0
	256QAM	1	0	12.53	0-5	0
		1	24	13.02	0-5	0
		1	49	12.47	0-5	0
		25	0	12.55	0-5	0
		25	12	12.59	0-5	0
		25	24	12.63	0-5	0
		50	0	12.54	0-5	0

[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	14.18	14.09	14.18	14.11	13.88	0	0
		1	12	14.16	14.21	14.28	14.18	13.92	0	0
		1	24	14.11	14.09	14.21	14.26	13.78	0	0
		12	0	14.22	14.23	14.39	14.27	13.98	0-1	0
		12	6	14.23	14.28	14.44	14.25	14.06	0-1	0
		12	11	14.18	14.26	14.35	14.18	13.97	0-1	0
		25	0	14.22	14.26	14.42	14.19	14.01	0-1	0
	16QAM	1	0	14.28	14.16	14.34	14.21	13.97	0-1	0
		1	12	14.23	14.35	14.45	14.35	14.12	0-1	0
		1	24	14.25	14.16	14.30	14.14	13.90	0-1	0
		12	0	14.22	14.19	14.32	14.18	13.98	0-2	0
		12	6	14.25	14.21	14.36	14.22	13.96	0-2	0
		12	11	14.21	14.20	14.33	14.18	13.95	0-2	0
		25	0	14.11	14.26	14.44	14.28	14.04	0-2	0
	64QAM	1	0	14.04	13.88	14.08	14.06	13.85	0-2	0
		1	12	13.98	13.98	14.15	14.04	13.85	0-2	0
		1	24	14.01	13.91	14.11	14.02	13.83	0-2	0
		12	0	14.28	14.19	14.48	14.28	14.19	0-3	0
		12	6	14.30	14.26	14.44	14.32	14.14	0-3	0
		12	11	14.24	14.25	14.44	14.29	14.17	0-3	0
		25	0	14.34	14.32	14.46	14.35	14.18	0-3	0
	256QAM	1	0	14.15	14.12	14.28	14.16	14.01	0-5	0
		1	12	14.11	14.13	14.30	14.14	13.97	0-5	0
		1	24	14.09	14.10	14.26	14.09	13.97	0-5	0
		12	0	14.39	14.38	14.54	14.44	14.29	0-5	0
		12	6	14.43	14.46	14.58	14.45	14.24	0-5	0
		12	11	14.37	14.40	14.55	14.44	14.22	0-5	0
		25	0	14.34	14.36	14.49	14.39	14.18	0-5	0

LTE Band 41 _ 10 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 MHz	40160 Ch. 2547 MHz	40620 Ch. 2593 MHz	41080 Ch. 2639 MHz	41540 Ch. 2685 MHz		
10 MHz	QPSK	1	0	14.18	14.03	14.11	14.02	13.71	0	0
		1	24	14.16	14.31	14.37	14.09	13.76	0	0
		1	49	14.09	13.91	13.96	13.84	13.61	0	0
		25	0	14.20	14.10	14.26	14.24	13.97	0-1	0
		25	12	14.22	14.26	14.44	14.30	13.99	0-1	0
		25	24	14.16	14.17	14.29	14.15	13.89	0-1	0
		50	0	14.08	14.18	14.36	14.15	13.91	0-1	0
	16QAM	1	0	14.25	14.06	14.20	14.07	13.84	0-1	0
		1	24	14.24	14.28	14.39	14.30	14.04	0-1	0
		1	49	14.22	13.95	14.07	13.95	13.75	0-1	0
		25	0	14.27	14.10	14.24	14.22	13.99	0-2	0
		25	12	14.31	14.34	14.46	14.31	14.07	0-2	0
		25	24	14.23	14.20	14.37	14.18	13.92	0-2	0
		50	0	14.17	14.25	14.35	14.25	14.02	0-2	0
	64QAM	1	0	14.10	13.76	13.98	13.81	13.63	0-2	0
		1	24	13.99	14.06	14.26	13.96	13.78	0-2	0
		1	49	14.09	13.82	14.03	13.69	13.52	0-2	0
		25	0	14.28	14.22	14.30	14.28	14.10	0-3	0
		25	12	14.24	14.31	14.48	14.38	14.21	0-3	0
		25	24	14.23	14.18	14.37	14.26	14.06	0-3	0
		50	0	14.28	14.31	14.51	14.36	14.21	0-3	0
	256QAM	1	0	14.02	13.95	14.15	14.09	13.87	0-5	0
		1	24	14.23	14.30	14.40	14.33	14.08	0-5	0
		1	49	13.93	13.97	14.15	14.00	13.82	0-5	0
		25	0	14.32	14.36	14.40	14.39	14.18	0-5	0
		25	12	14.36	14.36	14.72	14.45	14.21	0-5	0
		25	24	14.21	14.24	14.40	14.30	14.08	0-5	0
		50	0	14.29	14.36	14.51	14.38	14.18	0-5	0

LTE Band 41 _ 15 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 MHz	40173 Ch. 2548.3 MHz	40620 Ch. 2593.0 MHz	41068 Ch. 2637.8 MHz	41515 Ch. 2682.5 MHz		
15 MHz	QPSK	1	0	14.03	14.03	14.30	14.02	13.86	0	0
		1	36	14.00	14.13	14.31	14.09	13.93	0	0
		1	74	14.04	14.03	14.05	13.92	13.73	0	0
		36	0	14.14	14.07	14.33	14.17	13.99	0-1	0
		36	18	14.17	14.23	14.40	14.21	14.02	0-1	0
		36	39	14.17	14.23	14.26	14.21	13.91	0-1	0
		75	0	14.12	14.19	14.35	14.19	13.93	0-1	0
	16QAM	1	0	14.12	14.04	14.29	14.09	13.82	0-1	0
		1	36	14.02	14.11	14.25	14.09	13.83	0-1	0
		1	74	14.07	14.01	14.01	13.97	13.69	0-1	0
		36	0	14.10	14.06	14.29	14.13	13.95	0-2	0
		36	18	14.16	14.21	14.34	14.21	13.94	0-2	0
		36	39	14.14	14.21	14.24	14.15	13.88	0-2	0
		75	0	14.12	14.22	14.33	14.23	13.95	0-2	0
	64QAM	1	0	13.89	13.72	13.86	13.95	13.61	0-2	0
		1	36	13.89	13.90	14.05	13.93	13.77	0-2	0
		1	74	13.84	13.66	13.90	13.68	13.72	0-2	0
		36	0	14.28	14.17	14.29	14.30	14.12	0-3	0
		36	18	14.26	14.25	14.44	14.36	14.17	0-3	0
		36	39	14.26	14.19	14.43	14.21	14.16	0-3	0
		75	0	14.23	14.24	14.42	14.28	14.13	0-3	0
	256QAM	1	0	13.93	13.90	14.01	14.10	13.78	0-5	0
		1	36	14.06	14.10	14.25	14.15	13.94	0-5	0
		1	74	13.95	13.88	14.05	13.84	13.90	0-5	0
		36	0	14.25	14.17	14.32	14.38	14.10	0-5	0
		36	18	14.31	14.32	14.48	14.36	14.19	0-5	0
		36	39	14.23	14.22	14.41	14.25	14.16	0-5	0
		75	0	14.23	14.22	14.42	14.29	14.12	0-5	0

LTE Band 41 _ 20 MHz Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	14.08	14.17	14.14	13.94	13.78	0	0
		1	49	14.01	14.15	14.33	14.09	13.96	0	0
		1	99	14.01	14.12	13.88	13.73	13.50	0	0
		50	0	14.17	14.23	14.32	14.20	13.98	0-1	0
		50	25	14.16	14.24	14.35	14.24	13.99	0-1	0
		50	49	14.12	14.21	14.22	14.15	13.85	0-1	0
		100	0	14.07	14.19	14.30	14.18	13.89	0-1	0
	16QAM	1	0	14.09	14.14	14.16	13.92	13.75	0-1	0
		1	49	14.02	14.09	14.24	14.09	13.87	0-1	0
		1	99	14.03	14.14	13.88	13.78	13.45	0-1	0
		50	0	14.22	14.21	14.36	14.21	14.04	0-2	0
		50	25	14.16	14.28	14.43	14.28	14.03	0-2	0
		50	49	14.17	14.28	14.24	14.19	13.88	0-2	0
		100	0	14.11	14.20	14.35	14.23	13.97	0-2	0
	64QAM	1	0	13.96	13.85	13.70	13.81	13.46	0-2	0
		1	49	13.86	13.89	14.04	13.94	13.77	0-2	0
		1	99	13.84	13.87	13.71	13.37	13.56	0-2	0
		50	0	14.29	14.29	14.31	14.36	14.08	0-3	0
		50	25	14.31	14.32	14.50	14.35	14.21	0-3	0
		50	49	14.31	14.33	14.39	14.20	14.20	0-3	0
		100	0	14.18	14.20	14.37	14.28	14.13	0-3	0
	256QAM	1	0	13.77	13.70	13.88	13.98	13.63	0-5	0
		1	49	14.04	14.08	14.24	14.16	13.98	0-5	0
		1	99	13.80	13.69	13.94	13.56	13.76	0-5	0
		50	0	14.20	14.23	14.35	14.38	14.09	0-5	0
		50	25	14.35	14.34	14.53	14.39	14.25	0-5	0
		50	49	14.27	14.21	14.44	14.24	14.17	0-5	0
		100	0	14.18	14.20	14.42	14.27	14.15	0-5	0

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	13.89	14.01	14.07	0	0
		1	3	13.99	14.05	14.18	0	0
		1	5	13.95	14.01	14.13	0	0
		3	0	13.95	13.97	14.11	0	0
		3	1	13.99	14.03	14.17	0	0
		3	3	13.96	14.03	14.13	0	0
		6	0	14.03	14.15	14.19	0-1	0
	16QAM	1	0	14.07	14.50	14.32	0-1	0
		1	3	14.36	14.53	14.50	0-1	0
		1	5	14.16	14.29	14.39	0-1	0
		3	0	14.11	14.21	14.29	0-1	0
		3	1	14.15	14.25	14.37	0-1	0
		3	3	14.16	14.26	14.41	0-1	0
		6	0	14.13	14.17	14.29	0-2	0
	64QAM	1	0	14.34	14.35	14.36	0-2	0
		1	3	14.34	14.39	14.46	0-2	0
		1	5	14.24	14.29	14.38	0-2	0
		3	0	14.21	14.18	14.25	0-2	0
		3	1	14.25	14.24	14.33	0-2	0
		3	3	14.17	14.23	14.29	0-2	0
		6	0	14.08	14.15	14.31	0-3	0
	256QAM	1	0	14.24	14.33	14.30	0-5	0
		1	3	14.19	14.28	14.34	0-5	0
		1	5	14.12	14.20	14.19	0-5	0
		3	0	14.23	14.18	14.28	0-5	0
		3	1	14.33	14.27	14.35	0-5	0
		3	3	14.21	14.16	14.34	0-5	0
		6	0	14.74	14.08	14.20	0-5	0

