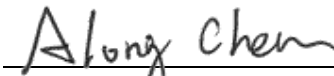


FCC/IC Test Report

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 24 Subpart E
RSS-133 Issue 6 January 2013
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:



Along Chen / Assistant Manager

Approved by:



Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FG740703P24	Rev. 01	Initial issue	Apr. 24, 2017

Summary of Test Results

FCC Rules	IC Rules	Test Items	Measured	Result
2.1046 / 24.232(c)	RSS-133 Section 6.4	Equivalent Isotropically Radiated Power	Power[dBm]: 26.05	Pass
2.1053 / 24.238(a)	RSS-133 Section 6.5	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 / 24.238(a)	RSS-133 Section 6.5	Conducted Emissions	Meet the requirement of limit	Pass
2.1051 / 24.238(a)	RSS-133 Section 6.5	Band Edge	Meet the requirement of limit	Pass
2.1049 / 24.238(b)	RSS-133 Section 6.5	Occupied Bandwidth	Meet the requirement of limit	Pass
2.1051 / 24.232(d)	RSS-133 Section 6.4	Peak to Average Ratio	Meet the requirement of limit	Pass
2.1055 / 24.235	RSS-133 Section 6.3	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 2: Channel Bandwidth: 1.4MHz: 1850.7~1909.3 MHz Channel Bandwidth: 3MHz: 1851.5 MHz ~ 1908.5 MHz Channel Bandwidth: 5MHz: 1852.5 MHz ~ 1907.5 MHz Channel Bandwidth: 10MHz: 1855 MHz ~ 1905 MHz Channel Bandwidth: 15MHz: 1857.5 MHz ~ 1902.5 MHz Channel Bandwidth: 20MHz: 1860 MHz ~ 1900 MHz
Modulation	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 2, CB: 1.4MHz	QPSK	0.402	1M08G7D
LTE Band 2, CB: 1.4MHz	16QAM	0.313	1M09W7D
LTE Band 2, CB: 3MHz	QPSK	0.403	2M69G7D
LTE Band 2, CB: 3MHz	16QAM	0.316	2M69W7D
LTE Band 2, CB: 5MHz	QPSK	0.386	4M48G7D
LTE Band 2, CB: 5MHz	16QAM	0.310	4M48W7D
LTE Band 2, CB: 10MHz	QPSK	0.393	8M93G7D
LTE Band 2, CB: 10MHz	16QAM	0.342	4M91W7D
LTE Band 2, CB: 15MHz	QPSK	0.392	13M4G7D
LTE Band 2, CB: 15MHz	16QAM	0.339	5M07W7D
LTE Band 2, CB: 20MHz	QPSK	0.357	17M9G7D
LTE Band 2, CB: 20MHz	16QAM	0.272	5M13W7D

1.1.3 Antenna Details

Ant. No.	Type	Connector	Gain (dBi)	Remark
1	Dipole	R-SMA	1.71	---

1.1.4 EUT Operational Condition

Supply Voltage	3.8Vdc from host		
Operational Voltage	<input checked="" type="checkbox"/> Vnom (3.8 V)	<input checked="" type="checkbox"/> Vmax (4.2 V)	<input checked="" type="checkbox"/> Vmin (3.4 V)
Operational Climatic	<input checked="" type="checkbox"/> Tnom (20°C)	<input checked="" type="checkbox"/> Tmax (85°C)	<input checked="" type="checkbox"/> Tmin (-40°C)

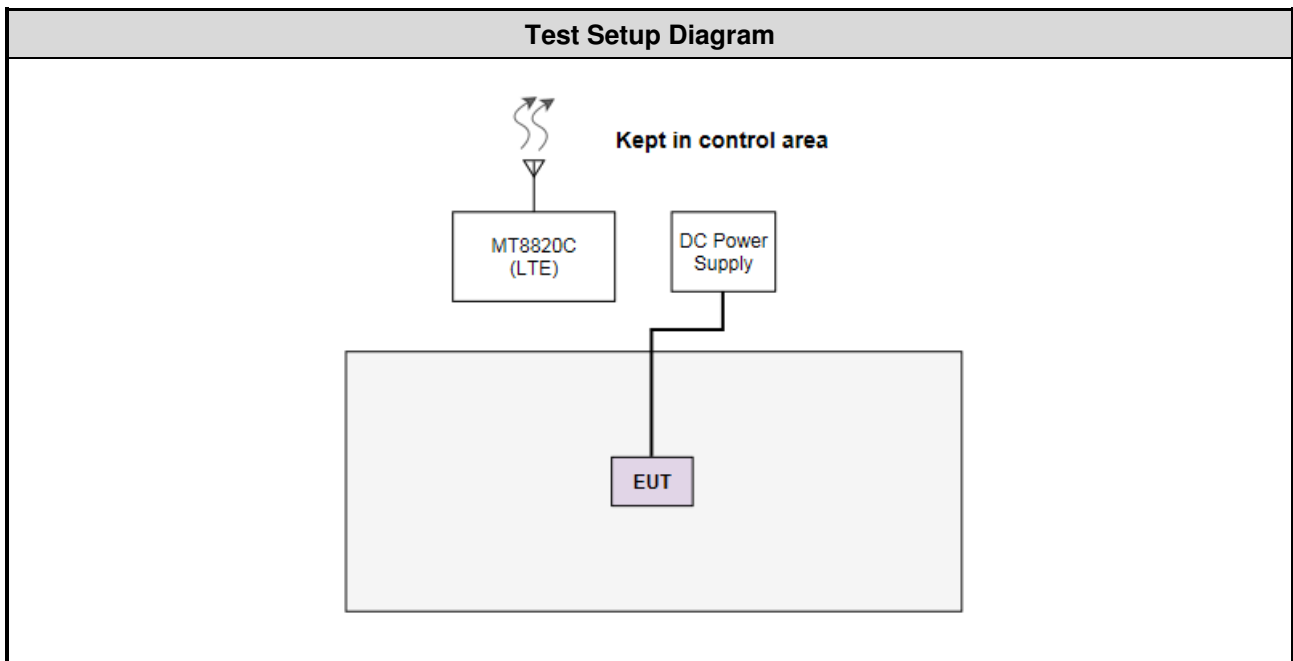
1.1.5 Operating Channel List

LTE Band 2		
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
1.4	18607	1850.7
1.4	18900	1880.0
1.4	19193	1909.3
3	18615	1851.5
3	18900	1880.0
3	19185	1908.5
5	18625	1852.5
5	18900	1880.0
5	19175	1907.5
10	18650	1855.0
10	18900	1880.0
10	19150	1905.0
15	18675	1857.5
15	18900	1880.0
15	19125	1902.5
20	18700	1860.0
20	18900	1880.0
20	19100	1900.0

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



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
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
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 09, 2016	Dec. 08, 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-N M-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 24 Subpart E

RSS-133 Issue 6 January 2013

RSS-Gen Issue 4 November 2014

SRSP-510 Issue 5 February 2009

ANSI C63.4-2014

ANSI/TIA-603-D 2010

ANSI C63.26-2015

FCC KDB 971168 D01 Power Meas License Digital Systems v02r02

FCC 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 ≤ 1 GHz	± 3.66 dB
Radiated emission > 1 GHz	± 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

LTE Band 2			
Test item	Channel Bandwidth	Modulation	Test channel
E.I.R.P	1.4 MHz	QPSK / 16QAM	18607 / 18900 / 19193
Conducted Emissions	3 MHz	QPSK / 16QAM	18615 / 18900 / 19185
	5 MHz	QPSK / 16QAM	18625 / 18900 / 19175
Occupied Bandwidth	10 MHz	QPSK / 16QAM	18650 / 18900 / 19150
	15 MHz	QPSK / 16QAM	18675 / 18900 / 19125
Peak to Average Ratio	20 MHz	QPSK / 16QAM	18700 / 18900 / 19100
Radiated Emission ≤ 1GHz	1.4 MHz	QPSK	18607
	3 MHz	QPSK	18615
	5 MHz	QPSK	18625
	10 MHz	QPSK	18650
	15 MHz	QPSK	18675
	20 MHz	QPSK	18700
Radiated Emission > 1GHz	1.4 MHz	QPSK	18607 / 18900 / 19193
	3 MHz	QPSK	18615 / 18900 / 19185
	5 MHz	QPSK	18625 / 18900 / 19175
	10 MHz	QPSK	18650 / 18900 / 19150
	15 MHz	QPSK	18675 / 18900 / 19125
	20 MHz	QPSK	18700 / 18900 / 19100
Band Edge	1.4 MHz	QPSK / 16QAM	18607 / 19193
	3 MHz	QPSK / 16QAM	18615 / 19185
	5 MHz	QPSK / 16QAM	18625 / 19175
	10 MHz	QPSK / 16QAM	18650 / 19150
	15 MHz	QPSK / 16QAM	18675 / 19125
	20 MHz	QPSK / 16QAM	18700 / 19100
Frequency Stability	1.4 MHz	QPSK	18900
	3 MHz	QPSK	18900
	5 MHz	QPSK	18900
	10 MHz	QPSK	18900
	15 MHz	QPSK	18900
	20 MHz	QPSK	18900

Note:

- 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 2 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 / middle / 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.

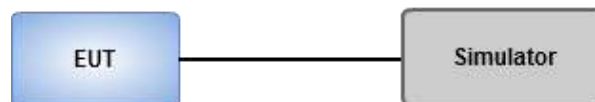
1. $EIRP = P_T + G_T - L_C$

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)	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	18607	1	0	23.96	0.249	1.71	25.67	0.369	2
		1	2	24.33	0.271	1.71	26.04	0.402	2
		1	5	24.24	0.265	1.71	25.95	0.394	2
		3	0	23.95	0.248	1.71	25.66	0.368	2
		3	1	23.94	0.248	1.71	25.65	0.367	2
		3	2	24.02	0.252	1.71	25.73	0.374	2
		6	0	22.92	0.196	1.71	24.63	0.290	2
	18900	1	0	23.41	0.219	1.71	25.12	0.325	2
		1	2	23.54	0.226	1.71	25.25	0.335	2
		1	5	23.32	0.215	1.71	25.03	0.318	2
		3	0	23.16	0.207	1.71	24.87	0.307	2
		3	1	23.13	0.206	1.71	24.84	0.305	2
		3	2	23.34	0.216	1.71	25.05	0.320	2
		6	0	22.31	0.170	1.71	24.02	0.252	2
	19193	1	0	23.04	0.201	1.71	24.75	0.299	2
		1	2	23.06	0.202	1.71	24.77	0.300	2
		1	5	22.79	0.190	1.71	24.50	0.282	2
		3	0	22.81	0.191	1.71	24.52	0.283	2
		3	1	22.82	0.191	1.71	24.53	0.284	2
		3	2	22.75	0.188	1.71	24.46	0.279	2
		6	0	21.94	0.156	1.71	23.65	0.232	2
16QAM	18607	1	0	23.06	0.202	1.71	24.77	0.300	2
		1	2	23.25	0.211	1.71	24.96	0.313	2
		1	5	23.06	0.202	1.71	24.77	0.300	2
		3	0	23.02	0.200	1.71	24.73	0.297	2
		3	1	23.11	0.205	1.71	24.82	0.303	2
		3	2	22.95	0.197	1.71	24.66	0.292	2
		6	0	21.98	0.158	1.71	23.69	0.234	2
	18900	1	0	22.09	0.162	1.71	23.80	0.240	2
		1	2	22.62	0.183	1.71	24.33	0.271	2
		1	5	22.36	0.172	1.71	24.07	0.255	2
		3	0	22.29	0.169	1.71	24.00	0.251	2
		3	1	22.24	0.167	1.71	23.95	0.248	2
		3	2	22.19	0.166	1.71	23.90	0.245	2
		6	0	21.39	0.138	1.71	23.10	0.204	2
	19193	1	0	21.96	0.157	1.71	23.67	0.233	2
		1	2	22.09	0.162	1.71	23.80	0.240	2
		1	5	21.78	0.151	1.71	23.49	0.223	2
		3	0	21.74	0.149	1.71	23.45	0.221	2
		3	1	21.72	0.149	1.71	23.43	0.220	2
		3	2	21.69	0.148	1.71	23.40	0.219	2
		6	0	20.78	0.120	1.71	22.49	0.177	2

Channel Bandwidth: 3MHz

Mode	Channel	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	18615	1	0	24.18	0.262	1.71	25.89	0.388	2
		1	7	24.34	0.272	1.71	26.05	0.403	2
		1	14	24.06	0.255	1.71	25.77	0.378	2
		8	0	22.93	0.196	1.71	24.64	0.291	2
		8	4	22.91	0.195	1.71	24.62	0.290	2
		8	7	22.89	0.195	1.71	24.60	0.288	2
		15	0	22.92	0.196	1.71	24.63	0.290	2
	18900	1	0	23.06	0.202	1.71	24.77	0.300	2
		1	7	23.15	0.207	1.71	24.86	0.306	2
		1	14	23.12	0.205	1.71	24.83	0.304	2
		8	0	22.14	0.164	1.71	23.85	0.243	2
		8	4	22.26	0.168	1.71	23.97	0.249	2
		8	7	22.21	0.166	1.71	23.92	0.247	2
		15	0	22.23	0.167	1.71	23.94	0.248	2
	19185	1	0	22.78	0.190	1.71	24.49	0.281	2
		1	7	22.82	0.191	1.71	24.53	0.284	2
		1	14	22.75	0.188	1.71	24.46	0.279	2
		8	0	21.74	0.149	1.71	23.45	0.221	2
		8	4	21.71	0.148	1.71	23.42	0.220	2
		8	7	21.62	0.145	1.71	23.33	0.215	2
		15	0	21.65	0.146	1.71	23.36	0.217	2
16QAM	18615	1	0	22.96	0.198	1.71	24.67	0.293	2
		1	7	23.29	0.213	1.71	25.00	0.316	2
		1	14	23.22	0.210	1.71	24.93	0.311	2
		8	0	21.45	0.140	1.71	23.16	0.207	2
		8	4	21.85	0.153	1.71	23.56	0.227	2
		8	7	21.82	0.152	1.71	23.53	0.225	2
		15	0	21.79	0.151	1.71	23.50	0.224	2
	18900	1	0	21.98	0.158	1.71	23.69	0.234	2
		1	7	22.16	0.164	1.71	23.87	0.244	2
		1	14	21.95	0.157	1.71	23.66	0.232	2
		8	0	21.12	0.129	1.71	22.83	0.192	2
		8	4	21.19	0.132	1.71	22.90	0.195	2
		8	7	21.15	0.130	1.71	22.86	0.193	2
		15	0	21.08	0.128	1.71	22.79	0.190	2
	19185	1	0	21.92	0.156	1.71	23.63	0.231	2
		1	7	21.96	0.157	1.71	23.67	0.233	2
		1	14	21.78	0.151	1.71	23.49	0.223	2
		8	0	20.69	0.117	1.71	22.40	0.174	2
8		4	20.72	0.118	1.71	22.43	0.175	2	
8		7	20.67	0.117	1.71	22.38	0.173	2	
15		0	20.62	0.115	1.71	22.33	0.171	2	

Channel Bandwidth: 5MHz

Mode	Channel	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	18625	1	0	24.02	0.252	1.71	25.73	0.374	2
		1	12	24.16	0.261	1.71	25.87	0.386	2
		1	24	23.79	0.239	1.71	25.50	0.355	2
		12	0	23.04	0.201	1.71	24.75	0.299	2
		12	6	23.06	0.202	1.71	24.77	0.300	2
		12	11	22.98	0.199	1.71	24.69	0.294	2
		25	0	22.94	0.197	1.71	24.65	0.292	2
	18900	1	0	23.05	0.202	1.71	24.76	0.299	2
		1	12	23.12	0.205	1.71	24.83	0.304	2
		1	24	22.93	0.196	1.71	24.64	0.291	2
		12	0	22.18	0.165	1.71	23.89	0.245	2
		12	6	22.15	0.164	1.71	23.86	0.243	2
		12	11	22.21	0.166	1.71	23.92	0.247	2
		25	0	22.12	0.163	1.71	23.83	0.242	2
	19175	1	0	22.89	0.195	1.71	24.60	0.288	2
		1	12	23.05	0.202	1.71	24.76	0.299	2
		1	24	22.83	0.192	1.71	24.54	0.284	2
		12	0	21.85	0.153	1.71	23.56	0.227	2
		12	6	21.79	0.151	1.71	23.50	0.224	2
		12	11	21.68	0.147	1.71	23.39	0.218	2
		25	0	21.62	0.145	1.71	23.33	0.215	2
16QAM	18625	1	0	22.56	0.180	1.71	24.27	0.267	2
		1	12	23.21	0.209	1.71	24.92	0.310	2
		1	24	22.95	0.197	1.71	24.66	0.292	2
		12	0	21.84	0.153	1.71	23.55	0.226	2
		12	6	21.92	0.156	1.71	23.63	0.231	2
		12	11	21.89	0.155	1.71	23.60	0.229	2
		25	0	21.89	0.155	1.71	23.60	0.229	2
	18900	1	0	21.95	0.157	1.71	23.66	0.232	2
		1	12	22.06	0.161	1.71	23.77	0.238	2
		1	24	21.86	0.153	1.71	23.57	0.228	2
		12	0	21.35	0.136	1.71	23.06	0.202	2
		12	6	21.31	0.135	1.71	23.02	0.200	2
		12	11	21.39	0.138	1.71	23.10	0.204	2
		25	0	21.12	0.129	1.71	22.83	0.192	2
	19175	1	0	21.45	0.140	1.71	23.16	0.207	2
		1	12	21.54	0.143	1.71	23.25	0.211	2
		1	24	21.32	0.136	1.71	23.03	0.201	2
		12	0	20.85	0.122	1.71	22.56	0.180	2
		12	6	20.89	0.123	1.71	22.60	0.182	2
		12	11	20.83	0.121	1.71	22.54	0.179	2
		25	0	20.65	0.116	1.71	22.36	0.172	2

Channel Bandwidth: 10MHz

Mode	Channel	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	18650	1	0	24.11	0.258	1.71	25.82	0.382	2
		1	24	24.23	0.265	1.71	25.94	0.393	2
		1	49	23.69	0.234	1.71	25.40	0.347	2
		25	0	22.86	0.193	1.71	24.57	0.286	2
		25	12	22.74	0.188	1.71	24.45	0.279	2
		25	24	22.79	0.190	1.71	24.50	0.282	2
	18900	50	0	22.72	0.187	1.71	24.43	0.277	2
		1	0	23.38	0.218	1.71	25.09	0.323	2
		1	24	23.54	0.226	1.71	25.25	0.335	2
		1	49	23.28	0.213	1.71	24.99	0.316	2
		25	0	22.34	0.171	1.71	24.05	0.254	2
		25	12	22.21	0.166	1.71	23.92	0.247	2
	19150	25	24	22.15	0.164	1.71	23.86	0.243	2
		50	0	22.12	0.163	1.71	23.83	0.242	2
		1	0	22.94	0.197	1.71	24.65	0.292	2
		1	24	23.12	0.205	1.71	24.83	0.304	2
		1	49	22.87	0.194	1.71	24.58	0.287	2
		25	0	21.89	0.155	1.71	23.60	0.229	2
16QAM	18650	25	12	21.74	0.149	1.71	23.45	0.221	2
		25	24	21.57	0.144	1.71	23.28	0.213	2
		50	0	21.55	0.143	1.71	23.26	0.212	2
		1	0	23.01	0.200	1.71	24.72	0.296	2
		1	24	23.63	0.231	1.71	25.34	0.342	2
		1	49	22.82	0.191	1.71	24.53	0.284	2
	18900	27	0	21.80	0.151	1.71	23.51	0.224	2
		27	12	21.53	0.142	1.71	23.24	0.211	2
		27	23	21.66	0.147	1.71	23.37	0.217	2
		1	0	22.33	0.171	1.71	24.04	0.254	2
		1	24	22.72	0.187	1.71	24.43	0.277	2
		1	49	21.97	0.157	1.71	23.68	0.233	2
	19150	27	0	21.16	0.131	1.71	22.87	0.194	2
		27	12	21.21	0.132	1.71	22.92	0.196	2
		27	23	21.07	0.128	1.71	22.78	0.190	2
		1	0	21.76	0.150	1.71	23.47	0.222	2
		1	24	22.51	0.178	1.71	24.22	0.264	2
		1	49	21.70	0.148	1.71	23.41	0.219	2
		27	0	20.66	0.116	1.71	22.37	0.173	2
		27	12	20.76	0.119	1.71	22.47	0.177	2
		27	23	20.61	0.115	1.71	22.32	0.171	2
		27	23	20.61	0.115	1.71	22.32	0.171	2

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)	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	18675	1	0	24.14	0.259	1.71	25.85	0.385	2
		1	37	24.22	0.264	1.71	25.93	0.392	2
		1	74	23.42	0.220	1.71	25.13	0.326	2
		36	0	22.84	0.192	1.71	24.55	0.285	2
		36	18	22.75	0.188	1.71	24.46	0.279	2
		36	37	22.51	0.178	1.71	24.22	0.264	2
		75	0	22.65	0.184	1.71	24.36	0.273	2
	18900	1	0	23.32	0.215	1.71	25.03	0.318	2
		1	37	23.41	0.219	1.71	25.12	0.325	2
		1	74	22.85	0.193	1.71	24.56	0.286	2
		36	0	22.21	0.166	1.71	23.92	0.247	2
		36	18	22.14	0.164	1.71	23.85	0.243	2
		36	37	22.06	0.161	1.71	23.77	0.238	2
		75	0	22.03	0.160	1.71	23.74	0.237	2
	19125	1	0	23.22	0.210	1.71	24.93	0.311	2
		1	37	23.35	0.216	1.71	25.06	0.321	2
		1	74	22.84	0.192	1.71	24.55	0.285	2
		36	0	21.81	0.152	1.71	23.52	0.225	2
		36	18	21.85	0.153	1.71	23.56	0.227	2
		36	37	21.64	0.146	1.71	23.35	0.216	2
	16QAM	18675	75	0	21.63	0.146	1.71	23.34	0.216
1			0	23.04	0.201	1.71	24.75	0.299	2
1			37	23.59	0.229	1.71	25.30	0.339	2
1			74	22.63	0.183	1.71	24.34	0.272	2
27			0	21.92	0.156	1.71	23.63	0.231	2
27			12	21.69	0.148	1.71	23.40	0.219	2
27			23	21.38	0.137	1.71	23.09	0.204	2
18900		1	0	22.23	0.167	1.71	23.94	0.248	2
		1	37	22.40	0.174	1.71	24.11	0.258	2
		1	74	21.89	0.155	1.71	23.60	0.229	2
		27	0	21.12	0.129	1.71	22.83	0.192	2
		27	12	21.07	0.128	1.71	22.78	0.190	2
		27	23	21.03	0.127	1.71	22.74	0.188	2
19125		1	0	22.13	0.163	1.71	23.84	0.242	2
		1	37	22.76	0.189	1.71	24.47	0.280	2
		1	74	21.99	0.158	1.71	23.70	0.234	2
		27	0	20.91	0.123	1.71	22.62	0.183	2
		27	12	20.97	0.125	1.71	22.68	0.185	2
	27	23	20.88	0.122	1.71	22.59	0.182	2	

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)	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	18700	1	0	23.69	0.234	1.71	25.40	0.347	2
		1	49	23.82	0.241	1.71	25.53	0.357	2
		1	99	23.26	0.212	1.71	24.97	0.314	2
		50	0	22.63	0.183	1.71	24.34	0.272	2
		50	24	22.65	0.184	1.71	24.36	0.273	2
		50	49	22.47	0.177	1.71	24.18	0.262	2
	18900	100	0	22.45	0.176	1.71	24.16	0.261	2
		1	0	23.32	0.215	1.71	25.03	0.318	2
		1	49	23.45	0.221	1.71	25.16	0.328	2
		1	99	22.89	0.195	1.71	24.60	0.288	2
		50	0	22.25	0.168	1.71	23.96	0.249	2
		50	24	22.18	0.165	1.71	23.89	0.245	2
	19100	50	49	21.93	0.156	1.71	23.64	0.231	2
		100	0	22.02	0.159	1.71	23.73	0.236	2
		1	0	22.95	0.197	1.71	24.66	0.292	2
		1	49	22.21	0.166	1.71	23.92	0.247	2
		1	99	22.75	0.188	1.71	24.46	0.279	2
		50	0	21.94	0.156	1.71	23.65	0.232	2
16QAM	18700	50	24	21.86	0.153	1.71	23.57	0.228	2
		50	49	21.77	0.150	1.71	23.48	0.223	2
		100	0	21.70	0.148	1.71	23.41	0.219	2
		1	0	22.56	0.180	1.71	24.27	0.267	2
		1	49	22.63	0.183	1.71	24.34	0.272	2
		1	99	21.58	0.144	1.71	23.29	0.213	2
	18900	27	0	21.76	0.150	1.71	23.47	0.222	2
		27	12	21.65	0.146	1.71	23.36	0.217	2
		27	23	21.32	0.136	1.71	23.03	0.201	2
		1	0	22.21	0.166	1.71	23.92	0.247	2
		1	49	22.39	0.173	1.71	24.10	0.257	2
		1	99	21.96	0.157	1.71	23.67	0.233	2
	19100	27	0	21.12	0.129	1.71	22.83	0.192	2
		27	12	21.13	0.130	1.71	22.84	0.192	2
		27	23	20.69	0.117	1.71	22.40	0.174	2
		1	0	21.33	0.136	1.71	23.04	0.201	2
		1	49	21.76	0.150	1.71	23.47	0.222	2
		1	99	20.93	0.124	1.71	22.64	0.184	2
19100	27	0	21.03	0.127	1.71	22.74	0.188	2	
	27	12	20.78	0.120	1.71	22.49	0.177	2	
	27	23	20.43	0.110	1.71	22.14	0.164	2	

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

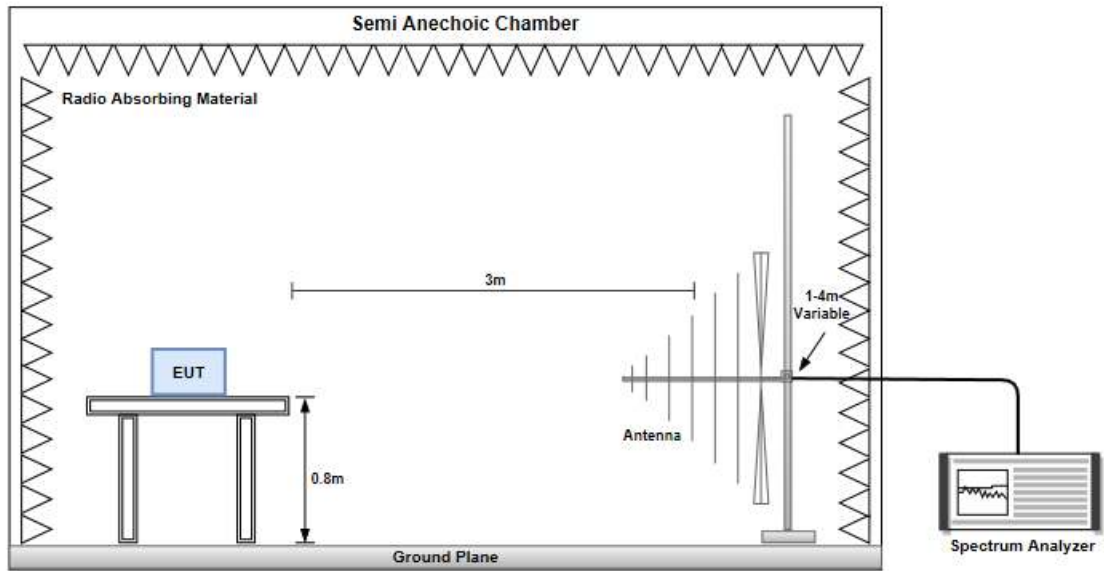
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB equal to -13dBm.

