HCT Co., Ltd.
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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:** 09. 30, 2019 **Test Report No.:** HCT-SR-1909-FC001 **Test Site: HCT CO., LTD.**

FCC ID: A3LSMW767U

Equipment Type:	**Note PC**
Application Type	**Certification**
FCC Rule Part(s):	**CFR §2.1093**
Model Name:	**SM-W767U,SM-W767V, SM-W767P, SM-W767A, SM-W767W**
Date of Test:	**09/04/2019 ~ 09/26/2019**

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

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

Tested By

Moon Pyung Choi
Test Engineer
SAR Team
Certification Division

Reviewed By

Yun-jeang, Heo
Technical Manager
SAR Team
Certification Division

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	09. 30, 2019	Initial Release

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 for Laptop and 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-W767U,SM-W767V, SM-W767P, SM-W767A, SM-W767W
Equipment Type	Note PC
FCC ID	A3LSMW767U
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 ㎒ ~ 846.6 ㎒	PCB	1.17
UMTS 1700	1 712.4 ㎒ ~ 1 752.6 ㎒	PCB	1.20
UMTS 1900	1 852.4 ㎒ ~ 1 907.6 ㎒	PCB	1.11
LTE Band 7	2 502.5 ㎒ ~ 2 567.5 ㎒	PCB	1.20
LTE Band 12	699.7 ㎒ ~ 715.3 ㎒	PCB	0.79
LTE Band 13	779.5 ㎒ ~ 784.5 ㎒	PCB	1.16
LTE Band 14	790.5 ㎒ ~ 795.5 ㎒	PCB	1.16
LTE Band 25	1 850.7 ㎒ ~ 1 914.3 ㎒	PCB	1.40
LTE Band 26	814.7 ㎒ ~ 848.3 ㎒	PCB	1.10
LTE Band 30	2 307.5 ㎒ ~ 2 312.5 ㎒	PCB	1.11
LTE TDD Band 38	2 572.5 ㎒ ~ 2 617.5 ㎒	PCB	1.12
LTE TDD Band 40	2 307.5 ㎒ ~ 2 312.5 ㎒, 2 352.5 ㎒ ~ 2 357.5 ㎒	PCB	0.39
LTE TDD Band 41	2 498.5 ㎒ ~ 2 687.5 ㎒	PCB	0.55
LTE Band 66	1 710.7 ㎒ ~ 1 779.3 ㎒	PCB	1.27
LTE Band 71	665.5 ㎒ ~ 695.5 ㎒	PCB	0.95
802.11b	2 412 ㎒ ~ 2 472 ㎒	DTS	1.01
U-NII-1	5 180 ㎒ ~ 5 240 ㎒	NII	N/A
U-NII-2A	5 260 ㎒ ~ 5 320 ㎒	NII	0.94
U-NII-2C	5 500 ㎒ ~ 5 720 ㎒	NII	1.01
U-NII-3	5 745 ㎒ ~ 5 825 ㎒	NII	1.09
Bluetooth	2 402 ㎒ ~ 2 480 ㎒	DSS	0.21
Simultaneous SAR per KDB 690783 D01v01r03			1.599
Date(s) of Tests:	09. 04, 2019 ~ 09. 26, 2019		

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 (PCS)	Data	1 850.7 ㎒ ~ 1 909.3 ㎒
LTE Band 4 (AWS)	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 (PCS)	Data	1 850.7 ㎒ ~ 1 914.3 ㎒
LTE Band 26 (Cell)	Data	814.7 ㎒ ~ 848.3 ㎒
LTE Band 30	Data	2 307.5 ㎒ ~ 2 312.5 ㎒
LTE TDD Band 38	Data	2 572.5 ㎒ ~ 2 617.5 ㎒
LTE TDD Band 40	Data	2 307.5 ㎒ ~ 2 312.5 ㎒, 2 352.5 ㎒ ~ 2 357.5 ㎒
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 ㎒
2.4 ㎓ WLAN	Data	2 412 ㎒ ~ 2 472 ㎒
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 / LE 5.0	Data	2 402 ㎒ ~ 2 480 ㎒

Device Description		
Device Serial Numbers:	Mode	Serial Number
	Main/ WLAN/ Bluetooth	D2A0R32M8001VYR
		D2A0R32M8001WAT
		D2A0R32M8001ZX
		D2A0R32M8001VK
	The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.	

4.2 Power Reduction for SAR

This device utilizes a power reduction mechanism for some wireless mode and bands for SAR compliance under some conditions when the device is being used 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

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	3GPP HSDPA	3GPP HSUPA	DC-HSDPA
UMTS Band 5 (850 ㎒)	Maximum	25	24	24	24
	Nominal	24	23	23	23
UMTS Band 4 (1700 ㎒)	Maximum	25	24	24	24
	Nominal	24	23	23	23
UMTS Band 2 (1900 ㎒)	Maximum	25	24	24	24
	Nominal	24	23	24	23

Mode / Band		Modulated Average (dBm)
LTE Band 2 (PCS)	Maximum	25.5
	Nominal	24.5
LTE Band 4 (AWS)	Maximum	25.5
	Nominal	24.5
LTE Band 5 (Cell)	Maximum	25.0
	Nominal	24.0
LTE Band 7	Maximum	24.5
	Nominal	23.5
LTE Band 12	Maximum	25.5
	Nominal	24.5
LTE Band 13	Maximum	25.5
	Nominal	24.5
LTE Band 14	Maximum	25.5
	Nominal	24.5
LTE Band 25 (PCS)	Maximum	25.5
	Nominal	24.5
LTE Band 26 (Cell)	Maximum	25.0
	Nominal	24.0
LTE Band 30	Maximum	25.0
	Nominal	24.0
LTE Band 38	Maximum	25.0
	Nominal	24.0
LTE Band 40	Maximum	12.0
		11.0
LTE Band 41 PC2	Maximum	27.0
	Nominal	26.0
LTE Band 41 PC3	Maximum	25.0
	Nominal	24.0
LTE Band 66 (AWS)	Maximum	25.5
	Nominal	24.5
LTE Band 71	Maximum	25.5
	Nominal	24.5

4.3.2 Reduced Main Output Power – Proximity Sensor activated

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	3GPP HSDPA	3GPP HSUPA	DC-HSDPA
UMTS Band 5 (850 ㎒)	Maximum	19	18	18	18
	Nominal	18	17	17	17
UMTS Band 4 (1700 ㎒)	Maximum	14	13	13	13
	Nominal	13	12	12	12
UMTS Band 2 (1900 ㎒)	Maximum	14	13	13	13
	Nominal	13	12	12	12

Mode / Band		Modulated Average (dBm)
LTE Band 2 (PCS)	Maximum	14
	Nominal	13
LTE Band 4 (AWS)	Maximum	14
	Nominal	13
LTE Band 5 (Cell)	Maximum	19
	Nominal	18
LTE Band 7	Maximum	13.5
	Nominal	12.5
LTE Band 12	Maximum	19
	Nominal	18
LTE Band 13	Maximum	19
	Nominal	18
LTE Band 14	Maximum	19
	Nominal	18
LTE Band 25 (PCS)	Maximum	14
	Nominal	13
LTE Band 26 (Cell)	Maximum	19
	Nominal	18
LTE Band 30	Maximum	14
	Nominal	13
LTE Band 38	Maximum	14
	Nominal	13
LTE Band 40	Maximum	12
	Nominal	11
LTE Band 41 PC2	Maximum	13
	Nominal	12
LTE Band 41 PC3	Maximum	13
	Nominal	12
LTE Band 66 (AWS)	Maximum	14
	Nominal	13
LTE Band 71	Maximum	19
	Nominal	18

4.3.3 Maximum 2.4 GHz, 5 GHz WIFI output power

Mode / Band			Modulated Average (dBm)								
			SISO					MIMO			
			11a	11b	11g	11n	11ac	11a	11g	11n	11ac
2.4 GHz WIFI	Ch.1	Maximum	N/A	19	17	16	N/A	N/A	20	19	N/A
		Nominal	N/A	18	16	15	N/A	N/A	19	18	N/A
	Ch.2~Ch.11	Maximum	N/A	19	17	17	N/A	N/A	20	20	N/A
		Nominal	N/A	18	16	16	N/A	N/A	19	19	N/A
5 GHz WIFI (20 MHz)	(U-NII-1) 5200 MHz	Maximum	14	N/A	N/A	14	13	17	N/A	17	16
		Nominal	13	N/A	N/A	13	12	16	N/A	16	15
	(U-NII-2A) 5300 MHz	Maximum	14	N/A	N/A	14	13	17	N/A	17	16
		Nominal	13	N/A	N/A	13	12	16	N/A	16	15
	(U-NII-2C) 5500 MHz	Maximum	14	N/A	N/A	14	13	17	N/A	17	16
		Nominal	13	N/A	N/A	13	12	16	N/A	16	15
	(U-NII-3) 5800 MHz	Maximum	14	N/A	N/A	14	13	17	N/A	17	16
		Nominal	13	N/A	N/A	13	12	16	N/A	16	15
5 GHz WIFI (40 MHz)	(U-NII-1) 5200 MHz	Maximum	N/A	N/A	N/A	13	12	N/A	N/A	16	15
		Nominal	N/A	N/A	N/A	12	11	N/A	N/A	15	14
	(U-NII-2A) 5300 MHz	Maximum	N/A	N/A	N/A	13	12	N/A	N/A	16	15
		Nominal	N/A	N/A	N/A	12	11	N/A	N/A	15	14
	(U-NII-2C) 5500 MHz	Maximum	N/A	N/A	N/A	13	12	N/A	N/A	16	15
		Nominal	N/A	N/A	N/A	12	11	N/A	N/A	15	14
	(U-NII-3) 5800 MHz	Maximum	N/A	N/A	N/A	13	12	N/A	N/A	16	15
		Nominal	N/A	N/A	N/A	12	11	N/A	N/A	15	14
5 GHz WIFI (80 MHz)	(U-NII-1) 5200 MHz	Maximum	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	14
		Nominal	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	13
	(U-NII-2A) 5300 MHz	Maximum	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	14
		Nominal	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	13
	(U-NII-2C) 5500 MHz	Maximum	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	14
		Nominal	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	13
	(U-NII-3) 5800 MHz	Maximum	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	14
		Nominal	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	13

4.3.4 Reduced 2.4 GHz, 5 GHz WIFI output power Proximity Sensor activated

Mode / Band			Modulated Average (dBm)								
			SISO					MIMO			
			11a	11b	11g	11n	11ac	11a	11g	11n	11ac
2.4 GHz WIFI	Ch.1	Maximum	N/A	14	14	14	N/A	N/A	17	17	N/A
		Nominal	N/A	13	13	13	N/A	N/A	16	16	N/A
	Ch.2~Ch.11	Maximum	N/A	14	14	14	N/A	N/A	17	17	N/A
		Nominal	N/A	13	13	13	N/A	N/A	16	16	N/A
5 GHz WIFI (20 MHz)	(U-NII-1) 5200 MHz	Maximum	9	N/A	N/A	9	9	12	N/A	12	12
		Nominal	8	N/A	N/A	8	8	11	N/A	11	11
	(U-NII-2A) 5300 MHz	Maximum	9	N/A	N/A	9	9	12	N/A	12	12
		Nominal	8	N/A	N/A	8	8	11	N/A	11	11
	(U-NII-2C) 5500 MHz	Maximum	9	N/A	N/A	9	9	12	N/A	12	12
		Nominal	8	N/A	N/A	8	8	11	N/A	11	11
	(U-NII-3) 5800 MHz	Maximum	9	N/A	N/A	9	9	12	N/A	12	12
		Nominal	8	N/A	N/A	8	8	11	N/A	11	11
5 GHz WIFI (40 MHz)	(U-NII-1) 5200 MHz	Maximum	N/A	N/A	N/A	9	9	N/A	N/A	12	12
		Nominal	N/A	N/A	N/A	8	8	N/A	N/A	11	11
	(U-NII-2A) 5300 MHz	Maximum	N/A	N/A	N/A	9	9	N/A	N/A	12	12
		Nominal	N/A	N/A	N/A	8	8	N/A	N/A	11	11
	(U-NII-2C) 5500 MHz	Maximum	N/A	N/A	N/A	9	9	N/A	N/A	12	12
		Nominal	N/A	N/A	N/A	8	8	N/A	N/A	11	11
	(U-NII-3) 5800 MHz	Maximum	N/A	N/A	N/A	9	9	N/A	N/A	12	12
		Nominal	N/A	N/A	N/A	8	8	N/A	N/A	11	11
5 GHz WIFI (80 MHz)	(U-NII-1) 5200 MHz	Maximum	N/A	N/A	N/A	N/A	9	N/A	N/A	N/A	12
		Nominal	N/A	N/A	N/A	N/A	8	N/A	N/A	N/A	11
	(U-NII-2A) 5300 MHz	Maximum	N/A	N/A	N/A	N/A	9	N/A	N/A	N/A	12
		Nominal	N/A	N/A	N/A	N/A	8	N/A	N/A	N/A	11
	(U-NII-2C) 5500 MHz	Maximum	N/A	N/A	N/A	N/A	9	N/A	N/A	N/A	12
		Nominal	N/A	N/A	N/A	N/A	8	N/A	N/A	N/A	11
	(U-NII-3) 5800 MHz	Maximum	N/A	N/A	N/A	N/A	9	N/A	N/A	N/A	12
		Nominal	N/A	N/A	N/A	N/A	8	N/A	N/A	N/A	11

4.3.5 RSDB Maximum 2.4 GHz, 5 GHz WIFI output power

Mode / Band			Modulated Average (dBm)					
			ANT 1			ANT 2		
			11b	11g	11n	11a	11n	11ac
2.4 GHz WIFI	Ch.1~Ch.11	Maximum	14	14	14	N/A	N/A	N/A
		Nominal	13	13	13	N/A	N/A	N/A
5 GHz WIFI (20 MHz)	(U-NII-1) 5200 MHz	Maximum	N/A	N/A	N/A	9	9	9
		Nominal	N/A	N/A	N/A	8	8	8
	(U-NII-2A) 5300 MHz	Maximum	N/A	N/A	N/A	9	9	9
		Nominal	N/A	N/A	N/A	8	8	8
	(U-NII-2C) 5500 MHz	Maximum	N/A	N/A	N/A	9	9	9
		Nominal	N/A	N/A	N/A	8	8	8
	(U-NII-3) 5800 MHz	Maximum	N/A	N/A	N/A	9	9	9
		Nominal	N/A	N/A	N/A	8	8	8
5 GHz WIFI (40 MHz)	(U-NII-1) 5200 MHz	Maximum	N/A	N/A	N/A	N/A	9	9
		Nominal	N/A	N/A	N/A	N/A	8	8
	(U-NII-2A) 5300 MHz	Maximum	N/A	N/A	N/A	N/A	9	9
		Nominal	N/A	N/A	N/A	N/A	8	8
	(U-NII-2C) 5500 MHz	Maximum	N/A	N/A	N/A	N/A	9	9
		Nominal	N/A	N/A	N/A	N/A	8	8
	(U-NII-3) 5800 MHz	Maximum	N/A	N/A	N/A	N/A	9	9
		Nominal	N/A	N/A	N/A	N/A	8	8
5 GHz WIFI (80 MHz)	(U-NII-1) 5200 MHz	Maximum	N/A	N/A	N/A	N/A	N/A	9
		Nominal	N/A	N/A	N/A	N/A	N/A	8
	(U-NII-2A) 5300 MHz	Maximum	N/A	N/A	N/A	N/A	N/A	9
		Nominal	N/A	N/A	N/A	N/A	N/A	8
	(U-NII-2C) 5500 MHz	Maximum	N/A	N/A	N/A	N/A	N/A	9
		Nominal	N/A	N/A	N/A	N/A	N/A	8
	(U-NII-3) 5800 MHz	Maximum	N/A	N/A	N/A	N/A	N/A	9
		Nominal	N/A	N/A	N/A	N/A	N/A	8

4.3.6 Maximum Bluetooth Power

Mode / Band		Modulated Average (dBm)
Bluetooth	Maximum	11
	Nominal	10
Bluetooth LE	Maximum	8
	Nominal	7

4.4 LTE Information

Item.		Description
Frequency Range	LTE Band 2 (PCS)	1 850.7 ㎒ ~ 1 909.3 ㎒
	LTE Band 4 (AWS)	1 710.7 ㎒ ~ 1 754.3 ㎒
	LTE Band 5 (Cell)	824.7 ㎒ ~ 848.3 ㎒
	LTE Band 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 38	2 572.5 ㎒ ~ 2 617.5 ㎒
	LTE TDD Band 40	2 307.5 ㎒ ~ 2 312.5 ㎒, 2 352.5 ㎒ ~ 2 357.5 ㎒
	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 38	5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒
	LTE TDD Band 40	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)

Mode		Low	Mid	High
		Freq.(㎒) (Ch. No.)	Freq.(㎒) (Ch. No.)	Freq.(㎒) (Ch. No.)
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)	
LTE Band 38	5 ㎒	2572.5 (37775)	2 595 (38000)	2617.5 (38225)
	10 ㎒	2575 (37800)	2 595 (38000)	2615 (38200)
	15 ㎒	2577.5 (37825)	2 595 (38000)	2612.5 (38175)
	20 ㎒	2580 (37850)	2 595 (38000)	2610 (38150)
LTE Band 40 (Low Side)	5 ㎒	2 307.5 (38725)	2 310 (38750)	2 312.5 (38775)
	10 ㎒		2 310 (38750)	
LTE Band 40 (Upper Side)	5 ㎒	2 352.5 (39175)	2 355 (39200)	2 357.5 (39225)
	10 ㎒		2 355 (39200)	
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	
HPUE Power Class	TDD 41 Power Class 3 :(Duty: 63.3%) Power Class 2 : (Duty:43.3%) (See 10.2.6)	
UE Category	LTE Rel. 14, DL: Category 18, UL: Category 13	
Modulations Supported in UL	QPSK, 16QAM, 64QAM	
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3	Yes	
A-MPR disabled for SAR Testing.	Yes	
LTE Carrier Aggregation	Down-Link CA	This device supports DL-link Intra-band and Inter-band Carrier aggregations. The Technical Description includes all the possible carrier aggregation combinations.
	Up-Link CA	41C (Power Class 3 only)
LTE information	This device does not support full CA features on 3GPP Release 14. It supports Carrier aggregation and LAA features. All Other uplink communications are identical to the Release 8 specifications. Uplink Communications are done on the PCC unless otherwise specified. The following LTE Release 14 features are not supported. Relay, HetNet, Enhanced MIMO, eICI, WiFi offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.	

4.5 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.

Simultaneous transmission paths

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 Antenna 1	Yes
UMTS + 2.4 GHz Wifi Antenna 2	Yes
UMTS + 2.4 GHz Wifi MIMO	Yes
LTE + 2.4 GHz Wifi Antenna 1	Yes
LTE + 2.4 GHz Wifi Antenna 2	Yes
LTE + 2.4 GHz Wifi MIMO	Yes
UMTS + 5 GHz WiFi Antenna 1	Yes
UMTS + 5 GHz WiFi Antenna 2	Yes
UMTS + 5 GHz WiFi MIMO	Yes
LTE + 5 GHz WiFi Antenna 1	Yes
LTE + 5 GHz WiFi Antenna 2	Yes
LTE + 5 GHz WiFi MIMO	Yes
UMTS + 2.4 GHz Wifi Antenna 1 + 5 GHz WiFi Antenna 2	Yes
LTE + 2.4 GHz Wifi Antenna 1 + 5 GHz WiFi Antenna 2	Yes
UMTS + 2.4 GHz Bluetooth	Yes
LTE + 2.4 GHz Bluetooth	Yes

1. Bluetooth cannot transmit simultaneously with WLAN
2. All Licensed modes cannot transmit simultaneously.
3. This device support the simultaneous transmission for 2.4 GHz Wifi Antenna 1 and 5 GHz WiFi Antenna

4.6 SAR Test Considerations

4.6.1 WiFi

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 ㎒ Bandwidth only
b) No aggregate channel configurations
c) 2Tx antenna output
d) 256 QAM is supported
e) TDWR channels are supported.
f) Straddle channels are supported

4.6.2 Bluetooth LE

Per FCC KDB 447498 D01v06, The SAR exclusion threshold for distance < 50mm is defined by the following equation:

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

Mode		Frequency	Maximum Allowed Power	Separation Distance	≤ 3.0
		[㎒]	[mW]	[mm]	1-g SAR
Bluetooth LE	Body SAR	2 480	6.0	5	1.9

Based on the maximum conducted power of Bluetooth LE and antenna to use separation distance, Bluetooth LE SAR was not required [(6/5)*√2.480] = 1.9 ≤ 3.0 for 1-g SAR.

The Reported SAR for WLAN and Bluetooth

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

4.6.3 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.

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 Uplink for LTE 41 with two component carriers in the uplink. SAR measurements and conducted powers were evaluated per Fall 2017 TCBC Workshop notes (LTE Carrier aggregation).
Because the maximum output for UL CA of LTE 41 is ≤ standalone LTE mode (without CA),
SAR for LTE B41 Up link CA was performed at the highest standalone SAR configuration without CA and also UL CA SAR is not required for all required test channels, Because the reported SAR for UL CA configuration is > 1.2 W/kg .

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.

This device supports 64QAM on the uplink for LTE operations conducted powers for 64QAM uplink configurations were measured per sec.5.1 of FCC KDB 941225 D05v02r05. SAR was not required for 64QAM since the highest maximum output power for 64QAM is ≤ 0.5dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg, per sec.5.2.4 of FCC KDB 941225 D05v02r05.

This DUT 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 bands have the same maximum 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 5 (824.7 MHz – 848.3 MHz) is covered by LTE Band 26 (814.7 MHz ~ 848.3 MHz), LTE Band 4 (1 710.7 MHz ~ 1 754.3 MHz) is covered by LTE Band 66 (1 710.7 MHz ~ 1 779.3 MHz), LTE Band 2 (1 850.7 MHz ~ 1 909.3 MHz) is covered by LTE Band 25 (1850.7 MHz ~ 1914.3 MHz)and each both LTE bands have the same target powers

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.

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 $[(X_1 - X_2)^2 + (Y_1 - Y_2)^2 + (Z_1 - Z_2)^2]$

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.

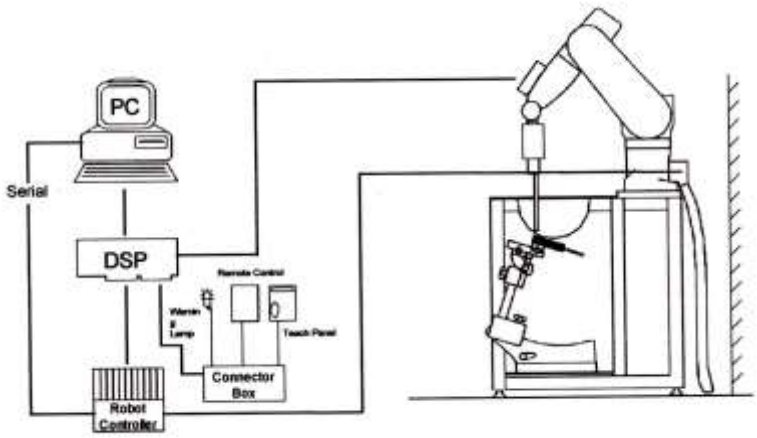


Figure 2. HCT SAR Lab. Test Measurement Set-up

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. The system is described in detail in.

7. SAR Measurement Procedure

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

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 table 4-1 & IEEE 1528-2013.

2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned are, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.

3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)

   a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

   b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.

   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

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

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5±1 mm</td><td>$^1/_2 \cdot \delta \cdot \ln(2) \pm 0.5$ mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface
normal at the measurement location</td><td>30°±1°</td><td>20°±1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan Spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤15 mm
2-3 GHz: ≤12 mm</td><td>3-4 GHz: ≤12 mm
4-6 GHz: ≤10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="3">Maximum zoom scan Spatial resolution: Δx_{zoom}, Δy_{zoom}</td><td>≤ 2 GHz: ≤8mm
2-3 GHz: ≤5mm*</td><td>3-4 GHz: ≤5 mm*
4-6 GHz: ≤4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan Spatial resolution normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{zoom}(n)$</td><td>≤ 5 mm</td><td>3-4 GHz: ≤4 mm
4-5 GHz: ≤3 mm
5-6 GHz: ≤2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{zoom}(1)$: between 1 st two Points closest to phantom surface</td><td>≤ 4 mm</td><td>3-4 GHz: ≤3 mm
4-5 GHz: ≤2.5 mm
5-6 GHz: ≤2 mm</td></tr>
<tr><td>$\Delta z_{zoom}(n>1)$: between subsequent Points</td><td colspan="2">$\leq 1.5 \cdot \Delta z_{zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3-4 GHz: ≥28 mm
4-5 GHz: ≥25 mm
5-6 GHz: ≥22 mm</td></tr>
<tr><td colspan="5">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.</td></tr>
</table>

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.

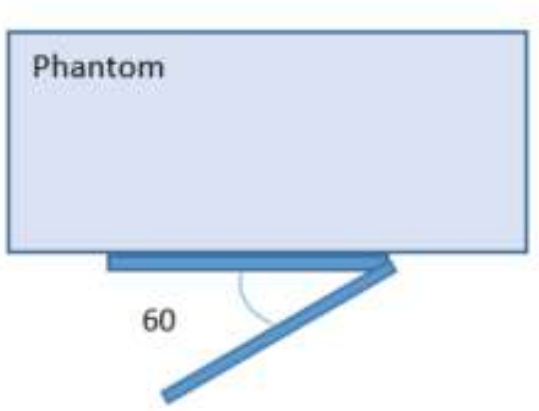
8.2 Laptop host platform test requirements Per KDB Publication 616217 D04v01r02

The required minimum test separation distance for incorporating transmitters and antennas into laptop, notebook and netbook computer displays is determined with the display screen opened at an angle of 90° to the keyboard compartment. If a computer has other operating configurations that require a different or more conservative display to keyboard angle for normal use, a KDB inquiry should be submitted to determine the test requirements. When antennas are incorporated in the keyboard section of a laptop computer, SAR is required for the bottom surface of the keyboard. Provided tablet use conditions are not supported by the laptop computer, SAR tests for bystander exposure from the edges of the keyboard and display screen of laptop computers are generally not required

Per FCC Guidance for SAR testing of this DUT In order to maintain SAR conservativeness,

The rubber feet on the bottom of the device will be removed for SAR testing. Because of the hinge mechanism at back of keyboard it would increase the distance between the keyboard bottom and phantom. The display needs to be kept open at ≤ 60°degrees for the rear of the keyboard to maintain contact with the phantom.

While users would normally keep the display open at angles greater than 60°degrees, for SAR testing purposes and to maintain conservativeness, we keep the display open at 60°degrees from the keyboard to perform the SAR measurement.



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 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at the exposure condition. The smallest separation distance determined by the sensor triggering , minus 1 mm. was used as the test separation distance for SAR testing. Sensor triggering distance evaluation is provided in a separate document.

Antenna Configuration	Wireless technologies	Position	§6.2 Triggering Distance	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR
Main Ant 1	WCDMA B5 /LTEB5/B7/B12/B13/ B14/B26/B30/B38/B40/B41/B71)	Rear	15	N/A	N/A	14
Main Ant 2	WCDMA B2/B4 /LTEB2/B4/B25/B66	Rear	14	N/A	N/A	13
WLAN Ant 1	2.4GHz/5GHz WLAN	Rear	5 mm	N/A	N/A	4 mm
WLAN Ant 2	2.4GHz/5GHz WLAN	Rear	5 mm	N/A	N/A	4 mm

9. RF Exposure Limits

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

NOTES:

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

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

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

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

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

10. FCC SAR General Measurement Procedures

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

10.1 Measured and Reported SAR

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

10.2 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

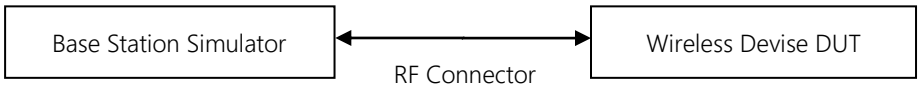
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control 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 Uplink Carrier Aggregation SAR Measurement Procedure

This device is specified with the same maximum output power and Tune-up tolerances for intra-band contiguous up-link LTE CA_41C and the single carrier LTE Band 41. Both Uplink carrier aggregation and single carrier are operating with Power class 3.
This device support intra-band contiguous UL CA: LTE CA_41C with a maximum of 20 ㎒ component carriers
For intra-band contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that aggregate maximum allowed output power is equivalent to the single carrier scenario.

This device does not have any operating restrictions, Power reduction or variations among the different LTE operating mode configurations on single carrier LTE Band 41 and intra-band contiguous up-link LTE CA_41C operations.

The measured power results of single carrier LTE Band and intra-band contiguous up-link LTE CA_41C satisfy Maximum output power and Tune-up tolerances.

Per Fall 2017 TCB Workshop Notes, the output Power with uplink CA active was measured for the configuration with the Highest Reported SAR with standalone condition.

Because the maximum output for UL CA of LTE Band 41 is ≤ standalone LTE mode (without CA), SAR for LTE Band 41 Up link CA was performed at the highest standalone SAR configuration without CA and also UL CA SAR is not required for all required test channels, Because the reported SAR for UL CA configuration is > 1.2 W/kg

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.

10.5.8 MIMO SAR considerations
Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is <1.6 W/kg, no additional SAR measurements for MIMO are required Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

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

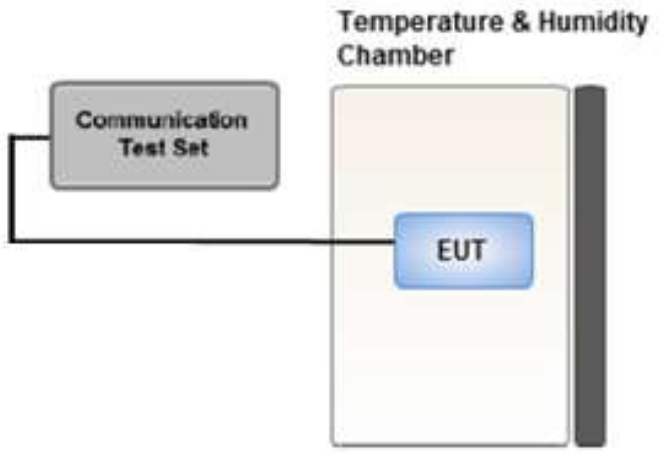
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base 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 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	24.55	24.49	24.45	-
5	HSDPA	Subtest 1	23.38	23.39	23.39	0
5		Subtest 2	23.41	23.38	23.38	0
5		Subtest 3	22.91	22.88	22.88	0.5
5		Subtest 4	22.90	22.88	22.88	0.5
6	HSUPA	Subtest 1	23.42	23.41	23.40	0
6		Subtest 2	21.42	21.41	21.38	2
6		Subtest 3	22.40	22.39	22.39	1
6		Subtest 4	21.41	21.40	21.39	2
6		Subtest 5	23.43	23.41	23.41	0
8	DC-HSDPA	Subtest 1	23.41	23.38	23.38	0
8		Subtest 2	23.37	23.38	23.37	0
8		Subtest 3	22.90	22.89	22.90	0.5
8		Subtest 4	22.90	22.87	22.88	0.5

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	24.16	24.16	24.05	-
5	HSDPA	Subtest 1	22.98	22.99	22.84	0
5		Subtest 2	22.96	22.97	22.87	0
5		Subtest 3	22.45	22.48	22.36	0.5
5		Subtest 4	22.45	22.47	22.36	0.5
6	HSUPA	Subtest 1	22.98	22.99	22.89	0
6		Subtest 2	20.98	20.99	20.91	2
6		Subtest 3	21.98	22.00	21.91	1
6		Subtest 4	20.99	21.01	20.92	2
6		Subtest 5	22.99	23.00	22.91	0
8	DC-HSDPA	Subtest 1	23.32	23.15	22.83	0
8		Subtest 2	23.30	23.16	22.83	0
8		Subtest 3	22.81	22.65	22.30	0.5
8		Subtest 4	22.79	22.67	22.31	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	24.00	24.12	24.06	-
5	HSDPA	Subtest 1	22.77	22.92	22.86	0
5		Subtest 2	22.76	22.90	22.86	0
5		Subtest 3	22.28	22.37	22.33	0.5
5		Subtest 4	22.25	22.38	22.31	0.5
6	HSUPA	Subtest 1	22.81	22.92	22.90	0
6		Subtest 2	20.80	20.94	20.90	2
6		Subtest 3	21.80	21.94	21.89	1
6		Subtest 4	20.79	20.92	20.88	2
6		Subtest 5	22.80	22.92	22.90	0
8	DC-HSDPA	Subtest 1	22.95	23.12	22.91	0
8		Subtest 2	22.98	23.08	22.92	0
8		Subtest 3	22.47	22.60	22.42	0.5
8		Subtest 4	22.47	22.58	22.41	0.5

WCDMA Average Conducted output powers

11.1.2 UMTS Reduced Conducted Output Power – Proximity Sensor activated

WCDMA Band 2

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	13.89	13.84	13.78	-
5	HSDPA	Subtest 1	12.73	12.72	12.69	0
5		Subtest 2	12.71	12.70	12.67	0
5		Subtest 3	12.21	12.18	12.18	0.5
5		Subtest 4	12.21	12.17	12.17	0.5
6	HSUPA	Subtest 1	12.69	12.71	12.07	0
6		Subtest 2	10.70	10.71	10.68	2
6		Subtest 3	11.71	11.71	11.69	1
6		Subtest 4	10.73	10.71	10.69	2
6		Subtest 5	12.72	12.74	12.69	0
8	DC-HSDPA	Subtest 1	12.72	12.68	12.70	0
8		Subtest 2	12.70	12.70	12.69	0
8		Subtest 3	12.21	12.24	12.19	0.5
8		Subtest 4	12.20	12.20	12.18	0.5

WCDMA Average Conducted output powers

WCDMA Band 4

3GPP Release Version	Mode	3GPP 34.121 Subtest	WCDMA Band 5 [dBm] UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	3GPP MPR
99	WCDMA	12.2 kbps RMC	13.47	13.44	13.37	-
5	HSDPA	Subtest 1	12.31	12.30	12.22	0
5		Subtest 2	12.29	12.29	12.20	0
5		Subtest 3	11.79	11.78	11.68	0.5
5		Subtest 4	11.79	11.76	11.68	0.5
6	HSUPA	Subtest 1	12.30	12.29	12.18	0
6		Subtest 2	10.28	10.28	10.19	2
6		Subtest 3	11.27	11.28	11.20	1
6		Subtest 4	10.28	10.31	10.22	2
6		Subtest 5	12.29	12.31	12.23	0
8	DC-HSDPA	Subtest 1	12.62	12.48	12.12	0
8		Subtest 2	12.63	12.48	12.13	0
8		Subtest 3	12.11	11.98	11.64	0.5
8		Subtest 4	12.11	11.97	11.63	0.5

WCDMA Average Conducted output powers

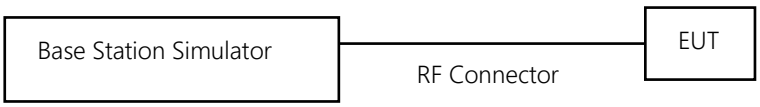
WCDMA Band 5

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	18.30	18.42	18.38	-
5	HSDPA	Subtest 1	17.04	17.17	17.15	0
5		Subtest 2	17.04	17.16	17.14	0
5		Subtest 3	16.53	16.66	16.63	0.5
5		Subtest 4	16.54	16.66	16.63	0.5
6	HSUPA	Subtest 1	17.10	17.24	17.21	0
6		Subtest 2	15.11	15.24	15.20	2
6		Subtest 3	16.11	16.24	16.19	1
6		Subtest 4	15.13	15.25	15.21	2
6		Subtest 5	17.15	17.24	17.20	0
8	DC-HSDPA	Subtest 1	17.28	17.41	17.31	0
8		Subtest 2	17.28	17.39	17.32	0
8		Subtest 3	16.77	16.90	16.81	0.5
8		Subtest 4	16.75	16.90	16.81	0.5