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	13.93	14.05	14.07	0	0
		1	7	13.97	14.05	14.16	0	0
		1	14	14.04	14.09	14.18	0	0
		8	0	14.14	14.08	14.20	0-1	0
		8	3	14.10	14.25	14.21	0-1	0
		8	7	14.16	14.17	14.28	0-1	0
		15	0	14.07	14.22	14.25	0-1	0
	16QAM	1	0	14.22	14.29	14.42	0-1	0
		1	7	14.29	14.40	14.56	0-1	0
		1	14	14.33	14.45	14.56	0-1	0
		8	0	14.22	14.22	14.26	0-2	0
		8	3	14.23	14.30	14.35	0-2	0
		8	7	14.20	14.37	14.40	0-2	0
		15	0	14.18	14.22	14.28	0-2	0
	64QAM	1	0	14.30	14.31	14.42	0-2	0
		1	7	14.36	14.43	14.44	0-2	0
		1	14	14.24	14.34	14.44	0-2	0
		8	0	14.29	14.25	14.30	0-3	0
		8	3	14.26	14.29	14.38	0-3	0
		8	7	14.23	14.17	14.32	0-3	0
		15	0	14.25	14.26	14.28	0-3	0
	256QAM	1	0	14.22	14.19	14.34	0-5	0
		1	7	14.23	14.27	14.43	0-5	0
		1	14	14.23	14.24	14.35	0-5	0
		8	0	14.23	14.24	14.30	0-5	0
		8	3	14.19	14.20	14.26	0-5	0
		8	7	14.17	14.14	14.28	0-5	0
		15	0	14.23	14.23	14.28	0-5	0

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	13.91	14.05	14.04	0	0
		1	12	13.97	14.16	14.31	0	0
		1	24	14.04	14.02	14.12	0	0
		12	0	14.01	14.10	14.20	0-1	0
		12	6	14.19	14.26	14.17	0-1	0
		12	11	14.14	14.26	14.30	0-1	0
		25	0	14.10	14.17	14.19	0-1	0
	16QAM	1	0	14.30	14.43	14.53	0-1	0
		1	12	14.38	14.47	14.50	0-1	0
		1	24	14.25	14.42	14.45	0-1	0
		12	0	14.15	14.20	14.24	0-2	0
		12	6	14.24	14.32	14.33	0-2	0
		12	11	14.23	14.31	14.40	0-2	0
		25	0	14.13	14.22	14.21	0-2	0
	64QAM	1	0	14.26	14.28	14.49	0-2	0
		1	12	14.36	14.31	14.59	0-2	0
		1	24	14.34	14.34	14.43	0-2	0
		12	0	14.27	14.20	14.34	0-3	0
		12	6	14.32	14.27	14.40	0-3	0
		12	11	14.28	14.25	14.34	0-3	0
		25	0	14.25	14.20	14.25	0-3	0
	256QAM	1	0	14.25	14.22	14.31	0-5	0
		1	12	14.30	14.24	14.29	0-5	0
		1	24	14.24	14.30	14.36	0-5	0
		12	0	14.14	14.15	14.23	0-5	0
		12	6	14.23	14.21	14.30	0-5	0
		12	11	14.13	14.12	14.27	0-5	0
		25	0	14.14	14.13	14.27	0-5	0

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	13.80	13.89	13.98	0	0
		1	24	13.91	14.07	14.15	0	0
		1	49	13.68	13.79	13.78	0	0
		25	0	13.95	14.07	14.14	0-1	0
		25	12	14.15	14.21	14.19	0-1	0
		25	24	14.07	14.17	14.23	0-1	0
		50	0	14.05	14.11	14.09	0-1	0
	16QAM	1	0	14.38	14.30	14.55	0-1	0
		1	24	14.55	14.64	14.68	0-1	0
		1	49	14.35	14.24	14.54	0-1	0
		25	0	14.05	14.11	14.16	0-2	0
		25	12	14.18	14.26	14.23	0-2	0
		25	24	14.09	14.12	14.20	0-2	0
		50	0	14.11	14.17	14.20	0-2	0
	64QAM	1	0	14.13	14.01	14.12	0-2	0
		1	24	14.38	14.33	14.37	0-2	0
		1	49	14.08	14.04	14.39	0-2	0
		25	0	14.13	14.09	14.12	0-3	0
		25	12	14.21	14.27	14.29	0-3	0
		25	24	14.15	14.15	14.22	0-3	0
		50	0	14.18	14.19	14.20	0-3	0
	256QAM	1	0	14.05	13.72	14.10	0-5	0
		1	24	14.35	14.21	14.35	0-5	0
		1	49	14.19	14.28	14.17	0-5	0
		25	0	14.02	14.16	14.14	0-5	0
		25	12	14.25	14.17	14.29	0-5	0
		25	24	14.05	14.11	14.10	0-5	0
		50	0	14.07	14.17	14.11	0-5	0

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	13.85	13.91	14.08	0	0
		1	36	13.90	14.04	14.12	0	0
		1	74	13.75	13.96	14.13	0	0
		36	0	14.07	14.03	14.16	0-1	0
		36	18	14.17	14.08	14.12	0-1	0
		36	39	14.06	14.07	14.18	0-1	0
		75	0	14.12	14.10	14.13	0-1	0
	16QAM	1	0	14.31	14.33	14.67	0-1	0
		1	36	14.50	14.52	14.42	0-1	0
		1	74	14.39	14.41	14.68	0-1	0
		36	0	14.03	14.15	14.18	0-2	0
		36	18	14.09	14.10	14.13	0-2	0
		36	39	14.01	14.10	14.16	0-2	0
		75	0	14.08	14.20	14.09	0-2	0
	64QAM	1	0	14.19	14.18	14.31	0-2	0
		1	36	14.35	14.39	14.37	0-2	0
		1	74	14.15	14.21	14.45	0-2	0
		36	0	14.16	14.11	14.19	0-3	0
		36	18	14.25	14.23	14.27	0-3	0
		36	39	14.16	14.14	14.21	0-3	0
		75	0	14.15	14.15	14.23	0-3	0
	256QAM	1	0	14.02	14.04	14.14	0-5	0
		1	36	14.15	14.27	14.24	0-5	0
		1	74	14.19	14.34	14.11	0-5	0
		36	0	14.09	14.07	14.13	0-5	0
		36	18	14.15	14.19	14.23	0-5	0
		36	39	14.11	14.10	14.25	0-5	0
		75	0	14.21	14.18	14.23	0-5	0

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	13.71	13.71	14.09	0	0
		1	49	13.88	13.95	14.08	0	0
		1	99	13.69	13.71	14.09	0	0
		50	0	14.04	14.08	14.16	0-1	0
		50	25	14.15	14.14	14.26	0-1	0
		50	49	14.00	14.02	14.15	0-1	0
		100	0	14.05	14.13	14.17	0-1	0
	16QAM	1	0	14.30	14.19	14.40	0-1	0
		1	49	14.34	14.40	14.40	0-1	0
		1	99	14.19	14.21	14.44	0-1	0
		50	0	14.02	14.01	14.18	0-2	0
		50	25	14.13	14.17	14.27	0-2	0
		50	49	14.03	14.08	14.22	0-2	0
		100	0	14.09	14.15	14.21	0-2	0
	64QAM	1	0	13.88	13.82	14.28	0-2	0
		1	49	14.21	14.21	14.35	0-2	0
		1	99	13.96	14.24	14.38	0-2	0
		50	0	14.03	14.03	14.13	0-3	0
		50	25	14.19	14.20	14.17	0-3	0
		50	49	14.11	14.11	14.17	0-3	0
		100	0	14.13	14.15	14.13	0-3	0
	256QAM	1	0	13.86	13.92	13.79	0-5	0
		1	49	14.20	14.19	14.27	0-5	0
		1	99	14.08	14.28	14.04	0-5	0
		50	0	14.05	14.03	14.17	0-5	0
		50	25	14.17	14.20	14.19	0-5	0
		50	49	14.09	14.16	14.14	0-5	0
		100	0	14.09	14.11	14.05	0-5	0

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.

[LTE Band 71 Conducted Power]

LTE Band 71 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133147 Ch. 665.5 ㎒	133297Ch. 680.5 ㎒	133447 Ch. 695.5 ㎒		
5 ㎒	QPSK	1	0	13.97	13.70	13.66	0	0
		1	12	13.94	13.82	13.84	0	0
		1	24	13.92	13.77	13.78	0	0
		12	0	13.99	13.86	13.86	0-1	0
		12	6	14.03	13.86	13.92	0-1	0
		12	11	14.09	13.91	13.91	0-1	0
		25	0	13.99	13.92	13.85	0-1	0
	16QAM	1	0	14.29	13.96	13.97	0-1	0
		1	12	14.15	14.25	14.24	0-1	0
		1	24	14.15	14.23	14.06	0-1	0
		12	0	14.06	13.85	13.89	0-2	0
		12	6	14.12	13.95	13.96	0-2	0
		12	11	14.10	13.96	14.02	0-2	0
		25	0	14.03	13.99	13.93	0-2	0
	64QAM	1	0	14.14	13.86	13.88	0-2	0
		1	12	14.10	14.03	14.10	0-2	0
		1	24	13.97	14.05	13.99	0-2	0
		12	0	13.94	13.81	13.77	0-3	0
		12	6	14.05	13.97	13.91	0-3	0
		12	11	14.02	13.93	13.89	0-3	0
		25	0	13.97	13.84	13.78	0-3	0
	256QAM	1	0	14.04	13.82	13.70	0-5	0
		1	12	14.08	14.02	13.98	0-5	0
		1	24	14.03	13.97	13.87	0-5	0
		12	0	13.95	13.79	13.82	0-5	0
		12	6	14.00	13.82	13.81	0-5	0
		12	11	13.96	13.87	13.88	0-5	0
		25	0	13.97	13.86	13.82	0-5	0

