FCC Test Report
(Part 24: LTE Band 2)

Report No.:	RF180731E06-2
FCC ID:	PKRNVWR1000
Test Model:	R1000
Received Date:	Jul. 31, 2018
Test Date:	Aug. 01 ~ Aug. 05, 2018
Issued Date:	Aug. 08, 2018
Applicant:	Novatel Wireless, Inc.
Address:	9605 Scranton Road Suite 300, San Diego, CA 92121 United States
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration/ Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RF180731E06-2	Original release	Aug. 08, 2018

1 Certificate of Conformity

Product: 4G LTE Wireless Router

Brand: Inseego

Test Model: R1000

Sample Status: Engineering sample

Applicant: Novatel Wireless, Inc.

Test Date: Aug. 01 ~ Aug. 05, 2018

Standards: FCC Part 24, Subpart E

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Aug. 08, 2018
Polly Chien / Specialist

Approved by : _____ , **Date:** Aug. 08, 2018
Bruce Chen / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Effective radiated power	Pass	Meet the requirement of limit.
2.1046 24.232(d)	Peak To Average Ratio	Pass	Meet the requirement of limit.
2.1047	Modulation characteristics	Pass	Meet the requirement
2.1055 24.235	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 24.238(b)	Occupied Bandwidth	Pass	Meet the requirement of limit.
24.238(b)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.1dB at 72.68MHz.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 11, 2018	Apr. 10, 2019
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	May 29, 2018	May 28, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-148	Dec. 11, 2017	Dec. 10, 2018
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Dec. 12, 2017	Dec. 11, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 01, 2017	Nov. 30, 2018
Loop Antenna EMCI	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Aug. 08, 2017	Aug. 07, 2018
Preamplifier Agilent (Above 1GHz)	8449B	3008A01638	Feb. 22, 2018	Feb. 21, 2019
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 15, 2018	Jan. 14, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Aug. 08, 2017	Aug. 07, 2018
RF signal cable Woken	8D-FB	Cable-CH9-01	Jul. 31, 2018	Jul. 30, 2019
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 04, 2018	Jun. 03, 2019
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA

Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.
3. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
4. The IC Site Registration No. is IC 7450F-9.

3 General Information

3.1 General Description of EUT

Product	4G LTE Wireless Router		
Brand	Inseego		
Test Model	R1000		
Sample Status	Engineering sample		
Power Supply Rating	4.5 Vdc (Battery:1.5Vdc*3) 54Vdc (PoE)		
Modulation Type	QPSK, 16QAM		
Operating Frequency	LTE Band 2 (Channel Bandwidth 5MHz)	1852.5MHz ~ 1907.5MHz	
	LTE Band 2 (Channel Bandwidth 10MHz)	1855.0MHz ~ 1905.0MHz	
	LTE Band 2 (Channel Bandwidth 15MHz)	1857.5MHz ~ 1902.5MHz	
	LTE Band 2 (Channel Bandwidth 20MHz)	1860.0MHz ~ 1900.0MHz	
Max. EIRP Power	LTE Band 2 (Channel Bandwidth 5MHz)	363.078mW (25.6dBm)	
	LTE Band 2 (Channel Bandwidth 10MHz)	467.735mW (26.7dBm)	
	LTE Band 2 (Channel Bandwidth 15MHz)	363.078mW (25.6dBm)	
	LTE Band 2 (Channel Bandwidth 20MHz)	446.684mW (26.5dBm)	
Emission Designator		QPSK	16QAM
	LTE Band 2 (Channel Bandwidth 5MHz)	4M49G7D	4M49W7D
	LTE Band 2 (Channel Bandwidth 10MHz)	8M97G7D	8M97W7D
	LTE Band 2 (Channel Bandwidth 15MHz)	13M49G7D	13M49W7D
	LTE Band 2 (Channel Bandwidth 20MHz)	17M97G7D	18M01W7D
Antenna Type	Refer to Note for more details		
Antenna Connector	Refer to Note for more details		
Accessory Device	PoE		
Data Cable Supplied	1.0m non-shielded Ethernet cable without core		

Note:

1. The EUT consumes power from the following PoE.

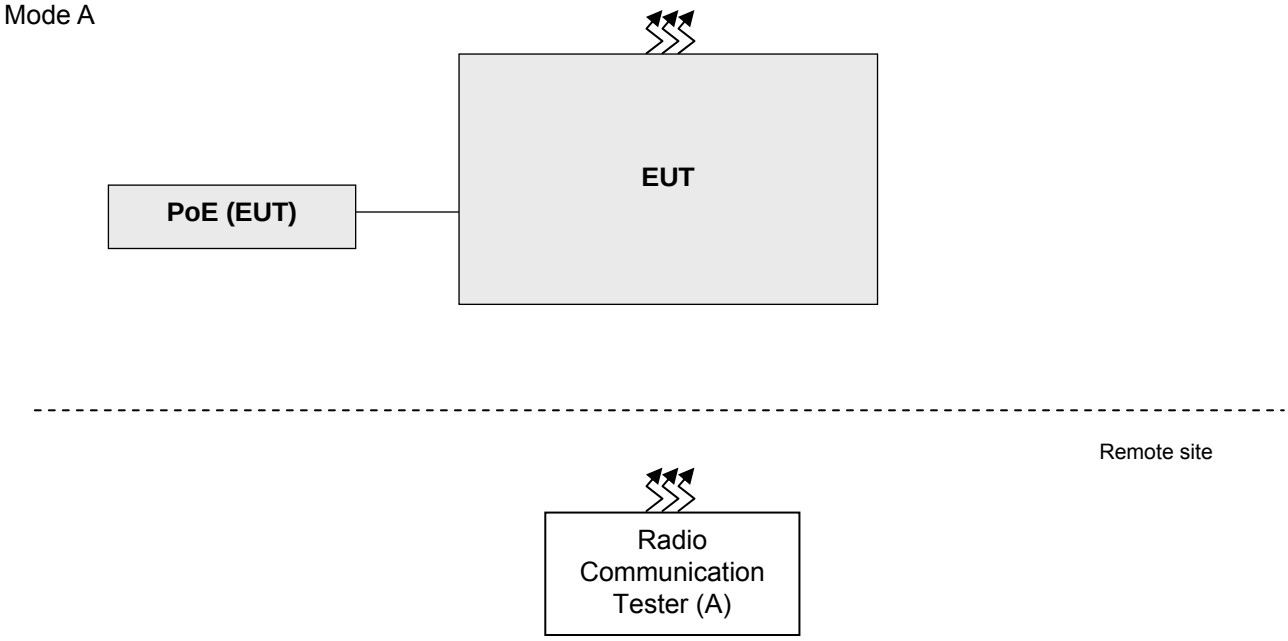
Brand	Leader
Model	UNA3-6540240-I1
Input Power	100-240Vac, 50/60Hz, 2.0A
Output Power	54Vdc, 2.4A
Power Line	1.8m non shielded AC power cable without core 1.4m DC power cable without core

2. The EUT uses following antennas.

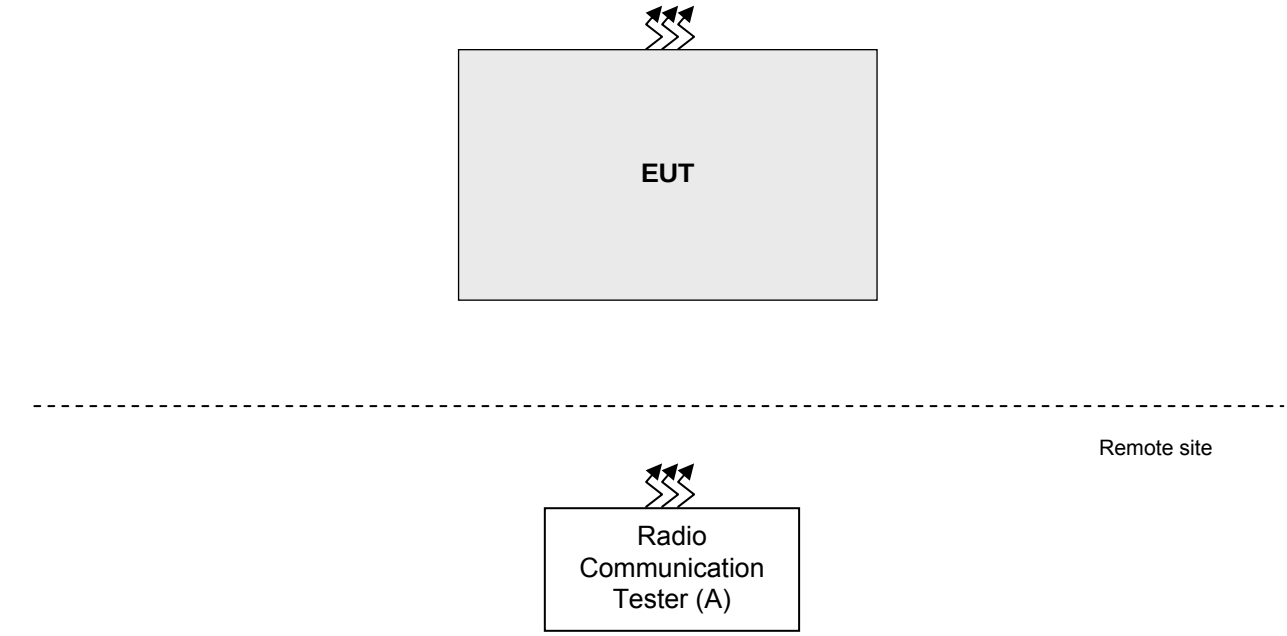
Frequency Range (MHz)	Antenna Type	Model	Antenna Connector	*Cable Length	Antenna Gain (dBi)
LTE Band 2	PCB	C037-511495	i-pex(MHF)	130mm	2.9

3.2 Configuration of System under Test

Mode A



Mode B



3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Radio Communication Tester	Anritsu	MT8820C	6201010284	NA	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on X-plane. Following channel(s) was (were) selected for the final test as listed below:

Test results are presented in the report as below.

Test Mode	Test Condition
A	EUT with battery
B	EUT with adapter

LTE Band 2

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
A	EIRP	18625 to 19175	18625(1852.50MHz), 18900(1880.00MHz), 19175(1907.50MHz)	5MHz	QPSK / 16QAM	1 RB / 24 RB Offset
		18650 to 19150	18650(1855.00MHz), 18900(1880.00MHz), 19150(1905.00MHz)	10MHz	QPSK / 16QAM	1 RB / 49 RB Offset
		18675 to 19125	18675(1857.50MHz), 18900(1880.00MHz), 19125(1902.50MHz)	15MHz	QPSK / 16QAM	1 RB / 74 RB Offset
		18700 to 19100	18700(1860.00MHz), 18900(1880.00MHz), 19100(1900.00MHz)	20MHz	QPSK / 16QAM	1 RB / 99 RB Offset
A	Modulation characteristics	18700 to 19100	18900(1880.00MHz)	20MHz	QPSK	1 RB / 99 RB Offset
A	Frequency Stability	18625 to 19175	18900(1880.00MHz)	5MHz	QPSK	1 RB / 24 RB Offset
		18650 to 19150	18900(1880.00MHz)	10MHz	QPSK	1 RB / 49 RB Offset
		18675 to 19125	18900(1880.00MHz)	15MHz	QPSK	1 RB / 74 RB Offset
		18700 to 19100	18900(1880.00MHz),	20MHz	QPSK	1 RB / 99 RB Offset
A	Occupied Bandwidth	18625 to 19175	18625(1852.50MHz), 18900(1880.00MHz), 19175(1907.50MHz)	5MHz	QPSK / 16QAM	1 RB / 24 RB Offset
		18650 to 19150	18650(1855.00MHz), 18900(1880.00MHz), 19150(1905.00MHz)	10MHz	QPSK / 16QAM	1 RB / 49 RB Offset
		18675 to 19125	18675(1857.50MHz), 18900(1880.00MHz), 19125(1902.50MHz)	15MHz	QPSK / 16QAM	1 RB / 74 RB Offset
		18700 to 19100	18700(1860.00MHz), 18900(1880.00MHz), 19100(1900.00MHz)	20MHz	QPSK / 16QAM	1 RB / 99 RB Offset
A	Band Edge	18625 to 19175	18625(1852.50MHz), 19175(1907.50MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		18650 to 19150	18650(1855.00MHz), 19150(1905.00MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
		18675 to 19125	18675(1857.50MHz), 19125(1902.50MHz)	15MHz	QPSK	1 RB / 0 RB Offset 1 RB / 74 RB Offset 75 RB / 0 RB Offset
		18700 to 19100	18700(1860.00MHz), 19100(1900.00MHz)	20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 99 RB Offset 100 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
A	Peak to Average Ratio	18625 to 19175	18625(1852.50MHz), 18900(1880.00MHz), 19175(1907.50MHz)	5MHz	QPSK / 16QAM	1 RB / 24 RB Offset
		18650 to 19150	18650(1855.00MHz), 18900(1880.00MHz), 19150(1905.00MHz)	10MHz	QPSK / 16QAM	1 RB / 49 RB Offset
		18675 to 19125	18675(1857.50MHz), 18900(1880.00MHz), 19125(1902.50MHz)	15MHz	QPSK / 16QAM	1 RB / 74 RB Offset
		18700 to 19100	18700(1860.00MHz), 18900(1880.00MHz), 19100(1900.00MHz)	20MHz	QPSK / 16QAM	1 RB / 99 RB Offset
A	Conducted Emission	18625 to 19175	18625(1852.50MHz), 18900(1880.00MHz), 19175(1907.50MHz)	5MHz	QPSK	1 RB / 24 RB Offset
		18650 to 19150	18650(1855.00MHz), 18900(1880.00MHz), 19150(1905.00MHz)	10MHz	QPSK	1 RB / 49 RB Offset
		18675 to 19125	18675(1857.50MHz), 18900(1880.00MHz), 19125(1902.50MHz)	15MHz	QPSK	1 RB / 74 RB Offset
		18700 to 19100	18700(1860.00MHz), 18900(1880.00MHz), 19100(1900.00MHz)	20MHz	QPSK	1 RB / 99 RB Offset
A, B	Radiated Emission Below 1GHz	18625 to 19175	18625(1852.50MHz)	5MHz	QPSK	1 RB / 24 RB Offset
		18650 to 19150	18650(1855.00MHz)	10MHz	QPSK	1 RB / 49 RB Offset
		18675 to 19125	18675(1857.50MHz)	15MHz	QPSK	1 RB / 74 RB Offset
		18700 to 19100	18700(1860.00MHz)	20MHz	QPSK	1 RB / 99 RB Offset
A	Radiated Emission Above 1GHz	18625 to 19175	18625(1852.50MHz), 18900(1880.00MHz), 19175(1907.50MHz)	5MHz	QPSK	1 RB / 24 RB Offset
		18650 to 19150	18650(1855.00MHz), 18900(1880.00MHz), 19150(1905.00MHz)	10MHz	QPSK	1 RB / 49 RB Offset
		18675 to 19125	18675(1857.50MHz), 18900(1880.00MHz), 19125(1902.50MHz)	15MHz	QPSK	1 RB / 74 RB Offset
		18700 to 19100	18700(1860.00MHz), 18900(1880.00MHz), 19100(1900.00MHz)	20MHz	QPSK	1 RB / 99 RB Offset

