FCC Test Report (Part 90S/R)

Report No.:	RF180321E03M-3
FCC ID:	RI7LN960A16
Test Model:	LN960A16
Received Date:	Apr. 09, 2019
Test Date:	Apr. 21 to 23, 2019
Issued Date:	May 27, 2019
Applicant:	Telit Communication S.p.a
Address:	Viale Stazione di Prosecco 5/b, Trieste, 34010, Italy
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number:	723255 / TW2022

Testing Laboratory
2022

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Release Control Record

Issue No.	Description	Date Issued
RF180321E03M-3	Original release	May 27, 2019

1 Certificate of Conformity

Product:	LTE M.2 Module
Brand:	Telit
Test Model:	LN960A16
Sample Status:	ENGINEERING SAMPLE
Applicant:	Telit Communication S.p.a
Test Date:	Apr. 21 to 23, 2019
Standards:	FCC Part 90, Subpart S / R

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 EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** May 27, 2019

Claire Kuan / Specialist

Approved by : _____ , **Date:** May 27, 2019

May Chen / Manager

2 Summary of Test Results

Applied Standard: FCC Part 90 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 90.635 (b) 90.542(a)(7)	Radiated Power	PASS	Meet the requirement of limit.
2.1047	Modulation characteristics	PASS	Meet the requirement
2.1055 90.213 90.539	Frequency Stability	PASS	Meet the requirement of limit.
2.1049 90.209	Occupied Bandwidth	PASS	Meet the requirement of limit.
2.1051 90.691 90.543	Emission Mask	PASS	Meet the requirement of limit.
2.1051 90.691 90.543	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 90.691 90.543	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -14.00dB at 1586MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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 ~ 1GHz	4.8 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.0 dB
	6GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Test Site and Instruments

For radiated spurious emissions test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Spectrum Analyzer Keysight	N9030B	MY57141948	June 01, 2018	May 31, 2019
Pre-Amplifier EMCI	EMC001340	980142	Jan. 25, 2019	Jan. 24, 2020
Loop Antenna Electro-Metrics	EM-6879	269	Sep. 07, 2018	Sep. 06, 2019
RF Cable	NA	LOOPCAB-001	Jan. 14, 2019	Jan. 13, 2020
RF Cable	NA	LOOPCAB-002	Jan. 14, 2019	Jan. 13, 2020
Pre-Amplifier EMCI	EMC330N	980538	May 07, 2018	May 06, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB9168	9168-0842	Nov. 21, 2018	Nov. 20, 2019
RF Cable	8D	966-5-1	May 07, 2018	May 06, 2019
RF Cable	8D	966-5-2	May 07, 2018	May 06, 2019
RF Cable	8D	966-5-3	May 07, 2018	May 06, 2019
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-02	Jan. 28, 2019	Jan. 27, 2020
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-1819	Nov. 25, 2018	Nov. 24, 2019
Pre-Amplifier EMCI	EMC12630SE	980509	May 07, 2018	May 06, 2019
RF Cable EMCI	EMC104-SM-SM-1500	180503	May 07, 2018	May 06, 2019
RF Cable EMCI	EMC104-SM-SM-2000	180501	May 07, 2018	May 06, 2019
RF Cable EMCI	EMC104-SM-SM-6000	180505	May 07, 2018	May 06, 2019
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 28, 2019	Jan. 27, 2020
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 25, 2018	Nov. 24, 2019
RF Cable	EMC102-KM-KM-1200	160924	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC102-KM-KM-1200	160925	Jan. 28, 2019	Jan. 27, 2020
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	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 966 Chamber No. 5.
3. Loop antenna was used for all emissions below 30 MHz.
4. Tested Date: Apr. 23, 2019

For other test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 01, 2018	July 31, 2019
Power meter Anritsu	ML2495A	1014008	May 09, 2018	May 08, 2019
Power sensor Anritsu	MA2411B	0917122	May 09, 2018	May 08, 2019
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
AC Power Source Extech Electronics	6205	1440452	NA	NA
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 09, 2019	Jan. 08, 2020
True RMS Clamp Meter FLUKE	325	31130711WS	May 22, 2018	May 21, 2019
ESG Vector signal generator Agilent	E4438C	MY45094468/005 506 602 UK6 UNJ	Nov. 19, 2018	Nov. 18, 2019
Mech Switch Absorptive Mini-Circuits	MSP4TA-18+	0140	Feb. 11, 2019	Feb. 10, 2020
FXD ATTEN Mini-Circuits	BW-S3W2+	MN71981	Feb. 11, 2019	Feb. 10, 2020
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Apr. 21, 2019

3 General Information

3.1 General Description of EUT

Product	LTE M.2 Module		
Brand	Telit		
Test Model	LN960A16		
Status of EUT	ENGINEERING SAMPLE		
Power Supply Rating	DC 3.3V from host equipment		
Modulation Type	QPSK, 16QAM, 64QAM		
Operating Frequency	LTE Band 14		790.5MHz ~ 795.5MHz
	LTE Band 26		814.7MHz ~ 823.3MHz
Max. ERP Power	LTE Band 14 (Channel Bandwidth 5MHz)		24.92 dBm
	LTE Band 14 (Channel Bandwidth 10MHz)		24.86 dBm
	LTE Band 26 (Channel Bandwidth 1.4MHz)		24.64 dBm
	LTE Band 26 (Channel Bandwidth 3MHz)		24.85 dBm
	LTE Band 26 (Channel Bandwidth 5MHz)		24.68 dBm
	LTE Band 26 (Channel Bandwidth 10MHz)		24.80 dBm
Emission Designator	LTE Band 14	Channel Bandwidth 5MHz	QPSK: 4M51G7D 16QAM: 4M51D7W 64QAW: 4M51D7W
		Channel Bandwidth 10MHz	QPSK: 9M02G7D 16QAM: 9M00D7W 64QAW: 9M00D7W
	LTE Band 26	Channel Bandwidth 1.4MHz	QPSK: 1M09G7D 16QAM: 1M09D7W 64QAW: 1M09D7W
		Channel Bandwidth 3MHz	QPSK: 2M70G7D 16QAM: 2M70D7W 64QAW: 2M70D7W
		Channel Bandwidth 5MHz	QPSK: 4M51G7D 16QAM: 4M49D7W 64QAW: 4M49D7W
		Channel Bandwidth 10MHz	QPSK: 9M00G7D 16QAM: 8M98D7W 64QAW: 9M00D7W
Antenna Type	Refer to note as below		
Antenna Connector	Refer to note as below		
Accessory Device	NA		
Data Cable Supplied	NA		

Note:

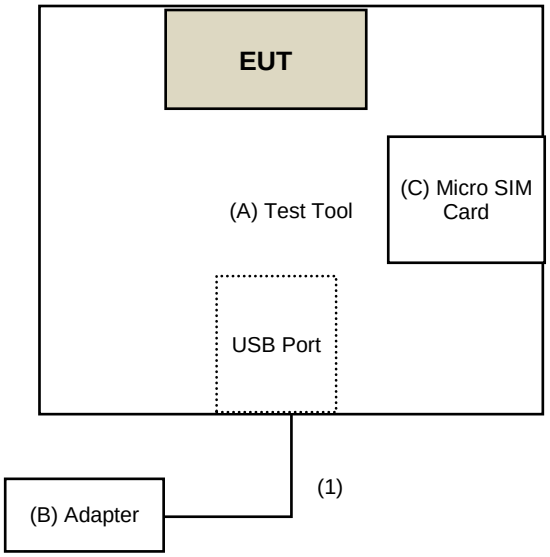
1. The antennas provided to the EUT, please refer to the following table:

Antenna No.	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length
1	Please refer to below table	699~803	PIFA	i-pex(MHF)	100mm
2	Please refer to below table	791~960 1447.9~1606	PIFA	i-pex(MHF)	100mm
3	Please refer to below table	1710~2170 2500~2690	PIFA	i-pex(MHF)	100mm
4	Please refer to below table	3400~3700	PIFA	i-pex(MHF)	100mm
5	Please refer to below table	5110~5925	PIFA	i-pex(MHF)	100mm

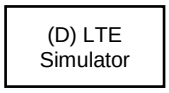
Antenna gain list			
Antenna No.	Band	Freq. Range (MHz)	Gain (dBi)
3	WCDMA II (B2)	1850~1910	4.92
3	WCDMA IV (B4)	1710~1755	5.99
2	WCDMA V (B5)	824~849	2.68
3	LTE Band (2)	1850~1910	4.92
3	LTE Band (4)	1710~1755	5.99
2	LTE Band (5)	824~849	2.68
3	LTE Band (7)	2500~2570	5.2
1	LTE Band (12)	698~716	4.17
1	LTE Band (13)	777~787	3.05
1	LTE Band (14)	788~798	2.87
1	LTE Band (17)	704~716	4.17
3	LTE Band (25)	1850~1915	4.92
2	LTE Band (26)	814~849	2.92
3	LTE Band (38)	2570~2620	4.82
3	LTE Band (41)	2496~2690	5.38
3	LTE Band (66)	1710~1780	5.99

2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Configuration of System under Test



Remote Site



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.	Test Tool	Foxconn	T77W968	NA	NA	Supplied by client
B.	Adapter	ASUS	EXA1205UA	NA	NA	Provided by Lab
C.	SIM Card	NA	NA	NA	NA	Provided by Lab
D.	Simulator	Keysight	E7515A	MY56030229	NA	Provided by Lab

Note:

1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	1	Yes	0	Provided by Lab

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:

LTE Band 14

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
ERP	23305 to 23355	23305, 23330, 23355	5MHz	QPSK/16QAM/64QAM	1RB / 0 RB offset
	23330	23330	10MHz	QPSK/16QAM/64QAM	1RB / 0 RB offset
Frequency Stability	23305 to 23355	23305, 23330, 23355	5MHz	QPSK	-
	23330	23330	10MHz	QPSK	-
Occupied Bandwidth	23305 to 23355	23305, 23330, 23355	5MHz	QPSK/16QAM/64QAM	Full RB
	23330	23330	10MHz	QPSK/16QAM/64QAM	Full RB
Emission Mask	23305 to 23355	23305	5MHz	QPSK	1 RB / 0 RB Offset
		23355			1 RB / 24 RB Offset
		23305, 23355			25 RB / 0 RB Offset
	23330	23355	10MHz	QPSK	1 RB / 0 RB Offset
					1 RB / 49 RB Offset
					50 RB / 0 RB Offset
Conducted Emission	23305 to 23355	23305, 23330, 23355	5MHz	QPSK	1RB / 0 RB offset
	23330	23330	10MHz	QPSK	1RB / 0 RB offset
Radiated Emission	23305 to 23355	23305, 23330, 23355	5MHz	QPSK	1RB / 0 RB offset
	23330	23330	10MHz	QPSK	1RB / 0 RB offset

NOTE:
All supported modulation types were evaluated.The Worst case of QPSK was selected. Therefore, the Frequency Stability, Condcudeted Emission and Radiated Emission were presented under QPSK mode only.

LTE Band 26

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
ERP	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK/16QAM/64QAM	1RB / 0 RB offset
	26705 to 26775	26705, 26740, 26775	3MHz	QPSK/16QAM/64QAM	1RB / 0 RB offset
	26715 to 26765	26715, 26740, 26765	5MHz	QPSK/16QAM/64QAM	1RB / 0 RB offset
	26740	26740	10MHz	QPSK/16QAM/64QAM	1RB / 0 RB offset
Frequency Stability	26697 to 26783	26740	1.4MHz	QPSK	-
	26705 to 26775	26740	3MHz	QPSK	-
	26715 to 26765	26740	5MHz	QPSK	-
	26740	26740	10MHz	QPSK	-
Occupied Bandwidth	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK/16QAM/64QAM	Full RB
	26705 to 26775	26705, 26740, 26775	3MHz	QPSK/16QAM/64QAM	Full RB
	26715 to 26765	26715, 26740, 26765	5MHz	QPSK/16QAM/64QAM	Full RB
	26740	26740	10MHz	QPSK/16QAM/64QAM	Full RB
Emission Mask	26697 to 26783	26697	1.4MHz	QPSK	1 RB / 0 RB Offset
		26783			1 RB / 5 RB Offset
		26697, 26783			6 RB / 0 RB Offset
	26705 to 26775	26705	3MHz	QPSK	1 RB / 0 RB Offset
		26775			1 RB / 14 RB Offset
		26705, 26775			15 RB / 0 RB Offset
	26715 to 26765	26715	5MHz	QPSK	1 RB / 0 RB Offset
		26765			1 RB / 24 RB Offset
		26715, 26765			25 RB / 0 RB Offset
	26740	26740	10MHz	QPSK	1 RB / 0 RB Offset
					1 RB / 49 RB Offset
					50 RB / 0 RB Offset
Conducted Emission	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK	1RB / 0 RB offset
	26705 to 26775	26705, 26740, 26775	3MHz	QPSK	1RB / 0 RB offset
	26715 to 26765	26715, 26740, 26765	5MHz	QPSK	1RB / 0 RB offset
	26740	26740	10MHz	QPSK	1RB / 0 RB offset
Radiated Emission	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK	1RB / 0 RB offset
	26705 to 26775	26705, 26740, 26775	3MHz	QPSK	1RB / 0 RB offset
	26715 to 26765	26715, 26740, 26765	5MHz	QPSK	1RB / 0 RB offset
	26740	26740	10MHz	QPSK	1RB / 0 RB offset

NOTE:
All supported modulation types were evaluated.The Worst case of QPSK was selected. Therefore, the Frequency Stability, Condcudeted Emission and Radiated Emission were presented under QPSK mode only.

Test Condition:

Test Item	Environmental Conditions	Input Power (System)	Tested By
Output Power	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin
Frequency Stability	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin
Occupied Bandwidth	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin
Emission Mask	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin
Conducted Emission	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin
Radiated Emission Below 1GHz	25deg. C, 75%RH	120Vac, 60Hz	James Chan
Radiated Emission Above 1GHz	25deg. C, 75%RH	120Vac, 60Hz	James Chan

3.4 EUT Operating Conditions

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 90, Subpart S / R

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 and Antenna Height

According to 90.635 (b), Maximum output power of the transmitter for mobile stations is 100 watts (20 dBw). According to 90.542(a)(7), Portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

4.1.2 Test Procedures

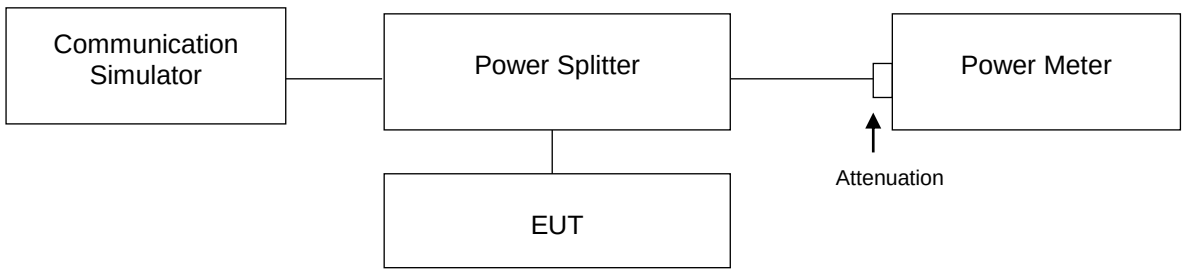
Conducted Power Measurement:

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 difference RB size/ RB offset for difference bandwidth record the power level shown on power meter.

EIRP / ERP Measurement:

a. EIRP = Conducted Output power level + Antenna gain.
b. ERP power can be calculated form EIRP power by subtracting the gain of dipole, ERP power = EIPR power - 2.15dBi.
c. ERP = Conducted Output power level + Antenna gain (dBi) - Isotropically Factor (2.15dB).

