

TEST REPORT

of

FCC Part 2 Subpart J, Part 22 Subpart C/H,
Part 24 Subpart E and Part 27 Subpart C,
IC RSS-130 Issue 2, RSS-132 Issue 3, RSS-133 Issue 6,
RSS-139 Issue 4 and RSS-Gen Issue 5

FCC ID: 2BAKQGG02F
IC Certification: 30242-GG02I

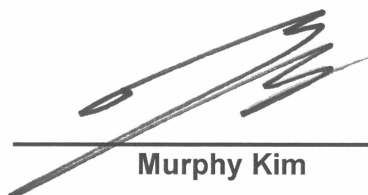
Equipment Under Test : Gateway
Model Name : GLSD-PLC-GW-2
Variant Model Name(s) : -
Applicant : FCC: Glassdome
: IC: Glassdome
Manufacturer : Glassdome
Date of Receipt : 2023.01.09
Date of Test(s) : 2023.01.09 ~ 2023.03.28
Date of Issue : 2023.04.04

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

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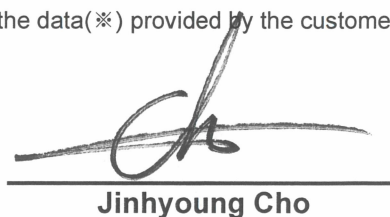
We are responsible for all the information of this test report except for the data(※) provided by the customer.

Tested by:



Murphy Kim

Technical
Manager:



Jinhyoung Cho

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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1.2. Details of Applicant

Applicant : Glassdome

Address : 22F, 755, Hanbat-daero, Seo-gu, Daejeon, Republic of Korea, 35209

Contact Person : Cho, Jun-beom

Phone No. : +82 10 9603 3500

1.3. Details of Manufacturer

Company : Same as applicant

Address : Same as applicant

1.4. Description of EUT

Kind of Product	Gateway
Model Name	GLSD-PLC-GW-2
Approved Module	FCC ID: XMR201606EC21A IC Certification: 10224A-201611EC21A
Serial Number	GG02F000001
Power Supply	DC 12 V
Rated Power	WCDMA II, IV, V: 23.0 dBm LTE Band 2, 4, 12: 23.0 dBm
Frequency Range	WCDMA II: 1 850 MHz ~ 1 910 MHz WCDMA IV: 1 710 MHz ~ 1 755 MHz WCDMA V: 824 MHz ~ 849 MHz LTE Band 2: 1 850 MHz ~ 1 910 MHz LTE Band 4: 1 710 MHz ~ 1 755 MHz LTE Band 12: 699 MHz ~ 716 MHz
Modulation Technique	QPSK, 16QAM
Antenna Type	Dipole antenna
Antenna Gain	699 MHz ~ 716 MHz: -2.59 dBi 824 MHz ~ 849 MHz: -0.08 dBi 1 710 MHz ~ 1 755 MHz: 1.19 dBi 1 850 MHz ~ 1 910 MHz: 1.82 dBi
H/W Version	V1.0.0
S/W Version	V1.0.0
FVIN	N/A

1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Signal Generator	R&S	SMA100B	106887	Oct. 13, 2022	Annual	Oct. 13, 2023
Signal Generator	R&S	SMBV100A	255834	May 25, 2022	Annual	May 25, 2023
Spectrum Analyzer	R&S	FSV30	103210	Dec. 07, 2022	Annual	Dec. 07, 2023
Spectrum Analyzer	Agilent	N9020A	MY53421758	Aug. 26, 2022	Annual	Aug. 26, 2023
Mobile Test Unit	R&S	CMW 500	144034	Feb. 17, 2023	Annual	Feb. 17, 2024
Power Meter	Anritsu	ML2495A	1223004	Nov. 29, 2022	Annual	Nov. 29, 2023
Power Sensor	Anritsu	MA2411B	1207272	May 27, 2022	Annual	May 27, 2023
Low Pass Filter	Mini-Circuits	NLP-1200+	V 8979400903-2	Feb. 09, 2023	Annual	Feb. 09, 2024
High Pass Filter	Wainwright Instrument GmbH	WHKX10-900-1000-18000-40SS	7	Mar. 02, 2023	Annual	Mar. 02, 2024
High Pass Filter	Wainwright Instrument GmbH	WHKX2.2/12.75G-10SS	8	Mar. 02, 2023	Annual	Mar. 02, 2024
High Pass Filter	Wainwright Instrument GmbH	WHKX3.0/18G-6SS	21	Jun. 09, 2022	Annual	Jun. 09, 2023
High Pass Filter	Wainwright Instrument GmbH	WHNX7.5/26.5G-6SS	11	Oct. 24, 2022	Annual	Oct. 24, 2023
Directional Coupler	KRYTAR	152613	122660	Jul. 06, 2022	Annual	Jul. 06, 2023
DC Power Supply	R&S	HMP2020	102130	Apr. 22, 2022	Annual	Apr. 22, 2023
Preamplifier	H.P.	8447F	2944A03909	Aug. 04, 2022	Annual	Aug. 04, 2023
Preamplifier	R&S	SCU 18	10117	Jun. 13, 2022	Annual	Jun. 13, 2023
Preamplifier	MITEQ Inc.	JS44-18004000-35-8P	1546891	Sep. 27, 2022	Annual	Sep. 27, 2023
Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519	1519-039	Aug. 23, 2021	Biennial	Aug. 23, 2023
Bilog Antenna	Schwarzbeck Mess-Elektronik	VULB9163	01126	Feb. 09, 2023	Annual	Feb. 09, 2024
Horn Antenna	R&S	HF906	100326	Feb. 28, 2023	Annual	Feb. 28, 2024
Horn Antenna	Schwarzbeck Mess-Elektronik	BBHA 9170	9170-540	Nov. 30, 2022	Annual	Nov. 30, 2023
Test Receiver	R&S	ESU26	100109	Jan. 18, 2023	Annual	Jan. 18, 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 × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N.C.R.	N/A	N.C.R.
Coaxial Cable	RFONE	MWX221-NMSNMS (4 m)	J1023142	Oct. 04, 2022	Semi-Annual	Apr. 04, 2023
Coaxial Cable	Qualwave Inc.	QA500-18-NN-10 (10 m)	22200114	Oct. 04, 2022	Semi-Annual	Apr. 04, 2023
Coaxial Cable	RADIAL	TESTPRO 3	182287	Feb. 18, 2023	Semi-Annual	Aug. 18, 2023

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.

1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 2, 22, 24 and 27 / IC part RSS-130 Issue2, RSS-132 Issue 3, RSS-133 Issue 6, RSS-139 Issue 4 and RSS-Gen Issue 5			
Section(s) in FCC	Section(s) in IC	Test Item(s)	Result
§2.1046 §22.913(a)(5) §24.232(c) §27.50(c)(10) §27.50(d)(4)	RSS-130 Issue 2 4.6 RSS-132 Issue 3 5.4 RSS-133 Issue 6 6.4 RSS-139 Issue 4 5.5	E.R.P. / E.I.R.P.	Complied
§2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h)(1)	RSS-130 Issue 2 4.7 RSS-132 Issue 3 5.5 RSS-133 Issue 6 6.5 RSS-139 Issue 4 5.6	Spurious Radiated Emission	Complied
§2.1046	RSS-Gen Issue 5 6.12	Conducted Output Power	Complied
§2.1049	RSS-Gen Issue 5 6.7	Occupied Bandwidth	N/A ¹⁾
§22.913(d) §24.232(d) §27.50(d)(5)	RSS-130 Issue 2 4.6 RSS-132 Issue 3 5.4 RSS-133 Issue 6 6.4 RSS-139 Issue 4 5.5	Peak-Average Ratio	N/A ¹⁾
§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h)(1)	RSS-130 Issue 2 4.7 RSS-132 Issue 3 5.5 RSS-133 Issue 6 6.5 RSS-139 Issue 4 5.6	Spurious Emission at Antenna Terminal	N/A ¹⁾
§22.917(a) §24.238(a) §27.53(g) §27.53(h)(1)	RSS-130 Issue 2 4.7 RSS-132 Issue 3 5.5 RSS-133 Issue 6 6.5 RSS-139 Issue 4 5.6	Band Edge	N/A ¹⁾
§2.1055 §22.355 §24.235 §27.54	RSS-Gen Issue 5 6.11 RSS-130 Issue 2 4.5 RSS-132 Issue 3 5.3 RSS-133 Issue 6 6.3 RSS-139 Issue 4 5.4	Frequency Stability	N/A ¹⁾

Note;

1) The test items were not conducted because the approved module was used.