3.2.2 Test Procedures

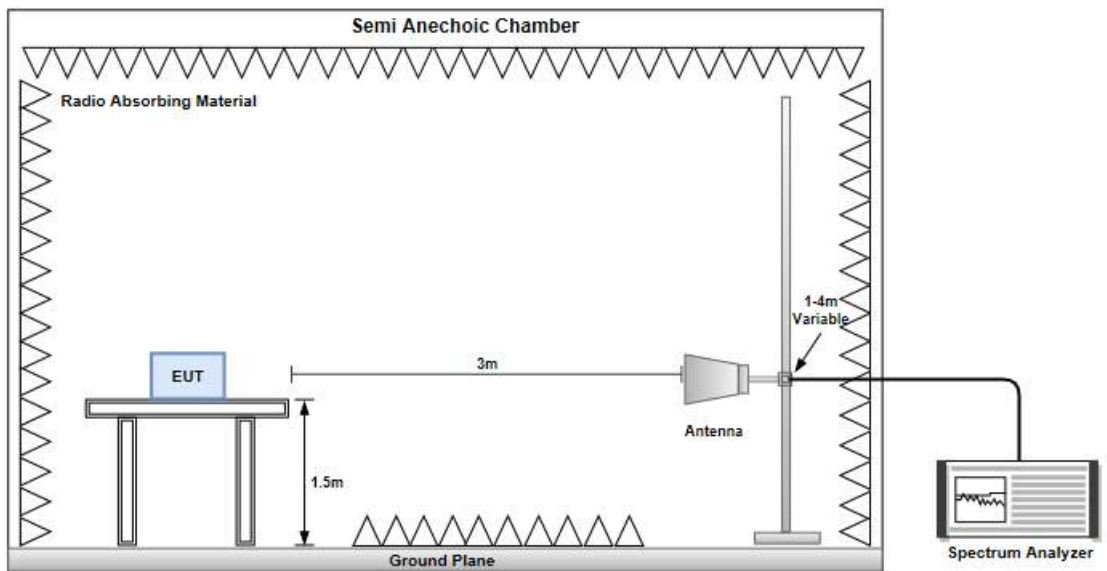
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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 and 4 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 2, CB:1.4MHz, 1RB, Offset 2,Channel:18607							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
46.49	H	-53.72	-13.00	-40.72	-60.26	-42.32	-11.40
92.08	H	-60.62	-13.00	-47.62	-59.40	-61.31	0.69
190.05	H	-65.44	-13.00	-52.44	-62.85	-68.76	3.32
323.91	H	-61.33	-13.00	-48.33	-61.85	-65.64	4.31
524.70	H	-62.55	-13.00	-49.55	-67.28	-66.61	4.06
651.77	H	-60.36	-13.00	-47.36	-66.80	-64.21	3.85
35.82	V	-47.05	-13.00	-34.05	-44.71	-34.17	-12.88
90.14	V	-58.25	-13.00	-45.25	-58.50	-59.03	0.78
177.44	V	-53.73	-13.00	-40.73	-56.41	-55.70	1.97
253.10	V	-57.92	-13.00	-44.92	-60.40	-62.37	4.45
468.44	V	-62.13	-13.00	-49.13	-66.43	-66.19	4.06
600.36	V	-57.44	-13.00	-44.44	-66.91	-60.98	3.54

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

Mode							
LTE Band 2, CB:3MHz, 1RB, Offset 7,Channel:18615							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
38.73	H	-58.52	-13.00	-45.52	-66.29	-46.05	-12.47
198.78	H	-63.89	-13.00	-50.89	-59.99	-68.10	4.21
289.96	H	-67.37	-13.00	-54.37	-66.11	-71.69	4.32
377.36	H	-64.28	-13.00	-51.28	-66.82	-68.59	4.31
493.66	H	-62.72	-13.00	-49.72	-67.04	-66.84	4.12
630.43	H	-59.14	-13.00	-46.14	-65.32	-62.87	3.73
33.88	V	-57.16	-13.00	-44.16	-54.76	-43.89	-13.27
90.14	V	-59.26	-13.00	-46.26	-59.51	-60.04	0.78
143.49	V	-61.69	-13.00	-48.69	-63.19	-60.52	-1.17
236.61	V	-49.05	-13.00	-36.05	-51.37	-53.48	4.43
427.70	V	-61.91	-13.00	-48.91	-65.36	-66.04	4.13
582.90	V	-57.27	-13.00	-44.27	-66.06	-60.96	3.69

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

Mode							
LTE Band 2, CB:5MHz, 1RB, Offset 12,Channel:18625							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
39.70	H	-56.97	-13.00	-43.97	-64.73	-44.64	-12.33
118.27	H	-65.99	-13.00	-52.99	-64.59	-65.26	-0.73
187.14	H	-66.71	-13.00	-53.71	-64.55	-69.73	3.02
346.22	H	-64.92	-13.00	-51.92	-66.76	-69.26	4.34
468.44	H	-63.53	-13.00	-50.53	-67.38	-67.59	4.06
549.92	H	-61.91	-13.00	-48.91	-66.95	-65.88	3.97
38.73	V	-57.54	-13.00	-44.54	-55.30	-45.07	-12.47
92.08	V	-59.04	-13.00	-46.04	-59.31	-59.73	0.69
233.70	V	-59.48	-13.00	-46.48	-61.75	-63.90	4.42
293.84	V	-61.50	-13.00	-48.50	-63.54	-65.80	4.30
470.38	V	-62.40	-13.00	-49.40	-66.75	-66.46	4.06
577.08	V	-58.13	-13.00	-45.13	-66.68	-61.87	3.74

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

Mode							
LTE Band 2, CB:10MHz, 1RB, Offset 24,Channel:18650							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
39.70	H	-57.58	-13.00	-44.58	-65.34	-45.25	-12.33
149.31	H	-66.71	-13.00	-53.71	-66.49	-65.86	-0.85
292.87	H	-66.52	-13.00	-53.52	-65.35	-70.83	4.31
426.73	H	-63.86	-13.00	-50.86	-67.11	-68.00	4.14
554.77	H	-61.96	-13.00	-48.96	-67.07	-65.89	3.93
652.74	H	-60.79	-13.00	-47.79	-67.24	-64.63	3.84
45.52	V	-59.64	-13.00	-46.64	-57.62	-48.05	-11.59
85.29	V	-57.87	-13.00	-44.87	-57.26	-57.18	-0.69
227.88	V	-60.77	-13.00	-47.77	-62.95	-65.17	4.40
321.00	V	-62.67	-13.00	-49.67	-64.89	-66.98	4.31
551.86	V	-58.82	-13.00	-45.82	-66.36	-62.77	3.95
656.62	V	-58.42	-13.00	-45.42	-67.64	-62.25	3.83

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

Mode							
LTE Band 2, CB:15MHz, 1RB, Offset 37,Channel:18675							
Frequency (MHz)	Antenna Polarity	E.IR.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
39.70	H	-57.12	-13.00	-44.12	-64.88	-44.79	-12.33
154.16	H	-65.07	-13.00	-52.07	-64.79	-64.49	-0.58
291.90	H	-66.66	-13.00	-53.66	-65.46	-70.97	4.31
398.60	H	-63.97	-13.00	-50.97	-66.89	-68.26	4.29
539.25	H	-61.85	-13.00	-48.85	-66.76	-65.86	4.01
675.05	H	-59.59	-13.00	-46.59	-66.30	-63.37	3.78
33.88	V	-57.39	-13.00	-44.39	-54.99	-44.12	-13.27
90.14	V	-58.35	-13.00	-45.35	-58.60	-59.13	0.78
237.58	V	-60.04	-13.00	-47.04	-62.37	-64.47	4.43
314.21	V	-62.91	-13.00	-49.91	-65.06	-67.21	4.30
446.13	V	-63.01	-13.00	-50.01	-66.74	-67.04	4.03
621.70	V	-57.52	-13.00	-44.52	-66.90	-61.19	3.67

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

Mode							
LTE Band 2, CB:20MHz, 1RB, Offset 49,Channel:18700							
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
39.70	H	-57.53	-13.00	-44.53	-65.29	-45.20	-12.33
123.12	H	-66.59	-13.00	-53.59	-65.37	-65.68	-0.91
176.47	H	-57.41	-13.00	-44.41	-56.45	-59.26	1.85
293.84	H	-66.51	-13.00	-53.51	-65.38	-70.81	4.30
449.04	H	-63.35	-13.00	-50.35	-66.85	-67.37	4.02
640.13	H	-59.67	-13.00	-46.67	-65.97	-63.46	3.79
32.91	V	-57.89	-13.00	-44.89	-55.47	-44.39	-13.50
90.14	V	-58.84	-13.00	-45.84	-59.09	-59.62	0.78
160.95	V	-59.72	-13.00	-46.72	-62.31	-59.58	-0.14
236.61	V	-60.56	-13.00	-47.56	-62.88	-64.99	4.43
461.65	V	-62.87	-13.00	-49.87	-66.98	-66.91	4.04
620.73	V	-58.28	-13.00	-45.28	-67.66	-61.95	3.67

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

3.2.5 Test Result of Radiated Emissions above 1GHz

Mode		LTE Band 2, CB:1.4MHz, 1RB, Offset 2,Channel:18607					
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3701.40	H	-47.79	-13.00	-34.79	-61.43	-54.51	6.72
5552.10	H	-47.09	-13.00	-34.09	-64.38	-53.32	6.23
7402.80	H	-44.41	-13.00	-31.41	-65.51	-47.32	2.91
3701.40	V	-49.31	-13.00	-36.31	-63.24	-56.03	6.72
5552.10	V	-45.65	-13.00	-32.65	-63.30	-51.88	6.23
7402.80	V	-43.59	-13.00	-30.59	-65.83	-46.50	2.91

Mode		LTE Band 2, CB:1.4MHz, 1RB, Offset 2,Channel:18900					
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3760.00	H	-46.70	-13.00	-33.70	-60.41	-53.40	6.70
5640.00	H	-45.55	-13.00	-32.55	-63.01	-51.75	6.20
7520.00	H	-42.94	-13.00	-29.94	-63.72	-45.92	2.98
3760.00	V	-47.90	-13.00	-34.90	-61.93	-54.60	6.70
5640.00	V	-45.01	-13.00	-32.01	-62.86	-51.21	6.20
7520.00	V	-43.68	-13.00	-30.68	-65.53	-46.66	2.98

Mode		LTE Band 2, CB:1.4MHz, 1RB, Offset 2,Channel:19193					
Frequency (MHz)	Antenna Polarity.	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3818.60	H	-45.99	-13.00	-32.99	-59.81	-52.68	6.69
5727.90	H	-39.91	-13.00	-26.91	-57.54	-46.04	6.13
7637.20	H	-41.61	-13.00	-28.61	-62.33	-44.65	3.04
3818.60	V	-46.16	-13.00	-33.16	-60.31	-52.85	6.69
5727.90	V	-39.14	-13.00	-26.14	-57.28	-45.27	6.13
7637.20	V	-42.69	-13.00	-29.69	-64.40	-45.73	3.04

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

Mode							
LTE Band 2, CB:3MHz, 1RB, Offset 7,Channel:18615							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3703.00	H	-43.64	-13.00	-30.64	-57.28	-50.36	6.72
5554.50	H	-41.28	-13.00	-28.28	-58.58	-47.51	6.23
7406.00	H	-42.69	-13.00	-29.69	-63.79	-45.60	2.91
3703.00	V	-44.12	-13.00	-31.12	-58.05	-50.84	6.72
5554.50	V	-40.31	-13.00	-27.31	-57.96	-46.54	6.23
7406.00	V	-42.71	-13.00	-29.71	-64.94	-45.62	2.91

Mode							
LTE Band 2, CB:3MHz, 1RB, Offset 7,Channel:18900							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3760.00	H	-42.27	-13.00	-29.27	-55.98	-48.97	6.70
5640.00	H	-41.77	-13.00	-28.77	-59.23	-47.97	6.20
7520.00	H	-43.83	-13.00	-30.83	-64.61	-46.81	2.98
3760.00	V	-42.61	-13.00	-29.61	-56.64	-49.31	6.70
5640.00	V	-40.64	-13.00	-27.64	-58.49	-46.84	6.20
7520.00	V	-41.22	-13.00	-28.22	-63.07	-44.20	2.98

Mode							
LTE Band 2, CB:3MHz, 1RB, Offset 7,Channel:19185							
Frequency (MHz)	Antenna Polarity.	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3817.00	H	-44.96	-13.00	-31.96	-58.78	-51.65	6.69
5725.50	H	-40.23	-13.00	-27.23	-57.85	-46.37	6.14
7634.00	H	-41.69	-13.00	-28.69	-62.40	-44.73	3.04
3817.00	V	-44.31	-13.00	-31.31	-58.46	-51.00	6.69
5725.50	V	-39.02	-13.00	-26.02	-57.15	-45.16	6.14
7634.00	V	-40.94	-13.00	-27.94	-62.65	-43.98	3.04

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

Mode							
LTE Band 2, CB:5MHz, 1RB, Offset 12,Channel:18625							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3705.00	H	-42.82	-13.00	-29.82	-56.47	-49.54	6.72
5557.50	H	-39.25	-13.00	-26.25	-56.56	-45.48	6.23
7410.00	H	-43.09	-13.00	-30.09	-64.17	-46.01	2.92
3705.00	V	-41.35	-13.00	-28.35	-55.30	-48.07	6.72
5557.50	V	-40.09	-13.00	-27.09	-57.75	-46.32	6.23
7410.00	V	-42.86	-13.00	-29.86	-65.07	-45.78	2.92

Mode							
LTE Band 2, CB:5MHz, 1RB, Offset 12,Channel:18900							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3760.00	H	-42.48	-13.00	-29.48	-56.19	-49.18	6.70
5640.00	H	-41.09	-13.00	-28.09	-58.55	-47.29	6.20
7520.00	H	-42.89	-13.00	-29.89	-63.67	-45.87	2.98
3760.00	V	-44.65	-13.00	-31.65	-58.68	-51.35	6.70
5640.00	V	-42.10	-13.00	-29.10	-59.95	-48.30	6.20
7520.00	V	-43.72	-13.00	-30.72	-65.57	-46.70	2.98

Mode							
LTE Band 2, CB:5MHz, 1RB, Offset 12,Channel:19175							
Frequency (MHz)	Antenna Polarity.	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3815.00	H	-43.41	-13.00	-30.41	-57.22	-50.10	6.69
5722.50	H	-41.63	-13.00	-28.63	-59.25	-47.77	6.14
7630.00	H	-42.38	-13.00	-29.38	-63.08	-45.42	3.04
3815.00	V	-42.09	-13.00	-29.09	-56.23	-48.78	6.69
5722.50	V	-40.52	-13.00	-27.52	-58.64	-46.66	6.14
7630.00	V	-41.74	-13.00	-28.74	-63.44	-44.78	3.04

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

Mode							
LTE Band 2, CB:10MHz, 1RB, Offset 24,Channel:18650							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3710.00	H	-41.07	-13.00	-28.07	-54.73	-47.79	6.72
5565.00	H	-42.92	-13.00	-29.92	-60.24	-49.15	6.23
7420.00	H	-41.48	-13.00	-28.48	-62.54	-44.40	2.92
3710.00	V	-42.39	-13.00	-29.39	-56.34	-49.11	6.72
5565.00	V	-41.06	-13.00	-28.06	-58.73	-47.29	6.23
7420.00	V	-40.21	-13.00	-27.21	-62.40	-43.13	2.92

Mode							
LTE Band 2, CB:10MHz, 1RB, Offset 24,Channel:18900							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3760.00	H	-39.63	-13.00	-26.63	-53.34	-46.33	6.70
5640.00	H	-40.47	-13.00	-27.47	-57.93	-46.67	6.20
7520.00	H	-41.17	-13.00	-28.17	-61.95	-44.15	2.98
3760.00	V	-45.24	-13.00	-32.24	-59.27	-51.94	6.70
5640.00	V	-42.91	-13.00	-29.91	-60.76	-49.11	6.20
7520.00	V	-43.68	-13.00	-30.68	-65.53	-46.66	2.98

Mode							
LTE Band 2, CB:10MHz, 1RB, Offset 24,Channel:19150							
Frequency (MHz)	Antenna Polarity.	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3810.00	H	-42.64	-13.00	-29.64	-56.43	-49.33	6.69
5715.00	H	-43.37	-13.00	-30.37	-60.98	-49.51	6.14
7620.00	H	-43.09	-13.00	-30.09	-63.76	-46.13	3.04
3810.00	V	-39.93	-13.00	-26.93	-54.06	-46.62	6.69
5715.00	V	-42.11	-13.00	-29.11	-60.21	-48.25	6.14
7620.00	V	-43.47	-13.00	-30.47	-65.15	-46.51	3.04

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

Mode							
LTE Band 2, CB:15MHz, 1RB, Offset 37,Channel:18675							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3715.00	H	-43.48	-13.00	-30.48	-57.14	-50.20	6.72
5572.50	H	-42.93	-13.00	-29.93	-60.27	-49.16	6.23
7430.00	H	-42.86	-13.00	-29.86	-63.89	-45.79	2.93
3715.00	V	-42.63	-13.00	-29.63	-56.59	-49.35	6.72
5572.50	V	-41.21	-13.00	-28.21	-58.89	-47.44	6.23
7430.00	V	-43.91	-13.00	-30.91	-66.06	-46.84	2.93

Mode							
LTE Band 2, CB:15MHz, 1RB, Offset 37,Channel:18900							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3760.00	H	-41.94	-13.00	-28.94	-55.65	-48.64	6.70
5640.00	H	-39.26	-13.00	-26.26	-56.72	-45.46	6.20
7520.00	H	-40.47	-13.00	-27.47	-61.25	-43.45	2.98
3760.00	V	-40.11	-13.00	-27.11	-54.14	-46.81	6.70
5640.00	V	-41.57	-13.00	-28.57	-59.42	-47.77	6.20
7520.00	V	-40.49	-13.00	-27.49	-62.34	-43.47	2.98

Mode							
LTE Band 2, CB:15MHz, 1RB, Offset 37,Channel:19125							
Frequency (MHz)	Antenna Polarity.	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3805.00	H	-43.69	-13.00	-30.69	-57.47	-50.38	6.69
5707.50	H	-41.06	-13.00	-28.06	-58.65	-47.21	6.15
7610.00	H	-44.84	-13.00	-31.84	-65.47	-47.87	3.03
3805.00	V	-45.57	-13.00	-32.57	-59.69	-52.26	6.69
5707.50	V	-42.32	-13.00	-29.32	-60.39	-48.47	6.15
7610.00	V	-42.47	-13.00	-29.47	-64.12	-45.50	3.03

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

Mode							
LTE Band 2, CB:20MHz, 1RB, Offset 49,Channel:18700							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3720.00	H	-44.26	-13.00	-31.26	-57.93	-50.98	6.72
5580.00	H	-38.72	-13.00	-25.72	-56.07	-44.95	6.23
7440.00	H	-44.57	-13.00	-31.57	-65.57	-47.50	2.93
3720.00	V	-45.96	-13.00	-32.96	-59.93	-52.68	6.72
5580.00	V	-38.22	-13.00	-25.22	-55.91	-44.45	6.23
7440.00	V	-42.83	-13.00	-29.83	-64.95	-45.76	2.93

Mode							
LTE Band 2, CB:20MHz, 1RB, Offset 49,Channel:18900							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3760.00	H	-45.53	-13.00	-32.53	-59.24	-52.23	6.70
5640.00	H	-45.19	-13.00	-32.19	-62.65	-51.39	6.20
7520.00	H	-41.54	-13.00	-28.54	-62.32	-44.52	2.98
3760.00	V	-47.16	-13.00	-34.16	-61.19	-53.86	6.70
5640.00	V	-45.00	-13.00	-32.00	-62.85	-51.20	6.20
7520.00	V	-43.57	-13.00	-30.57	-65.42	-46.55	2.98

Mode							
LTE Band 2, CB:20MHz, 1RB, Offset 49,Channel:19100							
Frequency (MHz)	Antenna Polarity.	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
3800.00	H	-40.88	-13.00	-27.88	-54.64	-47.57	6.69
5700.00	H	44.33	-13.00	57.33	-61.90	38.18	6.15
7600.00	H	-42.76	-13.00	-29.76	-63.36	-45.79	3.03
3800.00	V	-41.51	-13.00	-28.51	-55.62	-48.20	6.69
5700.00	V	-43.28	-13.00	-30.28	-61.32	-49.43	6.15
7600.00	V	-43.05	-13.00	-30.05	-64.68	-46.08	3.03

