

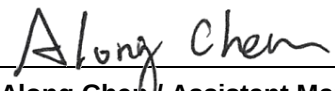
FCC Test Report

FCC ID : 2AIHD2046
Equipment : AG46
Model No. : 010-2046
Brand Name : Samsara
Applicant : Samsara Networks Inc.
Address : 444 De Haro Street, San Francisco, CA 94107,
U.S.A.
Standard : 47 CFR FCC Part 27
Received Date : May 08, 2020
Tested Date : Jun. 04 ~ Jun. 18, 2020

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.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

Reviewed by:


Along Chen / Assistant Manager

Approved by:

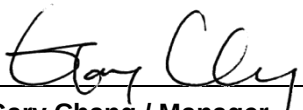

Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FG050802P27-1	Rev. 01	Initial issue	Jul. 01, 2020
FG050802P27-1	Rev. 02	Model name changed.	Jul. 07, 2020
FG050802P27-1	Rev. 03	Model / product name changed.	Jul. 09, 2020

Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 27.50(b)(10) 27.50(c)(10)	Effective Radiated Power	Power[dBm]: Band 12: 19.48 Band 13: 22.09	Pass
2.1053 27.53(c) 27.53(g)	Radiated Emissions	Meet the requirement of limit	Pass
2.1053 / 27.53(f)	Radiated Spurious Emission in the 1559-1610MHz band	Meet the requirement of limit	Pass
2.1051 27.53(c) 27.53(g)	Conducted Emissions	Meet the requirement of limit	Pass
2.1051 27.53(c) 27.53(g)	Band Edge	Meet the requirement of limit	Pass
2.1049	Occupied Bandwidth	Meet the requirement of limit	Pass
2.1055 / 27.54	Frequency Stability	Meet the requirement of limit	Pass
27.50(d)(5)	Peak to Average Ratio	Meet the requirement of limit	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

Operating Frequency	Band 12 Channel Bandwidth: 1.4MHz: 699.7 MHz ~ 715.3 MHz Channel Bandwidth: 3MHz: 700.5 MHz ~ 714.5 MHz Channel Bandwidth: 5MHz: 701.5 MHz ~ 713.5 MHz Channel Bandwidth: 10MHz: 704 MHz ~ 711 MHz Band 13 Channel Bandwidth: 5MHz: 779.5 ~ 784.5 MHz Channel Bandwidth: 10MHz: 782 MHz
Modulation	QPSK, 16QAM
UE Category	M1

1.1.2 Antenna Details

Type	Connector	Gain (dBi)	Remark
PIFA	No	0.82	Band 12
PIFA	No	3.79	Band 13

1.1.3 EUT Operational Condition

Supply Voltage	14.4Vdc from battery (x4)		
Operational Voltage	☒ Tnom (14.4V)	☒ Tmax (14.5V)	☒ Tmin (6V)
Operational Climatic	☒ Tnom (20°C)	☒ Tmax (85°C)	☒ Tmin (-40°C)

1.1.4 Accessories

Accessories		
No.	Equipment	Description
1	Battery x4	Brand: Fanzo Model: ER14505M Rating: 3.6V/2.1Ah

1.1.5 Maximum ERP and Emission Designator

Mode	Modulation	Maximum ERP (W)	Emission Designator
Band 12, CB: 1.4MHz	QPSK	0.089	1M08G7D
Band 12, CB: 1.4MHz	16QAM	0.062	908KW7D
Band 12, CB: 3MHz	QPSK	0.086	1M08G7D
Band 12, CB: 3MHz	16QAM	0.065	906KW7D
Band 12, CB: 5MHz	QPSK	0.082	1M09G7D
Band 12, CB: 5MHz	16QAM	0.076	915KW7D
Band 12, CB: 10MHz	QPSK	0.082	1M09G7D
Band 12, CB: 10MHz	16QAM	0.080	924KW7D
Band 13, CB: 5MHz	QPSK	0.162	1M09G7D
Band 13, CB: 5MHz	16QAM	0.156	913KW7D
Band 13, CB: 10MHz	QPSK	0.161	1M09G7D
Band 13, CB: 10MHz	16QAM	0.158	921KW7D

1.1.6 Operating Channel List

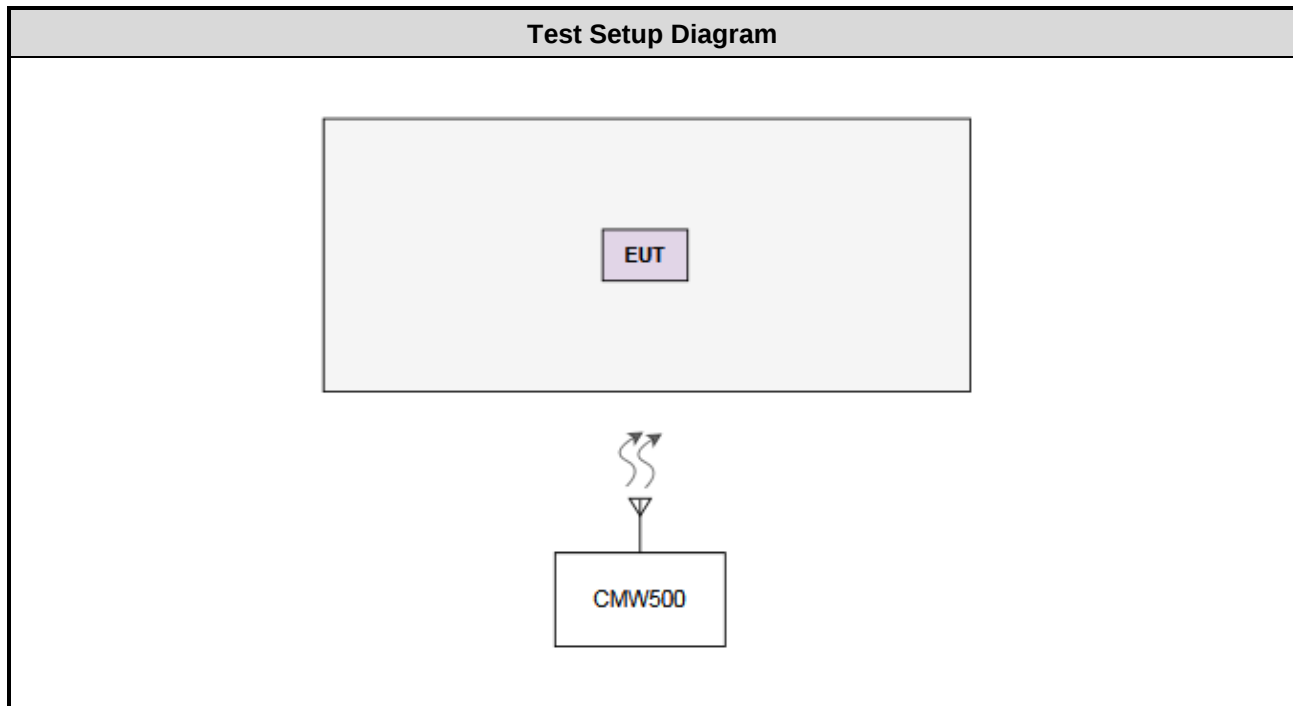
Band 12		
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
1.4	23017	699.7
1.4	23095	707.5
1.4	23173	715.3
3	23025	700.5
3	23095	707.5
3	23165	714.5
5	23035	701.5
5	23095	707.5
5	23155	713.5
10	23060	704.0
10	23095	707.5
10	23130	711.0

Band 13		
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
5	23205	779.5
5	23230	782.0
5	23255	784.5
10	23230	782.0

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
-	-	-	-	-	---

1.3 Test Setup Chart



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
Wideband Radio Communication Tester	R&S	CMW500	106070	Feb. 06, 2020	Feb. 05, 2021
Spectrum Analyzer	R&S	FSV40	101498	Dec. 17, 2019	Dec. 16, 2020
Receiver	R&S	ESR3	101657	Feb. 14, 2020	Feb. 13, 2021
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 12, 2019	Jul. 11, 2020
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 12, 2019	Dec. 11, 2020
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2019	Nov. 12, 2020
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 07, 2019	Oct. 06, 2020
Preamplifier	EMC	EMC02325	980225	Jul. 09, 2019	Jul. 08, 2020
Preamplifier	Agilent	83017A	MY39501308	Oct. 08, 2019	Oct. 07, 2020
RF Cable	EMC	EMC104-SM-SM-8000	181106	Oct. 07, 2019	Oct. 06, 2020
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 07, 2019	Oct. 06, 2020
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 07, 2019	Oct. 06, 2020
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 07, 2019	Oct. 06, 2020
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 07, 2019	Oct. 06, 2020
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Oct. 07, 2019	Oct. 06, 2020
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. 30, 2020	Apr. 29, 2021
Spectrum Analyzer	R&S	FSV40	101499	Jan. 09, 2020	Jan. 08, 2021
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Dec. 12, 2019	Dec. 11, 2020
Power Meter	Anritsu	ML2495A	1241002	Oct. 23, 2019	Oct. 22, 2020
Power Sensor	Anritsu	MA2411B	1207366	Oct. 23, 2019	Oct. 22, 2020
Wideband Radio Communication Tester	R&S	CMW500	106070	Feb. 06, 2020	Feb. 05, 2021
DC POWER SOURCE	GW INSTRUK	GPC-6030D	GES855395	Oct. 29, 2019	Oct. 28, 2020
Measurement Software	-	SENSE-FCC_2G-4G	V5.10.5	NA	NA

Note: Calibration Interval of instruments listed above is one year.

1.5 Test Standards

47 CFR FCC Part 27

ANSI C63.26-2015

FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

FCC KDB 971168 D02 Misc Rev Approv License Devices v02r01

1.6 Reference Guidance

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor ($k=2$)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Frequency error	$\pm 1 \times 10^{-9}$
Conducted emission	± 2.715 dB
Radiated emission ≤ 1 GHz	± 3.41 dB
Radiated emission > 1 GHz	± 4.59 dB
Temperature	± 0.4 °C

2 Test Configuration

2.1 Testing Condition and Location Information

Test Item	Test Site	Ambient Condition	Tested By
RF conducted	TH01-WS	24-26°C / 65-68%	Brad Wu
Radiated Emissions	03CH01-WS	24-26°C / 64-68%	Aska Huang

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISSED#: 10807A
- CAB identifier: TW2732

2.2 Testing Facility

Test Laboratory	International Certification Corp.
Test Site	03CH01-WS, TH01-WS
Address of Test Site	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

2.3 The Worst Test Modes and Channel Details

Band 12			
Test item	Channel Bandwidths	Modulation	Test channel
E.R.P	1.4 MHz	QPSK / 16QAM	23017 / 23095 / 23173
Conducted Emissions	3 MHz	QPSK / 16QAM	23025 / 23095 / 23165
Occupied Bandwidth	5 MHz	QPSK / 16QAM	23035 / 23095 / 23155
Peak to Average Ratio	10 MHz	QPSK / 16QAM	23060 / 23095 / 23130
Radiated Emission $\leq$ 1GHz	1.4 MHz	QPSK	23173
	3 MHz	QPSK	23165
	5 MHz	QPSK	23155
	10 MHz	QPSK	23130
Radiated Emission $>$ 1GHz	1.4 MHz	QPSK	23017 / 23095 / 23173
	3 MHz	QPSK	23025 / 23095 / 23165
	5 MHz	QPSK	23035 / 23095 / 23155
	10 MHz	QPSK	23060 / 23095 / 23130
Band Edge	1.4 MHz	QPSK / 16QAM	23017 / 23173
	3 MHz	QPSK / 16QAM	23025 / 23165
	5 MHz	QPSK / 16QAM	23035 / 23155
	10 MHz	QPSK / 16QAM	23060 / 23130
Frequency Stability	1.4 MHz	QPSK	23017 / 23173
	3 MHz	QPSK	23025 / 23165
	5 MHz	QPSK	23035 / 23155
	10 MHz	QPSK	23060 / 23130
Note:			
1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.			

Band 13			
Test item	Channel Bandwidth	Modulation	Test channel
E.R.P	5 MHz	QPSK / 16QAM	23205 / 23230 / 23255
Conducted Emissions	10 MHz	QPSK / 16QAM	23230
Occupied Bandwidth			
Peak to Average Ratio			
Radiated Emission $\leq$ 1GHz	5 MHz	QPSK	23255
	10 MHz	QPSK	23230
Radiated Emission $>$ 1GHz	5 MHz	QPSK	23205 / 23230 / 23255
	10 MHz	QPSK	23230
Band Edge	5 MHz	QPSK / 16QAM	23205 / 23255
	10 MHz	QPSK / 16QAM	23230
Frequency Stability	5 MHz	QPSK	23205 / 23255
	10 MHz	QPSK	23230
Note:			
1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.			

3 Test Results

3.1 Effective Radiated Power

3.1.1 Limit of Effective Radiated Power

Portable stations (hand-held devices) are limited to 3 watts ERP.

3.1.2 Test Procedures

For E.R.P measurement

ERP can be calculated by below formula from KDB 412172 D01.

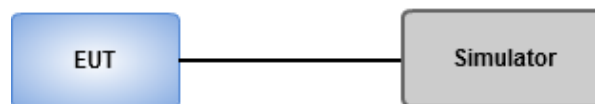
1. $EIRP = P_T + G_T - L_C$
 P_T = transmitter output power, in dBm.
 G_T = gain of the transmitting antenna, in dBi (EIRP).
 L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.
2. $ERP = EIRP - 2.15 \text{ dB}$.

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

3.1.3 Test Setup

Conducted Power Measurement



3.1.4 Test Result of Conducted power (dBm)

Band / Channel Bandwidth			Band 12 / CB: 1.4MHz		
Channel			23017	23095	23173
Frequency (MHz)			699.7	707.5	715.3
Mode	RB size# RB start	RB Index	Maximum AV Power (dBm)		
QPSK	1#0	0	20.71	20.12	20.81
	1#5	0	20.56	19.88	20.69
	6#0	0	18.17	18.17	18.44
16QAM	1#0	0	19.18	19.09	19.25
	1#5	0	18.93	19.08	19.24
	5#0	0	18.59	18.17	18.81

Band / Channel Bandwidth			Band 12 / CB: 3MHz		
Channel			23025	23095	23165
Frequency (MHz)			700.5	707.5	714.5
Mode	RB size# RB start	RB Index	Maximum AV Power (dBm)		
QPSK	1#0	0	20.55	20.38	20.65
	1#0	1	20.49	20.25	20.63
	1#5	0	20.51	20.29	20.57
	1#5	1	20.45	20.29	20.55
	3#0	0	19.45	19.22	19.52
	3#3	1	19.43	19.27	19.54
	6#0	0	18.21	18.16	18.37
	6#0	1	18.24	18.15	18.45
16QAM	1#0	0	19.25	19.19	19.45
	1#0	1	19.21	19.16	19.44
	1#5	0	19.04	18.96	19.25
	1#5	1	19.01	18.99	19.35
	3#0	0	18.55	18.31	18.52
	3#3	1	18.45	18.29	18.55
	5#0	0	18.49	18.37	18.56
	5#0	1	18.53	18.39	18.67

Band / Channel Bandwidth			Band 12 / CB: 5MHz		
Channel			23035	23095	23155
Frequency (MHz)			701.5	707.5	713.5
Mode	RB size# RB start	RB Index	Maximum AV Power (dBm)		
QPSK	1#0	0	20.45	20.21	20.48
	1#0	1	20.36	20.14	20.37
	1#5	1	20.30	19.88	20.39
	1#5	3	20.36	20.01	20.38
	3#0	0	20.31	20.15	20.37
	3#3	3	20.16	20.19	20.30
	6#0	0	19.27	19.06	19.31
	6#0	3	19.29	19.12	19.42
16QAM	1#0	0	20.11	20.12	20.02
	1#0	1	19.94	20.04	20.01
	1#5	1	19.76	19.89	19.82
	1#5	3	19.73	20.01	20.00
	3#0	0	19.99	20.10	19.99
	3#3	3	19.87	20.05	19.95
	5#0	0	19.09	19.19	19.37
	5#0	3	19.19	19.16	19.55

Band / Channel Bandwidth			Band 12 / CB: 10MHz		
Channel			23060	23095	23130
Frequency (MHz)			704	707.5	711
Mode	RB size# RB start	RB Index	Maximum AV Power (dBm)		
QPSK	1#0	0	20.46	20.38	20.47
	1#0	3	20.39	20.15	20.36
	1#5	3	20.28	19.89	20.26
	1#5	7	20.12	20.14	20.44
	3#0	0	20.29	20.19	20.12
	3#3	7	20.16	20.09	20.41
	6#0	0	19.29	19.14	19.13
	6#0	7	19.15	19.29	19.41
16QAM	1#0	0	20.36	20.24	20.33
	1#0	3	20.23	20.15	20.28
	1#5	3	19.73	19.88	19.76
	1#5	7	19.75	20.11	19.98
	3#0	0	20.01	20.21	19.84
	3#3	7	19.71	20.20	20.03
	5#0	0	20.22	20.18	20.25
	5#0	7	20.16	20.14	20.21

Band / Channel Bandwidth			Band 13 / CB: 5MHz		
Channel			23205	23230	23255
Frequency (MHz)			779.5	782.0	784.5
Mode	RB size# RB start	RB Index	Maximum AV Power (dBm)		
QPSK	1#0	0	20.43	20.31	20.45
	1#0	1	20.39	20.28	20.38
	1#5	1	20.36	20.03	20.41
	1#5	3	20.33	20.09	20.31
	3#0	0	20.40	20.08	20.21
	3#3	3	19.99	20.02	20.28
	6#0	0	19.24	19.28	19.22
	6#0	3	19.24	19.27	19.28
16QAM	1#0	0	19.88	20.30	19.95
	1#0	1	19.84	20.24	19.92
	1#5	1	19.74	20.06	19.87
	1#5	3	19.81	20.29	19.92
	3#0	0	19.86	20.23	19.94
	3#3	3	19.73	20.24	19.76
	5#0	0	19.29	19.32	19.28
	5#0	3	19.23	19.25	19.36

Band / Channel Bandwidth			Band 13 / CB: 10MHz		
Channel			23230		
Frequency (MHz)			782.0		
Mode	RB size# RB start	RB Index	Maximum AV Power (dBm)		
QPSK	1#0	0	20.42		
	1#0	3	20.18		
	1#5	3	20.08		
	1#5	7	20.26		
	3#0	0	20.21		
	3#3	7	20.08		
	6#0	0	19.26		
	6#0	7	19.38		
16QAM	1#0	0	20.35		
	1#0	3	20.28		
	1#5	3	20.18		
	1#5	7	20.26		
	3#0	0	20.27		
	3#3	7	20.21		
	5#0	0	20.28		
	5#0	7	20.31		

Band 12

3.1.5 Test Result of Effective Radiated Power (dBm)

Summary

Mode	Power (dBm)	Power (W)	ERP (dBm)	ERP (W)
Band 12	-	-	-	-
LTE-M1_1.4MHz_Nss1,QPSK_1TX	20.81	0.121	19.48	0.089
LTE-M1_1.4MHz_Nss1,16QAM_1TX	19.25	0.084	17.92	0.062
LTE-M1_3MHz_Nss1,QPSK_1TX	20.65	0.116	19.32	0.086
LTE-M1_3MHz_Nss1,16QAM_1TX	19.45	0.088	18.12	0.065
LTE-M1_5MHz_Nss1,QPSK_1TX	20.48	0.112	19.15	0.082
LTE-M1_5MHz_Nss1,16QAM_1TX	20.12	0.103	18.79	0.076
LTE-M1_10MHz_Nss1,QPSK_1TX	20.47	0.111	19.14	0.082
LTE-M1_10MHz_Nss1,16QAM_1TX	20.36	0.109	19.03	0.080

Result

Mode	Result	DG (dBi)	EIRP (dBm)	ERP (dBm)	ERP (W)	ERP Lim. (W)	Power (dBm)	Power (W)	Power Lim. (W)	Port 1 (dBm)
Band 12_LTE-M1_1.4MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
699.7MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.53	19.38	0.08670	3	20.71	0.118	Inf	20.71
699.7MHz_QPSK_RB 1,#RB 5,NB 0	Pass	0.82	21.38	19.23	0.08375	3	20.56	0.114	Inf	20.56
699.7MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	18.99	16.84	0.04831	3	18.17	0.066	Inf	18.17
707.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	20.94	18.79	0.07568	3	20.12	0.103	Inf	20.12
707.5MHz_QPSK_RB 1,#RB 5,NB 0	Pass	0.82	20.70	18.55	0.07161	3	19.88	0.097	Inf	19.88
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	18.99	16.84	0.04831	3	18.17	0.066	Inf	18.17
715.3MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.63	19.48	0.08872	3	20.81	0.121	Inf	20.81
715.3MHz_QPSK_RB 1,#RB 5,NB 0	Pass	0.82	21.51	19.36	0.08630	3	20.69	0.117	Inf	20.69
715.3MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	19.26	17.11	0.05140	3	18.44	0.070	Inf	18.44
699.7MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	20.00	17.85	0.06095	3	19.18	0.083	Inf	19.18
699.7MHz_16QAM_RB 1,#RB 5,NB 0	Pass	0.82	19.75	17.60	0.05754	3	18.93	0.078	Inf	18.93
699.7MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	19.41	17.26	0.05321	3	18.59	0.072	Inf	18.59
707.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	19.91	17.76	0.05970	3	19.09	0.081	Inf	19.09
707.5MHz_16QAM_RB 1,#RB 5,NB 0	Pass	0.82	19.90	17.75	0.05957	3	19.08	0.081	Inf	19.08
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	18.99	16.84	0.04831	3	18.17	0.066	Inf	18.17
715.3MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	20.07	17.92	0.06194	3	19.25	0.084	Inf	19.25
715.3MHz_16QAM_RB 1,#RB 5,NB 0	Pass	0.82	20.06	17.91	0.06180	3	19.24	0.084	Inf	19.24
715.3MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	19.63	17.48	0.05598	3	18.81	0.076	Inf	18.81
Band 12_LTE-M1_3MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
700.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.37	19.22	0.08356	3	20.55	0.114	Inf	20.55
700.5MHz_QPSK_RB 1,#RB 0,NB 1	Pass	0.82	21.31	19.16	0.08241	3	20.49	0.112	Inf	20.49
700.5MHz_QPSK_RB 1,#RB 5,NB 0	Pass	0.82	21.33	19.18	0.08279	3	20.51	0.112	Inf	20.51
700.5MHz_QPSK_RB 1,#RB 5,NB 1	Pass	0.82	21.27	19.12	0.08166	3	20.45	0.111	Inf	20.45
700.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	20.27	18.12	0.06486	3	19.45	0.088	Inf	19.45
700.5MHz_QPSK_RB 3,#RB 3,NB 1	Pass	0.82	20.25	18.10	0.06457	3	19.43	0.088	Inf	19.43
700.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	19.03	16.88	0.04875	3	18.21	0.066	Inf	18.21
700.5MHz_QPSK_RB 6,#RB 0,NB 1	Pass	0.82	19.06	16.91	0.04909	3	18.24	0.067	Inf	18.24
707.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.20	19.05	0.08035	3	20.38	0.109	Inf	20.38
707.5MHz_QPSK_RB 1,#RB 0,NB 1	Pass	0.82	21.07	18.92	0.07798	3	20.25	0.106	Inf	20.25
707.5MHz_QPSK_RB 1,#RB 5,NB 0	Pass	0.82	21.11	18.96	0.07870	3	20.29	0.107	Inf	20.29
707.5MHz_QPSK_RB 1,#RB 5,NB 1	Pass	0.82	21.11	18.96	0.07870	3	20.29	0.107	Inf	20.29
707.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	20.04	17.89	0.06152	3	19.22	0.084	Inf	19.22
707.5MHz_QPSK_RB 3,#RB 3,NB 1	Pass	0.82	20.09	17.94	0.06223	3	19.27	0.085	Inf	19.27
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	18.98	16.83	0.04819	3	18.16	0.065	Inf	18.16
707.5MHz_QPSK_RB 6,#RB 0,NB 1	Pass	0.82	18.97	16.82	0.04808	3	18.15	0.065	Inf	18.15
714.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.47	19.32	0.08551	3	20.65	0.116	Inf	20.65

Mode	Result	DG (dBi)	EIRP (dBm)	ERP (dBm)	ERP (W)	ERP Lim. (W)	Power (dBm)	Power (W)	Power Lim. (W)	Port 1 (dBm)
714.5MHz_QPSK_RB 1,#RB 0,NB 1	Pass	0.82	21.45	19.30	0.08511	3	20.63	0.116	Inf	20.63
714.5MHz_QPSK_RB 1,#RB 5,NB 0	Pass	0.82	21.39	19.24	0.08395	3	20.57	0.114	Inf	20.57
714.5MHz_QPSK_RB 1,#RB 5,NB 1	Pass	0.82	21.37	19.22	0.08356	3	20.55	0.114	Inf	20.55
714.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	20.34	18.19	0.06592	3	19.52	0.090	Inf	19.52
714.5MHz_QPSK_RB 3,#RB 3,NB 1	Pass	0.82	20.36	18.21	0.06622	3	19.54	0.090	Inf	19.54
714.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	19.19	17.04	0.05058	3	18.37	0.069	Inf	18.37
714.5MHz_QPSK_RB 6,#RB 0,NB 1	Pass	0.82	19.27	17.12	0.05152	3	18.45	0.070	Inf	18.45
700.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	20.07	17.92	0.06194	3	19.25	0.084	Inf	19.25
700.5MHz_16QAM_RB 1,#RB 0,NB 1	Pass	0.82	20.03	17.88	0.06138	3	19.21	0.083	Inf	19.21
700.5MHz_16QAM_RB 1,#RB 5,NB 0	Pass	0.82	19.86	17.71	0.05902	3	19.04	0.080	Inf	19.04
700.5MHz_16QAM_RB 1,#RB 5,NB 1	Pass	0.82	19.83	17.68	0.05861	3	19.01	0.080	Inf	19.01
700.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	19.37	17.22	0.05272	3	18.55	0.072	Inf	18.55
700.5MHz_16QAM_RB 3,#RB 3,NB 1	Pass	0.82	19.27	17.12	0.05152	3	18.45	0.070	Inf	18.45
700.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	19.31	17.16	0.05200	3	18.49	0.071	Inf	18.49
700.5MHz_16QAM_RB 5,#RB 0,NB 1	Pass	0.82	19.35	17.20	0.05248	3	18.53	0.071	Inf	18.53
707.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	20.01	17.86	0.06109	3	19.19	0.083	Inf	19.19
707.5MHz_16QAM_RB 1,#RB 0,NB 1	Pass	0.82	19.98	17.83	0.06067	3	19.16	0.082	Inf	19.16
707.5MHz_16QAM_RB 1,#RB 5,NB 0	Pass	0.82	19.78	17.63	0.05794	3	18.96	0.079	Inf	18.96
707.5MHz_16QAM_RB 1,#RB 5,NB 1	Pass	0.82	19.81	17.66	0.05834	3	18.99	0.079	Inf	18.99
707.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	19.13	16.98	0.04989	3	18.31	0.068	Inf	18.31
707.5MHz_16QAM_RB 3,#RB 3,NB 1	Pass	0.82	19.11	16.96	0.04966	3	18.29	0.067	Inf	18.29
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	19.19	17.04	0.05058	3	18.37	0.069	Inf	18.37
707.5MHz_16QAM_RB 5,#RB 0,NB 1	Pass	0.82	19.21	17.06	0.05082	3	18.39	0.069	Inf	18.39
714.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	20.27	18.12	0.06486	3	19.45	0.088	Inf	19.45
714.5MHz_16QAM_RB 1,#RB 0,NB 1	Pass	0.82	20.26	18.11	0.06471	3	19.44	0.088	Inf	19.44
714.5MHz_16QAM_RB 1,#RB 5,NB 0	Pass	0.82	20.07	17.92	0.06194	3	19.25	0.084	Inf	19.25
714.5MHz_16QAM_RB 1,#RB 5,NB 1	Pass	0.82	20.17	18.02	0.06339	3	19.35	0.086	Inf	19.35
714.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	19.34	17.19	0.05236	3	18.52	0.071	Inf	18.52
714.5MHz_16QAM_RB 3,#RB 3,NB 1	Pass	0.82	19.37	17.22	0.05272	3	18.55	0.072	Inf	18.55
714.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	19.38	17.23	0.05284	3	18.56	0.072	Inf	18.56
714.5MHz_16QAM_RB 5,#RB 0,NB 1	Pass	0.82	19.49	17.34	0.05420	3	18.67	0.074	Inf	18.67
Band 12_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
701.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.27	19.12	0.08166	3	20.45	0.111	Inf	20.45
701.5MHz_QPSK_RB 1,#RB 0,NB 1	Pass	0.82	21.18	19.03	0.07998	3	20.36	0.109	Inf	20.36
701.5MHz_QPSK_RB 1,#RB 5,NB 1	Pass	0.82	21.12	18.97	0.07889	3	20.30	0.107	Inf	20.3
701.5MHz_QPSK_RB 1,#RB 5,NB 3	Pass	0.82	21.18	19.03	0.07998	3	20.36	0.109	Inf	20.36
701.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	21.13	18.98	0.07907	3	20.31	0.107	Inf	20.31
701.5MHz_QPSK_RB 3,#RB 3,NB 3	Pass	0.82	20.98	18.83	0.07638	3	20.16	0.104	Inf	20.16

Mode	Result	DG (dBi)	EIRP (dBm)	ERP (dBm)	ERP (W)	ERP Lim. (W)	Power (dBm)	Power (W)	Power Lim. (W)	Port 1 (dBm)
701.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	20.09	17.94	0.06223	3	19.27	0.085	Inf	19.27
701.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	0.82	20.11	17.96	0.06252	3	19.29	0.085	Inf	19.29
707.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.03	18.88	0.07727	3	20.21	0.105	Inf	20.21
707.5MHz_QPSK_RB 1,#RB 0,NB 1	Pass	0.82	20.96	18.81	0.07603	3	20.14	0.103	Inf	20.14
707.5MHz_QPSK_RB 1,#RB 5,NB 1	Pass	0.82	20.70	18.55	0.07161	3	19.88	0.097	Inf	19.88
707.5MHz_QPSK_RB 1,#RB 5,NB 3	Pass	0.82	20.83	18.68	0.07379	3	20.01	0.100	Inf	20.01
707.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	20.97	18.82	0.07621	3	20.15	0.104	Inf	20.15
707.5MHz_QPSK_RB 3,#RB 3,NB 3	Pass	0.82	21.01	18.86	0.07691	3	20.19	0.104	Inf	20.19
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	19.88	17.73	0.05929	3	19.06	0.081	Inf	19.06
707.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	0.82	19.94	17.79	0.06012	3	19.12	0.082	Inf	19.12
713.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.30	19.15	0.08222	3	20.48	0.112	Inf	20.48
713.5MHz_QPSK_RB 1,#RB 0,NB 1	Pass	0.82	21.19	19.04	0.08017	3	20.37	0.109	Inf	20.37
713.5MHz_QPSK_RB 1,#RB 5,NB 1	Pass	0.82	21.21	19.06	0.08054	3	20.39	0.109	Inf	20.39
713.5MHz_QPSK_RB 1,#RB 5,NB 3	Pass	0.82	21.20	19.05	0.08035	3	20.38	0.109	Inf	20.38
713.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	21.19	19.04	0.08017	3	20.37	0.109	Inf	20.37
713.5MHz_QPSK_RB 3,#RB 3,NB 3	Pass	0.82	21.12	18.97	0.07889	3	20.30	0.107	Inf	20.3
713.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	20.13	17.98	0.06281	3	19.31	0.085	Inf	19.31
713.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	0.82	20.24	18.09	0.06442	3	19.42	0.087	Inf	19.42
701.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	20.93	18.78	0.07551	3	20.11	0.103	Inf	20.11
701.5MHz_16QAM_RB 1,#RB 0,NB 1	Pass	0.82	20.76	18.61	0.07261	3	19.94	0.099	Inf	19.94
701.5MHz_16QAM_RB 1,#RB 5,NB 1	Pass	0.82	20.58	18.43	0.06966	3	19.76	0.095	Inf	19.76
701.5MHz_16QAM_RB 1,#RB 5,NB 3	Pass	0.82	20.55	18.40	0.06918	3	19.73	0.094	Inf	19.73
701.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	20.81	18.66	0.07345	3	19.99	0.100	Inf	19.99
701.5MHz_16QAM_RB 3,#RB 3,NB 3	Pass	0.82	20.69	18.54	0.07145	3	19.87	0.097	Inf	19.87
701.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	19.91	17.76	0.05970	3	19.09	0.081	Inf	19.09
701.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	0.82	20.01	17.86	0.06109	3	19.19	0.083	Inf	19.19
707.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	20.94	18.79	0.07568	3	20.12	0.103	Inf	20.12
707.5MHz_16QAM_RB 1,#RB 0,NB 1	Pass	0.82	20.86	18.71	0.07430	3	20.04	0.101	Inf	20.04
707.5MHz_16QAM_RB 1,#RB 5,NB 1	Pass	0.82	20.71	18.56	0.07178	3	19.89	0.097	Inf	19.89
707.5MHz_16QAM_RB 1,#RB 5,NB 3	Pass	0.82	20.83	18.68	0.07379	3	20.01	0.100	Inf	20.01
707.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	20.92	18.77	0.07534	3	20.10	0.102	Inf	20.1
707.5MHz_16QAM_RB 3,#RB 3,NB 3	Pass	0.82	20.87	18.72	0.07447	3	20.05	0.101	Inf	20.05
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	20.01	17.86	0.06109	3	19.19	0.083	Inf	19.19
707.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	0.82	19.98	17.83	0.06067	3	19.16	0.082	Inf	19.16
713.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	20.84	18.69	0.07396	3	20.02	0.100	Inf	20.02
713.5MHz_16QAM_RB 1,#RB 0,NB 1	Pass	0.82	20.83	18.68	0.07379	3	20.01	0.100	Inf	20.01
713.5MHz_16QAM_RB 1,#RB 5,NB 1	Pass	0.82	20.64	18.49	0.07063	3	19.82	0.096	Inf	19.82
713.5MHz_16QAM_RB 1,#RB 5,NB 3	Pass	0.82	20.82	18.67	0.07362	3	20.00	0.100	Inf	20

Mode	Result	DG (dBi)	EIRP (dBm)	ERP (dBm)	ERP (W)	ERP Lim. (W)	Power (dBm)	Power (W)	Power Lim. (W)	Port 1 (dBm)
713.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	20.81	18.66	0.07345	3	19.99	0.100	Inf	19.99
713.5MHz_16QAM_RB 3,#RB 3,NB 3	Pass	0.82	20.77	18.62	0.07278	3	19.95	0.099	Inf	19.95
713.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	20.19	18.04	0.06368	3	19.37	0.086	Inf	19.37
713.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	0.82	20.37	18.22	0.06637	3	19.55	0.090	Inf	19.55
Band 12_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
704MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.28	19.13	0.08185	3	20.46	0.111	Inf	20.46
704MHz_QPSK_RB 1,#RB 0,NB 3	Pass	0.82	21.21	19.06	0.08054	3	20.39	0.109	Inf	20.39
704MHz_QPSK_RB 1,#RB 5,NB 3	Pass	0.82	21.10	18.95	0.07852	3	20.28	0.107	Inf	20.28
704MHz_QPSK_RB 1,#RB 5,NB 7	Pass	0.82	20.94	18.79	0.07568	3	20.12	0.103	Inf	20.12
704MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	21.11	18.96	0.07870	3	20.29	0.107	Inf	20.29
704MHz_QPSK_RB 3,#RB 3,NB 7	Pass	0.82	20.98	18.83	0.07638	3	20.16	0.104	Inf	20.16
704MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	20.11	17.96	0.06252	3	19.29	0.085	Inf	19.29
704MHz_QPSK_RB 6,#RB 0,NB 7	Pass	0.82	19.97	17.82	0.06053	3	19.15	0.082	Inf	19.15
707.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.20	19.05	0.08035	3	20.38	0.109	Inf	20.38
707.5MHz_QPSK_RB 1,#RB 0,NB 3	Pass	0.82	20.97	18.82	0.07621	3	20.15	0.104	Inf	20.15
707.5MHz_QPSK_RB 1,#RB 5,NB 3	Pass	0.82	20.71	18.56	0.07178	3	19.89	0.097	Inf	19.89
707.5MHz_QPSK_RB 1,#RB 5,NB 7	Pass	0.82	20.96	18.81	0.07603	3	20.14	0.103	Inf	20.14
707.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	21.01	18.86	0.07691	3	20.19	0.104	Inf	20.19
707.5MHz_QPSK_RB 3,#RB 3,NB 7	Pass	0.82	20.91	18.76	0.07516	3	20.09	0.102	Inf	20.09
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	19.96	17.81	0.06039	3	19.14	0.082	Inf	19.14
707.5MHz_QPSK_RB 6,#RB 0,NB 7	Pass	0.82	20.11	17.96	0.06252	3	19.29	0.085	Inf	19.29
711MHz_QPSK_RB 1,#RB 0,NB 0	Pass	0.82	21.29	19.14	0.08204	3	20.47	0.111	Inf	20.47
711MHz_QPSK_RB 1,#RB 0,NB 3	Pass	0.82	21.18	19.03	0.07998	3	20.36	0.109	Inf	20.36
711MHz_QPSK_RB 1,#RB 5,NB 3	Pass	0.82	21.08	18.93	0.07816	3	20.26	0.106	Inf	20.26
711MHz_QPSK_RB 1,#RB 5,NB 7	Pass	0.82	21.26	19.11	0.08147	3	20.44	0.111	Inf	20.44
711MHz_QPSK_RB 3,#RB 0,NB 0	Pass	0.82	20.94	18.79	0.07568	3	20.12	0.103	Inf	20.12
711MHz_QPSK_RB 3,#RB 3,NB 7	Pass	0.82	21.23	19.08	0.08091	3	20.41	0.110	Inf	20.41
711MHz_QPSK_RB 6,#RB 0,NB 0	Pass	0.82	19.95	17.80	0.06026	3	19.13	0.082	Inf	19.13
711MHz_QPSK_RB 6,#RB 0,NB 7	Pass	0.82	20.23	18.08	0.06427	3	19.41	0.087	Inf	19.41
704MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	21.18	19.03	0.07998	3	20.36	0.109	Inf	20.36
704MHz_16QAM_RB 1,#RB 0,NB 3	Pass	0.82	21.05	18.90	0.07762	3	20.23	0.105	Inf	20.23
704MHz_16QAM_RB 1,#RB 5,NB 3	Pass	0.82	20.55	18.40	0.06918	3	19.73	0.094	Inf	19.73
704MHz_16QAM_RB 1,#RB 5,NB 7	Pass	0.82	20.57	18.42	0.06950	3	19.75	0.094	Inf	19.75
704MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	20.83	18.68	0.07379	3	20.01	0.100	Inf	20.01
704MHz_16QAM_RB 3,#RB 3,NB 7	Pass	0.82	20.53	18.38	0.06887	3	19.71	0.094	Inf	19.71
704MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	21.04	18.89	0.07745	3	20.22	0.105	Inf	20.22
704MHz_16QAM_RB 5,#RB 0,NB 7	Pass	0.82	20.98	18.83	0.07638	3	20.16	0.104	Inf	20.16
707.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	21.06	18.91	0.07780	3	20.24	0.106	Inf	20.24

Mode	Result	DG (dBi)	EIRP (dBm)	ERP (dBm)	ERP (W)	ERP Lim. (W)	Power (dBm)	Power (W)	Power Lim. (W)	Port 1 (dBm)
707.5MHz_16QAM_RB 1,#RB 0,NB 3	Pass	0.82	20.97	18.82	0.07621	3	20.15	0.104	Inf	20.15
707.5MHz_16QAM_RB 1,#RB 5,NB 3	Pass	0.82	20.70	18.55	0.07161	3	19.88	0.097	Inf	19.88
707.5MHz_16QAM_RB 1,#RB 5,NB 7	Pass	0.82	20.93	18.78	0.07551	3	20.11	0.103	Inf	20.11
707.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	21.03	18.88	0.07727	3	20.21	0.105	Inf	20.21
707.5MHz_16QAM_RB 3,#RB 3,NB 7	Pass	0.82	21.02	18.87	0.07709	3	20.20	0.105	Inf	20.2
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	21.00	18.85	0.07674	3	20.18	0.104	Inf	20.18
707.5MHz_16QAM_RB 5,#RB 0,NB 7	Pass	0.82	20.96	18.81	0.07603	3	20.14	0.103	Inf	20.14
711MHz_16QAM_RB 1,#RB 0,NB 0	Pass	0.82	21.15	19.00	0.07943	3	20.33	0.108	Inf	20.33
711MHz_16QAM_RB 1,#RB 0,NB 3	Pass	0.82	21.10	18.95	0.07852	3	20.28	0.107	Inf	20.28
711MHz_16QAM_RB 1,#RB 5,NB 3	Pass	0.82	20.58	18.43	0.06966	3	19.76	0.095	Inf	19.76
711MHz_16QAM_RB 1,#RB 5,NB 7	Pass	0.82	20.80	18.65	0.07328	3	19.98	0.100	Inf	19.98
711MHz_16QAM_RB 3,#RB 0,NB 0	Pass	0.82	20.66	18.51	0.07096	3	19.84	0.096	Inf	19.84
711MHz_16QAM_RB 3,#RB 3,NB 7	Pass	0.82	20.85	18.70	0.07413	3	20.03	0.101	Inf	20.03
711MHz_16QAM_RB 5,#RB 0,NB 0	Pass	0.82	21.07	18.92	0.07798	3	20.25	0.106	Inf	20.25
711MHz_16QAM_RB 5,#RB 0,NB 7	Pass	0.82	21.03	18.88	0.07727	3	20.21	0.105	Inf	20.21

DG = Directional Gain; Port n = Port n output power

Band 13

3.1.6 Test Result of Effective Radiated Power (dBm)

Summary

Mode	Power (dBm)	Power (W)	ERP (dBm)	ERP (W)
Band 13	-	-	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	20.45	0.111	22.09	0.162
LTE-M1_5MHz_Nss1,16QAM_1TX	20.30	0.107	21.94	0.156
LTE-M1_10MHz_Nss1,QPSK_1TX	20.42	0.110	22.06	0.161
LTE-M1_10MHz_Nss1,16QAM_1TX	20.35	0.108	21.99	0.158

Result

Mode	Result	DG (dBi)	EIRP (dBm)	ERP (dBm)	ERP (W)	ERP Lim. (W)	Power (dBm)	Power (W)	Power Lim. (W)	Port 1 (dBm)
Band 13_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
779.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	3.79	24.22	22.07	0.16106	3	20.43	0.110	Inf	20.43
779.5MHz_QPSK_RB 1,#RB 0,NB 1	Pass	3.79	24.18	22.03	0.15959	3	20.39	0.109	Inf	20.39
779.5MHz_QPSK_RB 1,#RB 5,NB 1	Pass	3.79	24.15	22.00	0.15849	3	20.36	0.109	Inf	20.36
779.5MHz_QPSK_RB 1,#RB 5,NB 3	Pass	3.79	24.12	21.97	0.15740	3	20.33	0.108	Inf	20.33
779.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	3.79	24.19	22.04	0.15996	3	20.40	0.110	Inf	20.4
779.5MHz_QPSK_RB 3,#RB 3,NB 3	Pass	3.79	23.78	21.63	0.14555	3	19.99	0.100	Inf	19.99
779.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	3.79	23.03	20.88	0.12246	3	19.24	0.084	Inf	19.24
779.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	3.79	23.03	20.88	0.12246	3	19.24	0.084	Inf	19.24
782MHz_QPSK_RB 1,#RB 0,NB 0	Pass	3.79	24.10	21.95	0.15668	3	20.31	0.107	Inf	20.31
782MHz_QPSK_RB 1,#RB 0,NB 1	Pass	3.79	24.07	21.92	0.15560	3	20.28	0.107	Inf	20.28
782MHz_QPSK_RB 1,#RB 5,NB 1	Pass	3.79	23.82	21.67	0.14689	3	20.03	0.101	Inf	20.03
782MHz_QPSK_RB 1,#RB 5,NB 3	Pass	3.79	23.88	21.73	0.14894	3	20.09	0.102	Inf	20.09
782MHz_QPSK_RB 3,#RB 0,NB 0	Pass	3.79	23.87	21.72	0.14859	3	20.08	0.102	Inf	20.08
782MHz_QPSK_RB 3,#RB 3,NB 3	Pass	3.79	23.81	21.66	0.14655	3	20.02	0.100	Inf	20.02
782MHz_QPSK_RB 6,#RB 0,NB 0	Pass	3.79	23.07	20.92	0.12359	3	19.28	0.085	Inf	19.28
782MHz_QPSK_RB 6,#RB 0,NB 3	Pass	3.79	23.06	20.91	0.12331	3	19.27	0.085	Inf	19.27
784.5MHz_QPSK_RB 1,#RB 0,NB 0	Pass	3.79	24.24	22.09	0.16181	3	20.45	0.111	Inf	20.45
784.5MHz_QPSK_RB 1,#RB 0,NB 1	Pass	3.79	24.17	22.02	0.15922	3	20.38	0.109	Inf	20.38
784.5MHz_QPSK_RB 1,#RB 5,NB 1	Pass	3.79	24.20	22.05	0.16032	3	20.41	0.110	Inf	20.41
784.5MHz_QPSK_RB 1,#RB 5,NB 3	Pass	3.79	24.10	21.95	0.15668	3	20.31	0.107	Inf	20.31
784.5MHz_QPSK_RB 3,#RB 0,NB 0	Pass	3.79	24.00	21.85	0.15311	3	20.21	0.105	Inf	20.21
784.5MHz_QPSK_RB 3,#RB 3,NB 3	Pass	3.79	24.07	21.92	0.15560	3	20.28	0.107	Inf	20.28
784.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	3.79	23.01	20.86	0.12190	3	19.22	0.084	Inf	19.22
784.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	3.79	23.07	20.92	0.12359	3	19.28	0.085	Inf	19.28
779.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	3.79	23.67	21.52	0.14191	3	19.88	0.097	Inf	19.88
779.5MHz_16QAM_RB 1,#RB 0,NB 1	Pass	3.79	23.63	21.48	0.14060	3	19.84	0.096	Inf	19.84
779.5MHz_16QAM_RB 1,#RB 5,NB 1	Pass	3.79	23.53	21.38	0.13740	3	19.74	0.094	Inf	19.74
779.5MHz_16QAM_RB 1,#RB 5,NB 3	Pass	3.79	23.60	21.45	0.13964	3	19.81	0.096	Inf	19.81
779.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	3.79	23.65	21.50	0.14125	3	19.86	0.097	Inf	19.86
779.5MHz_16QAM_RB 3,#RB 3,NB 3	Pass	3.79	23.52	21.37	0.13709	3	19.73	0.094	Inf	19.73
779.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	3.79	23.08	20.93	0.12388	3	19.29	0.085	Inf	19.29
779.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	3.79	23.02	20.87	0.12218	3	19.23	0.084	Inf	19.23
782MHz_16QAM_RB 1,#RB 0,NB 0	Pass	3.79	24.09	21.94	0.15631	3	20.30	0.107	Inf	20.3
782MHz_16QAM_RB 1,#RB 0,NB 1	Pass	3.79	24.03	21.88	0.15417	3	20.24	0.106	Inf	20.24
782MHz_16QAM_RB 1,#RB 5,NB 1	Pass	3.79	23.85	21.70	0.14791	3	20.06	0.101	Inf	20.06
782MHz_16QAM_RB 1,#RB 5,NB 3	Pass	3.79	24.08	21.93	0.15596	3	20.29	0.107	Inf	20.29
782MHz_16QAM_RB 3,#RB 0,NB 0	Pass	3.79	24.02	21.87	0.15382	3	20.23	0.105	Inf	20.23
782MHz_16QAM_RB 3,#RB 3,NB 3	Pass	3.79	24.03	21.88	0.15417	3	20.24	0.106	Inf	20.24
782MHz_16QAM_RB 5,#RB 0,NB 0	Pass	3.79	23.11	20.96	0.12474	3	19.32	0.086	Inf	19.32

Mode	Result	DG (dBi)	EIRP (dBm)	ERP (dBm)	ERP (W)	ERP Lim. (W)	Power (dBm)	Power (W)	Power Lim. (W)	Port 1 (dBm)
782MHz_16QAM_RB 5,#RB 0,NB 3	Pass	3.79	23.04	20.89	0.12274	3	19.25	0.084	Inf	19.25
784.5MHz_16QAM_RB 1,#RB 0,NB 0	Pass	3.79	23.74	21.59	0.14421	3	19.95	0.099	Inf	19.95
784.5MHz_16QAM_RB 1,#RB 0,NB 1	Pass	3.79	23.71	21.56	0.14322	3	19.92	0.098	Inf	19.92
784.5MHz_16QAM_RB 1,#RB 5,NB 1	Pass	3.79	23.66	21.51	0.14158	3	19.87	0.097	Inf	19.87
784.5MHz_16QAM_RB 1,#RB 5,NB 3	Pass	3.79	23.71	21.56	0.14322	3	19.92	0.098	Inf	19.92
784.5MHz_16QAM_RB 3,#RB 0,NB 0	Pass	3.79	23.73	21.58	0.14388	3	19.94	0.099	Inf	19.94
784.5MHz_16QAM_RB 3,#RB 3,NB 3	Pass	3.79	23.55	21.40	0.13804	3	19.76	0.095	Inf	19.76
784.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	3.79	23.07	20.92	0.12359	3	19.28	0.085	Inf	19.28
784.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	3.79	23.15	21.00	0.12589	3	19.36	0.086	Inf	19.36
Band 13_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
782MHz_QPSK_RB 1,#RB 0,NB 0	Pass	3.79	24.21	22.06	0.16069	3	20.42	0.110	Inf	20.42
782MHz_QPSK_RB 1,#RB 0,NB 3	Pass	3.79	23.97	21.82	0.15205	3	20.18	0.104	Inf	20.18
782MHz_QPSK_RB 1,#RB 5,NB 3	Pass	3.79	23.87	21.72	0.14859	3	20.08	0.102	Inf	20.08
782MHz_QPSK_RB 1,#RB 5,NB 7	Pass	3.79	24.05	21.90	0.15488	3	20.26	0.106	Inf	20.26
782MHz_QPSK_RB 3,#RB 0,NB 0	Pass	3.79	24.00	21.85	0.15311	3	20.21	0.105	Inf	20.21
782MHz_QPSK_RB 3,#RB 3,NB 7	Pass	3.79	23.87	21.72	0.14859	3	20.08	0.102	Inf	20.08
782MHz_QPSK_RB 6,#RB 0,NB 0	Pass	3.79	23.05	20.90	0.12303	3	19.26	0.084	Inf	19.26
782MHz_QPSK_RB 6,#RB 0,NB 7	Pass	3.79	23.17	21.02	0.12647	3	19.38	0.087	Inf	19.38
782MHz_16QAM_RB 1,#RB 0,NB 0	Pass	3.79	24.14	21.99	0.15812	3	20.35	0.108	Inf	20.35
782MHz_16QAM_RB 1,#RB 0,NB 3	Pass	3.79	24.07	21.92	0.15560	3	20.28	0.107	Inf	20.28
782MHz_16QAM_RB 1,#RB 5,NB 3	Pass	3.79	23.97	21.82	0.15205	3	20.18	0.104	Inf	20.18
782MHz_16QAM_RB 1,#RB 5,NB 7	Pass	3.79	24.05	21.90	0.15488	3	20.26	0.106	Inf	20.26
782MHz_16QAM_RB 3,#RB 0,NB 0	Pass	3.79	24.06	21.91	0.15524	3	20.27	0.106	Inf	20.27
782MHz_16QAM_RB 3,#RB 3,NB 7	Pass	3.79	24.00	21.85	0.15311	3	20.21	0.105	Inf	20.21
782MHz_16QAM_RB 5,#RB 0,NB 0	Pass	3.79	24.07	21.92	0.15560	3	20.28	0.107	Inf	20.28
782MHz_16QAM_RB 5,#RB 0,NB 7	Pass	3.79	24.10	21.95	0.15668	3	20.31	0.107	Inf	20.31

DG = Directional Gain; Port n = Port n output power

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.