Approved module information

Model Name: EC21-A, EC21-A MINIPCIE

FCC ID: XMR201606EC21A

IC Certification: 10224A-201611EC21A

1.7. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL003964	2023.04.04	Initial
1	F690501-RF-RTL003964-1	2023.04.04	Revised the IC certification of approved module.

1.8. Sample Calculation for Offset

Where relevant, the following sample calculation is provided:

1.8.1. Conducted Test

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

1.8.2. Radiation Test

- E.I.R.P. (dB m) = Measured level (dB μ V) + Antenna factor (dB) + Cable loss (dB) + 20 Log D - 104.5; where D is the measurement distance in meters.
- E.R.P. (dB m) = E.I.R.P. (dB m) - 2.15 (dB)

1.9. Worst Case Configuration and Mode

WCDMA

The worst-case is based on the average conducted output power measurement investigation results. Output power measurements were measured on RMC, HSDPA and HSUPA Modulation. All testing was performed using RMC modulations to represent the worst case.

LTE

The worst-case is based on the conducted output power measurement investigation results. The spurious radiated emission at antenna terminal were only performed on bandwidth and RB offset (with RB size 1) with the highest conducted power in QPSK.

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. 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
Radiated Emission, 9 kHz to 30 MHz	H	3.40 dB
	V	3.40 dB
Radiated Emission, below 1 GHz	H	4.50 dB
	V	5.10 dB
Radiated Emission, above 1 GHz	H	3.70 dB
	V	3.90 dB

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

1.11. Spot Check Data

Band	Test item	Frequency (MHz)	Approved Module		Basic Model		Deviation (dB)	Remark
			EC21-A		GLSD-PLC-GW-2			
			FCC ID: XMR201606EC21A IC Certification: 10224A-201611EC21A		FCC ID: 2BAKQGG02F IC Certification: 30242-GG02I			
			(dB m)	(W)	(dB m)	(W)		
WCDMA II	Conducted power	1 850 ~ 1 910	23.36	0.217	23.35	0.216	-0.01	-
WCDMA IV	Conducted power	1 710 ~ 1 755	23.27	0.212	23.37	0.217	0.10	
WCDMA V	Conducted power	824 ~ 849	23.37	0.217	23.72	0.236	0.35	-
LTE 2	Conducted power	1 850 ~ 1 910	23.37	0.217	22.96	0.198	-0.41	
LTE 4	Conducted power	1 710 ~ 1 755	23.22	0.210	22.85	0.193	-0.37	
LTE 12	Conducted power	699 ~ 716	23.32	0.215	23.55	0.226	0.23	

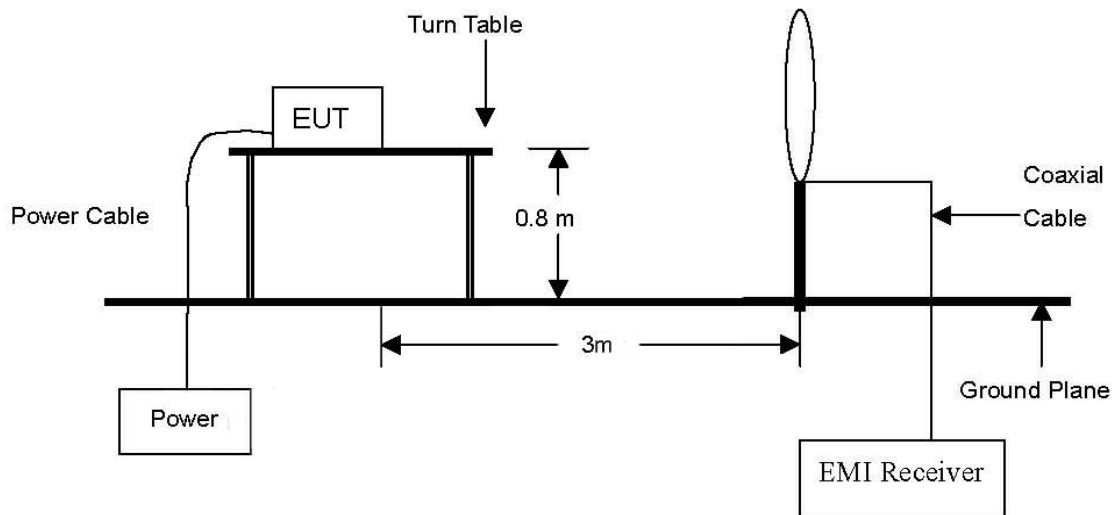
Note;

All conducted output power was measured.
 Output power compared the approved module with the host equipment.

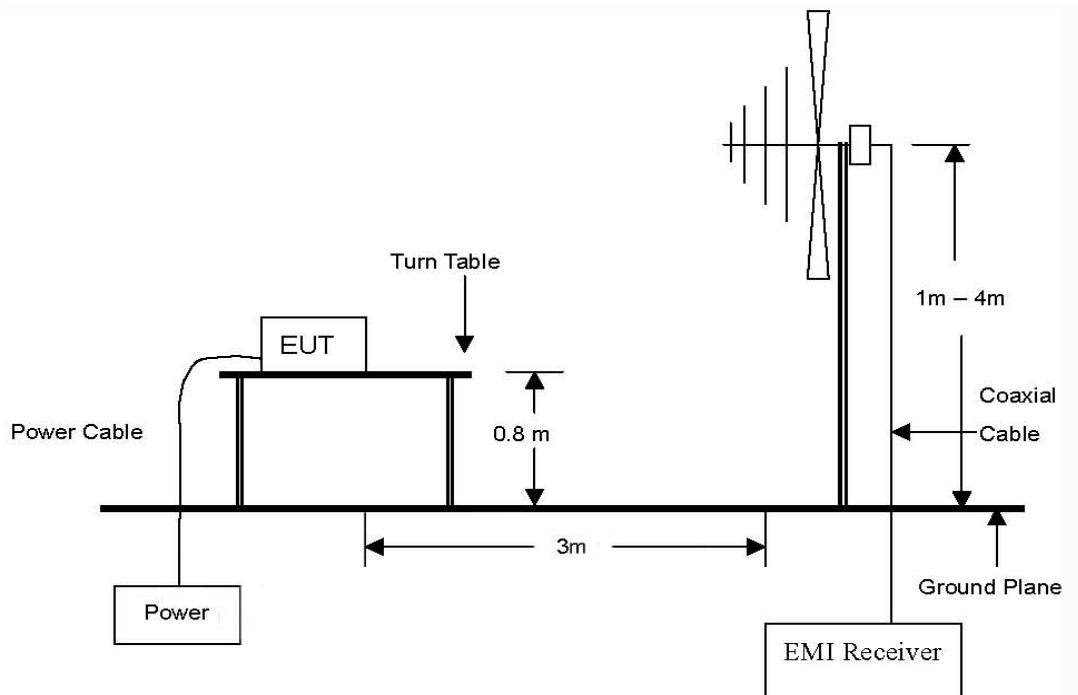
2. RF Radiated Output Power & Spurious Radiated Emission

