

# TEST REPORT

of

FCC Part 2 Subpart J, Part 22 Subpart C/H,  
Part 24 Subpart E, Part 27 Subpart C and Part 90 Subpart S

FCC ID: YZP-GN3000

Equipment Under Test : Telematics Module  
Model Name : LTD-GN3000  
Variant Model Name(s) : -  
Applicant : LG Innotek Co., Ltd.  
Manufacturer : LG Innotek Co., Ltd.  
Date of Receipt : 2024.02.15  
Date of Test(s) : 2024.02.16 ~ 2024.08.28  
Date of Issue : 2024.10.07

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

- 1) The results of this test report are effective only to the items tested.
- 2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.
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- 4) The data marked ※ in this report was provided by the customer and may affect the validity of the test results.

We are responsible for all the information of this test report except for the data(※) provided by the customer.

Tested by:



Dave Kim

Technical  
Manager:



Patrick Kang

**SGS Korea Co., Ltd. Gunpo Laboratory**

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## 1. General Information

### 1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)  
 - 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807  
 - 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807  
 - Designation number: KR0150

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Phone No. : +82 31 688 0901  
 Fax No. : +82 31 688 0921

### 1.2. Details of Applicant

Applicant : LG Innotek Co., Ltd.  
 Address : 30 Magokjungang 10-ro, Gangseo-gu, seoul, Republic Of Korea, 07996  
 Contact Person : Jeong, In-chang  
 Phone No. : +82 10 2326 9972

### 1.3. Details of Manufacturer

Company : Same as applicant  
 Address : Same as applicant  
 Factory1 : PT. LG INNOTEK INDONESIA  
 Factory1 Adress : Bekasi International Industrial Estate, Blok C8 No. 12 & 12A, Desa Cibatu, Cikarang Selatan, Bekasi 17750, Jawa Barat - Indonesia  
 Factory2 : LG Innotek Co., Ltd.  
 Factory2 Adress : 26, Hanamsandan 5beon-ro, Gwangsan-gu, Gwangju, Republic of Korea, 62229

### 1.4. Description of EUT

<b>Kind of Product</b>	Telematics Module
<b>Model Name</b>	LTD-GN3000
<b>Serial Number</b>	Conducted: C1 Radiated: R1
<b>Power Supply</b>	DC 4.00 V
<b>Rated Power</b>	LTE Band 2, 4, 5, 7, 25, 26, 38, 41, 66 : 23 dB m
<b>Frequency Range</b>	LTE Band 2: 1 850 MHz ~ 1 910 MHz LTE Band 4: 1 710 MHz ~ 1 755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2 500 MHz ~ 2 570 MHz LTE Band 25: 1 850 MHz ~ 1 915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2 570 MHz ~ 2 620 MHz LTE Band 41: 2 496 MHz ~ 2 690 MHz LTE Band 66: 1 710 MHz ~ 1 780 MHz
<b>Modulation Technique</b>	QPSK, 16QAM, 64QAM, 256QAM
<b>Antenna Type</b>	Dipole Antenna
<b>Antenna Gain*</b>	Refer to the clause 1.17
<b>H/W Version</b>	A.4
<b>S/W Version</b>	01N_TCM

### 1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Spectrum Analyzer	R&S	FSV30	100955	Mar. 08, 2024	Annual	Mar. 08, 2025
Spectrum Analyzer	R&S	FSW43	100637	Apr. 08, 2024	Annual	Apr. 08, 2025
Spectrum Analyzer	Agilent	N9030A	US51350132	Nov. 27, 2023	Annual	Nov. 27, 2024
Signal Generator	R&S	SMA100B	106887	Oct. 06, 2023	Annual	Oct. 06, 2024
DC Power Supply	R&S	HMP2020	102133	Apr. 23, 2024	Annual	Apr. 23, 2025
Communication test station	Anritsu	MT8000A	6261867312	Apr. 08, 2024	Annual	Apr. 08, 2025
Communication Analyzer	Anritsu	MT8821C	6262192291	Feb. 08, 2024	Annual	Feb. 08, 2025
Temperature Chamber	ESPEC CORP.	PL-2J	15004184	Jun. 03, 2024	Annual	Jun. 03, 2025
BRIDGE COUPLER	MARKI MICROWAVE INC	CBR16-0012	1542	May 13, 2024	Annual	May 13, 2025
Directional Coupler	KRYTAR	152613	140973	Jun. 07, 2024	Annual	Jun. 07, 2025
Power Sensor	Anritsu	MA2411B	1207272	May 29, 2024	Annual	May 29, 2025
Power Sensor	Anritsu	ML2495A	1223004	May 29, 2024	Annual	May 29, 2025
Low Pass Filter	Mini-Circuits	NLP-1200+	V 8979400903-1	May 17, 2024	Annual	May 17, 2025
High Pass Filter	Wainwright Instrument GmbH	WHKX10-900-1000-18000-40SS	7	Feb. 27, 2024	Annual	Feb. 27, 2025
High Pass Filter	Wainwright Instrument GmbH	WHKX3.0/18G-6SS	21	Jun. 07, 2024	Annual	Jun. 07, 2025
High Pass Filter	Wainwright Instrument GmbH	WHNX7.5/26.5G-6SS	11	Oct. 17, 2023	Annual	Oct. 17, 2024
Preamplifier	H.P.	8447F	2944A03909	Aug. 04, 2023	Annual	Aug. 09, 2025
Preamplifier	R&S	SCU 18F	101058	Dec. 07, 2023	Annual	Dec. 07, 2024
Preamplifier	MITEQ Inc.	JS44-18004000-35-8P	1546891	Oct. 06, 2023	Annual	Oct. 06, 2024
Test Receiver	R&S	ESU26	100109	Jan. 16, 2024	Annual	Jan. 16, 2025
Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519	1519-039	Aug. 21, 2023	Biennial	Aug. 21, 2025
Bilog Antenna	Schwarzbeck Mess-Elektronik	VULB9163	9163-437	May 29, 2024	Annual	May 29, 2025
Horn Antenna	R&S	HF906	100326	Feb. 19, 2024	Annual	Feb. 19, 2025
Horn Antenna	Schwarzbeck Mess-Elektronik	BBHA 9170	9170-540	Dec. 05, 2023	Annual	Dec. 05, 2024
Antenna Master	Innco systems GmbH	MA4640-XP-ET	MA4640/536/383 30516/L	N.C.R.	N/A	N.C.R.
Turn Table	Innco systems GmbH	DS 1200S	N/A	N.C.R.	N/A	N.C.R.
Controller	Innco systems GmbH	CONTROLLER CO3000-4P	CO3000/963/383 30516/L	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L x W x H (9.6 m x 6.4 m x 6.6 m)	N/A	N.C.R.	N/A	N.C.R.
Coaxial Cable	RADIALL	TESTPRO 3	182287	Apr. 12, 2024	Semi-Annual	Oct. 12, 2024
Coaxial Cable	RADIALL	TESTPRO 3	182288	Apr. 12, 2024	Semi-Annual	Oct. 12, 2024
Coaxial Cable	RADIALL	TESTPRO 3	182291	Apr. 12, 2024	Semi-Annual	Oct. 12, 2024
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-5 m	TPC2402190004	Apr. 03, 2024	Semi-Annual	Oct. 03, 2024
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-10 m	TPC2402190001	Apr. 03, 2024	Semi-Annual	Oct. 03, 2024

**Note;**

- For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.
- Equipment after the calibration due date was not used for testing.

### 1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 2, 22, 24, 27 and 90		
Section in FCC	Test Item(s)	Result
§22.913(a)(5) §24.232(c) §27.50(d)(4) §27.50(h)(2) §90.635(b)	E.R.P. / E.I.R.P.	Complied
§22.917(a) §24.238(a) §27.53(h)(1) §27.53(m)(4) §90.691(a)	Radiated Spurious Emission	Complied
§2.1046	Conducted Output Power	Complied
§2.1049	Occupied Bandwidth	Complied
§22.913(d) §24.232(d) §27.50(d)(5)	Peak-Average Ratio	Complied
§22.917(a) §24.238(a) §27.53(h)(1) §27.53(m)(4) §90.691(a)	Spurious Emission at Antenna Terminal	Complied
§22.917(a) §24.238(a) §27.53(h)(1) §27.53(m)(4) §90.691(a)	Band Edge and Emission Mask	Complied
§2.1055 §22.355 §24.235 §27.54 §90.213(a)	Frequency Stability	Complied

## 1.7. Sample Calculation for Offset

Where relevant, the following sample calculation is provided:

### 1.7.1. Conducted Test

Offset value (dB) = Directional Coupler (dB) + Cable loss (dB)

### 1.7.2. Radiation test

- E.I.R.P. (dB m) = Measured level (dB $\mu$ V) + Antenna factor (dB/m) + Cable loss (dB) + 20 Log D – 104.8;  
where D is the measurement distance in meters.
- E.R.P. (dB m) = E.I.R.P. (dB m) - 2.15 (dB)

## 1.8. Device Capabilities

This device contains the following capabilities;

LTE Band 2 (1 850 MHz ~ 1 910 MHz) is covered by LTE Band 25 (1 850 MHz ~ 1 915 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth. Therefore test data provided in this report covers LTE Band 2 as well as Band 25.

LTE Band 4 (1 710 MHz ~ 1 755 MHz) is covered by LTE Band 66 (1 710 MHz ~ 1 780 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth. Therefore test data provided in this report covers LTE Band 4 as well as Band 66.

LTE Band 5 (824 MHz ~ 849 MHz) is covered by LTE Band 26 (814 MHz ~ 849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth. Therefore test data provided in this report covers LTE Band 5 as well as Band 26.

## 1.9. Worst Case Configuration and Mode

The worst-case is based on the conducted output power measurement investigation results. All testing was performed using QPSK, 16QAM and 64QAM, 256QAM modulations. However, the spurious radiated emission and spurious at antenna terminal were only performed on bandwidth and RB offset (with RB size 1) with the highest conducted power in QPSK.

The peak to average ratio were tested only 256QAM modulation as worst case.

The radiation test of the EUT was investigated in three orthogonal orientations X, Y, and Z, and the worst case data is reported.

### 1.10. Introduction of Test Data Reuse

This report referenced from the FCC ID: YZP-GN1000.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID.

### 1.11. Difference

Model name	Description
LTD-GN1000	- Reference model - Single modular
LTD-GN3000	- The PCB and component placement are the same, but the filter has been changed.