WCDMA Average Conducted output powers

DC-HSDPA Configurations

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



11.2 LTE Maximum Output Power

11.2.1 LTE Maximum Conducted Power

LTE Band 2 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 ㎒	18900 Ch. 1880 ㎒	19193 Ch. 1909.3 ㎒		
1.4 ㎒	QPSK	1	0	24.95	24.85	24.69	0	0
		1	3	25.03	24.93	24.81	0	0
		1	5	24.95	24.87	24.83	0	0
		3	0	24.97	24.89	24.77	0	0
		3	1	25.02	24.91	24.81	0	0
		3	3	24.96	24.87	24.73	0	0
		6	0	24.03	23.99	23.85	0-1	1
	16QAM	1	0	24.17	24.12	24.06	0-1	1
		1	3	24.34	24.16	24.11	0-1	1
		1	5	24.29	24.13	24.09	0-1	1
		3	0	23.97	23.96	23.80	0-1	1
		3	1	24.08	23.98	23.86	0-1	1
		3	3	23.98	23.97	23.84	0-1	1
		6	0	23.15	23.11	22.93	0-2	2
	64QAM	1	0	23.15	23.08	23.04	0-2	2
		1	3	23.25	23.24	23.11	0-2	2
		1	5	23.24	23.21	22.96	0-2	2
		3	0	23.14	23.10	22.99	0-2	2
		3	1	23.23	23.14	22.96	0-2	2
		3	3	23.16	23.10	22.96	0-2	2
		6	0	22.05	22.00	21.88	0-3	3

LTE Band 2 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 ㎒	18900 Ch. 1880 ㎒	19185 Ch. 1908.5 ㎒		
3 ㎒	QPSK	1	0	25.01	24.86	24.83	0	0
		1	7	24.96	24.94	24.80	0	0
		1	14	25.01	25.02	24.83	0	0
		8	0	24.06	24.02	23.89	0-1	1
		8	3	24.11	24.13	23.92	0-1	1
		8	7	24.09	24.05	23.93	0-1	1
		15	0	24.09	24.08	23.94	0-1	1
	16QAM	1	0	24.14	24.05	24.13	0-1	1
		1	7	24.28	24.27	24.05	0-1	1
		1	14	24.18	24.29	24.18	0-1	1
		8	0	23.19	23.17	23.01	0-2	2
		8	3	23.18	23.22	23.04	0-2	2
		8	7	23.23	23.19	23.06	0-2	2
		15	0	23.16	23.12	22.98	0-2	2
	64QAM	1	0	23.15	23.13	23.07	0-2	2
		1	7	23.22	23.16	23.04	0-2	2
		1	14	23.33	23.32	23.15	0-2	2
		8	0	22.17	22.12	22.01	0-3	3
		8	3	22.20	22.12	22.03	0-3	3
		8	7	22.16	22.13	22.04	0-3	3
		15	0	22.15	22.11	21.99	0-3	3

LTE Band 2 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP	MPR [dB]
				18625 Ch. 1852.5 ㎒	18900 Ch. 1880 ㎒	19175 Ch. 1907.5 ㎒		
5 ㎒	QPSK	1	0	24.98	24.88	24.74	0	0
		1	12	25.03	24.96	24.86	0	0
		1	24	25.03	24.98	24.84	0	0
		12	0	24.07	24.03	23.85	0-1	1
		12	6	24.19	24.11	23.94	0-1	1
		12	11	24.17	24.09	24.03	0-1	1
		25	0	24.14	24.10	23.87	0-1	1
	16QAM	1	0	24.32	24.13	24.03	0-1	1
		1	12	24.30	24.33	24.19	0-1	1
		1	24	24.20	24.21	24.16	0-1	1
		12	0	23.14	23.14	22.91	0-2	2
		12	6	23.21	23.15	22.98	0-2	2
		12	11	23.17	23.14	23.04	0-2	2
		25	0	23.10	23.08	22.92	0-2	2
	64QAM	1	0	23.27	23.18	23.03	0-2	2
		1	12	23.29	23.24	23.07	0-2	2
		1	24	23.21	23.23	23.17	0-2	2
		12	0	22.19	22.15	22.01	0-3	3
		12	6	22.21	22.21	22.04	0-3	3
		12	11	22.21	22.21	22.11	0-3	3
		25	0	22.19	22.08	21.93	0-3	3

LTE Band 2 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 ㎒	18900 Ch. 1880 ㎒	19150 Ch. 1905 ㎒		
10 ㎒	QPSK	1	0	24.88	24.82	25.05	0	0
		1	24	24.98	24.96	24.90	0	0
		1	49	24.98	24.93	24.72	0	0
		25	0	24.12	24.04	23.96	0-1	1
		25	12	24.12	24.08	23.95	0-1	1
		25	24	24.06	24.03	23.92	0-1	1
		50	0	24.07	24.02	23.96	0-1	1
	16QAM	1	0	24.18	24.22	24.24	0-1	1
		1	24	24.27	24.22	24.16	0-1	1
		1	49	24.32	24.18	24.08	0-1	1
		25	0	23.12	23.09	22.98	0-2	2
		25	12	23.14	23.13	23.04	0-2	2
		25	24	23.03	23.09	22.94	0-2	2
		50	0	23.11	23.09	23.02	0-2	2
	64QAM	1	0	23.20	23.07	23.18	0-2	2
		1	24	23.18	23.13	23.24	0-2	2
		1	49	23.20	23.17	23.02	0-2	2
		25	0	22.15	22.11	22.00	0-3	3
		25	12	22.14	22.09	22.05	0-3	3
		25	24	22.04	22.09	22.00	0-3	3
		50	0	22.07	22.08	22.01	0-3	3

LTE Band 2 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 ㎒	18900 Ch. 1880 ㎒	19125 Ch. 1902.5 ㎒		
15 ㎒	QPSK	1	0	25.08	25.08	24.97	0	0
		1	36	24.92	25.05	24.91	0	0
		1	74	25.18	25.07	24.95	0	0
		36	0	24.15	24.14	24.10	0-1	1
		36	18	24.16	24.19	24.07	0-1	1
		36	39	24.22	24.20	24.12	0-1	1
		75	0	24.18	24.18	24.08	0-1	1
	16QAM	1	0	24.29	24.41	24.39	0-1	1
		1	36	24.32	24.29	24.31	0-1	1
		1	74	24.35	24.38	24.32	0-1	1
		36	0	23.17	23.16	23.11	0-2	2
		36	18	23.19	23.17	23.15	0-2	2
		36	39	23.24	23.23	23.17	0-2	2
		75	0	23.19	23.23	23.15	0-2	2
	64QAM	1	0	23.23	23.28	23.26	0-2	2
		1	36	23.31	23.32	23.17	0-2	2
		1	74	23.44	23.45	22.87	0-2	2
		36	0	22.20	22.22	22.13	0-3	3
		36	18	22.24	22.26	22.17	0-3	3
		36	39	22.24	22.23	22.13	0-3	3
		75	0	22.17	22.22	22.12	0-3	3

LTE Band 2 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	25.08	25.09	24.99	0	0
		1	49	24.98	25.01	24.91	0	0
		1	99	25.07	25.00	24.96	0	0
		50	0	24.16	24.13	24.09	0-1	1
		50	25	24.18	24.14	24.08	0-1	1
		50	49	24.20	24.22	24.09	0-1	1
		100	0	24.18	24.22	24.13	0-1	1
	16QAM	1	0	24.44	24.37	24.28	0-1	1
		1	49	24.27	24.36	24.29	0-1	1
		1	99	24.31	24.33	24.30	0-1	1
		50	0	23.16	23.19	23.12	0-2	2
		50	25	23.21	23.23	23.15	0-2	2
		50	49	23.27	23.19	23.15	0-2	2
		100	0	23.20	23.20	23.13	0-2	2
	64QAM	1	0	23.33	23.25	23.21	0-2	2
		1	49	23.25	23.21	23.19	0-2	2
		1	99	23.33	23.31	23.00	0-2	2
		50	0	22.20	22.25	22.15	0-3	3
		50	25	22.22	22.22	22.17	0-3	3
		50	49	22.26	22.27	22.22	0-3	3
		100	0	22.17	22.20	22.15	0-3	3

[LTE Band 4 Conducted Power]

LTE Band 4 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 ㎒	20175 Ch. 1732.5 ㎒	20393 Ch. 1754.3 ㎒		
1.4 ㎒	QPSK	1	0	24.53	24.50	24.37	0	0
		1	3	24.60	24.66	24.54	0	0
		1	5	24.60	24.60	24.47	0	0
		3	0	24.57	24.55	24.39	0	0
		3	1	24.63	24.61	24.53	0	0
		3	3	24.59	24.57	24.45	0	0
		6	0	23.71	23.63	23.50	0-1	1
	16QAM	1	0	23.76	23.72	23.62	0-1	1
		1	3	24.04	23.91	23.82	0-1	1
		1	5	23.84	23.91	23.63	0-1	1
		3	0	23.57	23.59	23.41	0-1	1
		3	1	23.59	23.64	23.60	0-1	1
		3	3	23.70	23.63	23.50	0-1	1
		6	0	22.82	22.74	22.56	0-2	2
	64QAM	1	0	22.79	22.69	22.71	0-2	2
		1	3	22.90	22.89	22.80	0-2	2
		1	5	22.87	22.78	22.71	0-2	2
		3	0	22.74	22.74	22.53	0-2	2
		3	1	22.82	22.80	22.67	0-2	2
		3	3	22.79	22.76	22.65	0-2	2
		6	0	21.72	21.67	21.53	0-3	3

LTE Band 4 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 ㎒	20175 Ch. 1732.5 ㎒	20385 Ch. 1753.5 ㎒		
3 ㎒	QPSK	1	0	24.54	24.54	24.45	0	0
		1	7	24.64	24.66	24.49	0	0
		1	14	24.58	24.57	24.43	0	0
		8	0	23.77	23.62	23.63	0-1	1
		8	3	23.76	23.69	23.64	0-1	1
		8	7	23.73	23.73	23.64	0-1	1
		15	0	23.73	23.62	23.62	0-1	1
	16QAM	1	0	23.79	23.77	23.80	0-1	1
		1	7	23.94	23.96	23.80	0-1	1
		1	14	23.94	23.79	23.80	0-1	1
		8	0	22.86	22.75	22.69	0-2	2
		8	3	22.86	22.80	22.74	0-2	2
		8	7	22.86	22.83	22.68	0-2	2
		15	0	22.82	22.67	22.60	0-2	2
	64QAM	1	0	22.70	22.72	22.70	0-2	2
		1	7	22.87	22.96	22.82	0-2	2
		1	14	22.91	22.83	22.73	0-2	2
		8	0	21.81	21.72	21.69	0-3	3
		8	3	21.88	21.73	21.73	0-3	3
		8	7	21.83	21.77	21.73	0-3	3
		15	0	21.78	21.65	21.65	0-3	3

LTE Band 4 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 ㎒	20175 Ch. 1732.5 ㎒	20375 Ch. 1752.5 ㎒		
5 ㎒	QPSK	1	0	24.57	24.54	24.44	0	0
		1	12	24.64	24.63	24.56	0	0
		1	24	24.59	24.55	24.44	0	0
		12	0	23.70	23.65	23.55	0-1	1
		12	6	23.80	23.68	23.58	0-1	1
		12	11	23.80	23.75	23.66	0-1	1
		25	0	23.75	23.67	23.58	0-1	1
	16QAM	1	0	23.87	23.79	23.76	0-1	1
		1	12	23.92	23.85	23.83	0-1	1
		1	24	23.90	23.86	23.74	0-1	1
		12	0	22.77	22.71	22.65	0-2	2
		12	6	22.83	22.76	22.67	0-2	2
		12	11	22.82	22.71	22.70	0-2	2
		25	0	22.80	22.69	22.59	0-2	2
	64QAM	1	0	22.88	22.83	22.76	0-2	2
		1	12	22.90	22.88	22.84	0-2	2
		1	24	22.78	22.79	22.75	0-2	2
		12	0	21.79	21.69	21.63	0-3	3
		12	6	21.88	21.80	21.69	0-3	3
		12	11	21.88	21.81	21.72	0-3	3
		25	0	21.79	21.69	21.63	0-3	3

LTE Band 4 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 ㎒	20175 Ch. 1732.5 ㎒	20350 Ch. 1750 ㎒		
10 ㎒	QPSK	1	0	24.58	24.64	24.47	0	0
		1	24	24.66	24.43	24.41	0	0
		1	49	24.54	24.61	24.48	0	0
		25	0	23.72	23.69	23.66	0-1	1
		25	12	23.79	23.73	23.66	0-1	1
		25	24	23.66	23.68	23.54	0-1	1
		50	0	23.74	23.70	23.58	0-1	1
	16QAM	1	0	23.79	23.91	23.91	0-1	1
		1	24	23.85	23.79	23.71	0-1	1
		1	49	23.77	23.79	23.69	0-1	1
		25	0	22.74	22.70	22.70	0-2	2
		25	12	22.79	22.76	22.70	0-2	2
		25	24	22.72	22.68	22.62	0-2	2
		50	0	22.71	22.73	22.63	0-2	2
	64QAM	1	0	22.82	22.75	22.83	0-2	2
		1	24	22.81	22.95	22.85	0-2	2
		1	49	22.81	22.75	22.71	0-2	2
		25	0	21.79	21.73	21.68	0-3	3
		25	12	21.82	21.71	21.70	0-3	3
		25	24	21.75	21.69	21.59	0-3	3
		50	0	21.75	21.69	21.67	0-3	3

LTE Band 4 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 ㎒	20175 Ch. 1732.5 ㎒	20325 Ch. 1747.5 ㎒		
15 ㎒	QPSK	1	0	24.74	24.69	24.65	0	0
		1	36	24.72	24.68	24.62	0	0
		1	74	24.76	24.65	24.64	0	0
		36	0	23.87	23.82	23.77	0-1	1
		36	18	23.86	23.85	23.81	0-1	1
		36	39	23.88	23.80	23.76	0-1	1
		75	0	23.85	23.82	23.73	0-1	1
	16QAM	1	0	24.09	23.98	23.97	0-1	1
		1	36	23.99	23.89	23.96	0-1	1
		1	74	24.08	23.91	23.91	0-1	1
		36	0	22.84	22.84	22.80	0-2	2
		36	18	22.91	22.87	22.79	0-2	2
		36	39	22.89	22.86	22.76	0-2	2
		75	0	22.87	22.90	22.79	0-2	2
	64QAM	1	0	22.99	22.90	22.95	0-2	2
		1	36	22.97	22.97	22.82	0-2	2
		1	74	22.92	22.94	22.86	0-2	2
		36	0	21.89	21.89	21.88	0-3	3
		36	18	21.94	21.88	21.87	0-3	3
		36	39	21.90	21.91	21.84	0-3	3
		75	0	21.91	21.88	21.80	0-3	3

LTE Band 4 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 ㎒		
20 ㎒	QPSK	1	0	24.76	0	0
		1	49	24.67	0	0
		1	99	24.67	0	0
		50	0	23.82	0-1	1
		50	25	23.88	0-1	1
		50	49	23.84	0-1	1
		100	0	23.87	0-1	1
	16QAM	1	0	24.02	0-1	1
		1	49	24.00	0-1	1
		1	99	23.95	0-1	1
		50	0	22.84	0-2	2
		50	25	22.86	0-2	2
		50	49	22.84	0-2	2
		100	0	22.85	0-2	2
	64QAM	1	0	22.96	0-2	2
		1	49	22.91	0-2	2
		1	99	22.94	0-2	2
		50	0	21.87	0-3	3
		50	25	21.88	0-3	3
		50	49	21.87	0-3	3
		100	0	21.89	0-3	3

Note: LTE Band 4 (AWS) at 20 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[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	23.74	24.03	23.99	0	0
		1	3	23.93	24.18	24.07	0	0
		1	5	23.86	24.13	24.03	0	0
		3	0	23.85	24.02	24.04	0	0
		3	1	23.88	24.16	24.07	0	0
		3	3	23.89	24.13	24.04	0	0
		6	0	22.96	23.20	23.31	0-1	1
	16QAM	1	0	23.04	23.18	23.25	0-1	1
		1	3	23.24	23.37	23.43	0-1	1
		1	5	23.08	23.41	23.24	0-1	1
		3	0	22.87	23.38	23.03	0-1	1
		3	1	22.88	23.20	23.13	0-1	1
		3	3	22.97	23.11	23.02	0-1	1
		6	0	22.00	22.35	22.19	0-2	2
	64QAM	1	0	22.00	22.15	22.18	0-2	2
		1	3	22.12	22.39	22.32	0-2	2
		1	5	22.10	22.36	22.23	0-2	2
		3	0	22.04	22.23	22.14	0-2	2
		3	1	22.09	22.32	22.15	0-2	2
		3	3	22.08	22.24	22.18	0-2	2
		6	0	20.99	21.25	21.16	0-3	3

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	23.85	24.09	24.01	0	0
		1	7	23.94	24.14	24.10	0	0
		1	14	23.99	24.25	24.14	0	0
		8	0	22.99	23.23	23.19	0-1	1
		8	3	23.11	23.29	23.27	0-1	1
		8	7	23.11	23.32	23.29	0-1	1
		15	0	23.13	23.33	23.25	0-1	1
	16QAM	1	0	23.17	23.29	23.18	0-1	1
		1	7	23.24	23.42	23.38	0-1	1
		1	14	23.29	23.42	23.38	0-1	1
		8	0	22.03	22.30	22.15	0-2	2
		8	3	22.24	22.34	22.29	0-2	2
		8	7	22.18	22.35	22.29	0-2	2
		15	0	22.09	22.35	22.26	0-2	2
	64QAM	1	0	22.08	22.21	22.22	0-2	2
		1	7	22.15	22.41	22.31	0-2	2
		1	14	22.24	22.47	22.37	0-2	2
		8	0	21.05	21.21	21.18	0-3	3
		8	3	21.16	21.28	21.31	0-3	3
		8	7	21.20	21.31	21.23	0-3	3
		15	0	21.10	21.36	21.24	0-3	3

LTE Band 5 _ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20425 Ch. 826.5 MHz	20525 Ch. 836.5 MHz	20625 Ch. 846.5 MHz		
5 MHz	QPSK	1	0	23.90	24.06	24.10	0	0
		1	12	24.02	24.14	24.18	0	0
		1	24	23.93	24.17	24.16	0	0
		12	0	22.99	23.23	23.16	0-1	1
		12	6	23.12	23.33	23.25	0-1	1
		12	11	23.15	23.36	23.29	0-1	1
		25	0	23.11	23.32	23.19	0-1	1
	16QAM	1	0	23.13	23.33	23.35	0-1	1
		1	12	23.22	23.42	23.35	0-1	1
		1	24	23.19	23.33	23.32	0-1	1
		12	0	22.05	22.21	22.16	0-2	2
		12	6	22.12	22.29	22.24	0-2	2
		12	11	22.21	22.32	22.24	0-2	2
		25	0	22.15	22.28	22.20	0-2	2
	64QAM	1	0	22.04	22.26	22.32	0-2	2
		1	12	22.03	22.45	22.30	0-2	2
		1	24	22.21	22.32	22.28	0-2	2
		12	0	21.04	21.30	21.16	0-3	3
		12	6	21.21	21.32	21.22	0-3	3
		12	11	21.20	21.37	21.23	0-3	3
		25	0	21.13	21.25	21.18	0-3	3

LTE Band 5 _ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20525 Ch. 836.5 MHz		
10 MHz	QPSK	1	0	24.09	0	0
		1	24	24.17	0	0
		1	49	24.12	0	0
		25	0	23.38	0-1	1
		25	12	23.35	0-1	1
		25	24	23.28	0-1	1
		50	0	23.31	0-1	1
	16QAM	1	0	23.31	0-1	1
		1	24	23.40	0-1	1
		1	49	23.29	0-1	1
		25	0	22.32	0-2	2
		25	12	22.32	0-2	2
		25	24	22.27	0-2	2
		50	0	22.32	0-2	2
	64QAM	1	0	22.41	0-2	2
		1	24	22.32	0-2	2
		1	49	22.41	0-2	2
		25	0	21.37	0-3	3
		25	12	21.28	0-3	3
		25	24	21.29	0-3	3
		50	0	21.32	0-3	3

Note: LTE Band 5 at 10 MHz Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[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	23.37	23.59	23.57	0	0
		1	12	23.52	23.72	23.70	0	0
		1	24	23.55	23.77	23.74	0	0
		12	0	22.52	22.71	22.78	0-1	1
		12	6	22.72	22.79	22.90	0-1	1
		12	11	22.65	22.88	22.84	0-1	1
		25	0	22.61	22.75	22.83	0-1	1
	16QAM	1	0	22.70	22.87	22.87	0-1	1
		1	12	22.81	23.00	22.96	0-1	1
		1	24	22.82	22.95	22.92	0-1	1
		12	0	21.57	21.78	21.73	0-2	2
		12	6	21.72	21.83	21.89	0-2	2
		12	11	21.68	21.90	21.88	0-2	2
		25	0	21.66	21.76	21.86	0-2	2
	64QAM	1	0	21.66	21.85	21.80	0-2	2
		1	12	21.81	21.97	21.90	0-2	2
		1	24	21.82	21.97	21.98	0-2	2
		12	0	20.60	20.77	20.79	0-3	3
		12	6	20.75	20.87	20.91	0-3	3
		12	11	20.75	20.94	20.95	0-3	3
		25	0	20.67	20.76	20.82	0-3	3

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	23.56	23.65	23.69	0	0
		1	24	23.38	23.51	23.74	0	0
		1	49	23.45	23.63	23.64	0	0
		25	0	22.60	22.78	22.83	0-1	1
		25	12	22.58	22.78	22.78	0-1	1
		25	24	22.53	22.72	22.77	0-1	1
		50	0	22.61	22.80	22.79	0-1	1
	16QAM	1	0	22.76	23.01	22.95	0-1	1
		1	24	22.77	23.00	22.91	0-1	1
		1	49	22.79	22.93	22.81	0-1	1
		25	0	21.67	21.83	21.83	0-2	2
		25	12	21.61	21.78	21.81	0-2	2
		25	24	21.60	21.73	21.72	0-2	2
		50	0	21.62	21.81	21.83	0-2	2
	64QAM	1	0	21.76	21.95	21.94	0-2	2
		1	24	21.70	21.73	21.88	0-2	2
		1	49	21.72	21.79	21.93	0-2	2
		25	0	20.65	20.82	20.82	0-3	3
		25	12	20.63	20.80	20.84	0-3	3
		25	24	20.56	20.74	20.78	0-3	3
		50	0	20.64	20.80	20.79	0-3	3

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	23.67	23.83	23.90	0	0
		1	36	23.68	23.72	23.80	0	0
		1	74	23.60	23.76	23.74	0	0
		36	0	22.74	22.92	22.97	0-1	1
		36	18	22.77	22.93	22.94	0-1	1
		36	39	22.77	22.84	22.93	0-1	1
		75	0	22.78	22.88	22.91	0-1	1
	16QAM	1	0	22.97	23.03	23.10	0-1	1
		1	36	22.87	22.97	23.12	0-1	1
		1	74	22.84	23.00	23.07	0-1	1
		36	0	21.75	21.98	21.98	0-2	2
		36	18	21.76	21.92	21.95	0-2	2
		36	39	21.73	21.89	21.90	0-2	2
		75	0	21.77	21.88	21.95	0-2	2
	64QAM	1	0	21.88	22.09	22.12	0-2	2
		1	36	21.88	21.93	22.01	0-2	2
		1	74	21.86	21.96	22.00	0-2	2
		36	0	20.81	20.96	21.01	0-3	3
		36	18	20.87	20.97	20.96	0-3	3
		36	39	20.81	20.88	20.91	0-3	3
		75	0	20.83	20.89	20.93	0-3	3

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	23.65	23.70	23.92	0	0
		1	49	23.61	23.73	23.74	0	0
		1	99	23.71	23.68	23.71	0	0
		50	0	22.75	22.97	23.00	0-1	1
		50	25	22.76	22.92	22.92	0-1	1
		50	49	22.74	22.91	22.84	0-1	1
		100	0	22.77	22.89	22.96	0-1	1
	16QAM	1	0	22.86	23.06	23.16	0-1	1
		1	49	22.97	23.01	22.97	0-1	1
		1	99	23.02	23.00	23.10	0-1	1
		50	0	21.78	21.96	22.04	0-2	2
		50	25	21.80	21.92	21.98	0-2	2
		50	49	21.81	21.94	21.91	0-2	2
		100	0	21.73	21.92	21.91	0-2	2
	64QAM	1	0	21.87	21.92	22.16	0-2	2
		1	49	21.90	21.95	22.02	0-2	2
		1	99	22.05	21.92	21.93	0-2	2
		50	0	20.80	20.98	21.05	0-3	3
		50	25	20.85	20.97	20.99	0-3	3
		50	49	20.79	20.91	20.88	0-3	3
		100	0	20.77	20.89	20.97	0-3	3

[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	24.52	24.45	24.47	0	0
		1	3	24.68	24.62	24.57	0	0
		1	5	24.52	24.57	24.53	0	0
		3	0	24.57	24.57	24.50	0	0
		3	1	24.57	24.64	24.53	0	0
		3	3	24.55	24.56	24.51	0	0
		6	0	23.63	23.65	23.58	0-1	1
	16QAM	1	0	23.85	23.77	23.72	0-1	1
		1	3	23.93	23.88	23.92	0-1	1
		1	5	23.85	23.74	23.69	0-1	1
		3	0	23.63	23.61	23.49	0-1	1
		3	1	23.60	23.62	23.57	0-1	1
		3	3	23.57	23.60	23.62	0-1	1
		6	0	22.73	22.76	22.60	0-2	2
	64QAM	1	0	22.80	22.71	22.75	0-2	2
		1	3	22.87	22.87	22.84	0-2	2
		1	5	22.74	22.78	22.78	0-2	2
		3	0	22.77	22.75	22.71	0-2	2
		3	1	22.75	22.80	22.70	0-2	2
		3	3	22.73	22.72	22.73	0-2	2
		6	0	21.68	21.63	21.57	0-3	3

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	24.55	24.54	24.52	0	0
		1	7	24.62	24.58	24.54	0	0
		1	14	24.61	24.55	24.52	0	0
		8	0	23.70	23.64	23.61	0-1	1
		8	3	23.77	23.76	23.67	0-1	1
		8	7	23.73	23.68	23.67	0-1	1
		15	0	23.74	23.71	23.65	0-1	1
	16QAM	1	0	23.77	23.85	23.72	0-1	1
		1	7	23.84	23.85	23.79	0-1	1
		1	14	23.91	23.90	23.91	0-1	1
		8	0	22.76	22.70	22.72	0-2	2
		8	3	22.78	22.84	22.74	0-2	2
		8	7	22.78	22.73	22.76	0-2	2
		15	0	22.77	22.73	22.69	0-2	2
	64QAM	1	0	22.78	22.80	22.72	0-2	2
		1	7	22.77	22.79	22.79	0-2	2
		1	14	22.86	22.76	22.86	0-2	2
		8	0	21.71	21.70	21.66	0-3	3
		8	3	21.80	21.80	21.70	0-3	3
		8	7	21.75	21.77	21.72	0-3	3
		15	0	21.76	21.78	21.61	0-3	3

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	24.54	24.53	24.55	0	0
		1	12	24.62	24.63	24.61	0	0
		1	24	24.56	24.61	24.55	0	0
		12	0	23.66	23.67	23.67	0-1	1
		12	6	23.78	23.76	23.74	0-1	1
		12	11	23.73	23.71	23.72	0-1	1
		25	0	23.72	23.75	23.66	0-1	1
	16QAM	1	0	23.86	23.76	23.85	0-1	1
		1	12	23.86	23.98	23.88	0-1	1
		1	24	23.89	23.79	23.76	0-1	1
		12	0	22.68	22.70	22.71	0-2	2
		12	6	22.74	22.77	22.74	0-2	2
		12	11	22.78	22.76	22.70	0-2	2
		25	0	22.78	22.75	22.73	0-2	2
	64QAM	1	0	22.73	22.80	22.84	0-2	2
		1	12	22.89	22.86	22.79	0-2	2
		1	24	22.79	22.83	22.75	0-2	2
		12	0	21.69	21.75	21.72	0-3	3
		12	6	21.84	21.88	21.79	0-3	3
		12	11	21.78	21.75	21.76	0-3	3
		25	0	21.77	21.73	21.74	0-3	3

LTE Band 12 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23095 Ch. 707.5 ㎒		
10 ㎒	QPSK	1	0	24.65	0	0
		1	24	24.55	0	0
		1	49	24.48	0	0
		25	0	23.78	0-1	1
		25	12	23.73	0-1	1
		25	24	23.68	0-1	1
		50	0	23.74	0-1	1
	16QAM	1	0	24.03	0-1	1
		1	24	23.93	0-1	1
		1	49	23.76	0-1	1
		25	0	22.74	0-2	2
		25	12	22.71	0-2	2
		25	24	22.68	0-2	2
		50	0	22.71	0-2	2
	64QAM	1	0	22.87	0-2	2
		1	24	22.73	0-2	2
		1	49	22.83	0-2	2
		25	0	21.75	0-3	3
		25	12	21.74	0-3	3
		25	24	21.68	0-3	3
		50	0	21.74	0-3	3

Note: LTE Band 12 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE Band 13 Conducted Power]

LTE Band 13 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23205 Ch. 779.5 ㎒	23230 Ch. 782 ㎒	23255 Ch. 784.5 ㎒		
5 ㎒	QPSK	1	0	24.24	24.23	24.19	0	0
		1	12	24.31	24.29	24.27	0	0
		1	24	24.23	24.27	24.24	0	0
		12	0	23.36	23.41	23.42	0-1	1
		12	6	23.43	23.42	23.44	0-1	1
		12	11	23.42	23.44	23.45	0-1	1
		25	0	23.42	23.44	23.45	0-1	1
	16QAM	1	0	23.60	23.44	23.47	0-1	1
		1	12	23.50	23.61	23.55	0-1	1
		1	24	23.50	23.46	23.53	0-1	1
		12	0	22.37	22.45	22.38	0-2	2
		12	6	22.50	22.46	22.50	0-2	2
		12	11	22.48	22.43	22.41	0-2	2
		25	0	22.48	22.49	22.46	0-2	2
	64QAM	1	0	22.31	22.54	22.49	0-2	2
		1	12	22.47	22.58	22.49	0-2	2
		1	24	22.45	22.40	22.37	0-2	2
		12	0	21.48	21.47	21.42	0-3	3
		12	6	21.56	21.52	21.46	0-3	3
		12	11	21.45	21.47	21.50	0-3	3
		25	0	21.50	21.43	21.46	0-3	3

LTE Band 13 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23230 Ch. 782 ㎒		
10 ㎒	QPSK	1	0	24.37	0	0
		1	24	24.36	0	0
		1	49	24.25	0	0
		25	0	23.44	0-1	1
		25	12	23.45	0-1	1
		25	24	23.41	0-1	1
		50	0	23.42	0-1	1
	16QAM	1	0	23.61	0-1	1
		1	24	23.67	0-1	1
		1	49	23.38	0-1	1
		25	0	22.47	0-2	2
		25	12	22.46	0-2	2
		25	24	22.38	0-2	2
		50	0	22.42	0-2	2
	64QAM	1	0	22.60	0-2	2
		1	24	22.42	0-2	2
		1	49	22.47	0-2	2
		25	0	21.47	0-3	3
		25	12	21.46	0-3	3
		25	24	21.37	0-3	3
		50	0	21.43	0-3	3

Note: LTE Band 13 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE Band 14 Conducted Power]

LTE Band 14 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23305 Ch. 790.5 ㎒	23330 Ch. 793 ㎒	23355 Ch. 795.5 ㎒		
5 ㎒	QPSK	1	0	23.73	23.70	23.69	0	0
		1	12	23.78	23.76	23.72	0	0
		1	24	23.78	23.81	23.76	0	0
		12	0	22.91	22.88	22.80	0-1	1
		12	6	23.00	22.95	22.86	0-1	1
		12	11	22.97	22.93	22.90	0-1	1
		25	0	22.94	22.95	22.81	0-1	1
	16QAM	1	0	22.99	22.94	22.89	0-1	1
		1	12	22.96	23.00	23.04	0-1	1
		1	24	23.00	23.04	22.99	0-1	1
		12	0	21.91	21.88	21.83	0-2	2
		12	6	21.96	21.96	21.88	0-2	2
		12	11	22.00	21.94	21.94	0-2	2
		25	0	21.93	21.93	21.86	0-2	2
	64QAM	1	0	22.04	22.01	21.82	0-2	2
		1	12	22.06	21.94	21.97	0-2	2
		1	24	21.99	21.94	21.92	0-2	2
		12	0	20.95	20.93	20.89	0-3	3
		12	6	21.05	21.03	20.94	0-3	3
		12	11	21.04	21.00	20.95	0-3	3
		25	0	20.99	20.98	20.89	0-3	3

LTE Band 14 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23330 Ch. 793 ㎒		
10 ㎒	QPSK	1	0	23.87	0	0
		1	24	23.90	0	0
		1	49	23.63	0	0
		25	0	22.94	0-1	1
		25	12	22.92	0-1	1
		25	24	22.81	0-1	1
		50	0	22.89	0-1	1
	16QAM	1	0	23.21	0-1	1
		1	24	23.00	0-1	1
		1	49	22.80	0-1	1
		25	0	21.96	0-2	2
		25	12	21.92	0-2	2
		25	24	21.81	0-2	2
		50	0	21.89	0-2	2
	64QAM	1	0	22.23	0-2	2
		1	24	21.93	0-2	2
		1	49	21.80	0-2	2
		25	0	20.96	0-3	3
		25	12	20.93	0-3	3
		25	24	20.84	0-3	3
		50	0	20.91	0-3	3

Note: LTE Band 14 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[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	24.47	24.39	24.26	0	0
		1	3	24.57	24.52	24.45	0	0
		1	5	24.53	24.43	24.38	0	0
		3	0	24.48	24.44	24.30	0	0
		3	1	24.55	24.43	24.38	0	0
		3	3	24.48	24.41	24.40	0	0
		6	0	23.60	23.46	23.38	0-1	1
	16QAM	1	0	23.71	23.63	23.54	0-1	1
		1	3	23.78	23.75	23.73	0-1	1
		1	5	23.69	23.76	23.69	0-1	1
		3	0	23.56	23.46	23.31	0-1	1
		3	1	23.58	23.56	23.44	0-1	1
		3	3	23.58	23.44	23.41	0-1	1
		6	0	22.70	22.56	22.44	0-2	2
	64QAM	1	0	22.73	22.63	22.52	0-2	2
		1	3	22.85	22.75	22.72	0-2	2
		1	5	22.71	22.65	22.62	0-2	2
		3	0	22.71	22.56	22.54	0-2	2
		3	1	22.76	22.67	22.59	0-2	2
		3	3	22.72	22.59	22.60	0-2	2
		6	0	21.66	21.55	21.40	0-3	3

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	24.52	24.36	24.23	0	0
		1	7	24.60	24.49	24.33	0	0
		1	14	24.59	24.47	24.34	0	0
		8	0	23.69	23.47	23.38	0-1	1
		8	3	23.75	23.63	23.44	0-1	1
		8	7	23.70	23.57	23.49	0-1	1
		15	0	23.69	23.55	23.44	0-1	1
	16QAM	1	0	23.78	23.60	23.50	0-1	1
		1	7	23.75	23.76	23.56	0-1	1
		1	14	23.76	23.74	23.64	0-1	1
		8	0	22.71	22.56	22.52	0-2	2
		8	3	22.79	22.71	22.52	0-2	2
		8	7	22.79	22.66	22.52	0-2	2
		15	0	22.67	22.58	22.47	0-2	2
	64QAM	1	0	22.77	22.59	22.50	0-2	2
		1	7	22.76	22.81	22.55	0-2	2
		1	14	22.80	22.77	22.54	0-2	2
		8	0	21.68	21.50	21.42	0-3	3
		8	3	21.74	21.68	21.57	0-3	3
		8	7	21.75	21.65	21.51	0-3	3
		15	0	21.69	21.60	21.44	0-3	3