2.1. Test setup

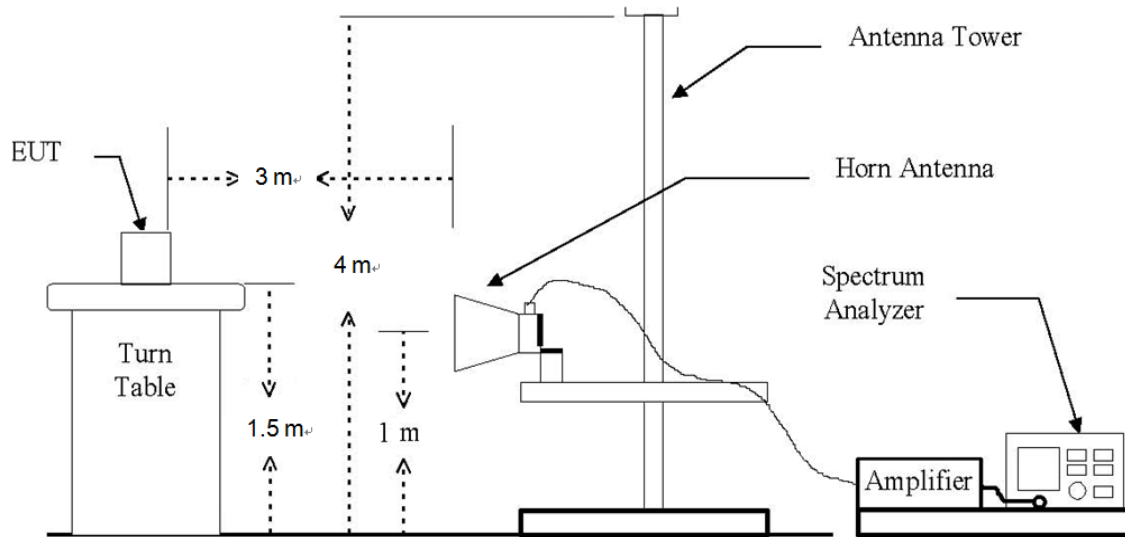
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz.



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 20 GHz Emissions.



2.2. Limit

2.2.1. Limit of RF Radiated Output Power

FCC

- §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(c)(10), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.
- §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.

IC

- RSS-130 Issue 2
4.6.3, the e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the e.i.r.p. limits.

- RSS-132 Issue 3
5.4, the transmitter output power shall be measured in terms of average power.
The equivalent isotropically radiated power (e.i.r.p.) for mobile equipment shall not exceed 11.5 watts.
Refer to SRSP-503 for base station e.i.r.p. limits.

- RSS-133 Issue 6
6.4, the equivalent isotropically radiated power (e.i.r.p.) for transmitters shall not exceed the limits given in SRSP-510. Moreover, mobile stations and hand-held portables are limited to 2 watts maximum e.i.r.p. The equipment shall employ means to limit the power to the minimum necessary for successful communication.

- RSS-139 Issue 4
5.5, The maximum output power of the equipment shall comply with the limits specified below. In the tables, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average values.

Table 3: Maximum power of equipment in the band 1 710-1 780 MHz

Equipment type	Maximum power
Fixed station and base station	30 dBm e.i.r.p./ channel bandwidth
Subscriber equipment	30 dBm e.i.r.p./ channel bandwidth

2.2.2. Limit of Spurious Radiated Emission

FCC

- §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(g), the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by 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.

IC

- RSS-130 Issue 2

4.7.1, the unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dB W), by at least $43 + 10 \log_{10} p$ (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

- RSS-132 Issue 3

5.5, Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

(i) In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1 % of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dB W) by at least $43 + 10 \log_{10} p$ (watts).

(ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dB W) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1 % of the occupied bandwidth, power integration over 100 kHz is required.

- RSS-133 Issue 6

6.5, Equipment shall comply with the limits in (i) and (ii) below.

(i) In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1 % of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dB W) by at least $43 + 10 \log_{10} p$ (watts).

(ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dB W) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1 % of the emission bandwidth, power integration over 1.0 MHz is required.

- RSS-139 Issue 4

5.6, Unwanted emissions shall be measured in terms of average values.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors) of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in table 6.

Table 6: Unwanted emission limits

Offset from the edge of the frequency block or frequency block group	Unwanted emission limit
1 MHz	-13 dB m/(1% of OB)*
>1 MHz	-13 dB m

* OB is the occupied bandwidth

2.3. Test Procedure: Based on ANSI/TIA 603E: 2016 and ANSI C63.26-2015, 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 $\geq 3 \times$ 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. RF Radiated Output Power

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
WCDMA II	1 850 ~ 1 910	23.35	0.216	1.82	25.17	0.329			2 W E.I.R.P.
WCDMA IV	1 710 ~ 1 755	23.37	0.217	1.19	24.56	0.286			1 W E.I.R.P.
WCDMA V	824 ~ 849	23.72	0.236	-0.08	23.64	0.231	21.49	0.141	7 W E.R.P.
LTE 2	1 850 ~ 1 910	22.96	0.198	1.82	24.78	0.301			2 W E.I.R.P.
LTE 4	1 710 ~ 1 755	22.85	0.193	1.19	24.04	0.254			1 W E.I.R.P.
LTE 12	699 ~ 716	23.55	0.226	-2.59	20.96	0.125	18.81	0.076	3 W E.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. Spurious Radiated Emission

WCDMA II

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 852.4 MHz)									
3 706.46	43.07	V	32.23	-36.61	38.69	-95.26	-56.57	-13	43.57
4 599.78	42.23	H	32.10	-36.65	37.68	-95.26	-57.58	-13	44.58
5 561.10	45.14	H	34.20	-34.14	45.20	-95.26	-50.06	-13	37.06
5 560.80	48.65	V	34.20	-34.14	48.71	-95.26	-46.55	-13	33.55
7 404.75	44.77	V	36.20	-32.16	48.81	-95.26	-46.45	-13	33.45
11 107.85	38.24	H	38.12	-30.12	46.24	-95.26	-49.02	-13	36.02
Above 11 200.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (1 880.0 MHz)									
3 762.40	43.58	V	32.40	-36.89	39.09	-95.26	-56.17	-13	43.17
4 600.02	42.59	H	32.10	-36.65	38.04	-95.26	-57.22	-13	44.22
5 643.65	48.15	H	34.11	-33.43	48.83	-95.26	-46.43	-13	33.43
5 636.25	43.63	V	34.13	-33.48	44.28	-95.26	-50.98	-13	37.98
7 520.45	40.57	V	36.16	-32.84	43.89	-95.26	-51.37	-13	38.37
11 272.80	37.11	H	38.25	-29.90	45.46	-95.26	-49.80	-13	36.80
Above 11 300.00	Not detected	-	-	-	-	-	-	-	-
High Channel (1 907.6 MHz)									
3 813.10	44.85	V	32.37	-36.51	40.71	-95.26	-54.55	-13	41.55
4 600.04	43.01	H	32.10	-36.65	38.46	-95.26	-56.80	-13	43.80
5 726.65	48.96	H	34.21	-33.55	49.62	-95.26	-45.64	-13	32.64
5 724.80	44.81	V	34.20	-33.54	45.47	-95.26	-49.79	-13	36.79
7 634.60	43.82	V	36.00	-32.53	47.29	-95.26	-47.97	-13	34.97
11 442.30	34.12	H	38.58	-30.54	42.16	-95.26	-53.10	-13	40.10
Above 11 500.00	Not detected	-	-	-	-	-	-	-	-

WCDMA IV

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 712.4 MHz)									
3 423.40	52.85	H	31.09	-36.92	47.02	-95.26	-48.24	-13	35.24
3 423.80	46.74	V	31.10	-36.92	40.92	-95.26	-54.34	-13	41.34
4 599.83	44.10	V	32.10	-36.65	39.55	-95.26	-55.71	-13	42.71
5 134.95	49.07	H	33.60	-35.46	47.21	-95.26	-48.05	-13	35.05
5 140.05	41.98	V	33.60	-35.47	40.11	-95.26	-55.15	-13	42.15
Above 5 200.00	Not detected	–	–	–	–	–	–	–	–
Middle Channel (1 732.6 MHz)									
3 467.15	49.80	H	31.23	-36.77	44.26	-95.26	-51.00	-13	38.00
3 467.60	46.34	V	31.24	-36.77	40.81	-95.26	-54.45	-13	41.45
4 599.64	45.28	V	32.10	-36.65	40.73	-95.26	-54.53	-13	41.53
5 195.55	50.30	H	33.78	-35.19	48.89	-95.26	-46.37	-13	33.37
5 201.55	47.26	V	33.80	-35.17	45.89	-95.26	-49.37	-13	36.37
Above 5 300.00	Not detected	–	–	–	–	–	–	–	–
High Channel (1 752.6 MHz)									
3 503.55	45.91	H	31.30	-36.68	40.53	-95.26	-54.73	-13	41.73
3 507.00	45.94	V	31.30	-36.70	40.54	-95.26	-54.72	-13	41.72
4 599.76	44.58	V	32.10	-36.65	40.03	-95.26	-55.23	-13	42.23
5 254.35	44.34	H	33.72	-35.07	42.99	-95.26	-52.27	-13	39.27
5 254.35	42.79	V	33.72	-35.07	41.44	-95.26	-53.82	-13	40.82
Above 5 300.00	Not detected	–	–	–	–	–	–	–	–