Note:

1. For radiated emission below 1GHz, the low, mid and high channels were pre-tested in chamber. The low channel was the worst case and chosen for final test.
2. The conducted output power for QPSK and 16QAM, measured value of QPSK is higher than 16QAM mode. Therefore, only occupied bandwidth and Peak to average ratio items had been tested under QPSK and 16QAM modes, the other test items were performed under QPSK mode only.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
Modulation characteristics	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
Frequency Stability	24deg. C, 64%RH	54Vdc	Match Tsui
Occupied Bandwidth	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
Band Edge	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
Peak To Average Ratio	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
Conducted Emission	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
Radiated Emission Below 1GHz	22deg. C, 66%RH	120Vac, 60Hz 4.5Vdc	Greg Lin
Radiated Emission Above 1GHz	22deg. C, 66%RH	120Vac, 60Hz	Han Wu

3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 24

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 2 watts e.r.p.

4.1.2 Test Procedures

EIRP / ERP Measurement:

a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 10MHz for LTE mode.
b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value“ of step b. Record the power level of S.G
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15dBi.

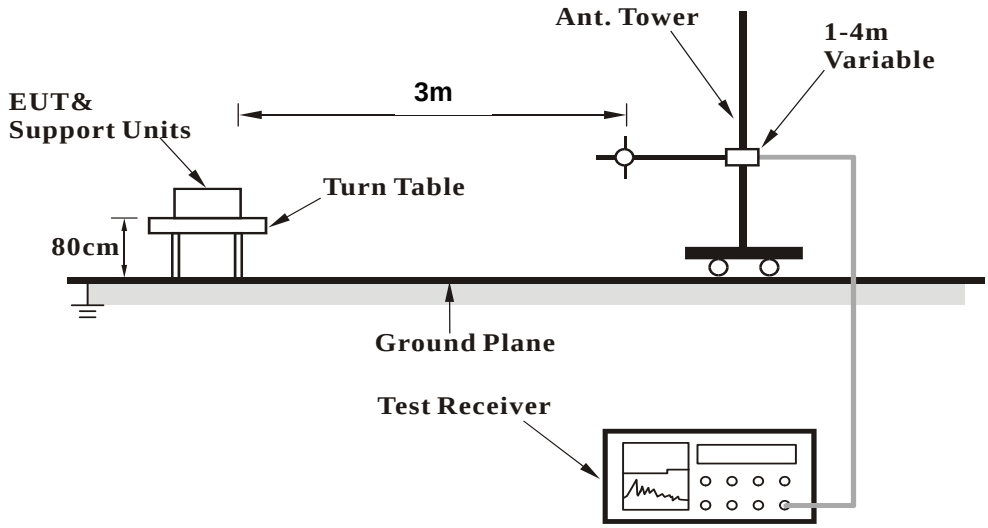
Conducted Power Measurement:

The EUT was set up for the maximum power with LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

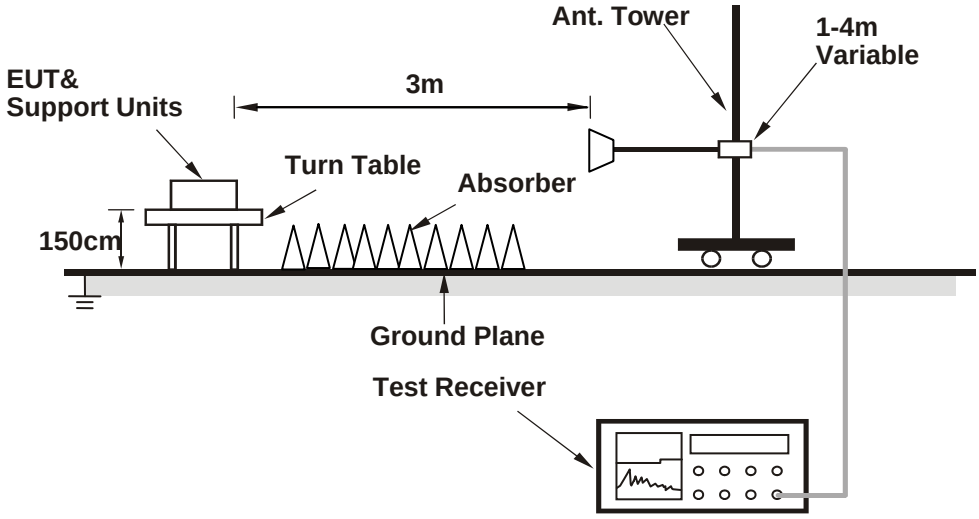
4.1.3 Test Setup

EIRP / ERP Measurement:

For Radiated Emission below or equal 1GHz



For Radiated Emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Conducted Power Measurement:

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.4 Test Results

Conducted Output Power (dBm)

Band / BW	RB Size	RB Offset	QPSK			16QAM		
			CH 18625	CH 18900	CH 19175	CH 18625	CH 18900	CH 19175
			1852.5 MHz	1880 MHz	1907.5 MHz	1852.5 MHz	1880 MHz	1907.5 MHz
2 / 5MHz	1	0	23.21	23.89	23.41	22.31	22.78	22.53
	1	12	23.17	23.79	23.38	22.24	22.73	22.51
	1	24	23.05	23.74	23.34	22.15	22.63	22.38
	12	0	22.18	22.73	22.32	21.32	21.45	21.32
	12	6	22.14	22.57	22.24	21.28	21.33	21.28
	12	13	22.09	22.48	22.18	21.21	21.28	21.18
	25	0	22.03	22.38	22.09	21.14	21.21	21.09

Band / BW	RB Size	RB Offset	QPSK			16QAM		
			CH 18650	CH 18900	CH 19150	CH 18650	CH 18900	CH 19150
			1855 MHz	1880 MHz	1905 MHz	1855 MHz	1880 MHz	1905 MHz
2 / 10MHz	1	0	23.56	24.78	23.98	22.39	23.58	22.72
	1	24	23.43	24.73	23.81	22.32	23.66	22.77
	1	49	23.34	24.55	23.70	22.15	23.35	22.51
	25	0	22.45	23.68	22.80	21.43	22.47	21.64
	25	12	22.20	23.48	22.64	21.14	22.43	21.47
	25	25	22.19	23.31	22.48	21.08	22.30	21.43
	50	0	22.35	23.68	22.77	21.32	22.61	21.76

Band / BW	RB Size	RB Offset	QPSK			16QAM		
			CH 18675	CH 18900	CH 19125	CH 18675	CH 18900	CH 19125
			1857.5 MHz	1880 MHz	1902.5 MHz	1857.5 MHz	1880 MHz	1902.5 MHz
2 / 15MHz	1	0	23.59	24.88	23.97	22.47	23.74	22.85
	1	37	23.50	24.76	23.89	22.43	23.73	22.77
	1	74	23.32	24.64	23.68	22.23	23.45	22.64
	36	0	22.50	23.72	22.87	21.38	22.65	21.67
	36	19	22.33	23.53	22.64	21.29	22.51	21.61
	36	39	22.22	23.47	22.55	21.13	22.40	21.49
	75	0	22.48	23.68	22.78	21.44	22.70	21.82

Band / BW	RB Size	RB Offset	QPSK			16QAM		
			CH 18700	CH 18900	CH 19100	CH 18700	CH 18900	CH 19100
			1860 MHz	1880 MHz	1900 MHz	1860 MHz	1880 MHz	1900 MHz
2 / 20MHz	1	0	23.67	24.92	24.05	22.63	23.83	23.01
	1	50	23.51	24.83	23.91	22.45	23.74	22.94
	1	99	23.37	24.58	23.84	22.25	23.52	22.71
	50	0	22.55	23.76	22.95	21.40	22.61	21.80
	50	25	22.36	23.59	22.73	21.30	22.55	21.75
	50	50	22.27	23.42	22.69	21.19	22.44	21.61
	100	0	22.49	23.72	22.89	21.41	22.71	21.92

EIRP Power (dBm)
LTE Band 2, Channel Bandwidth: 5MHz

MODE	TX channel 18625						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1852.50	-16.2	24.0	0.1	24.1	33.0	-8.9
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1852.50	-15.4	25.0	0.1	25.1	33.0	-7.9

MODE	TX channel 18900						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-15.9	24.6	0.0	24.6	33.0	-8.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-15.0	25.6	0.0	**25.6**	33.0	-7.4

MODE	TX channel 19175						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1907.50	-18.5	22.2	-0.1	22.1	33.0	-10.9
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1907.50	-17.0	23.8	-0.1	23.7	33.0	-9.3

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2, Channel Bandwidth: 10MHz

MODE		TX channel 18650					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1855.00	-15.3	25.0	0.0	25.0	33.0	-8.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1855.00	-15.3	25.2	0.0	25.2	33.0	-7.8

MODE		TX channel 18900					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-16.1	24.4	0.0	24.4	33.0	-8.6
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-14.5	26.1	0.0	26.1	33.0	-6.9

MODE		TX channel 19150					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1905.00	-16.0	24.7	-0.1	24.6	33.0	-8.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1905.00	-14.0	26.8	-0.1	**26.7**	33.0	-6.3

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2, Channel Bandwidth: 15MHz

MODE		TX channel 18675					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1857.50	-15.3	25.0	0.0	25.0	33.0	-8.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1857.50	-14.9	25.6	0.0	**25.6**	33.0	-7.4

MODE		TX channel 18900					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-15.5	25.1	0.0	25.1	33.0	-7.9
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-15.8	24.7	0.0	24.7	33.0	-8.3

MODE		TX channel 19125					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1902.50	-17.4	23.3	-0.1	23.2	33.0	-9.8
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1902.50	-16.2	24.6	-0.1	24.5	33.0	-8.5

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2, Channel Bandwidth: 20MHz

MODE		TX channel 18700					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1860.00	-14.9	25.4	0.0	25.4	33.0	-7.6
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1860.00	-14.0	26.5	0.0	**26.5**	33.0	-6.5

MODE		TX channel 18900					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-15.9	24.6	0.0	24.6	33.0	-8.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-14.6	26.0	0.0	26.0	33.0	-7.0

MODE		TX channel 19100					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1900.00	-15.9	24.8	-0.1	24.7	33.0	-8.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1900.00	-14.2	26.6	-0.1	**26.5**	33.0	-6.5

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

4.2 Modulation Characteristics Measurement

4.2.1 Limits of Modulation Characteristics

N/A

4.2.2 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

4.2.3 Test Setup

4.2.4 Test Results

LTE Band 2	
Spectrum Plot of Measurement Value	
Channel: 18900 / Frequency (MHz): 1880.0MHz	
Channel Bandwidth: 20MHz / QPSK	Channel Bandwidth: 20MHz / 16QAM

4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stabiliity Measurement

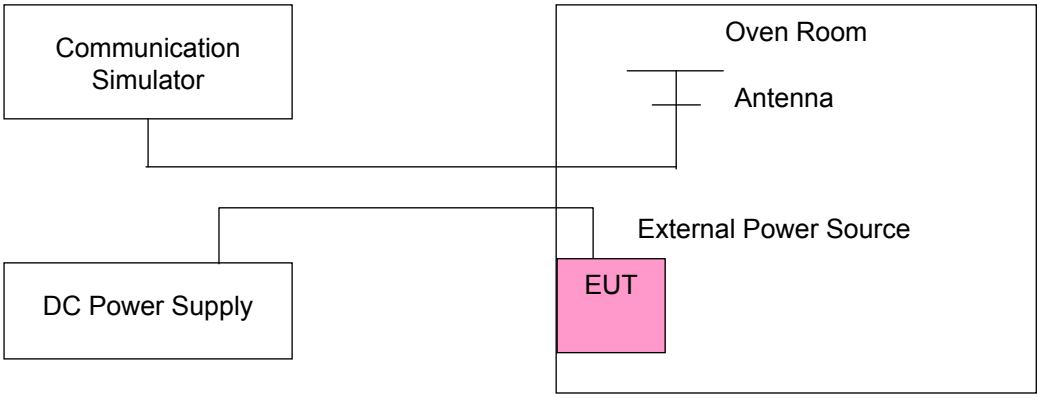
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

4.3.2 Test Procedure

a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5 ℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.3.3 Test Setup



4.3.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)				Limit (ppm)
	LTE Band 2				
	5MHz	10MHz	15MHz	20MHz	
54	0.002	0.001	0.002	0.001	2.5
45.9	0.001	0.001	0.001	0.001	2.5
62.1	0.002	0.002	0.002	0.001	2.5

Note: The applicant defined the normal working voltage is from 45.9Vdc to 62.1Vdc.

