

TEST REPORT



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1. Report No : DRRFCC2605-0021

2. Customer

• Name (FCC) : LG Electronics Inc.

• Address (FCC) : 222 LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, South Korea, 17709

3. Use of Report : FCC Original Certification

4. Product Name / Model Name : Telematics / TFWWAIBG1FF

FCC ID : 2B03LTFWWAIBG1FF

5. FCC Regulation(s) : CFR 47 Part 2 subpart 2.1093

Test Method Used : FCC SAR KDB Publications (Details in test report)

IEC/IEEE 62209-1528:2020

6. Date of Test : 2026.03.09 ~ 2026.05.04

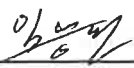
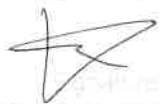
7. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

8. Testing Environment : Refer to appended test report.

9. Test Result : Refer to attached test report.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

This test report is not related to KOLAS accreditation.

Affirmation	Tested by	Reviewed by
	Name : SeungMin Lim 	Name : HakMin Kim 

2026 . 05 . 14 .

Dt&C Co., Ltd.

If this report is required to confirmation of authenticity, please contact to report@dtnc.net

Test Report Version

Test Report No.	Date	Description	Tested by	Reviewed by
DRRFCC2605-0021	May. 14, 2026	Initial issue	SeungMin Lim	HakMin Kim

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1. DESCRIPTION OF DEVICE

1.1 General Information

Product Name	Telematics				
FCC ID	2B03LTFVWAIBG1FF				
Equipment model name(s)	TFVWAIBG1FF				
PMN(Product Marketing Name)	TFVWAIBG1FF				
Equipment serial no.	Identical prototype				
FVIN (Firmware Version Identification Number)	0038				
Host Marketing Name	N/A				
FCC & ISED MRA Designation No.	KR0034				
FCC Test Firm Registration No.	704742				
ISED#	5740A				
	Band	Mode	Operating Modes	Bandwidth	Frequency
	LTE Band 71	LTE	Voice/Data	5/10/15/20 MHz	665.5 ~ 695.5 MHz
	LTE Band 12	LTE	Voice/Data	1.4/3/5/10 MHz	699.7 ~ 715.3 MHz
	LTE Band 17	LTE	Voice/Data	5/10 MHz	706.5 ~ 713.5 MHz
	LTE Band 13	LTE	Voice/Data	5/10 MHz	779.5 ~ 784.5 MHz
	LTE Band 14	LTE	Voice/Data	5/10 MHz	790.5 ~ 795.5 MHz
	LTE Band 26	LTE	Voice/Data	1.4/3/5/10/15MHz	814.7 ~ 848.3 MHz
	LTE Band 5	LTE	Voice/Data	1.4/3/5/10 MHz	824.7 ~ 848.3 MHz
	LTE Band 66	LTE	Voice/Datad	1.4/3/5/10/15/20 MHz	1 710.7 ~ 1 779.3 MHz
	LTE Band 4	LTE	Voice/Data	1.4/3/5/10/15/20 MHz	1 710.7 ~ 1 754.3 MHz
	LTE Band 25	LTE	Voice/Data	1.4/3/5/10/15/20 MHz	1 850.7 ~ 1 914.3 MHz
	LTE Band 2	LTE	Voice/Data	1.4/3/5/10/15/20 MHz	1 850.7 ~ 1 909.3 MHz
	LTE Band 7	LTE	Voice/Data	5/10/15/20MHz	2 502.5 ~ 2 567.5 MHz
	LTE Band 41	LTE	Voice/Data	5/10/15/20MHz	2 498.5 ~ 2 687.5 MHz
	NR Band n71	NR(SCS 15 kHz)	Voice/Data	5/10/15/20 MHz	665.5 ~ 695.5 MHz
	NR Band n12	NR(SCS 15 kHz)	Voice/Data	5/10/15 MHz	699.7 ~715.3 MHz
	NR Band n13	NR(SCS 15 kHz)	Voice/Data	5/10 MHz	779.5 ~784.5 MHz
	NR Band n14	NR(SCS 15 kHz)	Voice/Data	5/10 MHz	790.5 ~795.5 MHz
	NR Band n26	NR(SCS 15 kHz)	Voice/Data	5/10/15/20 MHz	816.5 ~ 846.5 MHz
	NR Band n5	NR(SCS 15 kHz)	Voice/Data	5/10/15/20 MHz	826.5 ~ 846.5 MHz
	NR Band n66	NR(SCS 15 kHz)	Voice/Data	5/10/15/20/25/30/40 MHz	1 712.5 ~ 1 777.5 MHz
	NR Band n25	NR(SCS 15 kHz)	Voice/Data	5/10/15/20/25/30/40 MHz	1 852.5 ~ 1 912.5 MHz
	NR Band n2	NR(SCS 15 kHz)	Voice/Data	5/10/15/20/25/30/40 MHz	1 852.5 ~ 1 907.5 MHz
	NR Band n7	NR(SCS 15 kHz)	Voice/Data	5/10/15/20/25/30/40 MHz	2 502.5 ~ 2 567.5 MHz
	NR Band n41	NR(SCS 30 kHz)	Voice/Data	10/20/30/40/50/60/70/80/90/100 MHz	2 506.02 ~ 2 679.99 MHz
	NR Band n38	NR(SCS 30 kHz)	Voice/Data	10/20/30/40 MHz	2 580.00 ~ 2 610.00 MHz
	NR Band n77 DoD	NR(SCS 30 kHz)	Voice/Data	10/20/30/40/50/60/70/80/90/100 MHz	3 455.01 ~ 3 544.98 MHz
	NR Band n77	NR(SCS 30 kHz)	Voice/Data	10/20/30/40/50/60/70/80 /90/100 MHz	3 710.01 ~ 3 969.99 MHz
	NR Band n78 DoD	NR(SCS 30 kHz)	Voice/Data	10/20/30/40/50/60/70/80/90/100 MHz	3 455.00 ~ 3 545.00 MHz
	NR Band n78	NR(SCS 30 kHz)	Voice/Data	10/20/30/40/50/60/70/80/90/100 MHz	3 710.99 ~ 3 789.99 MHz
Equipment Class	Band	Reported SAR			
		1g SAR (W/kg)			
		Head		Body	
PCB	LTE Band 71	< 0.1		0.20	
PCB	LTE Band 12	< 0.1		0.21	
PCB	LTE Band 17	-		-	
PCB	LTE Band 13	< 0.1		0.28	
PCB	LTE Band 14	0.13		0.25	
PCB	LTE Band 26	< 0.1		0.23	
PCB	LTE Band 5	< 0.1		0.17	
PCB	LTE Band 66	< 0.1		0.16	
PCB	LTE Band 4	-		-	
PCB	LTE Band 25	< 0.1		0.12	
PCB	LTE Band 2	< 0.1		0.11	
PCB	LTE Band 7	< 0.1		< 0.1	
PCB	LTE Band 41	< 0.1		< 0.1	
PCB	NR Band n71	< 0.1		< 0.1	
PCB	NR Band n12	< 0.1		< 0.1	
PCB	NR Band n13	< 0.1		0.10	
PCB	NR Band n14	< 0.1		0.10	
PCB	NR Band n26	< 0.1		0.10	
PCB	NR Band n5	-		-	
PCB	NR Band n66	< 0.1		< 0.1	
PCB	NR Band n25	< 0.1		< 0.1	
PCB	NR Band n2	-		-	
PCB	NR Band n7	< 0.1		< 0.1	
PCB	NR Band n41	< 0.1		< 0.1	
PCB	NR Band n38	-		-	
PCB	NR Band n77 DoD	< 0.1		0.39	
PCB	NR Band n77	< 0.1		0.48	
PCB	NR Band n78 DoD	-		-	
PCB	NR Band n78	-		-	
Simultaneous SAR per KDB 690783 D01v01r03		0.16		0.76	
FCC Equipment Class	PCS Licensed Transmitter(PCB)				
Date(s) of Tests	2026.03.09 ~ 2026.05.04				

1.2 Power Reduction for SAR

The Power Reductions are in section 8 of this test report.

1.3 Nominal and Maximum Output Power Specifications

The Nominal and Maximum Output Power Specifications are in section 8 of this test report.

1.4 DUT Antenna Locations

The closest distance between the INTERNAL antenna and the human body is 37 mm, EXTERNAL antenna and the human body is 40mm, details are in the OpDesc file.

1.5 Simultaneous Transmission Capabilities

The Simultaneous Transmission Capabilities are in section 11 of this test report.

1.6 Miscellaneous SAR Test Considerations

Licensed Transmitter(s)

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 D05v02r04.

This device has support to DLCA (Downlink carrier aggregation) in LTE and NR techs. But Uplink output power is not affected even if DLCA configurations are added. So DLCA cases do not need to be considered separately.

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

NR implementation supports SA and NSA mode. In EN-DC mode, NR operates with the LTE Bands shown in the NR RF1 checklist acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.

1.7 Guidance Applied

- IEEE 1528-2013
- IEC/IEEE 62209-1528:2020
- FCC KDB Publication 941225 D05v02r05 (SAR for LTE Devices)
- FCC KDB Publication 941225 D05Av01r02 (LTE Rel.10 KDB Inquiry Sheet)
- FCC KDB Publication 447498 D01v06 (General RF Exposure Guidance)
- FCC KDB Publication 690783 D01v01r03 (SAR Listings on Grants)
- FCC KDB Publication 865664 D01v01r04 (SAR Measurement 100 MHz to 6 GHz)
- FCC KDB Publication 865664 D02v01r02 (RF Exposure Reporting)
- October 2014 TCB Workshop Notes (Overlapping LTE Bands, Other LTE Considerations)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (DUT Holder Perturbations)
- May 2017 TCB Workshop Notes (LTE Test Conditions)
- November 2017 TCB Workshop Notes (LTE UL Carrier Aggregation SAR)
- April 2019 TCB Workshop Notes (Tissue Simulating Liquids)
- October 2020 TCB Workshop Notes (Intra-band and Inter-band NSA-EN-DC evaluation)
- April 2022 TCB Workshop Notes (5G NR FR1 Measurement)
- October 2022 TCB Workshop Notes (SAR test frequencies in multi-rule)

1.8 Device Serial Numbers

The serial numbers used for each test are indicated alongside the results in Section 10.

2. LTE AND NR INFORMATION

LTE Information					
Frequency Range of each LTE transmission Band	LTE Band 71 (665.5 ~ 695.5 MHz) LTE Band 12 (699.7 ~ 715.3 MHz) LTE Band 17 (706.5 ~ 713.5 MHz) LTE Band 13 (779.5 ~ 784.5 MHz) LTE Band 14 (790.5 ~ 795.5 MHz) LTE Band 26 (Cell) (814.7 ~ 848.3 MHz) LTE Band 5 (Cell) (824.7 ~ 848.3 MHz) LTE Band 66 (AWS) (1 710.7 ~ 1 779.3 MHz) LTE Band 4 (AWS) (1 710.7 ~ 1 754.3 MHz) LTE Band 25 (PCS) (1 850.7 ~ 1 914.3 MHz) LTE Band 2 (PCS) (1 850.7 ~ 1 909.3 MHz) LTE Band 7 (2 502.5 ~ 2 567.5 MHz) LTE Band 41 (2 498.5 ~ 2 687.5 MHz)				
Channel Bandwidths	LTE Band 71 : 5/10/15/20 MHz LTE Band 12 : 1.4/3/5/10 MHz LTE Band 17 : 5/10 MHz LTE Band 13 : 5/10 MHz LTE Band 14 : 5/10 MHz LTE Band 26 : 1.4/3/5/10/15MHz LTE Band 5 : 1.4/3/5/10 MHz LTE Band 66 : 1.4/3/5/10/15/20 MHz LTE Band 4 : 1.4/3/5/10/15/20 MHz LTE Band 25 : 1.4/3/5/10/15/20 MHz LTE Band 2 : 1.4/3/5/10/15/20 MHz LTE Band 7 : 5/10/15/20MHz LTE Band 41 : 5/10/15/20MHz				
Channel Number and Frequencies(MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (133147)	N/A	680.5 (133297)	N/A	695.5 (133447)
LTE Band 71: 10 MHz	668.0 (133172)	N/A	680.5 (133297)	N/A	693.0 (133422)
LTE Band 71: 15 MHz	670.5 (133197)	N/A	680.5 (133297) ^{Note1}	N/A	690.5 (133397)
LTE Band 71: 20 MHz	673.0 (133222)	N/A	680.5 (133297) ^{Note1}	N/A	688.0 (133372)
LTE Band 12: 1.4 MHz	699.7 (23017)	N/A	707.5 (23095)	N/A	715.3 (23173)
LTE Band 12: 3 MHz	700.5 (23025)	N/A	707.5 (23095)	N/A	714.5 (23165)
LTE Band 12: 5 MHz	701.5 (23035)	N/A	707.5 (23095)	N/A	713.5 (23155)
LTE Band 12: 10 MHz	704.0 (23060)	N/A	707.5 (23095) ^{Note2}	N/A	711.0 (23130)
LTE Band 17: 5 MHz	706.5 (23755)	N/A	710.0 (23790) ^{Note3}	N/A	713.5 (23825)
LTE Band 17: 10 MHz	709.0 (23780)	N/A	710.0 (23790) ^{Note3}	N/A	711.0 (23800)
LTE Band 13: 5 MHz	779.5 (23205)	N/A	782.0 (23230) ^{Note4}	N/A	784.5 (23255)
LTE Band 13: 10 MHz	N/A	N/A	782.0 (23230)	N/A	N/A
LTE Band 14: 5 MHz	790.5 (23305)	N/A	793.0 (23330) ^{Note5}	N/A	795.5 (23355)
LTE Band 14: 10 MHz	N/A	N/A	793.0 (23330)	N/A	N/A
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)	N/A	831.5 (26865)	N/A	848.3 (27033)
LTE Band 26 (Cell): 3 MHz	815.5 (26705)	N/A	831.5 (26865)	N/A	847.5 (27025)
LTE Band 26 (Cell): 5 MHz	816.5 (26715)	N/A	831.5 (26865)	N/A	846.5 (27015)
LTE Band 26 (Cell): 10 MHz	819.0 (26740)	N/A	831.5 (26865)	N/A	844.0 (26990)
LTE Band 26 (Cell): 15 MHz	821.5 (26765)	N/A	831.5 (26865) ^{Note6}	N/A	841.5 (26965)
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)	N/A	836.5 (20525)	N/A	848.3 (20643)
LTE Band 5 (Cell): 3 MHz	825.5 (20415)	N/A	836.5 (20525)	N/A	847.5 (20635)
LTE Band 5 (Cell): 5 MHz	826.5 (20425)	N/A	836.5 (20525)	N/A	846.5 (20625)
LTE Band 5 (Cell): 10 MHz	829.0 (20450)	N/A	836.5 (20525) ^{Note7}	N/A	844.0 (20600)
LTE Band 66 (AWS): 1.4 MHz	1 710.7 (131979)	N/A	1 745.0 (132322)	N/A	1 779.3 (132665)
LTE Band 66 (AWS): 3 MHz	1 711.5 (131987)	N/A	1 745.0 (132322)	N/A	1 778.5 (132657)
LTE Band 66 (AWS): 5 MHz	1 712.5 (131997)	N/A	1 745.0 (132322)	N/A	1 777.5 (132647)
LTE Band 66 (AWS): 10 MHz	1 715.0 (132022)	N/A	1 745.0 (132322)	N/A	1 775.0 (132622)
LTE Band 66 (AWS): 15 MHz	1 717.5 (132047)	N/A	1 745.0 (132322)	N/A	1 772.5 (132597)
LTE Band 66 (AWS): 20 MHz	1 720.0 (132072)	N/A	1 745.0 (132322)	N/A	1 770.0 (132572)
LTE Band 4 (AWS): 1.4 MHz	1 710.7 (19957)	N/A	1 732.5 (20175)	N/A	1 754.3 (20393)
LTE Band 4 (AWS): 3 MHz	1 711.5 (19965)	N/A	1 732.5 (20175)	N/A	1 753.5 (20385)
LTE Band 4 (AWS): 5 MHz	1 712.5 (19975)	N/A	1 732.5 (20175)	N/A	1 752.5 (20375)
LTE Band 4 (AWS): 10 MHz	1 715.0 (20000)	N/A	1 732.5 (20175)	N/A	1 750.0 (20350)
LTE Band 4 (AWS): 15 MHz	1 717.5 (20025)	N/A	1 732.5 (20175)	N/A	1 747.5 (20325)
LTE Band 4 (AWS): 20 MHz	1 720.0 (20050)	N/A	1 732.5 (20175) ^{Note8}	N/A	1 745.0 (20300)
LTE Band 25 (PCS): 1.4 MHz	1 850.7 (26047)	N/A	1 882.5 (26365)	N/A	1 914.3 (26683)
LTE Band 25 (PCS): 3 MHz	1 851.5 (26055)	N/A	1 882.5 (26365)	N/A	1 913.5 (26675)
LTE Band 25 (PCS): 5 MHz	1 852.5 (26065)	N/A	1 882.5 (26365)	N/A	1 912.5 (26665)
LTE Band 25 (PCS): 10 MHz	1 855.0 (26090)	N/A	1 882.5 (26365)	N/A	1 910.0 (26640)
LTE Band 25 (PCS): 15 MHz	1 857.5 (26115)	N/A	1 882.5 (26365)	N/A	1 907.5 (26615)
LTE Band 25 (PCS): 20 MHz	1 860.0 (26140)	N/A	1 882.5 (26365)	N/A	1 905.0 (26590)
LTE Band 2 (PCS): 1.4 MHz	1 850.7 (18607)	N/A	1 880.0 (18900)	N/A	1 909.3 (19193)
LTE Band 2 (PCS): 3 MHz	1 851.5 (18615)	N/A	1 880.0 (18900)	N/A	1 908.5 (19185)
LTE Band 2 (PCS): 5 MHz	1 852.5 (18625)	N/A	1 880.0 (18900)	N/A	1 907.5 (19175)
LTE Band 2 (PCS): 10 MHz	1 855.0 (18650)	N/A	1 880.0 (18900)	N/A	1 905.0 (19150)
LTE Band 2 (PCS): 15 MHz	1 857.5 (18675)	N/A	1 880.0 (18900)	N/A	1 902.5 (19125)
LTE Band 2 (PCS): 20 MHz	1 860.0 (18700)	N/A	1 880.0 (18900)	N/A	1 900.0 (19100)
LTE Band 7: 5 MHz	2 502.5 (20775)	N/A	2 535.0 (21100)	N/A	2 567.5 (21425)
LTE Band 7: 10 MHz	2 505.0 (20800)	N/A	2 535.0 (21100)	N/A	2 565.0 (21400)
LTE Band 7: 15 MHz	2 507.5 (20825)	N/A	2 535.0 (21100)	N/A	2 562.5 (21375)
LTE Band 7: 20 MHz	2 510.0 (20850)	N/A	2 535.0 (21100)	N/A	2 560.0 (21350)
LTE Band 41: 5 MHz	2 498.5 (39675)	2 545.8 (40148)	2 593.0 (40620)	2 640.3 (41093)	2 687.5 (41565)
LTE Band 41: 10 MHz	2 501.0 (39700)	2 547.0 (40160)	2 593.0 (40620)	2 639.0 (41080)	2 685.0 (41540)
LTE Band 41: 15 MHz	2 503.5 (39725)	2 548.3 (40173)	2 593.0 (40620)	2 637.8 (41068)	2 682.5 (41515)
LTE Band 41: 20 MHz	2 506.0 (39750)	2 549.5 (40185)	2 593.0 (40620)	2 636.5 (41055)	2 680.0 (41490)
UE Category	DL UE Cat 15, UL UE Cat 18				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256 QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	Yes				
A-MPR (Additional MPR) disabled for SAR Testing?	Yes				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 16. It supports uplink/downlink carrier aggregation, but only support up to 2CC uplink and 4CC downlink. It only supports 2x2 DL-MIMO, and doesn't support UL-MIMO.				