LTE Band 25 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 ㎒	26365 Ch. 1882.5 ㎒	26665 Ch. 1912.5 ㎒		
5 ㎒	QPSK	1	0	24.54	24.38	24.21	0	0
		1	12	24.59	24.54	24.37	0	0
		1	24	24.57	24.53	24.32	0	0
		12	0	23.62	23.51	23.32	0-1	1
		12	6	23.70	23.64	23.40	0-1	1
		12	11	23.70	23.56	23.45	0-1	1
		25	0	23.66	23.58	23.37	0-1	1
	16QAM	1	0	23.85	23.73	23.55	0-1	1
		1	12	23.83	23.77	23.61	0-1	1
		1	24	23.81	23.80	23.68	0-1	1
		12	0	22.64	22.49	22.36	0-2	2
		12	6	22.74	22.65	22.41	0-2	2
		12	11	22.72	22.64	22.45	0-2	2
		25	0	22.68	22.58	22.34	0-2	2
	64QAM	1	0	22.77	22.60	22.42	0-2	2
		1	12	22.79	22.76	22.59	0-2	2
		1	24	22.84	22.74	22.60	0-2	2
		12	0	21.71	21.58	21.36	0-3	3
		12	6	21.74	21.61	21.46	0-3	3
		12	11	21.74	21.68	21.54	0-3	3
		25	0	21.69	21.61	21.44	0-3	3

LTE Band 25 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 ㎒	26365 Ch. 1882.5 ㎒	26640 Ch. 1910 ㎒		
10 ㎒	QPSK	1	0	24.67	24.47	24.33	0	0
		1	24	24.45	24.41	24.36	0	0
		1	49	24.53	24.43	24.33	0	0
		25	0	23.67	23.54	23.41	0-1	1
		25	12	23.67	23.54	23.42	0-1	1
		25	24	23.63	23.56	23.44	0-1	1
		50	0	23.67	23.53	23.44	0-1	1
	16QAM	1	0	23.76	23.71	23.55	0-1	1
		1	24	23.71	23.68	23.48	0-1	1
		1	49	23.71	23.56	23.56	0-1	1
		25	0	22.68	22.56	22.47	0-2	2
		25	12	22.65	22.61	22.47	0-2	2
		25	24	22.62	22.62	22.43	0-2	2
		50	0	22.63	22.60	22.43	0-2	2
	64QAM	1	0	22.75	22.69	22.64	0-2	2
		1	24	22.67	22.68	22.42	0-2	2
		1	49	22.66	22.69	22.62	0-2	2
		25	0	21.66	21.57	21.49	0-3	3
		25	12	21.65	21.61	21.50	0-3	3
		25	24	21.65	21.61	21.48	0-3	3
		50	0	21.65	21.57	21.49	0-3	3

LTE Band 25 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 ㎒	26365 Ch. 1882.5 ㎒	26615 Ch. 1907.5 ㎒		
15 ㎒	QPSK	1	0	24.69	24.65	24.59	0	0
		1	36	24.62	24.65	24.55	0	0
		1	74	24.70	24.62	24.49	0	0
		36	0	23.75	23.72	23.61	0-1	1
		36	18	23.82	23.76	23.64	0-1	1
		36	39	23.83	23.75	23.65	0-1	1
		75	0	23.78	23.70	23.63	0-1	1
	16QAM	1	0	23.92	23.94	23.89	0-1	1
		1	36	23.87	23.84	23.70	0-1	1
		1	74	23.98	23.84	23.84	0-1	1
		36	0	22.74	22.71	22.64	0-2	2
		36	18	22.79	22.75	22.69	0-2	2
		36	39	22.79	22.75	22.63	0-2	2
		75	0	22.77	22.77	22.65	0-2	2
	64QAM	1	0	22.83	22.94	22.82	0-2	2
		1	36	22.84	22.95	22.74	0-2	2
		1	74	22.98	22.83	22.70	0-2	2
		36	0	21.78	21.71	21.63	0-3	3
		36	18	21.83	21.75	21.67	0-3	3
		36	39	21.81	21.77	21.71	0-3	3
		75	0	21.79	21.74	21.72	0-3	3

LTE Band 25 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	24.74	24.75	24.63	0	0
		1	49	24.60	24.59	24.51	0	0
		1	99	24.65	24.56	24.52	0	0
		50	0	23.74	23.74	23.61	0-1	1
		50	25	23.83	23.80	23.67	0-1	1
		50	49	23.80	23.77	23.66	0-1	1
		100	0	23.78	23.76	23.62	0-1	1
	16QAM	1	0	24.00	23.88	23.86	0-1	1
		1	49	23.90	23.93	23.80	0-1	1
		1	99	23.89	23.80	23.80	0-1	1
		50	0	22.77	22.74	22.61	0-2	2
		50	25	22.80	22.82	22.70	0-2	2
		50	49	22.84	22.76	22.64	0-2	2
		100	0	22.74	22.71	22.63	0-2	2
	64QAM	1	0	22.95	22.91	22.89	0-2	2
		1	49	22.82	22.89	22.81	0-2	2
		1	99	22.95	22.83	22.76	0-2	2
		50	0	21.81	21.75	21.66	0-3	3
		50	25	21.84	21.79	21.67	0-3	3
		50	49	21.85	21.79	21.69	0-3	3
		100	0	21.78	21.76	21.59	0-3	3

[LTE Band 26 Conducted Power]

LTE Band 26 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26697 Ch. 814.7 ㎒	26865 Ch. 831.5 ㎒	27033 Ch. 848.3 ㎒		
1.4 ㎒	QPSK	1	0	23.70	23.83	23.72	0	0
		1	3	23.81	23.98	23.74	0	0
		1	5	23.75	23.86	23.63	0	0
		3	0	23.77	23.86	23.7	0	0
		3	1	23.81	23.93	23.77	0	0
		3	3	23.77	23.86	23.68	0	0
		6	0	22.85	23.08	22.81	0-1	1
	16QAM	1	0	23.00	23.06	22.83	0-1	1
		1	3	23.05	23.26	23.06	0-1	1
		1	5	23.02	23.13	22.94	0-1	1
		3	0	22.78	22.84	22.78	0-1	1
		3	1	22.82	22.88	22.76	0-1	1
		3	3	22.87	22.96	22.69	0-1	1
		6	0	21.91	22.10	21.84	0-2	2
	64QAM	1	0	22.05	22.15	21.86	0-2	2
		1	3	22.04	22.21	22	0-2	2
		1	5	21.99	22.13	21.9	0-2	2
		3	0	21.95	22.15	21.93	0-2	2
		3	1	21.98	22.09	21.91	0-2	2
		3	3	21.99	22.09	21.83	0-2	2
		6	0	20.83	21.07	20.77	0-3	3

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	23.75	23.91	23.83	0	0
		1	7	23.77	23.99	23.76	0	0
		1	14	23.74	23.93	23.72	0	0
		8	0	22.84	23.05	22.93	0-1	1
		8	3	22.93	23.10	22.91	0-1	1
		8	7	22.86	23.10	22.83	0-1	1
		15	0	22.92	23.08	22.95	0-1	1
	16QAM	1	0	22.97	23.09	22.97	0-1	1
		1	7	23.07	23.29	23.04	0-1	1
		1	14	23.02	23.14	23	0-1	1
		8	0	21.91	22.15	21.93	0-2	2
		8	3	22.02	22.13	21.95	0-2	2
		8	7	21.89	22.08	21.86	0-2	2
		15	0	21.91	22.06	21.9	0-2	2
	64QAM	1	0	21.95	22.16	22.05	0-2	2
		1	7	21.99	22.17	21.89	0-2	2
		1	14	21.98	22.20	21.9	0-2	2
		8	0	20.87	21.15	20.9	0-3	3
		8	3	20.91	21.14	20.95	0-3	3
		8	7	20.92	21.13	20.86	0-3	3
		15	0	20.90	21.11	20.91	0-3	3

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	23.68	23.96	23.77	0	0
		1	12	23.88	23.97	23.77	0	0
		1	24	23.85	23.95	23.7	0	0
		12	0	22.85	23.04	22.88	0-1	1
		12	6	22.95	23.10	22.96	0-1	1
		12	11	22.92	23.10	22.91	0-1	1
		25	0	22.93	23.09	22.87	0-1	1
	16QAM	1	0	22.92	23.15	22.93	0-1	1
		1	12	23.07	23.24	22.92	0-1	1
		1	24	23.06	23.14	22.92	0-1	1
		12	0	21.98	22.11	21.83	0-2	2
		12	6	21.97	22.10	21.94	0-2	2
		12	11	21.88	22.13	21.92	0-2	2
		25	0	21.94	22.05	21.88	0-2	2
	64QAM	1	0	21.98	22.14	21.95	0-2	2
		1	12	22.13	22.19	21.93	0-2	2
		1	24	21.96	22.18	21.89	0-2	2
		12	0	21.01	21.08	20.89	0-3	3
		12	6	21.00	21.12	20.97	0-3	3
		12	11	20.97	21.15	20.95	0-3	3
		25	0	20.92	21.06	20.89	0-3	3

LTE Band 26 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26740 Ch. 819 ㎒	26865 Ch. 831.5 ㎒	26990 Ch. 844 ㎒		
10 ㎒	QPSK	1	0	23.85	23.99	23.83	0	0
		1	24	23.93	23.97	23.69	0	0
		1	49	23.88	24.08	23.7	0	0
		25	0	22.98	23.11	22.92	0-1	1
		25	12	23.00	23.16	22.95	0-1	1
		25	24	22.99	23.12	22.97	0-1	1
		50	0	23.00	23.15	22.94	0-1	1
	16QAM	1	0	23.09	23.17	23.1	0-1	1
		1	24	23.07	23.28	23.08	0-1	1
		1	49	23.25	23.19	23.08	0-1	1
		25	0	21.95	22.13	21.98	0-2	2
		25	12	22.01	22.16	21.95	0-2	2
		25	24	21.96	22.10	21.87	0-2	2
		50	0	21.97	22.14	21.93	0-2	2
	64QAM	1	0	22.12	22.21	22.01	0-2	2
		1	24	22.12	22.10	22.03	0-2	2
		1	49	22.22	22.19	22	0-2	2
		25	0	21.03	21.09	20.95	0-3	3
		25	12	21.01	21.09	20.94	0-3	3
		25	24	20.97	21.10	20.93	0-3	3
		50	0	20.96	21.12	20.96	0-3	3

LTE Band 26 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26765 Ch. 821.5 ㎒	26865 Ch. 831.5 ㎒	26965 Ch. 841.5 ㎒		
15 ㎒	QPSK	1	0	24.10	24.12	24.03	0	0
		1	36	23.99	24.10	24.10	0	0
		1	74	23.95	23.99	24.06	0	0
		36	0	23.02	23.14	23.16	0-1	1
		36	18	23.09	23.18	23.15	0-1	1
		36	39	23.13	23.09	23.10	0-1	1
		75	0	23.09	23.16	23.11	0-1	1
	16QAM	1	0	23.32	23.33	23.20	0-1	1
		1	36	23.20	23.31	23.29	0-1	1
		1	74	23.24	23.24	23.26	0-1	1
		36	0	21.95	22.08	22.08	0-2	2
		36	18	22.11	22.18	22.13	0-2	2
		36	39	22.14	22.02	22.09	0-2	2
		75	0	22.08	22.14	22.14	0-2	2
	64QAM	1	0	22.20	22.31	22.47	0-2	2
		1	36	22.12	22.19	22.25	0-2	2
		1	74	22.22	22.23	22.13	0-2	2
		36	0	21.04	21.12	21.21	0-3	3
		36	18	21.15	21.22	21.20	0-3	3
		36	39	21.17	21.13	21.14	0-3	3
		75	0	21.05	21.18	21.16	0-3	3

[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	23.60	23.71	23.74	0	0
		1	12	23.79	23.80	23.81	0	0
		1	24	23.73	23.76	23.69	0	0
		12	0	22.77	22.84	22.86	0-1	1
		12	6	22.91	22.86	22.85	0-1	1
		12	11	22.84	22.84	22.83	0-1	1
		25	0	22.85	22.83	22.84	0-1	1
	16QAM	1	0	22.89	22.95	22.98	0-1	1
		1	12	23.03	23.11	23.08	0-1	1
		1	24	22.97	23.03	22.98	0-1	1
		12	0	21.80	21.86	21.93	0-2	2
		12	6	21.90	21.89	21.88	0-2	2
		12	11	21.89	21.93	21.82	0-2	2
		25	0	21.89	21.86	21.87	0-2	2
	64QAM	1	0	21.89	21.96	22.04	0-2	2
		1	12	22.02	22.05	22.04	0-2	2
		1	24	22.02	21.96	21.98	0-2	2
		12	0	20.88	20.93	20.92	0-3	3
		12	6	20.94	20.88	20.96	0-3	3
		12	11	20.96	20.92	20.91	0-3	3
		25	0	20.90	20.85	20.92	0-3	3

LTE Band 30 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				27710 Ch. 2310 ㎒		
10 ㎒	QPSK	1	0	23.75	0	0
		1	24	23.63	0	0
		1	49	23.72	0	0
		25	0	22.84	0-1	1
		25	12	22.85	0-1	1
		25	24	22.80	0-1	1
		50	0	22.87	0-1	1
	16QAM	1	0	22.86	0-1	1
		1	24	22.93	0-1	1
		1	49	23.00	0-1	1
		25	0	21.86	0-2	2
		25	12	21.86	0-2	2
		25	24	21.85	0-2	2
		50	0	21.88	0-2	2
	64QAM	1	0	21.95	0-2	2
		1	24	21.96	0-2	2
		1	49	21.88	0-2	2
		25	0	20.86	0-3	3
		25	12	20.91	0-3	3
		25	24	20.85	0-3	3
		50	0	20.90	0-3	3

Note: LTE Band 14 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE TDD Band 38 Conducted Power]

LTE Band 38 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37775 Ch. 2572.5 ㎒	38000 Ch. 2595 ㎒	38225 Ch. 2617.5 ㎒		
5 ㎒	QPSK	1	0	24.30	24.42	24.51	0	0
		1	12	24.43	24.53	24.61	0	0
		1	24	24.50	24.60	24.61	0	0
		12	0	23.55	23.58	23.58	0-1	1
		12	6	23.63	23.72	23.66	0-1	1
		12	11	23.65	23.70	23.68	0-1	1
		25	0	23.61	23.66	23.66	0-1	1
	16QAM	1	0	23.47	23.59	23.59	0-1	1
		1	12	23.61	23.67	23.61	0-1	1
		1	24	23.67	23.74	23.71	0-1	1
		12	0	22.64	22.72	22.54	0-2	2
		12	6	22.62	22.70	22.67	0-2	2
		12	11	22.63	22.70	22.66	0-2	2
		25	0	22.63	22.71	22.68	0-2	2
	64QAM	1	0	22.16	21.76	22.24	0-2	2
		1	12	22.26	22.33	22.34	0-2	2
		1	24	22.33	22.40	22.35	0-2	2
		12	0	21.60	21.66	21.67	0-3	3
		12	6	21.69	21.78	21.76	0-3	3
		12	11	21.68	21.75	21.76	0-3	3
		25	0	21.69	21.74	21.76	0-3	3

LTE Band 38 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37800 Ch. 2575 ㎒	38000 Ch. 2595 ㎒	38200 Ch. 2615 ㎒		
10 ㎒	QPSK	1	0	24.21	24.33	24.33	0	0
		1	24	24.28	24.36	24.34	0	0
		1	49	24.15	24.26	24.28	0	0
		25	0	23.41	23.52	23.51	0-1	1
		25	12	23.46	23.53	23.56	0-1	1
		25	24	23.42	23.48	23.50	0-1	1
		50	0	23.44	23.54	23.53	0-1	1
	16QAM	1	0	23.33	22.61	23.55	0-1	1
		1	24	23.46	23.38	23.54	0-1	1
		1	49	23.28	23.49	23.39	0-1	1
		25	0	22.47	22.53	22.56	0-2	2
		25	12	22.46	22.57	22.55	0-2	2
		25	24	22.44	22.56	22.51	0-2	2
		50	0	22.49	22.57	22.57	0-2	2
	64QAM	1	0	21.99	22.11	22.18	0-2	2
		1	24	22.06	22.18	22.17	0-2	2
		1	49	21.98	22.11	22.10	0-2	2
		25	0	21.48	21.57	21.59	0-3	3
		25	12	21.53	21.62	21.57	0-3	3
		25	24	21.51	21.57	21.58	0-3	3
		50	0	21.49	21.61	21.56	0-3	3

LTE Band 38 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37825 Ch. 2507.5 ㎒	38000 Ch. 2595 ㎒	38175 Ch. 2612.5 ㎒		
15 ㎒	QPSK	1	0	24.49	24.60	24.59	0	0
		1	36	24.46	24.46	24.55	0	0
		1	74	24.39	24.45	24.44	0	0
		36	0	23.61	23.69	23.70	0-1	1
		36	18	23.65	23.70	23.70	0-1	1
		36	39	23.57	23.69	23.64	0-1	1
		75	0	23.63	23.70	23.68	0-1	1
	16QAM	1	0	23.65	23.74	23.75	0-1	1
		1	36	23.63	23.66	23.68	0-1	1
		1	74	23.57	23.61	23.58	0-1	1
		36	0	22.60	22.65	22.69	0-2	2
		36	18	22.63	22.68	22.68	0-2	2
		36	39	22.59	22.62	22.63	0-2	2
		75	0	22.66	22.70	22.71	0-2	2
	64QAM	1	0	22.32	22.39	22.41	0-2	2
		1	36	22.30	22.34	22.33	0-2	2
		1	74	22.20	22.24	22.24	0-2	2
		36	0	21.67	21.70	21.75	0-3	3
		36	18	21.66	21.65	21.72	0-3	3
		36	39	21.56	21.62	21.67	0-3	3
		75	0	21.68	21.73	21.72	0-3	3

LTE Band 38 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37850 Ch. 2580 ㎒	38000 Ch. 2595 ㎒	38150 Ch. 2610 ㎒		
20 ㎒	QPSK	1	0	24.49	24.60	24.61	0	0
		1	49	24.46	24.57	24.54	0	0
		1	99	24.42	24.48	24.36	0	0
		50	0	23.66	23.70	23.80	0-1	1
		50	25	23.68	23.73	23.72	0-1	1
		50	49	23.63	23.68	23.67	0-1	1
		100	0	23.64	23.69	23.69	0-1	1
	16QAM	1	0	23.65	23.74	23.75	0-1	1
		1	49	23.60	23.65	23.67	0-1	1
		1	99	23.59	23.55	23.56	0-1	1
		50	0	22.69	22.76	22.77	0-2	2
		50	25	22.71	22.76	22.69	0-2	2
		50	49	22.66	22.76	22.68	0-2	2
		100	0	22.67	22.73	22.75	0-2	2
	64QAM	1	0	22.30	22.40	22.41	0-2	2
		1	49	22.27	22.39	22.47	0-2	2
		1	99	22.24	22.21	22.20	0-2	2
		50	0	21.69	21.73	21.76	0-3	3
		50	25	21.68	21.76	21.77	0-3	3
		50	49	21.63	21.72	21.70	0-3	3
		100	0	21.68	21.71	21.72	0-3	3

[LTE Band 40 Low Side (MCC310) Conducted Power]
LTE Band 40 Low Sdie (MCC310) _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				38725 Ch. 2307.5 ㎒	38750 Ch. 2310 ㎒	38775 Ch. 2312.5 ㎒		
5 ㎒	QPSK	1	0	10.97	11.03	11.04	0	0
		1	12	10.95	11.02	11.03	0	0
		1	24	11.01	11.03	11.02	0	0
		12	0	10.09	10.15	10.14	0-1	1
		12	6	10.13	10.13	10.19	0-1	1
		12	11	10.14	10.11	10.12	0-1	1
		25	0	10.16	10.17	10.14	0-1	1
	16QAM	1	0	10.16	10.19	10.23	0-1	1
		1	12	10.16	10.19	10.19	0-1	1
		1	24	10.22	10.21	10.19	0-1	1
		12	0	9.09	9.10	9.10	0-2	2
		12	6	9.10	9.12	9.17	0-2	2
		12	11	9.13	9.10	9.10	0-2	2
		25	0	9.15	9.20	9.16	0-2	2
	64QAM	1	0	8.79	8.85	8.82	0-2	2
		1	12	8.79	8.82	8.83	0-2	2
		1	24	8.84	8.84	8.84	0-2	2
		12	0	8.18	8.19	8.19	0-3	3
		12	6	8.19	8.20	8.27	0-3	3
		12	11	8.20	8.18	8.18	0-3	3
		25	0	8.18	8.23	8.22	0-3	3

LTE Band 40 Low Side (MCC310) _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				38750 Ch. 2310 ㎒		
10 ㎒	QPSK	1	0	10.97	0	0
		1	24	10.83	0	0
		1	49	10.96	0	0
		25	0	10.09	0-1	1
		25	12	10.13	0-1	1
		25	24	10.07	0-1	1
		50	0	10.12	0-1	1
	16QAM	1	0	10.17	0-1	1
		1	24	10.06	0-1	1
		1	49	10.17	0-1	1
		25	0	9.11	0-2	2
		25	12	9.14	0-2	2
		25	24	9.08	0-2	2
		50	0	9.17	0-2	2
	64QAM	1	0	8.81	0-2	2
		1	24	8.67	0-2	2
		1	49	8.78	0-2	2
		25	0	8.17	0-3	3
		25	12	8.18	0-3	3
		25	24	8.13	0-3	3
		50	0	10.97	0-3	3

[LTE Band 40 Upper Side (MCC310) Conducted Power]
LTE Band 40 Upper Side (MCC310) _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				39175 Ch. 2352.5 ㎒	39200 Ch. 2355 ㎒	39225 Ch. 2357.5 ㎒		
5 ㎒	QPSK	1	0	11.18	11.22	11.23	0	0
		1	12	11.19	11.18	11.15	0	0
		1	24	11.15	11.12	11.11	0	0
		12	0	10.26	10.25	10.35	0-1	1
		12	6	10.26	10.27	10.28	0-1	1
		12	11	10.29	10.23	10.30	0-1	1
		25	0	10.24	10.29	10.31	0-1	1
	16QAM	1	0	10.39	10.38	10.39	0-1	1
		1	12	10.33	10.30	10.32	0-1	1
		1	24	10.31	10.31	10.33	0-1	1
		12	0	9.23	9.24	9.28	0-2	2
		12	6	9.26	9.27	9.29	0-2	2
		12	11	9.27	9.23	9.20	0-2	2
		25	0	9.25	9.27	9.31	0-2	2
	64QAM	1	0	9.03	9.03	9.05	0-2	2
		1	12	8.95	8.98	8.96	0-2	2
		1	24	8.95	8.99	8.97	0-2	2
		12	0	8.32	8.33	8.36	0-3	3
		12	6	8.33	8.34	8.40	0-3	3
		12	11	8.36	8.29	8.31	0-3	3
		25	0	8.30	8.34	8.34	0-3	3

LTE Band 40 Upper Side (MCC310) _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				39200 Ch. 2355 ㎒		
10 ㎒	QPSK	1	0	11.14	0	0
		1	24	11.21	0	0
		1	49	11.10	0	0
		25	0	10.35	0-1	1
		25	12	10.31	0-1	1
		25	24	10.29	0-1	1
		50	0	10.32	0-1	1
	16QAM	1	0	10.33	0-1	1
		1	24	10.37	0-1	1
		1	49	10.24	0-1	1
		25	0	9.33	0-2	2
		25	12	9.31	0-2	2
		25	24	9.29	0-2	2
		50	0	9.36	0-2	2
	64QAM	1	0	8.92	0-2	2
		1	24	8.95	0-2	2
		1	49	8.92	0-2	2
		25	0	8.40	0-3	3
		25	12	8.38	0-3	3
		25	24	8.37	0-3	3
		50	0	8.36	0-3	3

Note: LTE Band 40 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[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 3GPP [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	23.86	23.82	23.87	23.70	23.78	0	0
		1	12	23.86	23.81	23.90	23.75	23.76	0	0
		1	24	23.84	23.82	23.86	23.76	23.75	0	0
		12	0	23.00	22.95	22.90	22.80	22.87	0-1	1
		12	6	23.04	22.97	23.01	22.90	22.91	0-1	1
		12	11	23.03	23.00	22.98	22.83	22.91	0-1	1
		25	0	23.05	22.97	22.99	22.86	22.92	0-1	1
	16QAM	1	0	22.99	22.88	22.91	22.80	22.92	0-1	1
		1	12	22.98	22.98	22.96	22.85	22.92	0-1	1
		1	24	22.98	22.94	22.95	22.88	22.91	0-1	1
		12	0	22.01	21.93	21.87	21.80	21.87	0-2	2
		12	6	22.01	21.91	21.95	21.82	21.86	0-2	2
		12	11	22.00	21.93	21.93	21.81	21.88	0-2	2
		25	0	22.05	21.96	21.99	21.86	21.91	0-2	2
	64QAM	1	0	21.62	21.53	21.60	21.51	21.59	0-2	2
		1	12	21.61	21.56	21.58	21.52	21.54	0-2	2
		1	24	21.63	21.58	21.63	21.55	21.55	0-2	2
		12	0	21.04	21.01	20.99	20.88	20.98	0-3	3
		12	6	21.11	21.03	21.05	20.91	20.98	0-3	3
		12	11	21.06	21.05	21.02	20.89	20.98	0-3	3
		25	0	21.09	21.04	21.07	20.95	20.93	0-3	3

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	23.71	23.72	23.72	23.72	23.69	0	0
		1	24	23.73	23.74	23.70	23.50	23.72	0	0
		1	49	23.61	23.64	23.61	23.63	23.59	0	0
		25	0	22.96	22.92	22.97	22.86	22.87	0-1	1
		25	12	22.98	22.94	22.94	22.84	22.89	0-1	1
		25	24	22.88	22.86	22.89	22.75	22.82	0-1	1
		50	0	22.95	22.91	22.94	22.86	22.89	0-1	1
	16QAM	1	0	22.84	22.94	22.98	22.89	22.85	0-1	1
		1	24	22.87	22.74	22.74	22.65	22.90	0-1	1
		1	49	22.78	22.81	22.81	22.77	22.72	0-1	1
		25	0	21.98	21.95	21.93	21.83	21.90	0-2	2
		25	12	21.94	21.94	21.94	21.83	21.89	0-2	2
		25	24	21.89	21.87	21.89	21.77	21.81	0-2	2
		50	0	21.97	21.95	21.96	21.85	21.92	0-2	2
	64QAM	1	0	21.50	21.52	21.49	21.43	21.52	0-2	2
		1	24	21.51	21.50	21.52	21.43	21.49	0-2	2
		1	49	21.44	21.39	21.39	21.37	21.36	0-2	2
		25	0	21.02	20.99	21.00	20.92	20.96	0-3	3
		25	12	21.02	20.97	21.01	20.91	20.96	0-3	3
		25	24	20.95	20.93	20.92	20.83	20.89	0-3	3
		50	0	20.98	20.95	20.97	20.86	20.91	0-3	3

LTE Band 41 _ 15 ㎒ Bandwidth (Power Class 3)

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	23.94	23.83	23.86	23.87	23.73	0	0
		1	36	23.88	23.82	24.03	23.79	23.84	0	0
		1	74	23.86	23.71	23.79	23.60	23.86	0	0
		36	0	23.01	23.01	23.03	22.99	22.93	0-1	1
		36	18	23.04	23.03	23.06	22.96	23.00	0-1	1
		36	39	23.03	22.93	23.01	22.86	23.01	0-1	1
		75	0	23.04	23.01	23.06	22.95	22.99	0-1	1
	16QAM	1	0	23.03	22.97	23.02	23.06	22.97	0-1	1
		1	36	22.99	22.91	22.93	22.93	22.88	0-1	1
		1	74	22.98	22.87	22.92	22.78	23.02	0-1	1
		36	0	21.99	22.00	22.02	21.99	21.93	0-2	2
		36	18	21.99	21.96	22.04	21.95	21.96	0-2	2
		36	39	22.00	21.92	22.00	21.81	21.96	0-2	2
		75	0	22.07	22.03	22.09	21.97	21.98	0-2	2
	64QAM	1	0	21.65	21.58	21.65	21.67	21.54	0-2	2
		1	36	21.63	21.62	21.66	21.61	21.63	0-2	2
		1	74	21.60	21.45	21.55	21.40	21.66	0-2	2
		36	0	21.00	21.03	21.07	21.03	20.95	0-3	3
		36	18	21.03	21.03	21.08	20.99	21.02	0-3	3
		36	39	21.04	20.97	21.04	20.91	20.99	0-3	3
		75	0	21.06	21.05	21.11	21.01	21.06	0-3	3

LTE Band 41 _ 20 ㎒ Bandwidth (Power Class 3)

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	23.88	23.97	23.92	24.00	23.80	0	0
		1	49	23.94	23.90	23.92	23.87	23.89	0	0
		1	99	24.01	23.80	23.80	23.58	23.99	0	0
		50	0	23.15	23.05	23.15	23.15	23.06	0-1	1
		50	25	23.16	23.08	23.18	23.05	23.09	0-1	1
		50	49	23.14	22.98	23.10	22.99	23.14	0-1	1
		100	0	23.15	23.06	23.14	23.04	23.10	0-1	1
	16QAM	1	0	23.08	23.07	23.08	23.09	22.99	0-1	1
		1	49	23.01	22.98	23.05	22.95	23.02	0-1	1
		1	99	23.04	22.89	22.94	22.71	23.05	0-1	1
		50	0	22.17	22.14	22.17	22.15	22.08	0-2	2
		50	25	22.19	22.11	22.17	22.09	22.12	0-2	2
		50	49	22.18	22.01	22.15	21.95	22.19	0-2	2
		100	0	22.17	22.10	22.16	22.08	22.10	0-2	2
	64QAM	1	0	21.75	21.69	21.74	21.75	21.61	0-2	2
		1	49	21.68	21.67	21.70	21.65	21.65	0-2	2
		1	99	21.65	21.52	21.55	21.41	21.77	0-2	2
		50	0	21.18	21.10	21.17	21.16	21.07	0-3	3
		50	25	21.21	21.09	21.19	21.09	21.13	0-3	3
		50	49	21.17	21.04	21.13	20.96	21.14	0-3	3
		100	0	21.19	21.06	21.14	21.05	21.11	0-3	3

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 3GPP [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	26.20	26.25	26.53	26.30	26.03	0	0
		1	12	26.17	26.35	26.59	26.28	25.98	0	0
		1	24	26.23	26.36	26.57	26.26	25.93	0	0
		12	0	25.34	25.37	25.69	25.44	25.08	0-1	1
		12	6	25.36	25.45	25.72	25.44	25.10	0-1	1
		12	11	25.35	25.46	25.76	25.42	25.08	0-1	1
		25	0	25.36	25.44	25.71	25.44	25.07	0-1	1
	16QAM	1	0	25.42	25.49	25.81	25.54	25.18	0-1	1
		1	12	25.43	25.54	25.84	25.50	25.18	0-1	1
		1	24	25.45	25.54	25.82	25.50	25.15	0-1	1
		12	0	24.37	24.41	24.76	24.46	24.14	0-2	2
		12	6	24.41	24.50	24.78	24.53	24.13	0-2	2
		12	11	24.42	24.53	24.80	24.50	24.13	0-2	2
		25	0	24.40	24.50	24.73	24.46	24.14	0-2	2
	64QAM	1	0	24.28	24.33	24.66	24.37	24.04	0-2	2
		1	12	24.26	24.41	24.68	24.38	24.00	0-2	2
		1	24	24.32	24.42	24.70	24.38	24.01	0-2	2
		12	0	23.44	23.45	23.83	23.52	23.19	0-3	3
		12	6	23.46	23.56	23.83	23.55	23.22	0-3	3
		12	11	23.43	23.58	23.83	23.50	23.18	0-3	3
		25	0	23.44	23.54	23.79	23.51	23.14	0-3	3

LTE Band 41 _ 10 ㎒ Bandwidth (Power Class 2)

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39700 Ch. 2501 ㎒	40160 Ch. 2547 ㎒	40620 Ch. 2593 ㎒	41080 Ch. 2639 ㎒	41540 Ch. 2685 ㎒		
10 ㎒	QPSK	1	0	26.04	26.25	26.55	26.31	25.98	0	0
		1	24	25.99	26.20	26.47	26.22	25.91	0	0
		1	49	25.96	26.18	26.44	26.19	25.83	0	0
		25	0	25.26	25.44	25.76	25.43	25.11	0-1	1
		25	12	25.25	25.45	25.74	25.41	25.11	0-1	1
		25	24	25.17	25.40	25.68	25.39	25.05	0-1	1
		50	0	25.21	25.45	25.74	25.42	25.08	0-1	1
	16QAM	1	0	25.31	25.50	25.84	25.53	25.20	0-1	1
		1	24	25.25	25.47	25.76	25.43	25.11	0-1	1
		1	49	25.24	25.46	25.74	25.43	25.05	0-1	1
		25	0	24.25	24.48	24.81	24.48	24.17	0-2	2
		25	12	24.25	24.48	24.80	24.47	24.14	0-2	2
		25	24	24.22	24.43	24.74	24.40	24.06	0-2	2
		50	0	24.28	24.51	24.80	24.47	24.13	0-2	2
	64QAM	1	0	24.15	24.24	24.63	24.37	24.05	0-2	2
		1	24	24.06	24.31	24.59	24.30	23.96	0-2	2
		1	49	24.10	24.29	24.57	24.29	23.91	0-2	2
		25	0	23.35	23.53	23.84	23.51	23.20	0-3	3
		25	12	23.32	23.53	23.83	23.51	23.18	0-3	3
		25	24	23.30	23.50	23.80	23.45	23.12	0-3	3
		50	0	23.26	23.46	23.81	23.47	23.11	0-3	3

LTE Band 41 _ 15 ㎒ Bandwidth (Power Class 2)

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	26.20	26.34	26.71	26.48	26.07	0	0
		1	36	26.23	26.33	26.74	26.38	26.09	0	0
		1	74	26.19	26.22	26.64	26.25	26.14	0	0
		36	0	25.34	25.51	25.86	25.60	25.23	0-1	1
		36	18	25.38	25.54	25.90	25.57	25.23	0-1	1
		36	39	25.34	25.47	25.85	25.46	25.23	0-1	1
		75	0	25.36	25.49	25.85	25.55	25.23	0-1	1
	16QAM	1	0	25.42	25.61	25.94	25.73	25.29	0-1	1
		1	36	25.41	25.58	25.94	25.60	25.33	0-1	1
		1	74	25.34	25.47	25.86	25.45	25.32	0-1	1
		36	0	24.31	24.51	24.85	24.58	24.20	0-2	2
		36	18	24.33	24.50	24.86	24.58	24.23	0-2	2
		36	39	24.34	24.44	24.84	24.46	24.20	0-2	2
		75	0	24.39	24.53	24.89	24.55	24.26	0-2	2
	64QAM	1	0	24.26	24.26	24.68	24.57	24.15	0-2	2
		1	36	24.28	24.44	24.78	24.49	24.14	0-2	2
		1	74	24.20	24.31	24.71	24.30	24.14	0-2	2
		36	0	23.35	23.55	23.87	23.62	23.21	0-3	3
		36	18	23.39	23.54	23.91	23.58	23.26	0-3	3
		36	39	23.38	23.49	23.86	23.49	23.26	0-3	3
		75	0	23.38	23.51	23.87	23.58	23.27	0-3	3

LTE Band 41 _ 20 ㎒ Bandwidth (Power Class 2)