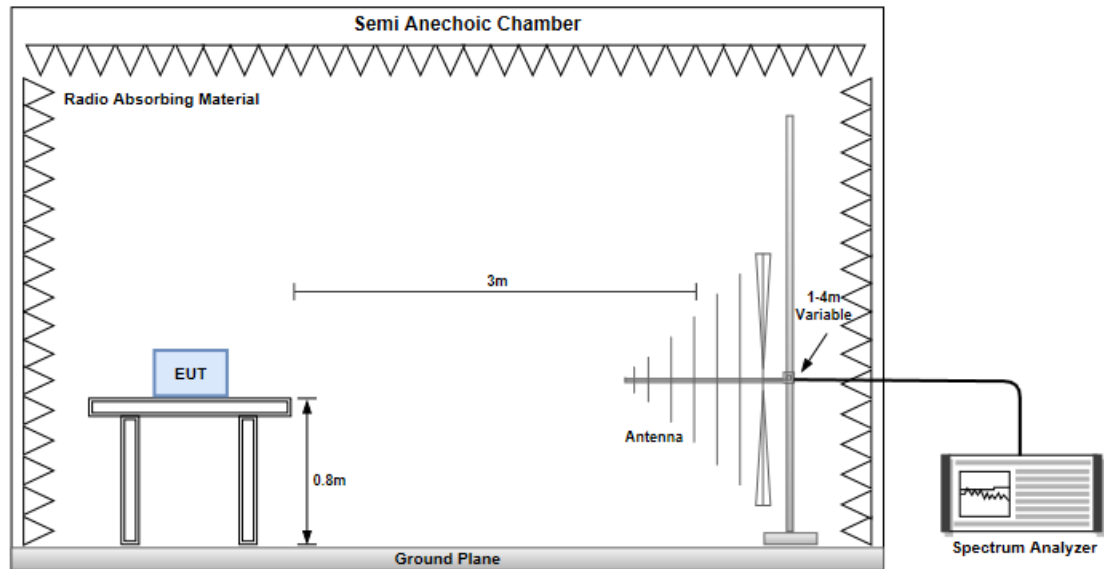
For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

3.2.2 Test Procedures

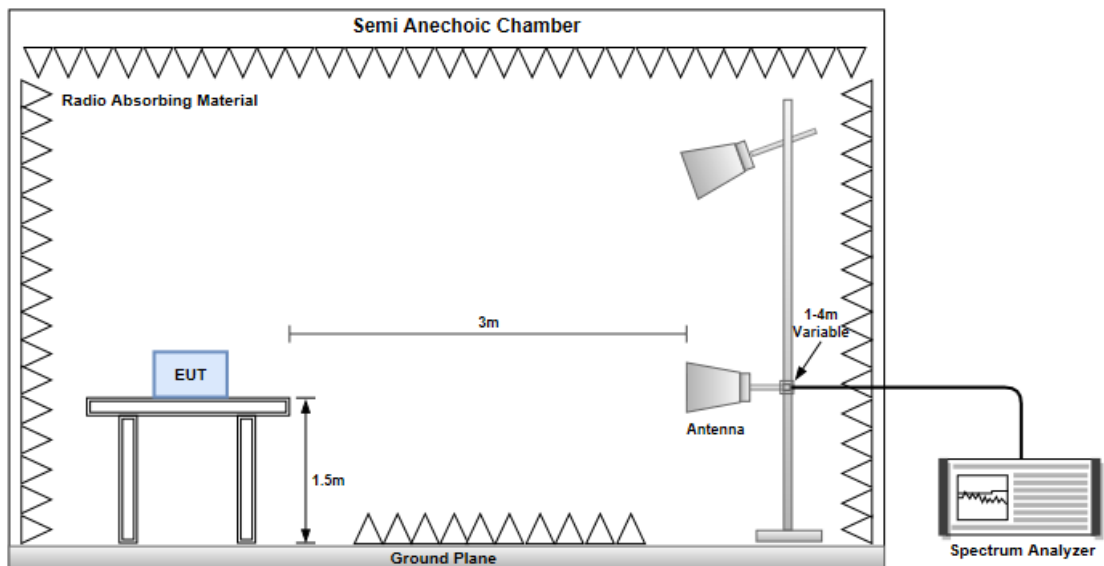
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. 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. ERP can be calculated by below formula:
$$E.R.P = E.I.R.P - 2.15dB.$$

3.2.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



Band 12

3.2.4 Test Result of Radiated Emissions below 1GHz

Mode	LTE Band 12, QPSK, CB:1.4 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23173						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
35.82	H	-67.98	-13.00	-54.98	-63.51	-47.70	-18.13
90.14	H	-72.98	-13.00	-59.98	-69.04	-65.92	-4.91
167.74	H	-76.17	-13.00	-63.17	-76.18	-68.91	-5.11
270.56	H	-76.52	-13.00	-63.52	-76.30	-67.70	-6.67
324.88	H	-76.04	-13.00	-63.04	-75.87	-72.77	-1.12
481.05	H	-73.39	-13.00	-60.39	-75.50	-70.01	-1.23
90.14	V	-67.98	-13.00	-54.98	-63.51	-60.92	-4.91
101.78	V	-72.98	-13.00	-59.98	-69.04	-65.72	-5.11
167.74	V	-76.17	-13.00	-63.17	-76.18	-68.33	-5.69
270.56	V	-76.52	-13.00	-63.52	-76.30	-73.11	-1.26
324.88	V	-76.04	-13.00	-63.04	-75.87	-72.71	-1.18
481.05	V	-73.39	-13.00	-60.39	-75.50	-69.96	-1.28

Mode	LTE Band 12, QPSK, CB:3 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23165						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
36.29	H	-70.67	-13.00	-57.67	-75.54	-50.45	-18.07
90.29	H	-69.67	-13.00	-56.67	-65.45	-62.61	-4.91
101.85	H	-74.56	-13.00	-61.56	-70.57	-67.29	-5.12
143.56	H	-78.23	-13.00	-65.23	-75.40	-69.41	-6.67
360.88	H	-75.11	-13.00	-62.11	-75.00	-71.84	-1.12
399.51	H	-75.39	-13.00	-62.39	-75.65	-72.01	-1.23
90.86	V	-67.69	-13.00	-54.69	-63.19	-60.62	-4.92
101.45	V	-72.43	-13.00	-59.43	-68.45	-65.18	-5.10
168.59	V	-75.61	-13.00	-62.61	-75.58	-67.83	-5.63
270.21	V	-76.09	-13.00	-63.09	-75.87	-72.68	-1.26
324.95	V	-75.36	-13.00	-62.36	-75.19	-72.03	-1.18
480.68	V	-73.63	-13.00	-60.63	-75.74	-70.20	-1.28

NOTE: ERP = S.G power value + correction factor - 2.15.

Mode	LTE Band 12, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23155						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
36.50	H	-70.69	-13.00	-57.69	-75.53	-50.51	-18.03
90.45	H	-69.26	-13.00	-56.26	-65.05	-62.20	-4.91
102.53	H	-74.34	-13.00	-61.34	-70.31	-77.34	5.15
143.51	H	-77.41	-13.00	-64.41	-74.58	-68.59	-6.67
360.24	H	-74.10	-13.00	-61.10	-73.98	-70.83	-1.12
399.76	H	-74.01	-13.00	-61.01	-74.27	-70.63	-1.23
90.51	V	-66.43	-13.00	-53.43	-61.94	-59.36	-4.92
102.94	V	-71.50	-13.00	-58.50	-67.68	-64.18	-5.17
168.24	V	-75.03	-13.00	-62.03	-75.01	-67.23	-5.65
270.56	V	-74.60	-13.00	-61.60	-74.38	-71.19	-1.26
324.71	V	-75.13	-13.00	-62.13	-74.96	-71.80	-1.18
480.55	V	-72.60	-13.00	-59.60	-74.70	-69.17	-1.28

Mode	LTE Band 12, QPSK, CB:10 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23130						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
36.94	H	-71.80	-13.00	-58.80	-76.60	-51.66	-17.99
89.54	H	-68.36	-13.00	-55.36	-64.03	-61.19	-5.02
102.36	H	-75.60	-13.00	-62.60	-71.58	-68.31	-5.14
144.28	H	-77.61	-13.00	-64.61	-74.78	-68.80	-6.66
360.96	H	-74.74	-13.00	-61.74	-74.63	-71.47	-1.12
399.84	H	-74.53	-13.00	-61.53	-74.79	-71.15	-1.23
91.26	V	-67.47	-13.00	-54.47	-62.96	-60.40	-4.92
100.54	V	-72.56	-13.00	-59.56	-68.48	-65.36	-5.05
167.28	V	-75.74	-13.00	-62.74	-75.76	-67.87	-5.72
271.64	V	-75.97	-13.00	-62.97	-75.74	-72.56	-1.26
325.15	V	-75.59	-13.00	-62.59	-75.43	-72.26	-1.18
481.82	V	-72.51	-13.00	-59.51	-57.36	-69.08	-1.28

NOTE: ERP = S.G power value + correction factor - 2.15.

3.2.5 Test Result of Radiated Emissions above 1GHz

Mode	LTE Band 12, QPSK, CB:1.4 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23017						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1398.50	H	-47.25	-13.00	-34.25	-51.69	-49.02	3.92
2097.75	H	-37.57	-13.00	-24.57	-44.65	-40.97	5.55
2797.00	H	-51.30	-13.00	-38.30	-60.16	-55.48	6.33
1398.50	V	-52.01	-13.00	-39.01	-56.16	-53.78	3.92
2097.75	V	-40.01	-13.00	-27.01	-47.08	-43.41	5.55
2797.00	V	-53.59	-13.00	-40.59	-62.54	-57.77	6.33

Mode	LTE Band 12, QPSK, CB:1.4 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23095						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1414.10	H	-46.41	-13.00	-33.41	-50.84	-48.30	4.04
2121.15	H	-37.13	-13.00	-24.13	-44.40	-40.36	5.38
2828.20	H	-51.26	-13.00	-38.26	-60.27	-55.46	6.35
1414.10	V	-51.37	-13.00	-38.37	-55.55	-53.26	4.04
2121.15	V	-39.39	-13.00	-26.39	-46.67	-42.62	5.38
2828.20	V	-53.21	-13.00	-40.21	-62.25	-57.41	6.35

Mode	LTE Band 12, QPSK, CB:1.4 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23173						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1429.70	H	-46.77	-13.00	-33.77	-51.18	-48.79	4.17
2144.55	H	-37.03	-13.00	-24.03	-44.47	-40.10	5.22
2859.40	H	-51.17	-13.00	-38.17	-60.34	-55.41	6.39
1429.70	V	-51.46	-13.00	-38.46	-55.65	-53.48	4.17
2144.55	V	-38.69	-13.00	-25.69	-46.18	-41.76	5.22
2859.40	V	-53.23	-13.00	-40.23	-62.36	-57.47	6.39

NOTE: ERP = S.G power value + correction factor - 2.15.

Mode	LTE Band 12, QPSK, CB:3 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23025						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1399.02	H	-47.00	-13.00	-34.00	-51.45	-48.77	3.92
2098.53	H	-37.62	-13.00	-24.62	-44.71	-41.02	5.55
2798.04	H	-51.36	-13.00	-38.36	-60.22	-55.53	6.32
1399.02	V	-51.90	-13.00	-38.90	-56.05	-53.67	3.92
2098.53	V	-39.15	-13.00	-26.15	-46.23	-42.55	5.55
2798.04	V	-53.38	-13.00	-40.38	-62.33	-57.55	6.32

Mode	LTE Band 12, QPSK, CB:3 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23095						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1413.02	H	-46.19	-13.00	-33.19	-50.63	-48.07	4.03
2119.53	H	-36.97	-13.00	-23.97	-44.23	-40.22	5.40
2826.04	H	-51.11	-13.00	-38.11	-60.11	-55.31	6.35
1413.02	V	-51.14	-13.00	-38.14	-55.32	-53.02	4.03
2119.53	V	-39.25	-13.00	-26.25	-46.52	-42.50	5.40
2826.04	V	-53.08	-13.00	-40.08	-62.12	-57.28	6.35

Mode	LTE Band 12, QPSK, CB:3 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23165						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1427.02	H	-46.62	-13.00	-33.62	-51.03	-48.61	4.14
2140.53	H	-36.92	-13.00	-23.92	-44.33	-40.02	5.25
2854.04	H	-51.07	-13.00	-38.07	-60.22	-55.30	6.38
1427.02	V	-51.14	-13.00	-38.14	-55.33	-53.13	4.14
2140.53	V	-38.75	-13.00	-25.75	-46.20	-41.85	5.25
2854.04	V	-53.09	-13.00	-40.09	-62.21	-57.32	6.38

NOTE: ERP = S.G power value + correction factor - 2.15.

Mode	LTE Band 12, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23035						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1398.86	H	-47.07	-13.00	-34.07	-51.51	-48.84	3.92
2098.29	H	-37.43	-13.00	-24.43	-44.52	-40.83	5.55
2797.72	H	-51.18	-13.00	-38.18	-60.04	-55.35	6.32
1398.86	V	-51.90	-13.00	-38.90	-56.05	-53.67	3.92
2098.29	V	-39.80	-13.00	-26.80	-46.88	-43.20	5.55
2797.72	V	-53.68	-13.00	-40.68	-62.63	-57.85	6.32

Mode	LTE Band 12, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23095						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1410.86	H	-46.19	-13.00	-33.19	-50.63	-48.05	4.01
2116.29	H	-37.29	-13.00	-24.29	-44.51	-40.56	5.42
2821.72	H	-51.19	-13.00	-38.19	-60.17	-55.38	6.34
1410.86	V	-51.04	-13.00	-38.04	-55.22	-52.90	4.01
2116.29	V	-39.12	-13.00	-26.12	-46.35	-42.39	5.42
2821.72	V	-53.34	-13.00	-40.34	-62.37	-57.53	6.34

Mode	LTE Band 12, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23155						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1422.86	H	-46.64	-13.00	-33.64	-51.06	-48.60	4.11
2134.29	H	-36.85	-13.00	-23.85	-44.22	-39.99	5.29
2845.72	H	-51.13	-13.00	-38.13	-60.24	-55.35	6.37
1422.86	V	-51.26	-13.00	-38.26	-55.44	-53.22	4.11
2134.29	V	-38.45	-13.00	-25.45	-45.85	-41.59	5.29
2845.72	V	-53.02	-13.00	-40.02	-62.12	-57.24	6.37

NOTE: ERP = S.G power value + correction factor - 2.15.

Mode	LTE Band 12, QPSK, CB:10 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23060						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1399.54	H	-47.61	-13.00	-34.61	-52.06	-49.38	3.92
2099.31	H	-38.01	-13.00	-25.01	-45.11	-41.40	5.54
2799.08	H	-51.59	-13.00	-38.59	-60.46	-55.76	6.32
1399.54	V	-52.34	-13.00	-39.34	-56.50	-54.11	3.92
2099.31	V	-40.39	-13.00	-27.39	-47.47	-43.78	5.54
2799.08	V	-53.77	-13.00	-40.77	-62.73	-57.94	6.32

Mode	LTE Band 12, QPSK, CB:10 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23095						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1406.54	H	-47.10	-13.00	-34.10	-51.54	-48.92	3.97
2109.81	H	-37.77	-13.00	-24.77	-44.95	-41.08	5.46
2813.08	H	-51.79	-13.00	-38.79	-60.73	-55.98	6.34
1406.54	V	-52.10	-13.00	-39.10	-56.27	-53.92	3.97
2109.81	V	-39.80	-13.00	-26.80	-46.98	-43.11	5.46
2813.08	V	-53.31	-13.00	-40.31	-62.31	-57.50	6.34

Mode	LTE Band 12, QPSK, CB:10 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23130						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1413.54	H	-47.41	-13.00	-34.41	-51.85	-49.29	4.03
2120.31	H	-37.61	-13.00	-24.61	-44.87	-40.85	5.39
2827.08	H	-51.70	-13.00	-38.70	-60.71	-55.90	6.35
1413.54	V	-51.99	-13.00	-38.99	-56.17	-53.87	4.03
2120.31	V	-39.00	-13.00	-26.00	-46.28	-42.24	5.39
2827.08	V	-53.41	-13.00	-40.41	-62.45	-57.61	6.35

NOTE: ERP = S.G power value + correction factor - 2.15.

Band 13

3.2.6 Test Result of Radiated Emissions below 1GHz

Mode	LTE Band 13, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23255						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
42.61	H	-62.77	-13.00	-49.77	-62.81	-48.70	-11.92
98.87	H	-62.61	-13.00	-49.61	-53.62	-60.75	0.29
136.70	H	-60.38	-13.00	-47.38	-52.67	-56.99	-1.24
171.62	H	-61.17	-13.00	-48.17	-52.59	-59.89	0.87
223.03	H	-70.34	-13.00	-57.34	-59.42	-72.57	4.38
738.10	H	-62.54	-13.00	-49.54	-63.40	-63.87	3.48
39.70	V	-54.51	-13.00	-41.51	-44.85	-40.02	-12.34
97.90	V	-57.12	-13.00	-44.12	-47.97	-55.28	0.31
147.37	V	-57.41	-13.00	-44.41	-51.96	-54.09	-1.17
155.13	V	-58.76	-13.00	-45.76	-53.65	-55.63	-0.98
268.62	V	-59.30	-13.00	-46.30	-53.93	-61.46	4.31
579.99	V	-63.68	-13.00	-50.68	-64.62	-65.46	3.93

Mode	LTE Band 13, QPSK, CB:10 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23230						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
38.73	H	-63.24	-13.00	-50.24	-63.92	-48.61	-12.48
98.87	H	-62.52	-13.00	-49.52	-53.53	-60.66	0.29
165.80	H	-62.07	-13.00	-49.07	-53.80	-59.92	0.00
178.41	H	-61.99	-13.00	-48.99	-53.04	-61.72	1.88
255.04	H	-73.90	-13.00	-60.90	-64.18	-76.10	4.35
747.80	H	-61.55	-13.00	-48.55	-62.66	-62.81	3.41
44.55	V	-55.34	-13.00	-42.34	-46.08	-41.55	-11.64
93.05	V	-55.32	-13.00	-42.32	-45.96	-53.58	0.41
157.07	V	-57.10	-13.00	-44.10	-52.07	-54.02	-0.93
214.30	V	-60.39	-13.00	-47.39	-54.70	-62.62	4.38
269.59	V	-61.95	-13.00	-48.95	-56.56	-64.10	4.30
589.69	V	-62.34	-13.00	-49.34	-63.42	-64.05	3.86

NOTE: ERP = S.G power value + correction factor - 2.15.

3.2.7 Test Result of Radiated Emissions above 1GHz

Mode	LTE Band 13, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23205						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
2332.29	H	-38.01	-13.00	-25.01	-45.54	-41.47	5.61
3109.72	H	-51.83	-13.00	-38.83	-62.11	-56.20	6.52
3887.15	H	-53.77	-13.00	-40.77	-66.74	-58.57	6.95
2332.29	V	-40.31	-13.00	-27.31	-48.17	-43.77	5.61
3109.72	V	-53.80	-13.00	-40.80	-63.90	-58.17	6.52
3887.15	V	-54.09	-13.00	-41.09	-67.04	-58.89	6.95

Mode	LTE Band 13, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23230						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
2339.79	H	-37.35	-13.00	-24.35	-44.87	-40.86	5.66
3119.72	H	-51.58	-13.00	-38.58	-61.89	-55.95	6.52
3899.65	H	-53.66	-13.00	-40.66	-38.51	-58.46	6.95
2339.79	V	-39.74	-13.00	-26.74	-47.60	-43.25	5.66
3119.72	V	-53.49	-13.00	-40.49	-63.63	-57.86	6.52
3899.65	V	-53.74	-13.00	-40.74	-66.63	-58.54	6.95

Mode	LTE Band 13, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23255						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
2347.29	H	-37.19	-13.00	-24.19	-44.69	-40.74	5.70
3129.72	H	-51.43	-13.00	-38.43	-61.78	-55.80	6.52
3912.15	H	-53.59	-13.00	-40.59	-66.38	-58.38	6.94
2347.29	V	-39.13	-13.00	-26.13	-46.98	-42.68	5.70
3129.72	V	-53.31	-13.00	-40.31	-63.51	-57.68	6.52
3912.15	V	-53.57	-13.00	-40.57	-66.38	-58.36	6.94

NOTE: ERP = S.G power value + correction factor - 2.15.

Mode	LTE Band 13, QPSK, CB:10 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23230						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
2333.31	H	-37.99	-13.00	-24.99	-45.52	-41.46	5.62
3111.08	H	-51.80	-13.00	-38.80	-62.08	-56.17	6.52
3888.85	H	-51.80	-13.00	-38.80	-66.79	-56.60	6.95
2333.31	V	-40.21	-13.00	-27.21	-48.07	-43.68	5.62
3111.08	V	-53.81	-13.00	-40.81	-63.91	-58.18	6.52
3888.85	V	-53.77	-13.00	-40.77	-66.71	-58.57	6.95

NOTE: ERP = S.G power value + correction factor - 2.15.

3.2.8 Test Result of Radiated Emissions in the 1559-1610MHz band

Mode	LTE Band 13, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23205						
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)
1563.24	H	-47.43	-40.00	-7.43	-53.63	-52.70	5.27
1563.24	V	-49.58	-40.00	-9.58	-55.88	-54.85	5.27

Mode	LTE Band 13, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23230						
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)
1559.86	H	-44.99	-40.00	-4.99	-51.20	-50.23	5.24
1559.86	V	-49.79	-40.00	-9.79	-47.60	-55.03	5.24

Mode	LTE Band 13, QPSK, CB:5 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23255						
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)
1564.86	H	-44.85	-40.00	-4.85	-51.04	-50.13	5.28
1564.86	V	-49.54	-40.00	-9.54	-55.84	-54.82	5.28

Mode	LTE Band 13, QPSK, CB:10 MHz, RB Size: 1 RB start: 0 index: 0 ,Channel: 23230						
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)
1555.54	H	-46.27	-40.00	-6.27	-52.50	-51.54	5.27
1555.54	V	-50.14	-40.00	-10.14	-56.45	-55.41	5.27

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

3.3 Conducted Emissions & Band Edge

3.3.1 Limit of Conducted Emissions & Band Edge

LTE band 12

The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB.

LTE band 13

- 1) The power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB equal to -13dBm.
- 2) On all frequencies between 763 ~ 775 MHz and 793 ~ 805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

3.3.2 Test Procedures

Out of band emission

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz ~ 10 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.

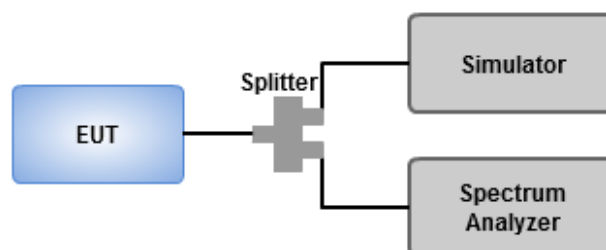
Band edge

1. Lowest and highest operating channels are tested for this item.
2. Set RBW = 1% of EBW, VBW = 3 x RBW, detector = RMS, sweep time = auto.
3. Record the max trace value and capture the test plot of each sub frequency band.

763 ~ 775 MHz / 793 ~ 806 MHz

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 763 MHz ~ 805 MHz.
3. Set RBW = 10 kHz, VBW = 30 kHz, detector = RMS, sweep time = auto.

3.3.3 Test Setup



Band 12

3.3.4 Test Result of Conducted Emissions & Band Edge

Out of band emission

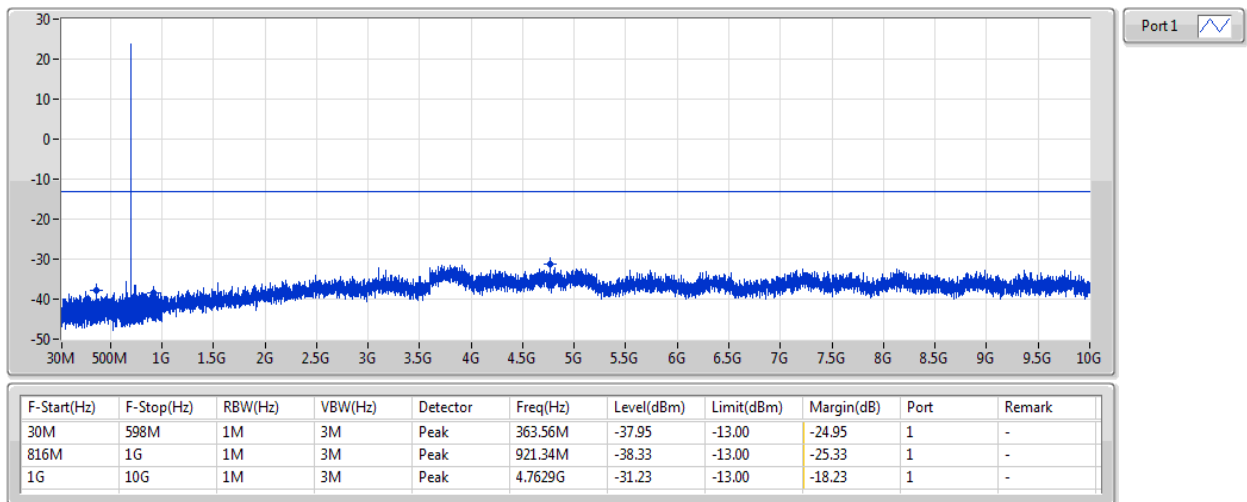
Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Port	Remark	Ref.Limit (dB)
Band 12	-	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_1.4MHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	3.79G	-29.88	-13.00	-16.88	1	-	-
LTE-M1_1.4MHz_Nss1,16QAM_1TX	Pass	1G	10G	1M	3M	Peak	3.7495G	-30.41	-13.00	-17.41	1	-	-
LTE-M1_3MHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	3.7792G	-29.97	-13.00	-16.97	1	-	-
LTE-M1_3MHz_Nss1,16QAM_1TX	Pass	1G	10G	1M	3M	Peak	3.7135G	-30.62	-13.00	-17.62	1	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	3.7306G	-29.86	-13.00	-16.86	1	-	-
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	1G	10G	1M	3M	Peak	3.8692G	-30.59	-13.00	-17.59	1	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	3.7693G	-29.57	-13.00	-16.57	1	-	-
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	1G	10G	1M	3M	Peak	3.8377G	-30.73	-13.00	-17.73	1	-	-

Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

CSE-TX-Port

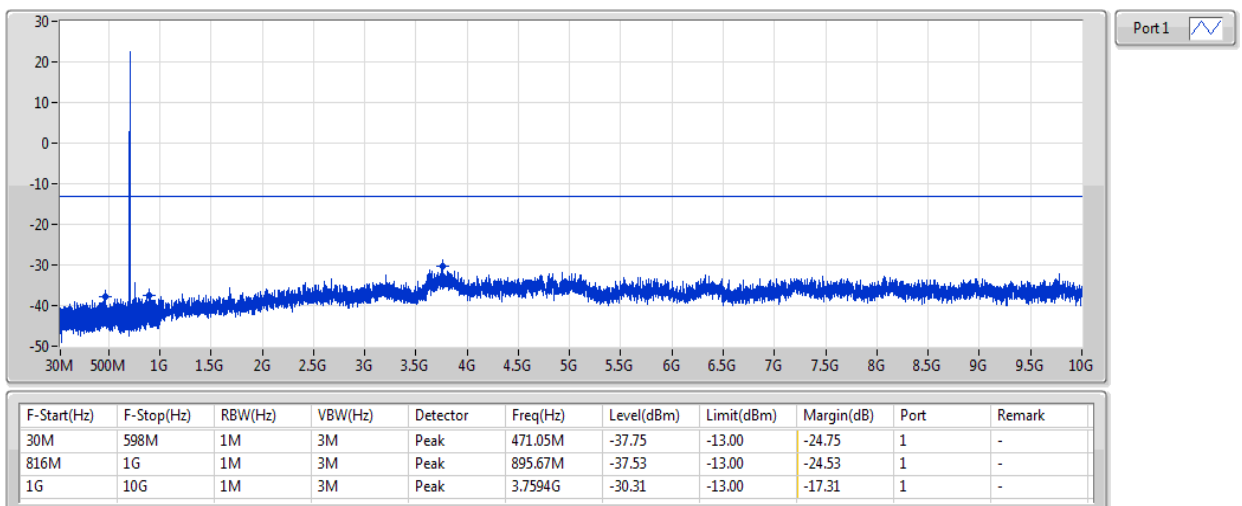
699.7MHz



Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

CSE-TX-Port

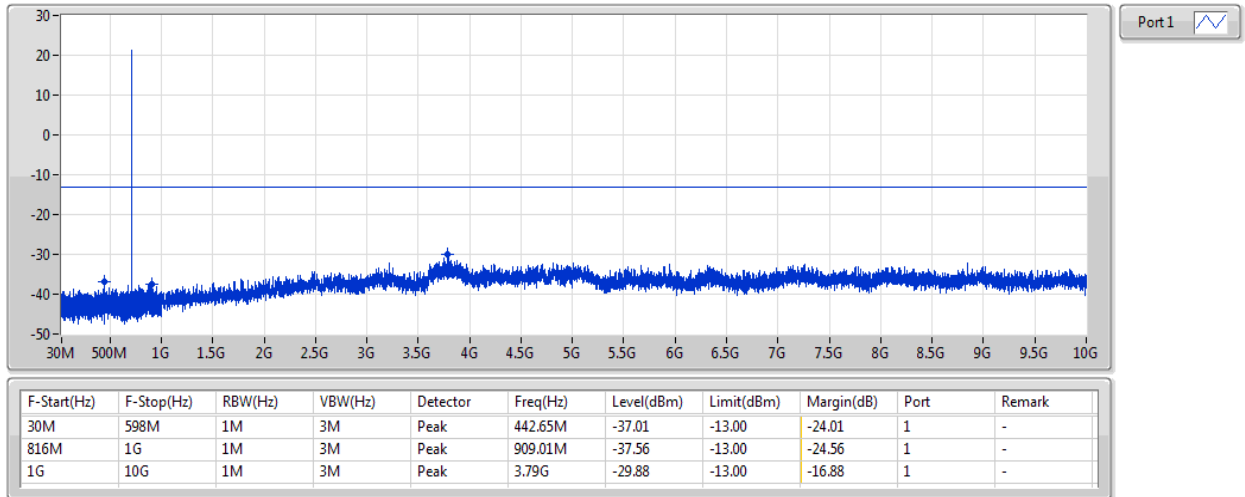
707.5MHz



Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

CSE-TX-Port

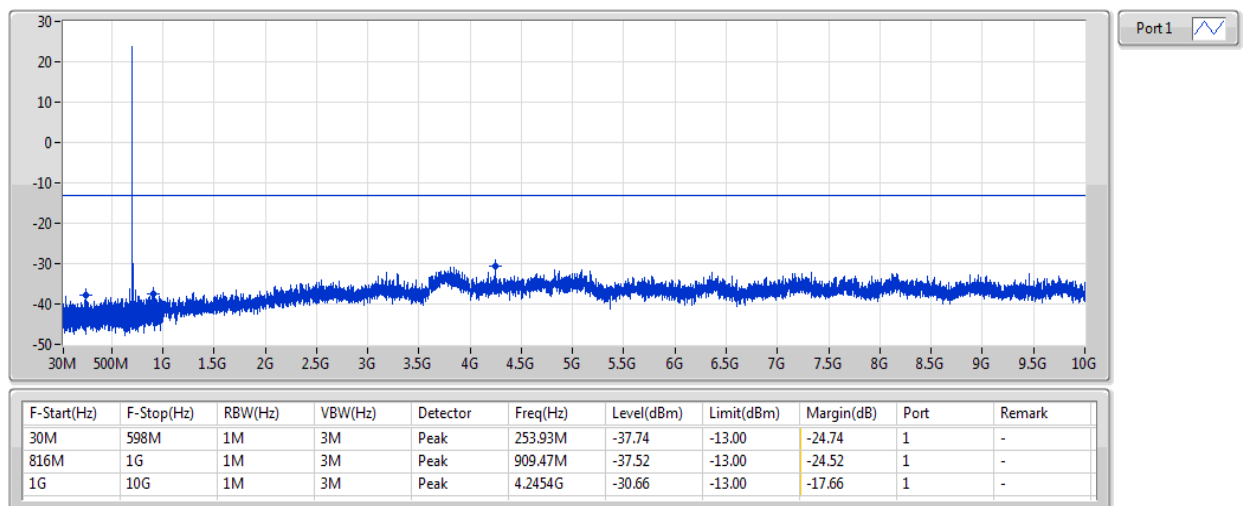
715.3MHz



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

CSE-TX-Port

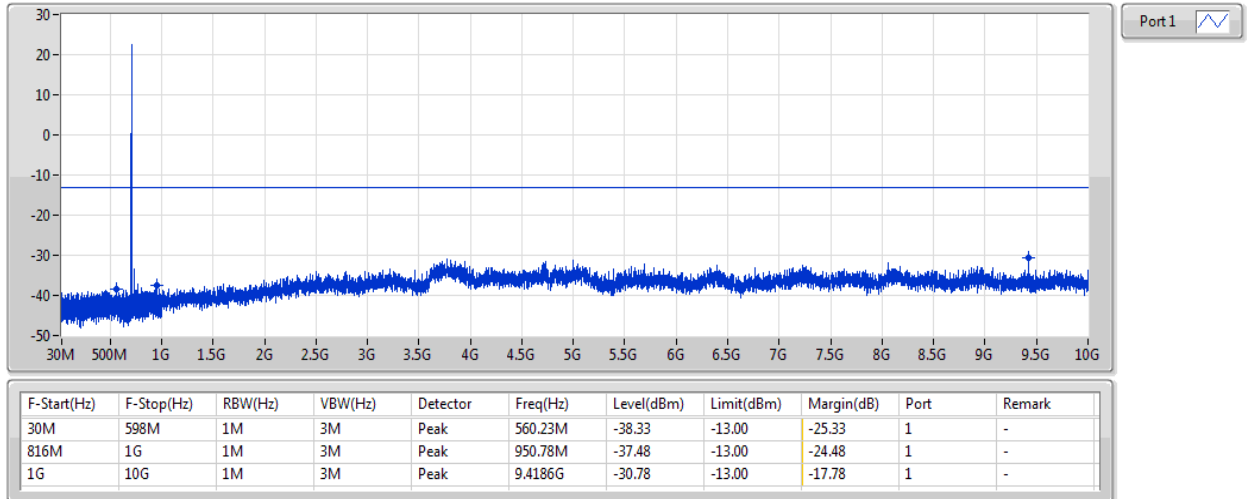
699.7MHz



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

CSE-TX-Port

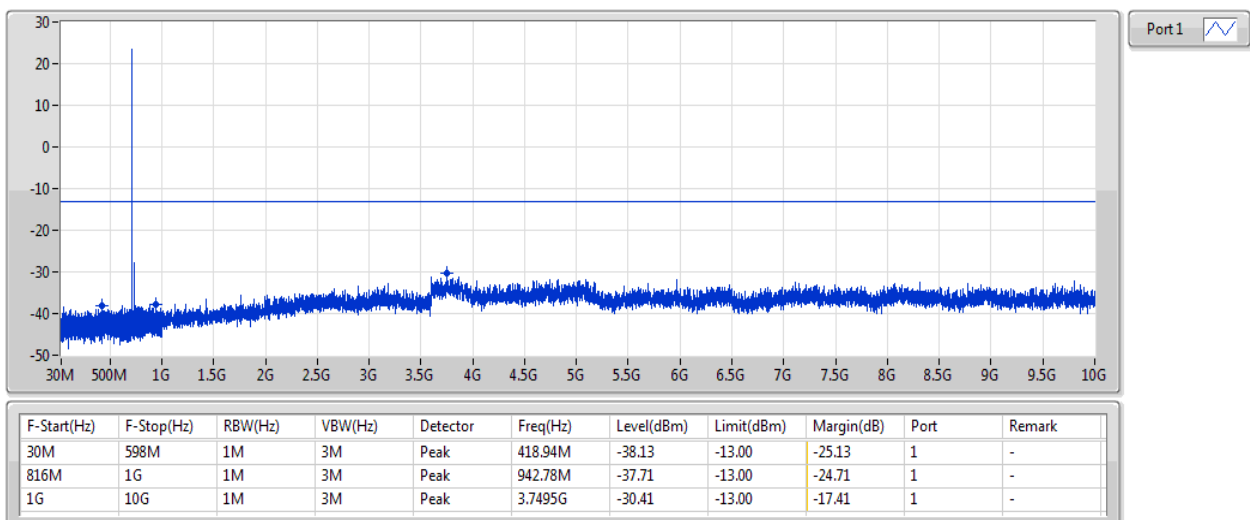
707.5MHz



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

CSE-TX-Port

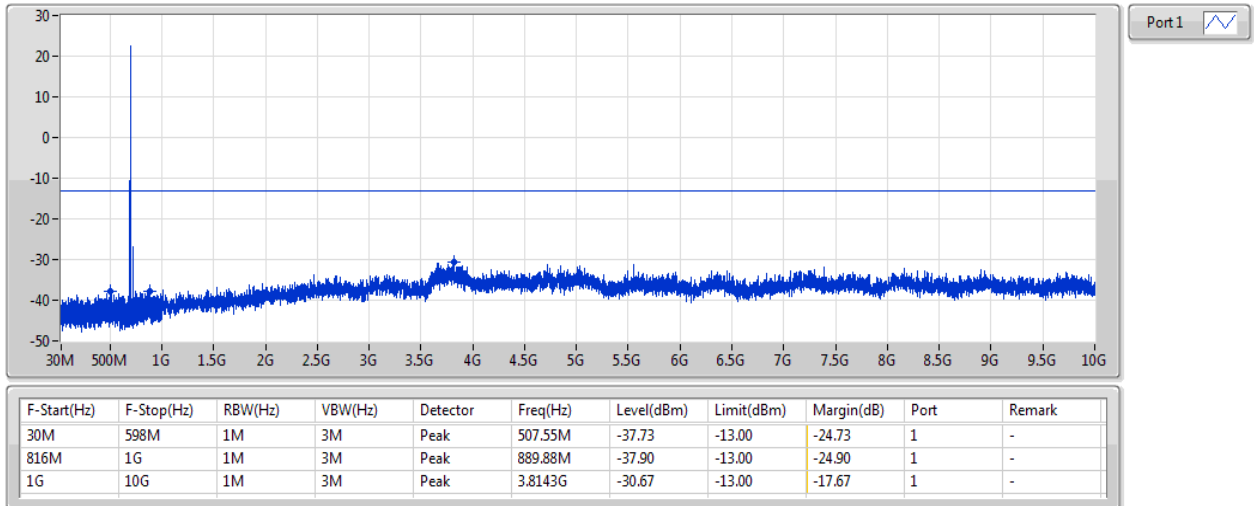
715.3MHz



Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

CSE-TX-Port

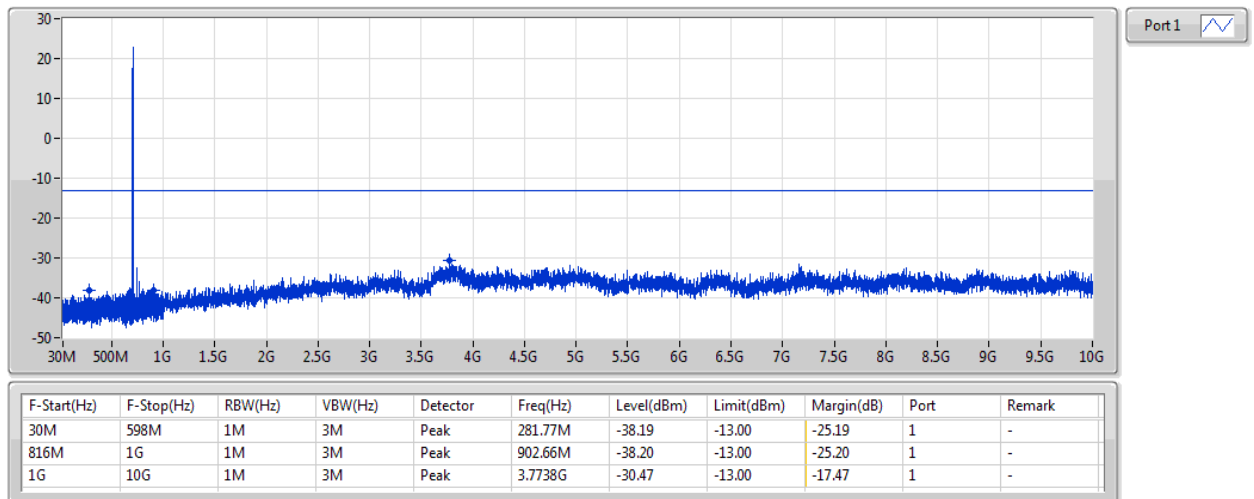
700.5MHz



Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

CSE-TX-Port

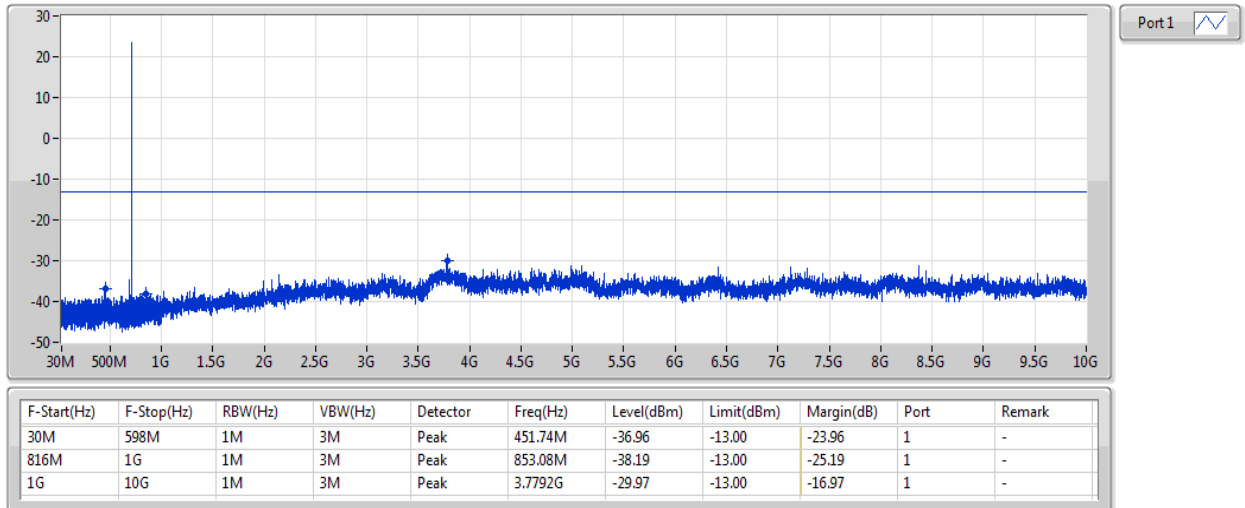
707.5MHz



Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

CSE-TX-Port

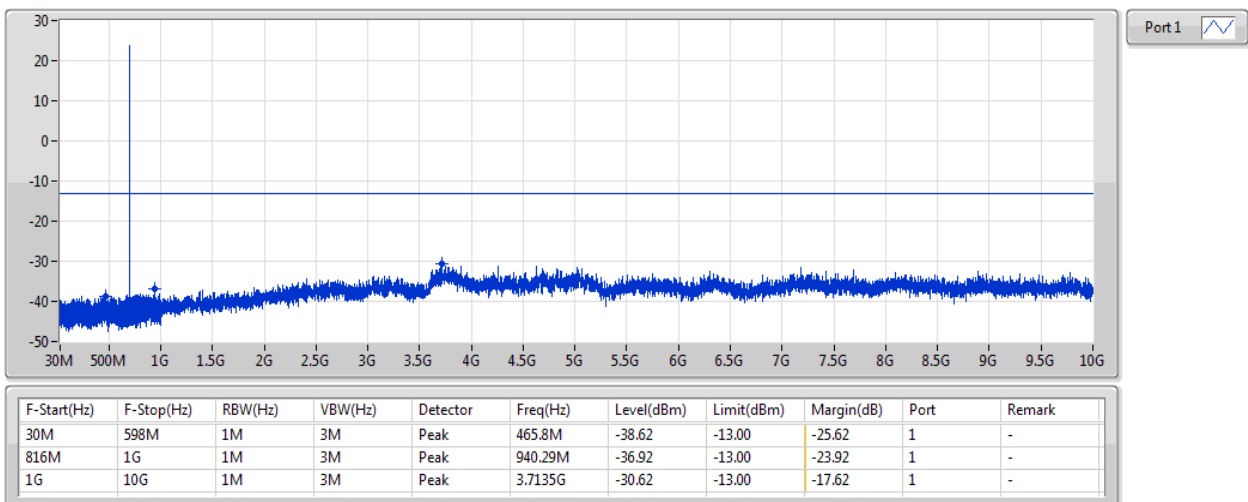
714.5MHz



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

CSE-TX-Port

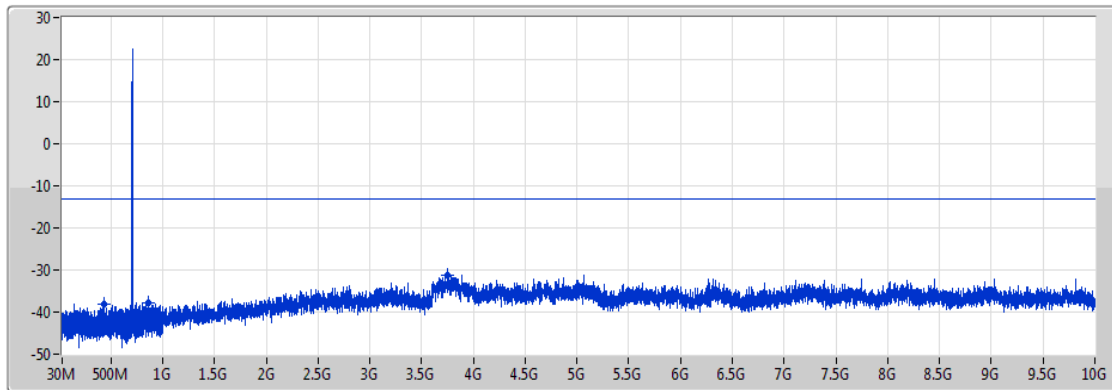
700.5MHz



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

CSE-TX-Port

707.5MHz

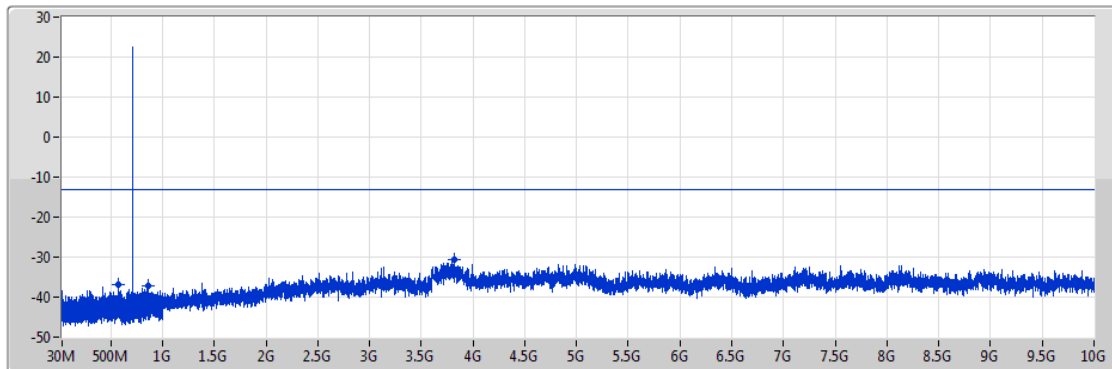


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
30M	598M	1M	3M	Peak	436.69M	-38.26	-13.00	-25.26	1	-
816M	1G	1M	3M	Peak	860.34M	-37.81	-13.00	-24.81	1	-
1G	10G	1M	3M	Peak	3.7504G	-31.22	-13.00	-18.22	1	-

Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

CSE-TX-Port

714.5MHz

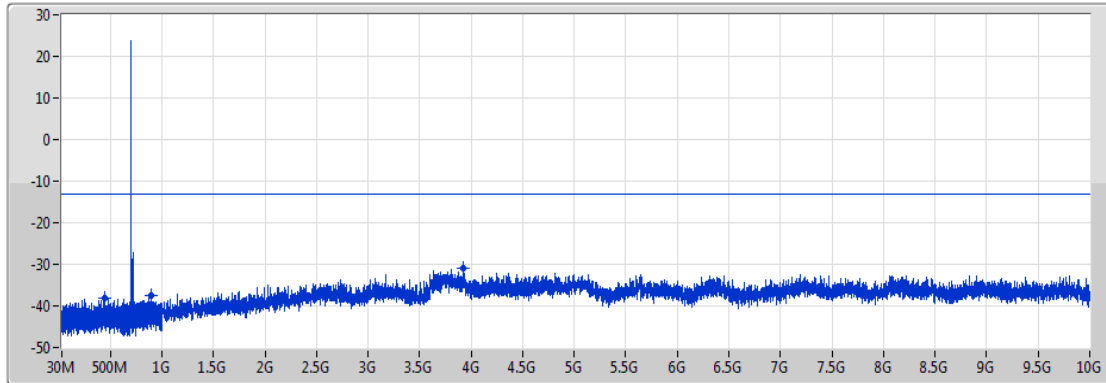


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
30M	598M	1M	3M	Peak	567.61M	-36.78	-13.00	-23.78	1	-
816M	1G	1M	3M	Peak	859.88M	-37.05	-13.00	-24.05	1	-
1G	10G	1M	3M	Peak	3.817G	-30.75	-13.00	-17.75	1	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

701.5MHz

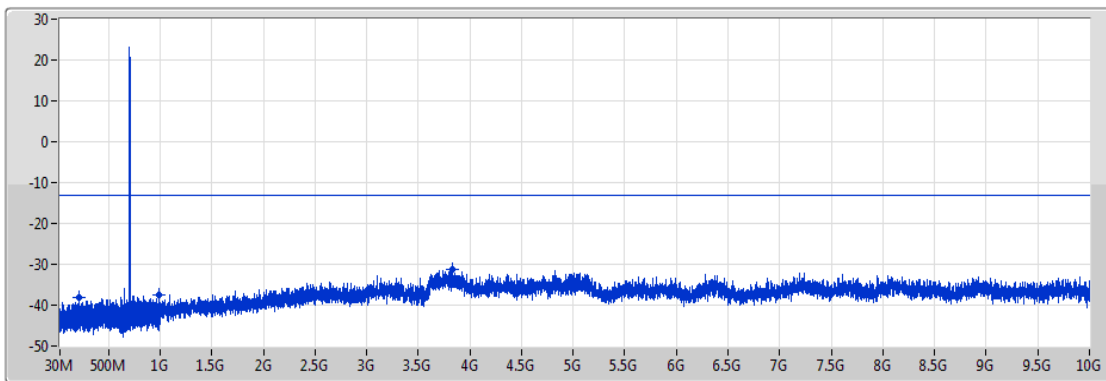


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
30M	598M	1M	3M	Peak	447.34M	-38.11	-13.00	-25.11	1	-
816M	1G	1M	3M	Peak	890.8M	-37.56	-13.00	-24.56	1	-
1G	10G	1M	3M	Peak	3.9205G	-31.08	-13.00	-18.08	1	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

707.5MHz

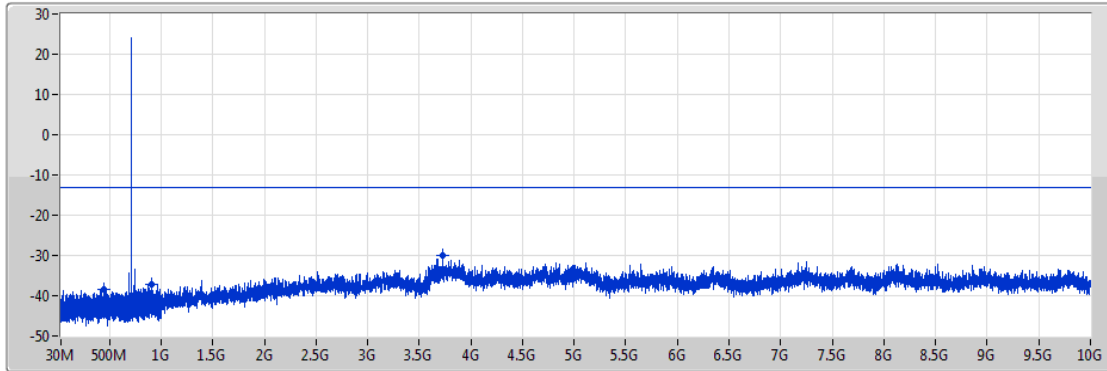


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
30M	598M	1M	3M	Peak	217.58M	-38.12	-13.00	-25.12	1	-
816M	1G	1M	3M	Peak	992.46M	-37.53	-13.00	-24.53	1	-
1G	10G	1M	3M	Peak	3.8341G	-31.19	-13.00	-18.19	1	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

713.5MHz

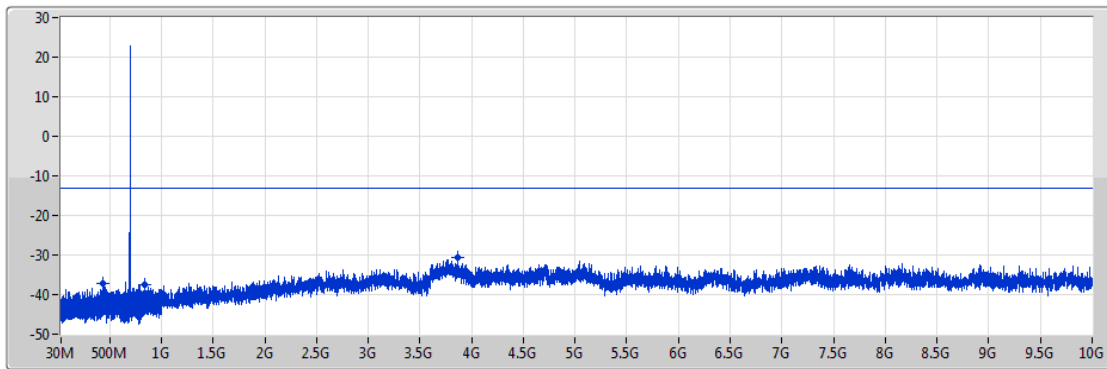


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
30M	598M	1M	3M	Peak	445.21M	-38.55	-13.00	-25.55	1	-
816M	1G	1M	3M	Peak	913.34M	-37.16	-13.00	-24.16	1	-
1G	10G	1M	3M	Peak	3.7306G	-29.86	-13.00	-16.86	1	-

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

701.5MHz

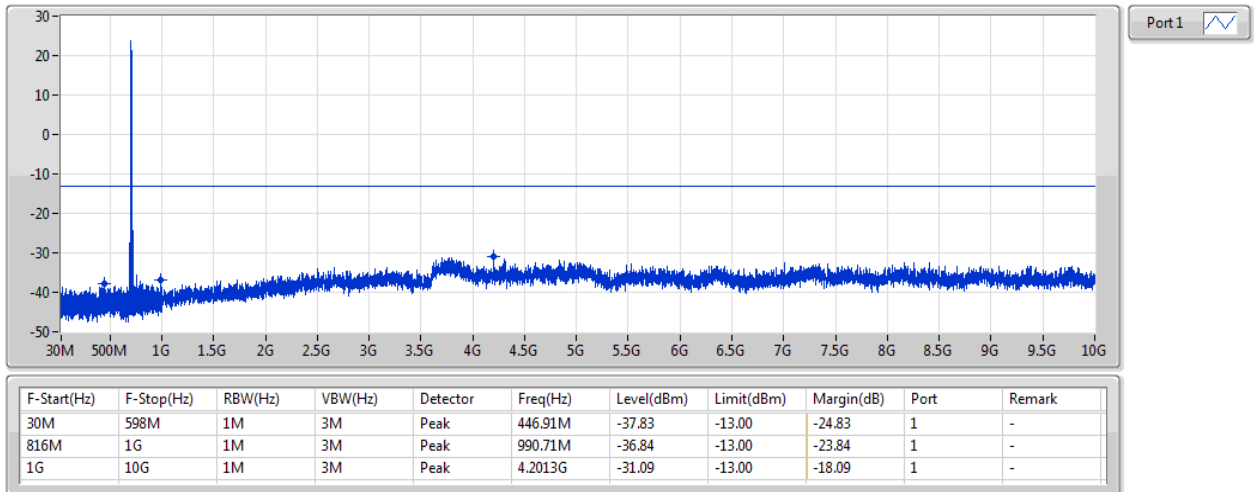


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
30M	598M	1M	3M	Peak	429.02M	-37.08	-13.00	-24.08	1	-
816M	1G	1M	3M	Peak	834.12M	-37.42	-13.00	-24.42	1	-
1G	10G	1M	3M	Peak	3.8692G	-30.59	-13.00	-17.59	1	-

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

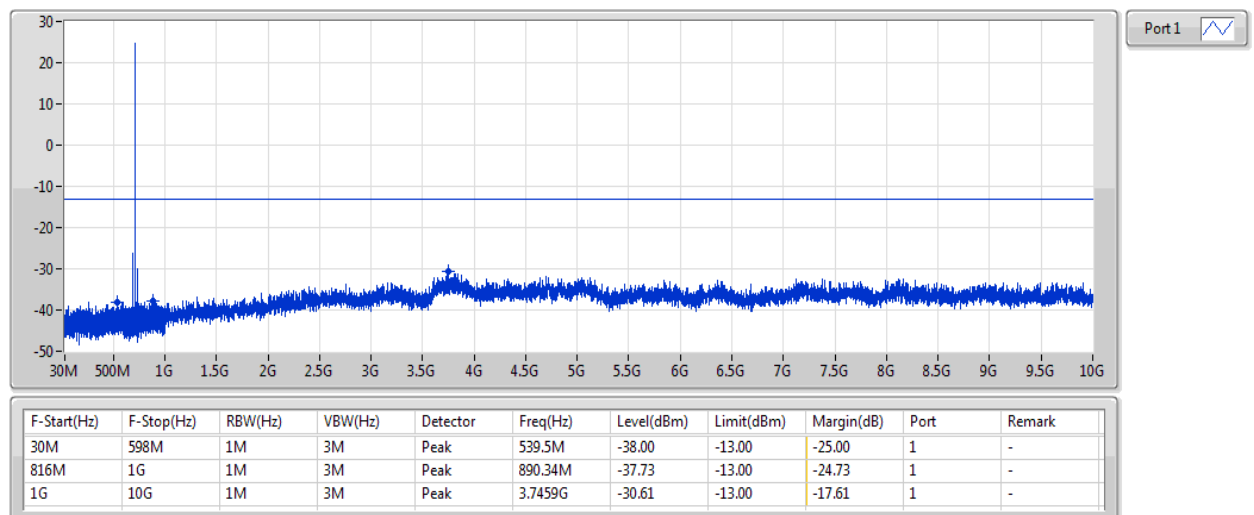
707.5MHz



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

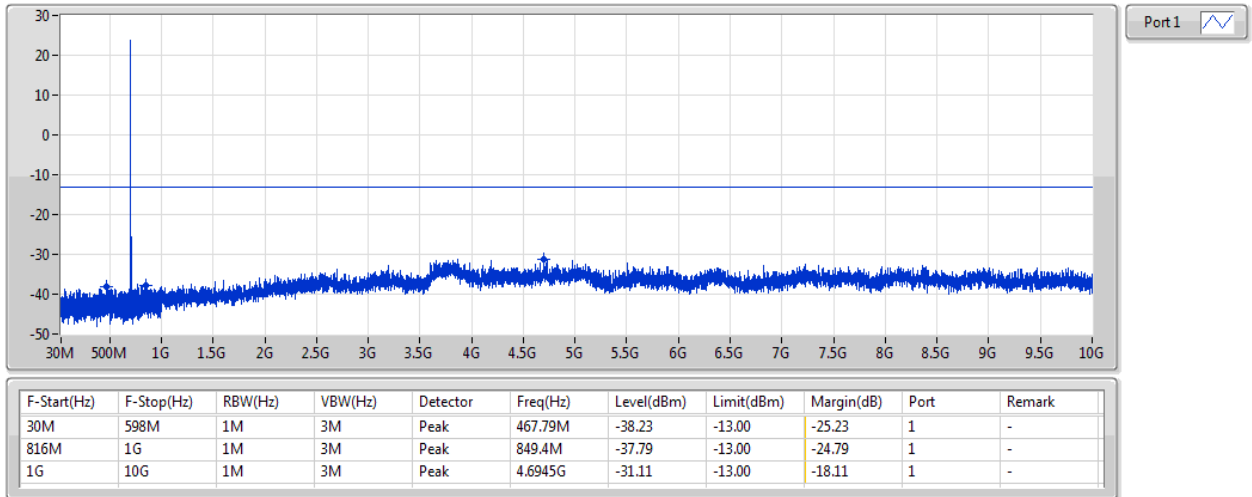
713.5MHz



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

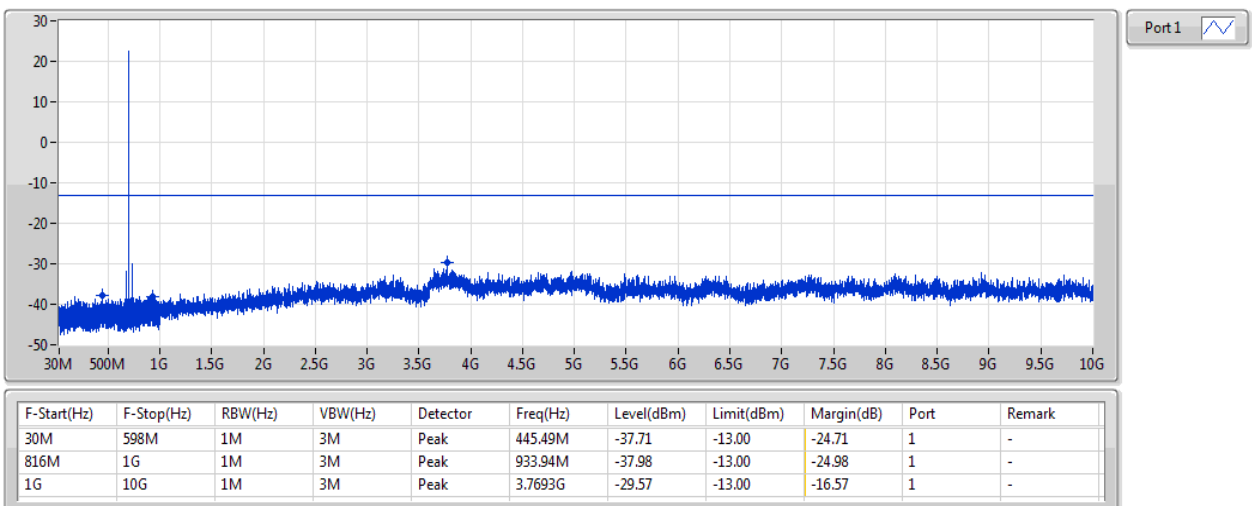
704MHz



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

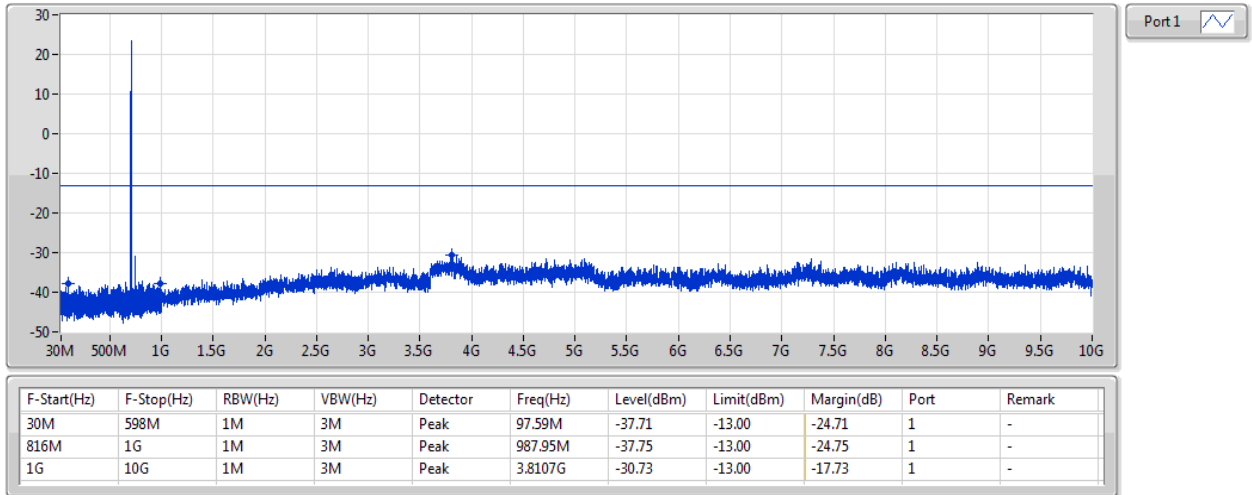
707.5MHz



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

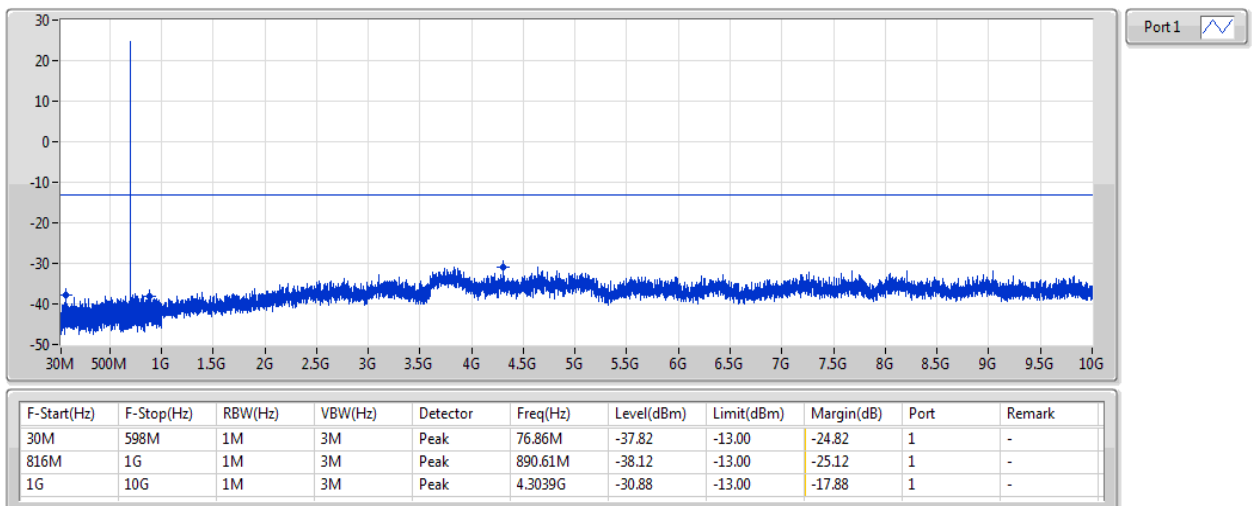
711MHz



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

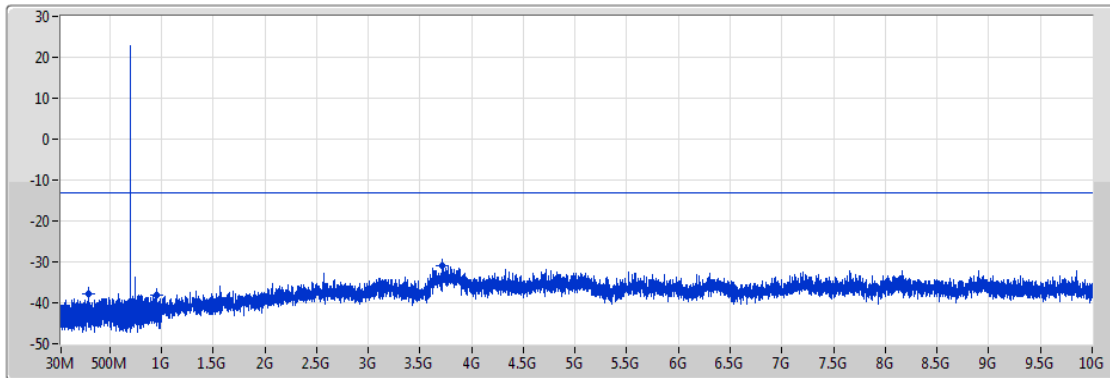
704MHz



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

707.5MHz

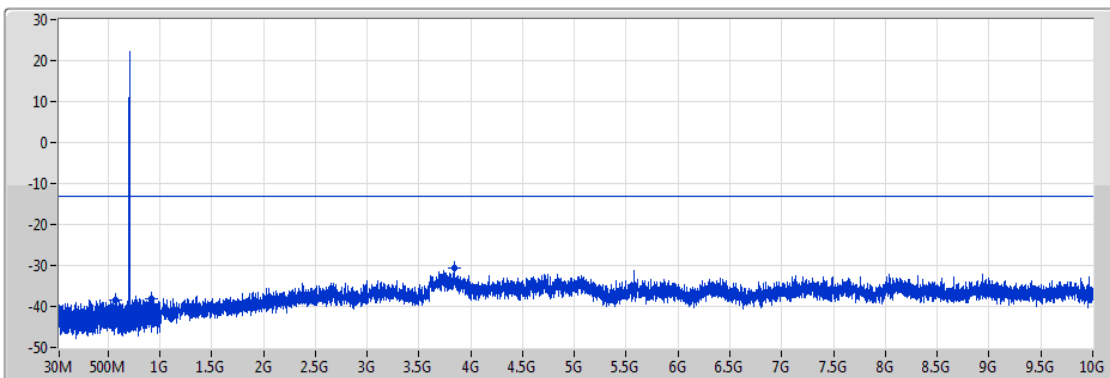


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
30M	598M	1M	3M	Peak	290.29M	-37.82	-13.00	-24.82	1	-
816M	1G	1M	3M	Peak	949.95M	-37.99	-13.00	-24.99	1	-
1G	10G	1M	3M	Peak	3.7108G	-30.87	-13.00	-17.87	1	-

Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

711MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
30M	598M	1M	3M	Peak	575.85M	-38.38	-13.00	-25.38	1	-
816M	1G	1M	3M	Peak	920.24M	-38.19	-13.00	-25.19	1	-
1G	10G	1M	3M	Peak	3.8377G	-30.73	-13.00	-17.73	1	-

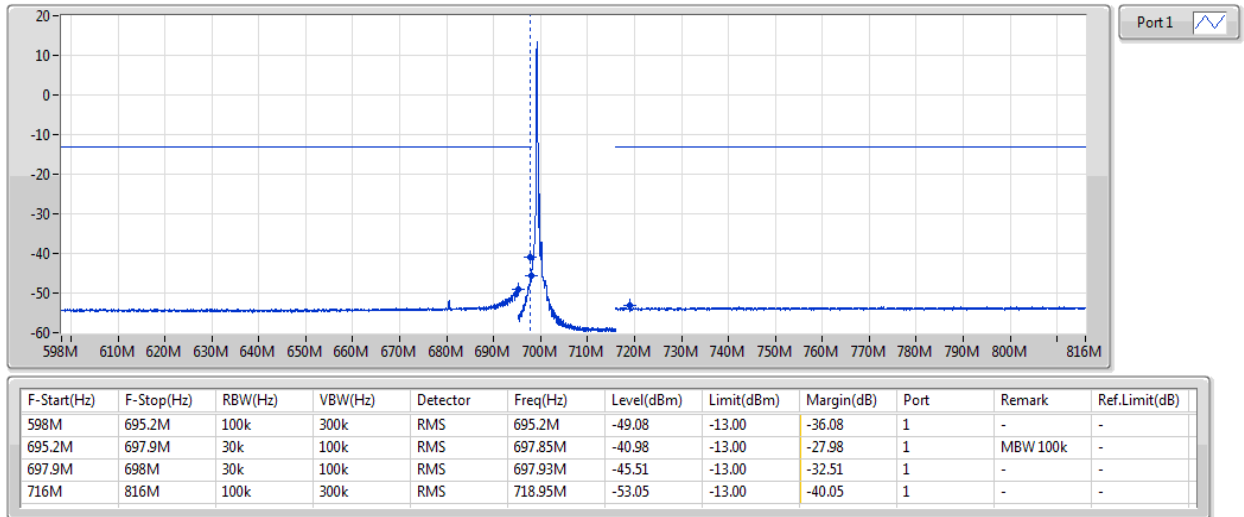
Band edge Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Port	Remark	Ref.Limit (dB)
Band 12	-	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_1.4MHz_Nss1,QPSK_1TX	Pass	716M	716.1M	30k	100k	RMS	716M	-23.49	-13.00	-10.49	1	-	-
LTE-M1_1.4MHz_Nss1,16QAM_1TX	Pass	716M	716.1M	30k	100k	RMS	716M	-24.24	-13.00	-11.24	1	-	-
LTE-M1_3MHz_Nss1,QPSK_1TX	Pass	716.1M	722M	30k	100k	RMS	716.15M	-32.64	-13.00	-19.64	1	MBW 100k	-
LTE-M1_3MHz_Nss1,16QAM_1TX	Pass	716.1M	722M	30k	100k	RMS	716.15M	-32.88	-13.00	-19.88	1	MBW 100k	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	716.1M	726M	30k	100k	RMS	716.15M	-28.03	-13.00	-15.03	1	MBW 100k	-
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	716.1M	726M	30k	100k	RMS	716.15M	-28.18	-13.00	-15.18	1	MBW 100k	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	716.1M	736M	30k	100k	RMS	716.15M	-32.96	-13.00	-19.96	1	MBW 100k	-
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	716.1M	736M	30k	100k	RMS	716.15M	-34.06	-13.00	-21.06	1	MBW 100k	-

Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

CSE-TX-Port

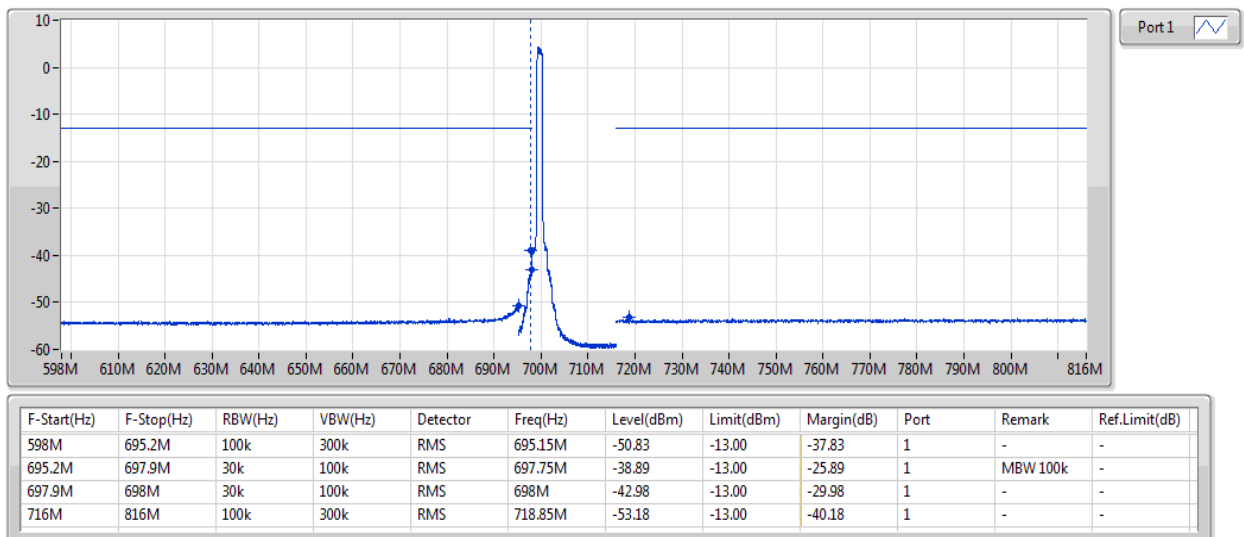
699.7MHz_QPSK_RB 1,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

CSE-TX-Port

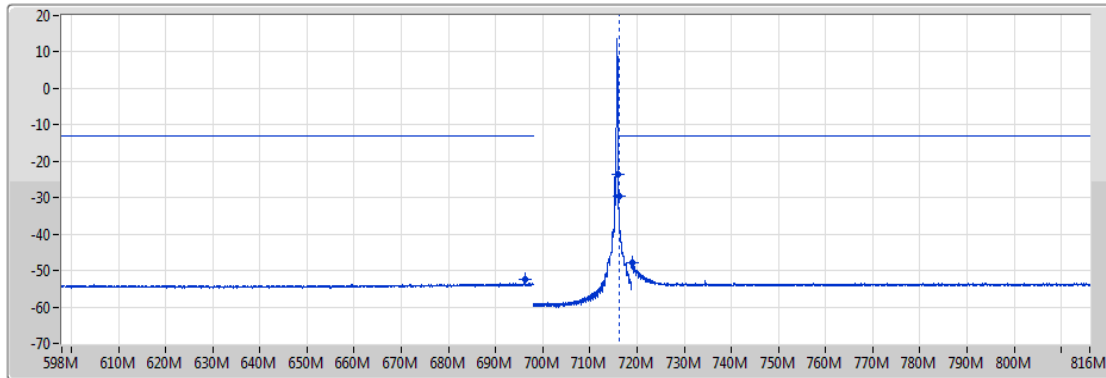
699.7MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

CSE-TX-Port

715.3MHz_QPSK_RB 1,#RB 5,NB 0

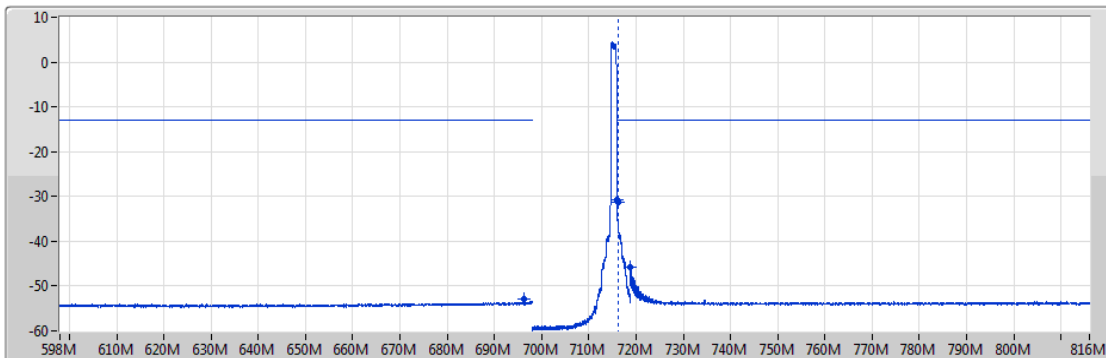


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
598M	698M	100k	300k	RMS	696.15M	-52.51	-13.00	-39.51	1	-
716M	716.1M	30k	100k	RMS	716M	-23.49	-13.00	-10.49	1	-
716.1M	718.8M	30k	100k	RMS	716.15M	-29.70	-13.00	-16.70	1	MBW 100k
718.8M	816M	100k	300k	RMS	719.04M	-47.78	-13.00	-34.78	1	-

Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

CSE-TX-Port

715.3MHz_QPSK_RB 6,#RB 0,NB 0

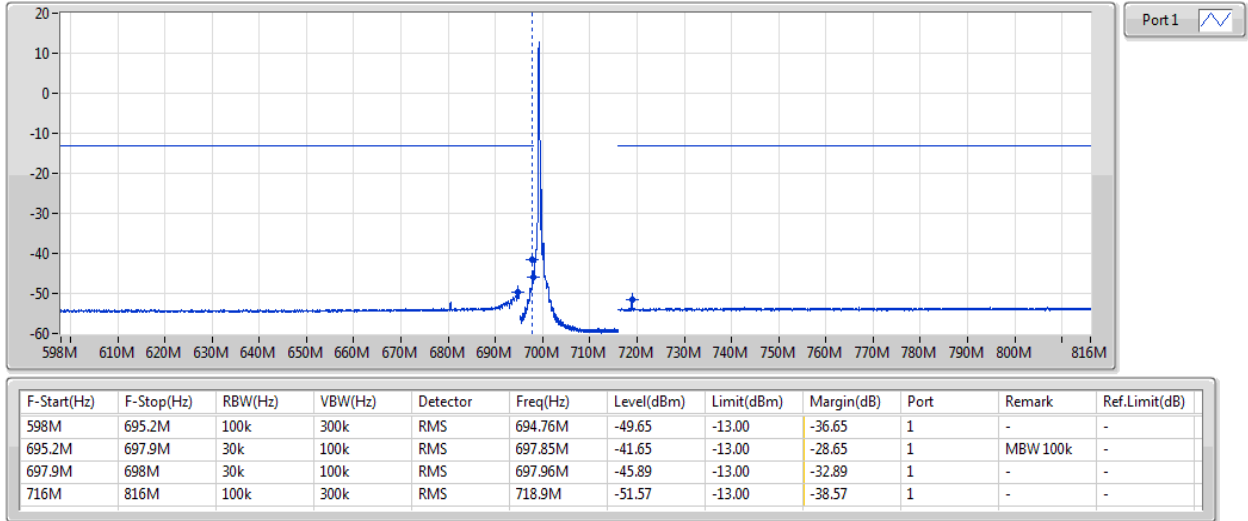


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
598M	698M	100k	300k	RMS	696.15M	-52.93	-13.00	-39.93	1	-
716M	716.1M	30k	100k	RMS	716M	-30.69	-13.00	-17.69	1	-
716.1M	718.8M	30k	100k	RMS	716.15M	-31.33	-13.00	-18.33	1	MBW 100k
718.8M	816M	100k	300k	RMS	718.8M	-45.90	-13.00	-32.90	1	-

Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

CSE-TX-Port

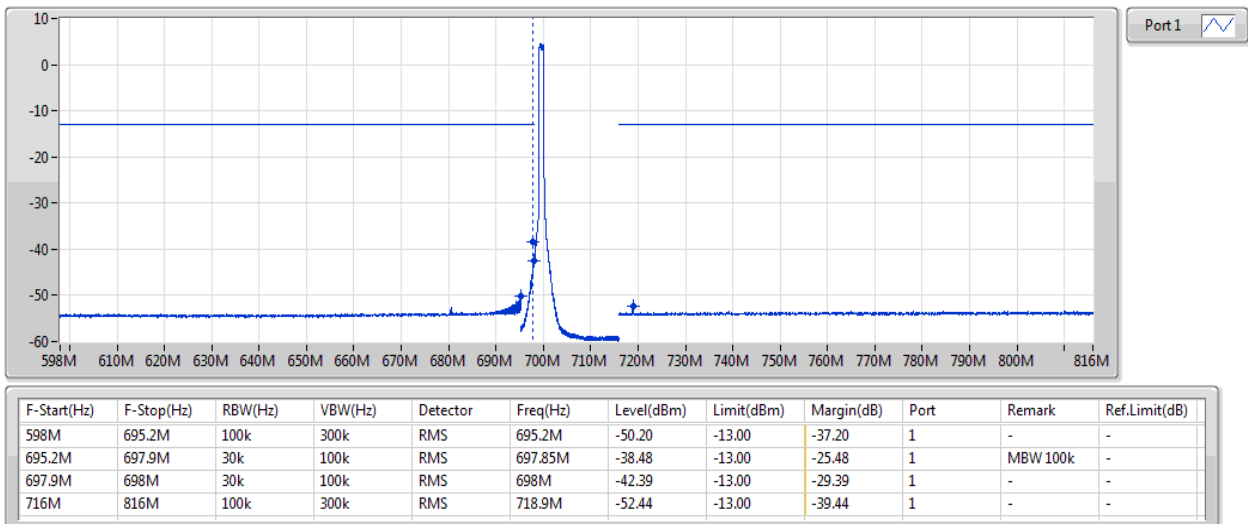
699.7MHz_16QAM_RB 1,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