4.1.3 Test Setup



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

4.1.4 Test Results

CONDUCTED OUTPUT POWER

LTE Band 14

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)	64QAM			3GPP MPR (dB)
			Low CH	Mid CH	High CH		Low CH	Mid CH	High CH		Low CH	Mid CH	High CH	
			23305	23330	23335		23305	23330	23335		23305	23330	23335	
			790.5	793	795.5		790.5	793	795.5		790.5	793	795.5	
			MHz	MHz	MHz		MHz	MHz	MHz		MHz	MHz	MHz	
14 / 5M	1	0	24.05	24.20	23.73	0	22.91	22.83	22.99	1	21.50	21.60	21.84	2
	1	12	23.73	23.81	23.60	0	23.03	22.52	22.52	1	21.64	21.80	21.41	2
	1	24	23.87	23.88	23.73	0	22.51	22.98	22.95	1	21.49	21.43	21.86	2
	12	0	22.96	22.67	22.92	1	21.54	21.67	21.78	2	20.78	20.63	20.65	3
	12	6	23.02	22.52	22.71	1	22.18	22.00	21.91	2	20.66	20.61	20.35	3
	12	13	22.99	22.65	22.51	1	21.96	22.05	21.64	2	20.61	20.54	20.34	3
	25	0	23.10	22.99	23.73	1	21.98	21.79	21.64	2	20.93	20.90	20.62	3

Band / BW	RB Size	RB Offset	QPSK	3GPP MPR (dB)	16QAM	3GPP MPR (dB)	64QAM	3GPP MPR (dB)
			Mid CH		Mid CH		Mid CH	
			23330		23330		23330	
			793		793		793	
			MHz		MHz		MHz	
14 / 10M	1	0	24.14	0	23.05	1	21.70	2
	1	24	23.94	0	22.47	1	21.60	2
	1	49	23.87	0	22.94	1	21.99	2
	25	0	22.93	1	22.08	2	21.13	3
	25	12	22.72	1	22.07	2	20.62	3
	25	25	22.62	1	21.88	2	20.94	3
	50	0	22.65	1	21.80	2	20.99	3

LTE Band 26

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)	64QAM			3GPP MPR (dB)
			Low CH	Mid CH	High CH		Low CH	Mid CH	High CH		Low CH	Mid CH	High CH	
			26697	26740	26783		26697	26740	26783		26697	26740	26783	
			814.7	819	823.3		814.7	819	823.3		814.7	819	823.3	
			MHz	MHz	MHz		MHz	MHz	MHz		MHz	MHz	MHz	
26 / 1.4M	1	0	23.42	23.87	23.28	0	22.36	22.43	22.71	1	21.70	21.22	21.63	2
	1	2	23.56	23.74	23.71	0	22.58	22.24	22.31	1	21.28	21.31	21.48	2
	1	5	23.32	23.23	23.51	0	22.41	22.36	22.51	1	21.39	21.28	21.17	2
	3	0	23.77	23.48	23.36	0	22.87	22.20	22.69	1	21.58	21.31	21.40	2
	3	1	23.39	23.34	23.60	0	22.52	22.40	22.29	1	21.45	21.34	21.61	2
	3	3	23.54	23.74	22.76	0	22.72	22.30	22.53	1	21.27	21.75	21.79	2
	6	0	22.33	22.23	22.28	1	21.30	21.62	21.14	2	20.23	20.21	20.62	3

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)	64QAM			3GPP MPR (dB)
			Low CH	Mid CH	High CH		Low CH	Mid CH	High CH		Low CH	Mid CH	High CH	
			26705	26740	26775		26705	26740	26775		26705	26740	26775	
			815.50	819.00	822.50		815.50	819.00	822.50		815.50	819.00	822.50	
			MHz	MHz	MHz		MHz	MHz	MHz		MHz	MHz	MHz	
26 / 3M	1	0	23.75	23.57	24.08	0	22.71	22.58	22.56	1	21.60	21.68	21.70	2
	1	7	23.91	23.58	23.68	0	22.47	22.40	22.86	1	21.55	21.37	21.61	2
	1	14	23.43	23.59	23.62	0	22.75	22.76	22.57	1	21.25	21.60	21.58	2
	8	0	22.55	22.71	22.91	1	21.47	21.86	21.87	2	20.36	20.29	20.37	3
	8	3	22.36	22.85	22.71	1	21.29	21.49	21.50	2	20.30	20.29	20.33	3
	8	7	22.86	22.92	22.47	1	21.46	21.45	21.56	2	20.14	20.27	20.84	3
	15	0	22.62	22.84	22.92	1	21.56	21.86	21.86	2	20.65	20.28	20.65	3

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)	64QAM			3GPP MPR (dB)
			Low CH	Mid CH	High CH		Low CH	Mid CH	High CH		Low CH	Mid CH	High CH	
			26715	26740	26765		26715	26740	26765		26715	26740	26765	
			816.50	819.00	821.50		816.50	819.00	821.50		816.50	819.00	821.50	
			MHz	MHz	MHz		MHz	MHz	MHz		MHz	MHz	MHz	
26 / 5M	1	0	23.60	23.91	23.48	0	22.48	22.67	22.83	1	21.25	21.71	21.51	2
	1	12	23.30	23.42	23.89	0	22.83	22.49	22.43	1	21.27	21.52	21.42	2
	1	24	23.59	23.54	23.80	0	22.45	22.88	22.49	1	21.70	21.88	21.71	2
	12	0	22.58	22.58	22.45	1	21.72	21.82	21.09	2	20.66	20.59	20.64	3
	12	6	22.80	22.50	23.47	1	21.54	21.44	21.75	2	20.19	20.78	20.36	3
	12	13	22.73	22.30	22.72	1	21.41	21.35	21.47	2	20.17	20.82	20.24	3
	25	0	22.57	22.47	22.33	1	21.40	21.52	21.64	2	20.71	20.55	20.35	3

Band / BW	RB Size	RB Offset	QPSK	3GPP MPR (dB)	16QAM	3GPP MPR (dB)	64QAM	3GPP MPR (dB)
			Mid CH		Mid CH		Mid CH	
			26740		26740		26740	
			819		819		819	
			MHz		MHz		MHz	
26/ 10M	1	0	24.03	0	22.47	1	21.38	2
	1	24	23.86	0	22.30	1	21.49	2
	1	49	23.75	0	22.23	1	21.83	2
	25	0	22.79	1	21.21	2	20.24	3
	25	12	22.26	1	21.24	2	20.79	3
	25	25	22.50	1	21.69	2	20.31	3
	50	0	22.29	1	21.17	2	20.29	3

ERP POWER

LTE Band 14

Band 14 / 5M 1RB#0

Test Mode	QPSK			16QAM			64QAM		
	Low CH	Mid CH	High CH	Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
	23305	23330	23355	23305	23330	23355	23305	23330	23355
	790.5	793	795.5	790.5	793	795.5	790.5	793	795.5
	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz
Max Cond. Power (dBm)	24.05	24.20	23.73	22.91	22.83	22.99	21.50	21.60	21.84
Gain (dBi)	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87
Isotropically Factor (dB)	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Max ERP Power (dBm)	24.77	24.92	24.45	23.63	23.55	23.71	22.22	22.32	22.56

Band 14 / 10M 1RB#0

Test Mode	QPSK	16QAM	64QAM
	Mid CH	Mid CH	Mid CH
	23330	23330	23330
	793	793	793
	MHz	MHz	MHz
Max Cond. Power (dBm)	24.14	23.05	21.70
Gain (dBi)	2.87	2.87	2.87
Isotropically Factor (dB)	2.15	2.15	2.15
Max ERP Power (dBm)	24.86	23.77	22.42

LTE Band 26

Band 26 / 1.4M 1RB#0

Test Mode	QPSK			16QAM			64QAM		
	Low CH	Mid CH	High CH	Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
	26697	26740	26783	26697	26740	26783	26697	26740	26783
	814.7	819	823.3	814.7	819	823.3	814.7	819	823.3
	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz
Max Cond. Power (dBm)	23.42	23.87	23.28	22.36	22.43	22.71	21.70	21.22	21.63
Gain (dBi)	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92
Isotropically Factor (dB)	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Max ERP Power (dBm)	24.19	24.64	24.05	23.13	23.20	23.48	22.47	21.99	22.40

Band 26 / 3M 1RB#0

Test Mode	QPSK			16QAM			64QAM		
	Low CH	Mid CH	High CH	Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
	26705	26740	26775	26705	26740	26775	26705	26740	26775
	815.50	819.00	822.50	815.50	819.00	822.50	815.5	819	822.5
	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz
Max Cond. Power (dBm)	23.75	23.57	24.08	22.71	22.58	22.56	21.60	21.68	21.70
Gain (dBi)	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92
Isotropically Factor (dB)	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Max ERP Power (dBm)	24.52	24.34	24.85	23.48	23.35	23.33	22.37	22.45	22.47

Band 26 / 5M 1RB#0

Test Mode	QPSK			16QAM			64QAM		
	Low CH	Mid CH	High CH	Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
	26715	26740	26765	26715	26740	26765	26715	26740	26765
	816.50	819.00	821.50	816.50	819.00	821.50	816.5	819	821.5
	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz
Max Cond. Power (dBm)	23.60	23.91	23.48	22.48	22.67	22.83	21.25	21.71	21.51
Gain (dBi)	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92
Isotropically Factor (dB)	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Max ERP Power (dBm)	24.37	24.68	24.25	23.25	23.44	23.60	22.02	22.48	22.28

Band 26 / 10M 1RB#0

Test Mode	QPSK	16QAM	64QAM
	Mid CH	Mid CH	Mid CH
	26740	26740	26740
	819	819	819
	MHz	MHz	MHz
Max Cond. Power (dBm)	24.03	22.47	21.38
Gain (dBi)	2.92	2.92	2.92
Isotropically Factor (dB)	2.15	2.15	2.15
Max ERP Power (dBm)	24.80	24.23	22.15

4.2 Modulation characteristics Measurement

4.2.1 Limits of Modulation characteristics

N/A

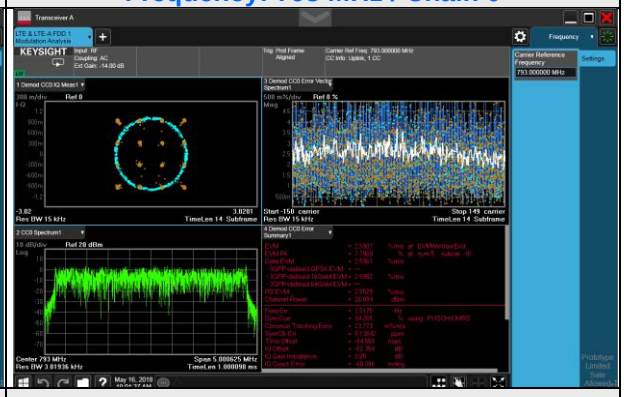
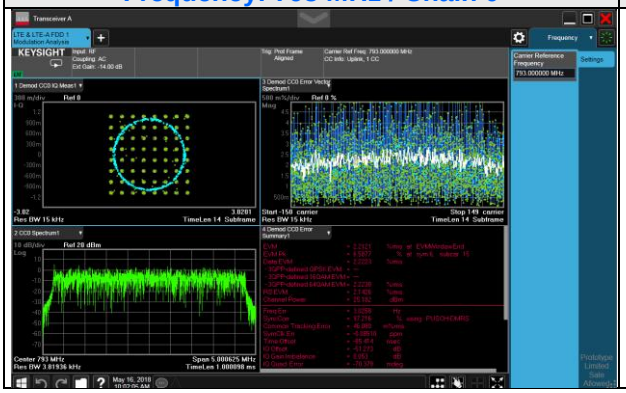
4.2.2 Test Procedure

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.

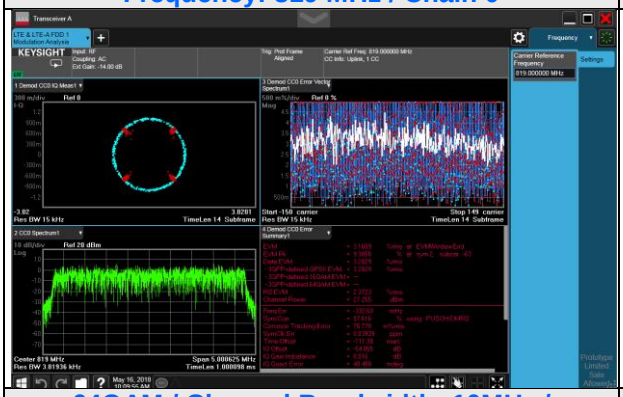
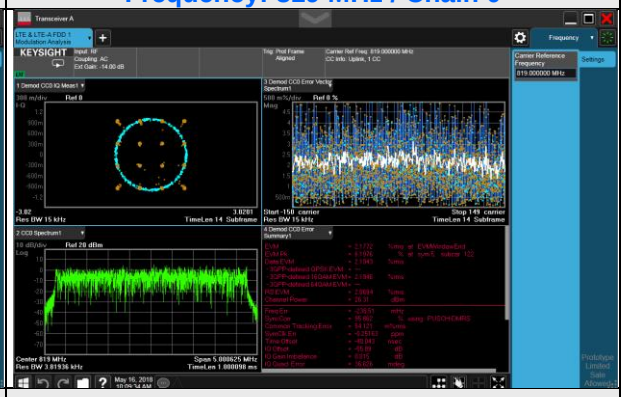
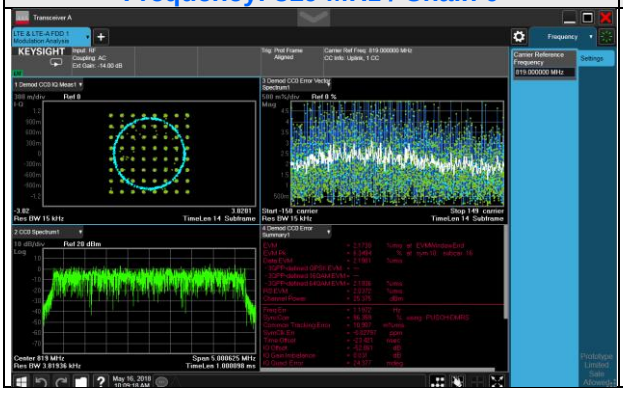
4.2.3 Test Setup

4.2.4 Test Results

LTE Band 14

QPSK / Channel Bandwidth: 10MHz / Frequency: 793 MHz / Chain 0	16QAM / Channel Bandwidth: 10MHz / Frequency: 793 MHz / Chain 0
	
64QAM / Channel Bandwidth: 10MHz / Frequency: 793 MHz / Chain 0	
	

LTE Band 26

QPSK / Channel Bandwidth: 10MHz / Frequency: 819 MHz / Chain 0	16QAM / Channel Bandwidth: 10MHz / Frequency: 819 MHz / Chain 0
	
64QAM / Channel Bandwidth: 10MHz / Frequency: 819 MHz / Chain 0	
	

4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stabiliity Measurement

Follow the 90.213 1.5ppm is for base and fixed station. 2.5 ppm is for mobile station.
Follow the 90.539 frequency stability of mobile, portable and control transmitters operating in the wideband segment must be 1.25 parts per million.