WCDMA V

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (826.4 MHz)									
1 319.84	57.14	H	25.04	-39.26	42.92	-97.41	-54.49	-13	41.49
1 650.64	49.81	H	25.71	-38.67	36.85	-97.41	-60.56	-13	47.56
1 650.56	51.61	V	25.71	-38.67	38.65	-97.41	-58.76	-13	45.76
1 980.00	49.35	V	27.82	-37.74	39.43	-97.41	-57.98	-13	44.98
2 301.90	48.84	H	28.01	-36.36	40.49	-97.41	-56.92	-13	43.92
2 310.40	52.70	V	28.04	-36.42	44.32	-97.41	-53.09	-13	40.09
2 639.96	46.49	H	28.82	-36.82	38.49	-97.41	-58.92	-13	45.92
2 639.87	49.12	V	28.82	-36.82	41.12	-97.41	-56.29	-13	43.29
Above 2 700.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (836.6 MHz)									
1 319.63	56.57	H	25.04	-39.26	42.35	-97.41	-55.06	-13	42.06
1 670.64	48.04	H	26.03	-38.66	35.41	-97.41	-62.00	-13	49.00
1 670.12	49.05	V	26.02	-38.66	36.41	-97.41	-61.00	-13	48.00
1 985.00	49.74	V	27.84	-37.71	39.87	-97.41	-57.54	-13	44.54
2 311.10	49.29	H	28.04	-36.42	40.91	-97.41	-56.50	-13	43.50
2 310.30	51.77	V	28.04	-36.42	43.39	-97.41	-54.02	-13	41.02
2 639.94	47.22	H	28.82	-36.82	39.22	-97.41	-58.19	-13	45.19
2 639.70	50.50	V	28.82	-36.82	42.50	-97.41	-54.91	-13	41.91
Above 2 700.00	Not detected	-	-	-	-	-	-	-	-
High Channel (846.6 MHz)									
1 319.94	56.57	H	25.04	-39.26	42.35	-97.41	-55.06	-13	42.06
1 690.82	46.46	H	26.35	-38.73	34.08	-97.41	-63.33	-13	50.33
1 695.14	44.30	V	26.42	-38.75	31.97	-97.41	-65.44	-13	52.44
1 994.60	49.33	V	27.88	-37.67	39.54	-97.41	-57.87	-13	44.87
2 307.50	48.36	H	28.03	-36.40	39.99	-97.41	-57.42	-13	44.42
2 309.10	50.48	V	28.04	-36.41	42.11	-97.41	-55.30	-13	42.30
2 639.95	46.87	H	28.82	-36.82	38.87	-97.41	-58.54	-13	45.54
2 640.29	48.69	V	28.82	-36.81	40.70	-97.41	-56.71	-13	43.71
Above 2 700.00	Not detected	-	-	-	-	-	-	-	-

LTE 2

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 860.0 MHz)									
5 553.26	50.07	H	34.20	-34.20	50.07	-95.26	-45.19	-13	32.19
5 553.38	47.82	V	34.20	-34.20	47.82	-95.26	-47.44	-13	34.44
7 404.60	45.59	H	36.20	-32.16	49.63	-95.26	-45.63	-13	32.63
7 404.47	42.15	V	36.20	-32.16	46.19	-95.26	-49.07	-13	36.07
9 255.56	43.85	V	37.11	-32.68	48.28	-95.26	-46.98	-13	33.98
11 106.73	38.94	H	38.11	-30.13	46.92	-95.26	-48.34	-13	35.34
11 106.34	44.93	V	38.11	-30.14	52.90	-95.26	-42.36	-13	29.36
Above 11 200.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (1 880.0 MHz)									
5 613.21	52.06	H	34.17	-33.66	52.57	-95.26	-42.69	-13	29.69
5 613.29	49.64	V	34.17	-33.66	50.15	-95.26	-45.11	-13	32.11
7 484.49	44.66	H	36.20	-32.90	47.96	-95.26	-47.30	-13	34.30
7 484.40	42.80	V	36.20	-32.90	46.10	-95.26	-49.16	-13	36.16
9 355.48	43.61	V	37.41	-32.20	48.82	-95.26	-46.44	-13	33.44
11 226.64	38.05	H	38.35	-30.14	46.26	-95.26	-49.00	-13	36.00
11 226.68	41.88	V	38.35	-30.14	50.09	-95.26	-45.17	-13	32.17
Above 11 300.00	Not detected	-	-	-	-	-	-	-	-
High Channel (1 900.0 MHz)									
5 673.36	50.67	H	34.10	-33.32	51.45	-95.26	-43.81	-13	30.81
5 673.26	48.04	V	34.10	-33.32	48.82	-95.26	-46.44	-13	33.44
7 564.15	44.10	H	36.07	-32.68	47.49	-95.26	-47.77	-13	34.77
7 564.46	42.30	V	36.07	-32.68	45.69	-95.26	-49.57	-13	36.57
9 455.72	44.54	V	37.60	-31.92	50.22	-95.26	-45.04	-13	32.04
11 346.67	38.11	H	38.20	-30.18	46.13	-95.26	-49.13	-13	36.13
11 346.62	41.34	V	38.20	-30.18	49.36	-95.26	-45.90	-13	32.90
Above 11 400.00	Not detected	-	-	-	-	-	-	-	-

LTE 4

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 720.0 MHz)									
3 422.15	54.78	H	31.09	-36.92	48.95	-95.26	-46.31	-13	33.31
3 422.18	55.57	V	31.09	-36.92	49.74	-95.26	-45.52	-13	32.52
4 599.26	40.23	H	32.10	-36.64	35.69	-95.26	-59.57	-13	46.57
4 600.03	44.61	V	32.10	-36.65	40.06	-95.26	-55.20	-13	42.20
5 133.26	45.55	H	33.60	-35.46	43.69	-95.26	-51.57	-13	38.57
5 133.30	48.05	V	33.60	-35.46	46.19	-95.26	-49.07	-13	36.07
6 844.46	43.64	H	35.59	-33.87	45.36	-95.26	-49.90	-13	36.90
10 266.68	44.87	V	37.87	-31.27	51.47	-95.26	-43.79	-13	30.79
Above 10 300.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (1 732.5 MHz)									
3 447.08	51.12	H	31.19	-36.76	45.55	-95.26	-49.71	-13	36.71
3 447.32	49.33	V	31.19	-36.76	43.76	-95.26	-51.50	-13	38.50
4 599.68	43.01	H	32.10	-36.65	38.46	-95.26	-56.80	-13	43.80
4 599.67	44.57	V	32.10	-36.65	40.02	-95.26	-55.24	-13	42.24
5 170.84	44.11	H	33.68	-35.34	42.45	-95.26	-52.81	-13	39.81
5 170.92	44.18	V	33.68	-35.34	42.52	-95.26	-52.74	-13	39.74
6 894.88	43.41	H	35.51	-33.53	45.39	-95.26	-49.87	-13	36.87
10 341.66	46.61	V	37.72	-30.70	53.63	-95.26	<u>-41.63</u>	-13	28.63
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-
High Channel (1 745.0 MHz)									
3 472.27	52.38	H	31.24	-36.79	46.83	-95.26	-48.43	-13	35.43
3 472.16	51.38	V	31.24	-36.79	45.83	-95.26	-49.43	-13	36.43
4 599.78	43.13	H	32.10	-36.65	38.58	-95.26	-56.68	-13	43.68
4 599.66	44.31	V	32.10	-36.65	39.76	-95.26	-55.50	-13	42.50
5 208.28	44.89	H	33.78	-35.15	43.52	-95.26	-51.74	-13	38.74
5 208.26	47.87	V	33.78	-35.15	46.50	-95.26	-48.76	-13	35.76
6 944.26	43.41	H	35.50	-33.26	45.65	-95.26	-49.61	-13	36.61
10 416.58	46.61	V	37.80	-31.07	53.34	-95.26	-41.92	-13	28.92
Above 10 500.00	Not detected	-	-	-	-	-	-	-	-