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

3.3 Conducted Emissions

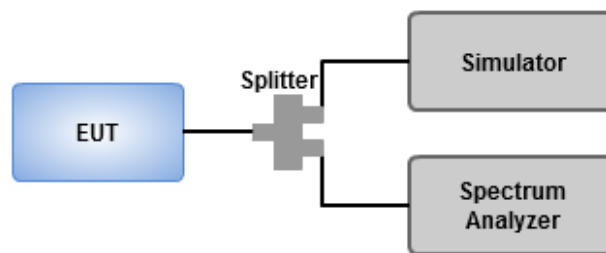
3.3.1 Limit of Conducted Emissions

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



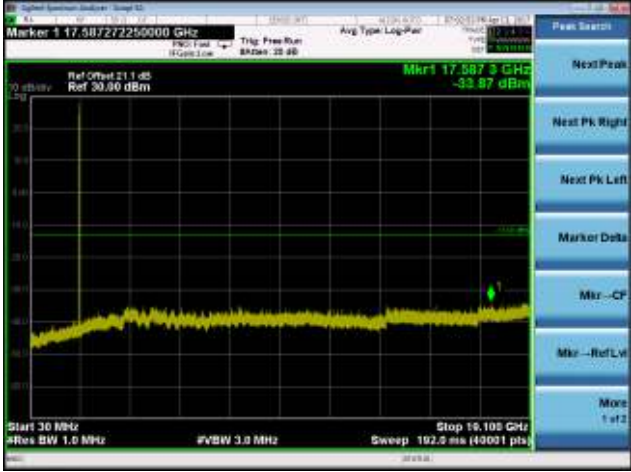
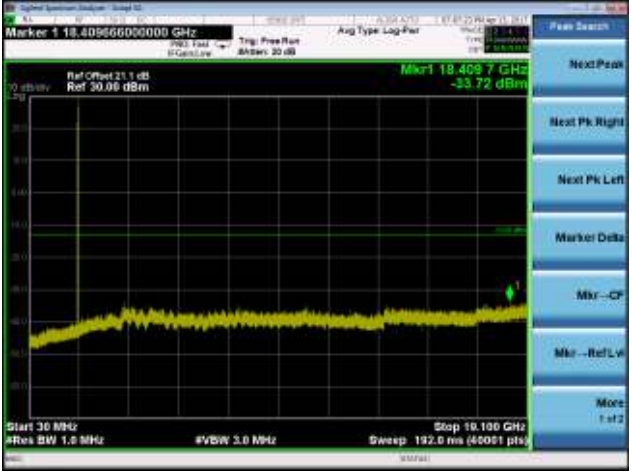
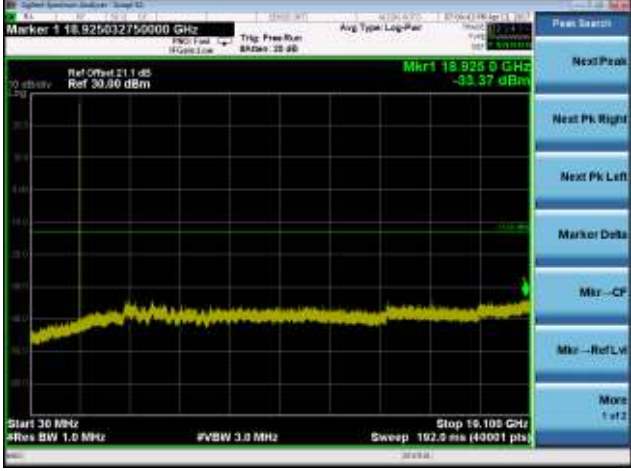
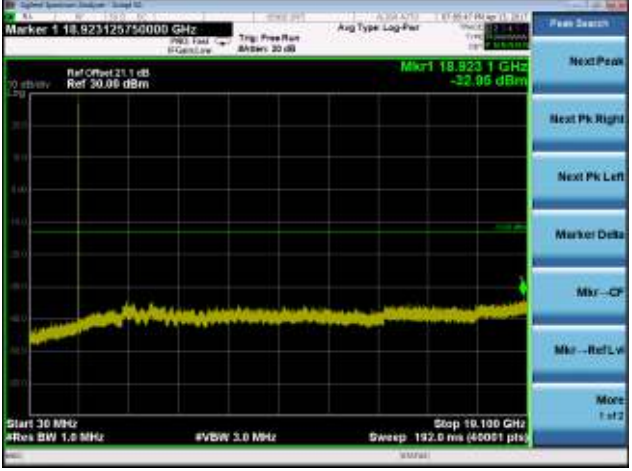
3.3.2 Test Procedures

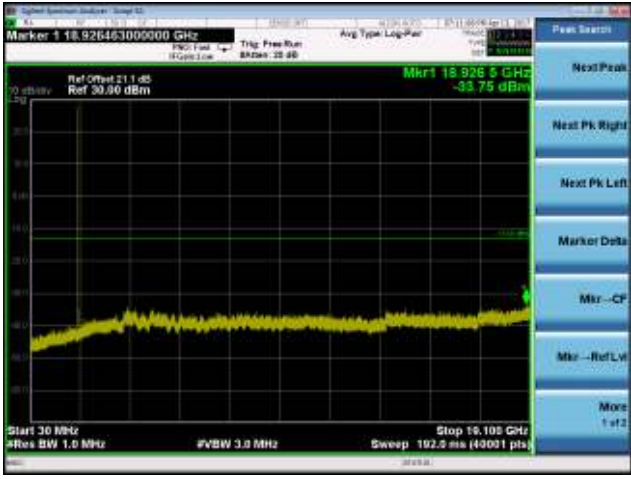

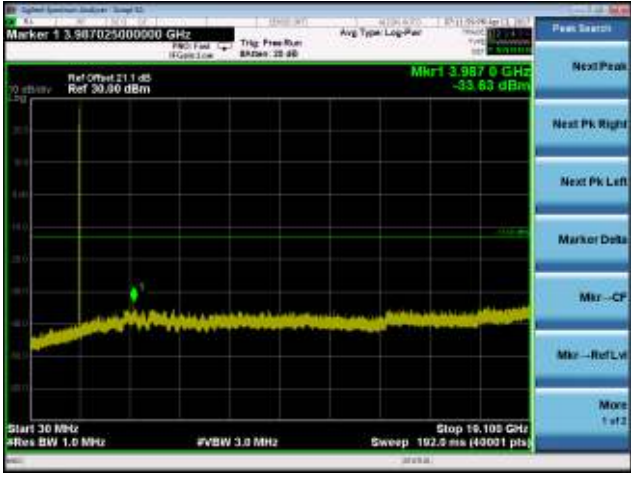

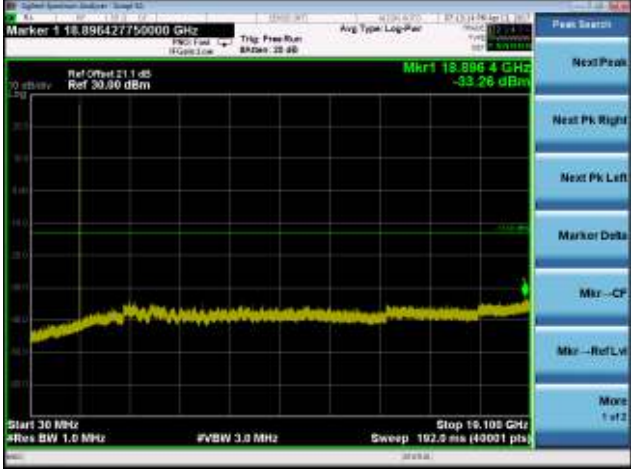
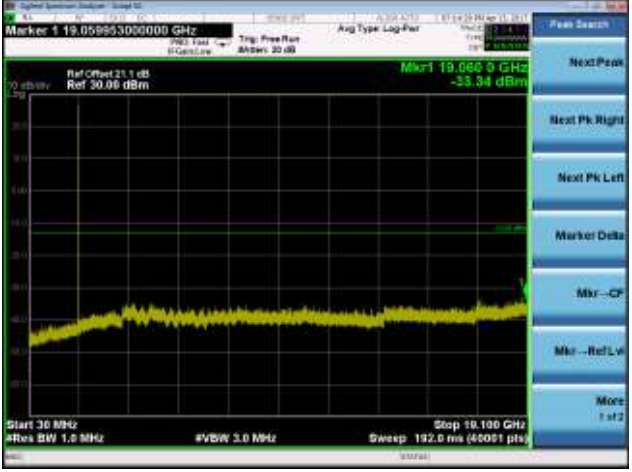
1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz ~ 19.1 GHz.
3. Set RBW = 1 MHz, VBW = 3 MHz, detector = Peak, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

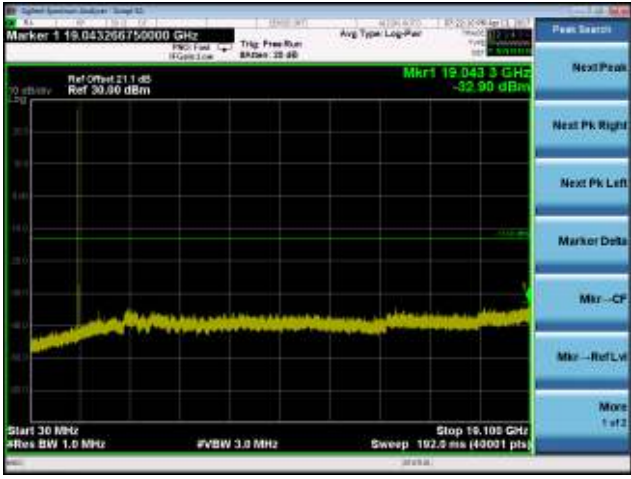


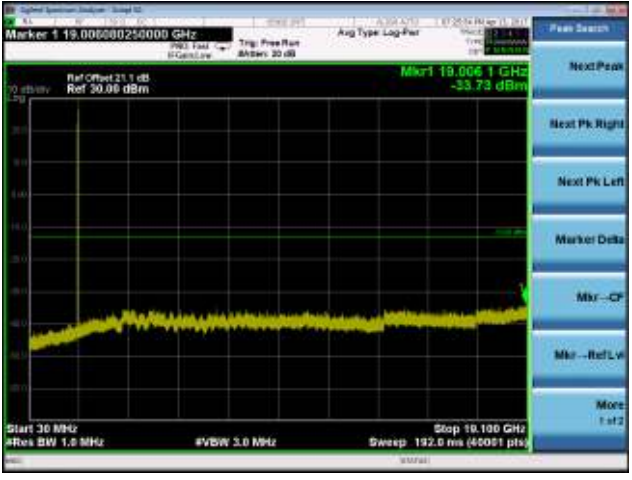
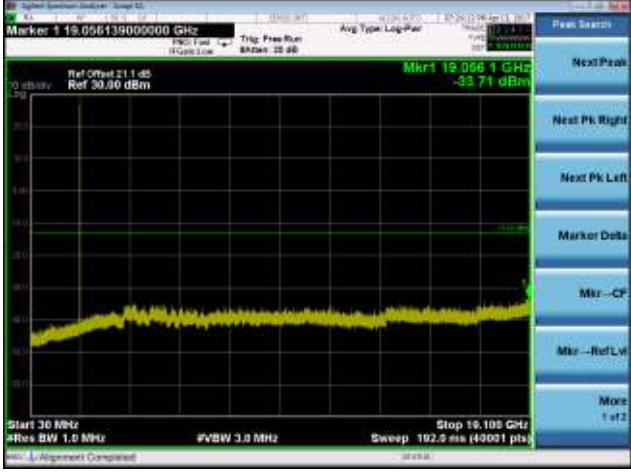
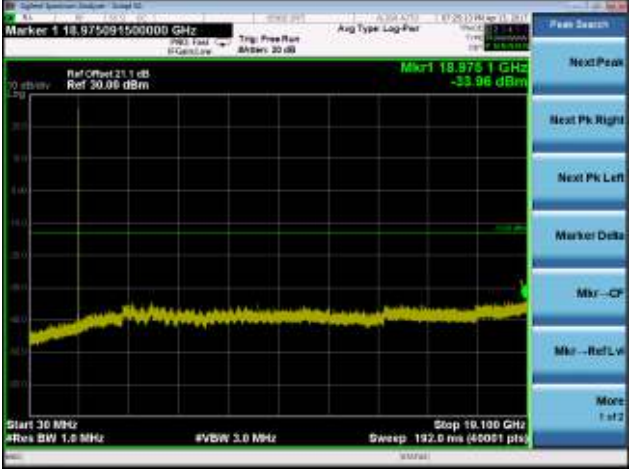
3.3.3 Test Setup

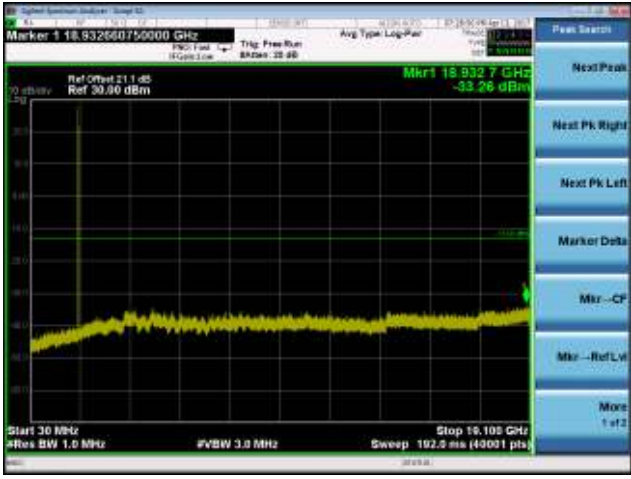

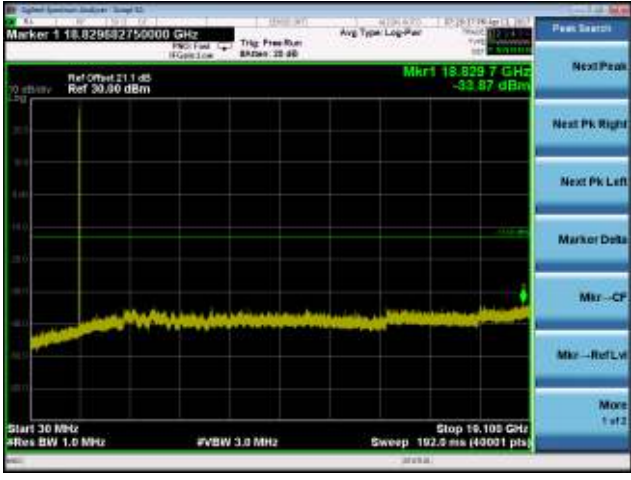
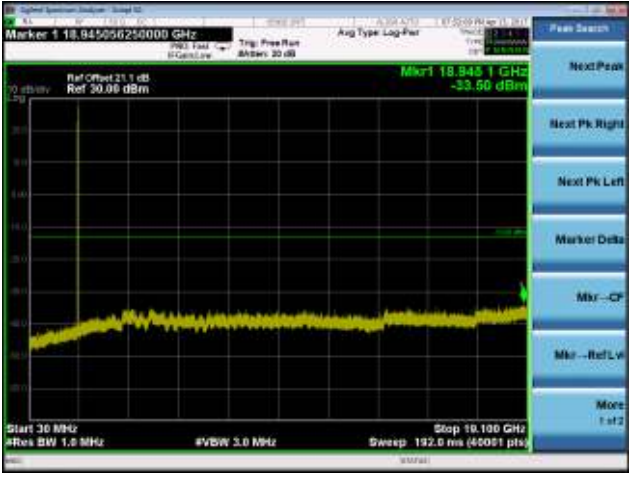
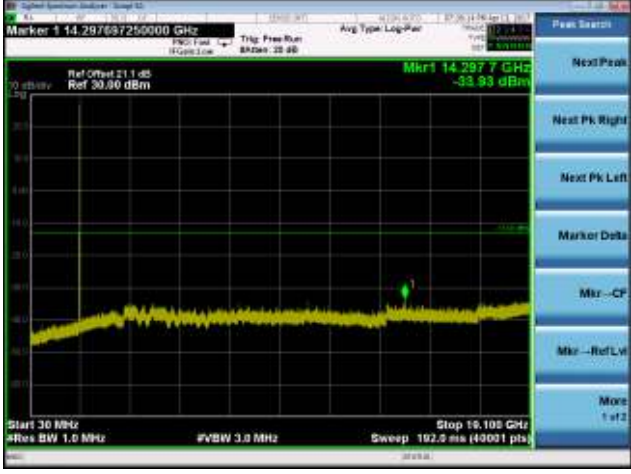
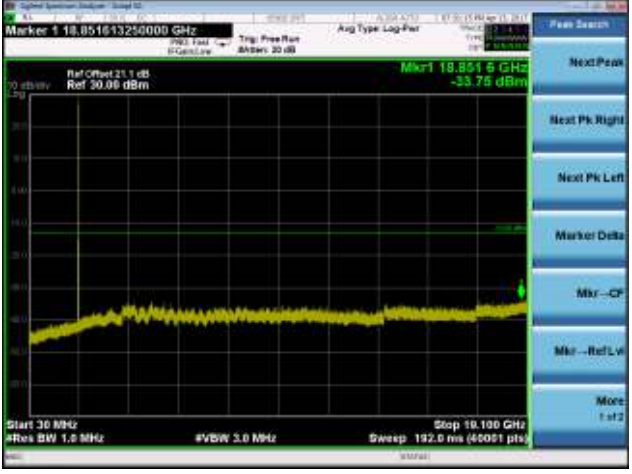


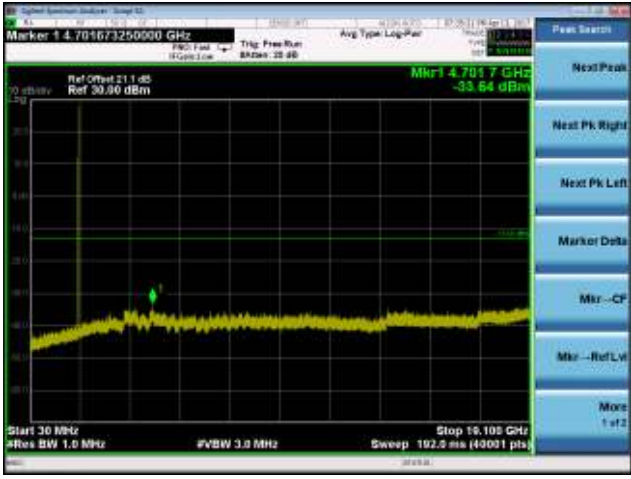

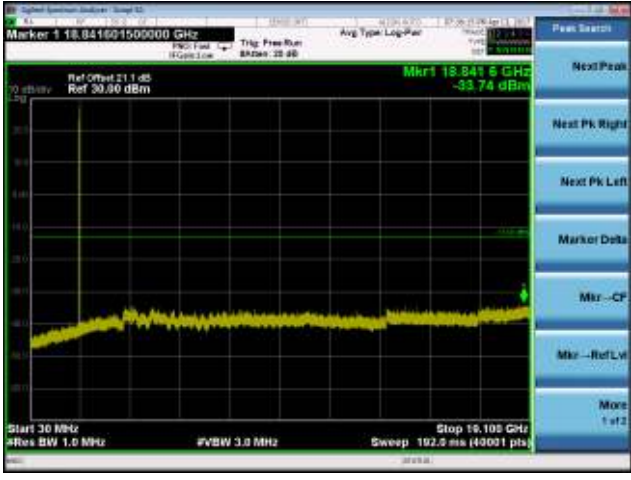
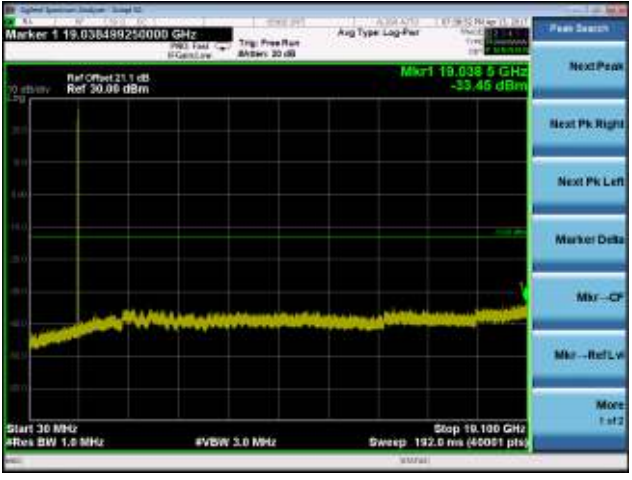
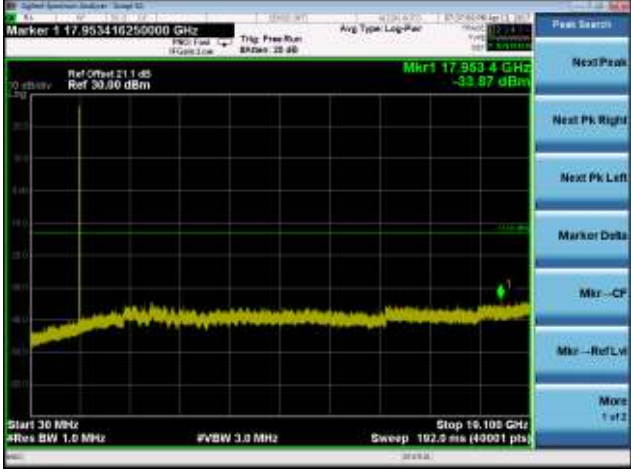
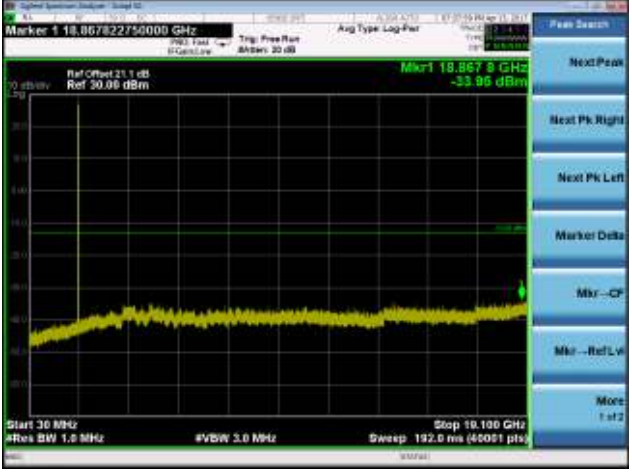
3.3.4 Test Result of Conducted Emissions

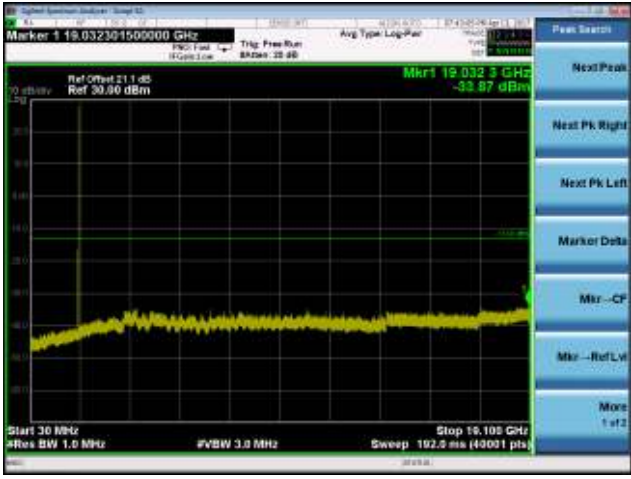

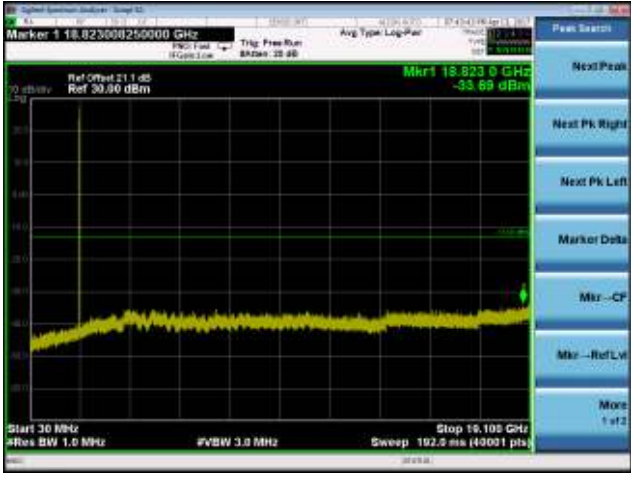

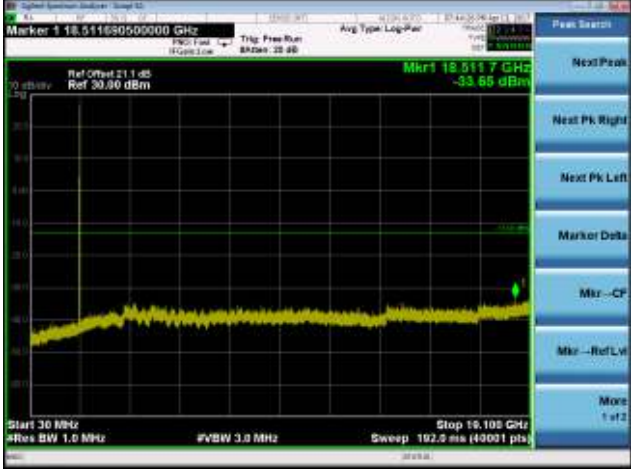
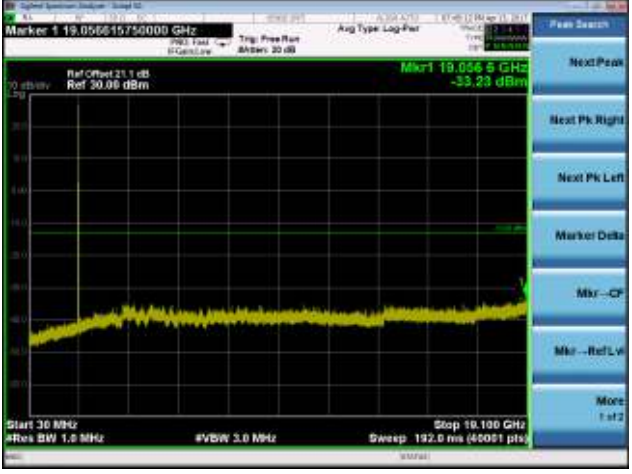
Mode	LTE Band 2, CB: 1.4MHz, QPSK	Mode	LTE Band 2, CB: 1.4MHz, 16QAM
Channel	18607	Channel	18607
			
Channel	18900	Channel	18900
			
Channel	19193	Channel	19193
			

Mode	LTE Band 2, CB: 3MHz, QPSK	Mode	LTE Band 2, CB: 3MHz, 16QAM
Channel	18615	Channel	18615
			
Channel	18900	Channel	18900
			
Channel	19185	Channel	19185
			

Mode	LTE Band 2, CB: 5MHz, QPSK	Mode	LTE Band 2, CB: 5MHz, 16QAM
Channel	18625	Channel	18625
			
Channel	18900	Channel	18900
			
Channel	19175	Channel	19175
			

Mode	LTE Band 2, CB: 10MHz, QPSK	Mode	LTE Band 2, CB: 10MHz, 16QAM
Channel	18650	Channel	18650
			
Channel	18900	Channel	18900
			
Channel	19150	Channel	19150
			

Mode	LTE Band 2, CB: 15MHz, QPSK	Mode	LTE Band 2, CB: 15MHz, 16QAM
Channel	18675	Channel	18675
			
Channel	18900	Channel	18900
			
Channel	19125	Channel	19125
			

Mode	LTE Band 2, CB: 20MHz, QPSK	Mode	LTE Band 2, CB: 20MHz, 16QAM
Channel	18700	Channel	18700
			
Channel	18900	Channel	18900
			
Channel	19100	Channel	19100
			

3.4 Band Edge

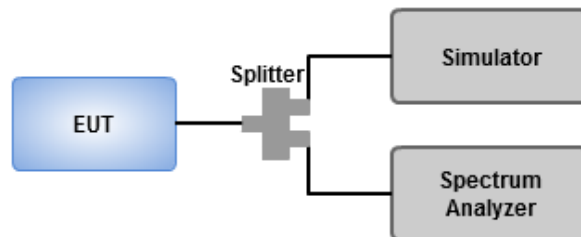
3.4.1 Limit of Band Edge

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 -13dBm.