Note(s)

- LTE B71 can not contain three non-overlapping channels of 20 MHz, 10 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- LTE B12 can not contain three non-overlapping channels of 10 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- LTE B17 can not contain three non-overlapping channels of 10 MHz, 5 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- LTE B13 can not contain three non-overlapping channels of 5 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- LTE B14 can not contain three non-overlapping channels of 5 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- LTE B26(Cell) can not contain three non-overlapping channels of 15 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- LTE B5 (Cell) can not contain three non-overlapping channels of 10 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- LTE B4 (AWS) can not contain three non-overlapping channels of 20 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

NR Information							
Frequency Range of each NR transmission Band	NR Band n71 (665.5 ~ 695.5 MHz) NR Band n12 (701.5 ~ 713.5 MHz) NR Band n13 (779.5 ~ 784.5 MHz) NR Band n14 (790.5 ~ 795.5 MHz) NR Band n26 (816.5 ~ 846.5 MHz) NR Band n5 (826.5 ~ 846.5 MHz) NR Band n66 (1 712.5 ~ 1 777.5 MHz) NR Band n25 (1 852.5 ~ 1 912.5 MHz) NR Band n2 (1 852.5 ~ 1 907.5 MHz) NR Band n7 (2 502.5 ~ 2 567.5 MHz) NR Band n41 (2 506.02 ~ 2 679.99 MHz) NR Band n38 (2 580.0 ~ 2 610.0 MHz) NR Band n77 (3 455.01 ~ 3544.98 MHz, 3 705 ~ 3 975 MHz) NR Band n78 (3 455.01 ~ 3544.98 MHz, 3 705 ~ 3 795 MHz)						
Channel Bandwidths	NR Band n71: 5/10/15/20 MHz NR Band n12: 5/10/15 MHz NR Band n13: 5/10 MHz NR Band n14: 5/10 MHz NR Band n26: 5/10/15/20 MHz NR Band n5: 5/10/15/20 MHz NR Band n66: 5/10/15/20/25/30/40 MHz NR Band n25: 5/10/15/20/25/30/40 MHz NR Band n2: 5/10/15/20/25/30/40 MHz NR Band n7: 5/10/20/30/40/50/60/70/80/90/100 MHz NR Band n38: 10/20/30/40 MHz NR Band n77: 10/20/30/40/50/60/70/80/90/100 MHz NR Band n78: 10/20/30/40/50/60/70/80/90/100 MHz						
Channel Number and Frequencies(MHz)	Low	Low-Mid	Mid-A	Mid	Mid-B	Mid-High	High
NR Band n71: 5 MHz	665.5 (133100)	N/A	N/A	680.5 (136100)	N/A	N/A	695.5 (139100)
NR Band n71: 10 MHz	668.0 (133600)	N/A	N/A	680.5 (136100)	N/A	N/A	693.0 (138600)
NR Band n71: 15 MHz	670.5 (134100)	N/A	N/A	680.5 (136100) ^{Note1}	N/A	N/A	690.5 (138100)
NR Band n71: 20 MHz	673.0 (134600)	N/A	N/A	680.5 (136100) ^{Note1}	N/A	N/A	688.0 (137600)
NR Band n12: 5 MHz	701.5 (140300)	N/A	N/A	707.5 (141500)	N/A	N/A	713.5 (142700)
NR Band n12: 10 MHz	704.0 (140800)	N/A	N/A	707.5 (141500) ^{Note2}	N/A	N/A	711.0 (142200)
NR Band n12: 15 MHz	706.5 (141300)	N/A	N/A	707.5 (141500) ^{Note2}	N/A	N/A	708.5 (141700)
NR Band n13: 5 MHz	779.5(155900)	N/A	N/A	782.0(156400) ^{Note3}	N/A	N/A	784.5(156900)
NR Band n13: 10 MHz	N/A	N/A	N/A	782.0(156400)	N/A	N/A	N/A
NR Band n14: 5 MHz	790.5(158100)	N/A	N/A	793.0(158600) ^{Note4}	N/A	N/A	795.5(159100)
NR Band n14: 10 MHz	N/A	N/A	N/A	793.0(158600)	N/A	N/A	N/A
NR Band n26: 5 MHz	816.5 (163300)	N/A	N/A	831.5 (166300)	N/A	N/A	846.5 (169300)
NR Band n26: 10 MHz	819.0 (163800)	N/A	N/A	831.5 (166300) ^{Note5}	N/A	N/A	844.0 (168800)
NR Band n26: 15 MHz	821.5 (164300)	N/A	N/A	831.5 (166300) ^{Note5}	N/A	N/A	841.5 (168300)
NR Band n26: 20 MHz	824.0 (164800)	N/A	N/A	831.5 (166300) ^{Note5}	N/A	N/A	839.0 (167800)
NR Band n5: 5 MHz	826.5 (165300)	N/A	N/A	836.5 (167300)	N/A	N/A	846.5 (169300)
NR Band n5: 10 MHz	829.0 (165800)	N/A	N/A	836.5 (167300) ^{Note6}	N/A	N/A	844.0 (168800)
NR Band n5: 15 MHz	831.5 (166300)	N/A	N/A	836.5 (167300) ^{Note6}	N/A	N/A	841.5 (168300)
NR Band n5: 20 MHz	834.0 (166800)	N/A	N/A	836.5 (167300) ^{Note6}	N/A	N/A	839.0 (167800)
NR Band n66: 5 MHz	1 712.5 (342500)	N/A	N/A	1 745.0 (349000)	N/A	N/A	1 777.5 (355500)
NR Band n66: 10 MHz	1 715.0 (343000)	N/A	N/A	1 745.0 (349000)	N/A	N/A	1 775.0 (355000)
NR Band n66: 15 MHz	1 717.5 (343500)	N/A	N/A	1 745.0 (349000)	N/A	N/A	1 772.5 (354500)
NR Band n66: 20 MHz	1 720.0 (344000)	N/A	N/A	1 745.0 (349000)	N/A	N/A	1 770.0 (354000)
NR Band n66: 25 MHz	1 722.5 (344500)	N/A	N/A	1 745.0 (349000) ^{Note7}	N/A	N/A	1 767.5 (353500)
NR Band n66: 30 MHz	1 725.0 (345000)	N/A	N/A	1 745.0 (349000) ^{Note7}	N/A	N/A	1 765.0 (353000)
NR Band n66: 40 MHz	1 730.0 (346000)	N/A	N/A	1 745.0 (349000) ^{Note7}	N/A	N/A	1 760.0 (352000)
NR Band n25: 5 MHz	1 852.5 (370500)	N/A	N/A	1 882.5 (376500)	N/A	N/A	1 912.5 (382500)
NR Band n25: 10 MHz	1 855.0 (371000)	N/A	N/A	1 882.5 (376500)	N/A	N/A	1 910.0 (382000)
NR Band n25: 15 MHz	1 857.5 (371500)	N/A	N/A	1 882.5 (376500)	N/A	N/A	1 907.5 (381500)
NR Band n25: 20 MHz	1 860.0 (372000)	N/A	N/A	1 882.5 (376500)	N/A	N/A	1 905.0 (381000)
NR Band n25: 25 MHz	1 862.5 (372500)	N/A	N/A	1 882.5 (376500) ^{Note8}	N/A	N/A	1 902.5 (380500)
NR Band n25: 30 MHz	1 865.0 (373000)	N/A	N/A	1 882.5 (376500) ^{Note8}	N/A	N/A	1 900.0 (380000)
NR Band n25: 40 MHz	1 870.0 (374000)	N/A	N/A	1 882.5 (376500) ^{Note8}	N/A	N/A	1 895.0 (379000)
NR Band n2: 5 MHz	1 852.5 (370500)	N/A	N/A	1 880.0 (376000)	N/A	N/A	1 907.5 (381500)
NR Band n2: 10 MHz	1 855.0 (371000)	N/A	N/A	1 880.0 (376000)	N/A	N/A	1 905.0 (381000)
NR Band n2: 15 MHz	1 857.5 (371500)	N/A	N/A	1 880.0 (376000)	N/A	N/A	1 902.5 (380500)
NR Band n2: 20 MHz	1 860.0 (372000)	N/A	N/A	1 880.0 (376000)	N/A	N/A	1 900.0 (380000)
NR Band n2: 25 MHz	1 862.5 (372500)	N/A	N/A	1 880.0 (376000) ^{Note9}	N/A	N/A	1 897.5 (379500)
NR Band n2: 30 MHz	1 865.0 (373000)	N/A	N/A	1 880.0 (376000) ^{Note9}	N/A	N/A	1 895.0 (379000)
NR Band n2: 40 MHz	1 870.0 (374000)	N/A	N/A	1 880.0 (376000) ^{Note9}	N/A	N/A	1 890.0 (378000)
NR Band n7: 5 MHz	2 502.5 (500500)	N/A	N/A	2 535 (507000)	N/A	N/A	2 567.5 (513500)
NR Band n7: 10 MHz	2 505.0 (501000)	N/A	N/A	2 535 (507000)	N/A	N/A	2 565.0 (513000)
NR Band n7: 15 MHz	2 507.5 (501500)	N/A	N/A	2 535 (507000)	N/A	N/A	2 562.5 (512500)
NR Band n7: 20 MHz	2 510.0 (502000)	N/A	N/A	2 535 (507000)	N/A	N/A	2 560.0 (512000)
NR Band n7: 25 MHz	2 512.5 (502500)	N/A	N/A	2 535 (507000) ^{Note10}	N/A	N/A	2 557.5 (511500)
NR Band n7: 30 MHz	2 515.0 (503000)	N/A	N/A	2 535 (507000) ^{Note10}	N/A	N/A	2 555.0 (511000)
NR Band n7: 40 MHz	2 520.0 (504000)	N/A	N/A	2 535 (507000) ^{Note10}	N/A	N/A	2 550.0 (510000)
NR Band n41: 10 MHz	2 501.01 (500202)	2 547.00 (509400)	N/A	2 592.99 (518598)	N/A	2 639.01 (527802)	2 685.00 (537000)
NR Band n41: 20 MHz	2 506.02 (501204)	2 549.52 (509904)	N/A	2 592.99 (518598)	N/A	2 636.49 (527296)	2 679.99 (535998)
NR Band n41: 30 MHz	2 511.00 (502200)	2 552.01 (510402)	N/A	2 592.99 (518598)	N/A	2 634.00 (526800)	2 674.98 (534996)
NR Band n41: 40 MHz	2 516.01 (503202)	2 567.34 (513468)	N/A	N/A	N/A	2 618.67 (523734)	2 670.00 (534000)
NR Band n41: 50 MHz	2 521.02 (504204)	N/A	N/A	2 592.99 (518598)	N/A	N/A	2 664.99 (532998)
NR Band n41: 60 MHz	2 526.00 (505200)	N/A	N/A	2 592.99 (518598)	N/A	N/A	2 659.98 (531996)
NR Band n41: 70 MHz	2 531.01 (506202)	N/A	N/A	N/A	N/A	N/A	2 655.00 (531000)
NR Band n41: 80 MHz	2 536.02 (507204)	N/A	N/A	N/A	N/A	N/A	2 649.99 (529998)
NR Band n41: 90 MHz	2 541.00 (508200)	N/A	N/A	N/A	N/A	N/A	2 644.98 (528996)
NR Band n41: 100 MHz	2 546.01 (509202)	N/A	N/A	2 592.99 (518598) ^{Note11}	N/A	N/A	2 640.00 (528000)
NR Band n38: 10 MHz	2 575.0 (515000)	N/A	N/A	2 595.0 (519000)	N/A	N/A	2 615.0 (523000)
NR Band n38: 20 MHz	2 580.0 (516000)	N/A	N/A	2 595.0 (519000) ^{Note12}	N/A	N/A	2 610.0 (522000)
NR Band n38: 30 MHz	2 585.0 (517000)	N/A	N/A	2 595.0 (519000) ^{Note12}	N/A	N/A	2 605.0 (521000)
NR Band n38: 40 MHz	2 590.0 (518000)	N/A	N/A	2 595.0 (519000) ^{Note12}	N/A	N/A	2 600.0 (520000)
NR Band n77 DoD: 10 MHz	3 455.01 (630334)	N/A	N/A	3 500.01 (633334)	N/A	N/A	3 544.98 (636332)
NR Band n77 DoD: 20 MHz	3 460.02 (630668)	N/A	N/A	3 500.01 (633334)	N/A	N/A	3 540.00 (636000)
NR Band n77 DoD: 30 MHz	3 465.00 (631000)	N/A	N/A	3 500.01 (633334)	N/A	N/A	3 534.99 (635666)
NR Band n77 DoD: 40 MHz	3 470.01 (631334)	N/A	N/A	N/A	N/A	N/A	3 529.98 (635332)
NR Band n77 DoD: 50 MHz	3 475.02 (631668)	N/A	N/A	N/A	N/A	N/A	3 525.00 (635000)
NR Band n77 DoD: 60 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n77 DoD: 70 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n77 DoD: 80 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n77 DoD: 90 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n77 DoD: 100 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n77: 10 MHz	3 705.00 (647000)	3 759.00 (650600)	3 813.00 (654200)	N/A	3 867.00 (657800)	3 921.00 (661400)	3 975.00 (665000)
NR Band n77: 20 MHz	3 710.01 (647334)	3 762.00 (650800)	3 813.99 (654266)	N/A	3 866.01 (657734)	3 918.00 (661200)	3 969.99 (664666)
NR Band n77: 30 MHz	3 715.02 (647668)	3 765.00 (651000)	3 815.01 (654334)	N/A	3 864.99 (657666)	3 915.00 (661000)	3 964.98 (664332)
NR Band n77: 40 MHz	3 720.00 (648000)	3 768.00 (651200)	3 816.00 (654400)	N/A	3 864.00 (657600)	3 912.00 (660800)	3 960.00 (664000)
NR Band n77: 50 MHz	3 725.01 (648334)	3 782.49 (652166)	N/A	3 840.00 (656000)	N/A	3 897.51 (659834)	3 954.99 (663666)
NR Band n77: 60 MHz	3 730.02 (648668)	3 803.34 (653556)	N/A	N/A	N/A	3 876.66 (658444)	3 949.98 (663332)
NR Band n77: 70 MHz	3 735.00 (649000)	3 804.99 (653666)	N/A	N/A	N/A	3 875.01 (658334)	3 945.00 (663000)
NR Band n77: 80 MHz	3 740.01 (649334)	N/A	N/A	3 840.00 (656000)	N/A	N/A	3 939.99 (662666)
NR Band n77: 90 MHz	3 745.02 (649668)	N/A	N/A	3 840.00 (656000)	N/A	N/A	3 934.98 (662332)
NR Band n77: 100 MHz	3 750.00 (650000)	N/A	N/A	N/A	N/A	N/A	3 930.00 (662000)
NR Band n78 DoD: 10 MHz	3 455.01 (630334)	N/A	N/A	3 500.01 (633334)	N/A	N/A	3 544.98 (636332)

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NR Band n78 DoD: 20 MHz	3 460.02 (630668)	N/A	N/A	3 500.01 (633334)	N/A	N/A	3 540.00 (636000)
NR Band n78 DoD: 30 MHz	3 465.00 (631000)	N/A	N/A	3 500.01 (633334)	N/A	N/A	3 534.99 (635666)
NR Band n78 DoD: 40 MHz	3 470.01 (631334)	N/A	N/A	N/A	N/A	N/A	3 529.98 (635332)
NR Band n78 DoD: 50 MHz	3 475.02 (631668)	N/A	N/A	N/A	N/A	N/A	3 525.00 (635000)
NR Band n78 DoD: 60 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n78 DoD: 70 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n78 DoD: 80 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n78 DoD: 90 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n78 DoD: 100 MHz	N/A	N/A	N/A	3 500.01 (633334)	N/A	N/A	N/A
NR Band n78: 10 MHz	3 705.00 (647000)	N/A	N/A	3 750.00 (650000)	N/A	N/A	3 795.00 (653000)
NR Band n78: 20 MHz	3 710.01 (647334)	N/A	N/A	3 750.00 (650000)	N/A	N/A	3 789.99 (652666)
NR Band n78: 30 MHz	3 715.00 (647666)	N/A	N/A	3 750.00 (650000)	N/A	N/A	3 784.98 (652332)
NR Band n78: 40 MHz	3 720.00 (648000)	N/A	N/A	N/A	N/A	N/A	3 780.00 (652000)
NR Band n78: 50 MHz	3 725.01 (648334)	N/A	N/A	N/A	N/A	N/A	3 774.99 (651666)
NR Band n78: 60 MHz	N/A	N/A	N/A	3 750.00 (650000)	N/A	N/A	N/A
NR Band n78: 70 MHz	N/A	N/A	N/A	3 750.00 (650000)	N/A	N/A	N/A
NR Band n78: 80 MHz	N/A	N/A	N/A	3 750.00 (650000)	N/A	N/A	N/A
NR Band n78: 90 MHz	N/A	N/A	N/A	3 750.00 (650000)	N/A	N/A	N/A
NR Band n78: 100 MHz	N/A	N/A	N/A	3 750.00 (650000)	N/A	N/A	N/A
SCS for NR Band n71n12n13n14n26n5n66n75n2n7	15 kHz						
SCS for NR Band n41n38n48n77n78	30 kHz						
Modulations Supported in UL	DFT-s-OFDM: $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM						
A-MPR (Additional MPR) disabled for SAR Testing?	YES						
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations						
LTE Anchor Bands for NR Band n71	N/A						
LTE Anchor Bands for NR Band n12	N/A						
LTE Anchor Bands for NR Band n13	N/A						
LTE Anchor Bands for NR Band n14	N/A						
LTE Anchor Bands for NR Band n26	N/A						
LTE Anchor Bands for NR Band n5	N/A						
LTE Anchor Bands for NR Band n66	N/A						
LTE Anchor Bands for NR Band n25	N/A						
LTE Anchor Bands for NR Band n2	N/A						
LTE Anchor Bands for NR Band n7	N/A						
LTE Anchor Bands for NR Band n41	N/A						
LTE Anchor Bands for NR Band n38	N/A						
LTE Anchor Bands for NR Band n77 DoD	2/5/7/12/13/14/25/41/66/71						
LTE Anchor Bands for NR Band n77	2/5/7/12/13/14/25/41/66/71						
LTE Anchor Bands for NR Band n78 DoD	2/4/5/7/12/13/14/25/26/41/66/71						
LTE Anchor Bands for NR Band n78	2/4/5/7/12/13/14/25/26/41/66/71						

Notes

- n71 can not contain three non-overlapping channels of 20 MHz, 15 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n12 can not contain three non-overlapping channels of 15 MHz, 10 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n13 can not contain three non-overlapping channels of 5 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n14 can not contain three non-overlapping channels of 5 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n26 can not contain three non-overlapping channels of 20 MHz, 15 MHz, 10 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n5 can not contain three non-overlapping channels of 20 MHz, 15 MHz, 10 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n66 can not contain three non-overlapping channels of 40 MHz, 30 MHz, 25 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n25 can not contain three non-overlapping channels of 40 MHz, 30 MHz, 25 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n2 can not contain three non-overlapping channels of 40 MHz, 30 MHz, 25 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n7 can not contain three non-overlapping channels of 40 MHz, 30 MHz, 25 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n41 can not contain three non-overlapping channels of 100 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
- n38 can not contain three non-overlapping channels of 20 MHz bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

3. INTROCUCTION

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

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. The measurement procedure described in IEEE/ANSI C95.3-2002 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 (rate) of the incremental energy (dU) 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 (see Fig. 3.1)

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

Fig. 3.1 SAR Mathematical Equation

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

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

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

E = Total RMS electric field strength (V/m)

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

4. DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04:

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 4.1).
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 4.1). On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):
 - a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 4.1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).
 - b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 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 then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.
 - 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 was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

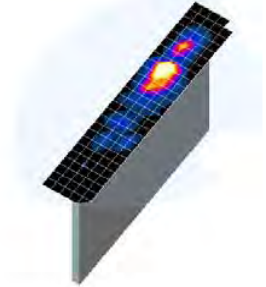


Figure 4.1
Sample SAR Area Scan

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 mm $\pm$ 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2)$ mm $\pm$ 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° $\pm$ 1°	20° $\pm$ 1°
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ 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	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$ mm	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details.				
* When zoom scan is required and the <u>reported</u> SAR from the <u>area scan based 1-g SAR estimation</u> procedures of KDB Publication 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.				

