

TEST REPORT

SAR Test for certification of SM-P625

APPLICANT

Samsung Electronics. Co., Ltd.

REPORT NO.

HCT-SR-2402-FC002-R1

DATE OF ISSUE

Feb. 23, 2024

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<p>TEST REPORT</p> <p>FCC SAR Test for certification</p>	<p>REPORT NO. HCT-SR-2402-FC002-R1</p> <p>DATE OF ISSUE Feb. 23, 2024</p> <p>FCC ID A3LSMP625</p>
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Applicant	SAMSUNG Electronics Co., Ltd 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677, Korea
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Product Name	Tablet
Model Name	SM-P625

Date of Test	Jan. 23, 2024 ~ Feb. 15, 2024
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Location of Test	<input checked="" type="checkbox"/> Permanent Testing Lab <input type="checkbox"/> On Site Testing Lab (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si,)
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FCC Rule Part(s)	CFR §2.1093
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Test Results	PASS (SAR Limit : 1.6 W/kg) Refer to the clause 3.2 Attestation of test result
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REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	Feb. 19, 2024	Initial Release
1	Feb. 23, 2024	5, 135 Page revised

Notice

Content

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked *.

Information provided by the applicant is marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

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1. Test Regulations

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

- FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
- FCC KDB Publication 941225 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 RF Exposure Guidance v06
- FCC KDB Publication 616217 D04 SAR Tablets v01r02
- FCC KDB Publication 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03
- FCC KDB Publication 971168 D01 Power Meas License Digital Systems v03r01

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

- October 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Overlapping LTE Bands Test exclusion)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- November 2017 TCBC Workshop Notes (LTE Carrier Aggregation)
- April 2018 TCBC Workshop Notes (LTE DL CA SAR Test Exclusion)
- April 2019 TCB Workshop Notes (Tissue Simulating Liquid (TSL))
- April 2022 TCBC Workshop Notes (Sum-Peak Location Separation Ratio)

2. Test Location

2.1 Test Laboratory

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

2.2 Test Facilities

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

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

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SM-P625
Equipment Type	Tablet
FCC ID	A3LSMP625
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

3.2 Attestation of test result of device under test

Band	Tx. Frequency	Equipment Class	Reported SAR (W/kg)
			Reported 1g Body SAR
GSM/GPRS/EDGE 850	824.2 MHz ~ 848.8 MHz	PCB	0.80
GSM/GPRS/EDGE 1900	1 850.2 MHz ~ 1 909.8 MHz	PCB	0.51
UMTS Band 5	826.4 MHz ~ 846.6 MHz	PCB	0.88
UMTS Band 4	1 712.4 MHz ~ 1 752.6 MHz	PCB	0.80
UMTS Band 2	1 852.4 MHz ~ 1 907.6 MHz	PCB	0.77
LTE FDD Band 12	699.7 MHz ~ 715.3 MHz	PCB	0.92
LTE FDD Band 17	706.5 MHz ~ 713.5 MHz	PCB	N/A
LTE FDD Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz	PCB	N/A
LTE FDD Band 4 (AWS)	1 710.7 MHz ~ 1 754.3 MHz	PCB	N/A
LTE FDD Band 25 (PCS)	1 850.7 MHz ~ 1 914.3 MHz	PCB	1.08
LTE FDD Band 26 (Cell)	814.7 MHz ~ 848.3 MHz	PCB	0.94
LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz	PCB	0.57
LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz	PCB	0.84
2.4 GHz WLAN	2 412 MHz ~ 2 472 MHz	DTS	0.79
U-NII-1	5 180 MHz ~ 5 240 MHz	NII	N/A
U-NII-2A	5 260 MHz ~ 5 320 MHz	NII	0.56
U-NII-2C	5 500 MHz ~ 5 720 MHz	NII	0.62
U-NII-3	5 745 MHz ~ 5 825 MHz	NII	0.64
Bluetooth	2 402 MHz ~ 2 480 MHz	DSS/DTS	0.37
Simultaneous SAR per KDB 690783 D01v01r03			1.59
Date(s) of Tests:	Jan. 23, 2024 ~ Feb. 15, 2024		

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Voice / Data	824.2 MHz ~ 848.8 MHz
GSM1900	Voice / Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 2	Voice / Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 4	Voice / Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 5	Voice / Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Voice / Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Voice / Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Voice / Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 12	Voice / Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 17	Voice / Data	706.5 MHz ~ 713.5 MHz
LTE FDD Band 25 (PCS)	Voice / Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26 (Cell)	Voice / Data	814.7 MHz ~ 848.3 MHz
LTE TDD Band 41	Voice / Data	2 498.5 MHz ~ 2 687.5 MHz
LTE FDD Band 66 (AWS)	Voice / Data	1 710.7 MHz ~ 1 779.3 MHz
U-NII-1	Voice / Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Voice / Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Voice / Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Voice / Data	5 745 MHz ~ 5 825 MHz
2.4 GHz WLAN	Voice / Data	2 412 MHz ~ 2 472 MHz
Bluetooth / LE 5.3	Data	2 402 MHz ~ 2 480 MHz
S-Pen	Data	531 kHz
Device Description		
Battery	EB-BT725ABU (BYD)	
S-Pen	CP-911-01B-X (WACOM)	
Book Cover	EF-BP610 (SEC)	
Device Serial Numbers	Mode	Serial Number
	GSM850, GSM1900, UMTS B2, B4, B5	XA90119M
	LTE B12, B25, B26, B41, B66	XA90075M
	2.4 GHz WLAN, 5 GHz WLAN, Bluetooth	XA90492M, XB10245M, XB10244M
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 uses an independent fixed level power reduction mechanism for WLAN/BT and some Main Bands are activating in close proximity to the user's Body. FCC KDB Publication 616217 D04v01r02 Sec.6 was used as a guideline for selection SAR test distances for device.

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

4.3 Nominal and Maximum Output Power Specifications

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

4.3.1 2G/3G/4G Nominal and Maximum Output Power

A. GSM Modes

Maximum Output Power

Mode / Band		Voice	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot
GSM/GPRS/EDGE 850	Maximum	34.5	34.5	32.0	30.0	29.0	27.5	25.5	24.5	23.5
	Nominal	33.5	33.5	31.0	29.0	28.0	26.5	24.5	23.5	22.5
GSM/GPRS/EDGE1900	Maximum	31.5	31.5	29.0	27.5	26.0	26.5	25.0	23.5	21.0
	Nominal	30.5	30.5	28.0	26.5	25.0	25.5	24.0	22.5	20.0

(Tolerance: Nominal +1 dB ~-1.5 dB)

Reduced Output Power

Mode / Band		Voice	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot
GSM/GPRS/EDGE 850	Maximum	24.5	24.5	22.5	21.0	20.0	18.5	16.0	15.0	14.0
	Nominal	23.5	23.5	21.5	20.0	19.0	17.5	15.0	14.0	13.0
GSM/GPRS/EDGE1900	Maximum	22.0	22.0	19.5	18.0	16.5	18.5	16.0	14.5	13.0
	Nominal	21.0	21.0	18.5	17.0	15.5	17.5	15.0	13.5	12.0

(Tolerance: Nominal +1 dB ~-1.5 dB)

B. UMTS Modes

Maximum Output Power

Mode/Band		Modulated Average(dBm)			
		3GPP Rel 99	HSDPA	HSUPA	DC-HSDPA
			3GPP Cat.24	3GPP Cat.6	3GPP Cat.24
UMTS Band 2 (1 900 MHz)	Maximum	24.0	23.5	23.0	23.0
	Nominal	23.0	22.5	22.0	22.0
UMTS Band 4 (1 700 MHz)	Maximum	24.0	23.5	23.0	23.0
	Nominal	23.0	22.5	22.0	22.0
UMTS Band 5 (835 MHz)	Maximum	24.5	23.5	23.5	23.0
	Nominal	23.5	22.5	22.5	22.0

(Tolerance: Nominal +1 dB ~-1.5 dB)

Reduced Output Power

Mode/Band		Modulated Average(dBm)			
		3GPP Rel 99	HSDPA	HSUPA	DC-HSDPA
			3GPP Cat.24	3GPP Cat.6	3GPP Cat.24
UMTS Band 2 (1 900 MHz)	Maximum	14.5	14.0	14.0	14.0
	Nominal	13.5	13.0	13.0	13.0
UMTS Band 4 (1 700 MHz)	Maximum	15.0	14.5	14.5	14.5
	Nominal	14.0	13.5	13.5	13.5
UMTS Band 5 (835 MHz)	Maximum	17.0	16.5	16.5	16.5
	Nominal	16.0	15.5	15.5	15.5

(Tolerance: Nominal +1 dB ~-1.5 dB)

C. LTE Modes

Maximum Output Power

Mode / Band		Modulated Average (dBm)	
		Maximum	Reduced
LTE FDD Band 2	Maximum	24.0	15.5
	Nominal	23.0	14.5
LTE FDD Band 4	Maximum	24.5	15.5
	Nominal	23.5	14.5
LTE FDD Band 5	Maximum	25.0	17.5
	Nominal	24.0	16.5
LTE FDD Band 12	Maximum	24.5	19.5
	Nominal	23.5	18.5
LTE FDD Band 17	Maximum	24.5	19.5
	Nominal	23.5	18.5
LTE FDD Band 25	Maximum	24.0	15.5
	Nominal	23.0	14.5
LTE FDD Band 26	Maximum	25.0	17.5
	Nominal	24.0	16.5
LTE TDD Band 41	Maximum	24.0	15.0
	Nominal	23.0	14.0
LTE FDD Band 66	Maximum	24.5	15.5
	Nominal	23.5	14.5

(Tolerance: Nominal +1 dB ~-1.5 dB)

4.3.2 Maximum output power

2.4 GHz, 5 GHz WIFI

Mode	IEEE 802.11 (dBm)														
	SISO (ANT 0)					SISO (ANT 1)					MIMO				
	a	b	g	n	ac	a	b	g	n	ac	a	b	g	n	ac
2.4 GHz		14 CH12,13 : 3	13.5 CH1,2 : 9 CH3,13 : 1.5 CH8, 9, 10, 11 : 9.5 CH12 : 3	13.5 CH1,2 : 9 CH3,13 : 1.5 CH8, 9, 10, 11 : 9.5 CH12 : 3										16.5 CH1,2 : 12 CH3,13 : 4.5 CH8, 9, 10, 11 : 12.5 CH12 : 6	
5 GHz (20 MHz BW)						11			11	11				14	14
5 GHz (40 MHz BW)									8.5	8.5				11.5	11.5
5 GHz (80 MHz BW)										5					8

(Upper tolerance: target +1.0dB)

4.3.3 Reduced output power

2.4 GHz, 5 GHz WIFI (Grip Sensor)

Mode	IEEE 802.11 (dBm)														
	SISO (ANT 0)					SISO (ANT 1)					MIMO				
	a	b	g	n	ac	a	b	g	n	ac	a	b	g	n	ac
2.4 GHz		11 Ch12,13 : 3	11 CH1,2 : 9 CH3,13 : 1.5 CH8, 9, 10, 11 : 9.5 CH12 : 3	11 CH1,2 : 9 CH3,13 : 1.5 CH8, 9, 10, 11 : 9.5 CH12 : 3										14 CH1,2 : 12 CH3,13 : 4.5 CH8, 9, 10, 11 : 12.5 CH12 : 6	
5 GHz(20 MHz BW)						7 CH140 : 8			7 CH140 : 8	7 CH140 : 8				10 CH140 : 11	10 CH140 : 11
5 GHz(40 MHz BW)									7	7				10	10
5 GHz(80 MHz BW)										5					8

(Upper tolerance: target +1.0dB)

4.3.4 Maximum Bluetooth Power

Mode	Frequency	Target power(dBm)
Bluetooth BDR (in dBm)	2402	9.5
	2441	
	2480	
Bluetooth EDR (in dBm)	2402	7.5
	2441	
	2480	
Bluetooth LE (in dBm)		9.5

(Upper tolerance: target +1.0dB)

4.4 LTE Information

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

Ch. No.& Freq.(MHz)		Low	Mid	High
LTE FDD Band 2 (PCS)	1.4 MHz	1 850.7 (18607)	1 880.0 (18900)	1 909.3 (19193)
	3 MHz	1 851.5 (18615)	1 880.0 (18900)	1 908.5 (19185)
	5 MHz	1 852.5 (18625)	1 880.0 (18900)	1 907.5 (19175)
	10 MHz	1 855.0 (18650)	1 880.0 (18900)	1 905.0 (19150)
	15 MHz	1 857.5 (18675)	1 880.0 (18900)	1 902.5 (19125)
	20 MHz	1 860.0 (18700)	1 880.0 (18900)	1 900.0 (19100)
LTE FDD Band 4 (AWS)	1.4 MHz	1 710.7 (19957)	1 732.5 (20175)	1 754.3 (20393)
	3 MHz	1 711.5 (19965)	1 732.5 (20175)	1 753.5 (20385)
	5 MHz	1 712.5 (19975)	1 732.5 (20175)	1 752.5 (20375)
	10 MHz	1 715.0 (20000)	1 732.5 (20175)	1 750.0 (20350)
	15 MHz	1 717.5 (20025)	1 732.5 (20175)	1 747.5 (20325)
LTE FDD Band 5 (Cell)	1.4 MHz	824.7 (20407)	836.5 (20525)	848.3 (20643)
	3 MHz	825.5 (20415)	836.5 (20525)	847.5 (20635)
	5 MHz	826.5 (20425)	836.5 (20525)	846.5 (20625)
	10 MHz		836.5 (20525)	
LTE FDD Band 12	1.4 MHz	699.7 (23017)	707.5 (23095)	715.3 (23173)
	3 MHz	700.5 (23025)	707.5 (23095)	714.5 (23165)
	5 MHz	701.5 (23035)	707.5 (23095)	713.5 (23155)
	10 MHz		707.5 (23095)	

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid	Mid-High / High	
LTE FDD Band 17	5 MHz			710.0(23790)		
	10 MHz			710.0(23790)		
LTE FDD Band 25 (PCS)	1.4 MHz	1 850.7 (26047)		1 882.5 (26365)	1 914.3 (26683)	
	3 MHz	1 851.5 (26055)		1 882.5 (26365)	1 913.5 (26675)	
	5 MHz	1 852.5 (26065)		1 882.5 (26365)	1 912.5 (26665)	
	10 MHz	1 855 (26090)		1 882.5 (26365)	1 910 (26640)	
	15 MHz	1 857.5 (26115)		1 882.5 (26365)	1 907.5 (26615)	
	20 MHz	1 860 (26140)		1 882.5 (26365)	1 905 (26590)	
LTE FDD Band 26 (Cell)	1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
	3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
	5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
	10 MHz	819.0 (26740)		831.5 (26865)	844.0 (26990)	
	15 MHz			831.5 (26865)		
LTE FDD Band 66 (AWS)	1.4 MHz	1 710.7 (131979)		1 745 (132322)	1 779.3 (132665)	
	3 MHz	1 711.5 (131987)		1 745 (132322)	1 778.5 (132657)	
	5 MHz	1 712.5 (131997)		1 745 (132322)	1 777.5 (132647)	
	10 MHz	1 715.0 (132022)		1 745 (132322)	1 775.0 (132622)	
	15 MHz	1 717.5 (132047)		1 745 (132322)	1 772.5 (132597)	
	20 MHz	1 720.0 (132072)		1 745 (132322)	1 770.0 (132572)	
LTE TDD Band 41	5 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)
	10 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)
	15 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)
	20 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)
UE Category				LTE Rel. 15, DL UE Category 15, UL UE Category 16		
HPUE Power Class				LTE TDD 41 Power Class 3		
Modulations Supported in UL				QPSK, 16QAM, 64QAM, 256QAM		
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3				Yes		
A-MPR disabled for SAR Testing.				Yes		
LTE Carrier Aggregation				This device supports Inter-Band & Intra-Band Down-Link Carrier aggregations. Detailed information of Down-Link CA are included in the Appendix. I and Technical Description document.		
LTE Release information				This device does not support full CA features on 3GPP Release 15. The following LTE Release 15 Features are not supported: UL CA, Relay, Hetnet, Enhanced eICI, MDH, cross-carrier Scheduling, Enhanced SC-FDMA.		

4.5 SAR Test Configuration

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

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

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

Case of separation distance under 50mm

Antenna	Band	Freq. [MHz]	GHz	dbm	mW	Separation Distances (mm)					SAR Test Exclusion Threshold (Test separation distances <50 mm threshold value <3)				
						Max Target	Rear	Left	Right	Top	Bottom	Rear	Left	Right	Top
Grip Sensor inactive															
Main 1	GSM850	848.8	0.8488	29	794.3	16	46.13	46.13	23	240.05	45.7	15.9	15.9	31.8	50 mm <
Main 1	GSM1900	1909.8	1.9098	27.5	562.3	16	46.13	46.13	23	240.05	48.6	16.8	16.8	33.8	50 mm <
Main 1	UMTS Band 2	1907.6	1.9076	24	251.2	16	46.13	46.13	23	240.05	21.7	7.5	7.5	15.1	50 mm <
Main 1	UMTS Band 4	1752.6	1.7526	24	251.2	16	46.13	46.13	23	240.05	20.8	7.2	7.2	14.5	50 mm <
Main 1	UMTS Band 5	846.6	0.8466	24.5	281.8	16	46.13	46.13	23	240.05	16.2	5.6	5.6	11.3	50 mm <
Main 1	LTE Band 5	848.3	0.8483	25	316.2	16	46.13	46.13	23	240.05	18.2	6.3	6.3	12.7	50 mm <
Main 1	LTE Band 12	715.3	0.7153	24.5	281.8	16	46.13	46.13	23	240.05	14.9	5.2	5.2	10.4	50 mm <
Main 1	LTE Band 25	1914.3	1.9143	24	251.2	16	46.13	46.13	23	240.05	21.7	7.5	7.5	15.1	50 mm <
Main 1	LTE Band 26	848.3	0.8483	24	251.2	16	46.13	46.13	23	240.05	14.5	5.0	5.0	10.1	50 mm <
Main 1	LTE Band 41	2680	2.6800	24	251.2	16	46.13	46.13	23	240.05	25.7	8.9	8.9	17.9	50 mm <
Main 1	LTE Band 66	1779.3	1.7793	24.5	281.8	16	46.13	46.13	23	240.05	23.5	8.1	8.1	16.3	50 mm <
WiFi0	2.4GHz WLAN	2472	2.4720	15	31.6	13	110.03	7	18	232.8	3.8	50 mm <	7.1	2.8	50 mm <
WiFi0,1	2.4GHz WLAN	2472	2.4720	14.5	28.2	13	7	7	18	232.8	3.4	6.3	6.3	2.5	50 mm <
WiFi1	5GHz WLAN	5825	5.8250	12	15.8	13	7	110.03	18	232.8	2.9	5.5	50 mm <	2.1	50 mm <
WiFi0,1	5GHz WLAN	5825	5.8250	12	15.8	13	7	7	18	232.8	2.9	5.5	5.5	2.1	50 mm <
WiFi0	Bluetooth	2480	2.4800	10.5	11.2	0	110.03	0	0	232.8	3.5	50 mm <	3.5	3.5	50 mm <
Grip Sensor active															
Main 1	GSM850	848.8	0.8488	20	100.0	0			0		18.4			18.4	
Main 1	GSM1900	1909.8	1.9098	18	63.1	0			0		17.4			17.4	
Main 1	UMTS Band 2	1907.6	1.9076	14.5	28.2	0			0		7.8			7.8	
Main 1	UMTS Band 4	1752.6	1.7526	15	31.6	0			0		8.4			8.4	
Main 1	UMTS Band 5	846.6	0.8466	17	50.1	0			0		9.2			9.2	
Main 1	LTE Band 5	848.3	0.8483	17.5	56.2	0			0		10.4			10.4	
Main 1	LTE Band 12	715.3	0.7153	19.5	89.1	0			0		15.1			15.1	
Main 1	LTE Band 25	1914.3	1.9143	15.5	35.5	0			0		9.8			9.8	
Main 1	LTE Band 26	848.3	0.8483	17.5	56.2	0			0		10.4			10.4	
Main 1	LTE Band 41	2680	2.6800	15	31.6	0			0		10.4			10.4	
Main 1	LTE Band 66	1779.3	1.7793	15.5	35.5	0			0		9.5			9.5	
WiFi0	2.4GHz WLAN	2472	2.4720	12	15.8	0		0	0		5.0		5.0	5.0	
WiFi0,1	2.4GHz WLAN	2472	2.4720	12	15.8	0	0	0	0		5.0	5.0	5.0	5.0	
WiFi1	5GHz WLAN	5825	5.8250	9	7.9	0	0		0		3.8	3.8		3.8	
WiFi0,1	5GHz WLAN	5825	5.8250	9	7.9	0	0	0	0		3.8	3.8	3.8	3.8	
WiFi0	Bluetooth	2480	2.4800	10.5	11.2										

Case of separation distance over 50mm

Antenna	Band	Freq. [MHz]	GHz	dbm	mW	Separation Distances (mm)					SAR Test Exclusion Threshold(mW)				
						Max Target	Rear	Left	Right	Top	Bottom	Rear	Left	Right	Top
Grip Sensor active															
Main 1	GSM850	848.8	0.8488	29	794.3	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	1238.2 mW
Main 1	GSM1900	1909.8	1.9098	27.5	562.3	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	2009.0 mW
Main 1	UMTS Band 2	1907.6	1.9076	24	251.2	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	2009.1 mW
Main 1	UMTS Band 4	1752.6	1.7526	24	251.2	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	2013.8 mW
Main 1	UMTS Band 5	846.6	0.8466	24.5	281.8	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	1235.7 mW
Main 1	LTE Band 5	848.3	0.8483	25	316.2	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	1237.7 mW
Main 1	LTE Band 12	715.3	0.7153	24.5	281.8	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	1083.6 mW
Main 1	LTE Band 25	1914.3	1.9143	24	251.2	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	2008.9 mW
Main 1	LTE Band 26	848.3	0.8483	24	251.2	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	1237.7 mW
Main 1	LTE Band 41	2680	2.6800	24	251.2	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	1992.1 mW
Main 1	LTE Band 66	1779.3	1.7793	24.5	281.8	16	46.13	46.13	23	240.05	≤50mm	≤50mm	≤50mm	≤50mm	2013.0 mW
WIFI0	2.4GHz WLAN	2472	2.4720	15	31.6	13	110.03	7	18	232.8	≤50mm	695.7 mW	≤50mm	≤50mm	1923.4 mW
WIFI0,1	2.4GHz WLAN	2472	2.4720	14.5	28.2	13	7	7	18	232.8	≤50mm	≤50mm	≤50mm	≤50mm	1923.4 mW
WIFI1	5GHz WLAN	5825	5.8250	12	15.8	13	7	110.03	18	232.8	≤50mm	≤50mm	662.5 mW	≤50mm	1890.2 mW
WIFI0,1	5GHz WLAN	5825	5.8250	12	15.8	13	7	7	18	232.8	≤50mm	≤50mm	≤50mm	≤50mm	1890.2 mW
WIFI0	Bluetooth	2480	2.4800	10.5	11.2	0	110.03	0	0	232.8	≤50mm	695.6 mW	≤50mm	≤50mm	1923.3 mW
Grip Sensor active															
Main 1	GSM850	848.8	0.8488	20	100.0	0			0		≤50mm			≤50mm	
Main 1	GSM1900	1909.8	1.9098	18	63.1	0			0		≤50mm			≤50mm	
Main 1	UMTS Band 2	1907.6	1.9076	14.5	28.2	0			0		≤50mm			≤50mm	
Main 1	UMTS Band 4	1752.6	1.7526	15	31.6	0			0		≤50mm			≤50mm	
Main 1	UMTS Band 5	846.6	0.8466	17	50.1	0			0		≤50mm			≤50mm	
Main 1	LTE Band 5	848.3	0.8483	17.5	56.2	0			0		≤50mm			≤50mm	
Main 1	LTE Band 12	715.3	0.7153	19.5	89.1	0			0		≤50mm			≤50mm	
Main 1	LTE Band 25	1914.3	1.9143	15.5	35.5	0			0		≤50mm			≤50mm	
Main 1	LTE Band 26	848.3	0.8483	17.5	56.2	0			0		≤50mm			≤50mm	
Main 1	LTE Band 41	2680	2.6800	15	31.6	0			0		≤50mm			≤50mm	
Main 1	LTE Band 66	1779.3	1.7793	15.5	35.5	0			0		≤50mm			≤50mm	
WIFI0	2.4GHz WLAN	2472	2.4720	12	15.8	0		0	0		≤50mm		≤50mm	≤50mm	
WIFI0,1	2.4GHz WLAN	2472	2.4720	12	15.8	0	0	0	0		≤50mm	≤50mm	≤50mm	≤50mm	
WIFI1	5GHz WLAN	5825	5.8250	9	7.9	0	0		0		≤50mm	≤50mm		≤50mm	
WIFI0,1	5GHz WLAN	5825	5.8250	9	7.9	0	0	0	0		≤50mm	≤50mm	≤50mm	≤50mm	
WIFI0	Bluetooth	2480	2.4800	10.5	11.2										

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

Antennas <50mm to adjacent edges: According to KDB 447498 D01v06, if the calculated threshold value >3 then SAR test is required.

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

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

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

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

Per KDB 447498 D01v06 Sec 4.3.1 b) For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B)

- 1) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·(f(MHz)/150)]} mW, for 100 MHz to 1500 MHz
- 2) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·10]} mW, for > 1500 MHz and ≤ 6 GHz

Per FCC KDB Publication 616217 D04v01r02, the rear surface and edges of tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Exclusion Threshold in 447498 D04 v01 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

This device was tested considering the Rear/left/right/top/bottom side for simultaneous transmission analysis of multiple transmitter conditions. The bottom side of the upper antenna and the top surface of the lower antenna excluded according to FCC KDB 616217 D04v01r02.

4.6 SAR Summation Scenario

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

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

Simultaneous Transmission Scenarios	
Applicable Combination	Body
WWAN + 2.4 GHz WI-FI Ant.0	Yes
WWAN + 2.4 GHz WI-FI MIMO	Yes
WWAN + 5 GHz WI-FI Ant.1	Yes
WWAN + 5 GHz WI-FI MIMO	Yes
WWAN + 2.4GHz Bluetooth	Yes
WWAN + 5 GHz WI-FI Ant.1 + 2.4GHz Bluetooth	Yes
WWAN + 5 GHz WI-FI MIMO + 2.4GHz Bluetooth	Yes

Note:

1. Bluetooth and 2.4GHz WLAN can not transmit simultaneously.
2. 2.4GHz WLAN and 5GHz WLAN can not transmit simultaneously.
3. The highest reported SAR for each exposure condition is used for SAR summation purpose.
4. This device supports Bluetooth tethering.
5. This device supports SISO Tx for Ant.0 at WLAN 2.4GHz and Ant.1 at WLAN 5GHz.
6. This device supports 2x2 MIMO Tx for WLAN 802.11n/ac. 802.11n/ac MIMO supports SDM. Each WLAN antenna can transmit together when operating with MIMO.

4.7 SAR Test Considerations

4.7.1 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 80MHz Bandwidth only for 5 GHz
- b) 2Tx Antenna output
- c) Up to 256 QAM is supported
- d) TDWR and Band gap channels are supported for 5 GHz
- e) Straddle channels are supported.

4.7.2 Licensed Transmitter(s)

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

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

This Device supports 64QAM and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per section 5.1 of FCC KDB 941225 D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is ≤ 0.5 dB higher than the same configuration in QPSK and the reported SAR for QPSK configuration is ≤ 1.45 W/Kg, per section 5.2.4 for FCC KDB941225 D05v02r05.

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

LTE capabilities with overlapping transmission frequency ranges were applied to LTE Band 25 and LTE Band 2, LTE Band 26 and LTE Band 5, LTE Band 4 and LTE Band 66, LTE Band 12 and LTE Band 17 of this model.

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

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

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

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

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

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

Per FCC KDB 690783 1 D01 SAR Listings on Grants v01r03 and KDB 447498 D01v06 General RF Exposure Guidance v06 The SAR numbers listed must be consistent with the highest reported test results required by the published RF exposure KDB procedures. When the measured SAR is not at the maximum tune-up tolerance limit or maximum output power allowed for production units, the measured results are scaled to the maximum conditions to determine compliance; the scaled results are referred to as the reported SAR.

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

The Reported SAR for WLAN and Bluetooth

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

5. Introduction

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

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

SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). 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)

Where:

- = conductivity of the tissue-simulant material (S/m)
- = mass density of the tissue-simulant material (kg/m³)
- = 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 DASY5, 6 and 8 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 7, 10 and 11 is working with SAR Measurement system DASY5, 6 and 8, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

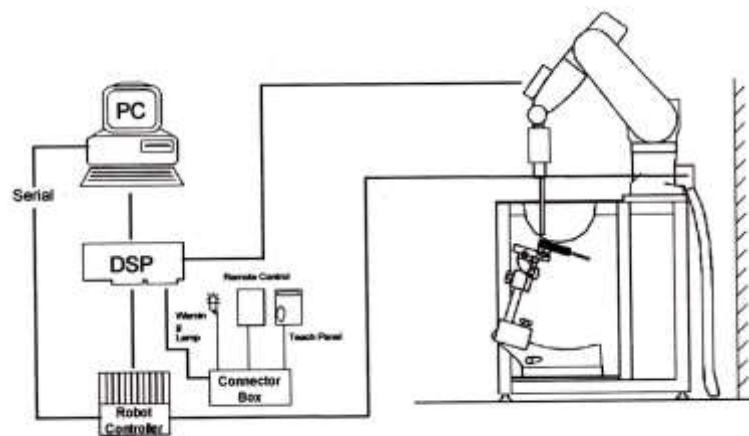


Figure 2. HCT SAR Lab. Test Measurement Set-up

The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer. The system is described in detail in.

7. SAR Measurement Procedure

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

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

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

		≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		5±1 mm	$\delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location		30°±1°	20°±1°
Maximum areascan Spatial resolution: Δx_{Area} , Δy_{Area}		≤ 2 GHz: ≤15 mm 2-3 GHz: ≤12 mm	3-4 GHz: ≤12 mm 4-6 GHz: ≤10 mm
		When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan Spatial resolution: Δx_{zoom} , Δy_{zoom}		≤ 2 GHz: ≤8 mm 2-3 GHz: ≤5 mm*	3-4 GHz: ≤5 mm* 4-6 GHz: ≤4 mm*
Maximum zoom scan Spatial resolution normal to phantom surface	uniform grid: $\Delta z_{zoom}(n)$	≤ 5 mm	3-4 GHz: ≤4 mm 4-5 GHz: ≤3 mm 5-6 GHz: ≤2 mm
	graded grid	$\Delta z_{zoom}(1)$: between 1 st two Points closest to phantom surface	≤ 4 mm 3-4 GHz: ≤3 mm 4-5 GHz: ≤2.5 mm 5-6 GHz: ≤2 mm
		$\Delta z_{zoom}(n>1)$: between subsequent Points	≤1.5· $\Delta z_{zoom}(n-1)$
Minimum zoom scan volume	x, y, z	≥ 30 mm	3-4 GHz: ≥28 mm 4-5 GHz: ≥25 mm 5-6 GHz: ≥22 mm
<p>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.</p> <p>* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</p>			

8. Description of Test Position

8.1 Device Holder

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

8.2 SAR Testing for Tablet Per KDB Publication 616217 D04v01r02

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

8.3 Proximity Sensor Considerations.

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

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

FCC KDB 616217 D04 Section 8 and additional FCC guidance were used as a guideline for selecting SAR test distances for this device at these additional exposure conditions. The smallest separation distance determined by the sensor triggering and sensor coverage for each applicable edge, minus 1 mm, was used as the test separation distance for SAR testing. Sensor triggering distance evaluation is provided in a separate document.

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

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR [mm]
Main1 Ant.	Rear	17	N/A	N/A	16
	Top	24	N/A	N/A	23
WLAN /BT WiFi0	Rear	14	N/A	N/A	13
	Right	8	N/A	N/A	7
	Top	19	N/A	N/A	18
WLAN WiFi1	Rear	14	N/A	N/A	13
	Left	8	N/A	N/A	7
	Top	19	N/A	N/A	18

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 made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

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

10. FCC SAR General Measurement Procedures

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

10.1 Measured and Reported SAR

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

10.2 3G SAR Test Reduction Procedure

10.2.1 GSM, GPRS AND EDGE

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

10.2.2 SAR Test Reduction

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

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested

10.2.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB 941225 D01v03r01-3G SAR Measurement Procedures.

The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to Check 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

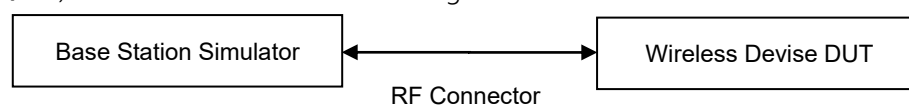
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control 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
 - i. The required channel and offset combination with the highest maximum output power is required for SAR.
 - ii. When the reported SAR is ≤ 0.8 W/Kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
 - iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
- b. Per Sec 4.2.2, SAR is required for 50% RB allocation using the largest Bandwidth following the same procedures outlined in Sec 4.2.1.
- c. Per Sec. 4.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 0.8 W/kg.
- d. Per Sec. 4.2.4 and 4.3, SAR test for higher order modulations and lower Band widths configurations are not required when the conducted power of the required test configurations determined by Sec. 4.2.1 through 4.2.3 is less than or equal to 1/2 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/Kg.

10.4.5 Downlink Carrier Aggregation

Conducted power measurements with LTE Carrier aggregation (CA) downlink only active are made in accordance to KDB publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. For every supported combination of downlink only carrier aggregation, additional conducted output Powers are measured with downlink carrier aggregation active for the configuration with highest measured maximum conducted power with the downlink carrier aggregation inactive measured among the channel Bandwidth, modulation and RB combinations in each frequency Band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation

configurations when the average output power with downlink only carrier aggregation active is not more than 0.25dB higher than the average output power with downlink only carrier aggregation inactive.

10.4.6 LTE(TDD) Considerations

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

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

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

for Special sub frame configurations.

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

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

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

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

Where

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

10.4.7 The Call Box Setup for LTE(TDD)

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

10.5 SAR Testing with 802.11 Transmitters

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

10.5.1 General Device Setup

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

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

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

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

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

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

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

10.5.4 Initial Test Position Procedure

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

10.5.5 2.4 GHz SAR test Requirements

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

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

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

10.5.6 OFDM Transmission Mode and SAR Test Channel Selection

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

10.5.7 Initial Test Configuration Procedure

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

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

10.5.8 Subsequent Test Configuration Procedures

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

10.5.9 MIMO SAR Considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 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.