CSE-TX-Port

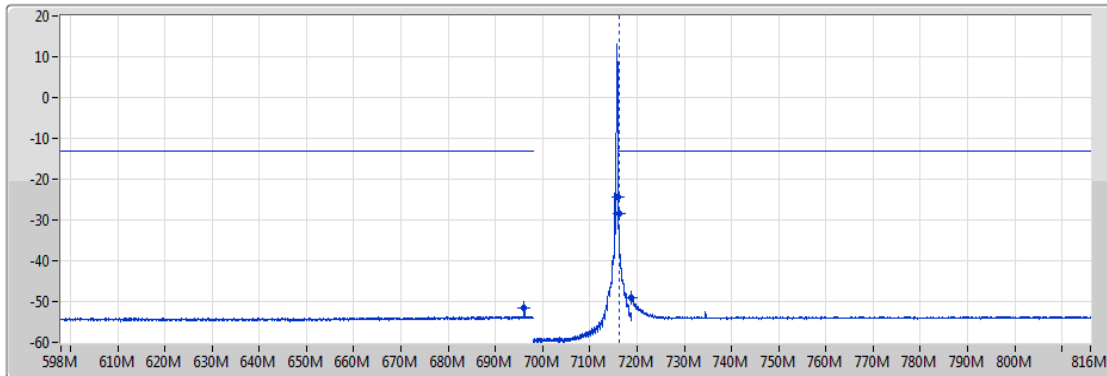
699.7MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

CSE-TX-Port

715.3MHz_16QAM_RB 1,#RB 5,NB 0

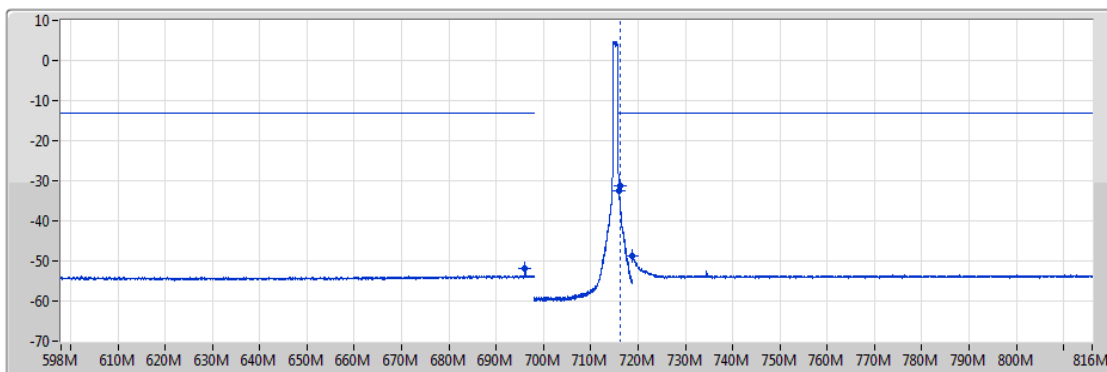


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
598M	698M	100k	300k	RMS	696.1M	-51.69	-13.00	-38.69	1	-
716M	716.1M	30k	100k	RMS	716M	-24.24	-13.00	-11.24	1	-
716.1M	718.8M	30k	100k	RMS	716.15M	-28.53	-13.00	-15.53	1	MBW 100k
718.8M	816M	100k	300k	RMS	718.8M	-49.20	-13.00	-36.20	1	-

Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

CSE-TX-Port

715.3MHz_16QAM_RB 5,#RB 0,NB 0

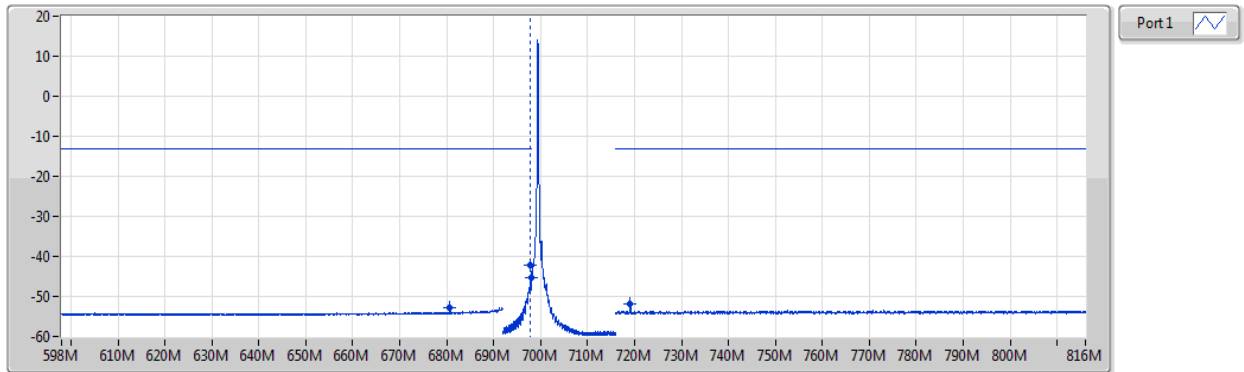


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
598M	698M	100k	300k	RMS	696.1M	-52.02	-13.00	-39.02	1	-
716M	716.1M	30k	100k	RMS	716M	-32.58	-13.00	-19.58	1	-
716.1M	718.8M	30k	100k	RMS	716.15M	-31.13	-13.00	-18.13	1	MBW 100k
718.8M	816M	100k	300k	RMS	718.8M	-48.64	-13.00	-35.64	1	-

Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

CSE-TX-Port

700.5MHz_QPSK_RB 1,#RB 0,NB 0

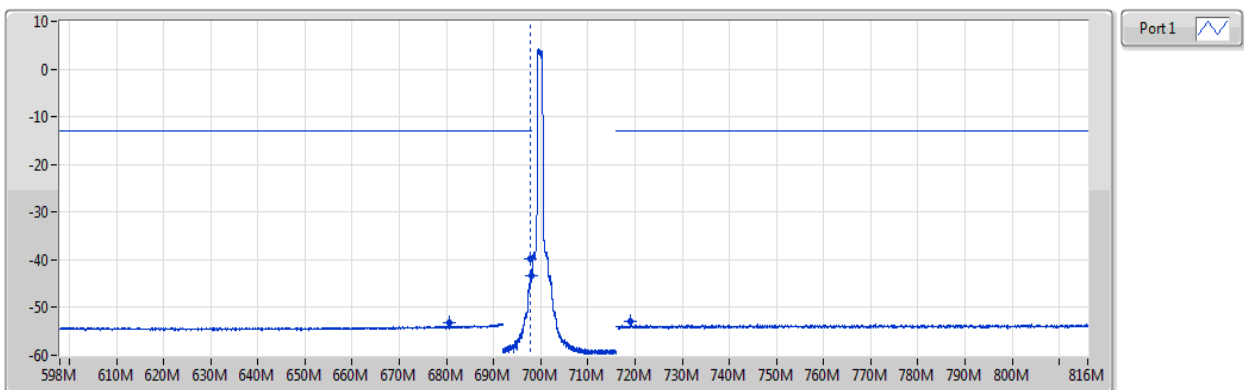


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
598M	692M	100k	300k	RMS	680.67M	-52.80	-13.00	-39.80	1	-	-
692M	697.9M	30k	100k	RMS	697.85M	-42.19	-13.00	-29.19	1	MBW 100k	-
697.9M	698M	30k	100k	RMS	698M	-45.31	-13.00	-32.31	1	-	-
716M	816M	100k	300k	RMS	719.05M	-51.89	-13.00	-38.89	1	-	-

Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

CSE-TX-Port

700.5MHz_QPSK_RB 6,#RB 0,NB 0

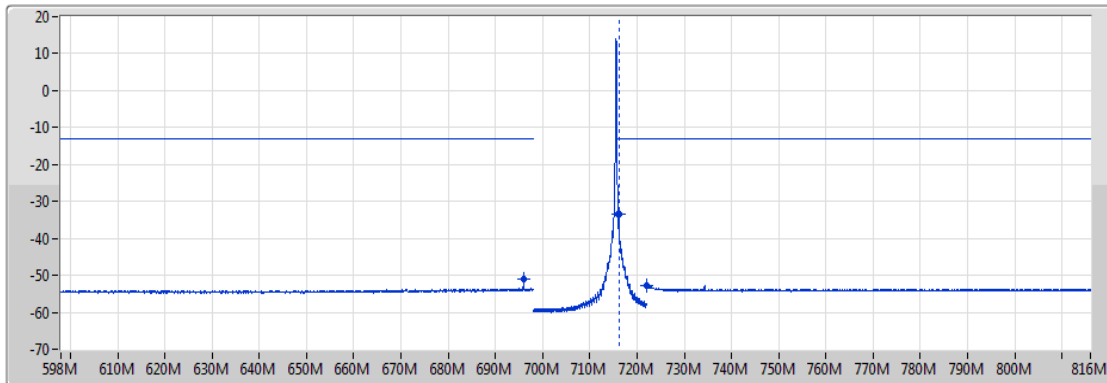


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
598M	692M	100k	300k	RMS	680.67M	-53.25	-13.00	-40.25	1	-	-
692M	697.9M	30k	100k	RMS	697.85M	-39.73	-13.00	-26.73	1	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.97M	-43.43	-13.00	-30.43	1	-	-
716M	816M	100k	300k	RMS	719.05M	-52.86	-13.00	-39.86	1	-	-

Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

CSE-TX-Port

714.5MHz_QPSK_RB 1,#RB 5,NB 1

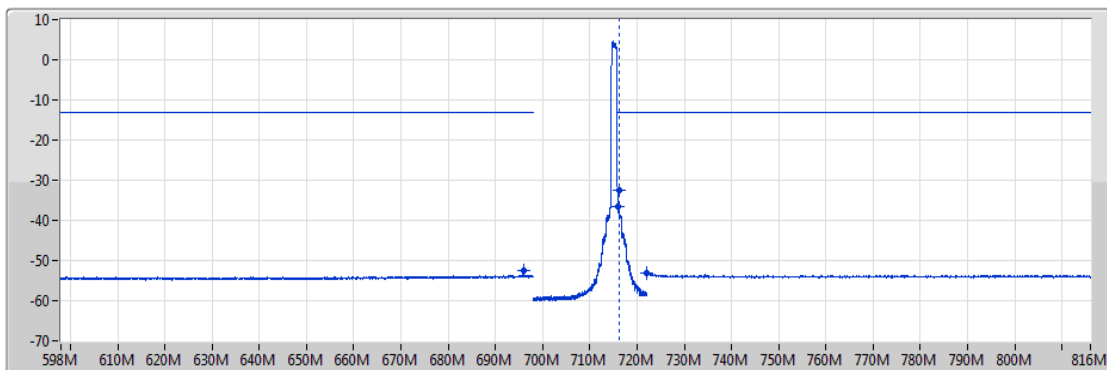


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
598M	698M	100k	300k	RMS	695.95M	-51.10	-13.00	-38.10	1	-
716M	716.1M	30k	100k	RMS	716.01M	-33.34	-13.00	-20.34	1	-
716.1M	722M	30k	100k	RMS	716.15M	-33.34	-13.00	-20.34	1	MBW 100k
722M	816M	100k	300k	RMS	722.05M	-52.74	-13.00	-39.74	1	-

Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

CSE-TX-Port

714.5MHz_QPSK_RB 6,#RB 0,NB 1

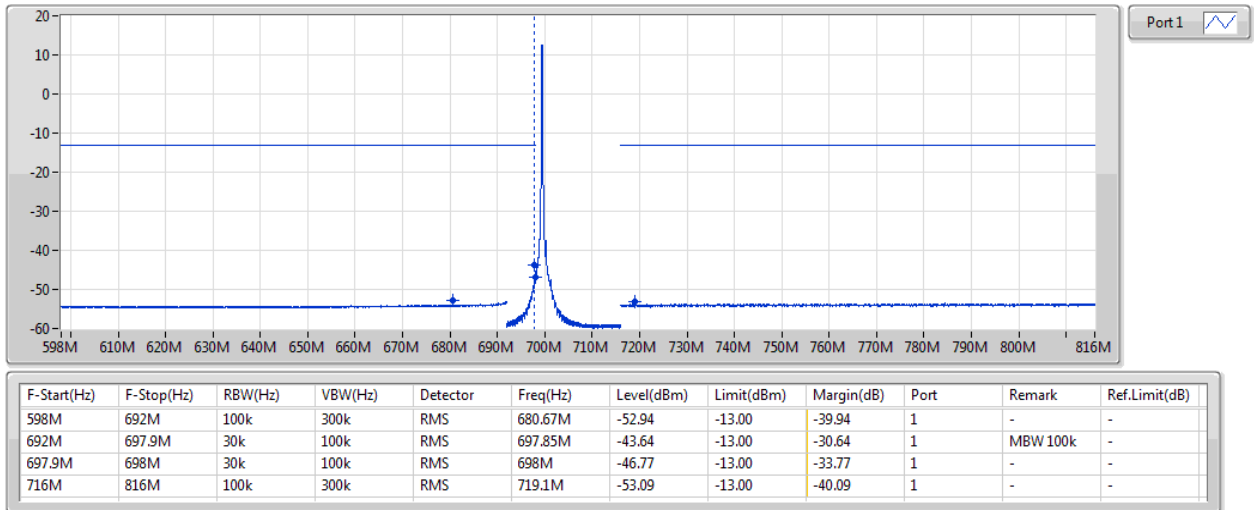


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
598M	698M	100k	300k	RMS	695.9M	-52.58	-13.00	-39.58	1	-
716M	716.1M	30k	100k	RMS	716.01M	-36.53	-13.00	-23.53	1	-
716.1M	722M	30k	100k	RMS	716.15M	-32.64	-13.00	-19.64	1	MBW 100k
722M	816M	100k	300k	RMS	722M	-53.16	-13.00	-40.16	1	-

Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

CSE-TX-Port

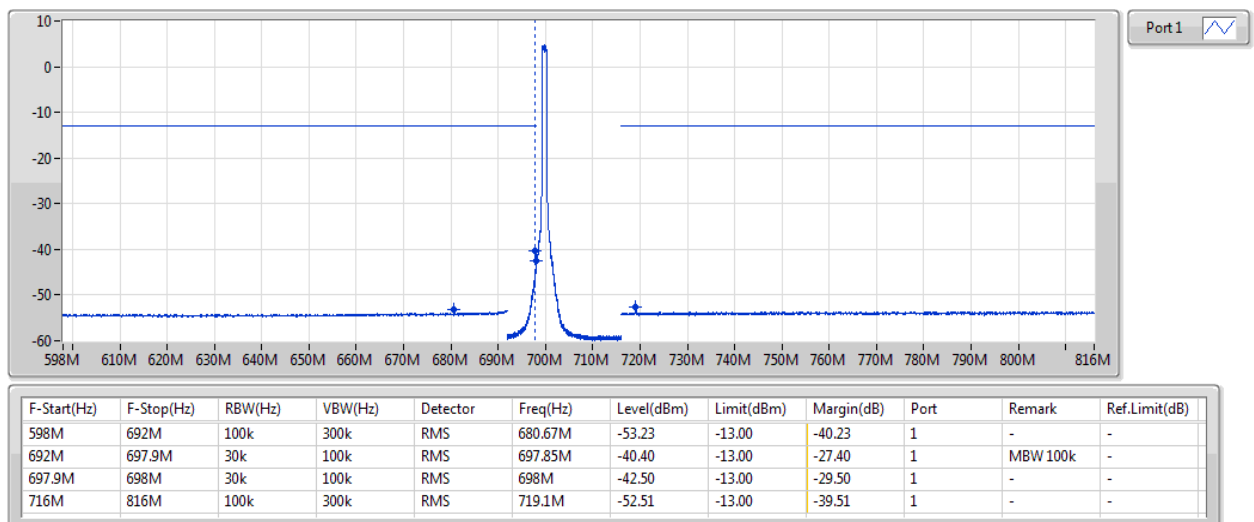
700.5MHz_16QAM_RB 1,#RB 0,NB 0



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

CSE-TX-Port

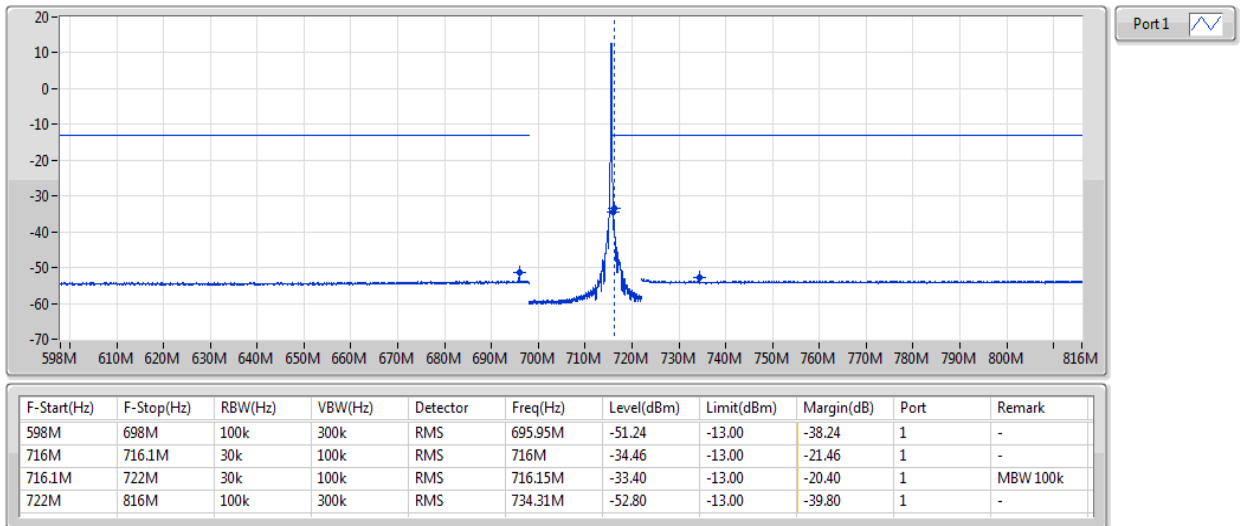
700.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

CSE-TX-Port

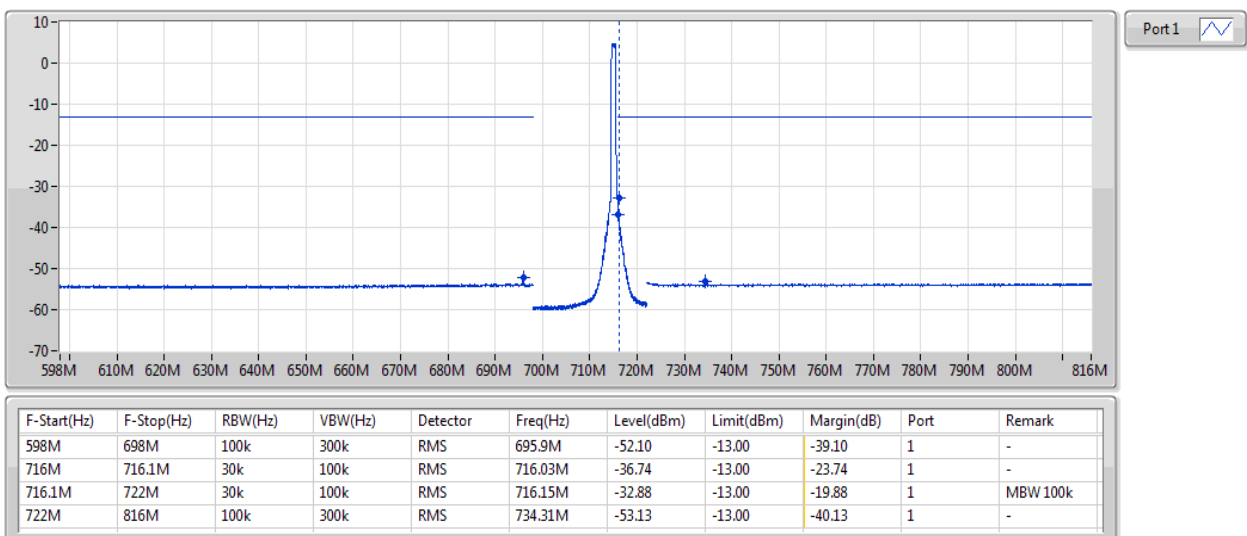
714.5MHz_16QAM_RB 1,#RB 5,NB 1



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

CSE-TX-Port

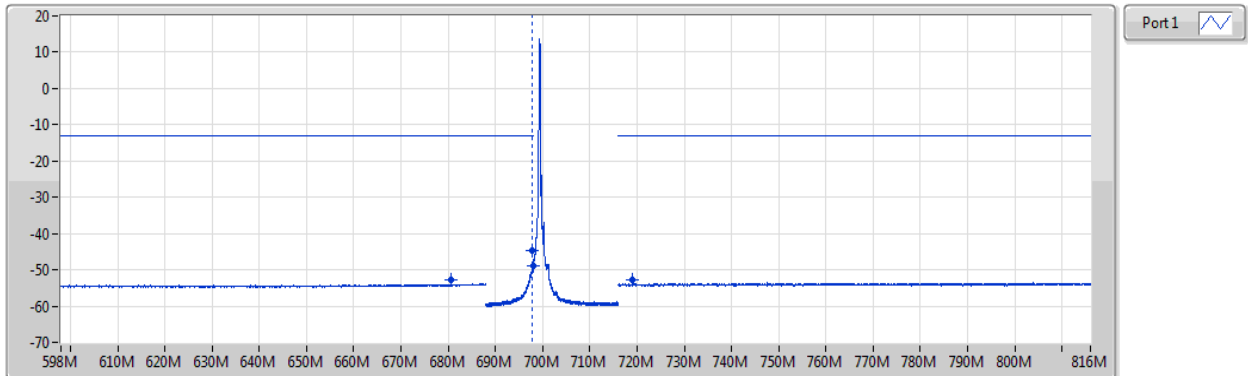
714.5MHz_16QAM_RB 5,#RB 0,NB 1



Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

701.5MHz_QPSK_RB 1,#RB 0,NB 0

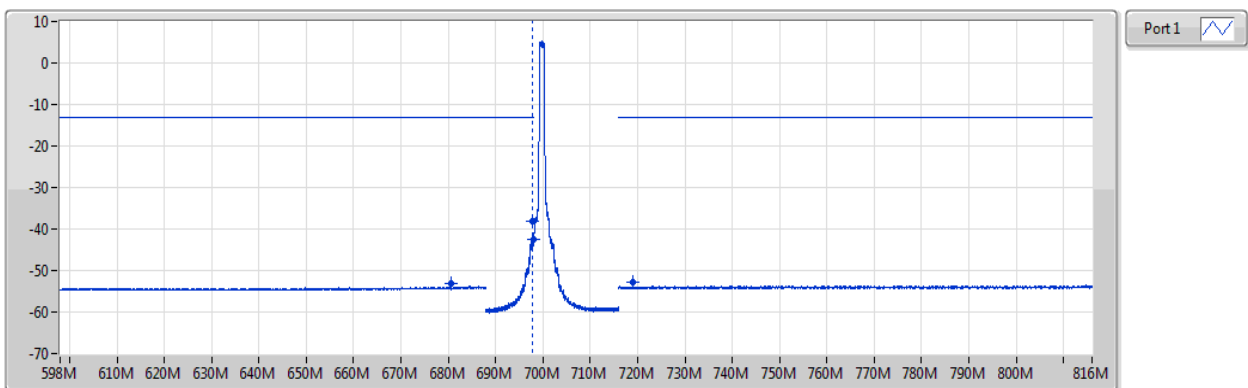


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
598M	688M	100k	300k	RMS	680.58M	-52.89	-13.00	-39.89	1	-	-
688M	697.9M	30k	100k	RMS	697.85M	-44.86	-13.00	-31.86	1	MBW 100k	-
697.9M	698M	30k	100k	RMS	698M	-48.78	-13.00	-35.78	1	-	-
716M	816M	100k	300k	RMS	719.05M	-52.72	-13.00	-39.72	1	-	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

701.5MHz_QPSK_RB 6,#RB 0,NB 0

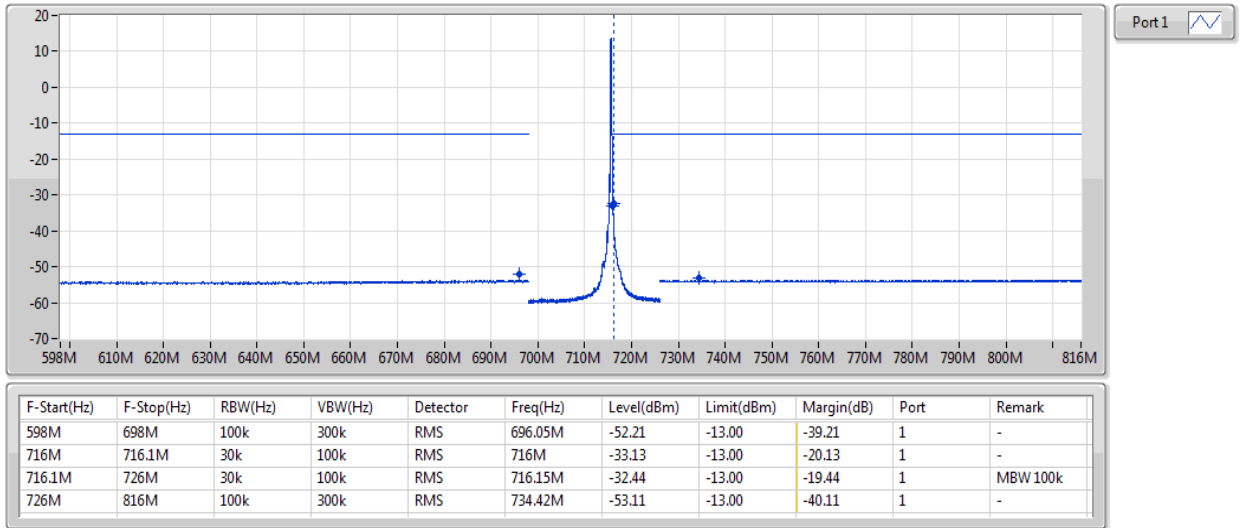


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
598M	688M	100k	300k	RMS	680.58M	-53.28	-13.00	-40.28	1	-	-
688M	697.9M	30k	100k	RMS	697.85M	-38.14	-13.00	-25.14	1	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.99M	-42.61	-13.00	-29.61	1	-	-
716M	816M	100k	300k	RMS	719M	-52.89	-13.00	-39.89	1	-	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

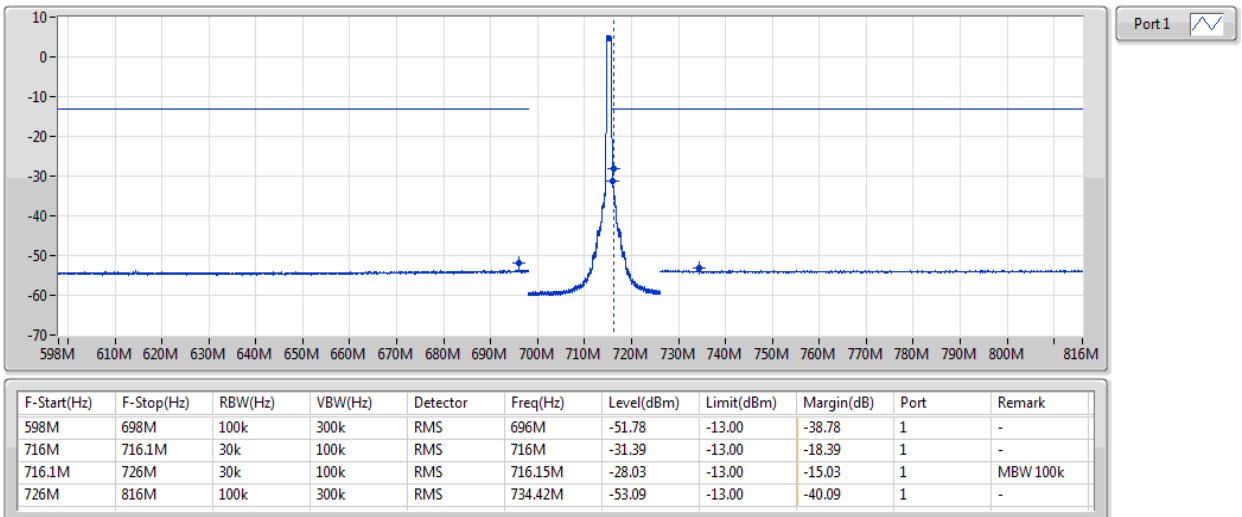
713.5MHz_QPSK_RB 1,#RB 5,NB 3



Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

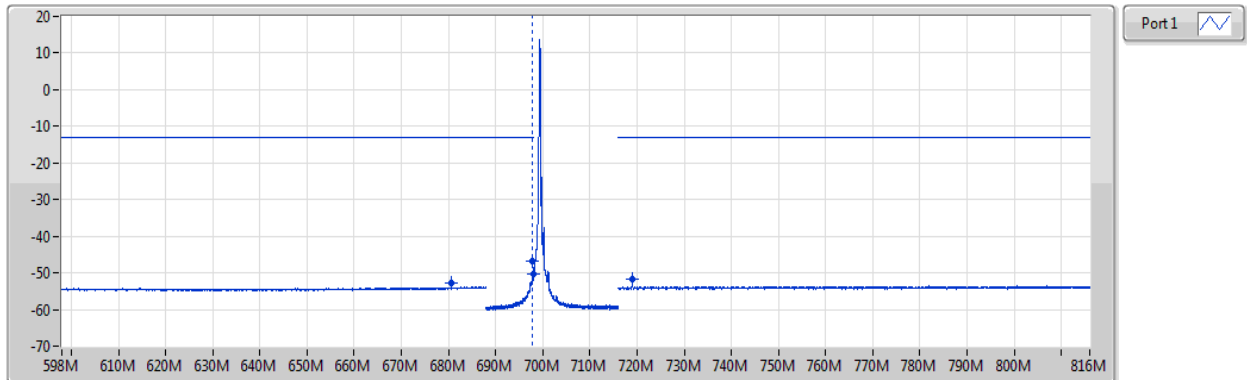
713.5MHz_QPSK_RB 6,#RB 0,NB 3



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

701.5MHz_16QAM_RB 1,#RB 0,NB 0

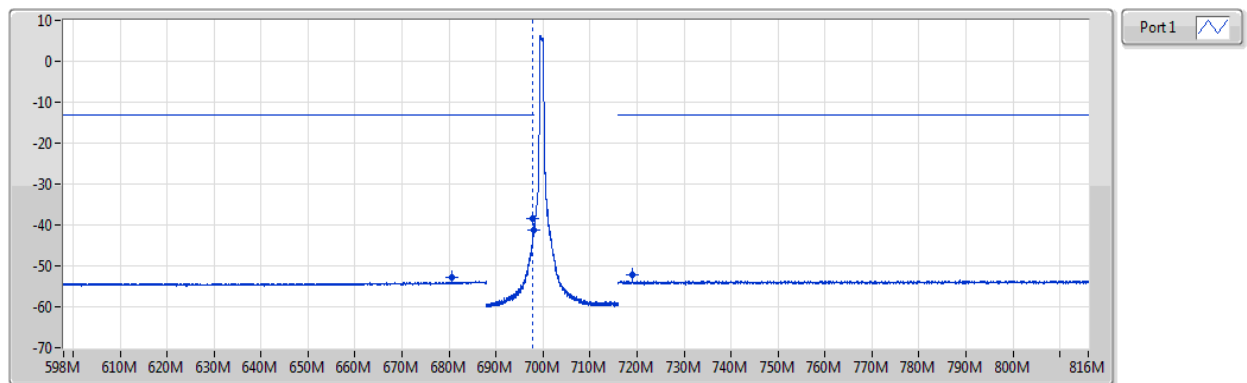


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
598M	688M	100k	300k	RMS	680.58M	-52.88	-13.00	-39.88	1	-	-
688M	697.9M	30k	100k	RMS	697.85M	-46.67	-13.00	-33.67	1	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.98M	-50.31	-13.00	-37.31	1	-	-
716M	816M	100k	300k	RMS	719M	-51.62	-13.00	-38.62	1	-	-

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

701.5MHz_16QAM_RB 5,#RB 0,NB 0

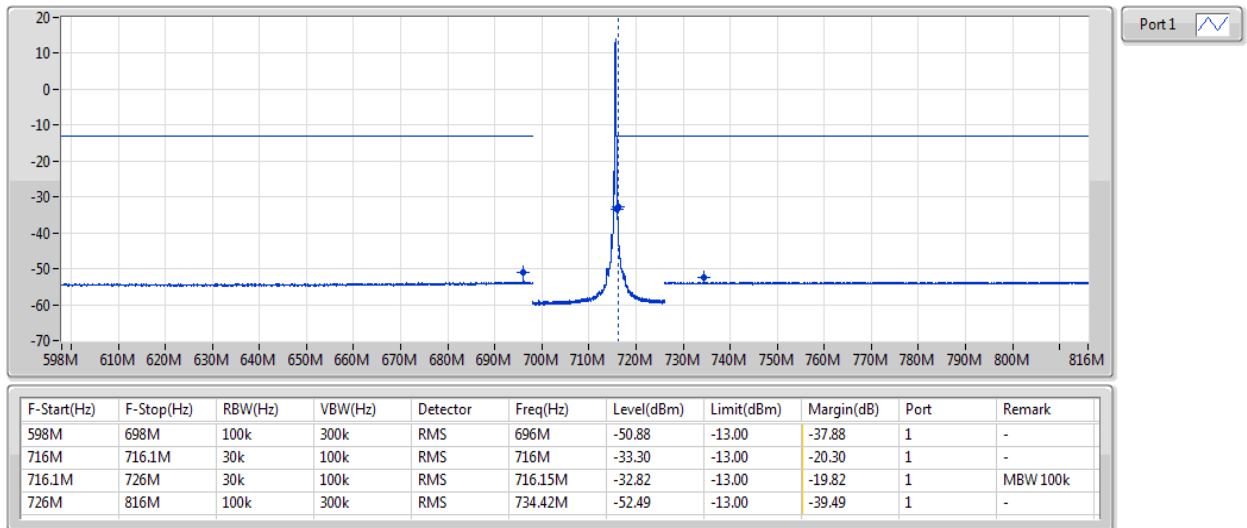


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
598M	688M	100k	300k	RMS	680.62M	-52.74	-13.00	-39.74	1	-	-
688M	697.9M	30k	100k	RMS	697.85M	-38.31	-13.00	-25.31	1	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.93M	-41.20	-13.00	-28.20	1	-	-
716M	816M	100k	300k	RMS	719M	-52.21	-13.00	-39.21	1	-	-

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

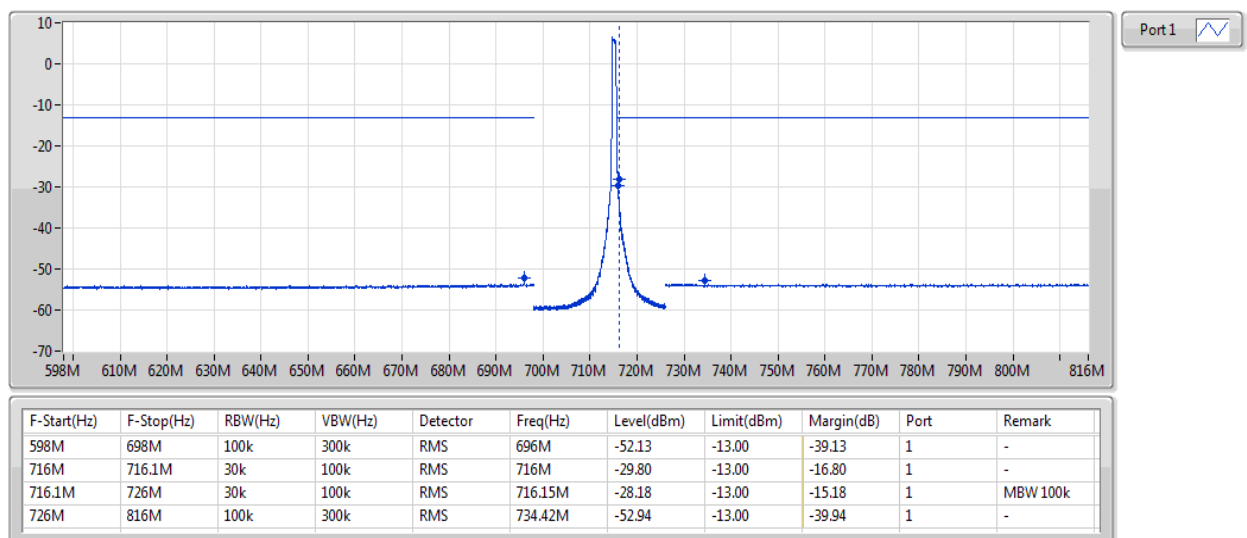
713.5MHz_16QAM_RB 1,#RB 5,NB 3



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

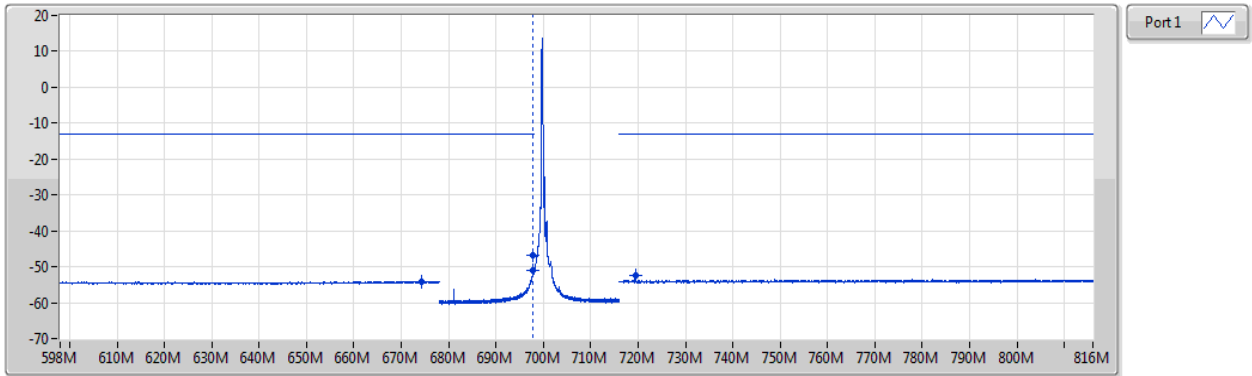
713.5MHz_16QAM_RB 5,#RB 0,NB 3



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

704MHz_QPSK_RB 1,#RB 0,NB 0

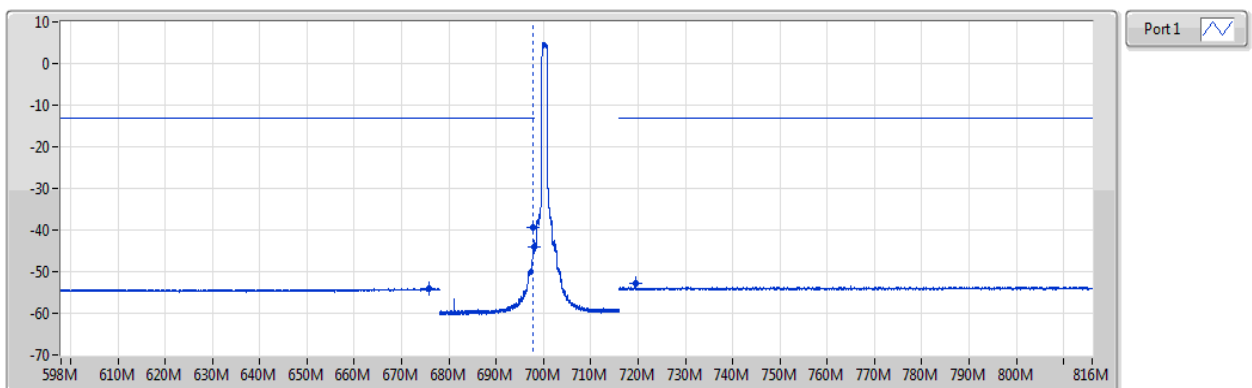


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
598M	678M	100k	300k	RMS	674.24M	-54.07	-13.00	-41.07	1	-	-
678M	697.9M	30k	100k	RMS	697.85M	-46.65	-13.00	-33.65	1	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.9M	-51.02	-13.00	-38.02	1	-	-
716M	816M	100k	300k	RMS	719.45M	-52.33	-13.00	-39.33	1	-	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

704MHz_QPSK_RB 6,#RB 0,NB 0

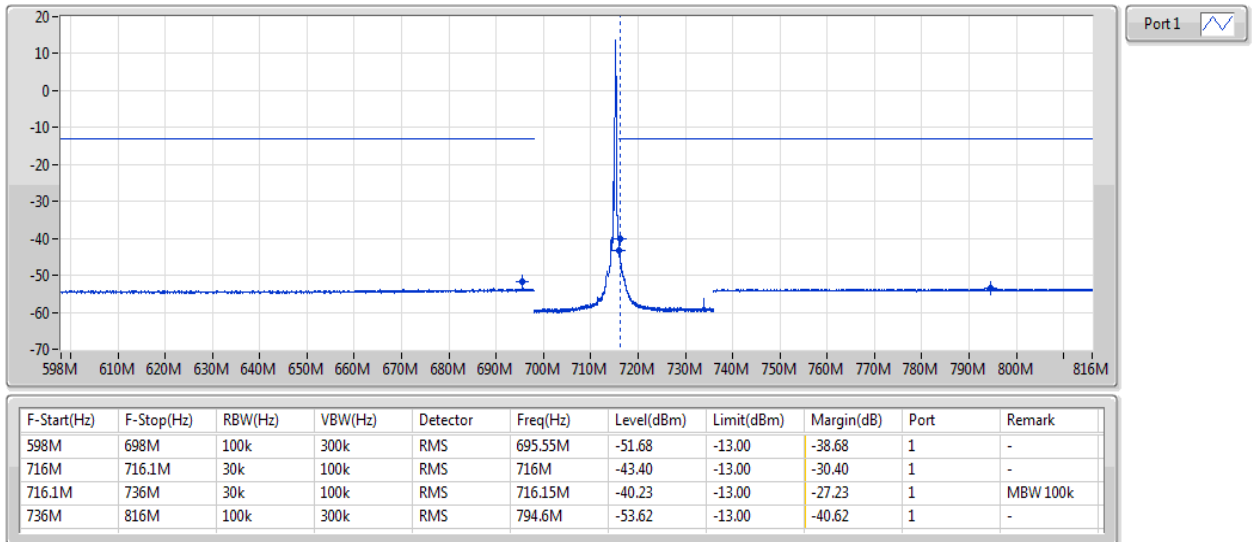


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
598M	678M	100k	300k	RMS	675.72M	-54.08	-13.00	-41.08	1	-	-
678M	697.9M	30k	100k	RMS	697.85M	-39.41	-13.00	-26.41	1	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.98M	-43.98	-13.00	-30.98	1	-	-
716M	816M	100k	300k	RMS	719.4M	-52.68	-13.00	-39.68	1	-	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

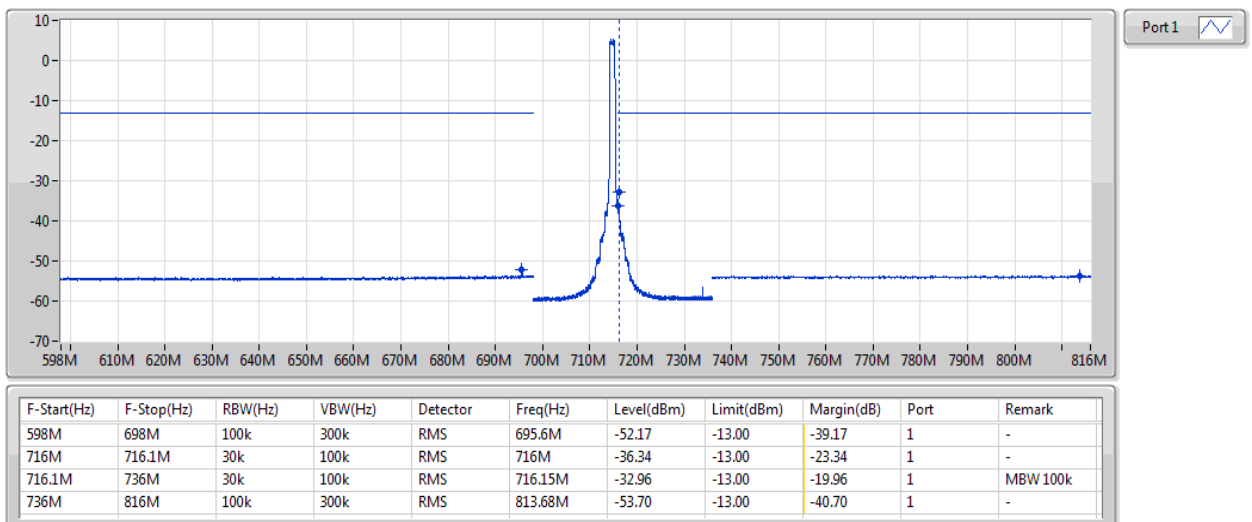
711MHz_QPSK_RB 1,#RB 5,NB 7



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

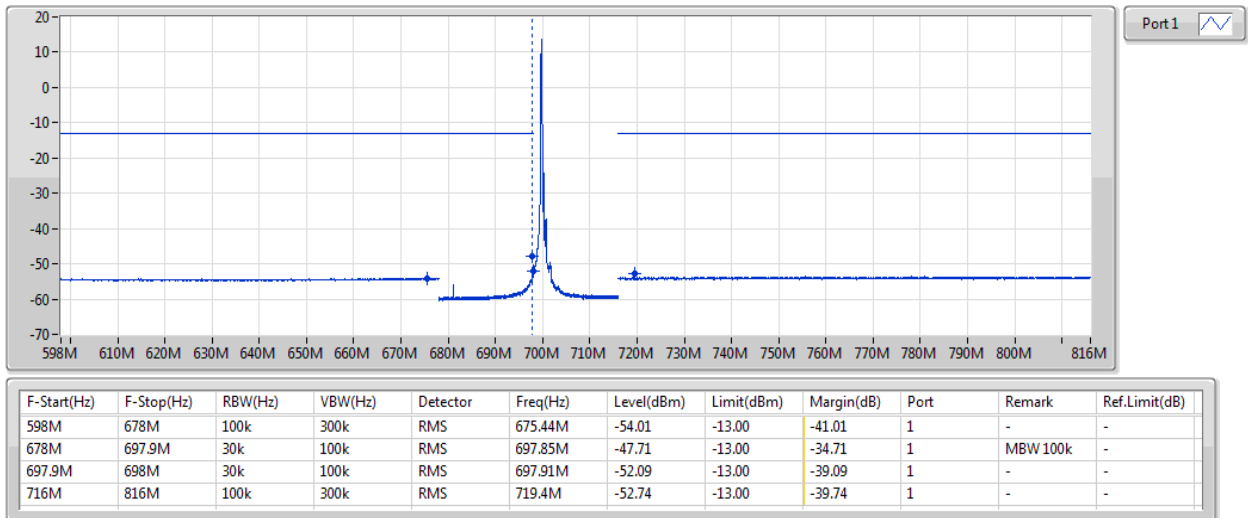
CSE-TX-Port

711MHz_QPSK_RB 6,#RB 0,NB 7



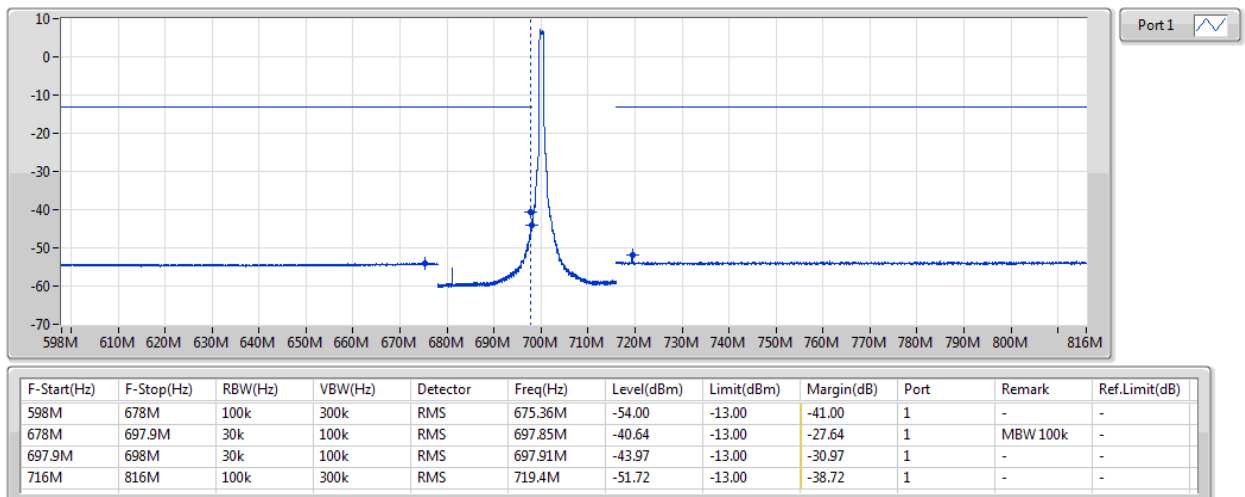
Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX
704MHz_16QAM_RB 1,#RB 0,NB 0

