FCC/IC Test Report

FCC ID	:	**RI7LE910C1NS**
IC	:	**5131A-LE910C1NS**
Equipment	:	**LTE Module**
Model No.	:	**LE910C1-NS**
Brand Name	:	**Telit**
Applicant	:	**TELIT COMMUNICATIONS S.P.A.**
Address	:	**Viale Stazione di Prosecco 5/B, Trieste 34010 Italy**
Standard	:	**47 CFR FCC Part 27 Subpart L RSS-139 Issue 3 July 2015**
Received Date	:	**Apr. 07, 2017**
Tested Date	:	**Apr. 07 ~ Apr. 16, 2017**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

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Release Record

Report No.	Version	Description	Issued Date
FG740703P27	Rev. 01	Initial issue	Apr. 24, 2017

Summary of Test Results

FCC Rules	IC Rules	Test Items	Measured	Result
2.1046 / 27.50(d)(4)	RSS-139 Section 6.5	Equivalent Isotropically Radiated Power	Power[dBm]: 26.39	Pass
2.1053 / 27.53(h)	RSS-139 Section 6.6	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 / 27.53(h)	RSS-139 Section 6.6	Conducted Emissions	Meet the requirement of limit	Pass
27.53(h)	RSS-139 Section 6.6	Band Edge Measurement	Meet the requirement of limit	Pass
2.1049 / 27.53(h)	RSS-139 Section 6.6	Occupied Bandwidth	Meet the requirement of limit	Pass
27.50(d)(5)	RSS-139 Section 6.5	Peak to Average Ratio	Meet the requirement of limit	Pass
2.1055 / 27.54	RSS-139 Section 6.4	Frequency Stability	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

Operating Frequency	LTE Band 4 Channel Bandwidth: 1.4MHz: 1710.7 MHz ~ 1754.3 MHz Channel Bandwidth: 3MHz: 1711.5 MHz ~ 1753.5 MHz Channel Bandwidth: 5MHz: 1712.5 MHz ~ 1752.5 MHz Channel Bandwidth: 10MHz: 1715 MHz ~ 1750 MHz Channel Bandwidth: 15MHz: 1717.5 MHz ~ 1747.5 MHz Channel Bandwidth: 20MHz: 1720 MHz ~ 1745 MHz
Modulation Type	QPSK, 16QAM (Uplink)
Release Version	10
Duplex Mode	FDD
UE Category	Cat. 1
H/W Version	CS1762C
S/W Version	25.00.241

1.1.2 Maximum EIRP and Emission Designator

Mode	Modulation	Maximum EIRP (W)	Emission Designator
LTE Band 4, CB: 1.4MHz	QPSK	0.404	1M08G7D
LTE Band 4, CB: 1.4MHz	16QAM	0.318	1M08W7D
LTE Band 4, CB: 3MHz	QPSK	0.392	2M69G7D
LTE Band 4, CB: 3MHz	16QAM	0.336	2M69W7D
LTE Band 4, CB: 5MHz	QPSK	0.383	4M48G7D
LTE Band 4, CB: 5MHz	16QAM	0.294	4M49W7D
LTE Band 4, CB: 10MHz	QPSK	0.423	8M93G7D
LTE Band 4, CB: 10MHz	16QAM	0.361	4M93W7D
LTE Band 4, CB: 15MHz	QPSK	0.436	13M4G7D
LTE Band 4, CB: 15MHz	16QAM	0.376	5M04W7D
LTE Band 4, CB: 20MHz	QPSK	0.406	17M8G7D
LTE Band 4, CB: 20MHz	16QAM	0.297	5M15W7D

1.1.3 Antenna Details

Ant. No.	Type	Connector	Gain (dBi)	Remark
1	Dipole	R-SMA	2.37	---

1.1.4 EUT Operational Condition

Supply Voltage	3.8Vdc from host		
Operational Voltage	☒ Vnom (3.8 V)	☒ Vmax (4.2 V)	☒ Vmin (3.4 V)
Operational Climatic	☒ Tnom (20°C)	☒ Tmax (85°C)	☒ Tmin (-40°C)

1.1.5 Operating Channel List

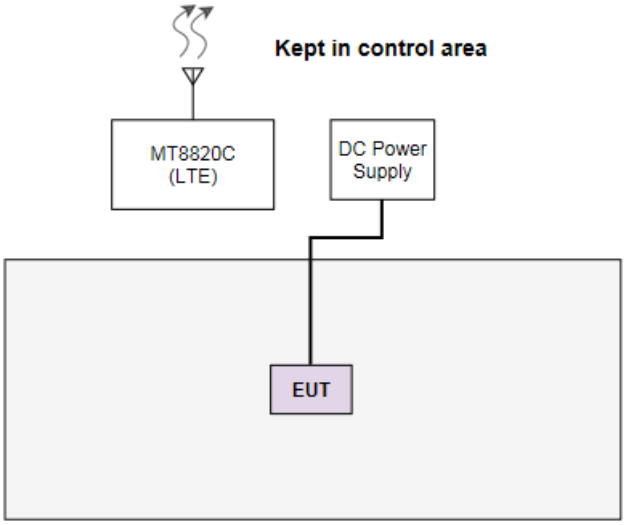
LTE Band 4		
Channel Bandwidth (MHz)	**Channel**	**Frequency (MHz)**
1.4	19957	1710.7
1.4	20175	1732.5
1.4	20393	1754.3
3	19965	1711.5
3	20175	1732.5
3	20385	1753.5
5	19975	1712.5
5	20175	1732.5
5	20375	1752.5
10	20000	1715.0
10	20175	1732.5
10	20350	1750.0
15	20025	1717.5
15	20175	1732.5
15	20325	1747.5
20	20050	1720.0
20	20175	1732.5
20	20300	1745.0

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Signal cable / Length (m)**
1	DC Power Supply	GW INSTEK	GPC-6030D	---	---

1.3 Test Setup Chart

Test Setup Diagram



1.4 The Equipment List

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Mar. 15, 2017	Mar. 14, 2018
Spectrum Analyzer	Agilent	N9010A	MY53400091	Sep. 09, 2016	Sep. 08, 2017
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Nov. 21, 2016	Nov. 20, 2017
Power Meter	Anritsu	ML2495A	1241002	Oct. 06, 2016	Oct. 05, 2017
Power Sensor	Anritsu	MA2411B	1207366	Oct. 06, 2016	Oct. 05, 2017
Radio Communication Analyzer	Anritsu	MT8820C	6201465544	Aug. 19, 2016	Aug. 18, 2017
DC POWER SOURCE	GW INSTEK	GPC-6030D	EM892433	Oct. 20, 2016	Oct. 19, 2017
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Nov. 25, 2016	Nov. 24, 2017
Receiver	R&S	ESR3	101658	Nov. 24, 2016	Nov. 23, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 04, 2016	Aug. 03, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 21, 2016	Dec. 20, 2017
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 25, 2016	Oct. 24, 2017
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 10, 2016	Nov. 09, 2017
Preamplifier	EMC	EMC02325	980225	Aug. 05, 2016	Aug. 04, 2017
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2016	Oct. 05, 2017
Preamplifier	EMC	EMC184045B	980192	Aug. 24, 2016	Aug. 23, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 09, 2016	Dec. 08, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 09, 2016	Dec. 08, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 09, 2016	Dec. 08, 2017
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	16052	Dec. 09, 2016	Dec. 08, 2017
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 09, 2016	Dec. 08, 2017
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 09, 2016	Dec. 08, 2017
Radio Communication Analyzer	Anritsu	MT8820C	6201465544	Aug. 19, 2016	Aug. 18, 2017
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

According to the specification of EUT, the EUT must comply with following standards.

47 CFR FCC Part 27 Subpart L
RSS-139 Issue 3 July 2015
RSS-Gen Issue 4 November 2014
SRSP-513 Issue 3 July 2015
ANSI C63.4-2014
ANSI C63.26-2015
ANSI / TIA / EIA-603-D -2010
KDB 971168 D01 Power Meas License Digital Systems v02r02
KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Frequency error	±34.134 Hz
Temperature	±0.6 °C
Conducted emission	±2.670 dB
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.63 dB

2 Test Configuration

2.1 Testing Condition and Location Information

Test Item	Test Site	Ambient Condition	Tested By
Radiated Emissions	03CH01-WS	24°C / 60-62%	Kevin Lee Vincent Yeh
RF Conducted	TH01-WS	22°C / 63%	Alex Huang

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- IC site registration No.: 10807A-1

2.2 The Worst Test Modes and Channel Details

Test item	Channel Bandwidth	Modulation	Test channel
E.I.R.P Conducted Emissions Occupied Bandwidth Peak to Average Ratio	1.4 MHz 3 MHz 5 MHz 10 MHz 15 MHz 20 MHz	QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM	19957 / 20175 / 20393 19965 / 20175 / 20385 19975 / 20175 / 20375 20000 / 20175 / 20350 20025 / 20175 / 20325 20050 / 20175 / 20300
Radiated Emission ≤ 1GHz	1.4 MHz 3 MHz 5 MHz 10 MHz 15 MHz 20 MHz	QPSK QPSK QPSK QPSK QPSK QPSK	20393 20385 20375 20175 20175 20050
Radiated Emission > 1GHz	1.4 MHz 3 MHz 5 MHz 10 MHz 15 MHz 20 MHz	QPSK QPSK QPSK QPSK QPSK QPSK	19957 / 20175 / 20393 19965 / 20175 / 20385 19975 / 20175 / 20375 20000 / 20175 / 20350 20025 / 20175 / 20325 20050 / 20175 / 20300
Band Edge	1.4 MHz 3 MHz 5 MHz 10 MHz 15 MHz 20 MHz	QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM	19957 20393 19965 20385 19975 20375 20000 20350 20025 20325 20050 20300
Frequency Stability	1.4 MHz 3 MHz 5 MHz 10 MHz 15 MHz 20 MHz	QPSK QPSK QPSK QPSK QPSK QPSK	20175 20175 20175 20175 20175 20175

Note:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.

3 Test Results

3.1 Equivalent Isotropically Radiated Power

3.1.1 Limit of Equivalent Isotropically Radiated Power

Mobile and portable stations are limited to 1 watts EIRP.

3.1.2 Test Procedures

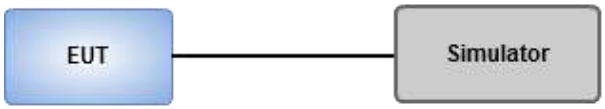
For Conducted power measurement:

1. The EUT links up with simulator and is set to maximum output power level at low / middel / high channel.
2. Measure the output power of low / middle / high channel of the EUT.

For EIRP measurement:
EIPR can be calculated by below formula from KDB 412172 D01.

1. EIRP = $P_T + G_T - L_C$
   P_T = transmitter output power, in dBm.
   G_T = gain of the transmitting antenna, in dBi (EIRP).
   L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

3.1.3 Test Setup



3.1.4 Test Result of Equivalent Isotropically Radiated Power (dBm)

Channel Bandwidth: 1.4MHz

Mode	Channel	RB	RB Offset	Conducted Average Power (dBm)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	19957	1	0	23.36	2.37	25.73	0.374	1
		1	2	23.45	2.37	25.82	0.382	1
		1	5	23.11	2.37	25.48	0.353	1
		3	0	23.06	2.37	25.43	0.349	1
		3	1	23.04	2.37	25.41	0.348	1
		3	2	22.95	2.37	25.32	0.340	1
		6	0	22.31	2.37	24.68	0.294	1
	20175	1	0	23.31	2.37	25.68	0.370	1
		1	2	23.56	2.37	25.93	0.392	1
		1	5	23.32	2.37	25.69	0.371	1
		3	0	23.29	2.37	25.66	0.368	1
		3	1	23.25	2.37	25.62	0.365	1
		3	2	23.26	2.37	25.63	0.366	1
		6	0	22.24	2.37	24.61	0.289	1
	20393	1	0	23.42	2.37	25.79	0.379	1
		1	2	23.69	2.37	26.06	0.404	1
		1	5	23.64	2.37	26.01	0.399	1
		3	0	23.51	2.37	25.88	0.387	1
		3	1	23.48	2.37	25.85	0.385	1
		3	2	23.33	2.37	25.70	0.372	1
		6	0	22.34	2.37	24.71	0.296	1
16QAM	19957	1	0	22.41	2.37	24.78	0.301	1
		1	2	22.65	2.37	25.02	0.318	1
		1	5	22.53	2.37	24.90	0.309	1
		3	0	22.44	2.37	24.81	0.303	1
		3	1	22.41	2.37	24.78	0.301	1
		3	2	22.36	2.37	24.73	0.297	1
		6	0	21.39	2.37	23.76	0.238	1
	20175	1	0	22.03	2.37	24.40	0.275	1
		1	2	22.15	2.37	24.52	0.283	1
		1	5	22.08	2.37	24.45	0.279	1
		3	0	21.95	2.37	24.32	0.270	1
		3	1	21.96	2.37	24.33	0.271	1
		3	2	21.93	2.37	24.30	0.269	1
		6	0	21.35	2.37	23.72	0.236	1
	20393	1	0	22.15	2.37	24.52	0.283	1
		1	2	22.43	2.37	24.80	0.302	1
		1	5	22.38	2.37	24.75	0.299	1
		3	0	22.32	2.37	24.69	0.294	1
		3	1	22.31	2.37	24.68	0.294	1
		3	2	22.25	2.37	24.62	0.290	1
		6	0	21.15	2.37	23.52	0.225	1

Channel Bandwidth: 3MHz

Mode	Channel	RB	RB Offset	Conducted Average Power (dBm)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	19965	1	0	23.23	2.37	25.60	0.363	1
		1	7	23.42	2.37	25.79	0.379	1
		1	14	23.32	2.37	25.69	0.371	1
		8	0	22.12	2.37	24.49	0.281	1
		8	4	22.11	2.37	24.48	0.281	1
		8	7	22.10	2.37	24.47	0.280	1
		15	0	22.08	2.37	24.45	0.279	1
	20175	1	0	23.28	2.37	25.65	0.367	1
		1	7	23.39	2.37	25.76	0.377	1
		1	14	23.22	2.37	25.59	0.362	1
		8	0	22.41	2.37	24.78	0.301	1
		8	4	22.44	2.37	24.81	0.303	1
		8	7	22.39	2.37	24.76	0.299	1
		15	0	22.35	2.37	24.72	0.296	1
	20385	1	0	23.31	2.37	25.68	0.370	1
		1	7	23.56	2.37	25.93	0.392	1
		1	14	23.34	2.37	25.71	0.372	1
		8	0	22.38	2.37	24.75	0.299	1
		8	4	22.31	2.37	24.68	0.294	1
		8	7	22.24	2.37	24.61	0.289	1
		15	0	22.19	2.37	24.56	0.286	1
16QAM	19965	1	0	22.75	2.37	25.12	0.325	1
		1	7	22.89	2.37	25.26	0.336	1
		1	14	22.43	2.37	24.80	0.302	1
		8	0	21.39	2.37	23.76	0.238	1
		8	4	21.21	2.37	23.58	0.228	1
		8	7	21.19	2.37	23.56	0.227	1
		15	0	21.14	2.37	23.51	0.224	1
	20175	1	0	22.56	2.37	24.93	0.311	1
		1	7	22.69	2.37	25.06	0.321	1
		1	14	22.43	2.37	24.80	0.302	1
		8	0	21.16	2.37	23.53	0.225	1
		8	4	21.11	2.37	23.48	0.223	1
		8	7	21.05	2.37	23.42	0.220	1
		15	0	21.03	2.37	23.40	0.219	1
	20385	1	0	22.54	2.37	24.91	0.310	1
		1	7	22.59	2.37	24.96	0.313	1
		1	14	22.43	2.37	24.80	0.302	1
		8	0	21.39	2.37	23.76	0.238	1
		8	4	21.32	2.37	23.69	0.234	1
		8	7	21.25	2.37	23.62	0.230	1
		15	0	21.26	2.37	23.63	0.231	1

Channel Bandwidth: 5MHz

Mode	Channel	RB	RB Offset	Conducted Average Power (dBm)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	19975	1	0	23.21	2.37	25.58	0.361	1
		1	12	23.45	2.37	25.82	0.382	1
		1	24	23.26	2.37	25.63	0.366	1
		12	0	22.26	2.37	24.63	0.290	1
		12	6	22.32	2.37	24.69	0.294	1
		12	11	22.21	2.37	24.58	0.287	1
		25	0	22.18	2.37	24.55	0.285	1
	20175	1	0	23.10	2.37	25.47	0.352	1
		1	12	23.28	2.37	25.65	0.367	1
		1	24	23.14	2.37	25.51	0.356	1
		12	0	22.45	2.37	24.82	0.303	1
		12	6	22.41	2.37	24.78	0.301	1
		12	11	22.39	2.37	24.76	0.299	1
		25	0	22.35	2.37	24.72	0.296	1
	20375	1	0	23.35	2.37	25.72	0.373	1
		1	12	23.46	2.37	25.83	0.383	1
		1	24	23.19	2.37	25.56	0.360	1
		12	0	22.49	2.37	24.86	0.306	1
		12	6	22.48	2.37	24.85	0.305	1
		12	11	22.43	2.37	24.80	0.302	1
		25	0	22.41	2.37	24.78	0.301	1
16QAM	19975	1	0	22.05	2.37	24.42	0.277	1
		1	12	22.31	2.37	24.68	0.294	1
		1	24	22.14	2.37	24.51	0.282	1
		12	0	21.49	2.37	23.86	0.243	1
		12	6	21.45	2.37	23.82	0.241	1
		12	11	21.44	2.37	23.81	0.240	1
		25	0	21.41	2.37	23.78	0.239	1
	20175	1	0	21.95	2.37	24.32	0.270	1
		1	12	22.24	2.37	24.61	0.289	1
		1	24	22.13	2.37	24.50	0.282	1
		12	0	21.46	2.37	23.83	0.242	1
		12	6	21.42	2.37	23.79	0.239	1
		12	11	21.40	2.37	23.77	0.238	1
		25	0	21.36	2.37	23.73	0.236	1
	20375	1	0	21.96	2.37	24.33	0.271	1
		1	12	22.18	2.37	24.55	0.285	1
		1	24	22.15	2.37	24.52	0.283	1
		12	0	21.48	2.37	23.85	0.243	1
		12	6	21.46	2.37	23.83	0.242	1
		12	11	21.45	2.37	23.82	0.241	1
		25	0	21.42	2.37	23.79	0.239	1

Channel Bandwidth: 10MHz

Mode	Channel	RB	RB Offset	Conducted Average Power (dBm)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	20000	1	0	23.26	2.37	25.63	0.366	1
		1	24	23.51	2.37	25.88	0.387	1
		1	49	23.36	2.37	25.73	0.374	1
		25	0	22.26	2.37	24.63	0.290	1
		25	12	22.21	2.37	24.58	0.287	1
		25	24	22.28	2.37	24.65	0.292	1
		50	0	22.24	2.37	24.61	0.289	1
	20175	1	0	23.42	2.37	25.79	0.379	1
		1	24	23.89	2.37	26.26	0.423	1
		1	49	23.55	2.37	25.92	0.391	1
		25	0	22.54	2.37	24.91	0.310	1
		25	12	22.45	2.37	24.82	0.303	1
		25	24	22.31	2.37	24.68	0.294	1
		50	0	22.26	2.37	24.63	0.290	1
	20350	1	0	23.69	2.37	26.06	0.404	1
		1	24	23.75	2.37	26.12	0.409	1
		1	49	23.44	2.37	25.81	0.381	1
		25	0	22.59	2.37	24.96	0.313	1
		25	12	22.54	2.37	24.91	0.310	1
		25	24	22.48	2.37	24.85	0.305	1
		50	0	22.63	2.37	25.00	0.316	1
16QAM	20000	1	0	21.67	2.37	24.04	0.254	1
		1	24	22.20	2.37	24.57	0.286	1
		1	49	21.89	2.37	24.26	0.267	1
		27	0	21.26	2.37	23.63	0.231	1
		27	12	21.22	2.37	23.59	0.229	1
		27	23	21.25	2.37	23.62	0.230	1
	20175	1	0	22.65	2.37	25.02	0.318	1
		1	24	23.21	2.37	25.58	0.361	1
		1	49	22.65	2.37	25.02	0.318	1
		27	0	21.43	2.37	23.80	0.240	1
		27	12	21.50	2.37	23.87	0.244	1
		27	23	21.29	2.37	23.66	0.232	1
	20350	1	0	22.37	2.37	24.74	0.298	1
		1	24	22.51	2.37	24.88	0.308	1
		1	49	22.30	2.37	24.67	0.293	1
		27	0	21.48	2.37	23.85	0.243	1
		27	12	21.69	2.37	24.06	0.255	1
		27	23	21.42	2.37	23.79	0.239	1

Note: Uplink support to 5Mbps only, RB setup of 16QAM is up to 27RB.