11. Output Power Specifications

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

Licensed Bands

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

Test Overview

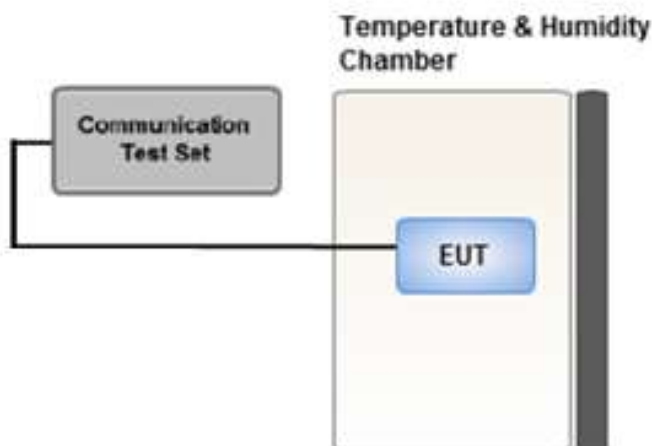
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base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

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

Test Procedure

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

Test setup



11.1 GSM

11.1.1 GSM Maximum Conducted Output Power (Main1 Ant.)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		34.50	34.50	32.00	30.00	29.00	27.50	25.50	24.50	23.50
Nominal		33.50	33.50	31.00	29.00	28.00	26.50	24.50	23.50	22.50
GSM 850	128	33.46	33.79	31.08	29.68	28.62	25.31	24.65	23.01	21.77
	190	33.44	33.63	31.33	29.60	28.33	25.12	24.55	23.03	21.36
	251	33.70	33.58	31.36	29.65	28.36	25.10	24.37	23.07	21.53
Maximum		31.50	31.50	29.00	27.50	26.00	26.50	25.00	23.50	21.00
Nominal		30.50	30.50	28.00	26.50	25.00	25.50	24.00	22.50	20.00
GSM 1900	512	30.15	30.10	27.03	25.54	24.11	25.30	23.10	21.21	18.93
	661	30.52	30.62	28.65	26.22	24.32	25.92	23.96	22.15	19.98
	810	30.23	29.98	28.10	25.83	24.71	26.28	24.16	22.37	20.27

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		25.47	25.47	26.48	26.74	26.99	18.47	19.48	20.24	20.49
Nominal		24.47	24.47	25.48	25.74	25.99	17.47	18.48	19.24	19.49
GSM 850	128	24.43	24.76	25.06	25.42	25.61	16.28	18.63	18.75	18.76
	190	24.41	24.6	25.31	25.34	25.32	16.09	18.53	18.77	18.35
	251	24.67	24.55	25.34	25.39	25.35	16.07	18.35	18.81	18.52
Maximum		22.47	22.47	22.98	23.24	22.99	17.47	18.98	19.24	17.99
Nominal		21.47	21.47	21.98	22.24	21.99	16.47	17.98	18.24	16.99
GSM 1900	512	21.12	21.07	21.01	21.28	21.1	16.27	17.08	16.95	15.92
	661	21.49	21.59	22.63	21.96	21.31	16.89	17.94	17.89	16.97
	810	21.2	20.95	22.08	21.57	21.7	17.25	18.14	18.11	17.26

GSM Conducted output powers (Frame-Average)

Note:

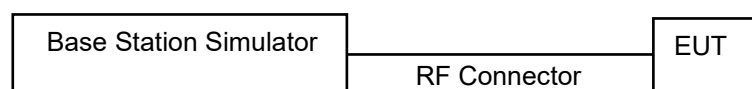
Time slot average factor is as follows:

1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB

2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB

3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB

4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB



11.1.2 GSM Reduced Conducted Output Power (Main1 Ant.)

Mode / Band	Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)				
	GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot	
Maximum	24.50	24.50	22.50	21.00	20.00	18.50	16.00	15.00	14.00	
Nominal	23.50	23.50	21.50	20.00	19.00	17.50	15.00	14.00	13.00	
GSM 850	128	24.01	24.09	22.07	19.84	19.47	18.05	15.85	14.58	13.52
	190	23.86	23.74	21.77	19.31	19.19	18.11	15.87	14.54	13.89
	251	23.83	23.69	21.66	19.12	18.84	17.87	15.77	14.42	13.40
Maximum	22.00	22.00	19.50	18.00	16.50	18.50	16.00	14.50	13.00	
Nominal	21.00	21.00	18.50	17.00	15.50	17.50	15.00	13.50	12.00	
GSM 1900	512	21.74	21.80	19.45	17.90	16.12	18.19	15.43	13.86	11.93
	661	21.91	21.54	18.90	17.40	16.22	17.70	15.38	14.08	12.45
	810	21.57	21.33	18.31	17.11	16.47	17.52	15.86	14.46	12.83

GSM Conducted output powers (Burst-Average)

Mode / Band	Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)				
	GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot	
Maximum	15.47	15.47	16.48	16.74	16.99	9.47	9.98	10.74	10.99	
Nominal	14.47	14.47	15.48	15.74	15.99	8.47	8.98	9.74	9.99	
GSM 850	128	14.98	15.06	16.05	15.58	16.46	9.02	9.83	10.32	10.51
	190	14.83	14.71	15.75	15.05	16.18	9.08	9.85	10.28	10.88
	251	14.8	14.66	15.64	14.86	15.83	8.84	9.75	10.16	10.39
Maximum	12.97	12.97	13.48	13.74	13.49	9.47	9.98	10.24	9.99	
Nominal	11.97	11.97	12.48	12.74	12.49	8.47	8.98	9.24	8.99	
GSM 1900	512	12.71	12.77	13.43	13.64	13.11	9.16	9.41	9.6	8.92
	661	12.88	12.51	12.88	13.14	13.21	8.67	9.36	9.82	9.44
	810	12.54	12.3	12.29	12.85	13.46	8.49	9.84	10.2	9.82

GSM Conducted output powers (Frame-Average)

Note:

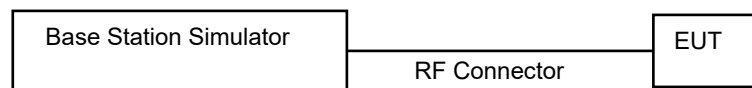
Time slot average factor is as follows:

1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB

2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB

3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB

4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB



11.2 UMTS Conducted Output Power

HSPA+

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

11.2.1 UMTS Maximum Conducted Output Power

UMTS Band 5 Maximum Conducted Output Power (Main1 Ant.)

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 5 [dBm]			3GPP MPR
		Subtest	UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	
99	UMTS	12.2 kbps RMC	23.25	23.11	22.90	-
99	UMTS	12.2 kbps AMR	23.23	23.10	22.88	-
2	HSDPA	Subtest 1	23.13	22.99	22.82	0
5		Subtest 2	22.22	22.07	21.86	0
5		Subtest 3	21.15	20.98	20.82	0.5
5		Subtest 4	21.13	20.98	20.80	0.5
6	HSUPA	Subtest 1	22.19	22.05	21.84	0
6		Subtest 2	20.11	20.02	19.77	2
6		Subtest 3	21.14	21.11	20.79	1
6		Subtest 4	20.10	19.98	19.75	2
6		Subtest 5	23.08	22.93	22.72	0
8	DC-HSDPA	Subtest1	20.87	20.62	20.53	0
8		Subtest2	22.79	22.54	22.41	0
8		Subtest3	22.81	22.59	22.43	0
8		Subtest4	22.78	22.61	22.41	0

UMTS Average Conducted output powers

UMTS Band 4 Maximum Conducted Output Power (Main1 Ant.)

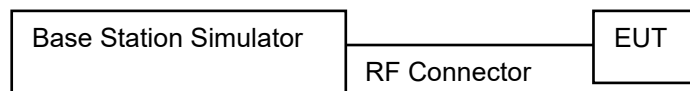
3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL1312 DL1537	UL1412 DL1637	UL1513 DL1738	
99	UMTS	12.2 kbps RMC	23.35	23.08	22.93	-
99	UMTS	12.2 kbps AMR	23.32	23.05	22.91	-
2	HSDPA	Subtest 1	22.91	22.84	23.13	0
5		Subtest 2	22.16	21.91	21.79	0
5		Subtest 3	21.25	20.97	20.89	0.5
5		Subtest 4	21.28	21.00	20.84	0.5
6	HSUPA	Subtest 1	22.18	21.86	21.76	0
6		Subtest 2	21.21	20.95	20.81	1
6		Subtest 3	22.16	21.90	21.74	0
6		Subtest 4	21.20	20.92	20.80	1
6		Subtest 5	22.91	22.87	22.76	0
8	DC-HSDPA	Subtest1	21.79	21.57	21.61	0
8		Subtest2	22.76	22.58	22.62	0
8		Subtest3	22.74	22.62	22.60	0
8		Subtest4	22.73	22.58	22.61	0

UMTS Band 2 Maximum Conducted Output Power (Main1 Ant.)

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	22.94	23.01	22.94	-
99	UMTS	12.2 kbps AMR	22.90	22.98	22.91	-
2	HSDPA	Subtest 1	22.82	22.92	22.85	0
5		Subtest 2	21.81	21.87	21.82	0
5		Subtest 3	20.90	20.96	20.87	0.5
5		Subtest 4	20.88	20.91	20.82	0.5
6	HSUPA	Subtest 1	21.84	21.89	21.80	0
6		Subtest 2	19.81	19.88	19.78	2
6		Subtest 3	20.84	20.95	20.81	1
6		Subtest 4	19.79	19.84	19.74	2
6		Subtest 5	22.81	22.88	22.78	0
8	DC-HSDPA	Subtest1	20.92	20.89	20.76	0
8		Subtest2	22.40	22.81	22.68	0
8		Subtest3	22.34	22.80	22.62	0
8		Subtest4	22.40	22.79	22.65	0

DC-HSDPA Configurations

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



11.2.2 UMTS Reduced Conducted Output Power

UMTS Band 5 Reduced Conducted Output Power (Main1 Ant.)

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 5 [dBm]			3GPP MPR
		Subtest	UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	
99	UMTS	12.2 kbps RMC	16.27	16.12	15.91	-
99	UMTS	12.2 kbps AMR	16.26	16.11	15.88	-
2	HSDPA	Subtest 1	16.21	16.06	15.85	0
5		Subtest 2	16.20	16.08	15.86	0
5		Subtest 3	16.22	16.06	15.88	0
5		Subtest 4	16.19	16.06	15.86	0
6	HSUPA	Subtest 1	15.19	15.05	14.86	0
6		Subtest 2	15.17	15.06	14.91	0
6		Subtest 3	15.17	15.03	14.95	0
6		Subtest 4	15.15	14.99	14.89	0
6		Subtest 5	16.22	16.05	15.79	0
8	DC-HSDPA	Subtest1	16.21	16.06	15.82	0
8		Subtest2	16.19	16.06	15.86	0
8		Subtest3	16.20	16.05	15.86	0
8		Subtest4	16.18	16.07	15.84	0

UMTS Average Conducted output powers

UMTS Band 4 Reduced Conducted Output Power (Main1 Ant.)

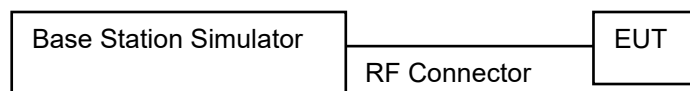
3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL1312 DL1537	UL1412 DL1637	UL1513 DL1738	
99	UMTS	12.2 kbps RMC	14.21	13.94	13.82	-
99	UMTS	12.2 kbps AMR	14.20	13.90	13.79	-
2	HSDPA	Subtest 1	14.19	13.91	13.82	0
5		Subtest 2	14.20	13.90	13.78	0
5		Subtest 3	14.19	13.94	13.77	0
5		Subtest 4	14.23	13.91	13.79	0
6	HSUPA	Subtest 1	13.10	12.85	12.76	0
6		Subtest 2	13.11	12.86	12.75	0
6		Subtest 3	13.12	12.87	12.76	0
6		Subtest 4	13.10	12.87	12.75	0
6		Subtest 5	14.18	13.93	13.79	0
8	DC-HSDPA	Subtest1	14.35	14.11	13.95	0
8		Subtest2	14.29	14.09	13.98	0
8		Subtest3	14.33	14.11	13.93	0
8		Subtest4	14.35	14.07	13.91	0

UMTS Band 2 Reduced Conducted Output Power (Main1 Ant.)

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	13.30	13.33	13.26	-
99	UMTS	12.2 kbps AMR	13.27	13.29	13.22	-
2	HSDPA	Subtest 1	13.29	13.34	13.26	0
5		Subtest 2	13.25	13.32	13.20	0
5		Subtest 3	13.29	13.32	13.24	0
5		Subtest 4	13.28	13.34	13.20	0
6	HSUPA	Subtest 1	12.30	12.38	12.25	0
6		Subtest 2	12.32	12.36	12.24	0
6		Subtest 3	12.28	12.36	12.24	0
6		Subtest 4	12.30	12.34	12.25	0
6		Subtest 5	13.32	13.34	13.24	0
8	DC-HSDPA	Subtest1	13.65	13.53	13.17	0
8		Subtest2	13.65	13.53	13.16	0
8		Subtest3	13.68	13.55	13.15	0
8		Subtest4	13.60	13.58	13.20	0

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.



11.3 LTE Maximum Output Power

LTE B4/B5/B12/B17/B26 does not support three non-overlapping channels at each supported max bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

11.3.1 LTE Maximum Conducted Power

[LTE FDD Band 2 Conducted Power_ Main1 Ant.]

LTE FDD Band 2 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 MHz	18900 Ch. 1880 MHz	19193 Ch. 1909.3 MHz		
1.4 MHz	QPSK	1	0	23.47	23.50	23.35	0	0
		1	3	23.42	23.51	23.32	0	0
		1	5	23.54	23.56	23.49	0	0
		3	0	23.58	23.60	23.48	0	0
		3	1	23.46	23.53	23.51	0	0
		3	3	23.47	23.57	23.46	0	0
		6	0	22.61	22.72	22.58	0-1	1
	16QAM	1	0	22.85	22.99	22.77	0-1	1
		1	3	22.86	22.85	22.74	0-1	1
		1	5	22.98	22.93	22.82	0-1	1
		3	0	22.75	22.75	22.61	0-1	1
		3	1	22.82	22.85	22.80	0-1	1
		3	3	22.78	22.77	22.66	0-1	1
		6	0	21.69	21.82	21.70	0-2	2
	64QAM	1	0	21.83	21.92	21.78	0-2	2
		1	3	21.79	21.96	21.75	0-2	2
		1	5	21.79	21.97	21.77	0-2	2
		3	0	21.59	21.73	21.60	0-2	2
		3	1	21.78	21.71	21.69	0-2	2
		3	3	21.65	21.87	21.72	0-2	2
		6	0	20.71	20.75	20.59	0-3	3
	256QAM	1	0	18.59	18.70	18.64	0-5	5
		1	3	18.57	18.52	18.50	0-5	5
		1	5	18.65	18.70	18.56	0-5	5
		3	0	18.61	18.65	18.50	0-5	5
		3	1	18.62	18.57	18.53	0-5	5
		3	3	18.61	18.69	18.49	0-5	5
		6	0	18.54	18.63	18.52	0-5	5

LTE FDD Band 2 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 MHz	18900 Ch. 1880 MHz	19185 Ch. 1908.5 MHz		
3 MHz	QPSK	1	0	23.55	23.65	23.52	0	0
		1	7	23.60	23.70	23.45	0	0
		1	14	23.54	23.66	23.32	0	0
		8	0	22.62	22.70	22.59	0	0
		8	3	22.70	22.80	22.54	0	0
		8	7	22.69	22.72	22.52	0	0
		15	0	22.72	22.77	22.49	0-1	1
	16QAM	1	0	22.87	22.91	22.78	0-1	1
		1	7	22.79	22.85	22.71	0-1	1
		1	14	22.85	22.93	22.63	0-1	1
		8	0	21.79	21.82	21.73	0-1	1
		8	3	21.84	21.80	21.66	0-1	1
		8	7	21.77	21.89	21.64	0-1	1
		15	0	21.74	21.83	21.70	0-2	2
	64QAM	1	0	21.94	21.98	21.75	0-2	2
		1	7	21.96	21.93	21.88	0-2	2
		1	14	21.90	21.99	21.67	0-2	2
		8	0	20.77	20.77	20.65	0-2	2
		8	3	20.71	20.76	20.63	0-2	2
		8	7	20.70	20.74	20.67	0-2	2
		15	0	20.77	20.73	20.66	0-3	3
	256QAM	1	0	18.67	18.75	18.53	0-5	5
		1	7	18.58	18.64	18.60	0-5	5
		1	14	18.63	18.76	18.71	0-5	5
		8	0	18.58	18.60	18.48	0-5	5
		8	3	18.60	18.65	18.53	0-5	5
		8	7	18.60	18.64	18.55	0-5	5
		15	0	18.57	18.63	18.48	0-5	5

LTE FDD Band 2 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 MHz	18900 Ch. 1880 MHz	19175 Ch. 1907.5 MHz		
5 MHz	QPSK	1	0	23.47	23.51	23.46	0	0
		1	12	23.57	23.71	23.59	0	0
		1	24	23.56	23.66	23.34	0	0
		12	0	22.64	22.74	22.64	0	0
		12	6	22.67	22.79	22.62	0	0
		12	11	22.69	22.75	22.58	0	0
		25	0	22.65	22.78	22.70	0-1	1
	16QAM	1	0	22.85	22.91	22.79	0-1	1
		1	12	22.99	22.92	22.69	0-1	1
		1	24	22.78	22.95	22.52	0-1	1
		12	0	21.76	21.84	21.78	0-1	1
		12	6	21.77	21.88	21.67	0-1	1
		12	11	21.71	21.89	21.65	0-1	1
	64QAM	25	0	21.68	21.82	21.67	0-2	2
		1	0	21.91	21.98	21.79	0-2	2
		1	12	21.90	21.94	21.79	0-2	2
		1	24	21.89	21.93	21.58	0-2	2
		12	0	20.76	20.83	20.72	0-2	2
		12	6	20.72	20.82	20.72	0-2	2
		12	11	20.75	20.82	20.70	0-2	2
	256QAM	25	0	20.60	20.75	20.63	0-3	3
		1	0	18.68	18.79	18.67	0-5	5
		1	12	18.72	18.81	18.57	0-5	5
		1	24	18.69	18.75	18.62	0-5	5
		12	0	18.61	18.65	18.52	0-5	5
		12	6	18.61	18.66	18.52	0-5	5
		12	11	18.56	18.70	18.57	0-5	5
	25	0	18.57	18.63	18.56	0-5	5	

LTE FDD Band 2 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 MHz	18900 Ch. 1880 MHz	19150 Ch. 1905 MHz		
10 MHz	QPSK	1	0	23.43	23.63	23.42	0	0
		1	24	23.52	23.63	23.44	0	0
		1	49	23.52	23.71	23.56	0	0
		25	0	22.53	22.72	22.65	0	0
		25	12	22.56	22.75	22.61	0	0
		25	24	22.61	22.78	22.66	0	0
		50	0	22.60	22.82	22.71	0-1	1
	16QAM	1	0	22.80	22.97	22.78	0-1	1
		1	24	22.68	22.81	22.74	0-1	1
		1	49	22.80	22.99	22.81	0-1	1
		25	0	21.63	21.81	21.72	0-1	1
		25	12	21.62	21.82	21.68	0-1	1
		25	24	21.63	21.82	21.69	0-1	1
	64QAM	50	0	21.59	21.83	21.71	0-2	2
		1	0	21.85	21.89	21.74	0-2	2
		1	24	21.76	21.89	21.71	0-2	2
		1	49	21.74	21.99	21.88	0-2	2
		25	0	20.57	20.70	20.61	0-2	2
		25	12	20.60	20.77	20.60	0-2	2
		25	24	20.56	20.72	20.63	0-2	2
	256QAM	50	0	20.58	20.76	20.66	0-3	3
		1	0	18.69	18.76	18.54	0-5	5
		1	24	18.58	18.80	18.55	0-5	5
		1	49	18.60	18.79	18.72	0-5	5
		25	0	18.46	18.71	18.52	0-5	5
		25	12	18.49	18.70	18.54	0-5	5
		25	24	18.52	18.66	18.56	0-5	5
	50	0	18.53	18.66	18.55	0-5	5	

LTE FDD Band 2 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 MHz	18900 Ch. 1880 MHz	19125 Ch. 1902.5 MHz		
15 MHz	QPSK	1	0	23.41	23.62	23.52	0	0
		1	36	23.52	23.70	23.60	0	0
		1	74	23.49	23.70	22.70	0	0
		36	0	22.55	22.74	22.67	0	0
		36	18	22.57	22.80	22.70	0	0
		36	39	22.59	22.83	22.74	0	0
		75	0	22.55	22.75	22.73	0-1	1
	16QAM	1	0	22.89	22.92	22.86	0-1	1
		1	36	22.56	22.95	22.70	0-1	1
		1	74	22.69	22.99	21.99	0-1	1
		36	0	21.63	21.80	21.74	0-1	1
		36	18	21.59	21.82	21.67	0-1	1
		36	39	21.57	21.83	21.74	0-1	1
	64QAM	75	0	21.59	21.79	21.67	0-2	2
		1	0	21.63	21.86	21.76	0-2	2
		1	36	21.66	21.87	21.84	0-2	2
		1	74	21.78	21.92	21.10	0-2	2
		36	0	20.65	20.80	20.71	0-2	2
		36	18	20.61	20.80	20.72	0-2	2
		36	39	20.57	20.81	20.74	0-2	2
	256QAM	75	0	20.58	20.76	20.67	0-3	3
		1	0	18.68	18.74	18.68	0-5	5
		1	36	18.57	18.86	18.57	0-5	5
		1	74	18.48	18.92	18.60	0-5	5
		36	0	18.52	18.61	18.57	0-5	5
		36	18	18.52	18.70	18.60	0-5	5
		36	39	18.48	18.72	18.60	0-5	5
		75	0	18.46	18.64	18.55	0-5	5

LTE FDD Band 2 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	23.45	23.50	23.62	0	0
		1	49	23.46	23.54	23.61	0	0
		1	99	23.50	23.68	22.96	0	0
		50	0	22.58	22.76	22.77	0	0
		50	25	22.64	22.77	22.81	0	0
		50	49	22.66	22.82	22.78	0	0
		100	0	22.63	22.74	22.72	0-1	1
	16QAM	1	0	22.73	22.72	22.84	0-1	1
		1	49	22.68	22.79	22.65	0-1	1
		1	99	22.73	23.00	22.22	0-1	1
		50	0	21.61	21.80	21.77	0-1	1
		50	25	21.62	21.80	21.73	0-1	1
		50	49	21.61	21.81	21.79	0-1	1
		100	0	21.63	21.76	21.76	0-2	2
	64QAM	1	0	21.69	21.89	21.83	0-2	2
		1	49	21.72	21.95	21.75	0-2	2
		1	99	21.75	21.93	21.26	0-2	2
		50	0	20.67	20.78	20.79	0-2	2
		50	25	20.62	20.79	20.75	0-2	2
		50	49	20.62	20.81	20.76	0-2	2
		100	0	20.60	20.75	20.70	0-3	3
	256QAM	1	0	18.72	18.61	18.73	0-5	5
		1	49	18.52	18.70	18.60	0-5	5
		1	99	18.57	18.72	18.71	0-5	5
		50	0	18.53	18.71	18.63	0-5	5
		50	25	18.58	18.71	18.66	0-5	5
		50	49	18.53	18.74	18.66	0-5	5
		100	0	18.52	18.64	18.63	0-5	5

[LTE FDD Band 4 Conducted Power _ Main1 Ant.]

LTE FDD Band 4 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 MHz	20175 Ch. 1732.5 MHz	20393 Ch. 1754.3 MHz		
1.4 MHz	QPSK	1	0	23.70	23.51	23.52	0	0
		1	3	23.59	23.51	23.51	0	0
		1	5	23.73	23.62	23.63	0	0
		3	0	23.69	23.61	23.60	0	0
		3	1	23.76	23.63	23.66	0	0
		3	3	23.72	23.60	23.64	0	0
	16QAM	6	0	22.75	22.67	22.70	0-1	1
		1	0	22.91	22.86	22.95	0-1	1
		1	3	22.75	22.78	22.84	0-1	1
		1	5	22.91	22.89	22.87	0-1	1
		3	0	22.83	22.76	22.82	0-1	1
		3	1	22.73	22.81	22.86	0-1	1
	64QAM	3	3	22.82	22.79	22.88	0-1	1
		6	0	21.85	21.78	21.77	0-2	2
		1	0	21.92	21.82	21.93	0-2	2
		1	3	21.94	21.82	21.88	0-2	2
		1	5	22.03	21.81	21.98	0-2	2
		3	0	21.87	21.67	21.76	0-2	2
	256QAM	3	1	21.91	21.77	21.86	0-2	2
		3	3	21.94	21.68	21.80	0-2	2
		6	0	20.86	20.75	20.71	0-3	3
		1	0	18.81	18.61	18.72	0-5	5
		1	3	18.68	18.65	18.68	0-5	5
		1	5	18.75	18.69	18.71	0-5	5
	3	0	18.72	18.68	18.66	0-5	5	
	3	1	18.75	18.71	18.67	0-5	5	
	3	3	18.76	18.67	18.71	0-5	5	
	6	0	18.74	18.62	18.63	0-5	5	

LTE FDD Band 4 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 MHz	20175 Ch. 1732.5 MHz	20385 Ch. 1753.5 MHz		
3 MHz	QPSK	1	0	23.75	23.56	23.64	0	0
		1	7	23.71	23.60	23.69	0	0
		1	14	23.70	23.61	23.63	0	0
		8	0	22.81	22.67	22.73	0	0
		8	3	22.81	22.71	22.75	0	0
		8	7	22.85	22.74	22.76	0	0
	16QAM	15	0	22.87	22.73	22.75	0-1	1
		1	0	22.87	22.85	22.87	0-1	1
		1	7	22.88	22.79	22.79	0-1	1
		1	14	22.93	22.84	22.95	0-1	1
		8	0	21.88	21.79	21.82	0-1	1
		8	3	21.98	21.81	21.84	0-1	1
	64QAM	8	7	21.91	21.85	21.81	0-1	1
		15	0	21.92	21.77	21.83	0-2	2
		1	0	22.04	21.93	22.05	0-2	2
		1	7	22.07	21.91	21.90	0-2	2
		1	14	22.07	21.81	21.97	0-2	2
		8	0	20.82	20.78	20.76	0-2	2
	256QAM	8	3	20.79	20.70	20.72	0-2	2
		8	7	20.82	20.76	20.75	0-2	2
		15	0	20.84	20.72	20.80	0-3	3
		1	0	18.69	18.71	18.73	0-5	5
		1	7	18.79	18.70	18.69	0-5	5
		1	14	18.67	18.69	18.71	0-5	5
	256QAM	8	0	18.77	18.61	18.64	0-5	5
		8	3	18.75	18.64	18.71	0-5	5
		8	7	18.78	18.59	18.68	0-5	5
		15	0	18.76	18.64	18.64	0-5	5

LTE FDD Band 4 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 MHz	20175 Ch. 1732.5 MHz	20375 Ch. 1752.5 MHz		
5 MHz	QPSK	1	0	23.68	23.61	23.62	0	0
		1	12	23.76	23.66	23.67	0	0
		1	24	23.79	23.67	23.75	0	0
		12	0	22.83	22.76	22.75	0	0
		12	6	22.88	22.73	22.76	0	0
		12	11	22.85	22.77	22.80	0	0
		25	0	22.89	22.68	22.70	0-1	1
	16QAM	1	0	23.05	23.00	22.97	0-1	1
		1	12	22.85	22.89	22.77	0-1	1
		1	24	23.06	22.95	23.00	0-1	1
		12	0	21.91	21.79	21.85	0-1	1
		12	6	21.91	21.82	21.84	0-1	1
		12	11	21.94	21.84	21.87	0-1	1
		25	0	21.91	21.70	21.75	0-2	2
	64QAM	1	0	22.08	21.93	21.91	0-2	2
		1	12	22.07	21.86	21.85	0-2	2
		1	24	22.06	21.86	21.92	0-2	2
		12	0	20.89	20.78	20.84	0-2	2
		12	6	20.88	20.77	20.80	0-2	2
		12	11	20.96	20.82	20.84	0-2	2
		25	0	20.84	20.71	20.70	0-3	3
	256QAM	1	0	18.87	18.82	18.69	0-5	5
		1	12	18.83	18.67	18.71	0-5	5
		1	24	18.86	18.67	18.82	0-5	5
12		0	18.77	18.67	18.67	0-5	5	
12		6	18.79	18.68	18.71	0-5	5	
12		11	18.80	18.66	18.72	0-5	5	
25		0	18.81	18.63	18.64	0-5	5	

LTE FDD Band 4 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 MHz	20175 Ch. 1732.5 MHz	20350 Ch. 1750 MHz		
10 MHz	QPSK	1	0	23.72	23.62	23.58	0	0
		1	24	23.76	23.61	23.62	0	0
		1	49	23.84	23.65	23.69	0	0
		25	0	22.90	22.67	22.73	0	0
		25	12	22.87	22.70	22.70	0	0
		25	24	22.90	22.72	22.75	0	0
		50	0	22.96	22.75	22.79	0-1	1
	16QAM	1	0	23.07	22.98	22.78	0-1	1
		1	24	22.91	22.73	22.68	0-1	1
		1	49	22.98	22.92	22.94	0-1	1
		25	0	21.94	21.74	21.79	0-1	1
		25	12	21.94	21.75	21.76	0-1	1
		25	24	21.94	21.76	21.78	0-1	1
	64QAM	50	0	21.94	21.78	21.80	0-2	2
		1	0	22.11	21.95	21.89	0-2	2
		1	24	22.03	21.87	21.83	0-2	2
		1	49	22.19	21.95	21.89	0-2	2
		25	0	20.89	20.72	20.74	0-2	2
		25	12	20.89	20.70	20.74	0-2	2
		25	24	20.90	20.72	20.75	0-2	2
	256QAM	50	0	20.94	20.72	20.73	0-3	3
		1	0	18.82	18.81	18.72	0-5	5
		1	24	18.86	18.55	18.60	0-5	5
		1	49	18.92	18.71	18.77	0-5	5
		25	0	18.85	18.65	18.68	0-5	5
		25	12	18.84	18.67	18.67	0-5	5
		25	24	18.82	18.66	18.70	0-5	5
		50	0	18.87	18.71	18.68	0-5	5

LTE FDD Band 4 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 MHz	20175 Ch. 1732.5 MHz	20325 Ch. 1747.5 MHz		
15 MHz	QPSK	1	0	23.72	23.62	23.55	0	0
		1	36	23.81	23.74	23.63	0	0
		1	74	23.84	23.68	23.66	0	0
		36	0	22.90	22.69	22.69	0	0
		36	18	22.88	22.72	22.70	0	0
		36	39	22.95	22.75	22.74	0	0
		75	0	22.91	22.73	22.70	0-1	1
	16QAM	1	0	23.02	23.03	22.85	0-1	1
		1	36	22.97	22.89	22.75	0-1	1
		1	74	23.07	22.98	23.01	0-1	1
		36	0	21.98	21.77	21.72	0-1	1
		36	18	21.97	21.78	21.73	0-1	1
		36	39	21.98	21.76	21.77	0-1	1
		75	0	21.94	21.74	21.70	0-2	2
	64QAM	1	0	21.99	22.00	21.82	0-2	2
		1	36	22.05	22.00	21.88	0-2	2
		1	74	22.18	21.94	21.94	0-2	2
		36	0	20.97	20.78	20.69	0-2	2
		36	18	20.96	20.75	20.69	0-2	2
		36	39	21.00	20.75	20.76	0-2	2
		75	0	20.92	20.73	20.65	0-3	3
	256QAM	1	0	18.89	18.76	18.53	0-5	5
		1	36	18.86	18.70	18.70	0-5	5
		1	74	18.95	18.67	18.72	0-5	5
		36	0	18.88	18.69	18.59	0-5	5
		36	18	18.85	18.66	18.64	0-5	5
		36	39	18.89	18.69	18.67	0-5	5
75		0	18.84	18.66	18.60	0-5	5	

LTE FDD Band 4 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 MHz		
20 MHz	QPSK	1	0	23.58	0	0
		1	49	23.62	0	0
		1	99	23.86	0	0
		50	0	22.74	0	0
		50	25	22.77	0	0
		50	49	22.84	0	0
		100	0	22.73	0-1	1
	16QAM	1	0	22.82	0-1	1
		1	49	22.82	0-1	1
		1	99	22.85	0-1	1
		50	0	21.69	0-1	1
		50	25	21.77	0-1	1
		50	49	21.77	0-1	1
		100	0	21.76	0-2	2
	64QAM	1	0	21.93	0-2	2
		1	49	21.84	0-2	2
		1	99	21.87	0-2	2
		50	0	20.74	0-2	2
		50	25	20.75	0-2	2
		50	49	20.76	0-2	2
		100	0	20.70	0-3	3
	256QAM	1	0	18.62	0-5	5
		1	49	18.67	0-5	5
		1	99	18.64	0-5	5
		50	0	18.68	0-5	5
		50	25	18.70	0-5	5
		50	49	18.70	0-5	5
		100	0	18.66	0-5	5

[LTE FDD Band 5 Conducted Power _ Main1 Ant.]