LTE Band 71 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133172 Ch. 668 ㎒	133297 Ch. 680.5 ㎒	133422 Ch. 693 ㎒		
10 ㎒	QPSK	1	0	13.93	13.90	13.78	0	0
		1	24	13.86	13.78	13.70	0	0
		1	49	13.84	13.75	13.69	0	0
		25	0	13.99	13.92	13.88	0-1	0
		25	12	13.96	13.95	13.97	0-1	0
		25	24	13.98	13.94	13.91	0-1	0
		50	0	13.98	13.88	13.87	0-1	0
	16QAM	1	0	14.36	14.50	14.34	0-1	0
		1	24	14.13	14.36	14.34	0-1	0
		1	49	14.20	14.29	14.28	0-1	0
		25	0	14.06	13.94	13.89	0-2	0
		25	12	14.09	13.93	13.90	0-2	0
		25	24	13.97	13.94	13.90	0-2	0
		50	0	13.94	13.81	13.92	0-2	0
	64QAM	1	0	14.05	14.04	13.92	0-2	0
		1	24	14.16	14.01	13.92	0-2	0
		1	49	14.09	14.03	13.97	0-2	0
		25	0	14.06	13.91	13.83	0-3	0
		25	12	13.98	13.87	13.88	0-3	0
		25	24	13.85	13.89	13.80	0-3	0
		50	0	13.93	13.81	13.83	0-3	0
	256QAM	1	0	13.78	13.65	13.65	0-5	0
		1	24	14.10	14.09	13.96	0-5	0
		1	49	13.71	13.86	13.46	0-5	0
		25	0	13.93	13.79	13.73	0-5	0
		25	12	13.94	13.84	13.83	0-5	0
		25	24	13.92	13.77	13.71	0-5	0
		50	0	13.90	13.76	13.76	0-5	0

LTE Band 71 _ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 133297 Ch. 680.5 MHz	MPR Allowed Per 3GPP [dB]	MPR [dB]
15 MHz	QPSK	1	0	13.86	0	0
		1	36	13.82	0	0
		1	74	13.72	0	0
		36	0	14.03	0-1	0
		36	18	13.94	0-1	0
		36	39	14.01	0-1	0
		75	0	13.93	0-1	0
	16QAM	1	0	14.36	0-1	0
		1	36	14.29	0-1	0
		1	74	14.26	0-1	0
		36	0	14.00	0-2	0
		36	18	13.94	0-2	0
		36	39	13.97	0-2	0
		75	0	13.94	0-2	0
	64QAM	1	0	14.03	0-2	0
		1	36	14.01	0-2	0
		1	74	14.00	0-2	0
		36	0	13.89	0-3	0
		36	18	13.86	0-3	0
		36	39	13.83	0-3	0
		75	0	13.82	0-3	0
	256QAM	1	0	13.68	0-5	0
		1	36	13.97	0-5	0
		1	74	13.82	0-5	0
		36	0	13.79	0-5	0
		36	18	13.85	0-5	0
		36	39	13.87	0-5	0
		75	0	13.83	0-5	0

LTE Band 71 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 133297 Ch. 680.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	13.91	0	0
		1	49	13.80	0	0
		1	99	13.89	0	0
		50	0	14.00	0-1	0
		50	25	14.03	0-1	0
		50	49	13.98	0-1	0
		100	0	13.93	0-1	0
	16QAM	1	0	14.45	0-1	0
		1	49	14.24	0-1	0
		1	99	14.14	0-1	0
		50	0	14.04	0-2	0
		50	25	13.94	0-2	0
		50	49	14.02	0-2	0
		100	0	13.93	0-2	0
	64QAM	1	0	14.00	0-2	0
		1	49	13.91	0-2	0
		1	99	13.93	0-2	0
		50	0	13.88	0-3	0
		50	25	13.85	0-3	0
		50	49	13.84	0-3	0
		100	0	13.79	0-3	0
	256QAM	1	0	13.73	0-5	0
		1	49	14.01	0-5	0
		1	99	13.83	0-5	0
		50	0	13.69	0-5	0
		50	25	14.27	0-5	0
		50	49	13.79	0-5	0
		100	0	13.75	0-5	0

11.2.3 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

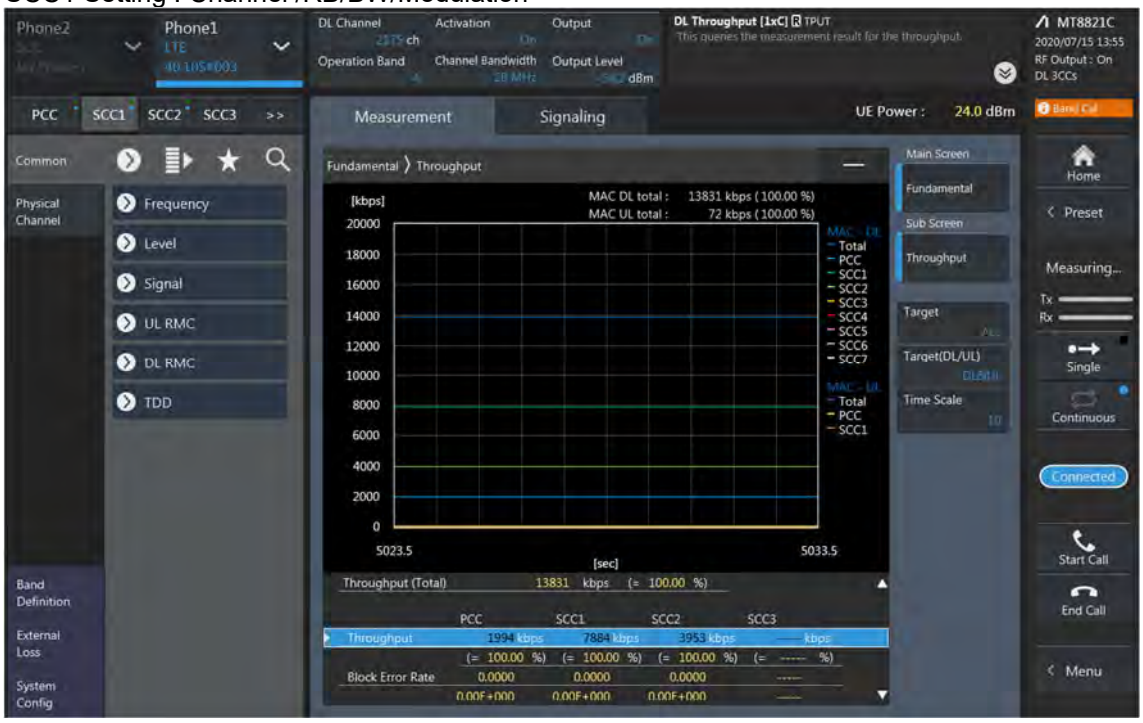
LTE Downlink 2CA Maximum Conducted Power

Combination	PCC									SCC				Tx Power		Deviation
	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)	LTE Tx Power with DL CA Enabled(dBm)	
5B(1)	5	5	20525	836.5	2525	881.5	QPSK	1	0	5	3	2564	885.4	24.58	24.53	-0.05
4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	71	20	68786	637	24.18	24.11	-0.07
4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	4	20	2175	2132.5	24.91	24.69	-0.22
12A-46A	12	5	23095	707.5	5095	737.5	QPSK	1	24	46	20	50665	5537.5	24.89	24.64	-0.25
25A-46A	25	20	26590	1905	8590	1985	QPSK	1	49	46	20	50665	5537.5	24.18	23.96	-0.22
41A-41A(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	41490	2680	24.71	24.59	-0.12
41A-41A(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	39750	2506	27.5	27.45	-0.05

LTE Down Link 3CA Call Setup

PCC Setting: Channel /RB/BW/Modulation

SCC1 Setting : Channel /RB/BW/Modulation



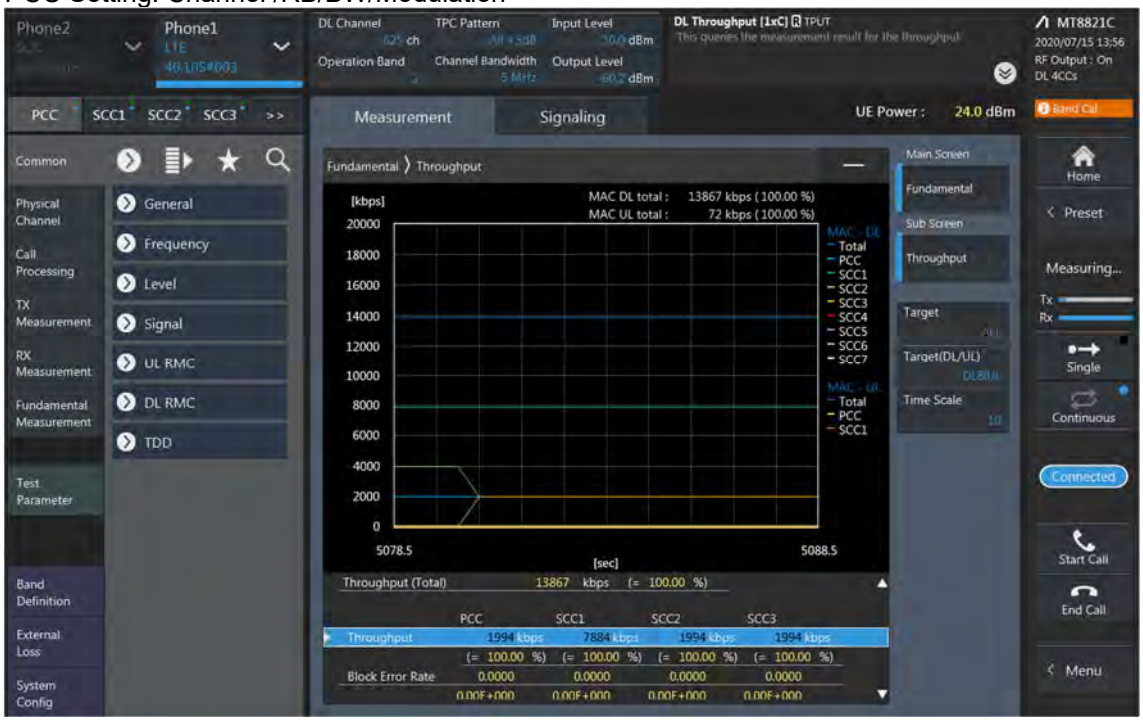
SCC2 Setting (Channel /RB/BW/Modulation)and call Connection