Channel Bandwidth: 15MHz

Mode	Channel	RB	RB Offset	Conducted Average Power (dBm)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	20025	1	0	23.11	2.37	25.48	0.353	1
		1	37	23.45	2.37	25.82	0.382	1
		1	74	23.14	2.37	25.51	0.356	1
		36	0	22.29	2.37	24.66	0.292	1
		36	18	22.45	2.37	24.82	0.303	1
		36	37	22.36	2.37	24.73	0.297	1
		75	0	22.35	2.37	24.72	0.296	1
	20175	1	0	23.50	2.37	25.87	0.386	1
		1	37	24.02	2.37	26.39	0.436	1
		1	74	23.45	2.37	25.82	0.382	1
		36	0	22.45	2.37	24.82	0.303	1
		36	18	22.35	2.37	24.72	0.296	1
		36	37	22.34	2.37	24.71	0.296	1
		75	0	22.31	2.37	24.68	0.294	1
	20325	1	0	23.45	2.37	25.82	0.382	1
		1	37	23.54	2.37	25.91	0.390	1
		1	74	23.35	2.37	25.72	0.373	1
		36	0	22.39	2.37	24.76	0.299	1
		36	18	22.46	2.37	24.83	0.304	1
		36	37	22.41	2.37	24.78	0.301	1
		75	0	22.39	2.37	24.76	0.299	1
16QAM	20025	1	0	22.52	2.37	24.89	0.308	1
		1	37	23.38	2.37	25.75	0.376	1
		1	74	22.56	2.37	24.93	0.311	1
		27	0	21.36	2.37	23.73	0.236	1
		27	12	21.55	2.37	23.92	0.247	1
		27	23	21.28	2.37	23.65	0.232	1
	20175	1	0	22.56	2.37	24.93	0.311	1
		1	37	23.03	2.37	25.40	0.347	1
		1	74	22.37	2.37	24.74	0.298	1
		27	0	21.36	2.37	23.73	0.236	1
		27	12	21.42	2.37	23.79	0.239	1
		27	23	21.23	2.37	23.60	0.229	1
	20325	1	0	22.28	2.37	24.65	0.292	1
		1	37	22.61	2.37	24.98	0.315	1
		1	74	22.14	2.37	24.51	0.282	1
		27	0	21.50	2.37	23.87	0.244	1
		27	12	21.66	2.37	24.03	0.253	1
		27	23	21.36	2.37	23.73	0.236	1

Note: Uplink support to 5Mbps only, RB setup of 16QAM is up to 27RB.

Channel Bandwidth: 20MHz

Mode	Channel	RB	RB Offset	Conducted Average Power (dBm)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	20050	1	0	23.54	2.37	25.91	0.390	1
		1	49	23.71	2.37	26.08	0.406	1
		1	99	23.26	2.37	25.63	0.366	1
		50	0	22.39	2.37	24.76	0.299	1
		50	24	22.42	2.37	24.79	0.301	1
		50	49	22.31	2.37	24.68	0.294	1
		100	0	22.41	2.37	24.78	0.301	1
	20175	1	0	23.35	2.37	25.72	0.373	1
		1	49	23.63	2.37	26.00	0.398	1
		1	99	23.24	2.37	25.61	0.364	1
		50	0	22.45	2.37	24.82	0.303	1
		50	24	22.51	2.37	24.88	0.308	1
		50	49	22.32	2.37	24.69	0.294	1
		100	0	22.26	2.37	24.63	0.290	1
	20300	1	0	23.35	2.37	25.72	0.373	1
		1	49	23.62	2.37	25.99	0.397	1
		1	99	23.14	2.37	25.51	0.356	1
		50	0	22.42	2.37	24.79	0.301	1
		50	24	22.51	2.37	24.88	0.308	1
		50	49	22.36	2.37	24.73	0.297	1
		100	0	22.31	2.37	24.68	0.294	1
16QAM	20050	1	0	21.97	2.37	24.34	0.272	1
		1	49	22.15	2.37	24.52	0.283	1
		1	99	21.49	2.37	23.86	0.243	1
		27	0	21.27	2.37	23.64	0.231	1
		27	12	21.36	2.37	23.73	0.236	1
		27	23	21.37	2.37	23.74	0.237	1
	20175	1	0	22.20	2.37	24.57	0.286	1
		1	49	22.36	2.37	24.73	0.297	1
		1	99	21.67	2.37	24.04	0.254	1
		27	0	21.28	2.37	23.65	0.232	1
		27	12	21.37	2.37	23.74	0.237	1
		27	23	21.03	2.37	23.40	0.219	1
	20300	1	0	21.88	2.37	24.25	0.266	1
		1	49	22.23	2.37	24.60	0.288	1
		1	99	21.83	2.37	24.20	0.263	1
		27	0	21.27	2.37	23.64	0.231	1
		27	12	21.54	2.37	23.91	0.246	1
		27	23	21.27	2.37	23.64	0.231	1

Note: Uplink support to 5Mbps only, RB setup of 16QAM is up to 27RB.

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

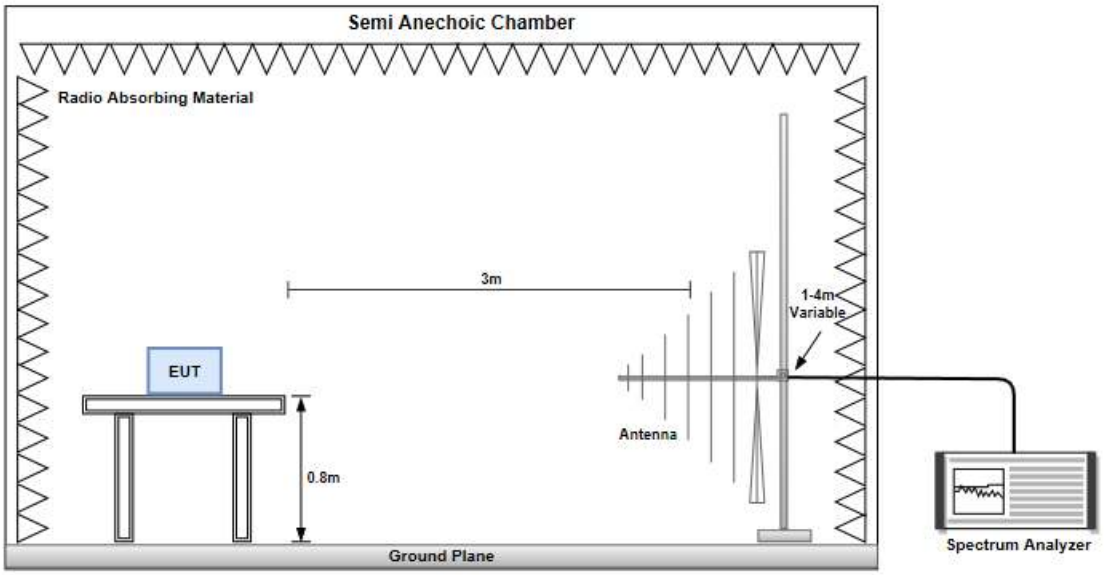
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB equal to -13 dBm.

3.2.2 Test Procedures

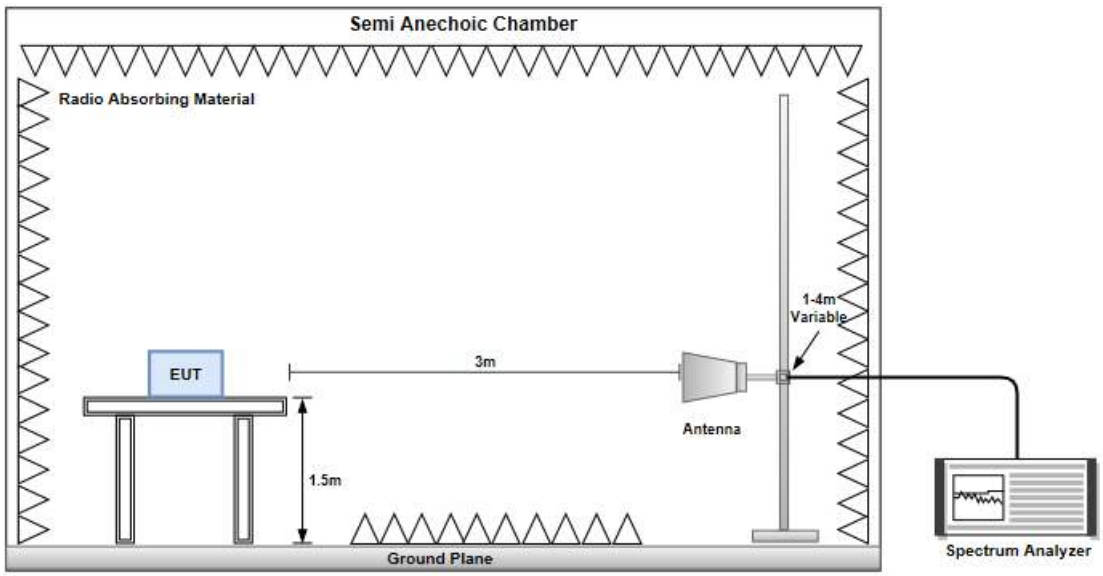
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.
4. After finding the max radiated emission, substitution method will be used for getting effective radiated power. EUT will be removed and substitution antenna will be placed at same position. Signal generator will output CW signal to substitution antenna through a RF cable. Rotate turntable and move antenna to find maximum radiated emission. Adjust output power of signal generator to let the maximum radiated emission is same as step 3. Record the output power level.
5. E.I.R.P = output power of step 4 + gain of substitution antenna – cable loss of RF cable.

3.2.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.2.4 Test Result of Radiated Emissions below 1GHz

Mode	LTE Band 4, CB:1.4MHz, 1RB, Offset 2,Channel:20393						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
30.97	H	-56.00	-13.00	-43.00	-63.92	-42.03	-13.97
158.04	H	-66.79	-13.00	-53.79	-66.47	-66.42	-0.37
293.84	H	-65.86	-13.00	-52.86	-64.73	-70.16	4.30
445.16	H	-63.39	-13.00	-50.39	-66.85	-67.43	4.04
586.78	H	-61.36	-13.00	-48.36	-66.97	-65.01	3.65
677.96	H	-61.04	-13.00	-48.04	-67.78	-64.81	3.77
45.52	V	-58.08	-13.00	-45.08	-56.06	-46.49	-11.59
90.14	V	-57.69	-13.00	-44.69	-57.94	-58.47	0.78
236.61	V	-60.69	-13.00	-47.69	-63.01	-65.12	4.43
440.31	V	-61.99	-13.00	-48.99	-65.62	-66.05	4.06
547.01	V	-58.48	-13.00	-45.48	-65.81	-62.46	3.98
664.38	V	-58.29	-13.00	-45.29	-67.47	-62.10	3.81

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:3MHz, 1RB, Offset 7,Channel:20385						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
30.97	H	-56.39	-13.00	-43.39	-64.31	-42.42	-13.97
71.71	H	-65.95	-13.00	-52.95	-65.05	-61.17	-4.78
143.49	H	-66.43	-13.00	-53.43	-66.27	-65.26	-1.17
291.90	H	-66.01	-13.00	-53.01	-64.81	-70.32	4.31
470.38	H	-63.41	-13.00	-50.41	-67.29	-67.47	4.06
636.25	H	-60.10	-13.00	-47.10	-66.36	-63.86	3.76
33.88	V	-58.66	-13.00	-45.66	-56.26	-45.39	-13.27
92.08	V	-59.40	-13.00	-46.40	-59.67	-60.09	0.69
199.75	V	-60.74	-13.00	-47.74	-62.52	-65.04	4.30
270.56	V	-61.06	-13.00	-48.06	-63.35	-65.45	4.39
440.31	V	-62.18	-13.00	-49.18	-65.81	-66.24	4.06
587.75	V	-58.23	-13.00	-45.23	-67.21	-61.88	3.65

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:5MHz, 1RB, Offset 12,Channel:20375						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
32.91	H	-56.70	-13.00	-43.70	-64.58	-43.20	-13.50
77.53	H	-56.53	-13.00	-43.53	-54.61	-53.44	-3.09
154.16	H	-65.00	-13.00	-52.00	-64.72	-64.42	-0.58
292.87	H	-66.50	-13.00	-53.50	-65.33	-70.81	4.31
440.31	H	-63.08	-13.00	-50.08	-66.48	-67.14	4.06
589.69	H	-61.46	-13.00	-48.46	-67.12	-65.09	3.63
30.97	V	-58.34	-13.00	-45.34	-55.87	-44.37	-13.97
90.14	V	-58.82	-13.00	-45.82	-59.07	-59.60	0.78
170.65	V	-57.83	-13.00	-44.83	-60.47	-58.93	1.10
235.64	V	-58.81	-13.00	-45.81	-61.11	-63.23	4.42
440.31	V	-62.23	-13.00	-49.23	-65.86	-66.29	4.06
621.70	V	-57.37	-13.00	-44.37	-66.75	-61.04	3.67

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:10MHz, 1RB, Offset 24,Channel:20175						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
30.97	H	-55.99	-13.00	-42.99	-63.91	-42.02	-13.97
121.18	H	-66.14	-13.00	-53.14	-64.79	-65.28	-0.86
268.62	H	-66.75	-13.00	-53.75	-64.83	-71.14	4.39
393.75	H	-64.22	-13.00	-51.22	-67.05	-68.52	4.30
556.71	H	-61.97	-13.00	-48.97	-67.11	-65.88	3.91
745.86	H	-58.73	-13.00	-45.73	-67.58	-62.19	3.46
32.91	V	-56.79	-13.00	-43.79	-54.37	-43.29	-13.50
90.14	V	-58.91	-13.00	-45.91	-59.16	-59.69	0.78
156.10	V	-62.06	-13.00	-49.06	-64.38	-61.59	-0.47
235.64	V	-59.52	-13.00	-46.52	-61.82	-63.94	4.42
440.31	V	-62.98	-13.00	-49.98	-66.61	-67.04	4.06
590.66	V	-57.38	-13.00	-44.38	-66.48	-61.00	3.62

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:15MHz, 1RB, Offset 37,Channel:20175						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
30.97	H	-56.83	-13.00	-43.83	-64.75	-42.86	-13.97
90.14	H	-65.90	-13.00	-52.90	-64.61	-66.68	0.78
166.77	H	-55.36	-13.00	-42.36	-54.76	-55.97	0.61
326.82	H	-66.49	-13.00	-53.49	-67.16	-70.80	4.31
493.66	H	-62.77	-13.00	-49.77	-67.09	-66.89	4.12
631.40	H	-60.57	-13.00	-47.57	-66.77	-64.30	3.73
45.52	V	-57.65	-13.00	-44.65	-55.63	-46.06	-11.59
90.14	V	-59.86	-13.00	-46.86	-60.11	-60.64	0.78
143.49	V	-62.95	-13.00	-49.95	-64.45	-61.78	-1.17
236.61	V	-59.70	-13.00	-46.70	-62.02	-64.13	4.43
440.31	V	-62.49	-13.00	-49.49	-66.12	-66.55	4.06
609.09	V	-58.20	-13.00	-45.20	-67.63	-61.80	3.60

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:20MHz, 1RB, Offset 49,Channel:20050						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
30.97	H	-56.54	-13.00	-43.54	-64.46	-42.57	-13.97
149.31	H	-65.77	-13.00	-52.77	-65.55	-64.92	-0.85
295.78	H	-66.26	-13.00	-53.26	-65.19	-70.56	4.30
454.86	H	-63.33	-13.00	-50.33	-66.93	-67.35	4.02
578.05	H	-61.86	-13.00	-48.86	-67.34	-65.59	3.73
721.61	H	-59.64	-13.00	-46.64	-67.51	-63.23	3.59
32.91	V	-57.60	-13.00	-44.60	-55.18	-44.10	-13.50
92.08	V	-59.18	-13.00	-46.18	-59.45	-59.87	0.69
143.49	V	-62.91	-13.00	-49.91	-64.41	-61.74	-1.17
235.64	V	-59.53	-13.00	-46.53	-61.83	-63.95	4.42
470.38	V	-62.47	-13.00	-49.47	-66.82	-66.53	4.06
574.17	V	-57.59	-13.00	-44.59	-66.03	-61.35	3.76

Note: EIRP = S.G Power value + Correction factor.

3.2.5 Test Result of Radiated Emissions above 1GHz

Mode	LTE Band 4, CB:1.4MHz, 1RB, Offset 2,Channel:19957						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3421.40	H	-41.34	-13.00	-28.34	-53.26	-47.97	6.63
5132.10	H	-40.07	-13.00	-27.07	-57.41	-46.23	6.16
6842.80	H	-41.73	-13.00	-28.73	-61.90	-46.08	4.35
3421.40	V	-42.28	-13.00	-29.28	-54.35	-48.91	6.63
5132.10	V	-41.34	-13.00	-28.34	-58.73	-47.50	6.16
6842.80	V	-42.47	-13.00	-29.47	-63.27	-46.82	4.35

Mode	LTE Band 4, CB:1.4MHz, 1RB, Offset 2,Channel:20175						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3465.00	H	-45.75	-13.00	-32.75	-58.07	-52.42	6.67
5197.50	H	-43.41	-13.00	-30.41	-60.88	-49.60	6.19
6930.00	H	-41.28	-13.00	-28.28	-61.68	-45.41	4.13
3465.00	V	-44.21	-13.00	-31.21	-56.70	-50.88	6.67
5197.50	V	-41.65	-13.00	-28.65	-59.20	-47.84	6.19
6930.00	V	-42.08	-13.00	-29.08	-63.40	-46.21	4.13

Mode	LTE Band 4, CB:1.4MHz, 1RB, Offset 2,Channel:20393						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3508.60	H	-43.81	-13.00	-30.81	-56.52	-50.51	6.70
5262.90	H	-42.29	-13.00	-29.29	-59.61	-48.50	6.21
7017.20	H	-43.65	-13.00	-30.65	-64.21	-47.58	3.93
3508.60	V	-42.54	-13.00	-29.54	-55.44	-49.24	6.70
5262.90	V	-41.37	-13.00	-28.37	-58.88	-47.58	6.21
7017.20	V	-40.13	-13.00	-27.13	-61.91	-44.06	3.93

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:3MHz, 1RB, Offset 7,Channel:19965						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3423.00	H	-41.84	-13.00	-28.84	-53.78	-48.48	6.64
5134.50	H	-40.61	-13.00	-27.61	-57.96	-46.77	6.16
6846.00	H	-39.26	-13.00	-26.26	-59.44	-43.60	4.34
3423.00	V	-42.51	-13.00	-29.51	-54.60	-49.15	6.64
5134.50	V	-39.26	-13.00	-26.26	-56.66	-45.42	6.16
6846.00	V	-41.06	-13.00	-28.06	-61.88	-45.40	4.34

Mode	LTE Band 4, CB:3MHz, 1RB, Offset 7,Channel:20175						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3465.00	H	-42.61	-13.00	-29.61	-54.93	-49.28	6.67
5197.50	H	-43.15	-13.00	-30.15	-60.62	-49.34	6.19
6930.00	H	-45.29	-13.00	-32.29	-65.69	-49.42	4.13
3465.00	V	-41.53	-13.00	-28.53	-54.02	-48.20	6.67
5197.50	V	-40.14	-13.00	-27.14	-57.69	-46.33	6.19
6930.00	V	-41.75	-13.00	-28.75	-63.07	-45.88	4.13

Mode	LTE Band 4, CB:3MHz, 1RB, Offset 7,Channel:20385						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3507.00	H	-41.29	-13.00	-28.29	-53.99	-47.98	6.69
5260.50	H	-39.41	-13.00	-26.41	-56.74	-45.62	6.21
7014.00	H	-42.05	-13.00	-29.05	-62.62	-45.99	3.94
3507.00	V	-43.53	-13.00	-30.53	-56.42	-50.22	6.69
5260.50	V	-42.03	-13.00	-29.03	-59.54	-48.24	6.21
7014.00	V	-41.87	-13.00	-28.87	-63.65	-45.81	3.94

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4 CB:5MHz, 1RB, Offset 12,Channel:19975						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
3425.00	H	-43.34	-13.00	-30.34	-55.29	-49.98	6.64
5137.50	H	-41.15	-13.00	-28.15	-58.50	-47.31	6.16
6850.00	H	-42.87	-13.00	-29.87	-63.06	-47.20	4.33
3425.00	V	-45.28	-13.00	-32.28	-57.39	-51.92	6.64
5137.50	V	-42.33	-13.00	-29.33	-59.73	-48.49	6.16
6850.00	V	-43.69	-13.00	-30.69	-64.53	-48.02	4.33

Mode	LTE Band 4, CB:5MHz, 1RB, Offset 12,Channel:20175						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
3465.00	H	-41.12	-13.00	-28.12	-53.44	-47.79	6.67
5197.50	H	-39.55	-13.00	-26.55	-57.02	-45.74	6.19
6930.00	H	-40.64	-13.00	-27.64	-61.04	-44.77	4.13
3465.00	V	-40.49	-13.00	-27.49	-52.98	-47.16	6.67
5197.50	V	-41.06	-13.00	-28.06	-58.61	-47.25	6.19
6930.00	V	-42.25	-13.00	-29.25	-63.57	-46.38	4.13

Mode	LTE Band 4, CB:5MHz, 1RB, Offset 12,Channel:20375						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
3505.00	H	-41.47	-13.00	-28.47	-54.15	-47.76	6.29
5257.50	H	-43.35	-13.00	-30.35	-60.68	-49.55	6.20
7010.00	H	-42.53	-13.00	-29.53	-63.10	-46.47	3.94
3505.00	V	-42.63	-13.00	-29.63	-55.50	-48.92	6.29
5257.50	V	-40.28	-13.00	-27.28	-57.79	-46.48	6.20
7010.00	V	-41.09	-13.00	-28.09	-62.85	-45.03	3.94