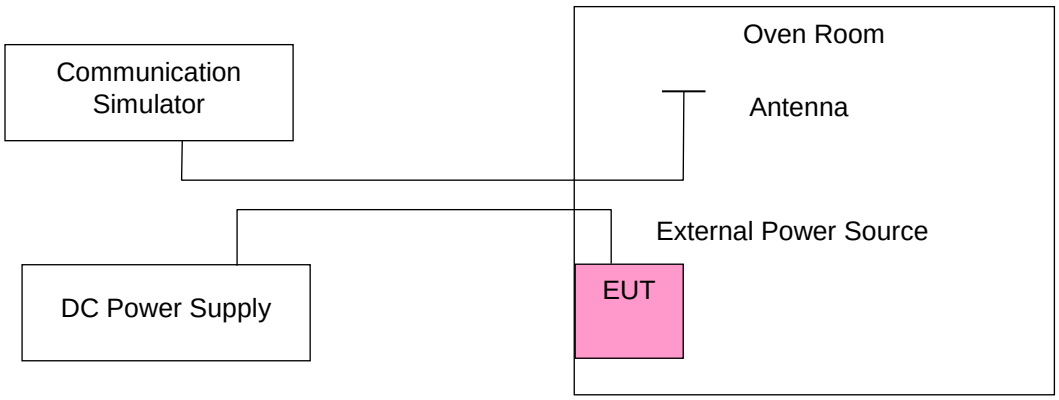
4.3.2 Test Procedure

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.

4.3.3 Test Setup



4.3.4 Test Results

LTE Band 14

Voltage (Volts)	Frequency Error (ppm)		Limit (ppm)
	LTE Band 14		
	5MHz	10MHz	
2.805	0.055	0.034	1.25
3.795	0.025	0.047	1.25

Frequency Error vs. Temperature

Temp. (℃)	Frequency Error (ppm)		Limit (ppm)
	LTE Band 14		
	5MHz	10MHz	
50	0.033	0.047	1.25
40	0.048	0.053	1.25
30	0.058	0.029	1.25
20	0.025	0.034	1.25
10	0.050	0.048	1.25
0	0.053	0.061	1.25
-10	0.048	0.045	1.25
-20	0.053	0.047	1.25
-30	0.043	0.054	1.25

LTE Band 26

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)				Limit (ppm)
	LTE Band 26				
	1.4MHz	3MHz	5MHz	10MHz	
2.805	0.044	0.039	0.054	0.051	2.5
3.795	0.049	0.042	0.038	0.031	2.5

Frequency Error vs. Temperature

Temp. (℃)	Frequency Error (ppm)				Limit (ppm)
	LTE Band 26				
	1.4MHz	3MHz	5MHz	10MHz	
50	0.054	0.056	0.034	0.053	2.5
40	0.042	0.028	0.051	0.054	2.5
30	0.031	0.046	0.060	0.060	2.5
20	0.039	0.029	0.033	0.024	2.5
10	0.053	0.039	0.051	0.034	2.5
0	0.032	0.051	0.051	0.060	2.5
-10	0.043	0.046	0.042	0.043	2.5
-20	0.024	0.048	0.057	0.035	2.5
-30	0.055	0.056	0.029	0.055	2.5

4.4 Occupied Bandwidth Measurement

4.4.1 Limits of Occupied Bandwidth Measurement

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

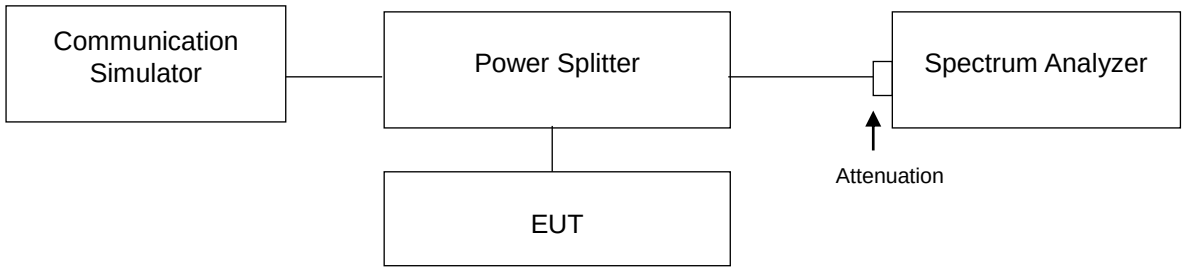
4.4.2 Test Procedure

All measurements were done at low, middle and high operational frequency range, RB of the spectrum is 1% of occupied bnadwidth and VB of the spectrum is 3 times RBW. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW≥1% x OBW and VBW≥3 x VBW.

Occupied Bandwdith Measurement:
Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

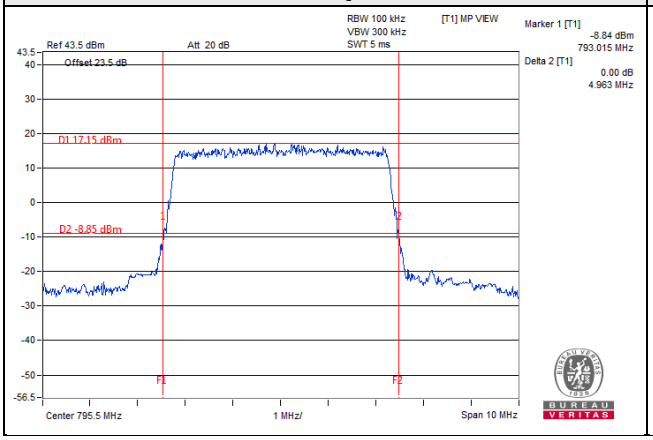
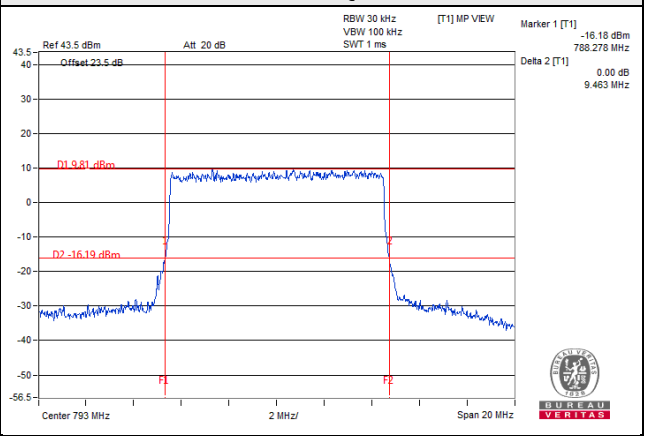
26 dB Bandwidth Measurement:
The emission bandwidth is defined as the width of the signal between two points,one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26dB below the transmitter power.

4.4.3 Test Setup



4.4.4 Test Result (-26dB Bandwidth)

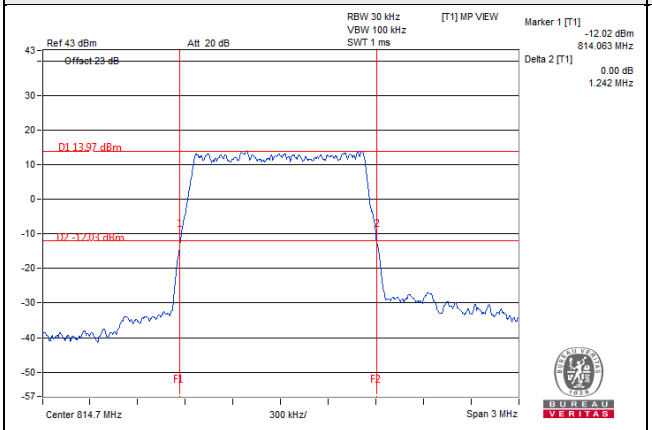
LTE Band 14									
Channel Bandwidth 5MHz					Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	-26dB Bandwidth (MHz)			Channel	Frequency (MHz)	-26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23305	790.5	4.94	4.95	4.93	23330	793	9.46	9.43	9.41
23330	793	4.94	4.94	4.94					
23355	795.5	4.96	4.92	4.93					

Spectrum Plot of Worst Value	
5MHz / QPSK	10MHz / QPSK
	

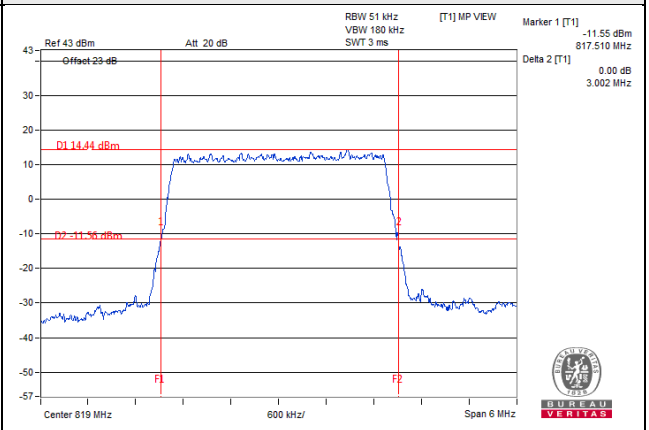
LTE Band 26									
Channel Bandwidth 1.4MHz					Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	-26dB Bandwidth (MHz)			Channel	Frequency (MHz)	-26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26697	814.7	1.24	1.24	1.24	26705	815.5	2.99	2.98	2.99
26740	819	1.24	1.24	1.23	26740	819	3.00	2.96	2.96
26783	823.3	1.23	1.23	1.24	26775	822.5	2.96	2.97	3.00
Channel Bandwidth 5MHz					Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	-26dB Bandwidth (MHz)			Channel	Frequency (MHz)	-26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26715	816.5	4.92	4.90	4.93	26740	819	9.81	9.83	9.79
26740	819	4.95	4.92	4.93					
26765	821.5	4.95	4.93	4.95					

Spectrum Plot of Worst Value

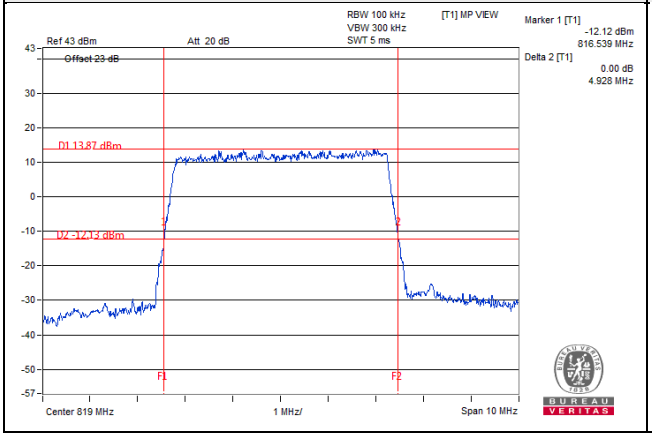
1.4MHz / QPSK



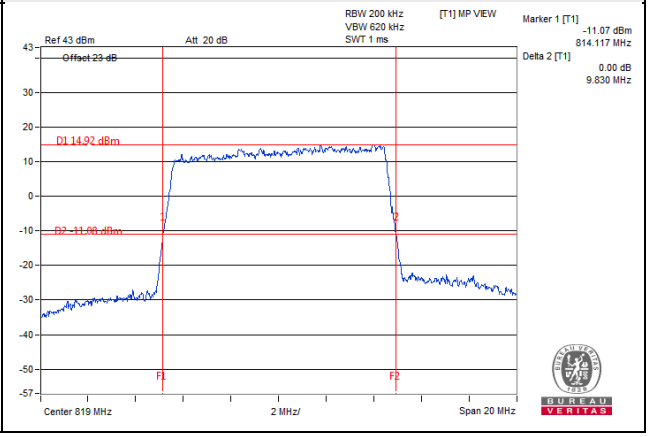
3MHz / QPSK



5MHz / QPSK

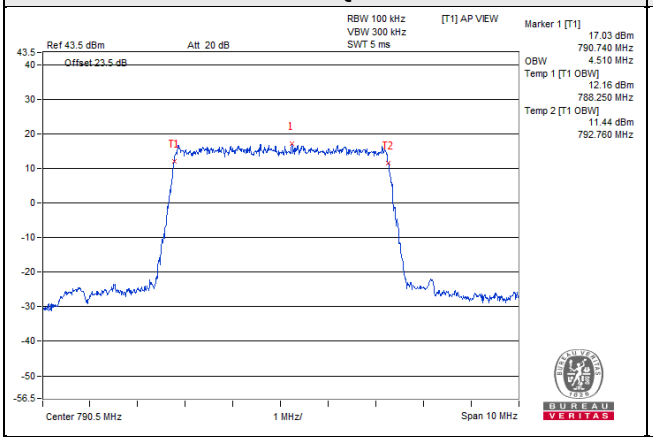
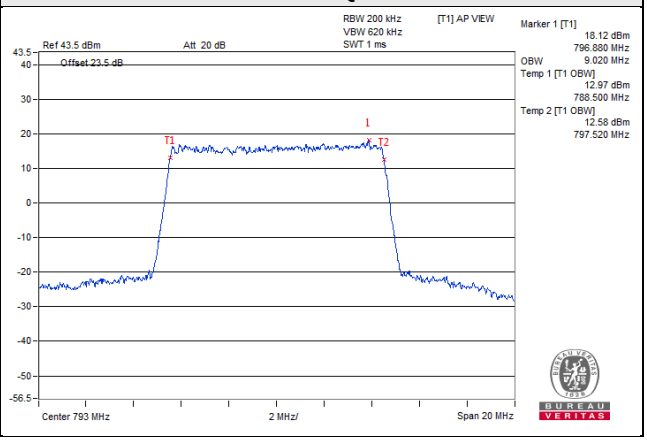


10MHz / 16QAM



4.4.5 Test Result (Occupied Bandwidth)

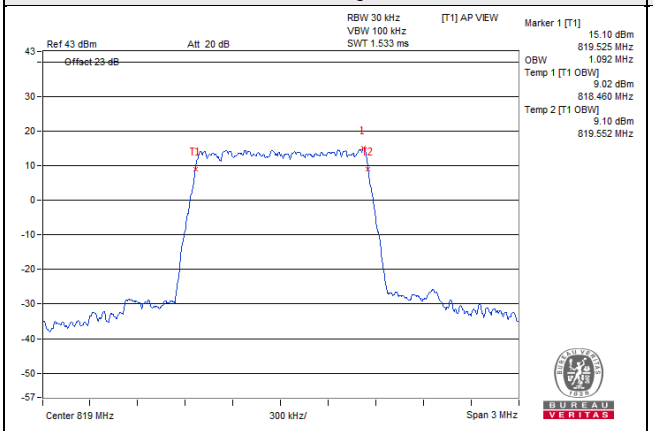
LTE Band 14									
Channel Bandwidth 5MHz					Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23305	790.5	4.51	4.50	4.51	23330	793	9.02	9.00	9.00
23330	793	4.49	4.50	4.51					
23355	795.5	4.51	4.51	4.50					

Spectrum Plot of Worst Value	
5MHz / QPSK	10MHz / QPSK
	

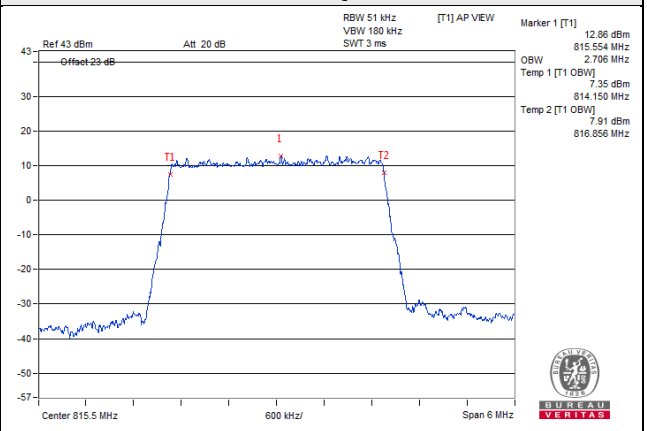
LTE Band 26									
Channel Bandwidth 1.4MHz					Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26697	814.7	1.08	1.08	1.09	26705	815.5	2.70	2.68	2.70
26740	819	1.09	1.09	1.09	26740	819	2.70	2.68	2.69
26783	823.3	1.08	1.09	1.09	26775	822.5	2.70	2.68	2.69
Channel Bandwidth 5MHz					Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26715	816.5	4.51	4.49	4.49	26740	819	9.00	8.98	9.00
26740	819	4.51	4.49	4.48					
26765	821.5	4.50	4.49	4.49					

Spectrum Plot of Worst Value

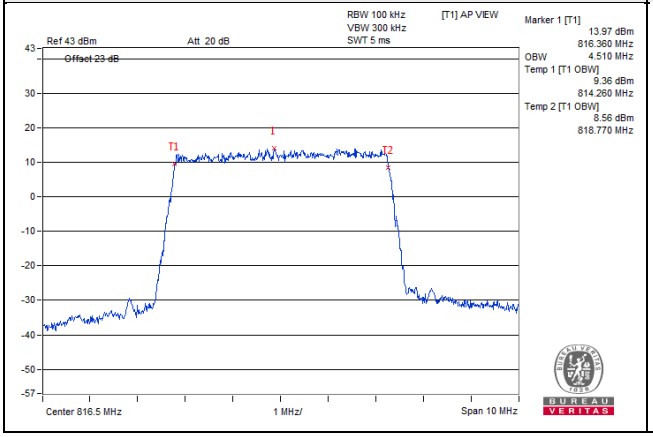
1.4MHz / QPSK



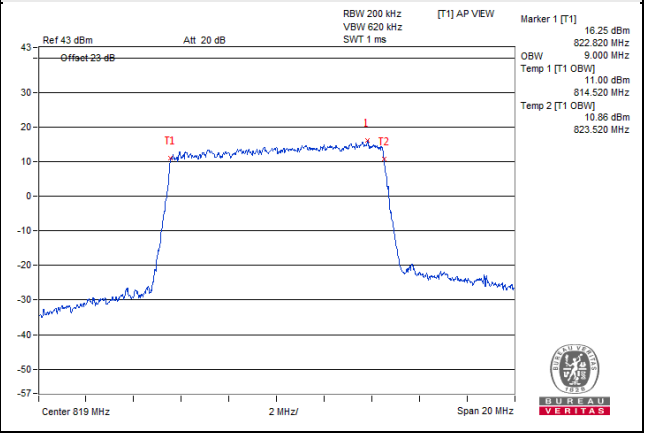
3MHz / QPSK



5MHz / QPSK



10MHz / 64QAM



4.5 Emission Mask Measurement

4.5.1 Limits of Emission Mask Measurement

Per 90.210, equipment used in 809-824/854-869 MHz licensed band to EA or non-EA systems shall comply with the emission mask provisions of §90.691.