3CA Downlink Carrier aggregation conducted Powers

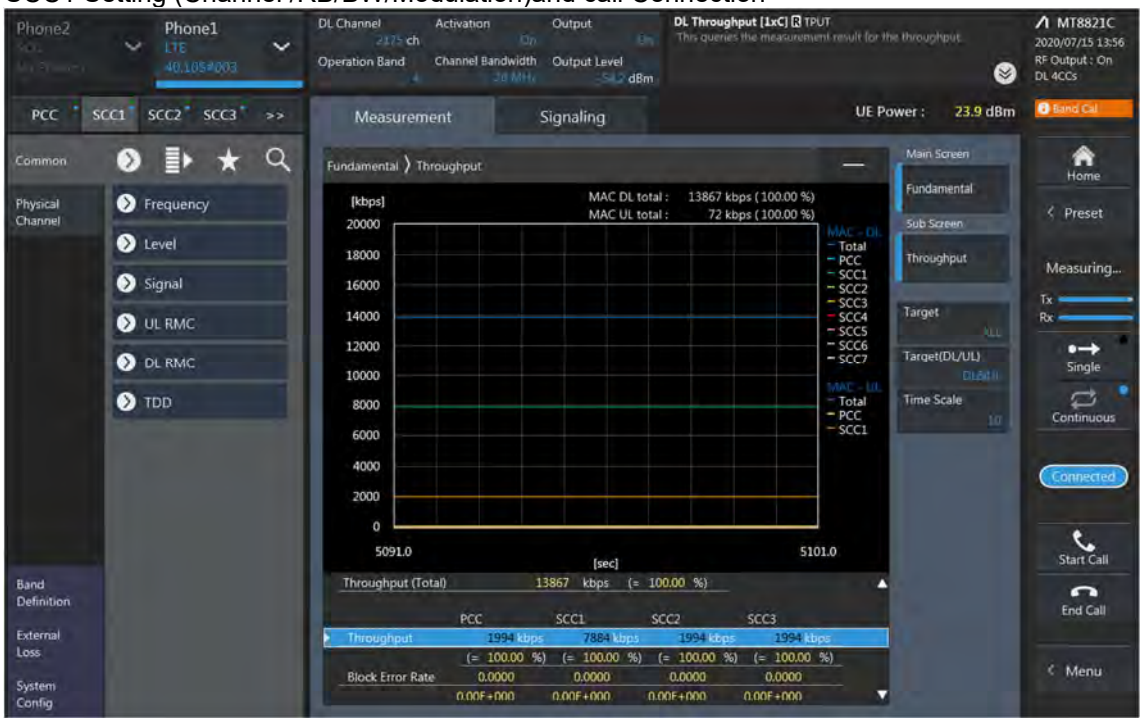
Combination	PCC									SCC				SCC				Tx Power		Dev.
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-2A-46A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	46	20	50665	5537.5	24.15	24.04	-0.11
2A-5A-46A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	24.15	24.06	-0.09
2A-5A-46A	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	24.59	24.42	-0.17
2A-13A-46A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	24.15	24.05	-0.1
2A-13A-46A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	24.17	24.02	-0.15
2A-4A-12A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	4	20	2175	2132.5	12	10	5095	737.5	24.15	24.00	-0.15
2A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	24.18	24.02	-0.16
2A-4A-12A	12	5	23095	707.5	5095	737.5	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	24.89	24.67	-0.22
2A-4A-13A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	4	20	2175	2132.5	13	10	5230	751	24.15	24.19	0.04
2A-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.18	24.08	-0.1
2A-4A-13A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.17	23.98	-0.19
2A-4A-71A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	4	20	2175	2132.5	71	20	68786	637	24.15	23.97	-0.184
2A-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.18	24.19	0.01
2A-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	24.91	24.72	-0.19
2A-12B	2	5	18625	1852.5	625	1932.5	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	24.15	24.12	-0.03
2A-12B	12	5	23095	707.5	5095	737.5	QPSK	1	24	12	5	5047	732.7	2	20	900	1960	24.89	24.67	-0.22
2A-66A-71A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	66	20	66786	2145	71	20	68786	637	24.15	24.02	-0.13
4A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	12	10	5095	737.5	24.18	24.14	-0.04
4A-4A-12A	12	5	23095	707.5	5095	737.5	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	24.89	24.69	-0.2
4A-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	13	10	5230	751	24.18	24.14	-0.04
4A-4A-13A	13	10	23230	782	5230	751	QPSK	1	49	4	20	2175	2132.5	4	10	2350	2150	24.17	23.86	-0.31
4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	24.18	24.21	0.03
4A-5B	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	4	20	2175	2132.5	24.59	24.35	-0.24
4A-46A-46A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	47090	5180	24.18	24.12	-0.06
4A-46C	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	24.18	24.10	-0.08
5A-46A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	46	20	50665	5537.5	66	20	66786	2145	24.59	24.40	-0.19
5B-46A	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	46	20	50665	5537.5	24.59	24.38	-0.21
12A-46C	12	5	23095	707.5	5095	737.5	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	24.89	24.70	-0.19
12A-66C	12	5	23095	707.5	5095	737.5	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	24.89	24.55	-0.34
12A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66984	2164.8	12	10	5095	737.5	24.11	24.14	0.03
13A-46A-66A	13	10	23230	782	5230	751	QPSK	1	49	46	20	50665	5537.5	66	20	66786	2145	24.17	24.15	-0.02
13A-46A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	737.5	46	20	50665	5537.5	24.11	24.08	-0.03
25A-25A-26A	25	20	26590	1905	8590	1985	QPSK	1	49	25	20	8140	1940	26	5	8865	876.5	24.18	24.15	-0.03
25A-25A-26A	26	5	26715	816.5	8715	861.5	QPSK	1	12	25	20	8365	1962.5	25	20	8590	1985	24.4	24.32	-0.08
25A-25A-41A	25	20	26590	1905	8590	1985	QPSK	1	49	25	20	8140	1940	41	20	40620	2593	24.18	24.17	-0.01
25A-26A-41A	25	20	26590	1905	8590	1985	QPSK	1	49	26	15	8865	876.5	41	20	40620	2593	24.18	24.05	-0.13
25A-26A-41A	26	10	26750	820	8750	865	QPSK	1	0	25	20	8365	1962.5	41	20	40620	2593	24.47	24.28	-0.19
25A-46C	25	20	26590	1905	8590	1985	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	24.18	24.05	-0.13
26A-41C	26	10	26750	820	8750	865	QPSK	1	0	41	20	40620	2593	41	20	40818	2612.8	24.47	24.35	-0.12
41A-41C(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	41292	2660.2	41	20	41490	2680	24.71	24.38	-0.33
41A-41C(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	40818	2612.8	41	20	41490	2680	24.71	24.40	-0.31
41A-41C(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	39948	2525.8	41	20	39750	2506	27.5	27.21	-0.29
41A-41C(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	40857	2616.7	41	20	39750	2506	27.5	27.26	-0.24
46A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	24.11	24.03	-0.08
66A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.11	24.11	0
66A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	66	20	67236	2190	24.11	24.09	-0.02