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:10MHz, 1RB, Offset 24,Channel:20000						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3430.00	H	-42.21	-13.00	-29.21	-54.21	-48.85	6.64
5145.00	H	-45.52	-13.00	-32.52	-62.89	-51.68	6.16
6860.00	H	-43.48	-13.00	-30.48	-63.70	-47.78	4.30
3430.00	V	-43.53	-13.00	-30.53	-55.68	-50.17	6.64
5145.00	V	-41.13	-13.00	-28.13	-58.55	-47.29	6.16
6860.00	V	-42.29	-13.00	-29.29	-63.19	-46.59	4.30

Mode	LTE Band 4, CB:10MHz, 1RB, Offset 24,Channel:20175						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3465.00	H	-41.36	-13.00	-28.36	-53.68	-48.03	6.67
5197.50	H	-40.20	-13.00	-27.20	-57.67	-46.39	6.19
6930.00	H	-39.63	-13.00	-26.63	-60.03	-43.76	4.13
3465.00	V	-40.51	-13.00	-27.51	-53.00	-47.18	6.67
5197.50	V	-39.67	-13.00	-26.67	-57.22	-45.86	6.19
6930.00	V	-40.74	-13.00	-27.74	-62.06	-44.87	4.13

Mode	LTE Band 4, CB:10MHz, 1RB, Offset 24,Channel:20350						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3500.00	H	-42.54	-13.00	-29.54	-55.18	-49.23	6.69
5250.00	H	-43.37	-13.00	-30.37	-60.72	-49.57	6.20
7000.00	H	-43.62	-13.00	-30.62	-64.20	-47.58	3.96
3500.00	V	-39.85	-13.00	-26.85	-52.68	-46.54	6.69
5250.00	V	-42.06	-13.00	-29.06	-59.58	-48.26	6.20
7000.00	V	-42.73	-13.00	-29.73	-64.46	-46.69	3.96

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:15MHz, 1RB, Offset 37,Channel:20025						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3435.00	H	-45.41	-13.00	-32.41	-57.45	-52.05	6.64
5152.50	H	-44.34	-13.00	-31.34	-61.72	-50.51	6.17
6870.00	H	-43.08	-13.00	-30.08	-63.33	-47.36	4.28
3435.00	V	-42.16	-13.00	-29.16	-54.36	-48.80	6.64
5152.50	V	-41.35	-13.00	-28.35	-58.79	-47.52	6.17
6870.00	V	-42.49	-13.00	-29.49	-63.45	-46.77	4.28

Mode	LTE Band 4, CB:15MHz, 1RB, Offset 37,Channel:20175						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3465.00	H	-41.47	-13.00	-28.47	-53.79	-48.14	6.67
5197.50	H	-40.21	-13.00	-27.21	-57.68	-46.40	6.19
6930.00	H	-39.11	-13.00	-26.11	-59.51	-43.24	4.13
3465.00	V	-42.91	-13.00	-29.91	-55.40	-49.58	6.67
5197.50	V	-41.28	-13.00	-28.28	-58.83	-47.47	6.19
6930.00	V	-40.64	-13.00	-27.64	-61.96	-44.77	4.13

Mode	LTE Band 4, CB:15MHz, 1RB, Offset 37,Channel:20325						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3495.00	H	-45.28	-13.00	-32.28	-57.88	-51.97	6.69
5242.50	H	-43.62	-13.00	-30.62	-60.99	-49.82	6.20
6990.00	H	-43.29	-13.00	-30.29	-63.85	-47.27	3.98
3495.00	V	-41.28	-13.00	-28.28	-54.06	-47.97	6.69
5242.50	V	-42.24	-13.00	-29.24	-59.77	-48.44	6.20
6990.00	V	-41.67	-13.00	-28.67	-63.35	-45.65	3.98

Note: EIRP = S.G Power value + Correction factor.

Mode	LTE Band 4, CB:20MHz, 1RB, Offset 49,Channel:20050						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3440.00	H	-42.28	-13.00	-29.28	-54.37	-48.93	6.65
5160.00	H	-41.74	-13.00	-28.74	-59.14	-47.91	6.17
6880.00	H	-42.63	-13.00	-29.63	-62.90	-46.88	4.25
3440.00	V	-42.41	-13.00	-29.41	-54.66	-49.06	6.65
5160.00	V	-39.64	-13.00	-26.64	-57.10	-45.81	6.17
6880.00	V	-42.37	-13.00	-29.37	-63.39	-46.62	4.25

Mode	LTE Band 4, CB:20MHz, 1RB, Offset 49,Channel:20175						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3465.00	H	-43.83	-13.00	-30.83	-56.15	-50.50	6.67
5197.50	H	-42.51	-13.00	-29.51	-59.98	-48.70	6.19
6930.00	H	-43.92	-13.00	-30.92	-64.32	-48.05	4.13
3465.00	V	-42.29	-13.00	-29.29	-54.78	-48.96	6.67
5197.50	V	-41.18	-13.00	-28.18	-58.73	-47.37	6.19
6930.00	V	-42.85	-13.00	-29.85	-64.17	-46.98	4.13

Mode	LTE Band 4, CB:20MHz, 1RB, Offset 49,Channel:20300						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3490.00	H	-43.85	-13.00	-30.85	-56.39	-50.53	6.68
5235.00	H	-42.12	-13.00	-29.12	-59.51	-48.32	6.20
6980.00	H	-41.96	-13.00	-28.96	-62.49	-45.97	4.01
3490.00	V	-42.60	-13.00	-29.60	-55.32	-49.28	6.68
5235.00	V	-41.37	-13.00	-28.37	-58.90	-47.57	6.20
6980.00	V	-40.34	-13.00	-27.34	-61.95	-44.35	4.01

Note: EIRP = S.G Power value + Correction factor.

3.3 Conducted Emissions

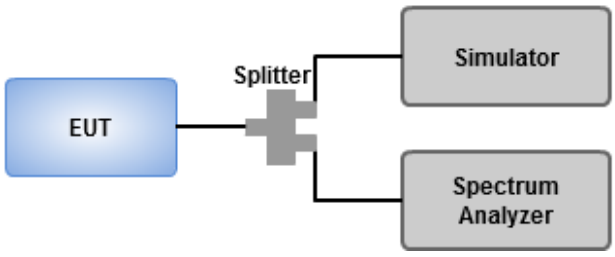
3.3.1 Limit of Conducted Emissions

The power of any emission outside of the authorized operating frequencyranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB equal to -13dBm.

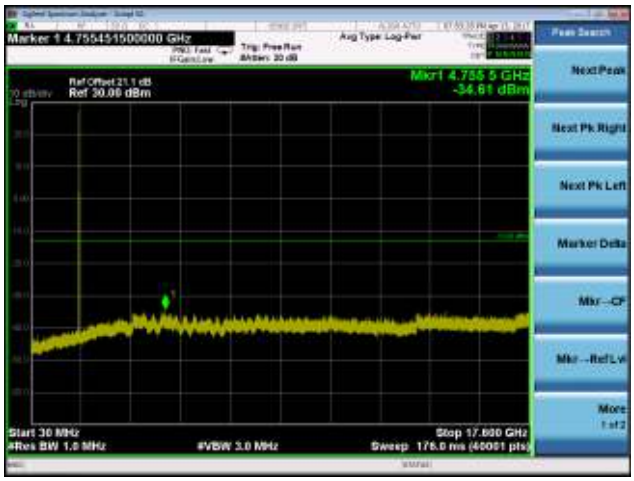
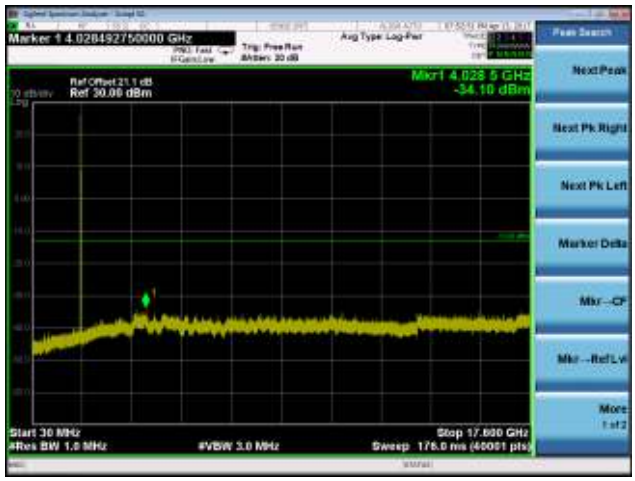
3.3.2 Test Procedures

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz~17.6 GHz.
3. Set RBW = 1MHz, VBW = 3MHz, detector =Peak, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

3.3.3 Test Setup



3.3.4 Test Result of Conducted Emissions

Mode	LTE Band 4, CB: 1.4MHz, QPSK	**Mode**	LTE Band 4, CB: 1.4MHz, 16QAM
Channel	19957	Channel	19957
			