LTE FDD Band 5 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20407 Ch. 824.7 MHz	20525 Ch. 836.5 MHz	20643 Ch. 848.3 MHz		
1.4 MHz	QPSK	1	0	24.21	23.94	23.82	0	0
		1	3	24.14	23.86	23.76	0	0
		1	5	24.22	23.96	23.86	0	0
		3	0	24.24	23.98	23.88	0	0
		3	1	24.27	24.01	23.93	0	0
		3	3	24.22	23.94	23.89	0	0
		6	0	23.25	23.00	22.91	0-1	1
	16QAM	1	0	23.56	23.09	22.95	0-1	1
		1	3	23.34	23.09	23.04	0-1	1
		1	5	23.52	23.19	22.95	0-1	1
		3	0	23.24	23.01	22.84	0-1	1
		3	1	23.32	23.10	22.90	0-1	1
		3	3	23.30	23.02	22.95	0-1	1
	64QAM	6	0	22.28	22.05	21.96	0-2	2
		1	0	22.55	22.11	21.98	0-2	2
		1	3	22.46	22.08	21.86	0-2	2
		1	5	22.51	22.05	22.02	0-2	2
		3	0	22.41	22.04	21.85	0-2	2
		3	1	22.43	22.12	21.99	0-2	2
		3	3	22.40	22.05	21.94	0-2	2
	256QAM	6	0	21.47	21.07	20.95	0-3	3
		1	0	19.33	19.09	18.94	0-5	5
		1	3	19.36	18.93	18.89	0-5	5
		1	5	19.29	19.07	18.98	0-5	5
		3	0	19.22	19.01	18.84	0-5	5
		3	1	19.30	19.01	18.92	0-5	5
		3	3	19.30	19.00	18.97	0-5	5
		6	0	19.21	18.93	18.88	0-5	5

LTE FDD Band 5 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20415 Ch. 825.5 MHz	20525 Ch. 836.5 MHz	20635 Ch. 847.5 MHz		
3 MHz	QPSK	1	0	24.22	23.98	23.89	0	0
		1	7	24.25	24.00	23.89	0	0
		1	14	24.19	23.96	23.92	0	0
		8	0	23.25	23.05	22.95	0	0
		8	3	23.27	23.06	22.97	0	0
		8	7	23.25	23.04	22.97	0	0
		15	0	23.30	23.08	22.99	0-1	1
	16QAM	1	0	23.51	23.20	23.00	0-1	1
		1	7	23.49	22.93	22.96	0-1	1
		1	14	23.50	23.19	22.94	0-1	1
		8	0	22.31	22.06	22.00	0-1	1
		8	3	22.36	22.09	22.01	0-1	1
		8	7	22.34	22.11	21.98	0-1	1
	64QAM	15	0	22.33	22.07	21.96	0-2	2
		1	0	22.42	22.19	21.99	0-2	2
		1	7	22.30	22.14	22.00	0-2	2
		1	14	22.41	22.13	22.12	0-2	2
		8	0	21.25	21.00	20.94	0-2	2
		8	3	21.23	21.00	20.91	0-2	2
		8	7	21.21	21.03	20.96	0-2	2
	256QAM	15	0	21.28	21.06	20.98	0-3	3
		1	0	19.33	19.12	19.04	0-5	5
		1	7	19.36	19.09	19.07	0-5	5
		1	14	19.29	19.07	18.91	0-5	5
		8	0	19.26	18.98	18.92	0-5	5
		8	3	19.27	18.99	18.90	0-5	5
		8	7	19.23	18.99	18.91	0-5	5
		15	0	19.21	18.98	18.90	0-5	5

LTE FDD Band 5 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20425 Ch. 826.5 MHz	20525 Ch. 836.5 MHz	20625 Ch. 846.5 MHz		
5 MHz	QPSK	1	0	24.16	24.03	23.83	0	0
		1	12	24.20	24.02	23.91	0	0
		1	24	24.22	24.03	23.91	0	0
		12	0	23.25	23.10	22.99	0	0
		12	6	23.27	23.12	22.99	0	0
		12	11	23.30	23.13	23.00	0	0
		25	0	23.37	23.15	23.08	0-1	1
	16QAM	1	0	23.51	23.22	23.14	0-1	1
		1	12	23.42	22.92	22.96	0-1	1
		1	24	23.43	23.08	23.05	0-1	1
		12	0	22.28	22.11	21.97	0-1	1
		12	6	22.29	22.08	21.96	0-1	1
		12	11	22.31	22.07	22.00	0-1	1
		25	0	22.32	22.11	21.99	0-2	2
	64QAM	1	0	22.47	22.22	22.24	0-2	2
		1	12	22.40	22.23	22.15	0-2	2
		1	24	22.40	22.19	22.10	0-2	2
		12	0	21.31	21.10	20.98	0-2	2
		12	6	21.29	21.10	20.99	0-2	2
		12	11	21.24	21.06	21.02	0-2	2
		25	0	21.28	21.08	21.01	0-3	3
	256QAM	1	0	19.45	19.17	19.04	0-5	5
		1	12	19.35	19.05	18.98	0-5	5
		1	24	19.34	19.14	19.09	0-5	5
		12	0	19.21	19.03	18.92	0-5	5
		12	6	19.25	19.03	18.95	0-5	5
		12	11	19.23	19.05	18.97	0-5	5
		25	0	19.22	19.02	18.98	0-5	5

LTE FDD Band 5 _ 10 MHz Bandwidth Conducted Power

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	24.12	0	0
		1	24	24.00	0	0
		1	49	23.99	0	0
		25	0	23.28	0	0
		25	12	23.16	0	0
		25	24	23.16	0	0
		50	0	23.19	0-1	1
	16QAM	1	0	23.30	0-1	1
		1	24	23.16	0-1	1
		1	49	23.24	0-1	1
		25	0	22.14	0-1	1
		25	12	22.11	0-1	1
		25	24	22.10	0-1	1
		50	0	22.14	0-2	2
	64QAM	1	0	22.20	0-2	2
		1	24	22.15	0-2	2
		1	49	22.13	0-2	2
		25	0	21.13	0-2	2
		25	12	21.12	0-2	2
		25	24	21.08	0-2	2
		50	0	21.12	0-3	3
	256QAM	1	0	19.19	0-5	5
		1	24	19.08	0-5	5
		1	49	19.09	0-5	5
		25	0	19.08	0-5	5
		25	12	19.06	0-5	5
		25	24	19.07	0-5	5
		50	0	19.05	0-5	5

[LTE FDD Band 12 Conducted _ Power Main1 Ant.]

LTE FDD Band 12 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23017 Ch. 699.7 MHz	23095 Ch. 707.5 MHz	23173 Ch. 715.3 MHz		
1.4 MHz	QPSK	1	0	23.43	23.59	23.59	0	0
		1	3	23.38	23.55	23.53	0	0
		1	5	23.42	23.59	23.62	0	0
		3	0	23.44	23.65	23.70	0	0
		3	1	23.50	23.69	23.68	0	0
		3	3	23.47	23.62	23.63	0	0
		6	0	22.50	22.68	22.64	0-1	1
	16QAM	1	0	22.65	22.80	22.94	0-1	1
		1	3	22.57	22.70	22.86	0-1	1
		1	5	22.70	22.75	22.93	0-1	1
		3	0	22.53	22.73	22.73	0-1	1
		3	1	22.62	22.76	22.76	0-1	1
		3	3	22.58	22.78	22.83	0-1	1
	64QAM	6	0	21.59	21.70	21.83	0-2	2
		1	0	21.60	21.88	21.95	0-2	2
		1	3	21.59	21.86	21.90	0-2	2
		1	5	21.74	21.91	21.89	0-2	2
		3	0	21.51	21.72	21.71	0-2	2
		3	1	21.63	21.74	21.76	0-2	2
		3	3	21.60	21.69	21.80	0-2	2
	256QAM	6	0	20.54	20.63	20.67	0-3	3
		1	0	18.52	18.59	18.79	0-5	5
		1	3	18.55	18.57	18.69	0-5	5
		1	5	18.55	18.64	18.77	0-5	5
		3	0	18.48	18.62	18.73	0-5	5
		3	1	18.54	18.62	18.79	0-5	5
		3	3	18.51	18.62	18.76	0-5	5
		6	0	18.45	18.59	18.62	0-5	5

LTE FDD Band 12 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23025 Ch. 700.5 MHz	23095 Ch. 707.5 MHz	23165 Ch. 714.5 MHz		
3 MHz	QPSK	1	0	23.46	23.71	23.67	0	0
		1	7	23.48	23.69	23.68	0	0
		1	14	23.45	23.64	23.65	0	0
		8	0	22.51	22.69	22.68	0	0
		8	3	22.62	22.74	22.71	0	0
		8	7	22.54	22.73	22.71	0	0
		15	0	22.55	22.77	22.73	0-1	1
	16QAM	1	0	22.81	22.85	22.83	0-1	1
		1	7	22.59	22.86	22.86	0-1	1
		1	14	22.72	22.87	22.89	0-1	1
		8	0	21.64	21.77	21.72	0-1	1
		8	3	21.63	21.76	21.78	0-1	1
		8	7	21.61	21.76	21.74	0-1	1
	64QAM	15	0	21.60	21.72	21.75	0-2	2
		1	0	21.75	21.99	21.99	0-2	2
		1	7	21.72	21.88	21.89	0-2	2
		1	14	21.80	21.78	21.83	0-2	2
		8	0	20.55	20.63	20.71	0-2	2
		8	3	20.49	20.61	20.70	0-2	2
		8	7	20.56	20.66	20.65	0-2	2
	256QAM	15	0	20.57	20.71	20.72	0-3	3
		1	0	18.49	18.74	18.69	0-5	5
		1	7	18.50	18.76	18.64	0-5	5
		1	14	18.51	18.73	18.69	0-5	5
		8	0	18.53	18.64	18.67	0-5	5
		8	3	18.54	18.68	18.68	0-5	5
		8	7	18.49	18.64	18.67	0-5	5
			15	0	18.47	18.55	18.60	0-5

LTE FDD Band 12 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23035 Ch. 701.5 MHz	23095 Ch. 707.5 MHz	23155 Ch. 713.5 MHz		
5 MHz	QPSK	1	0	23.50	23.66	23.70	0	0
		1	12	23.50	23.68	23.73	0	0
		1	24	23.53	23.66	23.68	0	0
		12	0	22.54	22.71	22.79	0	0
		12	6	22.56	22.73	22.72	0	0
		12	11	22.57	22.72	22.79	0	0
		25	0	22.60	22.77	22.81	0-1	1
	16QAM	1	0	22.78	22.93	22.92	0-1	1
		1	12	22.66	22.76	22.88	0-1	1
		1	24	22.65	22.75	22.87	0-1	1
		12	0	21.61	21.77	21.80	0-1	1
		12	6	21.61	21.74	21.73	0-1	1
		12	11	21.59	21.71	21.75	0-1	1
		25	0	21.59	21.77	21.80	0-2	2
	64QAM	1	0	21.71	21.89	21.99	0-2	2
		1	12	21.76	21.84	21.91	0-2	2
		1	24	21.69	21.89	21.96	0-2	2
		12	0	20.59	20.70	20.76	0-2	2
		12	6	20.60	20.69	20.69	0-2	2
		12	11	20.54	20.70	20.77	0-2	2
		25	0	20.63	20.70	20.74	0-3	3
	256QAM	1	0	18.49	18.87	18.71	0-5	5
		1	12	18.55	18.63	18.68	0-5	5
		1	24	18.47	18.66	18.67	0-5	5
		12	0	18.54	18.66	18.70	0-5	5
		12	6	18.54	18.68	18.68	0-5	5
		12	11	18.49	18.62	18.73	0-5	5
		25	0	18.55	18.63	18.74	0-5	5

LTE FDD Band 12 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23095 Ch. 707.5 MHz		
10 MHz	QPSK	1	0	23.69	0	0
		1	24	23.61	0	0
		1	49	23.62	0	0
		25	0	22.79	0	0
		25	12	22.78	0	0
		25	24	22.74	0	0
		50	0	22.82	0-1	1
	16QAM	1	0	22.85	0-1	1
		1	24	22.88	0-1	1
		1	49	22.78	0-1	1
		25	0	21.81	0-1	1
		25	12	21.77	0-1	1
		25	24	21.75	0-1	1
		50	0	21.77	0-2	2
	64QAM	1	0	21.93	0-2	2
		1	24	21.88	0-2	2
		1	49	21.90	0-2	2
		25	0	20.75	0-2	2
		25	12	20.74	0-2	2
		25	24	20.67	0-2	2
		50	0	20.74	0-3	3
	256QAM	1	0	18.85	0-5	5
		1	24	18.82	0-5	5
		1	49	18.66	0-5	5
		25	0	18.75	0-5	5
		25	12	18.70	0-5	5
		25	24	18.67	0-5	5
		50	0	18.76	0-5	5

[LTE FDD Band 17 Conducted Power _ Main1 Ant.]

LTE FDD Band 17 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23790 Ch. 710 MHz		
5 MHz	QPSK	1	0	23.69	0	0
		1	12	23.75	0	0
		1	24	23.70	0	0
		12	0	22.77	0	0
		12	6	22.76	0	0
		12	11	22.79	0	0
		25	0	22.84	0-1	1
	16QAM	1	0	23.01	0-1	1
		1	12	22.85	0-1	1
		1	24	22.93	0-1	1
		12	0	21.78	0-1	1
		12	6	21.77	0-1	1
		12	11	21.80	0-1	1
		25	0	21.78	0-2	2
	64QAM	1	0	21.89	0-2	2
		1	12	22.02	0-2	2
		1	24	21.86	0-2	2
		12	0	20.73	0-2	2
		12	6	20.78	0-2	2
		12	11	20.77	0-2	2
		25	0	20.74	0-3	3
	256QAM	1	0	18.87	0-5	5
		1	12	18.79	0-5	5
		1	24	18.82	0-5	5
		12	0	18.68	0-5	5
		12	6	18.73	0-5	5
		12	11	18.67	0-5	5
		25	0	18.74	0-5	5

LTE FDD Band 17 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23790 Ch. 710 MHz		
10 MHz	QPSK	1	0	23.75	0	0
		1	24	23.64	0	0
		1	49	23.64	0	0
		25	0	22.82	0	0
		25	12	22.79	0	0
		25	24	22.80	0	0
		50	0	22.83	0-1	1
	16QAM	1	0	23.03	0-1	1
		1	24	22.87	0-1	1
		1	49	22.78	0-1	1
		25	0	21.82	0-1	1
		25	12	21.80	0-1	1
		25	24	21.79	0-1	1
		50	0	21.81	0-2	2
	64QAM	1	0	21.88	0-2	2
		1	24	21.82	0-2	2
		1	49	21.82	0-2	2
		25	0	20.77	0-2	2
		25	12	20.75	0-2	2
		25	24	20.76	0-2	2
		50	0	20.78	0-3	3
	256QAM	1	0	18.82	0-5	5
		1	24	18.69	0-5	5
		1	49	18.69	0-5	5
		25	0	18.78	0-5	5
		25	12	18.74	0-5	5
		25	24	18.71	0-5	5
		50	0	18.70	0-5	5

[LTE FDD Band 25 Conducted Power _ Main1 Ant.]

LTE FDD Band 25 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 MHz	26365 Ch. 1882.5 MHz	26683 Ch. 1914.3 MHz		
1.4 MHz	QPSK	1	0	23.54	23.61	23.31	0	0
		1	3	23.51	23.63	23.29	0	0
		1	5	23.58	23.71	23.43	0	0
		3	0	23.62	23.71	23.51	0	0
		3	1	23.58	23.63	23.54	0	0
		3	3	23.56	23.61	23.51	0	0
	16QAM	1	0	22.90	22.96	22.76	0-1	1
		1	3	22.79	22.95	22.65	0-1	1
		1	5	22.78	22.96	22.73	0-1	1
		3	0	22.76	22.80	22.66	0-1	1
		3	1	22.90	22.92	22.69	0-1	1
		3	3	22.74	22.99	22.71	0-1	1
	64QAM	6	0	21.81	21.82	21.69	0-2	2
		1	0	21.88	21.91	21.70	0-2	2
		1	3	21.83	21.96	21.77	0-2	2
		1	5	21.85	21.98	21.75	0-2	2
		3	0	21.83	21.77	21.70	0-2	2
		3	1	21.73	21.83	21.71	0-2	2
	256QAM	3	3	21.79	21.83	21.66	0-2	2
		6	0	20.70	20.80	20.60	0-3	3
		1	0	18.71	18.75	18.55	0-5	5
		1	3	18.69	18.77	18.49	0-5	5
		1	5	18.73	18.74	18.50	0-5	5
		3	0	18.60	18.68	18.51	0-5	5
		3	1	18.69	18.66	18.46	0-5	5
		3	3	18.64	18.73	18.54	0-5	5
	6	0	18.51	18.59	18.53	0-5	5	

LTE FDD Band 25 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 MHz	26365 Ch. 1882.5 MHz	26675Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	23.55	23.69	23.51	0	0
		1	7	23.65	23.72	23.56	0	0
		1	14	23.58	23.73	23.53	0	0
		8	0	22.64	22.76	22.61	0-1	1
		8	3	22.68	22.80	22.60	0-1	1
		8	7	22.68	22.85	22.68	0-1	1
		15	0	22.72	22.85	22.67	0-1	1
	16QAM	1	0	22.86	22.99	22.78	0-1	1
		1	7	22.76	22.88	22.87	0-1	1
		1	14	22.78	22.93	22.83	0-1	1
		8	0	21.77	21.90	21.70	0-2	2
		8	3	21.83	21.98	21.77	0-2	2
		8	7	21.86	21.96	21.78	0-2	2
		15	0	21.78	21.92	21.73	0-2	2
	64QAM	1	0	21.90	22.00	21.89	0-2	2
		1	7	21.81	21.95	21.83	0-2	2
		1	14	21.92	21.97	21.82	0-2	2
		8	0	20.77	20.86	20.67	0-3	3
		8	3	20.71	20.84	20.71	0-3	3
		8	7	20.71	20.85	20.65	0-3	3
		15	0	20.75	20.86	20.66	0-3	3
	256QAM	1	0	18.59	18.71	18.53	0-5	5
		1	7	18.65	18.69	18.46	0-5	5
		1	14	18.62	18.78	18.60	0-5	5
		8	0	18.57	18.66	18.50	0-5	5
		8	3	18.59	18.65	18.52	0-5	5
		8	7	18.58	18.68	18.54	0-5	5
		15	0	18.57	18.70	18.50	0-5	5

LTE FDD Band 25 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 MHz	26365 Ch. 1882.5 MHz	26665 Ch. 1912.5 MHz		
5 MHz	QPSK	1	0	23.54	23.66	23.55	0	0
		1	12	23.63	23.72	23.55	0	0
		1	24	23.65	23.78	23.61	0	0
		12	0	22.65	22.83	22.65	0-1	1
		12	6	22.69	22.80	22.69	0-1	1
		12	11	22.70	22.84	22.68	0-1	1
		25	0	22.63	22.80	22.65	0-1	1
	16QAM	1	0	22.93	22.98	22.95	0-1	1
		1	12	22.81	22.97	22.85	0-1	1
		1	24	22.88	22.93	22.90	0-1	1
		12	0	21.75	21.91	21.78	0-2	2
		12	6	21.80	21.88	21.78	0-2	2
		12	11	21.77	21.90	21.80	0-2	2
		25	0	21.69	21.79	21.75	0-2	2
	64QAM	1	0	21.87	21.98	21.87	0-2	2
		1	12	21.89	21.94	21.82	0-2	2
		1	24	21.92	21.95	21.86	0-2	2
		12	0	20.76	20.83	20.73	0-3	3
		12	6	20.72	20.83	20.73	0-3	3
		12	11	20.73	20.84	20.67	0-3	3
		25	0	20.64	20.79	20.60	0-3	3
	256QAM	1	0	18.67	18.74	18.72	0-5	5
		1	12	18.61	18.74	18.52	0-5	5
		1	24	18.69	18.81	18.57	0-5	5
		12	0	18.63	18.71	18.60	0-5	5
		12	6	18.62	18.75	18.59	0-5	5
		12	11	18.63	18.75	18.60	0-5	5
		25	0	18.61	18.65	18.55	0-5	5

LTE FDD Band 25 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 MHz	26365 Ch. 1882.5 MHz	26640 Ch. 1910 MHz		
10 MHz	QPSK	1	0	23.54	23.70	23.53	0	0
		1	24	23.47	23.67	23.38	0	0
		1	49	23.48	23.79	23.56	0	0
		25	0	22.58	22.77	22.63	0-1	1
		25	12	22.62	22.79	22.56	0-1	1
		25	24	22.61	22.81	22.66	0-1	1
		50	0	22.63	22.84	22.69	0-1	1
	16QAM	1	0	22.83	22.93	22.93	0-1	1
		1	24	22.81	22.97	22.63	0-1	1
		1	49	22.65	22.99	22.81	0-1	1
		25	0	21.65	21.88	21.73	0-2	2
		25	12	21.66	21.82	21.61	0-2	2
		25	24	21.58	21.85	21.75	0-2	2
		50	0	21.68	21.88	21.73	0-2	2
	64QAM	1	0	21.77	21.97	21.78	0-2	2
		1	24	21.77	21.87	21.69	0-2	2
		1	49	21.74	21.93	21.84	0-2	2
		25	0	20.59	20.86	20.68	0-3	3
		25	12	20.61	20.77	20.68	0-3	3
		25	24	20.61	20.79	20.63	0-3	3
		50	0	20.58	20.81	20.70	0-3	3
	256QAM	1	0	18.61	18.81	18.62	0-5	5
		1	24	18.57	18.80	18.60	0-5	5
		1	49	18.53	18.72	18.63	0-5	5
		25	0	18.52	18.69	18.55	0-5	5
		25	12	18.54	18.68	18.61	0-5	5
		25	24	18.52	18.73	18.61	0-5	5
		50	0	18.52	18.76	18.64	0-5	5

LTE FDD Band 25 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 MHz	26365 Ch. 1882.5 MHz	26615 Ch. 1907.5 MHz		
15 MHz	QPSK	1	0	23.41	23.68	23.47	0	0
		1	36	23.56	23.69	23.49	0	0
		1	74	23.51	23.75	23.39	0	0
		36	0	22.57	22.79	22.60	0-1	1
		36	18	22.60	22.81	22.62	0-1	1
		36	39	22.56	22.81	22.42	0-1	1
		75	0	22.57	22.77	22.61	0-1	1
	16QAM	1	0	22.81	22.96	22.78	0-1	1
		1	36	22.59	22.85	22.67	0-1	1
		1	74	22.75	22.94	22.55	0-1	1
		36	0	21.59	21.86	21.69	0-2	2
		36	18	21.61	21.84	21.71	0-2	2
		36	39	21.64	21.88	21.50	0-2	2
		75	0	21.61	21.83	21.68	0-2	2
	64QAM	1	0	21.79	21.93	21.71	0-2	2
		1	36	21.69	21.94	21.74	0-2	2
		1	74	21.74	22.00	21.80	0-2	2
		36	0	20.61	20.80	20.65	0-3	3
		36	18	20.59	20.87	20.68	0-3	3
		36	39	20.61	20.87	20.68	0-3	3
		75	0	20.52	20.79	20.59	0-3	3
	256QAM	1	0	18.61	18.82	18.48	0-5	5
		1	36	18.42	18.84	18.63	0-5	5
		1	74	18.44	18.84	18.66	0-5	5
		36	0	18.53	18.72	18.53	0-5	5
		36	18	18.50	18.70	18.56	0-5	5
		36	39	18.43	18.72	18.60	0-5	5
		75	0	18.49	18.70	18.51	0-5	5

LTE FDD Band 25 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	23.42	23.53	23.47	0	0
		1	49	23.46	23.57	23.50	0	0
		1	99	23.51	23.70	23.60	0	0
		50	0	22.57	22.78	22.69	0-1	1
		50	25	22.60	22.80	22.72	0-1	1
		50	49	22.69	22.84	22.73	0-1	1
		100	0	22.61	22.75	22.65	0-1	1
	16QAM	1	0	22.90	22.99	22.76	0-1	1
		1	49	22.58	22.93	22.87	0-1	1
		1	99	22.71	22.97	22.89	0-1	1
		50	0	21.62	21.80	21.73	0-2	2
		50	25	21.68	21.83	21.70	0-2	2
		50	49	21.65	21.82	21.71	0-2	2
		100	0	21.65	21.84	21.72	0-2	2
	64QAM	1	0	21.79	21.95	21.77	0-2	2
		1	49	21.69	21.96	21.65	0-2	2
		1	99	21.80	21.97	21.77	0-2	2
		50	0	20.64	20.83	20.68	0-3	3
		50	25	20.61	20.80	20.72	0-3	3
		50	49	20.67	20.80	20.70	0-3	3
		100	0	20.59	20.81	20.66	0-3	3
	256QAM	1	0	18.60	18.71	18.65	0-5	5
		1	49	18.48	18.84	18.56	0-5	5
		1	99	18.55	18.78	18.57	0-5	5
		50	0	18.57	18.74	18.60	0-5	5
		50	25	18.57	18.75	18.60	0-5	5
		50	49	18.52	18.74	18.61	0-5	5
		100	0	18.50	18.72	18.51	0-5	5

[LTE FDD Band 26 Conducted Power _ Main1 Ant.]

LTE FDD Band 26 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26697 Ch. 814.7 MHz	26865 Ch. 831.5 MHz	27033 Ch. 848.3 MHz		
1.4 MHz	QPSK	1	0	24.33	23.98	23.81	0	0
		1	3	24.27	23.91	23.75	0	0
		1	5	24.32	24.03	23.82	0	0
		3	0	24.39	24.03	23.85	0	0
		3	1	24.33	24.03	23.86	0	0
		3	3	24.32	24.02	23.86	0	0
		6	0	23.46	23.08	22.92	0-1	1
	16QAM	1	0	23.52	23.19	22.99	0-1	1
		1	3	23.38	23.24	22.98	0-1	1
		1	5	23.45	23.28	23.00	0-1	1
		3	0	23.42	23.12	22.87	0-1	1
		3	1	23.52	23.15	22.94	0-1	1
		3	3	23.48	23.15	22.92	0-1	1
	64QAM	6	0	22.47	22.10	21.93	0-2	2
		1	0	22.59	22.27	21.96	0-2	2
		1	3	22.47	22.21	22.01	0-2	2
		1	5	22.54	22.28	22.06	0-2	2
		3	0	22.47	22.10	21.92	0-2	2
		3	1	22.49	22.13	21.88	0-2	2
		3	3	22.48	22.06	21.91	0-2	2
	256QAM	6	0	21.51	21.15	20.93	0-3	3
		1	0	19.49	19.16	18.96	0-5	5
		1	3	19.42	18.94	18.83	0-5	5
		1	5	19.47	19.09	18.86	0-5	5
		3	0	19.43	19.10	18.81	0-5	5
		3	1	19.52	19.13	18.86	0-5	5
		3	3	19.55	19.06	18.84	0-5	5
	6	0	19.42	19.06	18.80	0-5	5	

LTE FDD Band 26 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26705 Ch. 815.5 MHz	26865 Ch. 831.5 MHz	27025 Ch. 847.5 MHz		
3 MHz	QPSK	1	0	24.36	24.05	23.79	0	0
		1	7	24.36	24.02	23.86	0	0
		1	14	24.37	24.00	23.83	0	0
		8	0	23.41	23.07	22.87	0	0
		8	3	23.45	23.06	22.92	0	0
		8	7	23.44	23.15	22.95	0	0
		15	0	23.47	23.14	22.90	0-1	1
	16QAM	1	0	23.53	23.23	22.93	0-1	1
		1	7	23.43	23.03	22.90	0-1	1
		1	14	23.51	23.28	23.10	0-1	1
		8	0	22.49	22.16	21.98	0-1	1
		8	3	22.48	22.15	21.97	0-1	1
		8	7	22.53	22.14	21.96	0-1	1
	64QAM	15	0	22.46	22.13	21.91	0-2	2
		1	0	22.58	22.31	21.95	0-2	2
		1	7	22.55	22.21	21.94	0-2	2
		1	14	22.53	22.26	22.08	0-2	2
		8	0	21.41	21.10	20.92	0-2	2
		8	3	21.47	21.15	20.91	0-2	2
		8	7	21.46	21.17	20.89	0-2	2
	256QAM	15	0	21.46	21.13	20.93	0-3	3
		1	0	19.51	19.15	18.99	0-5	5
		1	7	19.48	19.11	18.93	0-5	5
		1	14	19.45	19.16	18.96	0-5	5
		8	0	19.38	19.11	18.88	0-5	5
		8	3	19.46	19.08	18.88	0-5	5
		8	7	19.43	19.06	18.90	0-5	5
		15	0	19.38	19.07	18.85	0-5	5

LTE FDD Band 26 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26715 Ch. 816.5 MHz	26865 Ch. 831.5 MHz	27015 Ch. 846.5 MHz		
5 MHz	QPSK	1	0	24.34	24.06	23.80	0	0
		1	12	24.38	24.09	23.89	0	0
		1	24	24.41	24.09	23.91	0	0
		12	0	23.45	23.18	22.92	0	0
		12	6	23.46	23.13	22.92	0	0
		12	11	23.49	23.15	22.95	0	0
		25	0	23.56	23.22	23.06	0-1	1
	16QAM	1	0	23.62	23.37	23.11	0-1	1
		1	12	23.56	23.06	22.90	0-1	1
		1	24	23.49	23.32	23.15	0-1	1
		12	0	22.45	22.18	21.95	0-1	1
		12	6	22.43	22.13	22.01	0-1	1
		12	11	22.47	22.16	22.02	0-1	1
	64QAM	25	0	22.50	22.20	21.97	0-2	2
		1	0	22.58	22.35	22.06	0-2	2
		1	12	22.62	22.23	22.12	0-2	2
		1	24	22.54	22.30	22.07	0-2	2
		12	0	21.49	21.13	20.97	0-2	2
		12	6	21.48	21.17	20.95	0-2	2
	256QAM	12	11	21.45	21.18	20.99	0-2	2
		25	0	21.52	21.12	20.95	0-3	3
		1	0	19.41	19.19	19.03	0-5	5
		1	12	19.43	19.08	19.02	0-5	5
		1	24	19.46	19.19	18.98	0-5	5
		12	0	19.44	19.11	18.87	0-5	5
		12	6	19.41	19.14	18.87	0-5	5
	12	11	19.44	19.12	18.93	0-5	5	
	25	0	19.46	19.13	18.92	0-5	5	

LTE FDD Band 26 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26740 Ch. 819 MHz	26865 Ch. 831.5 MHz	26990 Ch. 844 MHz		
10 MHz	QPSK	1	0	24.37	24.08	24.00	0	0
		1	24	24.31	24.04	23.91	0	0
		1	49	24.33	24.03	23.93	0	0
		25	0	23.53	23.22	23.08	0	0
		25	12	23.52	23.22	23.07	0	0
		25	24	23.52	23.23	23.09	0	0
		50	0	23.57	23.26	23.09	0-1	1
	16QAM	1	0	23.49	23.36	23.13	0-1	1
		1	24	23.47	23.22	23.05	0-1	1
		1	49	23.54	23.31	23.17	0-1	1
		25	0	22.49	22.23	22.06	0-1	1
		25	12	22.49	22.19	22.04	0-1	1
		25	24	22.52	22.20	22.02	0-1	1
		50	0	22.51	22.23	22.03	0-2	2
	64QAM	1	0	22.64	22.32	22.15	0-2	2
		1	24	22.52	22.24	22.17	0-2	2
		1	49	22.59	22.25	22.13	0-2	2
		25	0	21.46	21.18	21.01	0-2	2
		25	12	21.43	21.13	21.03	0-2	2
		25	24	21.45	21.16	21.04	0-2	2
		50	0	21.46	21.20	21.05	0-3	3
	256QAM	1	0	19.39	19.24	19.04	0-5	5
		1	24	19.48	19.21	19.02	0-5	5
		1	49	19.48	19.15	19.10	0-5	5
		25	0	19.45	19.20	18.99	0-5	5
		25	12	19.40	19.14	18.98	0-5	5
		25	24	19.43	19.11	18.96	0-5	5
		50	0	19.48	19.16	19.02	0-5	5

LTE FDD Band 26 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				26865 Ch. 831.5 MHz		
15 MHz	QPSK	1	0	24.13	0	0
		1	36	24.14	0	0
		1	74	24.02	0	0
		36	0	23.19	0	0
		36	18	23.23	0	0
		36	39	23.17	0	0
		75	0	23.21	0-1	1
	16QAM	1	0	23.37	0-1	1
		1	36	23.30	0-1	1
		1	74	23.13	0-1	1
		36	0	22.21	0-1	1
		36	18	22.16	0-1	1
		36	39	22.13	0-1	1
		75	0	22.22	0-2	2
	64QAM	1	0	22.34	0-2	2
		1	36	22.20	0-2	2
		1	74	22.36	0-2	2
		36	0	21.22	0-2	2
		36	18	21.21	0-2	2
		36	39	21.14	0-2	2
		75	0	21.20	0-3	3
	256QAM	1	0	19.32	0-5	5
		1	36	19.17	0-5	5
		1	74	19.11	0-5	5
		36	0	19.19	0-5	5
		36	18	19.13	0-5	5
		36	39	19.09	0-5	5
		75	0	19.13	0-5	5

[LTE TDD Band 41 Conducted Power _ Main1 Ant.]

LTE TDD Band 41 _ 5 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
5 MHz	QPSK	1	0	23.01	23.32	23.31	22.77	22.91	0	0
		1	12	22.95	23.27	23.21	22.71	22.84	0	0
		1	24	23.04	23.36	23.32	22.79	22.95	0	0
		12	0	22.08	22.38	22.40	21.84	22.07	0-1	1
		12	6	22.07	22.40	22.39	21.84	22.09	0-1	1
		12	11	22.08	22.41	22.37	21.83	22.08	0-1	1
		25	0	22.09	22.39	22.38	21.83	22.06	0-1	1
	16QAM	1	0	22.42	22.64	22.45	21.98	22.32	0-1	1
		1	12	22.42	22.48	22.61	21.99	22.23	0-1	1
		1	24	22.44	22.50	22.77	21.99	22.35	0-1	1
		12	0	21.05	21.39	21.45	20.82	21.09	0-2	2
		12	6	21.03	21.38	21.45	20.81	21.08	0-2	2
		12	11	21.04	21.38	21.45	20.81	21.08	0-2	2
		25	0	21.08	21.38	21.38	20.85	21.02	0-2	2
	64QAM	1	0	21.46	21.55	21.55	21.03	21.04	0-2	2
		1	12	21.35	21.58	21.47	20.93	20.98	0-2	2
		1	24	21.48	21.63	21.54	21.05	21.05	0-2	2
		12	0	20.08	20.29	20.42	19.85	20.01	0-3	3
		12	6	20.06	20.30	20.42	19.83	20.02	0-3	3
		12	11	20.06	20.29	20.40	19.84	20.00	0-3	3
		25	0	20.11	20.38	20.41	19.78	20.03	0-3	3
	256QAM	1	0	18.06	18.46	18.11	17.76	17.72	0-5	5
		1	12	18.04	18.36	18.00	17.78	17.64	0-5	5
		1	24	18.05	18.45	18.11	17.75	17.76	0-5	5
		12	0	18.08	18.25	18.28	17.75	17.88	0-5	5
		12	6	17.97	18.22	18.27	17.72	17.89	0-5	5
		12	11	18.08	18.25	18.28	17.74	17.89	0-5	5
		25	0	18.00	18.25	18.32	17.72	17.91	0-5	5

LTE TDD Band 41 _ 10 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
10 MHz	QPSK	1	0	23.03	23.30	23.35	22.81	22.94	0	0
		1	24	23.01	23.29	23.30	22.76	22.92	0	0
		1	49	23.05	23.36	23.31	22.77	22.95	0	0
		25	0	22.08	22.36	22.38	21.85	22.07	0-1	1
		25	12	22.09	22.36	22.38	21.83	22.07	0-1	1
		25	24	22.07	22.39	22.37	21.84	22.08	0-1	1
		50	0	22.11	22.41	22.41	21.89	22.13	0-1	1
	16QAM	1	0	22.24	22.44	22.62	22.20	22.20	0-1	1
		1	24	22.14	22.29	22.49	22.07	22.13	0-1	1
		1	49	22.22	22.50	22.57	22.12	22.16	0-1	1
		25	0	21.15	21.34	21.42	20.83	21.07	0-2	2
		25	12	21.14	21.37	21.40	20.82	21.05	0-2	2
		25	24	21.12	21.39	21.39	20.80	21.06	0-2	2
	64QAM	50	0	21.11	21.34	21.40	20.86	21.10	0-2	2
		1	0	21.34	21.57	21.55	21.07	20.92	0-2	2
		1	24	21.32	21.59	21.36	21.02	20.94	0-2	2
		1	49	21.27	21.60	21.32	21.00	20.88	0-2	2
		25	0	20.06	20.33	20.39	19.84	20.03	0-3	3
		25	12	20.04	20.33	20.38	19.81	20.01	0-3	3
		25	24	20.04	20.36	20.36	19.80	20.00	0-3	3
	256QAM	50	0	20.11	20.40	20.40	19.86	20.10	0-3	3
		1	0	18.08	18.41	18.22	17.64	17.82	0-5	5
		1	24	18.14	18.49	18.24	17.64	17.83	0-5	5
		1	49	18.07	18.49	18.19	17.55	17.83	0-5	5
		25	0	18.05	18.24	18.31	17.75	17.93	0-5	5
		25	12	18.03	18.24	18.31	17.68	17.91	0-5	5
		25	24	18.02	18.25	18.29	17.69	17.91	0-5	5
	50	0	18.08	18.40	18.40	17.85	18.10	0-5	5	

LTE TDD Band 41 _ 15 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
15 MHz	QPSK	1	0	23.06	23.29	23.34	22.82	22.95	0	0
		1	36	22.95	23.28	23.21	22.73	22.85	0	0
		1	74	23.06	23.41	23.32	22.80	22.97	0	0
		36	0	22.12	22.39	22.40	21.90	22.12	0-1	1
		36	18	22.11	22.41	22.39	21.86	22.13	0-1	1
		36	39	22.10	22.44	22.39	21.86	22.13	0-1	1
		75	0	22.10	22.43	22.39	21.87	22.13	0-1	1
	16QAM	1	0	22.26	22.60	22.56	22.21	22.10	0-1	1
		1	36	22.21	22.64	22.38	22.18	21.93	0-1	1
		1	74	22.23	22.68	22.50	22.16	22.09	0-1	1
		36	0	21.10	21.36	21.40	20.85	21.08	0-2	2
		36	18	21.09	21.39	21.40	20.84	21.10	0-2	2
		36	39	21.07	21.40	21.37	20.82	21.08	0-2	2
		75	0	21.14	21.41	21.40	20.88	21.09	0-2	2
	64QAM	1	0	21.34	21.54	21.64	20.99	21.32	0-2	2
		1	36	21.18	21.55	21.59	20.93	21.24	0-2	2
		1	74	21.31	21.64	21.61	21.05	21.26	0-2	2
		36	0	20.08	20.37	20.37	19.82	20.07	0-3	3
		36	18	20.08	20.39	20.38	19.81	20.09	0-3	3
		36	39	20.05	20.41	20.35	19.79	20.07	0-3	3
		75	0	20.10	20.38	20.39	19.88	20.10	0-3	3
	256QAM	1	0	18.09	18.25	18.45	17.68	17.66	0-5	5
		1	36	18.06	18.17	18.34	17.40	17.61	0-5	5
		1	74	18.05	18.31	18.37	17.56	17.68	0-5	5
		36	0	18.07	18.32	18.37	17.84	18.04	0-5	5
		36	18	18.08	18.35	18.38	17.84	18.06	0-5	5
		36	39	18.06	18.37	18.35	17.81	18.07	0-5	5
		75	0	18.03	18.32	18.34	17.79	18.02	0-5	5

LTE TDD Band 41 _ 20 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	23.06	23.28	23.34	22.85	23.00	0	0
		1	49	23.01	23.30	23.29	22.78	22.94	0	0
		1	99	23.03	23.41	23.28	22.78	22.96	0	0
		50	0	22.13	22.36	22.39	21.90	22.10	0-1	1
		50	25	22.10	22.40	22.38	21.88	22.13	0-1	1
		50	49	22.08	22.44	22.37	21.86	22.14	0-1	1
		100	0	22.11	22.41	22.39	21.89	22.14	0-1	1
	16QAM	1	0	22.27	22.54	22.54	22.05	22.21	0-1	1
		1	49	22.14	22.46	22.45	21.89	22.10	0-1	1
		1	99	22.22	22.60	22.49	21.96	22.16	0-1	1
		50	0	21.13	21.35	21.40	20.83	21.11	0-2	2
		50	25	21.05	21.38	21.39	20.81	21.13	0-2	2
		50	49	21.04	21.41	21.38	20.80	21.10	0-2	2
		100	0	21.15	21.43	21.43	20.92	21.15	0-2	2
	64QAM	1	0	21.35	21.57	21.55	21.04	21.27	0-2	2
		1	49	21.31	21.62	21.63	21.08	21.21	0-2	2
		1	99	21.30	21.67	21.59	21.04	21.20	0-2	2
		50	0	20.11	20.35	20.40	19.88	20.10	0-3	3
		50	25	20.09	20.38	20.39	19.86	20.11	0-3	3
		50	49	20.06	20.42	20.36	19.83	20.10	0-3	3
		100	0	20.10	20.38	20.37	19.85	20.06	0-3	3
	256QAM	1	0	18.08	18.29	18.40	17.87	17.84	0-5	5
		1	49	18.13	18.37	18.42	17.83	17.75	0-5	5
		1	99	18.06	18.43	18.39	17.75	17.74	0-5	5
		50	0	18.13	18.36	18.40	17.87	18.08	0-5	5
		50	25	18.08	18.38	18.39	17.85	18.11	0-5	5
		50	49	18.07	18.41	18.36	17.81	18.10	0-5	5
		100	0	18.06	18.33	18.32	17.82	18.04	0-5	5

Note; LTE TDD Band 41 has 5 required test channels per FCC 447498 D01v06. The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

[LTE FDD Band 66 Conducted Power _ Main1 Ant.]

