FCC Test Report

FCC ID	:	**MXF-WLTFQT141GN**
Equipment	:	**Cat4 Indoor CPE**
Model No.	:	**WLTFQT-141GN**
Brand Name	:	**Gemtek**
Multiple Listing	:	**Refer to item 1.1.1 for more details.**
Applicant	:	**Gemtek Technology Co., Ltd.**
Address	:	**No. 15-1 Zhonghua Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 30352.**
Standard	:	**47 CFR FCC Part 27 Subpart L**
Received Date	:	**May 17, 2018**
Tested Date	:	**May 24 ~ May 30, 2018**

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**

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FG851703P27	Rev. 01	Initial issue	Jun. 27, 2018

Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 / 27.50(d)(4)	Equivalent Isotropically Radiated Power	Power[dBm]: 27.89	Pass
2.1053 / 27.53(h)	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 / 27.53(h)	Conducted Emissions	Meet the requirement of limit	Pass
27.53(h)	Band Edge Measurement	Meet the requirement of limit	Pass
2.1049 / 27.53(h)	Occupied Bandwidth	Meet the requirement of limit	Pass
27.50(d)(5)	Peak to Average Ratio	Meet the requirement of limit	Pass
2.1055 / 27.54	Frequency Stability	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
Gemtek	WLTFQT-141GN	Cat4 Indoor CPE	Main tested model.
Blu-Castle	BC-4GMCPGa		For marketing purpose.
✦ All models are electrically identical, different model names are for marketing purpose.			

1.1.2 Specification of the Equipment under Test (EUT)

Operating Frequency (MHz)	LTE Band 4: Channel Bandwidth: 1.4MHz: 1710.7~1754.3 Channel Bandwidth: 3MHz: 1711.5~1753.5 Channel Bandwidth: 5MHz: 1712.5~1752.5 Channel Bandwidth: 10MHz: 1715~1750 Channel Bandwidth: 15MHz: 1717.5~1747.5 Channel Bandwidth: 20MHz: 1720~1745
Modulation Type	QPSK, 16QAM (Uplink)
Release Version	9
Duplex Mode	FDD
UE Category	Cat. 4

1.1.3 Maximum EIRP and Emission Designator

Mode	Modulation	Maximum EIRP (W)	Emission Designator
LTE Band 4, CB: 1.4MHz	QPSK	0.575	1M09G7D
LTE Band 4, CB: 1.4MHz	16QAM	0.459	1M09W7D
LTE Band 4, CB: 3MHz	QPSK	0.583	2M68G7D
LTE Band 4, CB: 3MHz	16QAM	0.452	2M69W7D
LTE Band 4, CB: 5MHz	QPSK	0.615	4M49G7D
LTE Band 4, CB: 5MHz	16QAM	0.462	4M48W7D
LTE Band 4, CB: 10MHz	QPSK	0.596	8M95G7D
LTE Band 4, CB: 10MHz	16QAM	0.458	8M93W7D
LTE Band 4, CB: 15MHz	QPSK	0.582	13M4G7D
LTE Band 4, CB: 15MHz	16QAM	0.450	13M4W7D
LTE Band 4, CB: 20MHz	QPSK	0.570	17M9G7D
LTE Band 4, CB: 20MHz	16QAM	0.460	17M9W7D

1.1.4 Antenna Details

Type	Gain (dBi)	Connector	Remark
Monopole	3.14	No	---

1.1.5 EUT Operational Condition

Supply Voltage	12Vdc from AC adapter		
Operational Voltage	☒ Vnom (120 V)	☒ Vmax (138 V)	☒ Vmin (102 V)
Operational Climatic	☒ Tnom (20°C)	☒ Tmax (50°C)	☒ Tmin (-30°C)

1.1.6 Operating Channel List

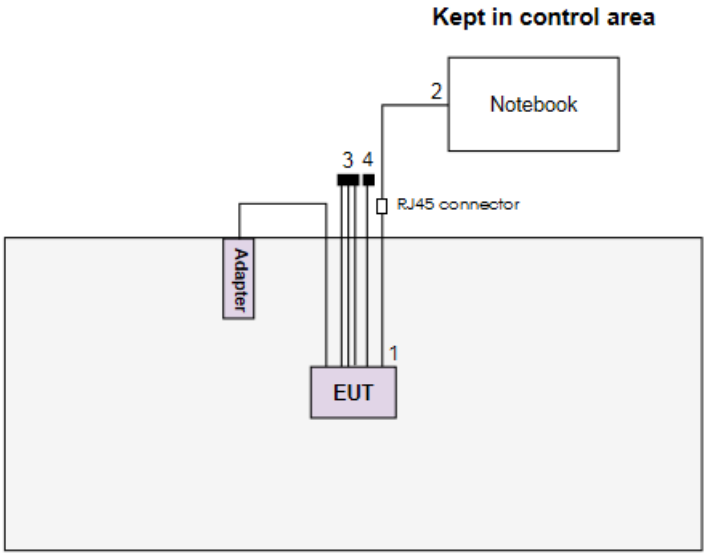
LTE Band 4		
Channel Bandwidth (MHz)	**Channel**	**Frequency (MHz)**
1.4	19957	1710.7
1.4	20175	1732.5
1.4	20393	1754.3
3	19965	1711.5
3	20175	1732.5
3	20385	1753.5
5	19975	1712.5
5	20175	1732.5
5	20375	1752.5
10	20000	1715.0
10	20175	1732.5
10	20350	1750.0
15	20025	1717.5
15	20175	1732.5
15	20325	1747.5
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**	**Remarks**
1	Notebook	DELL	Latitude E6430	DoC	---
2	RJ45 Load	ICC	---	---	---
3	RJ11 Load	ICC	---	---	---

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	RJ45, 1.5m non-shielded.
2	RJ45, 10m non-shielded.
3	RJ45, 1.5m(x3) non-shielded with load.
4	RJ11, 2m non-shielded with load.

1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Apr. 08, 2018	Apr. 07, 2019
Spectrum Analyzer	R&S	FSV40	101498	Dec. 04, 2017	Dec. 03, 2018
Receiver	R&S	ESR3	101658	Nov. 20, 2017	Nov. 19, 2018
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 25, 2017	Jul. 24, 2018
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 20, 2017	Dec. 19, 2018
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2017	Nov. 12, 2018
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 07, 2017	Dec. 06, 2018
Preamplifier	EMC	EMC02325	980225	Jul. 28, 2017	Jul. 27, 2018
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2017	Oct. 05, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16140/4	May 09, 2018	May 08, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 07, 2017	Dec. 06, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 07, 2017	Dec. 06, 2018
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	16052	Dec. 07, 2017	Dec. 06, 2018
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 07, 2017	Dec. 06, 2018
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 07, 2017	Dec. 06, 2018
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Apr. 08, 2018	Apr. 07, 2019
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 16, 2018	Apr. 15, 2019
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Apr. 08, 2018	Apr. 07, 2019
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Nov. 27, 2017	Nov. 26, 2018
AC POWER SOURCE	APC	AFC-500W	F312060012	Dec. 01, 2017	Nov. 30, 2018
Measurement Software	Sporton	Sporton_1	1.3.30	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
ANSI C63.4-2014
ANSI C63.26-2015
FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
FCC KDB 971168 D02 Misc Rev Approv License Devices v02r01
FCC KDB 412172 D01 Determining ERP and EIRP v01r01
FCC KDB 442401 ERP/EIRP measurement procedures for licensed radio service devices

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 ^{o}C
Conducted emission	±2.670 dB
AC conducted emission	±2.92 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	21-22°C / 63%	Vincent Yeh Akun Chung
RF conducted	TH01-WS	23°C / 63%	Brad Wu

- 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 20350 20325 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

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.

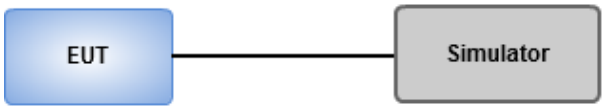
1. EIRP = $P_T + G_T - L_C$

   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 Conducted power (dBm)

Band / Channel Bandwidth			LTE Band 4 / CB: 1.4MHz		
Channel			19957	20175	20393
Frequency (MHz)			1710.7	1732.5	1754.3
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	24.15	24.25	24.25
	1	2	24.32	24.44	**24.46**
	1	5	24.18	24.25	24.30
	3	0	24.23	24.30	24.35
	3	1	24.27	24.38	24.31
	3	2	24.28	24.40	24.44
	6	0	23.30	23.24	23.45
16QAM	1	0	23.19	23.05	23.28
	1	2	23.18	23.13	23.39
	1	5	22.98	22.98	23.27
	3	0	23.15	23.10	23.30
	3	1	23.27	23.26	23.43
	3	2	23.48	23.25	23.40
	6	0	21.97	22.07	22.41

Band / Channel Bandwidth			LTE Band 4 / CB: 3MHz		
Channel			19965	20175	20385
Frequency (MHz)			1711.5	1732.5	1753.5
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	24.27	24.12	24.39
	1	7	24.29	24.23	**24.52**
	1	14	24.07	24.03	24.35
	8	0	23.46	23.25	23.55
	8	4	23.34	23.31	23.49
	8	7	23.32	23.30	23.45
	15	0	23.38	23.27	23.47
16QAM	1	0	23.02	23.39	23.24
	1	7	23.23	23.41	23.33
	1	14	23.18	23.37	23.22
	8	0	22.37	22.52	22.50
	8	4	22.33	22.39	22.53
	8	7	22.32	22.38	22.46
	15	0	22.08	22.13	22.48

Band / Channel Bandwidth			LTE Band 4 / CB: 5MHz		
Channel			19975	20175	20375
Frequency (MHz)			1712.5	1732.5	1752.5
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	24.14	24.29	24.51
	1	12	24.27	24.38	**24.75**
	1	24	23.95	24.14	24.51
	12	0	23.31	23.23	23.66
	12	6	23.20	23.32	23.73
	12	11	23.24	23.25	23.69
	25	0	23.29	23.29	23.68
16QAM	1	0	23.05	23.19	23.31
	1	12	23.12	23.36	23.51
	1	24	22.91	23.32	23.29
	12	0	22.09	22.27	22.67
	12	6	22.16	22.17	22.59
	12	11	22.05	22.10	22.77
	25	0	22.19	22.15	22.69

Band / Channel Bandwidth			LTE Band 4 / CB: 10MHz		
Channel			20000	20175	20350
Frequency (MHz)			1715	1732.5	1750
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	24.23	24.03	24.35
	1	24	24.36	24.60	**24.61**
	1	49	24.11	24.18	24.26
	25	0	23.41	23.38	23.53
	25	12	23.36	23.38	23.56
	25	24	23.23	23.39	23.53
	50	0	23.41	23.38	23.54
16QAM	1	0	23.08	22.99	23.39
	1	24	23.26	23.28	23.47
	1	49	23.11	23.04	23.38
	25	0	22.47	22.43	22.46
	25	12	22.42	22.33	22.81
	25	24	22.29	22.12	22.60
	50	0	22.25	22.22	22.54