Channel	20175	Channel	20175
			
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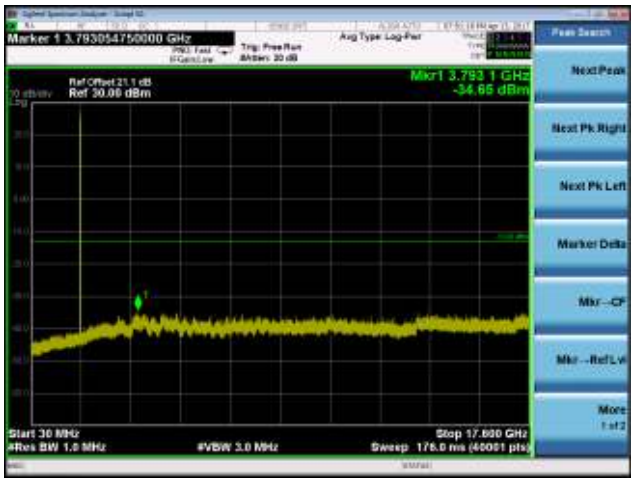
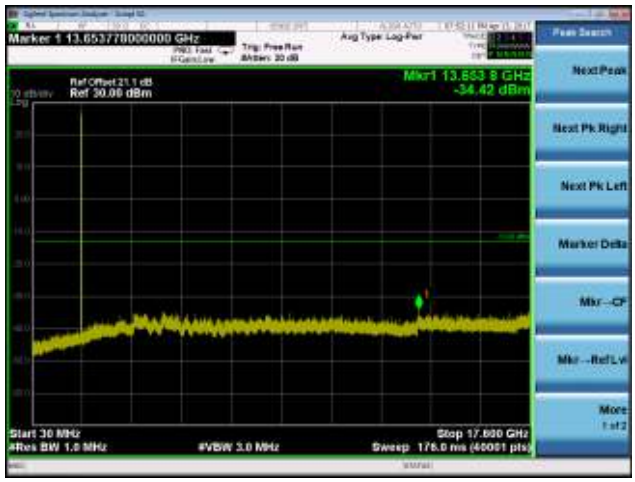
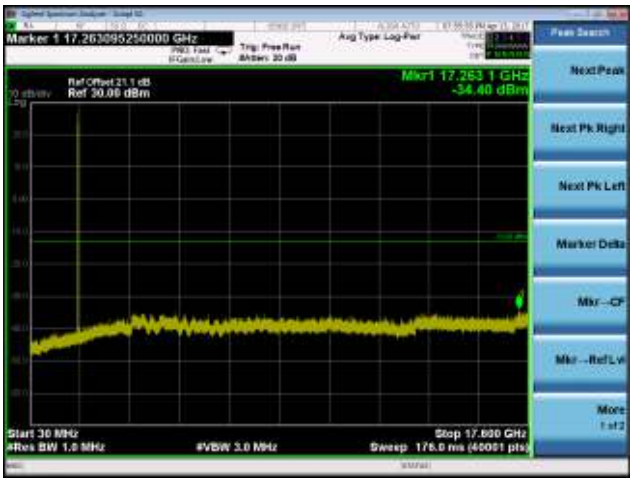
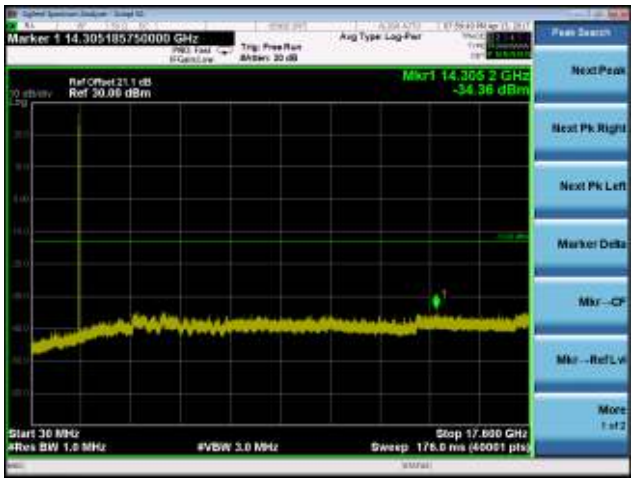
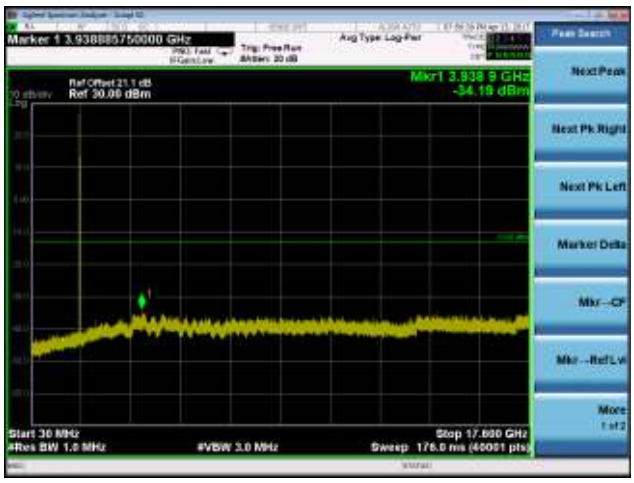
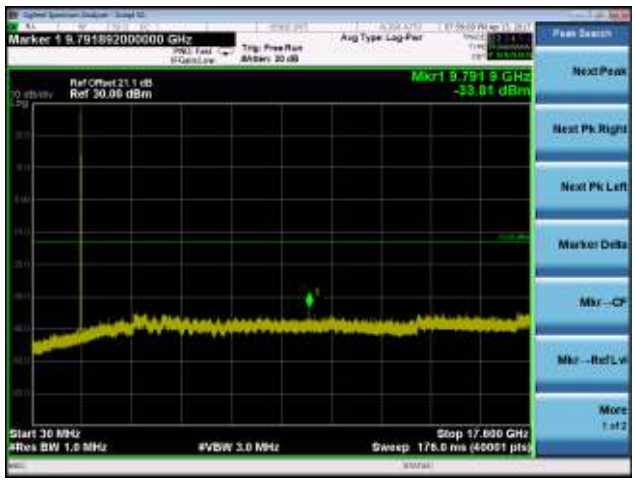
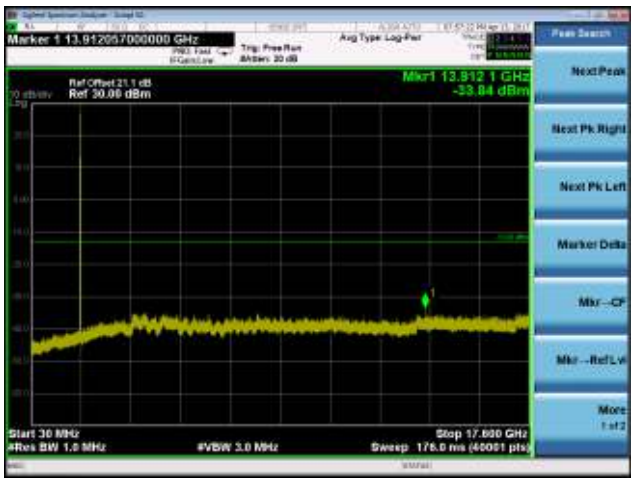
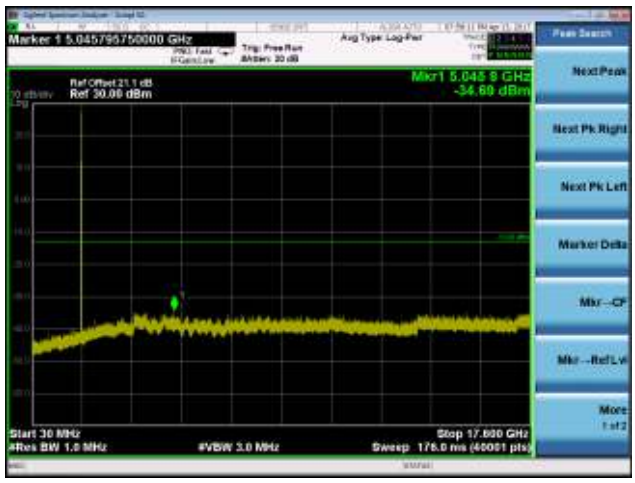
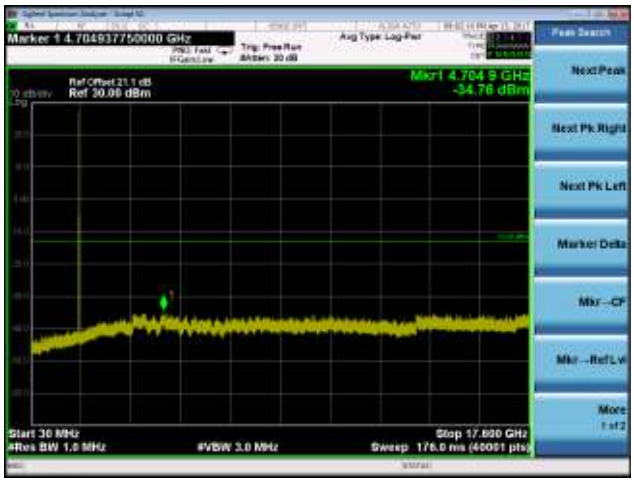
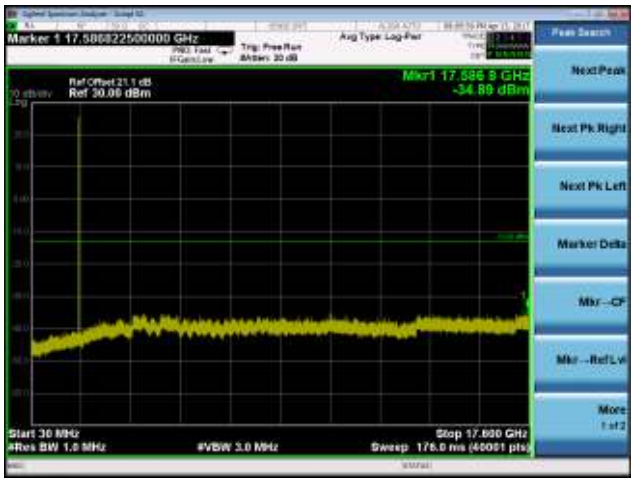
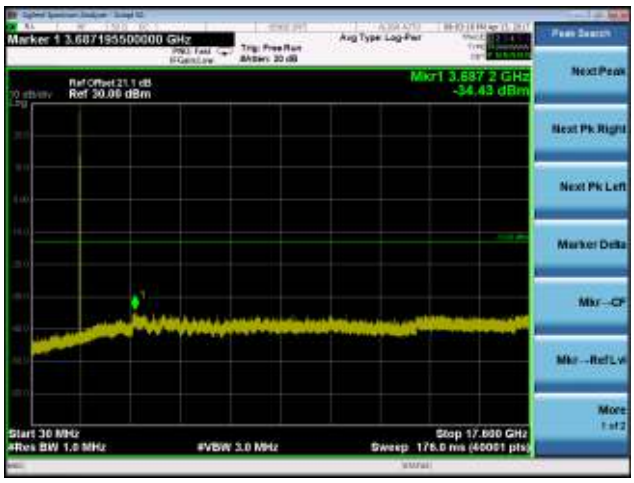
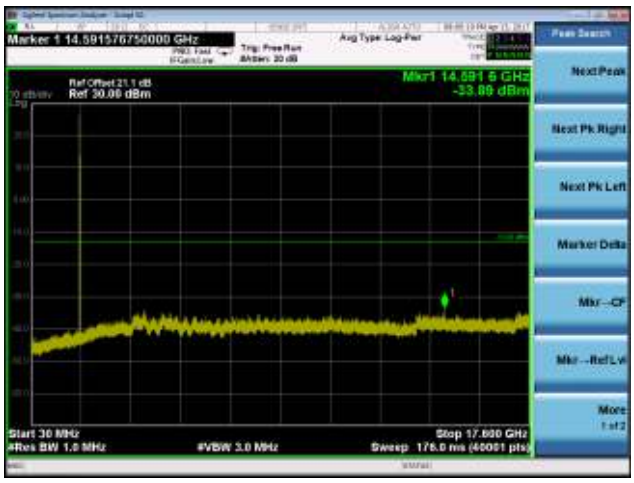
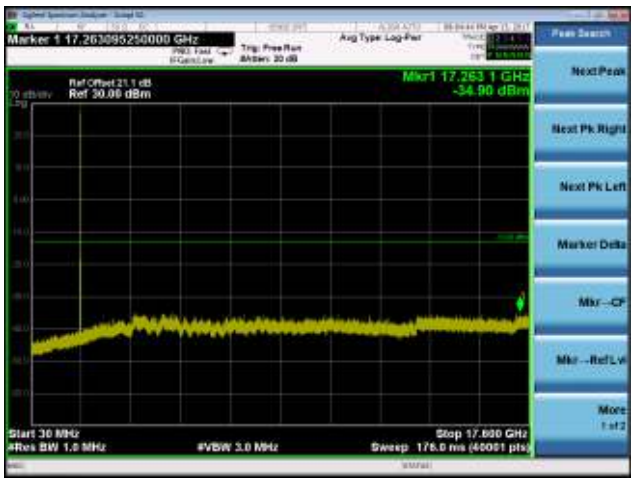
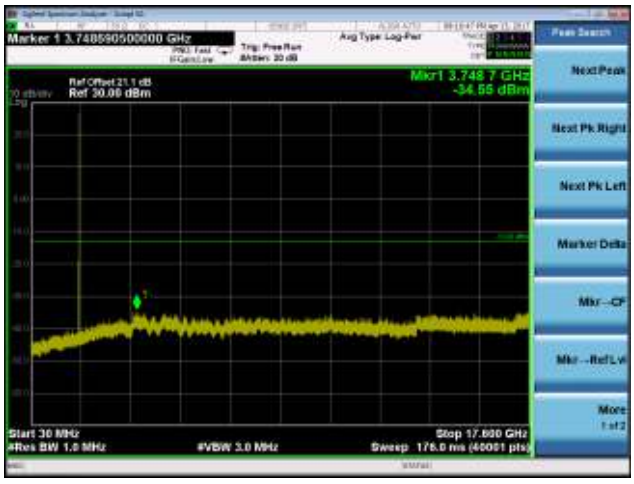
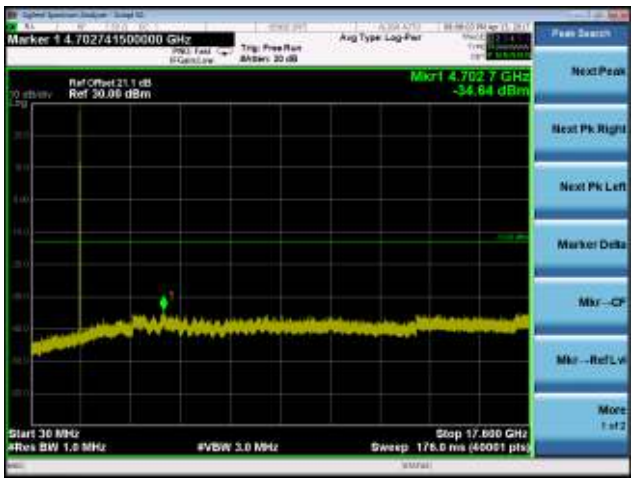
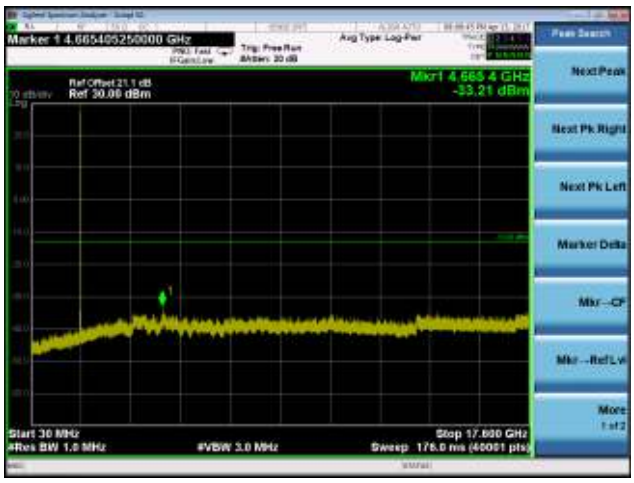
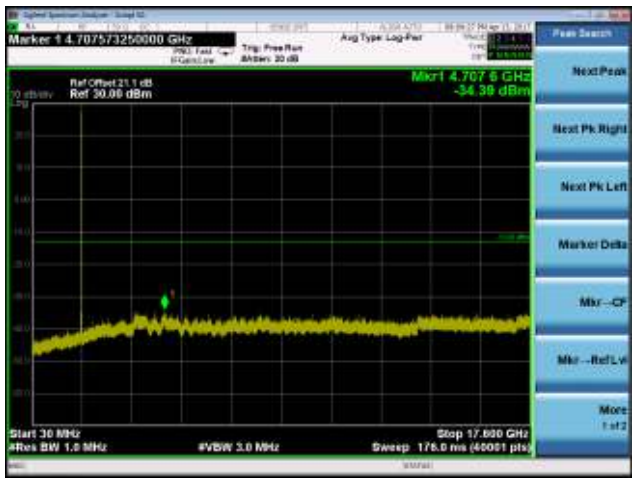
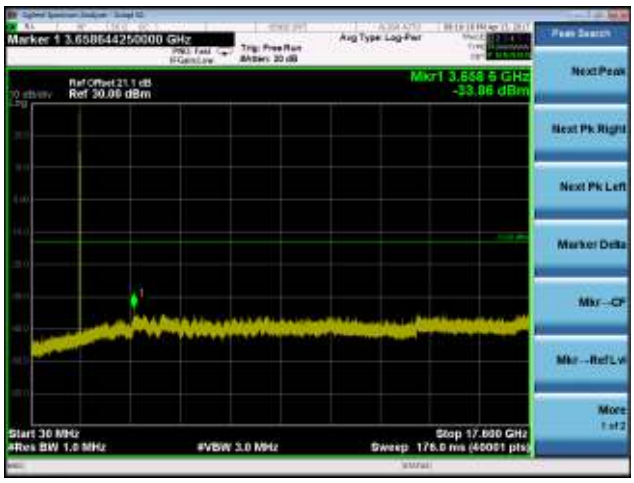
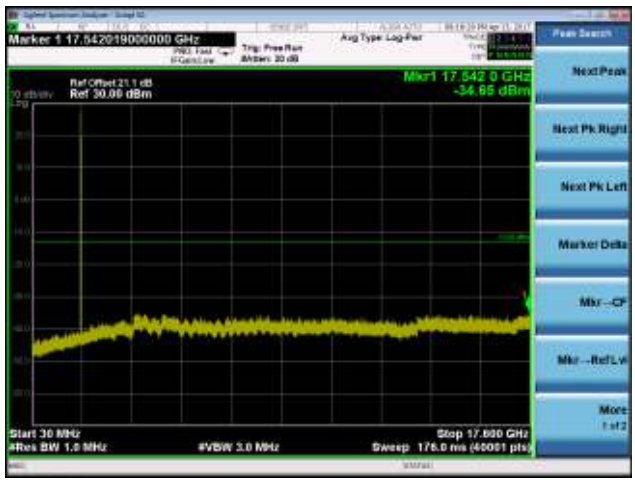
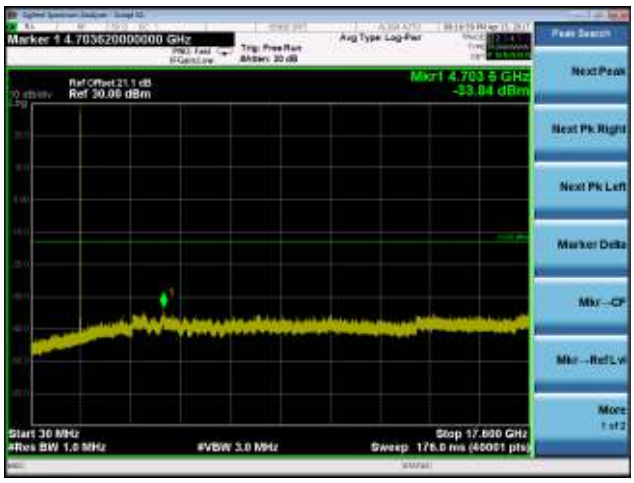
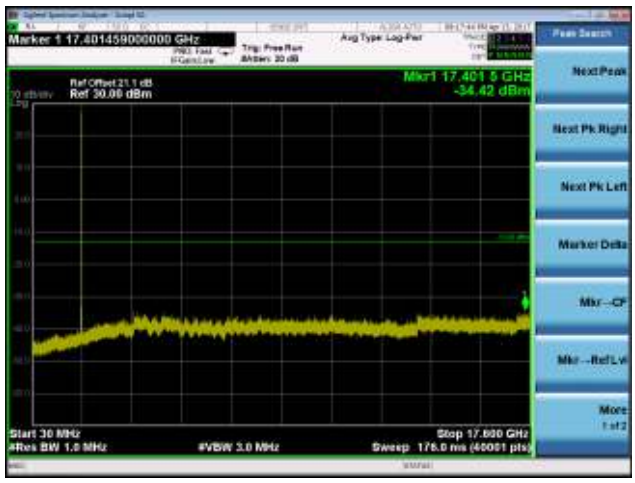
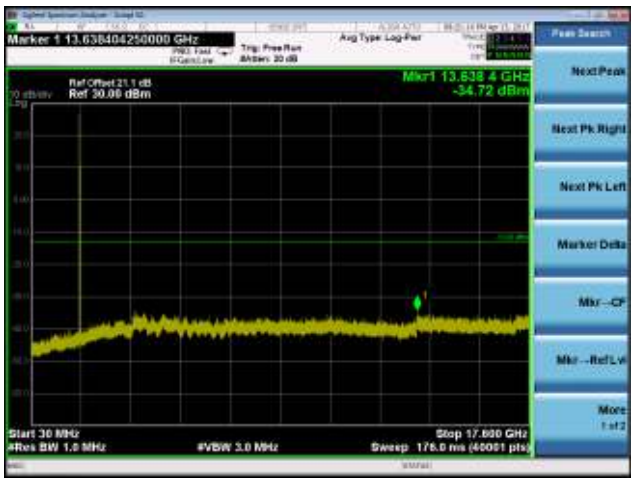
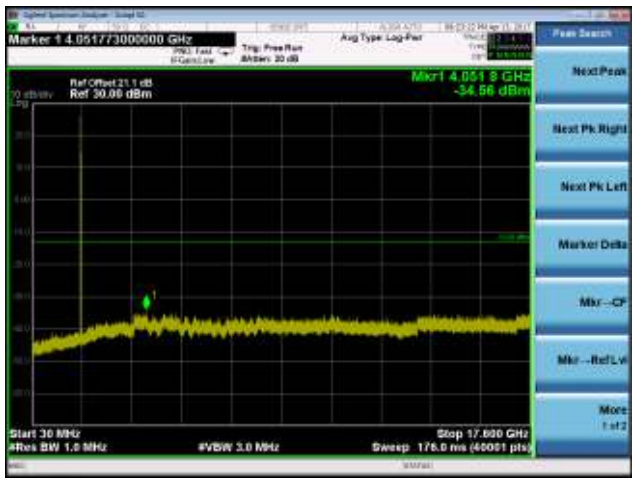
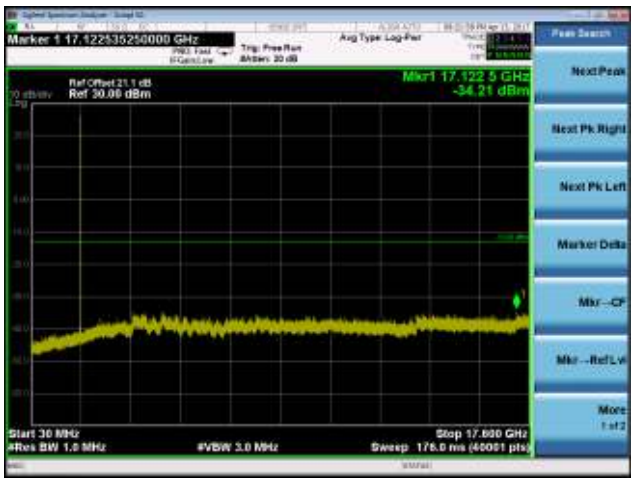
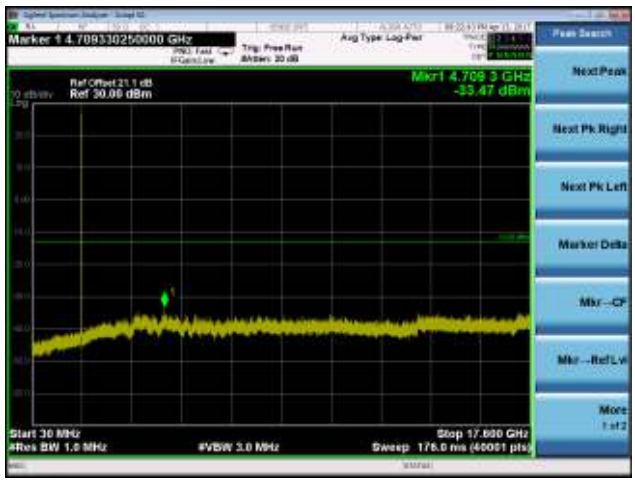
			

Mode	LTE Band 4, CB: 3MHz, QPSK	Mode	LTE Band 4, CB: 3MHz, 16QAM
Channel	19965	Channel	19965
			
Channel	20175	Channel	20175
			
Channel	20385	Channel	20385
			

Mode	LTE Band 4, CB: 5MHz, QPSK	Mode	LTE Band 4, CB: 5MHz, 16QAM
Channel	19975	Channel	19975
			
Channel	20175	Channel	20175
			
Channel	20375	Channel	20375
			

Mode	LTE Band 4, CB: 10MHz, QPSK	Mode	LTE Band 4, CB: 10MHz, 16QAM
Channel	20000	Channel	20000
			
Channel	20175	Channel	20175
			
Channel	20350	Channel	20350
			

Mode	LTE Band 4, CB: 15MHz, QPSK	Mode	LTE Band 4, CB: 15MHz, 16QAM
Channel	20025	Channel	20025
			
Channel	20175	Channel	20175
			
Channel	20325	Channel	20325
			

Mode	LTE Band 4, CB: 20MHz, QPSK	Mode	LTE Band 4, CB: 20MHz, 16QAM
Channel	20050	Channel	20050
			
Channel	20175	Channel	20175
			
Channel	20300	Channel	20300
			

3.4 Band Edge

3.4.1 Limit of Band Edge

The power of any emission outside of the authorized operating frequencyranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB equal to -13dBm.

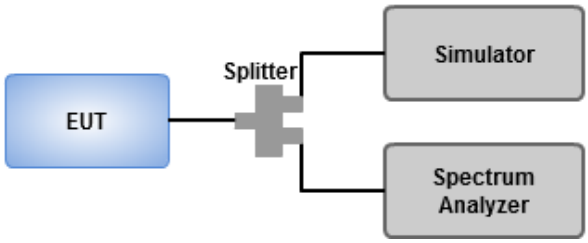
3.4.2 Test Procedures

1 Lowest and highest operating channels are tested for this item.

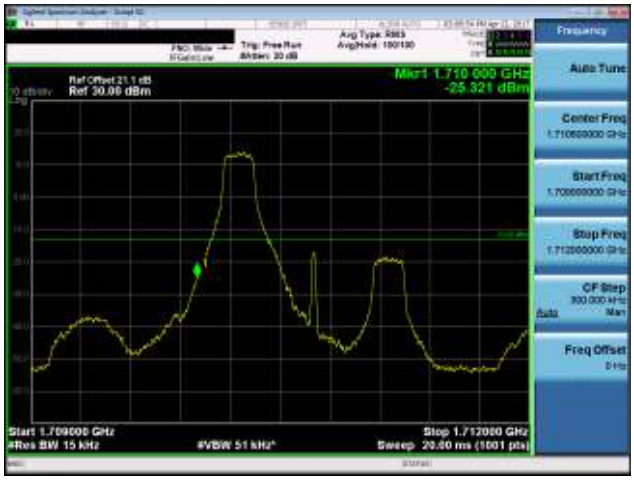
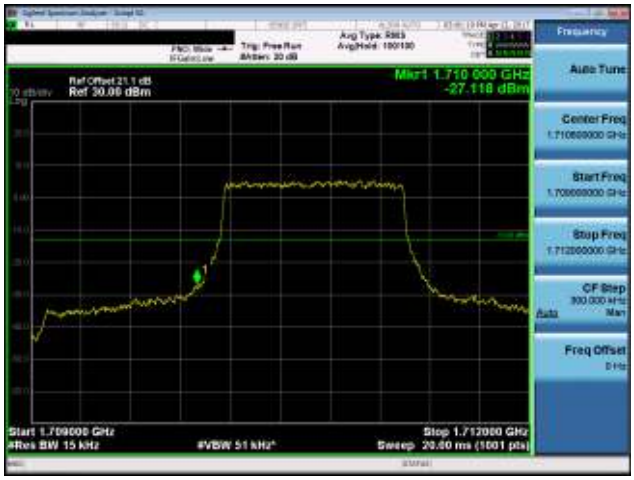
2 Set RBW = 15 / 30 / 51 / 100 / 150 / 200 kHz, VBW = 51 / 100 / 160 / 300 / 470 / 620 kHz for LTE channel bandwidth 1.4 / 3 / 5 / 10 / 15 / 20 MHz, detector = RMS, sweep time = auto to measure trace.

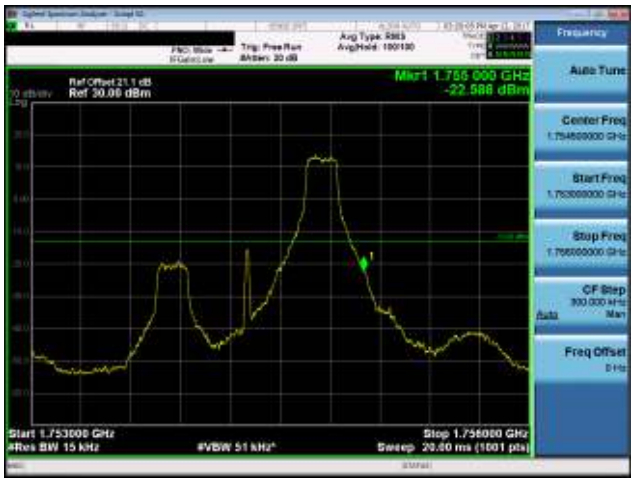
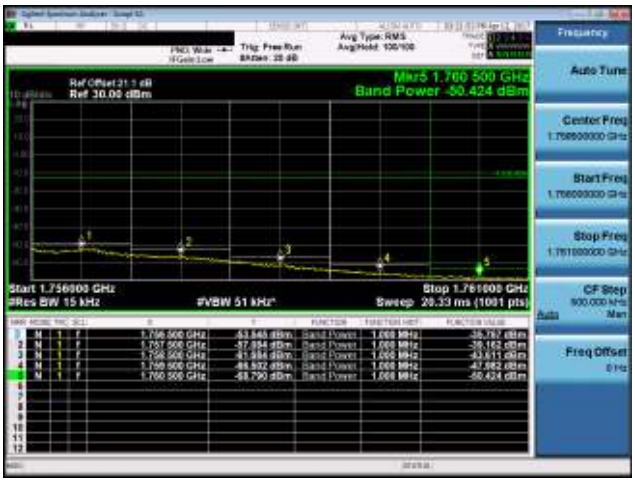
3 Set RBW = 15 / 30 / 51 / 100 kHz, VBW = 51 / 100 / 160 / 300 kHz, for channel bandwidth 1.4 / 3 / 5 / 10 MHz, detector = RMS and use channel power measurement function of spectrum analyze to integrate power over 1MHz.