LTE Down Link 4CA Call Setup

PCC Setting: Channel /RB/BW/Modulation

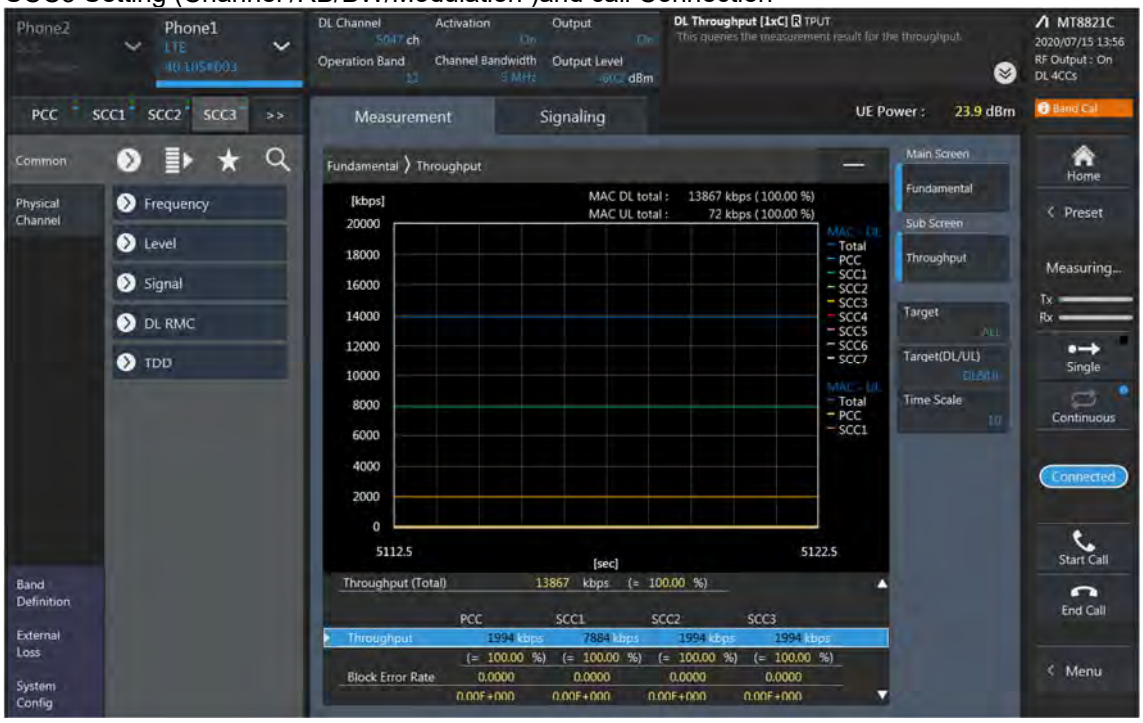


SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



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

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



4CA Downlink Carrier aggregation conducted Powers

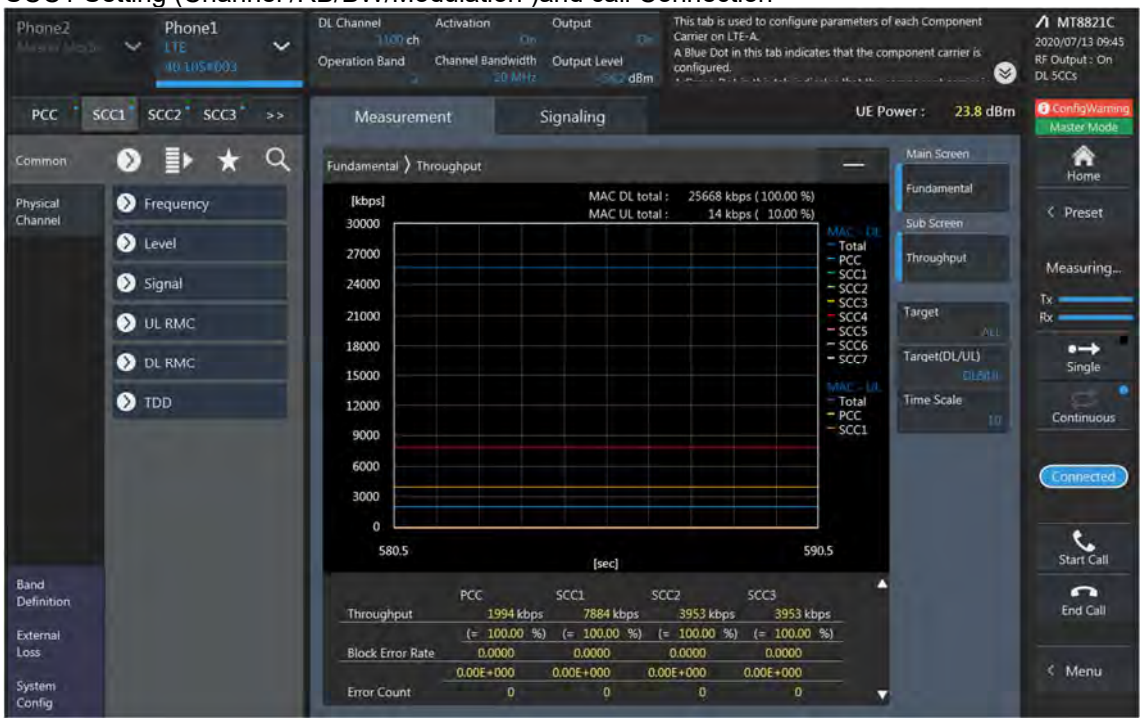
Combination	PCC									SCC				SCC				SCC				Tx Power		Dev.
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulatio	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-2A-4A-4A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.15	23.78	-0.37
2A-2A-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.18	24.00	-0.18
2A-2A-4A-5A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.15	23.84	-0.31
2A-2A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.18	24.09	-0.09
2A-2A-4A-5A	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.59	24.50	-0.09
2A-2A-4A-12A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.15	23.97	-0.18
2A-2A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.18	24.01	-0.17
2A-2A-4A-12A	12	5	23095	707.5	5095	737.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.89	24.60	-0.29
2A-2A-29A-30A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.15	23.78	-0.37
2A-2A-29A-30A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	22.49	22.42	-0.07
2A-2A-46C	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	24.15	23.91	-0.24
2A-4A-4A-5A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.15	23.89	-0.26
2A-4A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.18	24.12	-0.06
2A-4A-4A-5A	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.59	24.38	-0.21
2A-4A-4A-12A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.15	23.78	-0.37
2A-4A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.18	24.07	-0.11
2A-4A-5B	2	5	18625	1852.5	625	1932.5	QPSK	1	12	4	20	2175	2132.5	5	10	2525	881.5	5	5	2453	874.3	24.15	23.84	-0.31
2A-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.18	24.14	-0.04
2A-4A-5B	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	2	20	900	1960	4	20	2175	2132.5	24.59	24.42	-0.17
2A-4A-12B	2	5	18625	1852.5	625	1932.5	QPSK	1	12	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.15	24.13	-0.02
2A-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.18	23.88	-0.3
2A-4A-12B	12	5	23095	707.5	5095	737.5	QPSK	1	24	12	5	5047	732.7	2	20	900	1960	4	20	2175	2132.5	24.89	24.67	-0.22
2A-5A-46C	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.15	23.83	-0.32
2A-5A-46C	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.59	24.41	-0.18
2A-12B-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.15	23.97	-0.18
2A-12B-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.11	24.07	-0.04
2A-12A-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.15	23.98	-0.17
2A-12A-66A-66A	12	5	23095	707.5	5095	737.5	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.89	24.72	-0.17
2A-12A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.11	24.17	0.06
2A-12A-66C	2	5	18625	1852.5	625	1932.5	QPSK	1	12	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	24.15	23.96	-0.19
2A-12A-66C	12	5	23095	707.5	5095	737.5	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.89	24.68	-0.21
2A-12A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	2	20	900	1960	12	10	5095	737.5	24.11	24.06	-0.05
2A-13A-46C	2	5	18625	1852.5	625	1932.5	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	24.15	23.73	-0.42
2A-13A-46C	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.15	23.75	-0.4
2A-29A-30A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	29	10	9715	722.5	30	10	9820	2355	66	20	66786	2145	24.15	23.84	-0.31
2A-29A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	66	20	66786	2145	22.49	22.45	-0.04
2A-29A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	30	10	9820	2355	24.11	24.06	-0.05
2A-46A-46C	2	5	18625	1852.5	625	1932.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.15	23.94	-0.21
2A-46A-46A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	46	20	50665	5537.5	46	20	47090	5180	66	20	66786	2145	24.15	23.75	-0.4
2A-46A-46A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	47090	5180	24.11	23.83	-0.28
2A-46C-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.15	23.72	-0.43

Combination	PCC									SCC				SCC				SCC				Tx Power		Dev.
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulatio	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Banc	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.11	23.84	-0.27
2A-66C-71A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	66	20	66786	2145	66	20	66984	2164.8	71	20	68786	637	24.15	23.95	-0.2
2A-66C-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	2	20	900	1960	71	20	68786	637	24.11	24.00	-0.11
2A-66C-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.91	24.68	-0.23
2C-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	742	1944.2	66	20	66786	2145	66	20	67236	2190	24.15	23.97	-0.18
2C-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.11	23.95	-0.16
4A-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	24.18	24.16	-0.02
4A-4A-5B	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	4	20	2175	2132.5	4	10	2350	2150	24.59	24.39	-0.2
4A-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	24.18	24.09	-0.09
4A-46A-46C	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.18	23.91	-0.27
5A-5A-66A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2625	891.5	66	20	66786	2145	66	20	67236	2190	24.59	24.35	-0.24
5A-5A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	5	10	2525	881.5	5	5	2625	891.5	24.11	24.00	-0.11
5A-5A-66B	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2625	891.5	66	15	66786	2145	66	5	66879	2154.3	24.59	24.41	-0.18
5A-5A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	5	10	2525	881.5	5	5	2625	891.5	24.11	24.09	-0.02
5A-5A-66C	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2625	891.5	66	20	66786	2145	66	20	66984	2164.8	24.59	24.45	-0.14
5A-5A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	5	10	2525	881.5	5	5	2625	891.5	24.11	24.02	-0.09
5A-46C-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.59	24.51	-0.08
5A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.11	23.86	-0.25
5B-30A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	30	10	9820	2355	66	20	66786	2145	24.59	24.39	-0.2
5B-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	22.49	22.47	-0.02
5B-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	24.11	24.03	-0.08
5B-46C	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	46	20	50665	5537.5	46	20	50467	5517.7	24.59	24.36	-0.23
12A-46D	12	5	23095	707.5	5095	737.5	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.89	24.64	-0.25
13A-46D	13	10	23230	782	5230	751	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.17	24.10	-0.07
13A-46C-66A	13	10	23230	782	5230	751	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.17	24.02	-0.15
13A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	24.11	23.82	-0.29
25A-25A-41C	25	20	26590	1905	8590	1985	QPSK	1	49	25	20	8140	1940	41	20	40620	2593	41	20	40818	2612.8	24.18	24.06	-0.12
25A-41D	25	20	26590	1905	8590	1985	QPSK	1	49	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	24.18	24.03	-0.15
25A-46D	25	20	26590	1905	8590	1985	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.18	23.80	-0.38
29A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	29	10	9715	722.5	66	20	66786	2145	66	20	67236	2190	22.49	22.51	0.02
29A-30A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	29	10	9715	722.5	30	10	9820	2355	24.11	23.97	-0.14
41A-41D(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	24.71	24.53	-0.18
41A-41D(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	40422	2573.2	41	20	40818	2612.8	41	20	41490	2680	24.71	24.67	-0.04
41A-41D(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	40146	2545.6	41	20	39948	2525.8	41	20	39750	2506	27.5	27.34	-0.16
41A-41D(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	40857	2616.7	41	20	40659	2596.9	41	20	39750	2506	27.5	27.48	-0.02
41C-41C(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	40422	2573.2	41	20	41292	2660.2	41	20	41490	2680	24.71	24.32	-0.39
41C-41C(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	41253	2656.3	41	20	39948	2525.8	41	20	39750	2506	27.5	27.44	-0.06
41E(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	40422	2573.2	41	20	40818	2612.8	41	20	41016	2680	24.71	24.59	-0.12
41E(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	40857	2616.7	41	20	40659	2596.9	41	20	40461	2577.1	27.5	27.51	0.01
46A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.11	23.83	-0.28
46C-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	46	20	50467	5517.7	24.11	23.82	-0.29

LTE Down Link 5CA Call Setup

PCC Setting: Channel /RB/BW/Modulation

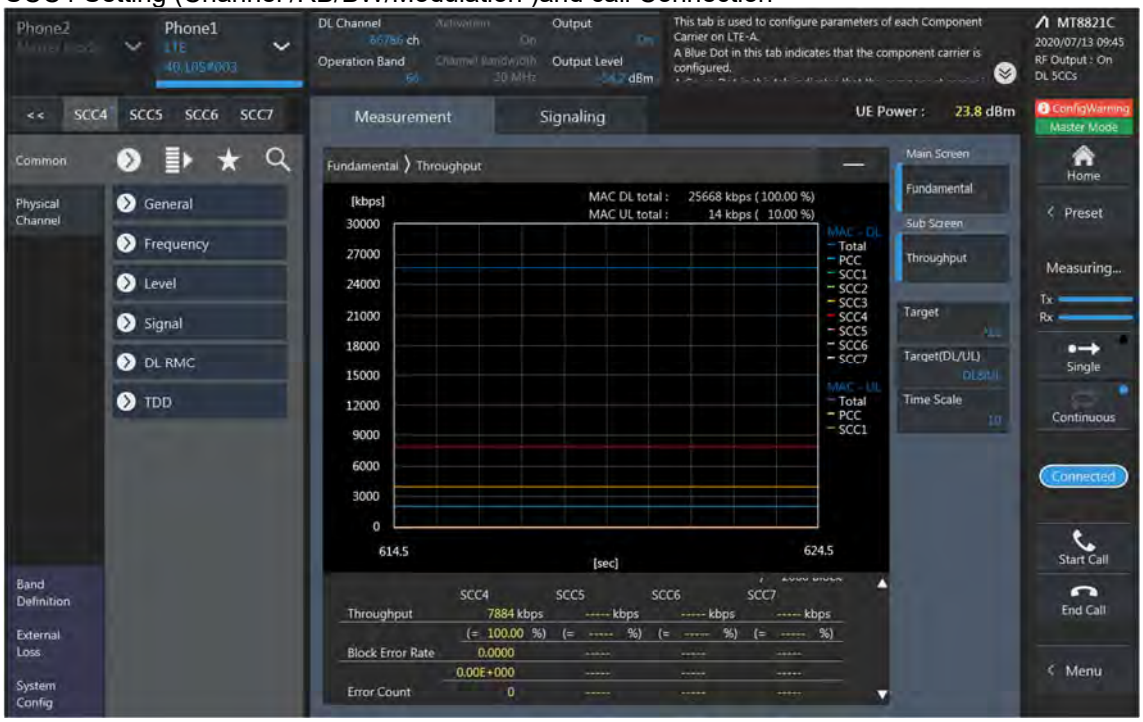
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