LTE FDD Band 66 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979 Ch. 1710.7 MHz	132322 Ch. 1745 MHz	132665 Ch. 1779.3 MHz		
1.4 MHz	QPSK	1	0	23.63	23.57	23.78	0	0
		1	3	23.56	23.51	23.73	0	0
		1	5	23.66	23.61	23.81	0	0
		3	0	23.68	23.59	23.80	0	0
		3	1	23.75	23.51	23.83	0	0
		3	3	23.67	23.51	23.78	0	0
		6	0	22.73	22.65	22.89	0-1	1
	16QAM	1	0	22.95	22.81	22.95	0-1	1
		1	3	22.74	22.70	22.93	0-1	1
		1	5	22.89	22.80	22.99	0-1	1
		3	0	22.80	22.61	22.97	0-1	1
		3	1	22.85	22.72	23.00	0-1	1
		3	3	22.82	22.69	22.96	0-1	1
		6	0	21.81	21.69	21.92	0-2	2
	64QAM	1	0	21.95	21.80	22.03	0-2	2
		1	3	21.81	21.78	22.05	0-2	2
		1	5	21.90	21.75	22.08	0-2	2
		3	0	21.74	21.58	21.82	0-2	2
		3	1	21.85	21.72	22.02	0-2	2
		3	3	21.81	21.67	21.99	0-2	2
		6	0	20.77	20.63	20.90	0-3	3
	256QAM	1	0	18.74	18.83	18.75	0-5	5
		1	3	18.68	18.47	18.69	0-5	5
		1	5	18.79	18.57	18.95	0-5	5
		3	0	18.72	18.60	18.86	0-5	5
		3	1	18.77	18.54	18.87	0-5	5
		3	3	18.76	18.57	18.84	0-5	5
		6	0	18.75	18.54	18.83	0-5	5

LTE FDD Band 66 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 MHz	132322 Ch. 1745 MHz	132657 Ch. 1778.5 MHz		
3 MHz	QPSK	1	0	23.72	23.62	23.81	0	0
		1	7	23.77	23.64	23.87	0	0
		1	14	23.75	23.61	23.81	0	0
		8	0	22.80	22.65	22.89	0	0
		8	3	22.85	22.67	22.94	0	0
		8	7	22.83	22.70	22.92	0	0
		15	0	22.86	22.68	22.91	0-1	1
	16QAM	1	0	23.05	22.74	23.09	0-1	1
		1	7	23.00	22.85	23.06	0-1	1
		1	14	23.05	22.76	23.07	0-1	1
		8	0	21.89	21.74	21.96	0-1	1
		8	3	21.94	21.69	22.00	0-1	1
		8	7	21.93	21.76	22.02	0-1	1
		15	0	21.94	21.76	21.99	0-2	2
	64QAM	1	0	22.01	21.84	22.09	0-2	2
		1	7	22.00	21.76	22.08	0-2	2
		1	14	22.13	21.87	22.12	0-2	2
		8	0	20.81	20.67	20.92	0-2	2
		8	3	20.82	20.65	20.90	0-2	2
		8	7	20.86	20.66	20.93	0-2	2
		15	0	20.87	20.71	20.95	0-3	3
	256QAM	1	0	18.77	18.78	18.73	0-5	5
		1	7	18.75	18.67	18.87	0-5	5
		1	14	18.79	18.69	18.85	0-5	5
		8	0	18.73	18.56	18.75	0-5	5
		8	3	18.70	18.59	18.85	0-5	5
		8	7	18.74	18.58	18.80	0-5	5
		15	0	18.73	18.56	18.78	0-5	5

LTE FDD Band 66 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 MHz	132322 Ch. 1745 MHz	132647 Ch. 1777.5 MHz		
5 MHz	QPSK	1	0	23.71	23.61	23.75	0	0
		1	12	23.79	23.65	23.86	0	0
		1	24	23.83	23.68	23.90	0	0
		12	0	22.83	22.69	22.88	0	0
		12	6	22.86	22.69	22.88	0	0
		12	11	22.89	22.74	22.93	0	0
		25	0	22.89	22.72	22.90	0-1	1
	16QAM	1	0	23.12	22.87	23.10	0-1	1
		1	12	22.85	22.69	23.04	0-1	1
		1	24	22.98	22.86	23.15	0-1	1
		12	0	21.94	21.72	21.98	0-1	1
		12	6	21.89	21.71	21.98	0-1	1
		12	11	21.91	21.78	22.00	0-1	1
		25	0	21.90	21.71	21.96	0-2	2
	64QAM	1	0	22.03	21.90	22.04	0-2	2
		1	12	21.85	21.83	21.99	0-2	2
		1	24	21.99	21.94	22.14	0-2	2
		12	0	20.91	20.68	20.94	0-2	2
		12	6	20.91	20.72	20.92	0-2	2
		12	11	20.89	20.72	20.96	0-2	2
		25	0	20.84	20.66	20.89	0-3	3
	256QAM	1	0	18.87	18.79	18.80	0-5	5
		1	12	18.83	18.69	18.88	0-5	5
		1	24	18.83	18.74	18.90	0-5	5
		12	0	18.75	18.56	18.75	0-5	5
		12	6	18.77	18.55	18.78	0-5	5
		12	11	18.78	18.63	18.86	0-5	5
		25	0	18.80	18.60	18.79	0-5	5

LTE FDD Band 66 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 MHz	132322 Ch. 1745 MHz	132622 Ch. 1775 MHz		
10 MHz	QPSK	1	0	23.76	23.59	23.79	0	0
		1	24	23.73	23.60	23.79	0	0
		1	49	23.80	23.68	23.89	0	0
		25	0	22.86	22.70	22.87	0	0
		25	12	22.91	22.70	22.89	0	0
		25	24	22.89	22.72	22.93	0	0
		50	0	22.96	22.77	22.91	0-1	1
	16QAM	1	0	23.03	22.79	22.95	0-1	1
		1	24	23.00	22.82	23.00	0-1	1
		1	49	23.08	22.87	23.04	0-1	1
		25	0	21.96	21.72	21.90	0-1	1
		25	12	21.94	21.72	21.90	0-1	1
		25	24	21.94	21.75	21.92	0-1	1
		50	0	21.93	21.73	21.93	0-2	2
	64QAM	1	0	22.16	21.87	21.96	0-2	2
		1	24	22.04	21.82	22.03	0-2	2
		1	49	22.26	21.93	22.03	0-2	2
		25	0	20.91	20.66	20.87	0-2	2
		25	12	20.94	20.67	20.86	0-2	2
		25	24	20.92	20.68	20.90	0-2	2
		50	0	20.94	20.68	20.92	0-3	3
	256QAM	1	0	18.78	18.77	18.83	0-5	5
		1	24	18.75	18.56	18.78	0-5	5
		1	49	18.82	18.69	18.88	0-5	5
		25	0	18.79	18.58	18.73	0-5	5
		25	12	18.79	18.59	18.74	0-5	5
		25	24	18.81	18.58	18.80	0-5	5
		50	0	18.83	18.62	18.77	0-5	5

LTE FDD Band 66 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 MHz	132322 Ch. 1745 MHz	132597 Ch. 1772.5 MHz		
15 MHz	QPSK	1	0	23.74	23.61	23.81	0	0
		1	36	23.84	23.69	23.82	0	0
		1	74	23.86	23.72	23.87	0	0
		36	0	22.90	22.71	22.92	0	0
		36	18	22.93	22.72	22.88	0	0
		36	39	22.92	22.76	22.95	0	0
		75	0	22.90	22.71	22.89	0-1	1
	16QAM	1	0	22.91	22.87	22.98	0-1	1
		1	36	23.12	22.77	22.97	0-1	1
		1	74	23.19	22.93	23.10	0-1	1
		36	0	21.97	21.70	21.90	0-1	1
		36	18	22.00	21.72	21.86	0-1	1
		36	39	21.99	21.74	21.95	0-1	1
		75	0	21.94	21.70	21.85	0-2	2
	64QAM	1	0	22.04	21.83	22.02	0-2	2
		1	36	22.00	21.75	21.87	0-2	2
		1	74	22.20	22.00	22.07	0-2	2
		36	0	20.98	20.75	20.90	0-2	2
		36	18	21.00	20.70	20.91	0-2	2
		36	39	20.96	20.76	20.98	0-2	2
		75	0	20.95	20.68	20.84	0-3	3
	256QAM	1	0	18.79	18.76	18.81	0-5	5
		1	36	18.86	18.64	18.76	0-5	5
		1	74	18.98	18.69	18.85	0-5	5
		36	0	18.79	18.61	18.75	0-5	5
		36	18	18.81	18.64	18.72	0-5	5
		36	39	18.84	18.64	18.79	0-5	5
		75	0	18.81	18.58	18.76	0-5	5

LTE FDD Band 66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	23.70	23.56	23.79	0	0
		1	49	23.74	23.62	23.82	0	0
		1	99	23.87	23.71	23.88	0	0
		50	0	22.91	22.76	22.96	0	0
		50	25	22.86	22.74	22.93	0	0
		50	49	22.91	22.75	22.97	0	0
		100	0	22.92	22.70	22.88	0-1	1
	16QAM	1	0	23.05	22.73	22.96	0-1	1
		1	49	23.13	22.81	22.98	0-1	1
		1	99	23.18	22.97	23.04	0-1	1
		50	0	21.97	21.71	21.93	0-1	1
		50	25	21.97	21.74	21.91	0-1	1
		50	49	21.99	21.77	21.96	0-1	1
		100	0	21.93	21.70	21.91	0-2	2
	64QAM	1	0	22.07	21.74	21.99	0-2	2
		1	49	22.08	21.75	22.02	0-2	2
		1	99	22.21	21.90	22.09	0-2	2
		50	0	20.95	20.72	20.92	0-2	2
		50	25	21.01	20.72	20.89	0-2	2
		50	49	20.98	20.76	20.93	0-2	2
		100	0	20.90	20.69	20.85	0-3	3
	256QAM	1	0	18.82	18.75	18.82	0-5	5
		1	49	18.87	18.56	18.71	0-5	5
		1	99	18.95	18.79	18.86	0-5	5
		50	0	18.86	18.57	18.76	0-5	5
		50	25	18.83	18.61	18.79	0-5	5
		50	49	18.84	18.65	18.79	0-5	5
		100	0	18.82	18.59	18.75	0-5	5

11.3.2 LTE Reduced Conducted Power

[LTE FDD Band 2 Reduced Conducted Power_ Main1 Ant.]

LTE FDD Band 2 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 MHz	18900 Ch. 1880 MHz	19193 Ch. 1909.3 MHz		
1.4 MHz	QPSK	1	0	14.06	14.15	14.00	0	0
		1	3	13.99	14.04	13.91	0	0
		1	5	14.06	14.12	13.97	0	0
		3	0	14.06	14.14	14.01	0	0
		3	1	14.13	14.18	13.97	0	0
		3	3	14.00	14.12	13.91	0	0
		6	0	14.08	14.16	14.03	0-1	0
	16QAM	1	0	14.16	14.15	14.11	0-1	0
		1	3	14.22	14.27	14.02	0-1	0
		1	5	14.26	14.33	14.17	0-1	0
		3	0	14.11	14.20	13.94	0-1	0
		3	1	14.16	14.26	14.16	0-1	0
		3	3	14.11	14.18	13.99	0-1	0
		6	0	14.07	14.19	13.98	0-2	0
	64QAM	1	0	14.15	14.24	14.11	0-2	0
		1	3	14.07	14.24	13.93	0-2	0
		1	5	14.21	14.23	14.10	0-2	0
		3	0	14.09	14.12	14.02	0-2	0
		3	1	14.13	14.11	14.10	0-2	0
		3	3	14.12	14.18	14.06	0-2	0
		6	0	14.02	14.16	13.98	0-3	0
	256QAM	1	0	14.15	14.18	14.04	0-5	0
		1	3	14.10	14.15	14.09	0-5	0
		1	5	14.24	14.17	14.14	0-5	0
3		0	14.12	14.12	14.00	0-5	0	
3		1	14.08	14.11	14.02	0-5	0	
3		3	14.10	14.19	14.05	0-5	0	
6		0	14.06	14.14	13.95	0-5	0	

LTE FDD Band 2 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 MHz	18900 Ch. 1880 MHz	19185 Ch. 1908.5 MHz		
3 MHz	QPSK	1	0	14.03	14.17	13.98	0	0
		1	7	14.10	14.17	14.05	0	0
		1	14	14.05	14.18	14.01	0	0
		8	0	14.07	14.18	14.03	0	0
		8	3	14.10	14.22	14.09	0	0
		8	7	14.13	14.20	14.07	0	0
		15	0	14.14	14.22	14.08	0-1	0
	16QAM	1	0	14.17	14.29	14.15	0-1	0
		1	7	14.02	14.15	14.14	0-1	0
		1	14	14.17	14.34	14.12	0-1	0
		8	0	14.10	14.21	14.02	0-1	0
		8	3	14.17	14.26	14.12	0-1	0
		8	7	14.12	14.20	14.07	0-1	0
	64QAM	15	0	14.12	14.21	14.06	0-2	0
		1	0	14.19	14.19	14.11	0-2	0
		1	7	14.19	14.25	14.10	0-2	0
		1	14	14.22	14.25	14.15	0-2	0
		8	0	14.07	14.16	13.93	0-2	0
		8	3	14.01	14.09	13.99	0-2	0
		8	7	14.10	14.16	14.01	0-2	0
	256QAM	15	0	14.08	14.18	14.07	0-3	0
		1	0	14.07	14.13	14.06	0-5	0
		1	7	14.18	14.15	14.03	0-5	0
		1	14	14.13	14.20	14.12	0-5	0
		8	0	14.09	14.12	14.00	0-5	0
		8	3	14.08	14.19	14.05	0-5	0
		8	7	14.05	14.16	14.03	0-5	0
		15	0	14.05	14.19	14.02	0-5	0

LTE FDD Band 2 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 MHz	18900 Ch. 1880 MHz	19175 Ch. 1907.5 MHz		
5 MHz	QPSK	1	0	13.99	14.15	13.97	0	0
		1	12	14.06	14.21	14.04	0	0
		1	24	14.09	14.22	14.01	0	0
		12	0	14.04	14.23	14.03	0	0
		12	6	14.10	14.21	14.06	0	0
		12	11	14.11	14.24	14.12	0	0
		25	0	14.13	14.29	14.14	0-1	0
	16QAM	1	0	14.20	14.24	14.11	0-1	0
		1	12	14.18	14.30	14.11	0-1	0
		1	24	14.14	14.42	14.17	0-1	0
		12	0	14.12	14.20	14.01	0-1	0
		12	6	14.07	14.22	13.98	0-1	0
		12	11	14.07	14.21	14.06	0-1	0
	64QAM	25	0	14.09	14.25	14.09	0-2	0
		1	0	14.08	14.21	14.07	0-2	0
		1	12	14.12	14.24	14.05	0-2	0
		1	24	14.14	14.32	14.16	0-2	0
		12	0	14.09	14.18	13.98	0-2	0
		12	6	14.05	14.21	14.00	0-2	0
		12	11	14.06	14.21	14.03	0-2	0
	256QAM	25	0	14.06	14.22	14.04	0-3	0
		1	0	14.10	14.22	14.03	0-5	0
		1	12	14.08	14.24	13.99	0-5	0
		1	24	14.18	14.27	14.05	0-5	0
		12	0	14.06	14.16	14.00	0-5	0
		12	6	14.08	14.16	13.99	0-5	0
		12	11	14.07	14.21	14.04	0-5	0
	25	0	14.12	14.24	14.05	0-5	0	

LTE FDD Band 2 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 MHz	18900 Ch. 1880 MHz	19150 Ch. 1905 MHz		
10 MHz	QPSK	1	0	13.98	14.17	14.02	0	0
		1	24	13.91	14.15	14.01	0	0
		1	49	13.98	14.20	14.06	0	0
		25	0	14.05	14.28	14.20	0	0
		25	12	14.05	14.30	14.18	0	0
		25	24	14.10	14.32	14.19	0	0
		50	0	14.12	14.33	14.23	0-1	0
	16QAM	1	0	14.25	14.25	14.03	0-1	0
		1	24	14.12	14.29	14.02	0-1	0
		1	49	14.11	14.44	14.16	0-1	0
		25	0	14.04	14.22	14.12	0-1	0
		25	12	14.05	14.27	14.13	0-1	0
		25	24	14.08	14.32	14.16	0-1	0
	64QAM	50	0	14.08	14.28	14.19	0-2	0
		1	0	14.05	14.24	14.11	0-2	0
		1	24	14.01	14.23	14.08	0-2	0
		1	49	14.07	14.28	14.23	0-2	0
		25	0	14.00	14.22	14.10	0-2	0
		25	12	14.00	14.23	14.11	0-2	0
		25	24	14.03	14.23	14.09	0-2	0
	256QAM	50	0	14.09	14.28	14.19	0-3	0
		1	0	14.00	14.17	14.03	0-5	0
		1	24	14.02	14.16	14.07	0-5	0
		1	49	14.03	14.31	14.18	0-5	0
		25	0	14.01	14.20	14.09	0-5	0
		25	12	14.02	14.21	14.11	0-5	0
		25	24	14.04	14.28	14.16	0-5	0
	50	0	14.06	14.26	14.16	0-5	0	

LTE FDD Band 2 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 MHz	18900 Ch. 1880 MHz	19125 Ch. 1902.5 MHz		
15 MHz	QPSK	1	0	13.93	14.10	14.11	0	0
		1	36	14.00	14.19	14.15	0	0
		1	74	13.96	14.22	14.17	0	0
		36	0	14.02	14.22	14.22	0	0
		36	18	14.04	14.28	14.23	0	0
		36	39	14.07	14.28	14.23	0	0
		75	0	14.11	14.31	14.28	0-1	0
	16QAM	1	0	14.16	14.17	14.19	0-1	0
		1	36	13.95	14.26	14.19	0-1	0
		1	74	13.97	14.36	14.25	0-1	0
		36	0	14.00	14.15	14.13	0-1	0
		36	18	14.02	14.22	14.13	0-1	0
		36	39	14.02	14.27	14.21	0-1	0
	64QAM	75	0	14.04	14.25	14.19	0-2	0
		1	0	14.12	14.28	14.13	0-2	0
		1	36	13.90	14.30	13.97	0-2	0
		1	74	14.05	14.37	14.29	0-2	0
		36	0	14.00	14.19	14.13	0-2	0
		36	18	14.00	14.23	14.15	0-2	0
		36	39	14.00	14.27	14.20	0-2	0
	256QAM	75	0	14.04	14.24	14.17	0-3	0
		1	0	14.11	14.08	14.19	0-5	0
		1	36	13.95	14.25	14.10	0-5	0
		1	74	13.93	14.26	14.14	0-5	0
		36	0	14.01	14.17	14.13	0-5	0
		36	18	13.99	14.20	14.15	0-5	0
		36	39	13.99	14.21	14.19	0-5	0
		75	0	14.04	14.27	14.18	0-5	0

LTE FDD Band 2 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	13.89	14.10	14.12	0	0
		1	49	13.92	14.13	14.11	0	0
		1	99	13.99	14.22	14.16	0	0
		50	0	14.15	14.32	14.33	0	0
		50	25	14.13	14.35	14.35	0	0
		50	49	14.18	14.36	14.34	0	0
		100	0	14.11	14.32	14.30	0-1	0
	16QAM	1	0	14.08	14.23	14.20	0-1	0
		1	49	14.05	14.30	14.12	0-1	0
		1	99	14.08	14.32	14.37	0-1	0
		50	0	14.09	14.25	14.27	0-1	0
		50	25	14.10	14.27	14.27	0-1	0
		50	49	14.12	14.30	14.26	0-1	0
		100	0	14.10	14.26	14.22	0-2	0
	64QAM	1	0	14.09	14.09	14.24	0-2	0
		1	49	14.02	14.22	14.20	0-2	0
		1	99	14.12	14.30	14.26	0-2	0
		50	0	14.10	14.24	14.23	0-2	0
		50	25	14.10	14.31	14.26	0-2	0
		50	49	14.11	14.32	14.25	0-2	0
		100	0	14.06	14.24	14.19	0-3	0
	256QAM	1	0	14.01	14.02	14.11	0-5	0
		1	49	13.98	14.17	14.12	0-5	0
		1	99	14.05	14.25	14.32	0-5	0
		50	0	14.03	14.23	14.21	0-5	0
		50	25	14.11	14.28	14.23	0-5	0
		50	49	14.07	14.30	14.28	0-5	0
		100	0	14.05	14.25	14.19	0-5	0

[LTE FDD Band 4 Reduced Conducted Power _ Main1 Ant.]

LTE FDD Band 4 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 MHz	20175 Ch. 1732.5 MHz	20393 Ch. 1754.3 MHz		
1.4 MHz	QPSK	1	0	14.68	14.56	14.59	0	0
		1	3	14.60	14.51	14.53	0	0
		1	5	14.72	14.62	14.63	0	0
		3	0	14.71	14.61	14.62	0	0
		3	1	14.62	14.56	14.65	0	0
		3	3	14.70	14.56	14.57	0	0
	16QAM	6	0	14.75	14.63	14.65	0-1	0
		1	0	14.92	14.81	14.83	0-1	0
		1	3	14.78	14.64	14.70	0-1	0
		1	5	14.76	14.79	14.80	0-1	0
		3	0	14.69	14.69	14.64	0-1	0
		3	1	14.80	14.75	14.76	0-1	0
	64QAM	3	3	14.72	14.68	14.68	0-1	0
		6	0	14.74	14.65	14.68	0-2	0
		1	0	14.91	14.76	14.69	0-2	0
		1	3	14.81	14.71	14.75	0-2	0
		1	5	14.81	14.77	14.81	0-2	0
		3	0	14.70	14.59	14.62	0-2	0
	256QAM	3	1	14.77	14.65	14.67	0-2	0
		3	3	14.76	14.63	14.67	0-2	0
		6	0	14.68	14.61	14.63	0-3	0
		1	0	14.74	14.67	14.76	0-5	0
		1	3	14.66	14.67	14.71	0-5	0
		1	5	14.85	14.75	14.73	0-5	0
	3	0	14.67	14.59	14.65	0-5	0	
	3	1	14.79	14.65	14.59	0-5	0	
	3	3	14.80	14.70	14.74	0-5	0	
	6	0	14.70	14.63	14.65	0-5	0	

LTE FDD Band 4 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 MHz	20175 Ch. 1732.5 MHz	20385 Ch. 1753.5 MHz		
3 MHz	QPSK	1	0	14.74	14.64	14.69	0	0
		1	7	14.72	14.65	14.67	0	0
		1	14	14.72	14.61	14.68	0	0
		8	0	14.78	14.63	14.68	0	0
		8	3	14.81	14.70	14.74	0	0
		8	7	14.80	14.70	14.73	0	0
	15	0	14.83	14.72	14.72	0-1	0	
	16QAM	1	0	14.88	14.83	14.70	0-1	0
		1	7	14.77	14.84	14.83	0-1	0
		1	14	14.94	14.87	14.87	0-1	0
		8	0	14.75	14.65	14.70	0-1	0
		8	3	14.81	14.71	14.72	0-1	0
		8	7	14.84	14.77	14.73	0-1	0
	15	0	14.78	14.69	14.70	0-2	0	
	64QAM	1	0	14.85	14.80	14.86	0-2	0
		1	7	14.79	14.78	14.78	0-2	0
		1	14	14.89	14.78	14.84	0-2	0
		8	0	14.75	14.65	14.68	0-2	0
		8	3	14.79	14.64	14.67	0-2	0
		8	7	14.78	14.67	14.66	0-2	0
	15	0	14.75	14.65	14.69	0-3	0	
	256QAM	1	0	14.82	14.71	14.71	0-5	0
		1	7	14.84	14.66	14.78	0-5	0
		1	14	14.79	14.69	14.80	0-5	0
		8	0	14.77	14.65	14.68	0-5	0
		8	3	14.80	14.65	14.72	0-5	0
		8	7	14.76	14.69	14.69	0-5	0
15	0	14.72	14.61	14.65	0-5	0		

LTE FDD Band 4 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 MHz	20175 Ch. 1732.5 MHz	20375 Ch. 1752.5 MHz		
5 MHz	QPSK	1	0	14.75	14.62	14.62	0	0
		1	12	14.87	14.68	14.71	0	0
		1	24	14.83	14.70	14.70	0	0
		12	0	14.84	14.68	14.71	0	0
		12	6	14.81	14.72	14.68	0	0
		12	11	14.84	14.70	14.75	0	0
	25	0	14.89	14.73	14.75	0-1	0	
	16QAM	1	0	14.97	14.91	14.74	0-1	0
		1	12	14.81	14.77	14.79	0-1	0
		1	24	14.93	14.75	14.91	0-1	0
		12	0	14.83	14.70	14.74	0-1	0
		12	6	14.81	14.70	14.66	0-1	0
		12	11	14.85	14.69	14.71	0-1	0
	25	0	14.83	14.68	14.70	0-2	0	
	64QAM	1	0	14.93	14.79	14.84	0-2	0
		1	12	14.82	14.72	14.78	0-2	0
		1	24	14.96	14.80	14.87	0-2	0
		12	0	14.80	14.65	14.70	0-2	0
		12	6	14.81	14.73	14.70	0-2	0
		12	11	14.82	14.68	14.75	0-2	0
	25	0	14.86	14.69	14.70	0-3	0	
	256QAM	1	0	14.89	14.74	14.71	0-5	0
		1	12	14.84	14.78	14.73	0-5	0
		1	24	14.80	14.67	14.78	0-5	0
		12	0	14.77	14.69	14.67	0-5	0
12		6	14.77	14.67	14.68	0-5	0	
12		11	14.80	14.71	14.75	0-5	0	
25	0	14.79	14.68	14.71	0-5	0		

LTE FDD Band 4 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 MHz	20175 Ch. 1732.5 MHz	20350 Ch. 1750 MHz		
10 MHz	QPSK	1	0	14.81	14.63	14.65	0	0
		1	24	14.77	14.63	14.64	0	0
		1	49	14.83	14.63	14.66	0	0
		25	0	14.90	14.69	14.74	0	0
		25	12	14.92	14.72	14.77	0	0
		25	24	14.92	14.73	14.79	0	0
		50	0	14.95	14.76	14.79	0-1	0
	16QAM	1	0	14.94	14.82	14.80	0-1	0
		1	24	14.90	14.79	14.76	0-1	0
		1	49	15.03	14.83	14.91	0-1	0
		25	0	14.87	14.71	14.74	0-1	0
		25	12	14.87	14.70	14.73	0-1	0
		25	24	14.87	14.71	14.76	0-1	0
		50	0	14.93	14.71	14.76	0-2	0
	64QAM	1	0	14.91	14.88	14.83	0-2	0
		1	24	14.95	14.82	14.73	0-2	0
		1	49	15.04	14.80	14.91	0-2	0
		25	0	14.87	14.68	14.66	0-2	0
		25	12	14.88	14.69	14.70	0-2	0
		25	24	14.90	14.69	14.74	0-2	0
		50	0	14.92	14.74	14.76	0-3	0
	256QAM	1	0	14.84	14.77	14.75	0-5	0
		1	24	14.80	14.72	14.75	0-5	0
		1	49	14.87	14.75	14.87	0-5	0
		25	0	14.87	14.69	14.68	0-5	0
		25	12	14.86	14.69	14.72	0-5	0
		25	24	14.88	14.71	14.78	0-5	0
		50	0	14.90	14.75	14.76	0-5	0

LTE FDD Band 4 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 MHz	20175 Ch. 1732.5 MHz	20325 Ch. 1747.5 MHz		
15 MHz	QPSK	1	0	14.79	14.62	14.60	0	0
		1	36	14.84	14.68	14.66	0	0
		1	74	14.86	14.69	14.66	0	0
		36	0	14.90	14.69	14.69	0	0
		36	18	14.90	14.72	14.70	0	0
		36	39	14.91	14.75	14.73	0	0
		75	0	14.90	14.74	14.75	0-1	0
	16QAM	1	0	14.98	14.85	14.69	0-1	0
		1	36	14.85	14.72	14.68	0-1	0
		1	74	15.10	14.79	14.81	0-1	0
		36	0	14.85	14.65	14.65	0-1	0
		36	18	14.88	14.72	14.67	0-1	0
		36	39	14.90	14.70	14.69	0-1	0
		75	0	14.86	14.70	14.69	0-2	0
	64QAM	1	0	14.89	14.83	14.67	0-2	0
		1	36	14.99	14.73	14.77	0-2	0
		1	74	14.99	14.73	14.90	0-2	0
		36	0	14.87	14.66	14.62	0-2	0
		36	18	14.87	14.69	14.68	0-2	0
		36	39	14.92	14.71	14.69	0-2	0
		75	0	14.91	14.69	14.72	0-3	0
	256QAM	1	0	14.88	14.73	14.62	0-5	0
		1	36	14.83	14.79	14.72	0-5	0
		1	74	15.04	14.75	14.78	0-5	0
		36	0	14.89	14.70	14.64	0-5	0
		36	18	14.88	14.69	14.62	0-5	0
		36	39	14.91	14.71	14.69	0-5	0
75		0	14.90	14.74	14.69	0-5	0	

LTE FDD Band 4 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 MHz		
20 MHz	QPSK	1	0	14.61	0	0
		1	49	14.61	0	0
		1	99	14.69	0	0
		50	0	14.70	0	0
		50	25	14.76	0	0
		50	49	14.81	0	0
		100	0	14.73	0-1	0
	16QAM	1	0	14.64	0-1	0
		1	49	14.77	0-1	0
		1	99	14.78	0-1	0
		50	0	14.71	0-1	0
		50	25	14.70	0-1	0
		50	49	14.75	0-1	0
		100	0	14.70	0-2	0
	64QAM	1	0	14.75	0-2	0
		1	49	14.68	0-2	0
		1	99	14.86	0-2	0
		50	0	14.72	0-2	0
		50	25	14.72	0-2	0
		50	49	14.73	0-2	0
		100	0	14.70	0-3	0
	256QAM	1	0	14.72	0-5	0
		1	49	14.72	0-5	0
		1	99	14.63	0-5	0
		50	0	14.72	0-5	0
		50	25	14.73	0-5	0
		50	49	14.76	0-5	0
		100	0	14.69	0-5	0

[LTE FDD Band 5 Reduced Conducted Power _ Main1 Ant.]