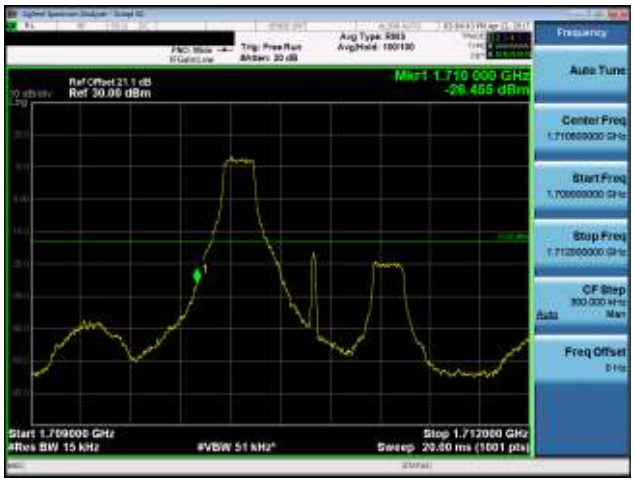
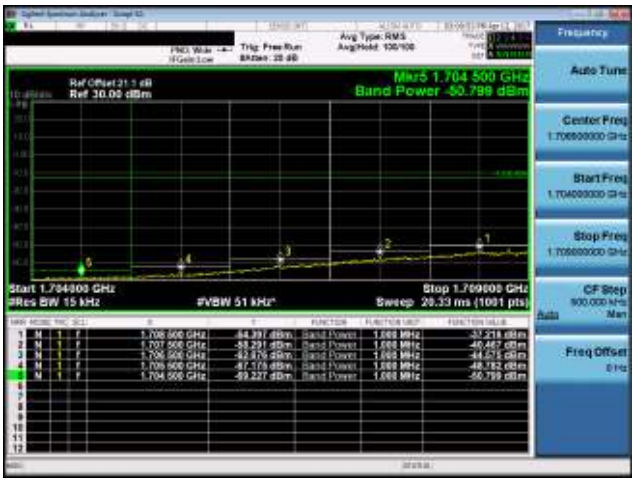
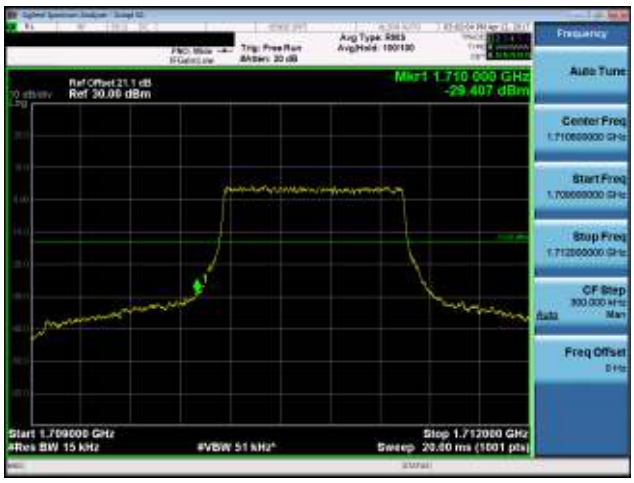
3.4.3 Test Setup

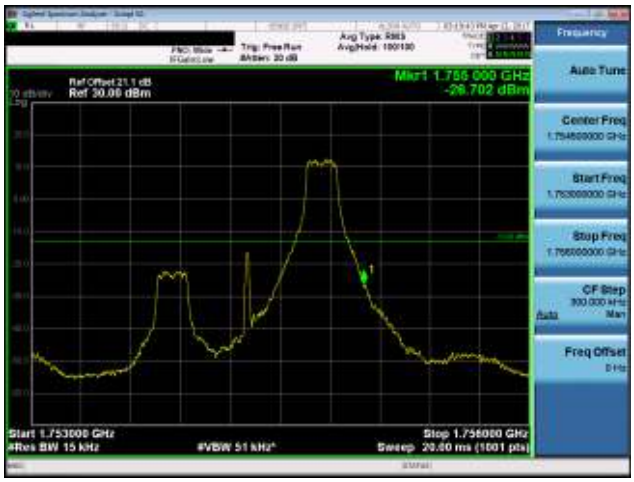
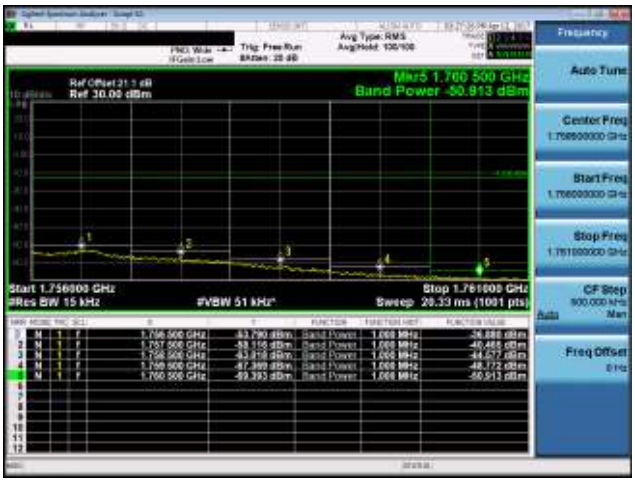


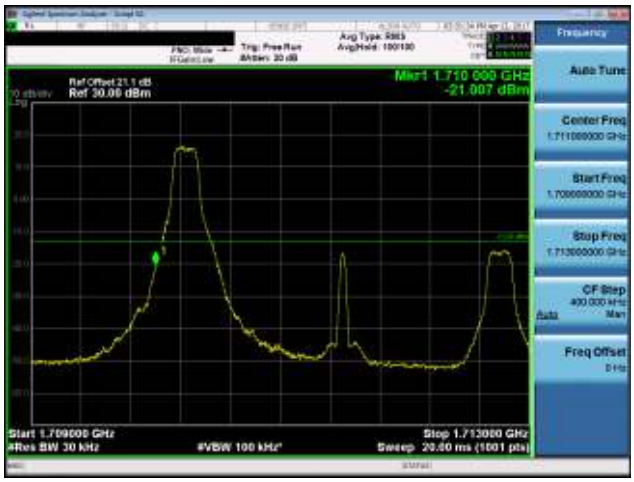
3.4.4 Test Result of Band Edge

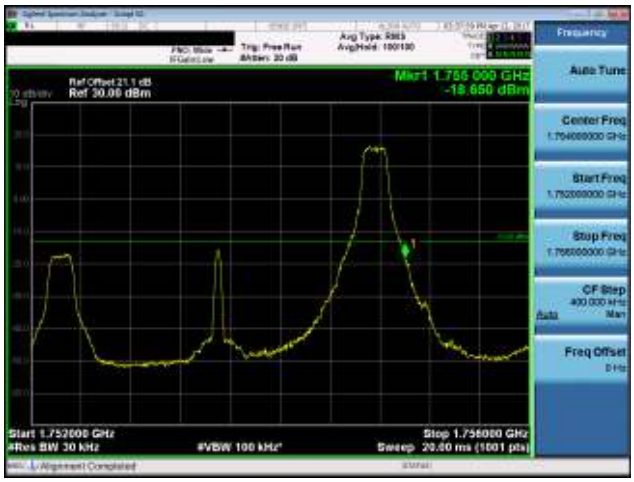
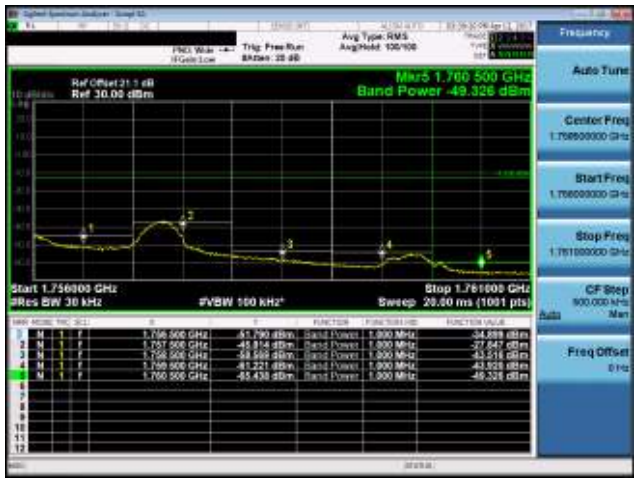
Mode	LTE Band 4, CB: 1.4MHz, QPSK				
Channel	19957	1 RB-1	**Channel**	19957	1 RB-2
					
Channel	19957	Full RB-1	**Channel**	19957	Full RB-2
					

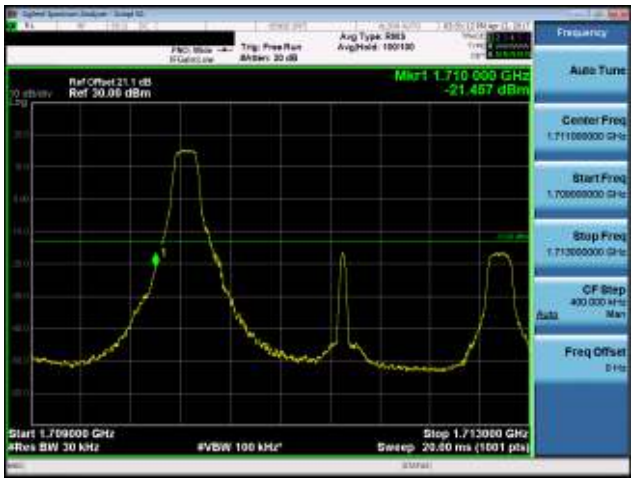
Mode	LTE Band 4, CB: 1.4MHz, QPSK				
Channel	20393	1 RB-1	**Channel**	20393	1 RB-2
					
Channel	20393	Full RB-1	**Channel**	20393	Full RB-2
					

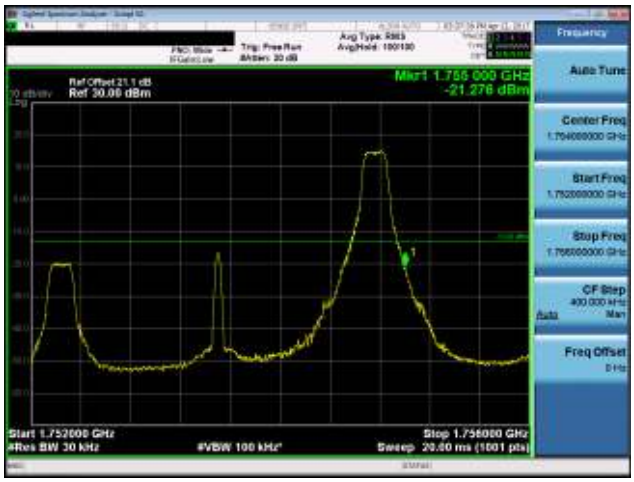
Mode	LTE Band 4, CB: 1.4MHz, 16QAM				
Channel	19957	1 RB-1	**Channel**	19957	1 RB-2
					
Channel	19957	Full RB-1	**Channel**	19957	Full RB-2
					

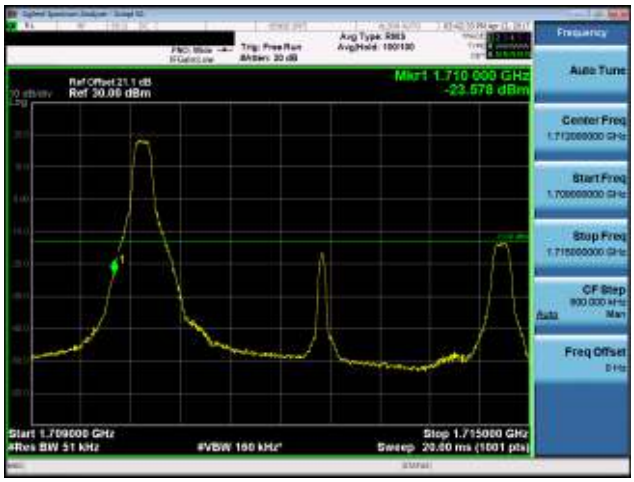
Mode	LTE Band 4, CB: 1.4MHz, 16QAM				
Channel	20393	1 RB-1	**Channel**	20393	1 RB-2
					
Channel	20393	Full RB-1	**Channel**	20393	Full RB-2
					

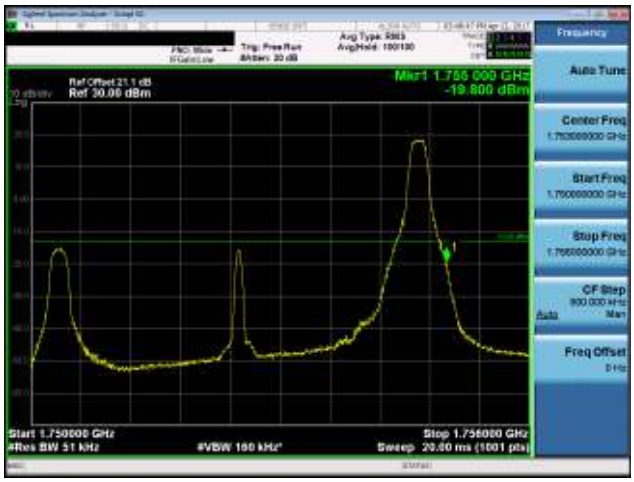
Mode	LTE Band 4, CB: 3MHz, QPSK				
Channel	19965	1 RB-1	**Channel**	19965	1 RB-2
					
Channel	19965	Full RB-1	**Channel**	19965	Full RB-2
					

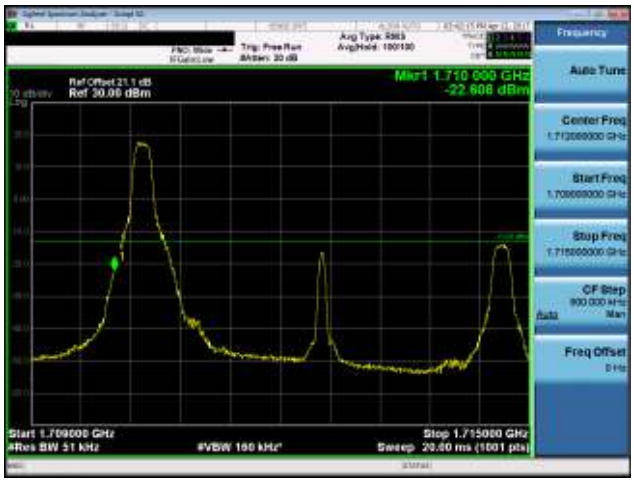
Mode	LTE Band 4, CB: 3MHz, QPSK				
Channel	20385	1 RB-1	**Channel**	20385	1 RB-2
					
Channel	20385	Full RB-1	**Channel**	20385	Full RB-2
					

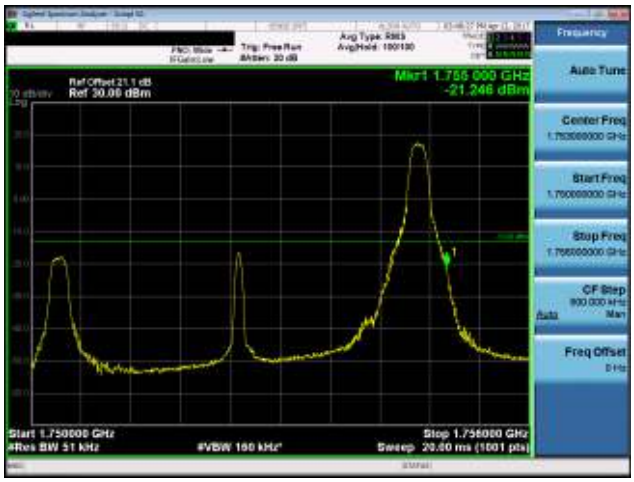
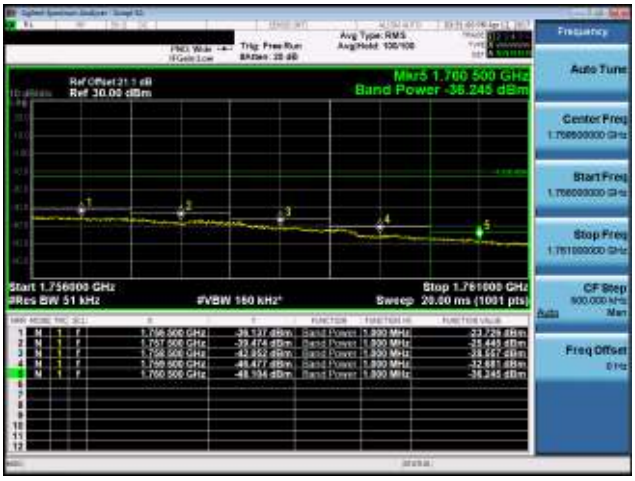
Mode	LTE Band 4, CB: 3MHz, 16QAM				
Channel	19965	1 RB-1	**Channel**	19965	1 RB-2
					
Channel	19965	Full RB-1	**Channel**	19965	Full RB-2
					

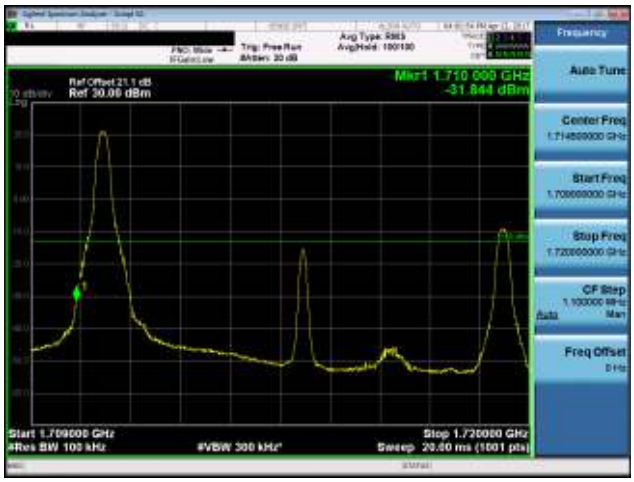
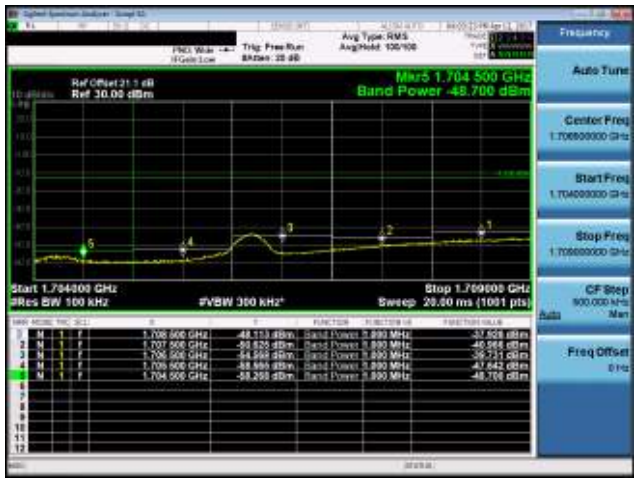
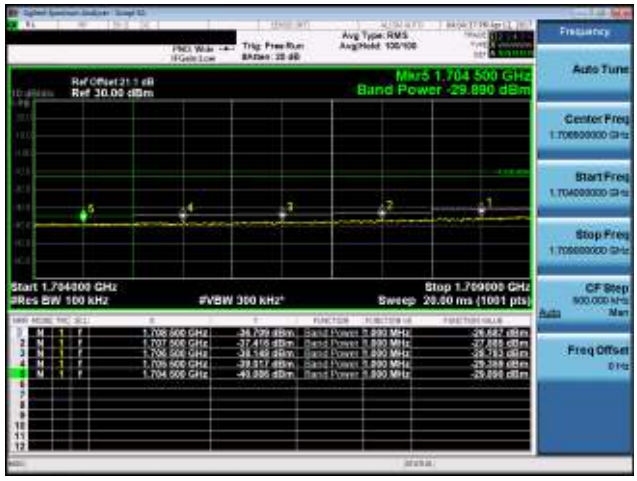
Mode	LTE Band 4, CB: 3MHz, 16QAM				
Channel	20385	1 RB-1	**Channel**	20385	1 RB-2
					
Channel	20385	Full RB-1	**Channel**	20385	Full RB-2
					

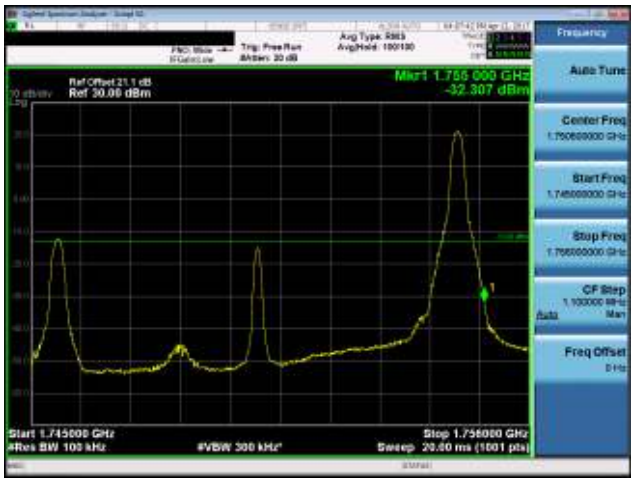
Mode	LTE Band 4, CB: 5MHz, QPSK				
Channel	19975	1 RB-1	**Channel**	19975	1 RB-2
					
Channel	19975	Full RB-1	**Channel**	19975	Full RB-2
					

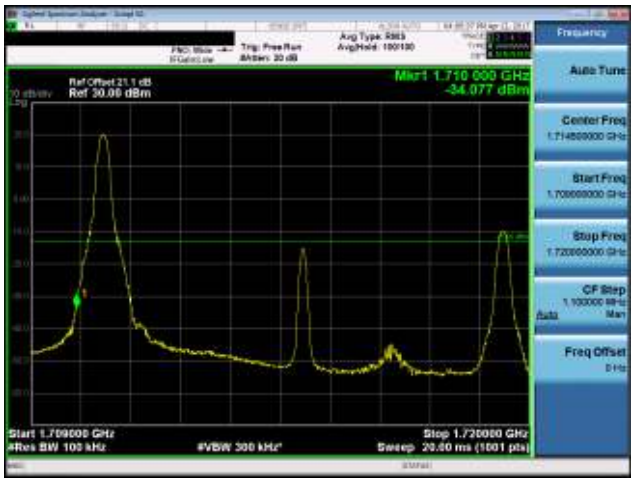
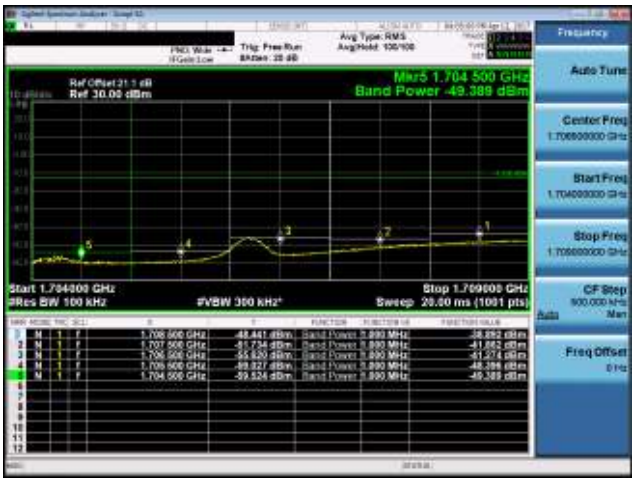
Mode	LTE Band 4, CB: 5MHz, QPSK				
Channel	20375	1 RB-1	**Channel**	20375	1 RB-2
					