Table 4.1 Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

5. TEST CONFIGURATION POSITIONS FOR HANDSETS

5.1 Device Holder

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

5.2 Generic device

The SAR evaluation shall be performed for all surfaces of the DUT that are accessible during intended use, as indicated in Figure 5.1. The separation distance in testing shall correspond to the intended use distance as specified in the user instructions provided by the manufacturer. If the intended use is not specified, all surfaces of the DUT shall be tested directly against the flat phantom.

The surface of the generic device (or the surface of the carry accessory holding the DUT) pointing towards the flat phantom shall be parallel to the surface of the phantom.

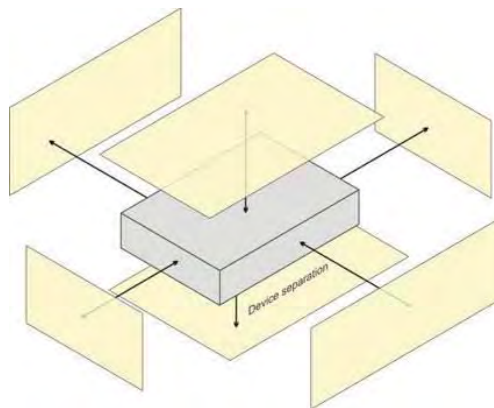


Figure 5.1 Test positions for a generic device

6. RF EXPOSURE LIMITS

Uncontrolled Environment:

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 Environment:

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 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.

Table 6.1.SAR Human Exposure Specified in ANSI/IEEE C95.1-1992

	HUMAN EXPOSURE LIMITS	
	General Public Exposure (W/kg) or (mW/g)	Occupational Exposure (W/kg) or (mW/g)
SPATIAL PEAK SAR * (Brain)	1.60	8.00
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.40
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.00	20.0

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams 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.

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).

7. FCC MEASUREMENT PROCEDURES

Power measurements were performed using a base station simulator under digital average power.

7.1 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.

7.2 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01v03r01.

The device was placed into a simulated call using a base station simulator in a RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test were evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device was tested throughout the SAR test at maximum output power, the SAR measurement system measures a "point SAR" at an arbitrary reference point at the start and end of the 1 gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviated by more than 5%, the SAR test and drift measurements were repeated.

7.3 SAR Measurement Conditions for LTE

LTE modes were tested according to FCC KDB 941225 D05v02r05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. The call simulator was used for LTE output power measurement 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).

7.3.1 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.

7.3.2 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.

7.3.3 A-MPR

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

7.3.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r05:

- a. Per Section 5.2.1, 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 channel 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 Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
- c. Per Section 5.2.3, 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. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
- d. Per Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to 0.5 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/kg.

7.3.5 64QAM uplink

(1) Per KDB 941225 D05 V02r05, we'll measure conducted powers per Section 5.1 for all uplink modulations (QPSK, 16QAM, 64QAM) and include in the test report.

(2) From these power measurements, we will apply the procedures in Section 5.2.4 ("Higher Order Modulations") to determine SAR test reduction for 16QAM and 64QAM test cases.

7.3.6 LTE TDD Consideration setup for SAR measurement

According to KDB 941225 D05 SAR for LTE Devices v02r05 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 configuration and Table 4.2-1 for Special subframe configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			-	-	-
8	$24144 \cdot T_s$			-	-	-

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 = Extended cyclic prefix in uplink * (Ts) * # of S + # of U

Ts = 1/(15000 * 2048) seconds

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

Calculated Duty Cycle = $5120 * [1/(15000 * 2048)] * 2 + 6 \text{ ms} = 63.33 \%$

8. RF CONDUCTED POWERS

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

8.1 LTE Nominal and Maximum Output Power Spec and Conducted Powers_Int Ant

LTE Band 71	Band & Mode	Modulated Average[dBm]
	Maximum	24.0
	Nominal	23.0

Table 8.1.1.1 Nominal and Maximum Output Power Spec

1) LTE Band 71

LTE Band 71 Conducted Power~ 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			133297 (680.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.66	≤ 1	0
	1	50	22.44		
	1	99	22.35		
	50	0	21.56		1
	50	25	21.41		
	50	50	21.35		
	100	0	21.50		1
16QAM	1	0	21.63	≤ 1	1
	1	50	21.52		
	1	99	21.45		
	50	0	20.60	≤ 2	2
	50	25	20.54		
	50	50	20.42		
	100	0	20.52		
64QAM	1	0	20.64	≤ 2	2
	1	50	20.50		
	1	99	20.41		
	50	0	19.64	≤ 3	3
	50	25	19.52		
	50	50	19.40		
	100	0	19.57		
256QAM	1	0	17.61	≤ 5	5
	1	50	17.54		
	1	99	17.37		
	50	0	17.61	≤ 5	5
	50	25	17.54		
	50	50	17.42		
	100	0	17.56		

Table 8.1.1.2 LTE Conducted Power

Note: LTE B71 can not contain three non-overlapping channels of 20 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 71 Conducted Power~ 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			133297 (680.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.54	≤ 1	0
	1	36	22.44		
	1	74	22.32		
	36	0	21.55		1
	36	18	21.42		
	36	37	21.35		
	75	0	21.48		1
16QAM	1	0	21.59	≤ 1	1
	1	36	21.51		
	1	74	21.40		
	36	0	20.55	≤ 2	2
	36	18	20.47		
	36	37	20.36		
	75	0	20.55		
64QAM	1	0	20.59	≤ 2	2
	1	36	20.52		
	1	74	20.38		
	36	0	19.60	≤ 3	3
	36	18	19.50		
	36	37	19.39		
	75	0	19.51		
256QAM	1	0	17.61	≤ 5	5
	1	36	17.54		
	1	74	17.38		
	36	0	17.57	≤ 5	5
	36	18	17.50		
	36	37	17.39		
	75	0	17.57		

Table 8.1.1.3 LTE Conducted Power

Note: LTE B71 can not contain three non-overlapping channels of 15 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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LTE Band 71 Conducted Power– 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			133172 (668.0 MHz)	133297 (680.5 MHz)	133422 (693.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.43	22.51	22.38	≤ 1	0
	1	25	22.33	22.44	22.31		
	1	49	22.20	22.33	22.19		
	25	0	21.39	21.55	21.40		1
	25	12	21.31	21.44	21.26		
	25	25	21.22	21.35	21.19		
	50	0	21.37	21.49	21.31		1
	16QAM	1	0	21.49	21.55		21.44
1		25	21.39	21.51	21.33		
1		49	21.32	21.36	21.28		
25		0	20.51	20.63	20.47	≤ 2	2
25		12	20.42	20.53	20.38		
25		25	20.30	20.40	20.23		
50		0	20.47	20.55	20.43		
64QAM		1	0	20.49	20.63	20.44	≤ 2
	1	25	20.37	20.54	20.35		
	1	49	20.30	20.38	20.31		
	25	0	19.51	19.61	19.49	≤ 3	3
	25	12	19.42	19.47	19.35		
	25	25	19.29	19.40	19.30		
	50	0	19.47	19.53	19.45		
	256QAM	1	0	17.46	17.60	17.41	≤ 5
1		25	17.45	17.49	17.39		
1		49	17.30	17.45	17.26		
25		0	17.53	17.62	17.41	≤ 5	5
25		12	17.42	17.53	17.37		
25		25	17.30	17.40	17.25		
50		0	17.41	17.60	17.43		

Table 8.1.1.4 LTE Conducted Power

LTE Band 71 Conducted Power– 5 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			133147 (665.5 MHz)	133297 (680.5 MHz)	133447 (695.5 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	22.40	22.49	22.41	≤ 1	0	
	1	12	22.31	22.42	22.30			
	1	24	22.24	22.34	22.22			
	12	0	21.43	21.49	21.39		0	
	12	6	21.35	21.42	21.32			
	12	13	21.20	21.32	21.21			
	25	0	21.36	21.49	21.37		1	
16QAM	1	0	21.48	21.55	21.45	≤ 1	1	
	1	12	21.38	21.49	21.39			
	1	24	21.31	21.45	21.28			
	12	0	20.51	20.57	20.42		1	
	12	6	20.45	20.55	20.33			
	12	13	20.34	20.41	20.28			
	25	0	20.50	20.58	20.39		≤ 2	2
64QAM	1	0	20.49	20.64	20.50	≤ 2	2	
	1	12	20.43	20.50	20.36			
	1	24	20.28	20.45	20.27			
	12	0	19.47	19.62	19.44		2	
	12	6	19.38	19.49	19.33			
	12	13	19.33	19.45	19.31			
	25	0	19.41	19.54	19.38		≤ 3	3
256QAM	1	0	17.51	17.58	17.45	≤ 5	5	
	1	12	17.40	17.55	17.32			
	1	24	17.33	17.36	17.26			
	12	0	17.49	17.61	17.42		≤ 5	5
	12	6	17.43	17.47	17.32			
	12	13	17.35	17.38	17.26			
	25	0	17.49	17.55	17.41			

Table 8.1.1.5 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 71 (ENDC)	Maximum	22.0
	Nominal	21.0

Table 8.1.1-1.1 Nominal and Maximum Output Power Spec

1-1) LTE Band 71 (ENDC)

LTE Band 71 Conducted Power- 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			133297 (680.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	21.29	≤ 1	0
	1	50	21.03		
	1	99	20.97		
	50	0	20.18		1
	50	25	20.09		
	50	50	19.99		
	100	0	20.12		1
16QAM	1	0	20.28	≤ 1	1
	1	50	20.20		
	1	99	20.04		
	50	0	19.28	≤ 2	2
	50	25	19.14		
	50	50	19.02		
	100	0	19.20		2
64QAM	1	0	19.24	≤ 2	2
	1	50	19.12		
	1	99	19.01		
	50	0	18.24	≤ 3	3
	50	25	18.21		
	50	50	18.09		
	100	0	18.25		3
256QAM	1	0	16.30	≤ 5	5
	1	50	16.15		
	1	99	16.03		
	50	0	16.23	≤ 5	5
	50	25	16.17		
	50	50	16.09		
	100	0	16.15		5

Table 8.1.1-1.2 LTE Conducted Power

Note: LTE B71 can not contain three non-overlapping channels of 20 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 71 Conducted Power- 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			133297 (680.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	21.12	≤ 1	0
	1	36	21.03		
	1	74	20.91		
	36	0	20.17		1
	36	18	20.04		
	36	37	19.94		
	75	0	20.10		1
16QAM	1	0	20.23	≤ 1	1
	1	36	20.12		
	1	74	20.01		
	36	0	19.22	≤ 2	2
	36	18	19.14		
	36	37	19.01		
	75	0	19.19		2
64QAM	1	0	19.27	≤ 2	2
	1	36	19.15		
	1	74	19.06		
	36	0	18.26	≤ 3	3
	36	18	18.15		
	36	37	18.05		
	75	0	18.15		3
256QAM	1	0	16.23	≤ 5	5
	1	36	16.19		
	1	74	16.06		
	36	0	16.19	≤ 5	5
	36	18	16.12		
	36	37	16.02		
	75	0	16.15		5

Table 8.1.1-1.3 LTE Conducted Power

Note: LTE B71 can not contain three non-overlapping channels of 15 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 71 Conducted Power– 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			133172 (668.0 MHz)	133297 (680.5 MHz)	133422 (693.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.10	21.20	20.99	≤ 1	0
	1	25	20.98	21.07	20.89		
	1	49	20.82	20.95	20.82		
	25	0	20.01	20.15	19.99		1
	25	12	19.94	20.06	19.89		
	25	25	19.88	19.96	19.86		
	50	0	20.00	20.07	19.93		
	16QAM	1	0	20.17	20.18		20.11
1		25	20.07	20.15	20.02		
1		49	19.98	20.00	19.91		
25		0	19.14	19.31	19.11	≤ 2	2
25		12	19.02	19.16	19.07		
25		25	18.99	19.04	18.82		
50		0	19.16	19.24	19.08		
64QAM		1	0	19.14	19.31	19.10	≤ 2
	1	25	18.97	19.13	18.96		
	1	49	18.96	19.04	18.93		
	25	0	18.09	18.23	18.18	≤ 3	
	25	12	18.00	18.11	17.93		
	25	25	17.98	17.99	17.91		
	50	0	18.12	18.15	18.03		
	256QAM	1	0	16.12	16.25	16.01	≤ 5
1		25	16.05	16.10	15.97		
1		49	15.91	16.08	15.88		
25		0	16.19	16.22	16.05	≤ 5	
25		12	16.09	16.16	16.02		
25		25	15.89	15.98	15.89		
50		0	16.10	16.18	16.09		

Table 8.1.1-1.4 LTE Conducted Power

LTE Band 71 Conducted Power– 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			133147 (665.5 MHz)	133297 (680.5 MHz)	133447 (695.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.07	21.12	21.02	≤ 1	0
	1	12	20.98	21.09	20.93		
	1	24	20.82	20.99	20.81		
	12	0	20.05	20.14	20.04		0
	12	6	20.00	20.02	19.93		
	12	13	19.89	19.95	19.80		
	25	0	20.04	20.09	20.06		1
16QAM	1	0	20.06	20.16	20.05	≤ 1	1
	1	12	20.01	20.15	20.03		
	1	24	19.93	20.05	19.96		
	12	0	19.15	19.21	19.11		1
	12	6	19.13	19.15	18.94		
	12	13	18.94	18.99	18.86		
	25	0	19.09	19.23	19.00		≤ 2
64QAM	1	0	19.15	19.27	19.18	≤ 2	2
	1	12	19.12	19.18	18.97		
	1	24	18.94	19.14	18.96		
	12	0	18.11	18.28	18.07		2
	12	6	17.97	18.07	17.91		
	12	13	17.91	18.05	17.93		
	25	0	18.03	18.23	18.07		≤ 3
256QAM	1	0	16.15	16.25	16.05	≤ 5	5
	1	12	16.02	16.15	15.99		
	1	24	16.00	16.02	15.93		
	12	0	16.17	16.28	16.03	≤ 5	5
	12	6	16.07	16.10	15.98		
	12	13	16.03	15.99	15.93		
	25	0	16.12	16.16	16.00		

Table 8.1.1-1.5 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 12	Maximum	24.0
	Nominal	23.0

Table 8.1.2.1 Nominal and Maximum Output Power Spec

2) LTE Band 12

LTE Band 12 Conducted Power– 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23095 (707.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.19	≤ 1	0
	1	25	22.05		
	1	49	22.05		
	25	0	21.24		1
	25	12	21.13		
	25	25	21.12		
	50	0	21.15		
16QAM	1	0	21.26	≤ 1	1
	1	25	21.12		
	1	49	21.17		
	25	0	20.34		
	25	12	20.27	≤ 2	2
	25	25	20.24		
	50	0	20.20		
64QAM	1	0	20.24	≤ 2	2
	1	25	20.18		
	1	49	20.13		
	25	0	19.29		
	25	12	19.23	≤ 3	3
	25	25	19.23		
	50	0	19.27		
256QAM	1	0	17.26	≤ 5	5
	1	25	17.18		
	1	49	17.15		
	25	0	17.29		
	25	12	17.26	≤ 5	5
	25	25	17.25		
	50	0	17.23		

Table 8.1.2.2 LTE Conducted Power

Note: LTE B12 can not contain three non-overlapping channels of 10 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 12 Conducted Power- 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23035 (701.5 MHz)	23095 (707.5 MHz)	23155 (713.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.13	22.14	22.06	≤ 1	0
	1	12	22.05	22.13	22.06		
	1	24	22.03	22.13	22.03		
	12	0	21.11	21.22	21.04		1
	12	6	21.09	21.11	21.02		
	12	13	21.03	21.11	21.02		
	25	0	21.05	21.11	21.07		
16QAM	1	0	21.16	21.31	21.18	≤ 1	1
	1	12	21.14	21.17	21.08		
	1	24	21.07	21.17	21.05		
	12	0	20.19	20.29	20.12		≤ 2
	12	6	20.05	20.15	20.02		
	12	13	20.09	20.15	20.09		
	25	0	20.12	20.22	20.03	2	
64QAM	1	0	20.14	20.28	20.17	≤ 2	2
	1	12	20.11	20.18	20.06		
	1	24	20.09	20.24	20.04		
	12	0	19.17	19.32	19.19		≤ 3
	12	6	19.13	19.19	19.08		
	12	13	19.12	19.16	19.03		
	25	0	19.14	19.23	19.03	3	
256QAM	1	0	17.20	17.23	17.17	≤ 5	5
	1	12	17.06	17.22	17.09		
	1	24	17.12	17.20	17.09		
	12	0	17.23	17.24	17.17		≤ 5
	12	6	17.13	17.21	17.02		
	12	13	17.11	17.15	17.06		
	25	0	17.05	17.21	17.08	≤ 5	