### 1.12. Reference Detail

Reference applicant that contains the reused reference data in the individual test reports:

Equipment class	Reference FCC ID	Application type	Reference test report number	Exhibit type	Variant test report number	Data reuse
PCB	YZP-GN1000	Original grant	F690501-RF-RTL005195 (LTE)	Test report	F690501-RF-RTL005288-1 (LTE)	All
			F690501-RF-RTL005197 (LTE ULCA)		F690501-RF-RTL005289-1 (LTE ULCA)	
			F690501-RF-RTL005199 (NR FDD)		F690501-RF-RTL005290-1 (NR FDD)	
			F690501-RF-RTL005201 (NR TDD)		F690501-RF-RTL005291-1 (NR TDD)	

### 1.13. Spot Check Data

After confirming through in the band that the performance of the FCC ID: YZP-GN1000 remains representative of FCC ID: YZP-GN1000.

The test data of FCC ID: YZP-GN1000 being submitted for this application to cover LTE features.

Test item	Band	Frequency (MHz)	Limit	Original model	Spot check model	Deviation (dB)
				LTD-GN1000	LTD-GN3000	
				FCC ID: YZP-GN1000	FCC ID: YZP-GN3000	
Conducted Output Power	25/2	1 860.0	2 W E.I.R.P.	23.28 dB m	22.78 dB m	-0.50
	7	2 510.0	2 W E.I.R.P.	23.02 dB m	22.94 dB m	-0.08
	26/5 part 22	831.5	7 W E.R.P.	22.81 dB m	22.94 dB m	0.13
	26 part 90	819.0	100 W E.R.P.	22.87 dB m	22.96 dB m	0.09
	41	2 501.0	2 W E.I.R.P.	22.78 dB m	23.07 dB m	0.29
	66/4	1 745.0	1 W E.I.R.P.	23.63 dB m	23.41 dB m	-0.22
Band edge	25/2	1 905.0	-13 dB m	-16.27 dB m	-16.68 dB m	-0.41
	7	2 510.0	-25 dB m	-30.94 dB m	-31.18 dB m	-0.24
	26/5 part 22	826.5	-13 dB m	-17.66 dB m	-17.69 dB m	-0.03
	26 part 90	814.7	-13 dB m	-20.08 dB m	-23.01 dB m	-2.93
	41	2 503.5	-25 dB m	-26.12 dB m	-26.73 dB m	-0.52
	66/4	1 710.7	-13 dB m	-16.89 dB m	-17.60 dB m	-0.71
Radiated Spurious Emissions	25/2	1 860.0	-13 dB m	-44.14 dB m	-46.67 dB m	-2.53
	7	2 535.0	-13 dB m	Not Detected	Not Detected	-
	26/5 part 22	831.5	-13 dB m	-14.94 dB m	-15.84 dB m	-0.90
	26 part 90	819.0	-13 dB m	-14.98 dB m	-15.38 dB m	-0.40
	41	2 685.0	-25 dB m	-36.51 dB m	-39.47 dB m	-2.96
	66/4	1 745.0	-13 dB m	-42.81 dB m	-44.22 dB m	-1.41



Test item	Band	Frequency (MHz)	Limit	Original model	Spot check model	Deviation (dB)
				LTD-GN1000	LTD-GN3000	
				FCC ID: YZP-GN1000	FCC ID: YZP-GN3000	
Conducted Spurious Emission	25/2	1 860.0	-13 dB m	-18.64 dB m	-17.22 dB m	1.42
	7	2 510.0	-25 dB m	-34.12 dB m	-34.38 dB m	-0.26
	26/5 part 22	831.5	-13 dB m	-18.44 dB m	-18.15 dB m	0.29
	26 part 90	819.0	-13 dB m	-18.80 dB m	-17.78 dB m	1.02
	41	2 501.0	-25 dB m	-35.17 dB m	-34.13 dB m	1.04
	66/4	1 745.0	-13 dB m	-18.36 dB m	-17.92 dB m	0.44
Peak-Average Ratio	25/2	1 882.5	-13 dB	6.99 dB	6.77 dB	-0.22
	7	2 565.0		6.61 dB	6.65 dB	0.04
	26/5 part 22	836.5		7.07 dB	6.35 dB	-0.72
	26 part 90	814.7		7.10 dB	6.45 dB	-0.65
	41	2 503.5		6.84 dB	6.28 dB	-0.56
	66/4	1 745.0		6.93 dB	6.49 dB	-0.44
Test item	Band	Frequency (MHz)	Limit	Original model	Spot check model	Deviation (ppm)
				LTD-GN1000	LTD-GN3000	
				FCC ID: YZP-GN1000	FCC ID: YZP-GN3000	
Stability	25/2	1 882.5	±2.5 ppm	0.004 60 ppm	0.003 86 ppm	-0.000 74
	7	2 535.0		0.002 11 ppm	0.003 68 ppm	0.001 57
	26/5 part 22	836.5		0.007 32 ppm	0.003 53 ppm	-0.003 79
	26 part 90	819.0		0.012 27 ppm	0.008 49 ppm	-0.003 78
	41	2 593.0		0.002 85 ppm	0.002 36 ppm	-0.000 49
	66/4	1 745.0		0.004 46 ppm	0.000 36 ppm	-0.004 10

Test item	Band	Frequency (MHz)	Bandwidth	Original model		Spot check model		Deviation	
				LTD-GN1000		LTD-GN3000		QPSK (MHz)	16QAM (MHz)
				QPSK (MHz)	16QAM (MHz)	QPSK (MHz)	16QAM (MHz)		
Occupied Bandwidth	25/2	1882.5	Lowest Bandwidth	1.088	1.100	1.091	1.097	0.003	-0.003
			Highest Bandwidth	17.982	17.942	17.942	17.942	-0.040	0.000
	7	2 535.0	Lowest Bandwidth	4.496	4.486	4.515	4.515	0.019	0.029
			Highest Bandwidth	17.902	17.942	17.942	17.942	0.040	0.000
	26/5 part 22	836.5	Lowest Bandwidth	1.097	1.088	1.094	1.106	-0.003	0.018
			Highest Bandwidth	13.487	13.516	13.546	13.487	0.059	-0.029
	26 part 90	819.0	Lowest Bandwidth	1.100	1.091	1.094	1.091	-0.006	0.000
			Highest Bandwidth	13.487	13.457	13.487	13.457	0.000	0.000
	41	2 593.0	Lowest Bandwidth	4.515	4.486	4.416	4.505	-0.099	0.019
			Highest Bandwidth	17.902	17.942	17.902	17.942	0.000	0.000
	66/4	1 745.0	Lowest Bandwidth	1.085	1.103	1.091	1.112	0.006	0.009
			Highest Bandwidth	17.822	17.902	17.902	17.902	0.080	0.000

**Note;**

Comparison of two models, upper deviation is within 3 dB range and all test results are under FCC technical limits.

### 1.14. Measurement Configuration

Test Items	Band	Test Channel			Bandwidth (MHz)						Modulation				RB #		
		Low	Mid	High	1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full
Conducted Output Power	7	V	V	V			V	V	V	V	V	V	V	V	V	V	V
	25/2	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
	*26/5 Part22	V	V	V	V	V	V	V	V		V	V	V	V	V	V	V
	26 Part90	V	V	V	V	V	V	V	V		V	V	V	V	V	V	V
	38	V	V	V			V	V	V	V	V	V	V	V	V	V	V
	41	V	V	V			V	V	V	V	V	V	V	V	V	V	V
	66/4	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Frequency Stability	7	-	V	-			V	-	-	-	V	-	-	-	-	-	V
	25/2	-	V	-	-	-	V	-	-	-	V	-	-	-	-	-	V
	*26/5 Part22	-	V	-	-	-	V	-	-		V	-	-	-	-	-	V
	26 Part90	-	V	-	-	-	V	-	-		V	-	-	-	-	-	V
	38	-	V	-			V	-	-	-	V	-	-	-	-	-	V
	41	-	V	-			V	-	-	-	V	-	-	-	-	-	V
	66/4	-	V	-	-	-	V	-	-	-	V	-	-	-	-	-	V
Occupied Bandwidth	7	-	V	-			V	V	V	V	V	V	-	-	-	-	V
	25/2	-	V	-	V	V	V	V	V	V	V	V	-	-	-	-	V
	*26/5 Part22	-	V	-	V	V	V	V	V		V	V	-	-	-	-	V
	26 Part90	-	V	-	V	V	V	V	V		V	V	-	-	-	-	V
	38	-	V	-			V	V	V	V	V	V	-	-	-	-	V
	41	-	V	-			V	V	V	V	V	V	-	-	-	-	V
	66/4	-	V	-	V	V	V	V	V	V	V	V	-	-	-	-	V
Peak-to-Average Ratio	7	V	V	V			V	V	V	V	-	-	-	V	-	-	V
	25/2	V	V	V	V	V	V	V	V	V	-	-	-	V	-	-	V
	*26/5 Part22	V	V	V	V	V	V	V	V		-	-	-	V	-	-	V
	26 Part90	V	V	V	V	V	V	V	V		-	-	-	V	-	-	V
	38	V	V	V			V	V	V	V	-	-	-	V	-	-	V
	41	V	V	V			V	V	V	V	-	-	-	V	-	-	V
	66/4	V	V	V	V	V	V	V	V	V	-	-	-	V	-	-	V

Test Items	Band	Test Channel			Bandwidth (MHz)						Modulation				RB #		
		Low	Mid	High	1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full
Band edge	7	V	-	V			V	V	V	V	V	V	-	-	V	-	V
	25/2	V	-	V	V	V	V	V	V	V	V	V	-	-	V	-	V
	*26/5 Part22	V	-	V	V	V	V	V	V		V	V	-	-	V	-	V
	26 Part90	V	-	V	V	V	V	V	V		V	V	-	-	V	-	V
	38	V	-	V			V	V	V	V	V	V	-	-	V	-	V
	41	V	-	V			V	V	V	V	V	V	-	-	V	-	V
	66/4	V	-	V	V	V	V	V	V	V	V	V	-	-	V	-	V
Spurious at antenna terminal & Radiated Spurious Emission	7	V	V	V	worst case												
	25/2	V	V	V	worst case												
	*26/5 Part22	V	V	V	worst case												
	26 Part90	V	V	V	worst case												
	38	V	V	V	worst case												
	41	V	V	V	worst case												
	66/4	V	V	V	worst case												

\*B5 is not supported 15M bandwidth

### 1.15. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty	
Conducted Output Power	0.33 dB	
Occupied Bandwidth	0.05 MHz	
Conducted Spurious Emissions	0.99 dB	
Peak to Average Ratio	0.66 dB	
Frequency Stability	116 Hz	
Radiated Emission, 9 kHz to 30 MHz	H	3.60 dB
	V	3.60 dB
Radiated Emission, below 1 GHz	H	4.60 dB
	V	4.90 dB
Radiated Emission, above 1 GHz	H	3.90 dB
	V	3.80 dB

All measurement uncertainty values are shown with a coverage factor of  $k=2$  to indicate a 95 % level of confidence.