LTE12

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (704.0 MHz)									
1 319.71	51.17	H	25.04	-39.26	36.95	-97.41	-60.46	-13	47.46
1 319.80	49.85	V	25.04	-39.26	35.63	-97.41	-61.78	-13	48.78
1 399.26	56.59	H	25.30	-39.15	42.74	-97.41	-54.67	-13	41.67
1 399.26	61.49	V	25.30	-39.15	47.64	-97.41	-49.77	-13	36.77
1 498.80	56.35	H	25.20	-38.91	42.64	-97.41	-54.77	-13	41.77
1 500.20	50.90	V	25.20	-38.90	37.20	-97.41	-60.21	-13	47.21
1 679.95	46.98	V	26.18	-38.69	34.47	-97.41	-62.94	-13	49.94
1 799.94	48.64	H	27.00	-38.70	36.94	-97.41	-60.47	-13	47.47
1 799.86	49.57	V	27.00	-38.70	37.87	-97.41	-59.54	-13	46.54
2 098.82	50.97	H	27.80	-37.35	41.42	-97.41	-55.99	-13	42.99
2 098.71	47.64	V	27.80	-37.35	38.09	-97.41	-59.32	-13	46.32
2 310.20	51.89	H	28.04	-36.42	43.51	-97.41	-53.90	-13	40.90
2 309.80	48.86	V	28.04	-36.41	40.49	-97.41	-56.92	-13	43.92
2 639.81	46.17	H	28.82	-36.82	38.17	-97.41	-59.24	-13	46.24
2 636.96	44.19	V	28.83	-36.83	36.19	-97.41	-61.22	-13	48.22
2 798.49	52.97	H	29.10	-36.77	45.30	-97.41	-52.11	-13	39.11
2 798.47	53.13	V	29.10	-36.77	45.46	-97.41	-51.95	-13	38.95
3 498.02	60.25	H	31.30	-36.67	54.88	-97.41	-42.53	-13	29.53
3 498.04	54.20	V	31.30	-36.67	48.83	-97.41	-48.58	-13	35.58
4 197.33	49.06	H	32.19	-36.26	44.99	-97.41	-52.42	-13	39.42
4 197.40	49.54	V	32.19	-36.26	45.47	-97.41	-51.94	-13	38.94
Above 4 200.00	Not detected	-	-	-	-	-	-	-	-

LTE12

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Middle Channel (707.5 MHz)									
1 319.78	51.10	H	25.04	-39.26	36.88	-97.41	-60.53	-13	47.53
1 319.76	49.17	V	25.04	-39.26	34.95	-97.41	-62.46	-13	49.46
1 406.32	61.54	H	25.27	-39.15	47.66	-97.41	-49.75	-13	36.75
1 406.17	58.92	V	25.28	-39.15	45.05	-97.41	-52.36	-13	39.36
1 499.70	55.70	H	25.20	-38.90	42.00	-97.41	-55.41	-13	42.41
1 499.20	51.58	V	25.20	-38.90	37.88	-97.41	-59.53	-13	46.53
1 679.75	47.38	V	26.18	-38.68	34.88	-97.41	-62.53	-13	49.53
1 799.82	49.16	H	27.00	-38.70	37.46	-97.41	-59.95	-13	46.95
1 799.52	50.48	V	27.00	-38.70	38.78	-97.41	-58.63	-13	45.63
2 109.43	48.37	H	27.76	-37.22	38.91	-97.41	-58.50	-13	45.50
2 109.11	50.17	V	27.76	-37.23	40.70	-97.41	-56.71	-13	43.71
2 307.80	49.79	H	28.03	-36.40	41.42	-97.41	-55.99	-13	42.99
2 309.50	46.73	V	28.04	-36.41	38.36	-97.41	-59.05	-13	46.05
2 639.60	46.45	H	28.82	-36.82	38.45	-97.41	-58.96	-13	45.96
2 643.11	44.17	V	28.81	-36.80	36.18	-97.41	-61.23	-13	48.23
2 812.40	55.25	H	29.15	-36.76	47.64	-97.41	-49.77	-13	36.77
2 812.36	54.69	V	29.15	-36.76	47.08	-97.41	-50.33	-13	37.33
3 515.42	64.13	H	31.30	-36.77	58.66	-97.41	-38.75	-13	25.75
3 515.56	57.13	V	31.30	-36.77	51.66	-97.41	-45.75	-13	32.75
4 218.69	48.22	H	32.20	-36.06	44.36	-97.41	-53.05	-13	40.05
4 218.58	46.80	V	32.20	-36.06	42.94	-97.41	-54.47	-13	41.47
Above 4 300.00	Not detected	-	-	-	-	-	-	-	-

LTE12

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
High Channel (711.0 MHz)									
1 319.92	50.89	H	25.04	-39.26	36.67	-97.41	-60.74	-13	47.74
1 319.99	49.05	V	25.04	-39.26	34.83	-97.41	-62.58	-13	49.58
1 413.16	58.72	H	25.25	-39.14	44.83	-97.41	-52.58	-13	39.58
1 413.29	62.75	V	25.25	-39.14	48.86	-97.41	-48.55	-13	35.55
1 498.10	56.55	H	25.20	-38.91	42.84	-97.41	-54.57	-13	41.57
1 500.60	51.96	V	25.20	-38.90	38.26	-97.41	-59.15	-13	46.15
1 679.90	47.59	V	26.18	-38.69	35.08	-97.41	-62.33	-13	49.33
1 799.96	48.09	H	27.00	-38.70	36.39	-97.41	-61.02	-13	48.02
1 799.90	50.75	V	27.00	-38.70	39.05	-97.41	-58.36	-13	45.36
2 119.76	48.83	H	27.72	-37.09	39.46	-97.41	-57.95	-13	44.95
2 119.84	50.10	V	27.72	-37.09	40.73	-97.41	-56.68	-13	43.68
2 310.80	50.36	H	28.04	-36.42	41.98	-97.41	-55.43	-13	42.43
2 308.00	46.54	V	28.03	-36.40	38.17	-97.41	-59.24	-13	46.24
2 639.84	46.13	H	28.82	-36.82	38.13	-97.41	-59.28	-13	46.28
2 640.17	44.25	V	28.82	-36.82	36.25	-97.41	-61.16	-13	48.16
2 826.46	54.37	H	29.21	-36.76	46.82	-97.41	-50.59	-13	37.59
2 826.23	53.12	V	29.20	-36.76	45.56	-97.41	-51.85	-13	38.85
3 532.95	62.23	H	31.30	-36.89	56.64	-97.41	-40.77	-13	27.77
3 532.95	57.98	V	31.30	-36.89	52.39	-97.41	-45.02	-13	32.02
4 239.83	45.74	H	32.20	-35.86	42.08	-97.41	-55.33	-13	42.33
4 239.61	47.21	V	32.20	-35.86	43.55	-97.41	-53.86	-13	40.86
Above 4 300.00	Not detected	-	-	-	-	-	-	-	-

Remark;

1. AF = Antenna Factor, CL = Cable Loss, CF = Conversion Factor.
2. E (dBμV/m) = Measured Level (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB).
3. E.I.R.P. (dB m) = E (dBμV/m) + CF (dB).
4. E.R.P. (dB m) = E (dBμV/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 ANSI C63.26-2015 5.2.7 and KDB 971168 D01 v03r01 5.8.4
6. The frequency spectrum is examined from 9 kHz to the 10th 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