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	26.23	26.32	26.57	26.52	26.10	0	0
		1	49	26.17	26.36	26.68	26.40	26.12	0	0
		1	99	26.18	26.36	26.56	26.14	26.14	0	0
		50	0	25.40	25.54	25.89	25.64	25.25	0-1	1
		50	25	25.40	25.55	25.90	25.59	25.27	0-1	1
		50	49	25.40	25.48	25.86	25.47	25.26	0-1	1
		100	0	25.41	25.50	25.87	25.55	25.26	0-1	1
	16QAM	1	0	25.48	25.59	25.85	25.72	25.32	0-1	1
		1	49	25.44	25.62	25.95	25.62	25.31	0-1	1
		1	99	25.44	25.62	25.80	25.38	25.39	0-1	1
		50	0	24.42	24.60	24.95	24.68	24.30	0-2	2
		50	25	24.46	24.60	24.92	24.64	24.31	0-2	2
		50	49	24.44	24.53	24.91	24.52	24.34	0-2	2
		100	0	24.42	24.54	24.88	24.60	24.29	0-2	2
	64QAM	1	0	24.34	24.44	24.64	24.54	24.17	0-2	2
		1	49	24.30	24.37	24.67	24.48	24.12	0-2	2
		1	99	24.25	24.45	24.65	24.20	24.16	0-2	2
		50	0	23.42	23.48	23.87	23.69	23.28	0-3	3
		50	25	23.43	23.61	23.94	23.64	23.31	0-3	3
		50	49	23.43	23.53	23.90	23.49	23.33	0-3	3
		100	0	23.43	23.52	23.82	23.58	23.29	0-3	3

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	24.54	24.56	24.55	0	0
		1	3	24.63	24.58	24.62	0	0
		1	5	24.56	24.57	24.59	0	0
		3	0	24.58	24.54	24.60	0	0
		3	1	24.64	24.62	24.64	0	0
		3	3	24.58	24.53	24.56	0	0
		6	0	23.67	23.61	23.63	0-1	1
	16QAM	1	0	23.85	23.80	23.76	0-1	1
		1	3	23.96	23.80	23.89	0-1	1
		1	5	23.82	23.72	23.77	0-1	1
		3	0	23.64	23.58	23.66	0-1	1
		3	1	23.64	23.63	23.62	0-1	1
		3	3	23.69	23.58	23.62	0-1	1
		6	0	22.77	22.71	22.74	0-2	2
	64QAM	1	0	22.76	22.80	22.79	0-2	2
		1	3	22.86	22.85	22.89	0-2	2
		1	5	22.79	22.77	22.80	0-2	2
		3	0	22.71	22.72	22.78	0-2	2
		3	1	22.84	22.80	22.84	0-2	2
		3	3	22.79	22.76	22.74	0-2	2
		6	0	21.68	21.58	21.65	0-3	3

LTE Band 66 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 ㎒	132322 Ch. 1745 ㎒	132657 Ch. 1778.5 ㎒		
3 ㎒	QPSK	1	0	24.55	24.52	24.55	0	0
		1	7	24.61	24.59	24.62	0	0
		1	14	24.66	24.62	24.60	0	0
		8	0	23.75	23.60	23.62	0-1	1
		8	3	23.75	23.74	23.76	0-1	1
		8	7	23.71	23.67	23.75	0-1	1
		15	0	23.75	23.68	23.71	0-1	1
	16QAM	1	0	23.85	23.77	23.86	0-1	1
		1	7	23.79	23.84	23.86	0-1	1
		1	14	23.86	23.88	23.94	0-1	1
		8	0	22.80	22.69	22.70	0-2	2
		8	3	22.88	22.78	22.79	0-2	2
		8	7	22.77	22.77	22.78	0-2	2
		15	0	22.76	22.71	22.78	0-2	2
	64QAM	1	0	22.80	22.71	22.78	0-2	2
		1	7	22.85	22.82	22.82	0-2	2
		1	14	22.91	22.80	22.85	0-2	2
		8	0	21.82	21.67	21.67	0-3	3
		8	3	21.82	21.75	21.82	0-3	3
		8	7	21.84	21.70	21.76	0-3	3
		15	0	21.75	21.72	21.76	0-3	3

LTE Band 66 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 ㎒	132322Ch. 1745 ㎒	132647 Ch. 1777.5 ㎒		
5 ㎒	QPSK	1	0	24.55	24.50	24.56	0	0
		1	12	24.63	24.60	24.62	0	0
		1	24	24.67	24.66	24.70	0	0
		12	0	23.70	23.64	23.66	0-1	1
		12	6	23.78	23.71	23.78	0-1	1
		12	11	23.78	23.69	23.71	0-1	1
		25	0	23.75	23.69	23.77	0-1	1
	16QAM	1	0	23.78	23.85	23.81	0-1	1
		1	12	23.97	23.84	23.89	0-1	1
		1	24	23.95	23.94	23.98	0-1	1
		12	0	22.78	22.69	22.65	0-2	2
		12	6	22.78	22.75	22.79	0-2	2
		12	11	22.78	22.74	22.76	0-2	2
		25	0	22.75	22.75	22.71	0-2	2
	64QAM	1	0	22.72	22.77	22.76	0-2	2
		1	12	22.84	22.88	22.84	0-2	2
		1	24	22.98	22.88	22.93	0-2	2
		12	0	21.82	21.68	21.69	0-3	3
		12	6	21.85	21.76	21.79	0-3	3
		12	11	21.79	21.74	21.79	0-3	3
		25	0	21.75	21.71	21.75	0-3	3

LTE Band 66 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 ㎒	132322 Ch. 1745 ㎒	132622 Ch. 1775 ㎒		
10 ㎒	QPSK	1	0	24.53	24.51	24.58	0	0
		1	24	24.59	24.59	24.58	0	0
		1	49	24.59	24.57	24.56	0	0
		25	0	23.74	23.69	23.74	0-1	1
		25	12	23.71	23.67	23.74	0-1	1
		25	24	23.67	23.60	23.69	0-1	1
		50	0	23.69	23.69	23.65	0-1	1
	16QAM	1	0	23.85	23.83	23.83	0-1	1
		1	24	23.85	23.82	23.91	0-1	1
		1	49	23.79	23.75	23.74	0-1	1
		25	0	22.73	22.71	22.78	0-2	2
		25	12	22.75	22.69	22.69	0-2	2
		25	24	22.66	22.65	22.68	0-2	2
		50	0	22.71	22.67	22.71	0-2	2
	64QAM	1	0	22.82	22.76	22.85	0-2	2
		1	24	22.90	22.78	22.84	0-2	2
		1	49	22.75	22.74	22.77	0-2	2
		25	0	21.79	21.70	21.75	0-3	3
		25	12	21.74	21.68	21.70	0-3	3
		25	24	21.67	21.62	21.70	0-3	3
		50	0	21.73	21.67	21.70	0-3	3

LTE Band 66 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 ㎒	132322 Ch. 1745 ㎒	132597 Ch. 1772.5 ㎒		
15 ㎒	QPSK	1	0	24.78	24.78	24.79	0	0
		1	36	24.66	24.67	24.67	0	0
		1	74	24.77	24.64	24.57	0	0
		36	0	23.88	23.89	23.85	0-1	1
		36	18	23.87	23.84	23.84	0-1	1
		36	39	23.83	23.78	23.81	0-1	1
		75	0	23.88	23.82	23.82	0-1	1
	16QAM	1	0	24.08	23.97	24.03	0-1	1
		1	36	23.89	23.87	23.90	0-1	1
		1	74	23.98	23.91	23.91	0-1	1
		36	0	22.87	22.85	22.86	0-2	2
		36	18	22.88	22.79	22.82	0-2	2
		36	39	22.78	22.80	22.81	0-2	2
		75	0	22.84	22.85	22.83	0-2	2
	64QAM	1	0	22.97	22.97	22.93	0-2	2
		1	36	22.80	22.88	22.79	0-2	2
		1	74	22.98	22.91	22.79	0-2	2
		36	0	21.87	21.92	21.91	0-3	3
		36	18	21.90	21.88	21.81	0-3	3
		36	39	21.80	21.82	21.80	0-3	3
		75	0	21.85	21.83	21.83	0-3	3

LTE Band 66 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	24.76	24.74	24.75	0	0
		1	49	24.70	24.64	24.64	0	0
		1	99	24.69	24.68	24.60	0	0
		50	0	23.90	23.87	23.87	0-1	1
		50	25	23.87	23.83	23.88	0-1	1
		50	49	23.83	23.76	23.79	0-1	1
		100	0	23.88	23.83	23.83	0-1	1
	16QAM	1	0	23.97	23.91	24.10	0-1	1
		1	49	23.96	23.93	23.91	0-1	1
		1	99	24.01	24.08	24.00	0-1	1
		50	0	22.94	22.87	22.91	0-2	2
		50	25	22.93	22.87	22.85	0-2	2
		50	49	22.81	22.80	22.82	0-2	2
		100	0	22.89	22.84	22.80	0-2	2
	64QAM	1	0	22.99	22.98	23.01	0-2	2
		1	49	22.89	22.92	22.85	0-2	2
		1	99	23.05	22.93	22.76	0-2	2
		50	0	21.93	21.86	21.93	0-3	3
		50	25	21.90	21.85	21.89	0-3	3
		50	49	21.82	21.84	21.81	0-3	3
		100	0	21.87	21.84	21.85	0-3	3

[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 ㎒	133297 Ch. 680.5 ㎒	133447 Ch. 695.5 ㎒		
5 ㎒	QPSK	1	0	24.55	24.51	24.41	0	0
		1	12	24.61	24.60	24.48	0	0
		1	24	24.65	24.66	24.50	0	0
		12	0	23.64	23.68	23.53	0-1	1
		12	6	23.74	23.70	23.63	0-1	1
		12	11	23.74	23.80	23.62	0-1	1
		25	0	23.71	23.68	23.62	0-1	1
	16QAM	1	0	23.83	23.74	23.64	0-1	1
		1	12	23.92	23.84	23.80	0-1	1
		1	24	23.90	23.80	23.74	0-1	1
		12	0	22.69	22.69	22.54	0-2	2
		12	6	22.80	22.72	22.67	0-2	2
		12	11	22.81	22.78	22.69	0-2	2
		25	0	22.75	22.75	22.64	0-2	2
	64QAM	1	0	22.37	22.76	22.65	0-2	2
		1	12	22.85	22.81	22.68	0-2	2
		1	24	22.83	22.82	22.74	0-2	2
		12	0	21.74	21.69	21.63	0-3	3
		12	6	21.86	21.78	21.68	0-3	3
		12	11	21.83	21.84	21.70	0-3	3
		25	0	21.77	21.75	21.68	0-3	3

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	24.66	24.68	24.56	0	0
		1	24	24.61	24.45	24.44	0	0
		1	49	24.58	24.59	24.36	0	0
		25	0	23.74	23.76	23.66	0-1	1
		25	12	23.73	23.74	23.61	0-1	1
		25	24	23.71	23.73	23.59	0-1	1
		50	0	23.75	23.72	23.63	0-1	1
	16QAM	1	0	23.95	23.87	23.80	0-1	1
		1	24	23.94	23.83	23.70	0-1	1
		1	49	23.86	23.77	23.63	0-1	1
		25	0	22.70	22.75	22.67	0-2	2
		25	12	22.75	22.74	22.64	0-2	2
		25	24	22.72	22.73	22.61	0-2	2
		50	0	22.77	22.74	22.60	0-2	2
	64QAM	1	0	22.42	22.87	22.78	0-2	2
		1	24	22.92	22.76	22.57	0-2	2
		1	49	22.83	22.76	22.51	0-2	2
		25	0	21.75	21.75	21.65	0-3	3
		25	12	21.74	21.76	21.61	0-3	3
		25	24	21.73	21.73	21.59	0-3	3
		50	0	21.73	21.80	21.64	0-3	3

LTE Band 71 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133197 Ch. 670.5 ㎒	133297 Ch. 680.5 ㎒	133397 Ch. 690.5 ㎒		
15 ㎒	QPSK	1	0	24.83	24.82	24.69	0	0
		1	36	24.68	24.68	24.61	0	0
		1	74	24.69	24.64	24.55	0	0
		36	0	23.88	23.86	23.82	0-1	1
		36	18	23.90	23.85	23.79	0-1	1
		36	39	23.85	23.82	23.80	0-1	1
		75	0	23.88	23.85	23.81	0-1	1
	16QAM	1	0	24.08	24.12	23.93	0-1	1
		1	36	23.96	23.96	23.84	0-1	1
		1	74	23.77	23.83	23.80	0-1	1
		36	0	22.90	22.84	22.84	0-2	2
		36	18	22.85	22.83	22.79	0-2	2
		36	39	22.85	22.79	22.76	0-2	2
		75	0	22.86	22.83	22.80	0-2	2
	64QAM	1	0	22.91	23.09	22.91	0-2	2
		1	36	22.88	22.89	22.74	0-2	2
		1	74	22.85	22.84	22.81	0-2	2
		36	0	21.92	21.87	21.85	0-3	3
		36	18	21.93	21.87	21.84	0-3	3
		36	39	21.84	21.89	21.77	0-3	3
		75	0	21.87	21.84	21.80	0-3	3

LTE Band 71 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133222 Ch. 673 ㎒	133297 Ch. 680.5 ㎒	133372 Ch. 688 ㎒		
20 ㎒	QPSK	1	0	24.74	24.78	24.83	0	0
		1	49	24.69	24.70	24.64	0	0
		1	99	24.67	24.57	24.49	0	0
		50	0	23.77	23.82	23.82	0-1	1
		50	25	23.90	23.88	23.79	0-1	1
		50	49	23.92	23.82	23.79	0-1	1
		100	0	23.86	23.85	23.80	0-1	1
	16QAM	1	0	24.13	24.03	24.09	0-1	1
		1	49	24.00	24.01	23.96	0-1	1
		1	99	24.01	23.85	23.74	0-1	1
		50	0	22.84	22.82	22.84	0-2	2
		50	25	22.88	22.85	22.85	0-2	2
		50	49	22.93	22.83	22.74	0-2	2
		100	0	22.83	22.86	22.75	0-2	2
	64QAM	1	0	22.85	22.99	23.10	0-2	2
		1	49	22.97	22.96	22.86	0-2	2
		1	99	22.94	22.81	22.74	0-2	2
		50	0	21.80	21.83	21.86	0-3	3
		50	25	21.89	21.91	21.84	0-3	3
		50	49	21.89	21.80	21.74	0-3	3
		100	0	21.86	21.86	21.78	0-3	3

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

11.2.2 LTE Reduced Conducted Power

[LTE Band 2 Conducted Power]

LTE Band 2 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	12.51	12.40	12.46	0	0
		1	3	12.66	12.61	12.57	0	0
		1	5	12.55	12.50	12.52	0	0
		3	0	12.52	12.45	12.48	0	0
		3	1	12.61	12.54	12.55	0	0
		3	3	12.62	12.52	12.52	0	0
		6	0	12.68	12.63	12.61	0-1	0
	16QAM	1	0	12.80	12.68	12.76	0-1	0
		1	3	13.04	12.91	12.95	0-1	0
		1	5	12.84	12.78	12.83	0-1	0
		3	0	12.62	12.59	12.59	0-1	0
		3	1	12.72	12.62	12.69	0-1	0
		3	3	12.59	12.58	12.64	0-1	0
		6	0	12.71	12.63	12.65	0-2	0
	64QAM	1	0	12.71	12.51	12.68	0-2	0
		1	3	12.86	12.63	12.82	0-2	0
		1	5	12.80	12.72	12.69	0-2	0
		3	0	12.62	12.52	12.64	0-2	0
		3	1	12.78	12.63	12.72	0-2	0
		3	3	12.70	12.60	12.66	0-2	0
		6	0	12.65	12.56	12.58	0-3	0

LTE Band 2 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 ㎒	18900 Ch. 1880 ㎒	19185 Ch. 1908.5 ㎒		
3 ㎒	QPSK	1	0	12.56	12.47	12.50	0	0
		1	7	12.62	12.56	12.58	0	0
		1	14	12.58	12.54	12.52	0	0
		8	0	12.69	12.63	12.65	0-1	0
		8	3	12.77	12.71	12.73	0-1	0
		8	7	12.74	12.70	12.69	0-1	0
		15	0	12.74	12.69	12.70	0-1	0
	16QAM	1	0	12.95	12.75	12.81	0-1	0
		1	7	12.82	12.80	12.80	0-1	0
		1	14	12.85	12.95	12.89	0-1	0
		8	0	12.66	12.62	12.70	0-2	0
		8	3	12.75	12.73	12.73	0-2	0
		8	7	12.76	12.70	12.70	0-2	0
		15	0	12.69	12.69	12.67	0-2	0
	64QAM	1	0	12.72	12.61	12.71	0-2	0
		1	7	12.78	12.71	12.78	0-2	0
		1	14	12.83	12.79	12.86	0-2	0
		8	0	12.66	12.66	12.61	0-3	0
		8	3	12.75	12.68	12.68	0-3	0
		8	7	12.76	12.70	12.76	0-3	0
		15	0	12.72	12.70	12.69	0-3	0

LTE Band 2 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 ㎒	18900Ch. 1880 ㎒	19175 Ch. 1907.5 ㎒		
5 ㎒	QPSK	1	0	12.58	12.46	12.50	0	0
		1	12	12.60	12.61	12.60	0	0
		1	24	12.56	12.55	12.50	0	0
		12	0	12.68	12.58	12.61	0-1	0
		12	6	12.74	12.70	12.62	0-1	0
		12	11	12.72	12.73	12.74	0-1	0
		25	0	12.67	12.66	12.57	0-1	0
	16QAM	1	0	12.88	12.74	12.85	0-1	0
		1	12	12.93	12.89	12.97	0-1	0
		1	24	12.82	12.82	12.92	0-1	0
		12	0	12.64	12.48	12.58	0-2	0
		12	6	12.72	12.59	12.62	0-2	0
		12	11	12.70	12.62	12.69	0-2	0
		25	0	12.65	12.61	12.60	0-2	0
	64QAM	1	0	12.66	12.56	12.63	0-2	0
		1	12	12.82	12.69	12.83	0-2	0
		1	24	12.75	12.61	12.68	0-2	0
		12	0	12.65	12.50	12.61	0-3	0
		12	6	12.72	12.65	12.67	0-3	0
		12	11	12.73	12.57	12.69	0-3	0
		25	0	12.69	12.63	12.62	0-3	0

LTE Band 2 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 ㎒	18900 Ch. 1880 ㎒	19150 Ch. 1905 ㎒		
10 ㎒	QPSK	1	0	12.54	12.56	12.57	0	0
		1	24	12.57	12.40	12.46	0	0
		1	49	12.41	12.52	12.56	0	0
		25	0	12.67	12.65	12.64	0-1	0
		25	12	12.67	12.63	12.66	0-1	0
		25	24	12.61	12.60	12.60	0-1	0
		50	0	12.63	12.62	12.63	0-1	0
	16QAM	1	0	12.76	12.94	12.94	0-1	0
		1	24	12.85	12.74	12.98	0-1	0
		1	49	12.66	12.73	12.91	0-1	0
		25	0	12.59	12.59	12.63	0-2	0
		25	12	12.61	12.64	12.64	0-2	0
		25	24	12.53	12.57	12.58	0-2	0
		50	0	12.60	12.59	12.63	0-2	0
	64QAM	1	0	12.61	12.71	12.77	0-2	0
		1	24	12.67	12.76	12.89	0-2	0
		1	49	12.59	12.65	12.72	0-2	0
		25	0	12.60	12.65	12.65	0-3	0
		25	12	12.61	12.62	12.67	0-3	0
		25	24	12.56	12.55	12.63	0-3	0
		50	0	12.64	12.60	12.64	0-3	0

LTE Band 2 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 ㎒	18900 Ch. 1880 ㎒	19125 Ch. 1902.5 ㎒		
15 ㎒	QPSK	1	0	12.67	12.70	12.70	0	0
		1	36	12.67	12.67	12.65	0	0
		1	74	12.54	12.62	12.70	0	0
		36	0	12.72	12.77	12.80	0-1	0
		36	18	12.74	12.80	12.80	0-1	0
		36	39	12.73	12.79	12.80	0-1	0
		75	0	12.71	12.81	12.82	0-1	0
	16QAM	1	0	13.11	12.92	13.00	0-1	0
		1	36	12.93	12.89	12.97	0-1	0
		1	74	12.97	12.95	13.02	0-1	0
		36	0	12.56	12.67	12.76	0-2	0
		36	18	12.58	12.66	12.78	0-2	0
		36	39	12.64	12.73	12.79	0-2	0
		75	0	12.59	12.67	12.74	0-2	0
	64QAM	1	0	12.58	12.65	12.85	0-2	0
		1	36	12.54	12.77	12.88	0-2	0
		1	74	12.45	12.71	12.76	0-2	0
		36	0	12.60	12.67	12.77	0-3	0
		36	18	12.59	12.78	12.78	0-3	0
		36	39	12.55	12.76	12.79	0-3	0
		75	0	12.58	12.77	12.75	0-3	0

LTE Band 2 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	12.63	12.62	12.60	0	0
		1	49	12.48	12.67	12.66	0	0
		1	99	12.56	12.73	12.77	0	0
		50	0	12.71	12.81	12.84	0-1	0
		50	25	12.69	12.84	12.80	0-1	0
		50	49	12.69	12.82	12.76	0-1	0
		100	0	12.68	12.82	12.80	0-1	0
	16QAM	1	0	13.03	12.82	12.91	0-1	0
		1	49	12.87	12.82	12.92	0-1	0
		1	99	12.92	13.10	13.02	0-1	0
		50	0	12.75	12.80	12.78	0-2	0
		50	25	12.67	12.80	12.81	0-2	0
		50	49	12.68	12.75	12.79	0-2	0
		100	0	12.72	12.74	12.76	0-2	0
	64QAM	1	0	12.81	12.61	12.78	0-2	0
		1	49	12.85	12.88	12.81	0-2	0
		1	99	12.74	12.93	13.00	0-2	0
		50	0	12.72	12.77	12.79	0-3	0
		50	25	12.74	12.80	12.79	0-3	0
		50	49	12.67	12.73	12.77	0-3	0
		100	0	12.71	12.75	12.75	0-3	0

[LTE Band 4 Conducted Power]

LTE Band 4 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	12.76	12.50	12.54	0	0
		1	3	12.84	12.64	12.63	0	0
		1	5	12.73	12.55	12.51	0	0
		3	0	12.76	12.55	12.57	0	0
		3	1	12.82	12.61	12.64	0	0
		3	3	12.76	12.53	12.52	0	0
		6	0	12.85	12.63	12.63	0-1	0
	16QAM	1	0	13.18	12.77	13.00	0-1	0
		1	3	13.22	12.96	12.91	0-1	0
		1	5	13.14	12.87	12.96	0-1	0
		3	0	12.98	12.61	12.70	0-1	0
		3	1	12.91	12.70	12.81	0-1	0
		3	3	12.91	12.65	12.69	0-1	0
		6	0	12.97	12.75	12.70	0-2	0
	64QAM	1	0	13.01	12.78	12.71	0-2	0
		1	3	13.04	12.83	12.77	0-2	0
		1	5	12.99	12.69	12.64	0-2	0
		3	0	13.01	12.73	12.77	0-2	0
		3	1	12.98	12.76	12.76	0-2	0
		3	3	12.93	12.70	12.62	0-2	0
		6	0	12.89	12.61	12.60	0-3	0

LTE Band 4 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	12.84	12.62	12.60	0	0
		1	7	12.82	12.64	12.63	0	0
		1	14	12.78	12.58	12.59	0	0
		8	0	12.95	12.68	12.71	0-1	0
		8	3	12.95	12.73	12.68	0-1	0
		8	7	12.91	12.69	12.70	0-1	0
		15	0	12.91	12.77	12.75	0-1	0
	16QAM	1	0	13.14	12.93	12.99	0-1	0
		1	7	13.20	12.97	13.01	0-1	0
		1	14	13.09	12.85	12.86	0-1	0
		8	0	13.00	12.75	12.74	0-2	0
		8	3	13.02	12.82	12.71	0-2	0
		8	7	12.97	12.78	12.69	0-2	0
		15	0	13.00	12.77	12.76	0-2	0
	64QAM	1	0	13.06	12.81	12.74	0-2	0
		1	7	12.93	12.85	12.71	0-2	0
		1	14	12.95	12.78	12.75	0-2	0
		8	0	12.97	12.75	12.69	0-3	0
		8	3	13.02	12.82	12.70	0-3	0
		8	7	12.95	12.76	12.70	0-3	0
		15	0	12.94	12.76	12.79	0-3	0

LTE Band 4 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	12.85	12.58	12.59	0	0
		1	12	12.81	12.63	12.67	0	0
		1	24	12.79	12.62	12.64	0	0
		12	0	13.00	12.71	12.71	0-1	0
		12	6	12.98	12.79	12.72	0-1	0
		12	11	12.90	12.73	12.77	0-1	0
		25	0	12.93	12.79	12.69	0-1	0
	16QAM	1	0	13.23	12.81	12.94	0-1	0
		1	12	13.24	12.90	13.10	0-1	0
		1	24	13.23	13.01	13.08	0-1	0
		12	0	12.98	12.76	12.72	0-2	0
		12	6	13.00	12.80	12.77	0-2	0
		12	11	12.92	12.76	12.75	0-2	0
		25	0	12.96	12.76	12.73	0-2	0
	64QAM	1	0	13.06	12.86	12.75	0-2	0
		1	12	13.01	12.87	12.92	0-2	0
		1	24	13.03	12.83	12.91	0-2	0
		12	0	12.99	12.71	12.75	0-3	0
		12	6	12.99	12.83	12.78	0-3	0
		12	11	12.95	12.78	12.76	0-3	0
		25	0	12.95	12.79	12.73	0-3	0

LTE Band 4 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 ㎒	20175 Ch. 1732.5 ㎒	20350 Ch. 1750 ㎒		
10 ㎒	QPSK	1	0	12.79	12.63	12.69	0	0
		1	24	12.87	12.66	12.57	0	0
		1	49	12.70	12.63	12.59	0	0
		25	0	12.89	12.74	12.72	0-1	0
		25	12	12.93	12.76	12.75	0-1	0
		25	24	12.88	12.73	12.71	0-1	0
		50	0	12.90	12.70	12.74	0-1	0
	16QAM	1	0	13.24	12.90	12.94	0-1	0
		1	24	13.13	13.02	12.90	0-1	0
		1	49	13.06	12.83	12.85	0-1	0
		25	0	12.92	12.79	12.73	0-2	0
		25	12	12.90	12.75	12.74	0-2	0
		25	24	12.86	12.73	12.71	0-2	0
		50	0	12.93	12.76	12.74	0-2	0
	64QAM	1	0	12.99	12.83	12.81	0-2	0
		1	24	12.95	12.77	12.76	0-2	0
		1	49	12.95	12.85	12.86	0-2	0
		25	0	12.92	12.71	12.70	0-3	0
		25	12	12.94	12.71	12.76	0-3	0
		25	24	12.88	12.69	12.72	0-3	0
		50	0	12.88	12.78	12.74	0-3	0

LTE Band 4 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	12.99	12.88	12.87	0	0
		1	36	12.94	12.86	12.75	0	0
		1	74	12.91	12.80	12.77	0	0
		36	0	13.06	12.90	12.93	0-1	0
		36	18	13.08	12.91	12.93	0-1	0
		36	39	13.02	12.89	12.85	0-1	0
		75	0	13.08	12.89	12.92	0-1	0
	16QAM	1	0	13.26	13.25	13.19	0-1	0
		1	36	13.22	13.04	13.19	0-1	0
		1	74	13.17	13.15	13.21	0-1	0
		36	0	13.06	12.91	12.95	0-2	0
		36	18	13.10	12.90	12.94	0-2	0
		36	39	13.04	12.89	12.85	0-2	0
		75	0	13.06	12.91	12.87	0-2	0
	64QAM	1	0	13.19	13.09	13.01	0-2	0
		1	36	13.17	12.97	13.00	0-2	0
		1	74	13.03	12.96	13.03	0-2	0
		36	0	13.10	12.93	12.94	0-3	0
		36	18	13.09	12.96	12.93	0-3	0
		36	39	13.05	12.88	12.91	0-3	0
		75	0	13.06	12.86	12.90	0-3	0

LTE Band 4 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 ㎒		
20 ㎒	QPSK	1	0	12.89	0	0
		1	49	12.73	0	0
		1	99	12.71	0	0
		50	0	12.96	0-1	0
		50	25	12.94	0-1	0
		50	49	12.87	0-1	0
		100	0	12.92	0-1	0
	16QAM	1	0	13.29	0-1	0
		1	49	13.11	0-1	0
		1	99	13.08	0-1	0
		50	0	12.98	0-2	0
		50	25	12.98	0-2	0
		50	49	12.87	0-2	0
		100	0	12.88	0-2	0
	64QAM	1	0	13.10	0-2	0
		1	49	12.97	0-2	0
		1	99	12.97	0-2	0
		50	0	12.96	0-3	0
		50	25	12.95	0-3	0
		50	49	12.85	0-3	0
		100	0	12.89	0-3	0

Note: LTE Band 4 (AWS) at 20 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE Band 5 Conducted Power]

LTE Band 5 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	18.05	18.04	17.99	0	0
		1	3	18.07	18.11	18.11	0	0
		1	5	18.09	18.11	18.05	0	0
		3	0	17.83	18.02	18.03	0	0
		3	1	17.85	18.13	18.02	0	0
		3	3	17.90	18.09	18.03	0	0
		6	0	17.93	18.19	18.13	0-1	0
	16QAM	1	0	18.05	18.20	18.16	0-1	0
		1	3	18.16	18.34	18.36	0-1	0
		1	5	18.18	18.29	18.24	0-1	0
		3	0	17.96	18.12	18.04	0-1	0
		3	1	18.02	18.13	18.09	0-1	0
		3	3	17.98	18.12	18.07	0-1	0
		6	0	18.03	18.28	18.16	0-2	0
	64QAM	1	0	18.12	18.18	18.22	0-2	0
		1	3	18.15	18.33	18.20	0-2	0
		1	5	18.18	18.31	18.21	0-2	0
		3	0	18.07	18.27	18.15	0-2	0
		3	1	18.12	18.25	18.24	0-2	0
		3	3	18.07	18.32	18.17	0-2	0
		6	0	17.96	18.22	18.15	0-3	0

LTE Band 5 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	17.83	18.03	17.96	0	0
		1	7	17.91	18.07	18.04	0	0
		1	14	18.00	18.14	18.14	0	0
		8	0	17.94	18.19	18.13	0-1	0
		8	3	18.07	18.23	18.23	0-1	0
		8	7	18.10	18.27	18.25	0-1	0
		15	0	18.04	18.27	18.22	0-1	0
	16QAM	1	0	18.04	18.28	18.22	0-1	0
		1	7	18.17	18.41	18.35	0-1	0
		1	14	18.32	18.34	18.35	0-1	0
		8	0	18.03	18.21	18.18	0-2	0
		8	3	18.12	18.27	18.25	0-2	0
		8	7	18.14	18.30	18.26	0-2	0
		15	0	18.05	18.27	18.20	0-2	0
	64QAM	1	0	18.07	18.27	18.25	0-2	0
		1	7	18.08	18.33	18.36	0-2	0
		1	14	18.17	18.45	18.30	0-2	0
		8	0	18.05	18.31	18.18	0-3	0
		8	3	18.14	18.32	18.36	0-3	0
		8	7	18.10	18.29	18.33	0-3	0
		15	0	18.12	18.26	18.28	0-3	0

LTE Band 5 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	17.99	18.20	18.19	0	0
		1	12	18.07	18.25	18.21	0	0
		1	24	18.09	18.24	18.16	0	0
		12	0	18.12	18.30	18.25	0-1	0
		12	6	18.21	18.32	18.36	0-1	0
		12	11	18.23	18.45	18.38	0-1	0
		25	0	18.18	18.44	18.30	0-1	0
	16QAM	1	0	18.12	18.46	18.38	0-1	0
		1	12	18.18	18.53	18.48	0-1	0
		1	24	18.33	18.50	18.54	0-1	0
		12	0	18.13	18.30	18.25	0-2	0
		12	6	18.28	18.33	18.33	0-2	0
		12	11	18.25	18.42	18.38	0-2	0
		25	0	18.22	18.33	18.30	0-2	0
	64QAM	1	0	18.16	18.44	18.37	0-2	0
		1	12	18.39	18.52	18.48	0-2	0
		1	24	18.40	18.45	18.47	0-2	0
		12	0	18.15	18.39	18.38	0-3	0
		12	6	18.31	18.47	18.41	0-3	0
		12	11	18.28	18.50	18.45	0-3	0
		25	0	18.23	18.39	18.38	0-3	0

LTE Band 5 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20525 Ch. 836.5 ㎒		
10 ㎒	QPSK	1	0	18.20	0	0
		1	24	18.00	0	0
		1	49	18.10	0	0
		25	0	18.20	0-1	0
		25	12	18.27	0-1	0
		25	24	18.23	0-1	0
		50	0	18.24	0-1	0
	16QAM	1	0	18.47	0-1	0
		1	24	18.33	0-1	0
		1	49	18.33	0-1	0
		25	0	18.27	0-2	0
		25	12	18.28	0-2	0
		25	24	18.20	0-2	0
		50	0	18.25	0-2	0
	64QAM	1	0	18.53	0-2	0
		1	24	18.43	0-2	0
		1	49	18.30	0-2	0
		25	0	18.30	0-3	0
		25	12	18.31	0-3	0
		25	24	18.25	0-3	0
		50	0	18.33	0-3	0

Note: LTE Band 5 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE Band 7 Conducted Power]
LTE Band 7_ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20775 Ch. 2502.5 ㎒	21100 Ch. 2535 ㎒	21425 Ch. 2567.5 ㎒		
5 ㎒	QPSK	1	0	12.05	12.11	12.25	0	0
		1	12	12.08	12.15	12.22	0	0
		1	24	11.97	12.05	12.23	0	0
		12	0	12.15	12.24	12.38	0-1	0
		12	6	12.19	12.22	12.34	0-1	0
		12	11	12.13	12.20	12.33	0-1	0
		25	0	12.18	12.18	12.33	0-1	0
	16QAM	1	0	12.41	12.48	12.62	0-1	0
		1	12	12.56	12.46	12.53	0-1	0
		1	24	12.36	12.38	12.60	0-1	0
		12	0	12.21	12.25	12.42	0-2	0
		12	6	12.26	12.24	12.39	0-2	0
		12	11	12.20	12.22	12.33	0-2	0
		25	0	12.23	12.24	12.37	0-2	0
	64QAM	1	0	12.42	12.37	12.57	0-2	0
		1	12	12.35	12.41	12.55	0-2	0
		1	24	12.30	12.29	12.54	0-2	0
		12	0	12.23	12.23	12.39	0-3	0
		12	6	12.26	12.28	12.37	0-3	0
		12	11	12.21	12.23	12.32	0-3	0
		25	0	12.19	12.19	12.32	0-3	0

LTE Band 7_ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20800 Ch. 2505 ㎒	21100 Ch. 2535 ㎒	21400 Ch. 2565 ㎒		
10 ㎒	QPSK	1	0	11.97	12.08	12.30	0	0
		1	24	12.15	11.96	12.28	0	0
		1	49	12.06	12.16	12.19	0	0
		25	0	12.10	12.23	12.35	0-1	0
		25	12	12.15	12.22	12.36	0-1	0
		25	24	12.15	12.23	12.29	0-1	0
		50	0	12.16	12.24	12.33	0-1	0
	16QAM	1	0	12.41	12.50	12.68	0-1	0
		1	24	12.43	12.38	12.67	0-1	0
		1	49	12.52	12.47	12.58	0-1	0
		25	0	12.20	12.26	12.39	0-2	0
		25	12	12.19	12.27	12.38	0-2	0
		25	24	12.18	12.23	12.34	0-2	0
		50	0	12.23	12.26	12.33	0-2	0
	64QAM	1	0	12.26	12.45	12.59	0-2	0
		1	24	12.48	12.34	12.54	0-2	0
		1	49	12.38	12.45	12.45	0-2	0
		25	0	12.17	12.26	12.37	0-3	0
		25	12	12.20	12.27	12.37	0-3	0
		25	24	12.22	12.25	12.36	0-3	0
		50	0	12.17	12.24	12.34	0-3	0