### 1.16. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL005288	2024.08.20	Initial
1	F690501-RF-RTL005288-1	2024.10.07	Software version information changed

### 1.17. Antenna Designation

Ant. Type	Ant. No	Support Band	
		LTE	NR
Dipole Antenna	Ant.1	2, 4, 5, 7, 25, 26, 38, 41, 66	2, 5, 7, 25, 26, 38, 41, 66
	Ant.2		77, 78

Band	Operating Frequency (MHz)	Antenna Peak Gain (dB i)	
		Ant. 1	Ant. 2
LTE 25/2 NR 25/2 GSM 1 900	1 850 ~ 1 915	1.90	
LTE 66/4 NR 66	1 710 ~ 1 780	4.20	
LTE 26/5 NR 26/5 WCDMA V GSM 850	824 ~ 849	1.99	
LTE 26 NR 26	814 ~ 824	0.72	
LTE 7 NR 7	2 500 ~ 2 570	4.43	
LTE 38 NR 38	2 570 ~ 2 620	3.35	
LTE 41 NR 41	2 496 ~ 2 690	4.43	
NR 77	3 450 ~ 3 550		4.69
	3 700 ~ 3 980		4.90
NR 78	3 450 ~ 3 550		4.69
	3 700 ~ 3 800		4.90

### 1.18. Emission Designator and Max Power

Band	Band width (MHz)	Modulation	Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.R.P. / E.I.R.P. Average (dB m)	E.R.P. / E.I.R.P. Average (W)	Emission Designator
7	5	QPSK	2 502.5	2 567.5	22.98	4.43	27.41	0.551	4M50G7D
		16QAM			22.06		26.49	0.446	4M49D7D
	10	QPSK	2 505.0	2 565.0	22.93		27.36	0.545	8M95G7D
		16QAM			22.45		26.88	0.488	8M95D7D
	15	QPSK	2 507.5	2 562.5	22.96		27.39	0.548	13M5G7D
		16QAM			22.25		26.68	0.466	13M5D7D
	20	QPSK	2 510.0	2 560.0	23.02		27.45	0.556	17M9G7D
		16QAM			21.93		26.36	0.433	17M9D7D
25/2	1.4	QPSK	1 850.7	1 914.3	23.24	1.90	25.14	0.327	1M09G7D
		16QAM			22.56		24.46	0.279	1M10D7D
	3	QPSK	1 851.5	1 913.5	23.15		25.05	0.320	2M68G7D
		16QAM			22.56		24.46	0.279	2M69D7D
	5	QPSK	1 852.5	1 912.5	23.22		25.12	0.325	4M51G7D
		16QAM			22.38		24.28	0.268	4M51D7D
	10	QPSK	1 855.0	1 910.0	23.19		25.09	0.323	8M95G7D
		16QAM			22.67		24.57	0.286	8M95D7D
	15	QPSK	1 857.5	1 907.5	23.27		25.17	0.329	13M5G7D
		16QAM			22.28		24.18	0.262	13M5D7D
	20	QPSK	1 860.0	1 905.0	23.28		25.18	0.330	18M0G7D
		16QAM			22.28		24.18	0.262	17M9D7D
26/5 Part 22	1.4	QPSK	824.7	848.3	22.69	1.99	21.26	0.134	1M10G7D
		16QAM			21.87		20.44	0.111	1M09D7D
	3	QPSK	825.5	847.5	22.78		21.35	0.136	2M70G7D
		16QAM			22.20		20.77	0.119	2M69D7D
	5	QPSK	826.5	846.5	22.69		21.26	0.134	4M52G7D
		16QAM			22.27		20.84	0.121	4M50D7D
	10	QPSK	829.0	844.0	22.80		21.37	0.137	8M95G7D
		16QAM			21.94		20.51	0.112	8M95D7D
26 Part 22	15	QPSK	831.5	841.5	22.81	21.38	0.137	13M5G7D	
		16QAM			21.95	20.52	0.113	13M5D7D	

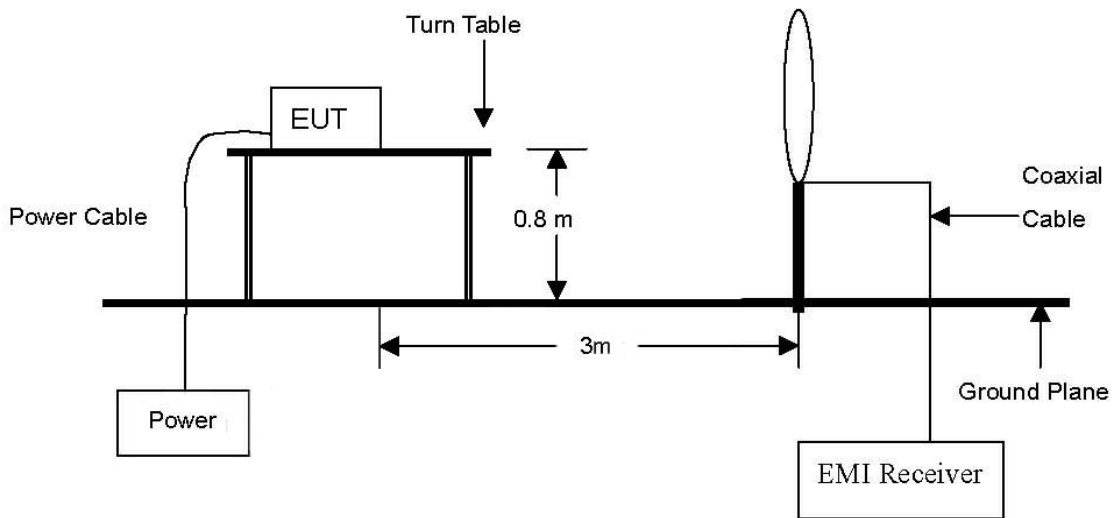
Band	Band width (MHz)	Modulation	Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.R.P. / E.I.R.P. Average (dB m)	E.R.P. / E.I.R.P. Average (W)	Emission Designator		
26 Part 90	1.4	QPSK	814.7	823.3	22.52	0.72	21.09	0.129	1M10G7D		
		16QAM			21.91		20.48	0.112	1M09D7D		
	3	QPSK	815.5	822.5	22.57		21.14	0.130	2M68G7D		
		16QAM			21.88		20.45	0.111	2M69D7D		
	5	QPSK	816.5	821.5	22.73		21.30	0.135	4M50G7D		
		16QAM			21.84		20.41	0.110	4M51D7D		
	10	QPSK	819.0		22.87		21.44	0.139	8M91G7D		
		16QAM	819.0		22.07		20.64	0.116	8M93D7D		
	15	QPSK	821.5		22.70		21.27	0.134	13M5G7D		
		16QAM	821.5		21.79		20.69	0.117	13M5D7D		
	38	5	QPSK	2 572.5	2 617.5		22.98	3.35	26.33	0.430	4M48G7D
			16QAM				22.28		25.63	0.366	4M50D7D
10		QPSK	2 575.0	2 615.0	22.85	26.20	0.417		8M91G7D		
		16QAM			22.07	25.42	0.348		8M93D7D		
15		QPSK	2 577.5	2 612.5	22.96	26.31	0.428		13M5G7D		
		16QAM			22.14	25.49	0.354		13M5D7D		
20		QPSK	2 580.0	2 610.0	22.93	26.28	0.425		17M9G7D		
		16QAM			22.23	25.58	0.361		17M9D7D		
41		5	QPSK	2 498.5	2 687.5	22.74	4.43		27.17	0.521	4M52G7D
			16QAM			21.83			26.26	0.423	4M49D7D
	10	QPSK	2 501.0	2 685.0	22.78	27.21		0.526	8M97G7D		
		16QAM			22.00	26.43		0.440	8M91D7D		
	15	QPSK	2 503.5	2 682.5	22.72	27.15		0.519	13M5G7D		
		16QAM			21.76	26.19		0.416	13M5D7D		
	20	QPSK	2 506.0	2 680.0	22.72	27.15		0.519	17M9G7D		
		16QAM			21.88	26.31		0.428	17M9D7D		
	66/4	1.4	QPSK	1 710.7	1 779.3	23.16		4.20	27.36	0.545	1M09G7D
			16QAM			22.33			26.53	0.450	1M10D7D
3		QPSK	1 711.5	1 778.5	23.05	27.25	0.531		2M67G7D		
		16QAM			22.35	26.55	0.452		2M69D7D		
5		QPSK	1 712.5	1 777.5	23.23	27.43	0.553		4M50G7D		
		16QAM			22.36	26.56	0.453		4M50D7D		
10		QPSK	1 715.0	1 775.0	23.17	27.37	0.546		8M95G7D		
		16QAM			22.58	26.78	0.476		8M91D7D		
15		QPSK	1 717.5	1 772.5	23.37	27.57	0.571		13M5G7D		
		16QAM			22.56	26.76	0.474		13M5D7D		
20		QPSK	1 720.0	1 770.0	23.63	27.83	0.607		17M8G7D		
		16QAM			22.59	26.79	0.478		17M9D7D		



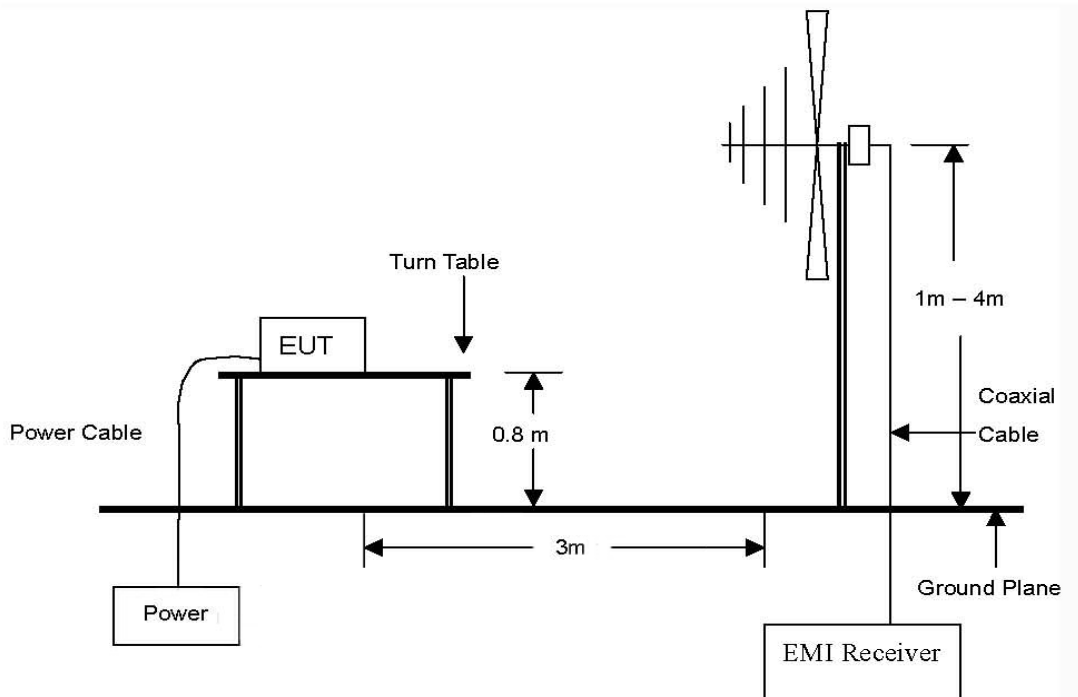
## 2. E.R.P. / E.I.R.P. & Radiated Spurious Emissions