Channel	20375	Full RB-1	**Channel**	20375	Full RB-2
					

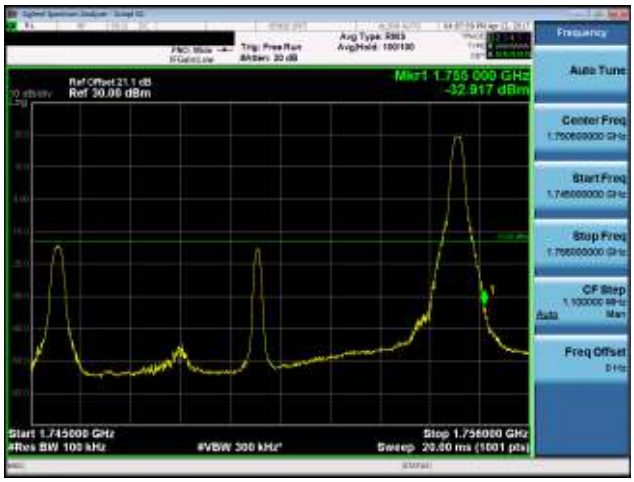
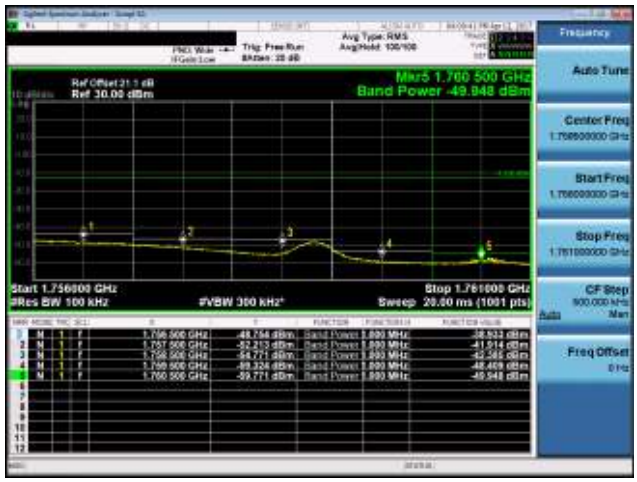
Mode	LTE Band 4, CB: 5MHz, 16QAM				
Channel	19975	1 RB-1	**Channel**	19975	1 RB-2
					
Channel	19975	Full RB-1	**Channel**	19975	Full RB-2
					

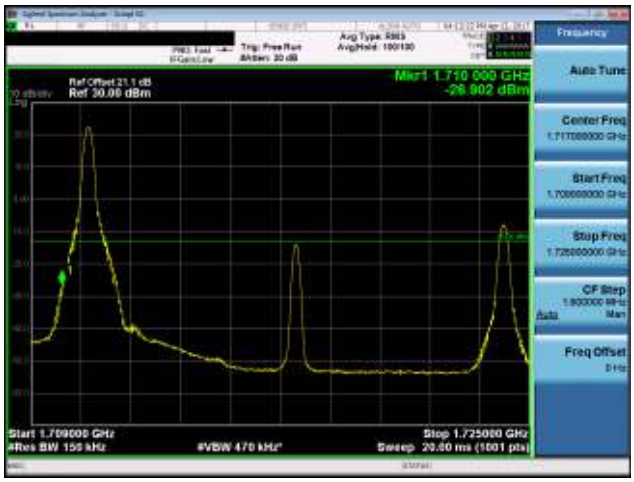
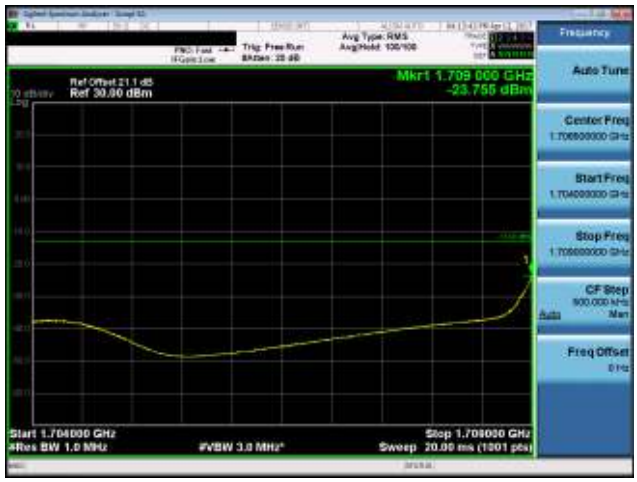
Mode	LTE Band 4, CB: 5MHz, 16QAM				
Channel	20375	1 RB-1	**Channel**	20375	1 RB-2
					
Channel	20375	Full RB-1	**Channel**	20375	Full RB-2
					

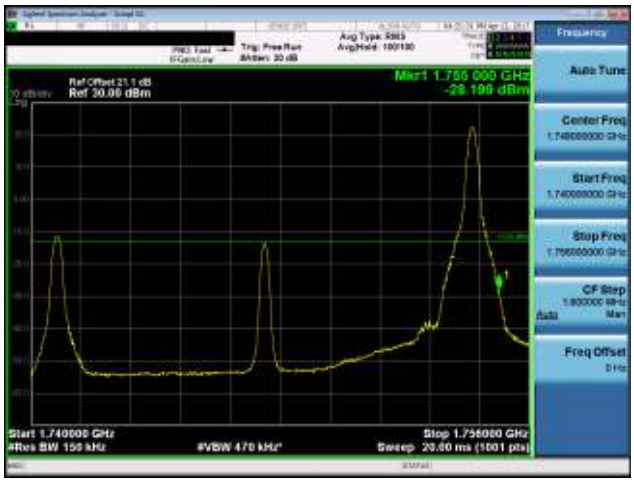
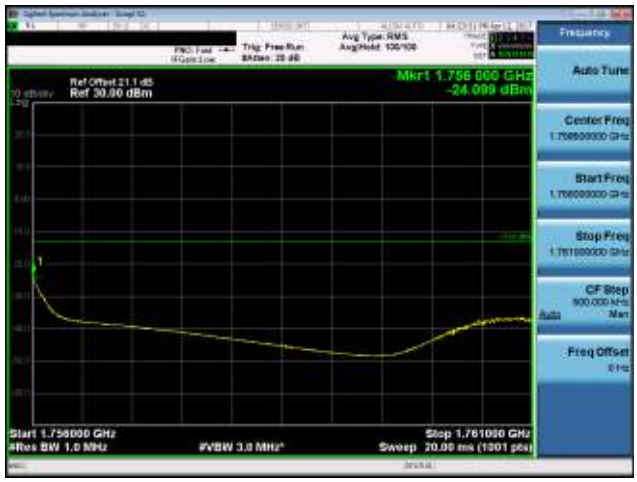
Mode	LTE Band 4, CB: 10MHz, QPSK				
Channel	20000	1 RB-1	**Channel**	20000	1 RB-2
					
Channel	20000	Full RB-1	**Channel**	20000	Full RB-2
					

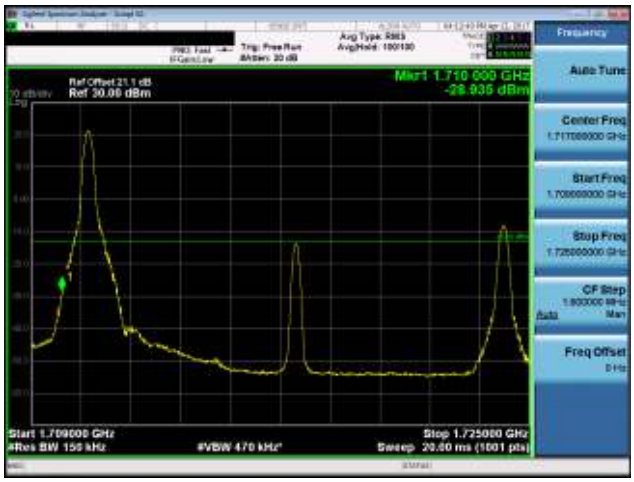
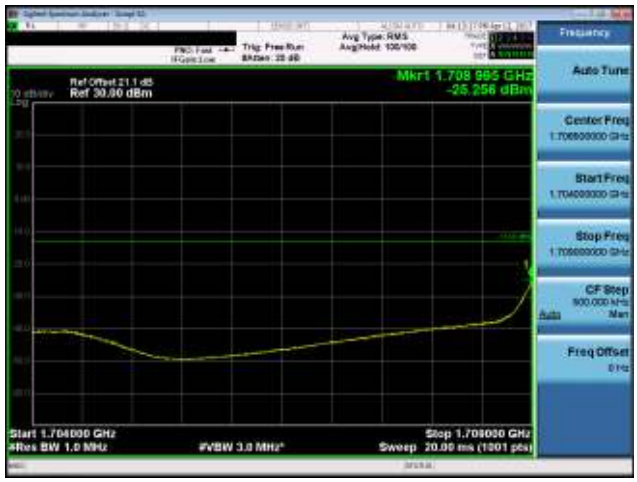
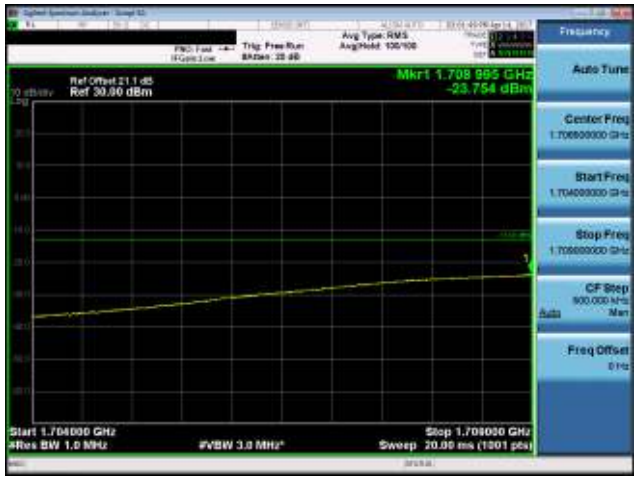
Mode	LTE Band 4, CB: 10MHz, QPSK				
Channel	20350	1 RB-1	**Channel**	20350	1 RB-2
					
Channel	20350	Full RB-1	**Channel**	20350	Full RB-2
					

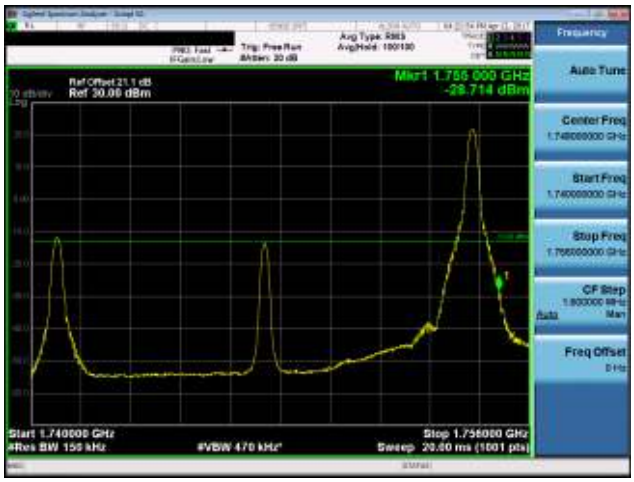
Mode	LTE Band 4, CB: 10MHz, 16QAM				
Channel	20000	1 RB-1	**Channel**	20000	1 RB-2
					
Channel	20000	Full RB-1	**Channel**	20000	Full RB-2
					

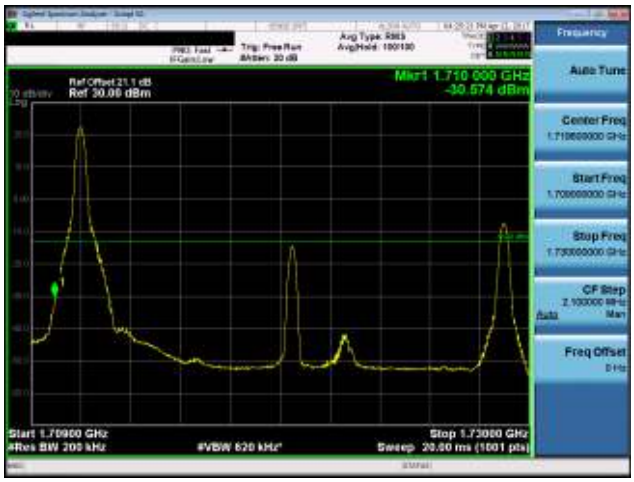
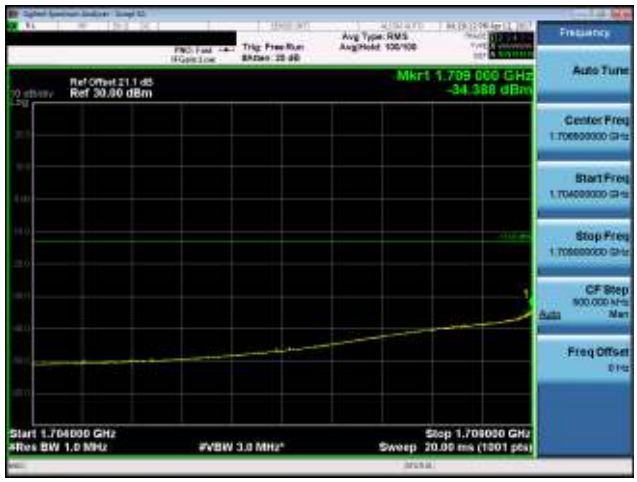
Mode	LTE Band 4, CB: 10MHz, 16QAM				
Channel	20350	1 RB-1	**Channel**	20350	1 RB-2
					
Channel	20350	Full RB-1	**Channel**	20350	Full RB-2
					

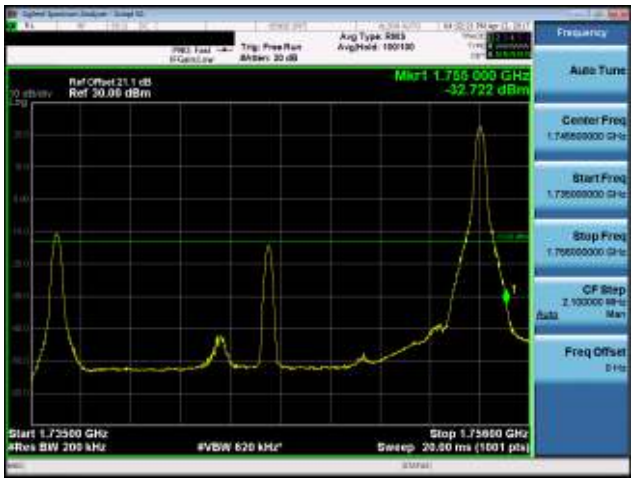
Mode	LTE Band 4, CB: 15MHz, QPSK				
Channel	20025	1 RB-1	**Channel**	20025	1 RB-2
					
Channel	20025	Full RB-1	**Channel**	20025	Full RB-2
					

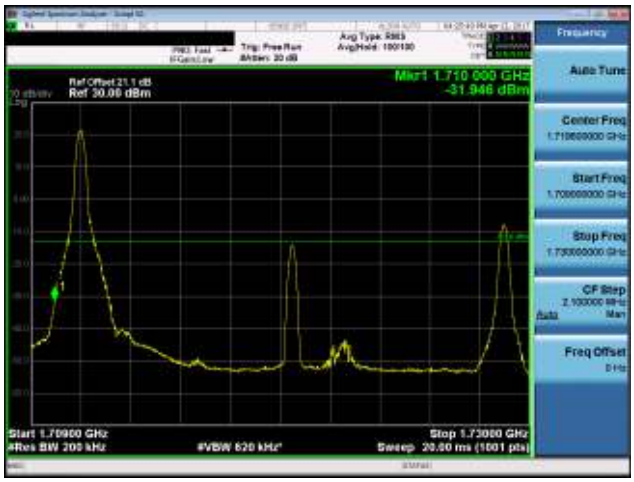
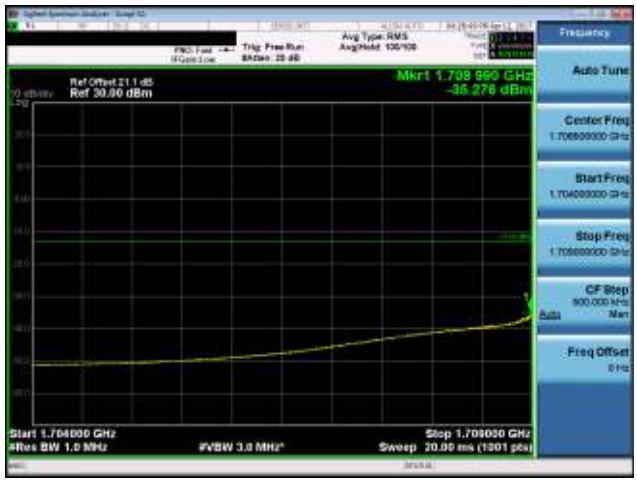
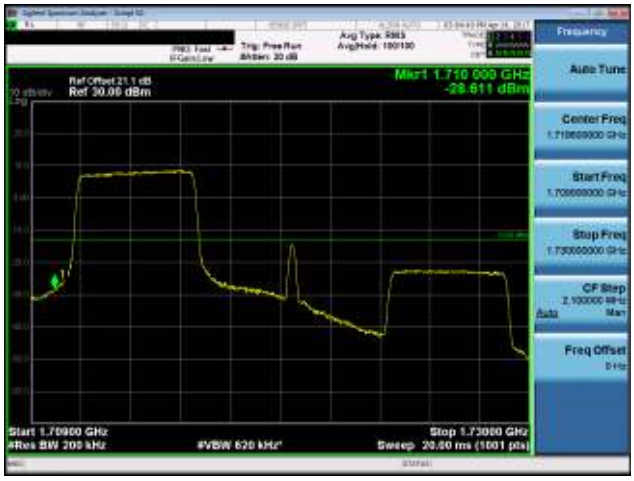
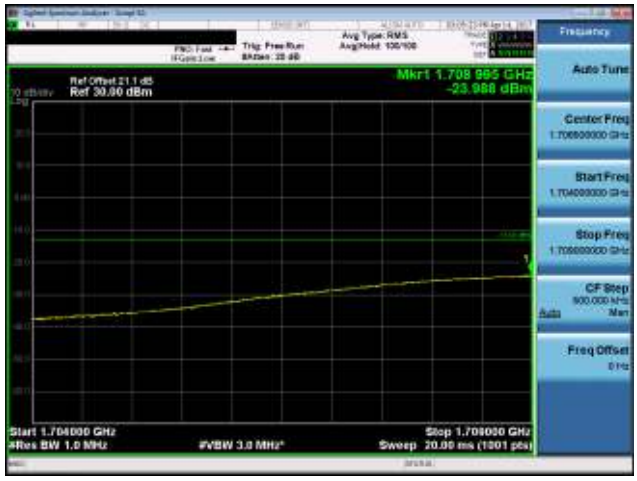
Mode	LTE Band 4, CB: 15MHz, QPSK				
Channel	20325	1 RB-1	**Channel**	20325	1 RB-2
					
Channel	20325	Full RB-1	**Channel**	20325	Full RB-2
					

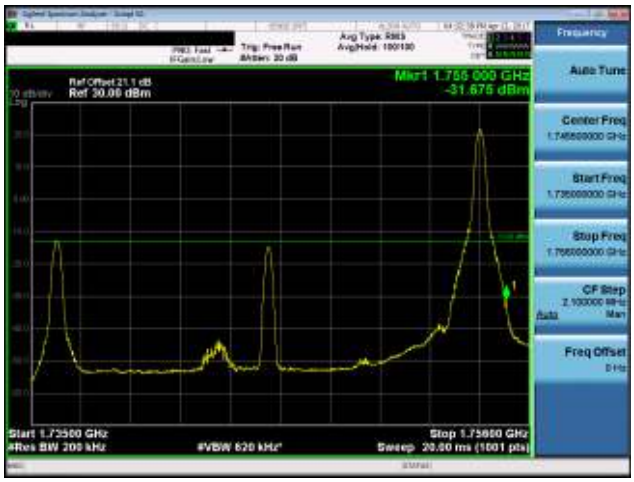
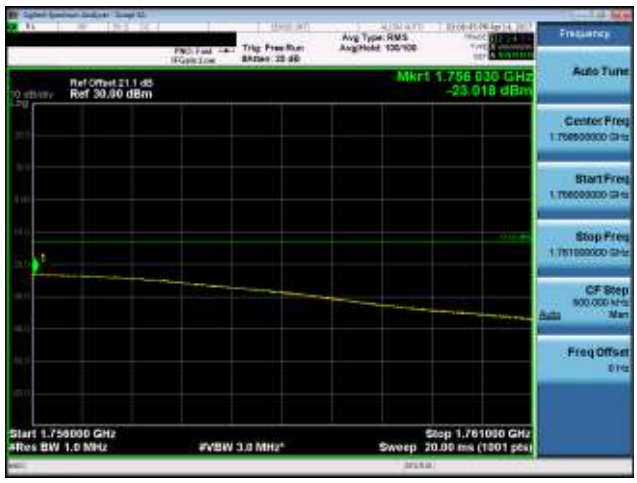
Mode	LTE Band 4, CB: 15MHz, 16QAM				
Channel	20025	1 RB-1	**Channel**	20025	1 RB-2
					
Channel	20025	Full RB-1	**Channel**	20025	Full RB-2
					

Mode	LTE Band 4, CB: 15MHz, 16QAM				
Channel	20325	1 RB-1	**Channel**	20325	1 RB-2
					
Channel	20325	Full RB-1	**Channel**	20325	Full RB-2
					

Mode	LTE Band 4, CB: 20MHz, QPSK				
Channel	20050	1 RB-1	**Channel**	20050	1 RB-2
					
Channel	20050	Full RB-1	**Channel**	20050	Full RB-2
					

Mode	LTE Band 4, CB: 20MHz, QPSK				
Channel	20300	1 RB-1	**Channel**	20300	1 RB-2
					
Channel	20300	Full RB-1	**Channel**	20300	Full RB-2
					

Mode	LTE Band 4, CB: 20MHz, 16QAM				
Channel	20050	1 RB-1	**Channel**	20050	1 RB-2
					
Channel	20050	Full RB-1	**Channel**	20050	Full RB-2
					

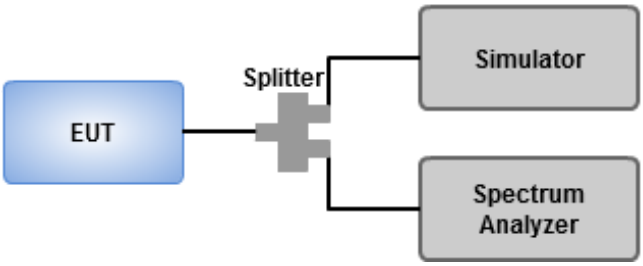
Mode	LTE Band 4, CB: 20MHz, 16QAM				
Channel	20300	1 RB-1	**Channel**	20300	1 RB-2
					
Channel	20300	Full RB-1	**Channel**	20300	Full RB-2
					

3.5 Occupied and 26 dB Bandwidth

3.5.1 Test Procedures

1. Set RBW = 15 / 30 / 51 / 100 / 150 / 200 kHz, VBW = 51 / 100 / 160 / 300 / 470 / 620 kHz for LTE channel bandwidth 1.4 / 3 / 5 / 10 / 15 / 20 MHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Using occupied bandwidth measurement function of spectrum analyzer to measure occupied bandwidth.
5. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 26dB relative to the maximum level measured in the fundamental emission.