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

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

SCC4 Setting (Channel /RB/BW/Modulation)and call Connection



5CA Downlink Carrier aggregation conducted Powers

Combination	PCC									SCC				SCC				SCC				SCC				Tx Power		Dev
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	lodulatio	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	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-2A-5A-30A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.15	24	-0.15
2A-2A-5A-30A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.59	24.66	0.07
2A-2A-5A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	22.49	22.23	-0.26
2A-2A-5A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.11	24.08	-0.03
2A-2A-5A-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.15	24.07	-0.08
2A-2A-5A-66A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.59	24.73	0.14
2A-2A-5A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.11	23.99	-0.12
2A-2A-5A-66B	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.15	24.07	-0.08
2A-2A-5A-66B	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.59	24.66	0.07
2A-2A-5A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.11	24.06	-0.05
2A-2A-5A-66C	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.15	24.02	-0.13
2A-2A-5A-66C	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.59	24.65	0.06
2A-2A-5A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.11	24.05	-0.06
2A-2A-12A-30A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	24.15	23.98	-0.17
2A-2A-12A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	22.49	22.27	-0.22
2A-2A-12A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.11	24.08	-0.03
2A-2A-12B-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.15	24	-0.15
2A-2A-12B-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.11	24.05	-0.06
2A-2A-12A-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.15	24.03	-0.12
2A-2A-12A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.11	24.05	-0.06
2A-2A-13A-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.15	24.08	-0.07
2A-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.17	24.14	-0.03
2A-2A-13A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.11	24.06	-0.05
2A-2A-13A-66B	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.15	24.09	-0.06
2A-2A-13A-66B	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.17	24.15	-0.02
2A-2A-13A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.11	24.01	-0.1
2A-2A-14A-30A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	24.15	24	-0.15
2A-2A-14A-30A-66A	14	5	23305	790.5	5305	760.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.22	24.39	0.17
2A-2A-14A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	22.49	22.24	-0.25
2A-2A-14A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	24.11	24.06	-0.05
2A-2A-14A-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.15	24.05	-0.1
2A-2A-14A-66A-66A	14	5	23305	790.5	5305	760.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.22	24.44	0.22
2A-2A-14A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.11	24.06	-0.05
2A-2A-46D	2	5	18625	1852.5	625	1932.5	QPSK	1	12	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.15	24.02	-0.13
2A-5A-30A-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.15	24.02	-0.13
2A-5A-30A-66A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.59	24.72	0.13
2A-5A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	22.49	22.25	-0.24
2A-5A-30A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	30	10	9820	2355	24.11	24.03	-0.08
2A-5B-30A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	66	20	66786	2145	24.15	24.04	-0.11

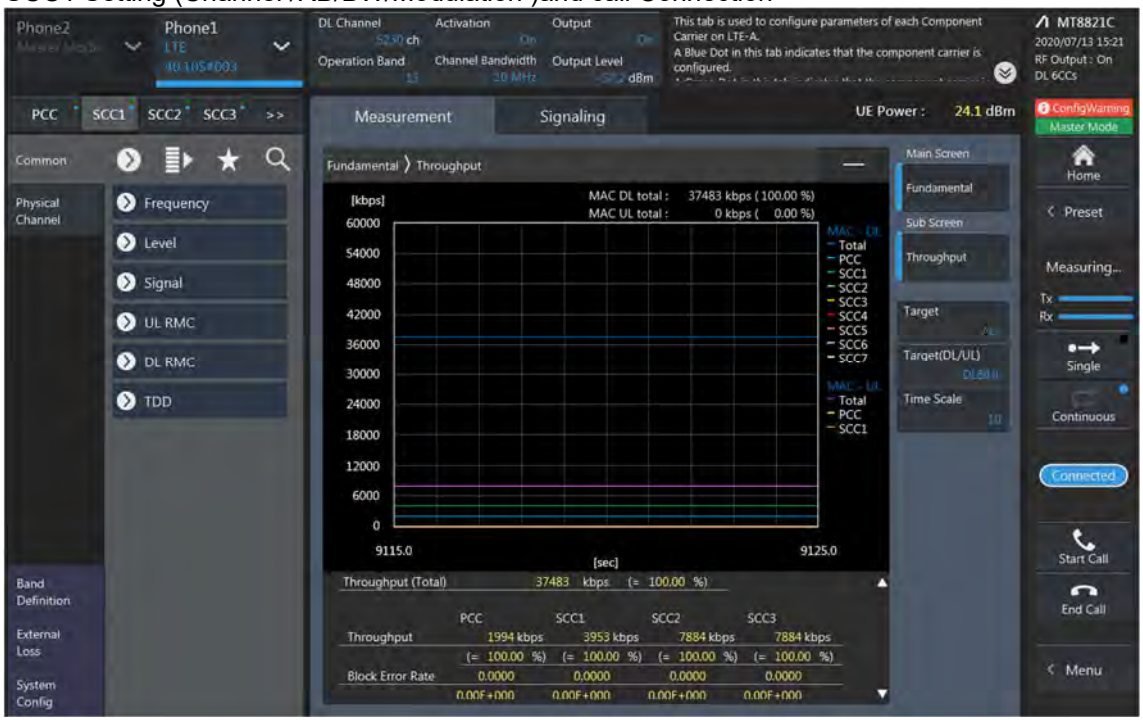
LTE Downlink 5CA Maximum Conducted Power

Combination	PCC									SCC				SCC				SCC				SCC				Tx Power		Dev
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulatio	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	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-5B-30A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	24.59	24.72	0.13
2A-5B-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	22.49	22.25	-0.24
2A-5B-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	24.11	24.05	-0.06
2A-5B-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.15	24.04	-0.11
2A-5B-66A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.59	24.69	0.1
2A-5B-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.11	24.08	-0.03
2A-5B-66B	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	15	66786	2145	66	5	66879	2154.3	24.15	23.98	-0.17
2A-5B-66B	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	2	20	900	1960	66	15	66786	2145	66	5	66879	2154.3	24.59	24.62	0.03
2A-5B-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.11	24.01	-0.1
2A-5B-66C	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2154.3	24.15	24.03	-0.12
2A-5B-66C	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2154.3	24.59	24.68	0.09
2A-5B-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.11	24.12	0.01
2A-12A-30A-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.15	24.02	-0.13
2A-12A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.49	22.29	-0.2
2A-12A-30A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	24.11	24.03	-0.08
2A-12B-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.15	24.04	-0.11
2A-12B-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.11	24.06	-0.05
2A-13A-66A-66B	2	5	18625	1852.5	625	1932.5	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.15	24.12	-0.03
2A-13A-66A-66B	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.17	24.09	-0.08
2A-13A-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	5	67168	2183.2	66	15	67261	2192.5	2	20	900	1960	13	10	5230	751	24.11	24.07	-0.04
2A-13A-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	66	20	67236	2190	2	20	900	1960	13	10	5230	751	24.11	24.06	-0.05
2A-14A-30A-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.15	24	-0.15
2A-14A-30A-66A-66A	14	5	23305	790.5	5305	760.5	QPSK	1	0	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.22	24.37	0.15
2A-14A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	2	20	900	1960	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	22.49	22.27	-0.22
2A-14A-30A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	14	10	5330	763	30	10	9820	2355	24.11	24.05	-0.06
2A-46A-46D	2	5	18625	1852.5	625	1932.5	QPSK	1	12	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.5	46	20	53144	5785.4	24.15	23.92	-0.23
2A-46A-46C-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	66	20	66786	2145	24.15	23.98	-0.17
2A-46A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.11	24.05	-0.06
4A-46A-46D	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.5	46	20	53144	5785.4	24.18	24	-0.18
5B-30A-66A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.59	24.69	0.1
5B-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	0	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	22.49	22.22	-0.27
5B-30A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	24.11	24.09	-0.02
5B-46D	5	10	20525	836.5	2525	881.5	QPSK	1	0	5	5	2453	874.3	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.59	24.53	-0.06
25A-25A-41D	25	20	26590	1905	8590	1985	QPSK	1	49	25	20	8140	1940	41	20	40422	2573.2	41	20	40620	2593	41	20	40818	2612.8	24.18	24.21	0.03
41C-41D(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	40422	2573.2	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	24.71	24.68	-0.03
41C-41D(PC3)	41	20	40620	2593	40620	2593	QPSK	1	49	41	20	40422	2573.2	41	20	40818	2612.8	41	20	41292	2660.2	41	20	41490	2680	24.71	24.66	-0.05
41C-41D(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	41253	2656.3	41	20	40146	2545.6	41	20	39948	2525.8	41	20	39750	2506	27.5	27.45	-0.05
41C-41D(PC2)	41	20	41055	2636.5	41055	2636.5	QPSK	1	49	41	20	41253	2656.3	41	20	40659	2596.9	41	20	39948	2525.8	41	20	39750	2506	27.5	27.55	0.05