LTE Band 7 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20825 Ch. 2507.5 ㎒	*21100 Ch. 2535 ㎒*	*21375 Ch. 2562.5 ㎒*		
15 ㎒	QPSK	1	0	12.25	12.34	12.42	0	0
		1	36	12.11	12.13	12.31	0	0
		1	74	12.16	12.25	12.30	0	0
		36	0	12.27	12.32	12.49	0-1	0
		36	18	12.34	12.39	12.48	0-1	0
		36	39	12.30	12.37	12.46	0-1	0
		75	0	12.29	12.35	12.46	0-1	0
	16QAM	1	0	12.66	12.65	12.88	0-1	0
		1	36	12.63	12.47	12.67	0-1	0
		1	74	12.60	12.52	12.71	0-1	0
		36	0	12.29	12.38	12.52	0-2	0
		36	18	12.37	12.41	12.57	0-2	0
		36	39	12.28	12.41	12.52	0-2	0
		75	0	12.35	12.35	12.53	0-2	0
	64QAM	1	0	12.51	12.54	12.68	0-2	0
		1	36	12.57	12.59	12.72	0-2	0
		1	74	12.55	12.45	12.54	0-2	0
		36	0	12.36	12.38	12.53	0-3	0
		36	18	12.34	12.41	12.49	0-3	0
		36	39	12.30	12.42	12.47	0-3	0
		75	0	12.32	12.35	12.51	0-3	0

LTE Band 7 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 ㎒	21100 Ch. 2535 ㎒	21350 Ch. 2560 ㎒		
20 ㎒	QPSK	1	0	12.23	12.31	12.48	0	0
		1	49	12.21	12.22	12.35	0	0
		1	99	12.11	12.23	12.25	0	0
		50	0	12.26	12.41	12.42	0-1	0
		50	25	12.33	12.42	12.52	0-1	0
		50	49	12.28	12.39	12.50	0-1	0
		100	0	12.28	12.38	12.48	0-1	0
	16QAM	1	0	12.57	12.68	12.69	0-1	0
		1	49	12.53	12.55	12.79	0-1	0
		1	99	12.55	12.55	12.70	0-1	0
		50	0	12.34	12.39	12.49	0-2	0
		50	25	12.37	12.43	12.52	0-2	0
		50	49	12.37	12.43	12.53	0-2	0
		100	0	12.32	12.39	12.52	0-2	0
	64QAM	1	0	12.55	12.63	12.73	0-2	0
		1	49	12.50	12.49	12.69	0-2	0
		1	99	12.53	12.43	12.62	0-2	0
		50	0	12.35	12.41	12.50	0-3	0
		50	25	12.39	12.39	12.55	0-3	0
		50	49	12.30	12.42	12.54	0-3	0
		100	0	12.36	12.37	12.43	0-3	0

[LTE Band 12 Conducted Power]

LTE Band 12 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	18.04	17.94	17.95	0	0
		1	3	18.08	18.09	18.08	0	0
		1	5	18.00	17.98	17.97	0	0
		3	0	18.02	18.02	17.93	0	0
		3	1	18.10	18.06	18.04	0	0
		3	3	18.03	17.97	18.06	0	0
		6	0	18.17	18.05	18.07	0-1	0
	16QAM	1	0	18.27	18.27	18.09	0-1	0
		1	3	18.43	18.33	18.15	0-1	0
		1	5	18.19	18.24	18.32	0-1	0
		3	0	18.15	18.15	18.04	0-1	0
		3	1	18.14	18.09	18.08	0-1	0
		3	3	18.06	18.10	18.09	0-1	0
		6	0	18.25	18.23	18.18	0-2	0
	64QAM	1	0	18.27	18.22	18.18	0-2	0
		1	3	18.31	18.27	18.22	0-2	0
		1	5	18.30	18.22	18.35	0-2	0
		3	0	18.31	18.23	18.21	0-2	0
		3	1	18.36	18.24	18.18	0-2	0
		3	3	18.22	18.19	18.17	0-2	0
		6	0	18.15	18.12	18.08	0-3	0

LTE Band 12 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	18.00	18.01	17.99	0	0
		1	7	18.08	18.06	18.04	0	0
		1	14	18.05	17.99	18.00	0	0
		8	0	18.15	18.09	18.09	0-1	0
		8	3	18.22	18.18	18.12	0-1	0
		8	7	18.21	18.18	18.15	0-1	0
		15	0	18.25	18.16	18.13	0-1	0
	16QAM	1	0	18.36	18.18	18.27	0-1	0
		1	7	18.42	18.38	18.30	0-1	0
		1	14	18.33	18.31	18.35	0-1	0
		8	0	18.22	18.21	18.18	0-2	0
		8	3	18.26	18.27	18.19	0-2	0
		8	7	18.20	18.21	18.18	0-2	0
		15	0	18.23	18.20	18.16	0-2	0
	64QAM	1	0	18.25	18.32	18.24	0-2	0
		1	7	18.33	18.37	18.25	0-2	0
		1	14	18.28	18.25	18.29	0-2	0
		8	0	18.29	18.18	18.15	0-3	0
		8	3	18.32	18.27	18.22	0-3	0
		8	7	18.22	18.25	18.19	0-3	0
		15	0	18.30	18.20	18.18	0-3	0

LTE Band 12 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	18.01	18.01	18.05	0	0
		1	12	18.05	18.05	18.04	0	0
		1	24	18.04	18.01	18.01	0	0
		12	0	18.16	18.12	18.09	0-1	0
		12	6	18.23	18.21	18.22	0-1	0
		12	11	18.19	18.19	18.19	0-1	0
		25	0	18.18	18.16	18.17	0-1	0
	16QAM	1	0	18.36	18.30	18.36	0-1	0
		1	12	18.30	18.30	18.34	0-1	0
		1	24	18.28	18.35	18.24	0-1	0
		12	0	18.14	18.18	18.12	0-2	0
		12	6	18.23	18.27	18.14	0-2	0
		12	11	18.25	18.24	18.17	0-2	0
		25	0	18.26	18.20	18.15	0-2	0
	64QAM	1	0	18.32	18.28	18.30	0-2	0
		1	12	18.38	18.20	18.32	0-2	0
		1	24	18.29	18.19	18.20	0-2	0
		12	0	18.26	18.22	18.19	0-3	0
		12	6	18.34	18.27	18.27	0-3	0
		12	11	18.25	18.25	18.26	0-3	0
		25	0	18.23	18.24	18.21	0-3	0

LTE Band 12 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23095 Ch. 707.5 ㎒		
10 ㎒	QPSK	1	0	18.10	0	0
		1	24	18.05	0	0
		1	49	17.98	0	0
		25	0	18.18	0-1	0
		25	12	18.20	0-1	0
		25	24	18.13	0-1	0
		50	0	18.16	0-1	0
	16QAM	1	0	18.38	0-1	0
		1	24	18.07	0-1	0
		1	49	18.32	0-1	0
		25	0	18.25	0-2	0
		25	12	18.21	0-2	0
		25	24	18.12	0-2	0
		50	0	18.19	0-2	0
	64QAM	1	0	18.23	0-2	0
		1	24	18.11	0-2	0
		1	49	18.39	0-2	0
		25	0	18.27	0-3	0
		25	12	18.23	0-3	0
		25	24	18.17	0-3	0
		50	0	18.24	0-3	0

Note: LTE Band 12 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE Band 13 Conducted Power]

LTE Band 13 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
5 ㎒	QPSK	1	0	17.76	0	0
		1	12	17.77	0	0
		1	24	17.75	0	0
		12	0	17.87	0-1	0
		12	6	17.96	0-1	0
		12	11	17.91	0-1	0
		25	0	17.90	0-1	0
	16QAM	1	0	18.08	0-1	0
		1	12	18.05	0-1	0
		1	24	18.14	0-1	0
		12	0	17.94	0-2	0
		12	6	17.98	0-2	0
		12	11	17.94	0-2	0
		25	0	18.00	0-2	0
	64QAM	1	0	17.95	0-2	0
		1	12	18.14	0-2	0
		1	24	18.04	0-2	0
		12	0	18.01	0-3	0
		12	6	18.05	0-3	0
		12	11	18.01	0-3	0
		25	0	17.98	0-3	0

LTE Band 13 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	17.89	0	0
		1	24	17.88	0	0
		1	49	17.76	0	0
		25	0	17.92	0-1	0
		25	12	17.93	0-1	0
		25	24	17.91	0-1	0
		50	0	17.92	0-1	0
	16QAM	1	0	18.11	0-1	0
		1	24	18.07	0-1	0
		1	49	17.93	0-1	0
		25	0	17.97	0-2	0
		25	12	17.94	0-2	0
		25	24	17.93	0-2	0
		50	0	17.96	0-2	0
	64QAM	1	0	18.17	0-2	0
		1	24	18.06	0-2	0
		1	49	17.97	0-2	0
		25	0	18.00	0-3	0
		25	12	18.02	0-3	0
		25	24	17.93	0-3	0
		50	0	17.97	0-3	0

Note: LTE Band 13 at 5 ㎒/ 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE Band 14 Conducted Power]

LTE Band 14 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23305 Ch. 790.5 ㎒	23330 Ch. 793 ㎒	23355 Ch. 795.5 ㎒		
5 ㎒	QPSK	1	0	17.76	17.73	17.71	0	0
		1	12	17.78	17.80	17.79	0	0
		1	24	17.80	17.80	17.76	0	0
		12	0	17.89	17.90	17.85	0-1	0
		12	6	17.98	17.95	17.90	0-1	0
		12	11	17.94	17.94	17.88	0-1	0
		25	0	17.95	17.95	17.83	0-1	0
	16QAM	1	0	18.01	18.01	17.92	0-1	0
		1	12	18.05	18.01	18.04	0-1	0
		1	24	18.07	18.06	18.07	0-1	0
		12	0	17.89	17.89	17.82	0-2	0
		12	6	18.02	17.93	17.90	0-2	0
		12	11	17.95	17.92	17.93	0-2	0
		25	0	17.93	17.91	17.83	0-2	0
	64QAM	1	0	17.99	18.06	17.96	0-2	0
		1	12	18.07	18.06	18.04	0-2	0
		1	24	17.97	17.96	18.06	0-2	0
		12	0	17.94	17.90	17.88	0-3	0
		12	6	18.02	17.99	17.92	0-3	0
		12	11	18.01	17.97	18.00	0-3	0
		25	0	17.95	17.97	17.85	0-3	0

LTE Band 14 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23330 Ch. 793 ㎒		
10 ㎒	QPSK	1	0	17.86	0	0
		1	24	17.59	0	0
		1	49	17.71	0	0
		25	0	17.93	0-1	0
		25	12	17.90	0-1	0
		25	24	17.81	0-1	0
		50	0	17.85	0-1	0
	16QAM	1	0	18.17	0-1	0
		1	24	18.07	0-1	0
		1	49	17.85	0-1	0
		25	0	17.90	0-2	0
		25	12	17.90	0-2	0
		25	24	17.82	0-2	0
		50	0	17.86	0-2	0
	64QAM	1	0	18.22	0-2	0
		1	24	17.86	0-2	0
		1	49	17.82	0-2	0
		25	0	17.91	0-3	0
		25	12	17.92	0-3	0
		25	24	17.82	0-3	0
		50	0	17.91	0-3	0

Note: LTE Band 14 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE Band 25 Conducted Power]

LTE Band 25 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	12.62	12.59	12.61	0	0
		1	3	12.68	12.62	12.65	0	0
		1	5	12.61	12.56	12.60	0	0
		3	0	12.61	12.57	12.61	0	0
		3	1	12.68	12.59	12.61	0	0
		3	3	12.61	12.58	12.58	0	0
		6	0	12.74	12.62	12.67	0-1	0
	16QAM	1	0	13.03	12.93	12.97	0-1	0
		1	3	12.89	12.83	13.03	0-1	0
		1	5	12.99	12.87	12.91	0-1	0
		3	0	12.70	12.61	12.70	0-1	0
		3	1	12.82	12.74	12.77	0-1	0
		3	3	12.74	12.67	12.70	0-1	0
		6	0	12.79	12.73	12.78	0-2	0
	64QAM	1	0	12.82	12.85	12.79	0-2	0
		1	3	12.89	12.92	12.87	0-2	0
		1	5	12.74	12.77	12.79	0-2	0
		3	0	12.81	12.74	12.76	0-2	0
		3	1	12.82	12.82	12.82	0-2	0
		3	3	12.81	12.69	12.77	0-2	0
		6	0	12.67	12.66	12.70	0-3	0

LTE Band 25 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 ㎒	26365 Ch. 1882.5 ㎒	26675Ch. 1913.5 ㎒		
3 ㎒	QPSK	1	0	12.69	12.54	12.48	0	0
		1	7	12.63	12.58	12.56	0	0
		1	14	12.64	12.58	12.55	0	0
		8	0	12.79	12.66	12.59	0-1	0
		8	3	12.84	12.70	12.67	0-1	0
		8	7	12.79	12.70	12.64	0-1	0
		15	0	12.80	12.72	12.60	0-1	0
	16QAM	1	0	12.91	12.80	12.77	0-1	0
		1	7	12.97	12.92	12.94	0-1	0
		1	14	12.95	12.86	12.82	0-1	0
		8	0	12.84	12.73	12.65	0-2	0
		8	3	12.85	12.71	12.64	0-2	0
		8	7	12.78	12.78	12.75	0-2	0
		15	0	12.75	12.75	12.61	0-2	0
	64QAM	1	0	12.82	12.77	12.70	0-2	0
		1	7	12.82	12.81	12.83	0-2	0
		1	14	12.81	12.77	12.76	0-2	0
		8	0	12.86	12.71	12.66	0-3	0
		8	3	12.84	12.71	12.65	0-3	0
		8	7	12.80	12.74	12.68	0-3	0
		15	0	12.76	12.78	12.60	0-3	0

LTE Band 25 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	12.67	12.55	12.48	0	0
		1	12	12.66	12.62	12.57	0	0
		1	24	12.58	12.64	12.55	0	0
		12	0	12.84	12.73	12.63	0-1	0
		12	6	12.84	12.71	12.63	0-1	0
		12	11	12.82	12.75	12.67	0-1	0
		25	0	12.79	12.67	12.59	0-1	0
	16QAM	1	0	12.93	12.91	12.86	0-1	0
		1	12	13.08	13.04	12.89	0-1	0
		1	24	13.00	12.95	12.83	0-1	0
		12	0	12.80	12.68	12.60	0-2	0
		12	6	12.75	12.71	12.63	0-2	0
		12	11	12.74	12.69	12.66	0-2	0
		25	0	12.81	12.66	12.62	0-2	0
	64QAM	1	0	12.84	12.80	12.74	0-2	0
		1	12	12.90	12.83	12.73	0-2	0
		1	24	12.93	12.84	12.72	0-2	0
		12	0	12.82	12.68	12.60	0-3	0
		12	6	12.85	12.75	12.70	0-3	0
		12	11	12.80	12.73	12.71	0-3	0
		25	0	12.77	12.68	12.59	0-3	0

LTE Band 25 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 ㎒	26365 Ch. 1882.5 ㎒	26640 Ch. 1910 ㎒		
10 ㎒	QPSK	1	0	12.66	12.63	12.52	0	0
		1	24	12.68	12.47	12.50	0	0
		1	49	12.53	12.58	12.49	0	0
		25	0	12.78	12.72	12.66	0-1	0
		25	12	12.75	12.71	12.64	0-1	0
		25	24	12.72	12.69	12.63	0-1	0
		50	0	12.74	12.69	12.65	0-1	0
	16QAM	1	0	13.05	12.90	12.73	0-1	0
		1	24	12.99	12.93	12.85	0-1	0
		1	49	12.92	12.89	12.91	0-1	0
		25	0	12.72	12.71	12.65	0-2	0
		25	12	12.73	12.70	12.61	0-2	0
		25	24	12.66	12.64	12.58	0-2	0
		50	0	12.72	12.71	12.64	0-2	0
	64QAM	1	0	12.87	12.90	12.73	0-2	0
		1	24	12.74	12.79	12.78	0-2	0
		1	49	12.87	12.71	12.67	0-2	0
		25	0	12.71	12.76	12.68	0-3	0
		25	12	12.73	12.74	12.64	0-3	0
		25	24	12.72	12.68	12.65	0-3	0
		50	0	12.74	12.70	12.67	0-3	0

LTE Band 25 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 ㎒	26365 Ch. 1882.5 ㎒	26615 Ch. 1907.5 ㎒		
15 ㎒	QPSK	1	0	12.75	12.83	12.76	0	0
		1	36	12.79	12.82	12.66	0	0
		1	74	12.65	12.68	12.68	0	0
		36	0	12.86	12.93	12.85	0-1	0
		36	18	12.84	12.90	12.81	0-1	0
		36	39	12.81	12.83	12.82	0-1	0
		75	0	12.85	12.87	12.79	0-1	0
	16QAM	1	0	13.11	13.03	13.09	0-1	0
		1	36	13.12	13.11	13.07	0-1	0
		1	74	12.91	12.96	13.00	0-1	0
		36	0	12.86	12.90	12.81	0-2	0
		36	18	12.84	12.84	12.80	0-2	0
		36	39	12.77	12.85	12.77	0-2	0
		75	0	12.82	12.85	12.80	0-2	0
	64QAM	1	0	12.96	13.01	12.95	0-2	0
		1	36	12.89	13.03	12.85	0-2	0
		1	74	12.75	12.85	12.79	0-2	0
		36	0	12.89	12.93	12.88	0-3	0
		36	18	12.87	12.89	12.81	0-3	0
		36	39	12.80	12.83	12.77	0-3	0
		75	0	12.86	12.89	12.84	0-3	0

LTE Band 25 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	12.78	12.74	12.80	0	0
		1	49	12.62	12.74	12.67	0	0
		1	99	12.71	12.64	12.56	0	0
		50	0	12.84	12.90	12.89	0-1	0
		50	25	12.79	12.93	12.85	0-1	0
		50	49	12.76	12.85	12.82	0-1	0
		100	0	12.80	12.89	12.84	0-1	0
	16QAM	1	0	13.14	13.09	13.15	0-1	0
		1	49	12.93	13.09	12.97	0-1	0
		1	99	13.09	13.05	12.96	0-1	0
		50	0	12.86	12.92	12.88	0-2	0
		50	25	12.81	12.91	12.82	0-2	0
		50	49	12.77	12.82	12.76	0-2	0
		100	0	12.82	12.82	12.80	0-2	0
	64QAM	1	0	12.96	12.84	12.91	0-2	0
		1	49	12.87	12.96	13.00	0-2	0
		1	99	12.87	12.82	12.75	0-2	0
		50	0	12.91	12.91	12.89	0-3	0
		50	25	12.81	12.93	12.84	0-3	0
		50	49	12.76	12.80	12.80	0-3	0
		100	0	12.88	12.82	12.82	0-3	0

[LTE Band 26 Conducted Power]

LTE Band 26 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	17.74	17.85	17.74	0	0
		1	3	17.77	17.95	17.83	0	0
		1	5	17.69	17.90	17.7	0	0
		3	0	17.73	17.84	17.78	0	0
		3	1	17.78	17.90	17.81	0	0
		3	3	17.75	17.85	17.8	0	0
		6	0	17.81	18.01	17.86	0-1	0
	16QAM	1	0	17.88	17.59	18.03	0-1	0
		1	3	17.93	18.02	18.04	0-1	0
		1	5	17.93	18.12	17.99	0-1	0
		3	0	17.80	17.92	17.83	0-1	0
		3	1	17.81	17.90	17.82	0-1	0
		3	3	17.75	17.86	17.82	0-1	0
		6	0	17.91	18.10	17.93	0-2	0
	64QAM	1	0	17.88	18.08	18.06	0-2	0
		1	3	17.97	18.09	17.99	0-2	0
		1	5	17.91	18.10	17.93	0-2	0
		3	0	17.95	18.01	17.99	0-2	0
		3	1	17.98	18.09	17.97	0-2	0
		3	3	17.87	18.09	17.92	0-2	0
		6	0	17.87	18.03	17.91	0-3	0

LTE Band 26 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	17.72	17.91	17.89	0	0
		1	7	17.72	17.90	17.82	0	0
		1	14	17.77	17.94	17.8	0	0
		8	0	17.89	18.00	17.93	0-1	0
		8	3	17.96	18.03	17.98	0-1	0
		8	7	17.79	18.02	17.95	0-1	0
		15	0	17.95	18.02	17.92	0-1	0
	16QAM	1	0	17.94	18.04	18.08	0-1	0
		1	7	18.03	18.14	18.05	0-1	0
		1	14	17.91	18.21	18.06	0-1	0
		8	0	17.83	18.03	17.97	0-2	0
		8	3	17.92	18.10	18.06	0-2	0
		8	7	17.92	18.04	17.95	0-2	0
		15	0	17.88	18.01	17.92	0-2	0
	64QAM	1	0	17.89	18.05	17.98	0-2	0
		1	7	18.05	18.13	18.06	0-2	0
		1	14	18.06	18.14	18.06	0-2	0
		8	0	18.05	18.05	18.03	0-3	0
		8	3	18.04	18.07	18.09	0-3	0
		8	7	17.94	18.05	18	0-3	0
		15	0	17.97	17.99	17.98	0-3	0

LTE Band 26 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	17.70	17.88	17.8	0	0
		1	12	17.83	17.94	17.87	0	0
		1	24	17.83	17.91	17.76	0	0
		12	0	17.83	17.97	17.92	0-1	0
		12	6	17.92	18.05	18	0-1	0
		12	11	17.91	18.03	17.95	0-1	0
		25	0	17.90	17.99	17.9	0-1	0
	16QAM	1	0	17.99	18.10	18.05	0-1	0
		1	12	18.02	18.14	18.04	0-1	0
		1	24	17.99	18.13	18	0-1	0
		12	0	17.82	17.99	17.9	0-2	0
		12	6	17.95	18.00	17.92	0-2	0
		12	11	17.84	17.99	17.88	0-2	0
		25	0	17.88	17.98	17.87	0-2	0
	64QAM	1	0	17.93	18.11	17.99	0-2	0
		1	12	17.98	18.09	18.03	0-2	0
		1	24	17.97	18.08	18.05	0-2	0
		12	0	17.91	18.05	18.03	0-3	0
		12	6	18.00	18.03	18.07	0-3	0
		12	11	17.98	18.03	18	0-3	0
		25	0	17.94	18.03	17.98	0-3	0

LTE Band 26 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26740 Ch. 819 ㎒	26865 Ch. 831.5 ㎒	26990 Ch. 844 ㎒		
10 ㎒	QPSK	1	0	17.91	17.91	17.88	0	0
		1	24	17.81	17.90	17.85	0	0
		1	49	17.88	17.94	17.73	0	0
		25	0	17.97	18.07	17.97	0-1	0
		25	12	17.96	18.05	17.99	0-1	0
		25	24	17.92	18.01	17.98	0-1	0
		50	0	17.94	18.03	17.97	0-1	0
	16QAM	1	0	18.15	18.24	18.1	0-1	0
		1	24	18.18	18.23	18.07	0-1	0
		1	49	18.20	18.22	18.01	0-1	0
		25	0	17.93	18.07	17.96	0-2	0
		25	12	17.95	18.05	17.96	0-2	0
		25	24	17.95	17.96	17.95	0-2	0
		50	0	17.91	18.04	17.96	0-2	0
	64QAM	1	0	18.18	18.20	18.12	0-2	0
		1	24	18.08	18.02	18.06	0-2	0
		1	49	18.06	18.06	18.07	0-2	0
		25	0	18.04	18.07	18.07	0-3	0
		25	12	17.99	18.08	18.07	0-3	0
		25	24	18.00	18.04	18.01	0-3	0
		50	0	17.99	18.07	18.02	0-3	0

LTE Band 26 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26765 Ch. 821.5 ㎒	**26865 Ch. 831.5 ㎒**	26965 Ch. 841.5 ㎒		
15 ㎒	QPSK	1	0	17.97	18.04	18.01	0	0
		1	36	18.03	17.95	17.87	0	0
		1	74	17.95	17.95	17.81	0	0
		36	0	17.96	18.07	18.06	0-1	0
		36	18	18.07	18.11	18.05	0-1	0
		36	39	18.06	18.06	18.03	0-1	0
		75	0	18.01	18.10	18.07	0-1	0
	16QAM	1	0	18.20	18.22	18.07	0-1	0
		1	36	18.10	18.16	18.11	0-1	0
		1	74	18.16	18.07	18.02	0-1	0
		36	0	17.94	18.01	18.01	0-2	0
		36	18	18.06	18.12	18.04	0-2	0
		36	39	18.10	18.00	17.98	0-2	0
		75	0	18.02	18.09	18.03	0-2	0
	64QAM	1	0	18.38	18.15	18.14	0-2	0
		1	36	18.23	18.33	18.16	0-2	0
		1	74	18.20	18.15	18.2	0-2	0
		36	0	18.01	18.16	18.19	0-3	0
		36	18	18.14	18.23	18.13	0-3	0
		36	39	18.22	18.12	18.09	0-3	0
		75	0	18.06	18.16	18.07	0-3	0

[LTE Band 30 Conducted Power]

LTE Band 30 _ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				27685 Ch. 2307.5 MHz	27710 Ch. 2310 MHz	27735 Ch. 2312.5 MHz		
5 MHz	QPSK	1	0	12.75	12.74	12.82	0	0
		1	12	12.79	12.79	12.79	0	0
		1	24	12.79	12.78	12.78	0	0
		12	0	12.91	12.86	12.95	0-1	0
		12	6	12.93	12.87	12.94	0-1	0
		12	11	12.92	12.90	12.90	0-1	0
		25	0	12.92	12.83	12.93	0-1	0
	16QAM	1	0	13.04	13.12	13.08	0-1	0
		1	12	13.14	13.07	13.18	0-1	0
		1	24	13.18	13.05	13.12	0-1	0
		12	0	12.89	12.88	12.87	0-2	0
		12	6	12.95	12.90	12.89	0-2	0
		12	11	12.88	12.89	12.89	0-2	0
		25	0	12.90	12.82	12.93	0-2	0
	64QAM	1	0	13.00	12.96	13.06	0-2	0
		1	12	13.05	13.06	12.97	0-2	0
		1	24	13.00	13.02	12.94	0-2	0
		12	0	12.95	12.88	12.99	0-3	0
		12	6	12.99	12.93	12.99	0-3	0
		12	11	12.95	12.92	12.93	0-3	0
		25	0	12.94	12.84	12.91	0-3	0

LTE Band 30 _ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				27710 Ch. 2310 MHz		
10 MHz	QPSK	1	0	12.81	0	0
		1	24	12.77	0	0
		1	49	12.72	0	0
		25	0	12.90	0-1	0
		25	12	12.92	0-1	0
		25	24	12.87	0-1	0
		50	0	12.86	0-1	0
	16QAM	1	0	13.15	0-1	0
		1	24	13.08	0-1	0
		1	49	13.02	0-1	0
		25	0	12.90	0-2	0
		25	12	12.89	0-2	0
		25	24	12.86	0-2	0
		50	0	12.93	0-2	0
	64QAM	1	0	13.02	0-2	0
		1	24	13.04	0-2	0
		1	49	12.95	0-2	0
		25	0	12.89	0-3	0
		25	12	12.91	0-3	0
		25	24	12.84	0-3	0
		50	0	12.94	0-3	0

Note: LTE Band 14 at 10 MHz Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LT Band 38 Conducted Power]

LTE Band 38 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37775 Ch. 2572.5 ㎒	38000 Ch. 2595 ㎒	38225 Ch. 2617.5 ㎒		
5 ㎒	QPSK	1	0	13.28	13.39	13.47	0	0
		1	12	13.37	13.49	13.62	0	0
		1	24	13.32	13.43	13.58	0	0
		12	0	13.39	13.53	13.60	0-1	0
		12	6	13.51	13.61	13.68	0-1	0
		12	11	13.52	13.59	13.70	0-1	0
		25	0	13.50	13.55	13.64	0-1	0
	16QAM	1	0	13.43	13.53	13.68	0-1	0
		1	12	13.53	13.65	13.80	0-1	0
		1	24	13.52	13.61	13.76	0-1	0
		12	0	13.38	13.50	13.55	0-2	0
		12	6	13.48	13.61	13.63	0-2	0
		12	11	13.50	13.59	13.70	0-2	0
		25	0	13.51	13.60	13.63	0-2	0
	64QAM	1	0	13.07	13.14	13.31	0-2	0
		1	12	13.17	13.25	13.39	0-2	0
		1	24	13.15	13.21	13.38	0-2	0
		12	0	13.47	13.58	13.65	0-3	0
		12	6	13.59	13.65	13.71	0-3	0
		12	11	13.56	13.66	13.77	0-3	0
		25	0	13.55	13.62	13.68	0-3	0

LTE Band 38 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37800 Ch. 2575 ㎒	38000 Ch. 2595 ㎒	38200 Ch. 2615 ㎒		
10 ㎒	QPSK	1	0	13.34	13.52	13.58	0	0
		1	24	13.33	13.28	13.55	0	0
		1	49	13.29	13.32	13.35	0	0
		25	0	13.55	13.60	13.76	0-1	0
		25	12	13.50	13.56	13.68	0-1	0
		25	24	13.43	13.47	13.61	0-1	0
		50	0	13.52	13.57	13.69	0-1	0
	16QAM	1	0	13.56	13.68	13.73	0-1	0
		1	24	13.50	13.43	13.72	0-1	0
		1	49	13.41	13.47	13.54	0-1	0
		25	0	13.53	13.57	13.75	0-2	0
		25	12	13.48	13.55	13.68	0-2	0
		25	24	13.43	13.47	13.62	0-2	0
		50	0	13.51	13.59	13.72	0-2	0
	64QAM	1	0	13.17	13.18	13.42	0-2	0
		1	24	13.11	13.17	13.15	0-2	0
		1	49	13.06	13.06	13.20	0-2	0
		25	0	13.57	13.66	13.78	0-3	0
		25	12	13.55	13.61	13.74	0-3	0
		25	24	13.49	13.54	13.68	0-3	0
		50	0	13.51	13.62	13.75	0-3	0

LTE Band 38 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37825 Ch. 2507.5 ㎒	38000 Ch. 2595 ㎒	38175 Ch. 2612.5 ㎒		
15 ㎒	QPSK	1	0	13.57	13.62	13.72	0	0
		1	36	13.48	13.58	13.60	0	0
		1	74	13.44	13.44	13.57	0	0
		36	0	13.67	13.77	13.85	0-1	0
		36	18	13.68	13.71	13.85	0-1	0
		36	39	13.61	13.64	13.75	0-1	0
		75	0	13.67	13.75	13.81	0-1	0
	16QAM	1	0	13.68	13.76	13.88	0-1	0
		1	36	13.61	13.73	13.73	0-1	0
		1	74	13.56	13.61	13.72	0-1	0
		36	0	13.65	13.72	13.85	0-2	0
		36	18	13.60	13.65	13.79	0-2	0
		36	39	13.54	13.60	13.73	0-2	0
		75	0	13.65	13.71	13.81	0-2	0
	64QAM	1	0	13.26	13.31	13.49	0-2	0
		1	36	13.24	13.30	13.42	0-2	0
		1	74	13.21	13.23	13.31	0-2	0
		36	0	13.66	13.76	13.86	0-3	0
		36	18	13.65	13.70	13.81	0-3	0
		36	39	13.61	13.64	13.77	0-3	0
		75	0	13.67	13.72	13.83	0-3	0

LTE Band 38 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37850 Ch. 2580 ㎒	38000 Ch. 2595 ㎒	38150 Ch. 2610 ㎒		
20 ㎒	QPSK	1	0	13.54	13.60	13.73	0	0
		1	49	13.50	13.54	13.66	0	0
		1	99	13.40	13.44	13.52	0	0
		50	0	13.77	13.79	13.92	0-1	0
		50	25	13.68	13.75	13.85	0-1	0
		50	49	13.61	13.66	13.77	0-1	0
		100	0	13.70	13.76	13.86	0-1	0
	16QAM	1	0	13.71	13.77	13.87	0-1	0
		1	49	13.65	13.68	13.81	0-1	0
		1	99	13.58	13.57	13.70	0-1	0
		50	0	13.77	13.81	13.95	0-2	0
		50	25	13.70	13.73	13.87	0-2	0
		50	49	13.64	13.65	13.77	0-2	0
		100	0	13.73	13.72	13.86	0-2	0
	64QAM	1	0	13.30	13.35	13.49	0-2	0
		1	49	13.26	13.28	13.38	0-2	0
		1	99	13.18	13.18	13.28	0-2	0
		50	0	13.76	13.82	13.93	0-3	0
		50	25	13.70	13.77	13.86	0-3	0
		50	49	13.64	13.66	13.78	0-3	0
		100	0	13.68	13.73	13.86	0-3	0

[LTE Band 40 Low Side (MCC310) Conducted Power]
LTE Band 40 Low Side (MCC310) _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				38725 Ch. 2307.5 ㎒	38750 Ch. 2310 ㎒	38775 Ch. 2312.5 ㎒		
5 ㎒	QPSK	1	0	11.00	11.06	10.99	0	0
		1	12	11.00	11.04	10.98	0	0
		1	24	10.95	11.02	10.99	0	0
		12	0	10.10	10.14	10.13	0-1	0
		12	6	10.16	10.15	10.19	0-1	0
		12	11	10.10	10.14	10.14	0-1	0
		25	0	10.14	10.20	10.17	0-1	0
	16QAM	1	0	10.19	10.21	10.18	0-1	0
		1	12	10.20	10.19	10.19	0-1	0
		1	24	10.16	10.17	10.19	0-1	0
		12	0	9.08	9.13	9.07	0-2	0
		12	6	9.15	9.15	9.12	0-2	0
		12	11	9.08	9.13	9.13	0-2	0
		25	0	9.15	9.13	9.19	0-2	0
	64QAM	1	0	8.83	8.79	8.83	0-2	0
		1	12	8.82	8.78	8.81	0-2	0
		1	24	8.80	8.80	8.83	0-2	0
		12	0	8.13	8.22	8.17	0-3	0
		12	6	8.24	8.23	8.21	0-3	0
		12	11	8.16	8.21	8.21	0-3	0
		25	0	8.21	8.19	8.25	0-3	0

LTE Band 40 Low Side (MCC:310) _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				38750 Ch. 2310 ㎒		
10 ㎒	QPSK	1	0	10.92	0	0
		1	24	10.99	0	0
		1	49	10.89	0	0
		25	0	10.16	0-1	0
		25	12	10.14	0-1	0
		25	24	10.14	0-1	0
		50	0	10.15	0-1	0
	16QAM	1	0	10.12	0-1	0
		1	24	10.16	0-1	0
		1	49	10.08	0-1	0
		25	0	9.17	0-2	0
		25	12	9.14	0-2	0
		25	24	9.14	0-2	0
		50	0	9.19	0-2	0
	64QAM	1	0	8.73	0-2	0
		1	24	8.78	0-2	0
		1	49	8.74	0-2	0
		25	0	8.20	0-3	0
		25	12	8.21	0-3	0
		25	24	8.16	0-3	0
		50	0	10.92	0-3	0

[LTE Band 40 Upper Side (MCC310) Conducted Power]