LTE FDD Band 5 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20407 Ch. 824.7 MHz	20525 Ch. 836.5 MHz	20643 Ch. 848.3 MHz		
1.4 MHz	QPSK	1	0	17.21	17.01	16.96	0	0
		1	3	17.14	16.94	16.88	0	0
		1	5	17.25	17.01	16.96	0	0
		3	0	17.24	17.03	16.95	0	0
		3	1	17.26	17.08	16.91	0	0
		3	3	17.22	16.91	16.88	0	0
		6	0	17.25	17.08	16.96	0-1	0
	16QAM	1	0	17.46	17.24	17.12	0-1	0
		1	3	17.36	17.20	17.08	0-1	0
		1	5	17.47	17.21	17.04	0-1	0
		3	0	17.28	17.11	17.05	0-1	0
		3	1	17.35	17.07	17.09	0-1	0
		3	3	17.28	17.08	17.09	0-1	0
	64QAM	6	0	17.32	17.13	16.98	0-2	0
		1	0	17.30	17.18	17.08	0-2	0
		1	3	17.34	17.10	17.01	0-2	0
		1	5	17.34	17.15	17.05	0-2	0
		3	0	17.24	17.13	17.04	0-2	0
		3	1	17.28	17.17	17.05	0-2	0
		3	3	17.25	17.09	16.97	0-2	0
	256QAM	6	0	17.22	17.04	16.99	0-3	0
		1	0	17.40	17.06	16.96	0-5	0
		1	3	17.23	17.00	16.97	0-5	0
		1	5	17.30	17.12	17.01	0-5	0
		3	0	17.24	17.05	16.93	0-5	0
		3	1	17.33	17.06	17.02	0-5	0
		3	3	17.31	17.12	17.06	0-5	0
	6	0	17.26	17.03	16.90	0-5	0	

LTE FDD Band 5 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20415 Ch. 825.5 MHz	20525 Ch. 836.5 MHz	20635 Ch. 847.5 MHz		
3 MHz	QPSK	1	0	17.26	17.11	17.04	0	0
		1	7	17.23	17.10	17.04	0	0
		1	14	17.20	17.01	16.99	0	0
		8	0	17.23	17.11	16.98	0	0
		8	3	17.27	17.13	17.05	0	0
		8	7	17.23	17.11	17.02	0	0
		15	0	17.33	17.09	17.04	0-1	0
	16QAM	1	0	17.42	17.32	17.18	0-1	0
		1	7	17.45	17.19	17.07	0-1	0
		1	14	17.42	17.30	17.24	0-1	0
		8	0	17.37	17.09	17.08	0-1	0
		8	3	17.28	17.17	17.07	0-1	0
		8	7	17.30	17.17	17.09	0-1	0
	64QAM	15	0	17.30	17.10	17.06	0-2	0
		1	0	17.25	17.16	17.01	0-2	0
		1	7	17.30	17.19	17.08	0-2	0
		1	14	17.35	17.31	17.10	0-2	0
		8	0	17.24	17.09	16.93	0-2	0
		8	3	17.26	17.04	16.94	0-2	0
		8	7	17.28	17.11	16.99	0-2	0
	256QAM	15	0	17.28	17.10	17.01	0-3	0
		1	0	17.33	17.26	17.20	0-5	0
		1	7	17.38	17.10	17.18	0-5	0
		1	14	17.25	17.25	17.21	0-5	0
		8	0	17.21	17.09	16.99	0-5	0
		8	3	17.30	17.08	17.02	0-5	0
		8	7	17.28	17.10	16.93	0-5	0
	15	0	17.24	17.03	16.96	0-5	0	

LTE FDD Band 5 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced 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	17.18	17.14	16.99	0	0
		1	12	17.27	17.11	17.01	0	0
		1	24	17.26	17.12	17.02	0	0
		12	0	17.28	17.16	17.04	0	0
		12	6	17.28	17.18	17.05	0	0
		12	11	17.26	17.12	17.02	0	0
		25	0	17.28	17.14	17.15	0-1	0
	16QAM	1	0	17.46	17.14	17.21	0-1	0
		1	12	17.34	17.11	17.18	0-1	0
		1	24	17.45	17.31	17.12	0-1	0
		12	0	17.31	17.14	17.05	0-1	0
		12	6	17.36	17.14	17.03	0-1	0
		12	11	17.33	17.11	17.01	0-1	0
		25	0	17.30	17.14	17.04	0-2	0
	64QAM	1	0	17.37	17.27	17.16	0-2	0
		1	12	17.28	17.16	17.05	0-2	0
		1	24	17.38	17.17	16.97	0-2	0
		12	0	17.30	17.14	17.02	0-2	0
		12	6	17.22	17.15	17.02	0-2	0
		12	11	17.29	17.18	17.04	0-2	0
		25	0	17.29	17.12	17.03	0-3	0
	256QAM	1	0	17.42	17.18	17.09	0-5	0
		1	12	17.40	17.05	17.18	0-5	0
		1	24	17.38	17.17	17.18	0-5	0
		12	0	17.25	17.06	16.96	0-5	0
		12	6	17.29	17.15	17.06	0-5	0
		12	11	17.27	17.12	17.04	0-5	0
		25	0	17.29	17.11	17.07	0-5	0

LTE FDD Band 5 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20525 Ch. 836.5 MHz		
10 MHz	QPSK	1	0	17.19	0	0
		1	24	17.08	0	0
		1	49	17.08	0	0
		25	0	17.26	0	0
		25	12	17.15	0	0
		25	24	17.13	0	0
		50	0	17.16	0-1	0
	16QAM	1	0	17.26	0-1	0
		1	24	17.26	0-1	0
		1	49	17.29	0-1	0
		25	0	17.16	0-1	0
		25	12	17.20	0-1	0
		25	24	17.16	0-1	0
		50	0	17.18	0-2	0
	64QAM	1	0	17.41	0-2	0
		1	24	17.20	0-2	0
		1	49	17.28	0-2	0
		25	0	17.12	0-2	0
		25	12	17.08	0-2	0
		25	24	17.11	0-2	0
		50	0	17.14	0-3	0
	256QAM	1	0	17.17	0-5	0
		1	24	17.12	0-5	0
		1	49	17.21	0-5	0
		25	0	17.17	0-5	0
		25	12	17.11	0-5	0
		25	24	17.13	0-5	0
		50	0	17.19	0-5	0

[LTE FDD Band 12 Reduced Conducted _ Power Main1 Ant.]

LTE FDD Band 12 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23017 Ch. 699.7 MHz	23095 Ch. 707.5 MHz	23173 Ch. 715.3 MHz		
1.4 MHz	QPSK	1	0	18.37	18.55	18.54	0	0
		1	3	18.28	18.46	18.40	0	0
		1	5	18.41	18.50	18.54	0	0
		3	0	18.42	18.52	18.55	0	0
		3	1	18.51	18.56	18.59	0	0
		3	3	18.29	18.54	18.50	0	0
		6	0	18.43	18.52	18.55	0-1	0
	16QAM	1	0	18.59	18.67	18.65	0-1	0
		1	3	18.43	18.68	18.61	0-1	0
		1	5	18.58	18.72	18.62	0-1	0
		3	0	18.50	18.59	18.60	0-1	0
		3	1	18.50	18.69	18.65	0-1	0
		3	3	18.50	18.70	18.53	0-1	0
	64QAM	6	0	18.45	18.59	18.53	0-2	0
		1	0	18.47	18.68	18.65	0-2	0
		1	3	18.59	18.71	18.55	0-2	0
		1	5	18.58	18.64	18.63	0-2	0
		3	0	18.50	18.59	18.60	0-2	0
		3	1	18.57	18.61	18.61	0-2	0
		3	3	18.57	18.57	18.54	0-2	0
	256QAM	6	0	18.40	18.58	18.53	0-3	0
		1	0	18.45	18.66	18.62	0-5	0
		1	3	18.40	18.67	18.52	0-5	0
		1	5	18.56	18.72	18.62	0-5	0
		3	0	18.44	18.56	18.57	0-5	0
		3	1	18.49	18.58	18.63	0-5	0
		3	3	18.50	18.62	18.64	0-5	0
		6	0	18.44	18.53	18.51	0-5	0

LTE FDD Band 12 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23025 Ch. 700.5 MHz	23095 Ch. 707.5 MHz	23165 Ch. 714.5 MHz		
3 MHz	QPSK	1	0	18.42	18.62	18.58	0	0
		1	7	18.50	18.61	18.60	0	0
		1	14	18.42	18.56	18.48	0	0
		8	0	18.43	18.56	18.56	0	0
		8	3	18.47	18.59	18.62	0	0
		8	7	18.49	18.62	18.58	0	0
		15	0	18.52	18.64	18.59	0-1	0
	16QAM	1	0	18.65	18.83	18.68	0-1	0
		1	7	18.57	18.64	18.67	0-1	0
		1	14	18.61	18.78	18.80	0-1	0
		8	0	18.47	18.60	18.62	0-1	0
		8	3	18.57	18.61	18.66	0-1	0
		8	7	18.53	18.63	18.63	0-1	0
	64QAM	15	0	18.51	18.61	18.65	0-2	0
		1	0	18.58	18.73	18.86	0-2	0
		1	7	18.54	18.73	18.82	0-2	0
		1	14	18.61	18.78	18.69	0-2	0
		8	0	18.45	18.61	18.57	0-2	0
		8	3	18.40	18.58	18.61	0-2	0
		8	7	18.45	18.59	18.58	0-2	0
	256QAM	15	0	18.49	18.60	18.55	0-3	0
		1	0	18.57	18.64	18.74	0-5	0
		1	7	18.52	18.76	18.58	0-5	0
		1	14	18.61	18.60	18.63	0-5	0
		8	0	18.52	18.59	18.62	0-5	0
		8	3	18.48	18.61	18.59	0-5	0
		8	7	18.42	18.58	18.56	0-5	0
	15	0	18.46	18.57	18.54	0-5	0	

LTE FDD Band 12 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23035 Ch. 701.5 MHz	23095 Ch. 707.5 MHz	23155 Ch. 713.5 MHz		
5 MHz	QPSK	1	0	18.46	18.60	18.58	0	0
		1	12	18.50	18.62	18.63	0	0
		1	24	18.51	18.59	18.52	0	0
		12	0	18.53	18.65	18.67	0	0
		12	6	18.52	18.63	18.62	0	0
		12	11	18.54	18.62	18.64	0	0
		25	0	18.55	18.63	18.66	0-1	0
	16QAM	1	0	18.66	18.84	18.82	0-1	0
		1	12	18.54	18.76	18.77	0-1	0
		1	24	18.65	18.85	18.85	0-1	0
		12	0	18.50	18.67	18.65	0-1	0
		12	6	18.54	18.63	18.56	0-1	0
		12	11	18.54	18.61	18.65	0-1	0
	64QAM	25	0	18.53	18.68	18.63	0-2	0
		1	0	18.70	18.78	18.67	0-2	0
		1	12	18.63	18.67	18.80	0-2	0
		1	24	18.55	18.72	18.73	0-2	0
		12	0	18.57	18.64	18.67	0-2	0
		12	6	18.53	18.60	18.62	0-2	0
		12	11	18.51	18.61	18.62	0-2	0
	256QAM	25	0	18.48	18.61	18.65	0-3	0
		1	0	18.62	18.72	18.77	0-5	0
		1	12	18.59	18.74	18.65	0-5	0
		1	24	18.59	18.73	18.68	0-5	0
		12	0	18.53	18.57	18.61	0-5	0
		12	6	18.45	18.63	18.60	0-5	0
		12	11	18.50	18.66	18.66	0-5	0
	25	0	18.52	18.61	18.66	0-5	0	

LTE FDD Band 12 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23095 Ch. 707.5 MHz		
10 MHz	QPSK	1	0	18.59	0	0
		1	24	18.57	0	0
		1	49	18.54	0	0
		25	0	18.69	0	0
		25	12	18.68	0	0
		25	24	18.63	0	0
		50	0	18.68	0-1	0
	16QAM	1	0	18.82	0-1	0
		1	24	18.71	0-1	0
		1	49	18.75	0-1	0
		25	0	18.68	0-1	0
		25	12	18.63	0-1	0
		25	24	18.65	0-1	0
		50	0	18.64	0-2	0
	64QAM	1	0	18.76	0-2	0
		1	24	18.70	0-2	0
		1	49	18.72	0-2	0
		25	0	18.68	0-2	0
		25	12	18.63	0-2	0
		25	24	18.64	0-2	0
		50	0	18.67	0-3	0
	256QAM	1	0	18.72	0-5	0
		1	24	18.71	0-5	0
		1	49	18.67	0-5	0
		25	0	18.68	0-5	0
		25	12	18.64	0-5	0
		25	24	18.59	0-5	0
		50	0	18.67	0-5	0

[LTE FDD Band 17 Reduced Conducted Power _ Main1 Ant.]

LTE FDD Band 17 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
				23790 Ch.	710 MHz		
5 MHz	QPSK	1	0	18.59	0	0	
		1	12	18.58	0	0	
		1	24	18.55	0	0	
		12	0	18.65	0	0	
		12	6	18.64	0	0	
		12	11	18.62	0	0	
		25	0	18.64	0-1	0	
	16QAM	1	0	18.86	0-1	0	
		1	12	18.59	0-1	0	
		1	24	18.82	0-1	0	
		12	0	18.60	0-1	0	
		12	6	18.62	0-1	0	
		12	11	18.62	0-1	0	
	64QAM	25	0	18.63	0-2	0	
		1	0	18.84	0-2	0	
		1	12	18.70	0-2	0	
		1	24	18.69	0-2	0	
		12	0	18.64	0-2	0	
		12	6	18.62	0-2	0	
		12	11	18.59	0-2	0	
	256QAM	25	0	18.64	0-3	0	
		1	0	18.70	0-5	0	
		1	12	18.76	0-5	0	
		1	24	18.66	0-5	0	
		12	0	18.66	0-5	0	
		12	6	18.59	0-5	0	
		12	11	18.60	0-5	0	
	25	0	18.66	0-5	0		

LTE FDD Band 17 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23790 Ch. 710 MHz		
10 MHz	QPSK	1	0	18.65	0	0
		1	24	18.53	0	0
		1	49	18.53	0	0
		25	0	18.69	0	0
		25	12	18.66	0	0
		25	24	18.64	0	0
		50	0	18.69	0-1	0
	16QAM	1	0	18.85	0-1	0
		1	24	18.62	0-1	0
		1	49	18.68	0-1	0
		25	0	18.69	0-1	0
		25	12	18.65	0-1	0
		25	24	18.62	0-1	0
		50	0	18.65	0-2	0
	64QAM	1	0	18.73	0-2	0
		1	24	18.59	0-2	0
		1	49	18.64	0-2	0
		25	0	18.66	0-2	0
		25	12	18.63	0-2	0
		25	24	18.61	0-2	0
		50	0	18.64	0-3	0
	256QAM	1	0	18.59	0-5	0
		1	24	18.60	0-5	0
		1	49	18.62	0-5	0
		25	0	18.67	0-5	0
		25	12	18.62	0-5	0
		25	24	18.64	0-5	0
		50	0	18.69	0-5	0

[LTE FDD Band 25 Reduced Conducted Power _ Main1 Ant.]

LTE FDD Band 25 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 MHz	26365 Ch. 1882.5 MHz	26683 Ch. 1914.3 MHz		
1.4 MHz	QPSK	1	0	14.03	14.20	13.99	0	0
		1	3	13.99	14.08	13.91	0	0
		1	5	14.06	14.20	13.95	0	0
		3	0	14.05	14.19	14.01	0	0
		3	1	14.14	14.12	13.92	0	0
		3	3	14.04	14.17	13.91	0	0
		6	0	14.11	14.20	14.05	0-1	0
	16QAM	1	0	14.18	14.38	14.14	0-1	0
		1	3	14.17	14.35	14.04	0-1	0
		1	5	14.25	14.36	14.06	0-1	0
		3	0	14.08	14.21	13.97	0-1	0
		3	1	14.09	14.33	14.04	0-1	0
		3	3	14.07	14.25	13.97	0-1	0
		6	0	14.08	14.25	14.00	0-2	0
	64QAM	1	0	14.26	14.27	14.10	0-2	0
		1	3	14.15	14.29	14.06	0-2	0
		1	5	14.20	14.31	14.12	0-2	0
		3	0	14.03	14.18	13.96	0-2	0
		3	1	14.13	14.25	14.06	0-2	0
		3	3	14.10	14.21	14.05	0-2	0
		6	0	14.02	14.19	13.99	0-3	0
	256QAM	1	0	14.09	14.15	14.02	0-5	0
		1	3	14.10	14.19	13.98	0-5	0
		1	5	14.10	14.24	14.02	0-5	0
		3	0	14.07	14.19	13.98	0-5	0
		3	1	14.20	14.22	13.97	0-5	0
		3	3	14.17	14.23	14.04	0-5	0
		6	0	14.10	14.13	13.94	0-5	0

LTE FDD Band 25 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 MHz	26365 Ch. 1882.5 MHz	26675Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	14.08	14.23	14.05	0	0
		1	7	14.10	14.19	14.06	0	0
		1	14	14.08	14.23	14.01	0	0
		8	0	14.08	14.25	14.06	0-1	0
		8	3	14.11	14.28	14.12	0-1	0
		8	7	14.15	14.26	14.10	0-1	0
		15	0	14.15	14.27	14.07	0-1	0
	16QAM	1	0	14.32	14.33	14.20	0-1	0
		1	7	14.25	14.33	14.09	0-1	0
		1	14	14.33	14.35	14.17	0-1	0
		8	0	14.16	14.24	14.06	0-2	0
		8	3	14.17	14.27	14.12	0-2	0
		8	7	14.17	14.28	14.06	0-2	0
	64QAM	15	0	14.15	14.25	14.06	0-2	0
		1	0	14.23	14.28	14.06	0-2	0
		1	7	14.19	14.37	14.05	0-2	0
		1	14	14.26	14.41	14.07	0-2	0
		8	0	14.13	14.26	14.01	0-3	0
		8	3	14.04	14.16	14.03	0-3	0
		8	7	14.11	14.24	14.00	0-3	0
	256QAM	15	0	14.08	14.26	14.01	0-3	0
		1	0	14.15	14.21	14.02	0-5	0
		1	7	14.11	14.21	14.01	0-5	0
		1	14	14.13	14.20	14.08	0-5	0
		8	0	14.06	14.19	14.01	0-5	0
		8	3	14.10	14.24	14.04	0-5	0
		8	7	14.11	14.24	13.98	0-5	0
	15	0	14.07	14.22	14.00	0-5	0	

LTE FDD Band 25 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 MHz	26365 Ch. 1882.5 MHz	26665 Ch. 1912.5 MHz		
5 MHz	QPSK	1	0	14.00	14.23	14.01	0	0
		1	12	14.08	14.25	14.08	0	0
		1	24	14.08	14.26	14.04	0	0
		12	0	14.09	14.26	14.07	0-1	0
		12	6	14.13	14.29	14.08	0-1	0
		12	11	14.12	14.30	14.11	0-1	0
		25	0	14.14	14.35	14.14	0-1	0
	16QAM	1	0	14.14	14.33	14.05	0-1	0
		1	12	14.06	14.40	14.01	0-1	0
		1	24	14.26	14.32	14.09	0-1	0
		12	0	14.09	14.28	14.07	0-2	0
		12	6	14.11	14.22	14.09	0-2	0
		12	11	14.10	14.29	14.06	0-2	0
		25	0	14.15	14.30	14.09	0-2	0
	64QAM	1	0	14.10	14.28	14.20	0-2	0
		1	12	14.18	14.34	14.12	0-2	0
		1	24	14.16	14.32	14.04	0-2	0
		12	0	14.10	14.26	14.08	0-3	0
		12	6	14.09	14.27	14.02	0-3	0
		12	11	14.13	14.27	14.04	0-3	0
		25	0	14.11	14.26	14.07	0-3	0
	256QAM	1	0	14.14	14.22	14.11	0-5	0
		1	12	14.14	14.29	14.07	0-5	0
		1	24	14.18	14.33	14.04	0-5	0
		12	0	14.05	14.25	14.03	0-5	0
		12	6	14.09	14.26	14.01	0-5	0
		12	11	14.07	14.25	14.02	0-5	0
		25	0	14.11	14.26	14.07	0-5	0

LTE FDD Band 25 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 MHz	26365 Ch. 1882.5 MHz	26640 Ch. 1910 MHz		
10 MHz	QPSK	1	0	13.99	14.24	14.07	0	0
		1	24	13.96	14.19	14.04	0	0
		1	49	13.99	14.26	14.07	0	0
		25	0	14.05	14.33	14.14	0-1	0
		25	12	14.11	14.29	14.15	0-1	0
		25	24	14.13	14.34	14.21	0-1	0
		50	0	14.16	14.37	14.21	0-1	0
	16QAM	1	0	14.16	14.40	14.17	0-1	0
		1	24	14.00	14.35	14.11	0-1	0
		1	49	14.16	14.47	14.25	0-1	0
		25	0	14.05	14.28	14.14	0-2	0
		25	12	14.06	14.29	14.17	0-2	0
		25	24	14.08	14.33	14.13	0-2	0
		50	0	14.11	14.31	14.16	0-2	0
	64QAM	1	0	14.08	14.27	14.06	0-2	0
		1	24	14.00	14.36	14.17	0-2	0
		1	49	14.01	14.36	14.12	0-2	0
		25	0	14.06	14.24	14.08	0-3	0
		25	12	14.07	14.30	14.12	0-3	0
		25	24	14.03	14.29	14.14	0-3	0
		50	0	14.08	14.33	14.19	0-3	0
	256QAM	1	0	14.00	14.19	14.08	0-5	0
		1	24	13.97	14.29	14.09	0-5	0
		1	49	14.03	14.29	14.07	0-5	0
		25	0	14.05	14.28	14.12	0-5	0
		25	12	14.03	14.28	14.10	0-5	0
		25	24	14.08	14.29	14.12	0-5	0
		50	0	14.09	14.31	14.15	0-5	0

LTE FDD Band 25 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 MHz	26365 Ch. 1882.5 MHz	26615 Ch. 1907.5 MHz		
15 MHz	QPSK	1	0	13.95	14.15	13.98	0	0
		1	36	14.01	14.28	14.08	0	0
		1	74	14.00	14.30	14.05	0	0
		36	0	14.02	14.31	14.11	0-1	0
		36	18	14.07	14.33	14.10	0-1	0
		36	39	14.08	14.37	14.15	0-1	0
		75	0	14.13	14.35	14.19	0-1	0
	16QAM	1	0	14.11	14.30	14.10	0-1	0
		1	36	13.87	14.29	14.06	0-1	0
		1	74	14.03	14.42	14.20	0-1	0
		36	0	14.00	14.25	14.04	0-2	0
		36	18	14.02	14.27	14.08	0-2	0
		36	39	14.02	14.30	14.09	0-2	0
		75	0	14.03	14.29	14.11	0-2	0
	64QAM	1	0	14.09	14.28	14.08	0-2	0
		1	36	14.13	14.37	14.12	0-2	0
		1	74	14.06	14.32	14.18	0-2	0
		36	0	14.03	14.25	14.03	0-3	0
		36	18	14.03	14.30	14.08	0-3	0
		36	39	14.01	14.31	14.12	0-3	0
		75	0	14.07	14.29	14.09	0-3	0
	256QAM	1	0	14.09	14.22	13.98	0-5	0
		1	36	14.03	14.19	14.10	0-5	0
		1	74	13.99	14.38	14.17	0-5	0
		36	0	14.00	14.25	14.03	0-5	0
		36	18	13.98	14.27	14.07	0-5	0
		36	39	13.98	14.32	14.08	0-5	0
		75	0	14.02	14.32	14.07	0-5	0

LTE FDD Band 25 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	13.95	14.16	14.03	0	0
		1	49	13.95	14.16	14.05	0	0
		1	99	14.03	14.25	14.13	0	0
		50	0	14.13	14.38	14.24	0-1	0
		50	25	14.17	14.39	14.24	0-1	0
		50	49	14.20	14.40	14.27	0-1	0
		100	0	14.17	14.36	14.22	0-1	0
	16QAM	1	0	14.17	14.27	14.15	0-1	0
		1	49	14.12	14.32	14.14	0-1	0
		1	99	14.09	14.30	14.25	0-1	0
		50	0	14.07	14.31	14.17	0-2	0
		50	25	14.13	14.34	14.18	0-2	0
		50	49	14.13	14.34	14.23	0-2	0
		100	0	14.13	14.31	14.14	0-2	0
	64QAM	1	0	14.12	14.20	14.07	0-2	0
		1	49	14.16	14.25	14.10	0-2	0
		1	99	14.06	14.40	14.26	0-2	0
		50	0	14.06	14.28	14.13	0-3	0
		50	25	14.14	14.33	14.22	0-3	0
		50	49	14.14	14.38	14.24	0-3	0
		100	0	14.07	14.30	14.16	0-3	0
	256QAM	1	0	14.01	14.15	14.09	0-5	0
		1	49	13.93	14.26	14.08	0-5	0
		1	99	14.02	14.29	14.18	0-5	0
		50	0	14.10	14.30	14.16	0-5	0
		50	25	14.10	14.32	14.21	0-5	0
		50	49	14.11	14.36	14.22	0-5	0
		100	0	14.08	14.30	14.15	0-5	0

[LTE FDD Band 26 Reduced Conducted Power _ Main1 Ant.]

LTE FDD Band 26 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26697 Ch. 814.7 MHz	26865 Ch. 831.5 MHz	27033 Ch. 848.3 MHz		
1.4 MHz	QPSK	1	0	17.38	17.11	16.93	0	0
		1	3	17.29	17.02	16.83	0	0
		1	5	17.41	17.10	16.92	0	0
		3	0	17.41	17.12	16.96	0	0
		3	1	17.48	17.00	16.89	0	0
		3	3	17.36	17.06	16.86	0	0
		6	0	17.43	17.09	16.98	0-1	0
	16QAM	1	0	17.49	17.38	17.12	0-1	0
		1	3	17.42	17.17	17.03	0-1	0
		1	5	17.43	17.25	17.07	0-1	0
		3	0	17.43	17.12	16.93	0-1	0
		3	1	17.48	17.13	17.03	0-1	0
		3	3	17.43	17.16	16.93	0-1	0
		6	0	17.44	17.15	16.94	0-2	0
	64QAM	1	0	17.45	17.27	17.04	0-2	0
		1	3	17.47	17.20	16.92	0-2	0
		1	5	17.49	17.23	17.04	0-2	0
		3	0	17.41	17.12	16.99	0-2	0
		3	1	17.46	17.19	16.99	0-2	0
		3	3	17.47	17.18	17.01	0-2	0
		6	0	17.41	17.15	16.94	0-3	0
	256QAM	1	0	17.44	17.11	17.08	0-5	0
		1	3	17.41	17.15	16.97	0-5	0
		1	5	17.45	17.26	16.94	0-5	0
		3	0	17.37	17.06	16.93	0-5	0
		3	1	17.40	17.09	16.92	0-5	0
		3	3	17.43	17.09	16.89	0-5	0
		6	0	17.42	17.11	16.94	0-5	0

LTE FDD Band 26 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26705 Ch. 815.5 MHz	26865 Ch. 831.5 MHz	27025 Ch. 847.5 MHz		
3 MHz	QPSK	1	0	17.41	17.14	16.99	0	0
		1	7	17.42	17.16	17.02	0	0
		1	14	17.38	17.09	16.94	0	0
		8	0	17.44	17.19	17.03	0	0
		8	3	17.47	17.13	17.00	0	0
		8	7	17.44	17.17	17.01	0	0
		15	0	17.43	17.18	17.01	0-1	0
	16QAM	1	0	17.44	17.32	17.22	0-1	0
		1	7	17.44	17.12	17.00	0-1	0
		1	14	17.46	17.27	17.11	0-1	0
		8	0	17.44	17.17	16.97	0-1	0
		8	3	17.45	17.21	16.99	0-1	0
		8	7	17.47	17.20	17.00	0-1	0
	64QAM	15	0	17.43	17.17	17.01	0-2	0
		1	0	17.46	17.32	17.08	0-2	0
		1	7	17.46	17.17	17.09	0-2	0
		1	14	17.47	17.29	17.10	0-2	0
		8	0	17.45	17.15	16.96	0-2	0
		8	3	17.47	17.08	16.93	0-2	0
		8	7	17.39	17.20	17.04	0-2	0
	256QAM	15	0	17.43	17.17	17.04	0-3	0
		1	0	17.46	17.22	17.03	0-5	0
		1	7	17.45	17.10	16.89	0-5	0
		1	14	17.40	17.20	17.07	0-5	0
		8	0	17.39	17.11	17.00	0-5	0
		8	3	17.44	17.11	17.02	0-5	0
		8	7	17.42	17.20	16.92	0-5	0
	15	0	17.40	17.13	16.96	0-5	0	

LTE FDD Band 26 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26715 Ch. 816.5 MHz	26865 Ch. 831.5 MHz	27015 Ch. 846.5 MHz		
5 MHz	QPSK	1	0	17.39	17.13	16.94	0	0
		1	12	17.45	17.19	17.00	0	0
		1	24	17.49	17.13	17.02	0	0
		12	0	17.49	17.17	17.04	0	0
		12	6	17.47	17.16	16.99	0	0
		12	11	17.44	17.20	16.99	0	0
		25	0	17.43	17.19	17.07	0-1	0
	16QAM	1	0	17.42	17.44	17.14	0-1	0
		1	12	17.46	17.34	17.12	0-1	0
		1	24	17.43	17.34	17.27	0-1	0
		12	0	17.46	17.20	17.02	0-1	0
		12	6	17.43	17.16	17.02	0-1	0
		12	11	17.46	17.23	17.07	0-1	0
	64QAM	25	0	17.45	17.20	17.01	0-2	0
		1	0	17.43	17.36	17.20	0-2	0
		1	12	17.46	17.43	17.14	0-2	0
		1	24	17.42	17.36	17.19	0-2	0
		12	0	17.45	17.20	16.97	0-2	0
		12	6	17.44	17.15	17.04	0-2	0
	256QAM	12	11	17.43	17.21	16.98	0-2	0
		25	0	17.43	17.18	17.02	0-3	0
		1	0	17.34	17.28	17.04	0-5	0
		1	12	17.45	17.13	16.98	0-5	0
		1	24	17.44	17.23	17.11	0-5	0
		12	0	17.41	17.16	17.02	0-5	0
		12	6	17.42	17.16	17.04	0-5	0
	12	11	17.43	17.17	17.02	0-5	0	
	25	0	17.49	17.20	17.02	0-5	0	

LTE FDD Band 26 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26740 Ch. 819 MHz	26865 Ch. 831.5 MHz	26990 Ch. 844 MHz		
10 MHz	QPSK	1	0	17.36	17.18	17.07	0	0
		1	24	17.36	17.08	16.96	0	0
		1	49	17.37	17.13	17.03	0	0
		25	0	17.47	17.23	17.12	0	0
		25	12	17.47	17.18	17.07	0	0
		25	24	17.45	17.21	17.08	0	0
		50	0	17.41	17.22	17.12	0-1	0
	16QAM	1	0	17.44	17.37	17.20	0-1	0
		1	24	17.48	17.29	17.06	0-1	0
		1	49	17.45	17.28	17.09	0-1	0
		25	0	17.46	17.21	17.08	0-1	0
		25	12	17.45	17.21	17.04	0-1	0
		25	24	17.42	17.22	17.10	0-1	0
		50	0	17.47	17.25	17.12	0-2	0
	64QAM	1	0	17.45	17.47	17.29	0-2	0
		1	24	17.47	17.34	17.27	0-2	0
		1	49	17.44	17.32	17.29	0-2	0
		25	0	17.43	17.19	17.06	0-2	0
		25	12	17.43	17.17	17.07	0-2	0
		25	24	17.47	17.19	17.06	0-2	0
		50	0	17.44	17.23	17.11	0-3	0
	256QAM	1	0	17.41	17.22	17.24	0-5	0
		1	24	17.48	17.26	17.14	0-5	0
		1	49	17.43	17.13	17.09	0-5	0
		25	0	17.47	17.22	17.07	0-5	0
		25	12	17.47	17.18	17.02	0-5	0
		25	24	17.39	17.19	17.06	0-5	0
		50	0	17.43	17.21	17.07	0-5	0

LTE FDD Band 26 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
				26865 Ch. 831.5 MHz			
15 MHz	QPSK	1	0	17.21		0	0
		1	36	17.20		0	0
		1	74	17.12		0	0
		36	0	17.24		0	0
		36	18	17.18		0	0
		36	39	17.18		0	0
		75	0	17.23		0-1	0
	16QAM	1	0	17.27		0-1	0
		1	36	17.28		0-1	0
		1	74	17.34		0-1	0
		36	0	17.23		0-1	0
		36	18	17.19		0-1	0
		36	39	17.20		0-1	0
		75	0	17.21		0-2	0
	64QAM	1	0	17.38		0-2	0
		1	36	17.26		0-2	0
		1	74	17.31		0-2	0
		36	0	17.21		0-2	0
		36	18	17.20		0-2	0
		36	39	17.17		0-2	0
		75	0	17.21		0-3	0
	256QAM	1	0	17.27		0-5	0
		1	36	17.27		0-5	0
		1	74	17.21		0-5	0
		36	0	17.19		0-5	0
		36	18	17.22		0-5	0
		36	39	17.22		0-5	0
		75	0	17.16		0-5	0

[LTE TDD Band 41 Reduced Conducted Power _ Main1 Ant.]