CSE-TX-Port



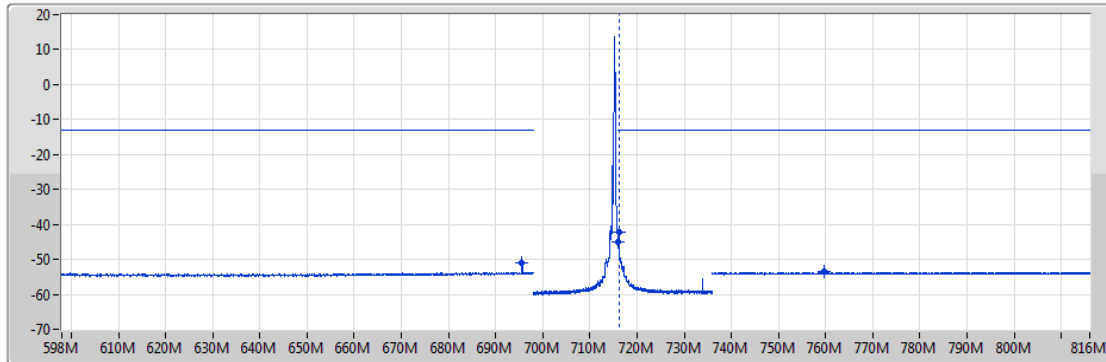
Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX
704MHz_16QAM_RB 5,#RB 0,NB 0

CSE-TX-Port



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX
711MHz_16QAM_RB 1,#RB 5,NB 7

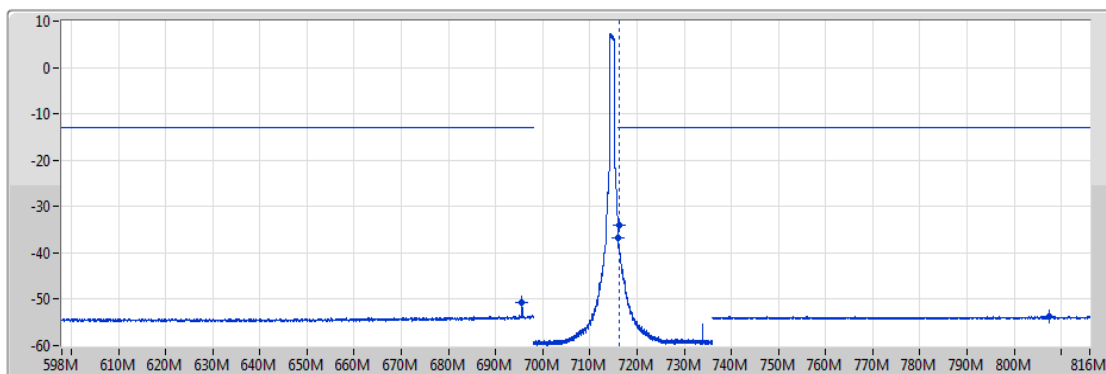
CSE-TX-Port



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
598M	698M	100k	300k	RMS	695.6M	-50.96	-13.00	-37.96	1	-
716M	716.1M	30k	100k	RMS	716M	-44.88	-13.00	-31.88	1	-
716.1M	736M	30k	100k	RMS	716.15M	-42.16	-13.00	-29.16	1	MBW 100k
736M	816M	100k	300k	RMS	759.72M	-53.65	-13.00	-40.65	1	-

Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX
711MHz_16QAM_RB 5,#RB 0,NB 7

CSE-TX-Port



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
598M	698M	100k	300k	RMS	695.6M	-50.79	-13.00	-37.79	1	-
716M	716.1M	30k	100k	RMS	716M	-36.69	-13.00	-23.69	1	-
716.1M	736M	30k	100k	RMS	716.15M	-34.06	-13.00	-21.06	1	MBW 100k
736M	816M	100k	300k	RMS	807.48M	-53.68	-13.00	-40.68	1	-

Band 13

3.3.5 Test Result of Conducted Emissions & Band Edge

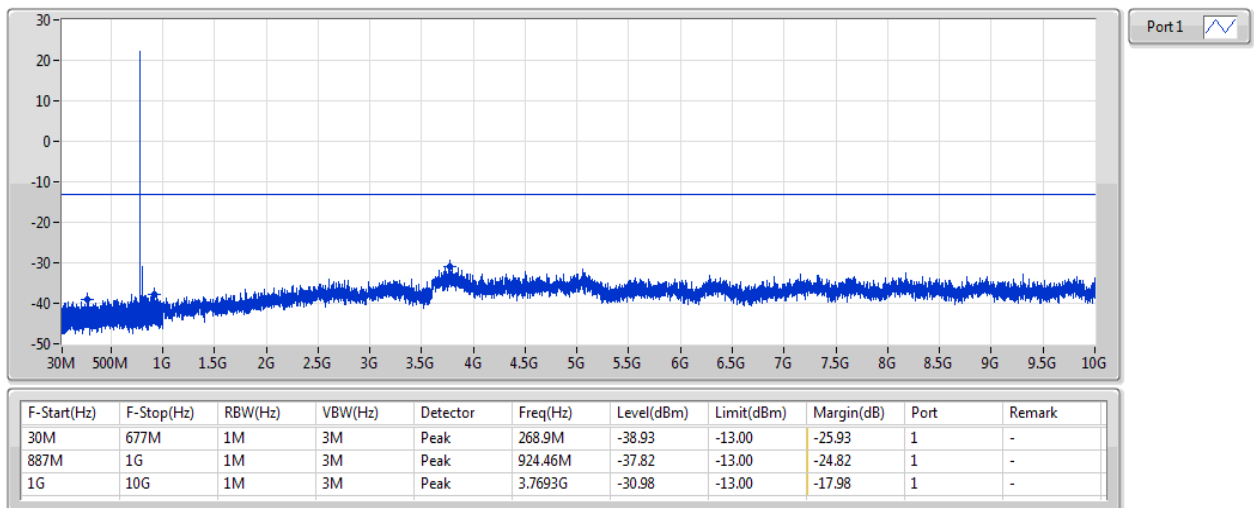
Out of band emission Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Port	Remark	Ref.Limit (dB)
Band 13	-	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_5MHz_Nss1,QPSK	Pass	1G	10G	1M	3M	Peak	3.8476G	-30.48	-13.00	-17.48	1	-	-
LTE-M1_5MHz_Nss1,16QAM	Pass	1G	10G	1M	3M	Peak	4.7224G	-31.07	-13.00	-18.07	1	-	-
LTE-M1_10MHz_Nss1,QPSK	Pass	1G	10G	1M	3M	Peak	3.8629G	-30.65	-13.00	-17.65	1	-	-
LTE-M1_10MHz_Nss1,16QAM	Pass	1G	10G	1M	3M	Peak	3.8539G	-31.76	-13.00	-18.76	1	-	-

Band 13_LTE-M1_5MHz_Nss1,QPSK

CSE-TX-Port

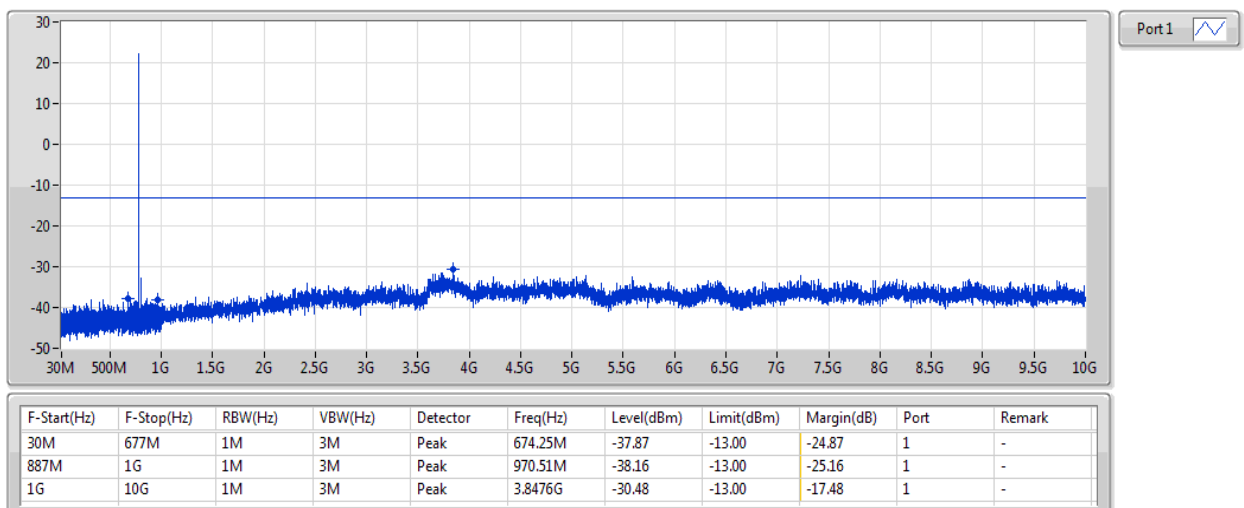
779.5MHz



Band 13_LTE-M1_5MHz_Nss1,QPSK

CSE-TX-Port

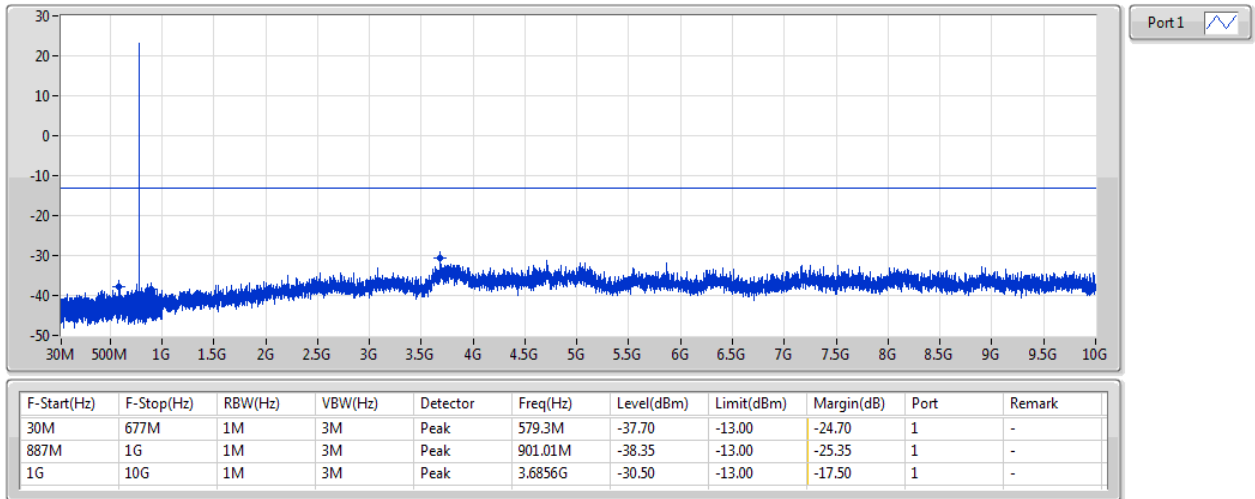
782MHz



Band 13_LTE-M1_5MHz_Nss1,QPSK

CSE-TX-Port

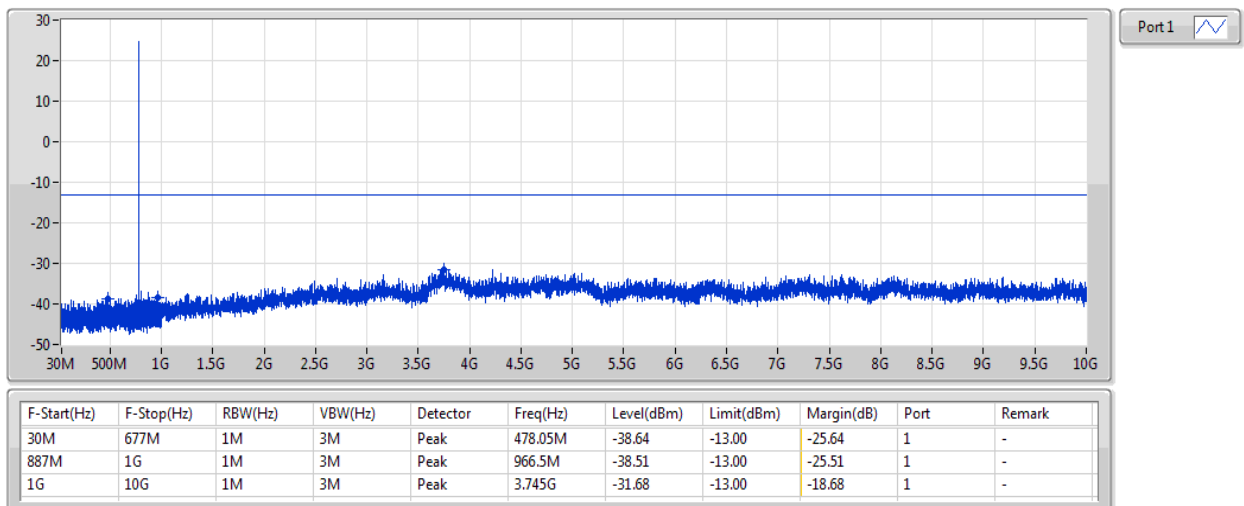
784.5MHz



Band 13_LTE-M1_5MHz_Nss1,16QAM

CSE-TX-Port

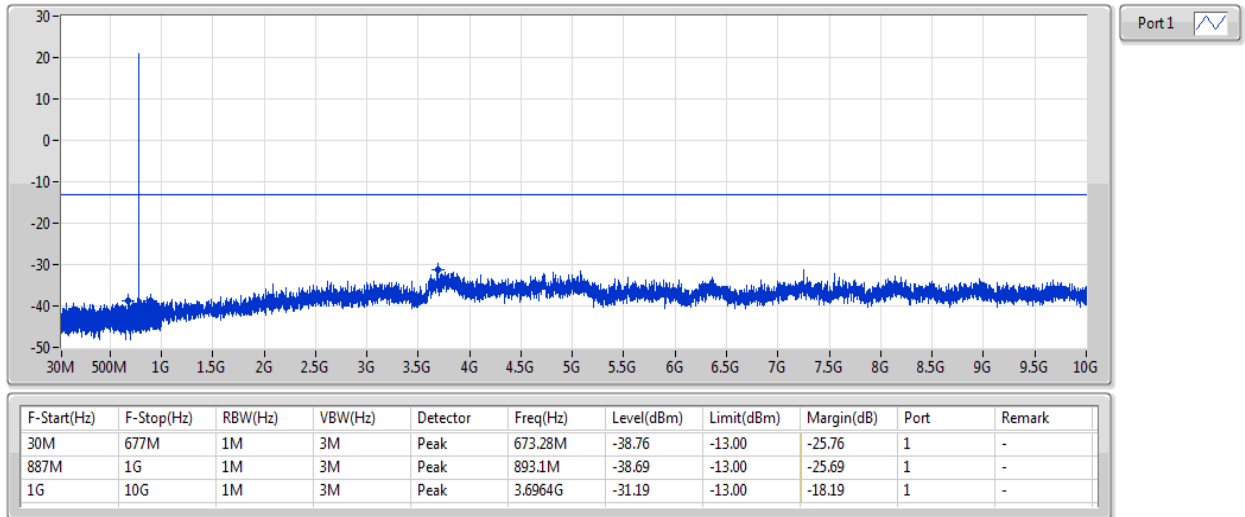
779.5MHz



Band 13_LTE-M1_5MHz_Nss1,16QAM

CSE-TX-Port

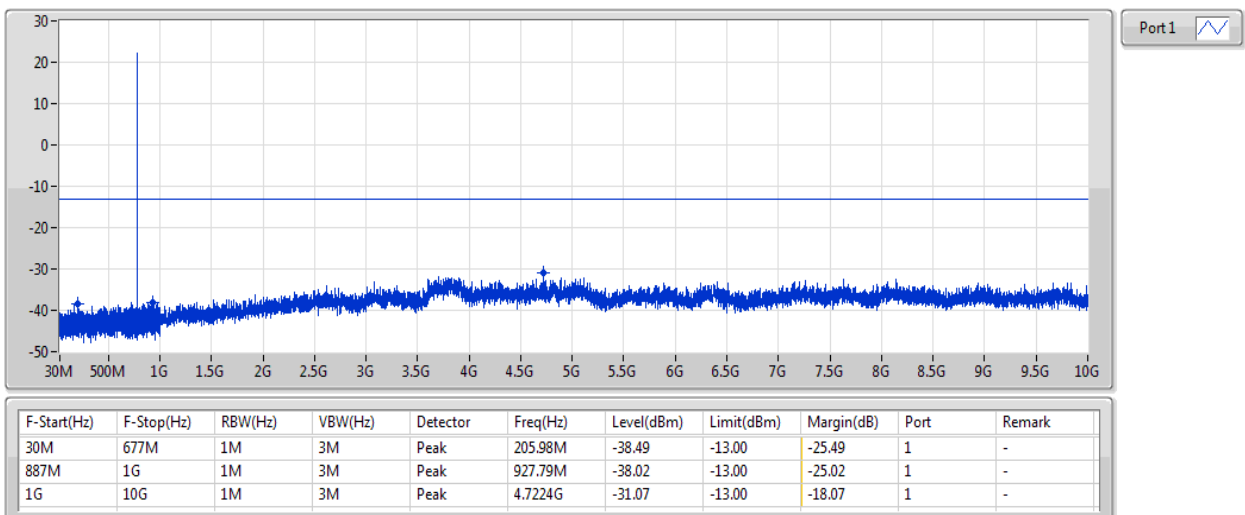
782MHz



Band 13_LTE-M1_5MHz_Nss1,16QAM

CSE-TX-Port

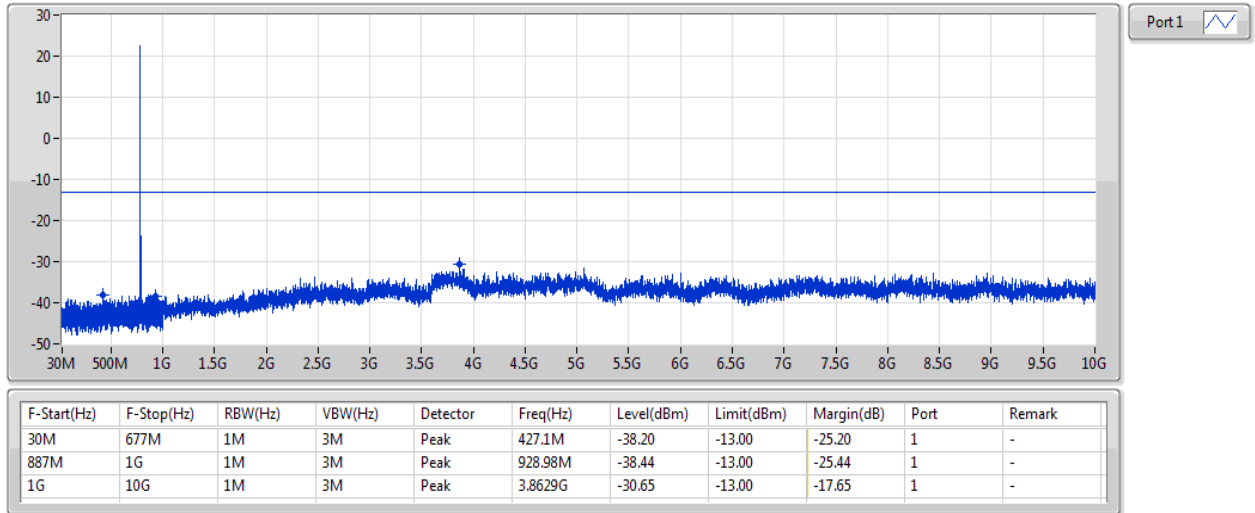
784.5MHz



Band 13_LTE-M1_10MHz_Nss1,QPSK

CSE-TX-Port

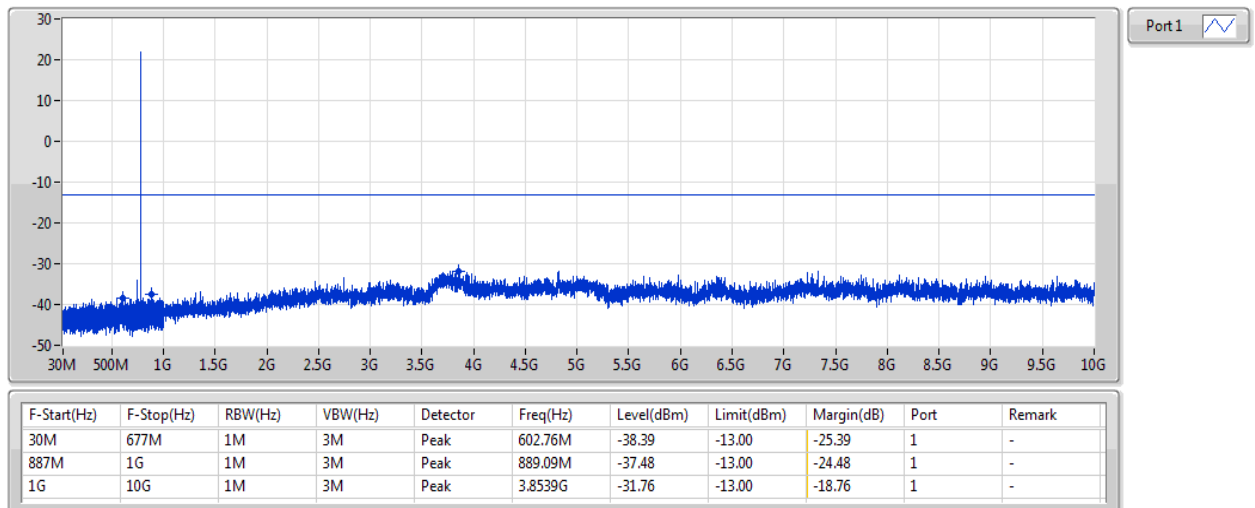
782MHz



Band 13_LTE-M1_10MHz_Nss1,16QAM

CSE-TX-Port

782MHz

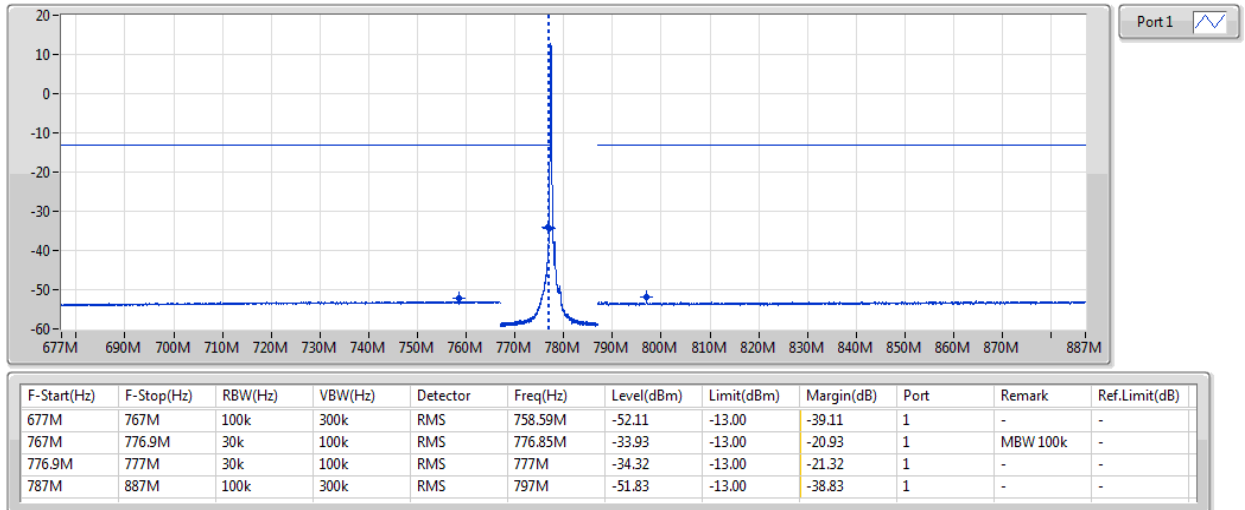


Band edge Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Port	Remark	Ref.Limit (dB)
Band 13	-	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	787.1M	797M	30k	100k	RMS	787.15M	-31.88	-13.00	-18.88	1	MBW 100k	-
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	767M	776.9M	30k	100k	RMS	776.85M	-30.19	-13.00	-17.19	1	MBW 100k	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	757M	776.9M	30k	100k	RMS	776.65M	-32.68	-13.00	-19.68	1	MBW 100k	-
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	757M	776.9M	30k	100k	RMS	776.85M	-29.65	-13.00	-16.65	1	MBW 100k	-

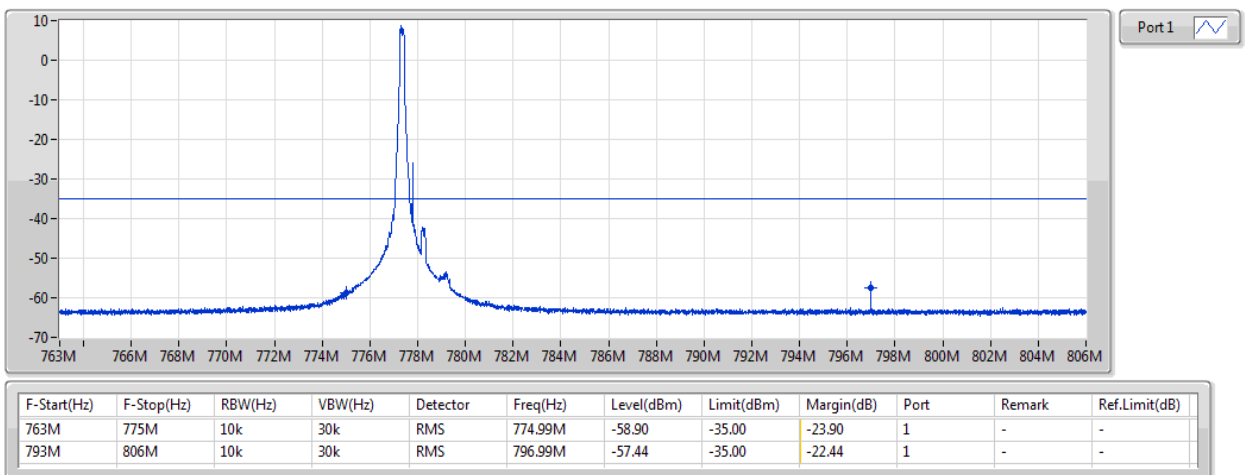
Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX
779.5MHz_QPSK_RB 1,#RB 0,NB 0

CSE-TX-Port



Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX
779.5MHz_QPSK_RB 1,#RB 0,NB 0

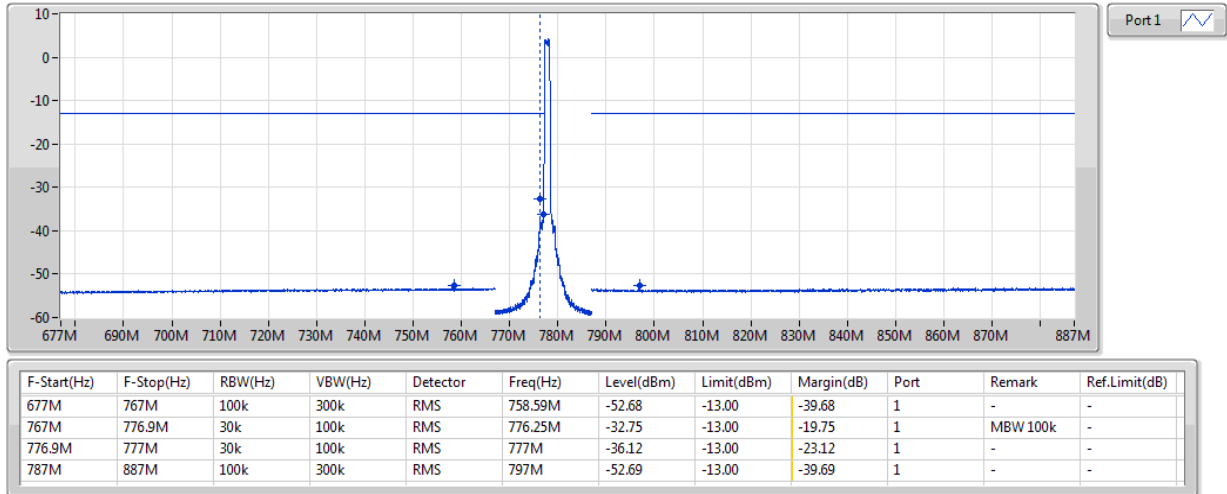
CSE-TX-Port



Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

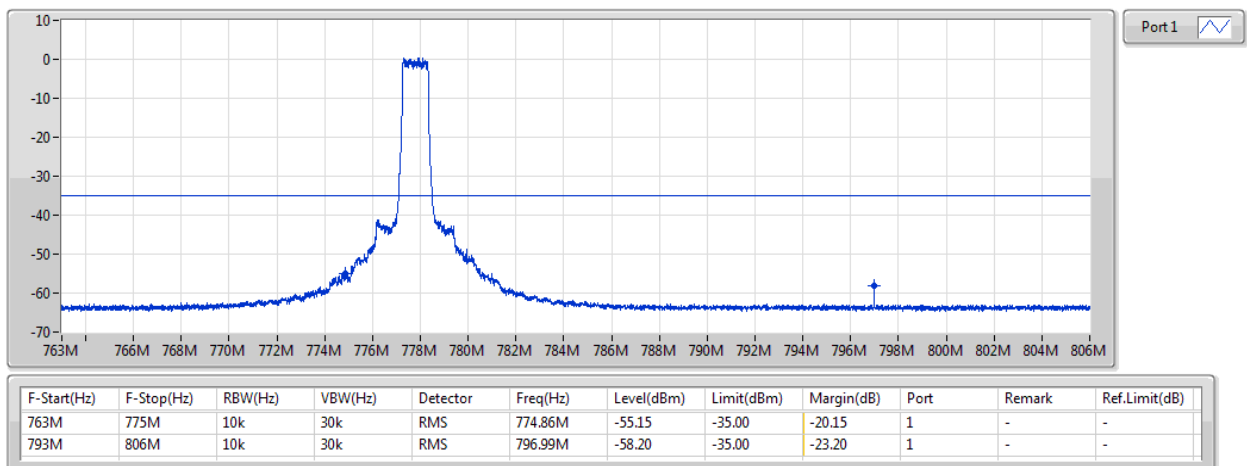
779.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

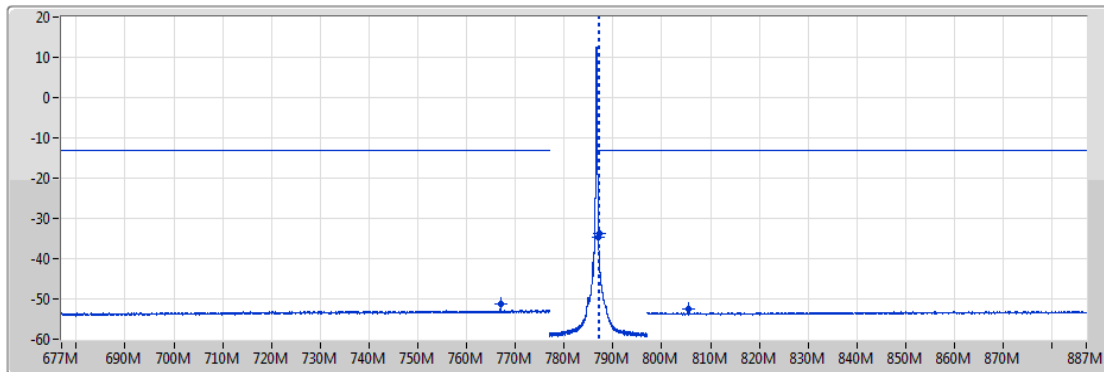
779.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

784.5MHz_QPSK_RB 1,#RB 5,NB 3

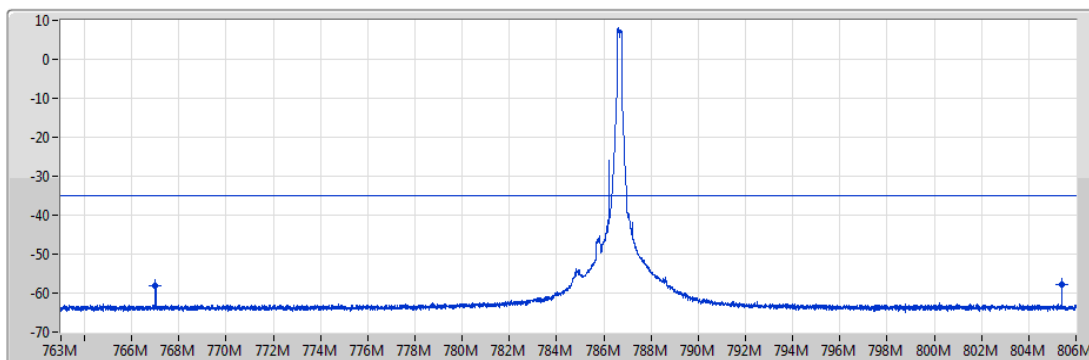


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
677M	777M	100k	300k	RMS	767M	-51.35	-13.00	-38.35	1	-
787M	787.1M	30k	100k	RMS	787M	-34.55	-13.00	-21.55	1	-
787.1M	797M	30k	100k	RMS	787.15M	-33.78	-13.00	-20.78	1	MBW 100k
797M	887M	100k	300k	RMS	805.42M	-52.64	-13.00	-39.64	1	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

784.5MHz_QPSK_RB 1,#RB 5,NB 3

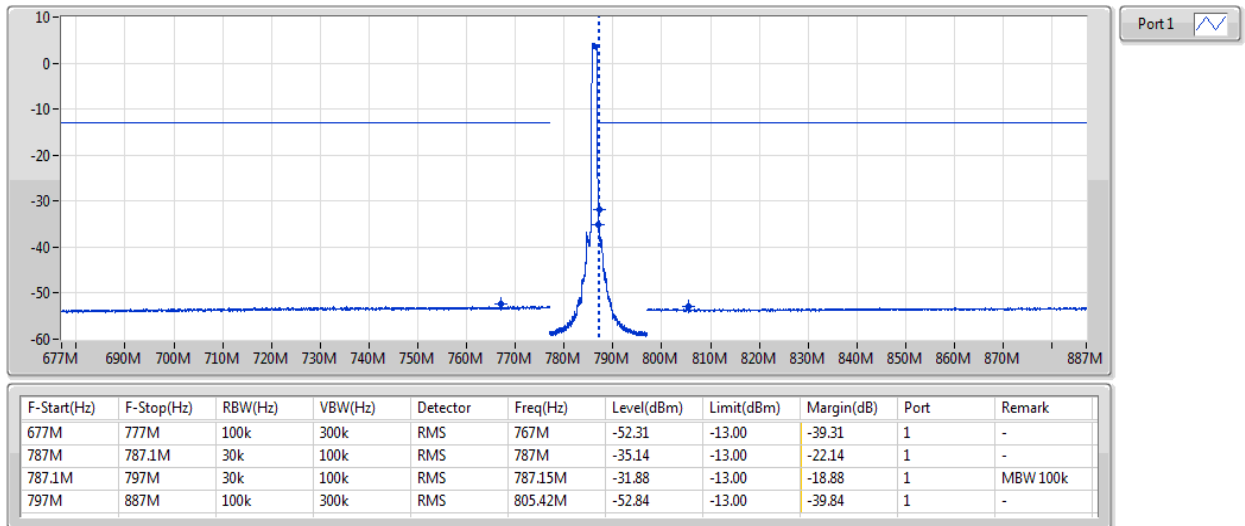


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
763M	775M	10k	30k	RMS	767.01M	-58.00	-35.00	-23.00	1	-
793M	806M	10k	30k	RMS	805.41M	-57.74	-35.00	-22.74	1	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

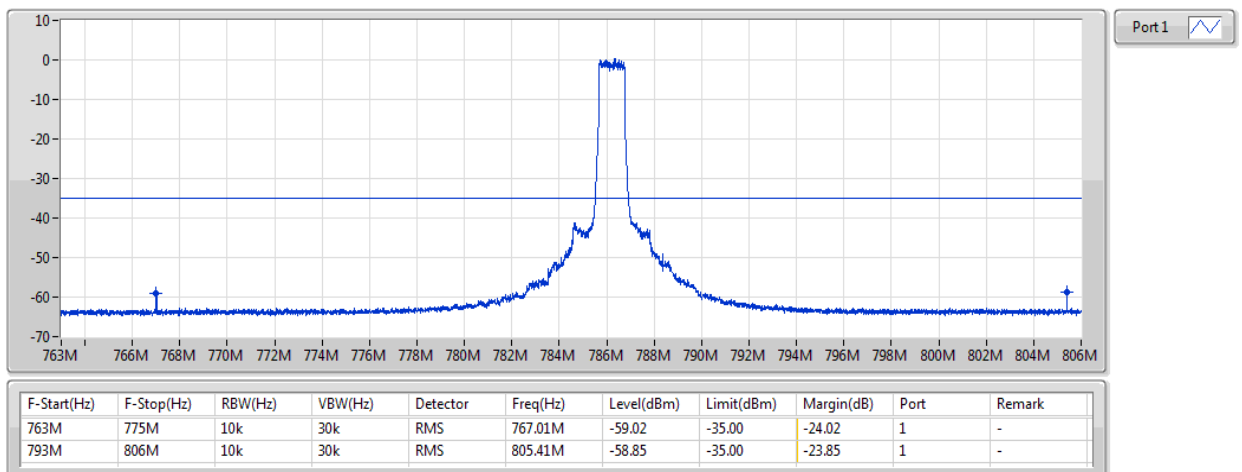
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Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

CSE-TX-Port

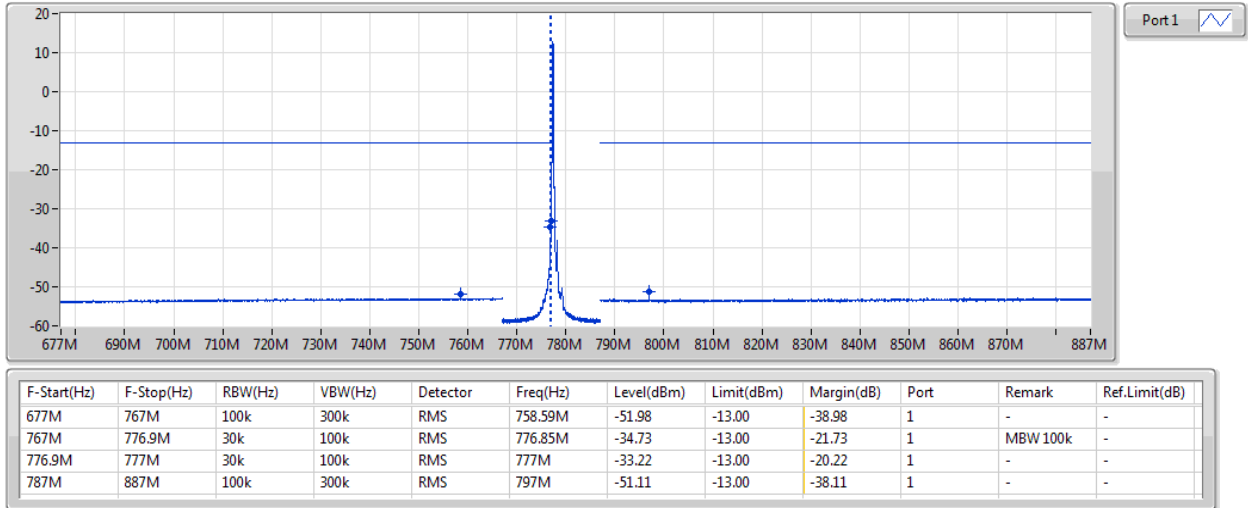
784.5MHz_QPSK_RB 6,#RB 0,NB 3



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

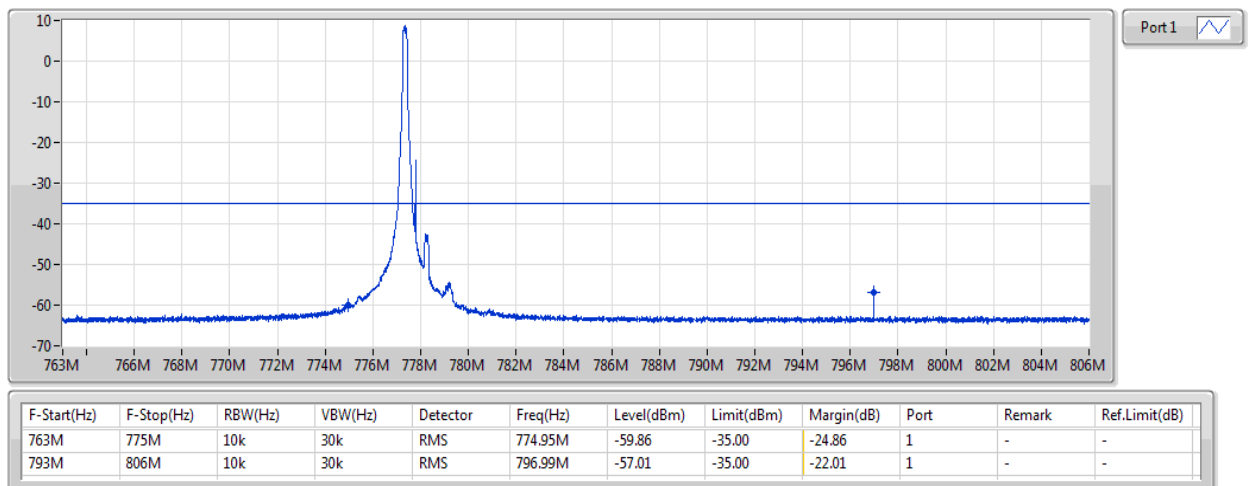
779.5MHz_16QAM_RB 1,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

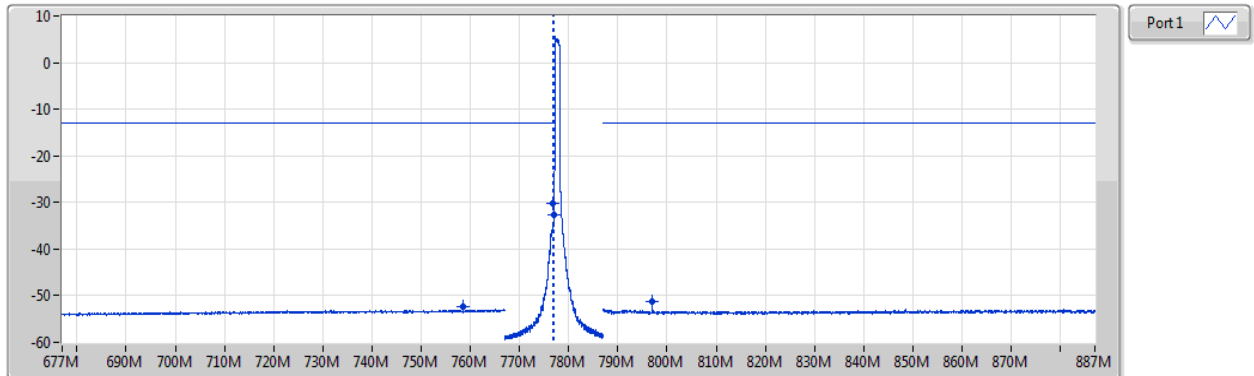
779.5MHz_16QAM_RB 1,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