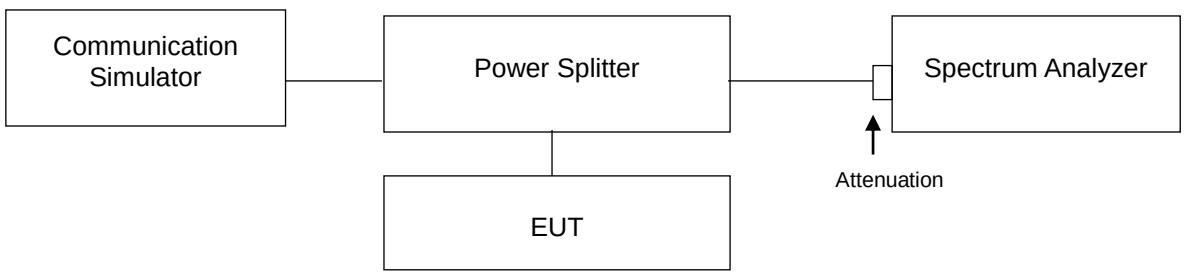
Per 90.691, Emission mask requirements
(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz. (2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.
(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

Per 90.543(e), Emission mask requirements
For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the 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, in accordance with the following:
(1) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations.(2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least 43 + 10 log (P) dB.(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

4.5.2 Test Procedures

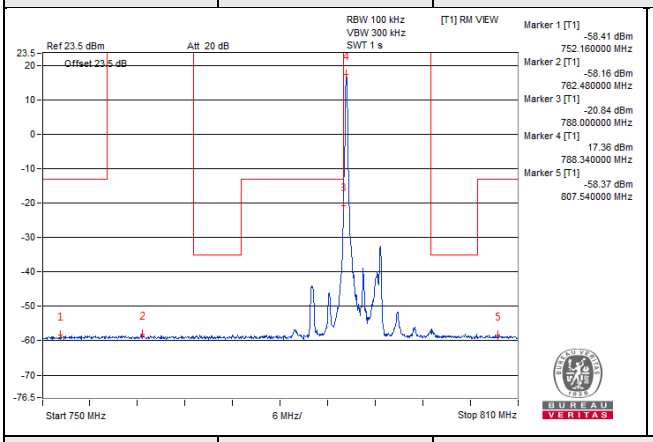
1. The power was measured with Spectrum Analyzer. All measurements were done at low and high operational frequency range.
2. The measurement used the power splitter via EUT RF power connector between signal generator and spectrum analyzer.
3. Record the test plot.

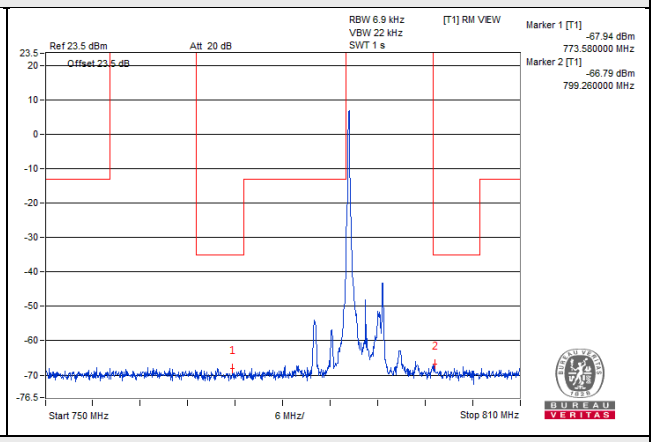
4.5.3 Test Setup



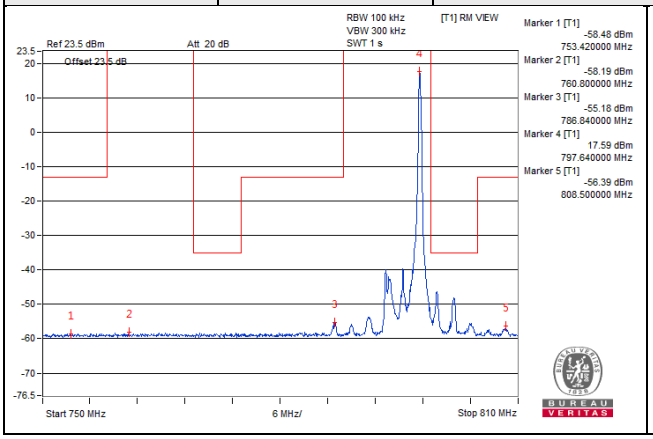
4.5.4 Test Results

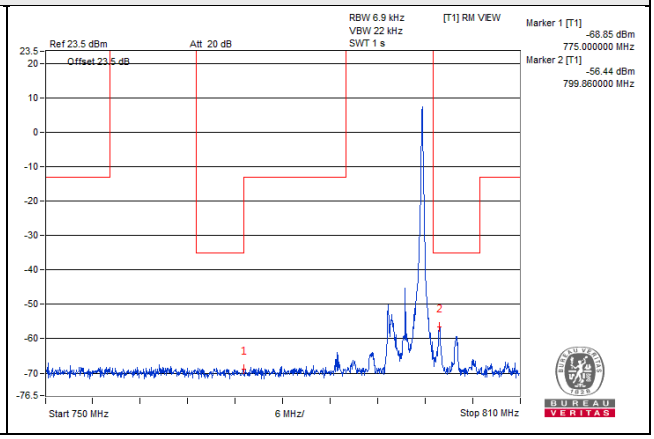
LTE Band 14		
Channel Bandwidth 5MHz QPSK		
Channel	23305	1 RB





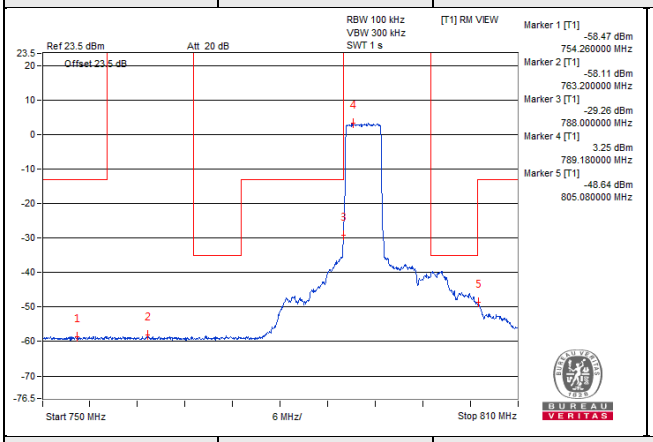
Channel	23355	1 RB

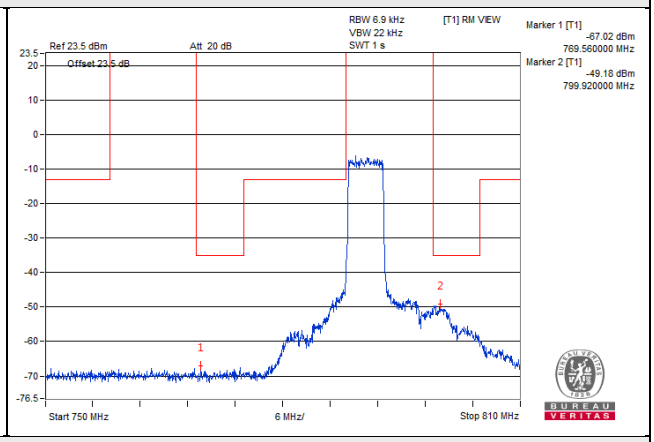




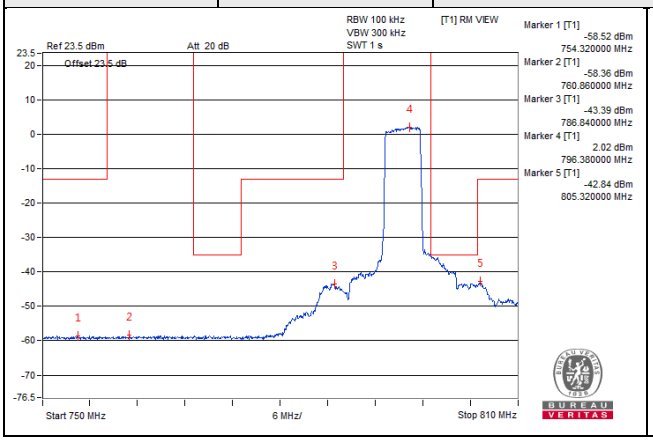
Note: Use of a narrower RBW (typically limited to a minimum RBW of 1 % of the OBW) for measuring.

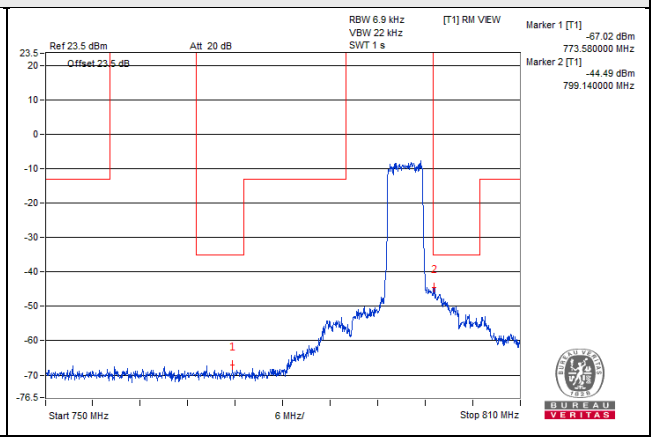
LTE Band 14		
Channel Bandwidth 5MHz QPSK		
Channel	23305	25 RB





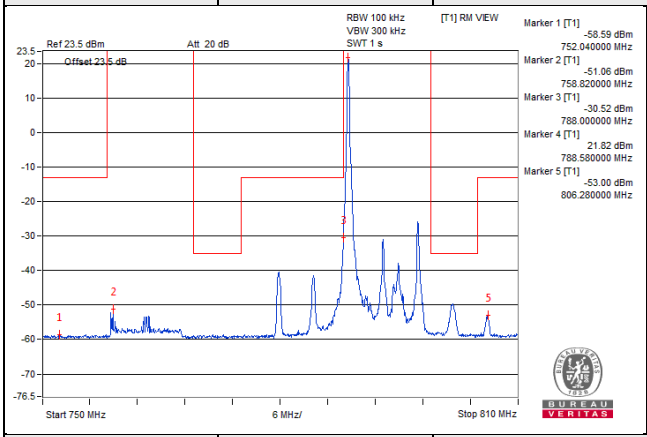
Channel	23355	25 RB

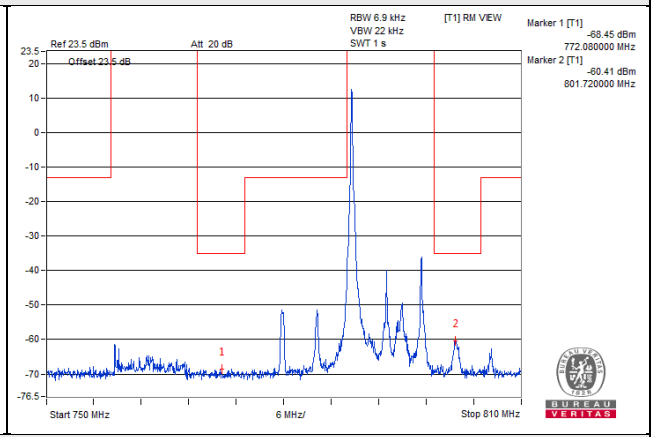




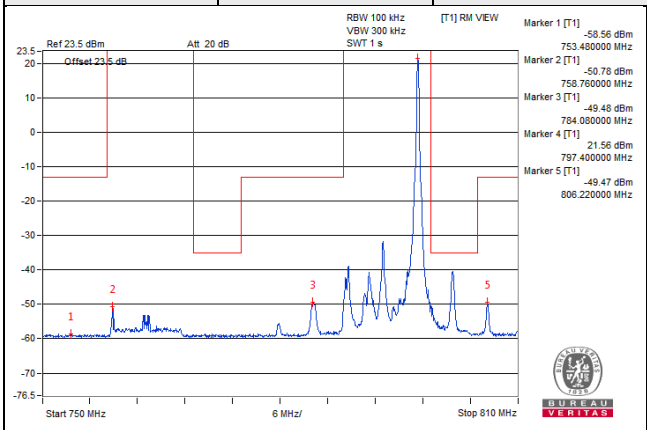
Note: Use of a narrower RBW (typically limited to a minimum RBW of 1 % of the OBW) for measuring.