Table 8.1.2.3 LTE Conducted Power

LTE Band 12 Conducted Power– 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23025 (700.5 MHz)	23095 (707.5 MHz)	23165 (714.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.09	22.11	22.08	≤ 1	0
	1	7	22.05	22.09	22.05		
	1	14	22.02	22.09	22.03		
	8	0	21.09	21.20	21.10		1
	8	4	21.05	21.11	21.08		
	8	7	21.02	21.12	21.06		
	15	0	21.03	21.09	21.09	1	
16QAM	1	0	21.18	21.24	21.15	≤ 1	1
	1	7	21.11	21.24	21.06		
	1	14	21.13	21.21	21.06		
	8	0	20.17	20.26	20.13	≤ 2	2
	8	4	20.06	20.23	20.08		
	8	7	20.07	20.16	20.10		
	15	0	20.10	20.21	20.10		
64QAM	1	0	20.13	20.24	20.18	≤ 2	2
	1	7	20.10	20.16	20.05		
	1	14	20.05	20.24	20.02		
	8	0	19.21	19.24	19.12	≤ 3	3
	8	4	19.11	19.22	19.08		
	8	7	19.14	19.21	19.10		
	15	0	19.05	19.22	19.09		
256QAM	1	0	17.16	17.30	17.16	≤ 5	5
	1	7	17.09	17.18	17.10		
	1	14	17.06	17.19	17.07		
	8	0	17.21	17.26	17.19	≤ 5	5
	8	4	17.05	17.15	17.05		
	8	7	17.05	17.15	17.04		
	15	0	17.10	17.15	17.05		

Table 8.1.2.4 LTE Conducted Power

LTE Band 12 Conducted Power- 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23017 (699.7 MHz)	23095 (707.5 MHz)	23173 (715.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.09	22.14	22.13	≤ 1	0
	1	2	22.07	22.12	22.04		0
	1	5	22.04	22.11	22.10		
	3	0	22.05	22.07	22.09		
	3	2	22.03	22.04	22.06		
	3	3	22.02	22.02	22.03		
	6	0	21.02	21.12	21.08		
16QAM	1	0	21.22	21.31	21.09	≤ 1	1
	1	2	21.14	21.23	21.05		
	1	5	21.13	21.15	21.06		
	3	0	21.13	21.15	-21.04		1
	3	2	21.08	21.07	21.02		
	3	3	21.07	21.12	21.03		
	6	0	20.08	20.16	20.05		≤ 2
64QAM	1	0	20.14	20.28	20.12	≤ 2	2
	1	2	20.13	20.24	20.02		
	1	5	20.09	20.20	20.08		
	3	0	20.08	20.15	20.07		2
	3	2	20.03	20.07	20.05		
	3	3	20.06	20.10	20.04		
	6	0	19.11	19.18	19.07		≤ 3
256QAM	1	0	17.21	17.24	17.13	≤ 5	5
	1	2	17.08	17.18	17.08		
	1	5	17.05	17.23	17.03		
	3	0	17.17	17.17	17.06	≤ 5	5
	3	2	17.05	17.16	17.04		
	3	3	17.14	17.11	17.03		
	6	0	17.06	17.24	17.09		

Table 8.1.2.5 LTE Conducted Power

CA Conf.	RF Expos. Cond.	UL																	
		PCC						SCC						MPR	Standalone			PCC+ SCC	
		Modulation	RB Size	RB Offset	BW	Freq.	Ch.	Modulation	RB Size	RB Offset	BW	Freq.	Ch.		LTE Rel.8	Aggregated BW	MPR	Tune-up Limit	CA Power (Total PCC+SCC)
CA 12B	Body	QPSK	1	24	5	707.5	23095	QPSK	1	0	10	714.7	23167	0	22.26	10	0	25.0	23.73
CA 12B	Body	16QAM	1	24	5	707.5	23095	16QAM	1	0	10	714.7	23167	0	21.33	10	0	24.0	22.59
CA 12B	Body	64QAM	1	24	5	707.5	23095	64QAM	1	0	10	714.7	23167	0	20.35	10	0	23.0	21.48
CA 12B	Body	256QAM	1	24	5	707.5	23095	256QAM	1	0	10	714.7	23167	0	17.36	10	0	20.0	18.54
CA 12B	Body	QPSK	1	24	5	707.5	23095	QPSK	1	0	5	712.3	23143	0	22.26	10	0	25.0	23.71
CA 12B	Body	16QAM	1	24	5	707.5	23095	16QAM	1	0	5	712.3	23143	0	21.33	10	0	24.0	22.51
CA 12B	Body	64QAM	1	24	5	707.5	23095	64QAM	1	0	5	712.3	23143	0	20.35	10	0	23.0	21.50
CA 12B	Body	256QAM	1	24	5	707.5	23095	256QAM	1	0	5	712.3	23143	0	17.36	10	0	20.0	18.42

Table 8.1.2.6 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 12 (ENDC)	Maximum	22.0
	Nominal	21.0

Table 8.1.2-1.1 Nominal and Maximum Output Power Spec

2-1) LTE Band 12 (ENDC)

LTE Band 12 Conducted Power- 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23095 (707.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	20.88	≤ 1	0
	1	25	20.72		
	1	49	20.64		
	25	0	19.88		1
	25	12	19.74		
	25	25	19.70		
	50	0	19.77		1
16QAM	1	0	19.84	≤ 1	1
	1	25	19.79		
	1	49	19.83		
	25	0	18.93	≤ 2	2
	25	12	18.85		
	25	25	18.84		
	50	0	18.83		
64QAM	1	0	18.90	≤ 2	2
	1	25	18.83		
	1	49	18.73		
	25	0	17.96	≤ 3	3
	25	12	17.82		
	25	25	17.85		
	50	0	17.96		
256QAM	1	0	15.86	≤ 5	5
	1	25	15.84		
	1	49	15.79		
	25	0	15.94	≤ 5	5
	25	12	15.93		
	25	25	15.88		
	50	0	15.87		

Table 8.1.2-1.2 LTE Conducted Power

Note: LTE B12 can not contain three non-overlapping channels of 10 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 12 Conducted Power- 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23035 (701.5 MHz)	23095 (707.5 MHz)	23155 (713.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	20.77	20.75	20.75	≤ 1	0
	1	12	20.72	20.71	20.69		
	1	24	20.71	20.71	20.62		
	12	0	19.75	19.84	19.69		1
	12	6	19.70	19.75	19.65		
	12	13	19.69	19.80	19.67		
	25	0	19.64	19.74	19.68		1
16QAM	1	0	19.75	19.91	19.76	≤ 1	1
	1	12	19.73	19.82	19.72		
	1	24	19.74	19.79	19.68		
	12	0	18.84	18.98	18.70	≤ 2	2
	12	6	18.73	18.78	18.60		
	12	13	18.77	18.83	18.65		
	25	0	18.79	18.87	18.63		2
64QAM	1	0	18.79	18.89	18.83	≤ 2	2
	1	12	18.69	18.81	18.71		
	1	24	18.70	18.86	18.66		
	12	0	17.84	17.91	17.79	≤ 3	3
	12	6	17.74	17.87	17.77		
	12	13	17.70	17.75	17.68		
	25	0	17.72	17.85	17.62		3
256QAM	1	0	15.83	15.91	15.84	≤ 5	5
	1	12	15.69	15.87	15.70		
	1	24	15.77	15.83	15.78		
	12	0	15.84	15.92	15.80	≤ 5	5
	12	6	15.74	15.88	15.68		
	12	13	15.78	15.81	15.75		
	25	0	15.68	15.81	15.71		

Table 8.1.2-1.3 LTE Conducted Power

LTE Band 12 Conducted Power– 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23025 (700.5 MHz)	23095 (707.5 MHz)	23165 (714.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	20.73	20.77	20.72	≤ 1	0
	1	7	20.70	20.67	20.66		
	1	14	20.65	20.74	20.68		
	8	0	19.74	19.85	19.76		1
	8	4	19.64	19.73	19.72		
	8	7	19.62	19.79	19.74		
	15	0	19.72	19.67	19.75	1	
16QAM	1	0	19.83	19.87	19.84	≤ 1	1
	1	7	19.80	19.87	19.65		
	1	14	19.79	19.84	19.64		
	8	0	18.86	18.94	18.82	≤ 2	2
	8	4	18.74	18.82	18.73		
	8	7	18.72	18.74	18.79		
	15	0	18.75	18.83	18.71	2	
64QAM	1	0	18.78	18.89	18.79	≤ 2	2
	1	7	18.75	18.85	18.71		
	1	14	18.64	18.83	18.62		
	8	0	17.84	17.91	17.78	≤ 3	3
	8	4	17.74	17.89	17.77		
	8	7	17.80	17.86	17.71		
	15	0	17.72	17.85	17.71	3	
256QAM	1	0	15.80	15.93	15.74	≤ 5	5
	1	7	15.75	15.76	15.68		
	1	14	15.66	15.79	15.67		
	8	0	15.84	15.92	15.83	≤ 5	5
	8	4	15.63	15.75	15.70		
	8	7	15.66	15.74	15.73		
	15	0	15.79	15.82	15.73	≤ 5	5

Table 8.1.2-1.4 LTE Conducted Power

LTE Band 12 Conducted Power- 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23017 (699.7 MHz)	23095 (707.5 MHz)	23173 (715.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	20.70	20.81	20.80	≤ 1	0
	1	2	20.65	20.80	20.71		0
	1	5	20.69	20.78	20.69		
	3	0	20.71	20.71	20.72		
	3	2	20.64	20.66	20.68		
	3	3	20.60	20.70	20.70		
	6	0	19.67	19.75	19.70		1
16QAM	1	0	19.88	19.98	19.72	≤ 1	1
	1	2	19.76	19.89	19.69		
	1	5	19.82	19.76	19.67		
	3	0	19.72	19.82	-19.72		
	3	2	19.69	19.69	19.71		
	3	3	19.66	19.70	19.67		1
	6	0	18.67	18.79	18.64		
64QAM	1	0	18.83	18.92	18.74	≤ 2	2
	1	2	18.72	18.90	18.62	≤ 2	2
	1	5	18.68	18.81	18.74		
	3	0	18.73	18.81	18.70		
	3	2	18.70	18.70	18.69		
	3	3	18.67	18.69	18.62		
	6	0	17.70	17.82	17.66		≤ 3
256QAM	1	0	15.82	15.84	15.77		≤ 5
	1	2	15.77	15.81	15.71		
	1	5	15.64	15.82	15.63		
	3	0	15.83	15.86	15.67	≤ 5	5
	3	2	15.65	15.84	15.65		
	3	3	15.78	15.72	15.64		
	6	0	15.65	15.85	15.73		

Table 8.1.2-1.5 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 17	Maximum	24.0
	Nominal	23.0

Table 8.1.3.1 Nominal and Maximum Output Power Spec

3) LTE Band 17

LTE Band 17 Conducted Power- 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23790 (710.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.26	≤ 1	0
	1	25	22.15		
	1	49	22.19		
	25	0	21.28		1
	25	12	21.15		
	25	25	21.18		
	50	0	21.22		1
16QAM	1	0	21.38	≤ 1	1
	1	25	21.19		
	1	49	21.29		
	25	0	20.30		
	25	12	20.23	≤ 2	2
	25	25	20.27		
	50	0	20.34		
64QAM	1	0	20.38	≤ 2	2
	1	25	20.21		
	1	49	20.24		
	25	0	19.35		
	25	12	19.23	≤ 3	3
	25	25	19.24		
	50	0	19.27		
256QAM	1	0	17.31	≤ 5	5
	1	25	17.24		
	1	49	17.24		
	25	0	17.37		
	25	12	17.25	≤ 5	5
	25	25	17.28		
	50	0	17.31		

Table 8.1.3.2 LTE Conducted Power

Note: LTE B17 can not contain three non-overlapping channels of 10 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 17 Conducted Power- 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23790 (710.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.25	≤ 1	0
	1	12	22.15		
	1	24	22.15		
	12	0	21.25		1
	12	6	21.19		
	12	13	21.14		
	25	0	21.20		1
16QAM	1	0	21.35	≤ 1	1
	1	12	21.18		
	1	24	21.29		
	12	0	20.35		
	12	6	20.26	≤ 2	2
	12	13	20.21		
	25	0	20.32		
64QAM	1	0	20.31	≤ 2	2
	1	12	20.15		
	1	24	20.29		
	12	0	19.36		
	12	6	19.22	≤ 3	3
	12	13	19.22		
	25	0	19.31		
256QAM	1	0	17.32	≤ 5	5
	1	12	17.18		
	1	24	17.22		
	12	0	17.33		
	12	6	17.20	≤ 5	5
	12	13	17.28		
	25	0	17.31		

Table 8.1.3.3 LTE Conducted Power

Note: LTE B17 can not contain three non-overlapping channels of 5 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Band & Mode		Modulated Average[dBm]
LTE Band 13	Maximum	24.0
	Nominal	23.0

Table 8.1.4.1 Nominal and Maximum Output Power Spec

4) LTE Band 13

LTE Band 13 Conducted Power- 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23230 (782.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.27	≤ 1	0
	1	25	22.02		
	1	49	22.09		
	25	0	21.28		1
	25	12	21.21		
	25	25	21.18		
	50	0	21.26		1
16QAM	1	0	21.27	≤ 1	1
	1	25	21.13		
	1	49	21.22		
	25	0	20.46	≤ 2	2
	25	12	20.38		
	25	25	20.36		
	50	0	20.45		
64QAM	1	0	20.34	≤ 2	2
	1	25	20.16		
	1	49	20.20		
	25	0	19.41	≤ 3	3
	25	12	19.34		
	25	25	19.30		
	50	0	19.37		
256QAM	1	0	17.33	≤ 5	5
	1	25	17.16		
	1	49	17.22		
	25	0	17.39	≤ 5	5
	25	12	17.38		
	25	25	17.32		
	50	0	17.43		

Table 8.1.4.2 LTE Conducted Power

LTE Band 13 Conducted Power- 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23230 (782.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.18	≤ 1	0
	1	12	22.06		
	1	24	22.06		
	12	0	21.20		1
	12	6	21.12		
	12	13	21.06		
	25	0	21.15		1
16QAM	1	0	21.24	≤ 1	1
	1	12	21.13		
	1	24	21.12		
	12	0	20.30	≤ 2	2
	12	6	20.12		
	12	13	20.14		
	25	0	20.25		
64QAM	1	0	20.25	≤ 2	2
	1	12	20.10		
	1	24	20.14		
	12	0	19.28	≤ 3	3
	12	6	19.12		
	12	13	19.16		
	25	0	19.19		
256QAM	1	0	17.28	≤ 5	5
	1	12	17.08		
	1	24	17.19		
	12	0	17.26	≤ 5	5
	12	6	17.12		
	12	13	17.13		
	25	0	17.24		

Table 8.1.4.3 LTE Conducted Power

Note: LTE B13 can not contain three non-overlapping channels of 10 MHz, 5 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Band & Mode		Modulated Average[dBm]
LTE Band 13 (ENDC)	Maximum	22.0
	Nominal	21.0

Table 8.1.4-1.1 Nominal and Maximum Output Power Spec

4-1) LTE Band 13 (ENDC)

LTE Band 13 Conducted Power- 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23230 (782.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	20.89	≤ 1	0
	1	25	20.63		
	1	49	20.70		
	25	0	19.90		1
	25	12	19.84		
	25	25	19.79		
	50	0	19.92		1
16QAM	1	0	19.96	≤ 1	1
	1	25	19.78		
	1	49	19.80		
	25	0	19.09	≤ 2	2
	25	12	19.00		
	25	25	18.98		
	50	0	19.05		
64QAM	1	0	18.92	≤ 2	2
	1	25	18.80		
	1	49	18.84		
	25	0	18.02	≤ 3	3
	25	12	18.00		
	25	25	17.91		
	50	0	17.98		
256QAM	1	0	15.96	≤ 5	5
	1	25	15.79		
	1	49	15.80		
	25	0	16.01	≤ 5	5
	25	12	15.96		
	25	25	15.95		
	50	0	16.01		

Table 8.1.4-1.2 LTE Conducted Power

LTE Band 13 Conducted Power- 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23230 (782.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	20.80	≤ 1	0
	1	12	20.74		
	1	24	20.68		
	12	0	19.83		1
	12	6	19.77		
	12	13	19.69		
	25	0	19.83		1
16QAM	1	0	19.87	≤ 1	1
	1	12	19.81		
	1	24	19.70		
	12	0	18.90	≤ 2	2
	12	6	18.71		
	12	13	18.80		
	25	0	18.91		
64QAM	1	0	18.90	≤ 2	2
	1	12	18.71		
	1	24	18.77		
	12	0	17.87	≤ 3	3
	12	6	17.73		
	12	13	17.76		
	25	0	17.81		
256QAM	1	0	15.87	≤ 5	5
	1	12	15.70		
	1	24	15.85		
	12	0	15.94	≤ 5	5
	12	6	15.71		
	12	13	15.78		
	25	0	15.90		

Table 8.1.4-1.3 LTE Conducted Power

Note: LTE B13 can not contain three non-overlapping channels of 10 MHz, 5 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Band & Mode		Modulated Average[dBm]
LTE Band 14	Maximum	24.0
	Nominal	23.0

Table 8.1.5.1 Nominal and Maximum Output Power Spec

5) LTE Band 14

LTE Band 14 Conducted Power- 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23330 (793.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.31	≤ 1	0
	1	25	22.18		
	1	49	22.21		
	25	0	21.33		1
	25	12	21.23		
	25	25	21.19		
	50	0	21.31		1
16QAM	1	0	21.28	≤ 1	1
	1	25	21.06		
	1	49	21.17		
	25	0	20.21	≤ 2	2
	25	12	20.14		
	25	25	20.10		
	50	0	20.20		
64QAM	1	0	20.27	≤ 2	2
	1	25	20.12		
	1	49	20.16		
	25	0	19.22	≤ 3	3
	25	12	19.12		
	25	25	19.11		
	50	0	19.18		
256QAM	1	0	17.27	≤ 5	5
	1	25	17.10		
	1	49	17.15		
	25	0	17.26	≤ 5	5
	25	12	17.18		
	25	25	17.12		
	50	0	17.19		