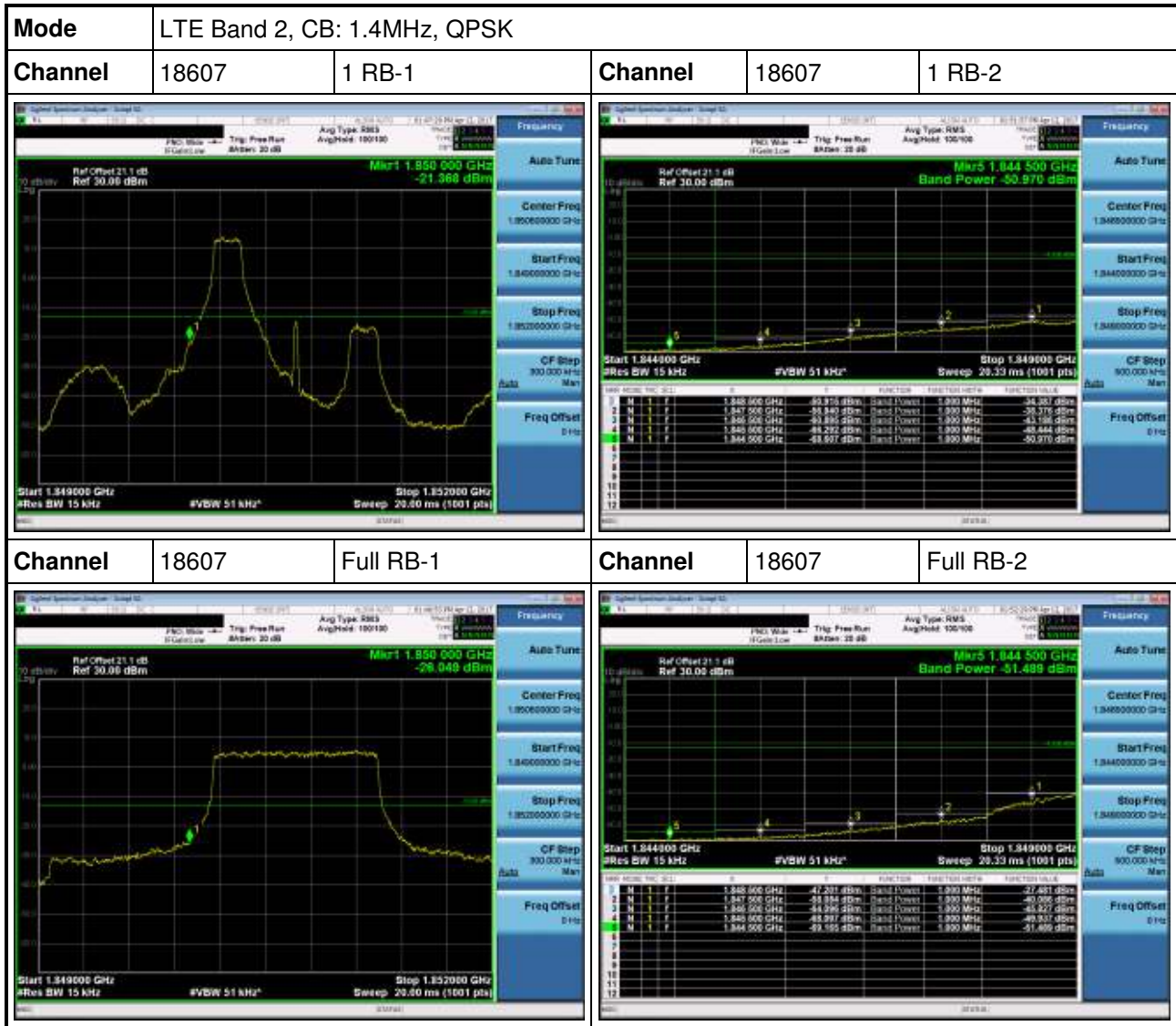
3.4.2 Test Procedures

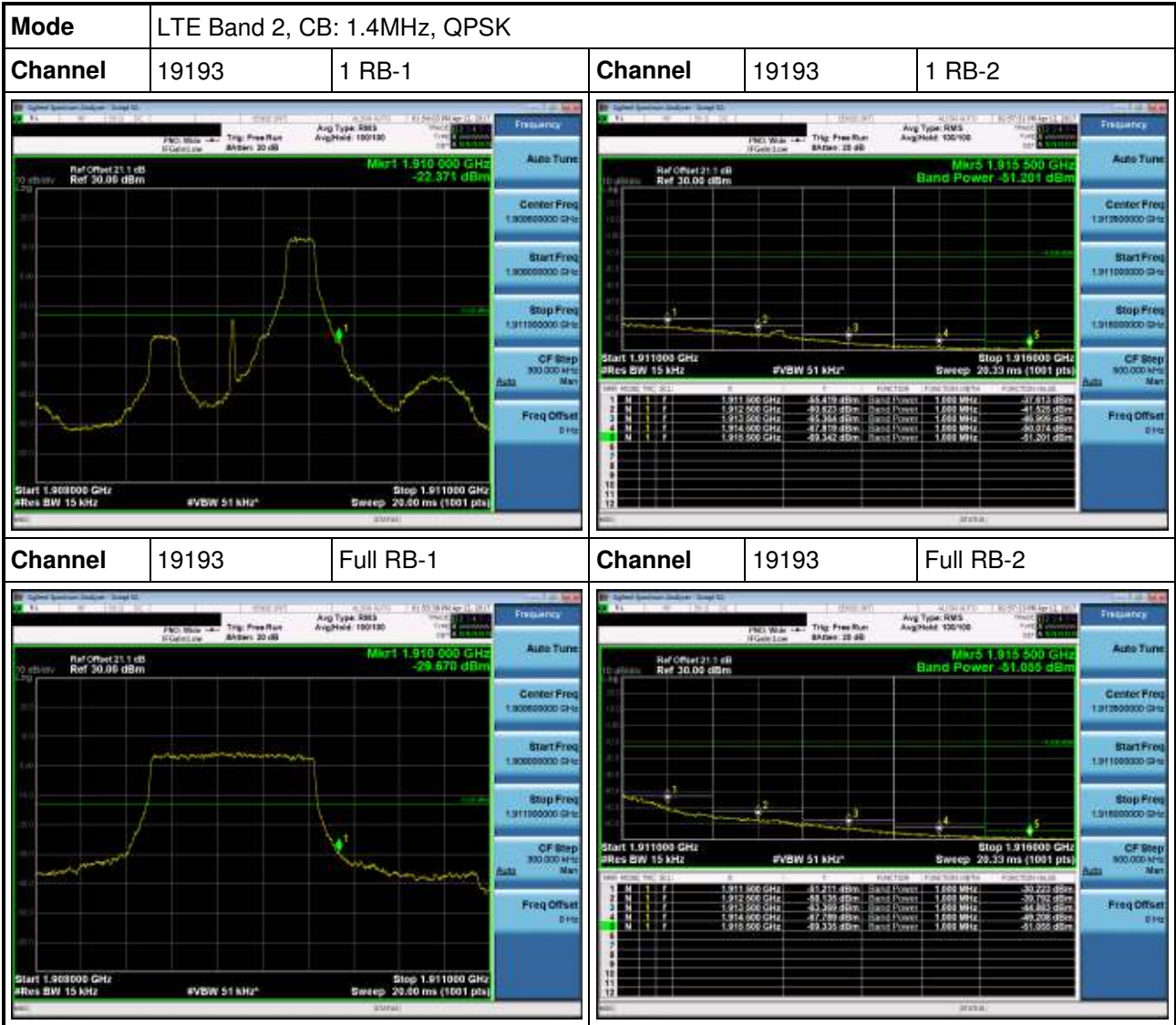
- 1 Lowest and highest operating channels are tested for this item.
- 2 Set RBW = 15 / 30 / 51 / 100 / 150 / 200 kHz, VBW = 51 / 100 / 160 / 300 / 470 / 620 kHz for LTE channel bandwidth 1.4 / 3 / 5 / 10 / 15 / 20 MHz, detector = RMS, sweep time = auto to measure trace.
- 3 Set RBW = 15 / 30 / 51 / 100 kHz, VBW = 51 / 100 / 160 / 300 kHz for LTE channel bandwidth 1.4 / 3 / 5 / 10 MHz, detector = RMS and use channel power measurement function of spectrum analyzer to integrate power over 1MHz.