779.5MHz_16QAM_RB 5,#RB 0,NB 0

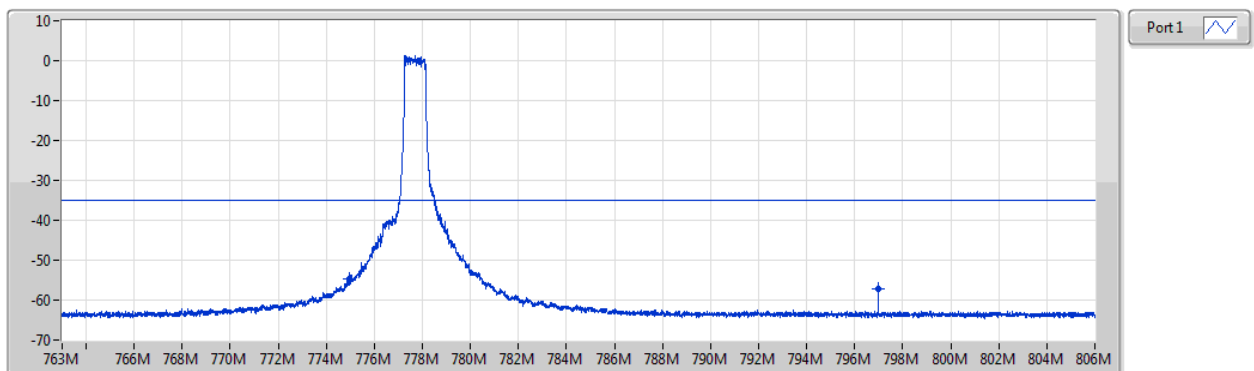


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
677M	767M	100k	300k	RMS	758.59M	-52.34	-13.00	-39.34	1	-	-
767M	776.9M	30k	100k	RMS	776.85M	-30.19	-13.00	-17.19	1	MBW 100k	-
776.9M	777M	30k	100k	RMS	777M	-32.57	-13.00	-19.57	1	-	-
787M	887M	100k	300k	RMS	797M	-51.37	-13.00	-38.37	1	-	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

779.5MHz_16QAM_RB 5,#RB 0,NB 0

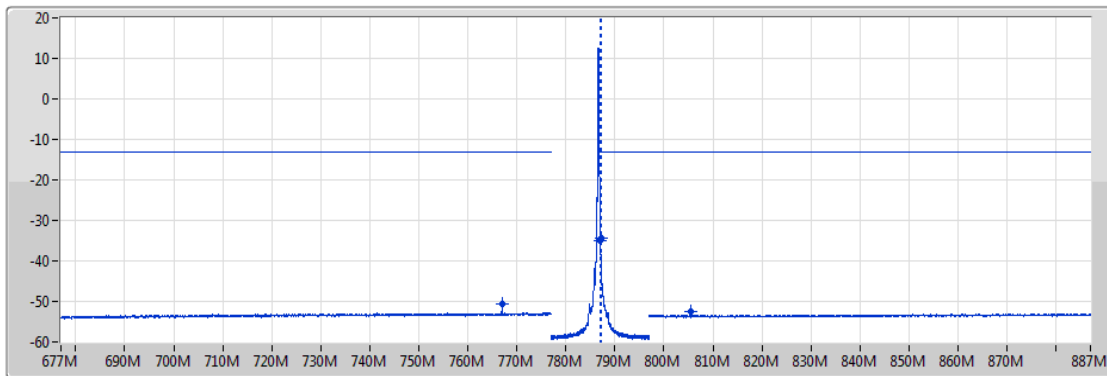


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.95M	-54.64	-35.00	-19.64	1	-	-
793M	806M	10k	30k	RMS	796.99M	-57.18	-35.00	-22.18	1	-	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

784.5MHz_16QAM_RB 1,#RB 5,NB 3

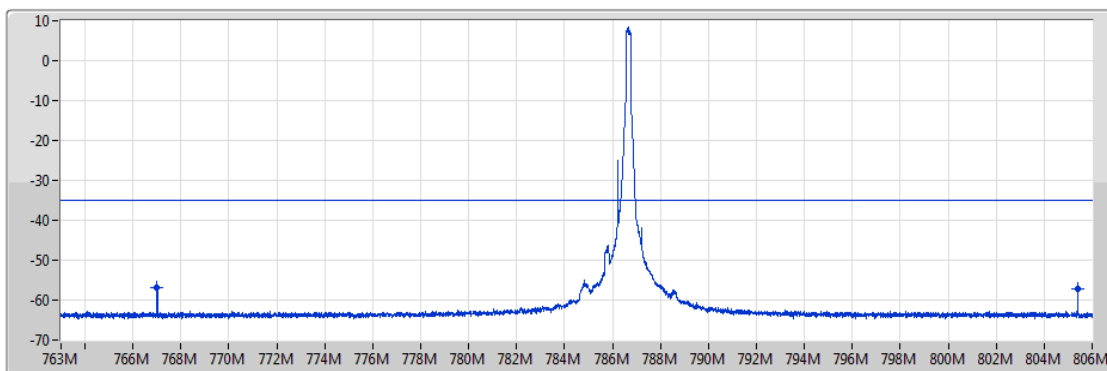


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
677M	777M	100k	300k	RMS	767M	-50.78	-13.00	-37.78	1	-
787M	787.1M	30k	100k	RMS	787.01M	-34.88	-13.00	-21.88	1	-
787.1M	797M	30k	100k	RMS	787.15M	-34.38	-13.00	-21.38	1	MBW 100k
797M	887M	100k	300k	RMS	805.42M	-52.41	-13.00	-39.41	1	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

784.5MHz_16QAM_RB 1,#RB 5,NB 3

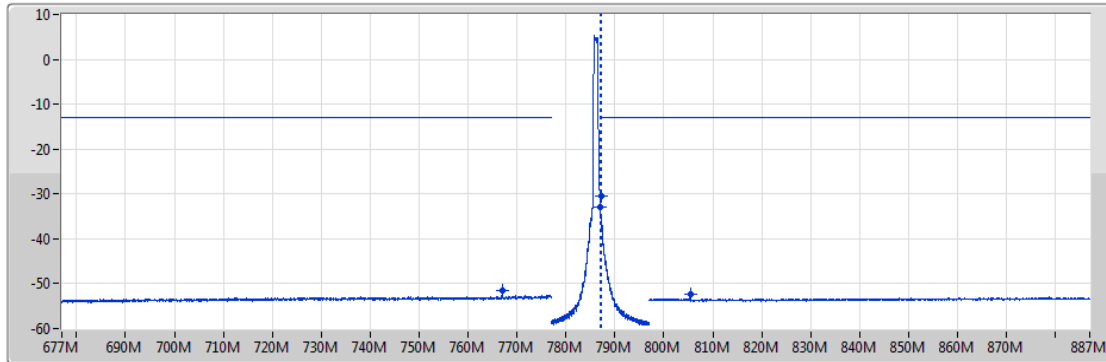


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
763M	775M	10k	30k	RMS	767.01M	-56.89	-35.00	-21.89	1	-
793M	806M	10k	30k	RMS	805.41M	-57.06	-35.00	-22.06	1	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

784.5MHz_16QAM_RB 5,#RB 0,NB 3

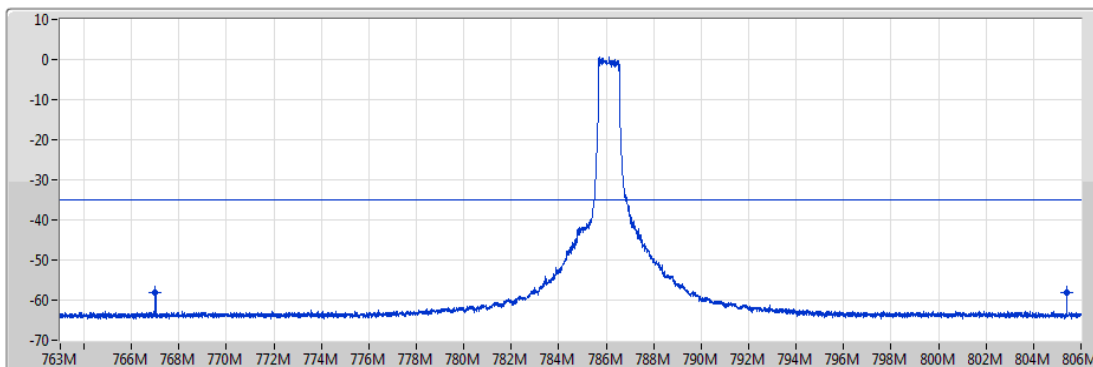


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
677M	777M	100k	300k	RMS	767.05M	-51.58	-13.00	-38.58	1	-
787M	787.1M	30k	100k	RMS	787M	-32.93	-13.00	-19.93	1	-
787.1M	797M	30k	100k	RMS	787.15M	-30.42	-13.00	-17.42	1	MBW 100k
797M	887M	100k	300k	RMS	805.42M	-52.37	-13.00	-39.37	1	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

CSE-TX-Port

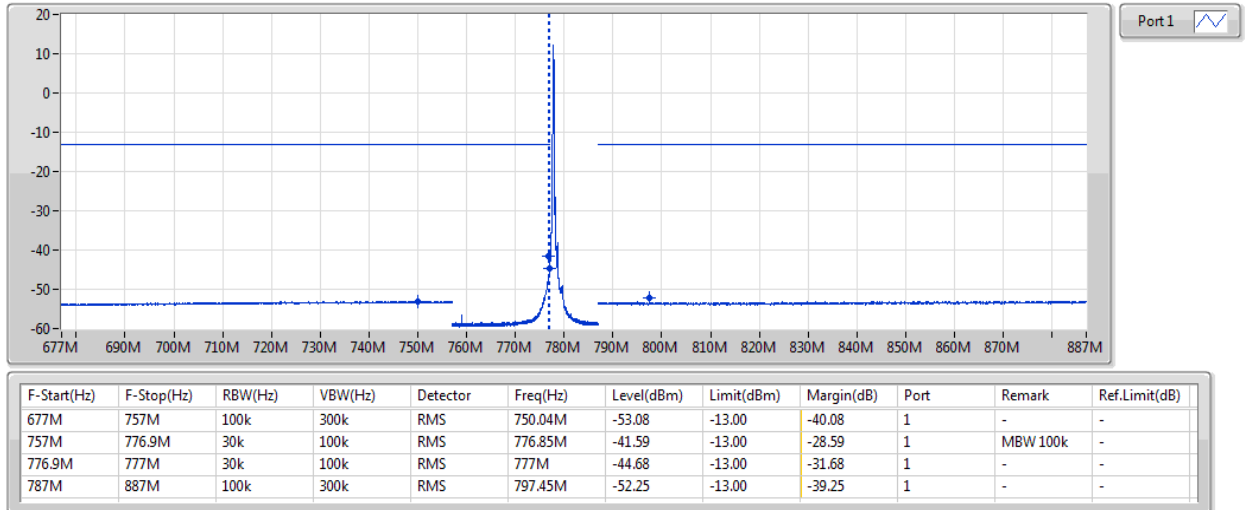
784.5MHz_16QAM_RB 5,#RB 0,NB 3



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
763M	775M	10k	30k	RMS	767.01M	-58.04	-35.00	-23.04	1	-
793M	806M	10k	30k	RMS	805.41M	-58.20	-35.00	-23.20	1	-

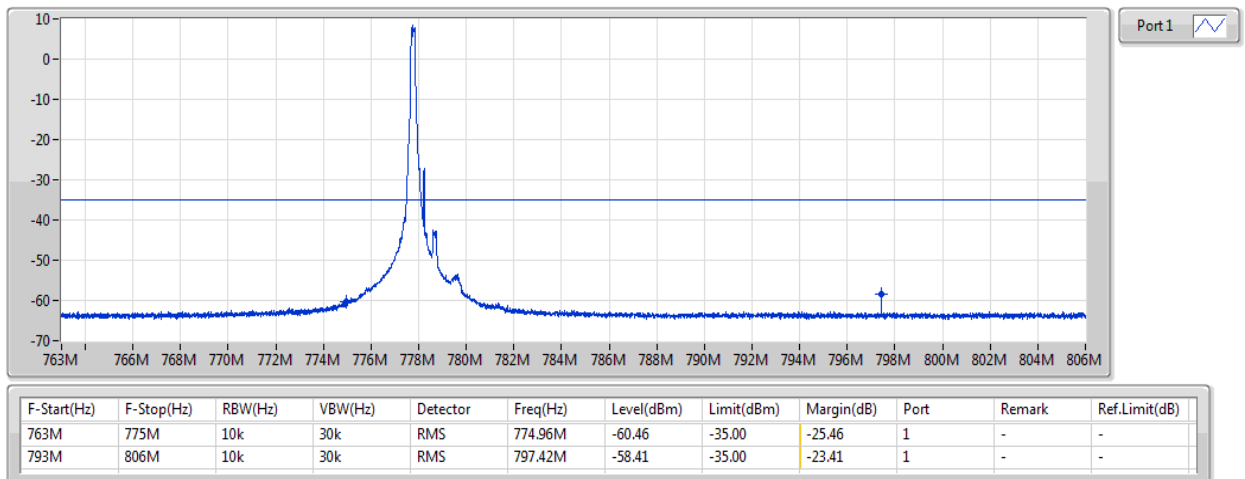
Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX
782MHz_QPSK_RB 1,#RB 0,NB 0

CSE-TX-Port



Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX
782MHz_QPSK_RB 1,#RB 0,NB 0

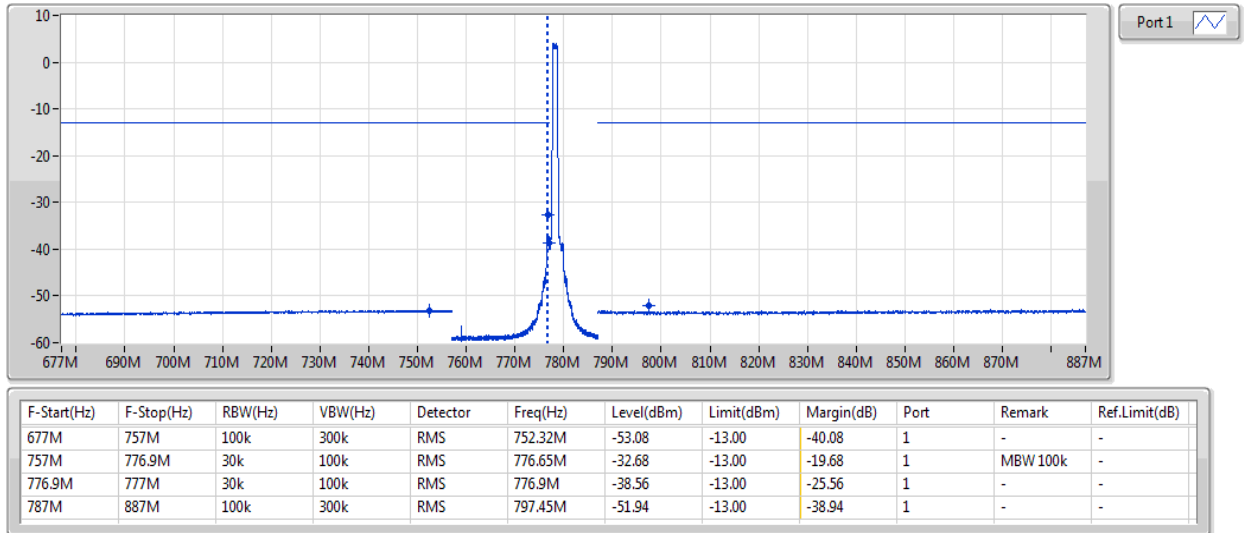
CSE-TX-Port



Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

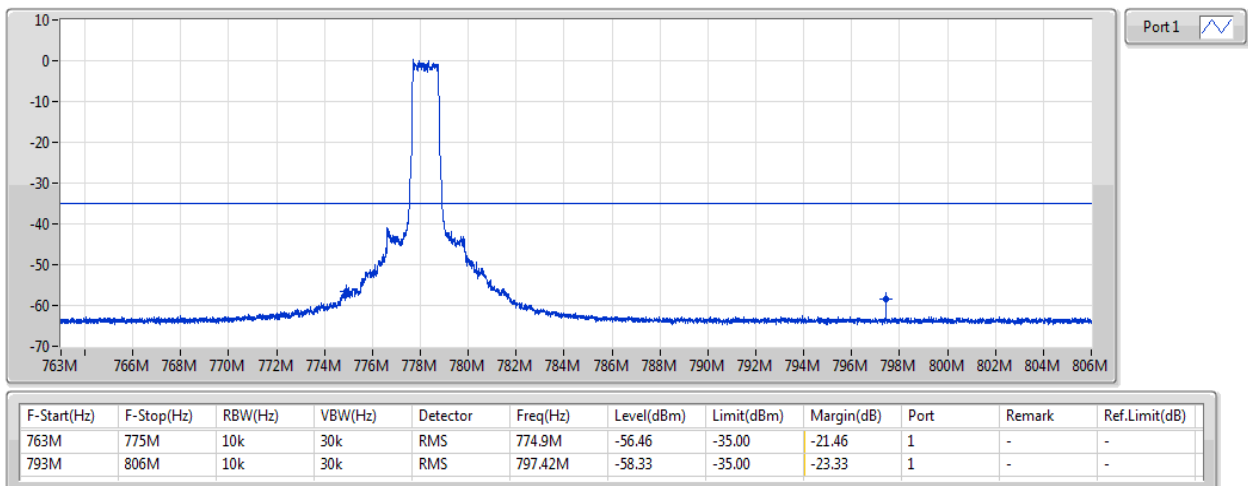
782MHz_QPSK_RB 6,#RB 0,NB 0



Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

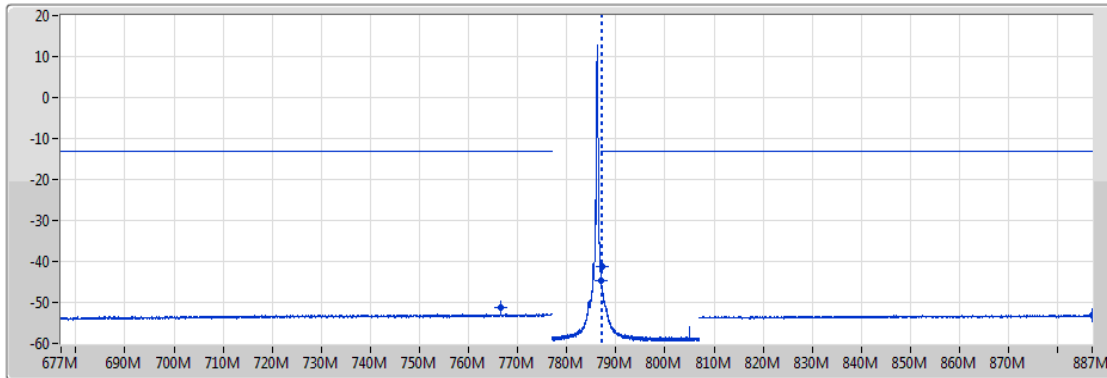
782MHz_QPSK_RB 6,#RB 0,NB 0



Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

782MHz_QPSK_RB 1,#RB 5,NB 7

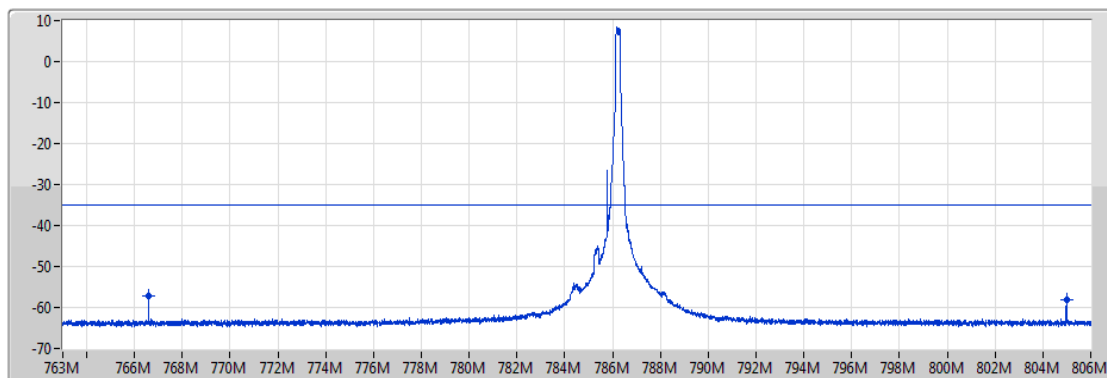


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
677M	777M	100k	300k	RMS	766.6M	-51.35	-13.00	-38.35	1	-
787M	787.1M	30k	100k	RMS	787M	-44.56	-13.00	-31.56	1	-
787.1M	807M	30k	100k	RMS	787.15M	-41.12	-13.00	-28.12	1	MBW 100k
807M	887M	100k	300k	RMS	886.92M	-53.12	-13.00	-40.12	1	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

782MHz_QPSK_RB 1,#RB 5,NB 7

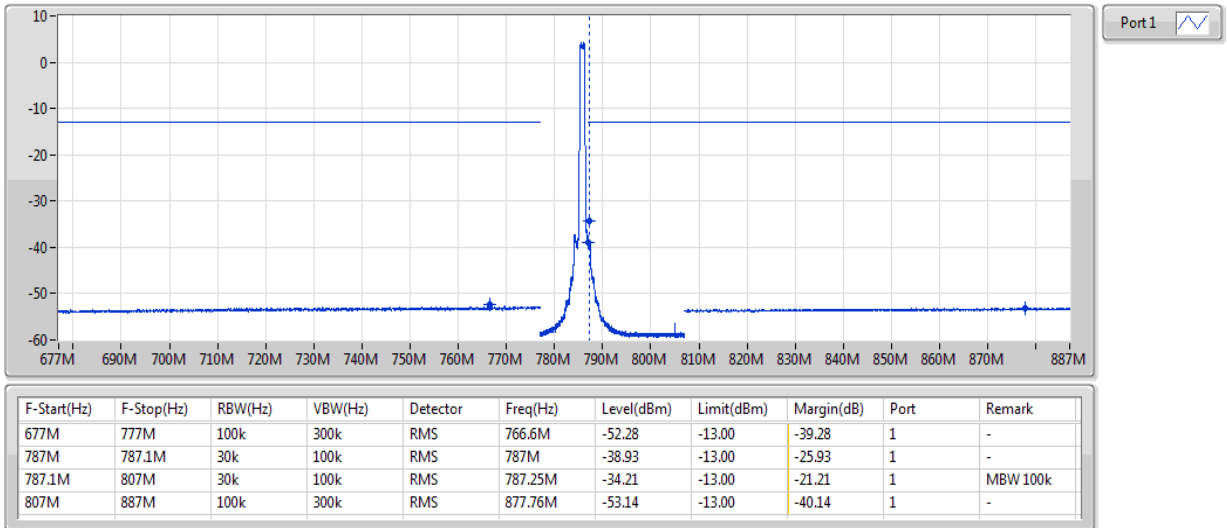


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
763M	775M	10k	30k	RMS	766.58M	-57.06	-35.00	-22.06	1	-
793M	806M	10k	30k	RMS	804.98M	-58.16	-35.00	-23.16	1	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

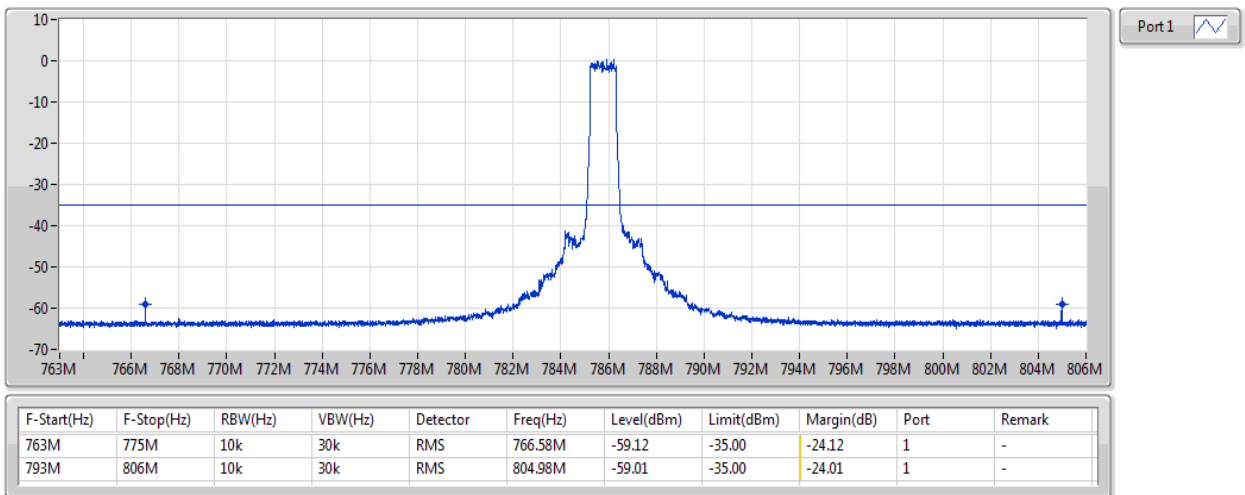
782MHz_QPSK_RB 6,#RB 0,NB 7



Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX

CSE-TX-Port

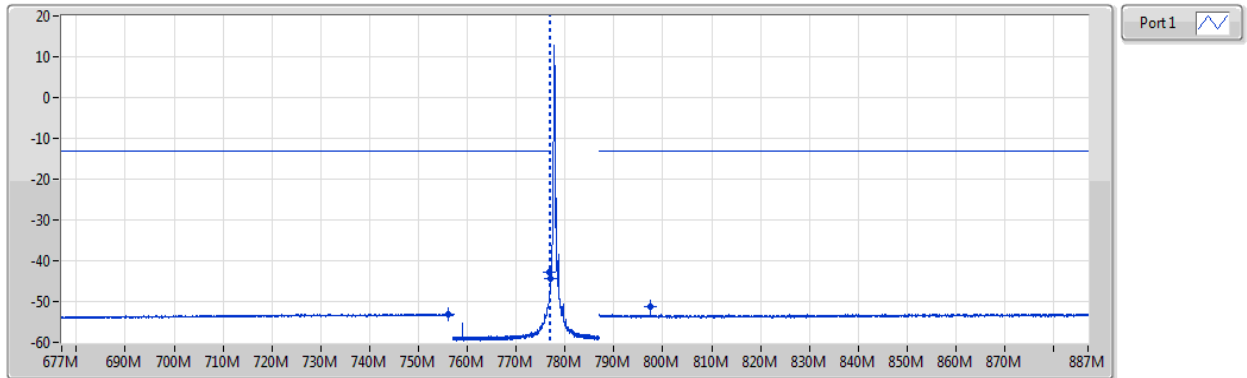
782MHz_QPSK_RB 6,#RB 0,NB 7



Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

782MHz_16QAM_RB 1,#RB 0,NB 0

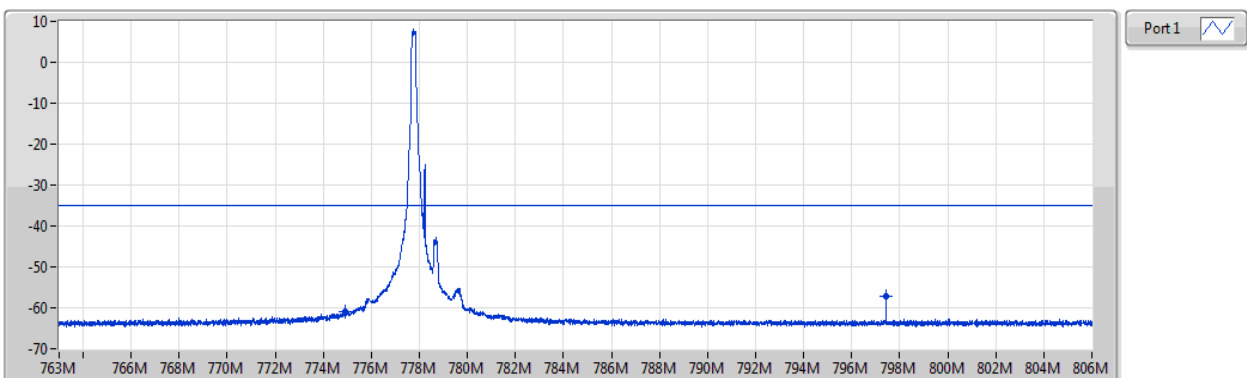


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
677M	757M	100k	300k	RMS	756M	-53.03	-13.00	-40.03	1	-	-
757M	776.9M	30k	100k	RMS	776.85M	-42.87	-13.00	-29.87	1	MBW 100k	-
776.9M	777M	30k	100k	RMS	776.99M	-44.31	-13.00	-31.31	1	-	-
787M	887M	100k	300k	RMS	797.4M	-51.24	-13.00	-38.24	1	-	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

782MHz_16QAM_RB 1,#RB 0,NB 0

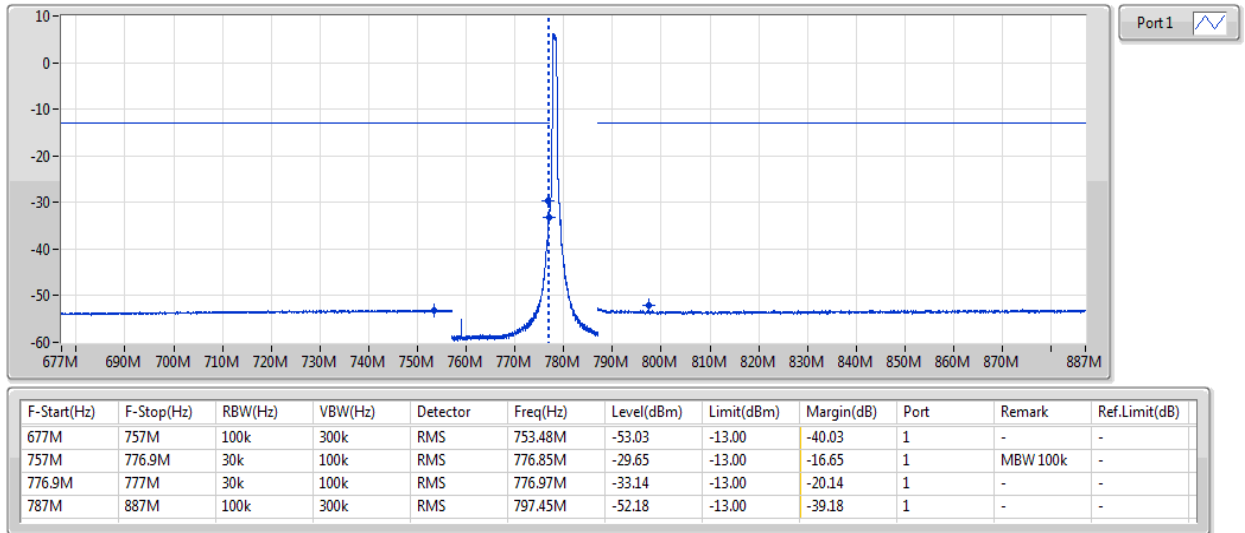


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.9M	-60.93	-35.00	-25.93	1	-	-
793M	806M	10k	30k	RMS	797.42M	-57.27	-35.00	-22.27	1	-	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

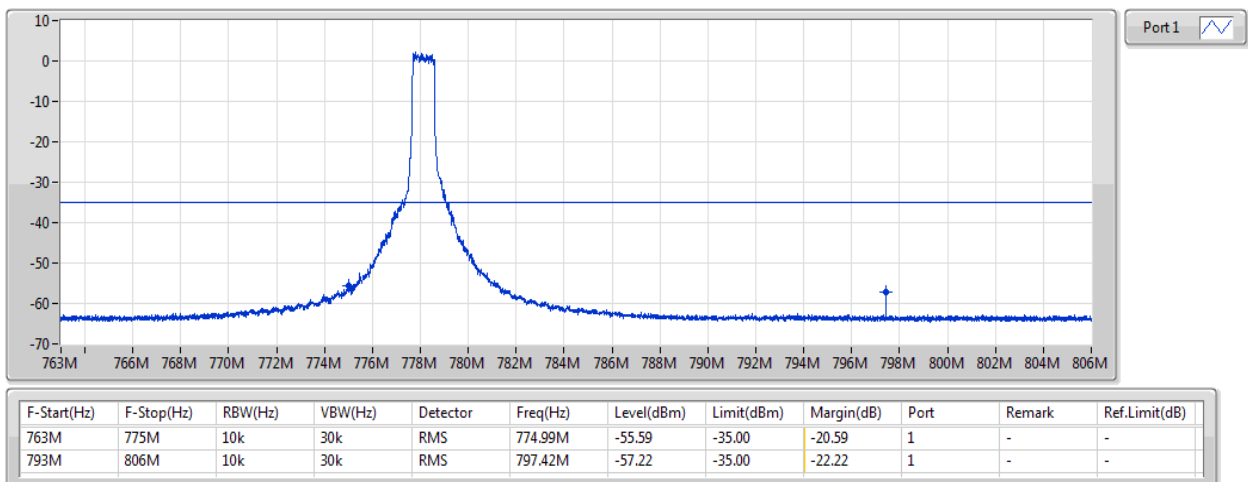
782MHz_16QAM_RB 5,#RB 0,NB 0



Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

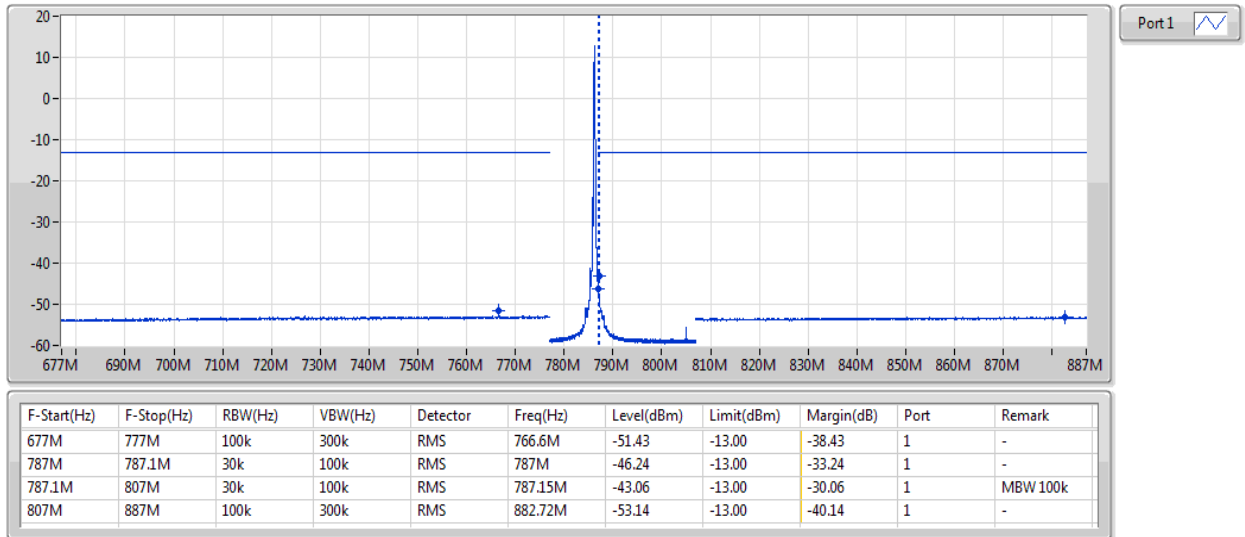
782MHz_16QAM_RB 5,#RB 0,NB 0



Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

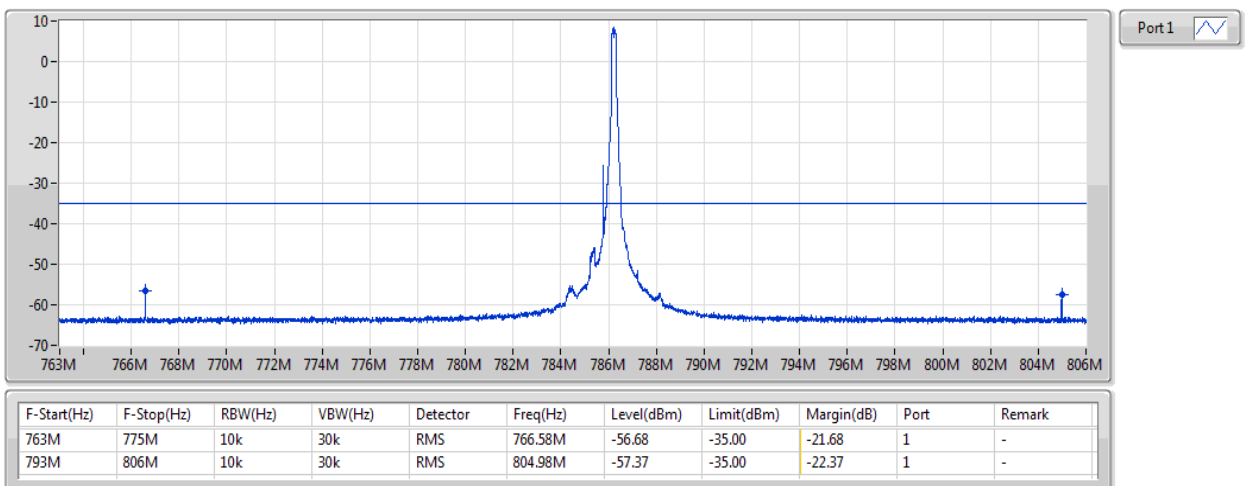
782MHz_16QAM_RB 1,#RB 5,NB 7



Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

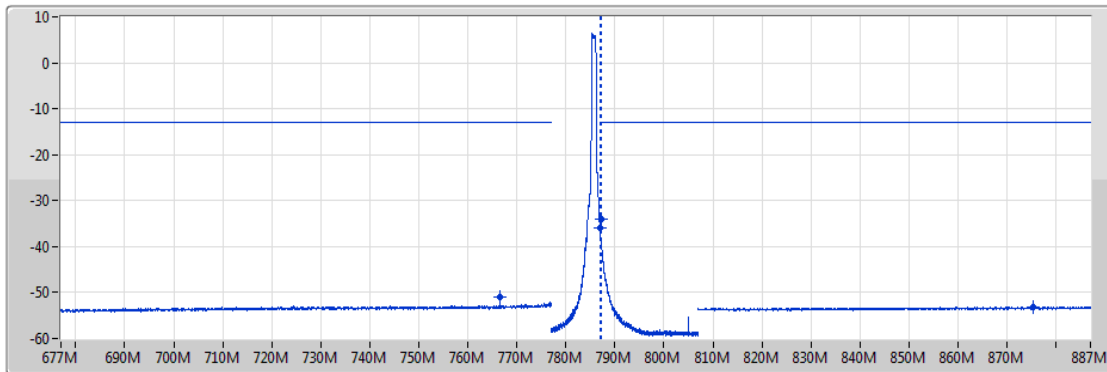
782MHz_16QAM_RB 1,#RB 5,NB 7



Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

782MHz_16QAM_RB 5,#RB 0,NB 7

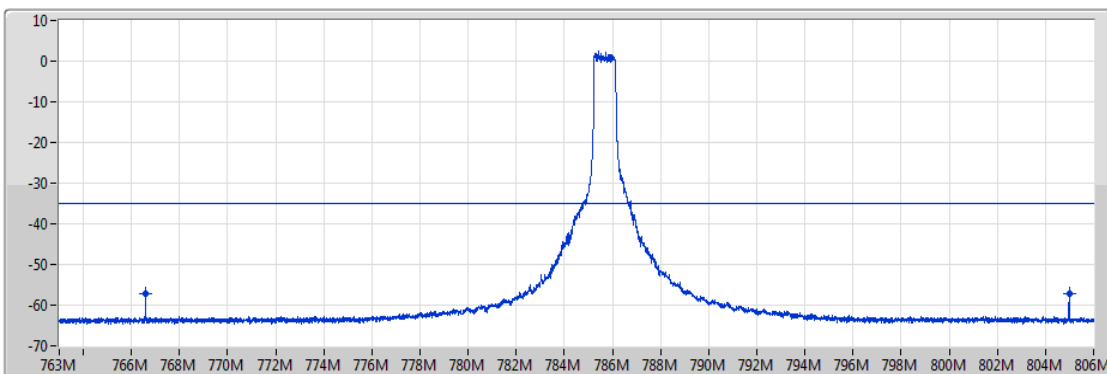


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
677M	777M	100k	300k	RMS	766.6M	-51.10	-13.00	-38.10	1	-
787M	787.1M	30k	100k	RMS	787M	-35.97	-13.00	-22.97	1	-
787.1M	807M	30k	100k	RMS	787.15M	-33.97	-13.00	-20.97	1	MBW 100k
807M	887M	100k	300k	RMS	875.36M	-53.15	-13.00	-40.15	1	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

CSE-TX-Port

782MHz_16QAM_RB 5,#RB 0,NB 7



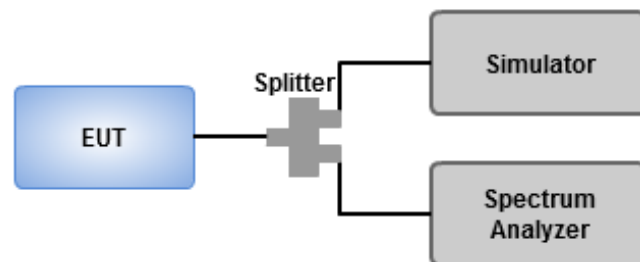
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
763M	775M	10k	30k	RMS	766.58M	-57.11	-35.00	-22.11	1	-
793M	806M	10k	30k	RMS	804.98M	-57.05	-35.00	-22.05	1	-

3.4 Occupied Bandwidth and 26dB Bandwidth

3.4.1 Test Procedures

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
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.