LTE Band 40 Upper Side (MCC310) _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				39175 Ch. 2352.5 ㎒	39200 Ch. 2355 ㎒	39225 Ch. 2357.5 ㎒		
5 ㎒	QPSK	1	0	11.26	11.22	11.26	0	0
		1	12	11.22	11.20	11.16	0	0
		1	24	11.17	11.17	11.14	0	0
		12	0	10.26	10.31	10.32	0-1	0
		12	6	10.28	10.26	10.36	0-1	0
		12	11	10.29	10.22	10.29	0-1	0
		25	0	10.30	10.30	10.31	0-1	0
	16QAM	1	0	10.40	10.36	10.42	0-1	0
		1	12	10.35	10.38	10.31	0-1	0
		1	24	10.35	10.31	10.33	0-1	0
		12	0	9.24	9.29	9.33	0-2	0
		12	6	9.24	9.26	9.28	0-2	0
		12	11	9.27	9.20	9.27	0-2	0
		25	0	9.26	9.25	9.34	0-2	0
	64QAM	1	0	9.05	9.01	9.05	0-2	0
		1	12	9.00	8.96	8.99	0-2	0
		1	24	8.95	8.97	8.99	0-2	0
		12	0	8.34	8.32	8.39	0-3	0
		12	6	8.35	8.36	8.39	0-3	0
		12	11	8.38	8.30	8.36	0-3	0
		25	0	8.31	8.32	8.37	0-3	0

LTE Band 40 Upper Side (MCC:310) _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				39200 Ch. 2355 ㎒		
10 ㎒	QPSK	1	0	11.12	0	0
		1	24	11.18	0	0
		1	49	11.15	0	0
		25	0	10.35	0-1	0
		25	12	10.32	0-1	0
		25	24	10.31	0-1	0
		50	0	10.36	0-1	0
	16QAM	1	0	10.30	0-1	0
		1	24	10.35	0-1	0
		1	49	10.25	0-1	0
		25	0	9.34	0-2	0
		25	12	9.33	0-2	0
		25	24	9.29	0-2	0
		50	0	9.35	0-2	0
	64QAM	1	0	8.92	0-2	0
		1	24	8.96	0-2	0
		1	49	8.90	0-2	0
		25	0	8.40	0-3	0
		25	12	8.39	0-3	0
		25	24	8.37	0-3	0
		50	0	8.36	0-3	0

Note: LTE Band 40 at 10 ㎒ Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

[LTE Band 41 Conducted Power] - Power Class 3

LTE Band 41 _ 5 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [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	11.93	11.77	11.82	11.77	11.82	0	0
		1	12	11.93	11.91	11.88	11.82	11.85	0	0
		1	24	11.89	11.75	11.78	11.72	11.72	0	0
		12	0	12.01	11.94	11.90	11.88	11.96	0-1	0
		12	6	12.07	12.00	11.97	12.00	11.97	0-1	0
		12	11	12.03	11.97	11.94	11.95	11.95	0-1	0
		25	0	12.03	11.96	11.94	11.95	11.91	0-1	0
	16QAM	1	0	12.08	11.93	11.95	11.91	11.95	0-1	0
		1	12	12.14	12.03	12.05	11.99	11.98	0-1	0
		1	24	12.11	11.92	11.96	11.90	11.81	0-1	0
		12	0	12.03	11.93	11.91	11.87	11.88	0-2	0
		12	6	12.07	11.96	11.97	11.96	11.91	0-2	0
		12	11	11.99	11.90	11.92	11.86	11.85	0-2	0
		25	0	12.05	11.95	11.96	11.95	11.89	0-2	0
	64QAM	1	0	11.75	11.59	11.59	11.49	11.58	0-2	0
		1	12	11.72	11.68	11.70	11.62	11.59	0-2	0
		1	24	11.73	11.58	11.63	11.52	11.52	0-2	0
		12	0	12.12	12.08	12.03	11.96	12.04	0-3	0
		12	6	12.15	12.09	12.10	12.07	12.04	0-3	0
		12	11	12.12	12.07	12.07	11.99	11.98	0-3	0
		25	0	12.12	12.04	12.05	12.01	12.00	0-3	0

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced 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	11.91	11.89	11.81	11.78	11.85	0	0
		1	24	11.73	11.73	11.88	11.78	11.67	0	0
		1	49	11.81	11.80	11.73	11.66	11.73	0	0
		25	0	12.00	11.97	12.02	11.99	11.97	0-1	0
		25	12	12.02	11.97	11.98	11.99	11.99	0-1	0
		25	24	11.93	11.93	11.95	11.92	11.88	0-1	0
		50	0	11.98	12.01	11.98	11.99	11.97	0-1	0
	16QAM	1	0	12.12	12.05	11.98	11.95	12.04	0-1	0
		1	24	11.92	11.84	12.06	11.97	11.82	0-1	0
		1	49	11.99	11.92	11.85	11.76	11.87	0-1	0
		25	0	12.05	11.93	12.03	11.98	11.94	0-2	0
		25	12	12.04	11.99	12.00	11.93	11.95	0-2	0
		25	24	11.96	11.91	11.94	11.88	11.82	0-2	0
		50	0	12.05	12.02	12.02	11.96	11.97	0-2	0
	64QAM	1	0	11.70	11.70	11.61	11.62	11.61	0-2	0
		1	24	11.55	11.49	11.67	11.58	11.63	0-2	0
		1	49	11.65	11.54	11.53	11.41	11.45	0-2	0
		25	0	12.12	12.07	12.07	12.04	12.02	0-3	0
		25	12	12.09	12.04	12.10	12.03	12.02	0-3	0
		25	24	12.04	12.02	12.02	11.98	11.96	0-3	0
		50	0	12.03	12.04	12.05	11.96	11.99	0-3	0

LTE Band 41 _ 15 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	12.03	11.98	12.12	11.94	11.94	0	0
		1	36	11.94	11.88	11.89	11.90	11.83	0	0
		1	74	11.95	11.97	11.82	11.87	11.83	0	0
		36	0	12.16	12.13	12.24	12.09	12.13	0-1	0
		36	18	12.19	12.17	12.18	12.06	12.14	0-1	0
		36	39	12.10	12.18	12.06	12.05	12.05	0-1	0
		75	0	12.16	12.13	12.14	12.10	12.09	0-1	0
	16QAM	1	0	12.25	12.18	12.36	12.15	12.09	0-1	0
		1	36	12.15	12.05	12.11	12.09	11.99	0-1	0
		1	74	12.17	12.13	12.01	11.99	11.96	0-1	0
		36	0	12.12	12.09	12.23	12.03	12.05	0-2	0
		36	18	12.17	12.13	12.17	12.05	12.05	0-2	0
		36	39	12.12	12.17	12.02	12.03	11.95	0-2	0
		75	0	12.23	12.17	12.19	12.10	12.05	0-2	0
	64QAM	1	0	11.84	11.76	11.96	11.77	11.69	0-2	0
		1	36	11.82	11.77	11.80	11.71	11.70	0-2	0
		1	74	11.79	11.78	11.62	11.63	11.59	0-2	0
		36	0	12.16	12.14	12.26	12.08	12.13	0-3	0
		36	18	12.17	12.16	12.20	12.09	12.12	0-3	0
		36	39	12.17	12.17	12.11	12.09	12.02	0-3	0
		75	0	12.22	12.19	12.19	12.13	12.10	0-3	0

LTE Band 41 _ 20 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	12.04	11.94	12.32	11.98	11.99	0	0
		1	49	12.00	11.90	11.98	11.88	11.89	0	0
		1	99	11.95	11.89	11.76	11.77	11.68	0	0
		50	0	12.16	12.20	12.26	12.12	12.18	0-1	0
		50	25	12.15	12.19	12.20	12.11	12.15	0-1	0
		50	49	12.15	12.20	12.06	12.10	12.07	0-1	0
		100	0	12.18	12.20	12.17	12.15	12.11	0-1	0
	16QAM	1	0	12.28	12.05	12.33	12.20	12.12	0-1	0
		1	49	12.18	12.07	12.15	12.07	12.03	0-1	0
		1	99	12.12	12.08	11.95	11.98	11.82	0-1	0
		50	0	12.21	12.20	12.31	12.14	12.14	0-2	0
		50	25	12.22	12.22	12.23	12.15	12.12	0-2	0
		50	49	12.22	12.20	12.12	12.14	12.02	0-2	0
		100	0	12.23	12.19	12.20	12.14	12.10	0-2	0
	64QAM	1	0	11.83	11.79	11.94	11.83	11.77	0-2	0
		1	49	11.83	11.71	11.82	11.68	11.65	0-2	0
		1	99	11.73	11.72	11.54	11.62	11.50	0-2	0
		50	0	12.21	12.21	12.29	12.16	12.18	0-3	0
		50	25	12.20	12.19	12.21	12.15	12.12	0-3	0
		50	49	12.18	12.20	12.12	12.14	12.04	0-3	0
		100	0	12.18	12.17	12.22	12.15	12.11	0-3	0

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	Reduced Power [dBm]					MPR Allowed Per 3GPP [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	12.17	12.14	12.50	12.30	11.89	0	0
		1	12	12.15	12.24	12.60	12.35	11.93	0	0
		1	24	12.17	12.19	12.51	12.20	11.81	0	0
		12	0	12.31	12.34	12.71	12.44	12.07	0-1	0
		12	6	12.34	12.42	12.73	12.45	12.11	0-1	0
		12	11	12.29	12.39	12.76	12.43	12.06	0-1	0
		25	0	12.29	12.38	12.69	12.43	12.07	0-1	0
	16QAM	1	0	12.53	12.37	12.83	12.61	12.13	0-1	0
		1	12	12.50	12.47	12.91	12.61	12.14	0-1	0
		1	24	12.48	12.44	12.82	12.52	12.02	0-1	0
		12	0	12.36	12.34	12.81	12.46	12.08	0-2	0
		12	6	12.40	12.44	12.80	12.53	12.11	0-2	0
		12	11	12.37	12.41	12.83	12.44	12.06	0-2	0
		25	0	12.33	12.42	12.72	12.49	12.05	0-2	0
	64QAM	1	0	12.36	12.31	12.75	12.42	11.97	0-2	0
		1	12	12.36	12.41	12.85	12.44	12.00	0-2	0
		1	24	12.31	12.37	12.73	12.35	11.91	0-2	0
		12	0	12.40	12.49	12.85	12.57	12.20	0-3	0
		12	6	12.41	12.56	12.88	12.60	12.25	0-3	0
		12	11	12.37	12.58	12.91	12.57	12.19	0-3	0
		25	0	12.37	12.52	12.82	12.56	12.19	0-3	0

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced 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	12.08	12.28	12.61	12.37	11.95	0	0
		1	24	12.05	12.22	12.55	12.29	11.84	0	0
		1	49	12.01	12.17	12.47	12.19	11.76	0	0
		25	0	12.23	12.42	12.79	12.50	12.13	0-1	0
		25	12	12.22	12.43	12.78	12.46	12.11	0-1	0
		25	24	12.15	12.37	12.73	12.41	12.03	0-1	0
		50	0	12.19	12.44	12.78	12.47	12.15	0-1	0
	16QAM	1	0	12.40	12.47	12.94	12.65	12.20	0-1	0
		1	24	12.34	12.41	12.87	12.58	12.08	0-1	0
		1	49	12.28	12.40	12.80	12.49	12.00	0-1	0
		25	0	12.27	12.43	12.85	12.49	12.12	0-2	0
		25	12	12.26	12.40	12.82	12.49	12.10	0-2	0
		25	24	12.21	12.37	12.77	12.44	12.03	0-2	0
		50	0	12.26	12.45	12.84	12.50	12.15	0-2	0
	64QAM	1	0	12.21	12.43	12.83	12.52	12.09	0-2	0
		1	24	12.21	12.37	12.79	12.41	11.94	0-2	0
		1	49	12.16	12.34	12.73	12.33	11.87	0-2	0
		25	0	12.31	12.53	12.95	12.64	12.24	0-3	0
		25	12	12.31	12.52	12.91	12.59	12.20	0-3	0
		25	24	12.26	12.48	12.87	12.52	12.13	0-3	0
		50	0	12.25	12.48	12.83	12.50	12.14	0-3	0

LTE Band 41 _ 15 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39725 Ch. 2503.5 ㎒	40173 Ch. 2548.3 ㎒	40620 Ch. 2593.0 ㎒	41068 Ch. 2637.8 ㎒	41515 Ch. 2682.5 ㎒		
15 ㎒	QPSK	1	0	12.22	12.36	12.84	12.46	12.11	0	0
		1	36	12.26	12.35	12.76	12.45	12.04	0	0
		1	74	12.17	12.38	12.56	12.36	11.93	0	0
		36	0	12.34	12.55	12.99	12.61	12.29	0-1	0
		36	18	12.36	12.59	12.96	12.62	12.26	0-1	0
		36	39	12.33	12.63	12.86	12.59	12.13	0-1	0
		75	0	12.33	12.60	12.94	12.59	12.21	0-1	0
	16QAM	1	0	12.56	12.58	12.86	12.79	12.39	0-1	0
		1	36	12.53	12.58	12.84	12.72	12.24	0-1	0
		1	74	12.38	12.67	12.87	12.64	12.09	0-1	0
		36	0	12.33	12.50	12.95	12.58	12.24	0-2	0
		36	18	12.34	12.55	12.94	12.59	12.21	0-2	0
		36	39	12.33	12.57	12.86	12.59	12.10	0-2	0
		75	0	12.35	12.56	12.95	12.62	12.22	0-2	0
	64QAM	1	0	12.38	12.51	12.92	12.66	12.21	0-2	0
		1	36	12.37	12.57	12.89	12.55	12.19	0-2	0
		1	74	12.29	12.55	12.78	12.54	11.99	0-2	0
		36	0	12.34	12.61	12.89	12.66	12.34	0-3	0
		36	18	12.37	12.68	12.88	12.64	12.31	0-3	0
		36	39	12.35	12.67	12.92	12.67	12.19	0-3	0
		75	0	12.36	12.69	12.79	12.66	12.27	0-3	0

LTE Band 41 _ 20 ㎒ Bandwidth - Power Class 2

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	12.22	12.26	12.80	12.50	12.20	0	0
		1	49	12.19	12.33	12.77	12.42	12.00	0	0
		1	99	12.18	12.43	12.52	12.31	11.79	0	0
		50	0	12.39	12.63	12.97	12.66	12.39	0-1	0
		50	25	12.41	12.65	12.96	12.64	12.31	0-1	0
		50	49	12.38	12.65	12.86	12.65	12.21	0-1	0
		100	0	12.36	12.63	12.96	12.66	12.29	0-1	0
	16QAM	1	0	12.53	12.50	12.93	12.82	12.48	0-1	0
		1	49	12.50	12.57	12.96	12.68	12.25	0-1	0
		1	99	12.47	12.66	12.83	12.58	11.98	0-1	0
		50	0	12.42	12.62	12.94	12.69	12.37	0-2	0
		50	25	12.43	12.64	12.93	12.71	12.33	0-2	0
		50	49	12.39	12.64	12.91	12.67	12.21	0-2	0
		100	0	12.37	12.63	12.96	12.67	12.25	0-2	0
	64QAM	1	0	12.41	12.45	12.91	12.67	12.26	0-2	0
		1	49	12.37	12.52	12.93	12.53	12.16	0-2	0
		1	99	12.36	12.61	12.73	12.45	11.84	0-2	0
		50	0	12.40	12.65	12.96	12.70	12.38	0-3	0
		50	25	12.45	12.69	12.94	12.72	12.33	0-3	0
		50	49	12.39	12.68	12.91	12.69	12.22	0-3	0
		100	0	12.41	12.66	12.93	12.65	12.27	0-3	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	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979Ch. 1710.7 ㎒	132322 Ch. 1745 ㎒	132665 Ch. 1779.3 ㎒		
1.4 ㎒	QPSK	1	0	12.81	12.65	12.56	0	0
		1	3	12.92	12.71	12.61	0	0
		1	5	12.88	12.64	12.56	0	0
		3	0	12.82	12.67	12.53	0	0
		3	1	12.89	12.70	12.57	0	0
		3	3	12.84	12.66	12.57	0	0
		6	0	12.92	12.73	12.64	0-1	0
	16QAM	1	0	13.22	12.86	12.84	0-1	0
		1	3	13.31	12.92	12.95	0-1	0
		1	5	13.19	12.94	12.99	0-1	0
		3	0	13.01	12.76	12.66	0-1	0
		3	1	13.06	12.79	12.71	0-1	0
		3	3	12.96	12.70	12.65	0-1	0
		6	0	13.02	12.79	12.76	0-2	0
	64QAM	1	0	13.13	12.85	12.79	0-2	0
		1	3	13.17	12.93	12.76	0-2	0
		1	5	13.06	12.86	12.80	0-2	0
		3	0	13.03	12.84	12.78	0-2	0
		3	1	13.13	12.88	12.81	0-2	0
		3	3	13.08	12.82	12.75	0-2	0
		6	0	12.95	12.73	12.63	0-3	0

LTE Band 66 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 ㎒	132322 Ch. 1745 ㎒	132657 Ch. 1778.5 ㎒		
3 ㎒	QPSK	1	0	12.85	12.65	12.53	0	0
		1	7	12.86	12.73	12.59	0	0
		1	14	12.88	12.67	12.60	0	0
		8	0	12.98	12.72	12.70	0-1	0
		8	3	13.06	12.83	12.78	0-1	0
		8	7	12.96	12.81	12.73	0-1	0
		15	0	13.03	12.83	12.73	0-1	0
	16QAM	1	0	13.14	12.94	12.84	0-1	0
		1	7	13.25	12.99	13.00	0-1	0
		1	14	13.24	12.91	12.84	0-1	0
		8	0	13.08	12.81	12.69	0-2	0
		8	3	13.11	12.89	12.78	0-2	0
		8	7	13.04	12.83	12.74	0-2	0
		15	0	13.01	12.80	12.68	0-2	0
	64QAM	1	0	13.01	12.79	12.77	0-2	0
		1	7	13.12	12.95	12.82	0-2	0
		1	14	13.03	12.87	12.73	0-2	0
		8	0	13.04	12.80	12.69	0-3	0
		8	3	13.08	12.86	12.79	0-3	0
		8	7	13.06	12.83	12.78	0-3	0
		15	0	13.04	12.81	12.75	0-3	0

LTE Band 66 _ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 MHz	132322Ch. 1745 MHz	132647 Ch. 1777.5 MHz		
5 MHz	QPSK	1	0	12.82	12.62	12.50	0	0
		1	12	12.93	12.73	12.61	0	0
		1	24	12.77	12.64	12.52	0	0
		12	0	12.98	12.73	12.67	0-1	0
		12	6	13.05	12.87	12.76	0-1	0
		12	11	12.97	12.84	12.71	0-1	0
		25	0	13.00	12.77	12.67	0-1	0
	16QAM	1	0	13.05	12.95	12.80	0-1	0
		1	12	13.28	13.12	13.04	0-1	0
		1	24	13.14	12.87	12.85	0-1	0
		12	0	13.09	12.74	12.64	0-2	0
		12	6	13.12	12.87	12.76	0-2	0
		12	11	13.05	12.79	12.78	0-2	0
		25	0	13.05	12.82	12.71	0-2	0
	64QAM	1	0	13.11	12.81	12.75	0-2	0
		1	12	13.17	12.98	12.86	0-2	0
		1	24	13.03	12.81	12.80	0-2	0
		12	0	13.08	12.77	12.67	0-3	0
		12	6	13.12	12.92	12.79	0-3	0
		12	11	13.11	12.87	12.78	0-3	0
		25	0	13.01	12.83	12.72	0-3	0

LTE Band 66 _ 10 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 MHz	132322 Ch. 1745 MHz	132622 Ch. 1775 MHz		
10 MHz	QPSK	1	0	12.96	12.80	12.67	0	0
		1	24	12.97	12.63	12.51	0	0
		1	49	12.80	12.65	12.50	0	0
		25	0	13.01	12.84	12.74	0-1	0
		25	12	12.96	12.83	12.72	0-1	0
		25	24	12.90	12.79	12.66	0-1	0
		50	0	12.98	12.82	12.74	0-1	0
	16QAM	1	0	13.36	13.21	13.09	0-1	0
		1	24	13.20	12.88	12.99	0-1	0
		1	49	13.17	12.94	12.95	0-1	0
		25	0	13.04	12.82	12.70	0-2	0
		25	12	13.06	12.79	12.72	0-2	0
		25	24	12.99	12.76	12.63	0-2	0
		50	0	13.05	12.83	12.72	0-2	0
	64QAM	1	0	13.16	13.02	12.95	0-2	0
		1	24	13.12	12.94	12.79	0-2	0
		1	49	13.00	12.87	12.86	0-2	0
		25	0	13.06	12.87	12.75	0-3	0
		25	12	13.01	12.79	12.76	0-3	0
		25	24	12.99	12.80	12.71	0-3	0
		50	0	13.02	12.81	12.73	0-3	0

LTE Band 66 _ 15 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 MHz	132322 Ch. 1745 MHz	132597 Ch. 1772.5 MHz		
15 MHz	QPSK	1	0	13.08	12.90	12.79	0	0
		1	36	13.00	12.78	12.80	0	0
		1	74	12.89	12.69	12.66	0	0
		36	0	13.19	13.02	12.94	0-1	0
		36	18	13.13	12.95	12.88	0-1	0
		36	39	13.03	12.85	12.83	0-1	0
		75	0	13.12	12.93	12.90	0-1	0
	16QAM	1	0	13.38	13.23	13.15	0-1	0
		1	36	13.44	13.14	13.03	0-1	0
		1	74	13.22	13.11	12.99	0-1	0
		36	0	13.21	13.03	12.93	0-2	0
		36	18	13.20	12.98	12.87	0-2	0
		36	39	13.09	12.86	12.77	0-2	0
		75	0	13.15	12.98	12.89	0-2	0
	64QAM	1	0	13.32	13.20	13.16	0-2	0
		1	36	13.30	13.06	12.85	0-2	0
		1	74	13.20	13.00	12.98	0-2	0
		36	0	13.24	13.02	12.97	0-3	0
		36	18	13.20	12.99	12.89	0-3	0
		36	39	13.08	12.87	12.81	0-3	0
		75	0	13.15	12.98	12.88	0-3	0

LTE Band 66 _ 20 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	13.03	12.86	12.76	0	0
		1	49	12.92	12.74	12.75	0	0
		1	99	12.87	12.81	12.76	0	0
		50	0	13.18	13.03	12.96	0-1	0
		50	25	13.10	12.91	12.86	0-1	0
		50	49	13.05	12.87	12.79	0-1	0
		100	0	13.09	12.94	12.88	0-1	0
	16QAM	1	0	13.36	13.24	13.03	0-1	0
		1	49	13.34	13.19	13.07	0-1	0
		1	99	13.21	13.08	13.07	0-1	0
		50	0	13.18	13.03	12.96	0-2	0
		50	25	13.12	12.94	12.88	0-2	0
		50	49	13.04	12.91	12.75	0-2	0
		100	0	13.14	13.00	12.82	0-2	0
	64QAM	1	0	13.30	13.07	13.02	0-2	0
		1	49	13.22	12.94	12.87	0-2	0
		1	99	13.21	13.02	12.79	0-2	0
		50	0	13.21	13.00	12.97	0-3	0
		50	25	13.11	12.97	12.87	0-3	0
		50	49	13.06	12.94	12.83	0-3	0
		100	0	13.07	12.95	12.91	0-3	0

[LTE Band 71 Conducted Power]

LTE Band 71 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133147 Ch. 665.5 ㎒	133297 Ch. 680.5 ㎒	133447 Ch. 695.5 ㎒		
5 ㎒	QPSK	1	0	18.05	18.08	17.96	0	0
		1	12	18.15	18.15	18.00	0	0
		1	24	18.18	18.16	18.06	0	0
		12	0	18.23	18.19	18.03	0-1	0
		12	6	18.26	18.21	18.16	0-1	0
		12	11	18.24	18.27	18.16	0-1	0
		25	0	18.25	18.17	18.11	0-1	0
	16QAM	1	0	18.25	18.26	18.16	0-1	0
		1	12	18.40	18.43	18.26	0-1	0
		1	24	18.38	18.41	18.22	0-1	0
		12	0	18.18	18.15	18.06	0-2	0
		12	6	18.25	18.19	18.13	0-2	0
		12	11	18.28	18.27	18.13	0-2	0
		25	0	18.22	18.20	18.16	0-2	0
	64QAM	1	0	18.24	18.26	18.17	0-2	0
		1	12	18.35	18.33	18.18	0-2	0
		1	24	18.40	18.27	18.19	0-2	0
		12	0	18.20	18.20	18.11	0-3	0
		12	6	18.32	18.24	18.20	0-3	0
		12	11	18.33	18.32	18.16	0-3	0
		25	0	18.29	18.19	18.16	0-3	0

LTE Band 71 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133172 Ch. 668 ㎒	133297 Ch. 680.5 ㎒	133422 Ch. 693 ㎒		
10 ㎒	QPSK	1	0	18.12	18.10	18.10	0	0
		1	24	18.14	18.00	17.94	0	0
		1	49	18.07	18.06	17.90	0	0
		25	0	18.25	18.23	18.16	0-1	0
		25	12	18.24	18.22	18.11	0-1	0
		25	24	18.20	18.21	18.08	0-1	0
		50	0	18.22	18.21	18.12	0-1	0
	16QAM	1	0	18.48	18.29	18.33	0-1	0
		1	24	18.39	18.30	18.34	0-1	0
		1	49	18.30	18.21	18.06	0-1	0
		25	0	18.18	18.23	18.13	0-2	0
		25	12	18.24	18.22	18.08	0-2	0
		25	24	18.16	18.21	18.07	0-2	0
		50	0	18.23	18.21	18.10	0-2	0
	64QAM	1	0	18.29	18.27	18.39	0-2	0
		1	24	18.37	18.33	18.28	0-2	0
		1	49	18.34	18.19	18.05	0-2	0
		25	0	18.23	18.23	18.11	0-3	0
		25	12	18.24	18.24	18.11	0-3	0
		25	24	18.20	18.20	18.10	0-3	0
		50	0	18.24	18.22	18.14	0-3	0

LTE Band 71 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133197 Ch. 670.5 ㎒	133297 Ch. 680.5 ㎒	133397 Ch. 690.5 ㎒		
15 ㎒	QPSK	1	0	18.40	18.34	18.26	0	0
		1	36	18.29	18.24	18.08	0	0
		1	74	18.24	18.23	18.08	0	0
		36	0	18.39	18.36	18.27	0-1	0
		36	18	18.43	18.40	18.30	0-1	0
		36	39	18.38	18.34	18.25	0-1	0
		75	0	18.44	18.37	18.28	0-1	0
	16QAM	1	0	18.55	18.59	18.42	0-1	0
		1	36	18.53	18.49	18.44	0-1	0
		1	74	18.30	18.37	18.33	0-1	0
		36	0	18.37	18.37	18.30	0-2	0
		36	18	18.36	18.35	18.26	0-2	0
		36	39	18.34	18.35	18.22	0-2	0
		75	0	18.34	18.36	18.26	0-2	0
	64QAM	1	0	18.55	18.60	18.46	0-2	0
		1	36	18.46	18.47	18.26	0-2	0
		1	74	18.47	18.40	18.17	0-2	0
		36	0	18.38	18.40	18.34	0-3	0
		36	18	18.38	18.39	18.29	0-3	0
		36	39	18.35	18.37	18.23	0-3	0
		75	0	18.38	18.32	18.28	0-3	0

LTE Band 71 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				133222 Ch. 673 ㎒	133297 Ch. 680.5 ㎒	133372 Ch. 688 ㎒		
20 ㎒	QPSK	1	0	18.29	18.29	18.35	0	0
		1	49	18.21	18.24	18.19	0	0
		1	99	18.21	18.15	18.02	0	0
		50	0	18.33	18.35	18.33	0-1	0
		50	25	18.41	18.40	18.35	0-1	0
		50	49	18.43	18.35	18.26	0-1	0
		100	0	18.36	18.40	18.33	0-1	0
	16QAM	1	0	18.59	18.53	18.60	0-1	0
		1	49	18.47	18.54	18.48	0-1	0
		1	99	18.45	18.33	18.21	0-1	0
		50	0	18.32	18.31	18.34	0-2	0
		50	25	18.41	18.40	18.32	0-2	0
		50	49	18.42	18.27	18.24	0-2	0
		100	0	18.36	18.39	18.26	0-2	0
	64QAM	1	0	18.53	18.49	18.50	0-2	0
		1	49	18.34	18.43	18.32	0-2	0
		1	99	18.33	18.26	18.11	0-2	0
		50	0	18.33	18.35	18.38	0-3	0
		50	25	18.41	18.40	18.33	0-3	0
		50	49	18.40	18.34	18.27	0-3	0
		100	0	18.35	18.34	18.31	0-3	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.

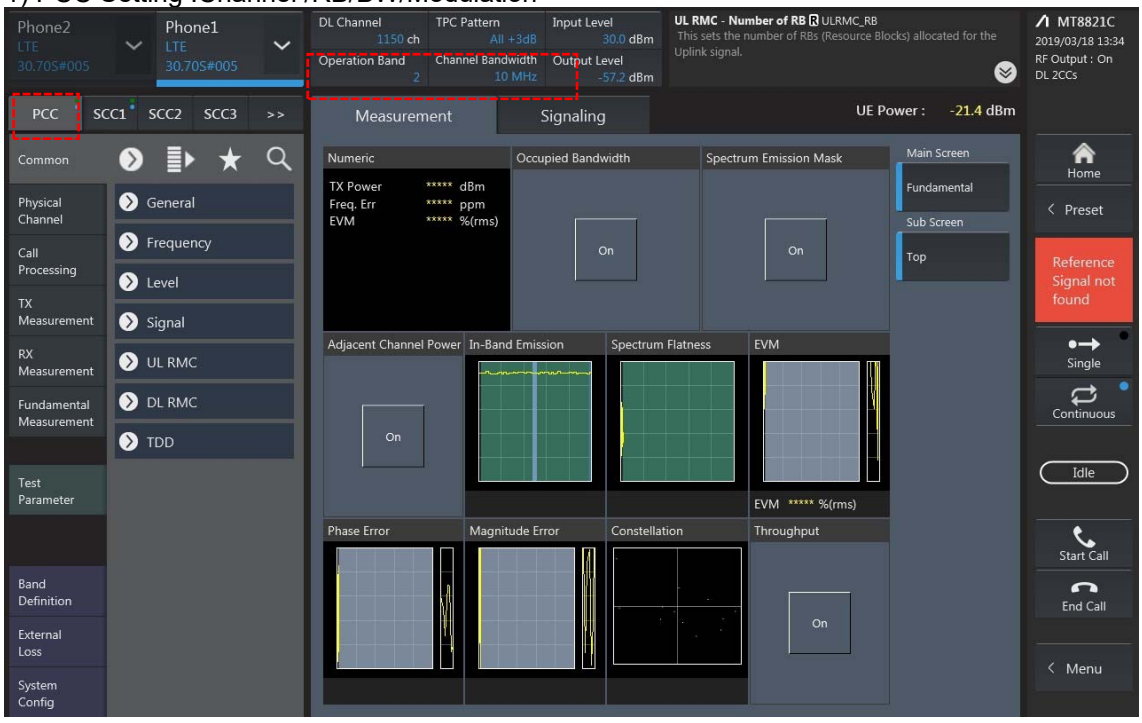
11.2.3 LTE Down-link Carrier Aggregation Conducted Powers

Downlink Carrier aggregation:

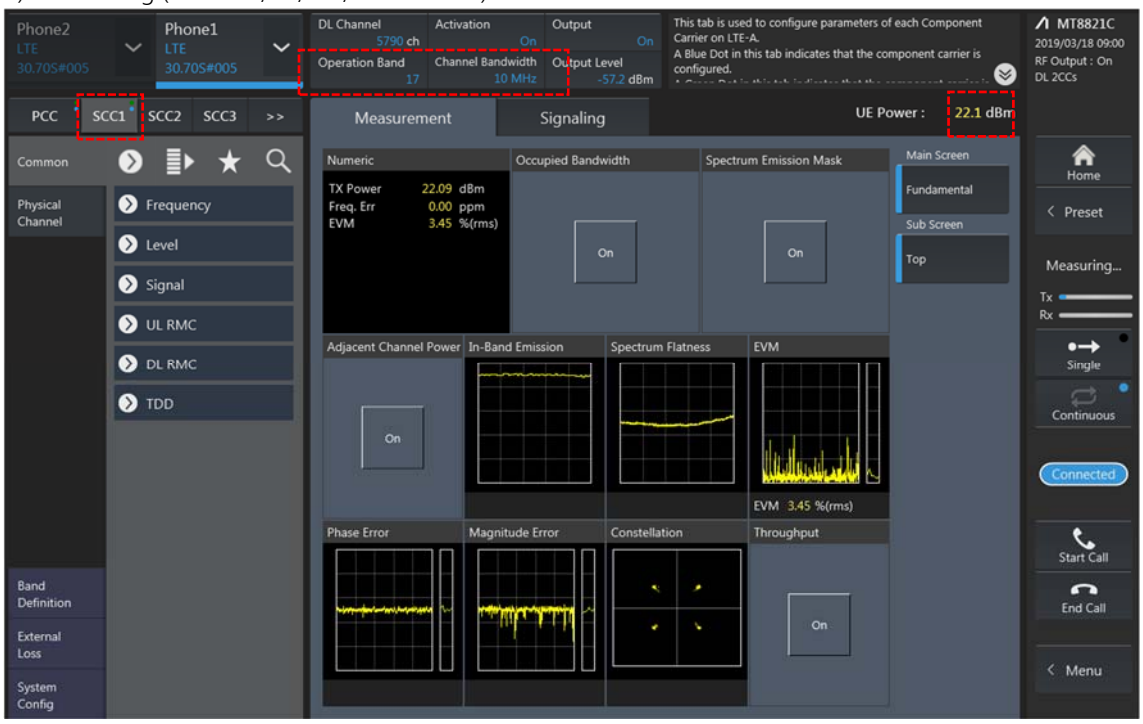
1. This device supports intra-downlink and inter-downlink carrier aggregation. For every supported combination of downlink carrier aggregation, power measurements were performed with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation 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.