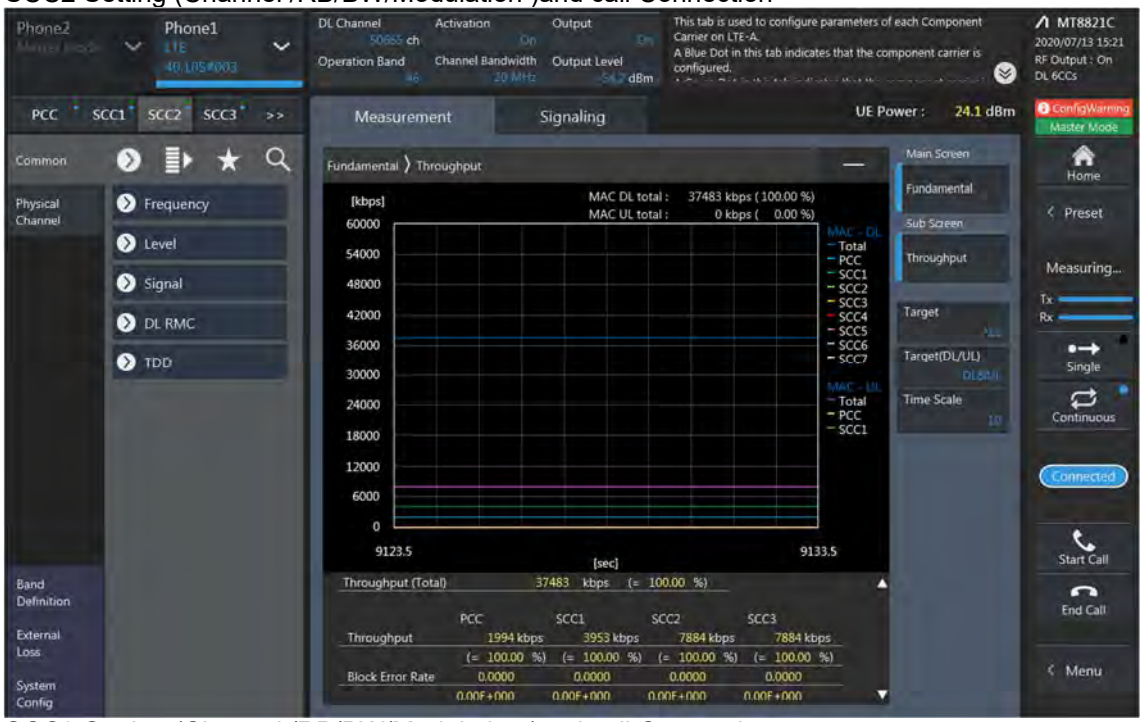
LTE Down Link 6CA Call Setup

PCC Setting: Channel /RB/BW/Modulation

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

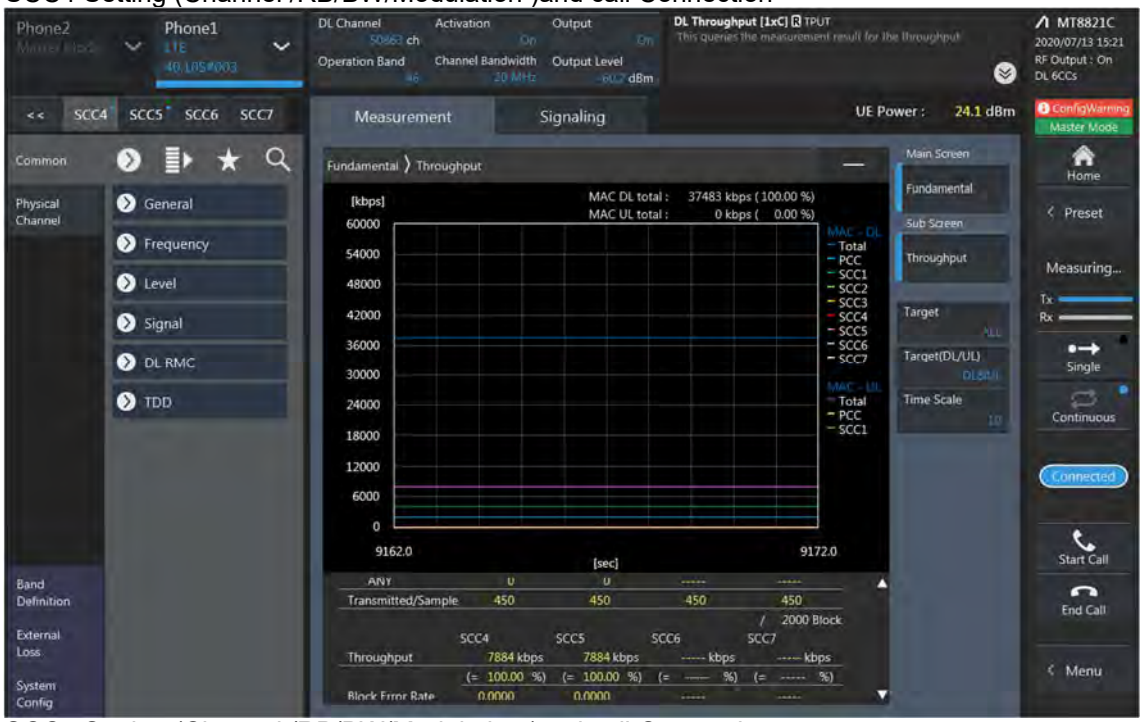


SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



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

SCC4 Setting (Channel /RB/BW/Modulation)and call Connection



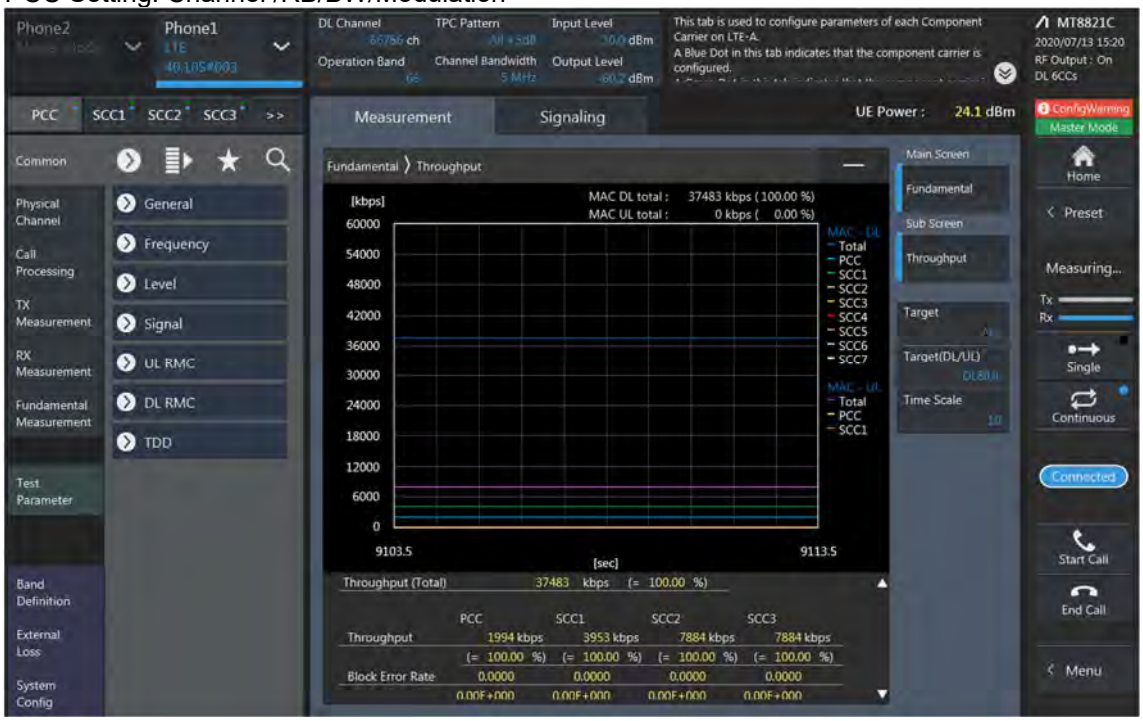
SCC5 Setting (Channel /RB/BW/Modulation)and call Connection

6CA Downlink Carrier aggregation conducted Powers

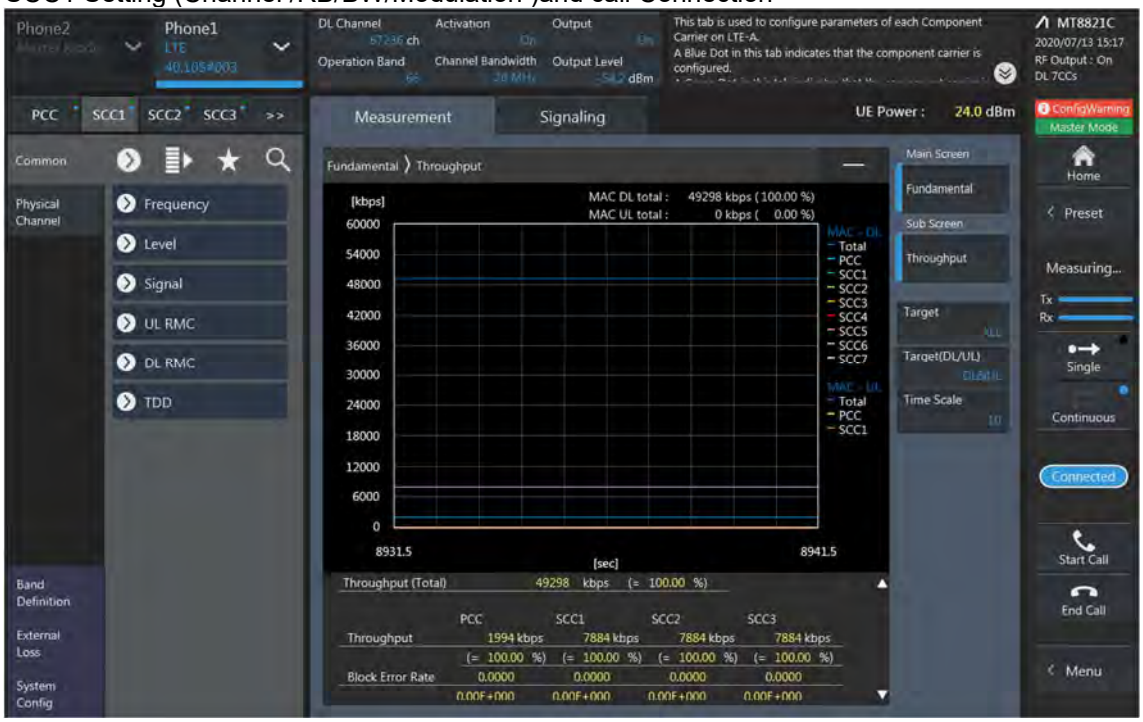
Combination	PCC									SCC				SCC				SCC				SCC				SCC				Tx Power		Dev.
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Mod.	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Freq.	Band	BW	SCC DL Channel	SCC DL Freq.	Band	BW	SCC DL Channel	SCC DL Freq.	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-5A-46D-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	24.15	24.08	-0.07
2A-5A-46D-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	24.59	24.58	-0.01
2A-5A-46D-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.11	24.09	-0.02
2A-5A-46E	2	5	18625	1852.5	625	1932.5	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.15	24.09	-0.06
2A-5A-46E	5	10	20525	836.5	2525	881.5	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.59	24.53	-0.06
2A-13A-46D-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	24.15	24.06	-0.09
2A-13A-46D-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	24.17	24.29	0.12
2A-13A-46D-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.11	24.02	-0.09
2A-13A-46E	2	5	18625	1852.5	625	1932.5	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.15	24.11	-0.04
2A-13A-46E	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.17	24.21	0.04
2A-46D-66A-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.15	24.07	-0.08
2A-46D-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.11	24.05	-0.06
2A-46E-66A	2	5	18625	1852.5	625	1932.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	24.15	24.05	-0.1
2A-46E-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.11	24.05	-0.06
5A-46D-66A-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.59	24.48	-0.11
5A-46D-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.11	24.04	-0.07
5A-46E-66A	5	10	20525	836.5	2525	881.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	24.59	24.52	-0.07
5A-46E-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.11	24.05	-0.06
13A-46D-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.17	24.13	-0.04
13A-46D-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.11	24.06	-0.05
13A-46E-66A	13	10	23230	782	5230	751	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	24.17	24.31	0.14
13A-46E-66A	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.11	24.07	-0.04