3.5.2 Test Setup

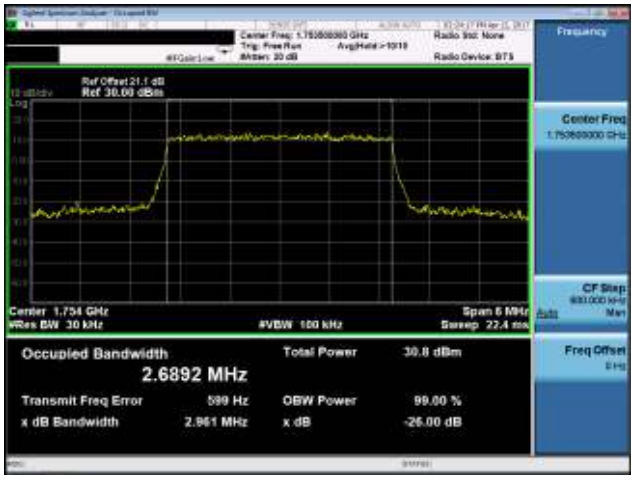
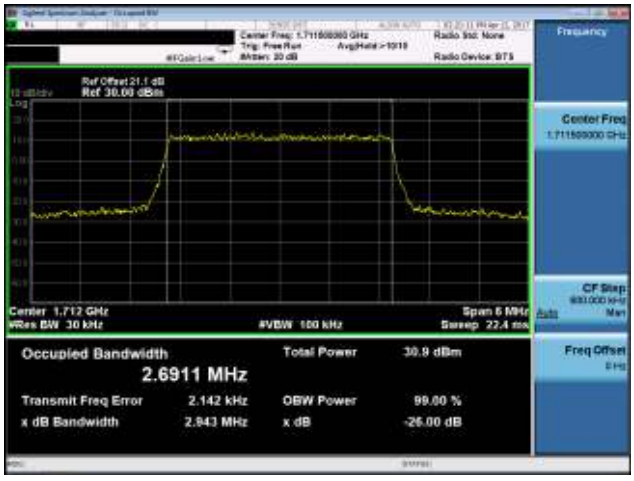


3.5.3 Test Result of Occupied Bandwidth

Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 4	1.4	QPSK	19957	1710.7	1.2570	1.0799
LTE Band 4	1.4	QPSK	20175	1732.5	1.2560	1.0801
LTE Band 4	1.4	QPSK	20393	1754.3	1.2610	1.0765
LTE Band 4	1.4	16QAM	19957	1710.7	1.2680	1.0845
LTE Band 4	1.4	16QAM	20175	1732.5	1.2790	1.0785
LTE Band 4	1.4	16QAM	20393	1754.3	1.2570	1.0801

Worst plots	
26dB bandwidth	**OBW**
	

Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 4	3	QPSK	19965	1711.5	2.9430	2.6911
LTE Band 4	3	QPSK	20175	1732.5	2.9360	2.6824
LTE Band 4	3	QPSK	20385	1753.5	2.9610	2.6892
LTE Band 4	3	16QAM	19965	1711.5	2.9560	2.6879
LTE Band 4	3	16QAM	20175	1732.5	2.9410	2.6843
LTE Band 4	3	16QAM	20385	1753.5	2.9470	2.6863

Worst plots	
26dB bandwidth	**OBW**
	

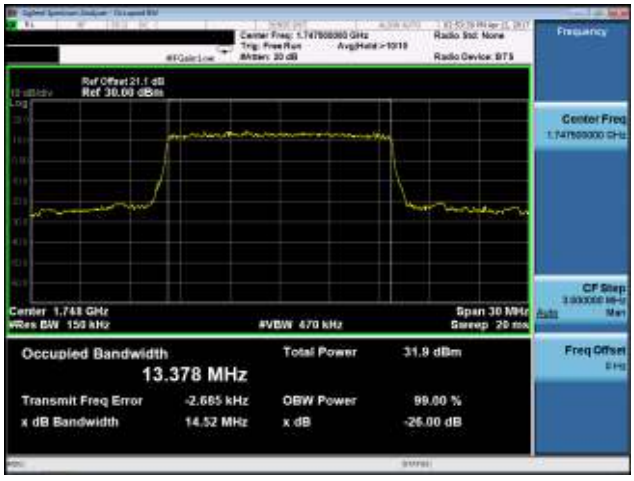
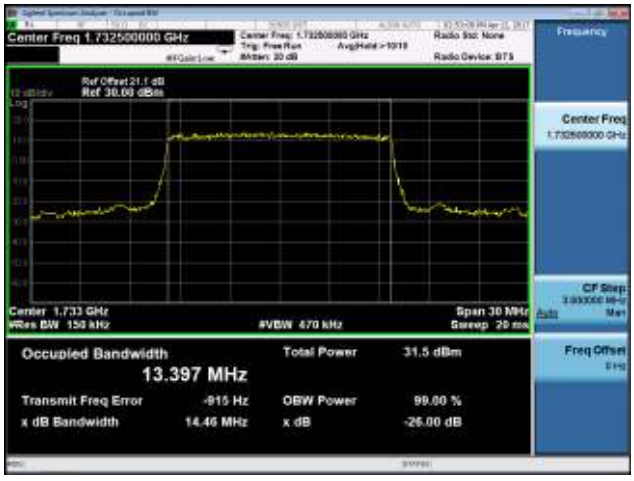
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 4	5	QPSK	19975	1712.5	4.9280	4.4770
LTE Band 4	5	QPSK	20175	1732.5	4.9460	4.4821
LTE Band 4	5	QPSK	20375	1752.5	4.8990	4.4787
LTE Band 4	5	16QAM	19975	1712.5	4.9120	4.4796
LTE Band 4	5	16QAM	20175	1732.5	4.9390	4.4855
LTE Band 4	5	16QAM	20375	1752.5	4.9850	4.4857

Worst plots	
26dB bandwidth	**OBW**
	

Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 4	10	QPSK	20000	1715.0	9.7820	8.9265
LTE Band 4	10	QPSK	20175	1732.5	9.7820	8.9238
LTE Band 4	10	QPSK	20350	1750.0	9.6950	8.9231
LTE Band 4	10	16QAM	20000	1715.0	6.0110	4.9026
LTE Band 4	10	16QAM	20175	1732.5	5.9320	4.9310
LTE Band 4	10	16QAM	20350	1750.0	6.0160	4.9111

Worst plots	
26dB bandwidth	**OBW**
	

Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 4	15	QPSK	20025	1717.5	14.3800	13.3700
LTE Band 4	15	QPSK	20175	1732.5	14.4600	13.3970
LTE Band 4	15	QPSK	20325	1747.5	14.5200	13.3780
LTE Band 4	15	16QAM	20025	1717.5	6.7400	5.0004
LTE Band 4	15	16QAM	20175	1732.5	7.2480	5.0358
LTE Band 4	15	16QAM	20325	1747.5	6.7250	5.0098

Worst plots	
26dB bandwidth	**OBW**
	

Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 4	20	QPSK	20050	1720.0	19.0300	17.8250
LTE Band 4	20	QPSK	20175	1732.5	19.1300	17.8210
LTE Band 4	20	QPSK	20300	1745.0	19.0600	17.8280
LTE Band 4	20	16QAM	20050	1720.0	7.3220	5.1504
LTE Band 4	20	16QAM	20175	1732.5	6.9910	5.1188
LTE Band 4	20	16QAM	20300	1745.0	7.2160	5.1190

Worst plots	
26dB bandwidth	**OBW**
	

3.6 Peak to Average Ratio

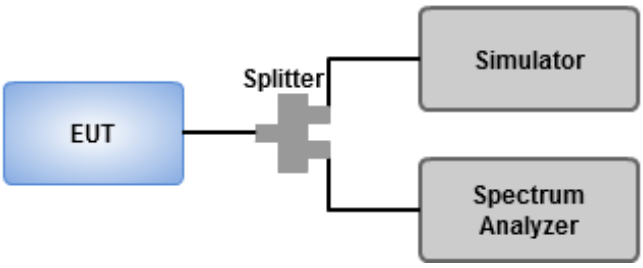
3.6.1 Limit of Peak to Average Ratio

The Peakto-average ratio (PAR) of the transmiss ion may not exceed 13 dB.

3.6.2 Test Procedures

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth.
2. Set the number of counts to a value that stabilizes the measured CCDF curve.
3. Set the measurement interval to 1 ms.
4. Record the maximum PAPR level associated with a probability of 0.1%.

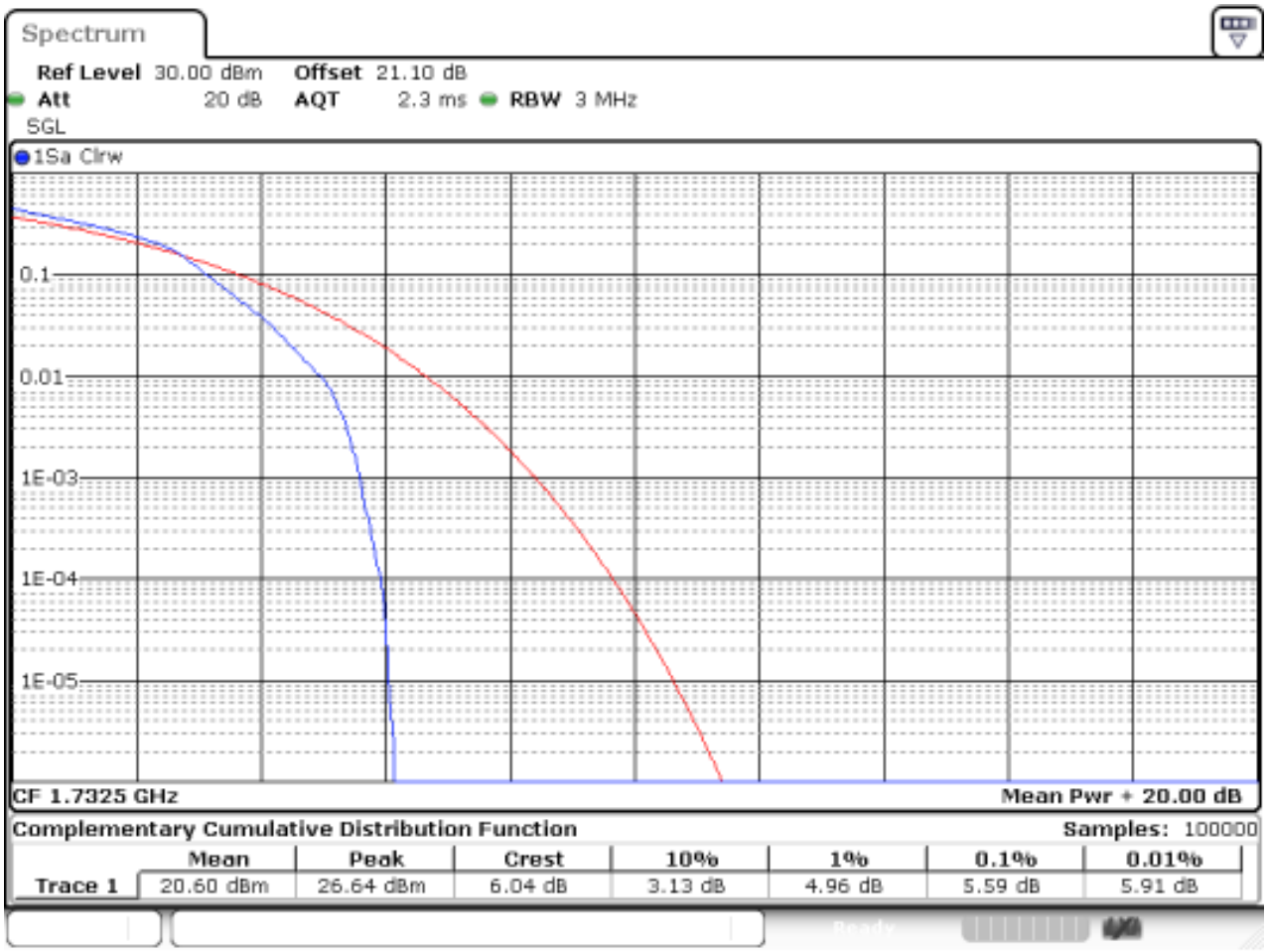
3.6.3 Test Setup



3.6.4 Test Result of Peak to Average Ratio

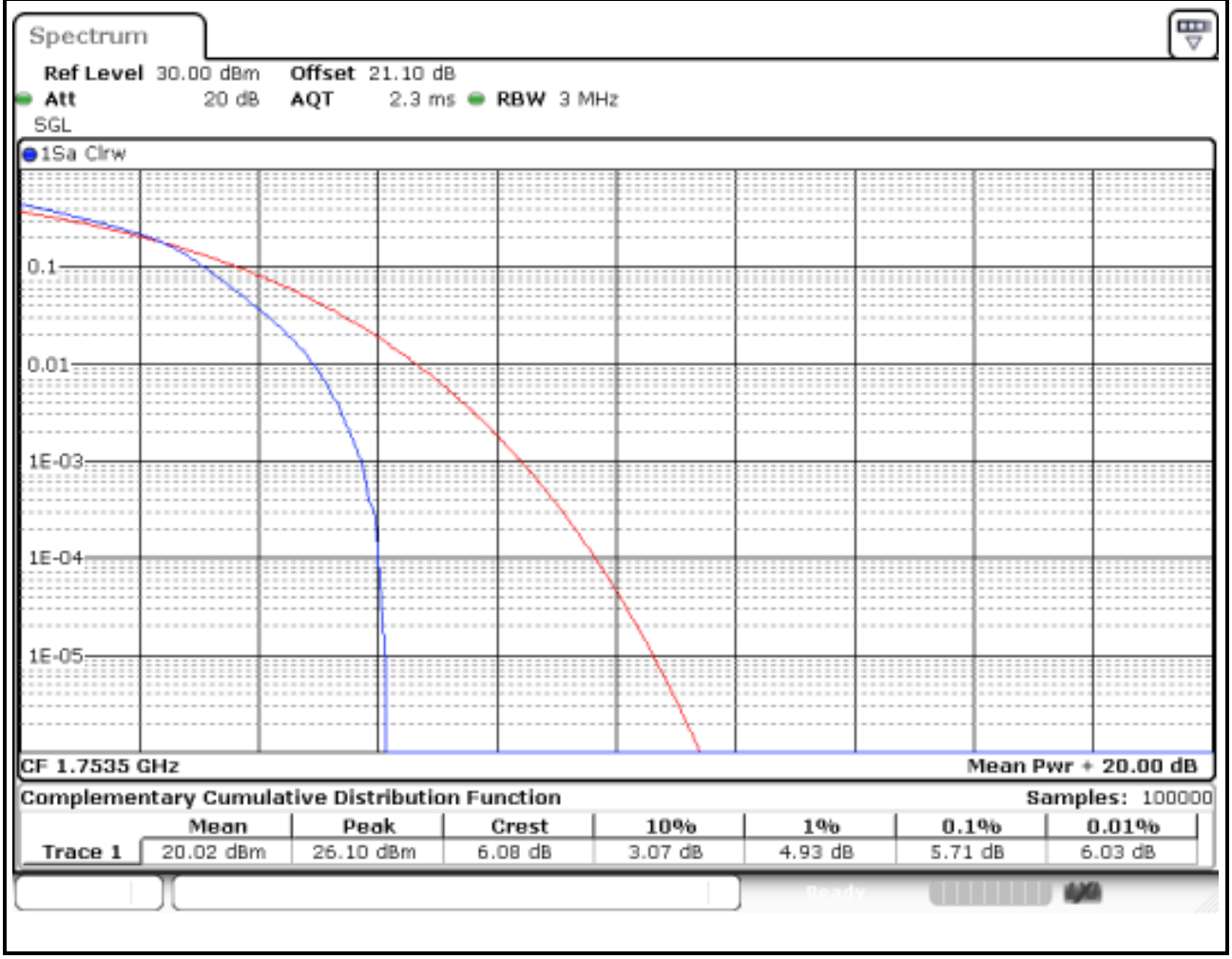
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 4	1.4	QPSK	19957	1710.7	4.46
LTE Band 4	1.4	QPSK	20175	1732.5	4.61
LTE Band 4	1.4	QPSK	20393	1754.3	4.70
LTE Band 4	1.4	16QAM	19957	1710.7	5.36
LTE Band 4	1.4	16QAM	20175	1732.5	5.59
LTE Band 4	1.4	16QAM	20393	1754.3	5.54

Worst plots



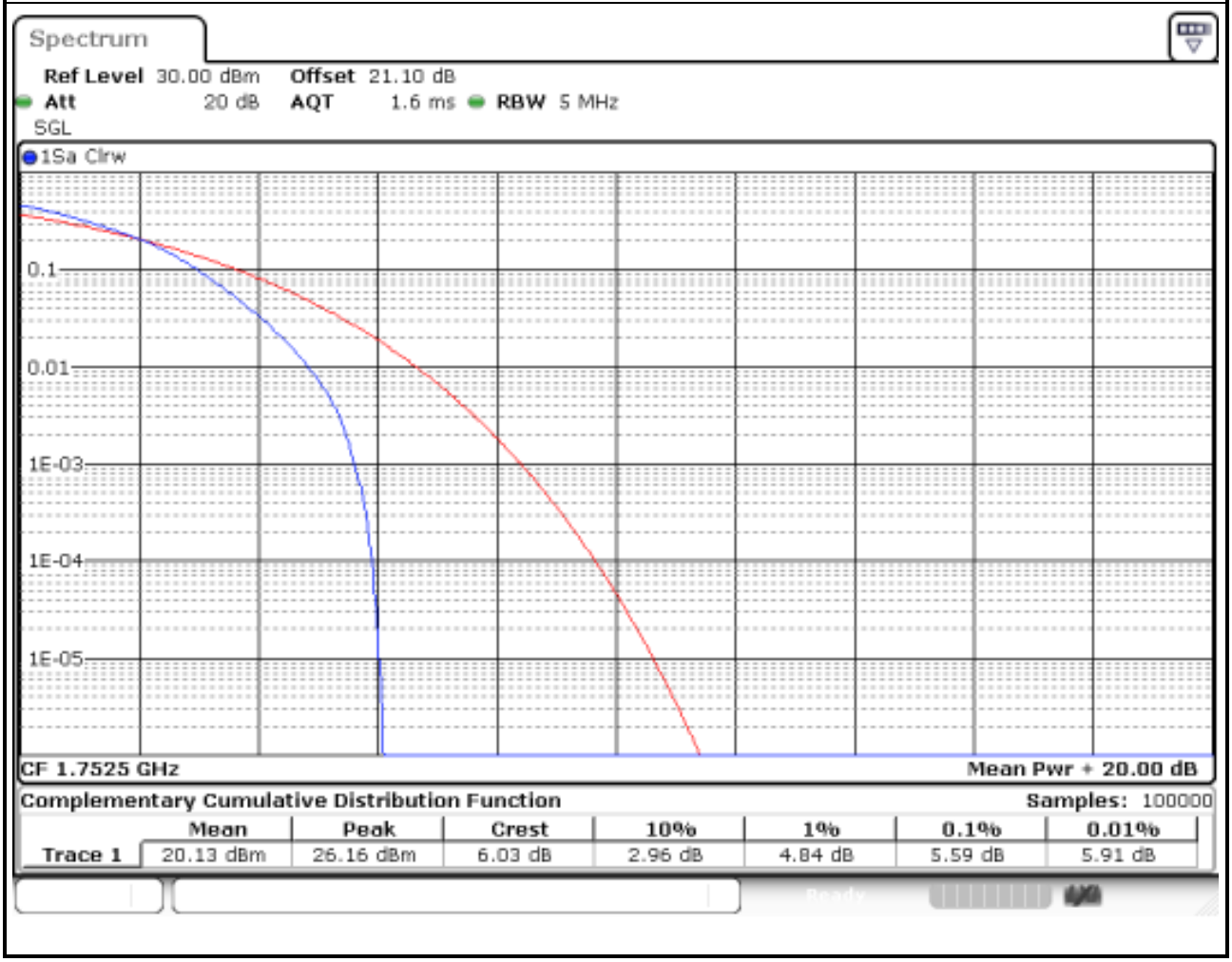
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 4	3	QPSK	19965	1711.5	4.55
LTE Band 4	3	QPSK	20175	1732.5	4.58
LTE Band 4	3	QPSK	20385	1753.5	4.55
LTE Band 4	3	16QAM	19965	1711.5	5.54
LTE Band 4	3	16QAM	20175	1732.5	5.54
LTE Band 4	3	16QAM	20385	1753.5	5.71