Table 8.1.5.2 LTE Conducted Power

LTE Band 14 Conducted Power- 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23330 (793.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.28	≤ 1	0
	1	12	22.12		
	1	24	22.16		
	12	0	21.25		1
	12	6	21.18		
	12	13	21.17		
	25	0	21.25		1
16QAM	1	0	21.33	≤ 1	1
	1	12	21.18		
	1	24	21.24		
	12	0	20.32	≤ 2	2
	12	6	20.29		
	12	13	20.20		
	25	0	20.32		
64QAM	1	0	20.31	≤ 2	2
	1	12	20.24		
	1	24	20.25		
	12	0	19.39	≤ 3	3
	12	6	19.25		
	12	13	19.26		
	25	0	19.31		
256QAM	1	0	17.34	≤ 5	5
	1	12	17.21		
	1	24	17.26		
	12	0	17.38	≤ 5	5
	12	6	17.29		
	12	13	17.21		
	25	0	17.29		

Table 8.1.5.3 LTE Conducted Power

Note: LTE B14 can not contain three non-overlapping channels of 5 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Band & Mode		Modulated Average[dBm]
LTE Band 14 (ENDC)	Maximum	22.0
	Nominal	21.0

Table 8.1.5-1.1 Nominal and Maximum Output Power Spec

5-1) LTE Band 14 (ENDC)

LTE Band 14 Conducted Power- 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23330 (793.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	20.92	≤ 1	0
	1	25	20.79		
	1	49	20.86		
	25	0	19.96		1
	25	12	19.92		
	25	25	19.78		
	50	0	20.00		1
16QAM	1	0	19.89	≤ 1	1
	1	25	19.68		
	1	49	19.81		
	25	0	18.85	≤ 2	2
	25	12	18.82		
	25	25	18.71		
	50	0	18.88		
64QAM	1	0	18.92	≤ 2	2
	1	25	18.70		
	1	49	18.77		
	25	0	17.83	≤ 3	3
	25	12	17.79		
	25	25	17.75		
	50	0	17.82		
256QAM	1	0	15.95	≤ 5	5
	1	25	15.75		
	1	49	15.76		
	25	0	15.92	≤ 5	5
	25	12	15.76		
	25	25	15.79		
	50	0	15.81		

Table 8.1.5-1.2 LTE Conducted Power

LTE Band 14 Conducted Power- 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			23330 (793.0 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	20.86	≤ 1	0
	1	12	20.70		
	1	24	20.85		
	12	0	19.90		1
	12	6	19.83		
	12	13	19.79		
	25	0	19.92		1
16QAM	1	0	19.94	≤ 1	1
	1	12	19.76		
	1	24	19.82		
	12	0	18.97	≤ 2	2
	12	6	18.90		
	12	13	18.78		
	25	0	19.01		
64QAM	1	0	18.92	≤ 2	2
	1	12	18.87		
	1	24	18.89		
	12	0	18.05	≤ 3	3
	12	6	17.90		
	12	13	17.87		
	25	0	17.89		
256QAM	1	0	16.02	≤ 5	5
	1	12	15.80		
	1	24	15.86		
	12	0	16.06	≤ 5	5
	12	6	15.97		
	12	13	15.82		
	25	0	15.92		

Table 8.1.5-1.3 LTE Conducted Power

Note: LTE B14 can not contain three non-overlapping channels of 5 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Band & Mode		Modulated Average[dBm]
LTE Band 26	Maximum	24.0
	Nominal	23.0

Table 8.1.6.1 Nominal and Maximum Output Power Spec

6) LTE Band 26 (Cell)

LTE Band 26 (Cell) Conducted Power- 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26865 (831.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.47	≤ 1	0
	1	36	22.43		
	1	74	22.46		
	36	0	21.67		1
	36	18	21.58		
	36	37	21.60		
	75	0	21.61		1
16QAM	1	0	21.39	≤ 1	1
	1	36	21.31		
	1	74	21.37		
	36	0	20.59		
	36	18	20.51	≤ 2	2
	36	37	20.57		
	75	0	20.52		2
64QAM	1	0	20.36	≤ 2	2
	1	36	20.33		
	1	74	20.33		
	36	0	19.56	≤ 3	3
	36	18	19.53		
	36	37	19.50		
	75	0	19.49		3
256QAM	1	0	17.55	≤ 5	5
	1	36	17.52		
	1	74	17.45		
	36	0	17.48		
	36	18	17.44	≤ 5	5
	36	37	17.41		
	75	0	17.47		5

Table 8.1.6.2 LTE Conducted Power

Note : LTE B26 can not contain three non-overlapping channels of 10 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 26 (Cell) Conducted Power– 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)		
			26740 (819.0 MHz)	26865 (831.5 MHz)	26990 (844.0 MHz)				
			Conducted Power (dBm)						
QPSK	1	0	22.41	22.46	22.26	≤ 1	0		
	1	25	22.28	22.31	22.22				
	1	49	22.24	22.42	22.21				
	25	0	21.45	21.50	21.48		1		
	25	12	21.42	21.49	21.44				
	25	25	21.42	21.44	21.43				
16QAM	50	0	21.43	21.47	21.40	≤ 1	1		
	1	0	21.24	21.30	21.35				
	1	25	21.11	21.20	21.23				
	1	49	21.09	21.25	21.27				
	25	0	20.36	20.51	20.46			≤ 2	2
	25	12	20.35	20.40	20.36				
	25	25	20.26	20.39	20.35				
	50	0	20.41	20.39	20.38				
64QAM	1	0	20.26	20.32	20.30	≤ 2	2		
	1	25	20.17	20.15	20.16				
	1	49	20.06	20.23	20.18				
	25	0	19.46	19.54	19.46			≤ 3	3
	25	12	19.43	19.49	19.42				
	25	25	19.25	19.45	19.42				
	50	0	19.30	19.40	19.38				
256QAM	1	0	17.44	17.51	17.36	≤ 5	5		
	1	25	17.29	17.42	17.33				
	1	49	17.33	17.38	17.31				
	25	0	17.25	17.35	17.34			≤ 5	5
	25	12	17.24	17.34	17.29				
	25	25	17.23	17.34	17.27				
	50	0	17.33	17.44	17.23				

Table 8.1.6.3 LTE Conducted Power

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LTE Band 26 (Cell) Conducted Power– 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26715 (816.5 MHz)	26865 (831.5 MHz)	27015 (846.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.35	22.41	22.40	≤ 1	0
	1	12	22.30	22.35	22.28		
	1	24	22.31	22.37	22.22		
	12	0	21.54	21.60	21.56		1
	12	6	21.38	21.55	21.49		
	12	13	21.37	21.55	21.53		
	25	0	21.36	21.46	21.47		1
16QAM	1	0	21.24	21.40	21.26	≤ 1	1
	1	12	21.14	21.16	21.17		
	1	24	21.17	21.34	21.22		
	12	0	20.42	20.53	20.41	≤ 2	2
	12	6	20.35	20.47	20.39		
	12	13	20.36	20.39	20.38		
	25	0	20.32	20.43	20.43		2
64QAM	1	0	20.23	20.24	20.29	≤ 2	2
	1	12	20.19	20.17	20.13		
	1	24	20.17	20.18	20.14		
	12	0	19.44	19.53	19.55	≤ 3	3
	12	6	19.39	19.40	19.41		
	12	13	19.31	19.48	19.48		
	25	0	19.38	19.35	19.46		3
256QAM	1	0	17.41	17.50	17.47	≤ 5	5
	1	12	17.36	17.36	17.41		
	1	24	17.29	17.27	17.38		
	12	0	17.34	17.45	17.40	≤ 5	5
	12	6	17.32	17.43	17.38		
	12	13	17.26	17.38	17.33		
	25	0	17.27	17.31	17.29		5

Table 8.1.6.4 LTE Conducted Power

LTE Band 26 (Cell) Conducted Power– 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26705 (815.5 MHz)	26865 (831.5 MHz)	27025 (847.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.23	22.43	22.38	0	0
	1	7	22.22	22.32	22.31		
	1	14	22.16	22.41	22.35		
	8	0	21.56	21.65	21.58	0-1	1
	8	4	21.43	21.51	21.36		
	8	7	21.44	21.56	21.38		
	15	0	21.44	21.56	21.49	0-1	1
16QAM	1	0	21.25	21.31	21.33	0-1	1
	1	7	21.06	21.19	21.26		
	1	14	21.05	21.22	21.17		
	8	0	20.39	20.51	20.48	0-2	2
	8	4	20.25	20.50	20.34		
	8	7	20.28	20.47	20.39		
	15	0	20.33	20.50	20.53	0-2	2
64QAM	1	0	20.16	20.26	20.25	0-2	2
	1	7	20.08	20.19	20.18		
	1	14	20.12	20.22	20.23		
	8	0	19.48	19.48	19.43	0-3	3
	8	4	19.44	19.33	19.36		
	8	7	19.39	19.44	19.39		
	15	0	19.26	19.37	19.32	0-3	3
256QAM	1	0	17.40	17.53	17.47	≤ 5	5
	1	7	17.35	17.35	17.44		
	1	14	17.33	17.42	17.45		
	8	0	17.38	17.48	17.44	≤ 5	5
	8	4	17.28	17.39	17.39		
	8	7	17.27	17.44	17.36		
	15	0	17.30	17.41	17.34	≤ 5	5

Table 8.1.6.5 LTE Conducted Power

LTE Band 26 (Cell) Conducted Power- 1.4 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			26697 (814.7 MHz)	27033 (831.5 MHz)	27033 (848.3 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	22.42	22.44	22.39	0	0	
	1	2	22.22	22.35	22.13			
	1	5	22.30	22.42	22.37			
	3	0	22.33	22.39	22.29	0	0	
	3	2	22.12	22.20	22.17			
	3	3	22.18	22.27	22.24			
16QAM	6	0	21.50	21.58	21.36	0-1	1	
	1	0	21.23	21.29	21.31	0-1	1	
	1	2	21.05	21.16	21.24			
	1	5	21.11	21.27	21.21			
	3	0	21.17	21.22	21.19	0-1	1	
	3	2	21.03	21.14	21.15			
	3	3	21.09	21.09	21.08			
	6	0	20.31	20.44	20.39	0-2	2	
	64QAM	1	0	20.24	20.33	20.29	0-2	2
		1	2	20.23	20.30	20.18		
1		5	20.15	20.27	20.18			
3		0	20.23	20.31	20.28	0-2	2	
3		2	20.21	20.22	20.02			
3		3	20.06	20.16	20.16			
6		0	19.35	19.39	19.46	0-3	3	
256QAM		1	0	17.45	17.50	17.40	≤ 5	5
	1	2	17.32	17.44	17.24			
	1	5	17.26	17.36	17.39			
	3	0	17.37	17.34	17.39	≤ 5	5	
	3	2	17.31	17.29	17.20			
	3	3	17.25	17.25	17.23			
	6	0	17.37	17.44	17.29	≤ 5	5	

Table 8.1.6.6 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 26 (ENDC)	Maximum	22.0
	Nominal	21.0

Table 8.1.6-1.1 Nominal and Maximum Output Power Spec

6-1) LTE Band 26 (Cell) (ENDC)

LTE Band 26 (Cell) Conducted Power- 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26865 (831.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	21.11	≤ 1	0
	1	36	21.08		
	1	74	21.07		
	36	0	20.29		1
	36	18	20.16		
	36	37	20.18		
	75	0	20.20		1
16QAM	1	0	20.07	≤ 1	1
	1	36	19.91		
	1	74	20.03		
	36	0	19.28	≤ 2	2
	36	18	19.18		
	36	37	19.20		
	75	0	19.21		
64QAM	1	0	18.97	≤ 2	2
	1	36	18.94		
	1	74	18.91		
	36	0	18.22	≤ 3	3
	36	18	18.12		
	36	37	18.22		
	75	0	18.12		
256QAM	1	0	16.22	≤ 5	5
	1	36	16.17		
	1	74	16.09		
	36	0	16.12	≤ 5	5
	36	18	16.09		
	36	37	16.01		
	75	0	16.16		

Table 8.1.6-1.2 LTE Conducted Power

Note : LTE B26 can not contain three non-overlapping channels of 10 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 26 (Cell) Conducted Power- 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26740 (819.0 MHz)	26865 (831.5 MHz)	26990 (844.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.03	21.07	20.89	≤ 1	0
	1	25	20.96	20.91	20.87		
	1	49	20.87	21.05	20.85		
	25	0	20.09	20.15	20.17		1
	25	12	20.00	20.09	20.11		
	25	25	20.03	20.06	20.03		
	50	0	20.05	20.15	19.98		1
16QAM	1	0	19.93	19.90	20.02	≤ 1	1
	1	25	19.80	19.80	19.85		
	1	49	19.77	19.89	19.90		
	25	0	18.98	19.16	19.06	≤ 2	2
	25	12	18.94	18.98	19.01		
	25	25	18.86	19.05	18.99		
	50	0	19.09	19.02	19.02		
64QAM	1	0	18.86	19.01	18.94	≤ 2	2
	1	25	18.78	18.84	18.85		
	1	49	18.72	18.98	18.81		
	25	0	18.12	18.23	18.12	≤ 3	3
	25	12	18.02	18.10	18.11		
	25	25	17.86	18.12	18.02		
	50	0	17.94	18.05	17.98		
256QAM	1	0	16.08	16.20	15.91	≤ 5	5
	1	25	15.97	16.07	15.89		
	1	49	15.91	15.96	15.88		
	25	0	15.91	16.03	16.02	≤ 5	5
	25	12	15.91	15.99	15.99		
	25	25	15.86	15.98	15.88		
	50	0	15.98	16.06	15.92		

Table 8.1.6-1.3 LTE Conducted Power

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LTE Band 26 (Cell) Conducted Power- 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26715 (816.5 MHz)	26865 (831.5 MHz)	27015 (846.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.02	21.07	21.00	≤ 1	0
	1	12	20.88	20.98	20.92		
	1	24	20.89	20.98	20.85		
	12	0	20.12	20.28	20.15		1
	12	6	20.04	20.20	20.07		
	12	13	19.99	20.13	20.14		
	25	0	19.94	20.06	20.05		1
16QAM	1	0	19.86	20.03	19.91	≤ 1	1
	1	12	19.83	19.81	19.85		
	1	24	19.76	20.02	19.83		
	12	0	19.00	19.14	19.06	≤ 2	2
	12	6	18.99	19.13	19.04		
	12	13	18.98	19.06	19.00		
	25	0	19.00	19.06	19.08		2
64QAM	1	0	18.88	18.88	18.98	≤ 2	2
	1	12	18.84	18.84	18.82		
	1	24	18.75	18.81	18.80		
	12	0	18.04	18.16	18.17	≤ 3	3
	12	6	18.01	18.03	18.00		
	12	13	17.98	18.08	18.15		
	25	0	18.04	18.04	18.12		3
256QAM	1	0	16.05	16.14	16.13	≤ 5	5
	1	12	16.02	16.05	16.02		
	1	24	15.93	15.95	15.97		
	12	0	15.98	16.11	16.14	≤ 5	5
	12	6	15.94	16.03	16.02		
	12	13	15.95	16.09	16.00		
	25	0	15.88	15.96	15.98		

Table 8.1.6-1.4 LTE Conducted Power

LTE Band 26 (Cell) Conducted Power- 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26705 (815.5 MHz)	26865 (831.5 MHz)	27025 (847.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	20.85	21.06	20.99	0	0
	1	7	20.81	20.98	20.94		
	1	14	20.84	21.04	20.98		
	8	0	20.20	20.24	20.20	0-1	1
	8	4	20.11	20.09	19.96		
	8	7	20.02	20.23	19.96		
	15	0	20.02	20.19	20.18	0-1	1
16QAM	1	0	19.92	19.96	20.01	0-1	1
	1	7	19.66	19.83	19.92		
	1	14	19.65	19.86	19.88		
	8	0	19.06	19.19	19.07	0-2	2
	8	4	18.92	19.15	18.98		
	8	7	18.94	19.12	19.01		
	15	0	19.00	19.12	19.21	0-2	2
64QAM	1	0	18.79	18.91	18.90	0-2	2
	1	7	18.77	18.81	18.79		
	1	14	18.72	18.89	18.86		
	8	0	18.17	18.15	18.07	0-3	3
	8	4	18.09	17.91	17.97		
	8	7	17.99	18.05	18.05		
	15	0	17.92	18.06	18.03	0-3	3
256QAM	1	0	16.04	16.21	15.99	≤ 5	5
	1	7	15.99	16.04	15.98		
	1	14	15.84	16.01	15.90		
	8	0	16.05	16.13	16.03	≤ 5	5
	8	4	15.94	15.99	15.94		
	8	7	15.95	16.11	15.96		
	15	0	15.92	16.02	16.00	≤ 5	5

Table 8.1.6-1.5 LTE Conducted Power

LTE Band 26 (Cell) Conducted Power- 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26697 (814.7 MHz)	26865 (831.5 MHz)	27033 (848.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.05	21.08	21.05	0	0
	1	2	20.86	20.97	20.80		
	1	5	20.98	21.07	20.97		
	3	0	20.97	21.00	20.88	0	0
	3	2	20.74	20.81	20.77		
	3	3	20.82	20.96	20.85		
16QAM	6	0	20.14	20.12	20.03	0-1	1
	1	0	19.87	19.89	19.91	0-1	1
	1	2	19.74	19.78	19.90		
	1	5	19.80	19.88	19.83		
	3	0	19.81	19.84	19.81	0-1	1
	3	2	19.69	19.75	19.75		
3	3	19.74	19.81	19.72			
64QAM	6	0	18.95	19.03	18.98	0-2	2
	1	0	18.93	19.01	18.88	0-2	2
	1	2	18.83	18.89	18.81		
	1	5	18.81	18.90	18.83		
	3	0	18.82	18.98	18.87	0-2	2
	3	2	18.79	18.90	18.66		
3	3	18.75	18.79	18.75			
256QAM	6	0	17.97	18.03	18.08	0-3	3
	1	0	16.04	16.12	16.01	≤ 5	5
	1	2	15.95	16.11	15.88		
	1	5	15.89	16.03	15.98		
	3	0	16.06	15.96	16.04	≤ 5	5
	3	2	15.92	15.92	15.82		
3	3	15.87	15.89	15.91			
256QAM	6	0	15.96	16.10	15.90	≤ 5	5

Table 8.1.6-1.6 LTE Conducted Power

Band & Mode		Modulated Average(dBm)
LTE Band 5	Maximum	24.0
	Nominal	23.0

Table 8.1.7.1 Nominal and Maximum Output Power Spec

7) LTE Band 5 (Cell)