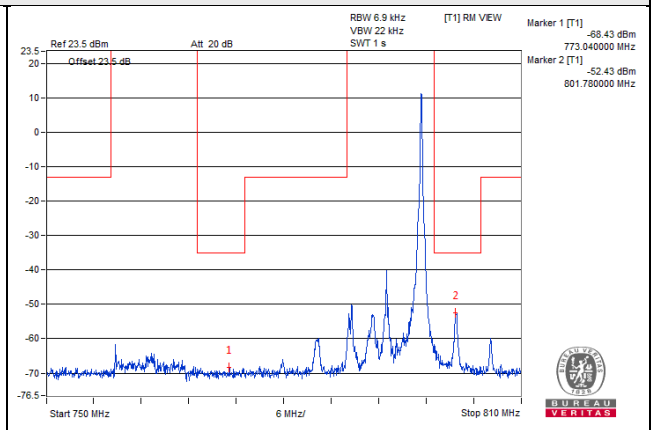
LTE Band 14		
Channel Bandwidth 10MHz QPSK		
Channel	23330	1 RB#0



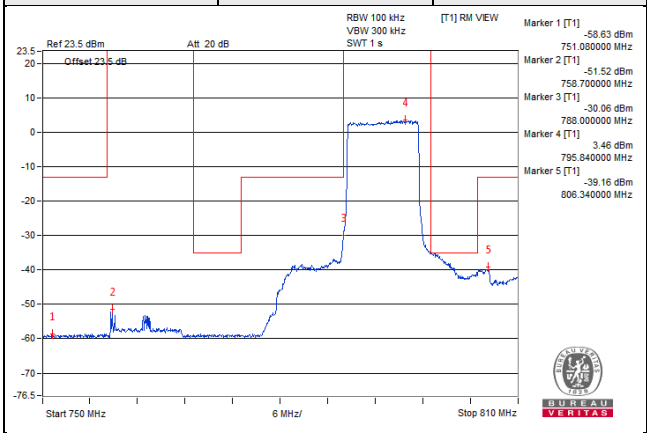


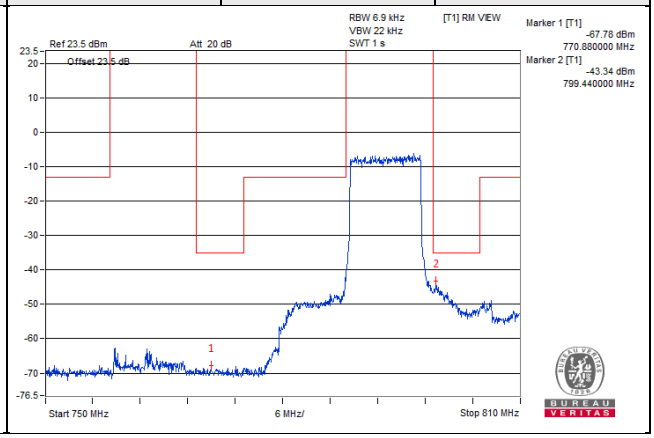
Channel	23330	1 RB#Max





Channel	23330	50 RB	Channel	23330	50 RB



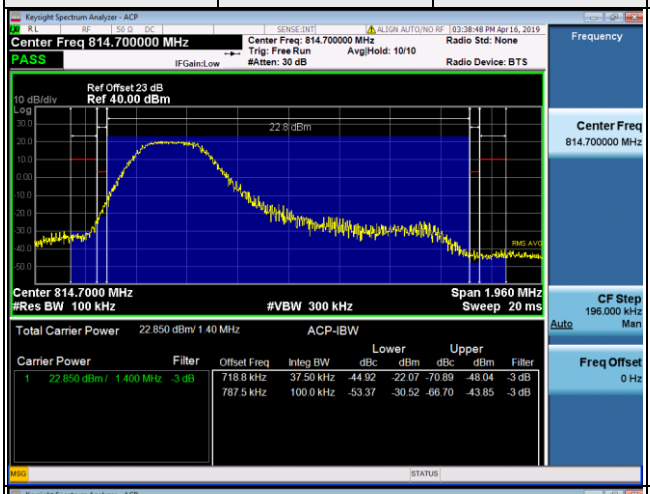


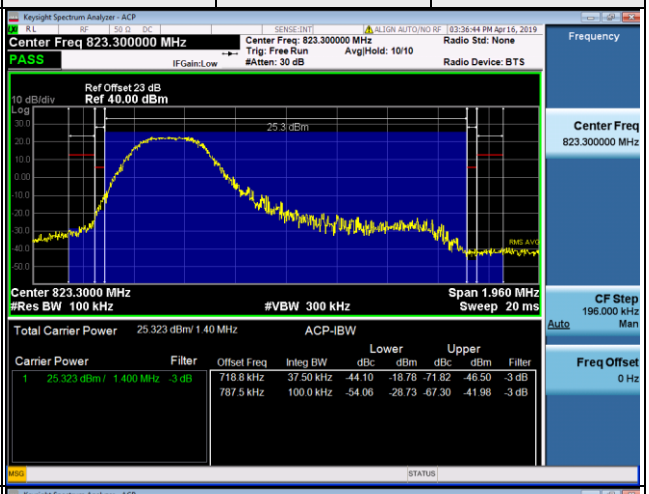
Note: Use of a narrower RBW (typically limited to a minimum RBW of 1 % of the OBW) for measuring.Note:

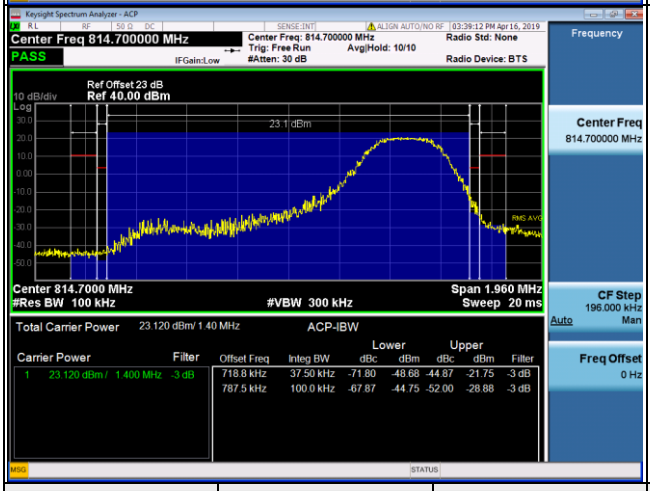
LTE Band 26

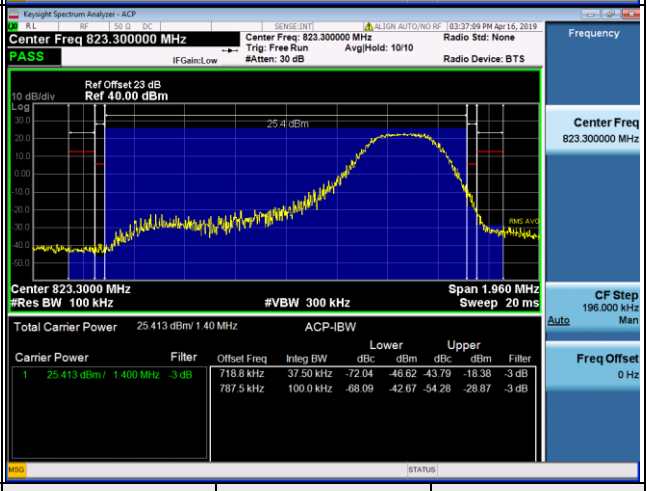
Channel Bandwidth 1.4MHz QPSK

Channel	26697	1 RB	Channel	26783	1 RB

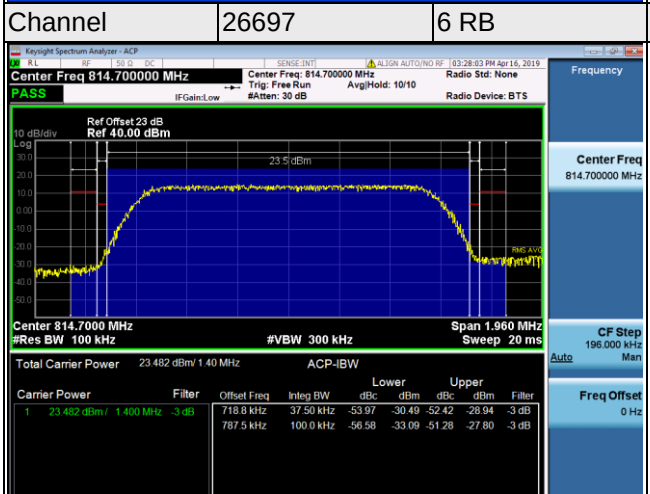


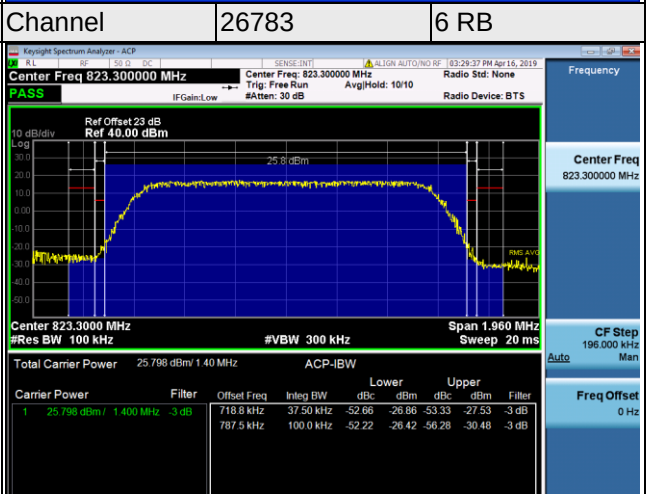


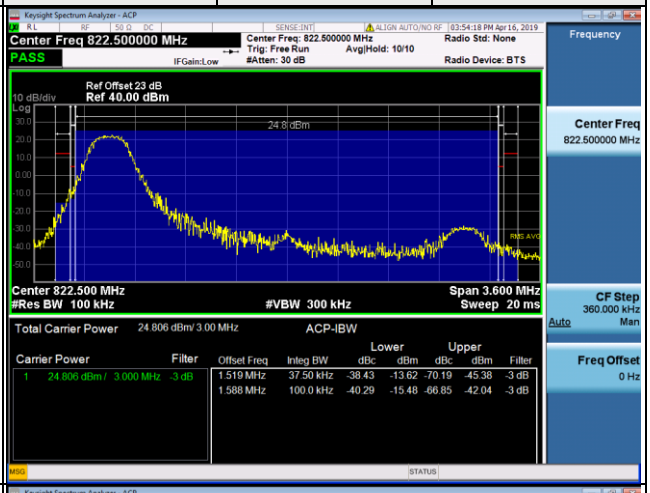


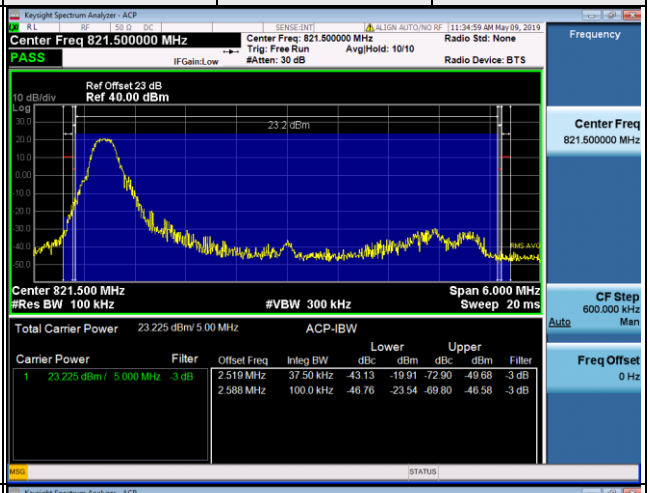
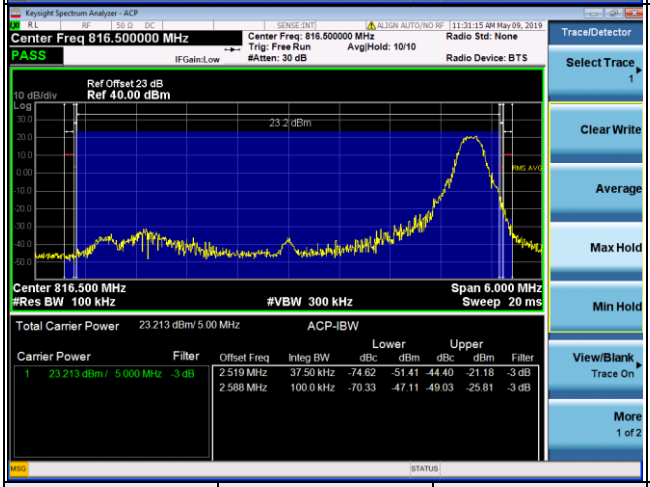
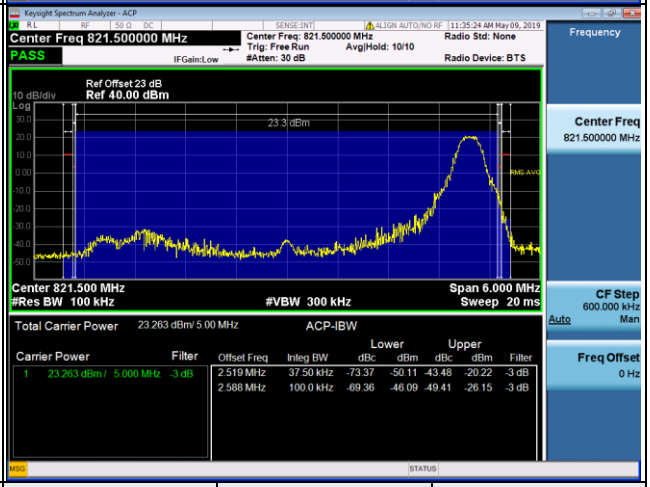
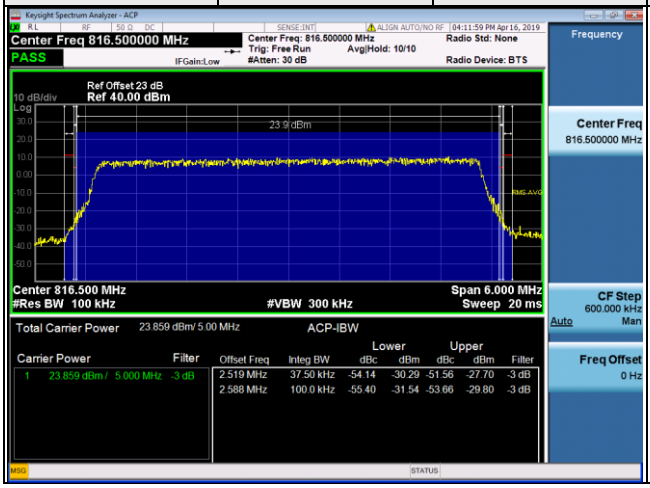
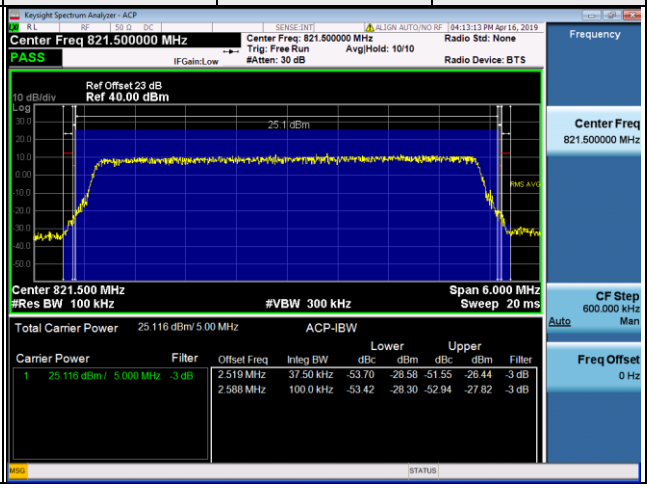


Channel	26697	6 RB	Channel	26783	6 RB





LTE Band 26					
Channel Bandwidth 3MHz QPSK					
Channel	26705	1 RB	Channel	26775	1 RB
					
					
Channel	26705	15 RB	Channel	26775	15 RB
					

LTE Band 26					
Channel Bandwidth 5MHz QPSK					
Channel	26715	1 RB	Channel	26765	1 RB
					
					
Channel	26715	25 RB	Channel	26765	25 RB
					

LTE Band 26		
Channel Bandwidth 10MHz QPSK		
Channel	26740	1 RB

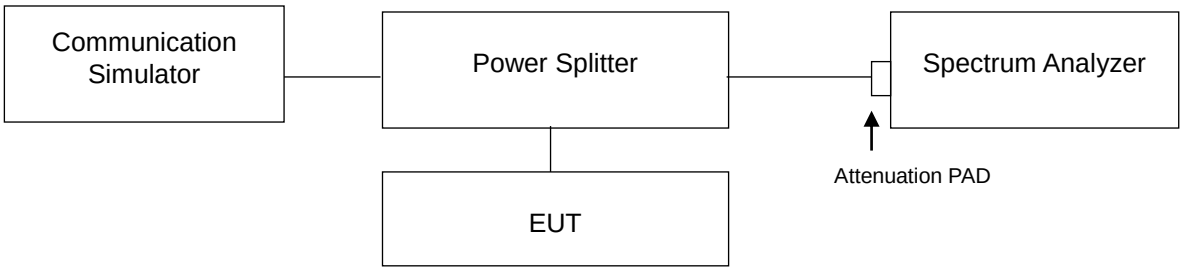
Channel	26740	50 RB

4.6 Conducted Spurious Emissions

4.6.1 Limits of Conducted Spurious Emissions Measurement

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm.