LTE TDD Band 41 _ 5 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
5 MHz	QPSK	1	0	14.48	14.75	14.48	14.18	14.27	0	0
		1	12	14.44	14.68	14.42	14.12	14.19	0	0
		1	24	14.57	14.74	14.49	14.18	14.27	0	0
		12	0	14.58	14.88	14.54	14.34	14.47	0-1	0
		12	6	14.60	14.87	14.54	14.33	14.48	0-1	0
		12	11	14.61	14.86	14.54	14.33	14.46	0-1	0
	16QAM	1	0	14.65	14.80	14.47	14.04	14.07	0-1	0
		1	12	14.65	14.90	14.43	14.17	14.04	0-1	0
		1	24	14.73	14.96	14.45	14.06	14.08	0-1	0
		12	0	14.49	14.71	14.40	14.13	14.24	0-2	0
		12	6	14.52	14.65	14.40	14.09	14.26	0-2	0
		12	11	14.53	14.64	14.39	14.11	14.25	0-2	0
	64QAM	25	0	14.52	14.59	14.37	14.08	14.08	0-2	0
		1	0	14.56	14.76	14.51	14.44	14.31	0-2	0
		1	12	14.60	14.73	14.46	14.42	14.31	0-2	0
		1	24	14.66	14.78	14.57	14.47	14.35	0-2	0
		12	0	14.46	14.61	14.49	14.04	14.16	0-3	0
		12	6	14.50	14.61	14.51	14.05	14.16	0-3	0
	256QAM	12	11	14.49	14.61	14.49	14.04	14.16	0-3	0
		25	0	14.42	14.59	14.32	14.01	14.03	0-3	0
		1	0	14.18	14.65	14.10	14.18	14.09	0-5	0
		1	12	14.17	14.56	14.00	14.11	14.04	0-5	0
		1	24	14.26	14.58	14.12	14.13	14.10	0-5	0
		12	0	14.43	14.63	14.39	14.12	14.22	0-5	0
		12	6	14.45	14.62	14.46	14.09	14.22	0-5	0
		12	11	14.47	14.61	14.44	14.10	14.22	0-5	0
	25	0	14.43	14.63	14.42	14.05	14.12	0-5	0	

LTE TDD Band 41 _ 10 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
10 MHz	QPSK	1	0	14.34	14.70	14.41	14.20	14.30	0	0
		1	24	14.40	14.66	14.37	14.18	14.27	0	0
		1	49	14.49	14.66	14.41	14.19	14.29	0	0
		25	0	14.40	14.72	14.41	14.22	14.35	0-1	0
		25	12	14.44	14.72	14.41	14.22	14.36	0-1	0
		25	24	14.48	14.71	14.43	14.22	14.35	0-1	0
	16QAM	1	0	14.34	14.86	14.26	14.16	14.24	0-1	0
		1	24	14.24	14.58	14.18	14.08	14.20	0-1	0
		1	49	14.47	14.62	14.27	14.11	14.21	0-1	0
		25	0	14.32	14.59	14.34	14.10	14.12	0-2	0
		25	12	14.36	14.53	14.34	14.09	14.12	0-2	0
		25	24	14.40	14.52	14.34	14.08	14.11	0-2	0
	64QAM	50	0	14.52	14.88	14.51	14.41	14.56	0-2	0
		1	0	14.31	14.97	14.60	14.34	14.49	0-2	0
		1	24	14.38	14.92	14.56	14.28	14.47	0-2	0
		1	49	14.43	14.91	14.59	14.24	14.46	0-2	0
		25	0	14.21	14.52	14.30	14.03	14.08	0-3	0
		25	12	14.26	14.51	14.29	14.18	14.09	0-3	0
	256QAM	25	24	14.29	14.49	14.29	14.22	14.07	0-3	0
		50	0	14.52	14.87	14.54	14.39	14.54	0-3	0
		1	0	14.19	14.62	14.40	14.21	14.06	0-5	0
		1	24	14.37	14.48	14.44	14.02	14.05	0-5	0
		1	49	14.38	14.42	14.40	14.08	14.06	0-5	0
		25	0	14.28	14.57	14.32	14.10	14.14	0-5	0
		25	12	14.32	14.55	14.32	14.06	14.14	0-5	0
		25	24	14.35	14.55	14.33	14.05	14.14	0-5	0
		50	0	14.54	14.88	14.55	14.42	14.55	0-5	0

LTE TDD Band 41 _ 15 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
15 MHz	QPSK	1	0	14.23	14.66	14.35	14.20	14.29	0	0
		1	36	14.26	14.57	14.24	14.12	14.17	0	0
		1	74	14.49	14.64	14.37	14.19	14.28	0	0
		36	0	14.49	14.94	14.53	14.47	14.64	0-1	0
		36	18	14.55	14.93	14.55	14.49	14.64	0-1	0
		36	39	14.61	14.92	14.55	14.49	14.62	0-1	0
		75	0	14.53	14.86	14.51	14.43	14.54	0-1	0
	16QAM	1	0	14.24	14.71	14.42	14.40	14.25	0-1	0
		1	36	14.22	14.79	14.26	14.32	14.13	0-1	0
		1	74	14.49	14.83	14.36	14.32	14.24	0-1	0
		36	0	14.33	14.72	14.39	14.30	14.38	0-2	0
		36	18	14.40	14.72	14.41	14.31	14.40	0-2	0
		36	39	14.45	14.70	14.41	14.30	14.39	0-2	0
	64QAM	75	0	14.43	14.68	14.39	14.24	14.32	0-2	0
		1	0	14.20	14.69	14.53	14.32	14.50	0-2	0
		1	36	14.24	14.62	14.47	14.24	14.43	0-2	0
		1	74	14.46	14.66	14.55	14.27	14.50	0-2	0
		36	0	14.34	14.74	14.38	14.28	14.37	0-3	0
		36	18	14.40	14.71	14.40	14.28	14.38	0-3	0
		36	39	14.47	14.68	14.39	14.28	14.36	0-3	0
	256QAM	75	0	14.39	14.66	14.39	14.22	14.28	0-3	0
		1	0	14.14	14.54	14.25	14.02	14.08	0-5	0
		1	36	14.17	14.47	14.17	14.09	14.03	0-5	0
		1	74	14.38	14.48	14.26	14.11	14.05	0-5	0
		36	0	14.37	14.74	14.41	14.29	14.37	0-5	0
		36	18	14.45	14.74	14.44	14.30	14.38	0-5	0
		36	39	14.50	14.73	14.44	14.28	14.37	0-5	0
	75	0	14.37	14.67	14.39	14.21	14.27	0-5	0	

LTE TDD Band 41 _ 20 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	14.47	14.77	14.35	14.21	14.33	0	0
		1	49	14.30	14.61	14.30	14.18	14.28	0	0
		1	99	14.15	14.59	14.34	14.19	14.28	0	0
		50	0	14.65	14.85	14.60	14.65	14.84	0-1	0
		50	25	14.57	14.66	14.59	14.63	14.83	0-1	0
		50	49	14.51	14.71	14.59	14.59	14.81	0-1	0
		100	0	14.60	14.66	14.60	14.62	14.77	0-1	0
	16QAM	1	0	14.11	14.62	14.34	14.10	14.31	0-1	0
		1	49	14.03	14.51	14.25	14.16	14.17	0-1	0
		1	99	14.36	14.57	14.38	14.05	14.26	0-1	0
		50	0	14.39	14.81	14.43	14.41	14.56	0-2	0
		50	25	14.44	14.80	14.43	14.43	14.56	0-2	0
		50	49	14.52	14.78	14.44	14.43	14.53	0-2	0
		100	0	14.52	14.83	14.50	14.44	14.52	0-2	0
	64QAM	1	0	14.48	14.78	14.51	14.52	14.41	0-2	0
		1	49	14.70	14.74	14.50	14.47	14.36	0-2	0
		1	99	14.82	14.72	14.54	14.41	14.38	0-2	0
		50	0	14.38	14.83	14.46	14.41	14.58	0-3	0
		50	25	14.45	14.83	14.48	14.42	14.58	0-3	0
		50	49	14.53	14.80	14.48	14.44	14.55	0-3	0
		100	0	14.46	14.77	14.44	14.37	14.46	0-3	0
	256QAM	1	0	14.14	14.51	14.23	14.19	14.15	0-5	0
		1	49	14.38	14.48	14.23	14.22	14.13	0-5	0
		1	99	14.49	14.45	14.26	14.16	14.13	0-5	0
		50	0	14.41	14.84	14.47	14.44	14.58	0-5	0
		50	25	14.48	14.84	14.49	14.45	14.58	0-5	0
		50	49	14.55	14.82	14.49	14.45	14.56	0-5	0
		100	0	14.44	14.78	14.45	14.36	14.46	0-5	0

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D01v06. The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

[LTE FDD Band 66 Reduced Conducted Power _ Main1 Ant.]

LTE FDD Band 66 _ 1.4 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979 Ch. 1710.7 MHz	132322 Ch. 1745 MHz	132665 Ch. 1779.3 MHz		
1.4 MHz	QPSK	1	0	14.20	14.05	14.28	0	0
		1	3	14.11	13.98	14.19	0	0
		1	5	14.23	14.02	14.28	0	0
		3	0	14.20	14.05	14.29	0	0
		3	1	14.10	14.04	14.26	0	0
		3	3	14.20	14.02	14.28	0	0
		6	0	14.24	14.07	14.28	0-1	0
	16QAM	1	0	14.26	14.13	14.42	0-1	0
		1	3	14.18	14.04	14.46	0-1	0
		1	5	14.27	14.20	14.44	0-1	0
		3	0	14.21	14.06	14.41	0-1	0
		3	1	14.27	14.12	14.42	0-1	0
		3	3	14.18	14.00	14.36	0-1	0
		6	0	14.23	14.12	14.38	0-2	0
	64QAM	1	0	14.35	14.08	14.42	0-2	0
		1	3	14.21	14.07	14.38	0-2	0
		1	5	14.35	14.17	14.46	0-2	0
		3	0	14.17	14.05	14.39	0-2	0
		3	1	14.22	14.08	14.33	0-2	0
		3	3	14.27	14.12	14.40	0-2	0
		6	0	14.15	14.06	14.36	0-3	0
	256QAM	1	0	14.30	14.12	14.35	0-5	0
		1	3	14.18	14.00	14.29	0-5	0
		1	5	14.26	14.16	14.33	0-5	0
		3	0	14.16	14.04	14.27	0-5	0
		3	1	14.21	14.04	14.32	0-5	0
		3	3	14.24	14.08	14.40	0-5	0
		6	0	14.14	14.02	14.27	0-5	0

LTE FDD Band 66 _ 3 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 MHz	132322 Ch. 1745 MHz	132657 Ch. 1778.5 MHz		
3 MHz	QPSK	1	0	14.27	14.10	14.29	0	0
		1	7	14.29	14.11	14.33	0	0
		1	14	14.24	14.07	14.28	0	0
		8	0	14.28	14.10	14.32	0	0
		8	3	14.30	14.14	14.36	0	0
		8	7	14.33	14.16	14.41	0	0
		15	0	14.30	14.15	14.37	0-1	0
	16QAM	1	0	14.27	14.14	14.41	0-1	0
		1	7	14.11	14.17	14.49	0-1	0
		1	14	14.27	14.16	14.38	0-1	0
		8	0	14.29	14.05	14.33	0-1	0
		8	3	14.30	14.21	14.38	0-1	0
		8	7	14.30	14.14	14.39	0-1	0
		15	0	14.22	14.13	14.36	0-2	0
	64QAM	1	0	14.29	14.24	14.32	0-2	0
		1	7	14.29	14.23	14.45	0-2	0
		1	14	14.28	14.22	14.38	0-2	0
		8	0	14.24	14.05	14.27	0-2	0
		8	3	14.24	14.02	14.33	0-2	0
		8	7	14.21	14.11	14.35	0-2	0
		15	0	14.26	14.10	14.32	0-3	0
	256QAM	1	0	14.26	14.16	14.30	0-5	0
		1	7	14.24	14.12	14.32	0-5	0
		1	14	14.37	14.18	14.41	0-5	0
		8	0	14.22	14.09	14.33	0-5	0
		8	3	14.24	14.09	14.33	0-5	0
		8	7	14.23	14.07	14.31	0-5	0
		15	0	14.21	14.06	14.33	0-5	0

LTE FDD Band 66 _ 5 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 MHz	132322 Ch. 1745 MHz	132647 Ch. 1777.5 MHz		
5 MHz	QPSK	1	0	14.23	14.09	14.23	0	0
		1	12	14.29	14.13	14.36	0	0
		1	24	14.31	14.14	14.37	0	0
		12	0	14.32	14.14	14.36	0	0
		12	6	14.30	14.16	14.35	0	0
		12	11	14.32	14.18	14.38	0	0
		25	0	14.41	14.24	14.42	0-1	0
	16QAM	1	0	14.40	14.17	14.34	0-1	0
		1	12	14.17	14.17	14.45	0-1	0
		1	24	14.36	14.19	14.55	0-1	0
		12	0	14.29	14.09	14.32	0-1	0
		12	6	14.27	14.15	14.39	0-1	0
		12	11	14.29	14.16	14.34	0-1	0
	64QAM	25	0	14.35	14.16	14.35	0-2	0
		1	0	14.40	14.21	14.31	0-2	0
		1	12	14.34	14.14	14.41	0-2	0
		1	24	14.33	14.26	14.43	0-2	0
		12	0	14.26	14.09	14.34	0-2	0
		12	6	14.26	14.10	14.31	0-2	0
	256QAM	12	11	14.26	14.10	14.34	0-2	0
		25	0	14.32	14.12	14.33	0-3	0
		1	0	14.30	14.15	14.38	0-5	0
		1	12	14.35	14.17	14.44	0-5	0
		1	24	14.33	14.18	14.39	0-5	0
		12	0	14.25	14.07	14.28	0-5	0
		12	6	14.23	14.08	14.33	0-5	0
	12	11	14.25	14.09	14.36	0-5	0	
	25	0	14.33	14.14	14.33	0-5	0	

LTE FDD Band 66 _ 10 MHz Bandwidth Conducted Power

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	14.30	14.08	14.25	0	0
		1	24	14.30	14.07	14.27	0	0
		1	49	14.30	14.15	14.35	0	0
		25	0	14.42	14.20	14.40	0	0
		25	12	14.42	14.24	14.40	0	0
		25	24	14.42	14.27	14.45	0	0
		50	0	14.43	14.28	14.45	0-1	0
	16QAM	1	0	14.50	14.12	14.36	0-1	0
		1	24	14.34	14.11	14.36	0-1	0
		1	49	14.57	14.31	14.47	0-1	0
		25	0	14.42	14.16	14.36	0-1	0
		25	12	14.35	14.20	14.33	0-1	0
		25	24	14.41	14.17	14.40	0-1	0
		50	0	14.41	14.19	14.40	0-2	0
	64QAM	1	0	14.50	14.21	14.38	0-2	0
		1	24	14.34	14.23	14.39	0-2	0
		1	49	14.48	14.22	14.48	0-2	0
		25	0	14.35	14.12	14.30	0-2	0
		25	12	14.38	14.17	14.33	0-2	0
		25	24	14.37	14.17	14.36	0-2	0
		50	0	14.44	14.19	14.38	0-3	0
	256QAM	1	0	14.37	14.07	14.23	0-5	0
		1	24	14.35	14.08	14.31	0-5	0
		1	49	14.43	14.21	14.45	0-5	0
		25	0	14.34	14.17	14.34	0-5	0
		25	12	14.37	14.16	14.29	0-5	0
		25	24	14.36	14.20	14.36	0-5	0
		50	0	14.41	14.18	14.40	0-5	0

LTE FDD Band 66 _ 15 MHz Bandwidth Conducted Power

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	14.29	14.09	14.24	0	0
		1	36	14.36	14.14	14.31	0	0
		1	74	14.35	14.16	14.37	0	0
		36	0	14.44	14.18	14.35	0	0
		36	18	14.44	14.21	14.38	0	0
		36	39	14.44	14.25	14.40	0	0
		75	0	14.45	14.26	14.42	0-1	0
	16QAM	1	0	14.46	14.21	14.41	0-1	0
		1	36	14.34	14.15	14.38	0-1	0
		1	74	14.46	14.25	14.52	0-1	0
		36	0	14.33	14.09	14.31	0-1	0
		36	18	14.36	14.15	14.32	0-1	0
		36	39	14.37	14.16	14.36	0-1	0
		75	0	14.37	14.17	14.35	0-2	0
	64QAM	1	0	14.43	14.18	14.45	0-2	0
		1	36	14.27	14.17	14.31	0-2	0
		1	74	14.45	14.33	14.48	0-2	0
		36	0	14.36	14.10	14.30	0-2	0
		36	18	14.40	14.14	14.30	0-2	0
		36	39	14.41	14.18	14.33	0-2	0
		75	0	14.40	14.20	14.36	0-3	0
	256QAM	1	0	14.35	14.14	14.23	0-5	0
		1	36	14.48	14.17	14.28	0-5	0
		1	74	14.54	14.27	14.48	0-5	0
		36	0	14.39	14.12	14.27	0-5	0
		36	18	14.37	14.14	14.28	0-5	0
		36	39	14.39	14.16	14.35	0-5	0
		75	0	14.38	14.18	14.35	0-5	0

LTE FDD Band 66 _ 20 MHz Bandwidth Conducted Power

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	14.26	14.05	14.24	0	0
		1	49	14.28	14.05	14.25	0	0
		1	99	14.35	14.18	14.34	0	0
		50	0	14.46	14.21	14.40	0	0
		50	25	14.47	14.26	14.46	0	0
		50	49	14.49	14.28	14.47	0	0
		100	0	14.45	14.23	14.40	0-1	0
	16QAM	1	0	14.38	14.13	14.38	0-1	0
		1	49	14.44	14.14	14.23	0-1	0
		1	99	14.50	14.30	14.40	0-1	0
		50	0	14.41	14.19	14.36	0-1	0
		50	25	14.42	14.19	14.40	0-1	0
		50	49	14.46	14.23	14.40	0-1	0
		100	0	14.43	14.18	14.35	0-2	0
	64QAM	1	0	14.47	14.19	14.33	0-2	0
		1	49	14.47	14.18	14.33	0-2	0
		1	99	14.56	14.22	14.51	0-2	0
		50	0	14.45	14.18	14.32	0-2	0
		50	25	14.47	14.19	14.39	0-2	0
		50	49	14.46	14.25	14.40	0-2	0
		100	0	14.45	14.17	14.35	0-3	0
	256QAM	1	0	14.32	14.03	14.28	0-5	0
		1	49	14.34	14.11	14.34	0-5	0
		1	99	14.41	14.30	14.46	0-5	0
		50	0	14.45	14.16	14.34	0-5	0
		50	25	14.45	14.17	14.37	0-5	0
		50	49	14.43	14.24	14.41	0-5	0
		100	0	14.42	14.18	14.35	0-5	0

11.4 WIFI Conducted Power measurement method

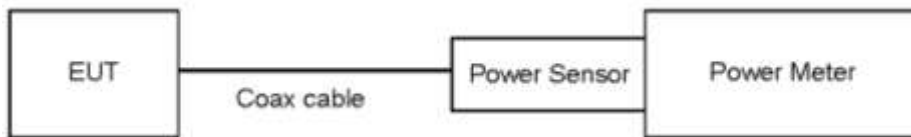
Un-Licensed Bands (DTS Band)

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

Test Procedure

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

Test setup



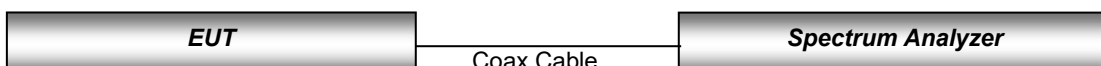
Un-Licensed Bands (NII Band)

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

Test Procedure

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

Test setup



11.4.1 IEEE 802.11 (2.4 GHz) Maximum Conducted Power

Mode	Frequency [MHz]	Channel	IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]
			Ant 0
802.11b	2 412	1	14.08
	2 437	6	13.14
	2 462	11	14.03
	2 467	12	3.13
	2 472	13	3.16
802.11g	2 412	1	9.43
	2 437	6	13.45
	2 462	11	8.62
	2 467	12	3.17
	2 472	13	2.00
802.11n (HT20)	2 412	1	9.42
	2 437	6	13.87
	2 462	11	9.62
	2 467	12	3.27
	2 472	13	1.95

Mode	Frequency [MHz]	Channel	IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			Ant 0	Ant 1	MIMO
802.11n (HT20)	2 412	1	8.78	8.49	11.65
	2427	4	13.99	13.10	16.58
	2 437	6	13.35	13.33	16.35
	2442	7	13.92	14.09	17.02
	2 462	11	8.87	8.22	11.57
	2 467	12	2.45	2.95	5.72
	2 472	13	1.25	0.72	4.00

11.4.2 IEEE 802.11 (2.4 GHz) Reduced Conducted Power

Mode	Frequency [MHz]	Channel	IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]
			Ant 0
802.11b	2 412	1	11.51
	2 437	6	10.96
	2 462	11	11.12
	2 467	12	3.13
	2 472	13	3.16
802.11g	2 412	1	9.43
	2 437	6	10.25
	2 462	11	8.62
	2 467	12	3.17
	2 472	13	2.00
802.11n (HT20)	2 412	1	9.42
	2 437	6	10.68
	2 462	11	9.62
	2 467	12	3.27
	2 472	13	1.95

Mode	Frequency [MHz]	Channel	IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			Ant 0	Ant 1	MIMO
802.11n (HT20)	2 412	1	8.78	8.49	11.65
	2427	4	10.93	9.48	13.28
	2 437	6	10.61	10.17	13.41
	2442	7	10.01	10.29	13.17
	2 462	11	8.87	8.22	11.57
	2 467	12	2.45	2.95	5.72
	2 472	13	1.25	0.72	4.00

11.4.3 IEEE 802.11 (5 GHz) Maximum Conducted Power

Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm]
			Ant 1
802.11a (20MHz BW)	5 180	36	10.59
	5 200	40	10.54
	5 240	48	10.99
	5 260	52	11.01
	5 300	60	10.84
	5 320	64	10.74
	5 500	100	10.52
	5 600	120	11.21
	5 720	144	11.47
	5 745	149	11.48
	5 785	157	11.24
5 825	165	10.95	

Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm]		
			Ant 0	Ant 1	MIMO
802.11n (20MHz BW)	5 180	36	10.78	10.22	13.52
	5 200	40	10.23	10.02	13.14
	5 220	44	10.54	10.43	13.50
	5 240	48	10.68	10.68	13.69
	5 260	52	11.01	11.79	14.43
	5 280	56	11.03	11.83	14.46
	5 300	60	10.97	11.70	14.36
	5 320	64	11.04	11.61	14.35
	5 500	100	10.60	11.84	14.28
	5 600	120	10.96	11.74	14.38
	5 620	124	10.79	11.68	14.27
	5 720	144	11.06	11.71	14.41
	5 745	149	11.05	11.60	14.35
	5 785	157	10.97	11.58	14.30
	5 825	165	11.26	11.16	14.22

11.4.4 IEEE 802.11 (5 GHz) Reduced Conducted Power

Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm]
			Ant 1
802.11a (20 MHz BW)	5 500	100	7.52
	5 600	120	8.06
	5 620	124	7.95
	5 700	140	8.36
	5 720	144	7.59

Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm]
			Ant 1
802.11n (40 MHz BW)	5 210	38	6.91
	5 230	46	7.03
	5 270	54	7.57
	5 310	62	7.32
	5 755	151	7.49
	5 795	159	7.32

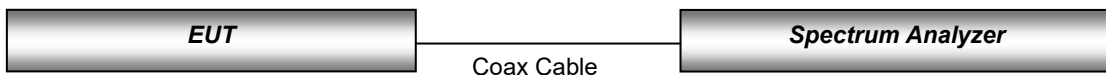
Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm]		
			Ant 0	Ant 1	MIMO
802.11n (20 MHz BW)	5 500	100	6.01	7.31	9.72
	5 600	120	6.87	7.76	10.35
	5 620	124	7.25	7.57	10.43
	5 700	140	8.20	8.80	11.52
	5 720	144	7.41	7.79	10.62

Mode	Frequency [MHz]	Channel	IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm]		
			Ant 0	Ant 1	MIMO
802.11n (40 MHz BW)	5 210	38	7.16	7.19	10.18
	5 230	46	7.52	7.45	10.49
	5 270	54	6.50	7.48	10.03
	5 310	62	6.23	7.22	9.76
	5 755	151	6.53	7.35	9.97
	5 795	159	6.66	7.16	9.93

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

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

Test Configuration



11.5 Bluetooth

Maximum Conducted Power

The Burst averaged-conducted power

Mode	Frequency [MHz]	Channel	Bluetooth Power [dBm]
			Ant 0
DH5	2 402	0	9.68
	2 441	39	9.99
	2 480	78	9.20
2-DH5	2 402	0	7.10
	2 441	39	7.28
	2 480	78	6.35
3-DH5	2 402	0	7.11
	2 441	39	7.29
	2 480	78	6.36

The Burst averaged-conducted power

Mode	Packet Length	Channel	Bluetooth Power [dBm]
			Ant 0
LE 125kbps	37	0	9.62
		19	9.91
		39	9.22
	255	0	9.45
		19	9.81
		39	8.85

Per October 2016 TCB Workshop Notes:

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

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

Bluetooth DH 5 Mode



Bluetooth Duty Cycle [BDR]

Duty Cycle = (BT-On time /BT-Full time) = (2.883/3.750) = 0.769 (DH5)

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 78.0 % In the ideal theory Duty Cycle, the test error tolerance [1%] of the test equipment was considered and applied to the measurement results.

BT LE Mode was tested in FTM mode with maximum duty transmission.

12. System Verification

12.1 Tissue Verification

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

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
01/25/2024	21.7	750H	705	0.863	43.780	0.889	42.174	-2.98	3.81
			710	0.868	43.710	0.890	42.148	-2.49	3.71
			750	0.911	43.132	0.893	41.940	1.99	2.84
02/02/2024	21.0	835H	820	0.919	41.208	0.899	41.577	2.22	-0.89
			835	0.937	40.980	0.900	41.500	4.11	-1.25
			850	0.949	40.698	0.916	41.500	3.60	-1.93
01/25/2024	21.9	835H	820	0.923	40.984	0.899	41.577	2.67	-1.43
			835	0.941	40.749	0.900	41.500	4.56	-1.81
			850	0.953	40.476	0.916	41.500	4.04	-2.47
01/29/2024	19.6	835H	820	0.920	40.980	0.899	41.577	2.38	-1.44
			835	0.935	40.693	0.900	41.500	3.93	-1.94
			850	0.951	40.520	0.916	41.500	3.78	-2.36
01/24/2024	21.7	1800H	1710	1.315	41.376	1.348	40.144	-2.45	3.07
			1750	1.354	41.222	1.371	40.080	-1.24	2.85
			1800	1.408	40.987	1.400	40.000	0.57	2.47
01/30/2024	20.2	1800H	1710	1.309	41.520	1.348	40.144	-2.89	3.43
			1750	1.353	41.340	1.371	40.080	-1.31	3.14
			1800	1.406	41.115	1.400	40.000	0.43	2.79
02/03/2024	21.2	1900H	1850	1.391	39.152	1.400	40.000	-0.64	-2.12
			1900	1.436	38.930	1.400	40.000	2.57	-2.68
			1910	1.446	38.871	1.400	40.000	3.29	-2.82
02/06/2024	20.2	1900H	1850	1.370	38.962	1.400	40.000	-2.14	-2.60
			1900	1.416	38.735	1.400	40.000	1.14	-3.16
			1910	1.424	38.685	1.400	40.000	1.71	-3.29
02/02/2024	19.8	1900H	1850	1.366	39.170	1.400	40.000	-2.43	-2.07
			1900	1.413	38.950	1.400	40.000	0.93	-2.62
			1910	1.422	38.910	1.400	40.000	1.57	-2.73
01/23/2024	22.2	2450H	2400	1.802	38.442	1.756	39.290	2.62	-2.16
			2450	1.860	38.233	1.800	39.200	3.33	-2.47
			2500	1.919	38.053	1.855	39.140	3.45	-2.78
01/31/2024	18.9	2450H	2400	1.786	37.817	1.756	39.290	1.71	-3.75
			2450	1.843	37.621	1.800	39.200	2.39	-4.03
			2500	1.901	37.456	1.855	39.140	2.48	-4.30
01/24/2024	21.7	2600H	2500	1.878	39.530	1.855	39.140	1.24	1.00
			2600	1.976	39.100	1.909	39.070	3.51	0.08
			2690	2.059	38.670	1.964	39.010	4.84	-0.87
02/13/2024	19.7	5180H-5320H	5180	4.590	37.200	4.635	36.010	-0.97	3.30
			5250	4.720	37.000	4.706	35.930	0.30	2.98
			5280	4.760	37.000	4.737	35.894	0.49	3.08
			5320	4.800	37.000	4.778	35.846	0.46	3.22
02/14/2024	20.1	5500H-5600H	5500	4.940	36.700	4.963	35.640	-0.46	2.97
			5600	5.040	36.400	5.065	35.530	-0.49	2.45
			5750	5.280	36.400	5.219	35.360	1.17	2.94
02/15/2024	22.6	5750H-5825H	5750	5.310	35.900	5.219	35.360	1.74	1.53
			5800	5.250	35.900	5.270	35.300	-0.38	1.70
			5825	5.220	35.800	5.296	35.270	-1.44	1.50

Note : Head-tissue simulating liquids are used for SAR test according to April 2019 TCBC workshop note.

12.2 System Verification

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target	50 mW	1 W	Deviation	Limit
							SAR _{1g}	Measured	Normalized		
[MHz]					[°C]	[°C]	(SPEAG) [W/kg]	SAR _{1g} [W/kg]	SAR _{1g} [W/kg]	[%]	[%]
750	01/25/2024	7309	1014	Head	21.8	21.7	8.59	0.417	8.34	-2.91	± 10
835	02/02/2024	7681	4d165	Head	21.1	21.0	9.74	0.505	10.10	3.70	± 10
835	01/25/2024	7681	4d165	Head	22.0	21.9	9.74	0.468	9.36	-3.90	± 10
835	01/29/2024	7309	4d165	Head	19.7	19.6	9.74	0.504	10.08	3.49	± 10
1800	01/24/2024	7681	2d015	Head	21.8	21.7	37.80	1.92	38.40	1.59	± 10
1800	01/30/2024	7309	2d015	Head	20.3	20.2	37.80	1.99	39.80	5.29	± 10
1900	02/03/2024	7681	5d032	Head	21.3	21.2	40.20	2.05	41.00	1.99	± 10
1900	02/06/2024	7681	5d032	Head	20.3	20.2	40.20	1.93	38.60	-3.98	± 10
1900	02/02/2024	7309	5d032	Head	19.9	19.8	40.20	2.00	40.00	-0.50	± 10
2 450	01/23/2024	7681	1049	Head	22.1	22.0	52.70	2.78	55.60	5.50	± 10
2 450	02/08/2024	7681	1049	Head	21.0	20.9	52.70	2.61	52.20	-0.95	± 10
2 600	01/24/2024	3968	1106	Head	21.7	21.6	55.60	2.71	54.20	-2.52	± 10
5 250	02/13/2024	3768	1317	Head	19.8	19.7	78.80	4.02	80.40	2.03	± 10
5 600	02/14/2024	3768	1317	Head	20.2	20.1	81.20	4.18	83.60	2.96	± 10
5 750	02/15/2024	3768	1317	Head	22.7	22.6	77.40	3.88	77.60	0.26	± 10

12.3 System Verification Procedure

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

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

Note;

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

13. SAR Test Data Summary

13.1 Body SAR Measurement Results

GSM 850 Body SAR															
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)						(W/kg)		(W/kg)	
824.2	128	GPRS 4Tx	Main1	20.0	19.47	0.16	Rear	ON	1:2.07	0		0.702	1.130	0.793	-
824.2	128	GPRS 4Tx	Main1	20.0	19.47	-0.10	Top	ON	1:2.07	0		0.426	1.130	0.481	-
836.6	190	GPRS 4Tx	Main1	29.0	28.33	-0.01	Rear	OFF	1:2.07	16		0.684	1.167	0.798	B1
836.6	190	GPRS 4Tx	Main1	29.0	28.33	0.11	Left	N/A	1:2.07	0		0.233	1.167	0.272	-
836.6	190	GPRS 4Tx	Main1	29.0	28.33	0.09	Right	N/A	1:2.07	0		0.265	1.167	0.309	-
836.6	190	GPRS 4Tx	Main1	29.0	28.33	0.06	Top	OFF	1:2.07	23		0.558	1.167	0.651	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Body 1.6 W/kg Averaged over 1 gram				

GSM 1900 Body SAR															
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)						(W/kg)		(W/kg)	
1 850.2	512	GPRS 3Tx	Main1	18.0	17.90	0.15	Rear	ON	1:2.77	0		0.495	1.023	0.506	B2
1 850.2	512	GPRS 3Tx	Main1	18.0	17.90	0.10	Top	ON	1:2.77	0		0.305	1.023	0.312	-
1 880.0	661	GPRS 3Tx	Main1	27.5	26.22	0.02	Rear	OFF	1:2.77	16		0.356	1.343	0.478	-
1 880.0	661	GPRS 3Tx	Main1	27.5	26.22	-0.08	Left	N/A	1:2.77	0		0.101	1.343	0.136	-
1 880.0	661	GPRS 3Tx	Main1	27.5	26.22	0.11	Right	N/A	1:2.77	0		0.310	1.343	0.416	-
1 880.0	661	GPRS 3Tx	Main1	27.5	26.22	0.01	Top	OFF	1:2.77	23		0.226	1.343	0.304	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Body 1.6 W/kg Averaged over 1 gram				

UMTS Band 5 Body SAR															
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)						(W/kg)		(W/kg)	
836.6	4183	RMC	Main1	17.0	16.12	0.06	Rear	ON	1:1	0		0.714	1.225	0.875	B3
826.4	4132	RMC	Main1	17.0	16.27	0.02	Rear	ON	1:1	0		0.711	1.183	0.841	-
846.6	4233	RMC	Main1	17.0	15.91	0.06	Rear	ON	1:1	0		0.675	1.285	0.867	-
836.6	4183	RMC	Main1	17.0	16.12	-0.13	Top	ON	1:1	0		0.561	1.225	0.687	-
836.6	4183	RMC	Main1	24.5	23.11	0.05	Rear	OFF	1:1	16		0.461	1.377	0.635	-
836.6	4183	RMC	Main1	24.5	23.11	0.18	Left	N/A	1:1	0		0.167	1.377	0.230	-
836.6	4183	RMC	Main1	24.5	23.11	0.15	Right	N/A	1:1	0		0.224	1.377	0.308	-
836.6	4183	RMC	Main1	24.5	23.11	0.08	Top	OFF	1:1	23		0.295	1.377	0.406	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Body 1.6 W/kg Averaged over 1 gram				

UMTS Band 4 Body SAR

Frequency		Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.														
1732.4	1412	RMC	Main1	15.0	13.94	0.00	Rear	ON	1:1	0		0.561	1.276	0.716	-
1732.4	1412	RMC	Main1	15.0	13.94	0.06	Top	ON	1:1	0		0.526	1.276	0.671	-
1732.4	1412	RMC	Main1	24.0	23.08	0.05	Rear	OFF	1:1	16		0.549	1.236	0.679	-
1732.4	1412	RMC	Main1	24.0	23.08	0.00	Left	N/A	1:1	0		0.124	1.236	0.153	-
1732.4	1412	RMC	Main1	24.0	23.08	0.16	Right	N/A	1:1	0		0.400	1.236	0.494	-
1732.4	1412	RMC	Main1	24.0	23.08	-0.010	Top	OFF	1:1	23		0.644	1.236	0.796	B4
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram			

UMTS Band 2 Body SAR

Frequency		Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	Duty Cycle	Distance (mm)	Ant. State	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.														
1880.0	9400	RMC	Main1	14.5	13.33	0.00	Rear	ON	1:1	0		0.444	1.309	0.581	-
1880.0	9400	RMC	Main1	14.5	13.33	-0.06	Top	ON	1:1	0		0.393	1.309	0.514	-
1880.0	9400	RMC	Main1	24.0	23.01	0.17	Rear	OFF	1:1	16		0.615	1.256	0.772	B5
1880.0	9400	RMC	Main1	24.0	23.01	0.00	Left	N/A	1:1	0		0.145	1.256	0.182	-
1880.0	9400	RMC	Main1	24.0	23.01	0.12	Right	N/A	1:1	0		0.551	1.256	0.692	-
1880.0	9400	RMC	Main1	24.0	23.01	-0.15	Top	OFF	1:1	23		0.585	1.256	0.735	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram			

LTE FDD Band 12 Body SAR

Frequency		Mode	Ant.	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Ant. State	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
Mhz	Ch.																		
707.5	23095	QPSK	Main1	10.0	19.50	18.59	-0.13	Rear	ON	0	1	0	1:1		0	0.749	1.233	0.924	B6
707.5	23095	QPSK	Main1	10.0	19.50	18.69	-0.18	Rear	ON	0	25	0	1:1		0	0.766	1.205	0.923	-
707.5	23095	QPSK	Main1	10.0	19.50	18.68	0.01	Rear	ON	0	50	0	1:1		0	0.712	1.208	0.860	-
707.5	23095	QPSK	Main1	10.0	19.50	18.59	0.17	Top	ON	0	1	0	1:1		0	0.624	1.233	0.769	-
707.5	23095	QPSK	Main1	10.0	19.50	18.69	0.12	Top	ON	0	25	0	1:1		0	0.616	1.205	0.742	-
707.5	23095	QPSK	Main1	10.0	19.50	18.68	0.06	Top	ON	0	50	0	1:1		0	0.584	1.208	0.705	-
707.5	23095	QPSK	Main1	10.0	24.5	23.69	0.03	Rear	OFF	0	1	0	1:1		16	0.258	1.205	0.311	-
707.5	23095	QPSK	Main1	10.0	23.5	22.79	0.02	Rear	OFF	1	25	0	1:1		16	0.218	1.178	0.257	-
707.5	23095	QPSK	Main1	10.0	24.5	23.69	0.13	Left	N/A	0	1	0	1:1		0	0.097	1.205	0.117	-
707.5	23095	QPSK	Main1	10.0	23.5	22.79	0.12	Left	N/A	1	25	0	1:1		0	0.087	1.178	0.102	-
707.5	23095	QPSK	Main1	10.0	24.5	23.69	0.11	Right	N/A	0	1	0	1:1		0	0.119	1.205	0.143	-
707.5	23095	QPSK	Main1	10.0	23.5	22.79	0.11	Right	N/A	1	25	0	1:1		0	0.100	1.178	0.118	-
707.5	23095	QPSK	Main1	10.0	24.5	23.69	0.13	Top	OFF	0	1	0	1:1		23	0.103	1.205	0.124	-
707.5	23095	QPSK	Main1	10.0	23.5	22.79	-0.06	Top	OFF	1	25	0	1:1		23	0.096	1.178	0.113	-
ANSI/ IEEE C95.1 - 2005 - Safety Limit Spatial Peak Uncontrolled Exposure/ General Population															Body 1.6 W/kg Averaged over 1 gram				