Band / Channel Bandwidth			LTE Band 4 / CB: 15MHz		
Channel			20025	20175	20325
Frequency (MHz)			1717.5	1732.5	1747.5
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	24.25	24.19	24.38
	1	37	24.42	24.30	**24.51**
	1	74	24.15	24.12	24.32
	36	0	23.45	23.35	23.54
	36	18	23.49	23.39	23.40
	36	37	23.35	23.39	23.48
	75	0	23.29	23.40	23.53
16QAM	1	0	23.18	23.06	23.30
	1	37	23.32	23.21	23.39
	1	74	23.08	23.14	23.29
	36	0	22.39	22.26	22.50
	36	18	22.33	22.23	22.39
	36	37	22.33	22.23	22.48
	75	0	22.27	22.24	22.49

Band / Channel Bandwidth			LTE Band 4 / CB: 20MHz		
Channel			20050	20175	20300
Frequency (MHz)			1720	1732.5	1745
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	24.00	24.00	24.34
	1	49	**24.42**	24.23	24.38
	1	99	24.18	24.17	24.14
	50	0	23.41	23.34	23.54
	50	24	23.46	23.38	23.39
	50	49	23.41	23.30	23.43
	100	0	23.43	23.37	23.44
16QAM	1	0	23.28	23.17	23.31
	1	49	23.49	23.31	23.44
	1	99	23.30	23.26	23.29
	50	0	22.37	22.25	22.59
	50	24	22.35	22.42	22.55
	50	49	22.35	22.34	22.29
	100	0	22.23	22.29	22.33

3.1.5 Test Result of Equivalent Isotropically Radiated Power (dBm)

LTE Band4 CB:1.4MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	19957	1710.7	1	0	24.15	0.260	3.14	27.29	0.536	1
			1	2	24.32	0.270	3.14	27.46	0.557	1
			1	5	24.18	0.262	3.14	27.32	0.540	1
			3	0	24.23	0.265	3.14	27.37	0.546	1
			3	1	24.27	0.267	3.14	27.41	0.551	1
			3	2	24.28	0.268	3.14	27.42	0.552	1
			6	0	23.30	0.214	3.14	26.44	0.441	1
	20175	1732.5	1	0	24.25	0.266	3.14	27.39	0.548	1
			1	2	24.44	0.278	3.14	27.58	0.573	1
			1	5	24.25	0.266	3.14	27.39	0.548	1
			3	0	24.30	0.269	3.14	27.44	0.555	1
			3	1	24.38	0.274	3.14	27.52	0.565	1
			3	2	24.40	0.275	3.14	27.54	0.568	1
			6	0	23.24	0.211	3.14	26.38	0.435	1
	20393	1754.3	1	0	24.25	0.266	3.14	27.39	0.548	1
			1	2	24.46	0.279	3.14	27.60	0.575	1
			1	5	24.30	0.269	3.14	27.44	0.555	1
			3	0	24.35	0.272	3.14	27.49	0.561	1
			3	1	24.31	0.270	3.14	27.45	0.556	1
			3	2	24.44	0.278	3.14	27.58	0.573	1
			6	0	23.45	0.221	3.14	26.59	0.456	1

LTE Band4 CB:1.4MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
16QAM	19957	1710.7	1	0	23.19	0.208	3.14	26.33	0.430	1
			1	2	23.18	0.208	3.14	26.32	0.429	1
			1	5	22.98	0.199	3.14	26.12	0.409	1
			3	0	23.15	0.207	3.14	26.29	0.426	1
			3	1	23.27	0.212	3.14	26.41	0.438	1
			3	2	23.48	0.223	3.14	26.62	0.459	1
			6	0	21.97	0.157	3.14	25.11	0.324	1
	20175	1732.5	1	0	23.05	0.202	3.14	26.19	0.416	1
			1	2	23.13	0.206	3.14	26.27	0.424	1
			1	5	22.98	0.199	3.14	26.12	0.409	1
			3	0	23.10	0.204	3.14	26.24	0.421	1
			3	1	23.26	0.212	3.14	26.40	0.437	1
			3	2	23.25	0.211	3.14	26.39	0.436	1
			6	0	22.07	0.161	3.14	25.21	0.332	1
	20393	1754.3	1	0	23.28	0.213	3.14	26.42	0.439	1
			1	2	23.39	0.218	3.14	26.53	0.450	1
			1	5	23.27	0.212	3.14	26.41	0.438	1
			3	0	23.30	0.214	3.14	26.44	0.441	1
			3	1	23.43	0.220	3.14	26.57	0.454	1
			3	2	23.40	0.219	3.14	26.54	0.451	1
			6	0	22.41	0.174	3.14	25.55	0.359	1

LTE Band4 CB:3MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	19965	1711.5	1	0	24.27	0.267	3.14	27.41	0.551	1
			1	7	24.29	0.269	3.14	27.43	0.553	1
			1	14	24.07	0.255	3.14	27.21	0.526	1
			8	0	23.46	0.222	3.14	26.60	0.457	1
			8	4	23.34	0.216	3.14	26.48	0.445	1
			8	7	23.32	0.215	3.14	26.46	0.443	1
			15	0	23.38	0.218	3.14	26.52	0.449	1
	20175	1732.5	1	0	24.12	0.258	3.14	27.26	0.532	1
			1	7	24.23	0.265	3.14	27.37	0.546	1
			1	14	24.03	0.253	3.14	27.17	0.521	1
			8	0	23.25	0.211	3.14	26.39	0.436	1
			8	4	23.31	0.214	3.14	26.45	0.442	1
			8	7	23.30	0.214	3.14	26.44	0.441	1
			15	0	23.27	0.212	3.14	26.41	0.438	1
	20385	1753.5	1	0	24.39	0.275	3.14	27.53	0.566	1
			1	7	24.52	0.283	3.14	27.66	0.583	1
			1	14	24.35	0.272	3.14	27.49	0.561	1
			8	0	23.55	0.226	3.14	26.69	0.467	1
			8	4	23.49	0.223	3.14	26.63	0.460	1
			8	7	23.45	0.221	3.14	26.59	0.456	1
			15	0	23.47	0.222	3.14	26.61	0.458	1

LTE Band4 CB:3MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
16QAM	19965	1711.5	1	0	23.02	0.200	3.14	26.16	0.413	1
			1	7	23.23	0.210	3.14	26.37	0.434	1
			1	14	23.18	0.208	3.14	26.32	0.429	1
			8	0	22.37	0.173	3.14	25.51	0.356	1
			8	4	22.33	0.171	3.14	25.47	0.352	1
			8	7	22.32	0.171	3.14	25.46	0.352	1
			15	0	22.08	0.161	3.14	25.22	0.333	1
	20175	1732.5	1	0	23.39	0.218	3.14	26.53	0.450	1
			1	7	23.41	0.219	3.14	26.55	0.452	1
			1	14	23.37	0.217	3.14	26.51	0.448	1
			8	0	22.52	0.179	3.14	25.66	0.368	1
			8	4	22.39	0.173	3.14	25.53	0.357	1
			8	7	22.38	0.173	3.14	25.52	0.356	1
			15	0	22.13	0.163	3.14	25.27	0.337	1
	20385	1753.5	1	0	23.24	0.211	3.14	26.38	0.435	1
			1	7	23.33	0.215	3.14	26.47	0.444	1
			1	14	23.22	0.210	3.14	26.36	0.433	1
			8	0	22.50	0.178	3.14	25.64	0.366	1
			8	4	22.53	0.179	3.14	25.67	0.369	1
			8	7	22.46	0.176	3.14	25.60	0.363	1
			15	0	22.48	0.177	3.14	25.62	0.365	1

LTE Band4 CB:5MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	19975	1712.5	1	0	24.14	0.259	3.14	27.28	0.535	1
			1	12	24.27	0.267	3.14	27.41	0.551	1
			1	24	23.95	0.248	3.14	27.09	0.512	1
			12	0	23.31	0.214	3.14	26.45	0.442	1
			12	6	23.20	0.209	3.14	26.34	0.431	1
			12	11	23.24	0.211	3.14	26.38	0.435	1
			25	0	23.29	0.213	3.14	26.43	0.440	1
	20175	1732.5	1	0	24.29	0.269	3.14	27.43	0.553	1
			1	12	24.38	0.274	3.14	27.52	0.565	1
			1	24	24.14	0.259	3.14	27.28	0.535	1
			12	0	23.23	0.210	3.14	26.37	0.434	1
			12	6	23.32	0.215	3.14	26.46	0.443	1
			12	11	23.25	0.211	3.14	26.39	0.436	1
			25	0	23.29	0.213	3.14	26.43	0.440	1
	20375	1752.5	1	0	24.51	0.282	3.14	27.65	0.582	1
			1	**12**	**24.75**	**0.299**	**3.14**	**27.89**	**0.615**	**1**
			1	24	24.51	0.282	3.14	27.65	0.582	1
			12	0	23.66	0.232	3.14	26.80	0.479	1
			12	6	23.73	0.236	3.14	26.87	0.486	1
			12	11	23.69	0.234	3.14	26.83	0.482	1
			25	0	23.68	0.233	3.14	26.82	0.481	1

LTE Band4 CB:5MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
16QAM	19975	1712.5	1	0	23.05	0.202	3.14	26.19	0.416	1
			1	12	23.12	0.205	3.14	26.26	0.423	1
			1	24	22.91	0.195	3.14	26.05	0.403	1
			12	0	22.09	0.162	3.14	25.23	0.333	1
			12	6	22.16	0.164	3.14	25.30	0.339	1
			12	11	22.05	0.160	3.14	25.19	0.330	1
			25	0	22.19	0.166	3.14	25.33	0.341	1
	20175	1732.5	1	0	23.19	0.208	3.14	26.33	0.430	1
			1	12	23.36	0.217	3.14	26.50	0.447	1
			1	24	23.32	0.215	3.14	26.46	0.443	1
			12	0	22.27	0.169	3.14	25.41	0.348	1
			12	6	22.17	0.165	3.14	25.31	0.340	1
			12	11	22.10	0.162	3.14	25.24	0.334	1
			25	0	22.15	0.164	3.14	25.29	0.338	1
	20375	1752.5	1	0	23.31	0.214	3.14	26.45	0.442	1
			1	12	23.51	0.224	3.14	26.65	0.462	1
			1	24	23.29	0.213	3.14	26.43	0.440	1
			12	0	22.67	0.185	3.14	25.81	0.381	1
			12	6	22.59	0.182	3.14	25.73	0.374	1
			12	11	22.77	0.189	3.14	25.91	0.390	1
			25	0	22.69	0.186	3.14	25.83	0.383	1