LTE Down Link 2CA Call Setup

1) PCC Setting :Channel /RB/BW/Modulation



2) SCC Setting (Channel /RB/BW/Modulation) and call Connection



2CA Downlink Carrier aggregation Maximum Conducted Powers

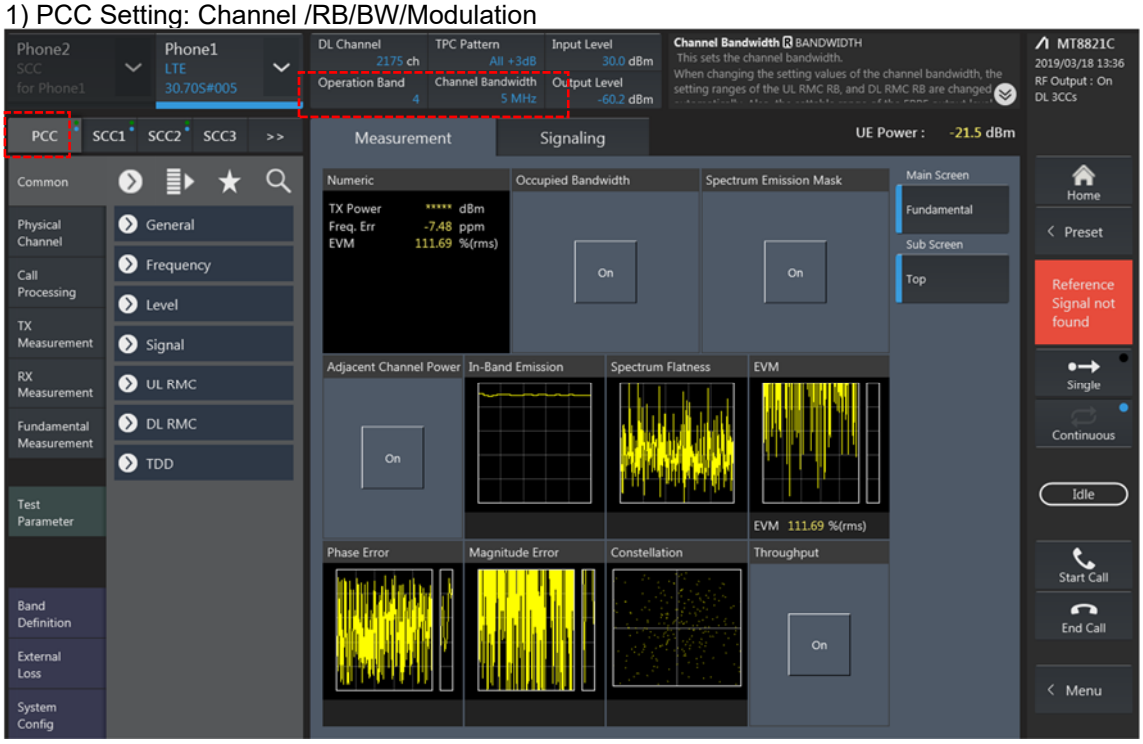
Combination	PCC									SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2A-12A(0)	2	15	18675	1857.5	675	1937.5	QPSK	1	74	12	10	5095	737.5	25.18	25.12
2A-12A(2)	2	10	19150	1905	1150	1985	QPSK	1	0	12	10	5095	737.5	25.05	25.15
2A-29A(0,2)	2	15	18675	1857.5	675	1937.5	QPSK	1	74	29	10	9715	722.5	25.18	25.2
4A-5A(0)	4	10	20000	1715	2000	2115	QPSK	1	24	5	10	2553	884.3	24.66	24.58
4A-7A(0)	4	10	20000	1715	2000	2115	QPSK	1	24	7	20	3100	2655	24.66	24.61
4A-12A(0,3)	4	10	20000	1715	2000	2115	QPSK	1	24	12	10	5095	737.5	24.66	24.58
4A-12A(1,2,4)	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	12	10	5095	737.5	24.76	24.81
4A-12A(5)	4	15	20025	1717.5	2025	2117.5	QPSK	1	0	12	5	5095	737.5	24.74	24.69
4A-29A(0,1)	4	10	20000	1715	2000	2115	QPSK	1	24	29	10	9715	722.5	24.66	24.71
4A-29A(2)	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	29	10	9715	722.5	24.76	24.8
4A-30A	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	30	10	9820	2355	24.76	24.77
5A-4A	5	5	20625	846.5	2625	891.5	QPSK	1	12	4	20	2175	2132.5	24.18	24.17
5A-7A	5	5	20625	846.5	2625	891.5	QPSK	1	12	7	20	3100	2655	24.18	24.12
5A-38A	5	5	20625	846.5	2625	891.5	QPSK	1	12	38	20	38000	2595	24.18	24.17
7A-7A(0)	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	23.9	23.89
7A-7A(2)	7	20	21350	2560	3350	2680	QPSK	1	0	7	10	3100	2655	23.92	23.98
7A-66A	7	20	21350	2560	3350	2680	QPSK	1	0	66	20	66786	2145	23.92	23.95
7C	7	20	21350	2560	3350	2680	QPSK	1	0	7	20	3152	2660.2	23.92	23.82
12A-2A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	1100	1980	24.65	24.58
12A-66A(0,2,3,4)	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	20	66786	2145	24.65	24.61
12A-66A(5)	12	5	23095	707.5	5095	737.5	QPSK	1	12	66	15	66786	2145	24.63	24.65
25A-25A(0)	25	10	26090	1855	8090	1935	QPSK	1	0	25	10	8640	1990	24.67	24.64
25A-25A(1,2)	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	25	20	8140	1940	24.75	24.72
25A-26A(0)	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	26	15	8865	876.5	24.75	24.8
25A-26A(1,2)	25	10	26090	1855	8090	1935	QPSK	1	0	26	15	8865	876.5	24.67	24.61
25A-41A	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	41	20	40620	2593	24.75	24.71
26A-25A(0)	26	15	26865	831.5	8865	876.5	QPSK	1	0	25	20	8365	1962.5	24.12	24.15
26A-25A(1,2)	26	10	26990	844	8990	889	QPSK	1	0	25	10	8365	1962.5	24.13	24.11
26A-41A	26	15	26865	831.5	8865	876.5	QPSK	1	0	41	20	40620	2593	24.12	24.11
30A-29A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	29	10	9715	722.5	23.81	23.78
41A-41A(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	41490	2680	24.03	24.06
41C(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40791	2610.1	24.03	24.01
41A-41A(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	41490	2680	26.74	26.72
41C(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40791	2610.1	26.74	26.77
66A-12A(0,3)	66	5	132647	1777.5	67111	2177.5	QPSK	1	24	12	10	5095	737.5	24.7	24.67
66A-12A(2,4)	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	12	10	5095	737.5	24.79	24.74
66A-12A(5)	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	12	5	5095	737.5	24.79	24.71
2A-46A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	46	20	50665	5537.5	25.18	25.13
4A-46A	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	46	20	50665	5537.5	24.76	24.72
5A-46A	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50665	5537.5	24.18	24.17
7A-46A	7	20	21350	2560	3350	2680	QPSK	1	0	46	20	50665	5537.5	23.92	23.94
13A-46A	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	24.37	24.35
66A-46A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	46	20	50665	5537.5	24.79	24.7

2CA Downlink Carrier aggregation Reduced Conducted Powers

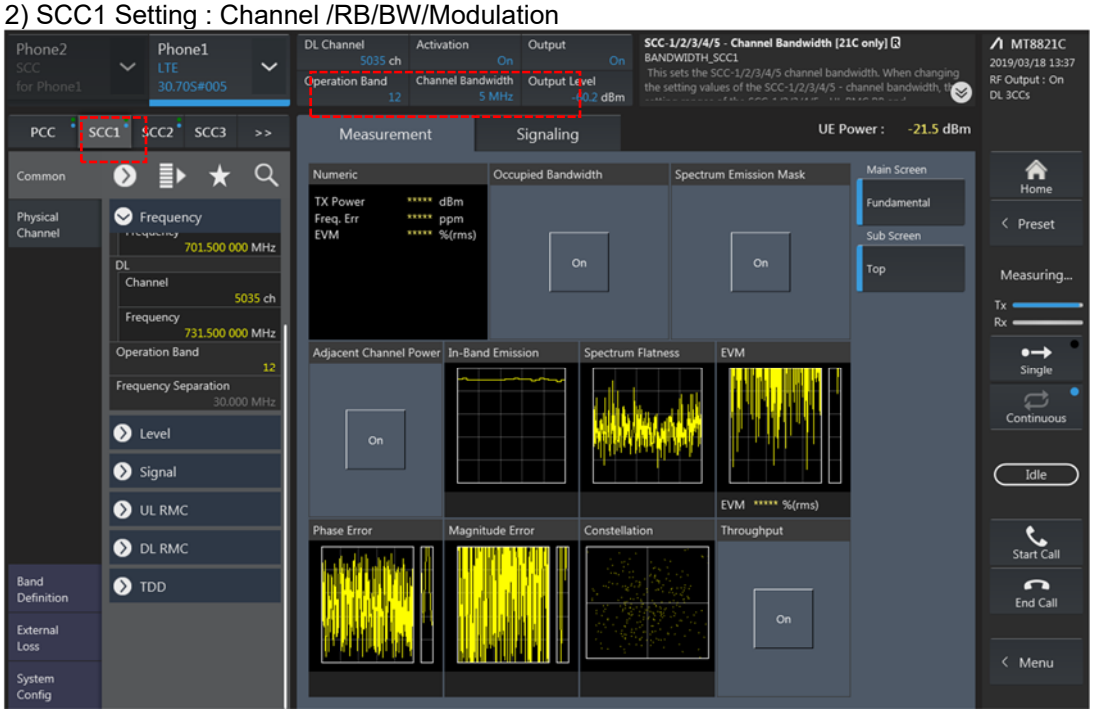
Combination	PCC									SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2A-12A(0)	2	15	18675	1857.5	675	1937.5	16QAM	1	0	12	10	5095	737.5	13.11	13.09
2A-12A(2)	2	10	19150	1905	1150	1985	16QAM	1	24	12	10	5095	737.5	12.98	12.96
2A-29A(0,2)	2	15	18675	1857.5	675	1937.5	16QAM	1	0	29	10	9715	722.5	13.11	13.11
4A-5A(0)	4	10	20000	1715	2000	2115	16QAM	1	0	5	10	2553	884.3	13.24	13.21
4A-7A(0)	4	10	20000	1715	2000	2115	16QAM	1	0	7	20	3100	2655	13.24	13.22
4A-12A(0,3)	4	10	20000	1715	2000	2115	16QAM	1	0	12	10	5095	737.5	13.24	13.21
4A-12A(1,2,4)	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	12	10	5095	737.5	13.29	13.27
4A-12A(5)	4	15	20025	1717.5	2025	2117.5	16QAM	1	0	12	5	5095	737.5	13.26	13.23
4A-29A(0,1)	4	10	20000	1715	2000	2115	16QAM	1	24	29	10	9715	722.5	13.24	13.21
4A-29A(2)	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	29	10	9715	722.5	13.29	13.2
4A-30A	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	30	10	9820	2355	13.29	13.23
5A-4A	5	5	20625	846.5	2625	891.5	16QAM	1	24	4	20	2175	2132.5	18.54	18.58
5A-7A	5	5	20625	846.5	2625	891.5	16QAM	1	24	7	20	3100	2655	18.54	18.52
5A-38A	5	5	20625	846.5	2625	891.5	16QAM	1	24	38	20	38000	2595	18.54	18.53
7A-7A(0,3)	7	15	21375	2562.5	3375	2682.5	16QAM	1	0	7	20	2850	2630	12.88	12.9
7A-7A(2)	7	20	21350	2560	3350	2680	16QAM	1	49	7	10	3100	2655	12.79	12.82
7A-66A	7	15	21375	2562.5	3375	2682.5	16QAM	1	0	66	20	66786	2145	12.88	12.8
7C	7	15	21375	2562.5	3375	2682.5	16QAM	1	0	7	20	3204	2665.4	12.88	12.86
12A-2A	12	10	23095	707.5	5095	737.5	64QAM	1	49	2	20	1100	1980	18.39	18.35
12A-66A(0,2,3,4)	12	10	23095	707.5	5095	737.5	64QAM	1	49	66	20	66786	2145	18.39	18.34
12A-66A(5)	12	5	23035	701.5	5035	731.5	64QAM	1	12	66	15	66786	2145	18.38	18.4
25A-25A(0)	25	10	26090	1855	8090	1935	16QAM	1	0	25	10	8640	1990	13.05	13.01
25A-25A(1,2)	25	20	26590	1905	8590	1985	16QAM	1	0	25	20	8140	1940	13.15	13.15
25A-26A(0)	25	20	26590	1905	8590	1985	16QAM	1	0	26	15	8865	876.5	13.15	13.12
25A-26A(1,2)	25	10	26090	1855	8090	1935	16QAM	1	0	26	15	8865	876.5	13.05	12.99
25A-41A	25	20	26590	1905	8590	1985	16QAM	1	0	41	20	40620	2593	13.15	13.1
26A-25A(0)	26	15	26865	831.5	8865	876.5	64QAM	36	18	25	20	8365	1962.5	18.33	18.31
26A-25A(1,2)	26	10	26990	844	8990	889	64QAM	1	0	25	10	8365	1962.5	18.32	18.29
26A-41A	26	15	26865	831.5	8865	876.5	64QAM	36	18	41	20	40620	2593	18.33	18.31
30A-29A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	29	10	9715	722.5	13.18	13.12
41A-41A	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	41490	2680	12.36	12.31
41C	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	40791	2610.1	12.36	12.36
66A-12A(0,3)	66	10	132022	1715	66486	2115	16QAM	1	0	12	10	5095	737.5	13.36	12.31
66A-12A(2,4)	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	12	10	5095	737.5	13.44	13.4
66A-12A(5)	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	12	5	5095	737.5	13.44	13.43
2A-46A	2	20	18900	1880	900	1960	16QAM	1	99	46	20	50665	5537.5	13.1	13.05
4A-46A	4	15	20025	1717.5	2025	2117.5	16QAM	1	0	46	20	50665	5537.5	13.42	13.44
5A-46A	5	5	20625	846.5	2625	891.5	16QAM	1	24	46	20	50665	5537.5	18.54	18.52
7A-46A	7	15	21375	2562.5	3375	2682.5	16QAM	1	0	46	20	50665	5537.5	12.88	12.84
13A-46A	13	10	23230	782	5230	751	64QAM	1	0	46	20	50665	5537.5	18.17	18.13
66A-46A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	46	20	50665	5537.5	13.44	13.49

LTE Down Link 3CA Call Setup

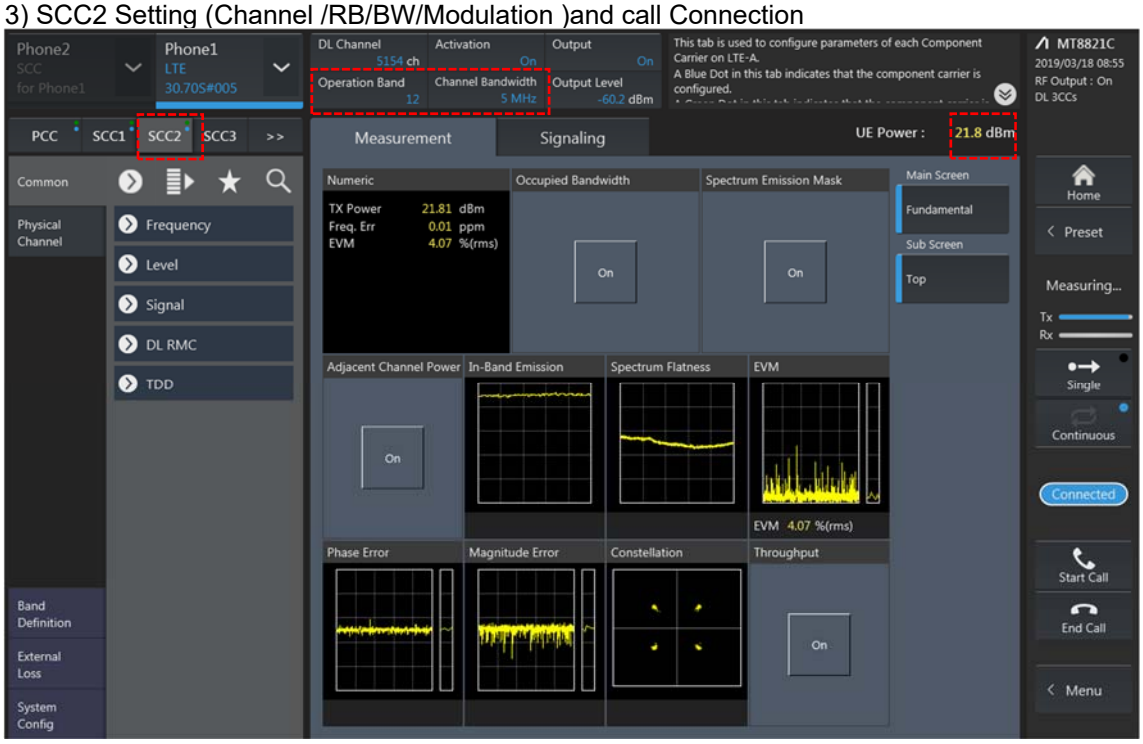
1) PCC Setting: Channel /RB/BW/Modulation



2) SCC1 Setting : Channel /RB/BW/Modulation



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



3CA Downlink Carrier aggregation Maximum Conducted Powers

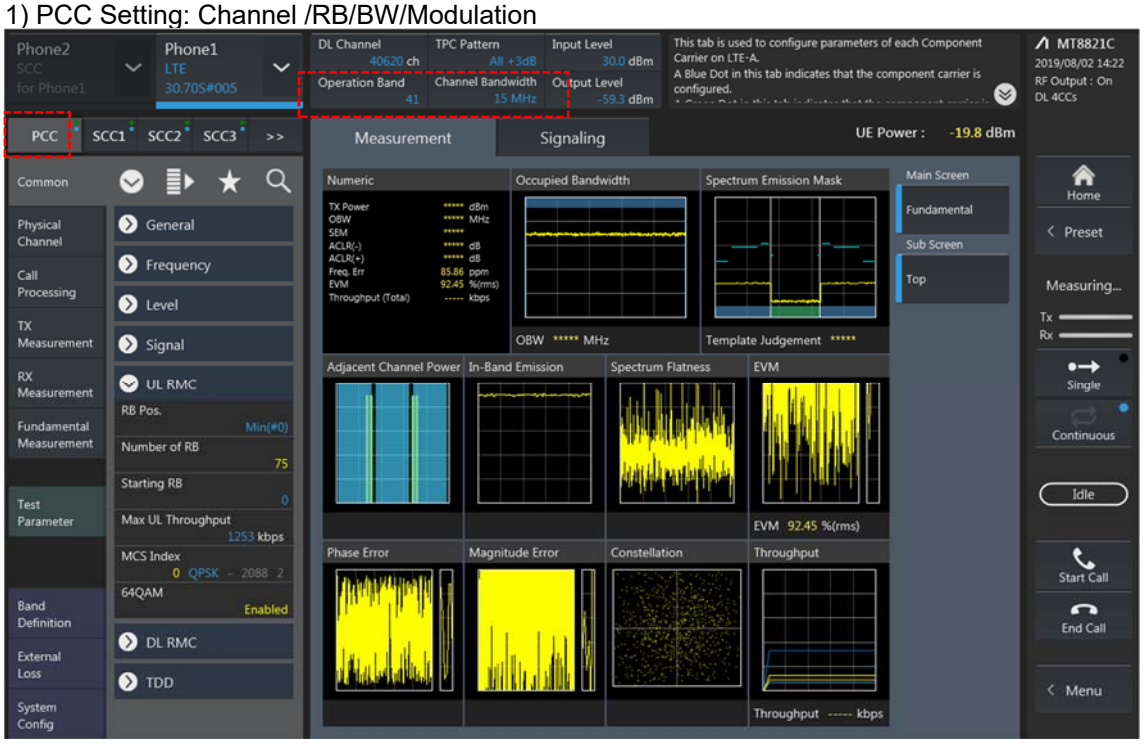
Combination	PCC									SCC				SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2A-2A-12A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	12	10	5095	737.5	25.18	25.13
2A-2A-14A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	14	10	5330	763	25.18	25.17
2A-4A-13A(0,2)	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	13	10	5230	751	25.18	25.11
2A-4A-13A(1)	2	10	19150	1905	1150	1985	QPSK	1	0	4	10	2175	2132.5	13	10	5230	751	25.05	25.03
2A-4A-12A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	12	10	5095	737.5	25.18	25.12
2A-7A-12A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	7	20	3100	2655	12	10	5095	737.5	25.18	25.18
2A-7C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	7	20	3350	2680	7	20	3152	2660.2	25.18	25.08
2A-12A-30A(0,1)	2	15	18675	1857.5	675	1937.5	QPSK	1	74	12	10	5095	737.5	30	10	9820	2355	25.18	25.16
2A-12A-30A(2)	2	10	19150	1905	1150	1985	QPSK	1	0	12	10	5095	737.5	30	10	9820	2355	25.05	25.07
2A-12A-66A(0,1)	2	15	18675	1857.5	675	1937.5	QPSK	1	74	12	10	5095	737.5	66	20	66786	2145	25.18	24.13
2A-12A-66A(2)	2	10	19150	1905	1150	1985	QPSK	1	0	12	10	5095	737.5	66	20	66786	2145	25.05	25.05
2A-12B	2	15	18675	1857.5	675	1937.5	QPSK	1	74	12	10	5095	737.5	12	5	5167	744.7	25.18	25.11
2A-14A-30A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	14	10	5330	763	30	10	9820	2355	25.18	25.19
2A-14A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	14	10	5330	763	66	20	66786	2145	25.18	25.13
2A-29A-66A(0,1)	2	10	19150	1905	1150	1985	QPSK	1	0	29	10	9715	722.5	66	20	66786	2145	25.05	25.01
2A-29A-66A(2)	2	15	18675	1857.5	675	1937.5	QPSK	1	74	29	10	9715	722.5	66	20	66786	2145	25.18	25.18
4A-2A-13A(0,2)	4	20	20175	1732.5	2175	2132.5	QPSK	1	0	2	20	900	1960	13	10	5230	751	24.76	24.73
4A-2A-13A(1)	4	10	20025	1717.5	2025	2117.5	QPSK	1	0	2	10	900	1960	13	10	5230	751	24.74	24.7
4A-4A-5A	4	20	20050	1720	2050	2120	QPSK	1	0	4	20	2300	2145	5	10	2525	881.5	24.75	24.69
4A-4A-7A	4	20	20050	1720	2050	2120	QPSK	1	0	4	20	2300	2145	7	20	3100	2655	24.75	24.73
4A-4A-12A	4	20	20050	1720	2050	2120	QPSK	1	0	4	20	2300	2145	12	10	5095	737.5	24.75	24.72
4A-4A-13A	4	20	20050	1720	2050	2120	QPSK	1	0	4	20	2300	2145	13	10	5230	751	24.75	24.7
4A-5A-30A	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	5	10	2525	881.5	30	10	9820	2355	24.76	24.73
4A-5B	4	20	20175	1732.5	2175	2132.5	QPSK	1	0	5	5	2625	871.5	5	10	2553	884.3	24.76	24.74
4A-7A-7A	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	7	20	3350	2680	7	20	2850	2630	24.76	24.74
4A-7A-12A(0)	4	10	20000	1715	2000	2115	QPSK	1	24	7	20	3100	2655	12	10	5095	2355	24.66	24.56
4A-7A-12A(1)	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	7	20	3100	2655	12	10	5095	2355	24.76	24.66
4A-7C	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	7	20	3350	2680	7	20	3152	2660.2	24.76	24.76
4A-12A-30A	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	12	10	5095	737.5	30	10	9820	2355	24.76	24.79
4A-12B	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	12	10	5095	737.5	12	5	5167	744.7	24.76	24.67
4A-29A-30A	4	20	20175	1735.5	2175	2132.5	QPSK	1	0	29	10	9715	722.5	30	10	9820	2355	24.76	24.73
5A-4A-4A	5	5	20625	846.5	2625	891.5	QPSK	1	12	4	20	2050	2120	4	20	2300	2145	24.18	24.19
5A-5A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	5	2425	871.5	66	20	66786	2145	24.18	24.16
5B-4A	5	5	20625	846.5	2625	871.5	QPSK	1	12	5	10	2553	884.3	4	20	2175	2132.5	24.18	24.19
12A-2A-2A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.65	24.6
12A-2A-30A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	30	10	9820	2355	24.65	24.67
12A-2A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	24.65	24.58
12A-66A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.65	24.65
13A-4A-4A	13	10	23230	782	5230	751	QPSK	1	0	4	20	2050	2120	4	20	2300	2145	24.37	24.34
14A-2A-2A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	23.9	23.86
14A-2A-30A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	30	10	9820	2355	23.9	23.91
14A-2A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	66	20	66786	2145	23.9	23.85
14A-30A-66A	14	10	23330	793	5330	763	QPSK	1	24	30	10	9820	2355	66	20	66786	2145	23.9	23.87
14A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	23.9	23.95
25A-25A-26A(0)	25	10	26090	1855	8090	1935	QPSK	1	0	25	10	8640	1990	26	5	8865	876.5	24.67	24.6
25A-25A-26A(1,2)	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	25	20	8140	1940	26	5	8865	876.5	24.75	24.7
25A-41C	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	41	15	40620	2593	41	20	40449	2575.9	24.75	24.79
26A-25A-25A	26	15	26865	831.5	8865	876.5	QPSK	1	0	25	15	8115	1937.5	25	15	8615	1987.5	24.12	24.1
26A-41C	26	15	26865	831.5	8865	876.5	QPSK	1	0	41	15	40620	2593	41	20	40449	2575.9	24.12	24.18
30A-2A-14A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	14	10	5330	763	23.81	23.76
30A-14A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	14	10	5330	763	66	20	66786	2145	23.81	23.79
30A-29A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	29	10	9715	722.5	66	20	66786	2145	23.81	23.82
41A-41C(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	41292	2660.2	41	20	41490	2680	24.03	24.01
41C-41A(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40449	2575.9	41	20	39750	2506	24.03	23.96
41D(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40791	2610.1	41	20	40989	2629.9	24.03	24.02
41A-41C(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	41292	2660.2	41	20	41490	2680	26.74	26.71
41C-41A(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40449	2575.9	41	20	39750	2506	26.74	26.7
41D(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40791	2610.1	41	20	40989	2629.9	26.74	26.69
66A-2A-12A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	12	10	5095	737.5	24.79	24.79
66A-2A-14A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	14	10	5330	763	24.79	24.75
66A-2A-29A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	24.79	24.71
66A-5A-5A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	5	5	2625	871.5	5	10	2553	884.3	24.79	24.7
66A-14A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	14	10	5330	763	30	10	9820	2355	24.79	24.75
66A-29A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	29	10	9715	722.5	30	10	9820	2355	24.79	24.72
66A-66A-12A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	12	10	5095	737.5	24.79	24.78
66A-66A-14A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	14	10	5330	763	24.79	24.75
66A-66C	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	66	20	66734	2139.8	24.79	24.74
66C-66A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66890	2155.4	66	20	66536	2120	24.79	24.8
66D	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66890	2155.4	66	20	66692	2135.6	24.79	24.77
2A-2A-46A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	46	20	50665	5537.5	25.18	25.17
2A-5A-46A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	5	10	2525	881.5	46	20	50665	5537.5	25.18	25.13
2A-13A-46A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	13	10	5230	751	46	20	50665	5537.5	25.18	25.15
2A-46A-46A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	46	20	47090	5180	46	20	50665	5537.5	25.18	25.15
2A-46A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	46	20	50665	5537.5	66	20	66786	2145	25.18	25.12
2A-46C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	46	20	50665	5537.5	46	20	50467	5517.7	25.18	25.11
4A-46A-46A	4	20	20175	1732.5	2175	2132.5	QPSK	1	0	46	20	47090	5180	46	20	50665	5537.5	24.76	24.73
5A-2A-46A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	24.18	24.17
5A-46C	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	24.18	24.16
5A-46A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50665	5537.5	66	20	66786	2145	24.18	24.19
5B-46A	5	5	20625	846.5	2625	871.5	QPSK	1	12	5	10	2553	884.3	46	20	50665	5537.5	24.18	24.15
7A-46C	7	20	21350	2560	3350	2680	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	23.92	23.87
13A-2A-46A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	24.37	24.33
13A-46C	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	24.37	24.37
13A-46A-66A	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	66	20	66786	2145	24.37	24.32
66A-2A-46A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	24.79	24.76
66A-5A-46A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	5	10	2525	881.5	46	20	50665	5537.5	24.79	24.79
66A-13A-46A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	13	10	5230	751	46	20	50665	5537.5	24.79	24.75
66A-46A-46A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	46	20	47090	5180	46	20	50665	5537.5	24.79	24.72
66A-46C	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.79
66A-66A-46A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	46	20	50665	5537.5	24.79	24.7

3CA Downlink Carrier aggregation Reduced Conducted Powers

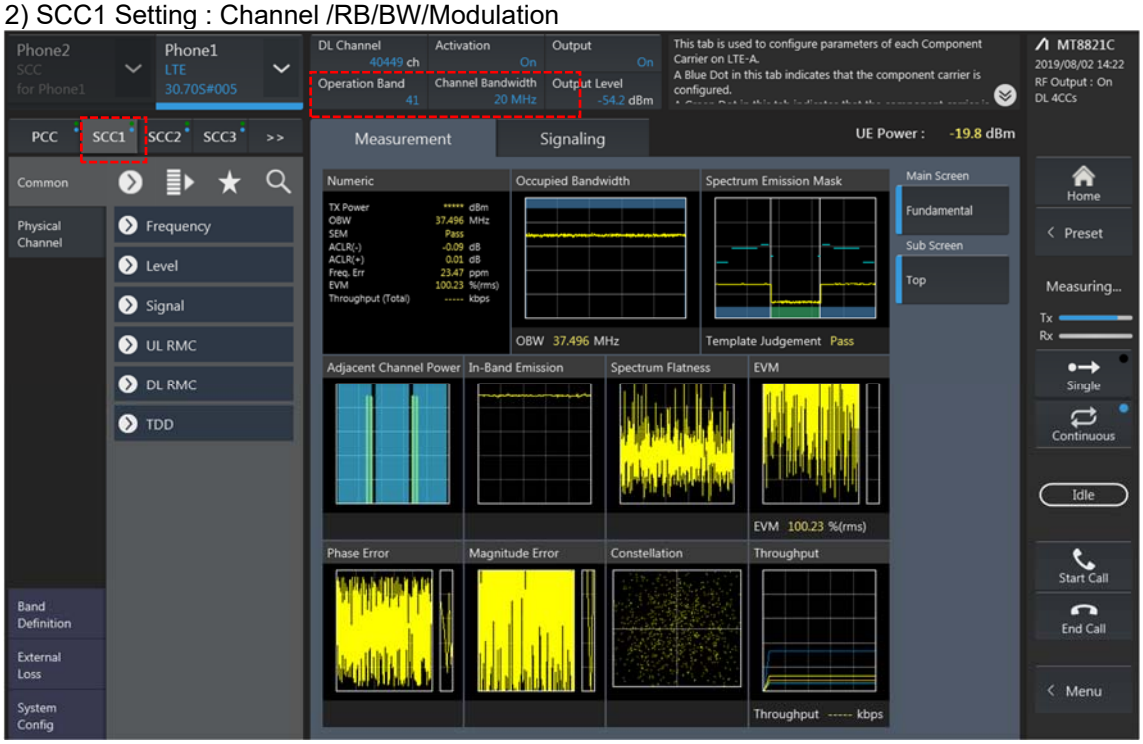
Combination	PCC									SCC				SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2A-2A-12A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	12	10	5095	737.5	13.11	13.08
2A-2A-14A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	14	10	5330	763	13.11	13.1
2A-4A-12A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	12	10	5095	737.5	13.11	13.12
2A-4A-13A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	13	10	5230	751	13.11	13.15
2A-7A-12A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	7	20	3100	2655	12	10	5095	737.5	13.11	13.1
2A-7C	2	15	18675	1857.5	675	1937.5	16QAM	1	0	7	15	3375	2682.5	7	20	3204	2665.4	13.11	13.12
2A-12A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	12	10	5095	737.5	30	10	9820	2355	13.11	13.07
2A-12A-66A(0,1)	2	15	18675	1857.5	675	1937.5	16QAM	1	0	12	10	5095	737.5	66	20	66786	2145	13.11	13.14
2A-12A-66A(2)	2	10	19150	1905	1150	1985	16QAM	1	24	12	10	5095	737.5	66	20	66786	2145	12.98	12.9
2A-12B	2	15	18675	1857.5	675	1937.5	16QAM	1	0	12	10	5095	737.5	12	5	5167	744.7	13.11	13.12
2A-14A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	14	10	5330	763	30	10	9820	2355	13.11	13.11
2A-14A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	14	10	5330	763	66	20	66786	2145	13.11	13.09
2A-29A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	29	10	9715	722.5	66	20	66786	2145	13.11	13.09
4A-2A-13A	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	2	20	900	1960	13	10	5230	751	13.29	13.21
4A-4A-5A	4	20	20050	1720	2050	2120	16QAM	1	0	4	20	2300	2145	5	10	2525	881.5	13.31	13.27
4A-4A-7A	4	20	20050	1720	2050	2120	16QAM	1	0	4	20	2300	2145	7	20	3100	2655	13.31	13.32
4A-4A-12A	4	20	20050	1720	2050	2120	16QAM	1	0	4	20	2300	2145	12	10	5095	737.5	13.31	13.3
4A-4A-13A	4	20	20050	1720	2050	2120	16QAM	1	0	4	20	2300	2145	13	10	5230	751	13.31	13.29
4A-5A-30A	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	5	10	2525	881.5	30	10	9820	2355	13.29	13.28
4A-5B	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	5	5	2625	871.5	5	10	2553	884.3	13.29	13.23
4A-7A-7A	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	7	20	3350	2680	7	20	2850	2630	13.29	13.21
4A-7A-12A(0)	4	10	20000	1715	2000	2115	16QAM	1	24	7	20	3100	2655	12	10	5095	2355	13.24	13.29
4A-7A-12A(1)	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	7	20	3100	2655	12	10	5095	2355	13.29	13.27
4A-7C	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	7	20	3350	2680	7	20	3152	2660.2	13.29	13.3
4A-12A-30A	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	12	10	5095	737.5	30	10	9820	2355	13.29	13.37
4A-12B	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	12	10	5095	737.5	12	5	5167	744.7	13.29	13.27
4A-29A-30A	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	29	10	9715	722.5	30	10	9820	2355	13.29	13.22
5A-4A-4A	5	5	20625	846.5	2625	891.5	16QAM	1	24	4	20	2050	2120	4	20	2300	2145	18.54	18.56
5A-5A-66A	5	5	20625	846.5	2625	891.5	16QAM	1	24	5	5	2425	871.5	66	20	66786	2145	18.54	18.5
5B-4A	5	5	20625	846.5	2625	871.5	16QAM	1	24	5	10	2553	884.3	4	20	2175	2132.5	18.54	18.49
12A-2A-2A	12	10	23095	707.5	5095	737.5	64QAM	1	49	2	20	900	1960	2	20	1100	1980	18.39	18.37
12A-2A-30A	12	10	23095	707.5	5095	737.5	64QAM	1	49	2	20	900	1960	30	10	9820	2355	18.39	18.35
12A-2A-66A	12	10	23095	707.5	5095	737.5	64QAM	1	49	2	20	900	1960	66	20	66786	2145	18.39	18.37
12A-66A-66A	12	10	23095	707.5	5095	737.5	64QAM	1	49	66	20	66786	2145	66	20	67236	2190	18.39	18.43
13A-4A-4A	13	10	23230	782	5230	751	64QAM	1	0	4	20	2050	2120	4	20	2300	2145	18.17	18.16
14A-2A-2A	14	10	23330	793	5330	763	64QAM	1	0	2	20	900	1960	2	20	1100	1980	18.22	18.24
14A-2A-30A	14	10	23330	793	5330	763	64QAM	1	0	2	20	900	1960	30	10	9820	2355	18.22	18.19
14A-2A-66A	14	10	23330	793	5330	763	64QAM	1	0	2	20	900	1960	66	20	66786	2145	18.22	18.23
14A-30A-66A	14	10	23330	793	5330	763	64QAM	1	0	30	10	9820	2355	66	20	66786	2145	18.22	18.19
14A-66A-66A	14	10	23330	793	5330	763	64QAM	1	0	66	20	66786	2145	66	20	67236	2190	18.22	18.22
25A-25A-26A	25	20	26365	1882.5	8365	1962.5	16QAM	1	0	25	20	8140	1940	26	5	8865	876.5	13.15	13.19
25A-41C	25	20	26365	1882.5	8365	1962.5	16QAM	1	0	41	15	40620	2593	41	20	40449	2575.9	13.15	13.11
26A-25A-25A	26	15	26865	831.5	8865	876.5	64QAM	36	18	25	15	8115	1937.5	25	15	8615	1987.5	18.33	18.31
26A-41C	26	15	26865	831.5	8865	876.5	64QAM	36	18	41	15	40620	2593	41	20	40449	2575.9	18.33	18.34
30A-2A-14A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	14	10	5330	763	13.18	13.16
30A-14A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	14	10	5330	763	66	20	66786	2145	13.18	13.2
30A-29A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	29	10	9715	722.5	66	20	66786	2145	13.18	13.14
41A-41C	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	41292	2660.2	41	20	41490	2680	12.36	12.36
41C-41A	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	40449	2575.9	41	20	39750	2506	12.36	12.39
41D	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	40791	2610.1	41	20	40989	2629.9	12.36	12.38
66A-2A-12A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	12	10	5095	737.5	13.44	13.44
66A-2A-14A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	14	10	5330	763	13.44	13.41
66A-2A-29A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	29	10	9715	722.5	13.44	13.42
66A-5A-5A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	5	5	2625	871.5	5	10	2553	884.3	13.44	13.38
66A-14A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	14	10	5330	763	30	10	9820	2355	13.44	13.4
66A-29A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	29	10	9715	722.5	30	10	9820	2355	13.44	13.37
66A-66A-12A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	12	10	5095	737.5	13.44	13.39
66A-66A-14A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	14	10	5330	763	13.44	13.41
66A-66C	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	66536	2120	66	20	66734	2139.8	13.44	13.36
66C-66A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	10	66681	2129.5	66	20	66536	2120	13.44	13.39
66D	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	66682	2134.6	66	20	66880	2154.4	13.44	13.36
2A-2A-46A	2	20	18900	1880	900	1960	16QAM	1	99	2	20	1100	1980	46	20	50665	5537.5	13.1	13.05
2A-5A-46A	2	20	18900	1880	900	1960	16QAM	1	99	5	10	2525	881.5	46	20	50665	5537.5	13.1	13.1
2A-13A-46A	2	20	18900	1880	900	1960	16QAM	1	99	13	10	5230	751	46	20	50665	5537.5	13.1	13.1
2A-46A-46A	2	20	18900	1880	900	1960	16QAM	1	99	46	20	50665	5537.5	46	20	47090	5180	13.1	13.09
2A-46A-66A	2	20	18900	1880	900	1960	16QAM	1	99	46	20	50665	5537.5	66	20	66786	2145	13.1	13.07
2A-46C	2	20	18900	1880	900	1960	16QAM	1	74	46	20	50665	5537.5	46	20	50467	5517.7	13.1	13.12
4A-46A-46A	4	15	20025	1717.5	2025	2117.5	16QAM	1	0	46	20	50665	5537.5	46	20	47090	5180	13.42	13.34
5A-2A-46A	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	46	20	50665	5537.5	18.54	18.53
5A-46C	5	5	20625	846.5	2625	891.5	16QAM	1	24	46	20	50665	5537.5	46	20	50467	5517.7	18.54	18.49
5A-46A-66A	5	5	20625	846.5	2625	891.5	16QAM	1	24	46	20	50665	5537.5	66	20	66786	2145	18.54	18.5
5B-46A	5	5	20625	846.5	2625	871.5	16QAM	1	24	5	10	2553	884.3	46	20	50665	5537.5	18.54	18.48
7A-46C	7	15	21375	2562.5	3375	2682.5	16QAM	1	0	46	20	50665	5537.5	46	20	50467	5517.7	12.88	12.86
13A-2A-46A	13	10	23230	782	5230	751	64QAM	1	0	2	20	900	1960	46	20	50665	5537.5	18.17	18.15
13A-46C	13	10	23230	782	5230	751	64QAM	1	0	46	20	50665	5537.5	46	20	50467	5517.7	18.17	18.16
13A-46A-66A	13	10	23230	782	5230	751	64QAM	1	0	46	20	50665	5537.5	66	20	66786	2145	18.17	18.12
66A-2A-46A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	46	20	50665	5537.5	13.44	13.35
66A-5A-46A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	5	10	2525	881.5	46	20	50665	5537.5	13.44	13.36
66A-13A-46A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	13	10	5230	751	46	20	50665	5537.5	13.44	13.37
66A-46A-46A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	46	20	50665	5537.5	46	20	47090	5180	13.44	13.39
66A-46C	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	46	20	50665	5537.5	46	20	50467	5517.7	13.44	13.39
66A-66A-46A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	46	20	50665	5537.5	13.44	13.38