LTE Band 5 (Cell) Conducted Power- 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20525 (836.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.61	≤ 1	0
	1	25	22.49		
	1	49	22.36		
	25	0	21.62		1
	25	12	21.55		
	25	25	21.54		
	50	0	21.59		
16QAM	1	0	21.58	≤ 1	1
	1	25	21.46		
	1	49	21.33		
	25	0	20.52		≤ 2
	25	12	20.47		
	25	25	20.44		
	50	0	20.50	2	
64QAM	1	0	20.48	≤ 2	2
	1	25	20.39		
	1	49	20.27		
	25	0	19.53		≤ 3
	25	12	19.51		
	25	25	19.49		
	50	0	19.55	3	
256QAM	1	0	17.60	≤ 5	5
	1	25	17.39		
	1	49	17.34		
	25	0	17.59		≤ 5
	25	12	17.51		
	25	25	17.46		
	50	0	17.49	5	

Table 8.1.7.2 LTE Conducted Power

Note: LTE B5 can not contain three non-overlapping channels of 10 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 5 (Cell) Conducted Power- 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20425 (826.5 MHz)	20525 (836.5 MHz)	20625 (846.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.53	22.46	22.59	≤ 1	0
	1	12	22.48	22.40	22.33		
	1	24	22.28	22.26	22.23		
	12	0	21.55	21.51	21.50		1
	12	6	21.38	21.45	21.40		
	12	13	21.38	21.43	21.47		
	25	0	21.43	21.45	21.49	1	
16QAM	1	0	21.47	21.56	21.47	≤ 1	1
	1	12	21.39	21.39	21.39		
	1	24	21.27	21.25	21.28		
	12	0	20.41	20.41	20.44	≤ 2	2
	12	6	20.36	20.34	20.40		
	12	13	20.37	20.37	20.29		
	25	0	20.41	20.38	20.36	2	
64QAM	1	0	20.38	20.33	20.40	≤ 2	2
	1	12	20.37	20.22	20.27		
	1	24	20.24	20.20	20.21		
	12	0	19.46	19.47	19.49	≤ 3	3
	12	6	19.37	19.39	19.37		
	12	13	19.41	19.38	19.32		
	25	0	19.48	19.52	19.42	3	
256QAM	1	0	17.46	17.46	17.54	≤ 5	5
	1	12	17.32	17.22	17.38		
	1	24	17.31	17.33	17.22		
	12	0	17.51	17.57	17.54	≤ 5	5
	12	6	17.42	17.44	17.41		
	12	13	17.30	17.45	17.41		
	25	0	17.33	17.38	17.48	≤ 5	5

Table 8.1.7.3 LTE Conducted Power

LTE Band 5 (Cell) Conducted Power- 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20415 (825.5 MHz)	20525 (836.5 MHz)	20635 (847.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.55	22.56	22.45	≤ 1	0
	1	7	22.38	22.40	22.35		
	1	14	22.35	22.24	22.32		
	8	0	21.49	21.51	21.55		1
	8	4	21.48	21.47	21.53		
	8	7	21.41	21.44	21.43		
	15	0	21.58	21.46	21.52	1	
16QAM	1	0	21.45	21.45	21.42	≤ 1	1
	1	7	21.35	21.35	21.41		
	1	14	21.27	21.23	21.30		
	8	0	20.40	20.43	20.42	≤ 2	2
	8	4	20.32	20.37	20.38		
	8	7	20.39	20.40	20.38		
	15	0	20.41	20.39	20.45		
64QAM	1	0	20.46	20.47	20.31	≤ 2	2
	1	7	20.34	20.30	20.22		
	1	14	20.20	20.27	20.20		
	8	0	19.41	19.42	19.51	≤ 3	3
	8	4	19.39	19.39	19.43		
	8	7	19.38	19.38	19.38		
	15	0	19.48	19.46	19.39		
256QAM	1	0	17.45	17.48	17.43	≤ 5	5
	1	7	17.32	17.38	17.28		
	1	14	17.30	17.33	17.26		
	8	0	17.58	17.51	17.53	≤ 5	5
	8	4	17.37	17.40	17.35		
	8	7	17.30	17.43	17.45		
	15	0	17.42	17.35	17.35		

Table 8.1.7.4 LTE Conducted Power

LTE Band 5 (Cell) Conducted Power- 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20407 (824.7 MHz)	20525 (836.5 MHz)	20643 (848.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.45	22.60	22.46	0	0
	1	2	22.43	22.33	22.44		
	1	5	22.21	22.20	22.33		
	3	0	22.36	22.44	22.40	0	0
	3	2	22.27	22.20	22.33		
	3	3	22.11	22.08	22.16		
16QAM	6	0	21.45	21.52	21.49	0-1	1
	1	0	21.44	21.53	21.54	0-1	1
	1	2	21.41	21.45	21.42		
	1	5	21.27	21.30	21.36		
	3	0	21.38	21.47	21.45	0-1	1
	3	2	21.33	21.40	21.31		
3	3	21.18	21.28	21.19			
64QAM	6	0	20.47	20.42	20.44	0-2	2
	1	0	20.38	20.43	20.44	0-2	2
	1	2	20.24	20.27	20.36		
	1	5	20.26	20.24	20.21		
	3	0	20.25	20.40	20.42	0-2	2
	3	2	20.12	20.17	20.28		
3	3	20.11	20.13	20.14			
256QAM	6	0	19.38	19.54	19.44	0-3	3
	1	0	17.51	17.41	17.53	≤ 5	5
	1	2	17.38	17.32	17.30		
	1	5	17.31	17.29	17.31		
	3	0	17.39	17.40	17.47	≤ 5	5
	3	2	17.34	17.28	17.14		
3	3	17.28	17.25	17.23			
	6	0	17.46	17.35	17.37	≤ 5	5

Table 8.1.7.5 LTE Conducted Power

CA Conf.	RF Expos. Cond.	UL																	
		PCC						SCC						MPR	Standalone			PCC+ SCC	
		Modulation	RB Size	RB Offset	BW	Freq.	Ch.	Modulation	RB Size	RB Offset	BW	Freq.	Ch.		LTE Rel.8	Aggregated BW	MPR	Tune-up Limit	CA Power (Total PCC+SCC)
CA 5B	Body	QPSK	1	49	10	836.5	20525	QPSK	1	0	10	846.4	20624	0	22.67	10	0	25.0	24.25
CA 5B	Body	16QAM	1	49	10	836.5	20525	16QAM	1	0	10	846.4	20624	0	21.51	10	0	24.0	23.12
CA 5B	Body	64QAM	1	49	10	836.5	20525	64QAM	1	0	10	846.4	20624	0	20.49	10	0	23.0	22.15
CA 5B	Body	256QAM	1	49	10	836.5	20525	256QAM	1	0	10	846.4	20624	0	17.54	10	0	20.0	19.21
CA 5B	Body	QPSK	1	49	10	836.5	20525	QPSK	1	0	5	843.7	20597	0	22.67	10	0	25.0	24.08
CA 5B	Body	16QAM	1	49	10	836.5	20525	16QAM	1	0	5	843.7	20597	0	21.51	10	0	24.0	22.97
CA 5B	Body	64QAM	1	49	10	836.5	20525	64QAM	1	0	5	843.7	20597	0	20.49	10	0	23.0	21.97
CA 5B	Body	256QAM	1	49	10	836.5	20525	256QAM	1	0	5	843.7	20597	0	17.54	10	0	20.0	19.04
CA 5B	Body	QPSK	1	24	5	836.5	20525	QPSK	1	0	3	840.4	20564	0	22.67	10	0	25.0	24.19
CA 5B	Body	16QAM	1	24	5	836.5	20525	16QAM	1	0	3	840.4	20564	0	21.51	10	0	24.0	22.94
CA 5B	Body	64QAM	1	24	5	836.5	20525	64QAM	1	0	3	840.4	20564	0	20.49	10	0	23.0	21.92
CA 5B	Body	256QAM	1	24	5	836.5	20525	256QAM	1	0	3	840.4	20564	0	17.54	10	0	20.0	19.20
CA 5B	Body	QPSK	1	24	5	836.5	20525	QPSK	1	0	10	843.7	20597	0	22.67	10	0	25.0	24.07
CA 5B	Body	16QAM	1	24	5	836.5	20525	16QAM	1	0	10	843.7	20597	0	21.51	10	0	24.0	22.87
CA 5B	Body	64QAM	1	24	5	836.5	20525	64QAM	1	0	10	843.7	20597	0	20.49	10	0	23.0	22.00
CA 5B	Body	256QAM	1	24	5	836.5	20525	256QAM	1	0	10	843.7	20597	0	17.54	10	0	20.0	19.23
CA 5B	Body	QPSK	1	14	3	836.5	20525	QPSK	1	0	5	840.4	20564	0	22.67	10	0	25.0	24.14
CA 5B	Body	16QAM	1	14	3	836.5	20525	16QAM	1	0	5	840.4	20564	0	21.51	10	0	24.0	22.99
CA 5B	Body	64QAM	1	14	3	836.5	20525	64QAM	1	0	5	840.4	20564	0	20.49	10	0	23.0	21.98
CA 5B	Body	256QAM	1	14	3	836.5	20525	256QAM	1	0	5	840.4	20564	0	17.54	10	0	20.0	19.05

Table 8.1.7.6 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 5 (ENDC)	Maximum	22.0
	Nominal	21.0

Table 8.1.7-1.1 Nominal and Maximum Output Power Spec

7-1) LTE Band 5 (Cell) (ENDC)

LTE Band 5 (Cell) Conducted Power- 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20525 (836.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	21.23	≤ 1	0
	1	25	21.07		
	1	49	21.05		
	25	0	20.31		1
	25	12	20.14		
	25	25	20.12		
	50	0	20.27		1
16QAM	1	0	20.18	≤ 1	1
	1	25	20.07		
	1	49	19.93		
	25	0	19.17	≤ 2	2
	25	12	19.05		
	25	25	19.13		
	50	0	19.08		
64QAM	1	0	19.09	≤ 2	2
	1	25	18.99		
	1	49	18.96		
	25	0	18.15	≤ 3	3
	25	12	18.13		
	25	25	18.13		
	50	0	18.20		
256QAM	1	0	16.26	≤ 5	5
	1	25	16.04		
	1	49	15.94		
	25	0	16.19	≤ 5	5
	25	12	16.10		
	25	25	16.05		
	50	0	16.11		

Table 8.1.7-1.2 LTE Conducted Power

Note: LTE B5 can not contain three non-overlapping channels of 10 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 5 (Cell) Conducted Power- 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20425 (826.5 MHz)	20525 (836.5 MHz)	20625 (846.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.18	21.13	21.21	≤ 1	0
	1	12	21.16	20.98	20.94		
	1	24	20.86	20.84	20.84		
	12	0	20.15	20.15	20.14		1
	12	6	19.96	20.07	20.04		
	12	13	20.05	20.02	20.10		
	25	0	20.10	20.10	20.07		
16QAM	1	0	20.05	20.14	20.08	≤ 1	1
	1	12	20.00	20.00	20.05		
	1	24	19.87	19.91	19.89		
	12	0	19.01	19.09	19.05	≤ 2	2
	12	6	18.95	18.97	18.99		
	12	13	18.97	18.96	18.91		
	25	0	19.05	19.04	18.98		
64QAM	1	0	19.04	18.98	19.03	≤ 2	2
	1	12	19.03	18.90	18.88		
	1	24	18.83	18.83	18.89		
	12	0	18.09	18.15	18.14	≤ 3	3
	12	6	17.99	18.08	17.98		
	12	13	18.04	17.98	17.97		
	25	0	18.14	18.14	18.04		
256QAM	1	0	16.12	16.08	16.16	≤ 5	5
	1	12	16.02	15.84	16.02		
	1	24	15.98	15.99	15.88		
	12	0	16.13	16.26	16.23	≤ 5	5
	12	6	16.04	16.10	16.08		
	12	13	15.89	16.09	16.05		
	25	0	15.96	16.07	16.16		

Table 8.1.7-1.3 LTE Conducted Power

LTE Band 5 (Cell) Conducted Power- 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20415 (825.5 MHz)	20525 (836.5 MHz)	20635 (847.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.19	21.22	21.05	≤ 1	0
	1	7	21.02	21.07	21.03		
	1	14	21.01	20.85	20.99		
	8	0	20.10	20.19	20.22		1
	8	4	20.07	20.13	20.18		
	8	7	20.05	20.05	20.04		
	15	0	20.18	20.14	20.19	1	
16QAM	1	0	20.09	20.04	20.11	≤ 1	1
	1	7	19.94	19.95	20.05		
	1	14	19.90	19.86	19.90		
	8	0	19.02	19.05	19.07	≤ 2	2
	8	4	19.00	19.01	19.04		
	8	7	18.97	19.01	19.06		
	15	0	19.10	19.08	19.10		2
64QAM	1	0	19.09	19.09	19.00	≤ 2	2
	1	7	18.96	18.90	18.90		
	1	14	18.88	18.96	18.83		
	8	0	18.10	18.07	18.16	≤ 3	3
	8	4	17.99	18.02	18.07		
	8	7	18.01	18.01	17.98		
	15	0	18.10	18.15	18.07		3
256QAM	1	0	16.12	16.10	16.05	≤ 5	5
	1	7	15.91	16.06	15.96		
	1	14	15.90	15.99	15.89		
	8	0	16.22	16.15	16.12	≤ 5	5
	8	4	16.04	16.05	16.01		
	8	7	15.90	16.07	16.11		
	15	0	16.08	15.95	16.02		

Table 8.1.7-1.4 LTE Conducted Power

LTE Band 5 (Cell) Conducted Power- 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20407 (824.7 MHz)	20525 (836.5 MHz)	20643 (848.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.06	21.24	21.06	0	0
	1	2	21.01	20.92	21.04		
	1	5	20.85	20.82	21.00		
	3	0	21.02	21.11	21.05	0	0
	3	2	20.86	20.81	20.91		
	3	3	20.69	20.71	20.81		
	6	0	20.12	20.14	20.09	0-1	1
16QAM	1	0	20.12	20.13	20.21	0-1	1
	1	2	20.09	20.08	20.06		
	1	5	19.89	19.92	20.03		
	3	0	19.97	20.15	20.11	0-1	1
	3	2	19.93	19.98	19.97		
	3	3	19.82	19.87	19.87		
	6	0	19.05	19.09	19.10	0-2	2
64QAM	1	0	19.06	19.08	19.07	0-2	2
	1	2	18.91	18.89	18.99		
	1	5	18.95	18.90	18.85		
	3	0	18.93	18.99	19.06	0-2	2
	3	2	18.78	18.77	18.89		
	3	3	18.76	18.81	18.72		
	6	0	18.03	18.19	18.06	0-3	3
256QAM	1	0	16.19	16.25	16.12	≤ 5	5
	1	2	16.01	15.97	15.88		
	1	5	15.99	15.97	16.00		
	3	0	16.07	16.08	16.13	≤ 5	5
	3	2	15.94	15.90	15.74		
	3	3	15.85	15.84	15.84		
	6	0	16.15	15.99	15.96	≤ 5	5

Table 8.1.7-1.5 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 66 (AWS)	Maximum	24.0
	Nominal	23.0

Table 8.1.8.1 Nominal and Maximum Output Power Spec

8) LTE Band 66 (AWS)

LTE Band 66 (AWS) Conducted Power– 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			132072 (1 720.0 MHz)	132322 (1 745.0 MHz)	132572 (1 770.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.46	22.49	22.46	≤ 1	0
	1	50	22.25	22.34	22.24		
	1	99	22.30	22.45	22.37		
	50	0	21.32	21.37	21.27		1
	50	25	21.25	21.36	21.24		
	50	50	21.30	21.30	21.25		
	100	0	21.36	21.38	21.26	1	
16QAM	1	0	21.40	21.41	21.37	≤ 1	1
	1	50	21.28	21.27	21.31		
	1	99	21.25	21.40	21.24		
	50	0	20.37	20.40	20.37	≤ 2	2
	50	25	20.31	20.27	20.34		
	50	50	20.32	20.25	20.31		
	100	0	20.28	20.32	20.28		2
64QAM	1	0	20.33	20.45	20.33	≤ 2	2
	1	50	20.29	20.32	20.30		
	1	99	20.27	20.33	20.27		
	50	0	19.30	19.41	19.40	≤ 3	3
	50	25	19.27	19.33	19.33		
	50	50	19.24	19.37	19.35		
	100	0	19.24	19.31	19.31		3
256QAM	1	0	17.45	17.52	17.47	≤ 5	5
	1	50	17.35	17.37	17.26		
	1	99	17.40	17.42	17.33		
	50	0	17.33	17.39	17.35	≤ 5	5
	50	25	17.29	17.36	17.25		
	50	50	17.26	17.38	17.29		
	100	0	17.25	17.30	17.27		5

Table 8.1.8.2 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power– 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			132047 (1 717.5 MHz)	132322 (1 745.0 MHz)	132597 (1 772.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.47	22.39	22.46	≤ 1	0
	1	36	22.41	22.26	22.37		
	1	74	22.38	22.29	22.41		
	36	0	21.34	21.34	21.29		1
	36	18	21.25	21.31	21.25		
	36	37	21.32	21.27	21.26		
	75	0	21.37	21.37	21.33		1
16QAM	1	0	21.33	21.39	21.35	≤ 1	1
	1	36	21.31	21.25	21.27		
	1	74	21.27	21.32	21.31		
	36	0	20.39	20.30	20.34	≤ 2	2
	36	18	20.31	20.27	20.31		
	36	37	20.34	20.25	20.32		
	75	0	20.27	20.27	20.27		2
64QAM	1	0	20.38	20.40	20.29	≤ 2	2
	1	36	20.33	20.27	20.26		
	1	74	20.37	20.32	20.28		
	36	0	19.39	19.37	19.33	≤ 3	3
	36	18	19.32	19.26	19.32		
	36	37	19.31	19.28	19.25		
	75	0	19.29	19.27	19.25		3
256QAM	1	0	17.50	17.46	17.48	≤ 5	5
	1	36	17.24	17.32	17.33		
	1	74	17.33	17.41	17.40		
	36	0	17.36	17.32	17.36	≤ 5	5
	36	18	17.35	17.27	17.30		
	36	37	17.33	17.26	17.24		
	75	0	17.27	17.28	17.28		5