LTE FDD Band 25 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.			(MHz)	(dBm)	(dBm)	(dB)								(mm)	(W/kg)	(W/kg)		
1882.5	26365	QPSK	Main1	20.0	15.50	14.25	0.01	Rear	ON	0	1	99	1:1		0	0.664	1.334	0.886	-
1860.0	26140	QPSK	Main1	20.0	15.50	14.03	0.00	Rear	ON	0	1	99	1:1		0	0.671	1.403	0.941	-
1905.0	26590	QPSK	Main1	20.0	15.50	14.13	-0.07	Rear	ON	0	1	99	1:1		0	0.786	1.371	1.078	B7
1882.5	26365	QPSK	Main1	20.0	15.50	14.40	-0.05	Rear	ON	0	50	49	1:1		0	0.698	1.288	0.899	-
1860.0	26140	QPSK	Main1	20.0	15.50	14.20	0.02	Rear	ON	0	50	49	1:1		0	0.707	1.349	0.954	-
1905.0	26590	QPSK	Main1	20.0	15.50	14.27	0.00	Rear	ON	0	50	49	1:1		0	0.780	1.327	1.035	-
1882.5	26365	QPSK	Main1	20.0	15.50	14.36	0.02	Rear	ON	0	100	0	1:1		0	0.688	1.300	0.894	-
1882.5	26365	QPSK	Main1	20.0	15.50	14.25	0.13	Top	ON	0	1	99	1:1		0	0.456	1.334	0.608	-
1882.5	26365	QPSK	Main1	20.0	15.50	14.40	0.14	Top	ON	0	50	49	1:1		0	0.483	1.288	0.622	-
1882.5	26365	QPSK	Main1	20.0	24.00	23.70	0.01	Rear	OFF	0	1	99	1:1		16	0.590	1.072	0.632	-
1882.5	26365	QPSK	Main1	20.0	23.00	22.84	0.07	Rear	OFF	1	50	49	1:1		16	0.490	1.038	0.509	-
1882.5	26365	QPSK	Main1	20.0	24.00	23.70	0.12	Left	N/A	0	1	99	1:1		0	0.133	1.072	0.143	-
1882.5	26365	QPSK	Main1	20.0	23.00	22.84	0.14	Left	N/A	1	50	49	1:1		0	0.112	1.038	0.116	-
1882.5	26365	QPSK	Main1	20.0	24.00	23.70	0.14	Right	N/A	0	1	99	1:1		0	0.611	1.072	0.655	-
1882.5	26365	QPSK	Main1	20.0	23.00	22.84	0.16	Right	N/A	1	50	49	1:1		0	0.525	1.038	0.545	-
1882.5	26365	QPSK	Main1	20.0	24.00	23.70	0.07	Top	OFF	0	1	99	1:1		23	0.551	1.072	0.591	-
1882.5	26365	QPSK	Main1	20.0	23.00	22.84	0.04	Top	OFF	1	50	49	1:1		23	0.463	1.038	0.481	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit																Body			
Spatial Peak																1.6 W/kg			
Uncontrolled Exposure/ General Population																Averaged over 1 gram			

LTE FDD Band 26 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	MPR (dB)	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.			(MHz)	(dBm)	(dBm)	(dB)								(mm)	(W/kg)	(W/kg)		
831.5	26865	QPSK	Main1	15.0	17.5	17.21	0.05	Rear	ON	0	1	0	1:1		0	0.783	1.069	0.837	-
831.5	26865	QPSK	Main1	15.0	17.5	17.24	0.01	Rear	ON	0	36	0	1:1		0	0.797	1.062	0.846	-
831.5	26865	QPSK	Main1	15.0	17.5	17.21	-0.15	Top	ON	0	1	0	1:1		0	0.837	1.069	0.895	-
831.5	26865	QPSK	Main1	15.0	17.5	17.24	0.18	Top	ON	0	36	0	1:1		0	0.882	1.062	0.937	-
831.5	26865	QPSK	Main1	15.0	17.5	17.23	0.100	Top	ON	0	75	0	1:1		0	0.885*	1.064	0.942	B8
831.5	26865	QPSK	Main1	15.0	25.0	24.14	0.05	Rear	OFF	0	1	36	1:1		16	0.579	1.219	0.706	-
831.5	26865	QPSK	Main1	15.0	24.0	23.23	-0.04	Rear	OFF	1	36	18	1:1		16	0.471	1.194	0.562	-
831.5	26865	QPSK	Main1	15.0	25.0	24.14	0.14	Left	N/A	0	1	36	1:1		0	0.185	1.219	0.226	-
831.5	26865	QPSK	Main1	15.0	24.0	23.23	0.12	Left	N/A	1	36	18	1:1		0	0.148	1.194	0.177	-
831.5	26865	QPSK	Main1	15.0	25.0	24.14	0.13	Right	N/A	0	1	36	1:1		0	0.188	1.219	0.229	-
831.5	26865	QPSK	Main1	15.0	24.0	23.23	0.13	Right	N/A	1	36	18	1:1		0	0.154	1.194	0.184	-
831.5	26865	QPSK	Main1	15.0	25.0	24.14	0.05	Top	OFF	0	1	36	1:1		23	0.372	1.219	0.453	-
831.5	26865	QPSK	Main1	15.0	24.0	23.23	0.00	Top	OFF	1	36	18	1:1		23	0.314	1.194	0.375	-
831.5	26865	QPSK	Main1	15.0	17.5	17.23	0.16	Top	ON	0	75	0	1:1		0	0.862	1.064	0.917	*
ANSI/ IEEE C95.1 - 2005 – Safety Limit																Body			
Spatial Peak																1.6 W/kg			
Uncontrolled Exposure/ General Population																Averaged over 1 gram			

Note: * Data entry indicate Variability measurement.

LTE TDD Band 41 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.																		
2 549.5	40185	QPSK	Main1	20	15.0	14.77	0.03	Rear	ON	0	1	0	1:1.58		0	0.370	1.054	0.390	-
2 549.5	40185	QPSK	Main1	20	15.0	14.85	0.03	Rear	ON	0	50	0	1:1.58		0	0.395	1.035	0.409	-
2 549.5	40185	QPSK	Main1	20	15.0	14.77	0.03	Top	ON	0	1	0	1:1.58		0	0.504	1.054	0.531	-
2 549.5	40185	QPSK	Main1	20	15.0	14.85	-0.02	Top	ON	0	50	0	1:1.58		0	0.546	1.035	0.565	B9
2 549.5	40185	QPSK	Main1	20	24.0	23.41	-0.19	Rear	OFF	0	1	99	1:1.58		16	0.127	1.146	0.146	-
2 549.5	40185	QPSK	Main1	20	24.0	22.44	-0.08	Rear	OFF	1	50	49	1:1.58		16	0.100	1.432	0.143	-
2 549.5	40185	QPSK	Main1	20	24.0	23.41	-0.16	Left	N/A	0	1	99	1:1.58		0	0.124	1.146	0.142	-
2 549.5	40185	QPSK	Main1	20	24.0	22.44	-0.06	Left	N/A	1	50	49	1:1.58		0	0.100	1.432	0.143	-
2 549.5	40185	QPSK	Main1	20	24.0	23.41	-0.01	Right	N/A	0	1	99	1:1.58		0	0.292	1.146	0.335	-
2 549.5	40185	QPSK	Main1	20	24.0	22.44	-0.04	Right	N/A	1	50	49	1:1.58		0	0.240	1.432	0.344	-
2 549.5	40185	QPSK	Main1	20	24.0	23.41	-0.06	Top	OFF	0	1	99	1:1.58		23	0.157	1.146	0.180	-
2 549.5	40185	QPSK	Main1	20	24.0	22.44	-0.15	Top	OFF	1	50	49	1:1.58		23	0.127	1.432	0.182	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population																Body 1.6 W/kg Averaged over 1 gram			

LTE FDD Band 66 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.																		
1 720	132072	QPSK	Main1	20.0	15.50	14.35	0.00	Rear	ON	0	1	99	1:1		0	0.618	1.303	0.805	-
1 745	132322	QPSK	Main1	20.0	15.50	14.18	-0.04	Rear	ON	0	1	99	1:1		0	0.621	1.355	0.841	B10
1 770	132572	QPSK	Main1	20.0	15.50	14.34	-0.03	Rear	ON	0	1	99	1:1		0	0.622	1.306	0.812	-
1 720	132072	QPSK	Main1	20.0	15.50	14.49	-0.04	Rear	ON	0	50	49	1:1		0	0.633	1.262	0.799	-
1 720	132072	QPSK	Main1	20.0	15.50	14.45	-0.02	Rear	ON	0	100	0	1:1		0	0.631	1.274	0.804	-
1 720	132072	QPSK	Main1	20.0	15.50	14.35	0.11	Top	ON	0	1	99	1:1		0	0.583	1.303	0.760	-
1 720	132072	QPSK	Main1	20.0	15.50	14.49	0.18	Top	ON	0	50	49	1:1		0	0.587	1.262	0.741	-
1 770	132572	QPSK	Main1	20.0	24.50	23.88	-0.16	Rear	OFF	0	1	99	1:1		16	0.620	1.153	0.715	-
1 770	132572	QPSK	Main1	20.0	23.50	22.97	-0.11	Rear	OFF	1	50	49	1:1		16	0.479	1.130	0.541	-
1 770	132572	QPSK	Main1	20.0	24.50	23.88	0.18	Left	N/A	0	1	99	1:1		0	0.126	1.153	0.145	-
1 770	132572	QPSK	Main1	20.0	23.50	22.97	0.17	Left	N/A	1	50	49	1:1		0	0.099	1.130	0.112	-
1 770	132572	QPSK	Main1	20.0	24.50	23.88	0.13	Right	N/A	0	1	99	1:1		0	0.447	1.153	0.515	-
1 770	132572	QPSK	Main1	20.0	23.50	22.97	0.19	Right	N/A	1	50	49	1:1		0	0.358	1.130	0.405	-
1 770	132572	QPSK	Main1	20.0	24.50	23.88	0.05	Top	OFF	0	1	99	1:1		23	0.495	1.153	0.571	-
1 770	132572	QPSK	Main1	20.0	23.50	22.97	0.00	Top	OFF	1	50	49	1:1		23	0.404	1.130	0.457	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population																Body 1.6 W/kg Averaged over 1 gram			

DTS Body SAR																			
Frequency		Mode	Ant.	Band width	Data Rate	Tune-Up Limit	Ant.0 Meas. Power	Ant.1 Meas. Power	Power Drift	Test Position	Sensor	Duty Cycle	Distance	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Reported SAR	Plot No.
Mhz	Ch.																		
2 412	1	802.11b	Ant.0	20	1Mbps	12.0	11.51		0.00	Rear	ON	98.2	0	0.863	0.381	1.119	1.018	0.434	B11
2 412	1	802.11b	Ant.0	20	1Mbps	12.0	11.51		0.17	Right	ON	98.2	0	0.736	0.364	1.119	1.018	0.415	-
2 412	1	802.11b	Ant.0	20	1Mbps	12.0	11.51		0.16	Top	ON	98.2	0	0.629	0.306	1.119	1.018	0.349	-
2 412	1	802.11b	Ant.0	20	1Mbps	15.0	14.08		0.00	Rear	OFF	98.2	13	0.0703	0.042	1.236	1.018	0.053	-
2 412	1	802.11b	Ant.0	20	1Mbps	15.0	14.08		-0.15	Right	OFF	98.2	7	0.174	0.108	1.236	1.018	0.136	-
2 412	1	802.11b	Ant.0	20	1Mbps	15.0	14.08		0.04	Top	OFF	98.2	18	0.0324	0.021	1.236	1.018	0.026	-
2 437	6	802.11n	MIMO	20	MCS8	12.0	10.61	10.17	0.10	Rear	ON	90.7	0	0.563	0.225	1.524	1.103	0.378	-
2 437	6	802.11n	MIMO	20	MCS8	12.0	10.61	10.17	0.00	Left	ON	90.7	0	1.27	0.470	1.524	1.103	0.790	B12
2 437	6	802.11n	MIMO	20	MCS8	12.0	10.61	10.17	0.02	Right	ON	90.7	0	0.654	0.307	1.524	1.103	0.516	-
2 437	6	802.11n	MIMO	20	MCS8	12.0	10.61	10.17	0.13	Top	ON	90.7	0	0.608	0.285	1.524	1.103	0.479	-
2 442	7	802.11n	MIMO	20	MCS8	14.5	13.92	14.09	-0.10	Rear	OFF	90.7	13	0.0546	0.034	1.143	1.103	0.043	-
2 442	7	802.11n	MIMO	20	MCS8	14.5	13.92	14.09	0.14	Left	OFF	90.7	7	0.161	0.100	1.143	1.103	0.126	-
2 442	7	802.11n	MIMO	20	MCS8	14.5	13.92	14.09	0.09	Right	OFF	90.7	7	0.232	0.142	1.143	1.103	0.179	-
2 442	7	802.11n	MIMO	20	MCS8	14.5	13.92	14.09	0.12	Top	OFF	90.7	18	0.0357	0.022	1.143	1.103	0.028	-
ANSI/ IEEE C95.1 - 2005– Safety Limit													Body						
Spatial Peak													1.6 W/kg						
Uncontrolled Exposure/ General Population													Averaged over 1 gram						

The reported SAR result of WLAN MIMO Mode was applied to the higher power scaling factor of each SISO antenna

5 GHz WLAN Body SAR																			
Frequency		Mode	Ant.	Band width	Data Rate	Tune-Up Limit	Ant 0 Meas. Power	Ant 1 Meas. Power	Power Drift	Test Position	Sensor	Duty Cycle	Distance	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Reported SAR	Plot No.
MHz	Ch.																		
5 270	54	802.11n	Ant.1	40	MCS0	8.0		7.57	-0.12	Rear	On	91.5	0	0.233	0.335	1.104	1.093	0.404	-
5 270	54	802.11n	Ant.1	40	MCS0	8.0		7.57	-0.10	Left	On	91.5	0	0.147	0.152	1.104	1.093	0.183	-
5 270	54	802.11n	Ant.1	40	MCS0	8.0		7.57	-0.13	Top	On	91.5	0	0.06	0.083	1.104	1.093	0.100	-
5 260	52	802.11a	Ant.1	20	6Mbps	12.0		11.01	0.10	Rear	Off	90.8	13	0.023	0.01	1.256	1.101	0.014	-
5 260	52	802.11a	Ant.1	20	6Mbps	12.0		11.01	-0.12	Left	Off	90.8	7	0.060	0.043	1.256	1.101	0.059	-
5 260	52	802.11a	Ant.1	20	6Mbps	12.0		11.01	-0.17	Top	Off	90.8	18	0.021	0.015	1.256	1.101	0.021	-
5 700	140	802.11a	Ant.1	20	6Mbps	9.0		8.36	-0.19	Rear	On	90.8	0	0.472	0.276	1.159	1.101	0.352	-
5 700	140	802.11a	Ant.1	20	6Mbps	9.0		8.36	-0.13	Left	On	90.8	0	0.723	0.466	1.159	1.101	0.595	B13
5 700	140	802.11a	Ant.1	20	6Mbps	9.0		8.36	-0.19	Top	On	90.8	0	0.176	0.14	1.159	1.101	0.179	-
5 720	144	802.11a	Ant.1	20	6Mbps	12.0		11.47	0.17	Rear	Off	90.8	13	0.024	0.011	1.130	1.101	0.014	-
5 720	144	802.11a	Ant.1	20	6Mbps	12.0		11.47	-0.16	Left	Off	90.8	7	0.151	0.105	1.130	1.101	0.131	-
5 720	144	802.11a	Ant.1	20	6Mbps	12.0		11.47	-0.17	Top	Off	90.8	18	0.036	0.017	1.130	1.101	0.021	-
5 755	151	802.11n	Ant.1	40	MCS0	8.0		7.49	0.16	Rear	On	91.5	0	0.224	0.223	1.125	1.093	0.274	-
5 755	151	802.11n	Ant.1	40	MCS0	8.0		7.49	0.19	Left	On	91.5	0	0.193	0.254	1.125	1.093	0.312	-
5 755	151	802.11n	Ant.1	40	MCS0	8.0		7.49	0.19	Top	On	91.5	0	0.049	0.059	1.125	1.093	0.073	-
5 785	149	802.11a	Ant.1	20	6Mbps	12.0		11.48	0.10	Rear	Off	90.8	13	0.017	0.01	1.127	1.101	0.012	-
5 785	149	802.11a	Ant.1	20	6Mbps	12.0		11.48	-0.10	Left	Off	90.8	7	0.156	0.116	1.127	1.101	0.144	-
5 785	149	802.11a	Ant.1	20	6Mbps	12.0		11.48	0.17	Top	Off	90.8	18	0.018	0.014	1.127	1.101	0.017	-
5 270	54	802.11n	MIMO	40	MCS8	8.0	6.50	7.48	-0.10	Rear	On	91	0	0.316	0.238	1.413	1.099	0.370	-
5 270	54	802.11n	MIMO	40	MCS8	8.0	6.50	7.48	-0.18	Left	On	91	0	0.220	0.125	1.413	1.099	0.194	-
5 270	54	802.11n	MIMO	40	MCS8	8.0	6.50	7.48	0.15	Right	On	91	0	0.382	0.363	1.413	1.099	0.564	-
5 270	54	802.11n	MIMO	40	MCS8	8.0	6.50	7.48	0.16	Top	On	91	0	0.219	0.142	1.413	1.099	0.220	-
5 280	56	802.11n	MIMO	20	MCS8	12.0	11.03	11.83	-0.12	Rear	Off	90.9	13	0.073	0.055	1.250	1.100	0.076	-
5 280	56	802.11n	MIMO	20	MCS8	12.0	11.03	11.83	0.12	Left	Off	90.9	7	0.085	0.061	1.250	1.100	0.084	-
5 280	56	802.11n	MIMO	20	MCS8	12.0	11.03	11.83	-0.15	Right	Off	90.9	7	0.316	0.255	1.250	1.100	0.351	-
5 280	56	802.11n	MIMO	20	MCS8	12.0	11.03	11.83	0.15	Top	Off	90.9	18	0.039	0.021	1.250	1.100	0.029	-
5 700	140	802.11n	MIMO	20	MCS8	9.0	8.20	8.80	-0.10	Rear	On	90.9	0	0.575	0.381	1.202	1.100	0.504	-
5 700	140	802.11n	MIMO	20	MCS8	9.0	8.20	8.80	-0.01	Left	On	90.9	0	0.699	0.446	1.202	1.100	0.590	-
5 700	140	802.11n	MIMO	20	MCS8	9.0	8.20	8.80	0.17	Right	On	90.9	0	0.787	0.469	1.202	1.100	0.620	-
5 700	140	802.11n	MIMO	20	MCS8	9.0	8.20	8.80	0.10	Top	On	90.9	0	0.188	0.116	1.202	1.100	0.153	-
5 720	144	802.11n	MIMO	20	MCS8	12.0	11.06	11.71	0.14	Rear	Off	90.9	13	0.083	0.045	1.242	1.100	0.061	-
5 720	144	802.11n	MIMO	20	MCS8	12.0	11.06	11.71	-0.18	Left	Off	90.9	7	0.153	0.113	1.242	1.100	0.154	-
5 720	144	802.11n	MIMO	20	MCS8	12.0	11.06	11.71	-0.19	Right	Off	90.9	7	0.27	0.212	1.242	1.100	0.290	-
5 720	144	802.11n	MIMO	20	MCS8	12.0	11.06	11.71	-0.15	Top	Off	90.9	18	0.024	0.016	1.242	1.100	0.022	-
5 755	151	802.11n	MIMO	40	MCS8	8.0	6.53	7.35	0.10	Rear	On	91	0	0.426	0.219	1.403	1.099	0.338	-
5 755	151	802.11n	MIMO	40	MCS8	8.0	6.53	7.35	0.10	Left	On	91	0	0.471	0.330	1.403	1.099	0.509	-
5 755	151	802.11n	MIMO	40	MCS8	8.0	6.53	7.35	0.17	Right	On	91	0	0.6	0.415	1.403	1.099	0.640	B14
5 755	151	802.11n	MIMO	40	MCS8	8.0	6.53	7.35	0.15	Top	On	91	0	0.174	0.096	1.403	1.099	0.148	-
5 745	149	802.11n	MIMO	20	MCS8	12.0	11.05	11.60	0.17	Rear	Off	90.9	13	0.049	0.027	1.245	1.100	0.037	-
5 745	149	802.11n	MIMO	20	MCS8	12.0	11.05	11.60	0.13	Left	Off	90.9	7	0.09	0.068	1.245	1.100	0.093	-
5 745	149	802.11n	MIMO	20	MCS8	12.0	11.05	11.60	-0.15	Right	Off	90.9	7	0.131	0.105	1.245	1.100	0.144	-
5 745	149	802.11n	MIMO	20	MCS8	12.0	11.05	11.60	-0.13	Top	Off	90.9	18	0.032	0.020	1.245	1.100	0.027	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population														Body 1.6 W/kg Averaged over 1 gram					

The reported SAR result of WLAN MIMO Mode was applied to the higher power scaling factor of each SISO antenna

DSS/DTS Tethering SAR

Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Sensor	Distance	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(mm)	(W/kg)		(Duty)	(W/kg)	
2 441	39	Bluetooth DH5	Ant.0	10.5	9.99	0.00	Rear	N/A	0	0.262	1.125	1.010	0.298	-
2 441	39	Bluetooth DH5	Ant.0	10.5	9.99	0.00	Left	N/A	0	0.0000	1.125	1.010	0.000	-
2 441	39	Bluetooth DH5	Ant.0	10.5	9.99	0.10	Right	N/A	0	0.211	1.125	1.010	0.240	-
2 441	39	Bluetooth DH5	Ant.0	10.5	9.99	0.17	Top	N/A	0	0.201	1.125	1.010	0.228	-
2 440	19	Bluetooth LE 125K	Ant.0	10.5	9.81	0.00	Rear	N/A	0	0.312	1.172	1.000	0.366	B15
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram				

13.2 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in FCC KDB Publication 616217 D04v01r02 and KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D01v06.
6. Per FCC KDB 865664 D01v01r04, variability SAR measurement were performed when the measured SAR results for a frequency Band were greater than or equal to 0.8 W/kg for 1g SAR and >2 for 10g SAR Please see Section 15 for variability analysis.
7. This device utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
8. FCC KDB Publication 616217 D04v01r02 Section 4.3, SAR tests are required for the back surface and edges of the tablet with the tablet touching the phantom. The SAR Exclusion Threshold in FCC KDB 447498 D01v06 was applied to determine SAR test exclusion for adjacent edge configurations

GSM/GPRS Test Notes:

1. This EUT'S GSM and GPRS device class is B.
2. Justification for reduced test configurations per KDB 941225 D01v03r01: The source-based time-averaged output power was evaluated for all multi-slot operations. The multi-slot configuration with the highest frame averaged output power including tolerance was evaluated for SAR.
3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is 1/2 dB, instead of the middle channel, the highest output power channel must be used.

UMTS Notes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTS SAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.
4. When Power back-off of UMTS B2/B4/B5 are applied, MPR of HSUPA is set to 0.

LTE Notes:

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

WLAN Notes:

1. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHz WiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11 g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR.
2. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHz WiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1g SAR and less than 3.0 W/kg for 10 g SAR.
3. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg or all test channels were measured.
4. The device was configured to transmit continuously at the required data rated, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100 % transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.

Bluetooth Notes:

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests mode type. The theoretical maximum duty cycle defined by chipset manufacturer is 78.0 % In the ideal theory Duty Cycle, the test error tolerance [1%] of the test equipment was considered and applied to the measurement results. BT LE Mode was tested in FTM mode with maximum duty transmission Under the worst case SAR conditions of BT BDR. Please see sec.11.5 for the time-domain plot and calculation for duty factor of the device.

14. Simultaneous SAR Analysis

14.1 Body SAR Simultaneous Transmission Analysis

Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & Bluetooth									
Band		WWAN SAR	2.4 GHz WLAN SISO Ant.0	2.4 GHz WLAN MIMO	BT	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+4	
GSM 850 (Main1 Ant)	Rear	0.798	0.434	0.378	0.366	1.232	1.176	1.164	No
	Front					0.000	0.000	0.000	No
	Left	0.272	0.400	0.790	0.000	0.672	1.062	0.272	No
	Right	0.309	0.415	0.516	0.240	0.724	0.825	0.549	No
	Top	0.651	0.349	0.479	0.228	1.000	1.130	0.879	No
	Bottom					0.000	0.000	0.000	No
GSM 1900 (Main1 Ant)	Rear	0.506	0.434	0.378	0.366	0.940	0.884	0.872	No
	Front					0.000	0.000	0.000	No
	Left	0.136	0.400	0.790	0.000	0.536	0.926	0.136	No
	Right	0.416	0.415	0.516	0.240	0.831	0.932	0.656	No
	Top	0.312	0.349	0.479	0.228	0.661	0.791	0.540	No
	Bottom					0.000	0.000	0.000	No
UMTS Band 2 (Main1 Ant)	Rear	0.772	0.434	0.378	0.366	1.206	1.150	1.138	No
	Front					0.000	0.000	0.000	No
	Left	0.182	0.400	0.790	0.000	0.582	0.972	0.182	No
	Right	0.615	0.415	0.516	0.240	1.030	1.131	0.855	No
	Top	0.735	0.349	0.479	0.228	1.084	1.214	0.963	No
	Bottom					0.000	0.000	0.000	No
UMTS Band 4 (Main1 Ant)	Rear	0.716	0.434	0.378	0.366	1.150	1.094	1.082	No
	Front					0.000	0.000	0.000	No
	Left	0.153	0.400	0.790	0.000	0.553	0.943	0.153	No
	Right	0.494	0.415	0.516	0.240	0.909	1.010	0.734	No
	Top	0.796	0.349	0.479	0.228	1.145	1.275	1.024	No
	Bottom					0.000	0.000	0.000	No
UMTS Band 5 (Main1 Ant)	Rear	0.875	0.434	0.378	0.366	1.309	1.253	1.241	No
	Front					0.000	0.000	0.000	No
	Left	0.230	0.400	0.790	0.000	0.630	1.020	0.230	No
	Right	0.308	0.415	0.516	0.240	0.723	0.824	0.548	No
	Top	0.687	0.349	0.479	0.228	1.036	1.166	0.915	No
	Bottom					0.000	0.000	0.000	No
LTE Band 5 (Main1 Ant)	Rear	0.915	0.434	0.378	0.366	1.349	1.293	1.281	No
	Front					0.000	0.000	0.000	No
	Left	0.265	0.400	0.790	0.000	0.665	1.055	0.265	No
	Right	0.323	0.415	0.516	0.240	0.738	0.839	0.563	No
	Top	0.585	0.349	0.479	0.228	0.934	1.064	0.813	No
	Bottom					0.000	0.000	0.000	No
LTE Band 12 (Main1 Ant)	Rear	0.924	0.434	0.378	0.366	1.358	1.302	1.290	No
	Front					0.000	0.000	0.000	No
	Left	0.117	0.400	0.790	0.000	0.517	0.907	0.117	No
	Right	0.143	0.415	0.516	0.240	0.558	0.659	0.383	No
	Top	0.769	0.349	0.479	0.228	1.118	1.248	0.997	No
	Bottom					0.000	0.000	0.000	No

Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & Bluetooth									
Band		WWAN SAR	2.4 GHz WLAN SISO Ant.0	2.4 GHz WLAN MIMO	BT	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+4	
LTE Band 25 (Main1 Ant)	Rear	1.078	0.434	0.378	0.366	1.512	1.456	1.444	No
	Front					0.000	0.000	0.000	No
	Left	0.143	0.400	0.790	0.000	0.543	0.933	0.143	No
	Right	0.655	0.415	0.516	0.240	1.070	1.171	0.895	No
	Top	0.622	0.349	0.479	0.228	0.971	1.101	0.850	No
	Bottom					0.000	0.000	0.000	No
LTE Band 26 (Main1 Ant)	Rear	0.846	0.434	0.378	0.366	1.280	1.224	1.212	No
	Front					0.000	0.000	0.000	No
	Left	0.226	0.400	0.790	0.000	0.626	1.016	0.226	No
	Right	0.229	0.415	0.516	0.240	0.644	0.745	0.469	No
	Top	0.942	0.349	0.479	0.228	1.291	1.421	1.170	No
	Bottom					0.000	0.000	0.000	No
LTE Band 66 (Main1 Ant)	Rear	0.841	0.434	0.378	0.366	1.275	1.219	1.207	No
	Front					0.000	0.000	0.000	No
	Left	0.145	0.400	0.790	0.000	0.545	0.935	0.145	No
	Right	0.515	0.415	0.516	0.240	0.930	1.031	0.755	No
	Top	0.760	0.349	0.479	0.228	1.109	1.239	0.988	No
	Bottom					0.000	0.000	0.000	No
LTE Band 41 (Main1 Ant)	Rear	0.409	0.434	0.378	0.366	0.843	0.787	0.775	No
	Front					0.000	0.000	0.000	No
	Left	0.143	0.400	0.790	0.000	0.543	0.933	0.143	No
	Right	0.344	0.415	0.516	0.240	0.759	0.860	0.584	No
	Top	0.565	0.349	0.479	0.228	0.914	1.044	0.793	No
	Bottom					0.000	0.000	0.000	No

Simultaneous Transmission Summation Scenario with 5 GHz WLAN & Bluetooth										
Band		WWAN SAR	5 GHz WLAN SISO Ant.1	5 GHz WLAN MIMO	BT	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR	Σ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+2+4	1+3+4	
GSM 850 (Main1 Ant)	Rear	0.798	0.404	0.504	0.366	1.202	1.302	1.568	1.668	Yes
	Front					0.000	0.000	0.000	0.000	No
	Left	0.272	0.595	0.590	0.000	0.867	0.862	0.867	0.862	No
	Right	0.309	0.400	0.640	0.240	0.709	0.949	0.949	1.189	No
	Top	0.651	0.179	0.220	0.228	0.830	0.871	1.058	1.099	No
	Bottom					0.000	0.000	0.000	0.000	No
GSM 1900 (Main1 Ant)	Rear	0.506	0.404	0.504	0.366	0.910	1.010	1.276	1.376	No
	Front					0.000	0.000	0.000	0.000	No
	Left	0.136	0.595	0.590	0.000	0.731	0.726	0.731	0.726	No
	Right	0.416	0.400	0.640	0.240	0.816	1.056	1.056	1.296	No
	Top	0.312	0.179	0.220	0.228	0.491	0.532	0.719	0.760	No
	Bottom					0.000	0.000	0.000	0.000	No
UMTS Band 2 (Main1 Ant)	Rear	0.772	0.404	0.504	0.366	1.176	1.276	1.542	1.642	Yes
	Front					0.000	0.000	0.000	0.000	No
	Left	0.182	0.595	0.590	0.000	0.777	0.772	0.777	0.772	No
	Right	0.615	0.400	0.640	0.240	1.015	1.255	1.255	1.495	No
	Top	0.735	0.179	0.220	0.228	0.914	0.955	1.142	1.183	No
	Bottom					0.000	0.000	0.000	0.000	No
UMTS Band 4 (Main1 Ant)	Rear	0.716	0.404	0.504	0.366	1.120	1.220	1.486	1.586	No
	Front					0.000	0.000	0.000	0.000	No
	Left	0.153	0.595	0.590	0.000	0.748	0.743	0.748	0.743	No
	Right	0.494	0.400	0.640	0.240	0.894	1.134	1.134	1.374	No
	Top	0.796	0.179	0.220	0.228	0.975	1.016	1.203	1.244	No
	Bottom					0.000	0.000	0.000	0.000	No
UMTS Band 5 (Main1 Ant)	Rear	0.875	0.404	0.504	0.366	1.279	1.379	1.645	1.745	Yes
	Front					0.000	0.000	0.000	0.000	No
	Left	0.230	0.595	0.590	0.000	0.825	0.820	0.825	0.820	No
	Right	0.308	0.400	0.640	0.240	0.708	0.948	0.948	1.188	No
	Top	0.687	0.179	0.220	0.228	0.866	0.907	1.094	1.135	No
	Bottom					0.000	0.000	0.000	0.000	No
LTE Band 5 (Main1 Ant)	Rear	0.915	0.404	0.504	0.366	1.319	1.419	1.685	1.785	Yes
	Front					0.000	0.000	0.000	0.000	No
	Left	0.265	0.595	0.590	0.000	0.860	0.855	0.860	0.855	No
	Right	0.323	0.400	0.640	0.240	0.723	0.963	0.963	1.203	No
	Top	0.585	0.179	0.220	0.228	0.764	0.805	0.992	1.033	No
	Bottom					0.000	0.000	0.000	0.000	No
LTE Band 12 (Main1 Ant)	Rear	0.924	0.404	0.504	0.366	1.328	1.428	1.694	1.794	Yes
	Front					0.000	0.000	0.000	0.000	No
	Left	0.117	0.595	0.590	0.000	0.712	0.707	0.712	0.707	No
	Right	0.143	0.400	0.640	0.240	0.543	0.783	0.783	1.023	No
	Top	0.769	0.179	0.220	0.228	0.948	0.989	1.176	1.217	No
	Bottom					0.000	0.000	0.000	0.000	No

Simultaneous Transmission Summation Scenario with 5 GHz WLAN & Bluetooth											
Band		WWAN SAR	5 GHz WLAN SISO Ant.1	5 GHz WLAN MIMO	BT	\sum 1-g SAR	\sum 1-g SAR	\sum 1-g SAR	\sum 1-g SAR	SPLSR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+2+4	1+3+4		
LTE Band 25 (Main1 Ant)	Rear	1.078	0.404	0.504	0.366	1.482	1.582	1.848	1.948	Yes	
	Front					0.000	0.000	0.000	0.000	No	
	Left	0.143	0.595	0.590	0.000	0.738	0.733	0.738	0.733	No	
	Right	0.655	0.400	0.640	0.240	1.055	1.295	1.295	1.535	No	
	Top	0.622	0.179	0.220	0.228	0.801	0.842	1.029	1.070	No	
	Bottom					0.000	0.000	0.000	0.000	No	
LTE Band 26 (Main1 Ant)	Rear	0.846	0.404	0.504	0.366	1.250	1.350	1.616	1.716	Yes	
	Front					0.000	0.000	0.000	0.000	No	
	Left	0.226	0.595	0.590	0.000	0.821	0.816	0.821	0.816	No	
	Right	0.229	0.400	0.640	0.240	0.629	0.869	0.869	1.109	No	
	Top	0.942	0.179	0.220	0.228	1.121	1.162	1.349	1.390	No	
	Bottom					0.000	0.000	0.000	0.000	No	
LTE Band 66 (Main1 Ant)	Rear	0.841	0.404	0.504	0.366	1.245	1.345	1.611	1.711	Yes	
	Front					0.000	0.000	0.000	0.000	No	
	Left	0.145	0.595	0.590	0.000	0.740	0.735	0.740	0.735	No	
	Right	0.515	0.400	0.640	0.240	0.915	1.155	1.155	1.395	No	
	Top	0.760	0.179	0.220	0.228	0.939	0.980	1.167	1.208	No	
	Bottom					0.000	0.000	0.000	0.000	No	
LTE Band 41 (Main1 Ant)	Rear	0.409	0.404	0.504	0.366	0.813	0.913	1.179	1.279	No	
	Front					0.000	0.000	0.000	0.000	No	
	Left	0.143	0.595	0.590	0.000	0.738	0.733	0.738	0.733	No	
	Right	0.344	0.400	0.640	0.240	0.744	0.984	0.984	1.224	No	
	Top	0.565	0.179	0.220	0.228	0.744	0.785	0.972	1.013	No	
	Bottom					0.000	0.000	0.000	0.000	No	

14.2 SAR to Peak Location Separation Ratio (SPLSR)

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:

SAR₁ 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

SAR₂ is the highest measured or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

R_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 > 4 W/Kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / R_i \leq 0.04 \text{ for 1g SAR and } (SAR_1 + SAR_2)^{1.5} / R_i \leq 0.1 \text{ for 10g SAR}$$

SPLSR Hotspot Combination

Per November 2019 TCB Workshop Notes, SPLSR Hotspot Combination procedure can be applied to evaluate to simultaneous transmission SAR analysis.