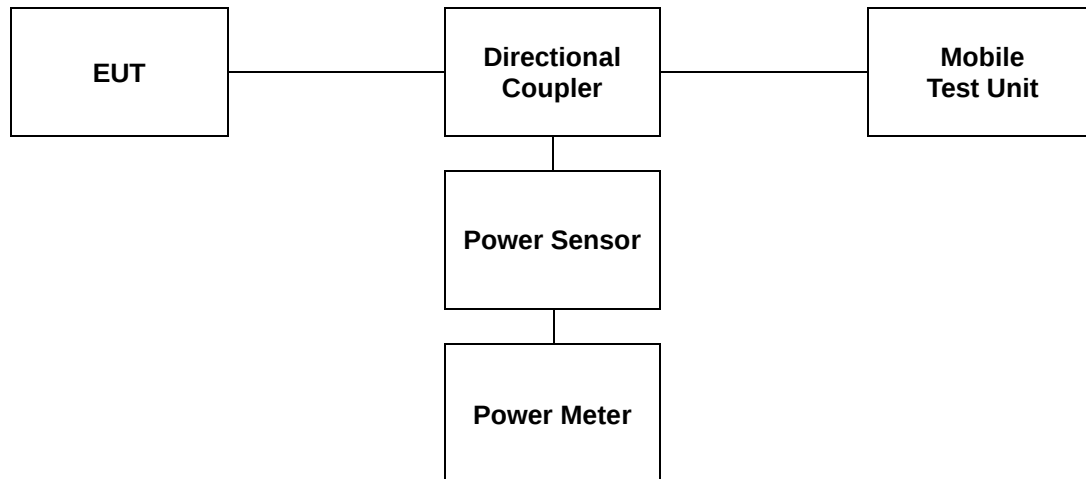
3.1. Limit

CFR 47, Section FCC §2.1046 and IC RSS-Gen Issue 5 6.12.

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.

- WCDMA

Band	Channel		9262		9400		9538	
	Frequency (MHz)		1 852.4		1 880.0		1 907.6	
			(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
II	RMC		23.19	0.208	23.27	0.212	<u>23.35</u>	<u>0.216</u>
	HSDPA	Subtest 1	<u>22.29</u>	<u>0.169</u>	22.26	0.168	22.24	0.167
		Subtest 2	22.09	0.162	22.05	0.160	22.27	0.169
		Subtest 3	21.60	0.145	21.72	0.149	21.68	0.147
		Subtest 4	21.74	0.149	21.62	0.145	21.69	0.148
	HSUPA	Subtest 1	21.56	0.143	21.50	0.141	22.06	0.161
		Subtest 2	21.41	0.138	21.46	0.140	21.69	0.148
		Subtest 3	21.92	0.156	22.05	0.160	22.14	0.164
		Subtest 4	21.91	0.155	21.92	0.156	22.08	0.161
		Subtest 5	22.02	0.159	21.94	0.156	21.99	0.158
	DC-HSDPA	Subtest 1	22.23	0.167	22.25	0.168	22.18	0.165
		Subtest 2	22.01	0.159	22.01	0.159	22.20	0.166
		Subtest 3	21.46	0.140	21.56	0.143	21.66	0.147
		Subtest 4	21.58	0.144	21.57	0.144	21.53	0.142

Band	Channel		1312		1413		1513	
	Frequency (MHz)		1 712.4		1 732.6		1 752.6	
			(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
IV	RMC		<u>23.37</u>	<u>0.217</u>	23.35	0.216	23.18	0.208
	HSDPA	Subtest 1	<u>22.27</u>	<u>0.169</u>	22.17	0.165	21.94	0.156
		Subtest 2	22.24	0.167	22.08	0.161	22.07	0.161
		Subtest 3	21.65	0.146	21.62	0.145	21.41	0.138
		Subtest 4	21.69	0.148	21.63	0.146	21.38	0.137
	HSUPA	Subtest 1	21.42	0.139	22.19	0.166	21.60	0.145
		Subtest 2	21.63	0.146	21.86	0.153	20.74	0.119
		Subtest 3	22.11	0.163	21.99	0.158	21.79	0.151
		Subtest 4	22.13	0.163	22.03	0.160	21.91	0.155
		Subtest 5	22.06	0.161	21.99	0.158	21.84	0.153
	DC-HSDPA	Subtest 1	22.26	0.168	22.15	0.164	21.95	0.157
		Subtest 2	22.19	0.166	22.01	0.159	22.03	0.160
		Subtest 3	21.63	0.146	21.59	0.144	21.46	0.140
		Subtest 4	21.71	0.148	21.68	0.147	21.35	0.136

Band	Channel		4132		4182		4233	
	Frequency (MHz)		826.4		836.6		846.6	
			(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
V	RMC		23.49	0.223	23.63	0.231	23.72	0.236
	HSDPA	Subtest 1	22.38	0.173	22.64	0.184	22.66	0.185
		Subtest 2	22.51	0.178	22.51	0.178	22.63	0.183
		Subtest 3	21.95	0.157	22.15	0.164	22.27	0.169
		Subtest 4	21.97	0.157	22.09	0.162	22.15	0.164
	HSUPA	Subtest 1	22.35	0.172	22.01	0.159	22.21	0.166
		Subtest 2	21.45	0.140	22.11	0.163	21.60	0.145
		Subtest 3	22.32	0.171	22.53	0.179	22.53	0.179
		Subtest 4	22.40	0.174	22.55	0.180	22.60	0.182
		Subtest 5	22.43	0.175	22.51	0.178	22.52	0.179
	DC-HSDPA	Subtest 1	22.33	0.171	22.60	0.182	22.64	0.184
		Subtest 2	22.48	0.177	22.52	0.179	22.54	0.179
		Subtest 3	21.91	0.155	22.13	0.163	22.22	0.167
		Subtest 4	21.95	0.157	22.02	0.159	22.17	0.165

- LTE

LTE Band 2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				18607 (1 850.7 MHz)		18900 (1 880.0 MHz)		19193 (1 909.3 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
1.4	QPSK	1	0	22.44	0.175	22.63	0.183	22.93	0.196
		1	3	22.46	0.176	22.61	0.182	22.82	0.191
		1	5	22.46	0.176	22.60	0.182	22.88	0.194
		3	0	22.42	0.175	22.77	0.189	22.83	0.192
		3	2	22.52	0.179	22.76	0.189	22.75	0.188
		3	3	22.49	0.177	22.69	0.186	22.86	0.193
		6	0	21.37	0.137	22.61	0.182	22.85	0.193
	16QAM	1	0	21.28	0.134	21.39	0.138	21.54	0.143
		1	3	21.26	0.134	21.32	0.136	21.51	0.142
		1	5	21.13	0.130	21.35	0.136	21.57	0.144
		3	0	21.27	0.134	21.39	0.138	21.57	0.144
		3	2	21.22	0.132	21.33	0.136	21.57	0.144
		3	3	21.34	0.136	21.34	0.136	21.57	0.144
		6	0	20.28	0.107	21.36	0.137	21.56	0.143

LTE Band 2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				18615 (1 851.5 MHz)		18900 (1 880.0 MHz)		19185 (1 908.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
3	QPSK	1	0	22.54	0.179	22.70	0.186	22.84	0.192
		1	7	22.56	0.180	22.78	0.190	22.80	0.191
		1	14	22.48	0.177	22.73	0.187	22.85	0.193
		8	0	22.55	0.180	21.48	0.141	21.88	0.154
		8	4	22.50	0.178	21.50	0.141	21.60	0.145
		8	7	22.42	0.175	21.54	0.143	21.80	0.151
		15	0	21.39	0.138	21.56	0.143	21.79	0.151
	16QAM	1	0	21.22	0.132	21.26	0.134	21.55	0.143
		1	7	21.13	0.130	21.37	0.137	21.44	0.139
		1	14	21.13	0.130	21.37	0.137	21.45	0.140
		8	0	21.58	0.144	20.31	0.107	20.50	0.112
		8	4	21.28	0.134	20.42	0.110	20.52	0.113
		8	7	21.20	0.132	20.39	0.109	20.51	0.112
		15	0	20.38	0.109	20.72	0.118	20.65	0.116