Table 8.1.8.3 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power- 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			132022 (1 715.0 MHz)	132322 (1 745.0 MHz)	132622 (1 775.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.38	22.44	22.39	≤ 1	0
	1	25	22.31	22.30	22.34		
	1	49	22.33	22.44	22.37		
	25	0	21.30	21.34	21.35		1
	25	12	21.26	21.25	21.30		
	25	25	21.28	21.31	21.31		
	50	0	21.32	21.30	21.29	1	
16QAM	1	0	21.40	21.28	21.38	≤ 1	1
	1	25	21.24	21.26	21.32		
	1	49	21.34	21.27	21.25		
	25	0	20.32	20.28	20.27	≤ 2	2
	25	12	20.31	20.25	20.26		
	25	25	20.26	20.27	20.25		
	50	0	20.26	20.31	20.24		
64QAM	1	0	20.35	20.37	20.43	≤ 2	2
	1	25	20.31	20.34	20.41		
	1	49	20.33	20.32	20.36		
	25	0	19.27	19.35	19.31	≤ 3	3
	25	12	19.25	19.31	19.29		
	25	25	19.26	19.33	19.28		
	50	0	19.26	19.24	19.28		
256QAM	1	0	17.37	17.50	17.50	≤ 5	5
	1	25	17.25	17.40	17.34		
	1	49	17.36	17.27	17.40		
	25	0	17.27	17.38	17.34	≤ 5	5
	25	12	17.24	17.34	17.29		
	25	25	17.26	17.29	17.25		
	50	0	17.25	17.29	17.26		

Table 8.1.8.4 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power- 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			131997 (1 712.5 MHz)	132322 (1 745.0 MHz)	132647 (1 777.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.38	22.43	22.42	≤ 1	0
	1	12	22.27	22.37	22.24		
	1	24	22.31	22.41	22.42		
	12	0	21.32	21.29	21.31		1
	12	6	21.31	21.25	21.25		
	12	13	21.26	21.27	21.27		
	25	0	21.27	21.30	21.26		1
16QAM	1	0	21.39	21.35	21.38	≤ 1	1
	1	12	21.31	21.31	21.32		
	1	24	21.36	21.34	21.36		
	12	0	20.38	20.30	20.36	≤ 2	2
	12	6	20.32	20.27	20.34		
	12	13	20.31	20.26	20.31		
	25	0	20.31	20.28	20.24		
64QAM	1	0	20.36	20.36	20.40	≤ 2	2
	1	12	20.29	20.33	20.24		
	1	24	20.32	20.31	20.38		
	12	0	19.30	19.34	19.36	≤ 3	3
	12	6	19.27	19.29	19.35		
	12	13	19.26	19.29	19.31		
	25	0	19.30	19.30	19.25		
256QAM	1	0	17.46	17.48	17.40	≤ 5	5
	1	12	17.25	17.41	17.29		
	1	24	17.30	17.33	17.37		
	12	0	17.33	17.31	17.32	≤ 5	5
	12	6	17.27	17.27	17.27		
	12	13	17.31	17.29	17.24		
	25	0	17.24	17.29	17.29		

Table 8.1.8.5 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power- 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			131987 (1 711.5 MHz)	132322 (1 745.0 MHz)	132657 (1 778.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.36	22.44	22.41	≤ 1	0
	1	7	22.31	22.42	22.29		
	1	14	22.33	22.39	22.33		
	8	0	21.34	21.29	21.34		1
	8	4	21.31	21.26	21.31		
	8	7	21.27	21.26	21.26		
	15	0	21.27	21.25	21.28		
16QAM	1	0	21.36	21.38	21.40	≤ 1	1
	1	7	21.32	21.25	21.34		
	1	14	21.34	21.31	21.28		
	8	0	20.39	20.31	20.30	≤ 2	2
	8	4	20.35	20.26	20.24		
	8	7	20.24	20.24	20.28		
	15	0	20.24	20.25	20.24		
64QAM	1	0	20.35	20.36	20.40	≤ 2	2
	1	7	20.31	20.26	20.28		
	1	14	20.29	20.24	20.37		
	8	0	19.37	19.40	19.38	≤ 3	3
	8	4	19.32	19.30	19.31		
	8	7	19.29	19.33	19.28		
	15	0	19.29	19.29	19.27		
256QAM	1	0	17.46	17.45	17.37	≤ 5	5
	1	7	17.42	17.27	17.33		
	1	14	17.37	17.28	17.36		
	8	0	17.32	17.37	17.36	≤ 5	5
	8	4	17.26	17.28	17.29		
	8	7	17.25	17.33	17.34		
	15	0	17.28	17.24	17.27		

Table 8.1.8.6 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power- 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			131979 (1 710.7 MHz)	132322 (1 745.0 MHz)	132665 (1 779.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.47	22.45	22.47	≤ 1	0
	1	2	22.28	22.33	22.36		0
	1	5	22.32	22.28	22.31		
	3	0	22.34	22.36	22.42		
	3	2	22.26	22.19	22.02		
	3	3	22.09	22.21	22.08		
	6	0	21.26	21.28	21.34		1
16QAM	1	0	21.37	21.29	21.38	≤ 1	1
	1	2	21.24	21.24	21.32		
	1	5	21.29	21.25	21.25		
	3	0	21.45	21.28	21.27		
	3	2	21.33	21.21	21.20		
	3	3	21.15	21.04	21.13		1
	6	0	20.29	20.31	20.28		
64QAM	1	0	20.34	20.40	20.41	≤ 2	2
	1	2	20.24	20.28	20.30		2
	1	5	20.31	20.31	20.31		
	3	0	20.16	20.19	20.27		
	3	2	20.14	20.11	20.03		
	3	3	20.11	20.14	20.12		
	6	0	19.25	19.26	19.24		
256QAM	1	0	17.45	17.47	17.47	≤ 5	5
	1	2	17.34	17.33	17.36		
	1	5	17.29	17.31	17.33		
	3	0	17.23	17.39	17.36		
	3	2	17.12	17.13	17.21	≤ 5	5
	3	3	17.22	17.17	17.15		
	6	0	17.29	17.31	17.27		

Table 8.1.8.7 LTE Conducted Power

CA Conf.	RF Expos. Cond.	UL																	
		PCC						SCC						MPR	Standalone			PCC+ SCC	
		Modulation	RB Size	RB Offset	BW	Freq.	Ch.	Modulation	RB Size	RB Offset	BW	Freq.	Ch.		LTE Rel.8	Aggregated BW	MPR	Tune-up Limit	CA Power (Total PCC+SCC)
CA_66B	Body	QPSK	1	49	10	1 745	132322	QPSK	1	0	10	1 754.9	132421	0	22.49	20	0	24.0	22.43
CA_66C	Body	QPSK	1	99	20	1 745	132322	QPSK	1	0	20	1 764.8	132520	0	22.49	20	0	24.0	22.41

Table 8.1.8.8 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 66 (AWS) (ENDC)	Maximum	22.0
	Nominal	21.0

Table 8.1.8-1.1 Nominal and Maximum Output Power Spec

8-1) LTE Band 66 (AWS) (ENDC)

LTE Band 66 (AWS) Conducted Power– 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			132072 (1 720.0 MHz)	132322 (1 745.0 MHz)	132572 (1 770.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.06	21.15	21.11	≤ 1	0
	1	50	20.92	20.98	20.88		
	1	99	20.94	21.06	21.05		
	50	0	19.93	20.05	19.88		1
	50	25	19.87	20.00	19.85		
	50	50	19.92	19.92	19.81		
	100	0	19.96	20.02	19.92	1	
16QAM	1	0	20.01	20.06	20.03	≤ 1	1
	1	50	19.96	19.88	20.00		
	1	99	19.90	20.02	19.88		
	50	0	19.01	19.05	19.06	≤ 2	2
	50	25	19.00	18.90	18.94		
	50	50	18.92	18.93	18.95		
	100	0	18.89	19.01	18.95		2
64QAM	1	0	18.97	19.11	19.02	≤ 2	2
	1	50	18.94	18.96	18.98		
	1	99	18.89	18.96	18.94		
	50	0	17.93	18.09	18.02	≤ 3	3
	50	25	17.90	18.01	17.98		
	50	50	17.89	17.96	17.97		
	100	0	17.85	17.93	17.96		3
256QAM	1	0	16.09	16.12	16.16	≤ 5	5
	1	50	16.04	15.95	15.86		
	1	99	16.09	16.03	15.97		
	50	0	15.98	16.06	15.95	≤ 5	5
	50	25	15.89	15.96	15.93		
	50	50	15.95	16.05	15.91		
	100	0	15.84	15.89	15.89		5

Table 8.1.8-1.2 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power– 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			132047 (1 717.5 MHz)	132322 (1 745.0 MHz)	132597 (1 772.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.10	21.04	21.05	≤ 1	0
	1	36	21.07	20.93	20.96		
	1	74	21.00	20.87	21.02		
	36	0	19.94	19.98	19.98		1
	36	18	19.92	19.97	19.94		
	36	37	19.91	19.93	19.90		
	75	0	19.98	19.99	20.01		1
16QAM	1	0	19.91	20.04	19.97	≤ 1	1
	1	36	19.90	19.83	19.92		
	1	74	19.90	19.99	19.92		
	36	0	19.04	18.99	18.94	≤ 2	2
	36	18	18.92	18.89	18.91		
	36	37	19.01	18.86	18.90		
	75	0	18.96	18.91	18.86		2
64QAM	1	0	19.06	19.09	18.95	≤ 2	2
	1	36	18.91	18.88	18.84		
	1	74	19.06	18.91	18.88		
	36	0	18.04	18.03	18.01	≤ 3	3
	36	18	17.91	17.89	17.90		
	36	37	18.00	17.94	17.87		
	75	0	17.88	17.85	17.84		3
256QAM	1	0	16.14	16.15	16.10	≤ 5	5
	1	36	16.00	15.98	15.97		
	1	74	15.92	16.03	15.99		
	36	0	16.05	15.96	16.05	≤ 5	5
	36	18	16.04	15.88	15.89		
	36	37	15.95	15.91	15.85		
	75	0	15.94	15.93	15.94		5

Table 8.1.8-1.3 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power- 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			132022 (1 715.0 MHz)	132322 (1 745.0 MHz)	132622 (1 775.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	20.99	21.05	21.06	≤ 1	0
	1	25	20.89	20.88	20.94		
	1	49	20.92	21.02	20.97		
	25	0	19.95	20.03	20.00		1
	25	12	19.88	19.86	19.92		
	25	25	19.93	19.93	19.96		
	50	0	19.98	19.97	19.93	1	
16QAM	1	0	20.07	19.95	19.98	≤ 1	1
	1	25	19.89	19.85	19.93		
	1	49	20.03	19.90	19.85		
	25	0	18.96	18.94	18.95	≤ 2	2
	25	12	18.95	18.87	18.93		
	25	25	18.92	18.88	18.89		
	50	0	18.86	18.99	18.84		2
64QAM	1	0	19.03	19.02	19.09	≤ 2	2
	1	25	18.89	19.00	19.02		
	1	49	18.92	18.97	18.95		
	25	0	17.90	18.03	17.92	≤ 3	3
	25	12	17.86	18.00	17.90		
	25	25	17.81	17.96	17.89		
	50	0	17.86	17.92	17.89		3
256QAM	1	0	15.95	16.11	16.13	≤ 5	5
	1	25	15.92	16.04	16.03		
	1	49	15.94	15.87	16.02		
	25	0	15.90	16.04	15.99	≤ 5	5
	25	12	15.86	15.97	15.92		
	25	25	15.85	15.96	15.87		
	50	0	15.94	15.97	15.88		

Table 8.1.8-1.4 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power- 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			131997 (1 712.5 MHz)	132322 (1 745.0 MHz)	132647 (1 777.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.06	21.03	21.09	≤ 1	0
	1	12	20.90	21.02	20.86		1
	1	24	20.96	21.00	21.00		
	12	0	19.99	19.94	19.93		
	12	6	19.92	19.92	19.90		
	12	13	19.93	19.93	19.87		
	25	0	19.86	19.88	19.85		1
16QAM	1	0	20.02	20.01	20.07	≤ 1	1
	1	12	19.97	19.95	19.96		
	1	24	19.98	19.95	19.97		
	12	0	19.01	18.95	18.97		
	12	6	19.00	18.87	18.93	≤ 2	2
	12	13	18.91	18.84	18.94		
	25	0	18.98	18.89	18.92		2
64QAM	1	0	19.05	19.04	19.01	≤ 2	2
	1	12	18.96	18.92	18.84		
	1	24	19.01	18.94	18.99		
	12	0	17.97	17.94	18.02		
	12	6	17.85	17.87	18.00	≤ 3	3
	12	13	17.86	17.91	17.97		
	25	0	17.91	17.92	17.85		3
256QAM	1	0	16.06	16.06	16.05	≤ 5	5
	1	12	15.91	16.00	15.91		
	1	24	15.95	16.02	16.03		
	12	0	16.01	15.93	16.00		
	12	6	15.94	15.88	15.91	≤ 5	5
	12	13	15.95	15.90	15.90		
	25	0	15.86	15.96	15.89		5

Table 8.1.8-1.5 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power- 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			131987 (1 711.5 MHz)	132322 (1 745.0 MHz)	132657 (1 778.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.01	21.12	21.10	≤ 1	0
	1	7	20.91	21.09	20.91		
	1	14	20.96	21.06	20.93		
	8	0	19.94	19.95	20.02		1
	8	4	19.92	19.93	19.94		
	8	7	19.89	19.89	19.89		
	15	0	19.89	19.88	19.96	1	
	16QAM	1	0	19.99	20.01	20.00	≤ 1
1		7	19.93	19.90	19.99		
1		14	19.93	19.91	19.92		
8		0	19.05	18.98	18.93	≤ 2	2
8		4	18.99	18.95	18.91		
8		7	18.89	18.88	18.87		
15		0	18.92	18.88	18.82		2
64QAM		1	0	19.00	18.98	19.06	≤ 2
	1	7	18.92	18.92	18.93		
	1	14	18.87	18.95	19.03		
	8	0	18.02	18.05	18.07	≤ 3	3
	8	4	18.01	17.98	17.98		
	8	7	17.98	17.98	17.87		
	15	0	17.90	17.89	17.93		3
	256QAM	1	0	16.11	16.06	16.05	≤ 5
1		7	16.08	16.00	15.99		
1		14	16.04	15.93	15.98		
8		0	15.91	15.99	16.04	≤ 5	5
8		4	15.89	15.87	15.93		
8		7	15.87	15.92	15.92		
15		0	15.87	15.89	15.87		

Table 8.1.8-1.6 LTE Conducted Power

LTE Band 66 (AWS) Conducted Power- 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			131979 (1 710.7 MHz)	132322 (1 745.0 MHz)	132665 (1 779.3 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.06	21.10	21.13	≤ 1	0
	1	2	20.96	20.95	20.95		0
	1	5	20.94	20.90	20.98		
	3	0	19.99	19.93	20.04		
	3	2	19.86	19.89	19.90		
	3	3	19.85	19.83	19.85		
	6	0	19.86	19.86	19.99		1
16QAM	1	0	19.96	19.91	20.01	≤ 1	1
	1	2	19.82	19.90	19.97		
	1	5	19.94	19.87	19.91		
	3	0	19.04	19.01	-18.97		1
	3	2	18.83	18.72	18.85		
	3	3	18.82	18.84	18.84		
	6	0	18.92	18.94	18.87		≤ 2
64QAM	1	0	19.00	19.03	19.09	≤ 2	2
	1	2	18.85	18.90	18.90		
	1	5	18.97	18.97	18.93		
	3	0	17.94	17.98	17.93		2
	3	2	17.93	17.81	17.89		
	3	3	17.87	17.96	17.86		
	6	0	17.88	17.85	17.85		≤ 3
256QAM	1	0	16.08	16.11	16.14	≤ 5	5
	1	2	16.00	15.94	16.02		
	1	5	15.87	15.99	15.96		
	3	0	15.00	14.99	15.05	≤ 5	5
	3	2	14.91	14.87	14.85		
	3	3	14.92	14.91	14.92		
	6	0	15.96	15.96	15.87	≤ 5	5

Table 8.1.8-1.7 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 4	Maximum	24.0
	Nominal	23.0

Table 8.1.9.1 Nominal and Maximum Output Power Spec

9) LTE Band 4

LTE Band 4 (AWS) Conducted Power- 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20175 (1 732.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	22.75	≤ 1	0
	1	50	22.73		
	1	99	22.74		
	50	0	21.71		1
	50	25	21.63		
	50	50	21.62		
16QAM	100	0	21.63	≤ 1	1
	1	0	21.66		
	1	50	21.60		
	1	99	21.64		2
	50	0	20.59		
	50	25	20.57		
64QAM	50	50	20.55	≤ 2	2
	100	0	20.61		
	1	0	20.72		
	1	50	20.55		3
	1	99	20.61		
	50	0	19.55		
256QAM	50	25	19.53	≤ 3	3
	50	50	19.50		
	100	0	19.62		
	1	0	17.91	≤ 5	5
	1	50	17.78		
	1	99	17.75		
256QAM	50	0	17.84		5
	50	25	17.76		
	50	50	17.79		
	100	0	17.64		5

Table 8.1.9.2 LTE Conducted Power

Note: LTE B4 can not contain three non-overlapping channels of 20 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 4 (AWS) Conducted Power- 15 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			20025 (1 717.5 MHz)	20175 (1 732.5 MHz)	20325 (1 747.5 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	22.64	22.71	22.70	≤ 1	0	
	1	36	22.52	22.58	22.63			
	1	74	22.50	22.63	22.68			
	36	0	21.60	21.67	21.58		1	
	36	18	21.49	21.59	21.48			
	36	37	21.53	21.52	21.55			
	75	0	21.61	21.59	21.61			
16QAM	1	0	21.52	21.53	21.60	≤ 1	1	
	1	36	21.48	21.50	21.52			
	1	74	21.51	21.52	21.55			
	36	0	20.53	20.52	20.51		≤ 2	2
	36	18	20.50	20.51	20.48			
	36	37	20.51	20.47	20.50			
	75	0	20.53	20.52	20.54			
64QAM	1	0	20.58	20.69	20.59	≤ 2	2	
	1	36	20.57	20.56	20.54			
	1	74	20.53	20.59	20.49			
	36	0	19.51	19.49	19.52		≤ 3	3
	36	18	19.47	19.48	19.49			
	36	37	19.49	19.47	19.47			
	75	0	19.53	19.51	19.54			
256QAM	1	0	17.81	17.88	17.83	≤ 5	5	
	1	36	17.68	17.76	17.75			
	1	74	17.69	17.66	17.75			
	36	0	17.76	17.69	17.73		≤ 5	5
	36	18	17.59	17.60	17.66			
	36	37	17.71	17.65	17.70			
	75	0	17.61	17.51	17.55			