4.6.2 Test Setup



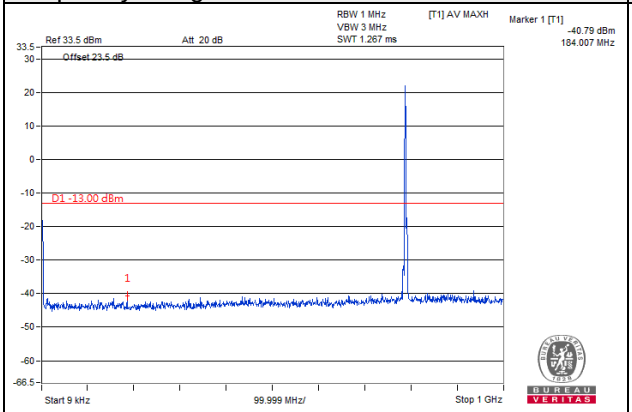
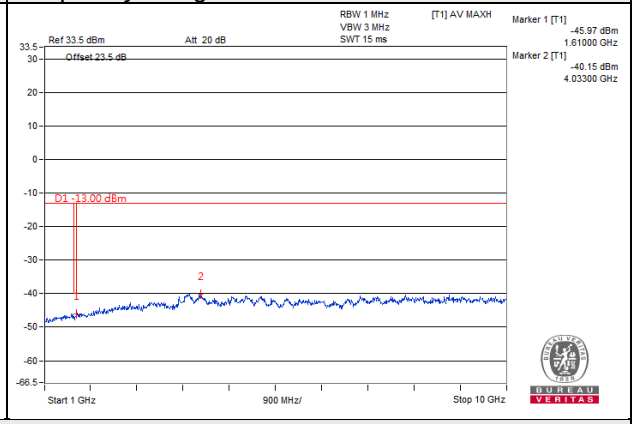
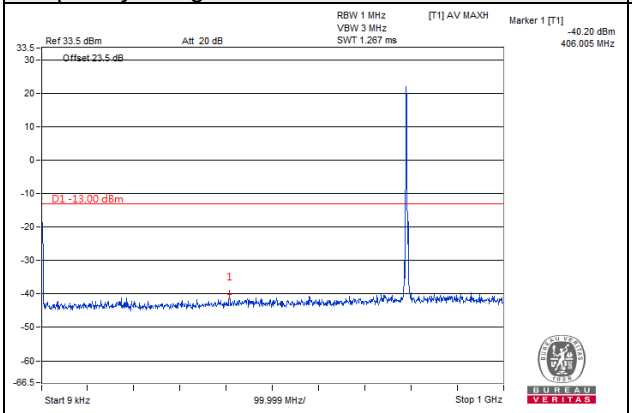
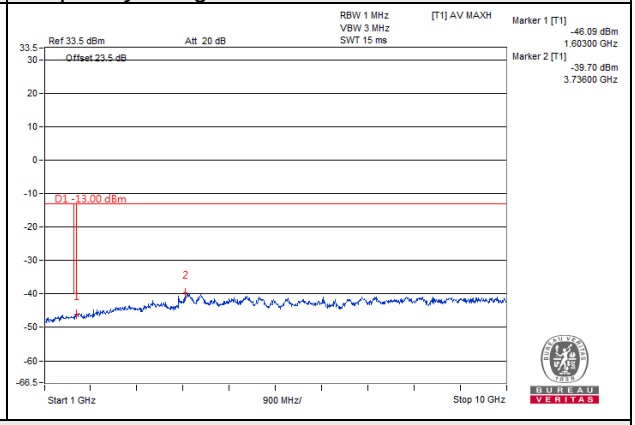
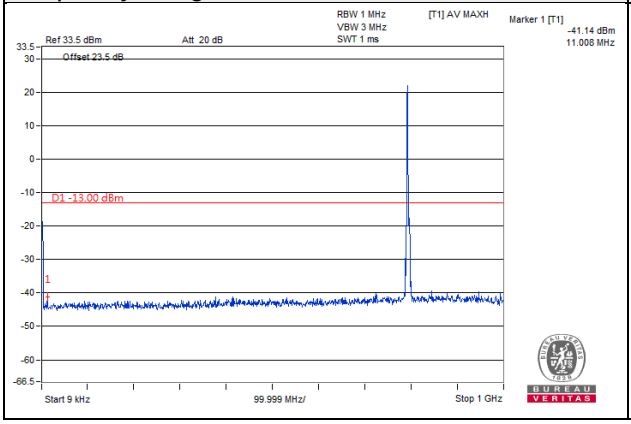
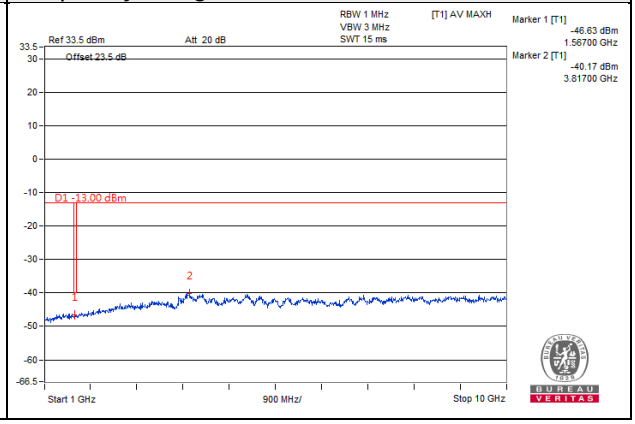
4.6.3 Test Procedure

a. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with Spectrum Analyzer.

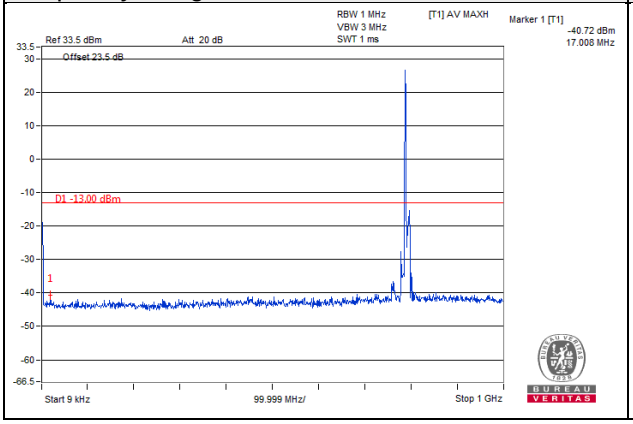
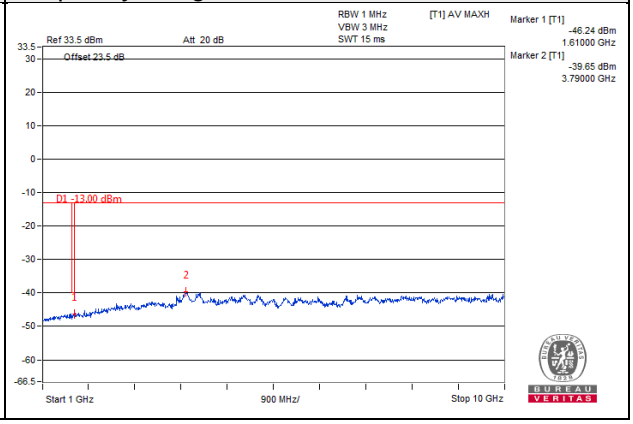
b. The conducted spurious emission used the power splitter via EUT RF power connector between signal generator and spectrum analyzer.

c. When the spectrum scanned from 9kHz to the tenth harmonic of the highest fundamental frequency, it shall be connected to the band reject filter attenuated the carried frequency. The spectrum set RBW: 1 MHz and VBW=3*RBW is used for measurement.

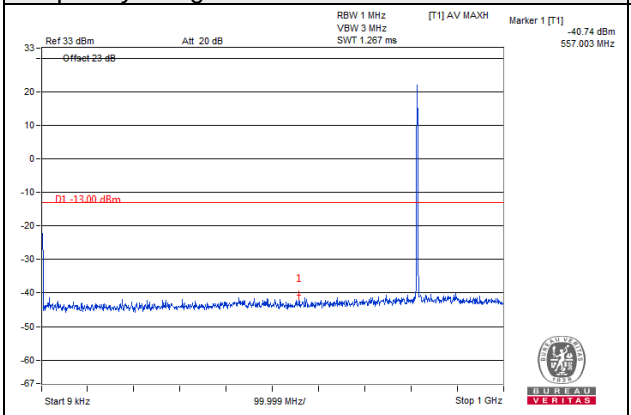
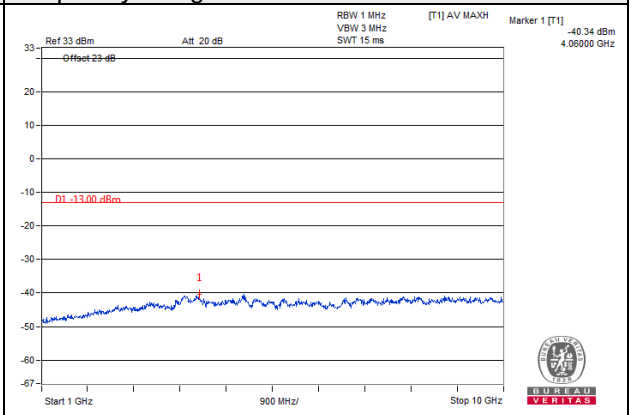
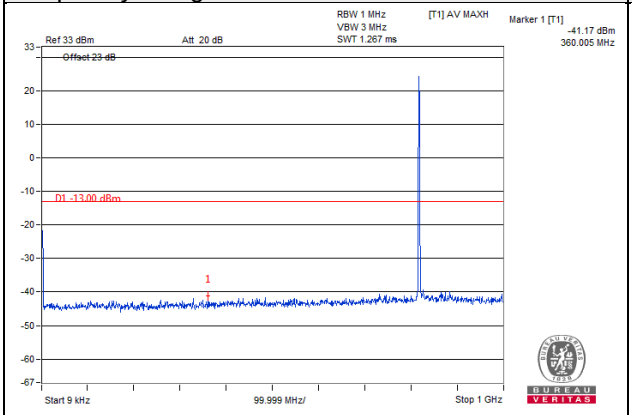
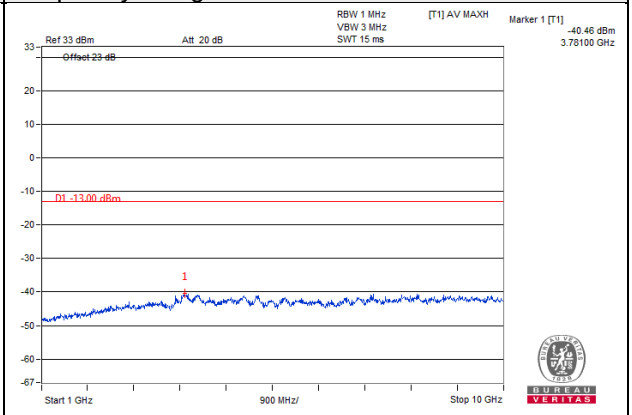
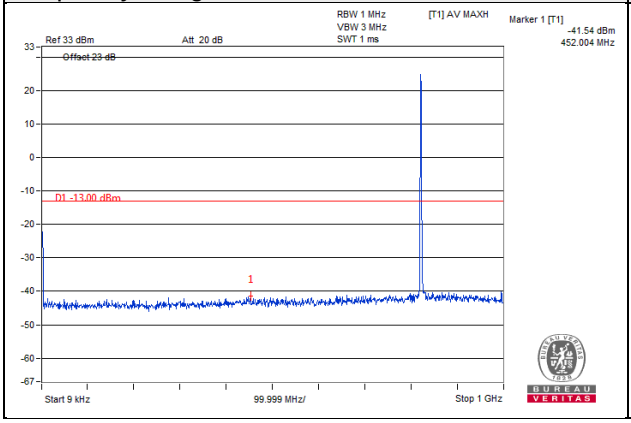
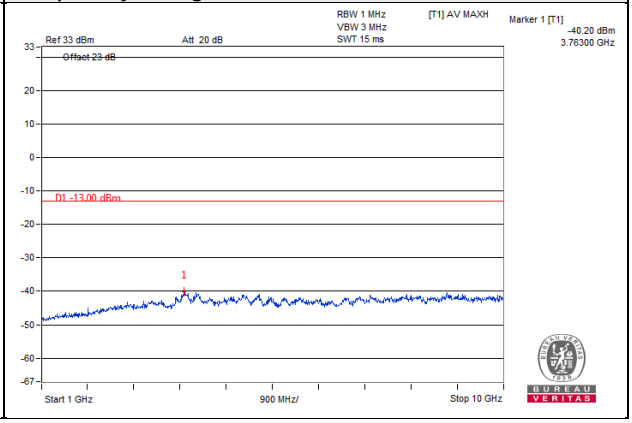
4.6.4 Test Results

LTE Band 14 Channel Band width: 5MHz	
Channel 23305	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Channel 23330	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Channel 23355	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	