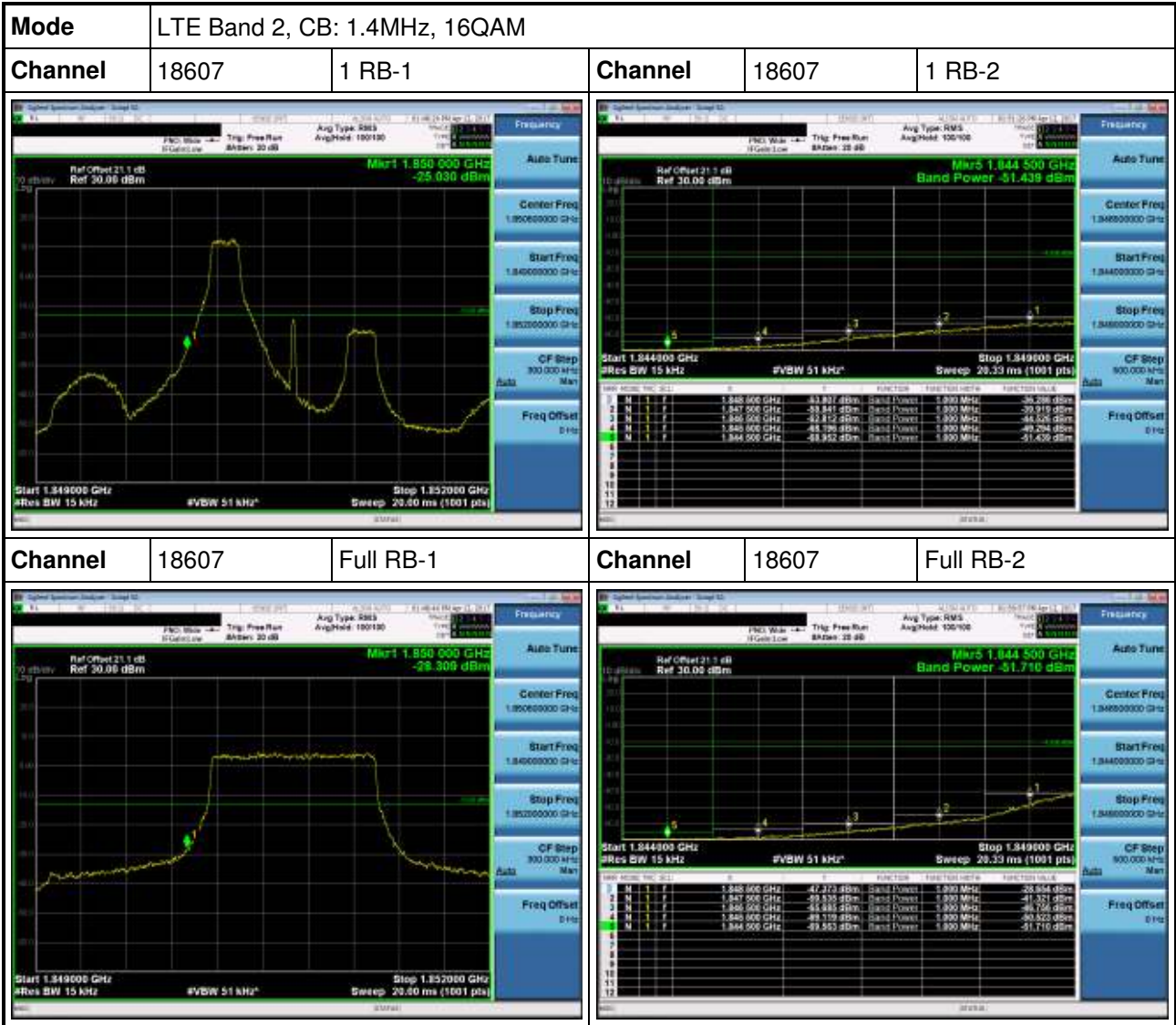
3.4.3 Test Setup

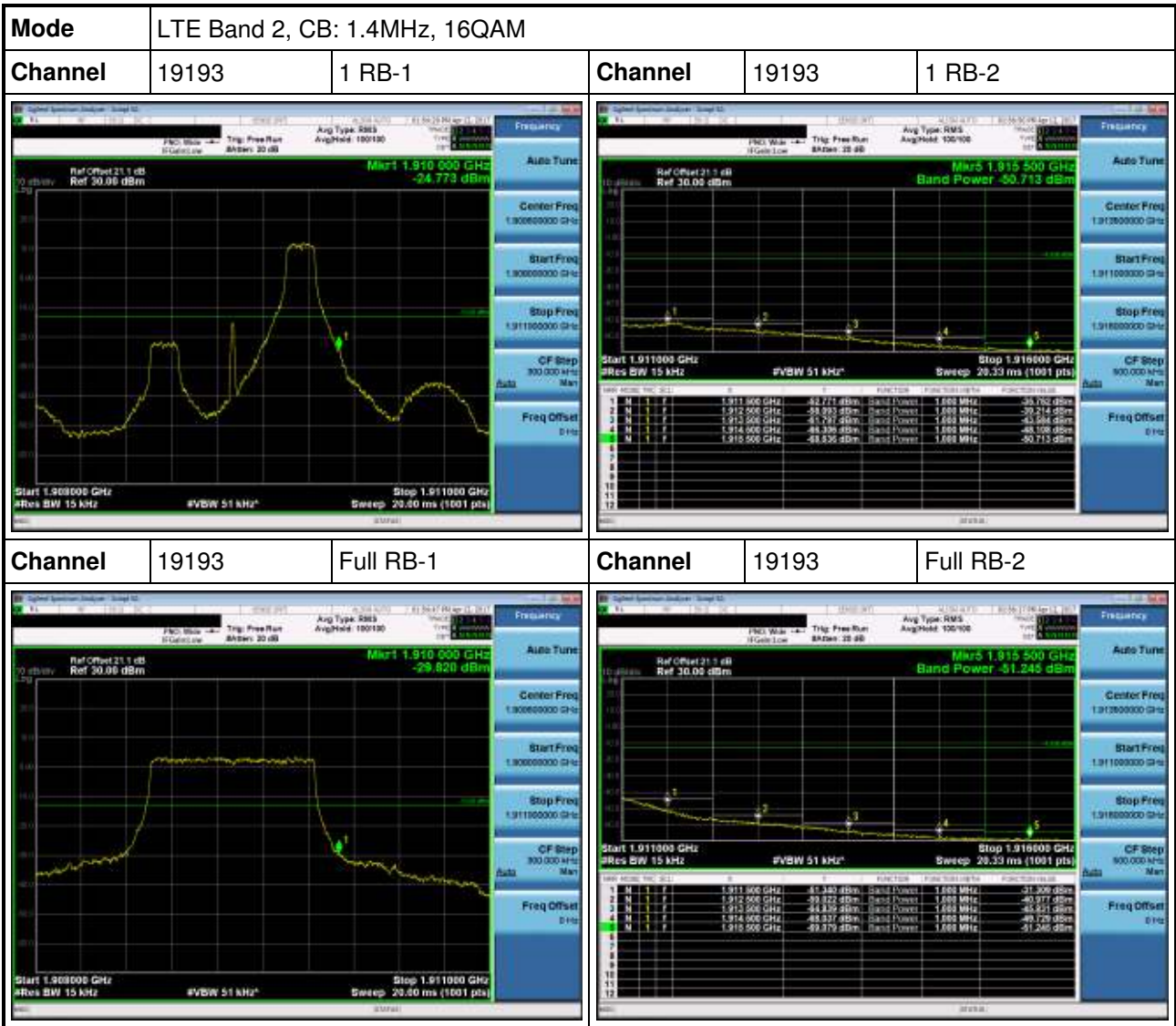


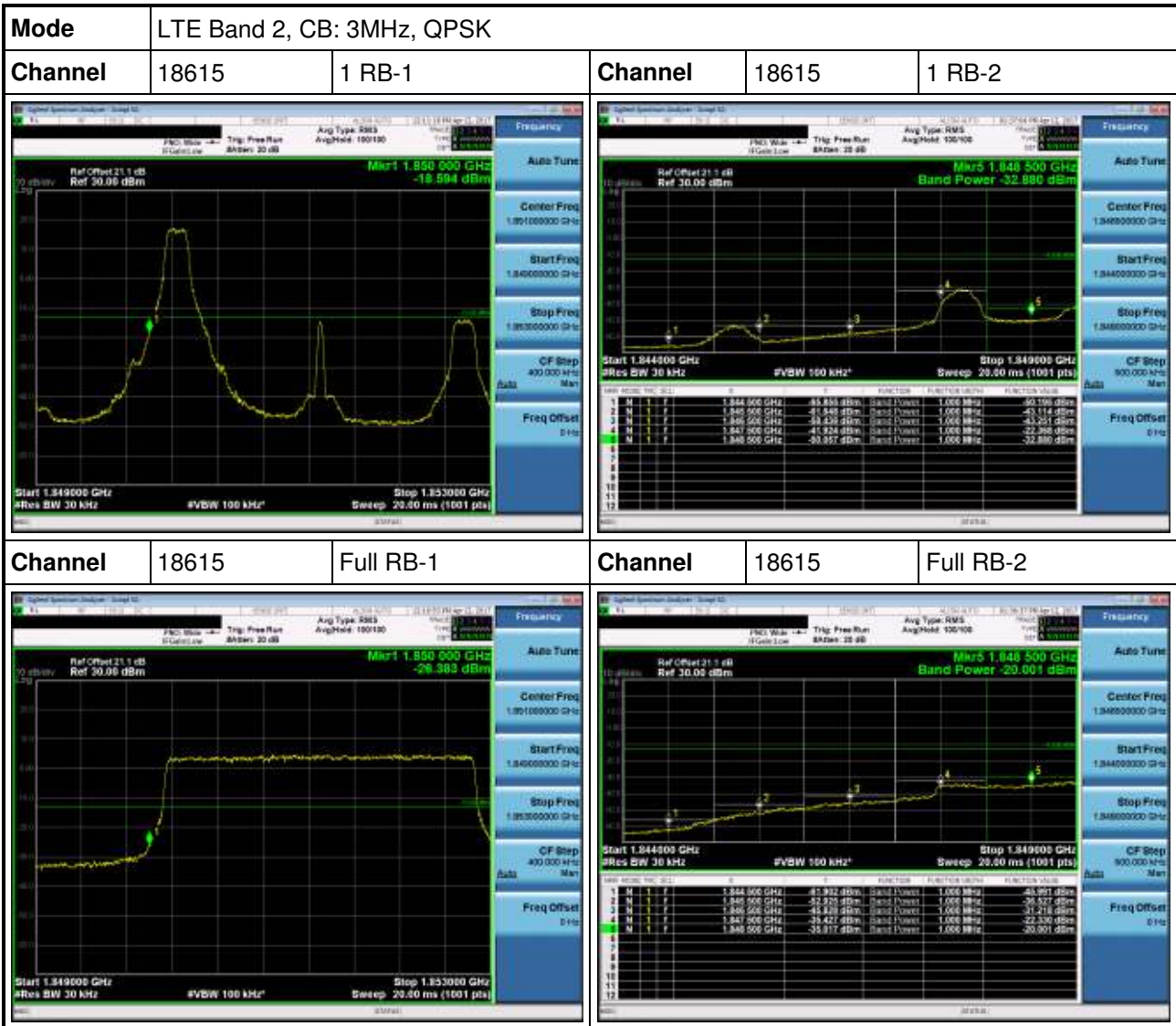
3.4.4 Test Result of Band Edge

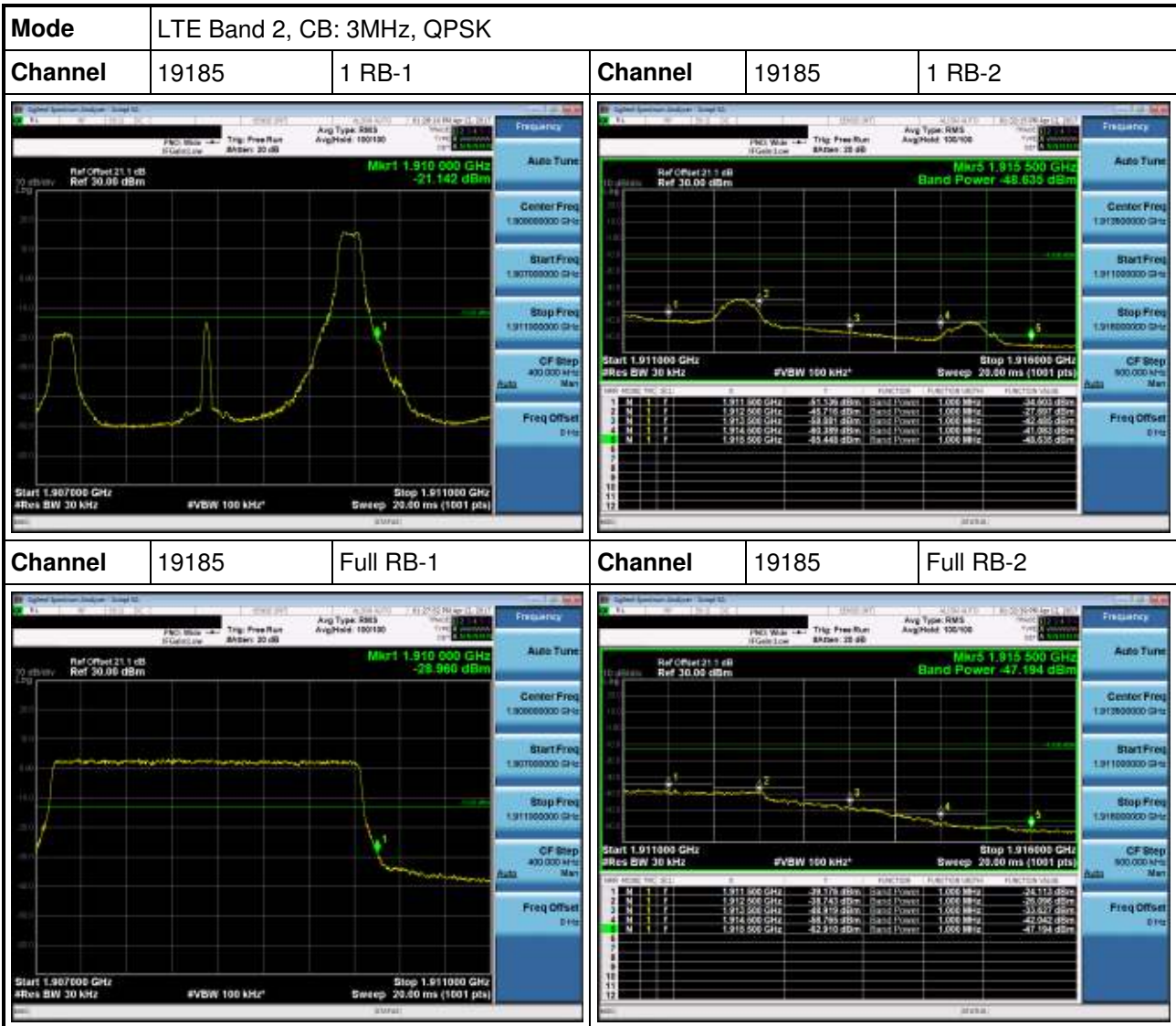


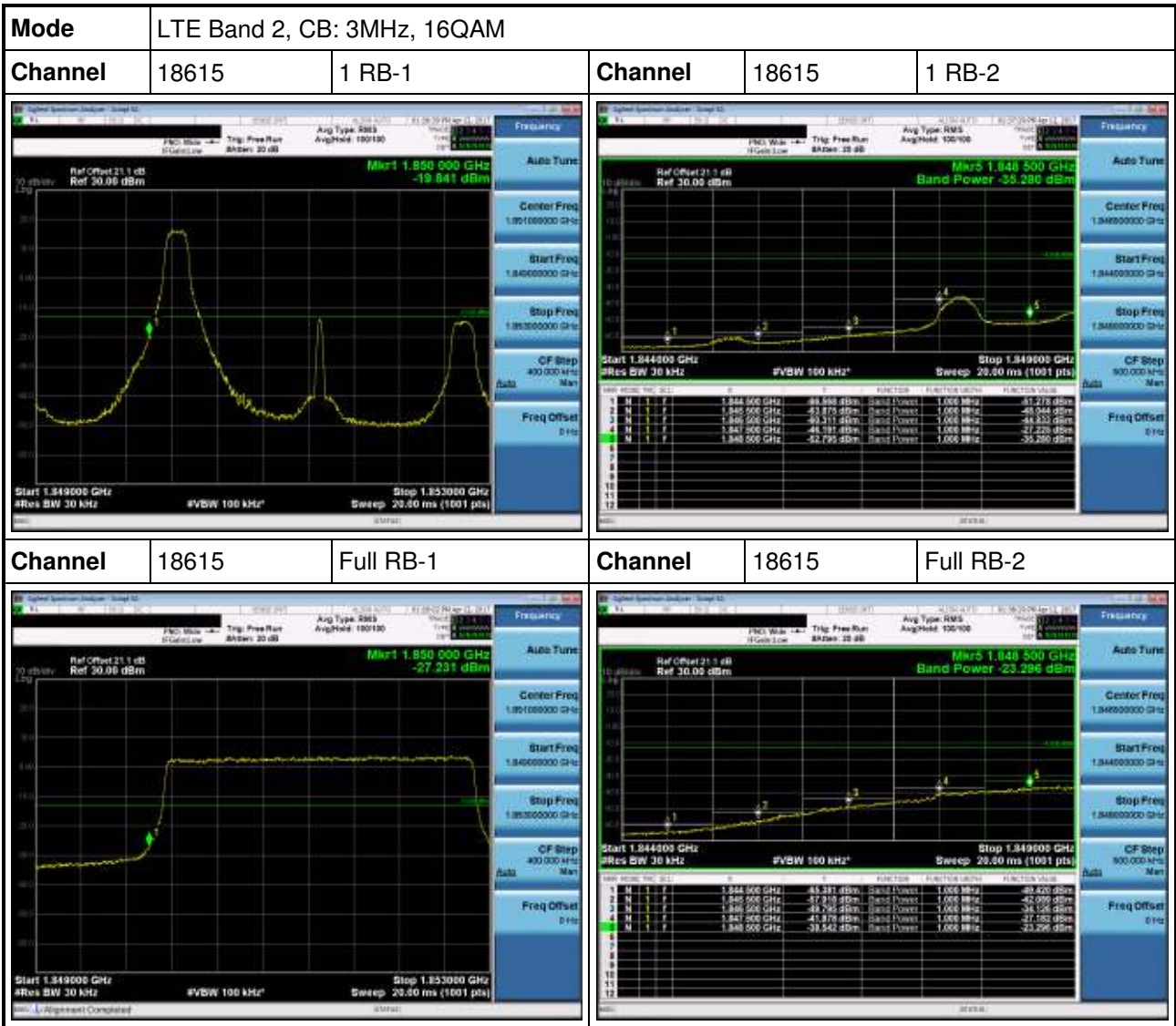


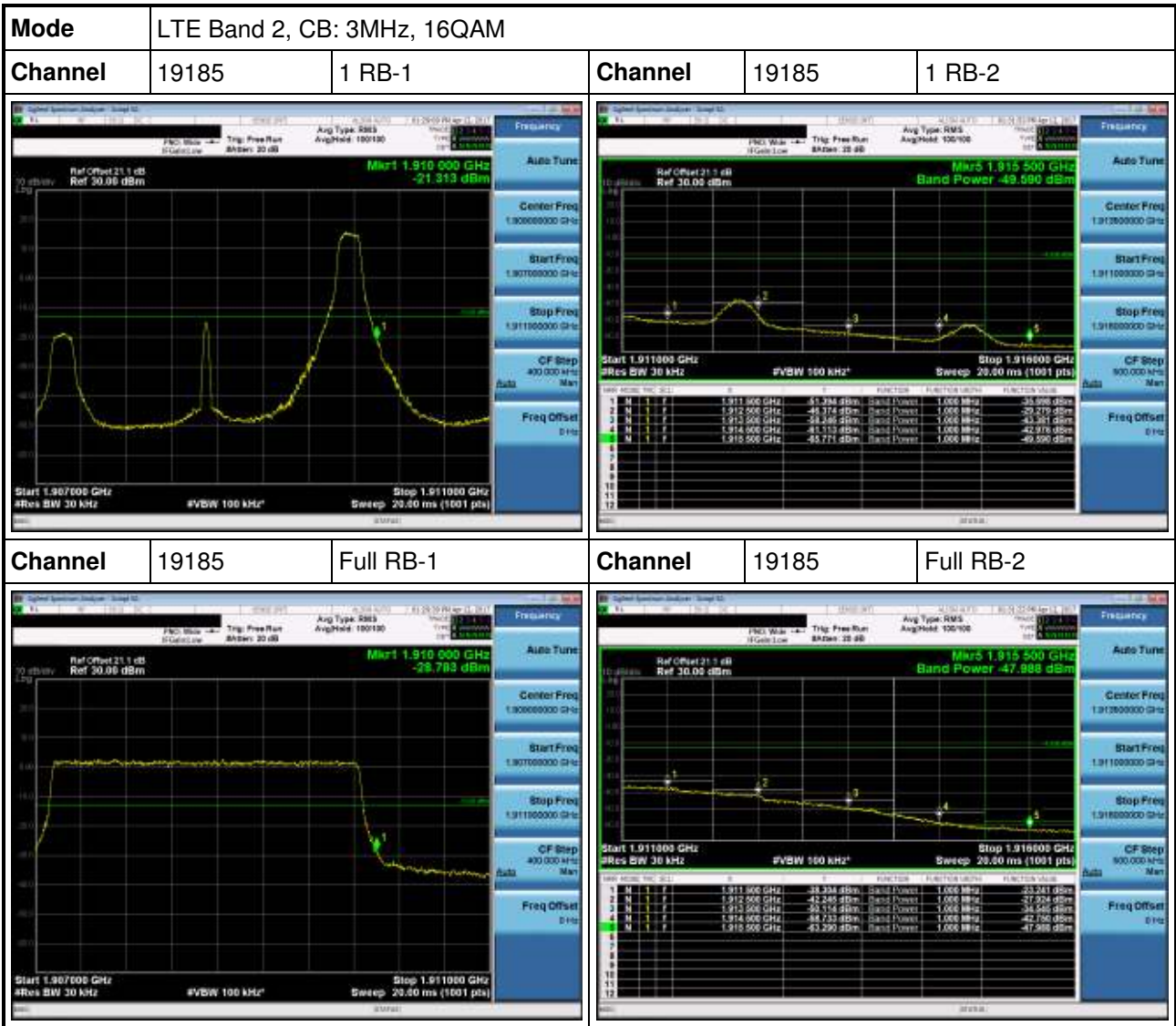


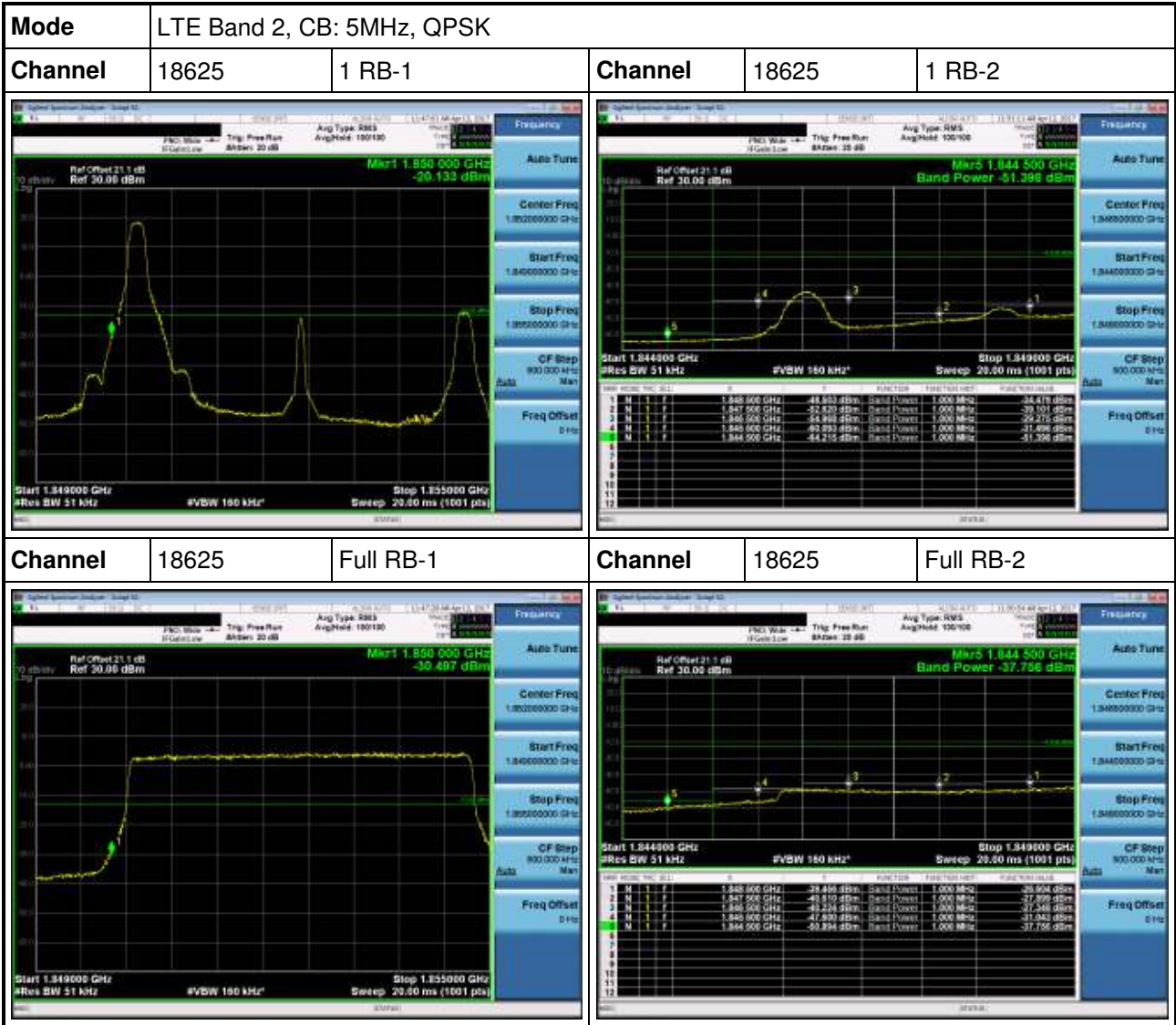


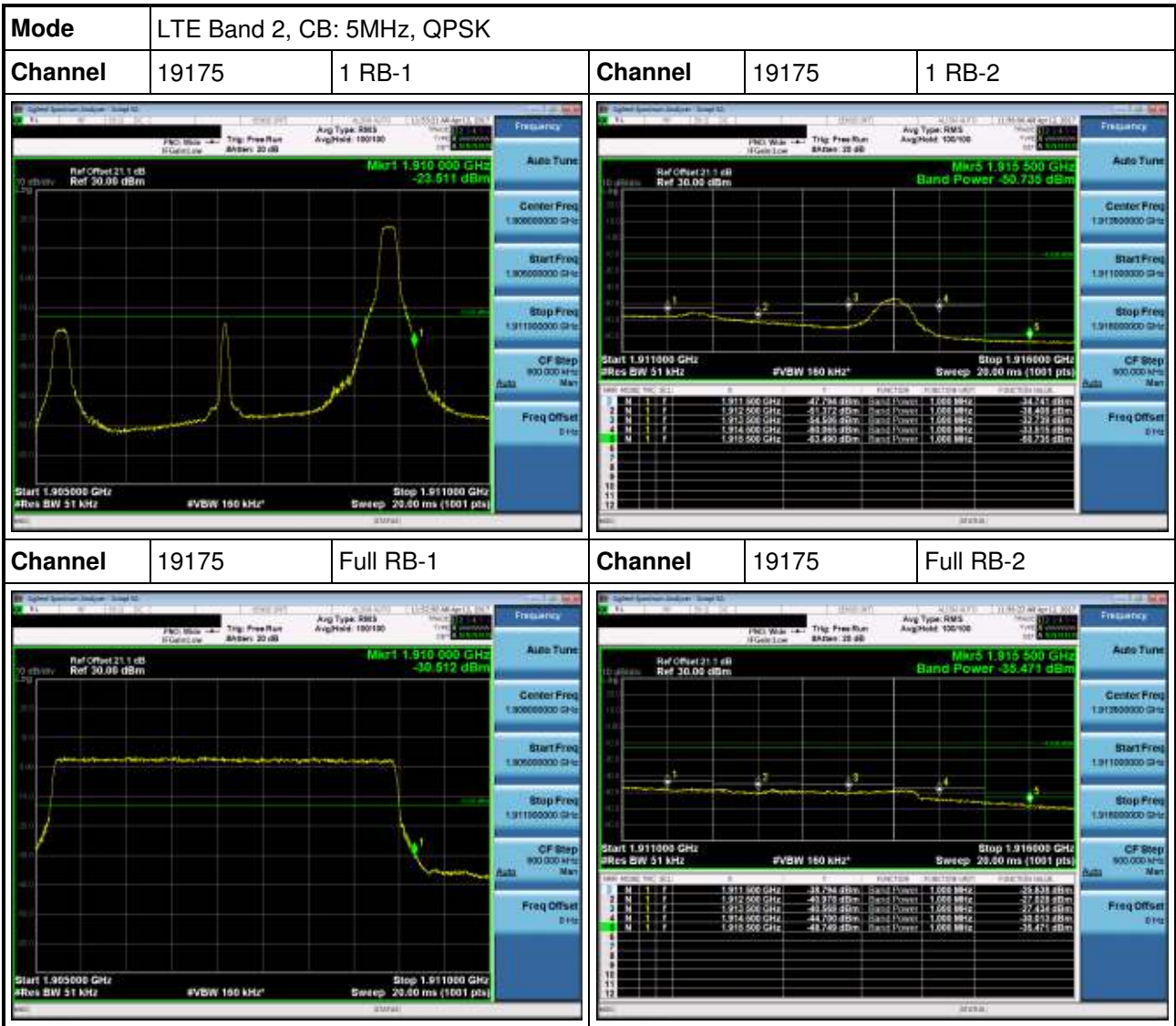








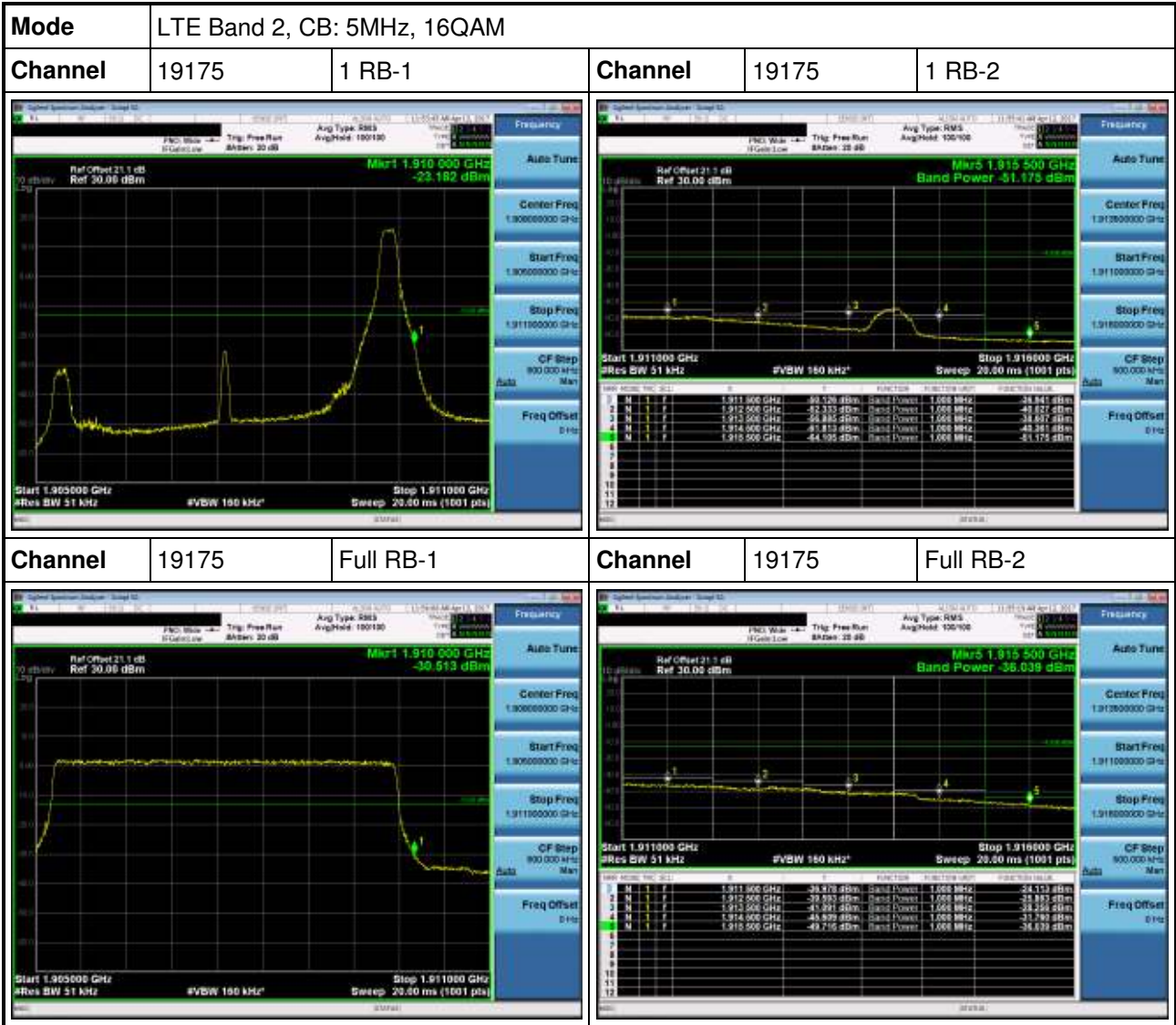


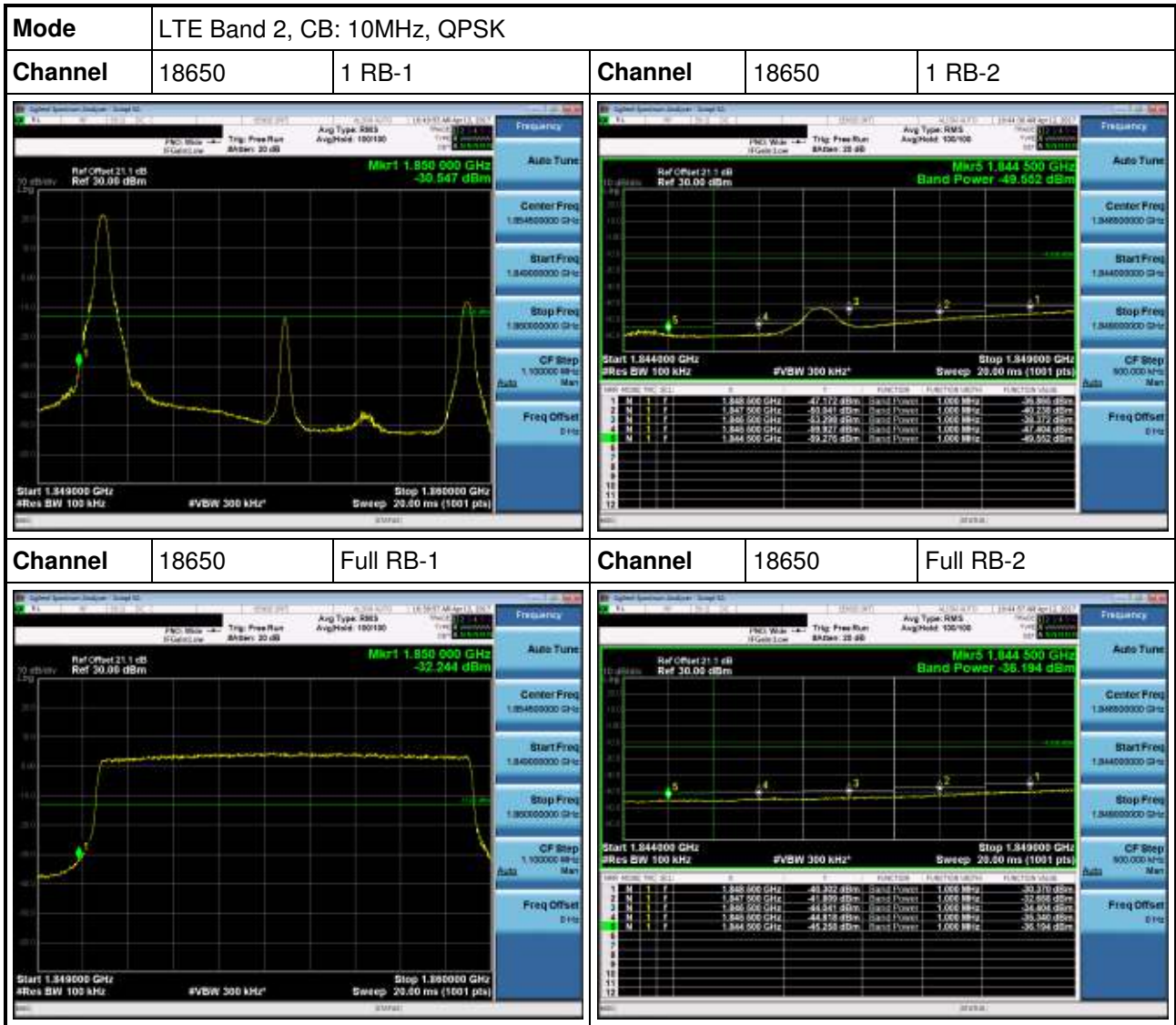


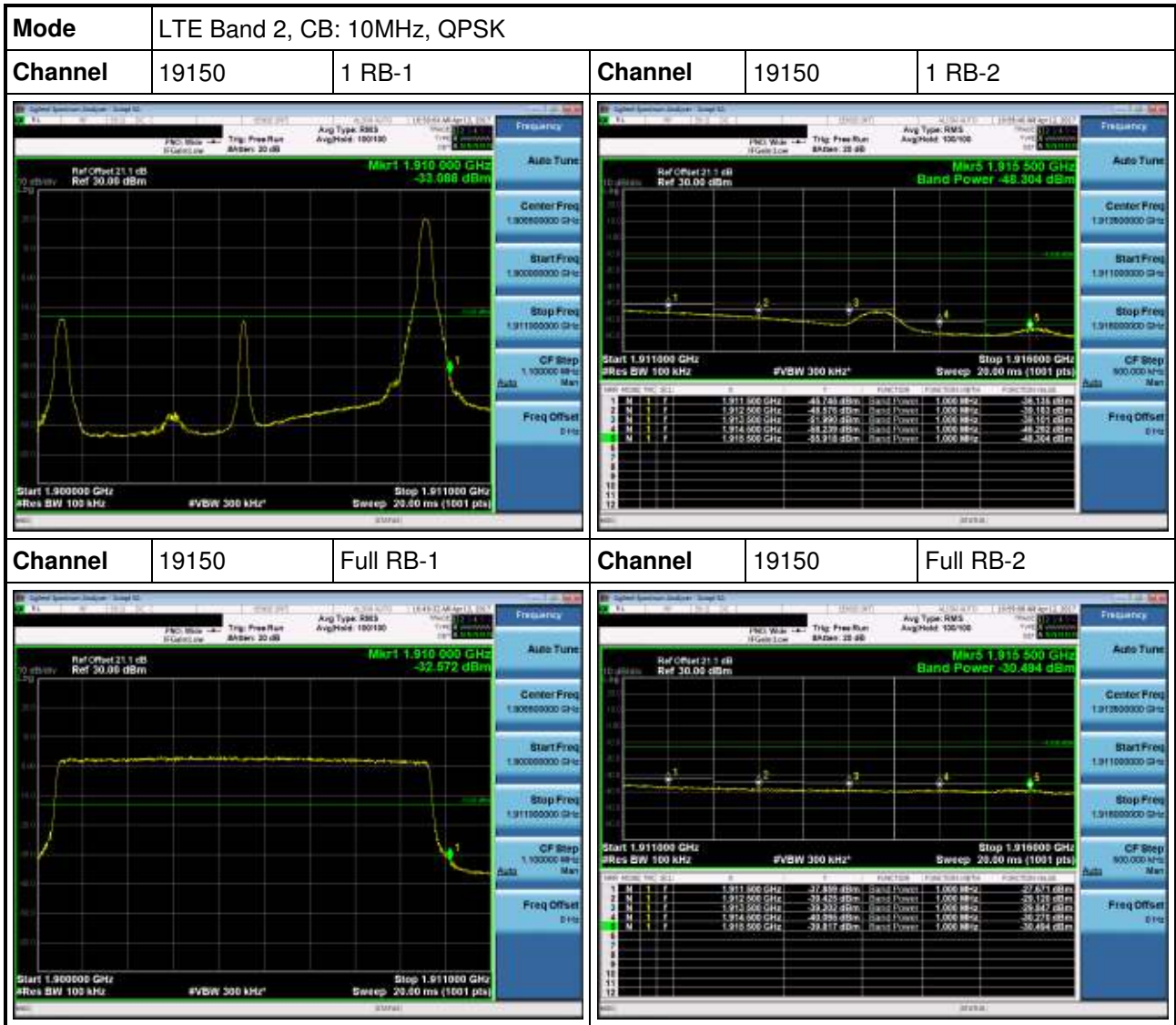


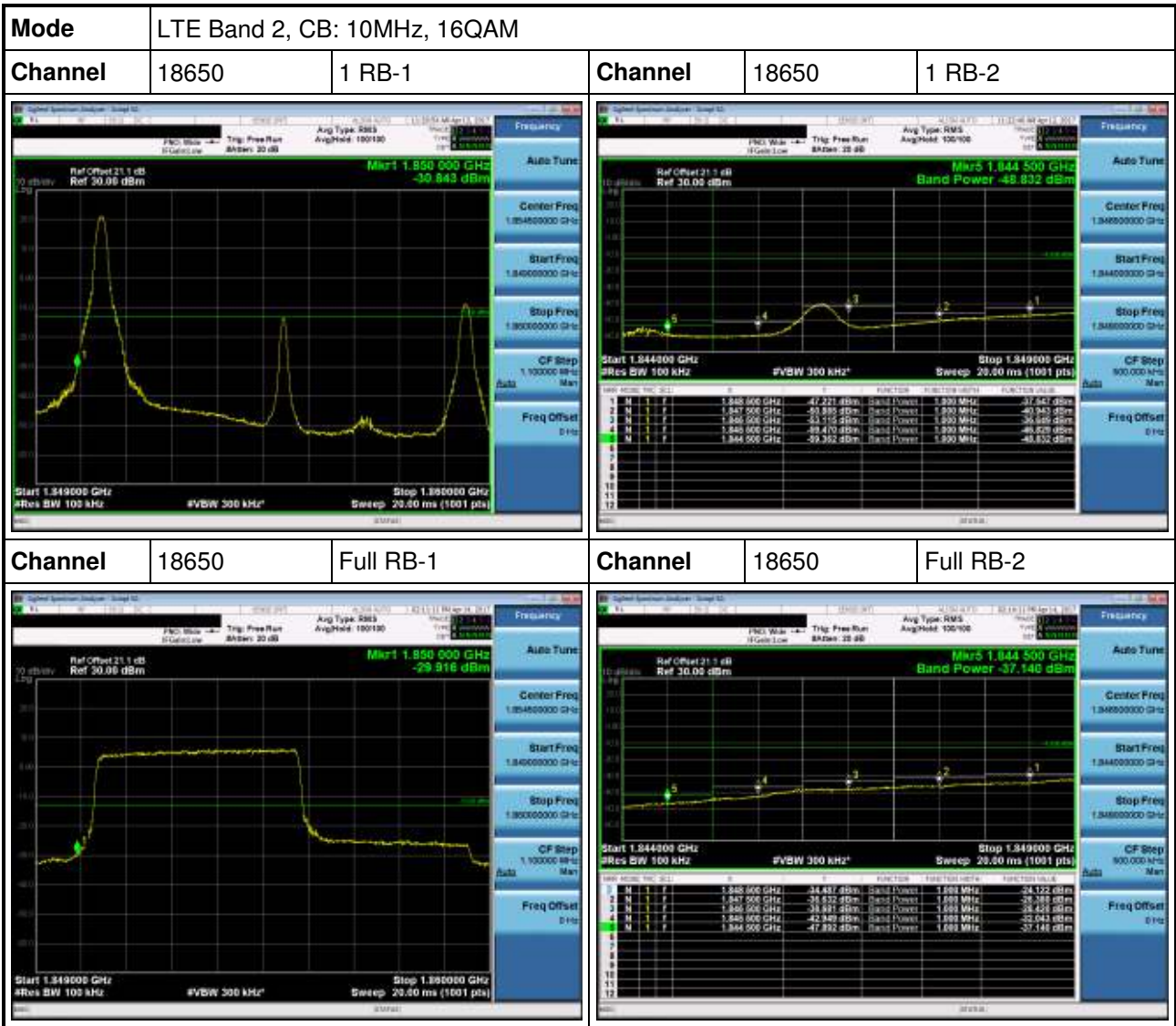


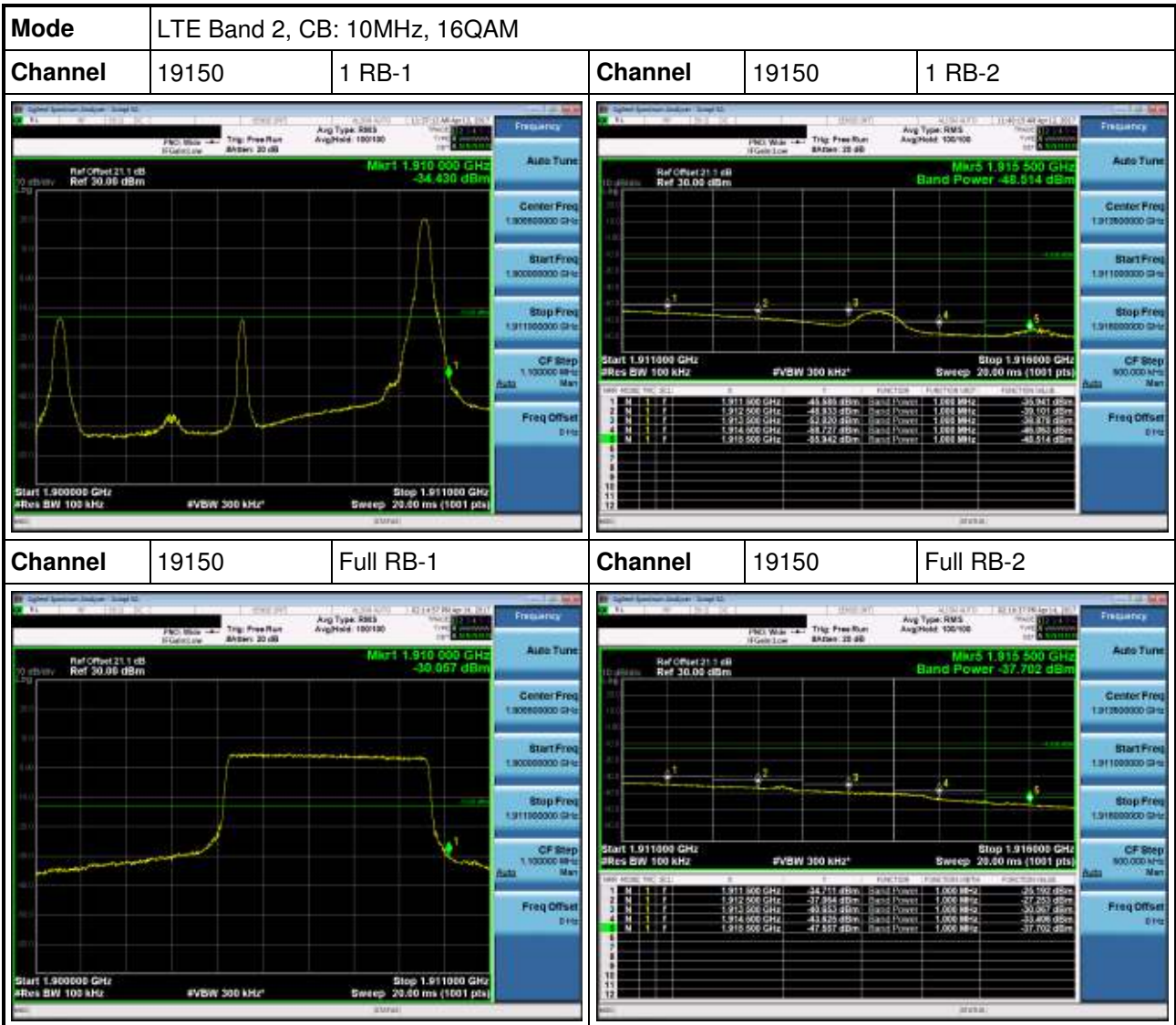
Mode	LTE Band 2, CB: 5MHz, 16QAM																																		
Channel	18625	1 RB-1	Channel	18625	1 RB-2																														
 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.850 000 GHz -21.618 dBm Center Freq 1.85200000 GHz Start Freq 1.84000000 GHz Stop Freq 1.86500000 GHz CF Step 900.000 MHz #Res BW 51 kHz #VBW 100 kHz Sweep 20.00 ms (1001 pts)</p>			 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr5 1.844 500 GHz Band Power -31.621 dBm Center Freq 1.84600000 GHz Start Freq 1.84000000 GHz Stop Freq 1.85200000 GHz CF Step 900.000 MHz #Res BW 51 kHz #VBW 100 kHz Sweep 20.00 ms (1001 pts)</p> <table border="1"> <thead> <tr> <th>Chan</th> <th>Mode</th> <th>Freq (GHz)</th> <th>Power (dBm)</th> <th>Band Power (dBm)</th> </tr> </thead> <tbody> <tr><td>1</td><td>M</td><td>1.846 000</td><td>-31.621</td><td>-31.621</td></tr> <tr><td>2</td><td>M</td><td>1.847 500</td><td>-32.777</td><td>-32.777</td></tr> <tr><td>3</td><td>M</td><td>1.848 500</td><td>-37.438</td><td>-37.438</td></tr> <tr><td>4</td><td>M</td><td>1.849 000</td><td>-33.870</td><td>-33.870</td></tr> <tr><td>5</td><td>M</td><td>1.849 500</td><td>-34.542</td><td>-34.542</td></tr> </tbody> </table>			Chan	Mode	Freq (GHz)	Power (dBm)	Band Power (dBm)	1	M	1.846 000	-31.621	-31.621	2	M	1.847 500	-32.777	-32.777	3	M	1.848 500	-37.438	-37.438	4	M	1.849 000	-33.870	-33.870	5	M	1.849 500	-34.542	-34.542
Chan	Mode	Freq (GHz)	Power (dBm)	Band Power (dBm)																															
1	M	1.846 000	-31.621	-31.621																															
2	M	1.847 500	-32.777	-32.777																															
3	M	1.848 500	-37.438	-37.438																															
4	M	1.849 000	-33.870	-33.870																															
5	M	1.849 500	-34.542	-34.542																															
Channel	18625	Full RB-1	Channel	18625	Full RB-2																														