LTE Down Link 4CA Call Setup

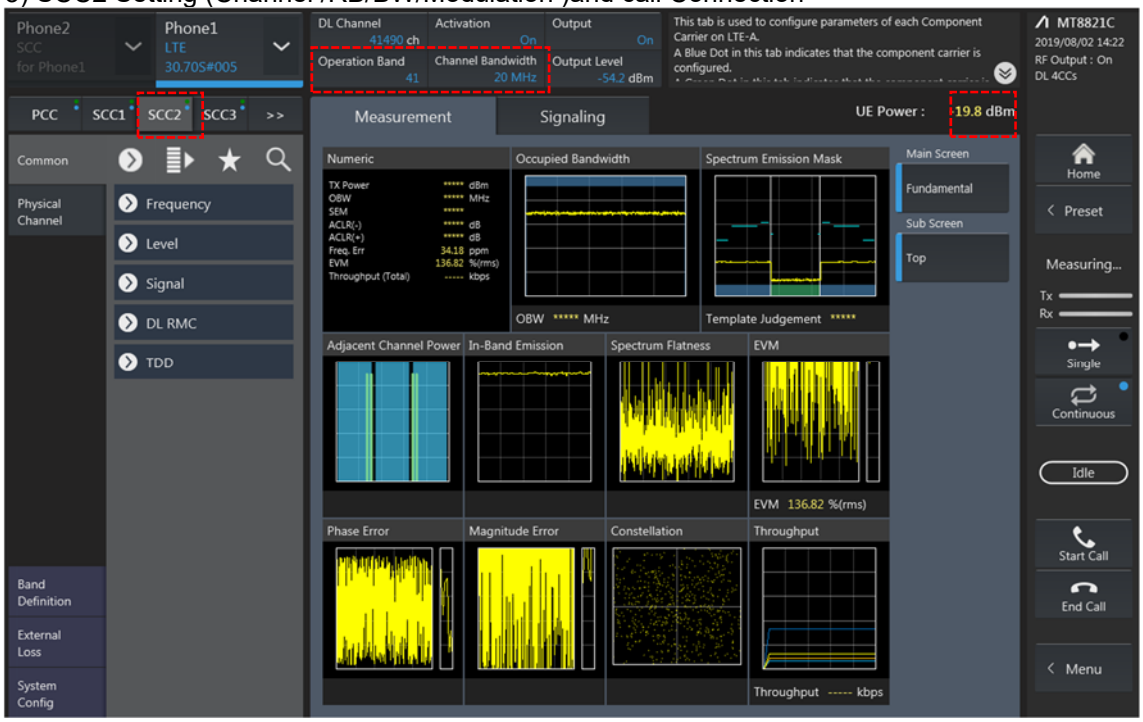
1) PCC Setting: Channel /RB/BW/Modulation



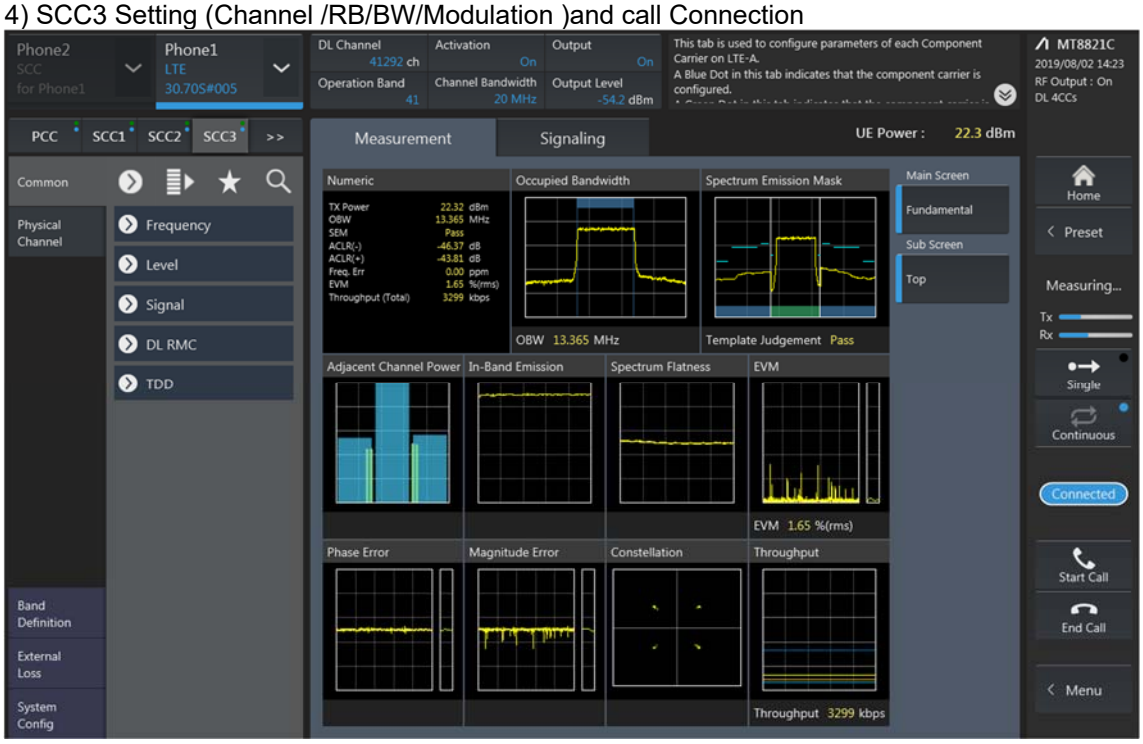
2) SCC1 Setting : Channel /RB/BW/Modulation



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



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



4CA Downlink Carrier aggregation Maximum Conducted Powers

Combination	PCC									SCC				SCC				SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2A-2A-4A-4A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	4	20	2050	2120	4	20	2300	2145	25.18	25.14
2A-2A-4A-5A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	25.18	25.17
2A-2A-5A-30A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	25.18	25.2
2A-2A-5A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	25.18	25.15
2A-2A-12A-30A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	25.18	25.18
2A-2A-12A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	25.18	25.15
2A-2A-13A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	25.18	25.15
2A-2A-14A-30A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	25.18	25.17
2A-2A-14A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	25.18	25.14
2A-2A-29A-30A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	25.18	25.19
2A-2A-30A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	25.18	25.21
2A-2A-66A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	25.18	25.17
2A-4A-4A-5A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2050	2120	4	20	2300	2145	5	10	2525	881.5	25.18	25.21
2A-4A-5A-30A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	5	10	2525	881.5	30	10	9820	2355	25.18	25.24
2A-4A-7A-7A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	7	20	3350	2680	7	20	2850	2630	25.18	25.19
2A-4A-7A-12A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	7	20	3100	2655	12	10	5095	2355	25.18	25.15
2A-4A-7C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	7	20	3350	2680	7	20	3152	2660.2	25.18	25.16
2A-4A-12A-30A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	12	10	5095	2355	30	10	9820	2355	25.18	25.11
2A-4A-12B	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	12	10	5095	737.5	12	5	5167	744.7	25.18	25.13
2A-4A-29A-30A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	29	10	9715	722.5	30	10	9820	2355	25.18	25.2
2A-5A-30A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	25.18	25.18
2A-5A-66A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	25.18	25.14
2A-12A-30A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	25.18	25.19
2A-12A-66A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	25.18	25.17
2A-13A-66A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	25.18	25.22
2A-14A-30A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	25.18	25.2
2A-14A-66A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	25.18	25.15
2A-29A-30A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	29	10	9715	722.5	30	10	9820	2355	66	20	66786	2145	25.18	25.11
2A-30A-66A-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	25.18	25.19
2A-66A-66A-71A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	25.18	25.21
2A-2A-66B	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	66	10	66987	2165.1	66	10	67086	2175	25.18	25.18
2A-2A-66C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	66	20	66536	2120	66	20	66734	2139.8	25.18	25.14
2A-4A-5B	2	15	18675	1857.5	675	1937.5	QPSK	1	74	4	20	2175	2132.5	5	5	2625	871.5	5	10	2553	884.3	25.18	25.17
2A-5A-66B	2	15	18675	1857.5	675	1937.5	QPSK	1	74	5	10	2525	881.5	66	10	66987	2165.1	66	10	67086	2175	25.18	25.19
2A-5A-66C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	5	10	2525	881.5	66	20	66536	2120	66	20	66734	2139.8	25.18	25.22
2A-13A-66B	2	15	18675	1857.5	675	1937.5	QPSK	1	74	13	10	5230	751	66	10	66987	2165.1	66	10	67086	2175	25.18	25.17
2A-13A-66C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	13	10	5230	751	66	20	66536	2120	66	20	66734	2139.8	25.18	25.15
4A-2A-2A-5A	4	20	20175	1732.5	2175	2132.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.76	24.76
4A-4A-2A-2A	4	20	20050	1720	2050	2120	QPSK	1	0	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.75	24.73
4A-4A-2A-5A	4	20	20050	1720	2050	2120	QPSK	1	0	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.75	24.71
4A-2A-5B	4	20	20175	1732.5	2175	2132.5	QPSK	1	0	2	20	900	1960	5	5	2625	871.5	5	10	2553	884.3	24.76	24.79
4A-4A-5B	4	20	20050	1720	2050	2120	QPSK	1	0	4	20	2300	2145	5	5	2625	871.5	5	10	2553	884.3	24.75	24.72
5A-2A-2A-4A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2300	2145	24.18	24.2
5A-2A-2A-30A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.18	24.17
5A-2A-2A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66734	2139.8	24.18	24.22
5A-2A-4A-4A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	4	20	2050	2120	4	20	2300	2145	24.18	24.2
5A-2A-30A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	30	10	9820	2355	66	20	66734	2139.8	24.18	24.18
5A-2A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.18	24.24
5A-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	5	2425	871.5	66	20	66786	2145	66	20	67236	2190	24.18	24.17
5A-30A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.18	24.21
5A-2A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	10	66987	2165.1	66	10	67086	2175	24.18	24.14
5A-2A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	20	66536	2120	66	20	66734	2139.8	24.18	24.15
5A-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	5	2425	871.5	66	10	66987	2165.1	66	10	67086	2175	24.18	24.19
5A-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	5	2425	871.5	66	20	66786	2145	66	20	67236	2190	24.18	24.22
5B-2A-4A	5	5	20625	846.5	2625	871.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	4	20	2300	2145	24.18	24.24
5B-4A-4A	5	5	20625	846.5	2625	871.5	QPSK	1	12	5	10	2553	884.3	4	20	2300	2132.5	4	20	2300	2145	24.18	24.21
5B-30A-66A	5	5	20625	846.5	2625	871.5	QPSK	1	12	5	10	2553	884.3	30	10	9820	2355	66	20	66734	2139.8	24.18	24.2
5B-66B	5	5	20625	846.5	2625	871.5	QPSK	1	12	5	10	2553	884.3	66	10	66987	2165.1	66	10	67086	2175	24.18	24.19
5B-66C	5	5	20625	846.5	2625	871.5	QPSK	1	12	5	10	2553	884.3	66	20	66786	2145	66	20	67236	2190	24.18	24.23
12A-2A-2A-30A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.65	24.6
12A-2A-2A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66734	2139.8	24.65	24.69
12A-2A-30A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	30	10	9820	2355	66	20	66734	2139.8	24.65	24.61
12A-2A-66A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.65	24.67
12A-30A-66A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.65	24.62
13A-2A-2A-66A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66734	2139.8	24.37	24.36
13A-2A-66A-66A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.37	24.39
13A-2A-66B	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	10	66987	2165.1	66	10	67086	2175	24.37	24.4
13A-2A-66C	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.37	24.42
14A-2A-2A-30A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	23.9	24.81
14A-2A-2A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	67236	2190	23.9	24.89
14A-2A-30A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	67236	2190	23.9	24.87
14A-2A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	23.9	24.86
14A-30A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	23.9	24.86
25A-41D	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	41	15	40620	2593	41	20	40449	2575.9	41	20	40791	2610.1	24.75	24.75
30A-2A-2A-5A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	23.81	23.84
30A-2A-2A-12A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	23.81	23.86
30A-2A-2A-14A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	14	10	5330	763	23.81	23.79
30A-2A-2A-29A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	23.81	23.77
30A-2A-2A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66734	2139.8	23.81	23.81
30A-2A-5A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	66	20	66734	2139.8	23.81	23.8
30A-2A-12A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	66	20	66734	2139.8	23.81	23.78
30A-2A-14A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	14	10	5330	763	66	20	66734	2139.8	23.81	23.84
30A-2A-29A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	66	20	66734	2139.8	23.81	23.81
30A-2A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	23.81	23.84
30A-5A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	23.81	23.8
30A-12A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	23.81	23.85
30A-14A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	23.81	23.86
30A-2A-5B	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	2	20	900	1960	5	5	2625	871.5	5	10	2553	884.3	23.81	23.77
30A-5B-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	12	5	5	2625	871.5	5	10	2553	884.3	66	20	66734	2139.8	23.81	23.79
41A-41D(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	24.03	24.04
41C-41C(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40449	2575.9	41	20	41292	2660.2	41	20	41490	2680	24.03	23.98
41D-41A(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40791	2610.1	41	20	40989	2629.9	41	20	41490	2680	24.03	23.94
41E(PC3)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40791	2610.1	41	20	40989	2629.9	41	20	41187	2649.7	24.03	24.01
41A-41D(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	26.74	26.71
41C-41C(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40449	2575.9	41	20	41292	2660.2	41	20	41490	2680	26.74	26.69
41D-41A(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40791	2610.1	41	20	40989	2629.9	41	20	41490	2680	26.74	26.75
41E(PC2)	41	15	40620	2593	40620	2593	QPSK	1	36	41	20	40791	2610.1	41	20	40989	2629.9	41	20	41187	2649.7	26.74	26.74
66A-2A-2A-5A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.79	24.79
66A-2A-2A-12A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.79	24.81
66A-2A-2A-13A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.76
66A-2A-2A-14A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.73
66A-2A-2A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	24.79	24.8
66A-2A-5A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	30	10	9820	2355	24.79	24.77
66A-2A-12A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	24.79	24.78
66A-2A-14A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	14	10	5330	763	30	10	9820	2355	24.79	24.81
66A-2A-29A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	30	10	9820	2355	24.79	24.82
66A-66A-2A-2A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	24.79	24.74
66A-66A-2A-5A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	24.79	24.78
66A-66A-2A-12A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.79	24.75
66A-66A-2A-13A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.79	24.79
66A-66A-2A-14A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	2	20	900	1960	14	10	5330	763	24.79	24.81
66A-66A-2A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	2	20	900	1960	30	10	9820	2355	24.79	24.82
66A-66A-5A-5A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	5	5	2425	871.5	5	5	2625	891.5	24.79	24.8
66A-66A-5A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	5	10	2525	881.5	30	10	9820	2355	24.79	24.84
66A-66A-12A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	12	10	5095	737.5	30	10	9820	2355	24.79	24.81
66A-66A-14A-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	14	10	5330	763	30	10	9820	2355	24.79	24.78
66A-5B-30A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	5	5	2625	871.5	5	10	2553	884.3	30	10	9820	2355	24.79	24.77
66B-2A-2A	66	10	132022	1715	66486	2115	QPSK	1	24	66	10	66585	2124.9	2	20	900	1960	2	20	1100	1980	24.59	24.58
66B-2A-5A	66	10	132022	1715	66486	2115	QPSK	1	24	66	10	66585	2124.9	2	20	900	1960	5	10	2525	881.5	24.59	24.6
66B-2A-13A	66	10	132022	1715	66486	2115	QPSK	1	24	66	10	66585	2124.9	2	20	900	1960	13	10	5230	751	24.59	24.57
66B-5A-5A	66	10	132022	1715	66486	2115	QPSK	1	24	66	10	66585	2124.9	5	5	2425	871.5	5	5	2625	891.5	24.59	24.59
66B-5B	66	10	132022	1715	66486	2115	QPSK	1	24	66	10	66585	2124.9	5	5	2625	871.5	5	10	2553	884.3	24.59	24.55
66C-2A-2A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66890	2155.4	2	20	900	1960	2	20	1100	1980	24.76	24.69
66C-2A-5A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66890	2155.4	2	20	900	1960	5	10	2525	881.5	24.76	24.71
66C-2A-13A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66890	2155.4	2	20	900	1960	13	10	5230	751	24.76	24.77
66C-5A-5A	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66890	2155.4	5	5	2425	871.5	5	5	2625	891.5	24.76	24.79
66C-5B	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66890	2155.4	5	5	2625	871.5	5	10	2553	884.3	24.76	24.76
2A-2A-46C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	25.18	25.15
2A-5A-46C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	25.18	25.16
2A-13A-46C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	25.18	25.18
2A-46A-46C	2	15	18675	1857.5	675	1937.5	QPSK	1	74	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	25.18	25.17
2A-46C-66A	2	15	18675	1857.5	675	1937.5	QPSK	1	74	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	25.18	25.12
4A-46A-46C	4	20	20175	1732.5	2175	2132.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.76	24.77
4A-46D	4	20	20175	1732.5	2175	2132.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.76	24.81
5A-2A-46C	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.18	24.19
5A-46D	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.18	24.19
5A-46C-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.18	24.16
7A-46D	7	20	21350	2560	3350	2680	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	23.92	23.89
13A-2A-46C	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.37	24.32
13A-46D	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.37	24.32
13A-46C-66A	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.37	24.33
66A-2A-46C	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.7
66A-5A-46C	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.75
66A-13A-46C	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.77
66A-46A-46C	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.79	24.82
66A-46D	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.79	24.81
66A-66A-46C	66	15	132597	1772.5	67061	2172.5	QPSK	1	0	66	20	66536	2120	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.76

4CA Downlink Carrier aggregation Reduced Conducted Powers

	PCC									SCC				SCC				SCC				Tx Power	
Combination	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2A-2A-4A-4A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	4	20	2050	2120	4	20	2300	2145	13.11	13.1
2A-2A-4A-5A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	13.11	13.14
2A-2A-5A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	13.11	13.15
2A-2A-5A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	13.11	13.12
2A-2A-12A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	13.11	13.11
2A-2A-12A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	13.11	13.07
2A-2A-13A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	13.11	13.14
2A-2A-14A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	13.11	13.09
2A-2A-14A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	13.11	13.09
2A-2A-29A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	13.11	13.11
2A-2A-30A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	13.11	13.11
2A-2A-66A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	13.11	13.1
2A-4A-4A-5A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2050	2120	4	20	2300	2145	5	10	2525	881.5	13.11	13.17
2A-4A-5A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	5	10	2525	881.5	30	10	9820	2355	13.11	13.1
2A-4A-7A-7A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	7	20	3350	2680	7	20	2850	2630	13.11	13.08
2A-4A-7A-12A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	7	20	3100	2655	12	10	5095	2355	13.11	13.09
2A-4A-7C	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	7	15	3375	2682.5	7	20	3204	2665.4	13.11	13.11
2A-4A-12A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	12	10	5095	2355	30	10	9820	2355	13.11	13.07
2A-4A-12B	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	12	10	5095	737.5	12	5	5167	744.7	13.11	13.14
2A-4A-29A-30A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	29	10	9715	722.5	30	10	9820	2355	13.11	13.1
2A-5A-30A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	13.11	13.14
2A-5A-66A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	13.11	13.08
2A-12A-30A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	13.11	13.15
2A-12A-66A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	13.11	13.09
2A-13A-66A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	13.11	13.08
2A-14A-30A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	13.11	13.15
2A-14A-66A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	13.11	13.15
2A-29A-30A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	29	10	9715	722.5	30	10	9820	2355	66	20	66786	2145	13.11	13.07
2A-30A-66A-66A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	13.11	13.09
2A-66A-66A-71A	2	15	18675	1857.5	675	1937.5	16QAM	1	0	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	13.11	13.12
2A-2A-66B	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	66	10	66987	2165.1	66	10	67086	2175	13.11	13.07
2A-2A-66C	2	15	18675	1857.5	675	1937.5	16QAM	1	0	2	20	1100	1980	66	20	66536	2120	66	20	66734	2139.8	13.11	13.14
2A-4A-5B	2	15	18675	1857.5	675	1937.5	16QAM	1	0	4	20	2175	2132.5	5	5	2625	871.5	5	10	2553	884.3	13.11	13.16
2A-5A-66B	2	15	18675	1857.5	675	1937.5	16QAM	1	0	5	10	2525	881.5	66	10	66987	2165.1	66	10	67086	2175	13.11	13.15
2A-5A-66C	2	15	18675	1857.5	675	1937.5	16QAM	1	0	5	10	2525	881.5	66	20	66536	2120	66	20	66734	2139.8	13.11	13.17
2A-13A-66B	2	15	18675	1857.5	675	1937.5	16QAM	1	0	13	10	5230	751	66	10	66987	2165.1	66	10	67086	2175	13.11	13.1
2A-13A-66C	2	15	18675	1857.5	675	1937.5	16QAM	1	0	13	10	5230	751	66	20	66536	2120	66	20	66734	2139.8	13.11	13.09
4A-2A-2A-5A	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	13.29	13.29
4A-4A-2A-2A	4	20	20050	1720	2050	2120	16QAM	1	0	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	13.31	13.28
4A-4A-2A-5A	4	20	20050	1720	2050	2120	16QAM	1	0	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	13.31	13.3
4A-2A-5B	4	20	20175	1732.5	2175	2132.5	16QAM	1	0	2	20	900	1960	5	5	2625	871.5	5	10	2553	884.3	1329	13.21
4A-4A-5B	4	20	20050	1720	2050	2120	16QAM	1	0	4	20	2300	2145	5	5	2625	871.5	5	10	2553	884.3	13.31	13.28
5A-2A-2A-4A	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	2	20	1100	1980	4	20	2300	2145	18.54	18.51
5A-2A-2A-30A	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	18.54	18.53
5A-2A-2A-66A	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	2	20	1100	1980	66	20	66734	2139.8	18.54	18.5
5A-2A-4A-4A	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	4	20	2050	2120	4	20	2300	2145	18.54	18.52
5A-2A-30A-66A	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	30	10	9820	2355	66	20	66734	2139.8	18.54	18.55
5A-2A-66A-66A	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	18.54	18.54
5A-5A-66A-66A	5	5	20625	846.5	2625	891.5	16QAM	1	24	5	5	2425	871.5	66	20	66786	2145	66	20	67236	2190	18.54	18.53
5A-30A-66A-66A	5	5	20625	846.5	2625	891.5	16QAM	1	24	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	18.54	18.54
5A-2A-66B	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	66	10	66987	2165.1	66	10	67086	2175	18.54	18.51
5A-2A-66C	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	66	20	66536	2120	66	20	66734	2139.8	18.54	18.5
5A-5A-66B	5	5	20625	846.5	2625	891.5	16QAM	1	24	5	5	2425	871.5	66	10	66987	2165.1	66	10	67086	2175	18.54	18.52
5A-5A-66C	5	5	20625	846.5	2625	891.5	16QAM	1	24	5	5	2425	871.5	66	20	66786	2145	66	20	67236	2190	18.54	18.51
5B-2A-4A	5	5	20625	846.5	2625	871.5	16QAM	1	24	5	10	2553	884.3	2	20	900	1960	4	20	2300	2145	18.54	18.55
5B-4A-4A	5	5	20625	846.5	2625	871.5	16QAM	1	12	5	10	2553	884.3	4	20	2050	2120	4	20	2300	2145	18.54	18.56
5B-30A-66A	5	5	20625	846.5	2625	871.5	16QAM	1	12	5	10	2553	884.3	30	10	9820	2355	66	20	66734	2139.8	18.54	18.49
5B-66B	5	5	20625	846.5	2625	871.5	16QAM	1	12	5	10	2553	884.3	66	10	66987	2165.1	66	10	67086	2175	18.54	18.51
5B-66C	5	5	20625	846.5	2625	871.5	16QAM	1	12	5	10	2553	884.3	66	20	66786	2145	66	20	67236	2190	18.54	18.5
12A-2A-2A-30A	12	10	23095	707.5	5095	737.5	16QAM	1	49	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	18.39	18.4
12A-2A-2A-66A	12	10	23095	707.5	5095	737.5	16QAM	1	49	2	20	900	1960	2	20	1100	1980	66	20	66734	2139.8	18.39	18.37
12A-2A-30A-66A	12	10	23095	707.5	5095	737.5	16QAM	1	49	2	20	900	1960	30	10	9820	2355	66	20	66734	2139.8	18.39	18.4
12A-2A-66A-66A	12	10	23095	707.5	5095	737.5	16QAM	1	49	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	18.39	18.41
12A-30A-66A-66A	12	10	23095	707.5	5095	737.5	16QAM	1	49	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	18.39	18.35
13A-2A-2A-66A	13	10	23230	782	5230	751	64QAM	1	0	2	20	900	1960	2	20	1100	1980	66	20	66734	2139.8	18.17	18.16
13A-2A-66A-66A	13	10	23230	782	5230	751	64QAM	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	18.17	18.14
13A-2A-66B	13	10	23230	782	5230	751	64QAM	1	0	2	20	900	1960	66	10	66987	2165.1	66	10	67086	2175	18.17	18.19
13A-2A-66C	13	10	23230	782	5230	751	64QAM	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	18.17	18.2
14A-2A-2A-30A	14	10	23330	793	5330	763	64QAM	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	18.22	18.23
14A-2A-2A-66A	14	10	23330	793	5330	763	64QAM	1	0	2	20	900	1960	2	20	1100	1980	66	20	67236	2190	18.22	18.15
14A-2A-30A-66A	14	10	23330	793	5330	763	64QAM	1	0	2	20	900	1960	30	10	9820	2355	66	20	67236	2190	18.22	18.19
14A-2A-66A-66A	14	10	23330	793	5330	763	64QAM	1	0	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	18.22	18.21
14A-30A-66A-66A	14	10	23330	793	5330	763	64QAM	1	0	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	18.22	18.19
25A-41D	25	20	26590	1905	8590	1985	16QAM	1	0	41	15	40620	2593	41	20	40449	2575.9	41	20	40791	2610.1	13.15	13.14
30A-2A-2A-5A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	13.18	13.19
30A-2A-2A-12A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	13.18	13.17
30A-2A-2A-14A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	2	20	1100	1980	14	10	5330	763	13.18	13.13
30A-2A-2A-29A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	13.18	13.11
30A-2A-2A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	2	20	1100	1980	66	20	66734	2139.8	13.18	13.1
30A-2A-5A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	5	10	2525	881.5	66	20	66734	2139.8	13.18	13.17
30A-2A-12A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	12	10	5095	737.5	66	20	66734	2139.8	13.18	13.14
30A-2A-14A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	14	10	5330	763	66	20	66734	2139.8	13.18	13.14
30A-2A-29A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	29	10	9715	722.5	66	20	66734	2139.8	13.18	13.16
30A-2A-66A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	13.18	13.18
30A-5A-66A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	13.18	13.12
30A-12A-66A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	13.18	13.17
30A-14A-66A-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	13.18	13.14
30A-2A-5B	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	2	20	900	1960	5	5	2625	871.5	5	10	2553	884.3	13.18	13.11
30A-5B-66A	30	5	27735	2312.5	9845	2357.5	16QAM	1	12	5	5	2625	871.5	5	10	2553	884.3	66	20	66734	2139.8	13.18	13.13
41A-41D	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	12.36	12.36
41C-41C	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	40449	2575.9	41	20	41292	2660.2	41	20	41490	2680	12.36	12.34
41D-41A	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	40791	2610.1	41	20	40989	2629.9	41	20	41490	2680	12.36	12.3
41E	41	15	40620	2593	40620	2593	16QAM	1	0	41	20	40791	2610.1	41	20	40989	2629.9	41	20	41187	2649.7	12.36	12.39
66A-2A-2A-5A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	13.44	13.37
66A-2A-2A-12A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	13.44	13.4
66A-2A-2A-13A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	2	20	1100	1980	13	10	5230	751	13.44	13.39
66A-2A-2A-14A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	2	20	1100	1980	14	10	5330	763	13.44	13.45
66A-2A-2A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	13.44	13.41
66A-2A-5A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	5	10	2525	881.5	30	10	9820	2355	13.44	13.44
66A-2A-12A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	13.44	13.39
66A-2A-14A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	14	10	5330	763	30	10	9820	2355	13.44	13.41
66A-2A-29A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	29	10	9715	722.5	30	10	9820	2355	13.44	13.39
66A-66A-2A-2A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	2	20	900	1960	2	20	1100	1980	13.44	13.44
66A-66A-2A-5A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	2	20	900	1960	5	10	2525	881.5	13.44	13.44
66A-66A-2A-12A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	2	20	900	1960	12	10	5095	737.5	13.44	13.42
66A-66A-2A-13A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	2	20	900	1960	13	10	5230	751	13.44	13.39
66A-66A-2A-14A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	2	20	900	1960	14	10	5330	763	13.44	13.45
66A-66A-2A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	2	20	900	1960	30	10	9820	2355	13.44	13.4
66A-66A-5A-5A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	5	5	2425	871.5	5	5	2625	891.5	13.44	13.39
66A-66A-5A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	5	10	2525	881.5	30	10	9820	2355	13.44	13.37
66A-66A-12A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	12	10	5095	737.5	30	10	9820	2355	13.44	13.41
66A-66A-14A-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	14	10	5330	763	30	10	9820	2355	13.44	13.42
66A-5B-30A	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	5	5	2625	871.5	5	10	2553	884.3	30	10	9820	2355	13.44	13.42
66B-2A-2A	66	10	132022	1715	66486	2115	16QAM	1	0	66	10	66585	2124.9	2	20	900	1960	2	20	1100	1980	13.36	13.37
66B-2A-5A	66	10	132022	1715	66486	2115	16QAM	1	0	66	10	66585	2124.9	2	20	900	1960	5	10	2525	881.5	13.36	13.36
66B-2A-13A	66	10	132022	1715	66486	2115	16QAM	1	0	66	10	66585	2124.9	2	20	900	1960	13	10	5230	751	13.36	13.4
66B-5A-5A	66	10	132022	1715	66486	2115	16QAM	1	0	66	10	66585	2124.9	5	5	2425	871.5	5	5	2625	891.5	13.36	13.41
66B-5B	66	10	132022	1715	66486	2115	16QAM	1	0	66	10	66585	2124.9	5	5	2625	871.5	5	10	2553	884.3	13.36	13.39
66C-2A-2A	66	15	132047	1717.5	66511	2117.5	16QAM	1	0	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	13.44	13.49
66C-2A-5A	66	15	132047	1717.5	66511	2117.5	16QAM	1	0	66	20	66682	2134.6	2	20	900	1960	5	10	2525	881.5	13.44	13.47
66C-2A-13A	66	15	132047	1717.5	66511	2117.5	16QAM	1	0	66	20	66682	2134.6	2	20	900	1960	13	10	5230	751	13.44	13.4
66C-5A-5A	66	15	132047	1717.5	66511	2117.5	16QAM	1	0	66	20	66682	2134.6	5	5	2425	871.5	5	5	2625	891.5	13.44	13.42
66C-5B	66	15	132047	1717.5	66511	2117.5	16QAM	1	0	66	20	66682	2134.6	5	5	2625	871.5	5	10	2553	884.3	13.44	13.42
2A-2A-46C	2	20	18900	1880	900	1960	16QAM	1	99	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	13.1	13.11
2A-5A-46C	2	20	18900	1880	900	1960	16QAM	1	99	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	13.1	13.04
2A-13A-46C	2	20	18900	1880	900	1960	16QAM	1	99	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	13.1	13.09
2A-46A-46C	2	20	18900	1880	900	1960	16QAM	1	99	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	13.1	13.17
2A-46C-66A	2	20	18900	1880	900	1960	16QAM	1	99	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	13.1	13.12
4A-46A-46C	4	15	20025	1717.5	2025	2117.5	16QAM	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	13.42	13.4
4A-46D	4	15	20025	1717.5	2025	2117.5	16QAM	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	13.42	13.38
5A-2A-46C	5	5	20625	846.5	2625	891.5	16QAM	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	18.54	18.5
5A-46D	5	5	20625	846.5	2625	891.5	16QAM	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	18.54	18.51
5A-46C-66A	5	5	20625	846.5	2625	891.5	16QAM	1	24	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	18.54	18.51
7A-46D	7	15	21375	2562.5	3375	2682.5	16QAM	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	12.88	12.89
13A-2A-46C	13	10	23230	782	5230	751	64QAM	1	0	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	18.17	18.19
13A-46D	13	10	23230	782	5230	751	64QAM	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	18.17	18.12
13A-46C-66A	13	10	23230	782	5230	751	64QAM	1	0	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	18.17	18.17
66A-2A-46C	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	13.44	13.4
66A-5A-46C	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	13.44	13.35
66A-13A-46C	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	13.44	13.41
66A-46A-46C	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	13.44	13.4
66A-46D	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	13.44	13.37
66A-66A-46C	66	15	132047	1717.5	66511	2117.5	16QAM	1	36	66	20	67036	2170	46	20	50665	5537.5	46	20	50467	5517.7	13.44	13.37