Frequency Error vs. Temperature.

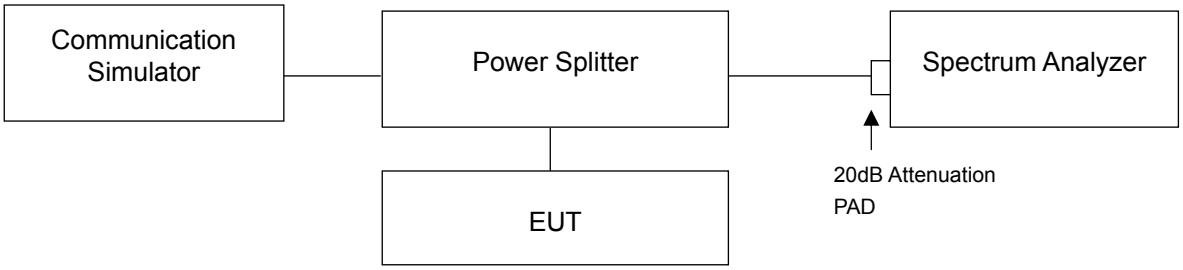
Temp. (℃)	Frequency Error (ppm)				Limit (ppm)
	LTE Band 2				
	5MHz	10MHz	15MHz	20MHz	
-30	0.001	0.002	0.001	0.001	2.5
-20	0.002	0.002	0.001	0.001	2.5
-10	0.002	0.001	0.001	0.001	2.5
0	0.002	0.001	0.002	0.002	2.5
10	0.002	0.001	0.001	0.001	2.5
20	-0.001	-0.002	-0.001	-0.001	2.5
30	-0.001	-0.001	-0.002	-0.001	2.5
40	-0.001	-0.002	-0.001	-0.002	2.5
50	-0.001	-0.001	-0.001	-0.001	2.5

4.4 Occupied Bandwidth Measurement

4.4.1 Test Procedure

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.4.2 Test Setup



4.4.3 Test Result

26dB Bandwidth

LTE Band 2, Channel Bandwidth 5MHz			
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		QPSK	16QAM
18625	1852.5	4.765	4.776
18900	1880.0	4.757	4.774
19175	1907.5	4.767	4.779

LTE Band 2, Channel Bandwidth 10MHz			
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		QPSK	16QAM
18650	1855.0	9.498	9.500
18900	1880.0	9.493	9.487
19150	1905.0	9.485	9.505

LTE Band 2, Channel Bandwidth 15MHz			
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		QPSK	16QAM
18675	1857.5	14.275	14.267
18900	1880.0	14.236	14.267
19125	1902.5	14.249	14.254

LTE Band 2, Channel Bandwidth 20MHz			
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		QPSK	16QAM
18700	1860.0	19.032	19.052
18900	1880.0	19.012	19.042
19100	1900.0	19.007	19.027

Spectrum Plot of Worst Value	
5MHz / 16QAM	10MHz / 16QAM
15MHz / QPSK	20MHz / 16QAM

Occupied Bandwidth

LTE Band 2, Channel Bandwidth 5MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		QPSK	16QAM
18625	1852.5	4.4867	4.4881
18900	1880.0	4.4874	4.4940
19175	1907.5	4.4901	4.4914

LTE Band 2, Channel Bandwidth 10MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		QPSK	16QAM
18650	1855.0	8.9676	8.9701
18900	1880.0	8.9716	8.9729
19150	1905.0	8.9746	8.9741

LTE Band 2, Channel Bandwidth 15MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		QPSK	16QAM
18675	1857.5	13.497	13.491
18900	1880.0	13.481	13.476
19125	1902.5	13.488	13.484

LTE Band 2, Channel Bandwidth 20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		QPSK	16QAM
18700	1860.0	17.979	18.011
18900	1880.0	17.954	17.964
19100	1900.0	17.946	17.987

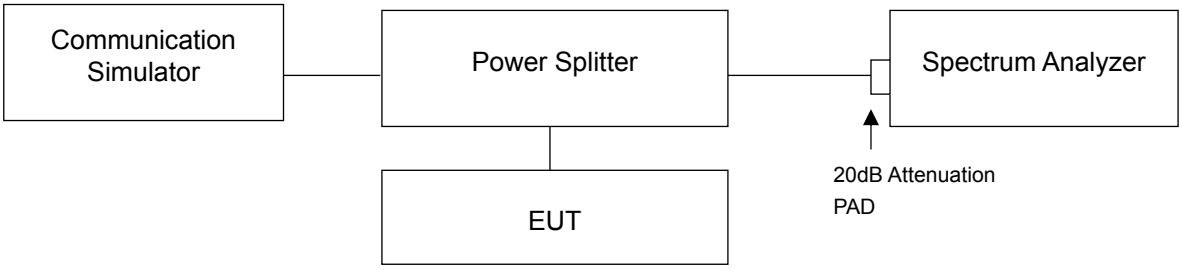
Spectrum Plot of Worst Value	
5MHz / 16QAM	10MHz / QPSK
15MHz / QPSK	20MHz / 16QAM

4.5 Band Edge Measurement

4.5.1 Limits of Band Edge Measurement

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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

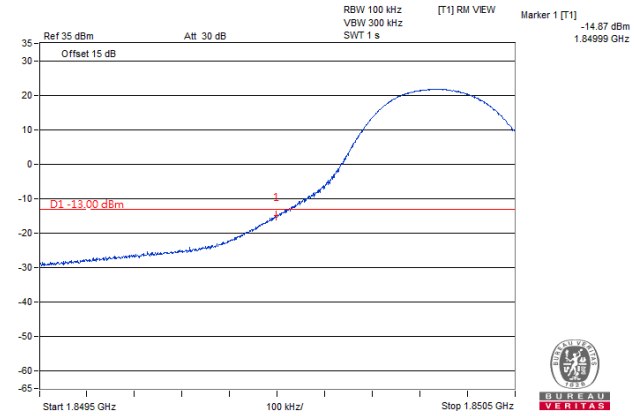
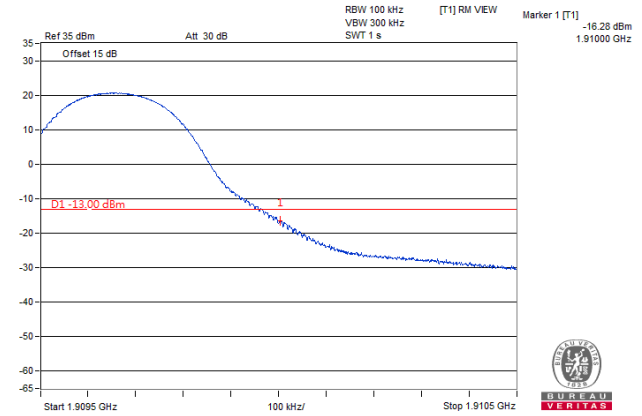
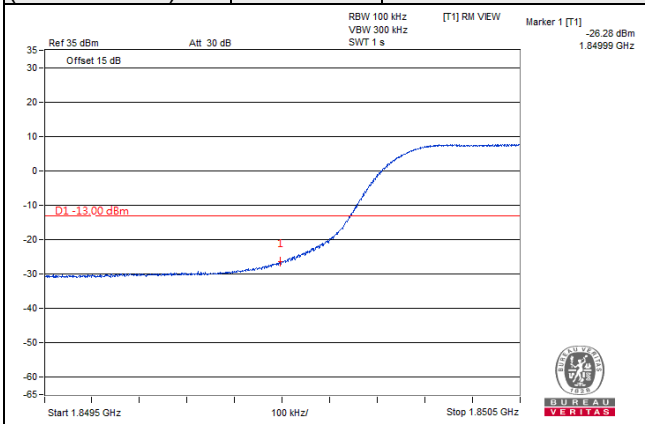
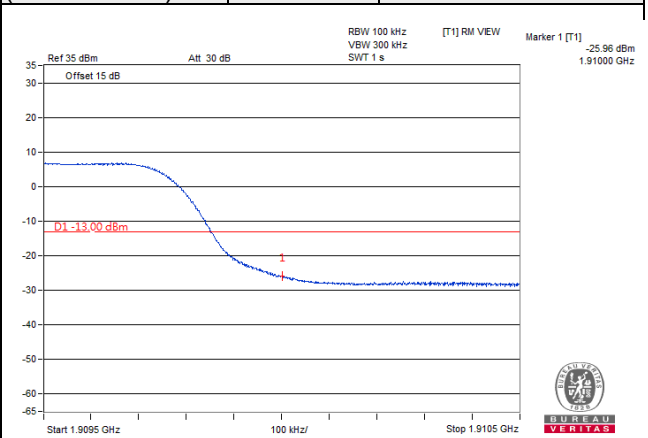
4.5.2 Test Setup

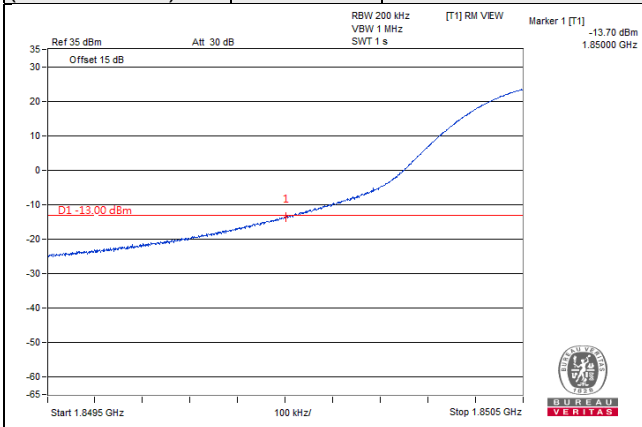
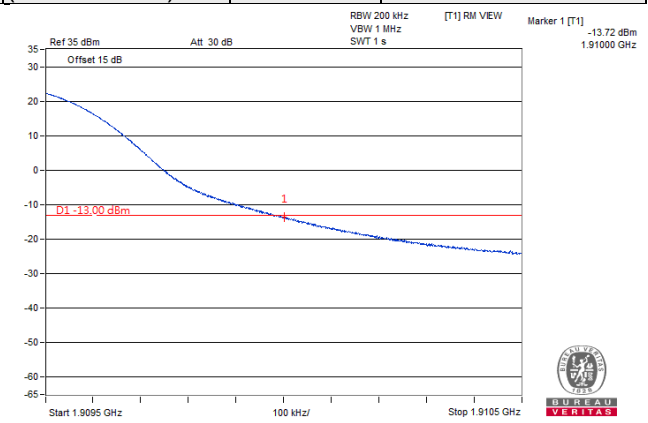
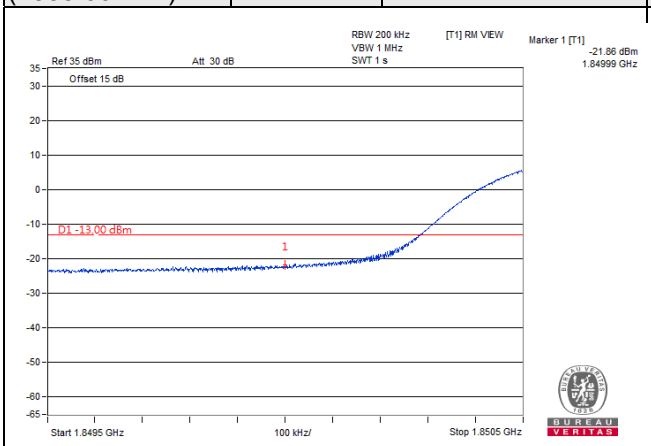
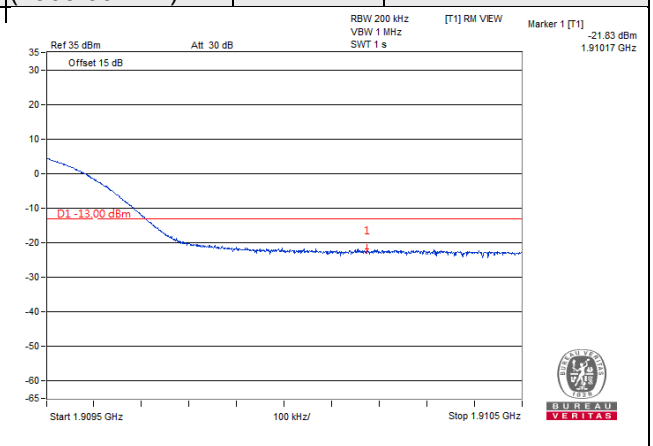