LTE Band4 CB:10MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	20000	1715	1	0	24.23	0.265	3.14	27.37	0.546	1
			1	24	24.36	0.273	3.14	27.50	0.562	1
			1	49	24.11	0.258	3.14	27.25	0.531	1
			25	0	23.41	0.219	3.14	26.55	0.452	1
			25	12	23.36	0.217	3.14	26.50	0.447	1
			25	24	23.23	0.210	3.14	26.37	0.434	1
			50	0	23.41	0.219	3.14	26.55	0.452	1
	20175	1732.5	1	0	24.03	0.253	3.14	27.17	0.521	1
			1	24	24.60	0.288	3.14	27.74	0.594	1
			1	49	24.18	0.262	3.14	27.32	0.540	1
			25	0	23.38	0.218	3.14	26.52	0.449	1
			25	12	23.38	0.218	3.14	26.52	0.449	1
			25	24	23.39	0.218	3.14	26.53	0.450	1
			50	0	23.38	0.218	3.14	26.52	0.449	1
	20350	1750	1	0	24.35	0.272	3.14	27.49	0.561	1
			1	24	24.61	0.289	3.14	27.75	0.596	1
			1	49	24.26	0.267	3.14	27.40	0.550	1
			25	0	23.53	0.225	3.14	26.67	0.465	1
			25	12	23.56	0.227	3.14	26.70	0.468	1
			25	24	23.53	0.225	3.14	26.67	0.465	1
			50	0	23.54	0.226	3.14	26.68	0.466	1

LTE Band4 CB:10MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
16QAM	20000	1715	1	0	23.08	0.203	3.14	26.22	0.419	1
			1	24	23.26	0.212	3.14	26.40	0.437	1
			1	49	23.11	0.205	3.14	26.25	0.422	1
			25	0	22.47	0.177	3.14	25.61	0.364	1
			25	12	22.42	0.175	3.14	25.56	0.360	1
			25	24	22.29	0.169	3.14	25.43	0.349	1
			50	0	22.25	0.168	3.14	25.39	0.346	1
	20175	1732.5	1	0	22.99	0.199	3.14	26.13	0.410	1
			1	24	23.28	0.213	3.14	26.42	0.439	1
			1	49	23.04	0.201	3.14	26.18	0.415	1
			25	0	22.43	0.175	3.14	25.57	0.361	1
			25	12	22.33	0.171	3.14	25.47	0.352	1
			25	24	22.12	0.163	3.14	25.26	0.336	1
			50	0	22.22	0.167	3.14	25.36	0.344	1
	20350	1750	1	0	23.39	0.218	3.14	26.53	0.450	1
			1	24	23.47	0.222	3.14	26.61	0.458	1
			1	49	23.38	0.218	3.14	26.52	0.449	1
			25	0	22.46	0.176	3.14	25.60	0.363	1
			25	12	22.81	0.191	3.14	25.95	0.394	1
			25	24	22.60	0.182	3.14	25.74	0.375	1
			50	0	22.54	0.179	3.14	25.68	0.370	1

LTE Band4 CB:15MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	20025	1717.5	1	0	24.25	0.266	3.14	27.39	0.548	1
			1	37	24.42	0.277	3.14	27.56	0.570	1
			1	74	24.15	0.260	3.14	27.29	0.536	1
			36	0	23.45	0.221	3.14	26.59	0.456	1
			36	18	23.49	0.223	3.14	26.63	0.460	1
			36	37	23.35	0.216	3.14	26.49	0.446	1
			75	0	23.29	0.213	3.14	26.43	0.440	1
	20175	1732.5	1	0	24.19	0.262	3.14	27.33	0.541	1
			1	37	24.30	0.269	3.14	27.44	0.555	1
			1	74	24.12	0.258	3.14	27.26	0.532	1
			36	0	23.35	0.216	3.14	26.49	0.446	1
			36	18	23.39	0.218	3.14	26.53	0.450	1
			36	37	23.39	0.218	3.14	26.53	0.450	1
			75	0	23.40	0.219	3.14	26.54	0.451	1
	20325	1747.5	1	0	24.38	0.274	3.14	27.52	0.565	1
			1	37	24.51	0.282	3.14	27.65	0.582	1
			1	74	24.32	0.270	3.14	27.46	0.557	1
			36	0	23.54	0.226	3.14	26.68	0.466	1
			36	18	23.40	0.219	3.14	26.54	0.451	1
			36	37	23.48	0.223	3.14	26.62	0.459	1
			75	0	23.53	0.225	3.14	26.67	0.465	1

LTE Band4 CB:15MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
16QAM	20025	1717.5	1	0	23.18	0.208	3.14	26.32	0.429	1
			1	37	23.32	0.215	3.14	26.46	0.443	1
			1	74	23.08	0.203	3.14	26.22	0.419	1
			36	0	22.39	0.173	3.14	25.53	0.357	1
			36	18	22.33	0.171	3.14	25.47	0.352	1
			36	37	22.33	0.171	3.14	25.47	0.352	1
			75	0	22.27	0.169	3.14	25.41	0.348	1
	20175	1732.5	1	0	23.06	0.202	3.14	26.20	0.417	1
			1	37	23.21	0.209	3.14	26.35	0.432	1
			1	74	23.14	0.206	3.14	26.28	0.425	1
			36	0	22.26	0.168	3.14	25.40	0.347	1
			36	18	22.23	0.167	3.14	25.37	0.344	1
			36	37	22.23	0.167	3.14	25.37	0.344	1
			75	0	22.24	0.167	3.14	25.38	0.345	1
	20325	1747.5	1	0	23.30	0.214	3.14	26.44	0.441	1
			1	37	23.39	0.218	3.14	26.53	0.450	1
			1	74	23.29	0.213	3.14	26.43	0.440	1
			36	0	22.50	0.178	3.14	25.64	0.366	1
			36	18	22.39	0.173	3.14	25.53	0.357	1
			36	37	22.48	0.177	3.14	25.62	0.365	1
			75	0	22.49	0.177	3.14	25.63	0.366	1

LTE Band4 CB:20MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
QPSK	20050	1720	1	0	24.00	0.251	3.14	27.14	0.518	1
			1	49	24.42	0.277	3.14	27.56	0.570	1
			1	99	24.18	0.262	3.14	27.32	0.540	1
			50	0	23.41	0.219	3.14	26.55	0.452	1
			50	24	23.46	0.222	3.14	26.60	0.457	1
			50	49	23.41	0.219	3.14	26.55	0.452	1
			100	0	23.43	0.220	3.14	26.57	0.454	1
	20175	1732.5	1	0	24.00	0.251	3.14	27.14	0.518	1
			1	49	24.23	0.265	3.14	27.37	0.546	1
			1	99	24.17	0.261	3.14	27.31	0.538	1
			50	0	23.34	0.216	3.14	26.48	0.445	1
			50	24	23.38	0.218	3.14	26.52	0.449	1
			50	49	23.30	0.214	3.14	26.44	0.441	1
			100	0	23.37	0.217	3.14	26.51	0.448	1
	20300	1745	1	0	24.34	0.272	3.14	27.48	0.560	1
			1	49	24.38	0.274	3.14	27.52	0.565	1
			1	99	24.14	0.259	3.14	27.28	0.535	1
			50	0	23.54	0.226	3.14	26.68	0.466	1
			50	24	23.39	0.218	3.14	26.53	0.450	1
			50	49	23.43	0.220	3.14	26.57	0.454	1
			100	0	23.44	0.221	3.14	26.58	0.455	1

LTE Band4 CB:20MHz	Channel	Freq. (MHz)	RB	RB Offset	Conducted Average Power (dBm)	Conducted Power (W)	Ant. Gain (dB)	E.I.R.P Power (dBm)	E.I.R.P Power (W)	E.I.R.P Limit (W)
16QAM	20050	1720	1	0	23.28	0.213	3.14	26.42	0.439	1
			1	49	23.49	0.223	3.14	26.63	0.460	1
			1	99	23.30	0.214	3.14	26.44	0.441	1
			50	0	22.37	0.173	3.14	25.51	0.356	1
			50	24	22.35	0.172	3.14	25.49	0.354	1
			50	49	22.35	0.172	3.14	25.49	0.354	1
			100	0	22.23	0.167	3.14	25.37	0.344	1
	20175	1732.5	1	0	23.17	0.207	3.14	26.31	0.428	1
			1	49	23.31	0.214	3.14	26.45	0.442	1
			1	99	23.26	0.212	3.14	26.40	0.437	1
			50	0	22.25	0.168	3.14	25.39	0.346	1
			50	24	22.42	0.175	3.14	25.56	0.360	1
			50	49	22.34	0.171	3.14	25.48	0.353	1
			100	0	22.29	0.169	3.14	25.43	0.349	1
	20300	1745	1	0	23.31	0.214	3.14	26.45	0.442	1
			1	49	23.44	0.221	3.14	26.58	0.455	1
			1	99	23.29	0.213	3.14	26.43	0.440	1
			50	0	22.59	0.182	3.14	25.73	0.374	1
			50	24	22.55	0.180	3.14	25.69	0.371	1
			50	49	22.29	0.169	3.14	25.43	0.349	1
			100	0	22.33	0.171	3.14	25.47	0.352	1

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

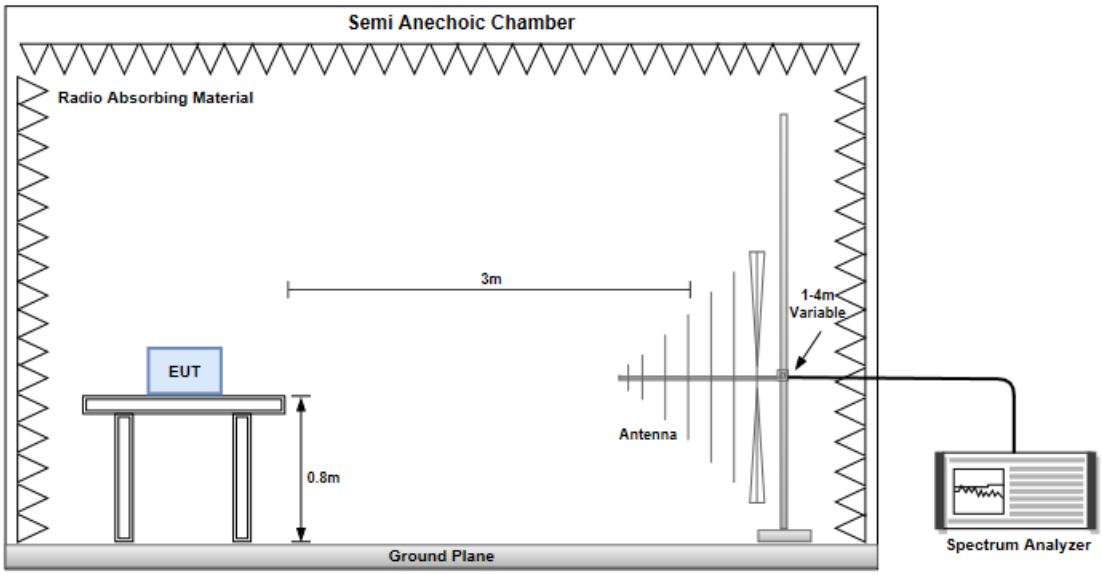
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB equal to -13 dBm.