### 2.1. Test setup

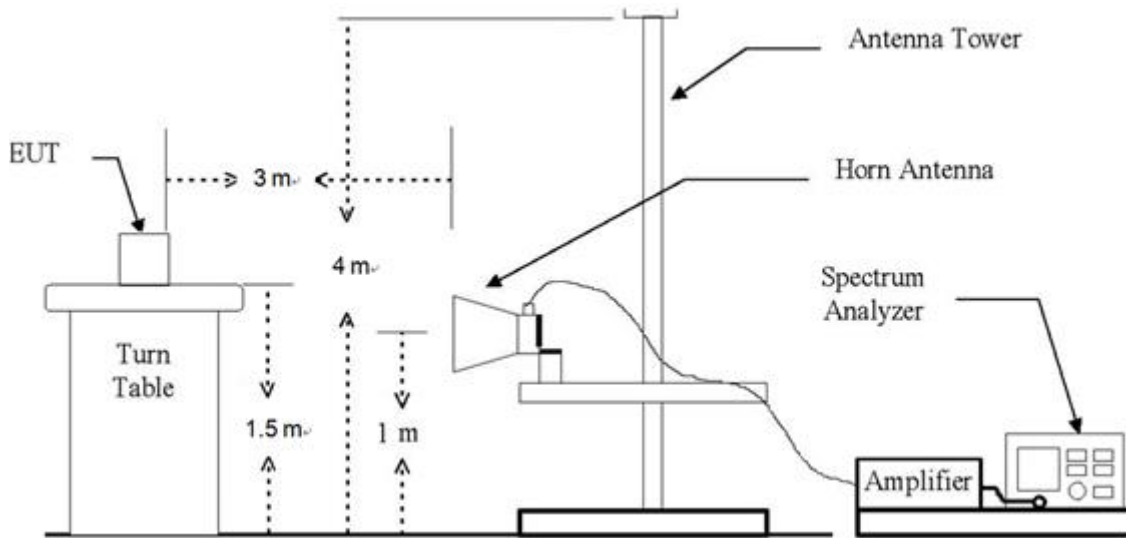
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 1 GHz to 27 GHz Emissions.



## 2.2. Limit

### 2.2.1. Limit of E.R.P. / E.I.R.P.

- §22.913(a)(5), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.
- §24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.
- §27.50(d)(4), fixed, mobile, and portable (hand-held) stations operating in the 1 710-1 755 MHz band and mobile and portable stations operating in the 1 695-1 710 MHz and 1 755-1 780 MHz bands are limited to 1 watt EIRP.
- §27.50(h)(2), Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.
- §90.635(b), the maximum output power of the transmitter for mobile stations is 100 watts (20 dBW).

### 2.2.2. Limit of Spurious Radiated Emission

- §22.917(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10\log(P)$  dB.
- §24.238(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.
- §27.53(h)(1), for operations in the 1 695-1 710 MHz, 1 710-1 755 MHz, 1 755-1 780 MHz, 1 915-1 920 MHz, 1 995-2 000 MHz, 2 000-2 020 MHz, 2 110-2 155 MHz, 2 155-2 180 MHz, and 2 180-2 200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10} (P)$  dB.
- §27.53(m)(4), for mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log_{10} (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log_{10} (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log_{10} (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that  $43 + 10 \log_{10} (P)$  dB on all frequencies between 2 490.5 MHz and 2 496 MHz and  $55 + 10 \log_{10} (P)$  dB at or below 2 490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2 495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.
- §90.691(a), out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
  - (1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $116 \text{ Log}_{10} (f / 6.1)$  decibels or  $50 + 10 \text{ Log}_{10} (P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
  - (2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \text{ Log}_{10} (P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

## 2.3. Test Procedure

### 2.3.1. E.R.P. or E.I.R.P. from conducted RF output power

According to subclause 5.2.5.5 of ANSI C63.26-2015 E.R.P. and E.I.R.P. are defined as the product of the power supplied to the antenna and its gain.

The relevant equation for determining the E.R.P. or E.I.R.P. from the conducted RF output power measured using the guidance provided above is:

$$\text{E.R.P. or E.I.R.P.} = P_{\text{Meas}} + G_{\text{T}}$$

where:

E.R.P. or E.I.R.P. = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

$P_{\text{Meas}}$  = measured transmitter output power or PSD, in dBm or dBW;

$G_{\text{T}}$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

### 2.3.2. Radiated Spurious Emissions

The test based on ANSI/TIA 603E: 2016 and ANSI C63.26-2015 and KDB 971168 D01 Power Meas License Digital Systems v03r01.

1. On a test site, the EUT shall be placed at 0.8 m or 1.5 m height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
4. Radiated spurious emissions measurement method was set as follows:  
RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz, VBW  $\geq$  3 x RBW,  
Detector = RMS, trace mode = max hold, per the guidelines of KDB 971168 D01 Power Meas License Digital Systems v03r01.
5. The transmitter shall be switched on, the measuring receiver shall be tuned to the frequency of the transmitter under test.
6. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
7. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
8. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
9. The maximum signal level detected by the measuring receiver shall be noted.
10. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
11. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
12. The measurement shall be repeated with the test antenna orientated for horizontal polarization.

## 2.4. Test results

Ambient temperature : (23 ± 1) °C  
 Relative humidity : 47 % R.H.

### 2.4.1. E.R.P. / E.I.R.P.

Band	Frequency (MHz)	Maximum Conducted Power (dB m)	Maximum Conducted Power (W)	Antenna Gain (dB i)	Maximum E.I.R.P. (dB m)	Maximum E.I.R.P. (W)	Maximum E.R.P. (dB m)	Maximum E.R.P. (W)	Limit
7	2 500 ~ 2 570	23.02	0.200	4.43	27.45	0.556			2 W E.I.R.P.
25/2	1 850 ~ 1 915	23.28	0.213	1.90	25.18	0.330			2 W E.I.R.P.
26/5 Part 22	824 ~ 849	22.81	0.191	1.99	24.80	0.302	22.65	0.184	7 W E.R.P.
26 Part 90	814 ~ 824	22.87	0.194	0.72	23.59	0.229	21.44	0.139	100 W
38	2 570 ~ 2 620	22.98	0.199	3.35	26.33	0.430			2 W E.I.R.P.
41	2 496 ~ 2 690	22.78	0.190	4.43	27.21	0.526			2 W E.I.R.P.
66/4	1 710 ~ 1 780	23.63	0.231	4.20	27.83	0.607			1 W E.I.R.P.

**Remark;**

1. E.I.R.P. (dB m) = Maximum Conducted Power (dB m) + Antenna Gain (dB i)
2. E.R.P. (dB m) = E.I.R.P. (dB m) - 2.15 (dB); where E.R.P. and E.I.R.P. are expressed in consistent units.

**2.4.2. Radiated spurious emissions**

**LTE band 7 (20 MHz - QPSK)**

Frequency (MHz)	Measured Level (dB $\mu$ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB $\mu$ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 510.0 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (2 535.0 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
High Channel (2 560.0 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

**LTE band 25/2 (20 MHz - QPSK)**

Frequency (MHz)	Measured Level (dB $\mu$ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB $\mu$ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 860.0 MHz)									
5 606.73	44.40	H	34.10	-27.38	51.12	-95.26	<b>-44.14</b>	-13	31.14
5 606.51	43.75	V	34.10	-27.41	50.44	-95.26	-44.82	-13	31.82
Above 5 700.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (1 882.5 MHz)									
5 674.10	42.07	H	34.10	-28.86	47.31	-95.26	-47.95	-13	34.95
5 674.14	42.42	V	34.10	-28.86	47.66	-95.26	-47.60	-13	34.60
Above 5 700.00	Not detected	-	-	-	-	-	-	-	-
High Channel (1 905.0 MHz)									
5 741.61	38.40	H	34.18	-28.25	44.33	-95.26	-50.93	-13	37.93
5 741.82	41.03	V	34.18	-28.24	46.97	-95.26	-48.29	-13	35.29
Above 5 800.00	Not detected	-	-	-	-	-	-	-	-



**LTE band 26/5 Part 22 (15 MHz - QPSK)**

Frequency (MHz)	Measured Level (dB $\mu$ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB $\mu$ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (831.5 MHz)									
1 649.77	58.58	H	25.80	-37.15	47.23	-97.41	-50.18	-13	37.18
1 649.66	51.38	V	25.80	-37.15	40.03	-97.41	-57.38	-13	44.38
2 474.65	87.76	H	28.30	-33.59	82.47	-97.41	<b>-14.94</b>	-13	1.94
2 474.47	80.02	V	28.30	-33.60	74.72	-97.41	-22.69	-13	9.69
3 299.47	53.67	H	31.00	-33.72	50.95	-97.41	-46.46	-13	33.46
3 299.39	48.97	V	31.00	-33.72	46.25	-97.41	-51.16	-13	38.16
4 124.36	65.75	H	32.10	-30.51	67.34	-97.41	-30.07	-13	17.07
4 124.15	62.79	V	32.10	-30.50	64.39	-97.41	-33.02	-13	20.02
5 773.91	53.15	H	34.25	-29.88	57.52	-97.41	-39.89	-13	26.89
5 773.74	53.56	V	34.25	-29.87	57.94	-97.41	-39.47	-13	26.47
7 423.56	43.51	H	36.25	-28.84	50.92	-97.41	-46.49	-13	33.49
7 423.66	41.17	V	36.25	-28.85	48.57	-97.41	-48.84	-13	35.84
Above 7 500.00	Not detected	-	-	-	-	-	-	-	-
High Channel (841.5 MHz)									
1 669.72	57.35	H	26.15	-36.86	46.64	-97.41	-50.77	-13	37.77
1 669.56	51.66	V	26.15	-36.86	40.95	-97.41	-56.46	-13	43.46
2 504.62	77.56	H	28.42	-35.02	70.96	-97.41	-26.45	-13	13.45
2 504.44	73.70	V	28.42	-35.02	67.10	-97.41	-30.31	-13	17.31
3 339.14	49.68	H	31.00	-33.76	46.92	-97.41	-50.49	-13	37.49
3 339.23	47.93	V	31.00	-33.76	45.17	-97.41	-52.24	-13	39.24
4 174.06	63.29	H	32.10	-32.24	63.15	-97.41	-34.26	-13	21.26
4 174.34	61.50	V	32.10	-32.25	61.35	-97.41	-36.06	-13	23.06
5 843.87	50.21	H	34.39	-29.90	54.70	-97.41	-42.71	-13	29.71
5 843.90	52.56	V	34.39	-29.90	57.05	-97.41	-40.36	-13	27.36
7 513.30	42.24	H	36.07	-28.54	49.77	-97.41	-47.65	-13	34.65
7 513.32	39.42	V	36.07	-28.54	46.95	-97.41	-50.46	-13	37.46
Above 7 600.00	Not detected	-	-	-	-	-	-	-	-