LTE Band 2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				18625 (1 852.5 MHz)		18900 (1 880.0 MHz)		19175 (1 907.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	22.41	0.174	22.61	0.182	22.63	0.183
		1	12	22.53	0.179	22.72	0.187	22.95	0.197
		1	24	22.60	0.182	22.66	0.185	22.70	0.186
		12	0	22.50	0.178	22.65	0.184	21.68	0.147
		12	6	22.54	0.179	22.67	0.185	21.61	0.145
		12	13	22.47	0.177	22.67	0.185	21.66	0.147
		25	0	22.47	0.177	21.52	0.142	21.72	0.149
	16QAM	1	0	21.18	0.131	21.46	0.140	21.37	0.137
		1	12	21.17	0.131	21.38	0.137	21.39	0.138
		1	24	21.19	0.132	21.15	0.130	21.37	0.137
		12	0	21.22	0.132	21.36	0.137	20.48	0.112
		12	6	21.25	0.133	21.50	0.141	20.60	0.115
		12	13	21.51	0.142	21.41	0.138	20.49	0.112
		25	0	21.30	0.135	20.49	0.112	20.71	0.118

LTE Band 2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				18650 (1 855.0 MHz)		18900 (1 880.0 MHz)		19150 (1 905.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	22.55	0.180	22.71	0.187	22.86	0.193
		1	25	22.55	0.180	22.72	0.187	22.79	0.190
		1	49	22.60	0.182	22.79	0.190	22.88	0.194
		25	0	22.44	0.175	22.70	0.186	22.73	0.187
		25	12	22.39	0.173	22.68	0.185	22.71	0.187
		25	25	22.54	0.179	22.68	0.185	22.79	0.190
		50	0	22.55	0.180	21.56	0.143	21.74	0.149
	16QAM	1	0	21.28	0.134	21.37	0.137	21.56	0.143
		1	25	21.33	0.136	21.24	0.133	21.25	0.133
		1	49	21.11	0.129	21.38	0.137	21.39	0.138
		25	0	21.40	0.138	21.47	0.140	21.68	0.147
		25	12	21.41	0.138	21.77	0.150	21.49	0.141
		25	25	21.42	0.139	21.77	0.150	21.48	0.141
		50	0	21.46	0.140	20.70	0.117	20.77	0.119

LTE Band 2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				18675 (1 857.5 MHz)		18900 (1 880.0 MHz)		19125 (1 902.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
15	QPSK	1	0	22.63	0.183	22.83	0.192	22.86	0.193
		1	36	22.58	0.181	22.82	0.191	22.76	0.189
		1	74	22.68	0.185	22.75	0.188	22.90	0.195
		36	0	22.51	0.178	22.68	0.185	22.71	0.187
		36	18	22.55	0.180	22.66	0.185	22.72	0.187
		36	37	22.55	0.180	22.65	0.184	22.73	0.187
		75	0	22.47	0.177	22.62	0.183	21.30	0.135
	16QAM	1	0	21.28	0.134	21.54	0.143	21.29	0.135
		1	36	21.32	0.136	21.40	0.138	21.36	0.137
		1	74	21.38	0.137	21.24	0.133	21.53	0.142
		36	0	21.44	0.139	21.57	0.144	21.41	0.138
		36	18	21.41	0.138	21.52	0.142	21.55	0.143
		36	37	21.40	0.138	21.52	0.142	21.58	0.144
		75	0	21.44	0.139	21.55	0.143	20.78	0.120

LTE Band 2									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				18700 (1 860.0 MHz)		18900 (1 880.0 MHz)		19100 (1 900.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
20	QPSK	1	0	22.53	0.179	22.70	0.186	22.96	0.198
		1	50	22.56	0.180	22.75	0.188	22.93	0.196
		1	99	22.59	0.182	22.82	0.191	22.77	0.189
		50	0	22.43	0.175	22.80	0.191	22.88	0.194
		50	25	22.63	0.183	22.68	0.185	22.61	0.182
		50	50	22.41	0.174	22.61	0.182	22.82	0.191
		100	0	22.40	0.174	22.75	0.188	21.67	0.147
	16QAM	1	0	21.57	0.144	21.38	0.137	21.56	0.143
		1	50	21.42	0.139	21.42	0.139	21.49	0.141
		1	99	21.36	0.137	21.39	0.138	21.46	0.140
		50	0	21.36	0.137	21.34	0.136	21.57	0.144
		50	25	21.35	0.136	21.61	0.145	21.61	0.145
		50	50	21.52	0.142	21.61	0.145	21.66	0.147
		100	0	21.44	0.139	21.72	0.149	20.79	0.120

LTE Band 4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				19957 (1 710.7 MHz)		20175 (1 732.5 MHz)		20393 (1 754.3 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
1.4	QPSK	1	0	22.19	0.166	22.69	0.186	22.50	0.178
		1	3	22.30	0.170	22.76	0.189	22.48	0.177
		1	5	22.18	0.165	22.67	0.185	22.51	0.178
		3	0	22.23	0.167	22.74	0.188	22.59	0.182
		3	2	22.32	0.171	22.54	0.179	22.52	0.179
		3	3	22.29	0.169	22.73	0.187	22.52	0.179
		6	0	21.23	0.133	22.63	0.183	22.52	0.179
	16QAM	1	0	21.18	0.131	21.52	0.142	21.39	0.138
		1	3	21.22	0.132	21.39	0.138	21.35	0.136
		1	5	21.27	0.134	21.52	0.142	21.34	0.136
		3	0	21.19	0.132	21.39	0.138	21.44	0.139
		3	2	21.22	0.132	21.45	0.140	21.30	0.135
		3	3	21.34	0.136	21.41	0.138	21.42	0.139
		6	0	20.34	0.108	21.49	0.141	21.27	0.134

LTE Band 4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				19965 (1 711.5 MHz)		20175 (1 732.5 MHz)		20385 (1 753.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
3	QPSK	1	0	22.55	0.180	22.80	0.191	22.40	0.174
		1	7	22.40	0.174	22.74	0.188	22.56	0.180
		1	14	22.35	0.172	22.58	0.181	22.56	0.180
		8	0	22.47	0.177	21.56	0.143	21.34	0.136
		8	4	22.42	0.175	21.58	0.144	21.36	0.137
		8	7	22.33	0.171	21.53	0.142	21.35	0.136
		15	0	21.34	0.136	21.55	0.143	21.36	0.137
	16QAM	1	0	21.30	0.135	21.43	0.139	21.34	0.136
		1	7	21.19	0.132	21.20	0.132	21.22	0.132
		1	14	21.21	0.132	21.36	0.137	21.34	0.136
		8	0	21.40	0.138	20.44	0.111	20.44	0.111
		8	4	21.45	0.140	20.59	0.115	20.45	0.111
		8	7	21.30	0.135	20.67	0.117	20.49	0.112
		15	0	20.32	0.108	20.44	0.111	20.61	0.115

LTE Band 4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				19975 (1 712.5 MHz)		20175 (1 732.5 MHz)		20375 (1 752.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	22.50	0.178	22.69	0.186	22.54	0.179
		1	12	22.50	0.178	22.83	0.192	22.84	0.192
		1	24	22.49	0.177	22.63	0.183	22.76	0.189
		12	0	22.40	0.174	22.62	0.183	21.62	0.145
		12	6	22.38	0.173	22.60	0.182	21.52	0.142
		12	13	22.41	0.174	22.61	0.182	21.62	0.145
		25	0	22.46	0.176	21.54	0.143	21.55	0.143
	16QAM	1	0	21.06	0.128	21.33	0.136	21.20	0.132
		1	12	21.12	0.129	21.35	0.136	21.20	0.132
		1	24	21.12	0.129	21.22	0.132	21.39	0.138
		12	0	21.28	0.134	21.35	0.136	20.61	0.115
		12	6	21.31	0.135	21.32	0.136	20.50	0.112
		12	13	21.27	0.134	21.62	0.145	20.72	0.118
		25	0	21.46	0.140	20.77	0.119	20.75	0.119