3.2.2 Test Procedures

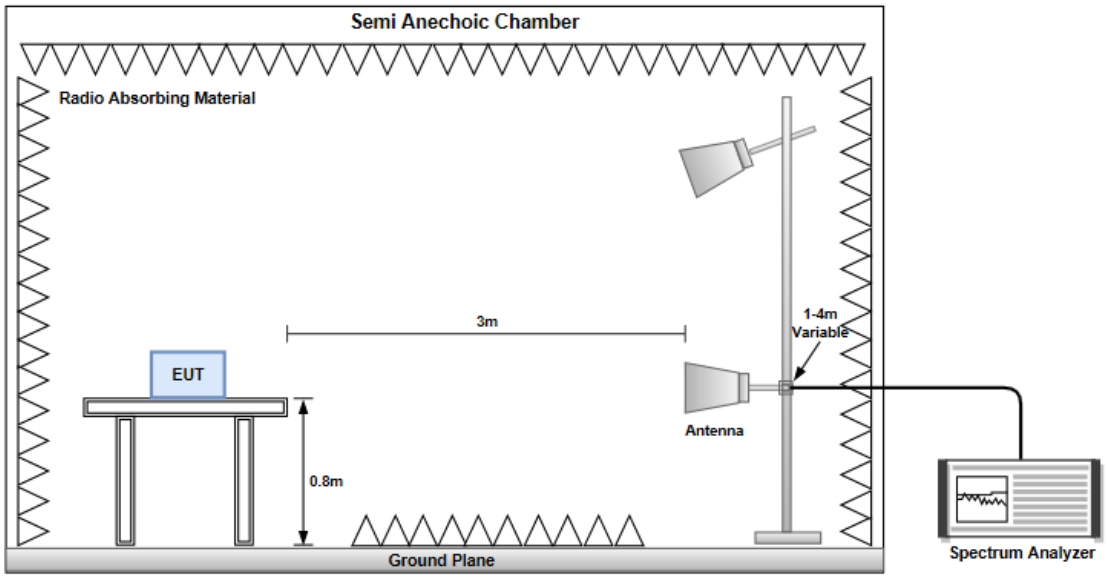
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at a height of 0.8 m test table above the ground plane.
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	-64.76	-13.00	-51.76	-72.72	-50.87	-13.89
101.78	H	-62.81	-13.00	-49.81	-60.96	-62.89	0.08
124.09	H	-65.80	-13.00	-52.80	-63.83	-64.78	-1.02
140.58	H	-64.38	-13.00	-51.38	-63.68	-62.95	-1.43
624.61	H	-61.87	-13.00	-48.87	-67.25	-65.36	3.49
749.74	H	-62.73	-13.00	-49.73	-71.28	-65.71	2.98
101.78	V	-57.25	-13.00	-44.25	-56.30	-57.33	0.08
124.09	V	-53.01	-13.00	-40.01	-52.92	-51.99	-1.02
140.58	V	-60.83	-13.00	-47.83	-62.36	-59.40	-1.43
499.48	V	-63.13	-13.00	-50.13	-67.14	-67.01	3.88
624.61	V	-57.08	-13.00	-44.08	-65.69	-60.57	3.49
749.74	V	-61.30	-13.00	-48.30	-70.46	-64.28	2.98

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	-65.55	-13.00	-52.55	-73.51	-51.66	-13.89
101.78	H	-64.04	-13.00	-51.04	-62.19	-64.12	0.08
140.58	H	-64.33	-13.00	-51.33	-63.63	-62.90	-1.43
374.35	H	-64.84	-13.00	-51.84	-66.74	-68.87	4.03
624.61	H	-62.83	-13.00	-49.83	-68.21	-66.32	3.49
749.74	H	-63.02	-13.00	-50.02	-71.57	-66.00	2.98
101.78	V	-57.05	-13.00	-44.05	-56.10	-57.13	0.08
124.09	V	-52.09	-13.00	-39.09	-52.00	-51.07	-1.02
140.58	V	-60.55	-13.00	-47.55	-62.08	-59.12	-1.43
499.48	V	-63.91	-13.00	-50.91	-67.92	-67.79	3.88
624.61	V	-57.24	-13.00	-44.24	-65.85	-60.73	3.49
749.74	V	-60.60	-13.00	-47.60	-69.76	-63.58	2.98

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)**
30.97	H	-65.48	-13.00	-52.48	-73.44	-51.59	-13.89
101.78	H	-63.89	-13.00	-50.89	-62.04	-63.97	0.08
140.58	H	-65.05	-13.00	-52.05	-64.35	-63.62	-1.43
374.35	H	-66.27	-13.00	-53.27	-68.17	-70.30	4.03
624.61	H	-61.76	-13.00	-48.76	-67.14	-65.25	3.49
749.74	H	-62.32	-13.00	-49.32	-70.87	-65.30	2.98
97.90	V	-58.45	-13.00	-45.45	-57.39	-58.66	0.21
124.09	V	-52.69	-13.00	-39.69	-52.60	-51.67	-1.02
140.58	V	-60.49	-13.00	-47.49	-62.02	-59.06	-1.43
499.48	V	-63.62	-13.00	-50.62	-67.63	-67.50	3.88
624.61	V	-56.77	-13.00	-43.77	-65.38	-60.26	3.49
479.74	V	-61.23	-13.00	-48.23	-70.39	-64.21	2.98

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

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)**
30.00	H	-64.55	-13.00	-51.55	-72.61	-50.48	-14.07
101.78	H	-63.10	-13.00	-50.10	-61.25	-63.18	0.08
140.58	H	-64.41	-13.00	-51.41	-63.71	-62.98	-1.43
374.35	H	-65.88	-13.00	-52.88	-67.78	-69.91	4.03
624.61	H	-62.43	-13.00	-49.43	-67.81	-65.92	3.49
749.74	H	-62.50	-13.00	-49.50	-71.05	-65.48	2.98
97.90	V	-56.73	-13.00	-43.73	-55.67	-56.94	0.21
124.09	V	-52.22	-13.00	-39.22	-52.13	-51.20	-1.02
140.58	V	-60.38	-13.00	-47.38	-61.91	-58.95	-1.43
499.48	V	-64.08	-13.00	-51.08	-68.09	-67.96	3.88
624.61	V	-56.59	-13.00	-43.59	-65.20	-60.08	3.49
749.74	V	-61.10	-13.00	-48.10	-70.26	-64.08	2.98

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

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)**
30.97	H	-65.62	-13.00	-52.62	-73.58	-51.73	-13.89
105.66	H	-64.32	-13.00	-51.32	-62.37	-64.19	-0.13
140.58	H	-64.45	-13.00	-51.45	-63.75	-63.02	-1.43
374.35	H	-65.09	-13.00	-52.09	-66.99	-69.12	4.03
624.61	H	-61.70	-13.00	-48.70	-67.08	-65.19	3.49
749.74	H	-61.79	-13.00	-48.79	-70.34	-64.77	2.98
101.78	V	-56.85	-13.00	-43.85	-55.90	-56.93	0.08
124.09	V	-52.87	-13.00	-39.87	-52.78	-51.85	-1.02
140.58	V	-61.64	-13.00	-48.64	-63.17	-60.21	-1.43
499.48	V	-63.62	-13.00	-50.62	-67.63	-67.50	3.88
624.61	V	-57.27	-13.00	-44.27	-65.88	-60.76	3.49
749.74	V	-61.10	-13.00	-48.10	-70.26	-64.08	2.98

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)**
105.66	H	-63.99	-13.00	-50.99	-62.04	-63.86	-0.13
124.09	H	-66.00	-13.00	-53.00	-64.03	-64.98	-1.02
140.58	H	-64.73	-13.00	-51.73	-64.03	-63.30	-1.43
374.35	H	-65.31	-13.00	-52.31	-67.21	-69.34	4.03
624.61	H	-63.18	-13.00	-50.18	-68.56	-66.67	3.49
749.74	H	-62.33	-13.00	-49.33	-70.88	-65.31	2.98
101.78	V	-57.75	-13.00	-44.75	-56.80	-57.83	0.08
124.09	V	-52.31	-13.00	-39.31	-52.22	-51.29	-1.02
142.52	V	-61.29	-13.00	-48.29	-62.87	-59.91	-1.38
499.48	V	-63.79	-13.00	-50.79	-67.80	-67.67	3.88
624.61	V	-56.98	-13.00	-43.98	-65.59	-60.47	3.49
749.74	V	-60.82	-13.00	-47.82	-69.98	-63.80	2.98

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	-49.93	-13.00	-36.93	-60.84	-56.41	6.48
5132.10	H	-41.40	-13.00	-28.40	-58.45	-47.31	5.91
6842.80	H	-29.61	-13.00	-16.61	-48.31	-33.81	4.20
3421.40	V	-48.46	-13.00	-35.46	-59.66	-54.94	6.48
5132.10	V	-45.69	-13.00	-32.69	-58.95	-51.60	5.91
6842.80	V	-27.81	-13.00	-14.81	-46.74	-32.01	4.20

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	-49.02	-13.00	-36.02	-60.40	-55.53	6.51
5197.50	H	-37.76	-13.00	-24.76	-54.59	-43.70	5.94
6930.00	H	-36.14	-13.00	-23.14	-54.69	-40.23	4.09
3465.00	V	-48.25	-13.00	-35.25	-59.86	-54.76	6.51
5197.50	V	-35.37	-13.00	-22.37	-52.51	-41.31	5.94
6930.00	V	-34.28	-13.00	-21.28	-53.33	-38.37	4.09

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	-49.31	-13.00	-36.31	-61.15	-55.85	6.54
5262.90	H	-37.82	-13.00	-24.82	-54.37	-43.79	5.97
7017.20	H	-30.99	-13.00	-17.99	-49.43	-34.97	3.98
3508.60	V	-50.05	-13.00	-37.05	-62.07	-56.59	6.54
5262.90	V	-39.35	-13.00	-26.35	-56.32	-45.32	5.97
7017.20	V	-28.70	-13.00	-15.70	-47.93	-32.68	3.98

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	-45.79	-13.00	-32.79	-56.73	-52.27	6.48
5134.50	H	-43.20	-13.00	-30.20	-60.24	-49.11	5.91
6846.00	H	-35.88	-13.00	-22.88	-54.57	-40.07	4.19
3423.00	V	-49.51	-13.00	-36.51	-60.73	-55.99	6.48
5134.50	V	-44.16	-13.00	-31.16	-61.41	-50.07	5.91
6846.00	V	-33.91	-13.00	-20.91	-52.85	-38.10	4.19

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	-45.85	-13.00	-32.85	-57.23	-52.36	6.51
5197.50	H	-43.34	-13.00	-30.34	-60.17	-49.28	5.94
6930.00	H	-35.99	-13.00	-22.99	-54.54	-40.08	4.09
3465.00	V	-49.71	-13.00	-36.71	-61.32	-56.22	6.51
5197.50	V	-44.23	-13.00	-31.23	-61.37	-50.17	5.94
6930.00	V	-34.06	-13.00	-21.06	-53.11	-38.15	4.09

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	-45.51	-13.00	-32.51	-57.34	-52.05	6.54
5260.50	H	-43.02	-13.00	-30.02	-59.58	-48.99	5.97
7014.00	H	-36.82	-13.00	-23.82	-55.26	-40.80	3.98
3507.00	V	-49.46	-13.00	-36.46	-61.47	-56.00	6.54
5260.50	V	-44.01	-13.00	-31.01	-60.99	-49.98	5.97
7014.00	V	-33.88	-13.00	-20.88	-53.09	-37.86	3.98