**LTE band 26\_Part 90 (10 MHz - QPSK)**

Frequency (MHz)	Measured Level (dB $\mu$ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB $\mu$ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Middle Channel (819.0 MHz)									
1 629.14	57.24	H	25.63	-37.05	45.82	-97.41	-51.59	-13	38.59
1 629.09	55.22	V	25.63	-37.05	43.80	-97.41	-53.61	-13	40.61
2 443.82	89.10	H	28.19	-34.86	82.43	-97.41	<b>-14.98</b>	-13	1.98
2 443.80	66.16	V	28.19	-34.86	59.49	-97.41	-37.93	-13	24.93
3 258.23	52.99	H	30.83	-33.64	50.18	-97.41	-47.23	-13	34.23
3 258.38	48.00	V	30.83	-33.65	45.18	-97.41	-52.23	-13	39.23
4 072.76	63.19	H	32.10	-32.46	62.83	-97.41	-34.58	-13	21.58
4 073.05	64.88	V	32.10	-32.47	64.51	-97.41	-32.90	-13	19.90
5 702.38	54.15	H	34.10	-29.04	59.21	-97.41	-38.20	-13	25.20
5 702.05	53.22	V	34.10	-29.03	58.29	-97.41	-39.12	-13	26.12
7 331.51	46.51	H	36.16	-28.06	54.61	-97.41	-42.80	-13	29.80
7 331.18	43.09	V	36.16	-28.06	51.19	-97.41	-46.22	-13	33.22
Above 7 400.00	Not detected	-	-	-	-	-	-	-	-

**LTE band 38 (5 MHz – QPSK)**

Frequency (MHz)	Measured Level (dB $\mu$ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB $\mu$ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 572.5 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (2 595.0 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
High Channel (2 617.5 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

**LTE band 41 (10 MHz – QPSK)**

Frequency (MHz)	Measured Level (dB $\mu$ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB $\mu$ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 501.0 MHz)									
7 489.89	43.55	H	36.12	-27.56	52.11	-95.26	-43.15	-25	18.15
7 489.86	48.68	V	36.12	-27.56	57.24	-95.26	-38.02	-25	13.02
Above 7 500.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (2 593.0 MHz)									
7 765.73	39.93	H	36.00	-26.72	49.21	-95.26	-46.05	-25	21.05
7 765.86	46.45	V	36.00	-26.71	55.74	-95.26	-39.52	-25	14.52
Above 7 800.00	Not detected	-	-	-	-	-	-	-	-
High Channel (2 685.0 MHz)									
8 041.81	41.02	H	36.20	-26.11	51.11	-95.26	-44.15	-25	19.15
8 041.72	48.84	V	36.20	-26.12	58.92	-95.26	<b>-36.34</b>	-25	11.34
Above 8 100.00	Not detected	-	-	-	-	-	-	-	-

**LTE band 66/4 (20 MHz - QPSK)**

Frequency (MHz)	Measured Level (dB $\mu$ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB $\mu$ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 720.0 MHz)									
5 133.36	40.82	H	33.57	-29.87	44.52	-95.26	-50.74	-13	37.74
5 133.35	40.21	V	33.57	-29.87	43.91	-95.26	-51.35	-13	38.35
8 559.85	33.01	H	36.52	-26.82	42.71	-95.26	-52.55	-13	39.55
8 555.49	36.30	V	36.51	-26.58	46.23	-95.26	-49.03	-13	36.03
Above 8 600.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (1 745.0 MHz)									
5 208.26	39.60	H	33.72	-30.01	43.31	-95.26	-51.96	-13	38.96
5 208.33	41.61	V	33.72	-30.01	45.32	-95.26	-49.94	-13	36.94
8 678.47	33.80	H	36.66	-27.03	43.43	-95.26	-51.83	-13	38.83
8 680.37	42.60	V	36.66	-27.06	52.20	-95.26	-43.07	-13	30.07
Above 8 700.00	Not detected	-	-	-	-	-	-	-	-
High Channel (1 770.0 MHz)									
5 283.23	43.39	H	33.93	-29.06	48.26	-95.26	-47.00	-13	34.00
5 283.43	44.69	V	33.93	-29.06	49.56	-95.26	-45.70	-13	32.70
8 805.43	34.29	H	37.01	-26.95	44.35	-95.26	-50.91	-13	37.91
8 805.42	42.39	V	37.01	-26.95	52.45	-95.26	<b>-42.81</b>	-13	29.81
Above 8 900.00	Not detected	-	-	-	-	-	-	-	-

**Remark;**

1. AF = Antenna Factor, CL = Cable Loss, CF = Conversion Factor.
2. E (dB $\mu$ V/m) = Measured Level (dB $\mu$ V) + Antenna Factor (dB/m) + AMP (dB) + Cable Loss (dB).
3. E.I.R.P. (dB m) = E (dB $\mu$ V/m) + CF (dB).
4. E.R.P. (dB m) = E (dB $\mu$ V/m) + CF (dB) - 2.15 (dB); where E.R.P. and E.I.R.P. are expressed in consistent units.
5. CF (dB) = 20 log D - 104.8; where D is the measurement distance in meters, According to KDB 971168 D01 v03r01 5.8.4.
6. The frequency spectrum is examined from 9 kHz to the 10<sup>th</sup> harmonic of the fundamental frequency of the transmitter. No other spurious and harmonic emissions were reported greater than listed emissions above table.

### 3. Conducted Output Power

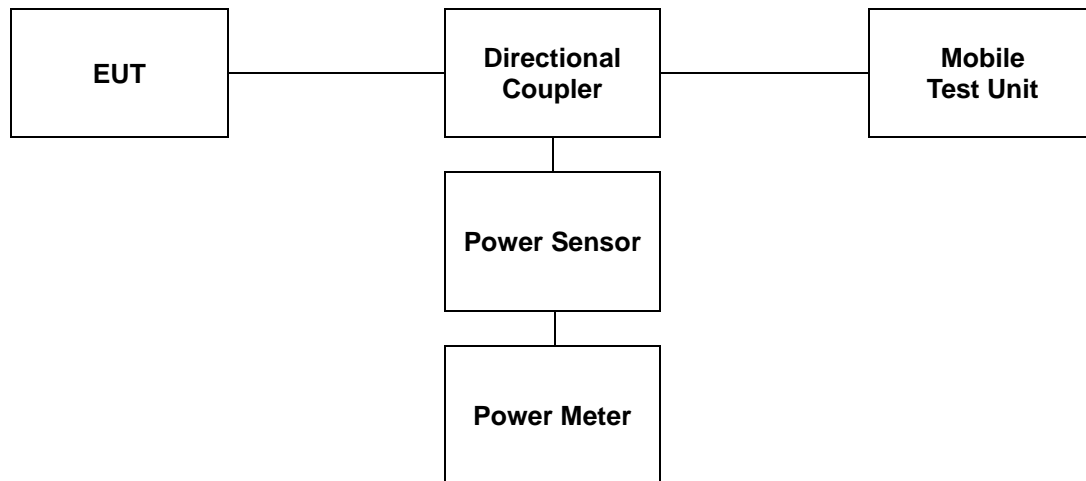
#### 3.1. Limit

CFR 47, Section FCC §2.1046

#### 3.2. Test Procedure

Output power shall be measured at the RF output terminals for all configurations.

1. The RF output of the transmitter was connected to the input of the mobile test unit in order to establish communication with the EUT.
2. The EUT was set up for the max. output power with pseudo random data modulation by using mobile test unit parameters.
3. The measurement performed using a wideband RF power meter.
4. This EUT was tested under all configurations and the highest power was investigated and reported.



### 3.3. Test Result

Ambient temperature : (23 ± 1) °C  
 Relative humidity : 47 % R.H.

LTE Band 7									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				20775 (2 502.5 MHz)		21100 (2 535.0 MHz)		21425 (2 567.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	22.56	0.180	22.61	0.182	22.40	0.174
		1	12	22.45	0.176	<b>22.98</b>	<b>0.199</b>	22.37	0.173
		1	24	22.58	0.181	22.59	0.182	22.33	0.171
		12	0	21.66	0.147	21.56	0.143	21.46	0.140
		12	6	21.65	0.146	21.62	0.145	21.66	0.147
		12	13	21.24	0.133	21.71	0.148	21.43	0.139
		25	0	21.66	0.147	21.67	0.147	21.39	0.138
	16QAM	1	0	22.03	0.160	21.75	0.150	21.58	0.144
		1	12	21.64	0.146	21.91	0.155	21.63	0.146
		1	24	<b>22.06</b>	<b>0.161</b>	21.71	0.148	21.61	0.145
		12	0	20.68	0.117	20.59	0.115	20.34	0.108
		12	6	20.89	0.123	20.76	0.119	20.56	0.114
		12	13	20.51	0.112	20.59	0.115	20.49	0.112
	64QAM	25	0	20.60	0.115	20.68	0.117	20.66	0.116
		1	0	20.65	0.116	20.72	0.118	20.40	0.110
		1	12	20.76	0.119	20.61	0.115	20.33	0.108
		1	24	20.71	0.118	<b>20.79</b>	<b>0.120</b>	20.46	0.111
		12	0	19.59	0.091	19.52	0.090	19.86	0.097
		12	6	19.54	0.090	19.53	0.090	19.93	0.098
	256QAM	12	13	19.41	0.087	19.56	0.090	20.11	0.103
		25	0	19.48	0.089	19.51	0.089	19.85	0.097
		1	0	17.53	0.057	17.69	0.059	17.58	0.057
		1	12	17.64	0.058	<b>17.78</b>	<b>0.060</b>	17.62	0.058
		1	24	17.54	0.057	17.69	0.059	17.49	0.056
		12	0	17.57	0.057	17.66	0.058	17.65	0.058
		12	6	17.65	0.058	17.61	0.058	17.39	0.055
		12	13	17.57	0.057	17.60	0.058	17.63	0.058
		25	0	17.58	0.057	17.54	0.057	17.59	0.057