LTE Band 4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				20000 (1 715.0 MHz)		20175 (1 732.5 MHz)		20350 (1 750.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	22.40	0.174	22.76	0.189	22.46	0.176
		1	25	22.44	0.175	22.72	0.187	22.58	0.181
		1	49	22.56	0.180	22.80	0.191	22.66	0.185
		25	0	22.37	0.173	22.63	0.183	22.54	0.179
		25	12	22.53	0.179	22.65	0.184	22.51	0.178
		25	25	22.54	0.179	22.60	0.182	22.52	0.179
		50	0	22.41	0.174	21.62	0.145	21.48	0.141
	16QAM	1	0	21.16	0.131	21.33	0.136	21.11	0.129
		1	25	21.30	0.135	21.35	0.136	21.10	0.129
		1	49	21.27	0.134	21.39	0.138	21.39	0.138
		25	0	21.40	0.138	21.23	0.133	21.53	0.142
		25	12	21.49	0.141	21.27	0.134	21.58	0.144
		25	25	21.72	0.149	21.80	0.151	21.62	0.145
		50	0	21.38	0.137	20.71	0.118	20.67	0.117

LTE Band 4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				20025 (1 717.5 MHz)		20175 (1 732.5 MHz)		20325 (1 747.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
15	QPSK	1	0	22.53	0.179	22.59	0.182	22.68	0.185
		1	36	22.49	0.177	22.64	0.184	22.42	0.175
		1	74	22.48	0.177	22.62	0.183	22.53	0.179
		36	0	22.40	0.174	22.54	0.179	22.48	0.177
		36	18	22.38	0.173	22.43	0.175	22.31	0.170
		36	37	22.41	0.174	22.54	0.179	22.09	0.162
		75	0	22.36	0.172	22.47	0.177	21.23	0.133
	16QAM	1	0	21.64	0.146	21.18	0.131	21.47	0.140
		1	36	21.35	0.136	21.20	0.132	20.99	0.126
		1	74	21.42	0.139	21.35	0.136	21.29	0.135
		36	0	21.38	0.137	21.45	0.140	21.50	0.141
		36	18	21.51	0.142	21.42	0.139	21.43	0.139
		36	37	21.41	0.138	21.59	0.144	21.39	0.138
		75	0	21.25	0.133	21.55	0.143	20.32	0.108

LTE Band 4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				20050 (1 720.0 MHz)		20175 (1 732.5 MHz)		20300 (1 745.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
20	QPSK	1	0	22.41	0.174	22.55	0.180	22.85	0.193
		1	50	22.49	0.177	22.40	0.174	22.76	0.189
		1	99	22.62	0.183	22.47	0.177	22.59	0.182
		50	0	22.15	0.164	22.32	0.171	22.70	0.186
		50	25	22.38	0.173	22.24	0.167	22.62	0.183
		50	50	22.53	0.179	22.18	0.165	22.56	0.180
		100	0	22.14	0.164	22.21	0.166	21.54	0.143
	16QAM	1	0	21.20	0.132	21.26	0.134	21.97	0.157
		1	50	21.19	0.132	20.95	0.124	21.37	0.137
		1	99	21.27	0.134	21.04	0.127	21.28	0.134
		50	0	21.14	0.130	20.93	0.124	21.53	0.142
		50	25	21.12	0.129	21.26	0.134	21.46	0.140
		50	50	21.79	0.151	21.20	0.132	21.46	0.140
		100	0	21.16	0.131	21.29	0.135	20.64	0.116

LTE Band 12									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				23017 (699.7 MHz)		23095 (707.5 MHz)		23173 (715.3 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
1.4	QPSK	1	0	23.22	0.210	23.26	0.212	23.30	0.214
		1	3	23.20	0.209	23.24	0.211	23.03	0.201
		1	5	23.14	0.206	23.16	0.207	23.15	0.207
		3	0	23.25	0.211	23.13	0.206	23.15	0.207
		3	2	23.22	0.210	23.13	0.206	23.11	0.205
		3	3	23.16	0.207	23.13	0.206	23.11	0.205
		6	0	22.17	0.165	22.11	0.163	22.13	0.163
	16QAM	1	0	22.21	0.166	22.56	0.180	21.96	0.157
		1	3	22.00	0.158	21.87	0.154	21.89	0.155
		1	5	22.09	0.162	21.87	0.154	21.71	0.148
		3	0	21.95	0.157	21.88	0.154	21.89	0.155
		3	2	22.41	0.174	21.75	0.150	21.99	0.158
		3	3	22.42	0.175	21.82	0.152	22.00	0.158
		6	0	21.19	0.132	21.91	0.155	21.79	0.151

LTE Band 12									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				23025 (700.5 MHz)		23095 (707.5 MHz)		23165 (714.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
3	QPSK	1	0	23.13	0.206	23.16	0.207	22.91	0.195
		1	7	23.20	0.209	23.17	0.207	22.89	0.195
		1	14	23.15	0.207	23.14	0.206	22.89	0.195
		8	0	23.12	0.205	23.04	0.201	22.90	0.195
		8	4	23.02	0.200	23.06	0.202	22.94	0.197
		8	7	23.11	0.205	23.01	0.200	22.92	0.196
		15	0	22.09	0.162	22.10	0.162	22.19	0.166
	16QAM	1	0	22.51	0.178	21.82	0.152	21.75	0.150
		1	7	21.80	0.151	21.89	0.155	21.78	0.151
		1	14	21.81	0.152	21.91	0.155	21.93	0.156
		8	0	22.05	0.160	22.01	0.159	22.03	0.160
		8	4	22.04	0.160	21.96	0.157	21.98	0.158
		8	7	21.95	0.157	21.89	0.155	22.01	0.159
		15	0	21.21	0.132	21.16	0.131	21.08	0.128

LTE Band 12									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				23035 (701.5 MHz)		23095 (707.5 MHz)		23155 (713.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	23.10	0.204	22.99	0.199	23.13	0.206
		1	12	23.21	0.209	23.19	0.208	23.10	0.204
		1	24	23.35	0.216	23.22	0.210	23.11	0.205
		12	0	23.09	0.204	23.01	0.200	22.12	0.163
		12	6	23.17	0.207	23.18	0.208	22.14	0.164
		12	13	23.17	0.207	23.16	0.207	22.12	0.163
		25	0	23.14	0.206	22.17	0.165	22.16	0.164
	16QAM	1	0	21.85	0.153	21.76	0.150	21.97	0.157
		1	12	21.79	0.151	22.36	0.172	21.95	0.157
		1	24	21.94	0.156	21.87	0.154	22.03	0.160
		12	0	22.02	0.159	22.18	0.165	21.18	0.131
		12	6	21.95	0.157	22.34	0.171	21.25	0.133
		12	13	22.18	0.165	22.37	0.173	21.05	0.127
		25	0	22.04	0.160	21.25	0.133	20.99	0.126

LTE Band 12									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				23060 (704.0 MHz)		23095 (707.5 MHz)		23130 (711.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	23.15	0.207	23.17	0.207	23.55	0.226
		1	25	23.17	0.207	23.12	0.205	23.16	0.207
		1	49	23.18	0.208	23.08	0.203	23.15	0.207
		25	0	23.07	0.203	22.92	0.196	23.16	0.207
		25	12	23.09	0.204	23.07	0.203	23.04	0.201
		25	25	23.19	0.208	23.02	0.200	23.02	0.200
		50	0	23.13	0.206	21.98	0.158	22.14	0.164
	16QAM	1	0	21.74	0.149	21.55	0.143	21.47	0.140
		1	25	21.98	0.158	21.74	0.149	21.77	0.150
		1	49	21.98	0.158	21.81	0.152	21.87	0.154
		25	0	22.06	0.161	21.91	0.155	22.00	0.158
		25	12	22.30	0.170	22.18	0.165	22.22	0.167
		25	25	21.75	0.150	22.13	0.163	22.11	0.163
		50	0	22.11	0.163	20.86	0.122	21.33	0.136

- End of the Test Report -