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	-48.89	-13.00	-35.89	-59.85	-55.37	6.48
5137.50	H	-44.21	-13.00	-31.21	-61.24	-50.12	5.91
6850.00	H	-34.49	-13.00	-21.49	-53.18	-38.68	4.19
3425.00	V	-50.01	-13.00	-37.01	-61.25	-56.49	6.48
5137.50	V	-44.79	-13.00	-31.79	-62.04	-50.70	5.91
6850.00	V	-33.02	-13.00	-20.02	-51.96	-37.21	4.19

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	-48.72	-13.00	-35.72	-60.10	-55.23	6.51
5197.50	H	-44.01	-13.00	-31.01	-60.84	-49.95	5.94
6930.00	H	-34.37	-13.00	-21.37	-52.92	-38.46	4.09
3465.00	V	-49.91	-13.00	-36.91	-61.52	-56.42	6.51
5197.50	V	-44.61	-13.00	-31.61	-61.75	-50.55	5.94
6930.00	V	-32.93	-13.00	-19.93	-51.98	-37.02	4.09

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	-48.32	-13.00	-35.32	-60.13	-54.86	6.54
5257.50	H	-43.65	-13.00	-30.65	-60.23	-49.62	5.97
7010.00	H	-34.03	-13.00	-21.03	-52.46	-38.02	3.99
3505.00	V	-49.56	-13.00	-36.56	-61.55	-56.10	6.54
5257.50	V	-44.13	-13.00	-31.13	-61.12	-50.10	5.97
7010.00	V	-32.54	-13.00	-19.54	-51.73	-36.53	3.99

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	-48.51	-13.00	-35.51	-59.52	-54.99	6.48
5145.00	H	-43.26	-13.00	-30.26	-60.27	-49.18	5.92
6860.00	H	-35.23	-13.00	-22.23	-53.90	-39.41	4.18
3430.00	V	-50.02	-13.00	-37.02	-61.30	-56.50	6.48
5145.00	V	-44.71	-13.00	-31.71	-61.94	-50.63	5.92
6860.00	V	-34.45	-13.00	-21.45	-53.40	-38.63	4.18

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	-48.27	-13.00	-35.27	-59.65	-54.78	6.51
5197.50	H	-43.06	-13.00	-30.06	-59.89	-49.00	5.94
6930.00	H	-34.91	-13.00	-21.91	-53.46	-39.00	4.09
3465.00	V	-49.84	-13.00	-36.84	-61.45	-56.35	6.51
5197.50	V	-44.59	-13.00	-31.59	-61.73	-50.53	5.94
6930.00	V	-34.14	-13.00	-21.14	-53.19	-38.23	4.09

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	-48.25	-13.00	-35.25	-60.01	-54.78	6.53
5250.00	H	-43.12	-13.00	-30.12	-59.73	-49.09	5.97
7000.00	H	-34.81	-13.00	-21.81	-53.24	-38.81	4.00
3500.00	V	-49.79	-13.00	-36.79	-61.73	-56.32	6.53
5250.00	V	-44.42	-13.00	-31.42	-61.43	-50.39	5.97
7000.00	V	-34.06	-13.00	-21.06	-53.20	-38.06	4.00

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	-49.12	-13.00	-36.12	-60.18	-55.61	6.49
5152.50	H	-43.67	-13.00	-30.67	-60.66	-49.59	5.92
6870.00	H	-36.82	-13.00	-23.82	-55.47	-40.98	4.16
3435.00	V	-49.70	-13.00	-36.70	-61.03	-56.19	6.49
5152.50	V	-44.32	-13.00	-31.32	-61.55	-50.24	5.92
6870.00	V	-32.71	-13.00	-19.71	-51.67	-36.87	4.16

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	-49.29	-13.00	-36.29	-60.67	-55.80	6.51
5197.50	H	-43.83	-13.00	-30.83	-60.66	-49.77	5.94
6930.00	H	-36.93	-13.00	-23.93	-55.48	-41.02	4.09
3465.00	V	-49.87	-13.00	-36.87	-61.48	-56.38	6.51
5197.50	V	-44.44	-13.00	-31.44	-61.58	-50.38	5.94
6930.00	V	-32.86	-13.00	-19.86	-51.91	-36.95	4.09

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	-48.97	-13.00	-35.97	-60.67	-55.50	6.53
5242.50	H	-42.51	-13.00	-29.51	59.14	-48.47	5.96
6990.00	H	-36.72	-13.00	-23.72	-55.17	-40.73	4.01
3495.00	V	-49.51	-13.00	-36.51	-61.43	-56.04	6.53
5242.50	V	-44.29	-13.00	-31.29	-61.31	-50.25	5.96
6990.00	V	-32.42	-13.00	-19.42	-51.55	-36.43	4.01

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	-49.06	-13.00	-36.06	-60.17	-55.55	6.49
5160.00	H	-40.60	-13.00	-27.60	-57.56	-46.52	5.92
6880.00	H	-27.72	-13.00	-14.72	-46.35	-31.87	4.15
3440.00	V	-49.27	-13.00	-36.27	-60.65	-55.76	6.49
5160.00	V	-39.77	-13.00	-26.77	-56.99	-45.69	5.92
6880.00	V	-26.38	-13.00	-13.38	-45.36	-30.53	4.15

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	-48.74	-13.00	-35.74	-60.12	-55.25	6.51
5197.50	H	-38.36	-13.00	-25.36	-55.19	-44.30	5.94
6930.00	H	-36.26	-13.00	-23.26	-54.81	-40.35	4.09
3465.00	V	-49.03	-13.00	-36.03	-60.64	-55.54	6.51
5197.50	V	-39.31	-13.00	-26.31	-56.45	-45.25	5.94
6930.00	V	-34.76	-13.00	-21.76	-53.81	-38.85	4.09

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	H	-47.93	-13.00	-34.93	-59.58	-54.46	6.53
5235	H	-38.81	-13.00	-25.81	-55.48	-44.77	5.96
6980	H	-28.52	-13.00	-15.52	-46.98	-32.55	4.03
3490	V	-48.63	-13.00	-35.63	-60.28	-55.16	6.53
5235	V	-39.56	-13.00	-26.56	-56.23	-45.52	5.96
6980	V	-30.17	-13.00	-17.17	-48.63	-34.2	4.03

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

3.3 Conducted Emissions

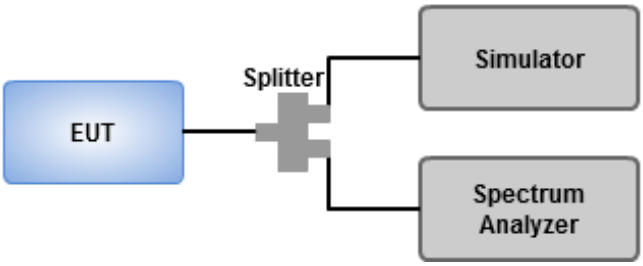
3.3.1 Limit of Conducted Emissions

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.

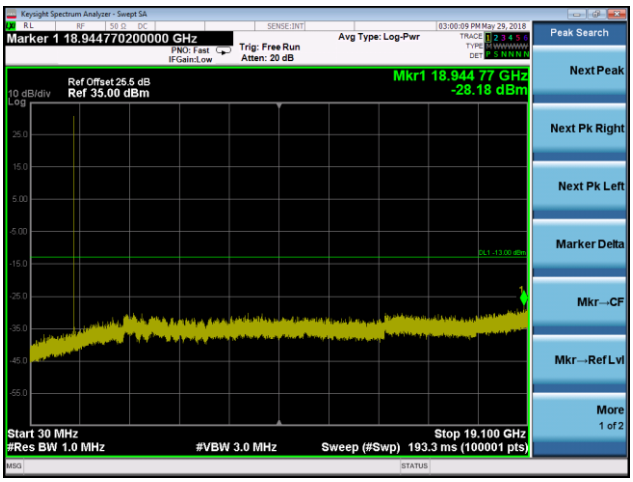
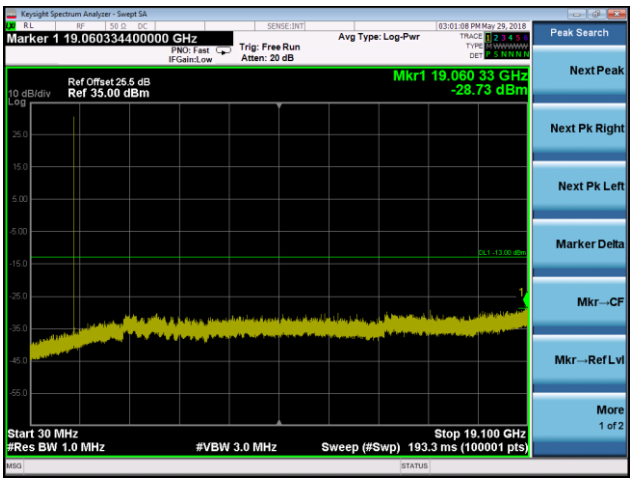
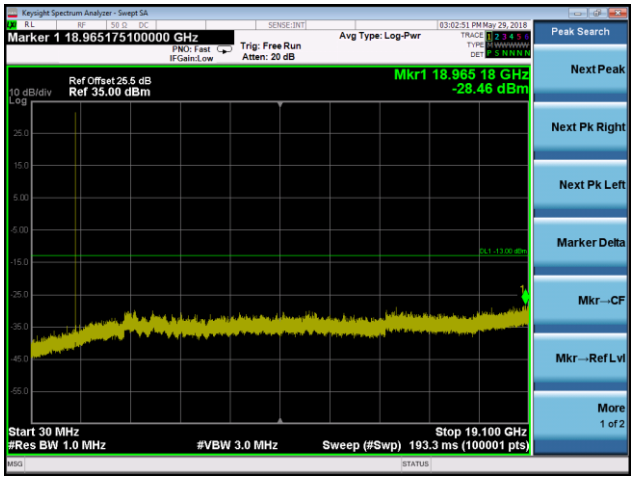
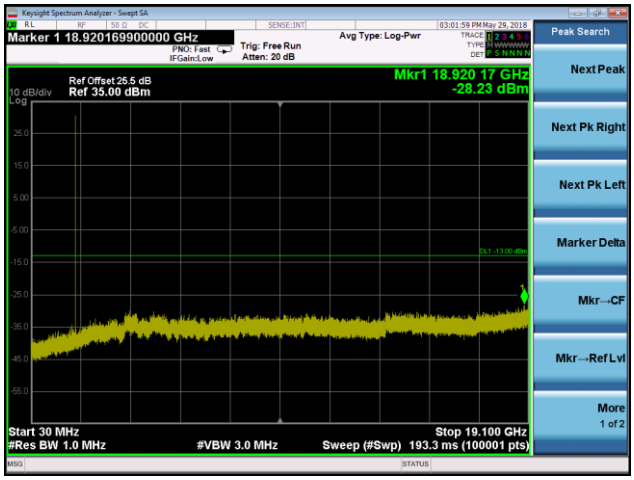
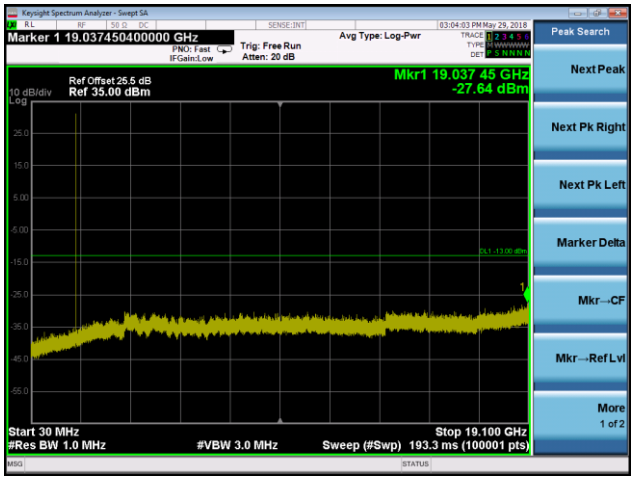
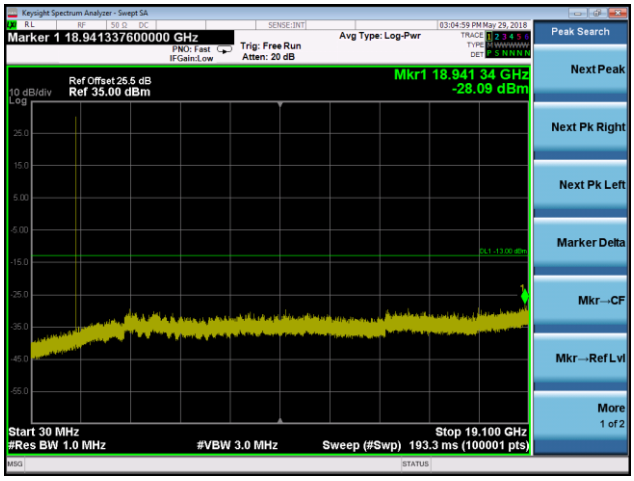
3.3.2 Test Procedures