LTE Band 7									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				20800 (2 505.0 MHz)		21100 (2 535.0 MHz)		21400 (2 565.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	22.50	0.178	22.68	0.185	22.52	0.179
		1	25	22.40	0.174	22.71	0.187	22.34	0.171
		1	49	22.45	0.176	<b>22.93</b>	<b>0.196</b>	22.88	0.194
		25	0	21.52	0.142	21.61	0.145	21.52	0.142
		25	12	21.56	0.143	21.56	0.143	21.58	0.144
		25	25	21.48	0.141	21.65	0.146	21.60	0.145
		50	0	21.69	0.148	21.59	0.144	21.54	0.143
	16QAM	1	0	22.02	0.159	21.75	0.150	21.53	0.142
		1	25	<b>22.45</b>	<b>0.176</b>	21.78	0.151	21.78	0.151
		1	49	21.60	0.145	22.05	0.160	21.59	0.144
		25	0	20.76	0.119	20.60	0.115	20.59	0.115
		25	12	20.65	0.116	20.68	0.117	20.58	0.114
		25	25	20.68	0.117	20.71	0.118	20.56	0.114
		50	0	20.67	0.117	20.71	0.118	20.60	0.115
	64QAM	1	0	20.53	0.113	20.60	0.115	20.62	0.115
		1	25	20.63	0.116	<b>20.69</b>	<b>0.117</b>	20.40	0.110
		1	49	20.65	0.116	20.65	0.116	20.53	0.113
		25	0	19.72	0.094	19.53	0.090	19.44	0.088
		25	12	19.87	0.097	19.58	0.091	19.40	0.087
		25	25	19.79	0.095	19.56	0.090	19.39	0.087
		50	0	19.55	0.090	19.43	0.088	19.45	0.088
	256QAM	1	0	<b>18.04</b>	<b>0.064</b>	17.82	0.061	17.77	0.060
		1	25	17.87	0.061	17.88	0.061	17.43	0.055
		1	49	17.65	0.058	17.71	0.059	17.60	0.058
		25	0	17.75	0.060	17.75	0.060	17.62	0.058
		25	12	17.67	0.058	17.74	0.059	17.56	0.057
		25	25	17.71	0.059	17.75	0.060	17.59	0.057
		50	0	17.74	0.059	17.74	0.059	17.65	0.058



LTE Band 7									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				20825 (2 507.5 MHz)		21100 (2 535.0 MHz)		21375 (2 562.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
15	QPSK	1	0	22.51	0.178	<b>22.96</b>	<b>0.198</b>	22.62	0.183
		1	36	22.50	0.178	22.62	0.183	22.67	0.185
		1	74	22.43	0.175	22.67	0.185	22.39	0.173
		36	0	21.68	0.147	21.56	0.143	21.57	0.144
		36	18	21.66	0.147	21.60	0.145	21.61	0.145
		36	37	21.74	0.149	21.67	0.147	21.37	0.137
		75	0	21.69	0.148	21.63	0.146	21.55	0.143
	16QAM	1	0	21.97	0.157	21.75	0.150	21.59	0.144
		1	36	<b>22.25</b>	<b>0.168</b>	21.90	0.155	21.57	0.144
		1	74	21.84	0.153	22.13	0.163	21.58	0.144
		36	0	20.84	0.121	20.71	0.118	20.55	0.114
		36	18	20.89	0.123	20.69	0.117	20.53	0.113
		36	37	20.78	0.120	20.61	0.115	20.45	0.111
	64QAM	75	0	20.60	0.115	20.67	0.117	20.54	0.113
		1	0	20.67	0.117	20.63	0.116	20.60	0.115
		1	36	20.58	0.114	<b>20.96</b>	<b>0.125</b>	20.36	0.109
		1	74	20.51	0.112	20.76	0.119	20.21	0.105
		36	0	19.61	0.091	19.41	0.087	19.41	0.087
		36	18	19.69	0.093	19.56	0.090	19.42	0.087
		36	37	19.66	0.092	19.61	0.091	19.22	0.084
	256QAM	75	0	19.35	0.086	19.50	0.089	19.32	0.086
		1	0	17.79	0.060	17.78	0.060	17.71	0.059
		1	36	17.80	0.060	17.83	0.061	17.46	0.056
		1	74	17.69	0.059	<b>17.86</b>	<b>0.061</b>	17.30	0.054
36		0	17.68	0.059	17.71	0.059	17.58	0.057	
36		18	17.65	0.058	17.61	0.058	17.51	0.056	
36		37	17.48	0.056	17.57	0.057	17.37	0.055	
75		0	17.63	0.058	17.72	0.059	17.51	0.056	

LTE Band 7									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				20850 (2 510.0 MHz)		21100 (2 535.0 MHz)		21350 (2 560.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
20	QPSK	1	0	22.67	0.185	22.61	0.182	22.49	0.177
		1	50	22.38	0.173	22.64	0.184	22.48	0.177
		1	99	<b>23.02</b>	<b>0.200</b>	23.01	0.200	22.34	0.171
		50	0	21.60	0.145	21.50	0.141	21.54	0.143
		50	25	21.88	0.154	21.74	0.149	21.52	0.142
		50	50	21.65	0.146	21.64	0.146	21.51	0.142
		100	0	21.60	0.145	21.69	0.148	21.48	0.141
	16QAM	1	0	21.88	0.154	21.78	0.151	21.62	0.145
		1	50	21.76	0.150	21.82	0.152	21.67	0.147
		1	99	21.75	0.150	<b>21.93</b>	<b>0.156</b>	21.62	0.145
		50	0	20.77	0.119	20.74	0.119	20.45	0.111
		50	25	20.65	0.116	20.72	0.118	20.59	0.115
		50	50	20.74	0.119	20.72	0.118	20.49	0.112
		100	0	20.65	0.116	20.58	0.114	20.54	0.113
	64QAM	1	0	20.63	0.116	20.55	0.114	20.70	0.117
		1	50	20.65	0.116	20.69	0.117	20.55	0.114
		1	99	20.65	0.116	<b>20.77</b>	<b>0.119</b>	20.43	0.110
		50	0	19.52	0.090	19.49	0.089	19.48	0.089
		50	25	19.48	0.089	19.44	0.088	19.41	0.087
		50	50	19.51	0.089	19.54	0.090	19.36	0.086
		100	0	19.42	0.087	19.45	0.088	19.40	0.087
	256QAM	1	0	17.96	0.063	17.75	0.060	17.94	0.062
		1	50	17.93	0.062	<b>18.02</b>	<b>0.06</b>	17.70	0.059
		1	99	17.69	0.059	17.90	0.062	17.44	0.055
50		0	17.83	0.061	17.75	0.060	17.61	0.058	
50		25	17.67	0.058	17.80	0.060	17.62	0.058	
50		50	17.69	0.059	17.81	0.060	17.58	0.057	
100		0	17.60	0.058	17.67	0.058	17.59	0.057	

LTE Band 25/2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26047 (1 850.7 MHz)		26365 (1 882.5 MHz)		26683 (1 914.3 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
1.4	QPSK	1	0	23.15	0.207	23.15	0.207	<b>23.24</b>	<b>0.211</b>
		1	3	23.15	0.207	22.95	0.197	23.05	0.202
		1	5	23.16	0.207	22.93	0.196	23.08	0.203
		3	0	22.85	0.193	22.88	0.194	22.88	0.194
		3	2	22.79	0.190	22.92	0.196	22.93	0.196
		3	3	22.86	0.193	22.78	0.190	22.87	0.194
	16QAM	6	0	22.03	0.160	22.11	0.163	22.02	0.159
		1	0	22.10	0.162	22.19	0.166	22.26	0.168
		1	3	<b>22.56</b>	<b>0.180</b>	22.08	0.161	22.47	0.177
		1	5	22.45	0.176	22.19	0.166	22.23	0.167
		3	0	22.31	0.170	22.12	0.163	22.36	0.172
		3	2	22.53	0.179	22.21	0.166	22.24	0.167
	64QAM	3	3	22.47	0.177	22.28	0.169	22.17	0.165
		6	0	21.08	0.128	21.30	0.135	21.54	0.143
		1	0	21.18	0.131	21.16	0.131	21.37	0.137
		1	3	<b>21.50</b>	<b>0.141</b>	21.12	0.129	21.25	0.133
		1	5	21.34	0.136	20.98	0.125	21.22	0.132
		3	0	21.11	0.129	21.45	0.140	21.22	0.132
	256QAM	3	2	21.33	0.136	21.02	0.126	21.16	0.131
		3	3	21.26	0.134	21.05	0.127	21.21	0.132
		6	0	20.26	0.106	20.34	0.108	20.21	0.105
		1	0	<b>18.34</b>	<b>0.068</b>	18.20	0.066	18.05	0.064
		1	3	18.32	0.068	18.24	0.067	18.29	0.067
		1	5	18.13	0.065	18.23	0.067	18.15	0.065
	3	0	18.21	0.066	18.12	0.065	18.25	0.067	
	3	2	18.24	0.067	18.11	0.065	18.25	0.067	
	3	3	18.27	0.067	18.05	0.064	18.23	0.067	
	6	0	18.18	0.066	18.06	0.064	18.23	0.067	

LTE Band 25/2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26055 (1 851.5 MHz)		26365 (1 882.5 MHz)		26675 (1 913.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
3	QPSK	1	0	22.90	0.195	22.87	0.194	22.85	0.193
		1	7	23.06	0.202	22.83	0.192	22.98	0.199
		1	14	22.99	0.199	22.85	0.193	<b>23.15</b>	<b>0.207</b>
		8	0	21.95	0.157	21.89	0.155	21.83	0.152
		8	4	22.01	0.159	21.94	0.156	21.84	0.153
		8	7	21.93	0.156	21.88	0.154	21.82	0.152
		15	0	22.00	0.158	21.85	0.153	21.85	0.153
	16QAM	1	0	22.28	0.169	22.13	0.163	22.09	0.162
		1	7	22.40	0.174	<b>22.56</b>	<b>0.180</b>	22.56	0.180
		1	14	22.35	0.172	22.11	0.163	22.21	0.166
		8	0	21.28	0.134	20.93	0.124	20.90	0.123
		8	4	21.11	0.129	20.98	0.125	20.89	0.123
		8	7	21.14	0.130	20.90	0.123	20.91	0.123
		15	0	21.06	0.128	20.89	0.123	20.89	0.123
	64QAM	1	0	21.17	0.131	21.05	0.127	21.10	0.129
		1	7	21.46	0.140	20.97	0.125	21.29	0.135
		1	14	<b>21.48</b>	<b>0.141</b>	20.94	0.124	21.23	0.133
		8	0	20.06	0.101	19.92	0.098	19.85	0.097
		8	4	20.27	0.106	19.90	0.098	19.83	0.096
		8	7	20.06	0.101	19.94	0.099	19.82	0.096
		15	0	20.10	0.102	19.92	0.098	19.87	0.097
	256QAM	1	0	17.96	0.063	17.95	0.062	17.93	0.062
		1	7	18.14	0.065	17.95	0.062	18.12	0.065
		1	14	18.13	0.065	17.74	0.059	18.12	0.065
8		0	18.02	0.063	17.95	0.062	17.80	0.060	
8		4	18.09	0.064	17.96	0.063	17.85	0.061	
8		7	<b>18.20</b>	<b>0.066</b>	17.96	0.063	17.79	0.060	
15		0	18.06	0.064	17.88	0.061	17.89	0.062	