The antennas for the unlicensed transmitters are closely located. As a result, the associated SAR Hotspots are also closely located. Some of the sum of SAR calculations yielded results over 1.6W/kg. The SPLSR calculations for these situations were performed by treating the unlicensed SAR values as a single transmitter. The most conservative distance between all the unlicensed hotspots to the licensed hotspot was used for the value of d in SPLSR calculation.

Hybrid SPLSR and enlarged zoom scan (Volume scan) can be applied when Simultaneous transmission SAR is over 1.6 W/kg for 1g or 4.0W/kg for 10g respectively, it does not meet SPLSR criteria, and antenna pair is co-located. Antenna co-location means that SAR distributions overlap because the antenna pair are not significantly spatially separated.

Test Procedure:

Step.1 perform enlarged zoom scan (Volume scan) on the co-located antenna pair to determine 1g/10g aggregate SAR.

Step.2 Apply SPLSR procedure for the spatially separated antenna and aggregate SAR distribution of the co-located antenna pair.

Per Sec. 14, below simultaneous transmission summations need to be calculated SPLSR.

14.2.1 SPLSR Evaluation

Mode/Band	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
GSM850	-0.0105	0.1410	-0.1790	0.798
UMTS B2	0.0075	0.1320	-0.1780	0.772
UMTS B4	-0.0255	0.1200	-0.1770	0.716
UMTS B5	0.0135	0.1230	-0.1770	0.875
LTE B5	0.0045	0.1230	-0.1820	0.915
LTE B12	0.0000	0.1370	-0.1820	0.924
LTE B25	0.0075	0.1340	-0.1820	1.078
LTE B26	0.0015	0.1380	-0.1820	0.846
LTE B66	0.0045	0.1350	-0.1820	0.841
Bluetooth Ant.1	-0.0576	0.1290	-0.1780	0.369
WLAN 5GHz SISO Ant.1	0.0659	0.1214	-0.1810	0.404
WLAN 5GHz MIMO	-0.0690	0.119	-0.1780	0.504

14.2.2 SAR to Peak Location Ratio (SPLSR) Figures

14.2.2.1 5GHz SISO Rear side

Band			\sum 1-g SAR (W/kg)				Peak SAR Separation Distance (mm)			SPLSR			Plot No.
1	2	3	1+2+3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
UMTS Band 5	Bluetooth	5GHzAnt. 1	1.645	1.241	1.241	0.770	52.577	71.360	123.770	0.03	0.02	0.01	#1
LTE Band 5			1.685	1.319	1.281	0.770	66.513	59.915	123.770	0.02	0.02	0.01	#2
LTE Band 12			1.694	1.290	1.290	0.770	67.729	58.290	123.770	0.02	0.03	0.01	#3
LTE Band 25			1.848	1.444	1.444	0.770	59.752	65.414	123.770	0.03	0.03	0.01	#4
LTE Band 26			1.616	1.212	1.212	0.770	66.513	59.915	123.770	0.02	0.02	0.01	#5
LTE Band 66			1.611	1.207	1.207	0.770	62.896	62.517	123.770	0.02	0.02	0.01	#6

14.2.2.2 5GHz MIMO Rear side

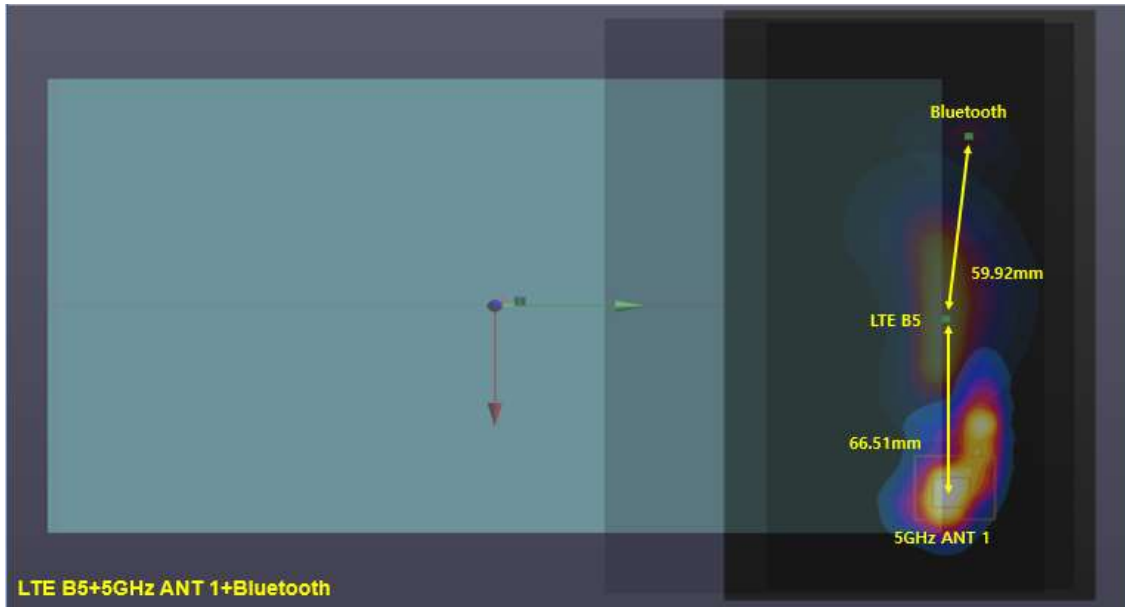
Band			\sum 1-g SAR (W/kg)				Peak SAR Separation Distance (mm)			SPLSR	Plot No.
1	2	3	1+2+3	1+2	1+3	2+3	1+2	1+3	2+3	1+2+3	
GSM 850	Bluetooth	5GHzMIMO	1.668	1.164	1.164	0.870	62.508	48.615	15.164	0.04	#7
UMTS Band 2			1.642	1.138	1.138	0.870	77.597	65.169	15.164	0.03	#8
UMTS Band 5			1.745	1.241	1.241	0.870	82.603	71.360	15.164	0.03	#9
LTE Band 5			1.785	1.419	1.281	0.870	73.717	62.517	15.164	0.04	#10
LTE Band 12			1.794	1.290	1.290	0.870	71.421	58.290	15.164	0.04	#11
LTE Band 25			1.948	1.444	1.444	0.870	78.059	65.414	15.164	0.04	#12
LTE Band 26			1.716	1.212	1.212	0.870	73.125	59.915	15.164	0.04	#13
LTE Band 66			1.711	1.207	1.207	0.870	75.328	62.517	15.164	0.04	#14

14.2.3 SPLSR Plot

Plot #1 UMTS B5+5GHz Ant.1+Bluetooth



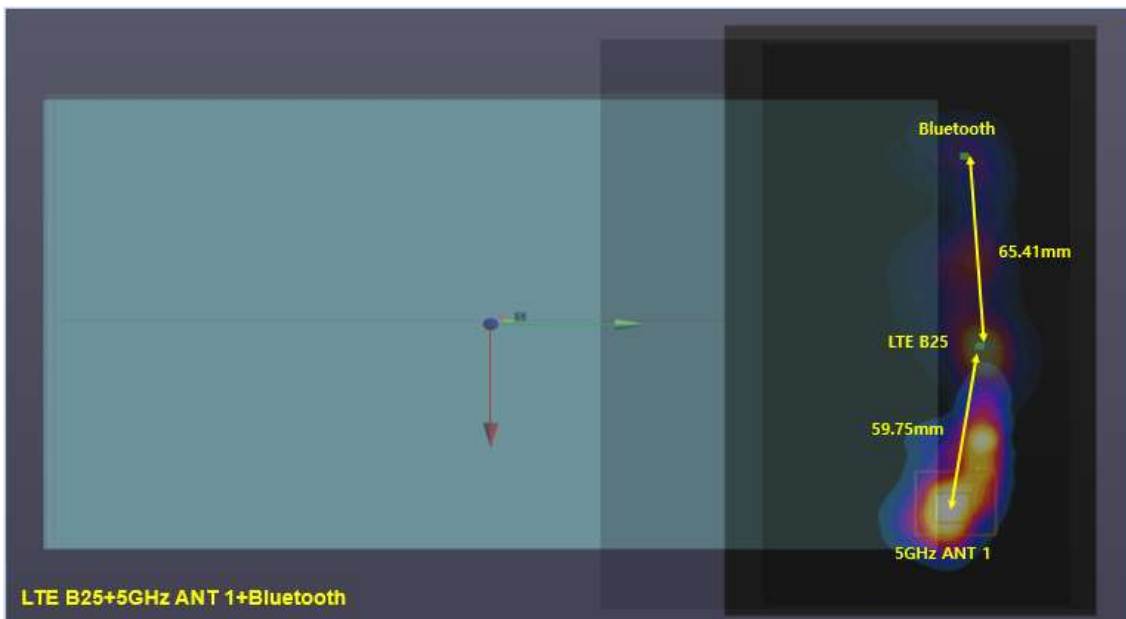
Plot #2 LTE B5+5GHz Ant.1+Bluetooth



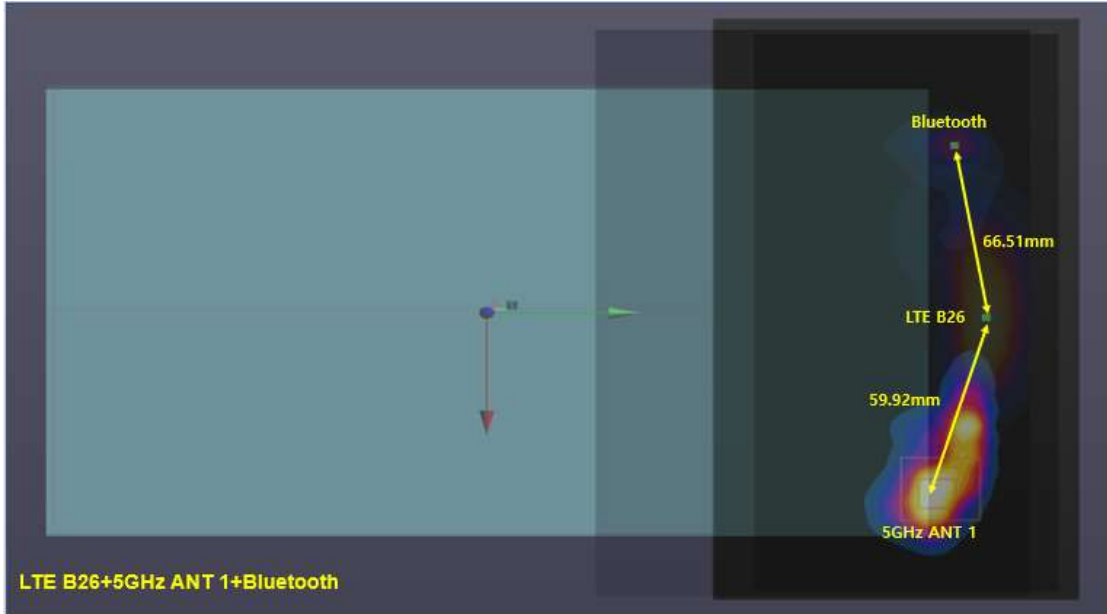
Plot #3 LTE B12+5GHz Ant.1+Bluetooth



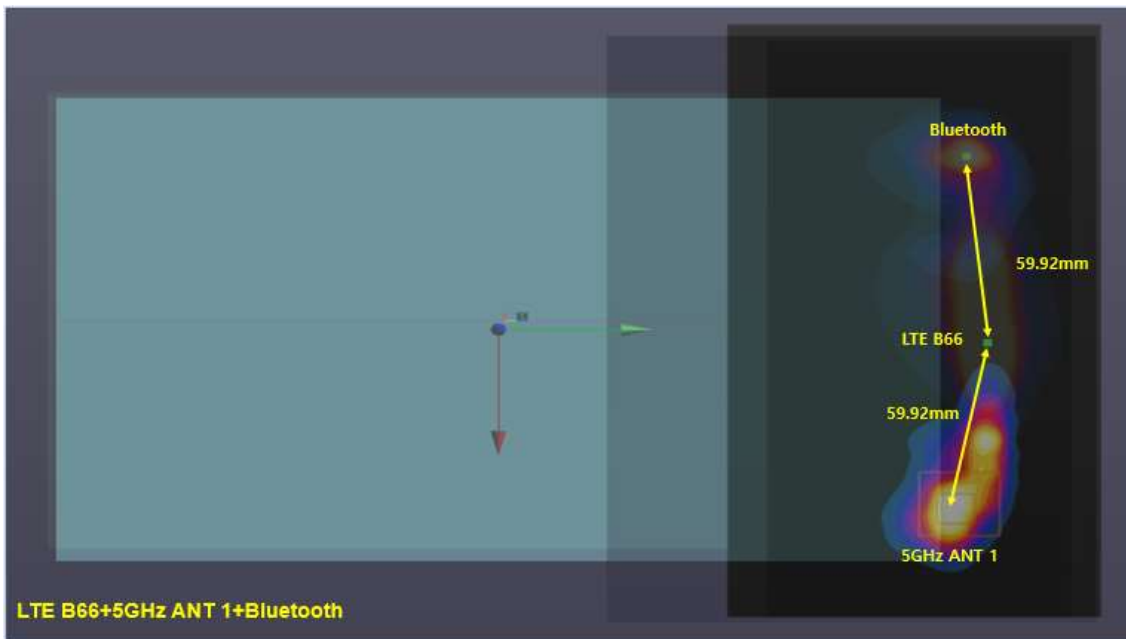
Plot #4 LTE B25+5GHz Ant.1+Bluetooth



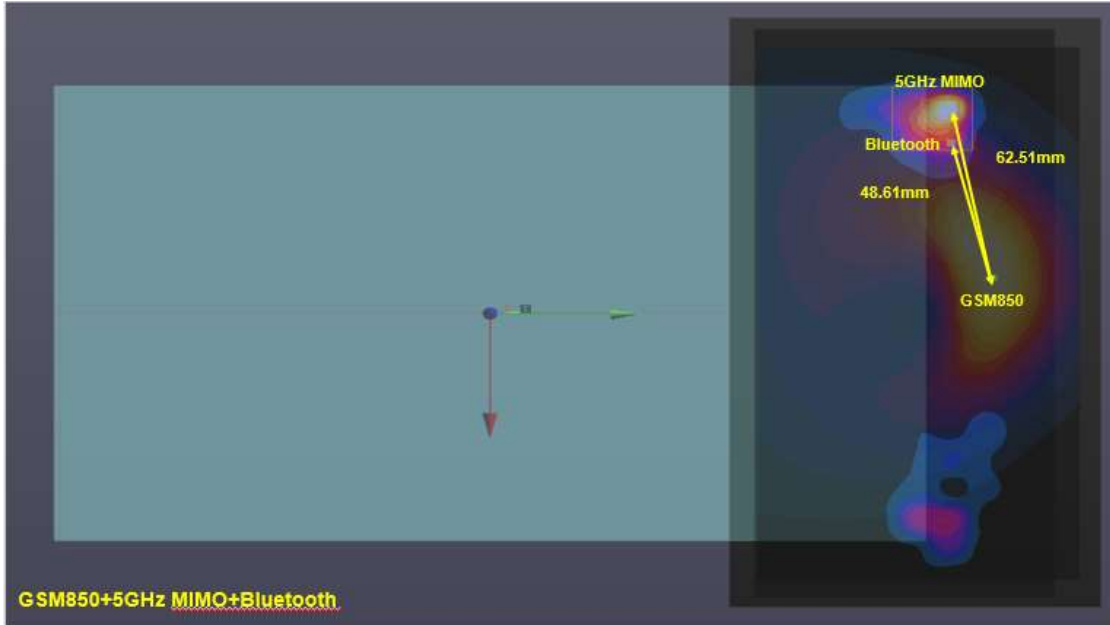
Plot #5 LTE B26+5GHz Ant.1+Bluetooth



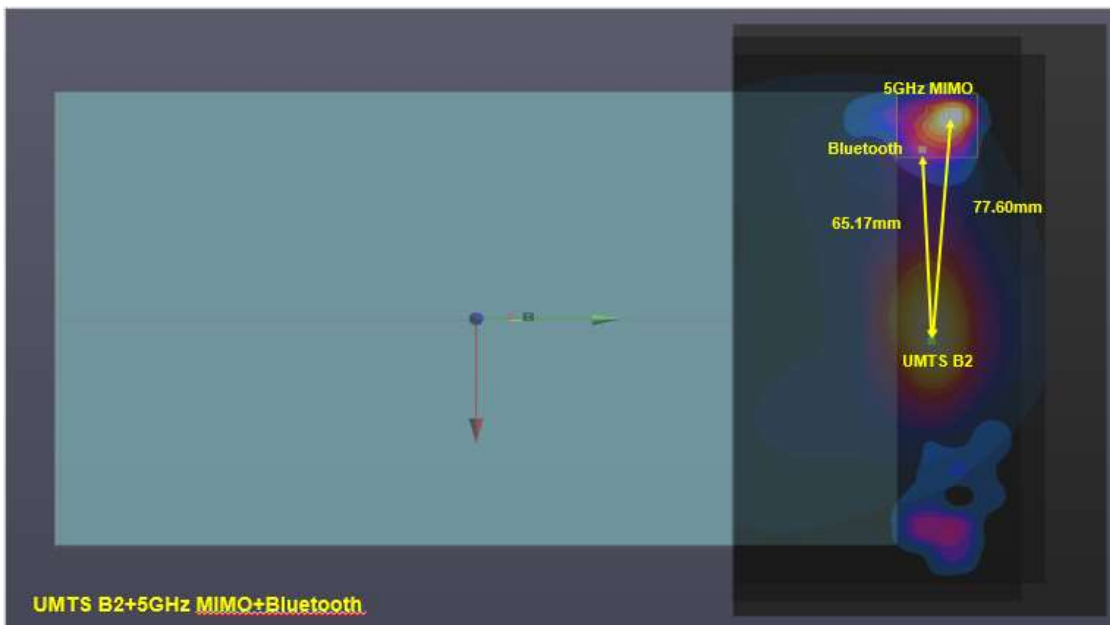
Plot #6 LTE B66+5GHz Ant.1+Bluetooth



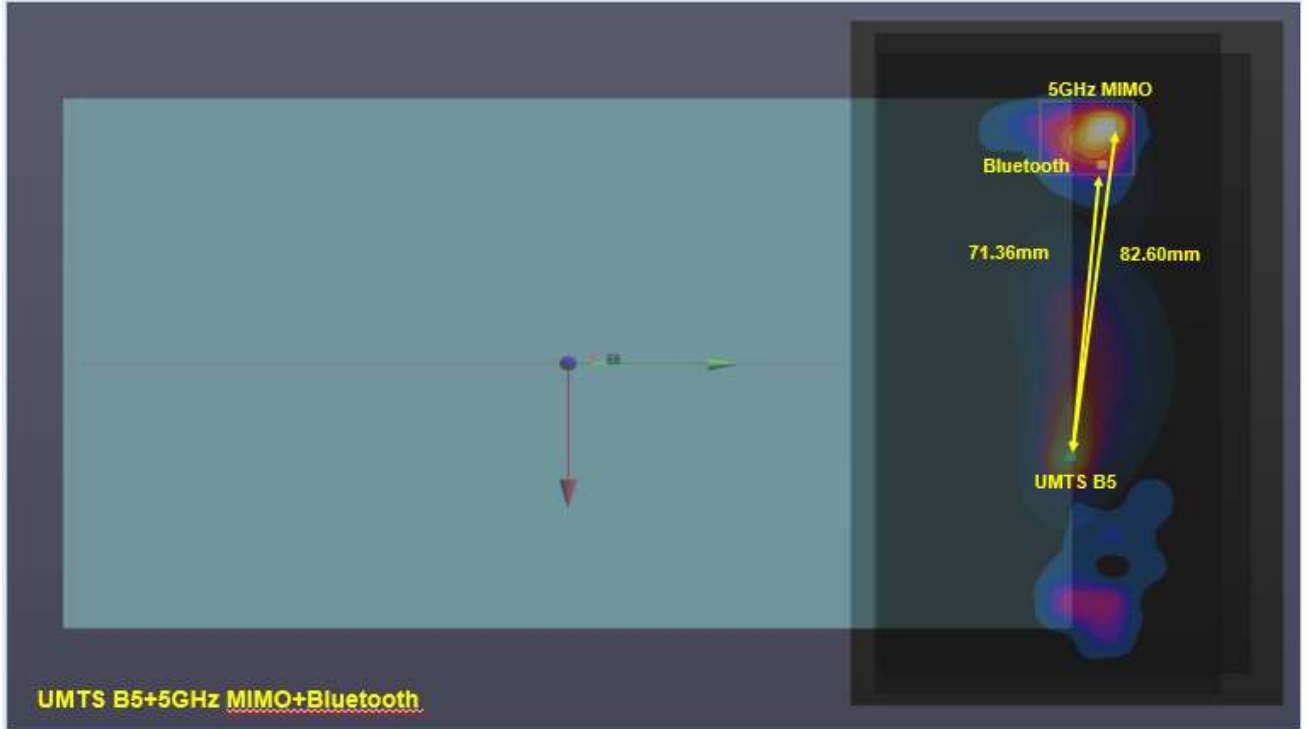
Plot #7 GSM850+5GHz MIMO+Bluetooth



Plot #8 UMTS B2+5GHz MIMO+Bluetooth



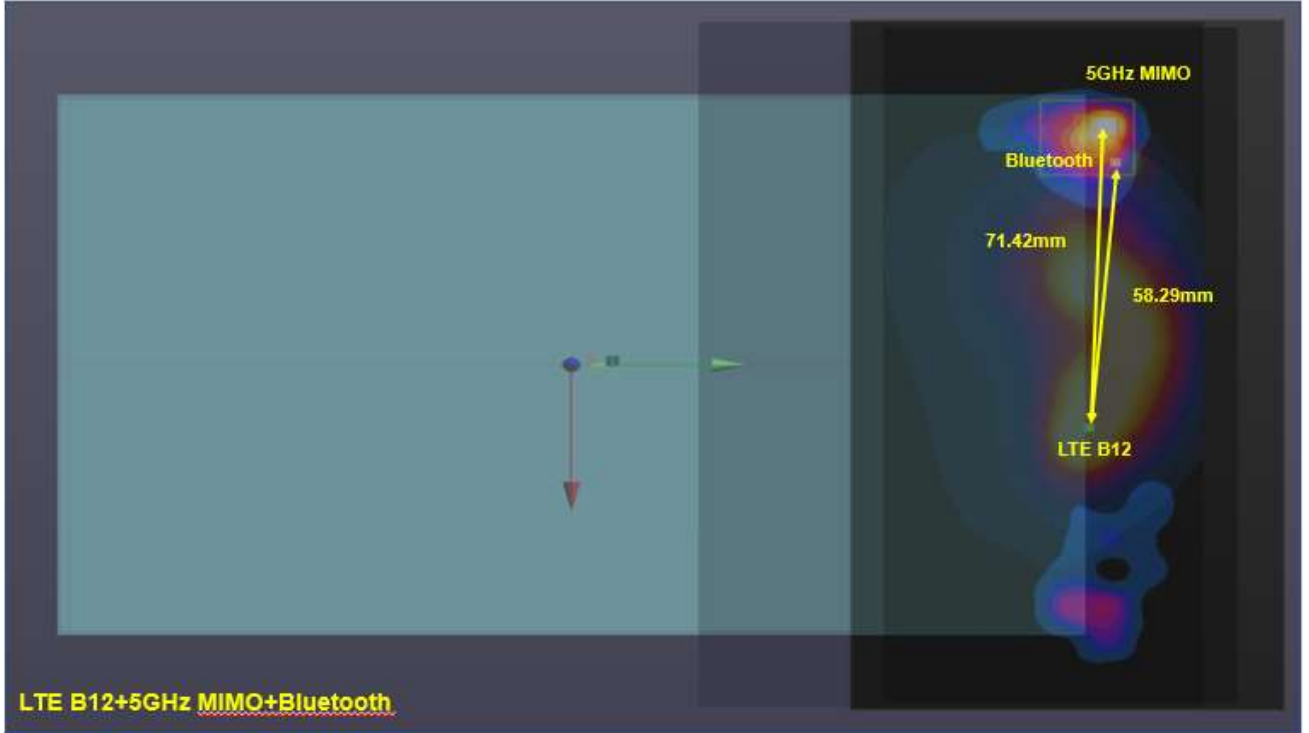
Plot #9 UMTS B5+5GHz MIMO+Bluetooth



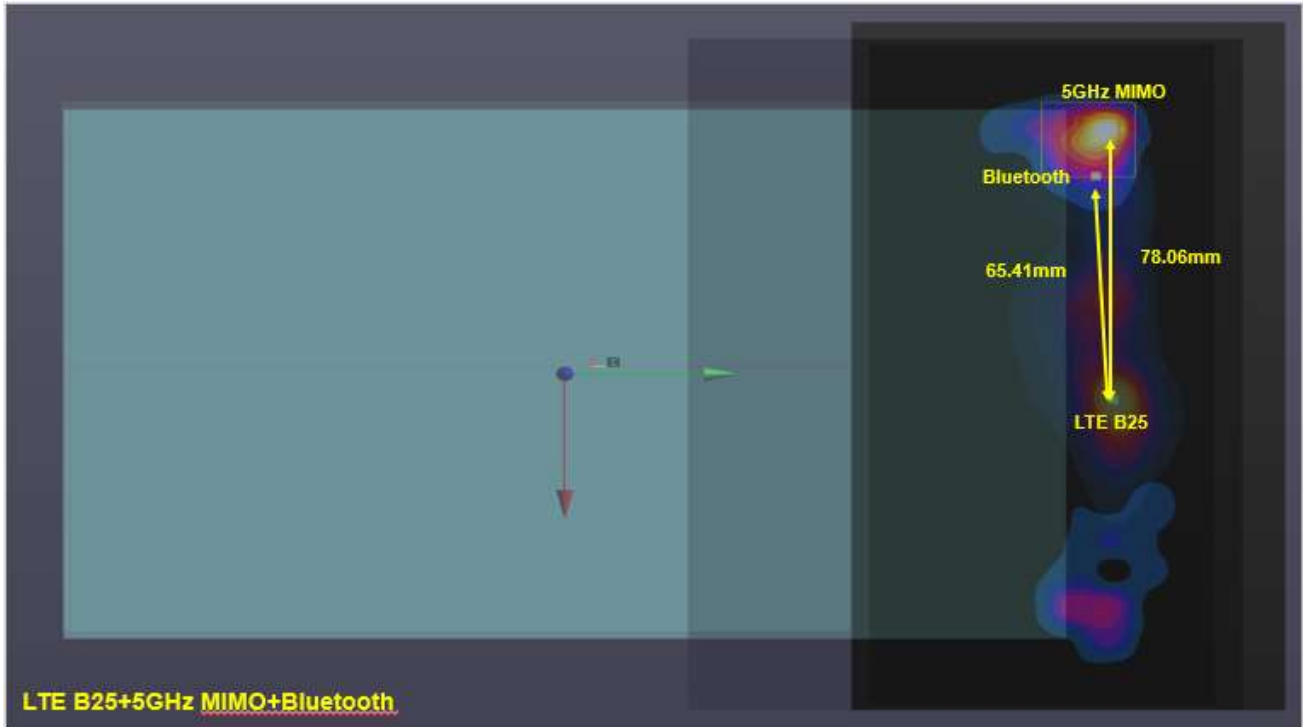
Plot #10 LTE B5+5GHz MIMO+Bluetooth



Plot #11 LTE B12+5GHz MIMO+Bluetooth



Plot #12 LTE B25+5GHz MIMO+Bluetooth



Plot #13 LTE B26+5GHz MIMO+Bluetooth



Plot #14 LTE B66+5GHz MIMO+Bluetooth



14.3.4 Simultaneous Transmission Conclusion.

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

15. SAR Measurement Variability and Uncertainty

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

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

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

Body SAR measurement variability Results

Frequency		Mode/Band	Configuration	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
Mhz	Channel					
831.5	26865	LTE FDD Band 26	Top	0.885	0.862	1.03

16. Measurement Uncertainty

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

17. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	ELI Phantom	-	N/A	N/A	N/A
Staubli #8	CS8Cspeag-TX60	F/20/0018446/C/001	N/A	N/A	N/A
Staubli #9	CS8Cspeag-TX60L	F10/5D1CA1/C/01	N/A	N/A	N/A
Staubli #10	CS8Cspeag-TX90	F13/ 5SD0A1/ C/ 01	N/A	N/A	N/A
Staubli#13	CS9spe-TX2-60	F/21/0029145/C/001	N/A	N/A	N/A
Staubli #8	TX60 Lspeag	F/20/0018446/A/001	N/A	N/A	N/A
Staubli #9	TX60 Xlspeag	F10/5D1CA1/A/01	N/A	N/A	N/A
Staubli #10	TX90 Xl speag	F13/ 5SD0A1/ A/ 01	N/A	N/A	N/A
Staubli#13	TX2-60 Lspe	F/21/0029145/A/001	N/A	N/A	N/A
Staubli #8	Teach Pendant (Joystick)	020885	N/A	N/A	N/A
Staubli #9	Teach Pendant (Joystick)	S-0123	N/A	N/A	N/A
Staubli #10	Teach Pendant (Joystick)	001729	N/A	N/A	N/A
Staubli#13	Teach Pendant (Joystick)	D21144507C	N/A	N/A	N/A
TESTO	175-H1/Thermometer	44606611906	03/27/2023	Annual	03/27/2024
TESTO	175-H1/Thermometer	44606559906	03/27/2023	Annual	03/27/2024
TESTO	608-H1/Thermometer	83348029	03/27/2023	Annual	03/27/2024
TESTO	608-H1/Thermometer	83348028	03/27/2023	Annual	03/27/2024
SPEAG	DAE4	648	04/25/2023	Annual	04/25/2024
SPEAG	DAE4	868	09/20/2023	Annual	09/20/2024
SPEAG	DAE4	1464	06/16/2023	Annual	06/16/2024
SPEAG	DAE4	1750	09/19/2023	Annual	09/19/2024
SPEAG	E-Field Probe EX3DV4	3768	07/18/2023	Annual	07/18/2024
SPEAG	E-Field Probe EX3DV4	3968	09/27/2023	Annual	09/27/2024
SPEAG	E-Field Probe EX3DV4	7309	06/19/2023	Annual	06/19/2024
SPEAG	E-Field Probe EX3DV4	7681	11/27/2023	Annual	11/27/2024
SPEAG	Dipole D750V3	1014	05/23/2023	Annual	05/23/2024
SPEAG	Dipole D835V2	4d165	05/23/2023	Annual	05/23/2024
SPEAG	Dipole D1800V2	2d015	05/17/2023	Annual	05/17/2024
SPEAG	Dipole D1900V2	5d032	01/18/2024	Annual	01/18/2025
SPEAG	Dipole D2450V2	1049	04/25/2023	Annual	04/25/2024
SPEAG	Dipole D2600V2	1106	05/24/2023	Annual	05/24/2024
SPEAG	Dipole D5 GHz V2	1317	05/17/2023	Annual	05/17/2024
Agilent	Power Meter E4419B	MY41291386	09/21/2023	Annual	09/21/2024
Agilent	Power Meter N1911A	MY45101406	05/26/2023	Annual	05/26/2024
Agilent	Power Sensor 8481A	SG1091286	09/21/2023	Annual	09/21/2024
H.P	Power Sensor 8481A	MY41090675	09/21/2023	Annual	09/21/2024
Agilent	Wideband Power Sensor N1921A	MY55220026	07/28/2023	Annual	07/28/2024
Agilent	11636B/Power Divider	58698	01/15/2024	Annual	01/15/2025
SPEAG	DAKS 3.5	1031	08/24/2023	Annual	08/24/2024
SPEAG	DAKS 3.5	1038	01/22/2024	Annual	01/22/2025
SPEAG	Vector Reflectometer	0050813	04/26/2023	Annual	04/26/2024
SPEAG	Vector Reflectometer	0141013	01/11/2024	Annual	01/11/2025
SPEAG	MXA Signal Analyzer	MY49100108	01/09/2024	Annual	01/09/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY48361100	09/21/2023	Annual	09/21/2024
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/27/2023	Annual	07/27/2024
R&S	Wireless Communication Test Set CMW500	115733	03/23/2023	Annual	03/23/2024

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/23/2023	Annual	03/23/2024
EMPOWER	RF Power Amplifier	1084	05/26/2023	Annual	05/26/2024
EMPOWER	RF Power Amplifier	1011	09/21/2023	Annual	09/21/2024
MICRO LAB	LP Filter / LA-15N	10453	09/21/2023	Annual	09/21/2024
MICRO LAB	LP Filter / LA-30N	-	09/21/2023	Annual	09/21/2024
MICRO LAB	LP Filter / LA-60N	32011	09/21/2023	Annual	09/21/2024
Agilent	Attenuator (3dB) 8693B	MY39260298	08/22/2023	Annual	08/22/2024
HP	Attenuator (3dB) 33340A	02427	08/22/2023	Annual	08/22/2024
HP	Attenuator (20dB) 8493C	09271	08/22/2023	Annual	08/22/2024
Agilent	Directional Bridge 86205A	3140A04581	04/25/2023	Annual	04/25/2024
OSI	Power Divider	#3	05/26/2023	Annual	05/26/2024
Agilent	MXA Signal Analyzer N9020A	MY50510407	06/07/2023	Annual	06/07/2024
HP	Dual Directional Coupler	16072	09/21/2023	Annual	09/21/2024
Anritsu	Radio Communication Tester MT8820C	6200695605	03/23/2023	Annual	03/23/2024
Anritsu	Radio Communication Tester MT8821C	6201502997	05/26/2023	Annual	05/26/2024
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/26/2023	Annual	05/26/2024
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	01/16/2024	Annual	01/16/2025

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

18. Conclusion

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

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

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

19. References

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Appendix A. DUT Ant. Information & SETUP PHOTO

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

Report No.
HCT-SR-2402-FC002-P