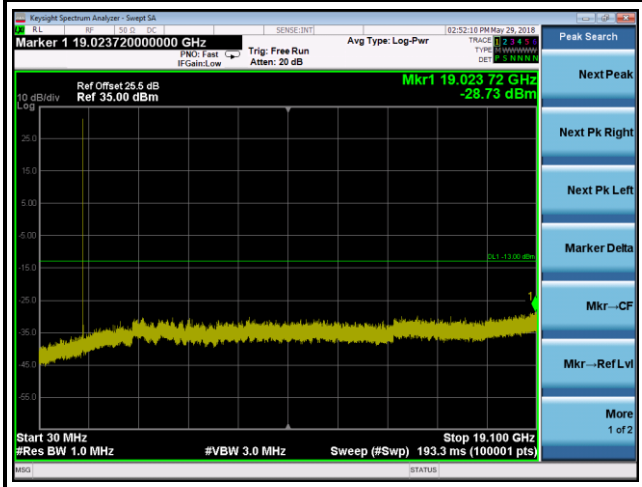
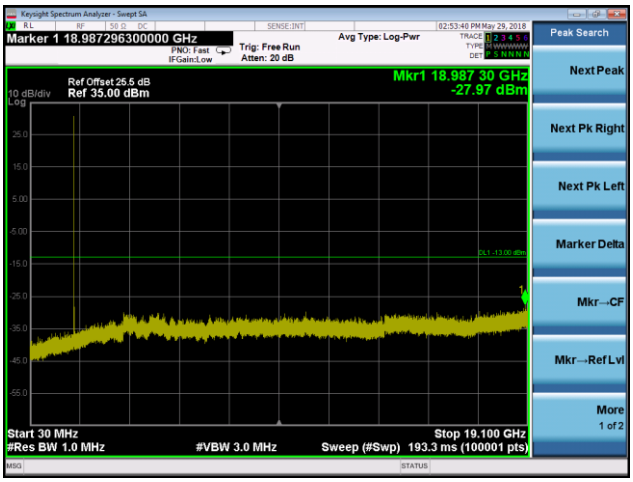
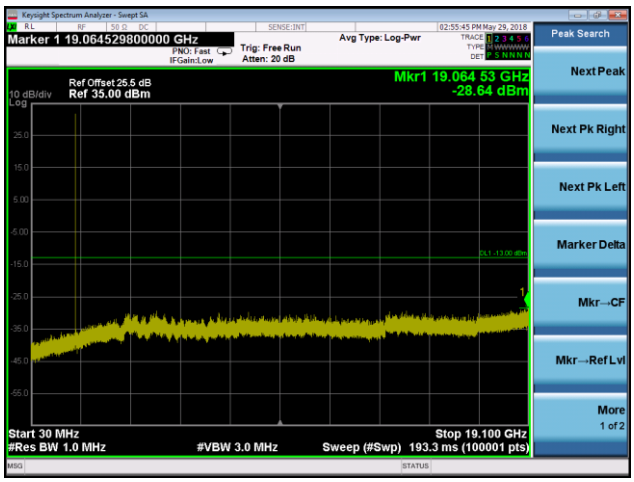
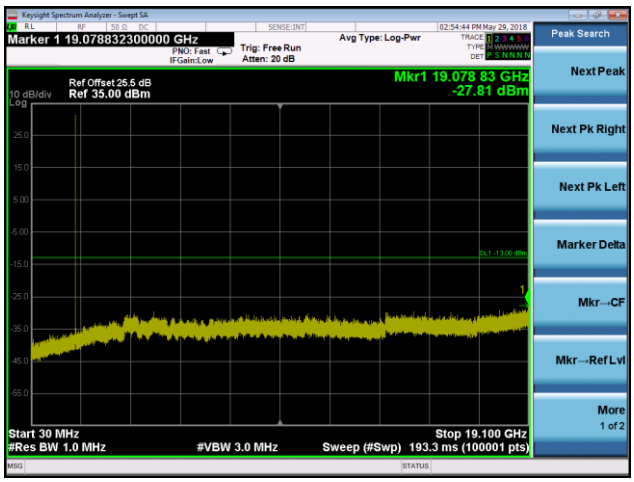
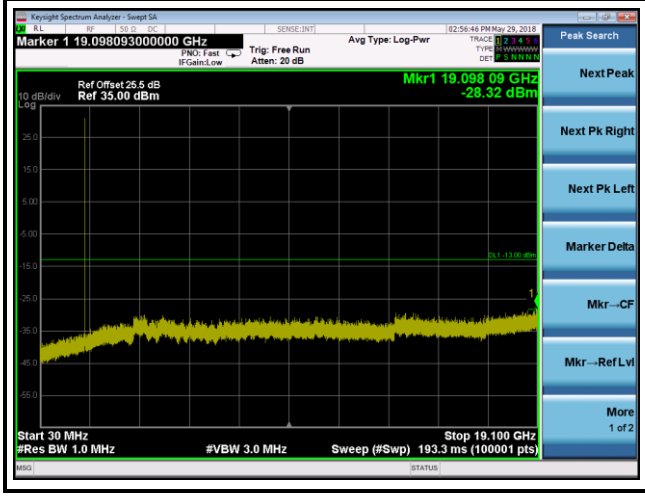
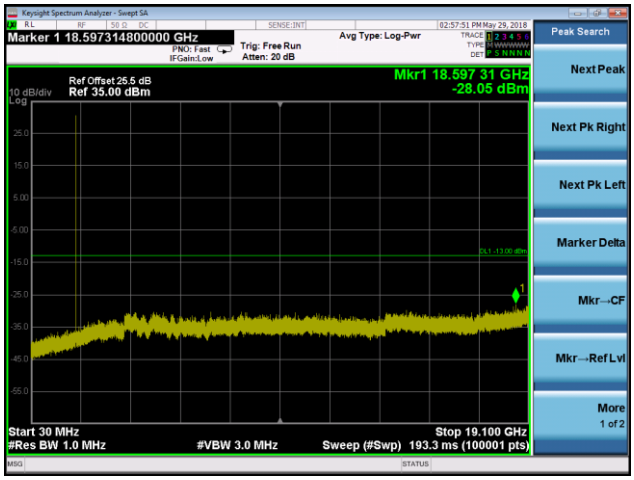
1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz~19.1 GHz.
3. Set RBW = 1MHz, VBW = 3MHz, detector =Peak, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