LTE Band 25/2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26065 (1 852.5 MHz)		26365 (1 882.5 MHz)		26665 (1 912.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	23.08	0.203	23.02	0.200	22.91	0.195
		1	12	23.02	0.200	22.88	0.194	22.83	0.192
		1	24	<b>23.22</b>	<b>0.210</b>	22.79	0.190	22.89	0.195
		12	0	21.82	0.152	21.79	0.151	21.87	0.154
		12	6	22.05	0.160	21.54	0.143	21.92	0.156
		12	13	22.04	0.160	21.87	0.154	21.91	0.155
		25	0	21.85	0.153	21.95	0.157	21.83	0.152
	16QAM	1	0	<b>22.38</b>	<b>0.173</b>	22.30	0.170	22.14	0.164
		1	12	22.32	0.171	22.17	0.165	22.02	0.159
		1	24	22.31	0.170	21.97	0.157	22.08	0.161
		12	0	20.94	0.124	21.06	0.128	20.91	0.123
		12	6	21.16	0.131	20.88	0.122	20.90	0.123
		12	13	21.15	0.130	20.98	0.125	21.04	0.127
	64QAM	25	0	21.04	0.127	20.95	0.124	20.86	0.122
		1	0	20.99	0.126	20.90	0.123	20.99	0.126
		1	12	<b>21.46</b>	<b>0.140</b>	21.15	0.130	21.17	0.131
		1	24	21.32	0.136	21.14	0.130	21.18	0.131
		12	0	19.89	0.097	19.94	0.099	19.86	0.097
		12	6	20.13	0.103	19.94	0.099	19.96	0.099
	256QAM	12	13	20.30	0.107	19.98	0.100	19.96	0.099
		25	0	20.14	0.103	19.92	0.098	19.87	0.097
		1	0	17.97	0.063	17.90	0.062	17.79	0.060
		1	12	18.06	0.064	<b>18.25</b>	<b>0.067</b>	17.81	0.060
		1	24	18.19	0.066	18.14	0.065	17.87	0.061
12		0	18.06	0.064	17.90	0.062	17.88	0.061	
12		6	18.09	0.064	17.97	0.063	17.88	0.061	
12		13	18.09	0.064	17.96	0.063	17.94	0.062	
25		0	18.01	0.063	17.83	0.061	17.88	0.061	

LTE Band 25/2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26090 (1 855.0 MHz)		26365 (1 882.5 MHz)		26640 (1 910.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	23.09	0.204	23.05	0.202	22.82	0.191
		1	25	<b>23.19</b>	<b>0.208</b>	22.92	0.196	22.82	0.191
		1	49	23.03	0.201	23.14	0.206	22.78	0.190
		25	0	22.11	0.163	22.12	0.163	22.04	0.160
		25	12	21.96	0.157	21.98	0.158	22.08	0.161
		25	25	22.03	0.160	22.04	0.160	21.89	0.155
		50	0	21.86	0.153	21.96	0.157	22.09	0.162
	16QAM	1	0	22.13	0.163	22.13	0.163	22.20	0.166
		1	25	22.44	0.175	<b>22.67</b>	<b>0.185</b>	22.26	0.168
		1	49	22.31	0.170	22.34	0.171	22.33	0.171
		25	0	21.11	0.129	21.15	0.130	20.96	0.125
		25	12	21.29	0.135	21.07	0.128	20.94	0.124
		25	25	21.02	0.126	21.10	0.129	20.92	0.124
		50	0	21.09	0.129	21.04	0.127	20.90	0.123
	64QAM	1	0	21.06	0.128	21.14	0.130	20.81	0.121
		1	25	21.24	0.133	21.17	0.131	21.00	0.126
		1	49	<b>21.27</b>	<b>0.134</b>	20.98	0.125	21.00	0.126
		25	0	20.16	0.104	20.02	0.100	19.96	0.099
		25	12	20.39	0.109	20.25	0.106	19.99	0.100
		25	25	20.28	0.107	20.06	0.101	19.98	0.100
		50	0	20.18	0.104	20.06	0.101	19.87	0.097
	256QAM	1	0	18.11	0.065	17.97	0.063	18.07	0.064
		1	25	<b>18.28</b>	<b>0.067</b>	18.08	0.064	18.19	0.066
		1	49	18.27	0.067	18.07	0.064	18.10	0.065
25		0	18.21	0.066	17.95	0.062	17.90	0.062	
25		12	18.06	0.064	18.08	0.064	17.95	0.062	
25		25	18.21	0.066	18.11	0.065	17.98	0.063	
50		0	18.15	0.065	18.06	0.064	17.94	0.062	

LTE Band 25/2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26115 (1 857.5 MHz)		26365 (1 882.5 MHz)		26615 (1 907.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
15	QPSK	1	0	23.17	0.207	22.93	0.196	22.39	0.173
		1	36	<b>23.27</b>	<b>0.212</b>	23.07	0.203	22.94	0.197
		1	74	23.07	0.203	22.84	0.192	23.15	0.207
		36	0	21.93	0.156	22.04	0.160	22.09	0.162
		36	18	22.09	0.162	22.11	0.163	22.06	0.161
		36	37	21.97	0.157	21.96	0.157	21.93	0.156
		75	0	22.02	0.159	21.93	0.156	21.90	0.155
	16QAM	1	0	<b>22.28</b>	<b>0.169</b>	22.12	0.163	21.69	0.148
		1	36	22.16	0.164	22.16	0.164	22.27	0.169
		1	74	22.13	0.163	22.10	0.162	22.10	0.162
		36	0	21.29	0.135	20.96	0.125	21.11	0.129
		36	18	21.18	0.131	20.94	0.124	20.85	0.122
		36	37	21.35	0.136	20.83	0.121	20.97	0.125
	64QAM	75	0	20.99	0.126	20.85	0.122	20.91	0.123
		1	0	21.14	0.130	21.04	0.127	20.29	0.107
		1	36	21.36	0.137	20.99	0.126	21.10	0.129
		1	74	<b>21.42</b>	<b>0.139</b>	21.10	0.129	21.25	0.133
		36	0	20.23	0.105	20.09	0.102	20.11	0.103
		36	18	20.13	0.103	19.96	0.099	19.85	0.097
		36	37	20.24	0.106	20.06	0.101	20.04	0.101
	256QAM	75	0	20.15	0.104	19.92	0.098	19.88	0.097
		1	0	18.17	0.066	18.05	0.064	17.22	0.053
		1	36	18.15	0.065	18.00	0.063	18.20	0.066
		1	74	18.13	0.065	18.18	0.066	17.96	0.063
		36	0	17.96	0.063	18.08	0.064	17.84	0.061
		36	18	<b>18.23</b>	<b>0.067</b>	18.01	0.063	17.89	0.062
		36	37	18.04	0.064	18.01	0.063	17.90	0.062
75	0	18.11	0.065	17.99	0.063	17.69	0.059		

LTE Band 25/2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26140 (1 860.0 MHz)		26365 (1 882.5 MHz)		26590 (1 905.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
20	QPSK	1	0	22.81	0.191	22.84	0.192	22.90	0.195
		1	50	23.02	0.200	22.87	0.194	22.45	0.176
		1	99	<b>23.28</b>	<b>0.213</b>	22.82	0.191	22.70	0.186
		50	0	21.89	0.155	21.97	0.157	21.94	0.156
		50	25	22.01	0.159	21.95	0.157	21.96	0.157
		50	13	21.84	0.153	21.99	0.158	21.88	0.154
		100	0	21.93	0.156	22.07	0.161	21.80	0.151
	16QAM	1	0	22.11	0.163	22.03	0.160	22.21	0.166
		1	50	<b>22.28</b>	<b>0.169</b>	22.00	0.158	21.70	0.148
		1	99	22.27	0.169	22.12	0.163	21.86	0.153
		50	0	21.07	0.128	20.95	0.124	21.17	0.131
		50	25	21.04	0.127	20.99	0.126	20.39	0.109
		50	50	21.18	0.131	21.15	0.130	20.89	0.123
		100	0	21.04	0.127	20.95	0.124	20.69	0.117
	64QAM	1	0	21.10	0.129	21.07	0.128	20.51	0.112
		1	50	21.08	0.128	20.96	0.125	20.67	0.117
		1	99	<b>21.45</b>	<b>0.140</b>	21.05	0.127	21.04	0.127
		50	0	20.13	0.103	19.95	0.099	20.23	0.105
		50	25	20.15	0.104	19.94	0.099	19.51	0.089
		50	50	20.04	0.101	19.92	0.098	20.07	0.102
		100	0	20.04	0.101	19.94	0.099	19.58	0.091
	256QAM	1	0	18.17	0.066	18.02	0.063	18.08	0.064
		1	50	18.27	0.067	18.24	0.067	17.66	0.058
		1	99	<b>18.31</b>	<b>0.068</b>	18.10	0.065	18.03	0.064
50		0	18.11	0.065	18.15	0.065	18.05	0.064	
50		25	18.13	0.065	18.17	0.066	17.69	0.059	
50		50	17.99	0.063	18.04	0.064	18.01	0.063	
100		0	18.07	0.064	18.09	0.064	17.96	0.063	