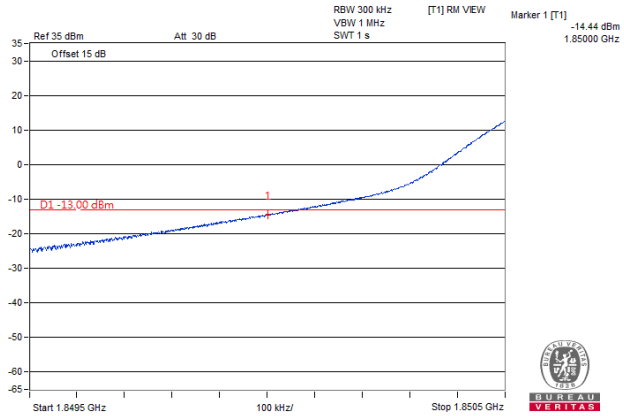
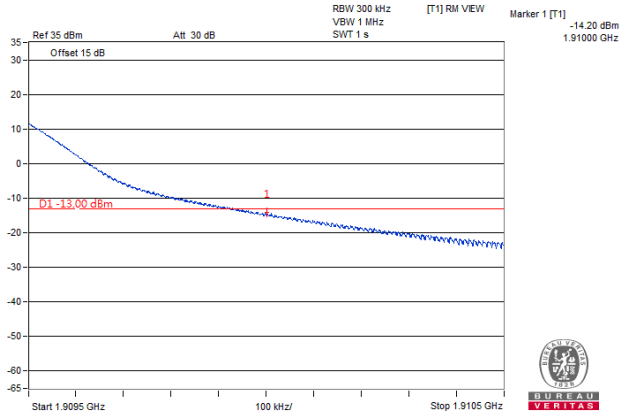
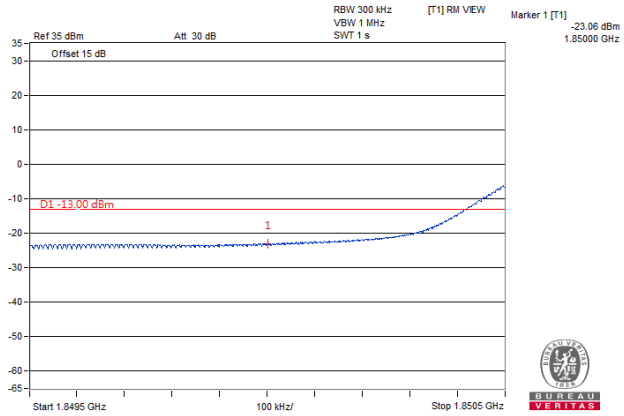
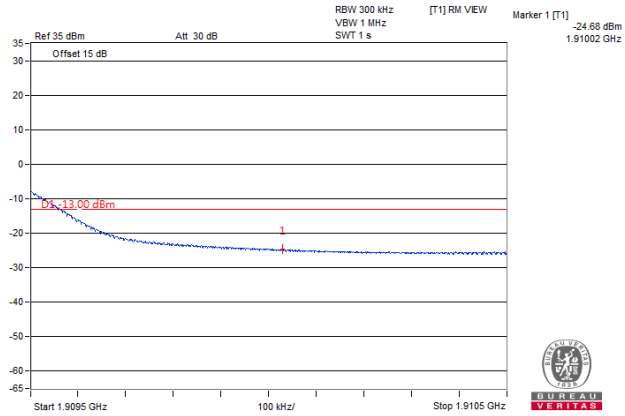
4.5.3 Test Procedures

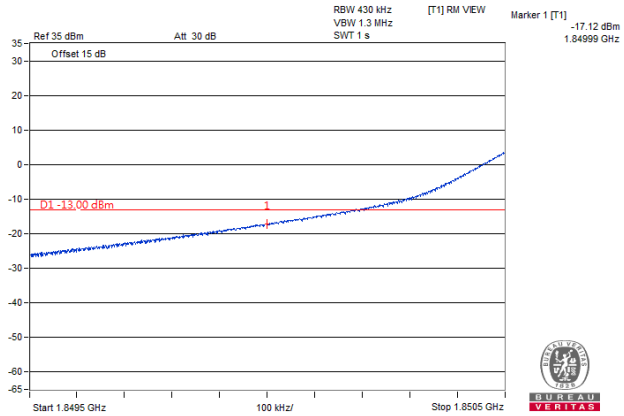
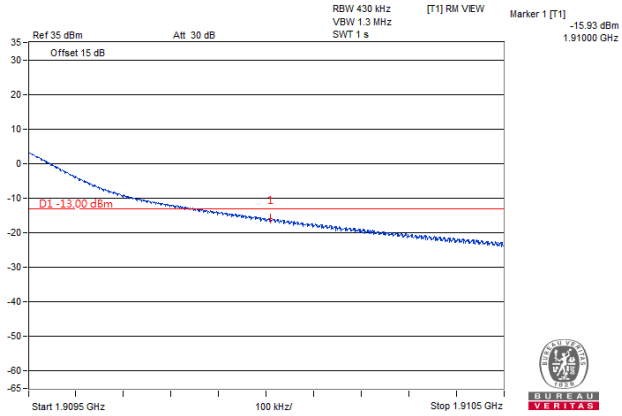
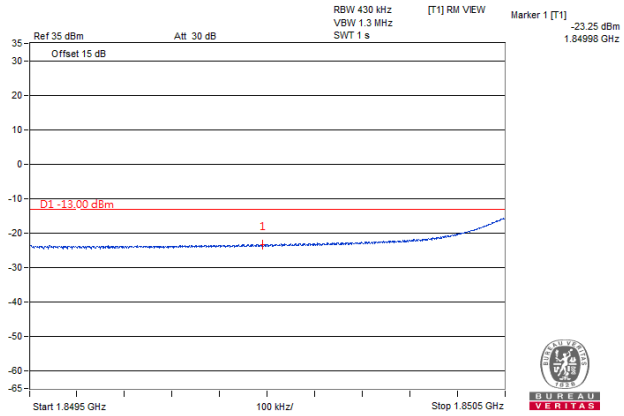
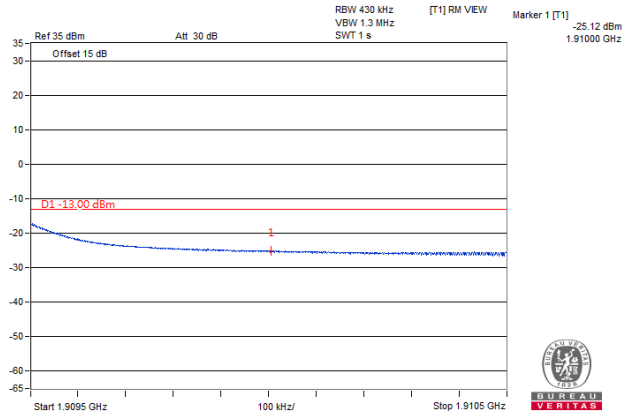
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and span is 1.5MHz. RB of the spectrum is 51kHz and VB of the spectrum is 150kHz (LTE Channel Bandwidth 5MHz).
c. The center frequency of spectrum is the band edge frequency and span is 1.5MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (LTE Channel Bandwidth 10MHz).
d. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 200kHz and VB of the spectrum is 620kHz (LTE Channel Bandwidth 15MHz).
e. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 430kHz and VB of the spectrum is 1200kHz (LTE Channel Bandwidth 20MHz).
f. Record the max trace plot into the test report.

4.5.4 Test Results

LTE Band 2, Channel Bandwidth 5MHz					
Channel 18625 (1852.50MHz)	QPSK	1 RB / 0 RB Offset	Channel 19175 (1907.50MHz)	QPSK	1 RB / 24 RB Offset
				
Channel 18625 (1852.50MHz)	QPSK	25 RB / 0 RB Offset	Channel 19175 (1907.50MHz)	QPSK	25 RB / 0 RB Offset
				

LTE Band 2, Channel Bandwidth 10MHz					
Channel 18650 (1855.00MHz)	QPSK	1 RB / 0 RB Offset	Channel 19150 (1905.00MHz)	QPSK	1 RB / 49 RB Offset
					
Channel 18650 (1855.00MHz)	QPSK	50 RB / 0 RB Offset	Channel 19150 (1905.00MHz)	QPSK	50 RB / 0 RB Offset
					

LTE Band 2, Channel Bandwidth 15MHz					
Channel 18675 (1857.50MHz)	QPSK	1 RB / 0 RB Offset	Channel 19125 (1902.50MHz)	QPSK	1 RB / 74 RB Offset
					
Channel 18675 (1857.50MHz)	QPSK	75 RB / 0 RB Offset	Channel 19125 (1902.50MHz)	QPSK	75 RB / 0 RB Offset
					

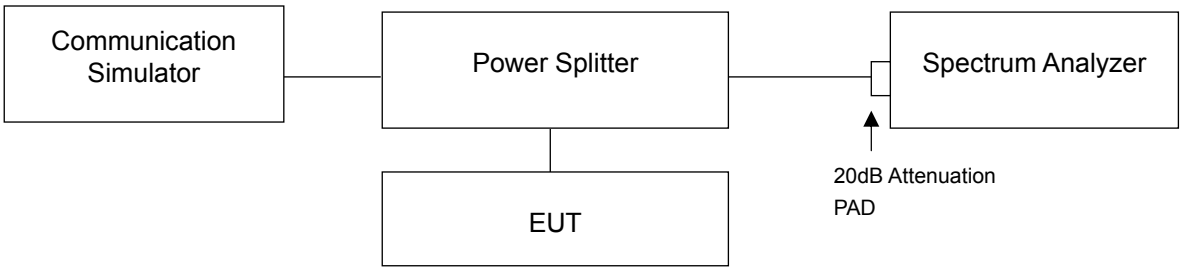
LTE Band 2, Channel Bandwidth 20MHz					
Channel 18700 (1860.00MHz)	QPSK	1 RB / 0 RB Offset	Channel 19100 (1900.00 MHz)	QPSK	1 RB / 99 RB Offset
					
Channel 18700 (1860.00MHz)	QPSK	100 RB / 0 RB Offset	Channel 19100 (1900.00 MHz)	QPSK	100 RB / 0 RB Offset
					

4.6 Peak to Average Ratio

4.6.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

4.6.2 Test Setup



4.6.3 Test Procedures

a. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
b. Set the number of counts to a value that stabilizes the measured CCDF curve;
c. Record the maximum PAPR level associated with a probability of 0.1%.