 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.850 000 GHz -29.652 dBm Center Freq 1.85200000 GHz Start Freq 1.84000000 GHz Stop Freq 1.86500000 GHz CF Step 900.000 MHz #Res BW 51 kHz #VBW 100 kHz Sweep 20.00 ms (1001 pts)</p>			 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr5 1.844 500 GHz Band Power -38.641 dBm Center Freq 1.84600000 GHz Start Freq 1.84000000 GHz Stop Freq 1.85200000 GHz CF Step 900.000 MHz #Res BW 51 kHz #VBW 100 kHz Sweep 20.00 ms (1001 pts)</p> <table border="1"> <thead> <tr> <th>Chan</th> <th>Mode</th> <th>Freq (GHz)</th> <th>Power (dBm)</th> <th>Band Power (dBm)</th> </tr> </thead> <tbody> <tr><td>1</td><td>M</td><td>1.846 000</td><td>-37.750</td><td>-37.750</td></tr> <tr><td>2</td><td>M</td><td>1.847 500</td><td>-40.970</td><td>-40.970</td></tr> <tr><td>3</td><td>M</td><td>1.848 500</td><td>-41.884</td><td>-41.884</td></tr> <tr><td>4</td><td>M</td><td>1.849 000</td><td>-47.893</td><td>-47.893</td></tr> <tr><td>5</td><td>M</td><td>1.849 500</td><td>-39.837</td><td>-39.837</td></tr> </tbody> </table>			Chan	Mode	Freq (GHz)	Power (dBm)	Band Power (dBm)	1	M	1.846 000	-37.750	-37.750	2	M	1.847 500	-40.970	-40.970	3	M	1.848 500	-41.884	-41.884	4	M	1.849 000	-47.893	-47.893	5	M	1.849 500	-39.837	-39.837
Chan	Mode	Freq (GHz)	Power (dBm)	Band Power (dBm)																															
1	M	1.846 000	-37.750	-37.750																															
2	M	1.847 500	-40.970	-40.970																															
3	M	1.848 500	-41.884	-41.884																															
4	M	1.849 000	-47.893	-47.893																															
5	M	1.849 500	-39.837	-39.837																															

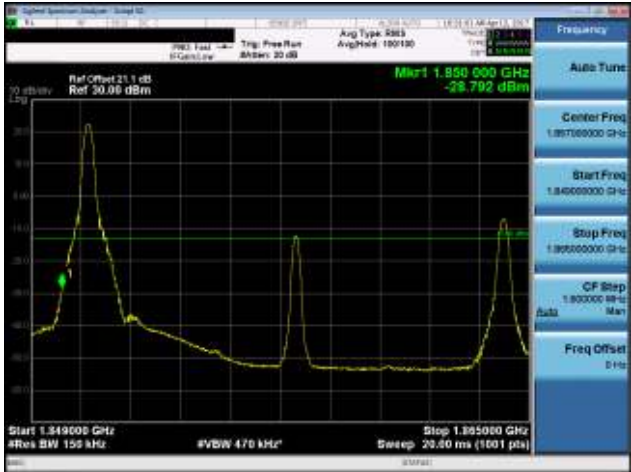


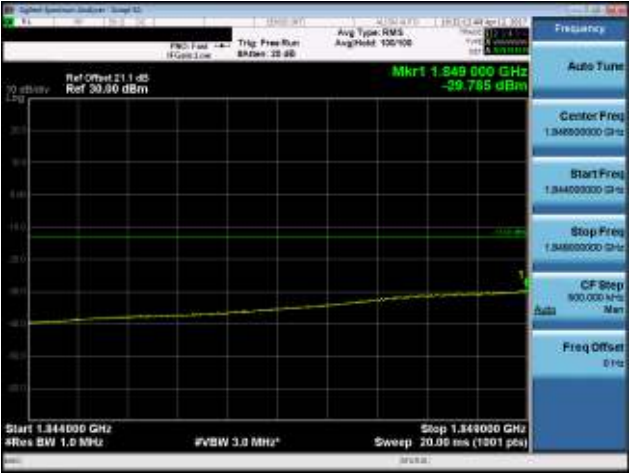


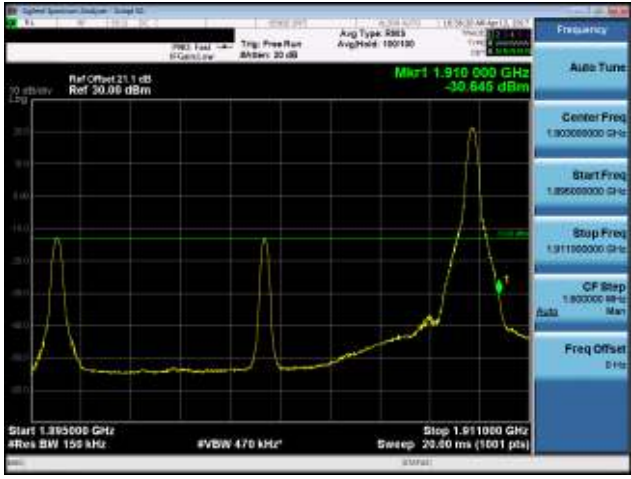





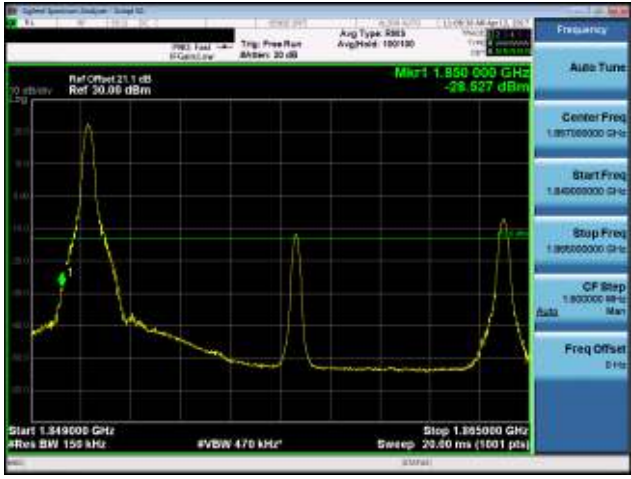



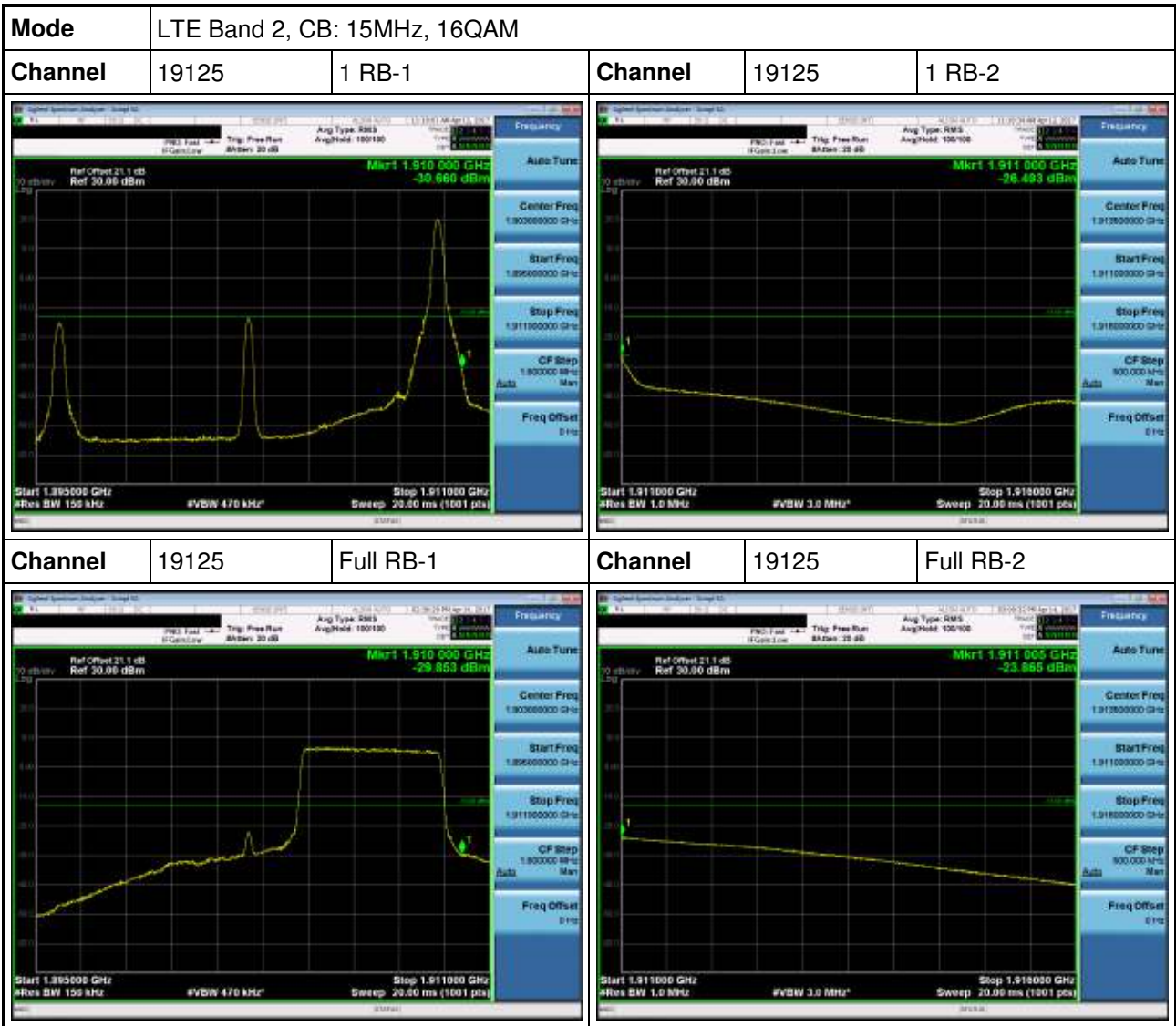


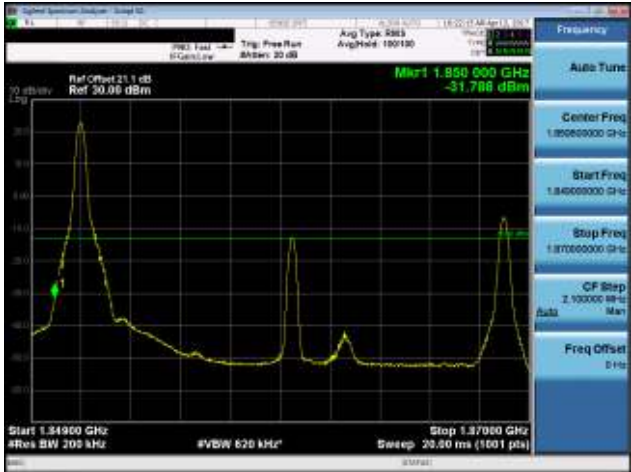


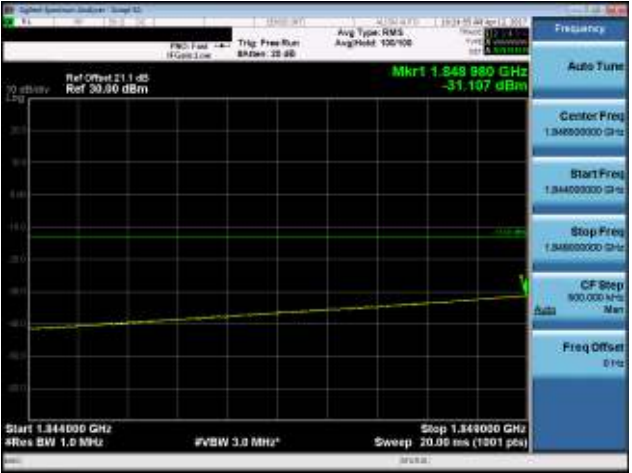


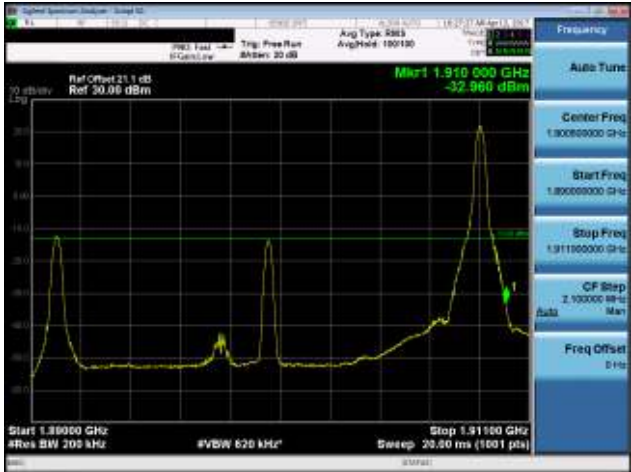



Mode	LTE Band 2, CB: 15MHz, QPSK				
Channel	18675	1 RB-1	Channel	18675	1 RB-2
 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.850 000 GHz -23.792 dBm</p> <p>Center Freq: 1.85700000 GHz Start Freq: 1.84000000 GHz Stop Freq: 1.89500000 GHz CF Step: 1.800000 MHz Freq Offset: 0 Hz</p> <p>Start 1.849000 GHz #Res BW 150 kHz #VBW 470 kHz* Sweep 20.00 ms (1001 pts)</p>		 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.849 995 GHz -23.782 dBm</p> <p>Center Freq: 1.84900000 GHz Start Freq: 1.84000000 GHz Stop Freq: 1.84800000 GHz CF Step: 800.000 MHz Freq Offset: 0 Hz</p> <p>Start 1.844000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 20.00 ms (1001 pts)</p>			
Channel	18675	Full RB-1	Channel	18675	Full RB-2
 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.850 000 GHz -34.381 dBm</p> <p>Center Freq: 1.85700000 GHz Start Freq: 1.84000000 GHz Stop Freq: 1.89500000 GHz CF Step: 1.800000 MHz Freq Offset: 0 Hz</p> <p>Start 1.849000 GHz #Res BW 150 kHz #VBW 470 kHz* Sweep 20.00 ms (1001 pts)</p>		 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.849 000 GHz -29.785 dBm</p> <p>Center Freq: 1.84900000 GHz Start Freq: 1.84000000 GHz Stop Freq: 1.84800000 GHz CF Step: 800.000 MHz Freq Offset: 0 Hz</p> <p>Start 1.844000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 20.00 ms (1001 pts)</p>			