Worst plots



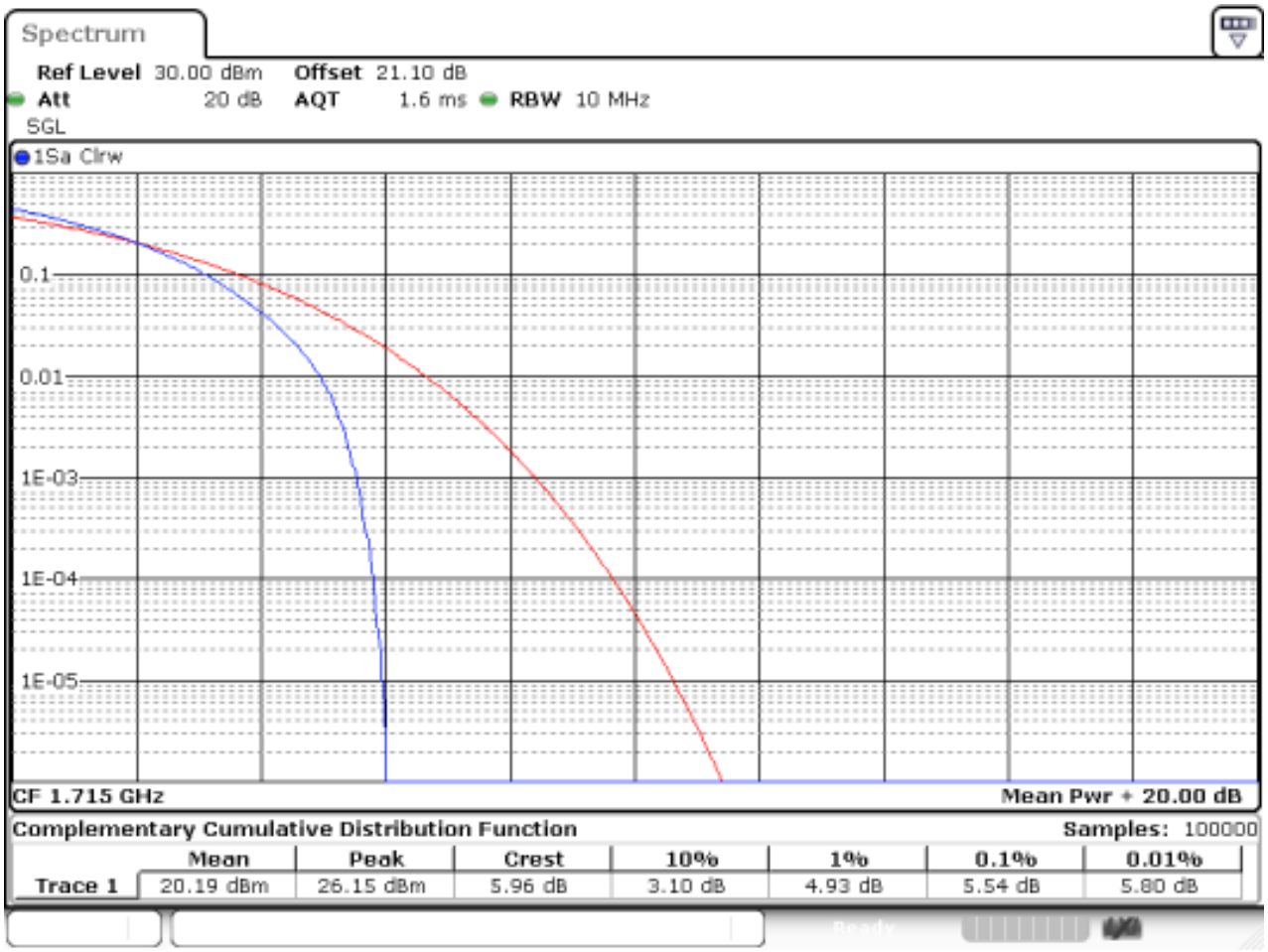
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 4	5	QPSK	19975	1712.5	4.61
LTE Band 4	5	QPSK	20175	1732.5	4.61
LTE Band 4	5	QPSK	20375	1752.5	4.55
LTE Band 4	5	16QAM	19975	1712.5	5.57
LTE Band 4	5	16QAM	20175	1732.5	5.59
LTE Band 4	5	16QAM	20375	1752.5	5.59

Worst plots



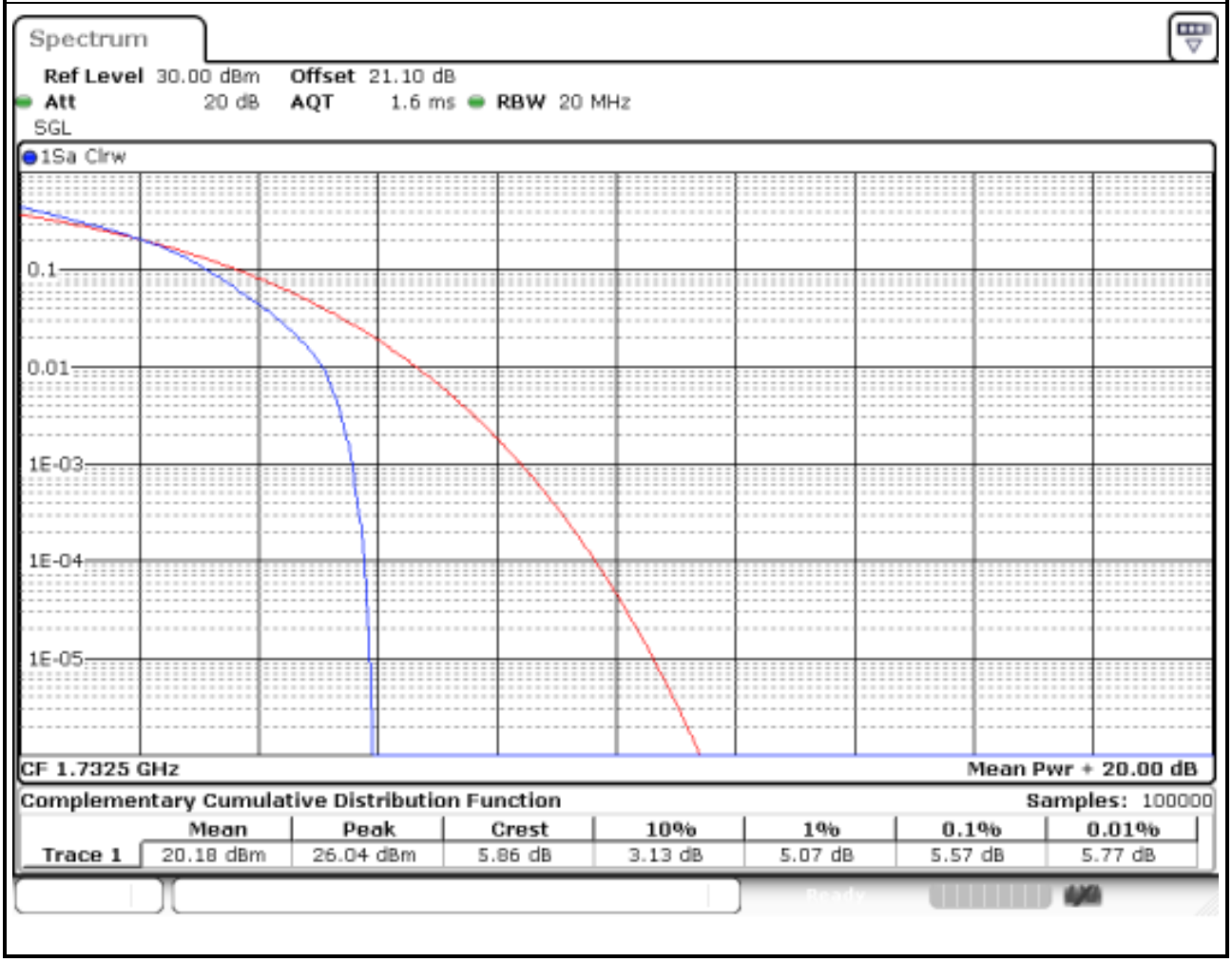
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 4	10	QPSK	20000	1715.0	4.55
LTE Band 4	10	QPSK	20175	1732.5	4.52
LTE Band 4	10	QPSK	20350	1750.0	4.52
LTE Band 4	10	16QAM	20000	1715.0	5.54
LTE Band 4	10	16QAM	20175	1732.5	5.48
LTE Band 4	10	16QAM	20350	1750.0	5.39

Worst plots



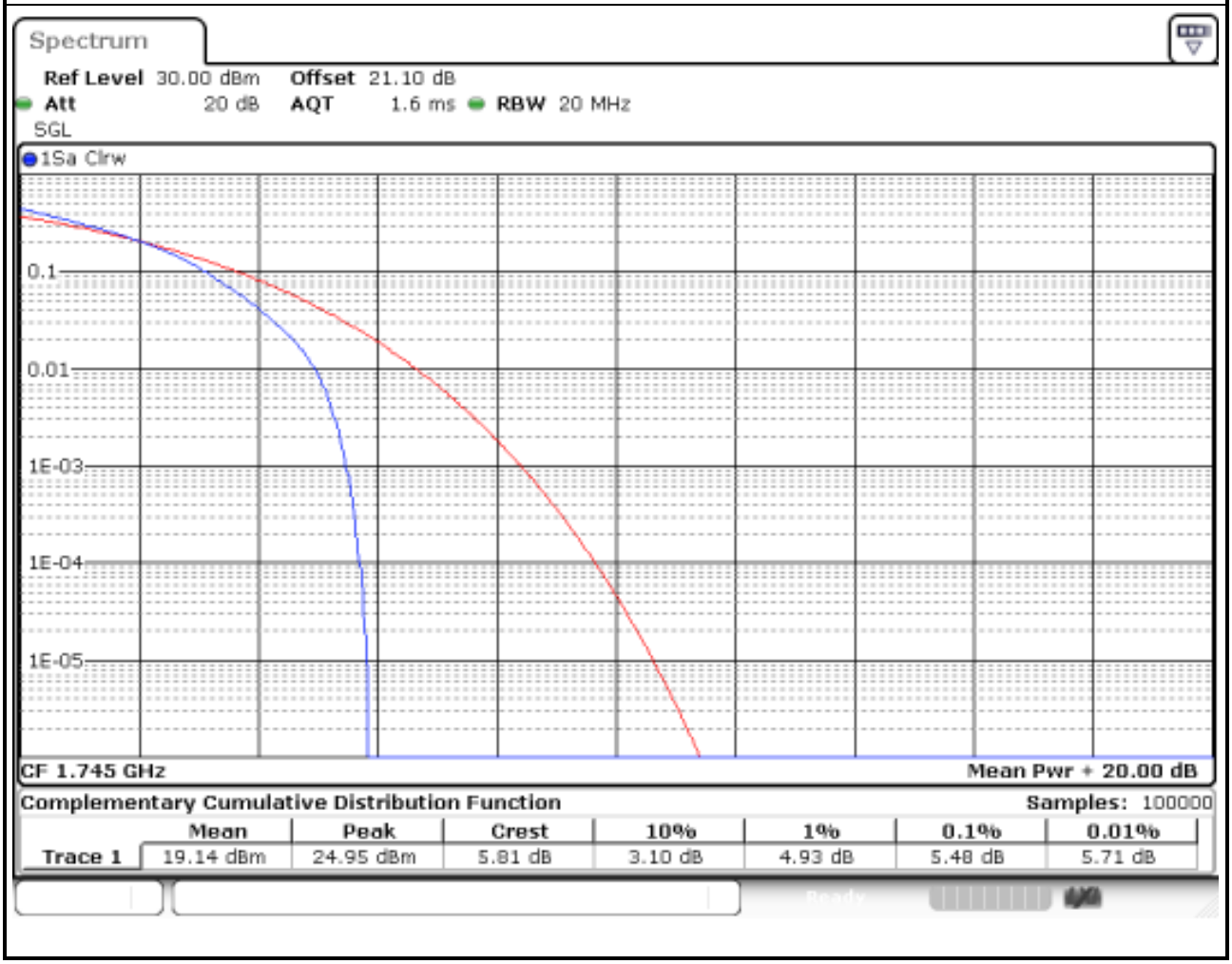
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 4	15	QPSK	20025	1717.5	4.70
LTE Band 4	15	QPSK	20175	1732.5	4.75
LTE Band 4	15	QPSK	20325	1747.5	4.70
LTE Band 4	15	16QAM	20025	1717.5	5.48
LTE Band 4	15	16QAM	20175	1732.5	5.57
LTE Band 4	15	16QAM	20325	1747.5	5.45

Worst plots



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 4	20	QPSK	20050	1720.0	4.43
LTE Band 4	20	QPSK	20175	1732.5	4.52
LTE Band 4	20	QPSK	20300	1745.0	4.46
LTE Band 4	20	16QAM	20050	1720.0	5.45
LTE Band 4	20	16QAM	20175	1732.5	5.45
LTE Band 4	20	16QAM	20300	1745.0	5.48

Worst plots



3.7 Frequency Stability

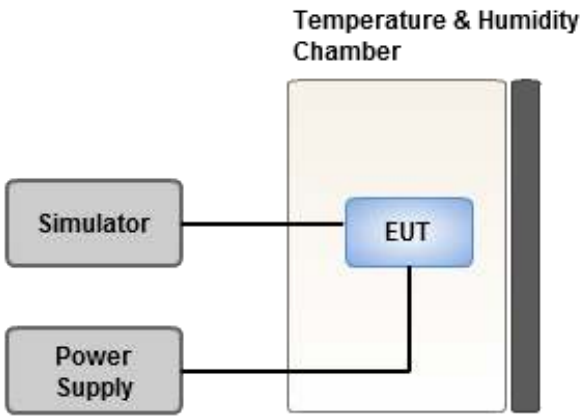
3.7.1 Limit of Frequency Stability

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.7.2 Test Procedures

1. EUT was placed at temperature chamber and connected to an external power supply.
2. Temperature and voltage condition shall be tested to confirm frequency stability.
3. Temperature range is from -40~55°C and voltage range is from lowest to highest working voltage.
4. Tem Link up EUT and simulator. Confirm frequency drift value of simulator and record it.

3.7.3 Test Setup



3.7.4 Test Result of Frequency Stability

Channel Bandwidth: 1.4MHz

Frequency: 1732.5MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	-0.005	2.5
T20°CVmin	0.006	2.5
T85°CVnom	-0.009	2.5
T80°CVnom	-0.011	2.5
T70°CVnom	-0.008	2.5
T60°CVnom	0.008	2.5
T50°CVnom	-0.006	2.5
T40°CVnom	0.009	2.5
T30°CVnom	-0.008	2.5
T20°CVnom	0.006	2.5
T10°CVnom	-0.003	2.5
T0°CVnom	0.004	2.5
T-10°CVnom	0.01	2.5
T-20°CVnom	-0.012	2.5
T-30°CVnom	-0.009	2.5
T-40°CVnom	-0.006	2.5
Vnom [Vdc]: 3.8	Vmax [Vdc]: 4.2	Vmin [Vdc]: 3.4
Tnom [°C]: 20	Tmax [°C]: 85	Tmin [°C]: -40

Channel Bandwidth: 3MHz

Frequency: 1732.5MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	-0.004	2.5
T20°CVmin	-0.003	2.5
T85°CVnom	0.01	2.5
T80°CVnom	0.008	2.5
T70°CVnom	-0.009	2.5
T60°CVnom	0.008	2.5
T50°CVnom	0.005	2.5
T40°CVnom	-0.007	2.5
T30°CVnom	-0.005	2.5
T20°CVnom	0.003	2.5
T10°CVnom	-0.005	2.5
T0°CVnom	-0.006	2.5
T-10°CVnom	-0.006	2.5
T-20°CVnom	-0.004	2.5
T-30°CVnom	-0.004	2.5
T-40°CVnom	-0.01	2.5
Vnom [Vdc]: 3.8	Vmax [Vdc]: 4.2	Vmin [Vdc]: 3.4
Tnom [°C]: 20	Tmax [°C]: 85	Tmin [°C]: -40

Channel Bandwidth: 5MHz

Frequency: 1732.5MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	0.005	2.5
T20°CVmin	-0.004	2.5
T85°CVnom	0.008	2.5
T80°CVnom	0.009	2.5
T70°CVnom	-0.01	2.5
T60°CVnom	-0.005	2.5
T50°CVnom	0.009	2.5
T40°CVnom	-0.007	2.5
T30°CVnom	-0.005	2.5
T20°CVnom	0.007	2.5
T10°CVnom	-0.003	2.5
T0°CVnom	-0.004	2.5
T-10°CVnom	0.006	2.5
T-20°CVnom	-0.006	2.5
T-30°CVnom	-0.004	2.5
T-40°CVnom	-0.009	2.5
Vnom [Vdc]: 3.8	Vmax [Vdc]: 4.2	Vmin [Vdc]: 3.4
Tnom [°C]: 20	Tmax [°C]: 85	Tmin [°C]: -40

Channel Bandwidth: 10MHz

Frequency: 1732.5MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	-0.004	2.5
T20°CVmin	0.005	2.5
T85°CVnom	0.011	2.5
T80°CVnom	-0.009	2.5
T70°CVnom	-0.005	2.5
T60°CVnom	-0.006	2.5
T50°CVnom	-0.005	2.5
T40°CVnom	-0.004	2.5
T30°CVnom	-0.011	2.5
T20°CVnom	0.012	2.5
T10°CVnom	-0.004	2.5
T0°CVnom	-0.006	2.5
T-10°CVnom	0.008	2.5
T-20°CVnom	0.009	2.5
T-30°CVnom	-0.009	2.5
T-40°CVnom	-0.011	2.5
Vnom [Vdc]: 3.8	Vmax [Vdc]: 4.2	Vmin [Vdc]: 3.4
Tnom [°C]: 20	Tmax [°C]: 85	Tmin [°C]: -40

Channel Bandwidth: 15MHz

Frequency: 1732.5MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	-0.004	2.5
T20°CVmin	-0.005	2.5
T85°CVnom	-0.009	2.5
T80°CVnom	0.01	2.5
T70°CVnom	0.01	2.5
T60°CVnom	0.004	2.5
T50°CVnom	-0.005	2.5
T40°CVnom	-0.006	2.5
T30°CVnom	-0.007	2.5
T20°CVnom	-0.008	2.5
T10°CVnom	-0.009	2.5
T0°CVnom	-0.007	2.5
T-10°CVnom	-0.003	2.5
T-20°CVnom	-0.007	2.5
T-30°CVnom	-0.005	2.5
T-40°CVnom	0.004	2.5
Vnom [Vdc]: 3.8	Vmax [Vdc]: 4.2	Vmin [Vdc]: 3.4
Tnom [°C]: 20	Tmax [°C]: 85	Tmin [°C]: -40

Channel Bandwidth: 20MHz

Frequency: 1732.5MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	-0.005	2.5
T20°CVmin	-0.005	2.5
T85°CVnom	0.007	2.5
T80°CVnom	0.007	2.5
T70°CVnom	-0.007	2.5
T60°CVnom	-0.006	2.5
T50°CVnom	0.005	2.5
T40°CVnom	0.009	2.5
T30°CVnom	-0.011	2.5
T20°CVnom	-0.009	2.5
T10°CVnom	0.004	2.5
T0°CVnom	-0.008	2.5
T-10°CVnom	-0.009	2.5
T-20°CVnom	0.011	2.5
T-30°CVnom	0.004	2.5
T-40°CVnom	-0.004	2.5
Vnom [Vdc]: 3.8	Vmax [Vdc]: 4.2	Vmin [Vdc]: 3.4
Tnom [°C]: 20	Tmax [°C]: 85	Tmin [°C]: -40

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou	**Kwei Shan**	**Kwei Shan Site II**
Tel: 886-2-2601-1640	Tel: 886-3-271-8666	Tel: 886-3-271-8640
No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan, R.O.C.	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666
Fax: 886-3-318-0155
Email: ICC_Service@icertifi.com.tw

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