Table 8.1.9.3 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power- 10 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			20000 (1 715.0 MHz)	20175 (1 732.5 MHz)	20350 (1 750.0 MHz)			
Conducted Power (dBm)								
QPSK	1	0	22.58	22.71	22.61	≤ 1	0	
	1	25	22.51	22.70	22.53			
	1	49	22.53	22.70	22.59			
	25	0	21.56	21.63	21.61		1	
	25	12	21.51	21.46	21.54			
	25	25	21.51	21.51	21.59			
16QAM	50	0	21.59	21.56	21.58	≤ 1	1	
	1	0	21.55	21.65	21.59		1	
	1	25	21.54	21.59	21.53			
	1	49	21.52	21.61	21.58			
	25	0	20.56	20.53	20.58		2	
	25	12	20.53	20.49	20.52			
64QAM	25	25	20.47	20.50	20.48	≤ 2		2
	50	0	20.59	20.59	20.52		2	
	1	0	20.54	20.63	20.65		≤ 2	2
	1	25	20.49	20.54	20.52			
	1	49	20.51	20.59	20.63			
	256QAM	25	0	19.52	19.49		19.50	≤ 3
25		12	19.51	19.47	19.47			
25		25	19.48	19.48	19.46			
50		0	19.46	19.51	19.54	3		
1		0	17.73	17.83	17.65	≤ 5	5	
1		25	17.70	17.78	17.61			
1	49	17.69	17.69	17.57				
256QAM	25	0	17.65	17.82	17.79	≤ 5	5	
	25	12	17.61	17.64	17.68			
	25	25	17.63	17.63	17.74			
	50	0	17.59	17.58	17.61		≤ 5	5

Table 8.1.9.4 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power- 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			19975 (1 712.5 MHz)	20175 (1 732.5 MHz)	20375 (1 752.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.56	22.68	22.70	≤ 1	0
	1	12	22.47	22.59	22.64		
	1	24	22.50	22.64	22.66		
	12	0	21.54	21.61	21.65		1
	12	6	21.49	21.55	21.56		
	12	13	21.49	21.53	21.46		
16QAM	25	0	21.54	21.54	21.55	≤ 1	1
	1	0	21.51	21.52	21.64		1
	1	12	21.50	21.51	21.54		
	1	24	21.49	21.52	21.49		
	12	0	20.51	20.48	20.58		2
	12	6	20.48	20.47	20.53		
12	13	20.49	20.46	20.48	2		
64QAM	25	0	20.53	20.53	20.57	≤ 2	2
	1	0	20.54	20.60	20.63		2
	1	12	20.52	20.53	20.55		
	1	24	20.47	20.57	20.61		
	12	0	19.50	19.49	19.48		3
	12	6	19.46	19.48	19.46		
12	13	19.49	19.46	19.47	3		
256QAM	25	0	19.47	19.50	19.46	≤ 3	3
	1	0	17.71	17.65	17.84		5
	1	12	17.66	17.58	17.76		
	1	24	17.67	17.57	17.70		
	12	0	17.72	17.73	17.74		5
	12	6	17.59	17.70	17.68		
12	13	17.67	17.67	17.63	5		
256QAM	25	0	17.57	17.53	17.54	≤ 5	5

Table 8.1.9.5 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power– 3 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			19965 (1 711.5 MHz)	20175 (1 732.5 MHz)	20385 (1 753.5 MHz)			
Conducted Power (dBm)								
QPSK	1	0	22.58	22.70	22.67	≤ 1	0	
	1	7	22.58	22.68	22.61			
	1	14	22.51	22.63	22.59			
	8	0	21.60	21.64	21.61		1	
	8	4	21.59	21.46	21.54			
	8	7	21.58	21.60	21.52			
	15	0	21.59	21.58	21.59			
16QAM	1	0	21.55	21.62	21.62	≤ 1	1	
	1	7	21.48	21.54	21.59			
	1	14	21.52	21.60	21.52			
	8	0	20.52	20.51	20.55		≤ 2	2
	8	4	20.49	20.46	20.53			
	8	7	20.48	20.47	20.48			
	15	0	20.53	20.58	20.56			
64QAM	1	0	20.59	20.56	20.61	≤ 2	2	
	1	7	20.52	20.52	20.56			
	1	14	20.53	20.55	20.47			
	8	0	19.49	19.49	19.48		≤ 3	3
	8	4	19.47	19.47	19.46			
	8	7	19.46	19.48	19.47			
	15	0	19.50	19.60	19.57			
256QAM	1	0	17.63	17.81	17.85	≤ 5	5	
	1	7	17.60	17.76	17.76			
	1	14	17.62	17.74	17.69			
	8	0	17.73	17.72	17.71		≤ 5	5
	8	4	17.61	17.65	17.64			
	8	7	17.68	17.70	17.66			
	15	0	17.56	17.48	17.53			

Table 8.1.9.6 LTE Conducted Power

TE Band 4 (AWS) Conducted Power- 1.4 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)		
			19957 (1 710.7 MHz)	20175 (1 732.5 MHz)	20393 (1 754.3 MHz)				
			Conducted Power (dBm)						
QPSK	1	0	22.59	22.67	22.70	≤ 1	0		
	1	2	22.52	22.64	22.52				
	1	5	22.50	22.60	22.62				
	3	0	22.49	22.53	22.54				
	3	2	22.48	22.51	22.37		0		
	3	3	22.38	22.47	22.51				
	6	0	21.61	21.60	21.55			1	
16QAM	1	0	21.54	21.60	21.61	≤ 1	1		
	1	2	21.51	21.55	21.58				
	1	5	21.49	21.59	21.56				
	3	0	21.55	21.48	21.46				
	3	2	21.40	21.38	21.43		1		
	3	3	21.39	21.45	21.44				
	6	0	20.57	20.60	20.57			≤ 2	2
64QAM	1	0	20.57	20.71	20.61	≤ 2	2		
	1	2	20.50	20.49	20.58				
	1	5	20.56	20.58	20.58				
	3	0	20.56	20.57	20.59				
	3	2	20.44	20.41	20.51		2		
	3	3	20.40	20.47	20.41				
	6	0	19.51	19.53	19.50			≤ 3	3
256QAM	1	0	17.49	17.76	17.85	≤ 5	5		
	1	2	17.46	17.74	17.63				
	1	5	17.48	17.72	17.71				
	3	0	17.53	17.69	17.69				
	3	2	17.39	17.58	17.46	≤ 5	5		
	3	3	17.28	17.62	17.58				
	6	0	17.58	17.51	17.59			≤ 5	5

Table 8.1.9.7 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 4 (ENDC)	Maximum	22.0
	Nominal	21.0

Table 8.1.9-1.1 Nominal and Maximum Output Power Spec

9-1) LTE Band 4 (ENDC)

LTE Band 4 (AWS) Conducted Power- 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20175 (1 732.5 MHz)		
			Conducted Power (dBm)		
QPSK	1	0	21.38	≤ 1	0
	1	50	21.36		
	1	99	21.34		
	50	0	20.37		1
	50	25	20.26		
	50	50	20.23		
	100	0	20.25		1
16QAM	1	0	20.33	≤ 1	1
	1	50	20.26		
	1	99	20.31		
	50	0	19.24	≤ 2	2
	50	25	19.15		
	50	50	19.14		
	100	0	19.26		
64QAM	1	0	19.41	≤ 2	2
	1	50	19.35		
	1	99	19.28		
	50	0	18.18	≤ 3	3
	50	25	18.15		
	50	50	18.11		
	100	0	18.31		
256QAM	1	0	16.50	≤ 5	5
	1	50	16.39		
	1	99	16.37		
	50	0	16.46	≤ 5	5
	50	25	16.34		
	50	50	16.39		
	100	0	16.28		

Table 8.1.9-1.2 LTE Conducted Power

Note: LTE B4 can not contain three non-overlapping channels of 20 MHz bandwidth.

Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Band 4 (AWS) Conducted Power- 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			20025 (1 717.5 MHz)	20175 (1 732.5 MHz)	20325 (1 747.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	21.29	21.37	21.32	≤ 1	0
	1	36	21.21	21.26	21.27		
	1	74	21.14	21.24	21.32		
	36	0	20.25	20.32	20.25		1
	36	18	20.17	20.23	20.17		
	36	37	20.17	20.15	20.16		
	75	0	20.24	20.17	20.22		
16QAM	1	0	20.20	20.22	20.28	≤ 1	1
	1	36	20.16	20.12	20.20		
	1	74	20.12	20.10	20.14		
	36	0	19.19	19.20	19.12	≤ 2	2
	36	18	19.09	19.15	19.11		
	36	37	19.18	19.13	19.10		
	75	0	19.12	19.18	19.20		
64QAM	1	0	19.21	19.36	19.28	≤ 2	2
	1	36	19.15	19.20	19.15		
	1	74	19.18	19.18	19.15		
	36	0	18.16	18.16	18.16	≤ 3	3
	36	18	18.14	18.15	18.08		
	36	37	18.12	18.09	18.12		
	75	0	18.12	18.20	18.19		
256QAM	1	0	16.43	16.44	16.45	≤ 5	5
	1	36	16.36	16.43	16.40		
	1	74	16.29	16.24	16.41		
	36	0	16.37	16.36	16.33	≤ 5	5
	36	18	16.26	16.22	16.28		
	36	37	16.30	16.27	16.28		
	75	0	16.29	16.18	16.19		

Table 8.1.9-1.3 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power- 10 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			20000 (1 715.0 MHz)	20175 (1 732.5 MHz)	20350 (1 750.0 MHz)			
Conducted Power (dBm)								
QPSK	1	0	21.19	21.35	21.24	≤ 1	0	
	1	25	21.14	21.31	21.21			
	1	49	21.16	21.34	21.23			
	25	0	20.17	20.25	20.25		1	
	25	12	20.14	20.05	20.14			
	25	25	20.11	20.16	20.24			
	50	0	20.20	20.19	20.16			
16QAM	1	0	20.21	20.32	20.26	≤ 1	1	
	1	25	20.13	20.27	20.17			
	1	49	20.20	20.27	20.21			
	25	0	19.17	19.16	19.20		≤ 2	2
	25	12	19.16	19.14	19.14			
	25	25	19.16	19.13	19.09			
	50	0	19.28	19.22	19.20			
64QAM	1	0	19.16	19.25	19.31	≤ 2	2	
	1	25	19.16	19.12	19.17			
	1	49	19.15	19.22	19.26			
	25	0	18.18	18.10	18.13		≤ 3	3
	25	12	18.11	18.08	18.11			
	25	25	18.06	18.07	18.08			
	50	0	18.13	18.12	18.14			
256QAM	1	0	16.35	16.44	16.26	≤ 5	5	
	1	25	16.29	16.43	16.22			
	1	49	16.32	16.35	16.16			
	25	0	16.28	16.40	16.42		≤ 5	5
	25	12	16.21	16.21	16.33			
	25	25	16.25	16.28	16.38			
	50	0	16.20	16.22	16.25			

Table 8.1.9-1.4 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power- 5 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			19975 (1 712.5 MHz)	20175 (1 732.5 MHz)	20375 (1 752.5 MHz)			
Conducted Power (dBm)								
QPSK	1	0	21.25	21.33	21.34	≤ 1	0	
	1	12	21.05	21.22	21.31			
	1	24	21.19	21.22	21.30			
	12	0	20.19	20.30	20.25		1	
	12	6	20.18	20.18	20.16			
	12	13	20.10	20.20	20.15			
	25	0	20.21	20.22	20.18			
16QAM	1	0	20.16	20.19	20.22	≤ 1	1	
	1	12	20.11	20.12	20.17			
	1	24	20.09	20.11	20.11			
	12	0	19.14	19.17	19.21		≤ 2	2
	12	6	19.11	19.07	19.18			
	12	13	19.10	19.15	19.06			
	25	0	19.17	19.20	19.17			
64QAM	1	0	19.20	19.23	19.28	≤ 2	2	
	1	12	19.20	19.14	19.15			
	1	24	19.15	19.19	19.24			
	12	0	18.18	18.13	18.13		≤ 3	3
	12	6	18.06	18.09	18.07			
	12	13	18.07	18.08	18.07			
	25	0	18.06	18.09	18.13			
256QAM	1	0	16.40	16.33	16.50	≤ 5	5	
	1	12	16.24	16.17	16.34			
	1	24	16.36	16.16	16.32			
	12	0	16.35	16.36	16.42		≤ 5	5
	12	6	16.17	16.34	16.35			
	12	13	16.25	16.27	16.26			
	25	0	16.26	16.12	16.16			

Table 8.1.9-1.5 LTE Conducted Power

LTE Band 4 (AWS) Conducted Power- 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			19965 (1 711.5 MHz)	20175 (1 732.5 MHz)	20385 (1 753.5 MHz)		
Conducted Power (dBm)							
QPSK	1	0	21.25	21.37	21.27	≤ 1	0
	1	7	21.17	21.28	21.25		
	1	14	21.13	21.27	21.23		
	8	0	20.26	20.27	20.27		1
	8	4	20.19	20.09	20.12		
	8	7	20.16	20.23	20.16		
	15	0	20.17	20.24	20.21		
16QAM	1	0	20.21	20.27	20.29	≤ 1	1
	1	7	20.16	20.18	20.17		
	1	14	20.21	20.25	20.10		
	8	0	19.21	19.13	19.23	≤ 2	2
	8	4	19.18	19.06	19.13		
	8	7	19.08	19.06	19.17		
	15	0	19.21	19.16	19.20		
64QAM	1	0	19.24	19.20	19.25	≤ 2	2
	1	7	19.10	19.10	19.22		
	1	14	19.18	19.18	19.05		
	8	0	18.10	18.09	18.17	≤ 3	3
	8	4	18.09	18.07	18.13		
	8	7	18.05	18.08	18.10		
	15	0	18.12	18.27	18.19		
256QAM	1	0	16.30	16.45	16.44	≤ 5	5
	1	7	16.18	16.39	16.43		
	1	14	16.29	16.34	16.35		
	8	0	16.36	16.36	16.37	≤ 5	5
	8	4	16.28	16.23	16.26		
	8	7	16.34	16.33	16.27		
	15	0	16.24	16.16	16.18		

Table 8.1.9-1.6 LTE Conducted Power

TE Band 4 (AWS) Conducted Power- 1.4 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)	
			19957 (1 710.7 MHz)	20175 (1 732.5 MHz)	20393 (1 754.3 MHz)			
			Conducted Power (dBm)					
QPSK	1	0	21.28	21.28	21.37	≤ 1	0	
	1	2	21.10	21.25	21.15			
	1	5	21.09	21.24	21.24			
	3	0	21.17	21.21	21.18		0	
	3	2	21.15	21.09	21.05			
	3	3	21.03	21.15	21.15			
	6	0	20.19	20.22	20.13		1	
	16QAM	1	0	20.23	20.29		20.23	≤ 1
1		2	20.12	20.17	20.21			
1		5	20.13	20.27	20.22			
3		0	20.21	20.13	-20.10	1		
3		2	19.99	19.97	20.02			
3		3	19.97	20.06	20.08			
6		0	19.26	19.19	19.21	≤ 2	2	
64QAM		1	0	19.25	19.40	19.30	≤ 2	
	1	2	19.12	19.12	19.27			
	1	5	19.22	19.16	19.26			
	3	0	19.17	19.19	19.20	2		
	3	2	19.02	19.10	19.14			
	3	3	18.99	19.10	19.02			
	6	0	18.18	18.20	18.18	≤ 3		3
	256QAM	1	0	16.17	16.40	16.47		≤ 5
1		2	16.06	16.36	16.29			
1		5	16.11	16.34	16.31			
3		0	16.15	16.30	16.32	≤ 5	5	
3		2	16.05	16.21	16.07			
3		3	15.95	16.19	16.24			
6		0	16.26	16.13	16.28			

Table 8.1.9-1.7 LTE Conducted Power

Band & Mode		Modulated Average[dBm]
LTE Band 25(PCS)	Maximum	24.0
	Nominal	23.0

Table 8.1.10.1 Nominal and Maximum Output Power Spec

10) LTE Band 25 (PCS)

LTE Band 25 (PCS) Conducted Power- 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26140 (1 860.0 MHz)	26365 (1 882.5 MHz)	26590 (1 905.0 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.25	22.31	22.28	≤ 1	0
	1	50	22.13	22.25	22.27		
	1	99	22.02	22.21	22.14		
	50	0	21.37	21.48	21.35		1
	50	25	21.29	21.34	21.26		
	50	50	21.31	21.36	21.17		
	100	0	21.06	21.26	21.15		1
16QAM	1	0	21.10	21.15	21.26	≤ 1	1
	1	50	21.04	21.12	21.08		
	1	99	21.03	21.11	21.21		
	50	0	20.35	20.37	20.23	≤ 2	2
	50	25	20.34	20.27	20.18		
	50	50	20.17	20.32	20.16		
	100	0	20.08	20.26	20.13		2
64QAM	1	0	20.25	20.13	20.19	≤ 2	2
	1	50	20.07	20.11	20.16		
	1	99	20.17	20.08	20.07		
	50	0	19.31	19.36	19.24	≤ 3	3
	50	25	19.23	19.30	19.23		
	50	50	19.24	19.22	19.19		
	100	0	19.12	19.21	19.18		3
256QAM	1	0	17.15	17.36	17.35	≤ 5	5
	1	50	17.12	17.32	17.27		
	1	99	17.09	17.08	17.28		
	50	0	17.39	17.53	17.42	≤ 5	5
	50	25	17.34	17.50	17.40		
	50	50	17.27	17.46	17.30		
	100	0	17.23	17.20	17.27		

Table 8.1.10.2 LTE Conducted Power

LTE Band 25 (PCS) Conducted Power- 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed Per 3GPP(dB)	MPR (dB)
			26115 (1 857.5 MHz)	26365 (1 882.5 MHz)	26615 (1 907.5 MHz)		
			Conducted Power (dBm)				
QPSK	1	0	22.22	22.25	22.28	≤ 1	0
	1	36	22.06	22.19	22.26		
	1	74	22.11	22.23	22.17		
	36	0	21.40	21.45	21.42		1
	36	18	21.23	21.43	21.34		
	36	37	21.34	21.41	21.22		
	75	0	21.20	21.19	21.22		1
16QAM	1	0	21.13	21.18	21.30	≤ 1	1
	1	36	21.10	21.04	21.14		
	1	74	21.12	21.10	21.23		
	36	0	20.41	20.39	20.30	≤ 2	2
	36	18	20.40	20.35	20.20		
	36	37	20.22	20.32	20.11		
	75	0	20.15	20.23	20.15		2
64QAM	1	0	20.28	20.20	20.25	≤ 2	2
	1	36	20.06	20.09	20.11		
	1	74	20.13	20.06	20.19		
	36	0	19.30	19.41	19.27	≤ 3	3
	36	18	19.17	19.33	19.15		
	36	37	19.27	19.30	19.17		
	75	0	19.04	19.11	19.20		3
256QAM	1	0	17.23	17.39	17.42	≤ 5	5
	1	36	17.19	17.26	17.33		
	1	74	17.11	17.08	17.27		
	36	0	17.43	17.61	17.36	≤ 5	5
	36	18	17.24	17.48	17.36		
	36	37	17.28	17.51	17.31		
	75	0	17.37	17.15	17.28		5

Table 8.1.10.3 LTE Conducted Power