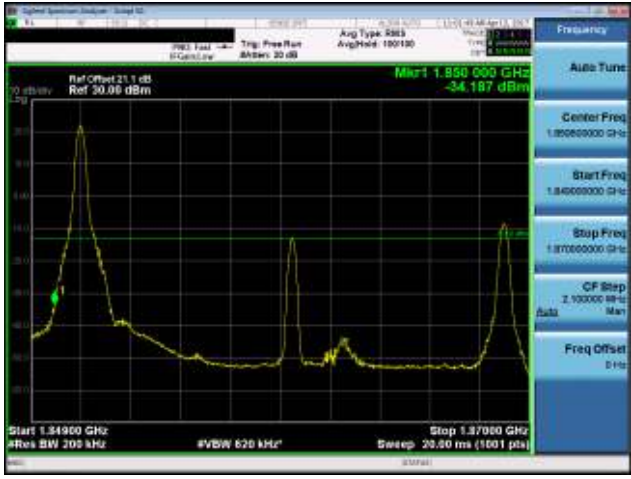
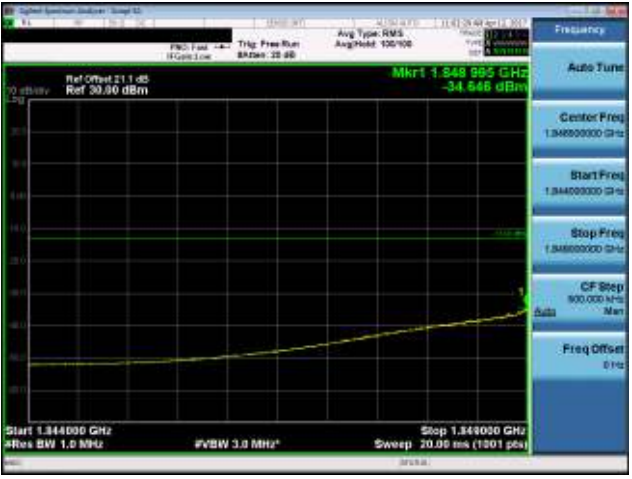


Mode	LTE Band 2, CB: 15MHz, QPSK				
Channel	19125	1 RB-1	Channel	19125	1 RB-2
 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.910 000 GHz -30.645 dBm Center Freq: 1.90300000 GHz Start Freq: 1.89500000 GHz Stop Freq: 1.91100000 GHz CF Step: 1.900000 MHz Freq Offset: 0 Hz</p>			 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.911 005 GHz -25.531 dBm Center Freq: 1.91200000 GHz Start Freq: 1.91100000 GHz Stop Freq: 1.91300000 GHz CF Step: 900.000 MHz Freq Offset: 0 Hz</p>		
Channel	19125	Full RB-1	Channel	19125	Full RB-2
 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.910 000 GHz -34.135 dBm Center Freq: 1.90300000 GHz Start Freq: 1.89500000 GHz Stop Freq: 1.91100000 GHz CF Step: 1.900000 MHz Freq Offset: 0 Hz</p>			 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.911 235 GHz -26.695 dBm Center Freq: 1.91200000 GHz Start Freq: 1.91100000 GHz Stop Freq: 1.91300000 GHz CF Step: 900.000 MHz Freq Offset: 0 Hz</p>		

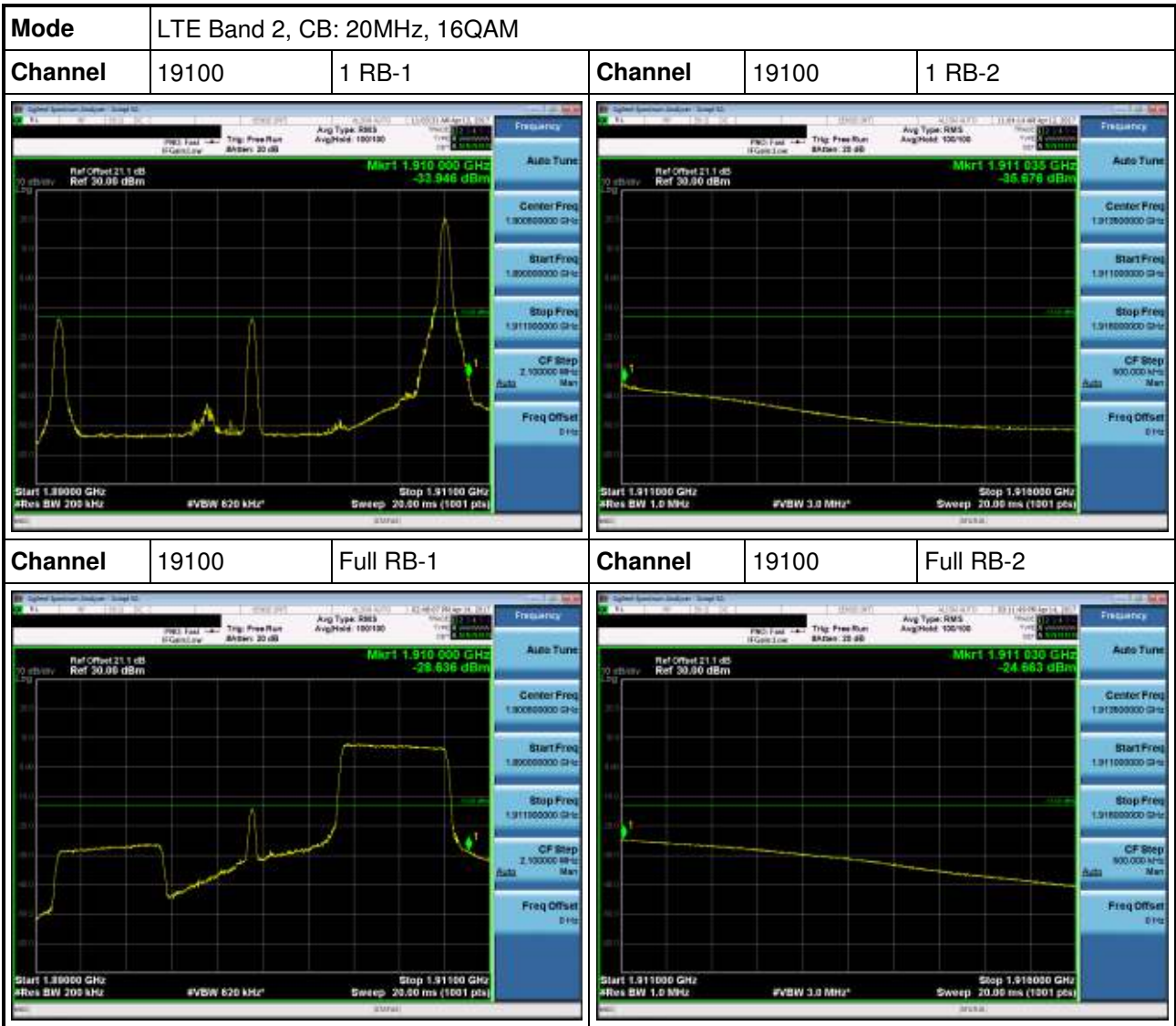
Mode	LTE Band 2, CB: 15MHz, 16QAM				
Channel	18675	1 RB-1	Channel	18675	1 RB-2
					
Channel	18675	Full RB-1	Channel	18675	Full RB-2
					



Mode	LTE Band 2, CB: 20MHz, QPSK				
Channel	18700	1 RB-1	Channel	18700	1 RB-2
					
Channel	18700	Full RB-1	Channel	18700	Full RB-2
					

Mode	LTE Band 2, CB: 20MHz, QPSK				
Channel	19100	1 RB-1	Channel	19100	1 RB-2
 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.910 000 GHz -32.960 dBm</p> <p>Center Freq: 1.90000000 GHz Start Freq: 1.80000000 GHz Stop Freq: 1.91000000 GHz CF Step: 2.100000 MHz Freq Offset: 0 Hz</p> <p>Start 1.80000 GHz #Res BW 200 kHz #VBW 620 kHz Sweep 20.00 ms (1001 pts)</p>			 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.911 012 GHz -33.896 dBm</p> <p>Center Freq: 1.91000000 GHz Start Freq: 1.91000000 GHz Stop Freq: 1.91000000 GHz CF Step: 400.000 MHz Freq Offset: 0 Hz</p> <p>Start 1.91000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 20.00 ms (1001 pts)</p>		
Channel	19100	Full RB-1	Channel	19100	Full RB-2
 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.910 000 GHz -33.320 dBm</p> <p>Center Freq: 1.90000000 GHz Start Freq: 1.80000000 GHz Stop Freq: 1.91000000 GHz CF Step: 2.100000 MHz Freq Offset: 0 Hz</p> <p>Start 1.80000 GHz #Res BW 200 kHz #VBW 620 kHz Sweep 20.00 ms (1001 pts)</p>			 <p>Ref Offset 21.1 dB Ref 30.00 dBm Mkr1 1.911 052 GHz -27.652 dBm</p> <p>Center Freq: 1.91000000 GHz Start Freq: 1.91000000 GHz Stop Freq: 1.91000000 GHz CF Step: 400.000 MHz Freq Offset: 0 Hz</p> <p>Start 1.91000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 20.00 ms (1001 pts)</p>		

Mode	LTE Band 2, CB: 20MHz, 16QAM				
Channel	18700	1 RB-1	Channel	18700	1 RB-2
					
Channel	18700	Full RB-1	Channel	18700	Full RB-2
					

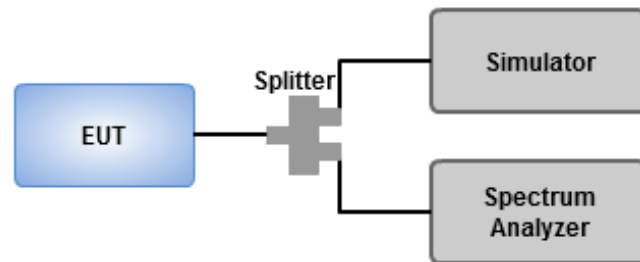


3.5 Occupied and 26 dB Bandwidth

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 2	1.4	QPSK	18607	1850.7	1.2940	1.0833
LTE Band 2	1.4	QPSK	18900	1880.0	1.2660	1.0802
LTE Band 2	1.4	QPSK	19193	1909.3	1.2490	1.0764
LTE Band 2	1.4	16QAM	18607	1850.7	1.2770	1.0867
LTE Band 2	1.4	16QAM	18900	1880.0	1.2730	1.0795
LTE Band 2	1.4	16QAM	19193	1909.3	1.2630	1.0806



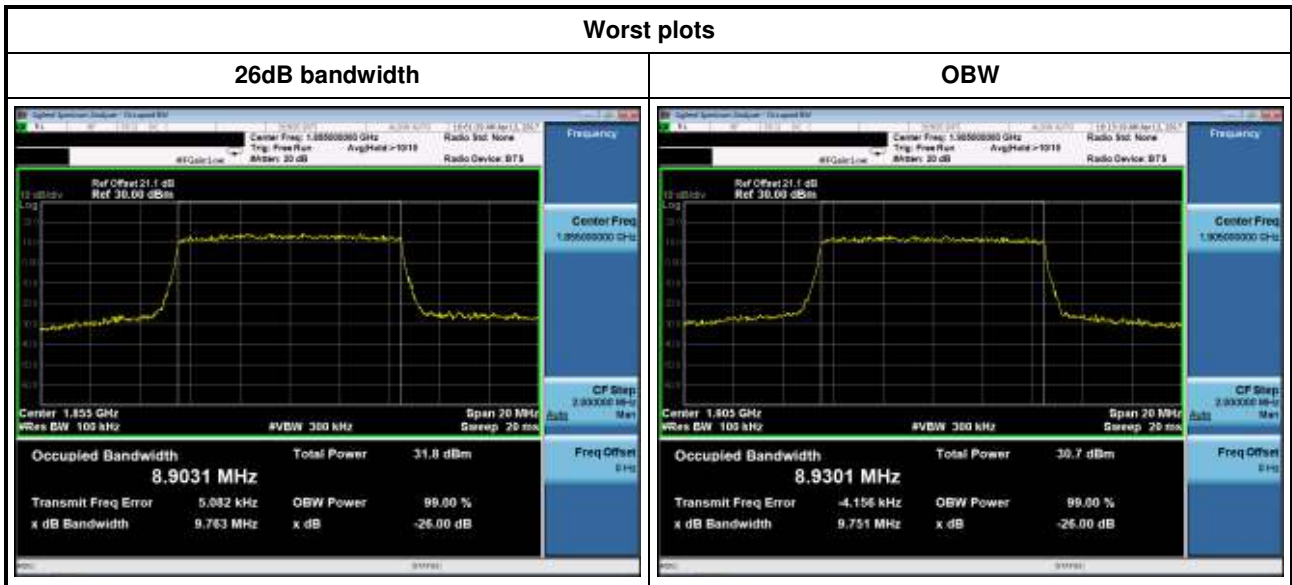
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 2	3	QPSK	18615	1851.5	2.9440	2.6885
LTE Band 2	3	QPSK	18900	1880.0	2.9400	2.6827
LTE Band 2	3	QPSK	19185	1908.5	2.9260	2.6869
LTE Band 2	3	16QAM	18615	1851.5	2.9650	2.6872
LTE Band 2	3	16QAM	18900	1880.0	2.9400	2.6853
LTE Band 2	3	16QAM	19185	1908.5	2.9450	2.6857



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 2	5	QPSK	18625	1852.5	4.9110	4.4724
LTE Band 2	5	QPSK	18900	1880.0	4.9460	4.4820
LTE Band 2	5	QPSK	19175	1907.5	4.9050	4.4803
LTE Band 2	5	16QAM	18625	1852.5	4.8950	4.4783
LTE Band 2	5	16QAM	18900	1880.0	4.9350	4.4828
LTE Band 2	5	16QAM	19175	1907.5	4.9220	4.4832



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 2	10	QPSK	18650	1855.0	9.7630	8.9031
LTE Band 2	10	QPSK	18900	1880.0	9.6960	8.9264
LTE Band 2	10	QPSK	19150	1905.0	9.7510	8.9301
LTE Band 2	10	16QAM	18650	1855.0	5.9950	4.9083
LTE Band 2	10	16QAM	18900	1880.0	5.9730	4.9091
LTE Band 2	10	16QAM	19150	1905.0	5.9210	4.9138



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 2	15	QPSK	18675	1857.5	14.3800	13.3840
LTE Band 2	15	QPSK	18900	1880.0	14.5200	13.4020
LTE Band 2	15	QPSK	19125	1902.5	14.4400	13.3830
LTE Band 2	15	16QAM	18675	1857.5	7.1110	5.0734
LTE Band 2	15	16QAM	18900	1880.0	6.8450	4.9797
LTE Band 2	15	16QAM	19125	1902.5	7.0180	5.0331



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 2	20	QPSK	18700	1860.0	19.0800	17.8100
LTE Band 2	20	QPSK	18900	1880.0	19.1500	17.8750
LTE Band 2	20	QPSK	19100	1900.0	19.1100	17.8140
LTE Band 2	20	16QAM	18700	1860.0	7.2530	5.1189
LTE Band 2	20	16QAM	18900	1880.0	7.6010	5.1257
LTE Band 2	20	16QAM	19100	1900.0	7.0150	5.1183



3.6 Peak to Average Ratio

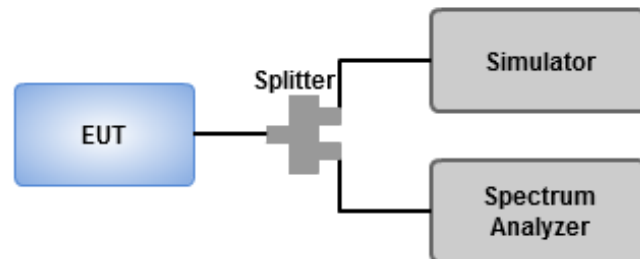
3.6.1 Limit of Peak to Average Ratio

Peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.6.2 Test Procedures

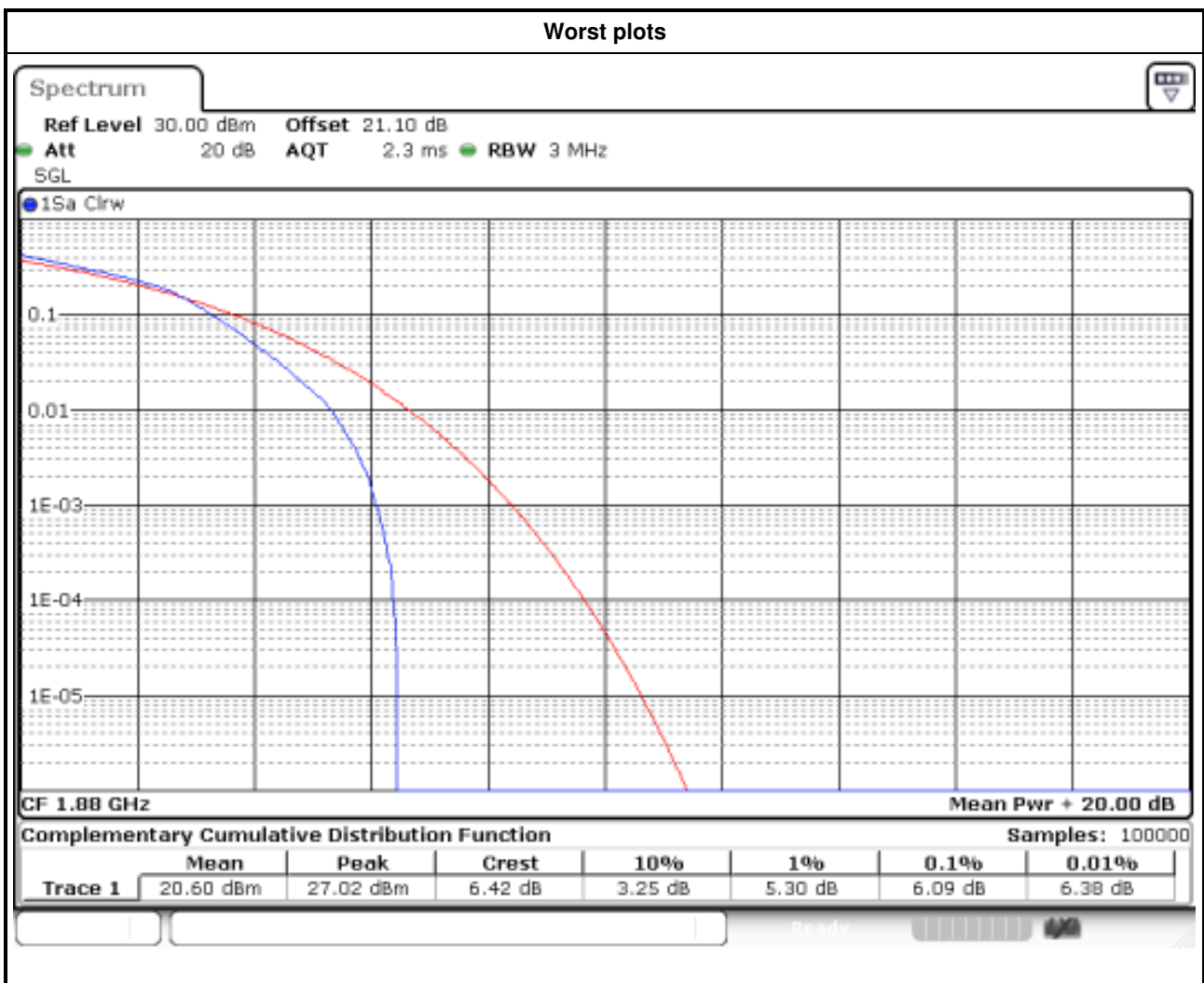
1. Enable CCDF function of spectrum analyzer and set RBW = 10MHz.
2. Set the number of counts to a value that stabilizes the measured CCDF curve.
3. Record the maximum PAPR level associated with a probability of 0.1%.