LTE Band 26/5_part 22									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26797 (824.7 MHz)		26915 (836.5 MHz)		27033 (848.3 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
1.4	QPSK	1	0	22.62	0.183	<b>22.69</b>	<b>0.186</b>	22.58	0.181
		1	2	22.55	0.180	22.63	0.183	22.59	0.182
		1	5	22.62	0.183	22.61	0.182	22.51	0.178
		3	0	22.62	0.183	22.34	0.171	22.43	0.175
		3	2	22.46	0.176	22.62	0.183	22.60	0.182
		3	3	22.55	0.180	22.57	0.181	22.58	0.181
		6	0	21.59	0.144	21.60	0.145	21.74	0.149
	16QAM	1	0	21.66	0.147	21.83	0.152	21.76	0.150
		1	3	21.76	0.150	<b>21.87</b>	<b>0.154</b>	21.82	0.152
		1	5	21.81	0.152	21.85	0.153	21.73	0.149
		3	0	21.65	0.146	21.58	0.144	21.76	0.150
		3	2	21.66	0.147	21.82	0.152	21.77	0.150
		3	3	21.76	0.150	21.78	0.151	21.68	0.147
		6	0	20.69	0.117	20.93	0.124	20.81	0.121
	64QAM	1	0	20.63	0.116	<b>20.82</b>	<b>0.121</b>	20.74	0.119
		1	2	20.78	0.120	20.80	0.120	20.71	0.118
		1	5	20.73	0.118	20.79	0.120	20.62	0.115
		3	0	20.11	0.103	20.36	0.109	20.52	0.113
		3	2	20.12	0.103	20.43	0.110	20.53	0.113
		3	3	20.09	0.102	20.44	0.111	20.43	0.110
		6	0	19.86	0.097	19.80	0.095	20.14	0.103
	256QAM	1	0	17.53	0.057	17.73	0.059	17.58	0.057
		1	2	17.52	0.056	17.76	0.060	17.69	0.059
		1	5	17.62	0.058	17.72	0.059	17.58	0.057
		3	0	17.67	0.058	17.66	0.058	17.68	0.059
		3	2	17.61	0.058	17.65	0.058	17.67	0.058
		3	3	17.61	0.058	17.73	0.059	17.57	0.057
6		0	17.57	0.057	<b>17.79</b>	<b>0.060</b>	17.73	0.059	

LTE Band 26/5_part 22									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26805 (825.5 MHz)		26915 (836.5 MHz)		27025 (847.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
3	QPSK	1	0	22.54	0.179	22.59	0.182	22.54	0.179
		1	7	22.62	0.183	<b>22.78</b>	<b>0.190</b>	22.55	0.180
		1	14	22.66	0.185	22.52	0.179	22.60	0.182
		8	0	21.51	0.142	21.53	0.142	21.53	0.142
		8	4	21.53	0.142	21.75	0.150	21.43	0.139
		8	7	21.49	0.141	21.58	0.144	21.52	0.142
	16QAM	15	0	21.60	0.145	21.66	0.147	21.52	0.142
		1	0	21.73	0.149	21.61	0.145	21.91	0.155
		1	7	21.86	0.153	<b>22.20</b>	<b>0.166</b>	21.90	0.155
		1	14	21.80	0.151	22.04	0.160	21.93	0.156
		8	0	20.61	0.115	20.89	0.123	20.82	0.121
		8	4	20.65	0.116	20.65	0.116	20.58	0.114
	64QAM	8	7	20.88	0.122	20.64	0.116	20.58	0.114
		15	0	20.56	0.114	20.61	0.115	20.49	0.112
		1	0	20.78	0.120	20.65	0.116	20.77	0.119
		1	7	<b>20.86</b>	<b>0.122</b>	20.82	0.121	20.75	0.119
		1	14	20.77	0.119	20.74	0.119	20.67	0.117
		8	0	19.63	0.092	19.58	0.091	19.49	0.089
	256QAM	8	4	19.69	0.093	19.67	0.093	19.54	0.090
		8	7	19.71	0.094	19.64	0.092	19.54	0.090
		15	0	19.57	0.091	19.63	0.092	19.58	0.091
		1	0	17.57	0.057	17.51	0.056	17.54	0.057
		1	7	17.66	0.058	17.80	0.060	17.65	0.058
		1	14	17.56	0.057	17.63	0.058	17.54	0.057
		8	0	17.55	0.057	17.50	0.056	17.50	0.056
		8	4	17.61	0.058	17.65	0.058	17.49	0.056
		8	7	17.59	0.057	<b>17.83</b>	<b>0.061</b>	17.50	0.056
		15	0	17.51	0.056	17.64	0.058	17.49	0.056

LTE Band 26/5_part 22									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26815 (826.5 MHz)		26915 (836.5 MHz)		27015 (846.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	22.66	0.185	22.65	0.184	22.54	22.66
		1	12	22.62	0.183	<b>22.69</b>	<b>0.186</b>	22.67	22.62
		1	24	22.57	0.181	22.58	0.181	22.41	22.57
		12	0	21.88	0.154	21.86	0.153	21.50	21.88
		12	6	21.76	0.150	21.79	0.151	21.55	21.76
		12	13	21.78	0.151	21.68	0.147	21.54	21.78
		25	0	21.55	0.143	21.61	0.145	21.52	21.55
	16QAM	1	0	21.84	0.153	21.93	0.156	21.69	21.84
		1	12	21.84	0.153	21.74	0.149	21.73	21.84
		1	24	21.84	0.153	<b>22.27</b>	<b>0.169</b>	21.63	21.84
		12	0	20.86	0.122	20.72	0.118	20.57	20.86
		12	6	20.94	0.124	20.87	0.122	20.61	20.94
		12	13	20.86	0.122	20.75	0.119	20.53	20.86
		25	0	20.93	0.124	20.66	0.116	20.61	20.93
	64QAM	1	0	<b>20.87</b>	<b>0.122</b>	20.70	0.117	20.69	20.87
		1	12	20.75	0.119	20.77	0.119	20.86	20.75
		1	24	20.69	0.117	20.76	0.119	20.60	20.69
		12	0	19.67	0.093	19.63	0.092	19.60	19.67
		12	6	19.76	0.095	19.86	0.097	19.59	19.76
		12	13	19.86	0.097	19.81	0.096	19.60	19.86
		25	0	19.84	0.096	19.66	0.092	19.61	19.84
	256QAM	1	0	17.66	0.058	17.58	0.057	17.62	17.66
		1	12	17.58	0.057	17.72	0.059	<b>17.75</b>	<b>17.58</b>
		1	24	17.71	0.059	17.71	0.059	17.47	17.71
		12	0	17.52	0.056	17.58	0.057	17.64	17.52
		12	6	17.47	0.056	17.63	0.058	17.54	17.47
		12	13	17.59	0.057	17.56	0.057	17.60	17.59
		25	0	17.51	0.056	17.58	0.057	17.49	17.51

LTE Band 26/5_part 22									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26840 (829.0 MHz)		26915 (836.5 MHz)		26990 (844.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	22.62	0.183	22.76	0.189	22.46	0.176
		1	25	<b>22.80</b>	<b>0.191</b>	22.72	0.187	22.75	0.188
		1	49	22.63	0.183	22.72	0.187	22.67	0.185
		25	0	21.51	0.142	21.56	0.143	21.64	0.146
		25	12	21.49	0.141	21.55	0.143	21.71	0.148
		25	25	21.55	0.143	21.63	0.146	21.77	0.150
		50	0	21.60	0.145	21.62	0.145	21.61	0.145
	16QAM	1	0	21.68	0.147	21.74	0.149	21.81	0.152
		1	25	21.89	0.155	21.82	0.152	21.77	0.150
		1	49	<b>21.94</b>	<b>0.156</b>	21.84	0.153	21.73	0.149
		25	0	20.31	0.107	20.32	0.108	20.69	0.117
		25	12	20.33	0.108	20.28	0.107	20.32	0.108
		25	25	20.48	0.112	20.45	0.111	20.63	0.116
		50	0	20.39	0.109	20.75	0.119	20.69	0.117
	64QAM	1	0	20.60	0.115	20.77	0.119	20.67	0.117
		1	25	<b>20.86</b>	<b>0.122</b>	20.77	0.119	20.82	0.121
		1	49	20.76	0.119	20.73	0.118	20.81	0.121
		25	0	19.70	0.093	19.59	0.091	19.79	0.095
		25	12	19.74	0.094	19.77	0.095	19.65	0.092
		25	25	19.81	0.096	19.66	0.092	19.75	0.094
		50	0	19.73	0.094	19.64	0.092	19.56	0.090
	256QAM	1	0	17.66	0.058	17.63	0.058	17.72	0.059
		1	25	17.73	0.059	17.79	0.060	17.67	0.058
		1	49	17.50	0.056	<b>17.95</b>	<b>0.062</b>	17.55	0.057
		25	0	17.55	0.057	17.65	0.058	17.62	0.058
		25	12	17.76	0.060	17.65	0.058	17.67	0.058
		25	25	17.64	0.058	17.61	0.058	17.66	0.058
		50	0	17.59	0.057	17.57	0.057	17.61	0.058

LTE Band 26_part 22									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				26865 (831.5 MHz)				26965 (841.5 MHz)	
				(dB m)	(W)			(dB m)	(W)
15	QPSK	1	0	<b>22.81</b>	<b>0.191</b>	-	-	22.63	0.183
		1	36	22.41	0.174	-	-	22.77	0.189
		1	74	22.71	0.187	-	-	22.64	0.184
		36	0	21.45	0.140	-	-	21.55	0.143
		36	18	21.25	0.133	-	-	21.56	0.143
		36	37	21.68	0.147	-	-	21.66	0.146
		75	0	21.49	0.141	-	-	21.58	0.144
	16QAM	1	0	<b>21.95</b>	<b>0.157</b>	-	-	21.77	0.150
		1	36	21.78	0.151	-	-	21.78	0.151
		1	74	21.80	0.151	-	-	21.82	0.152
		36	0	20.75	0.119	-	-	20.89	0.123
		36	18	20.95	0.124	-	-	20.76	0.119
		36	37	20.61	0.115	-	-	20.70	0.117
	64QAM	75	0	20.79	0.120	-	-	20.65	0.116
		1	0	20.66	0.116	-	-	20.71	0.118
		1	36	20.60	0.115	-	-	<b>20.75</b>	<b>0.119</b>
		1	74	20.61	0.115	-	-	20.74	0.119
		36	0	19.67	0.093	-	-	19.83	0.096
		36	18	19.72	0.094	-	-	19.79	0.095
		36	37	19.74	0.094	-	-	19.65	0.092
	256QAM	75	0	19.70	0.093	-	-	19.57	0.091
		1	0	17.64	0.058	-	-	17.65	0.058
		1	36	17.67	0.058	-	-	<b>17.73</b>	<b>0.059</b>
		1	74	17.71	0.059	-	-	17.64	0.058
		36	0	17.64	0.058	-	-	17.62	0.058
		36	18	17.58	0.057	-	-	17.62	0.058
		36	37	17.70	0.059	-	-	17.62	0.058
		75	0	17.58	0.057	-	-	17.54	0.057