3.4.2 Test Setup



Band 12

3.4.3 Test Result of Occupied and 26 dB Bandwidth

Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 12	-	-	-	-	-
LTE-M1_1.4MHz_Nss1,QPSK_1TX	1.237M	1.078M	1M08G7D	1.223M	1.076M
LTE-M1_1.4MHz_Nss1,16QAM_1TX	1.064M	907.763k	908KW7D	1.047M	899.993k
LTE-M1_3MHz_Nss1,QPSK_1TX	1.241M	1.079M	1M08G7D	1.219M	1.075M
LTE-M1_3MHz_Nss1,16QAM_1TX	1.058M	906.254k	906KW7D	1.054M	902.088k
LTE-M1_5MHz_Nss1,QPSK_1TX	1.244M	1.086M	1M09G7D	1.231M	1.084M
LTE-M1_5MHz_Nss1,16QAM_1TX	1.1M	914.851k	915KW7D	1.031M	911.748k
LTE-M1_10MHz_Nss1,QPSK_1TX	1.238M	1.091M	1M09G7D	1.225M	1.089M
LTE-M1_10MHz_Nss1,16QAM_1TX	1.138M	924.184k	924KW7D	1.075M	909.425k

Max-N dB = Maximum 26dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 26dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

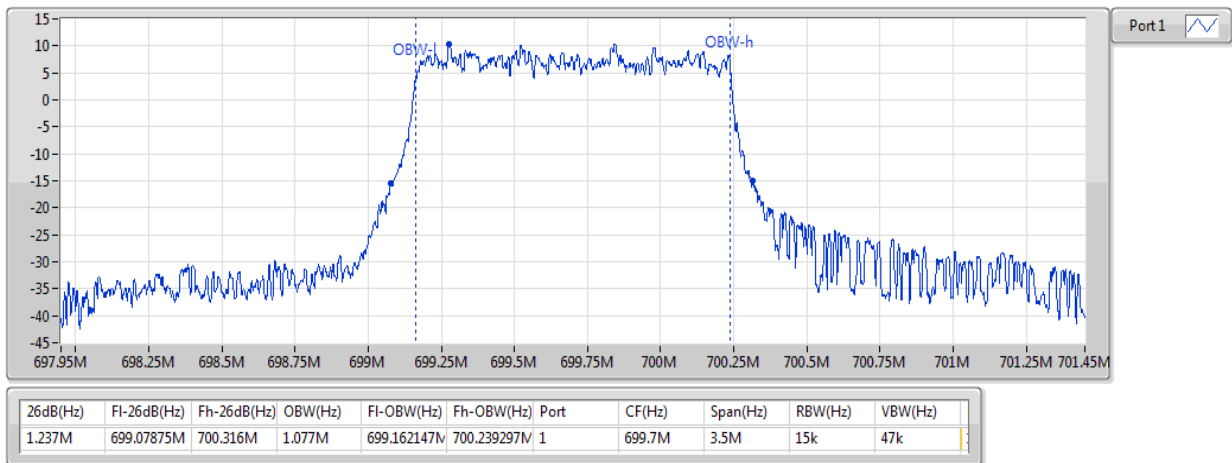
Mode	Result	Limit (Hz)	Port 1-NdB (Hz)	Port 1-OBW (Hz)
Band 12_LTE-M1_1.4MHz_Nss1_1TX	-	-	-	-
699.7MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.237M	1.077M
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.223M	1.078M
715.3MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.223M	1.076M
699.7MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.047M	907.763k
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.064M	899.993k
715.3MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.054M	905.261k
Band 12_LTE-M1_3MHz_Nss1_1TX	-	-	-	-
700.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.23M	1.076M
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.219M	1.075M
714.5MHz_QPSK_RB 6,#RB 0,NB 1	Pass	Inf	1.241M	1.079M
700.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.058M	906.254k
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.054M	905.563k
714.5MHz_16QAM_RB 5,#RB 0,NB 1	Pass	Inf	1.054M	902.088k
Band 12_LTE-M1_5MHz_Nss1_1TX	-	-	-	-
701.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.244M	1.084M
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.231M	1.086M
713.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	Inf	1.244M	1.084M
701.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.031M	911.748k
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.1M	914.851k
713.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	Inf	1.069M	912.022k
Band 12_LTE-M1_10MHz_Nss1_1TX	-	-	-	-
704MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.225M	1.091M
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.238M	1.09M
711MHz_QPSK_RB 6,#RB 0,NB 7	Pass	Inf	1.238M	1.089M
704MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.138M	919.544k
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.138M	924.184k
711MHz_16QAM_RB 5,#RB 0,NB 7	Pass	Inf	1.075M	909.425k

Port X-N dB = Port X 26dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

EBW

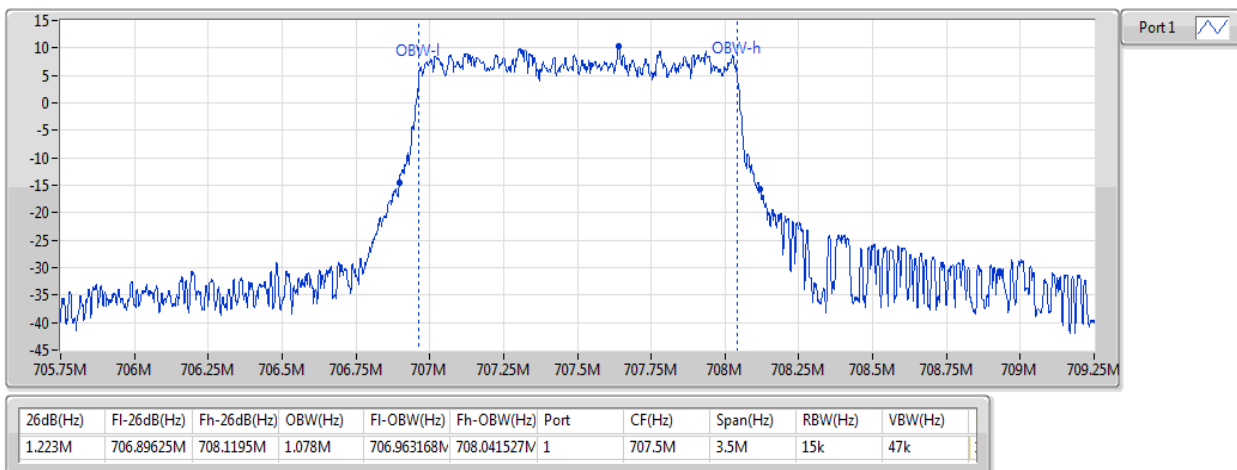
699.7MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

EBW

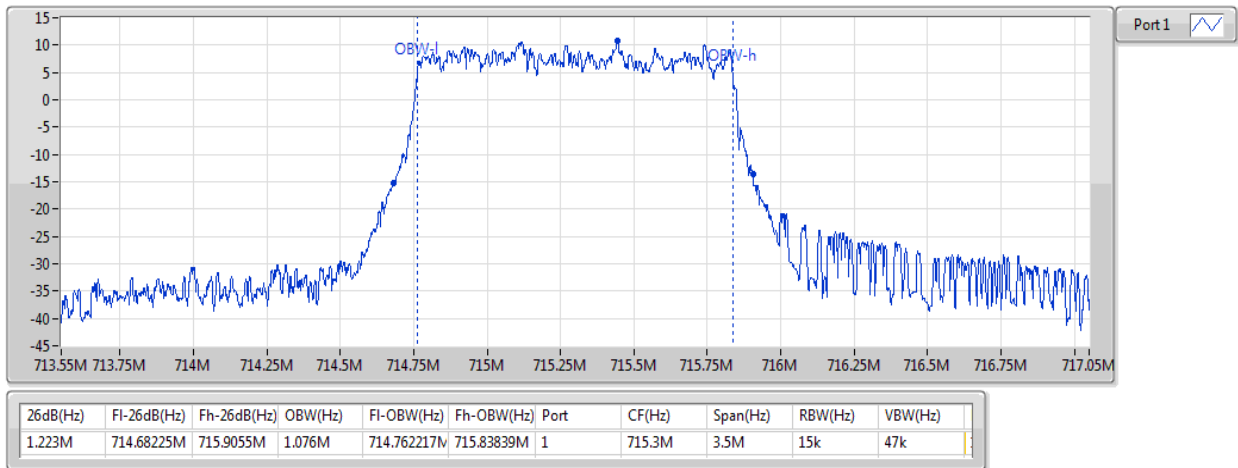
707.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

EBW

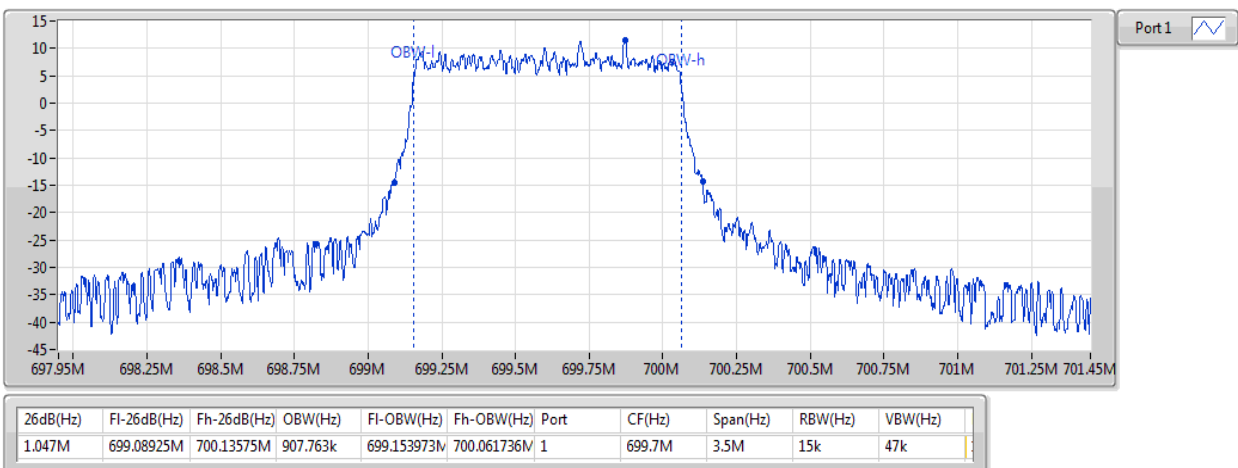
715.3MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

EBW

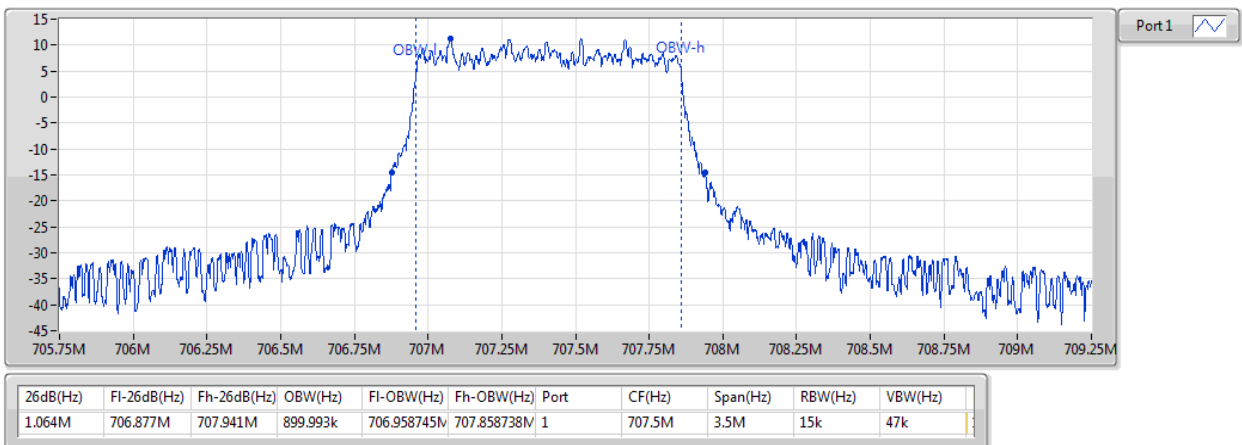
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Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

EBW

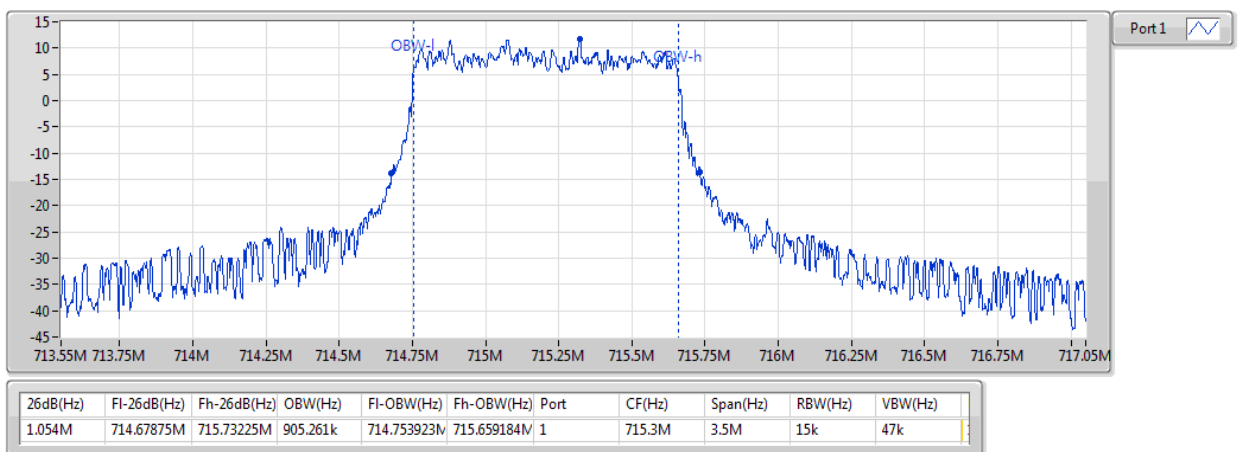
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Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

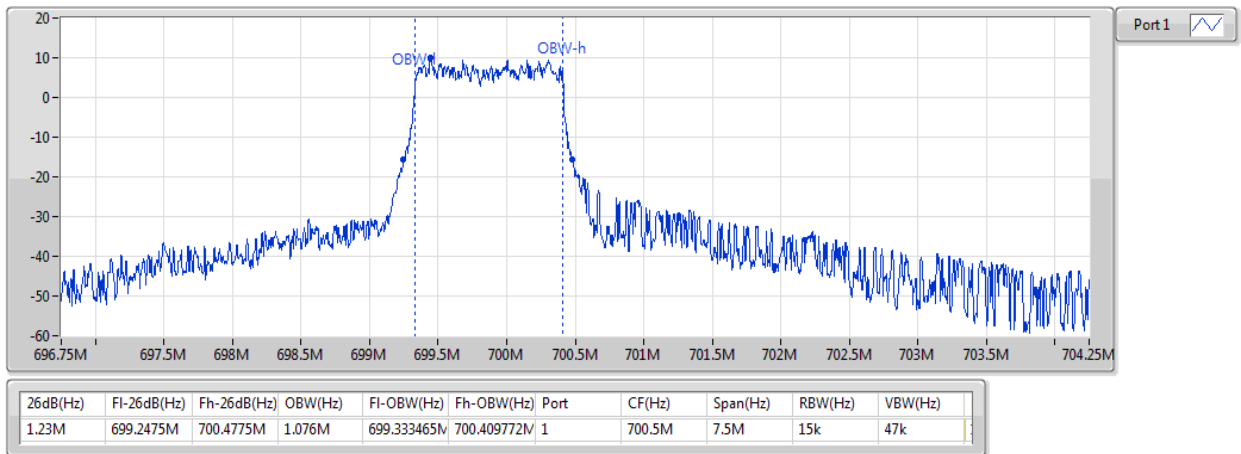
EBW

715.3MHz_16QAM_RB 5,#RB 0,NB 0



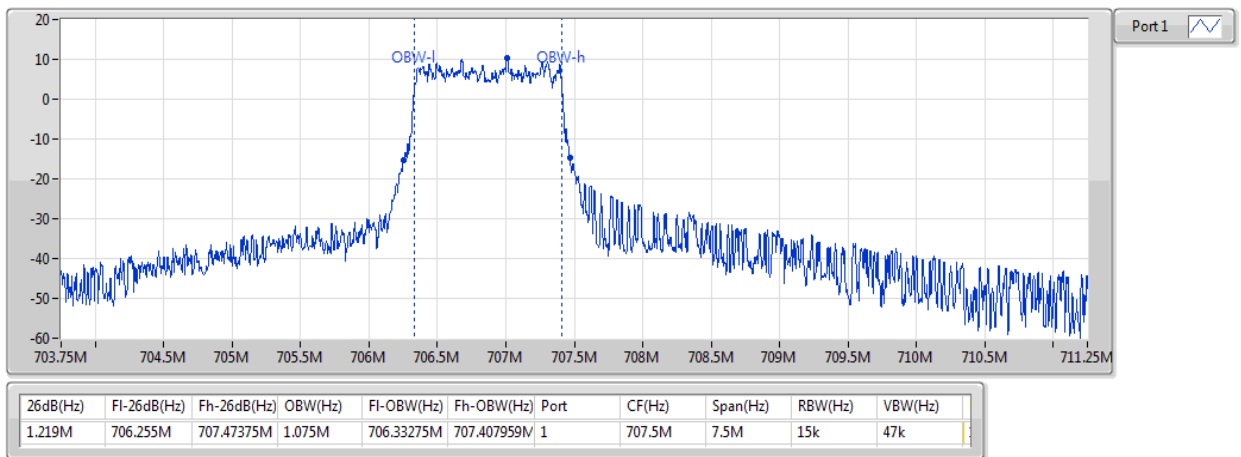
Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX
700.5MHz_QPSK_RB 6,#RB 0,NB 0

EBW



Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX
707.5MHz_QPSK_RB 6,#RB 0,NB 0

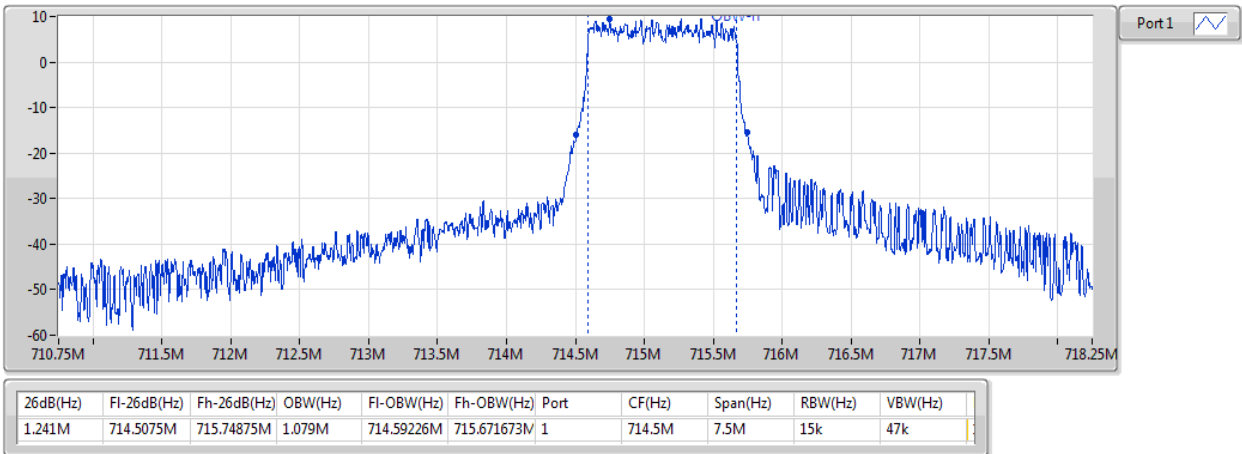
EBW



Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

EBW

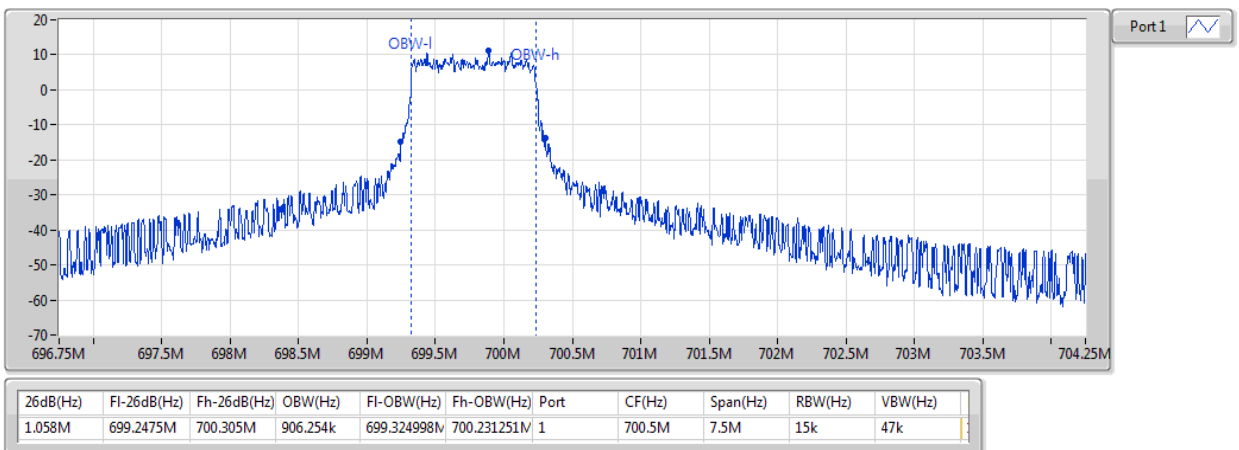
714.5MHz_QPSK_RB 6,#RB 0,NB 1



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

EBW

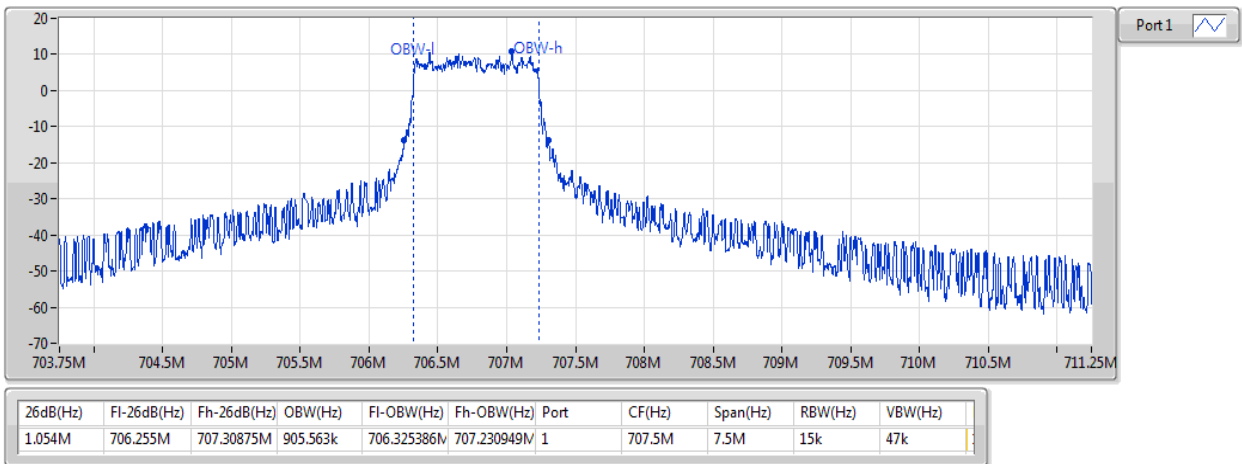
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Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

EBW

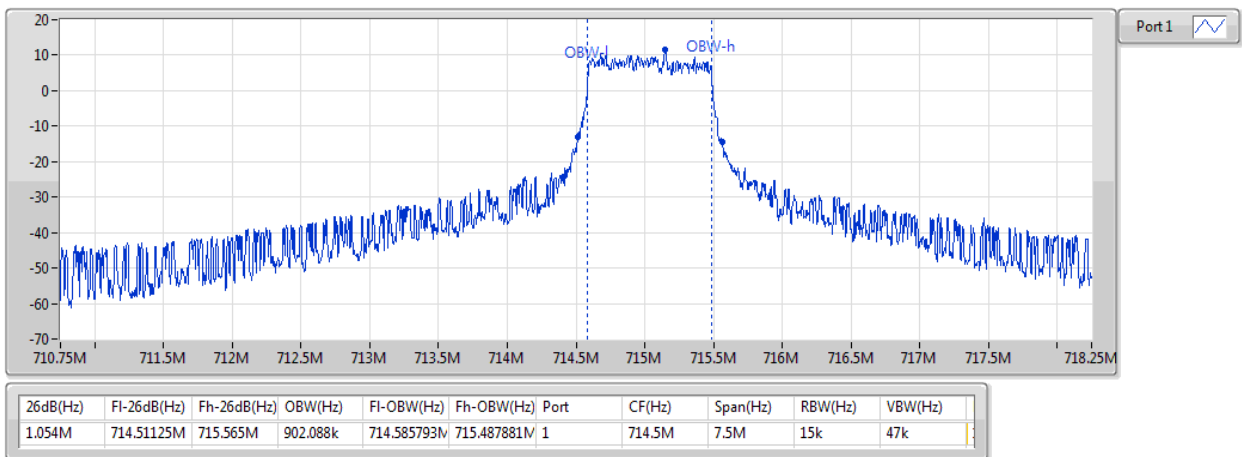
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Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

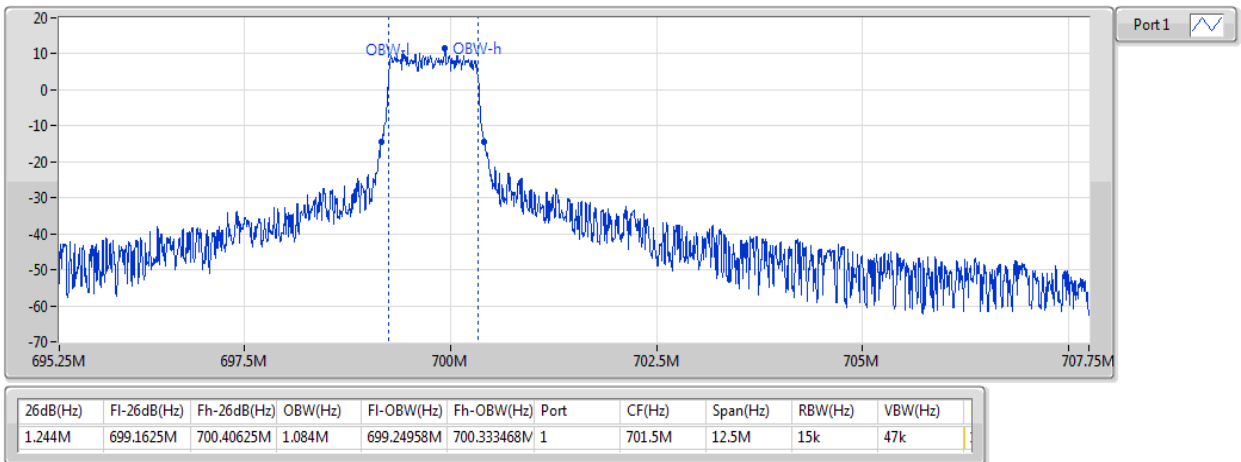
EBW

714.5MHz_16QAM_RB 5,#RB 0,NB 1



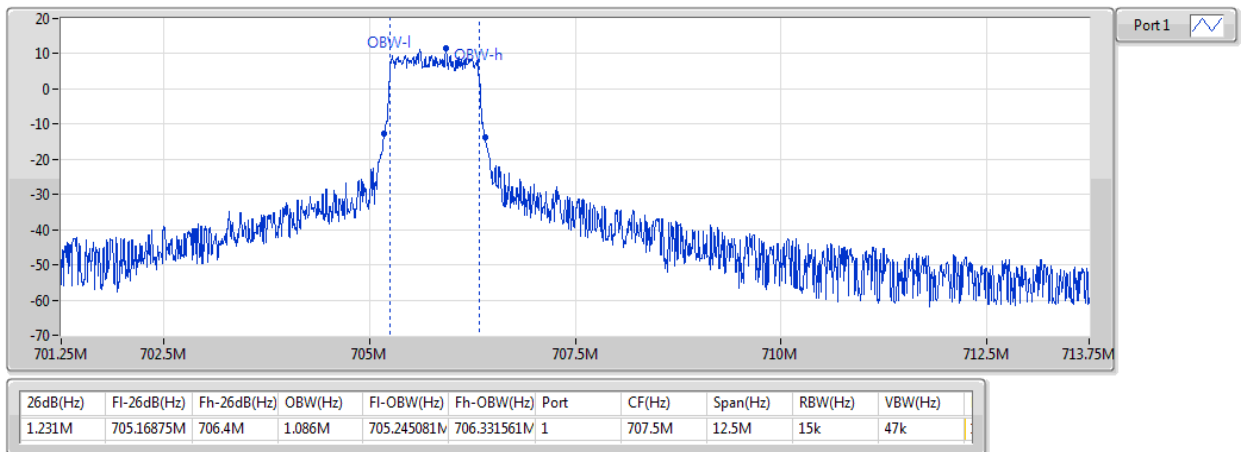
Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX
701.5MHz_QPSK_RB 6,#RB 0,NB 0

EBW



Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX
707.5MHz_QPSK_RB 6,#RB 0,NB 0

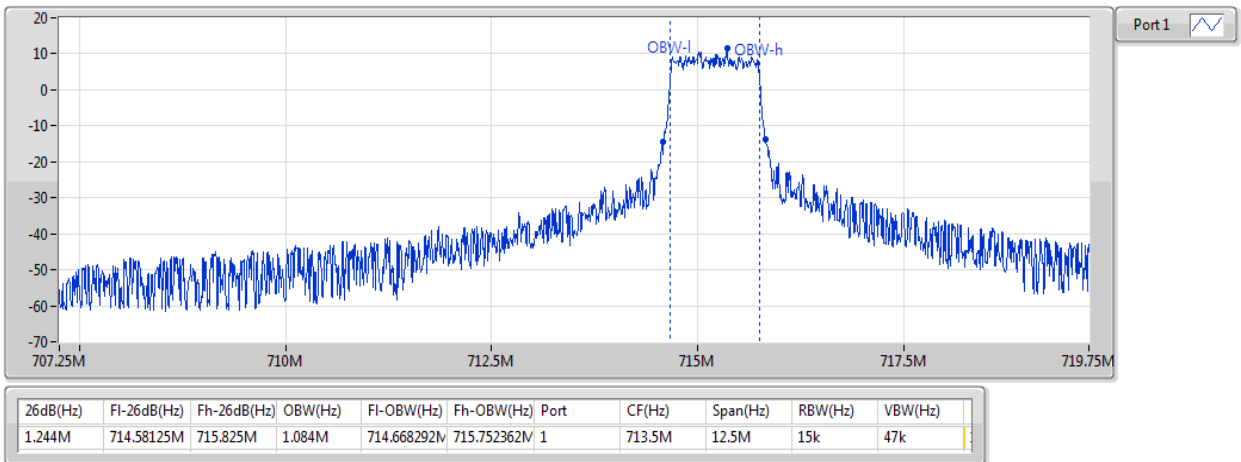
EBW



Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

EBW

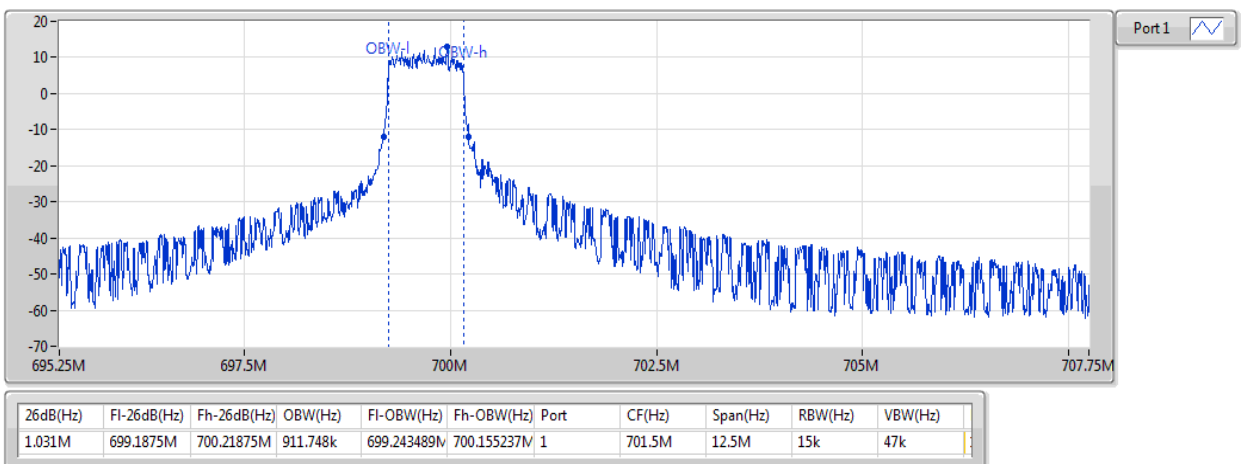
713.5MHz_QPSK_RB 6,#RB 0,NB 3



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

EBW

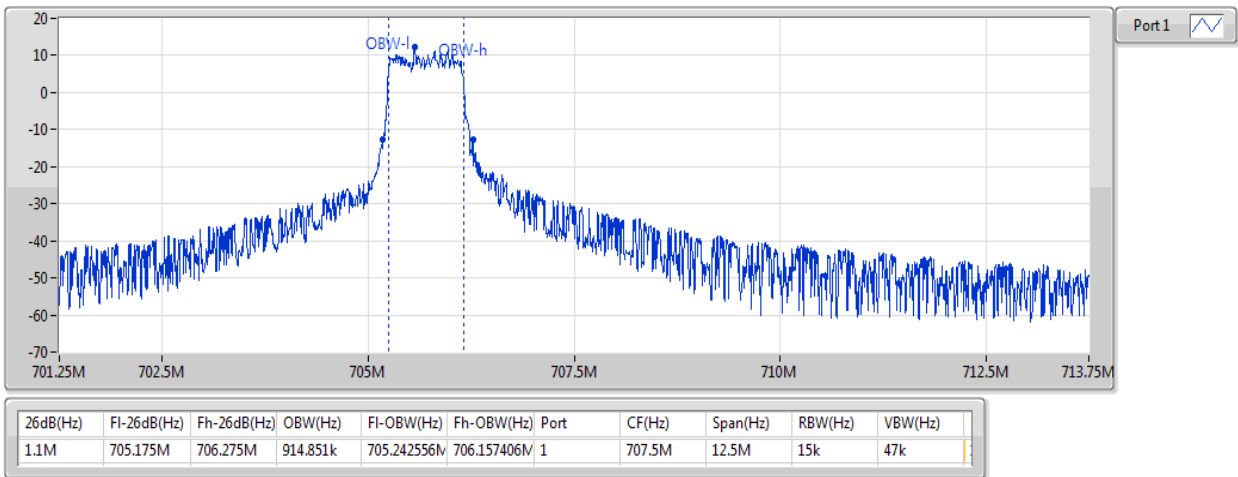
701.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

EBW

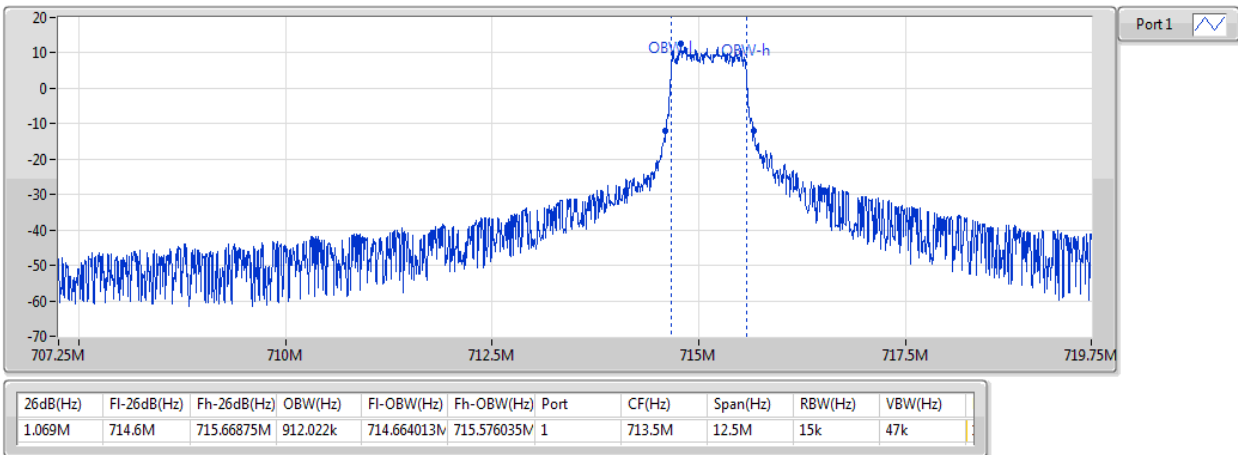
707.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

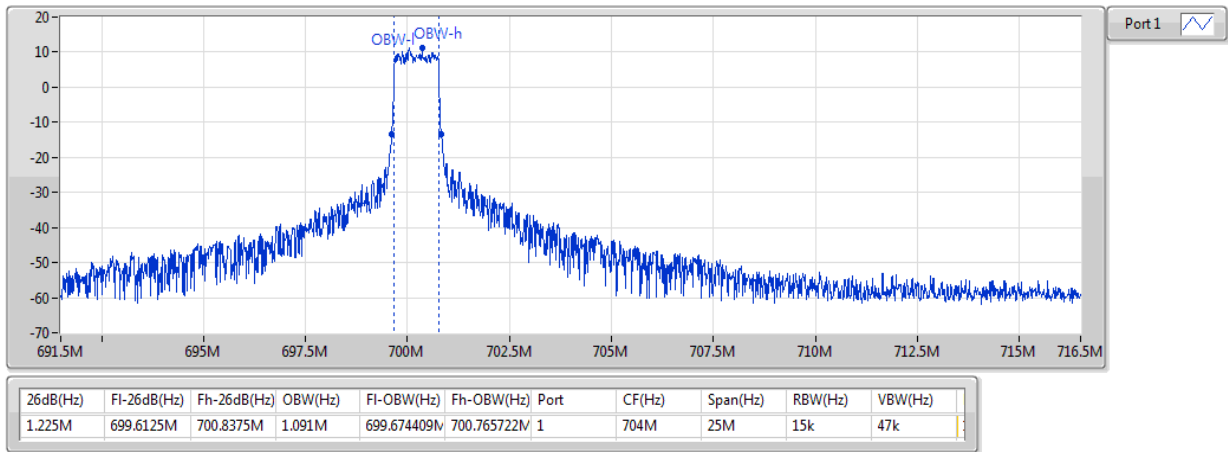
EBW

713.5MHz_16QAM_RB 5,#RB 0,NB 3



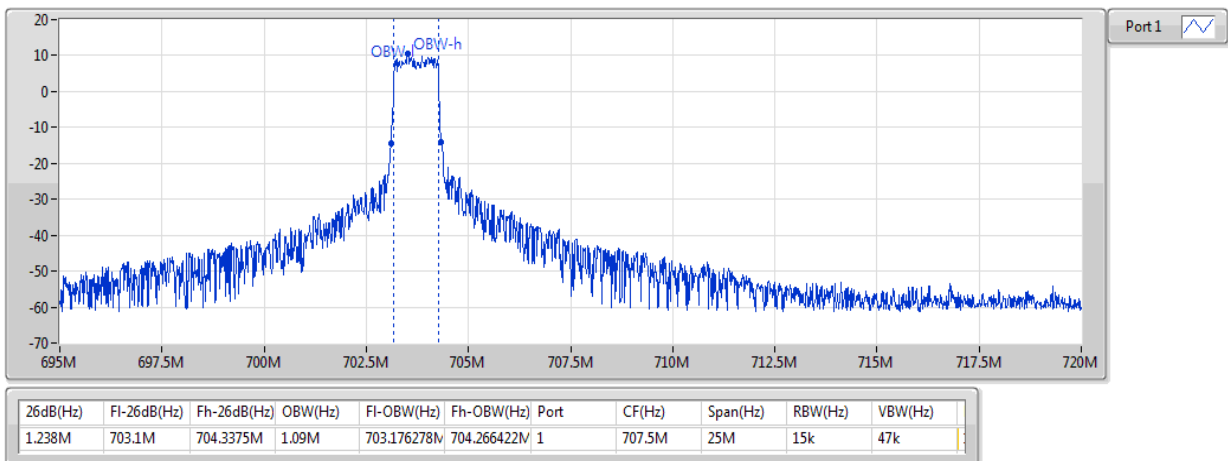
Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX
704MHz_QPSK_RB 6,#RB 0,NB 0

EBW



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX
707.5MHz_QPSK_RB 6,#RB 0,NB 0

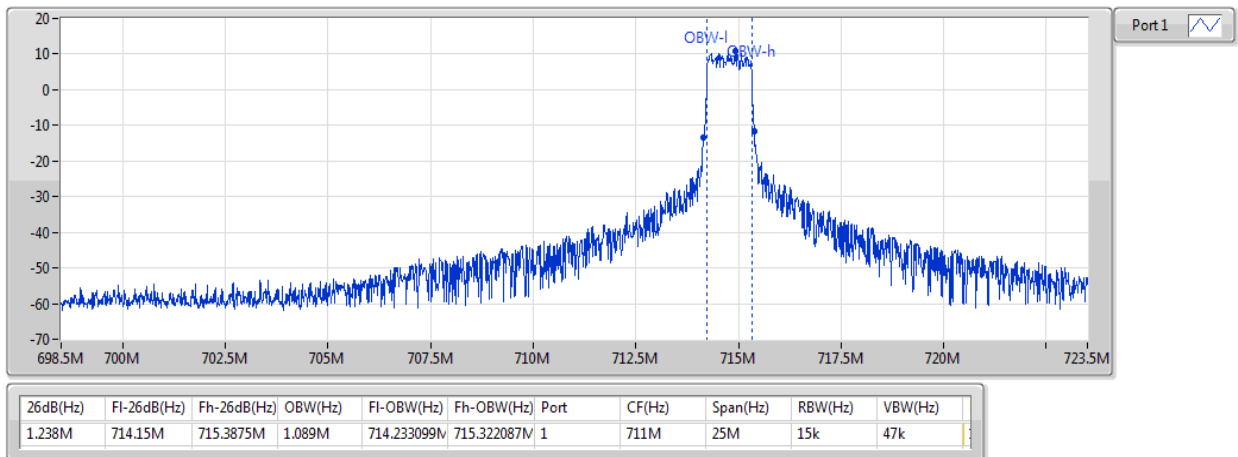
EBW



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

EBW

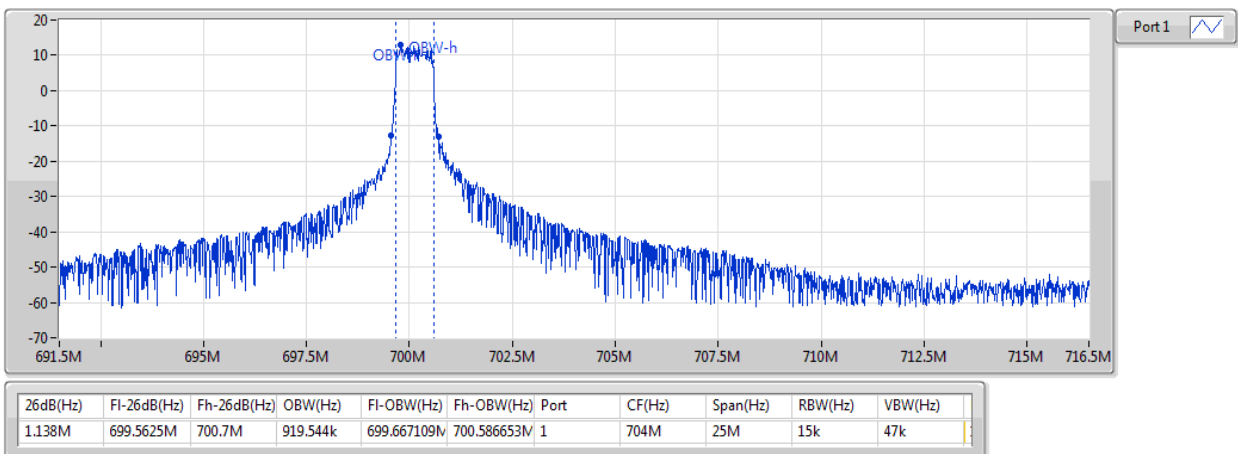
711MHz_QPSK_RB 6,#RB 0,NB 7



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

EBW

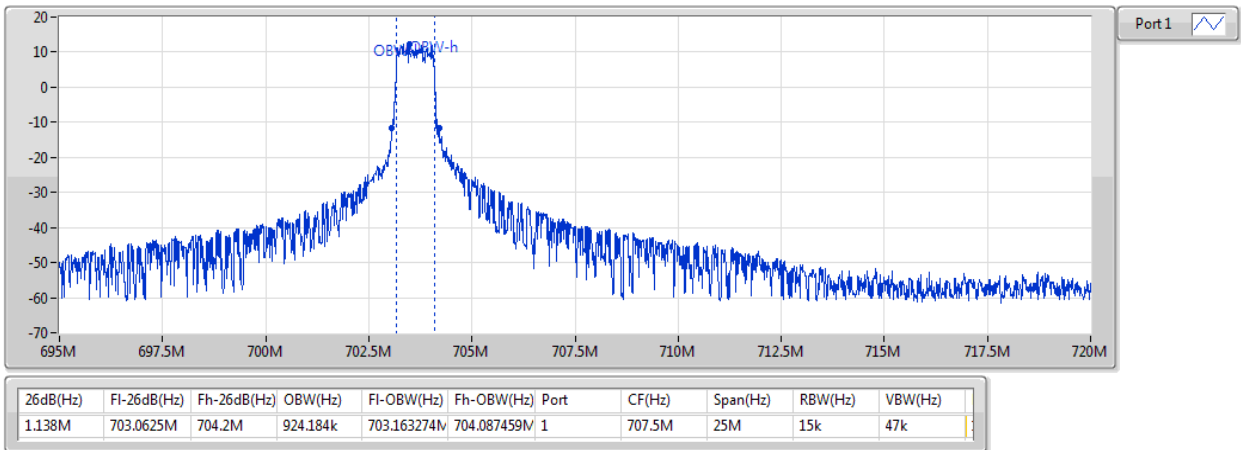
704MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

EBW

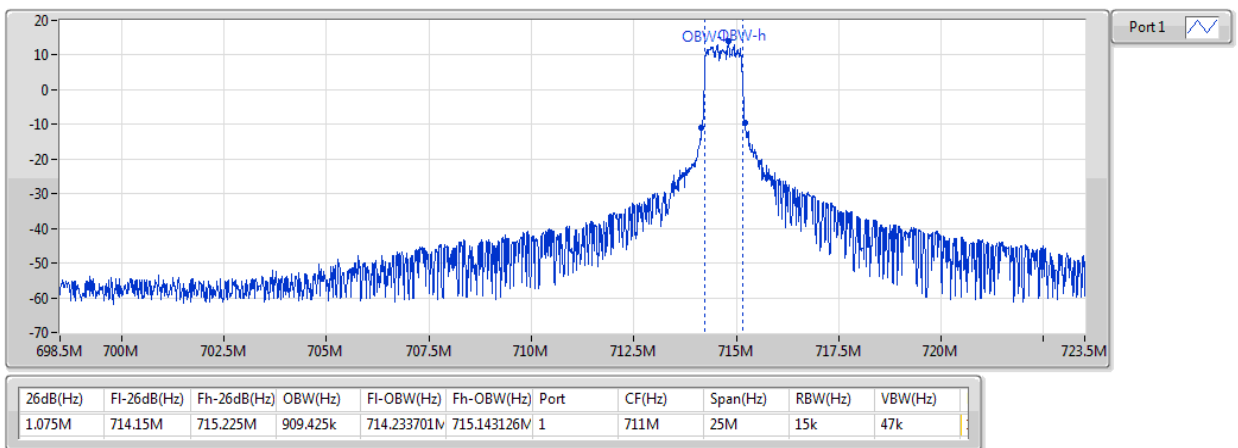
707.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

EBW

711MHz_16QAM_RB 5,#RB 0,NB 7



Band 13

3.4.4 Test Result of Occupied and 26 dB Bandwidth

Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 13	-	-	-	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	1.238M	1.09M	1M09	1.225M	1.086M
LTE-M1_5MHz_Nss1,16QAM_1TX	1.094M	913.03k	913K	1.056M	910.313k
LTE-M1_10MHz_Nss1,QPSK_1TX	1.225M	1.093M	1M09	1.225M	1.093M
LTE-M1_10MHz_Nss1,16QAM_1TX	1.138M	921.112k	921K	1.138M	921.112k

Max-N dB = Maximum 26dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 26dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