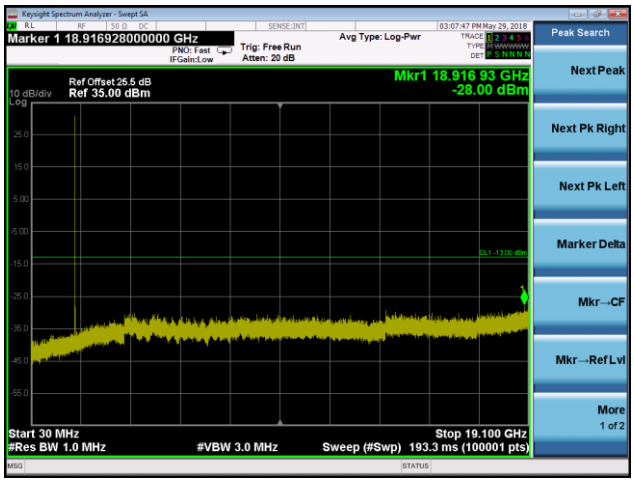
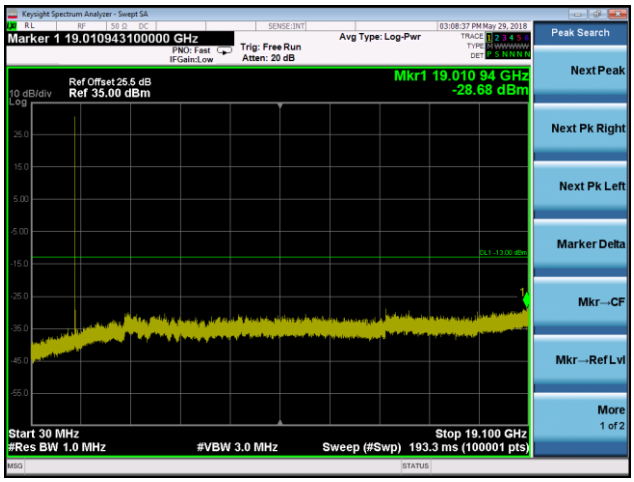
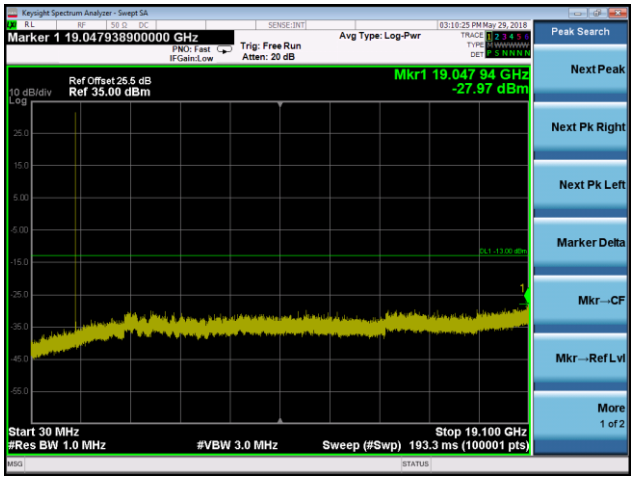
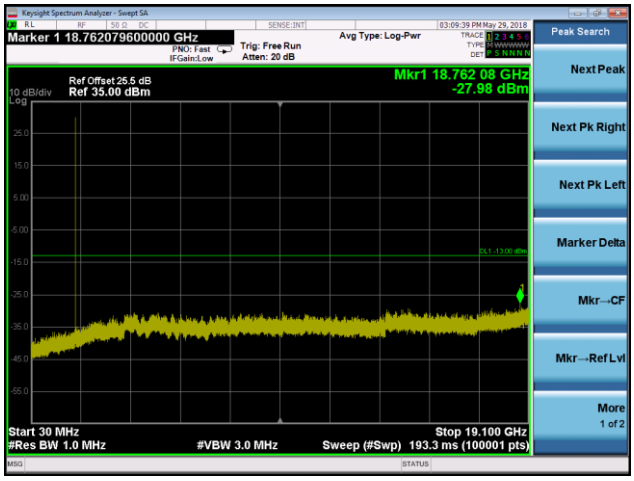
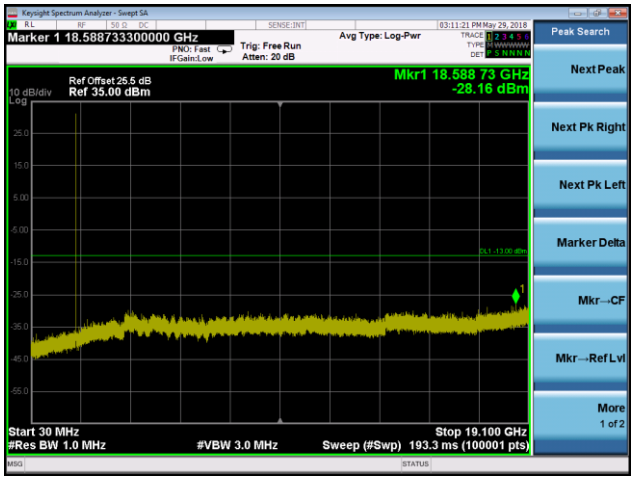
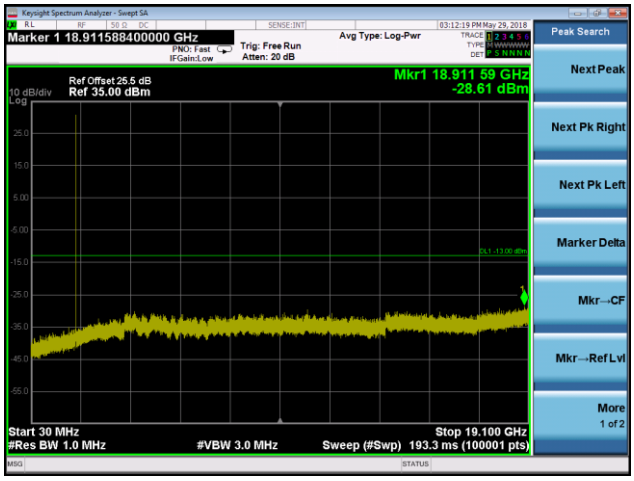
3.3.3 Test Setup

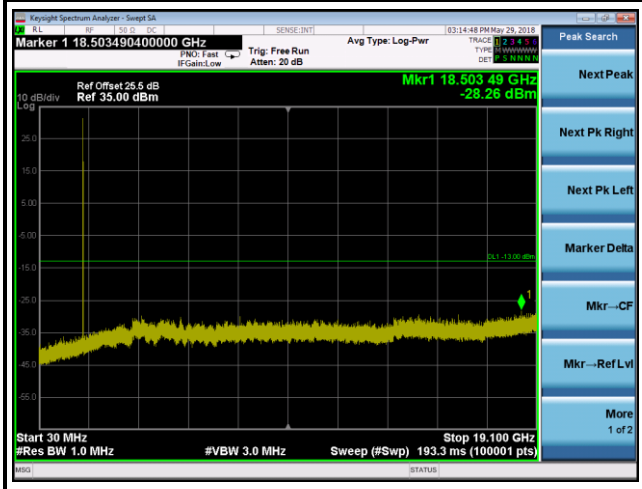
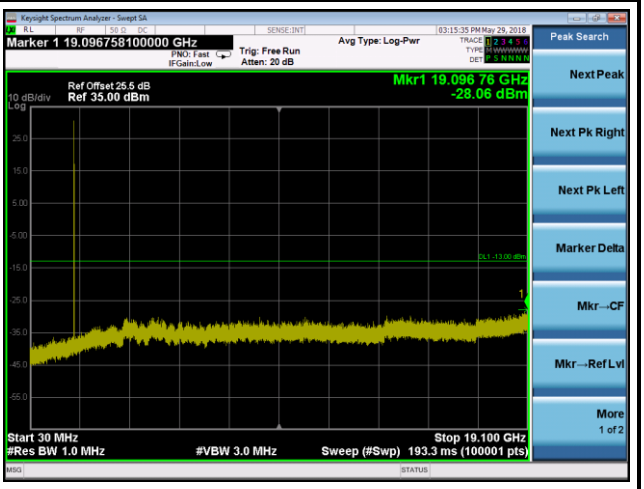
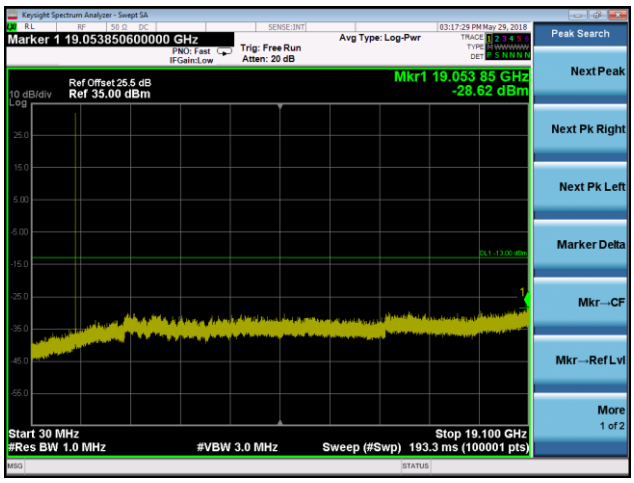
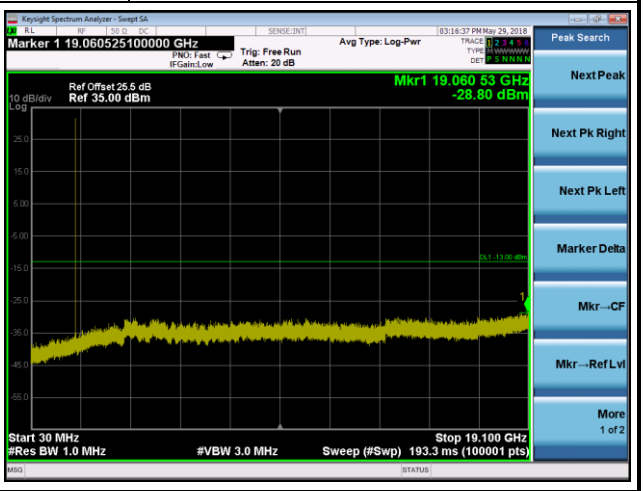
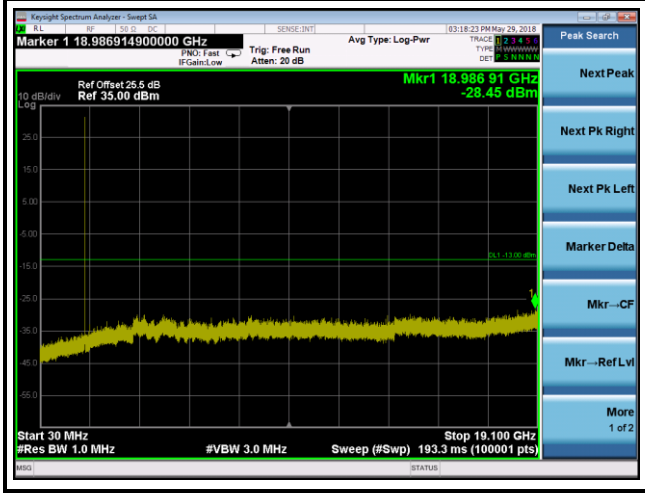
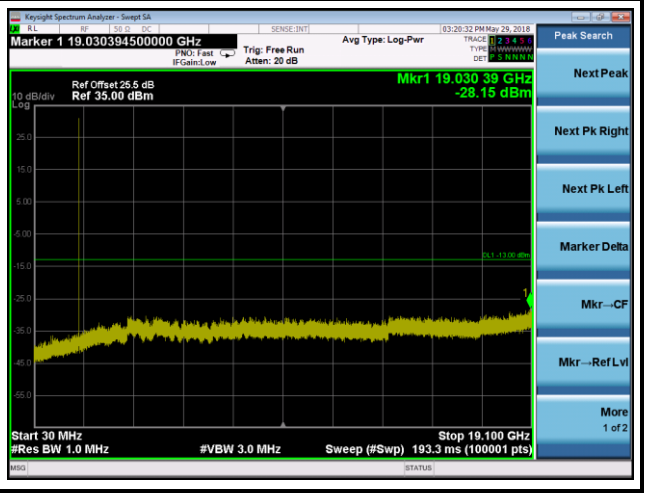