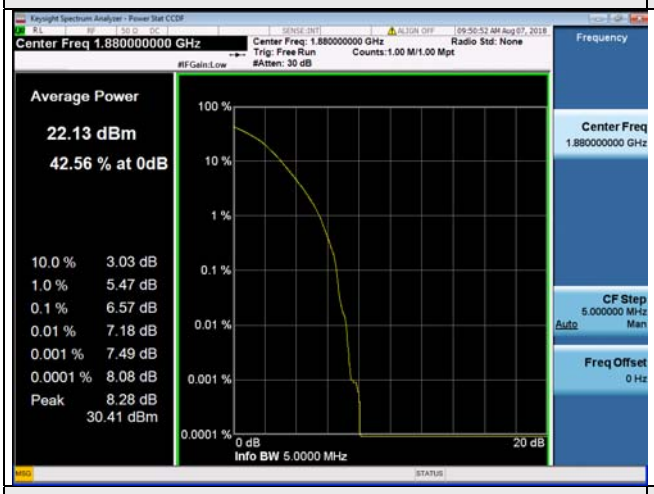
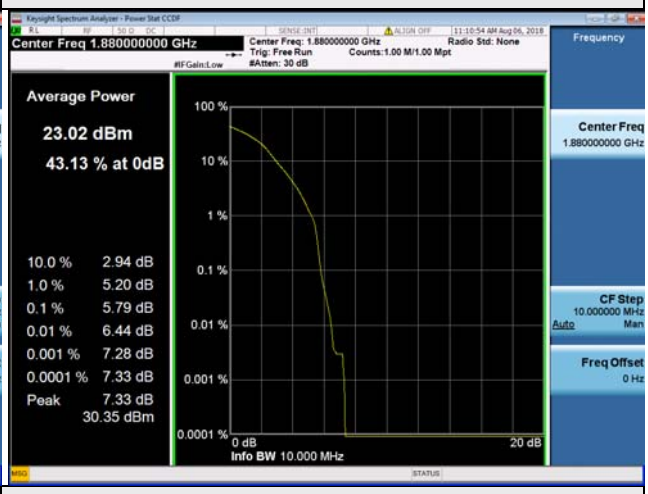
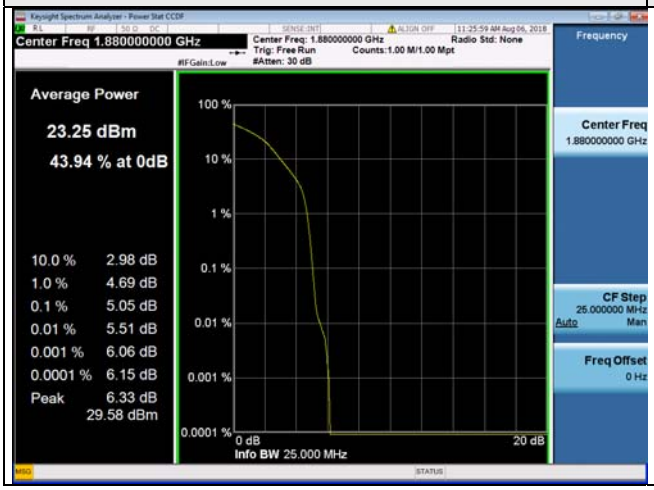
4.6.4 Test Results

LTE Band 2, Channel Bandwidth 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
18625	1852.5	5.36	5.68
18900	1880.0	5.56	6.57
19175	1907.5	4.67	5.67

LTE Band 2, Channel Bandwidth 10MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
18650	1855.0	3.12	4.53
18900	1880.0	4.53	5.79
19150	1905.0	4.05	5.12

LTE Band 2, Channel Bandwidth 15MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
18675	1857.5	3.04	4.19
18900	1880.0	4.21	5.05
19125	1902.5	3.64	4.82

LTE Band 2, Channel Bandwidth 20MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
18700	1860.0	3.89	4.44
18900	1880.0	4.11	5.40
19100	1900.0	3.89	5.16

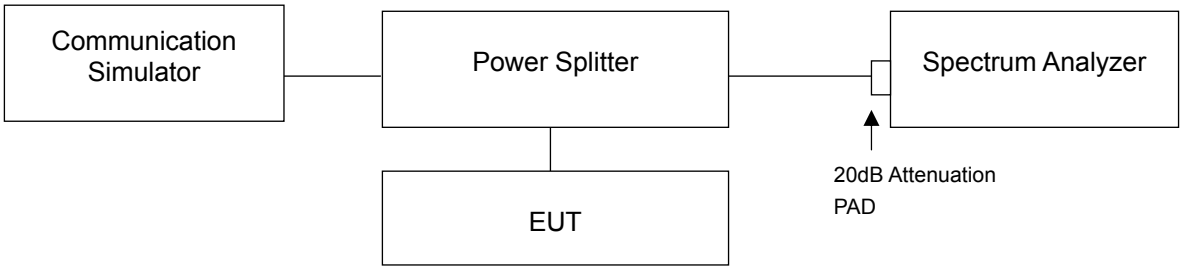
Spectrum Plot Of Worst Value	
5MHz / 16QAM	10MHz / 16QAM
	
15MHz / 16QAM	20MHz / 16QAM
	

4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

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. The emission limit equal to –13dBm.

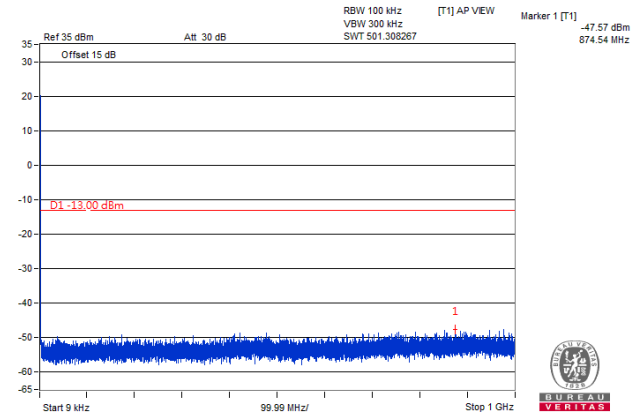
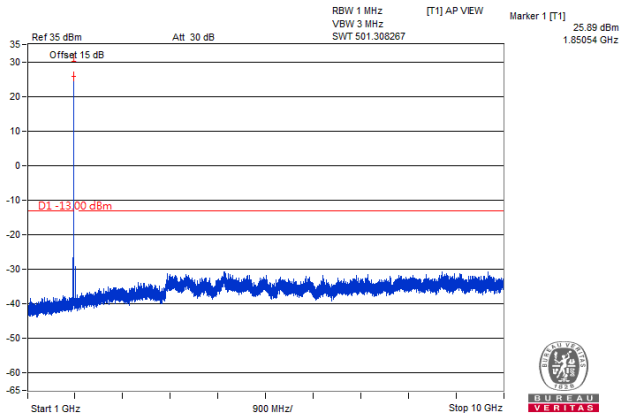
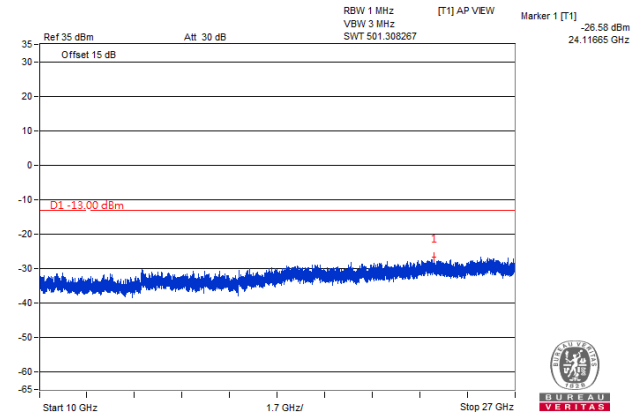
4.7.2 Test Setup

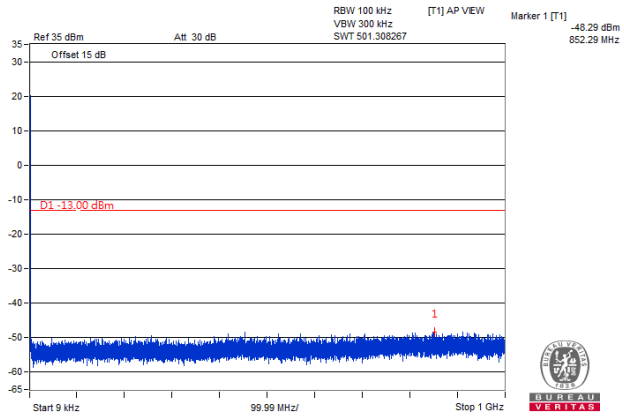
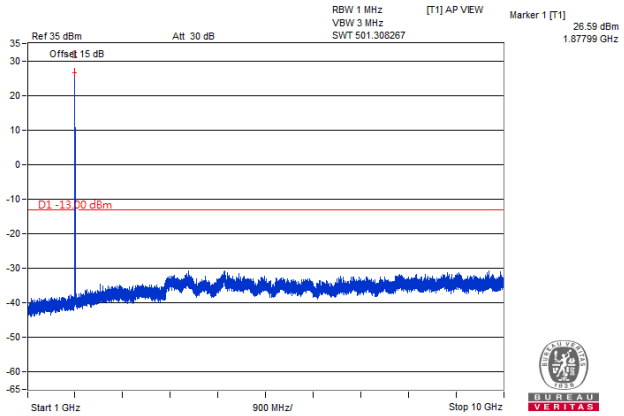
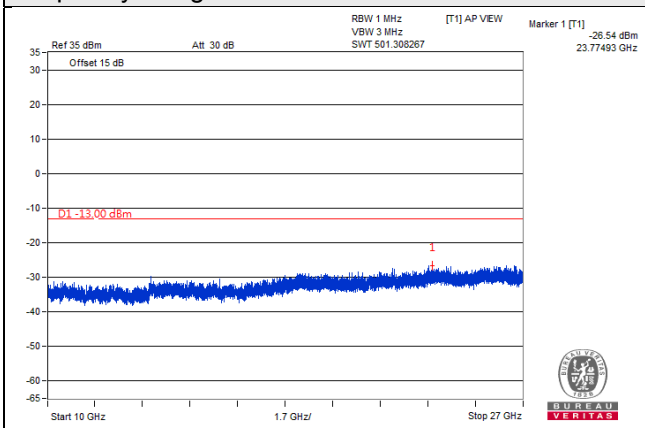


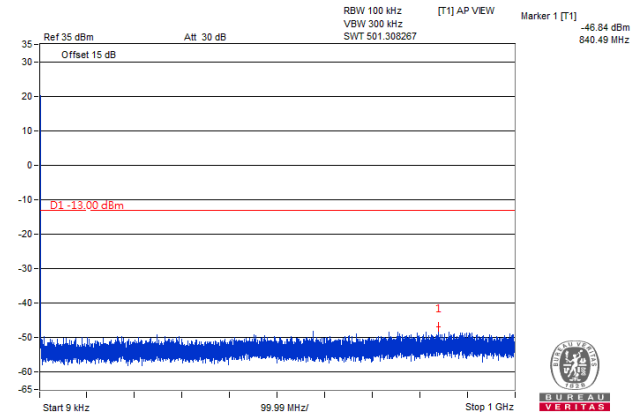
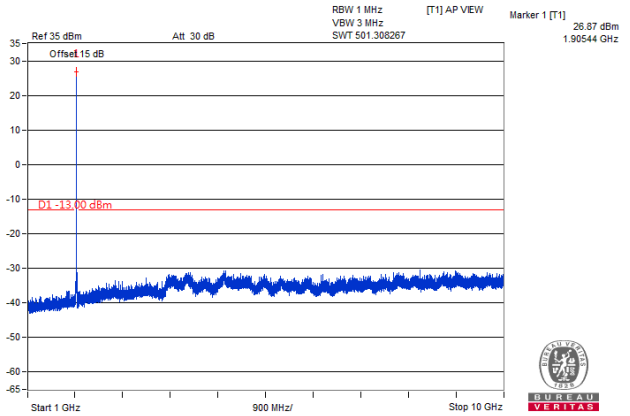
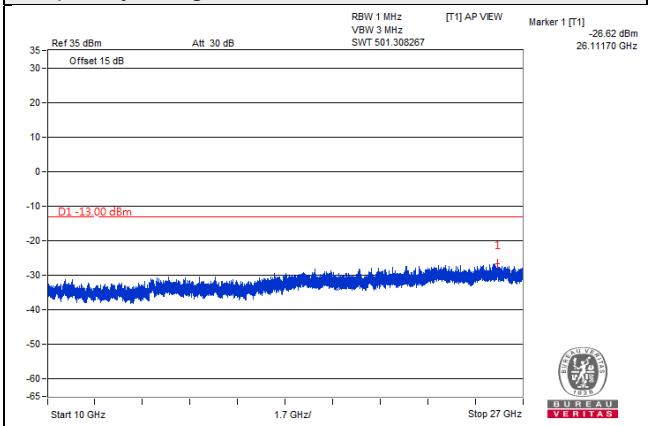
4.7.3 Test Procedure