3.6.3 Test Setup

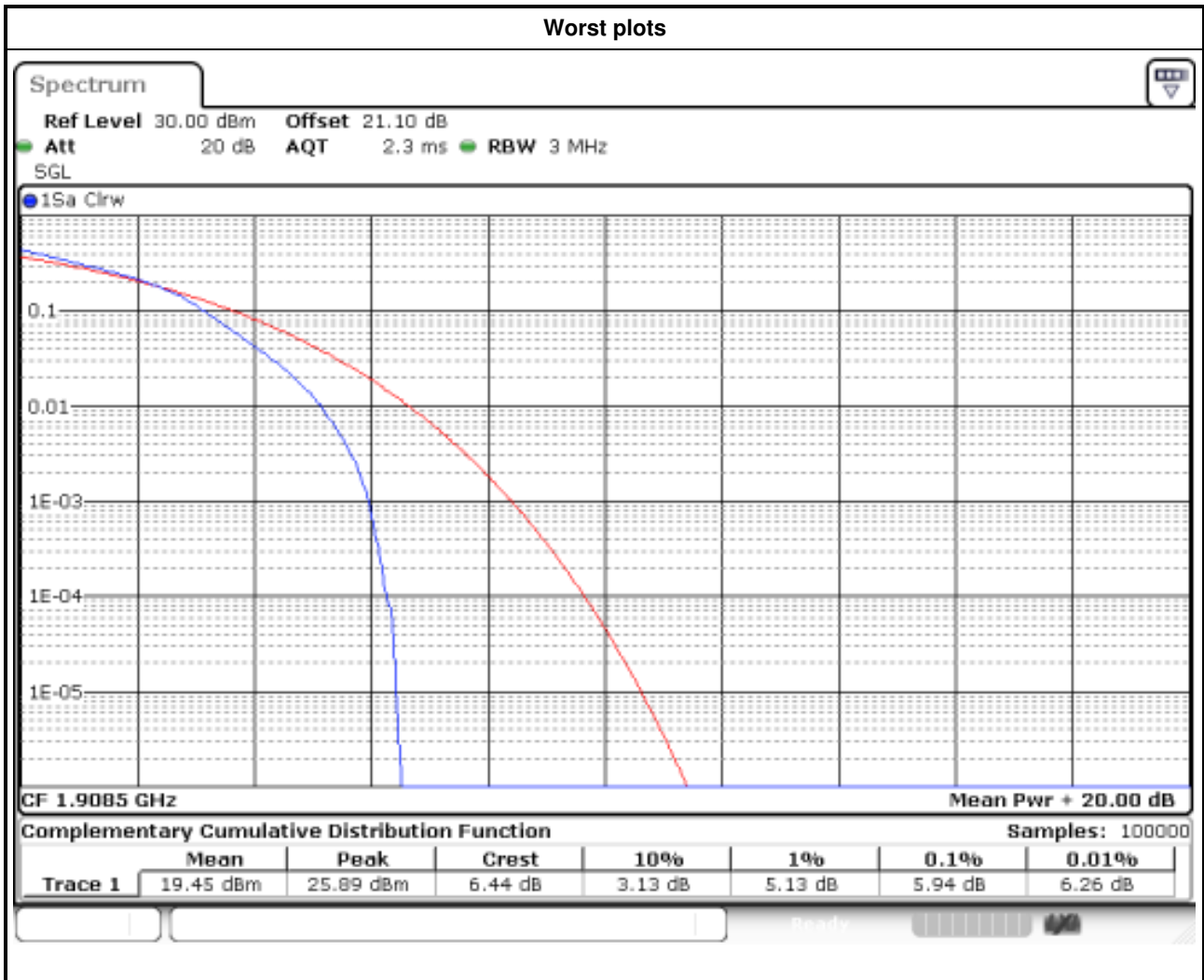


3.6.4 Test Result of Peak to Average ratio

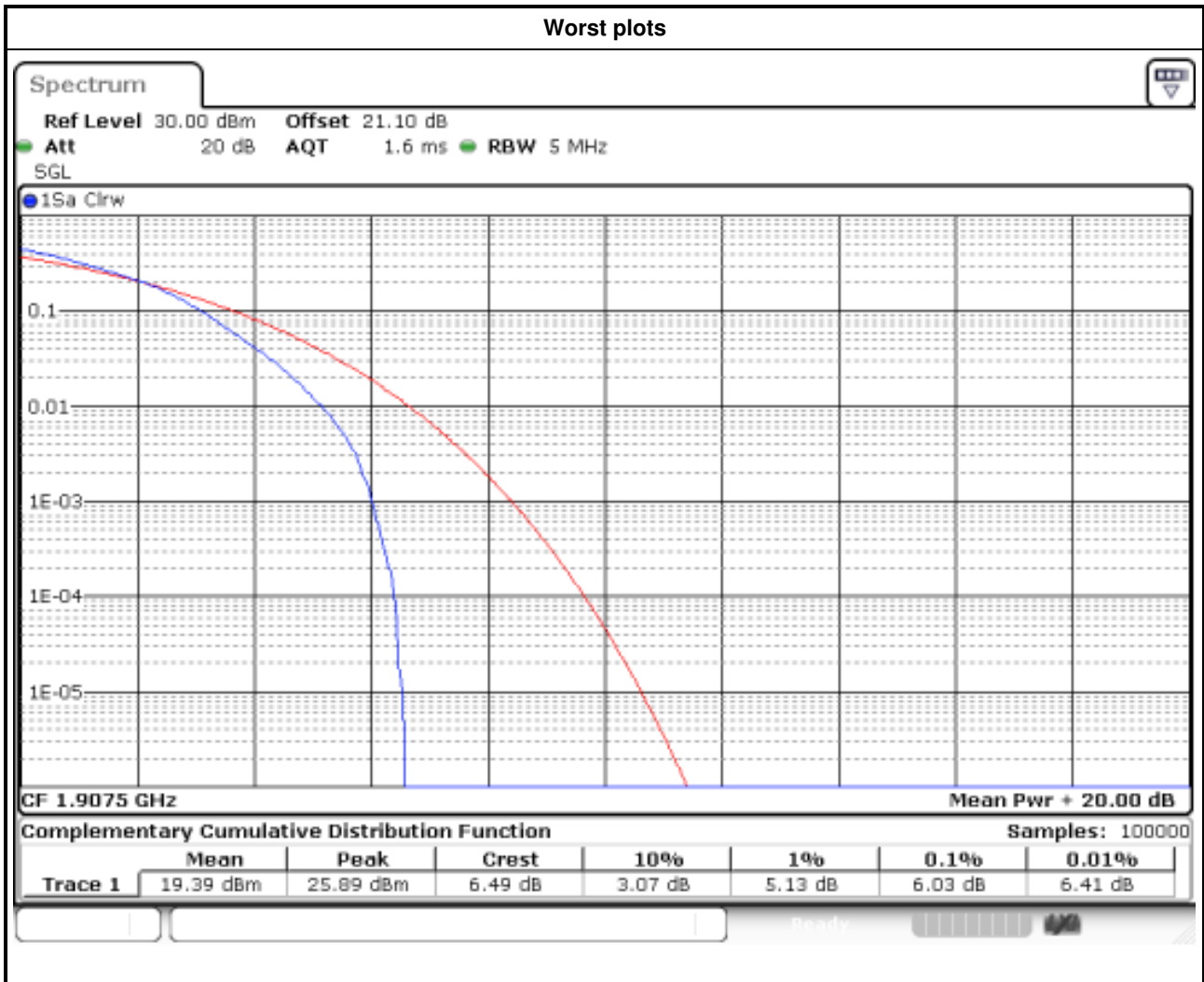
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 2	1.4	QPSK	18607	1850.7	4.32
LTE Band 2	1.4	QPSK	18900	1880.0	5.13
LTE Band 2	1.4	QPSK	19193	1909.3	4.96
LTE Band 2	1.4	16QAM	18607	1850.7	5.13
LTE Band 2	1.4	16QAM	18900	1880.0	6.09
LTE Band 2	1.4	16QAM	19193	1909.3	6.00



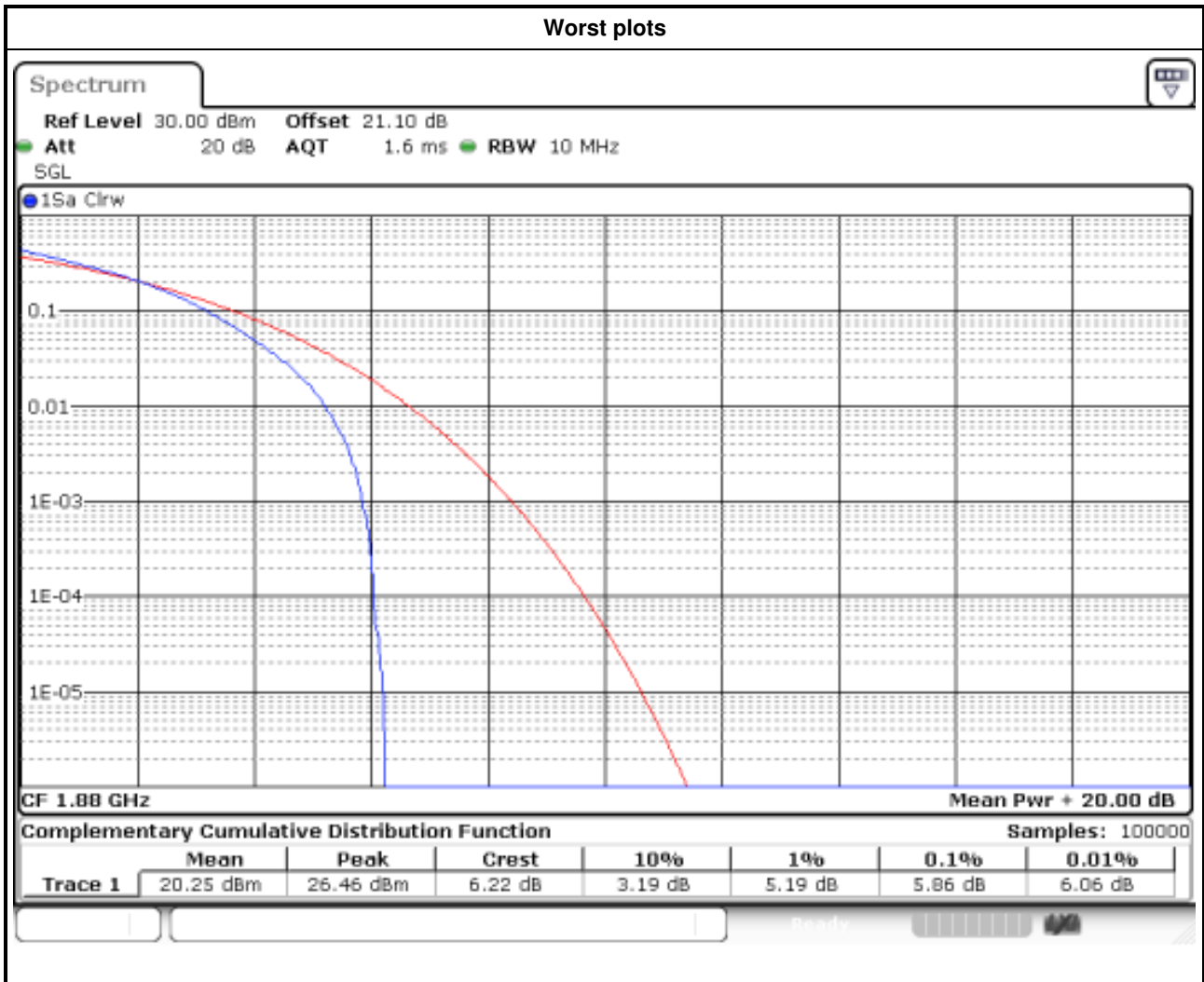
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 2	3	QPSK	18615	1851.5	4.35
LTE Band 2	3	QPSK	18900	1880.0	4.99
LTE Band 2	3	QPSK	19185	1908.5	4.87
LTE Band 2	3	16QAM	18615	1851.5	5.45
LTE Band 2	3	16QAM	18900	1880.0	5.88
LTE Band 2	3	16QAM	19185	1908.5	5.94



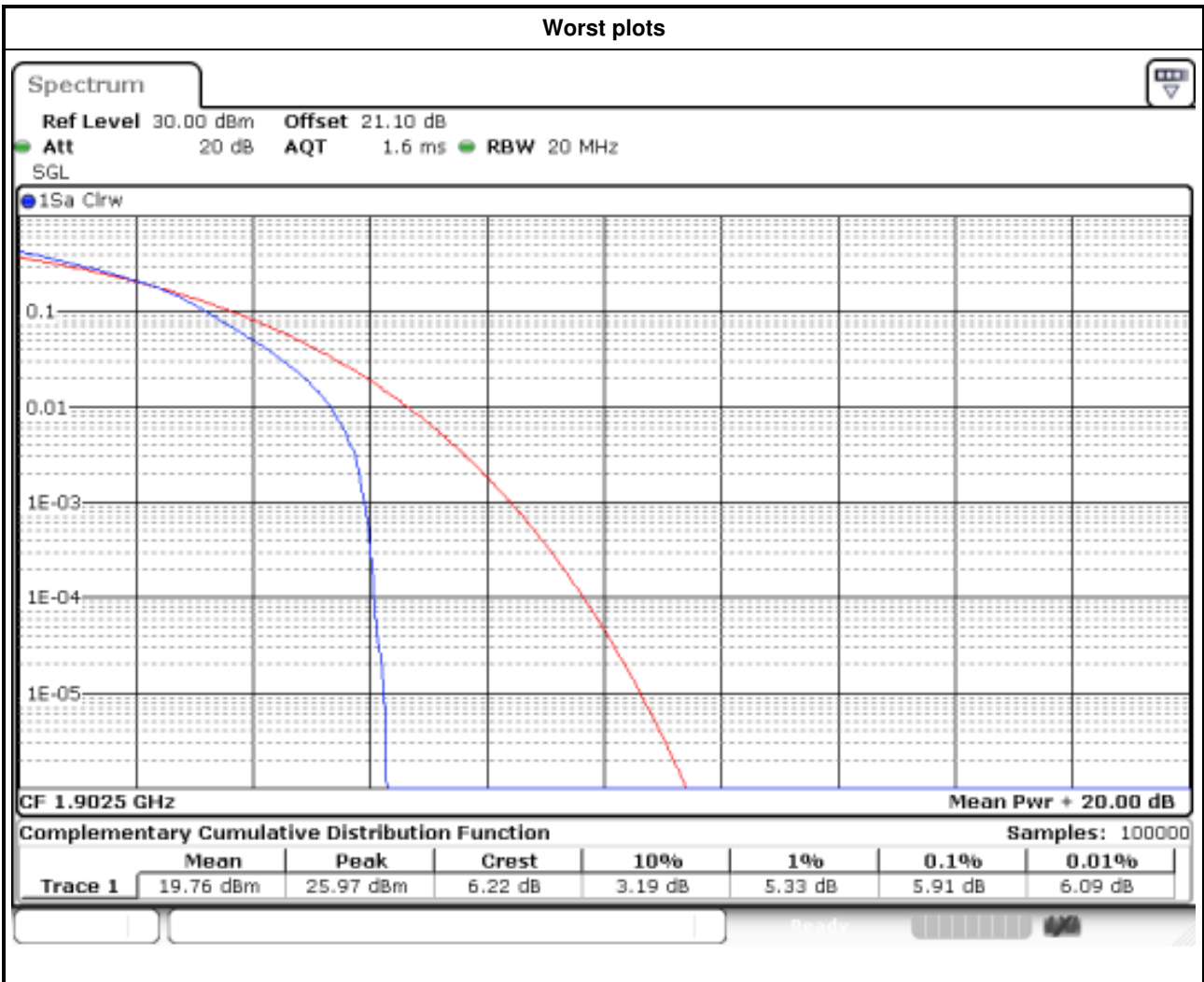
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 2	5	QPSK	18625	1852.5	4.41
LTE Band 2	5	QPSK	18900	1880.0	4.96
LTE Band 2	5	QPSK	19175	1907.5	4.84
LTE Band 2	5	16QAM	18625	1852.5	5.51
LTE Band 2	5	16QAM	18900	1880.0	6.00
LTE Band 2	5	16QAM	19175	1907.5	6.03



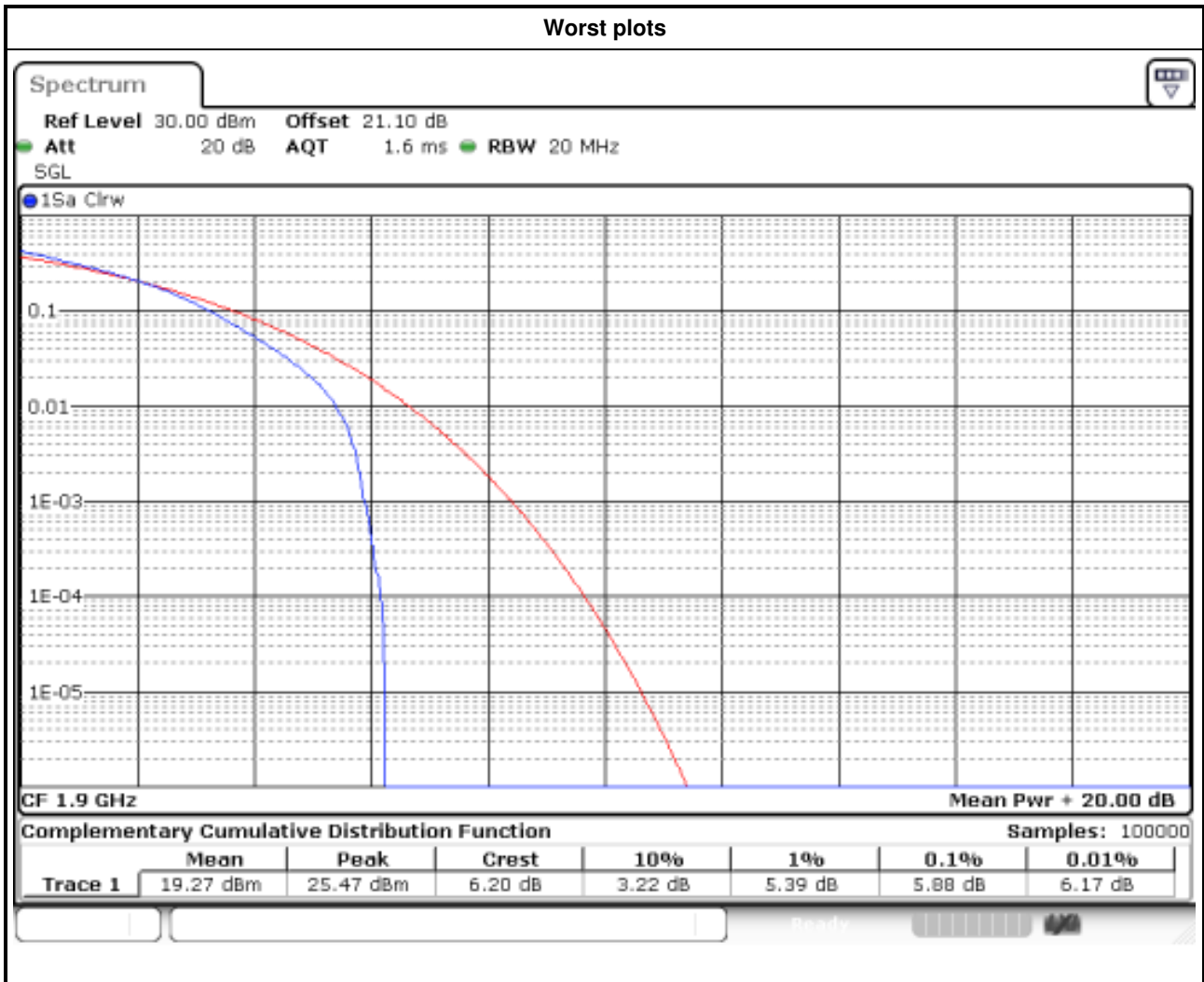
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 2	10	QPSK	18650	1855.0	4.52
LTE Band 2	10	QPSK	18900	1880.0	4.81
LTE Band 2	10	QPSK	19150	1905.0	4.81
LTE Band 2	10	16QAM	18650	1855.0	5.51
LTE Band 2	10	16QAM	18900	1880.0	5.86
LTE Band 2	10	16QAM	19150	1905.0	5.80



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 2	15	QPSK	18675	1857.5	4.90
LTE Band 2	15	QPSK	18900	1880.0	5.13
LTE Band 2	15	QPSK	19125	1902.5	5.07
LTE Band 2	15	16QAM	18675	1857.5	5.42
LTE Band 2	15	16QAM	18900	1880.0	5.83
LTE Band 2	15	16QAM	19125	1902.5	5.91



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 2	20	QPSK	18700	1860.0	4.67
LTE Band 2	20	QPSK	18900	1880.0	4.87
LTE Band 2	20	QPSK	19100	1900.0	4.87
LTE Band 2	20	16QAM	18700	1860.0	5.48
LTE Band 2	20	16QAM	18900	1880.0	5.80
LTE Band 2	20	16QAM	19100	1900.0	5.88



3.7 Frequency Stability

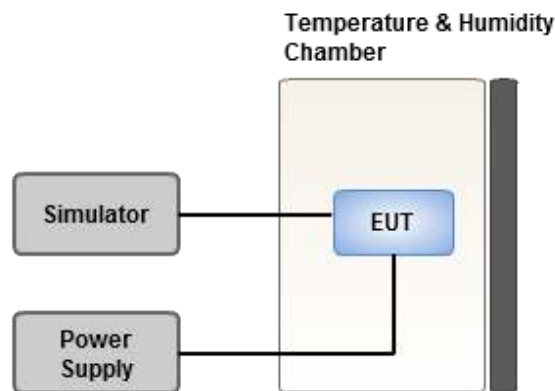
3.7.1 Limit of Frequency Stability

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

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: 1880.0MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	-0.004	2.5
T20°CVmin	0.005	2.5
T85°CVnom	0.006	2.5
T80°CVnom	-0.003	2.5
T70°CVnom	0.009	2.5
T60°CVnom	-0.008	2.5
T50°CVnom	-0.005	2.5
T40°CVnom	-0.009	2.5
T30°CVnom	-0.009	2.5
T20°CVnom	-0.007	2.5
T10°CVnom	-0.008	2.5
T0°CVnom	-0.007	2.5
T-10°CVnom	0.006	2.5
T-20°CVnom	-0.007	2.5
T-30°CVnom	-0.004	2.5
T-40°CVnom	-0.005	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: 1880.0MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	0.007	2.5
T20°CVmin	-0.006	2.5
T85°CVnom	-0.009	2.5
T80°CVnom	-0.008	2.5
T70°CVnom	-0.010	2.5
T60°CVnom	-0.007	2.5
T50°CVnom	-0.004	2.5
T40°CVnom	0.005	2.5
T30°CVnom	0.008	2.5
T20°CVnom	0.006	2.5
T10°CVnom	0.004	2.5
T0°CVnom	-0.002	2.5
T-10°CVnom	0.007	2.5
T-20°CVnom	-0.011	2.5
T-30°CVnom	0.007	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: 5MHz

Frequency: 1880.0MHz	Frequency Drift (ppm)	
	Temperature (°C)	Frequency Error (ppm)
T20°CVmax	-0.007	2.5
T20°CVmin	-0.005	2.5
T85°CVnom	0.008	2.5
T80°CVnom	-0.009	2.5
T70°CVnom	-0.011	2.5
T60°CVnom	0.012	2.5
T50°CVnom	-0.005	2.5
T40°CVnom	0.008	2.5
T30°CVnom	-0.01	2.5
T20°CVnom	0.005	2.5
T10°CVnom	-0.007	2.5
T0°CVnom	0.006	2.5
T-10°CVnom	0.006	2.5
T-20°CVnom	-0.005	2.5
T-30°CVnom	-0.007	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: 10MHz

Frequency: 1880.0MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	0.007	2.5
T20°CVmin	0.009	2.5
T85°CVnom	-0.01	2.5
T80°CVnom	-0.011	2.5
T70°CVnom	0.009	2.5
T60°CVnom	-0.004	2.5
T50°CVnom	-0.005	2.5
T40°CVnom	-0.004	2.5
T30°CVnom	0.008	2.5
T20°CVnom	-0.009	2.5
T10°CVnom	-0.009	2.5
T0°CVnom	-0.005	2.5
T-10°CVnom	-0.004	2.5
T-20°CVnom	-0.008	2.5
T-30°CVnom	-0.008	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: 15MHz

Frequency: 1880.0MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	-0.007	2.5
T20°CVmin	-0.011	2.5
T85°CVnom	0.012	2.5
T80°CVnom	-0.009	2.5
T70°CVnom	-0.008	2.5
T60°CVnom	-0.005	2.5
T50°CVnom	0.007	2.5
T40°CVnom	0.01	2.5
T30°CVnom	-0.004	2.5
T20°CVnom	-0.007	2.5
T10°CVnom	-0.004	2.5
T0°CVnom	-0.004	2.5
T-10°CVnom	0.005	2.5
T-20°CVnom	-0.009	2.5
T-30°CVnom	-0.005	2.5
T-40°CVnom	-0.007	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: 1880.0MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°CVmax	-0.004	2.5
T20°CVmin	-0.005	2.5
T85°CVnom	0.008	2.5
T80°CVnom	-0.006	2.5
T70°CVnom	-0.006	2.5
T60°CVnom	-0.005	2.5
T50°CVnom	-0.007	2.5
T40°CVnom	0.009	2.5
T30°CVnom	-0.008	2.5
T20°CVnom	-0.005	2.5
T10°CVnom	-0.002	2.5
T0°CVnom	-0.009	2.5
T-10°CVnom	0.01	2.5
T-20°CVnom	-0.011	2.5
T-30°CVnom	-0.008	2.5
T-40°CVnom	-0.008	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>.

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

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