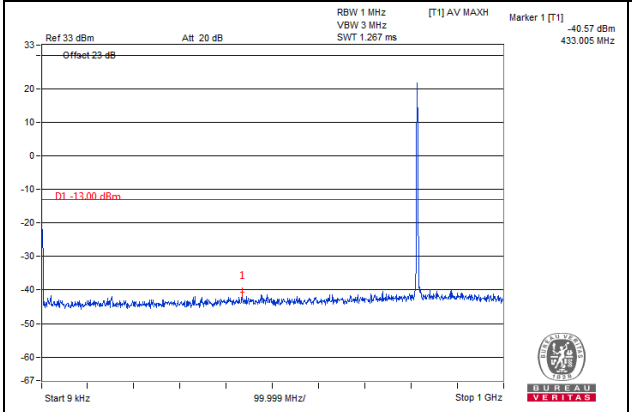
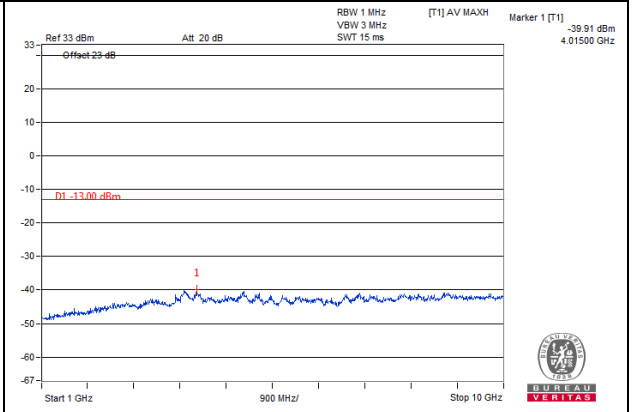
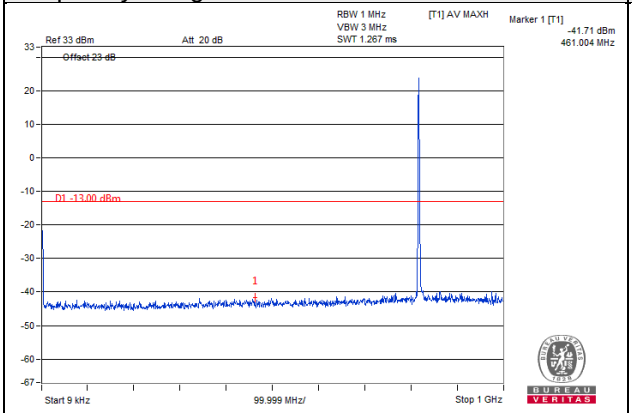
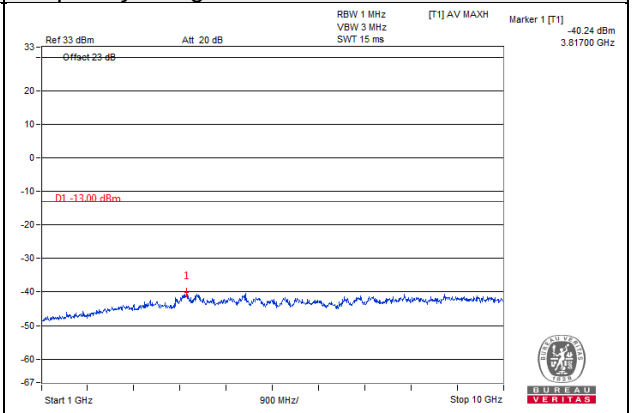
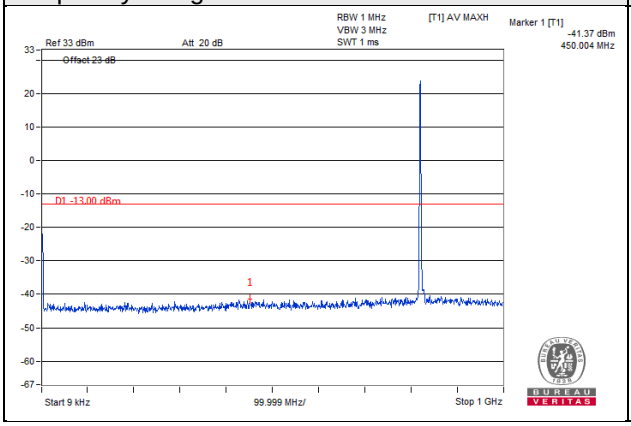
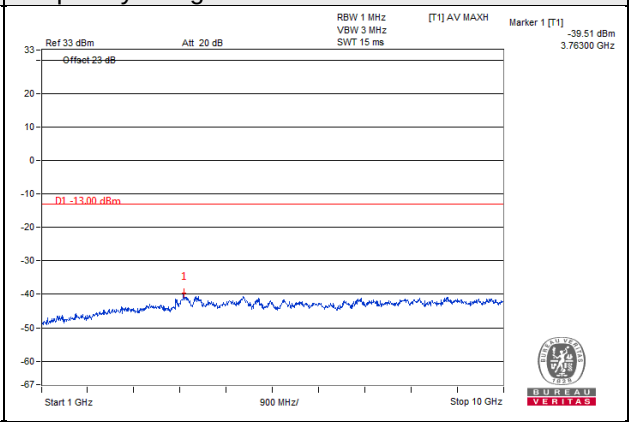
Note: The signal of 9kHz is IF signal from test instrument.

LTE Band 14 Channel Band width: 10MHz	
Channel 23330	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	

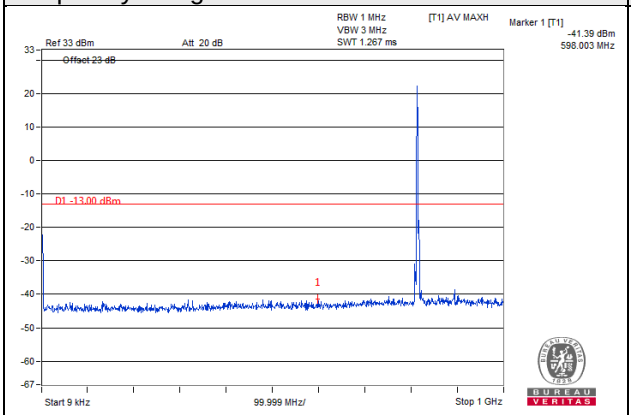
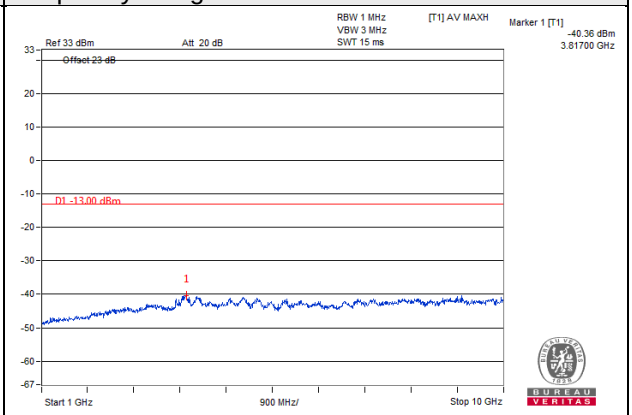
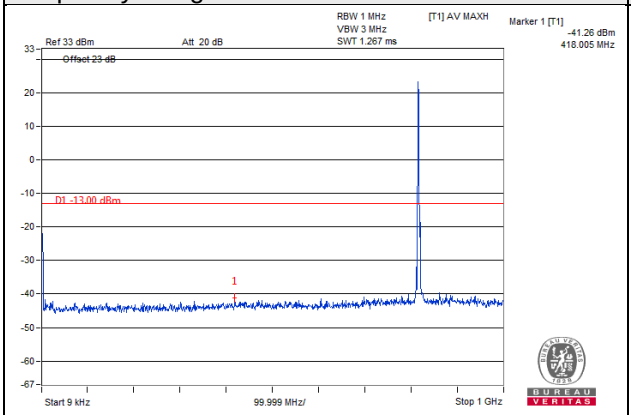
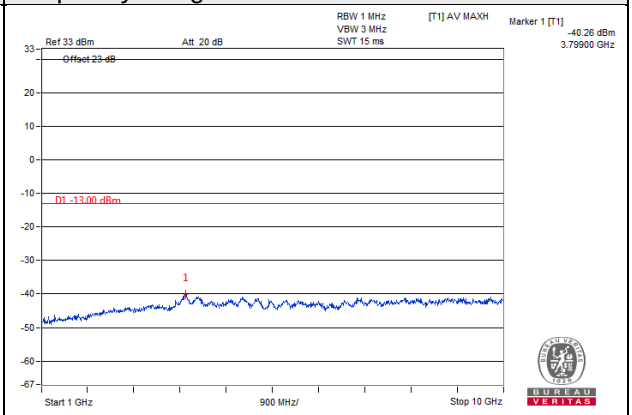
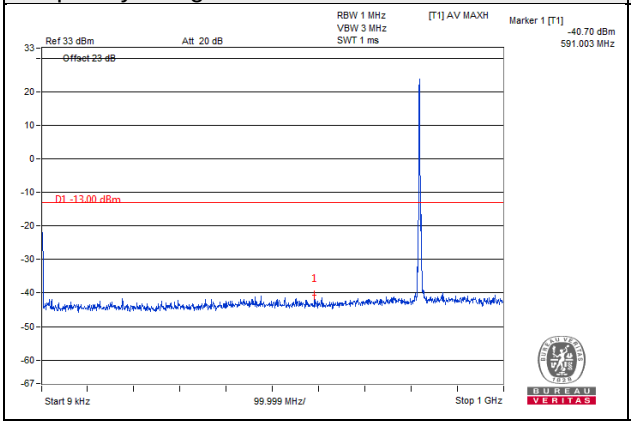
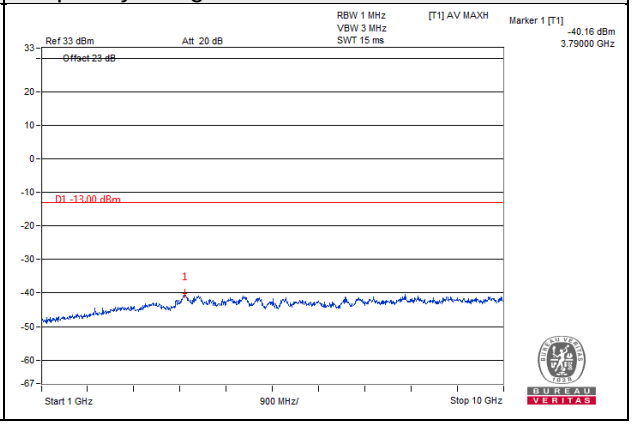
Note: The signal of 9kHz is IF signal from test instrument.

LTE Band 26 Channel Band width: 1.4MHz	
Channel 26697	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Channel 26740	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Channel 26783	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	

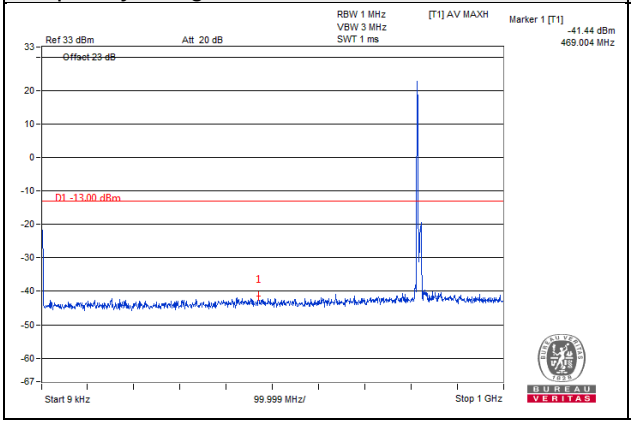
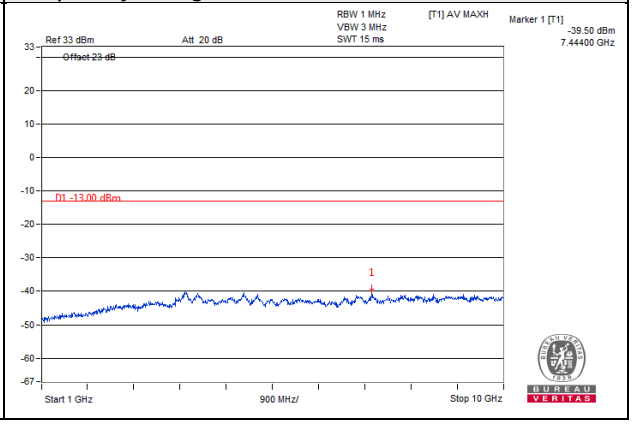
Note: The signal of 9kHz is IF signal from test instrument.

LTE Band 26 Channel Band width: 3MHz	
Channel 26705	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Channel 26740	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Channel 26775	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	

Note: The signal of 9kHz is IF signal from test instrument.

LTE Band 26 Channel Band width: 5MHz	
Channel 26715	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Channel 26740	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	
Channel 26765	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	

Note: The signal of 9kHz is IF signal from test instrument.

LTE Band 26 Channel Band width: 10MHz	
Channel 26740	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~10GHz
	

Note: The signal of 9kHz is IF signal from test instrument.

4.7 Radiated Emission Measurement

4.7.1 Limits of Radiated Emission Measuremen

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm

For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals.

4.7.2 Test Procedure

a. Substitution method is used for EIRP measurement. In the semi-anechoic chamber, EUT placed on the 0.8m/1.5m 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. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = Read Value (dBμV/m) - Correction Factor @ 3m

c. Correction Factor (dB) @ 3M = 20log(D) − 104.8; where D is the measurement distance @3m =-95.26dB

d. ERP power can be calculated form EIRP power by subtracting the gain of dipole, ERP power = EIRP power - 2.15dBi.

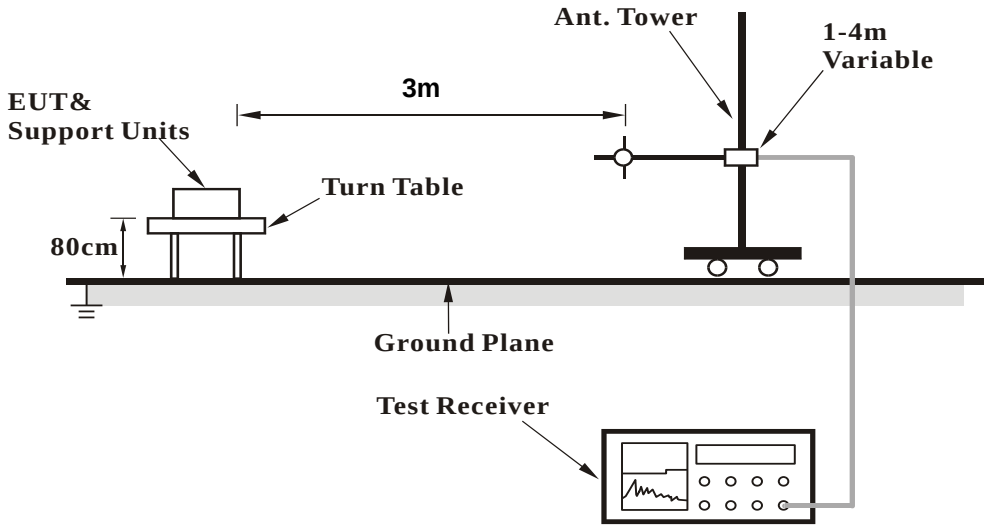
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.7.3 Deviation from Test Standard

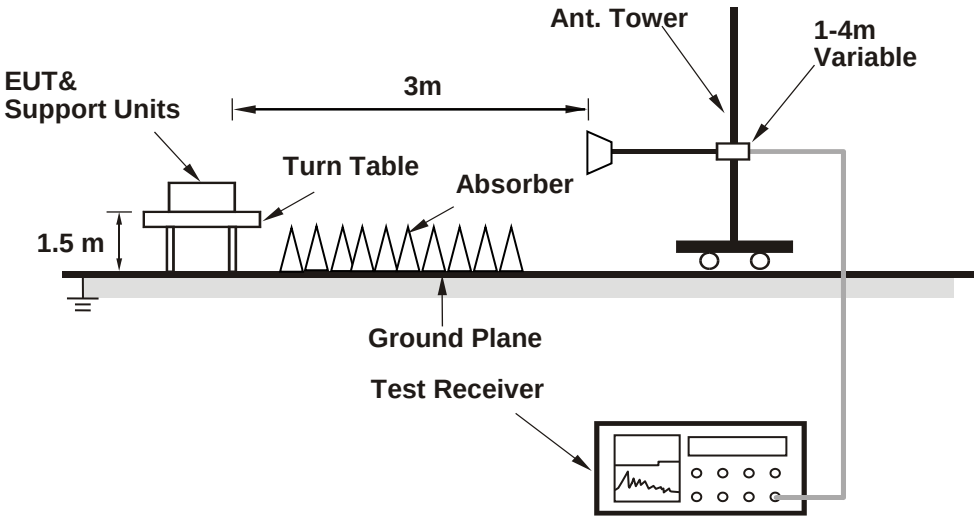
No deviation.