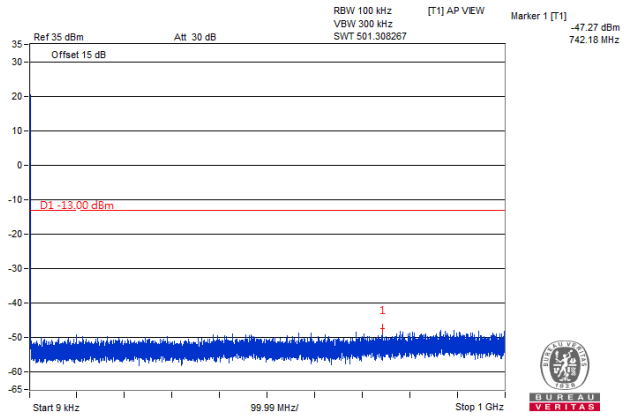
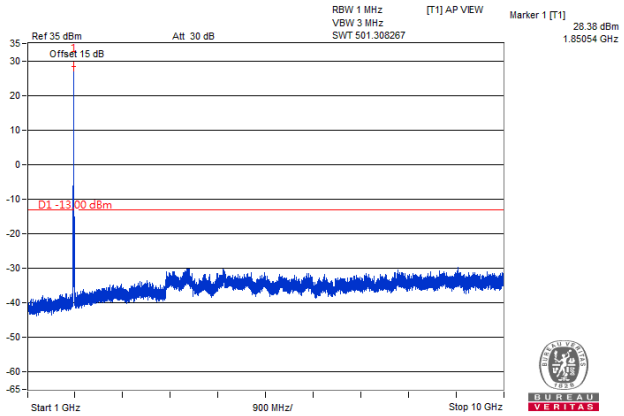
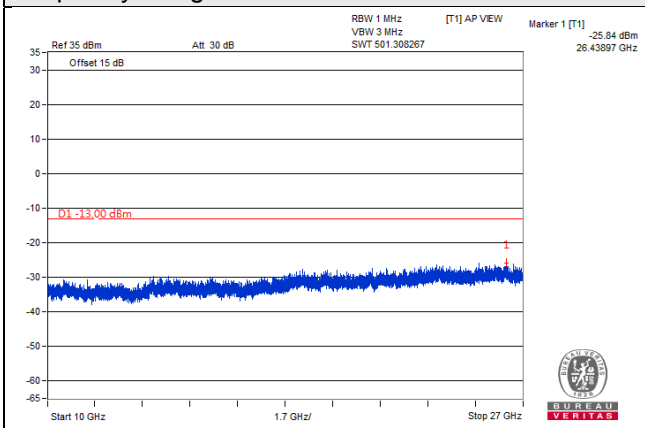
a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. Measuring frequency range is from 9 kHz to 1GHz. 20dB attenuation pad is connected with spectrum. RBW=100kHz and VBW=300kHz is used for conducted emission measurement.
c. Measuring frequency range is from 1GHz to 27GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

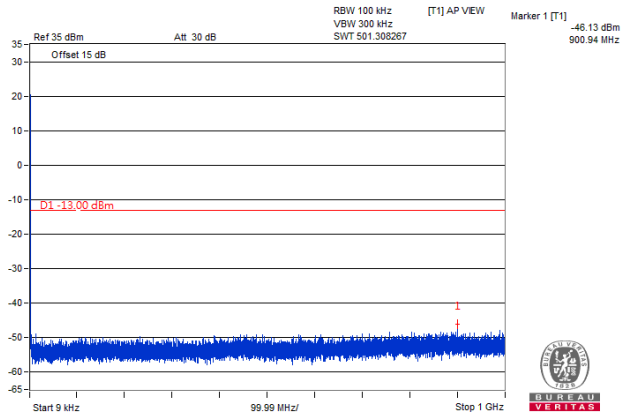
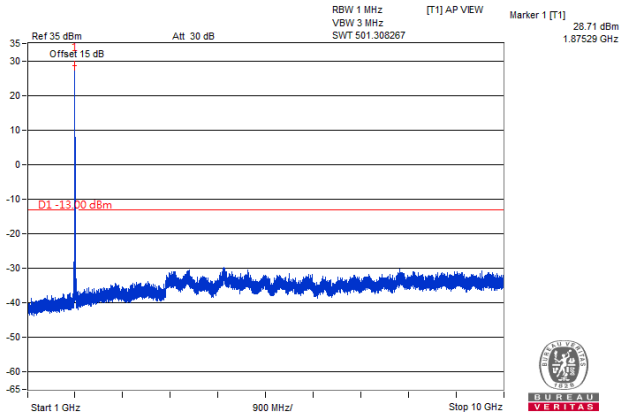
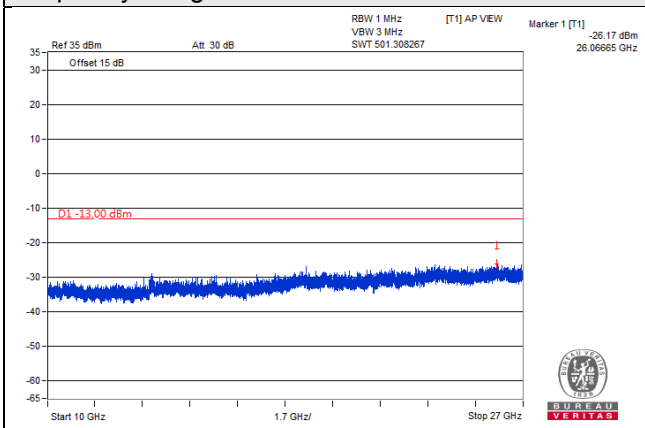
4.7.4 Test Results

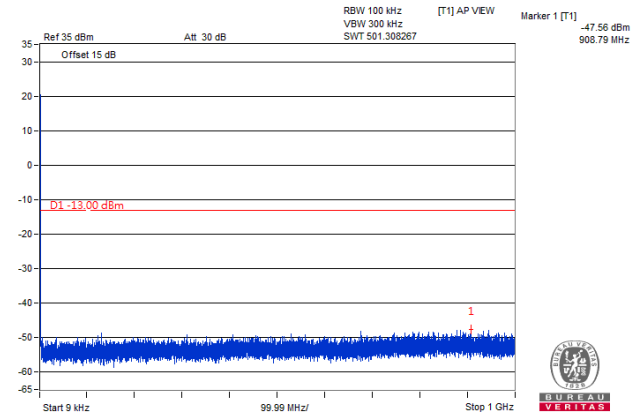
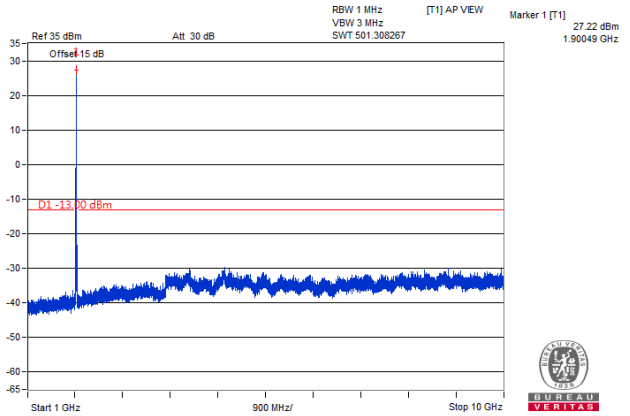
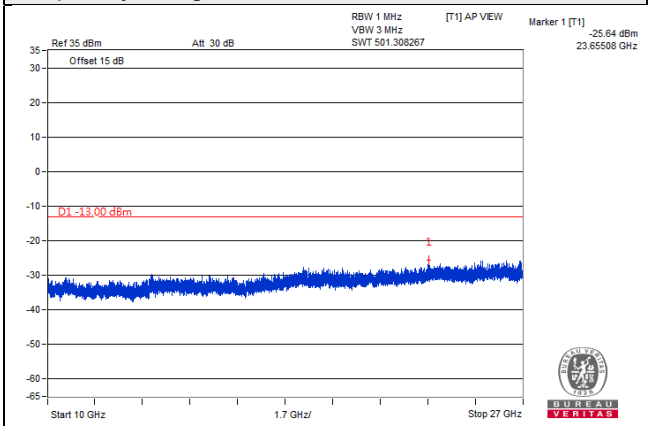
LTE Band 2, Channel Bandwidth 5MHz	
Channel 18625 (1852.50MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

LTE Band 2, Channel Bandwidth 5MHz	
Channel 18900 (1880.00MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

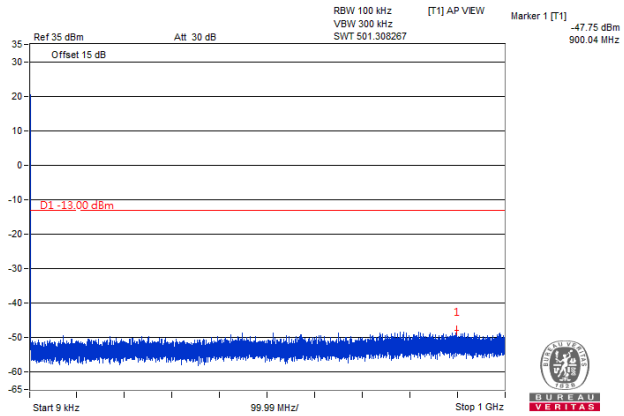
LTE Band 2, Channel Bandwidth 5MHz	
Channel 19175 (1907.50MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

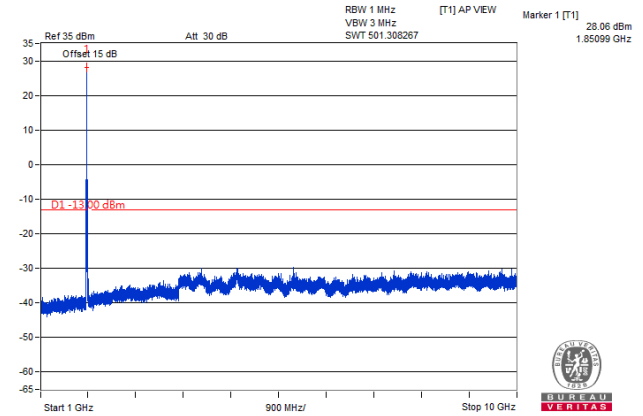
LTE Band 2, Channel Bandwidth 10MHz	
Channel 18650 (1855.00MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

LTE Band 2, Channel Bandwidth 10MHz	
Channel 18900 (1880.00MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

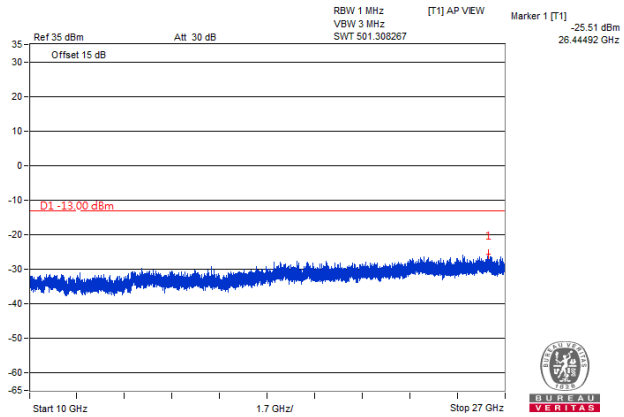
LTE Band 2, Channel Bandwidth 10MHz	
Channel 19150 (1905.00MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

LTE Band 2, Channel Bandwidth 15MHz	
Channel 18675 (1857.50MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz

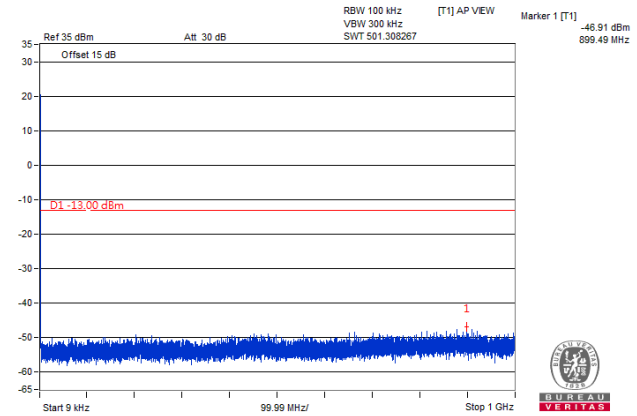


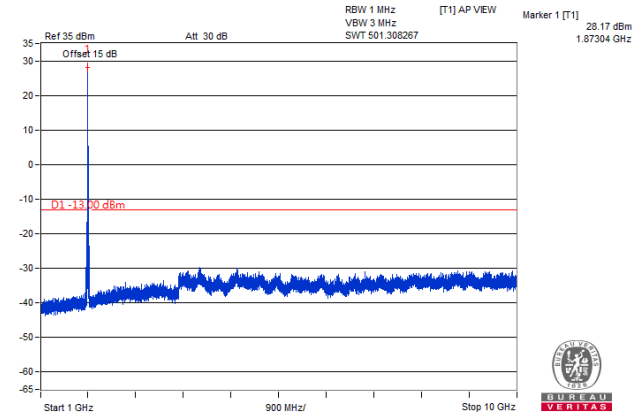


Frequency Range : 10GHz~27GHz	

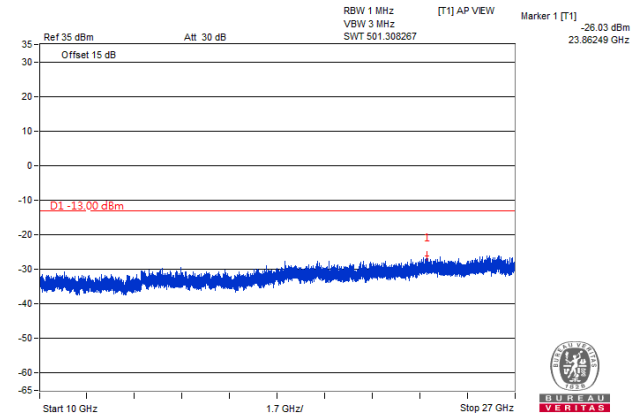


LTE Band 2, Channel Bandwidth 15MHz	
Channel 18900 (1880.00MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz

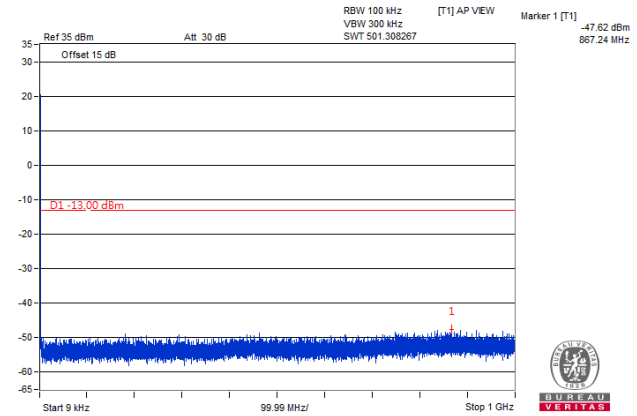


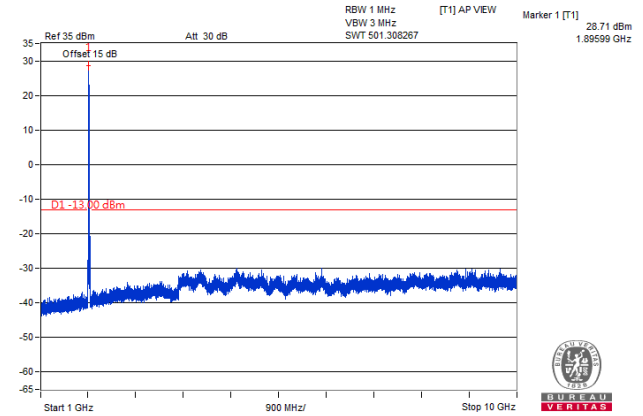


Frequency Range : 10GHz~27GHz	

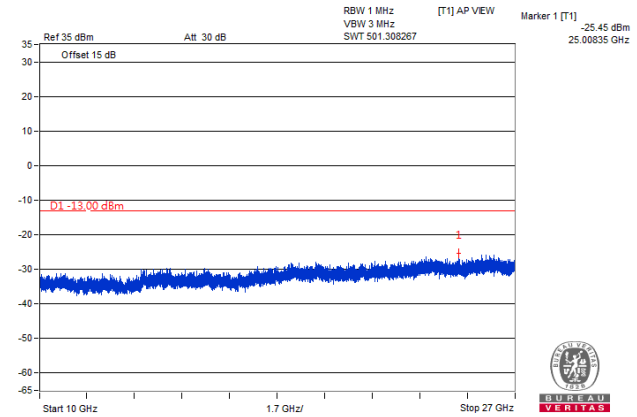


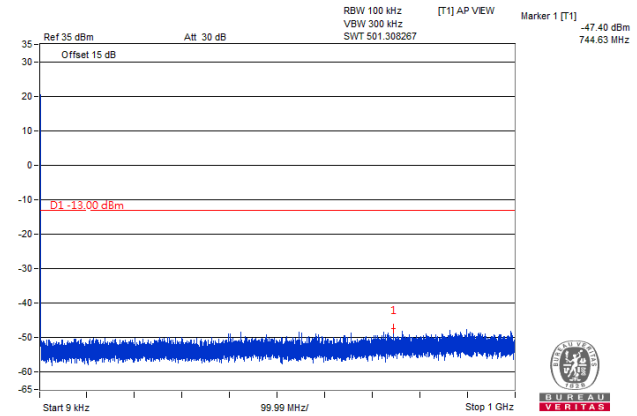
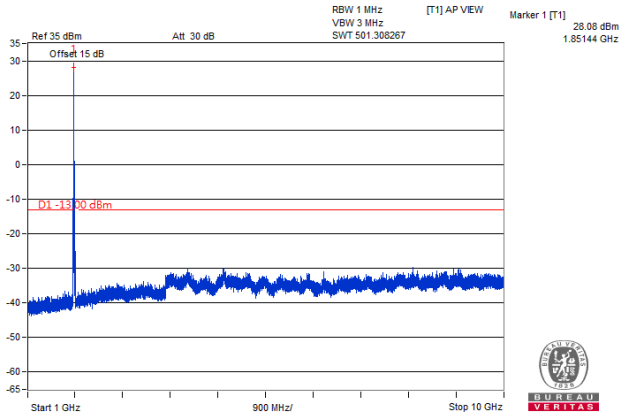
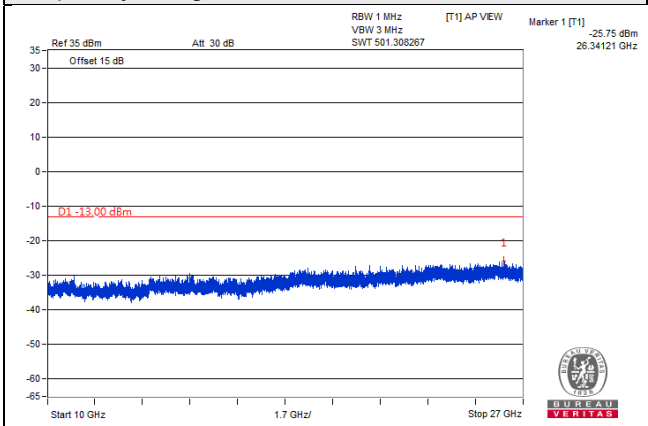
LTE Band 2, Channel Bandwidth 15MHz	
Channel 19125 (1902.50MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz

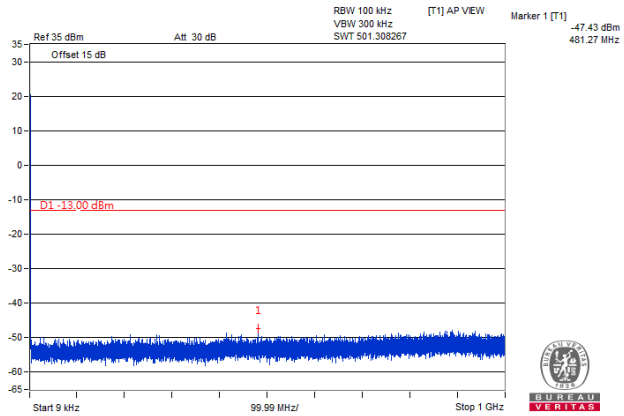
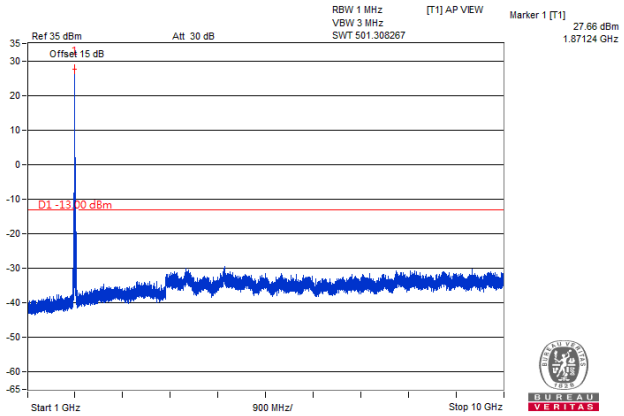
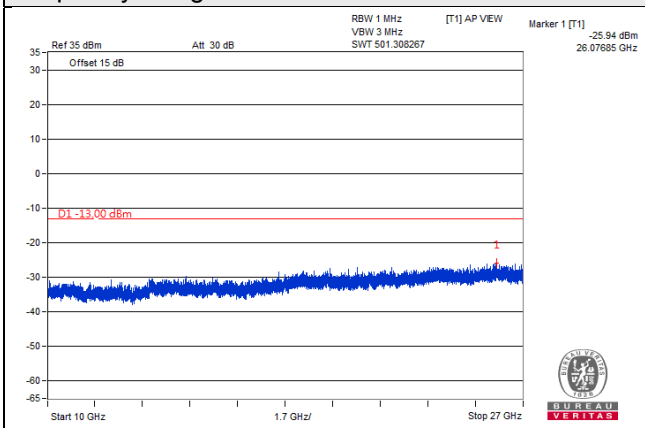


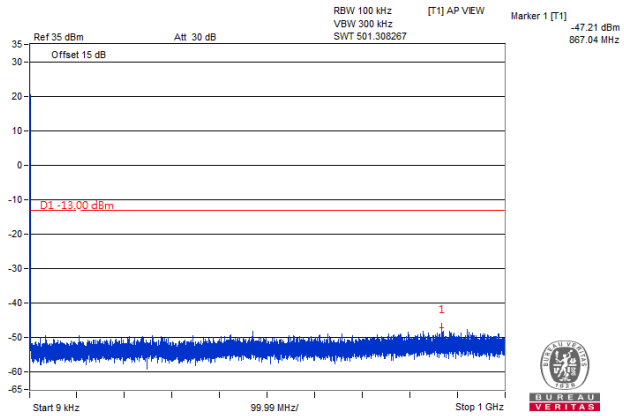
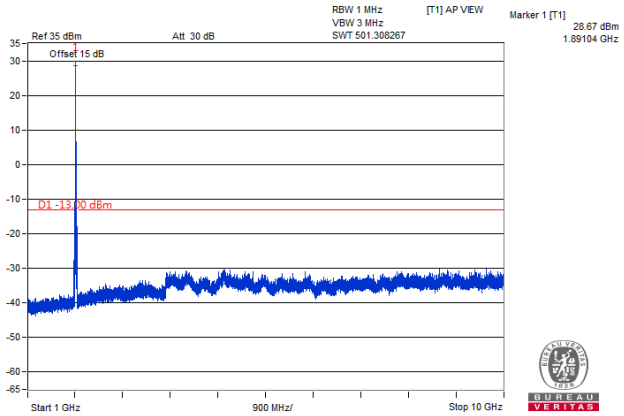
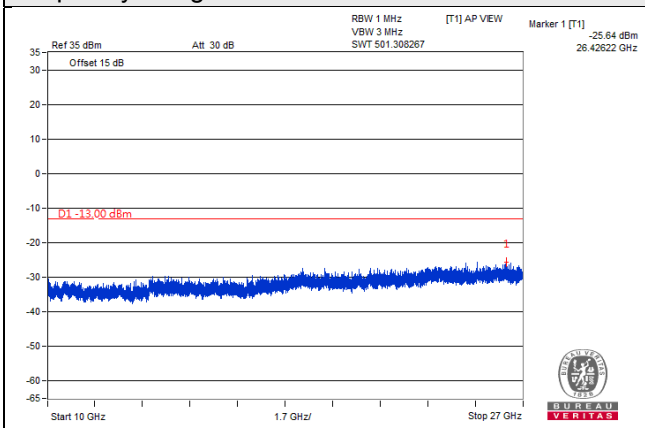


Frequency Range : 10GHz~27GHz	



LTE Band 2, Channel Bandwidth 20MHz	
Channel 18700 (1860.00MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

LTE Band 2, Channel Bandwidth 20MHz	
Channel 18900 (1880.00MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

LTE Band 2, Channel Bandwidth 20MHz	
Channel 19100 (1900.00MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Frequency Range : 10GHz~27GHz	
	

4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

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. The emission limit equal to –13dBm.

4.8.2 Test Procedure

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step a. Record the power level of S.G
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15dBi.

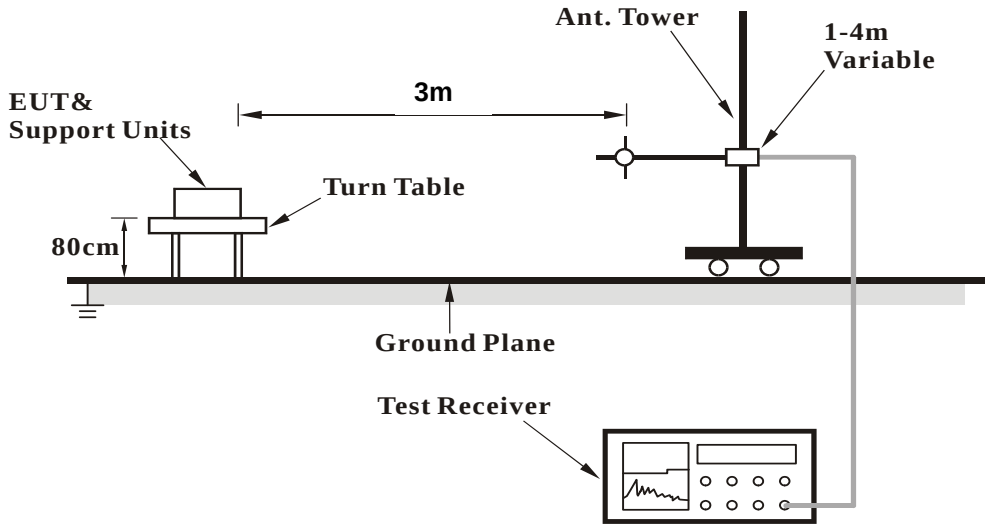
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.8.3 Deviation from Test Standard

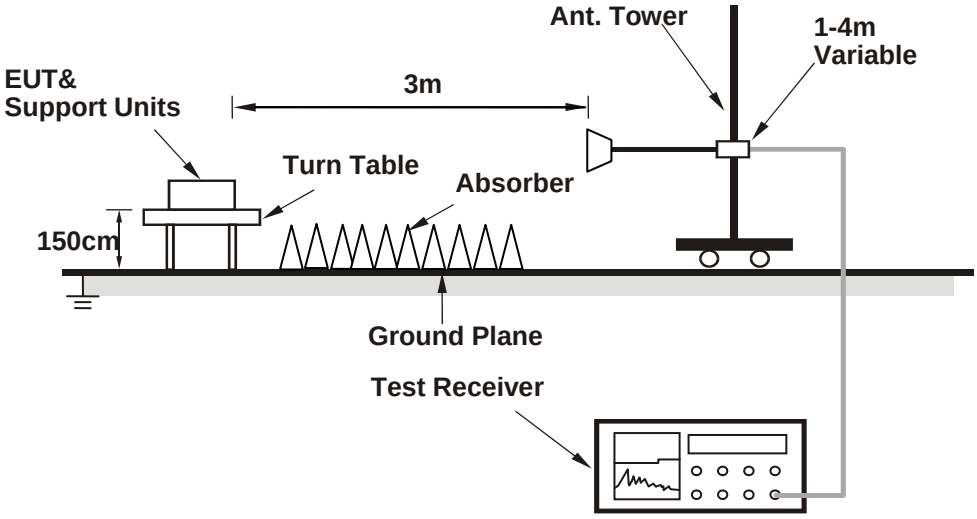
No deviation.