LTE Down Link 7CA Call Setup

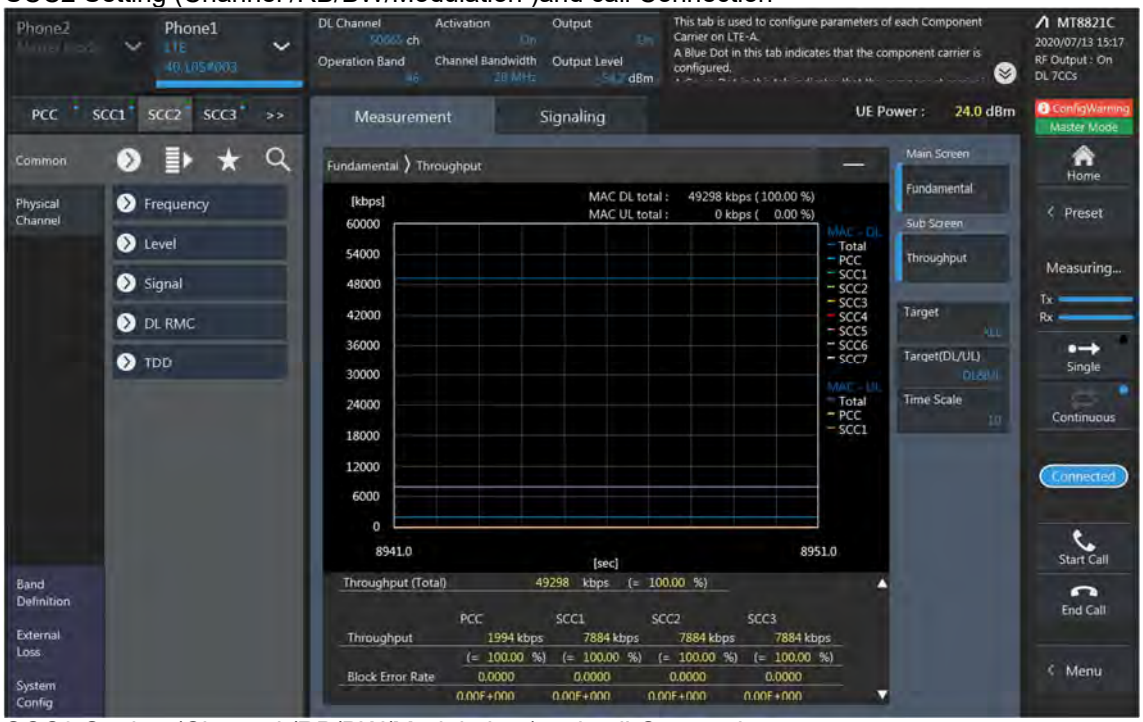
PCC Setting: Channel /RB/BW/Modulation



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

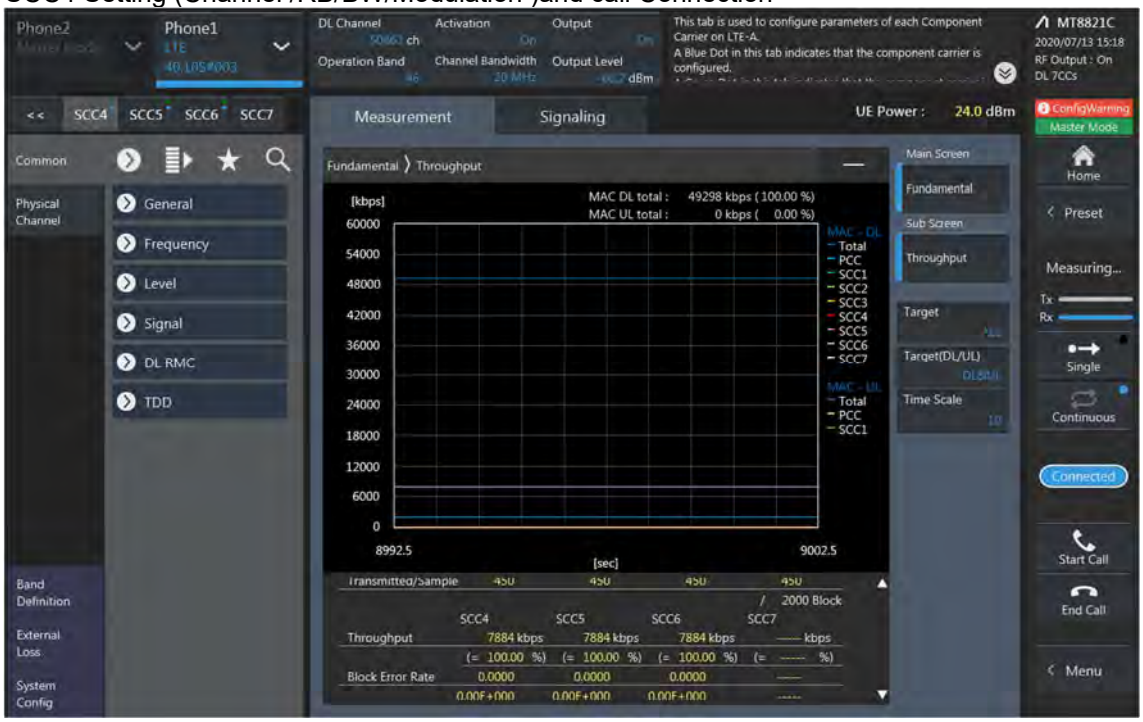


SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



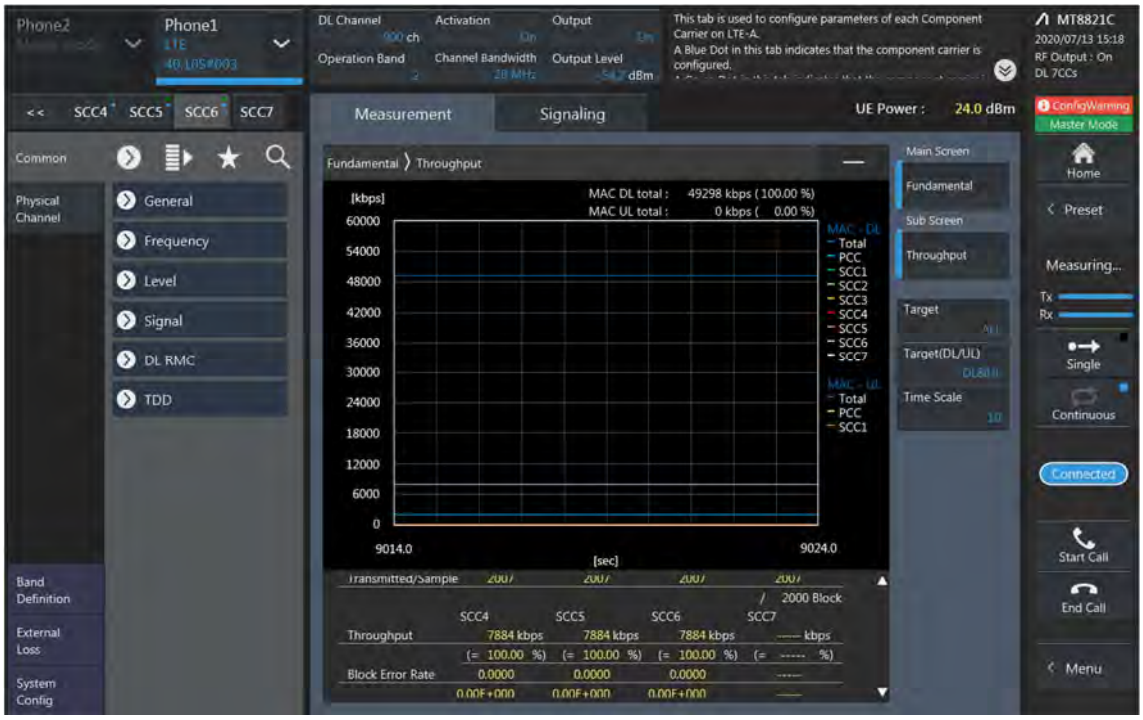
SCC3 Setting (Channel /RB/BW/Modulation)and call Connection

SCC4 Setting (Channel /RB/BW/Modulation)and call Connection



SCC5 Setting (Channel /RB/BW/Modulation)and call Connection

SCC6 Setting (Channel /RB/BW/Modulation)and call Connection



7CA Downlink Carrier aggregation conducted Powers

Combination	PCC									SCC				SCC				SCC				SCC				SCC				SCC				Tx Power		Dev.
	Band	BW	PCC UL Channel	PCC UL Freq.	PCC DL Channel	PCC DL Freq.	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Freq.	Band	BW	SCC DL Channel	SCC DL Freq.	Band	BW	SCC DL Channel	SCC DL Freq.	Band	BW	SCC DL Channel	SCC DL Freq.	Band	BW	SCC DL Channel	SCC DL Freq.	Band	BW	SCC DL Channel	SCC DL Freq.	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-46E-66A-66A	2	5	18625	1852.5	625	1933	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	66	20	67236	2190	24.15	24.05	-0.1
2A-46E-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	2	20	900	1960	24.11	23.98	-0.13

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