4.7.4 Test Setup

For Radiated emission below 1GHz



For Radiated emission above 1GHz



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

4.7.5 Test Results

Below 1GHz

LTE Band 14: 5MHz

Mode	TX channel 23305	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	88.11	34.44	-95.26	-60.82	-13	-47.82
2	139.8	35.22	-95.26	-60.04	-13	-47.04
3	290.19	32.75	-95.26	-62.51	-13	-49.51
4	344.25	31.18	-95.26	-64.08	-13	-51.08
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	68.86	32.18	-95.26	-63.08	-13	-50.08
2	89.74	32.06	-95.26	-63.20	-13	-50.20
3	127.31	26.08	-95.26	-69.18	-13	-56.18
4	239.29	33.68	-95.26	-61.58	-13	-48.58

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 23330	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	83.09	35.75	-95.26	-59.51	-13	-46.51
2	139.11	34.25	-95.26	-61.01	-13	-48.01
3	289.27	32.13	-95.26	-63.13	-13	-50.13
4	345.48	29.78	-95.26	-65.48	-13	-52.48
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	69.33	30.91	-95.26	-64.35	-13	-51.35
2	91.98	31.78	-95.26	-63.48	-13	-50.48
3	130.07	26.92	-95.26	-68.34	-13	-55.34
4	242.48	30.23	-95.26	-65.03	-13	-52.03

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 23355	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	86.94	35.56	-95.26	-59.70	-13	-46.70
2	138.72	34.4	-95.26	-60.86	-13	-47.86
3	292.52	31.56	-95.26	-63.70	-13	-50.70
4	345.79	28.3	-95.26	-66.96	-13	-53.96
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	65.91	31.22	-95.26	-64.04	-13	-51.04
2	93.51	30.44	-95.26	-64.82	-13	-51.82
3	130.1	27.87	-95.26	-67.39	-13	-54.39
4	239.4	31.24	-95.26	-64.02	-13	-51.02

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 14: 10MHz

Mode	TX channel 23330	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	87.71	33.79	-95.26	-61.47	-13	-48.47
2	134.22	32.66	-95.26	-62.60	-13	-49.60
3	288.21	31.32	-95.26	-63.94	-13	-50.94
4	343.51	30.04	-95.26	-65.22	-13	-52.22
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	71.27	30.75	-95.26	-64.51	-13	-51.51
2	91.4	31.82	-95.26	-63.44	-13	-50.44
3	130.88	28.14	-95.26	-67.12	-13	-54.12
4	238.78	29.8	-95.26	-65.46	-13	-52.46

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 26: 1.4MHz

Mode	TX channel 26697	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	84.19	36.23	-95.26	-59.03	-13	-46.03
2	136.66	36.45	-95.26	-58.81	-13	-45.81
3	290.84	32.51	-95.26	-62.75	-13	-49.75
4	346.78	30.61	-95.26	-64.65	-13	-51.65
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	67.9	31.6	-95.26	-63.66	-13	-50.66
2	92.75	33.53	-95.26	-61.73	-13	-48.73
3	129.23	26.93	-95.26	-68.33	-13	-55.33
4	239.21	34.16	-95.26	-61.10	-13	-48.10

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26740	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	84.55	36.05	-95.26	-59.21	-13	-46.21
2	137.64	34.12	-95.26	-61.14	-13	-48.14
3	288.27	32.04	-95.26	-63.22	-13	-50.22
4	344.38	28.59	-95.26	-66.67	-13	-53.67
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	66.05	30.11	-95.26	-65.15	-13	-52.15
2	91.9	32.22	-95.26	-63.04	-13	-50.04
3	129.44	26.13	-95.26	-69.13	-13	-56.13
4	236.34	31.46	-95.26	-63.80	-13	-50.80

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26783	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	85.41	35.88	-95.26	-59.38	-13	-46.38
2	135.09	34.74	-95.26	-60.52	-13	-47.52
3	287.25	32.68	-95.26	-62.58	-13	-49.58
4	347.94	28.51	-95.26	-66.75	-13	-53.75
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	69.96	30.1	-95.26	-65.16	-13	-52.16
2	90.84	33.21	-95.26	-62.05	-13	-49.05
3	129.17	28.86	-95.26	-66.40	-13	-53.40
4	236.99	32.64	-95.26	-62.62	-13	-49.62

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 26: 3MHz

Mode	TX channel 26705	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	84.92	34.67	-95.26	-60.59	-13	-47.59
2	135.63	34.68	-95.26	-60.58	-13	-47.58
3	288.02	31.48	-95.26	-63.78	-13	-50.78
4	343.43	31.31	-95.26	-63.95	-13	-50.95
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	67.19	32	-95.26	-63.26	-13	-50.26
2	94.46	32.99	-95.26	-62.27	-13	-49.27
3	126.61	28.55	-95.26	-66.71	-13	-53.71
4	238.32	32.24	-95.26	-63.02	-13	-50.02

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26740	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	85.07	35.56	-95.26	-59.70	-13	-46.70
2	136.07	36.63	-95.26	-58.63	-13	-45.63
3	286.3	31.06	-95.26	-64.20	-13	-51.20
4	344.61	30.94	-95.26	-64.32	-13	-51.32
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	70.59	31.66	-95.26	-63.60	-13	-50.60
2	94.86	30.79	-95.26	-64.47	-13	-51.47
3	128.56	27.39	-95.26	-67.87	-13	-54.87
4	237.02	33.26	-95.26	-62.00	-13	-49.00

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26775	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	86.4	36.68	-95.26	-58.58	-13	-45.58
2	135.6	33.94	-95.26	-61.32	-13	-48.32
3	287.69	31.35	-95.26	-63.91	-13	-50.91
4	343.34	29.89	-95.26	-65.37	-13	-52.37
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	68.47	31.57	-95.26	-63.69	-13	-50.69
2	92.73	32.37	-95.26	-62.89	-13	-49.89
3	126.79	28.21	-95.26	-67.05	-13	-54.05
4	237	33.21	-95.26	-62.05	-13	-49.05

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 26: 5MHz

Mode	TX channel 26715	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	88.11	36.26	-95.26	-59.00	-13	-46.00
2	139.98	35.48	-95.26	-59.78	-13	-46.78
3	290.95	31.72	-95.26	-63.54	-13	-50.54
4	347.49	29.16	-95.26	-66.10	-13	-53.10
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	68.3	32	-95.26	-63.26	-13	-50.26
2	90.31	31.19	-95.26	-64.07	-13	-51.07
3	127.34	28.95	-95.26	-66.31	-13	-53.31
4	234.88	32.37	-95.26	-62.89	-13	-49.89

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26740	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	83.59	35.35	-95.26	-59.91	-13	-46.91
2	138.43	36.42	-95.26	-58.84	-13	-45.84
3	290.85	33.4	-95.26	-61.86	-13	-48.86
4	346.62	29.52	-95.26	-65.74	-13	-52.74
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	66.83	31.89	-95.26	-63.37	-13	-50.37
2	92.71	32.21	-95.26	-63.05	-13	-50.05
3	132.88	25.81	-95.26	-69.45	-13	-56.45
4	236.42	33.24	-95.26	-62.02	-13	-49.02

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26765	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	86.08	35.71	-95.26	-59.55	-13	-46.55
2	139.17	34.94	-95.26	-60.32	-13	-47.32
3	288.01	33.08	-95.26	-62.18	-13	-49.18
4	347.16	29.68	-95.26	-65.58	-13	-52.58
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	67.75	31.51	-95.26	-63.75	-13	-50.75
2	94.95	32.87	-95.26	-62.39	-13	-49.39
3	131.58	27.67	-95.26	-67.59	-13	-54.59
4	239.13	33.75	-95.26	-61.51	-13	-48.51

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 26: 10MHz

Mode	TX channel 26740	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	86.62	36.91	-95.26	-58.35	-13	-45.35
2	138.25	37.1	-95.26	-58.16	-13	-45.16
3	288.07	34.4	-95.26	-60.86	-13	-47.86
4	345.32	32.07	-95.26	-63.19	-13	-50.19
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	68.46	32.12	-95.26	-63.14	-13	-50.14
2	91.07	32.33	-95.26	-62.93	-13	-49.93
3	130.16	28.46	-95.26	-66.80	-13	-53.80
4	235.71	32.22	-95.26	-63.04	-13	-50.04

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Above 1GHz

LTE Band 14: 5MHz

Mode	TX channel 23305	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1581	28.98	-95.26	-66.28	-40	-26.28
2	2371.5	51.13	-95.26	-44.13	-13	-31.13
3	3162	53.74	-95.26	-41.52	-13	-28.52
4	3952.5	53.23	-95.26	-42.03	-13	-29.03
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1581	39.9	-95.26	-55.36	-40	-15.36
2	2371.5	50.03	-95.26	-45.23	-13	-32.23
3	3162	49.18	-95.26	-46.08	-13	-33.08
4	3952.5	47.22	-95.26	-48.04	-13	-35.04

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 23330	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1586	30.39	-95.26	-64.87	-40	-24.87
2	2379	52.42	-95.26	-42.84	-13	-29.84
3	3172	55.44	-95.26	-39.82	-13	-26.82
4	3965	52.44	-95.26	-42.82	-13	-29.82
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	**1586**	**41.26**	**-95.26**	**-54.00**	**-40**	**-14.00**
2	2379	51.86	-95.26	-43.40	-13	-30.40
3	3172	47.79	-95.26	-47.47	-13	-34.47
4	3965	50.19	-95.26	-45.07	-13	-32.07

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 23355	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1591	29.07	-95.26	-66.19	-40	-26.19
2	2386.5	51.29	-95.26	-43.97	-13	-30.97
3	3182	53.01	-95.26	-42.25	-13	-29.25
4	3977.5	53.64	-95.26	-41.62	-13	-28.62
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1591	39.97	-95.26	-55.29	-40	-15.29
2	2386.5	51.34	-95.26	-43.92	-13	-30.92
3	3182	48.27	-95.26	-46.99	-13	-33.99
4	3977.5	48.59	-95.26	-46.67	-13	-33.67

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 14: 10MHz

Mode	TX channel 23330	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1586	29.42	-95.26	-65.84	-40	-25.84
2	2379	52.36	-95.26	-42.90	-13	-29.90
3	3172	55.44	-95.26	-39.82	-13	-26.82
4	3965	53.8	-95.26	-41.46	-13	-28.46
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1586	39.02	-95.26	-56.24	-40	-16.24
2	2379	51.89	-95.26	-43.37	-13	-30.37
3	3172	47.68	-95.26	-47.58	-13	-34.58
4	3965	48.74	-95.26	-46.52	-13	-33.52

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 26: 1.4 MHz

Mode	TX channel 26697	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1629.4	31.49	-95.26	-63.77	-13	-50.77
2	2444.1	47.16	-95.26	-48.10	-13	-35.10
3	3258.8	43.77	-95.26	-51.49	-13	-38.49
4	4073.5	47.58	-95.26	-47.68	-13	-34.68
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1629.4	32.79	-95.26	-62.47	-13	-49.47
2	2444.1	40.01	-95.26	-55.25	-13	-42.25
3	3258.8	40.36	-95.26	-54.90	-13	-41.90
4	4073.5	37.77	-95.26	-57.49	-13	-44.49

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26740	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1638	32.01	-95.26	-63.25	-13	-50.25
2	2457	47	-95.26	-48.26	-13	-35.26
3	3276	44.49	-95.26	-50.77	-13	-37.77
4	4095	45.94	-95.26	-49.32	-13	-36.32
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1638	32.55	-95.26	-62.71	-13	-49.71
2	2457	41.8	-95.26	-53.46	-13	-40.46
3	3276	39.69	-95.26	-55.57	-13	-42.57
4	4095	38.35	-95.26	-56.91	-13	-43.91

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26783	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1646.6	31.66	-95.26	-63.60	-13	-50.60
2	2469.9	48.07	-95.26	-47.19	-13	-34.19
3	3293.2	46.06	-95.26	-49.20	-13	-36.20
4	4116.5	47.04	-95.26	-48.22	-13	-35.22
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1646.6	32.44	-95.26	-62.82	-13	-49.82
2	2469.9	39.75	-95.26	-55.51	-13	-42.51
3	3293.2	39.87	-95.26	-55.39	-13	-42.39
4	4116.5	38.92	-95.26	-56.34	-13	-43.34

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 26: 3MHz

Mode	TX channel 26705	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1631	32.28	-95.26	-62.98	-13	-49.98
2	2446.5	49.73	-95.26	-45.53	-13	-32.53
3	3262	46.14	-95.26	-49.12	-13	-36.12
4	4077.5	48.45	-95.26	-46.81	-13	-33.81
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1631	31.29	-95.26	-63.97	-13	-50.97
2	2446.5	39.74	-95.26	-55.52	-13	-42.52
3	3262	39.82	-95.26	-55.44	-13	-42.44
4	4077.5	37.03	-95.26	-58.23	-13	-45.23

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26740	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1638	31.86	-95.26	-63.40	-13	-50.40
2	2457	47.55	-95.26	-47.71	-13	-34.71
3	3276	44.69	-95.26	-50.57	-13	-37.57
4	4095	45.59	-95.26	-49.67	-13	-36.67
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1638	32.87	-95.26	-62.39	-13	-49.39
2	2457	38.81	-95.26	-56.45	-13	-43.45
3	3276	38.76	-95.26	-56.50	-13	-43.50
4	4095	39.89	-95.26	-55.37	-13	-42.37

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26775	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1645	29.99	-95.26	-65.27	-13	-52.27
2	2467.5	47.53	-95.26	-47.73	-13	-34.73
3	3290	44.53	-95.26	-50.73	-13	-37.73
4	4112.5	45.54	-95.26	-49.72	-13	-36.72
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1645	33.65	-95.26	-61.61	-13	-48.61
2	2467.5	39.98	-95.26	-55.28	-13	-42.28
3	3290	40.43	-95.26	-54.83	-13	-41.83
4	4112.5	38.57	-95.26	-56.69	-13	-43.69

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 26: 5MHz

Mode	TX channel 26715	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1632	31.13	-95.26	-64.13	-13	-51.13
2	2448	45.59	-95.26	-49.67	-13	-36.67
3	3264	42.89	-95.26	-52.37	-13	-39.37
4	4080	47.6	-95.26	-47.66	-13	-34.66
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1632	31.84	-95.26	-63.42	-13	-50.42
2	2448	42.47	-95.26	-52.79	-13	-39.79
3	3264	39.55	-95.26	-55.71	-13	-42.71
4	4080	38.78	-95.26	-56.48	-13	-43.48

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26740	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1638	28.48	-95.26	-66.78	-13	-53.78
2	2457	49.95	-95.26	-45.31	-13	-32.31
3	3276	47.08	-95.26	-48.18	-13	-35.18
4	4095	48.13	-95.26	-47.13	-13	-34.13
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1638	32.33	-95.26	-62.93	-13	-49.93
2	2457	40.67	-95.26	-54.59	-13	-41.59
3	3276	39.07	-95.26	-56.19	-13	-43.19
4	4095	40.19	-95.26	-55.07	-13	-42.07

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

Mode	TX channel 26765	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1643	30.45	-95.26	-64.81	-13	-51.81
2	2464.5	47.23	-95.26	-48.03	-13	-35.03
3	3286	44.88	-95.26	-50.38	-13	-37.38
4	4107.5	46.25	-95.26	-49.01	-13	-36.01
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1643	32.63	-95.26	-62.63	-13	-49.63
2	2464.5	41.5	-95.26	-53.76	-13	-40.76
3	3286	38.16	-95.26	-57.10	-13	-44.10
4	4107.5	39.58	-95.26	-55.68	-13	-42.68

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

LTE Band 26: 10MHz

Mode	TX channel 26740	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1638	30.25	-95.26	-65.01	-13	-52.01
2	2457	47.32	-95.26	-47.94	-13	-34.94
3	3276	44.09	-95.26	-51.17	-13	-38.17
4	4095	48.34	-95.26	-46.92	-13	-33.92
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1638	32.51	-95.26	-62.75	-13	-49.75
2	2457	39.46	-95.26	-55.80	-13	-42.80
3	3276	40.33	-95.26	-54.93	-13	-41.93
4	4095	39.69	-95.26	-55.57	-13	-42.57

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @3m.

5 Pictures of Test Arrangements

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

Appendix – Information of 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 accredited and approved according to ISO/IEC 17025.

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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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