4.8.4 Test Setup

For Radiated Emission below or equal 1GHz



For Radiated Emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.8.5 Test Results

Below 1GHz
LTE Band 2, Channel Bandwidth: 5MHz

Mode	TX channel 18625 (1852.50MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin	Test Mode	A

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.00	-49.3	-25.9	-19.4	-45.3	-13.0	-32.30
2	58.13	-54.8	-54.7	-4.2	-58.9	-13.0	-45.90
3	194.90	-58.3	-64.2	-2.6	-66.8	-13.0	-53.80
4	385.02	-66.5	-70.9	3.5	-67.4	-13.0	-54.40
5	715.79	-59.2	-59.5	3.5	-56.0	-13.0	-43.00
6	873.90	-69.0	-65.1	3.5	-61.6	-13.0	-48.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	66.86	-30.4	-36.1	-1.5	-37.6	-13.0	-24.6
2	164.83	-45.2	-45.5	-2.9	-48.4	-13.0	-35.4
3	280.26	-53.4	-48.6	-1.6	-50.2	-13.0	-37.2
4	415.09	-61.3	-65.1	3.4	-61.7	-13.0	-48.7
5	772.05	-60.5	-57.4	3.9	-53.5	-13.0	-40.5
6	935.01	-59.6	-54.4	3.7	-50.7	-13.0	-37.7

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 18625 (1852.50MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin	Test Mode	B

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	52.31	-58.0	-52.7	-6.8	-59.5	-13.0	-46.5
2	110.51	-54.9	-60.2	-2.6	-62.8	-13.0	-49.8
3	145.43	-60.9	-62.7	-3.1	-65.8	-13.0	-52.8
4	198.78	-54.6	-60.6	-2.4	-63.0	-13.0	-50.0
5	226.91	-51.4	-57.6	-1.7	-59.3	-13.0	-46.3
6	580.96	-64.8	-67.5	3.8	-63.7	-13.0	-50.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	72.68	-43.9	-49.6	-0.1	-49.7	-13.0	-36.7
2	91.11	-50.8	-57.0	-0.4	-57.4	-13.0	-44.4
3	129.91	-58.9	-60.9	-3.3	-64.2	-13.0	-51.2
4	193.93	-54.4	-53.1	-2.6	-55.7	-13.0	-42.7
5	283.17	-63.9	-59.5	-1.7	-61.2	-13.0	-48.2
6	580.96	-65.3	-67.0	3.8	-63.2	-13.0	-50.2

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 2, Channel Bandwidth: 10MHz

Mode	TX channel 18650 (1855.00MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin	Test Mode	A

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	35.82	-55.6	-36.2	-15.9	-52.1	-13.0	-39.1
2	132.82	-61.4	-64.2	-3.3	-67.5	-13.0	-54.5
3	224.97	-58.1	-64.2	-1.9	-66.1	-13.0	-53.1
4	501.42	-68.6	-72.5	3.8	-68.7	-13.0	-55.7
5	715.79	-59.2	-59.5	3.5	-56.0	-13.0	-43.0
6	957.32	-66.6	-61.9	3.8	-58.1	-13.0	-45.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	41.64	-29.1	-25.8	-12.3	-38.1	-13.0	-25.1
2	101.78	-35.8	-42.6	-1.6	-44.2	-13.0	-31.2
3	233.70	-51.0	-51.6	-1.7	-53.3	-13.0	-40.3
4	579.99	-62.3	-64.0	3.8	-60.2	-13.0	-47.2
5	746.83	-51.5	-48.2	3.7	-44.5	-13.0	-31.5
6	958.29	-65.6	-60.1	3.8	-56.3	-13.0	-43.3

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 18650 (1855.00MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin	Test Mode	B

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	52.31	-55.6	-50.3	-6.8	-57.1	-13.0	-44.1
2	111.48	-54.5	-59.7	-2.5	-62.2	-13.0	-49.2
3	147.37	-62.2	-64.1	-2.9	-67.0	-13.0	-54.0
4	224.97	-49.0	-55.1	-1.9	-57.0	-13.0	-44.0
5	249.22	-58.0	-63.1	-1.4	-64.5	-13.0	-51.5
6	580.96	-64.8	-67.5	3.8	-63.7	-13.0	-50.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	41.64	-39.1	-35.8	-12.3	-48.1	-13.0	-35.1
2	159.01	-58.3	-58.5	-2.8	-61.3	-13.0	-48.3
3	194.9	-54.6	-53.1	-2.6	-55.7	-13.0	-42.7
4	224.97	-53.7	-56.0	-1.9	-57.9	-13.0	-44.9
5	474.26	-62.3	-66.0	3.5	-62.5	-13.0	-49.5
6	514.03	-61.3	-64.9	3.8	-61.1	-13.0	-48.1

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 2, Channel Bandwidth: 15MHz

Mode	TX channel 18675 (1857.50MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin	Test Mode	A

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.00	-49.0	-25.6	-19.4	-45.0	-13.0	-32.0
2	68.80	-51.7	-57.5	-0.8	-58.3	-13.0	-45.3
3	317.12	-61.7	-69.8	4.1	-65.7	-13.0	-52.7
4	729.37	-62.9	-62.8	3.6	-59.2	-13.0	-46.2
5	885.54	-61.9	-58.2	3.4	-54.8	-13.0	-41.8
6	976.72	-68.6	-63.4	3.6	-59.8	-13.0	-46.8
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	59.10	-31.9	-34.9	-3.8	-38.7	-13.0	-25.7
2	139.61	-47.7	-47.4	-3.1	-50.5	-13.0	-37.5
3	265.71	-54.4	-51.7	-1.6	-53.3	-13.0	-40.3
4	455.83	-64.7	-68.4	3.5	-64.9	-13.0	-51.9
5	729.37	-46.4	-43.6	3.6	-40.0	-13.0	-27.0
6	947.62	-60.7	-55.2	3.8	-51.4	-13.0	-38.4

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 18675 (1857.50MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin	Test Mode	B

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	66.86	-46.4	-51.8	-1.5	-53.3	-13.0	-40.3
2	115.36	-53.8	-58.9	-2.9	-61.8	-13.0	-48.8
3	182.29	-53.3	-58.6	-3.0	-61.6	-13.0	-48.6
4	221.09	-48.9	-55.1	-1.9	-57.0	-13.0	-44.0
5	246.31	-55.7	-61.0	-1.6	-62.6	-13.0	-49.6
6	580.96	-64.6	-67.3	3.8	-63.5	-13.0	-50.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	53.28	-36.4	-37.1	-6.2	-43.3	-13.0	-30.3
2	71.71	-48.5	-54.2	-0.3	-54.5	-13.0	-41.5
3	114.39	-61.4	-65.9	-2.8	-68.7	-13.0	-55.7
4	191.99	-53.6	-52.6	-2.6	-55.2	-13.0	-42.2
5	224.97	-50.4	-52.7	-1.9	-54.6	-13.0	-41.6
6	579.99	-64.9	-66.6	3.8	-62.8	-13.0	-49.8

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 2, Channel Bandwidth: 20MHz

Mode	TX channel 18700 (1860.00MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin	Test Mode	A

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	32.91	-48.7	-27.9	-17.7	-45.6	-13.0	-32.6
2	122.15	-55.8	-60.3	-3.2	-63.5	-13.0	-50.5
3	256.01	-58.2	-61.9	-1.5	-63.4	-13.0	-50.4
4	746.83	-62.4	-62.1	3.7	-58.4	-13.0	-45.4
5	892.33	-60.7	-56.9	3.5	-53.4	-13.0	-40.4
6	962.17	-65.1	-60.4	3.7	-56.7	-13.0	-43.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	71.71	-37.6	-43.3	-0.3	-43.6	-13.0	-30.6
2	93.05	-40.8	-47.2	-0.7	-47.9	-13.0	-34.9
3	171.62	-49.1	-49.7	-2.9	-52.6	-13.0	-39.6
4	352.04	-64.1	-68.4	3.9	-64.5	-13.0	-51.5
5	772.05	-60.5	-57.4	3.9	-53.5	-13.0	-40.5
6	933.07	-60.0	-54.8	3.7	-51.1	-13.0	-38.1

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 18700 (1860.00MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin	Test Mode	B

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	67.83	-45.7	-51.4	-1.0	-52.4	-13.0	-39.4
2	82.38	-48.4	-54.2	0.4	-53.8	-13.0	-40.8
3	118.27	-54.3	-59.1	-2.9	-62.0	-13.0	-49.0
4	173.56	-53.1	-57.7	-2.8	-60.5	-13.0	-47.5
5	223.03	-51.3	-57.4	-2.0	-59.4	-13.0	-46.4
6	580.96	-64.4	-67.1	3.8	-63.3	-13.0	-50.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	48.43	-43.5	-42.5	-8.7	-51.2	-13.0	-38.2
2	**72.68**	**-27.3**	**-33.0**	**-0.1**	**-33.1**	**-13.0**	**-20.1**
3	81.41	-46.6	-51.7	0.5	-51.2	-13.0	-38.2
4	128.94	-27.1	-29.3	-3.2	-32.5	-13.0	-19.5
5	192.96	-54.1	-53.0	-2.6	-55.6	-13.0	-42.6
6	233.70	-54.7	-55.3	-1.7	-57.0	-13.0	-44.0

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Above 1GHz
LTE Band 2, Channel Bandwidth: 5MHz

Mode	TX channel 18625 (1852.50MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3705.00	-60.7	-52.2	1.4	-50.8	-13.0	-37.8
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3705.00	-60.3	-52.1	1.4	-50.7	-13.0	-37.7

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 18900 (1880.00MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-62.2	-53.7	1.3	-52.4	-13.0	-39.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-58.6	-50.3	1.3	-49.0	-13.0	-36.0

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 19175 (1907.50MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3815.00	-62.0	-53.7	1.4	-52.3	-13.0	-39.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3815.00	-59.6	-51.4	1.4	-50.0	-13.0	-37.0

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 2, Channel Bandwidth: 10MHz

Mode	TX channel 18650 (1855.00MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3710.00	-61.1	-52.6	1.4	-51.2	-13.0	-38.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3710.00	-58.7	-50.5	1.4	-49.1	-13.0	-36.1

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 18900 (1880.00MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-61.9	-53.4	1.3	-52.1	-13.0	-39.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-59.8	-51.5	1.3	-50.2	-13.0	-37.2

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 19150 (1905.00MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3810.00	-61.6	-53.2	1.3	-51.9	-13.0	-38.9
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3810.00	-60.5	-52.2	1.3	-50.9	-13.0	-37.9

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 2, Channel Bandwidth: 15MHz

Mode	TX channel 18675 (1857.50MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3715.00	-62.1	-53.6	1.4	-52.2	-13.0	-39.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3715.00	-60.5	-52.3	1.4	-50.9	-13.0	-37.9

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 18900 (1880.00MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-60.7	-52.2	1.3	-50.9	-13.0	-37.9
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-59.4	-51.1	1.3	-49.8	-13.0	-36.8

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 19125 (1902.50MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3805.00	-64.0	-55.6	1.3	-54.3	-13.0	-41.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3805.00	-59.2	-51.0	1.3	-49.7	-13.0	-36.7

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 2, Channel Bandwidth: 20MHz

Mode	TX channel 18700 (1860.00MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3720.00	-63.6	-55.1	1.4	-53.7	-13.0	-40.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3720.00	-58.8	-50.6	1.4	-49.2	-13.0	-36.2

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 18900 (1880.00MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-60.5	-52.0	1.3	-50.7	-13.0	-37.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-59.0	-50.7	1.3	-49.4	-13.0	-36.4

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 19100 (1900.00MHz)	Frequency Range	Above 1000MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3800.00	-59.4	-51.0	1.3	-49.7	-13.0	-36.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3800.00	-59.9	-51.7	1.3	-50.4	-13.0	-37.4

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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