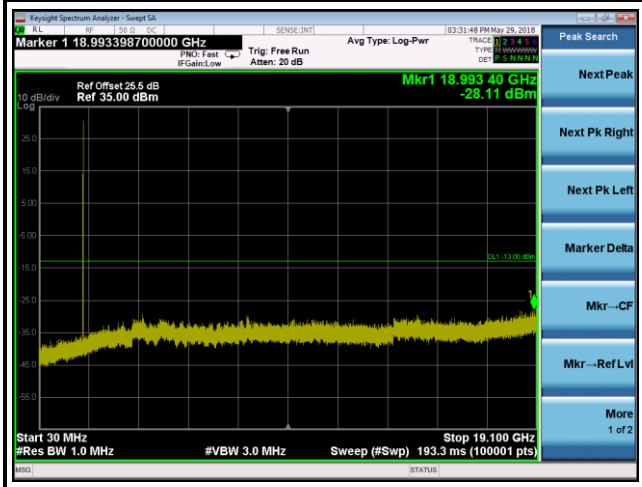
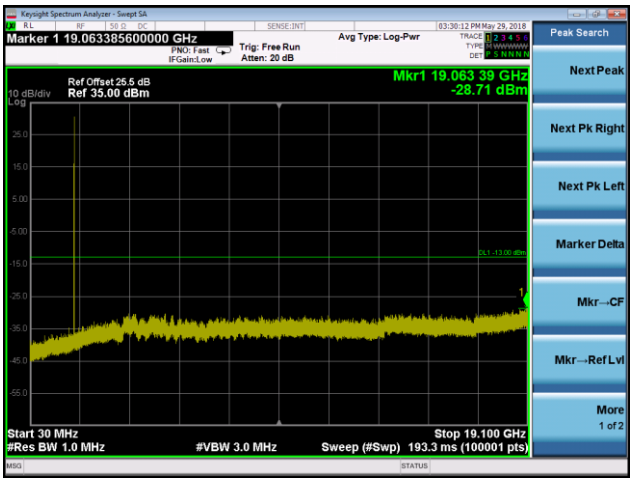
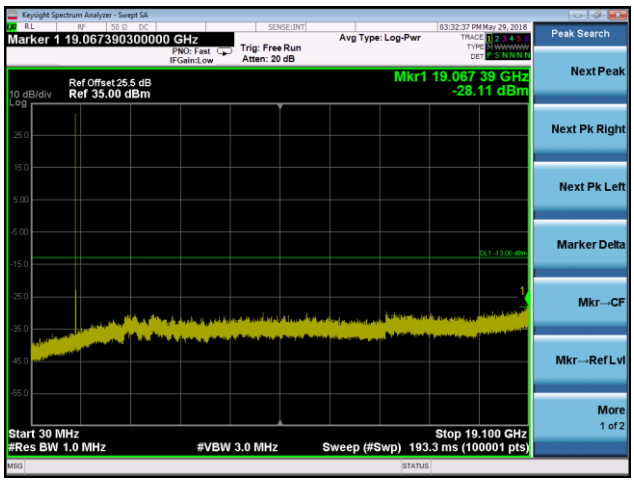
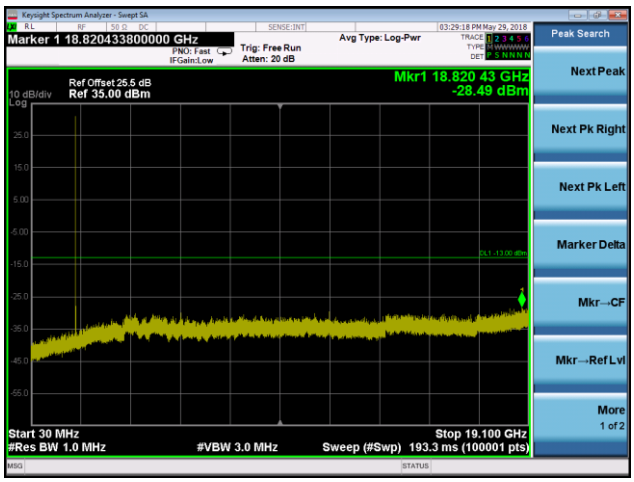
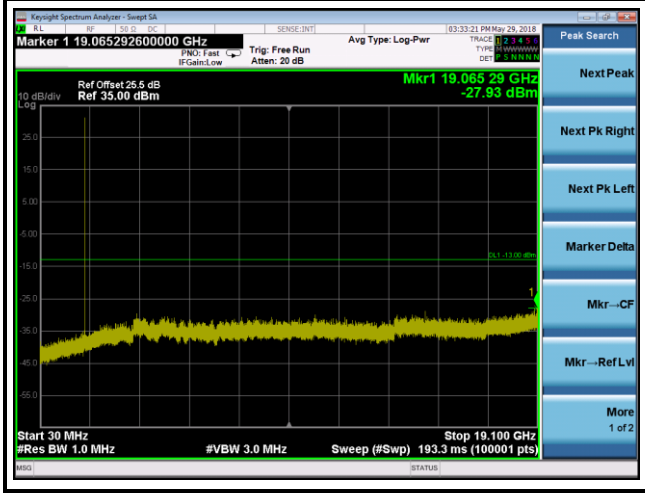
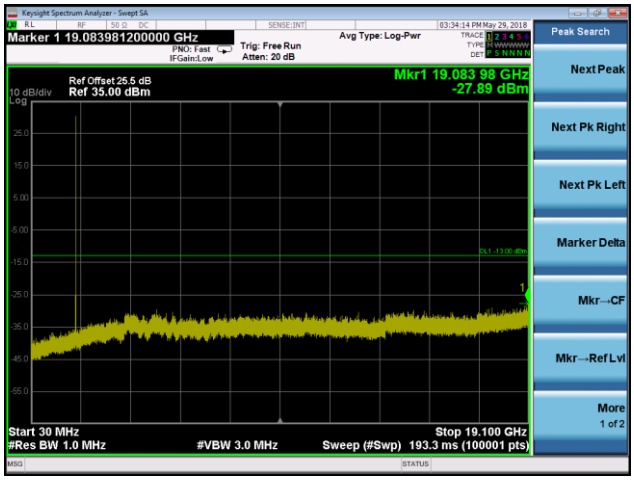
3.3.4 Test Result of Conducted Emissions

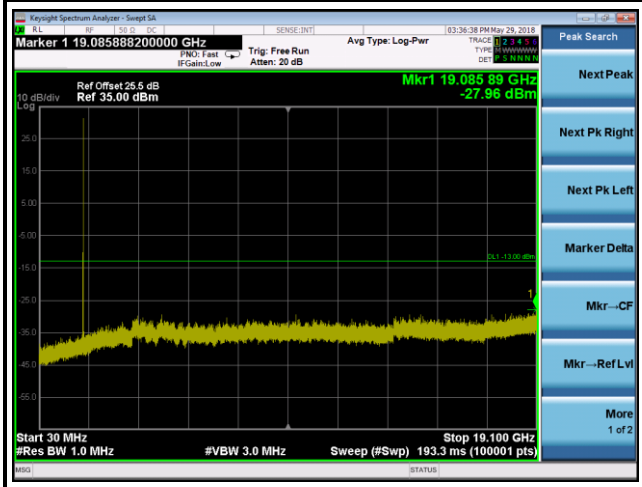
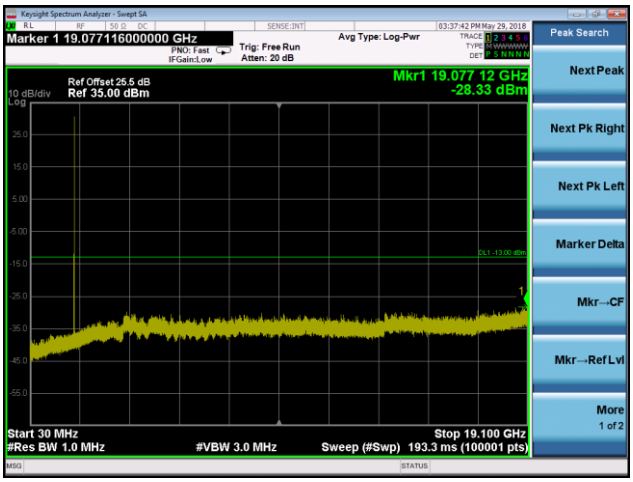
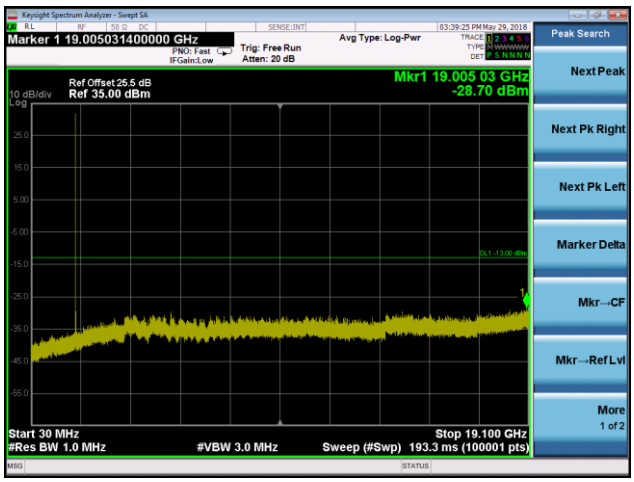
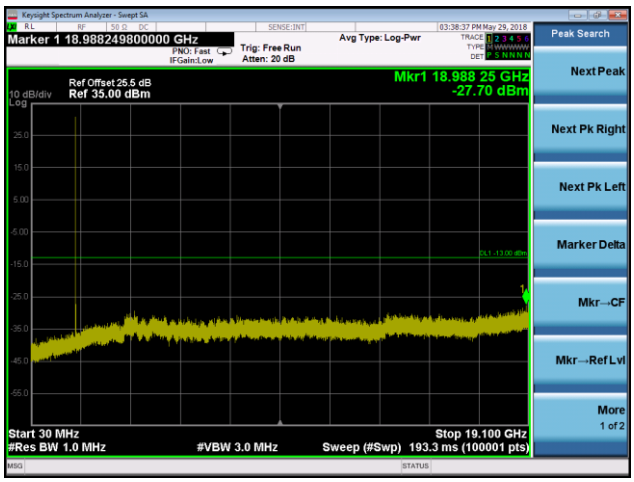
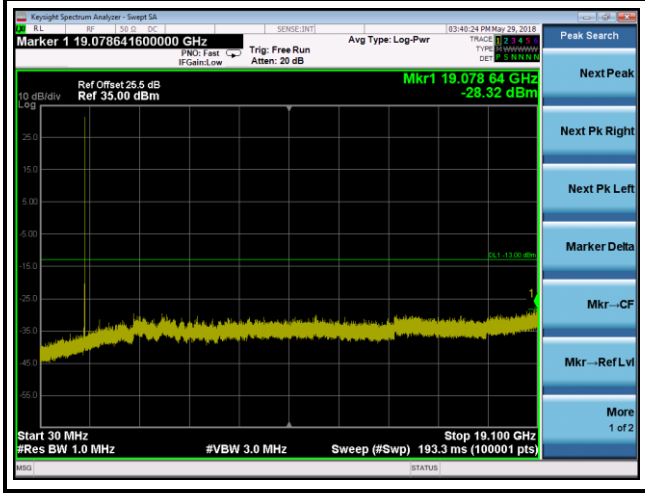
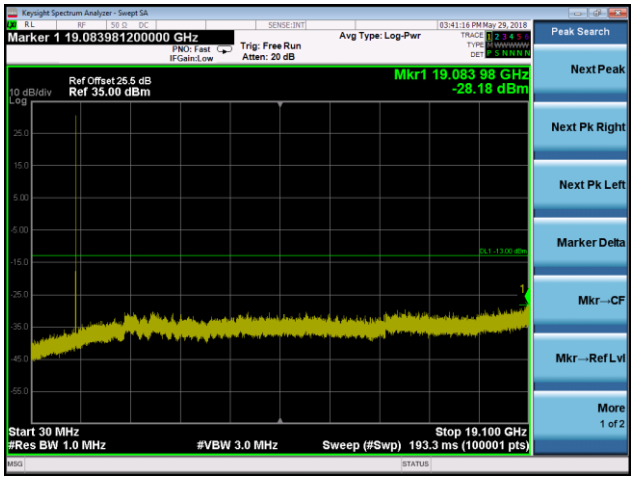
Mode	LTE Band 4, CB: 1.4MHz, QPSK	Mode	LTE Band 4, CB: 1.4MHz, 16QAM
Channel	19957	Channel	19957
		
Channel	20175	Channel	20175
		
Channel	20393	Channel	20393
		

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