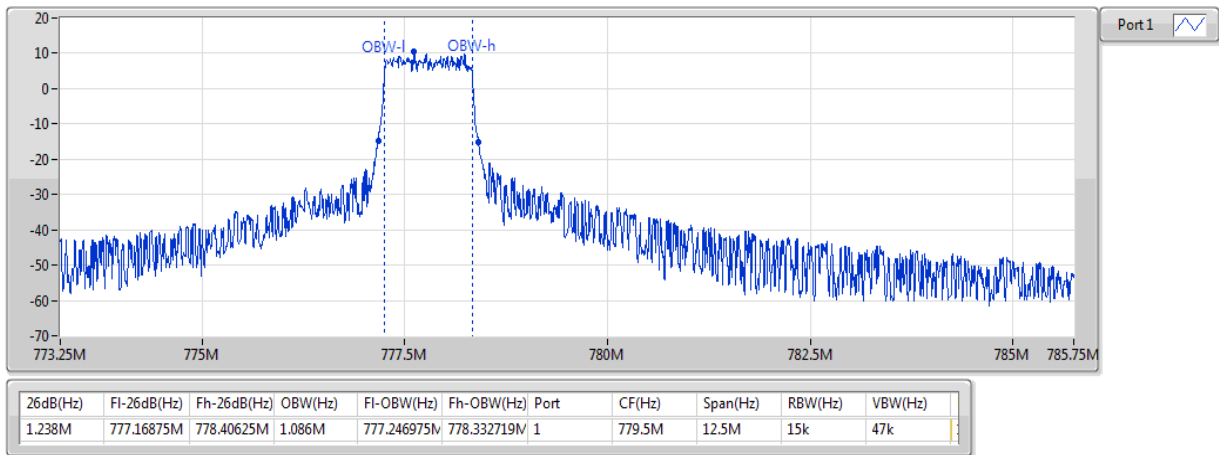
Mode	Result	Limit (Hz)	Port 1-NdB (Hz)	Port 1-OBW (Hz)
Band 13_LTE-M1_5MHz_Nss1_1TX	-	-	-	-
779.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.238M	1.086M
782MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.225M	1.09M
784.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	Inf	1.231M	1.089M
779.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.069M	913.03k
782MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.094M	911.176k
784.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	Inf	1.056M	910.313k
Band 13_LTE-M1_10MHz_Nss1_1TX	-	-	-	-
782MHz_QPSK_RB 6,#RB 0,NB 0	Pass	Inf	1.225M	1.093M
782MHz_16QAM_RB 5,#RB 0,NB 0	Pass	Inf	1.138M	921.112k

Port X-N dB = Port X 26dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

EBW

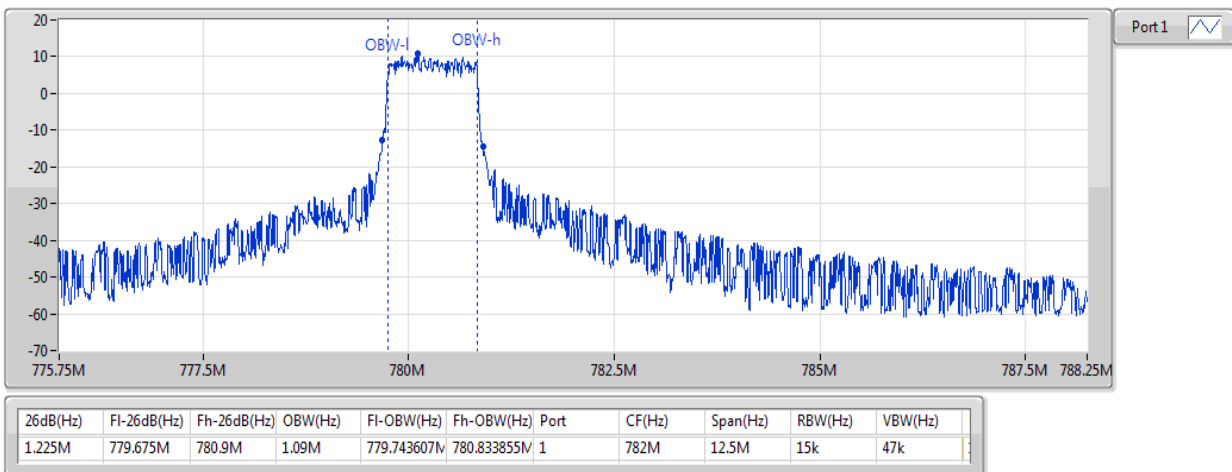
779.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

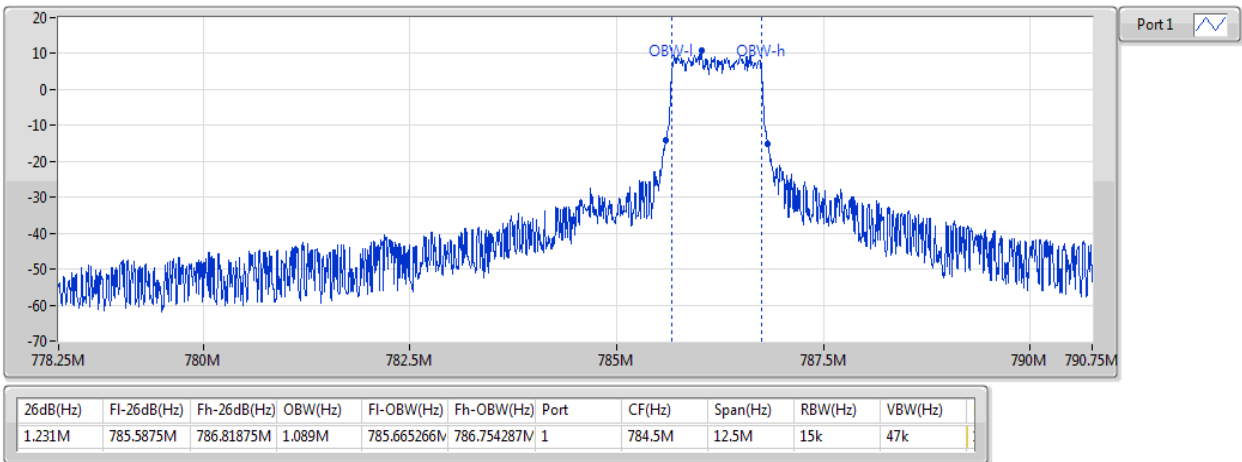
EBW

782MHz_QPSK_RB 6,#RB 0,NB 0



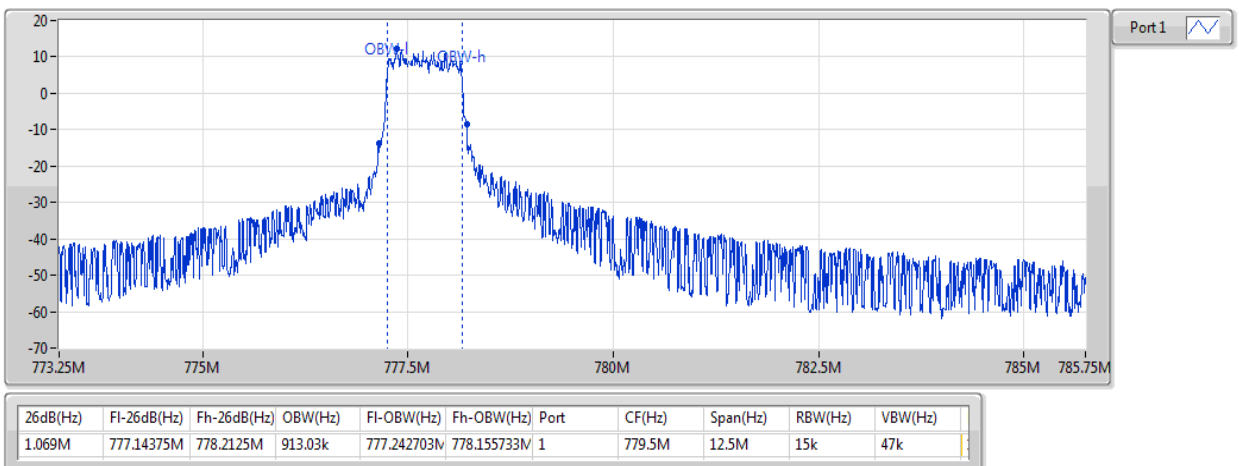
Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX
784.5MHz_QPSK_RB 6,#RB 0,NB 3

EBW



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX
779.5MHz_16QAM_RB 5,#RB 0,NB 0

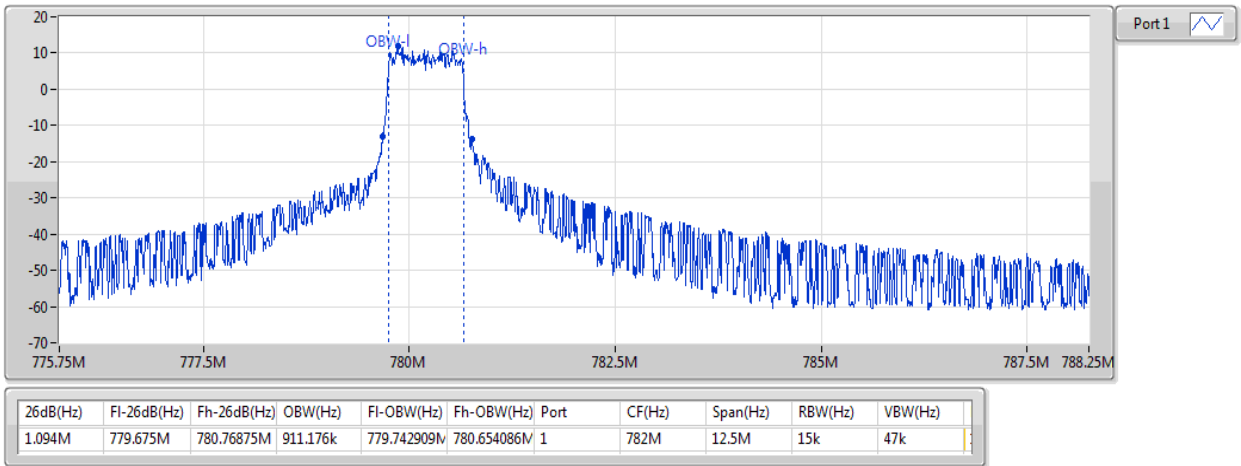
EBW



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

EBW

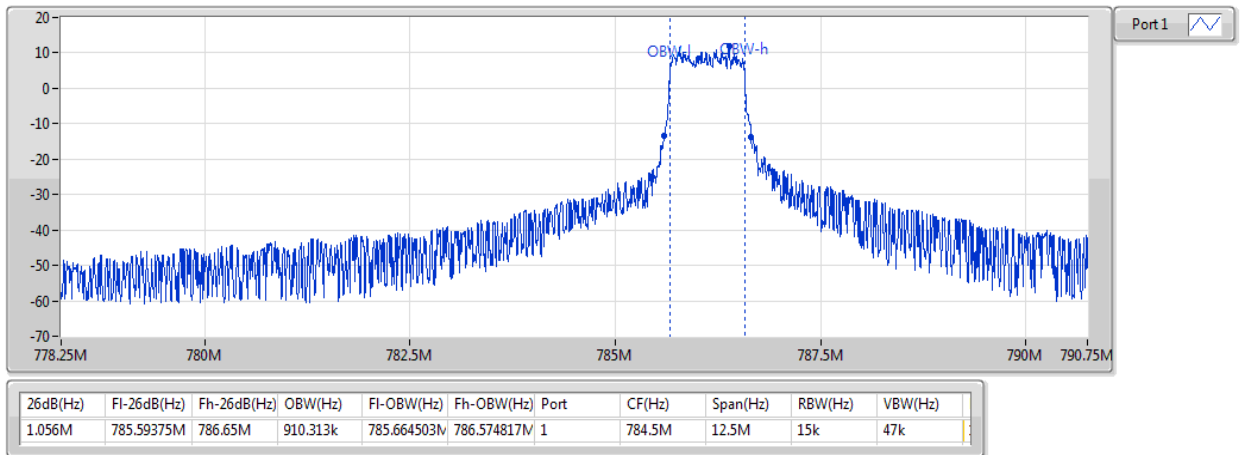
782MHz_16QAM_RB 5,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

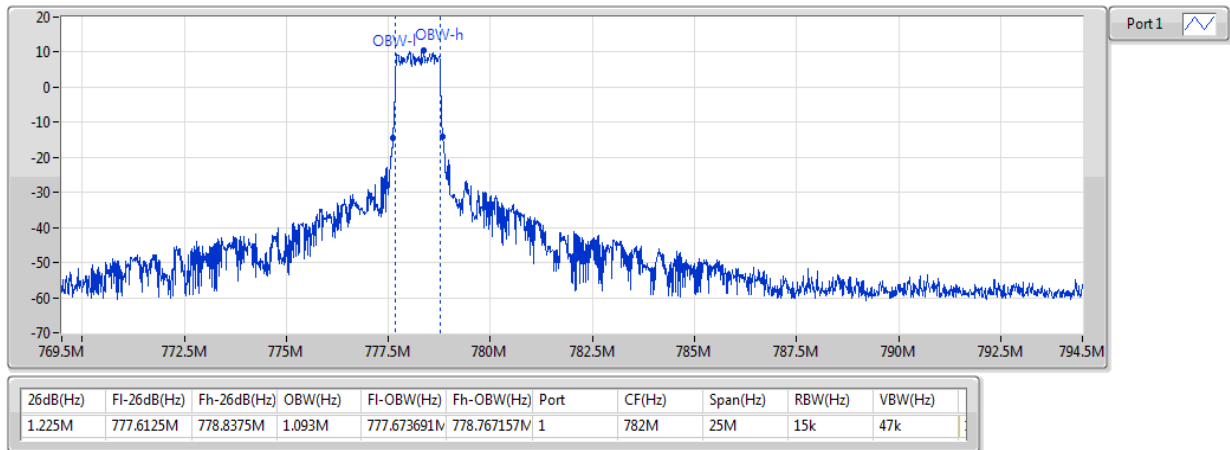
EBW

784.5MHz_16QAM_RB 5,#RB 0,NB 3



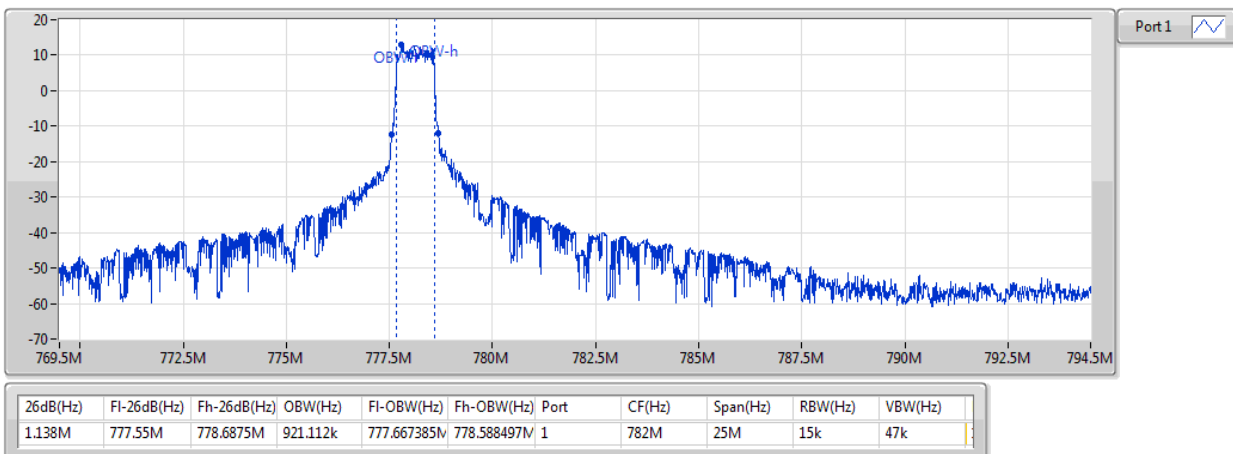
Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX
782MHz_QPSK_RB 6,#RB 0,NB 0

EBW



Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX
782MHz_16QAM_RB 5,#RB 0,NB 0

EBW



3.5 Peak to Average Ratio

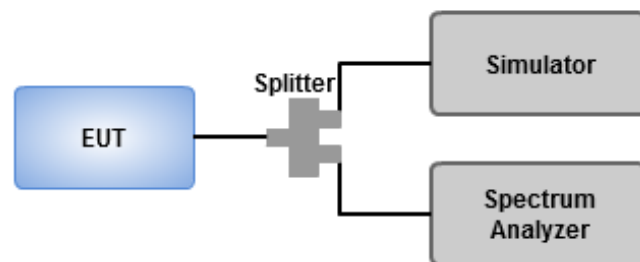
3.5.1 Limit of Peak to Average Ratio

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

3.5.2 Test Procedures

1. Set the number of counts to a value that stabilizes the measured CCDF curve.
2. Set the measurement interval to 1 ms.
3. Record the maximum PAPR level associated with a probability of 0.1%.

3.5.3 Test Setup



Band 12

3.5.4 Test Result of Peak to Average Ratio

Summary

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 12	-	-	-	-	-
LTE-M1_1.4MHz_Nss1,QPSK_1TX	Pass	715.3	13.00	4.94	1
LTE-M1_1.4MHz_Nss1,16QAM_1TX	Pass	707.5	13.00	5.57	1
LTE-M1_3MHz_Nss1,QPSK_1TX	Pass	700.5	13.00	4.93	1
LTE-M1_3MHz_Nss1,16QAM_1TX	Pass	707.5	13.00	5.60	1
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	707.5	13.00	4.73	1
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	707.5	13.00	5.11	1
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	707.5	13.00	4.71	1
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	707.5	13.00	4.54	1

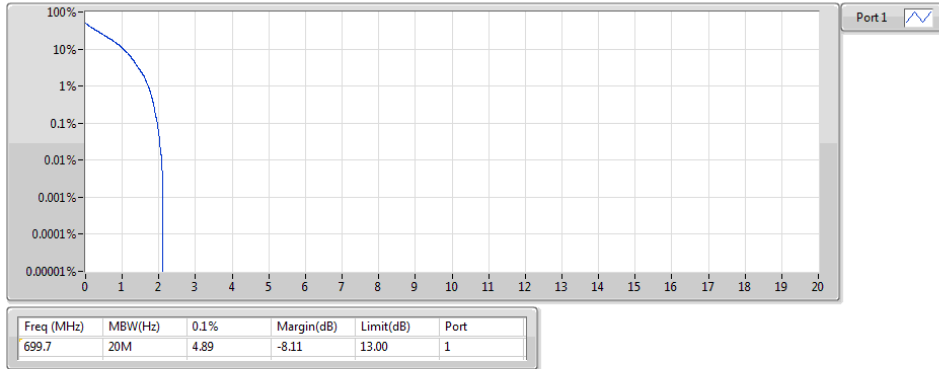
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 12_LTE-M1_1.4MHz_Nss1_1TX	-	-	-	-	-
699.7MHz_QPSK_RB 6,#RB 0,NB 0	Pass	699.7	13.00	4.89	1
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	707.5	13.00	4.92	1
715.3MHz_QPSK_RB 6,#RB 0,NB 0	Pass	715.3	13.00	4.94	1
699.7MHz_16QAM_RB 5,#RB 0,NB 0	Pass	699.7	13.00	5.56	1
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	707.5	13.00	5.57	1
715.3MHz_16QAM_RB 5,#RB 0,NB 0	Pass	715.3	13.00	5.45	1
Band 12_LTE-M1_3MHz_Nss1_1TX	-	-	-	-	-
700.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	700.5	13.00	4.93	1
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	707.5	13.00	4.90	1
714.5MHz_QPSK_RB 6,#RB 0,NB 1	Pass	714.5	13.00	4.83	1
700.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	700.5	13.00	5.54	1
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	707.5	13.00	5.60	1
714.5MHz_16QAM_RB 5,#RB 0,NB 1	Pass	714.5	13.00	5.43	1
Band 12_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-
701.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	701.5	13.00	4.64	1
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	707.5	13.00	4.73	1
713.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	713.5	13.00	4.58	1
701.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	701.5	13.00	5.03	1
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	707.5	13.00	5.11	1
713.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	713.5	13.00	4.87	1
Band 12_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-
704MHz_QPSK_RB 6,#RB 0,NB 0	Pass	704	13.00	4.65	1
707.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	707.5	13.00	4.71	1
711MHz_QPSK_RB 6,#RB 0,NB 7	Pass	711	13.00	4.62	1
704MHz_16QAM_RB 5,#RB 0,NB 0	Pass	704	13.00	4.48	1
707.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	707.5	13.00	4.54	1
711MHz_16QAM_RB 5,#RB 0,NB 7	Pass	711	13.00	4.35	1

Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

PAR

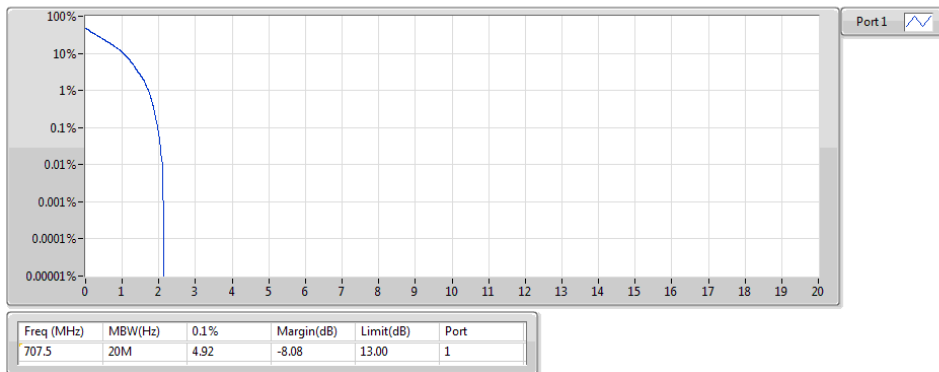
699.7MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

PAR

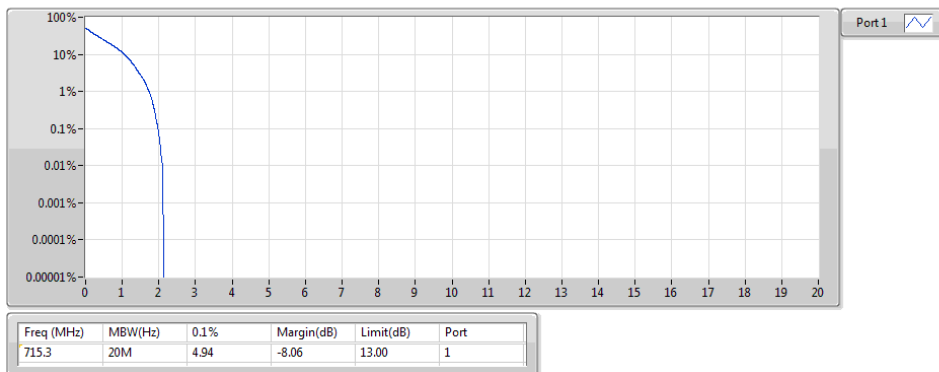
707.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,QPSK_1TX

PAR

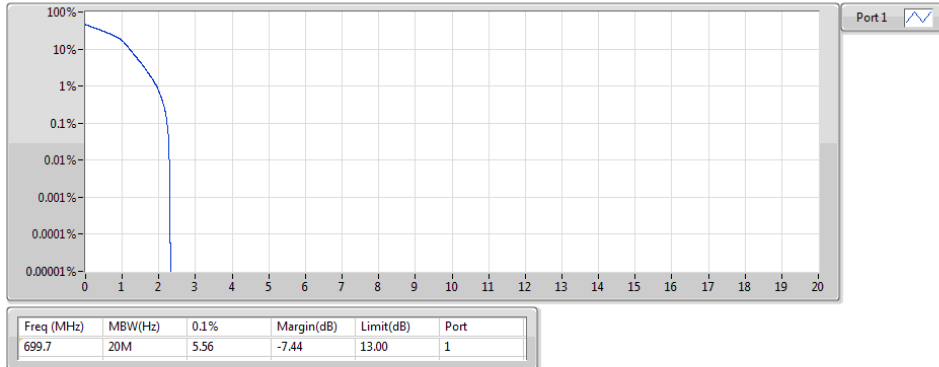
715.3MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

PAR

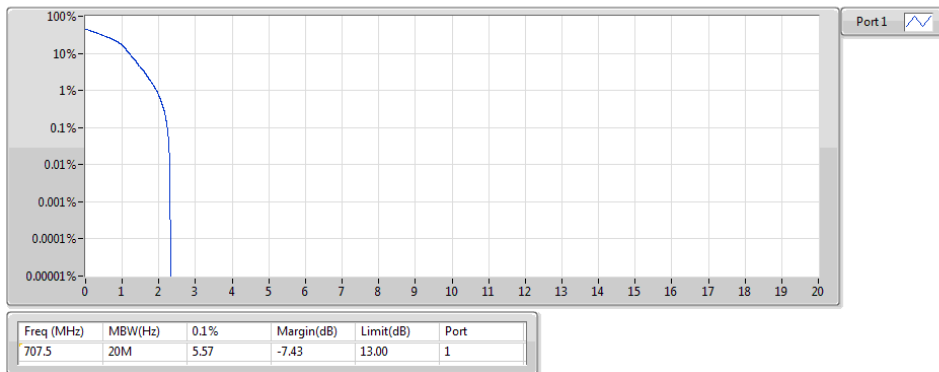
699.7MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

PAR

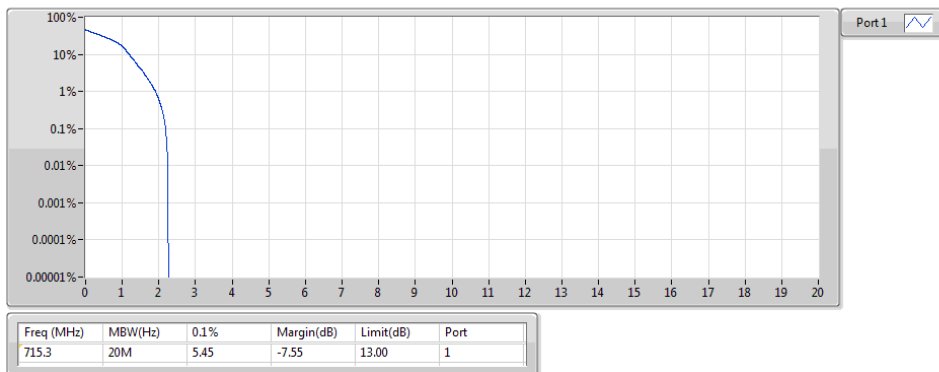
707.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_1.4MHz_Nss1,16QAM_1TX

PAR

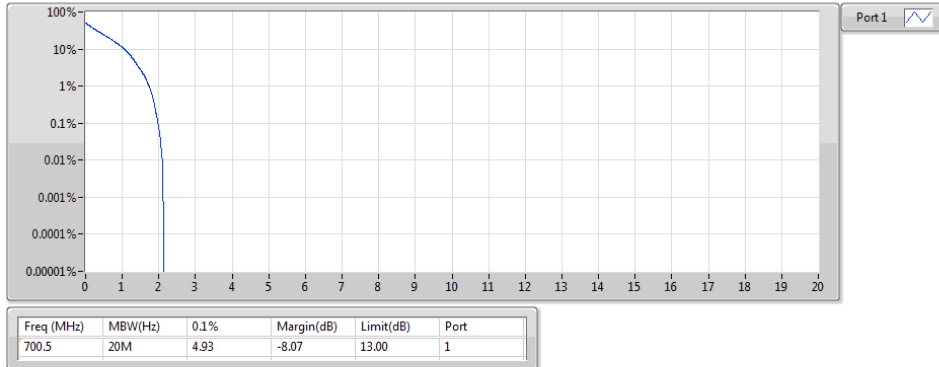
715.3MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

PAR

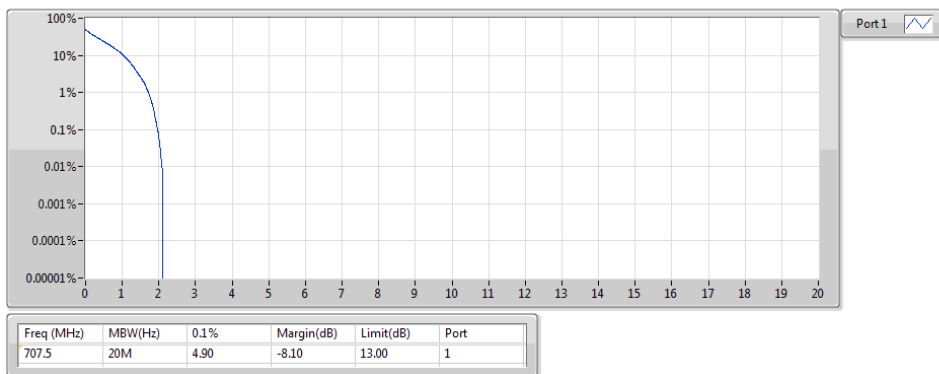
700.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

PAR

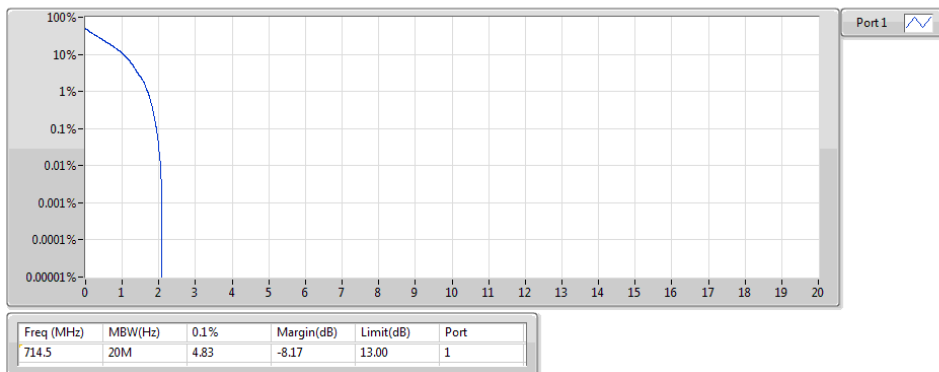
707.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_3MHz_Nss1,QPSK_1TX

PAR

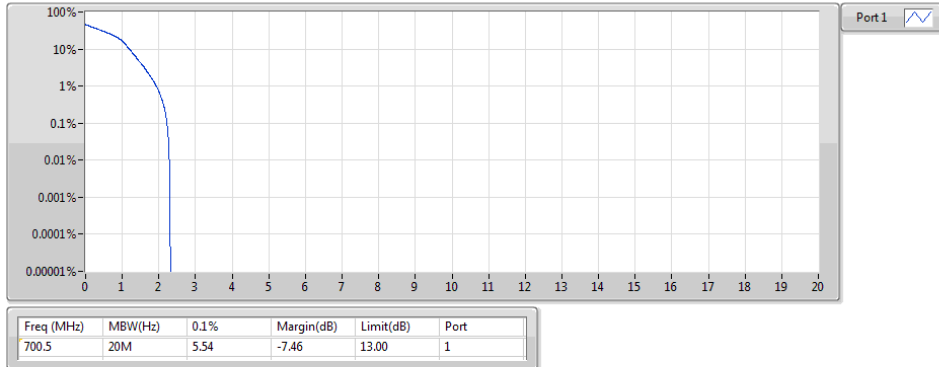
714.5MHz_QPSK_RB 6,#RB 0,NB 1



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

PAR

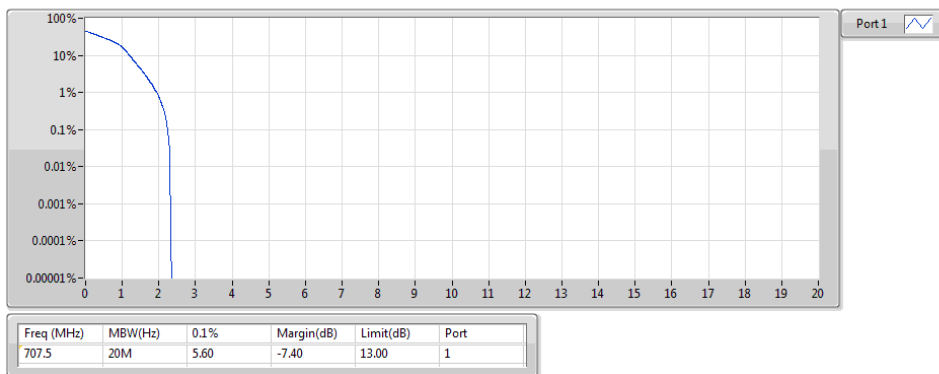
700.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

PAR

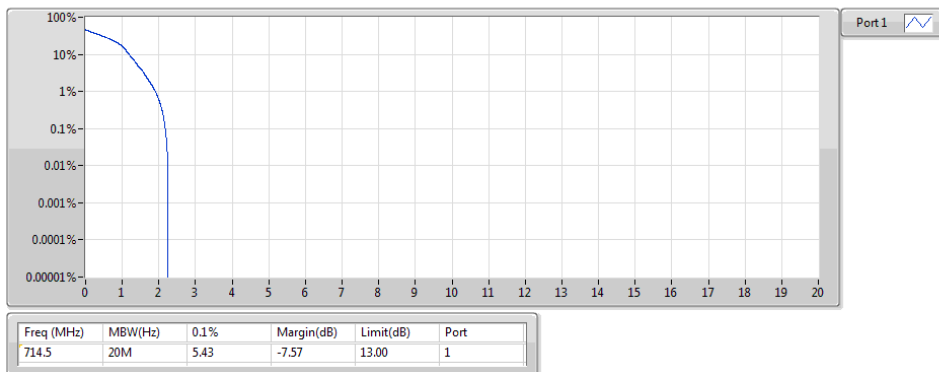
707.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_3MHz_Nss1,16QAM_1TX

PAR

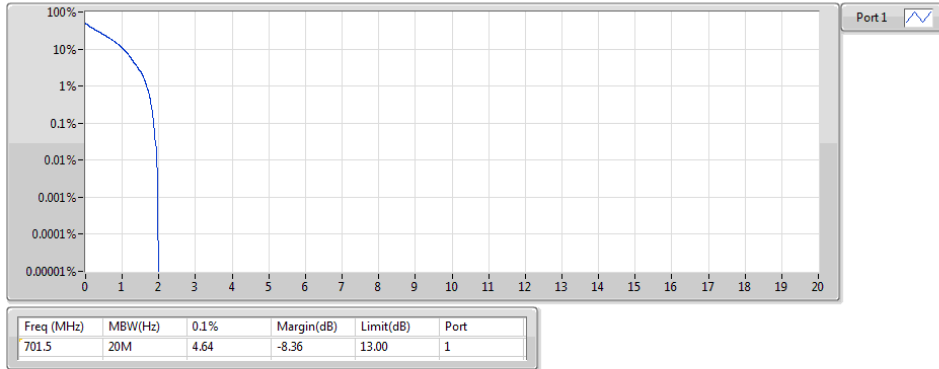
714.5MHz_16QAM_RB 5,#RB 0,NB 1



Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

PAR

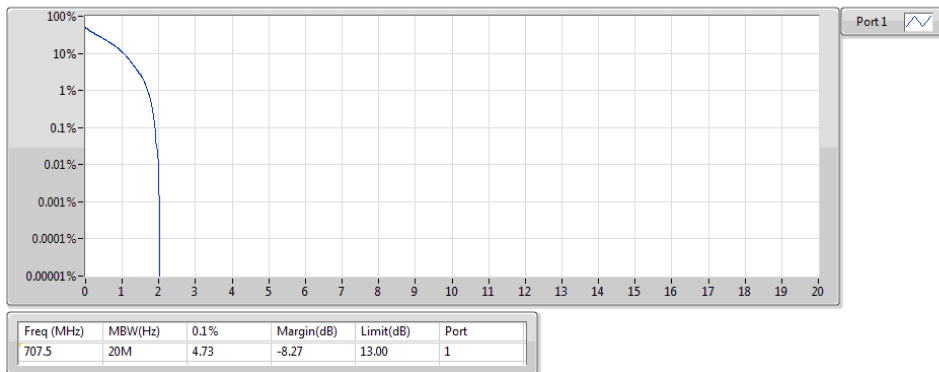
701.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

PAR

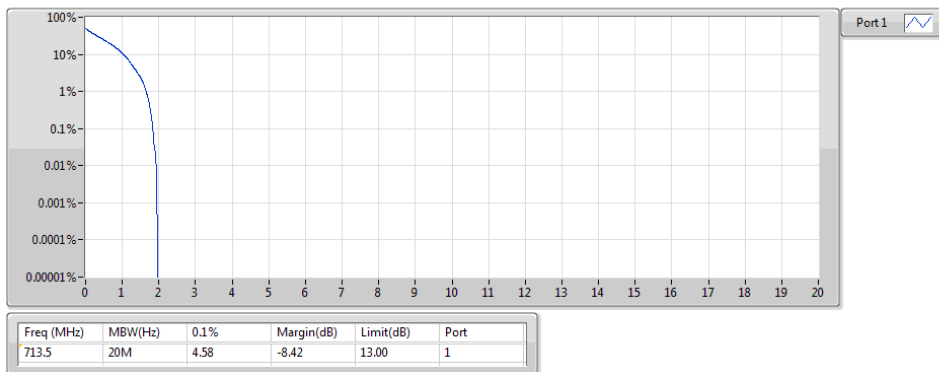
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Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX

PAR

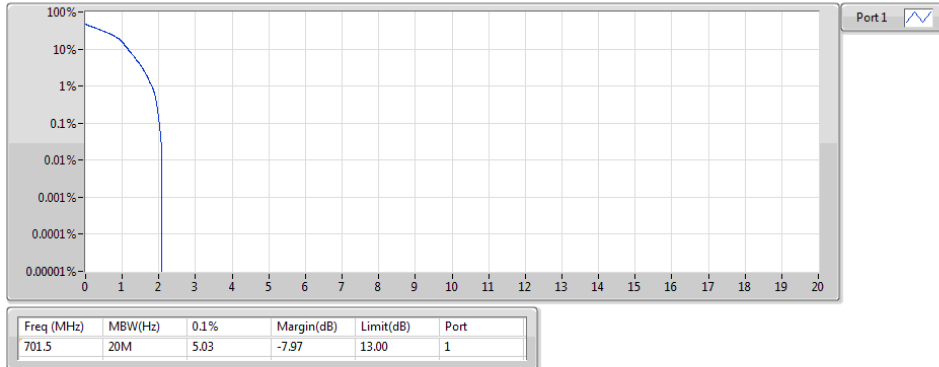
713.5MHz_QPSK_RB 6,#RB 0,NB 3



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

PAR

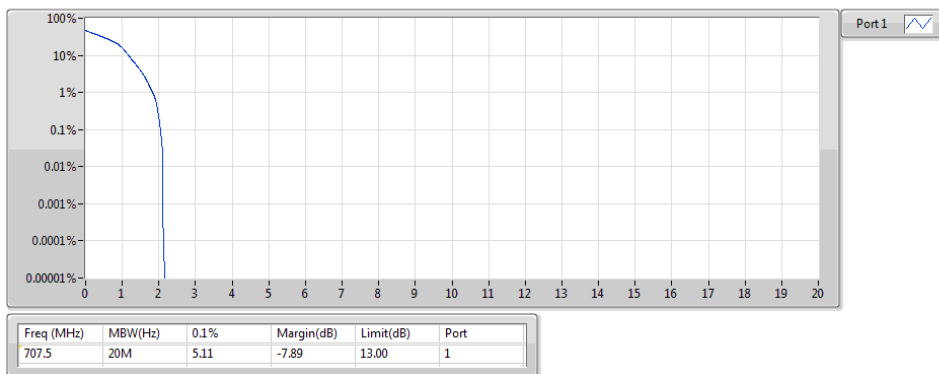
701.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

PAR

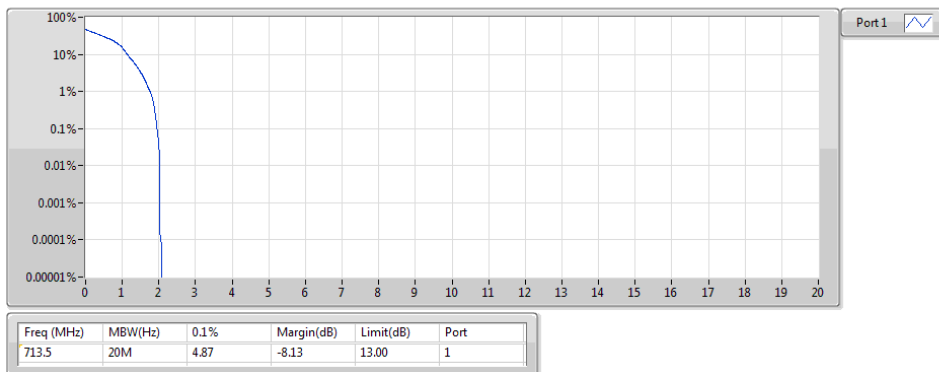
707.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX

PAR

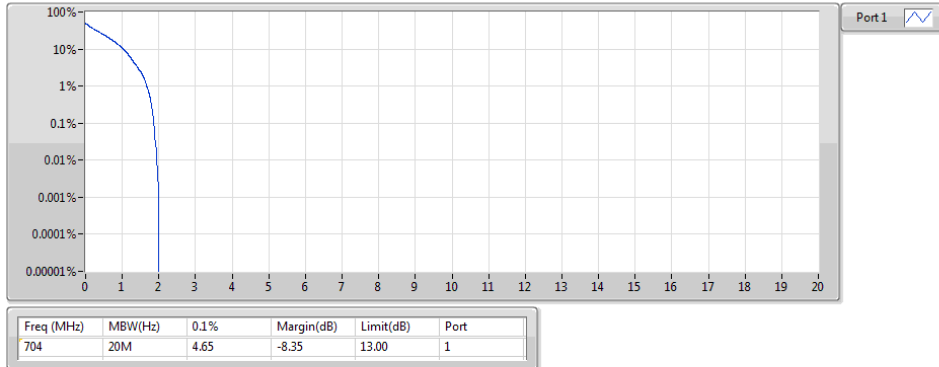
713.5MHz_16QAM_RB 5,#RB 0,NB 3



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

PAR

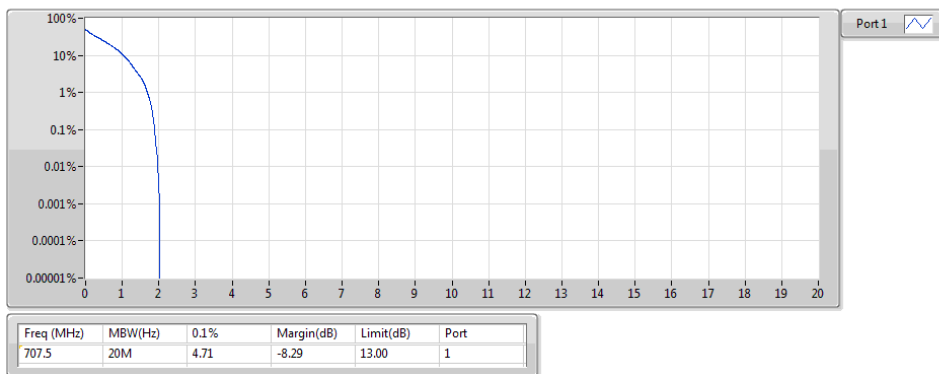
704MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

PAR

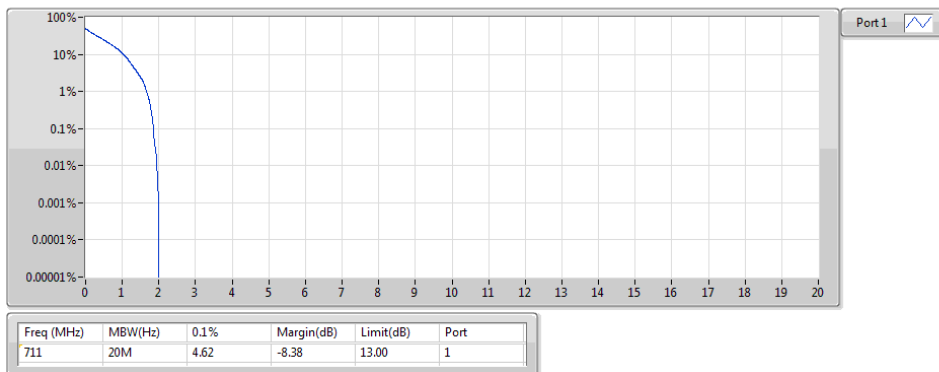
707.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX

PAR

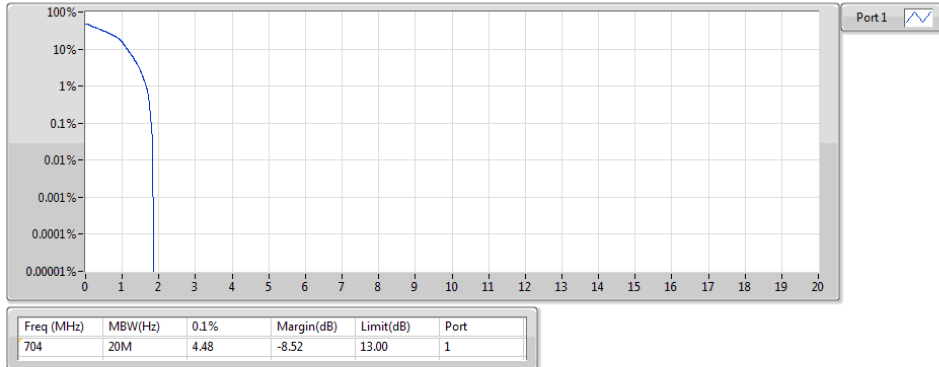
711MHz_QPSK_RB 6,#RB 0,NB 7



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

PAR

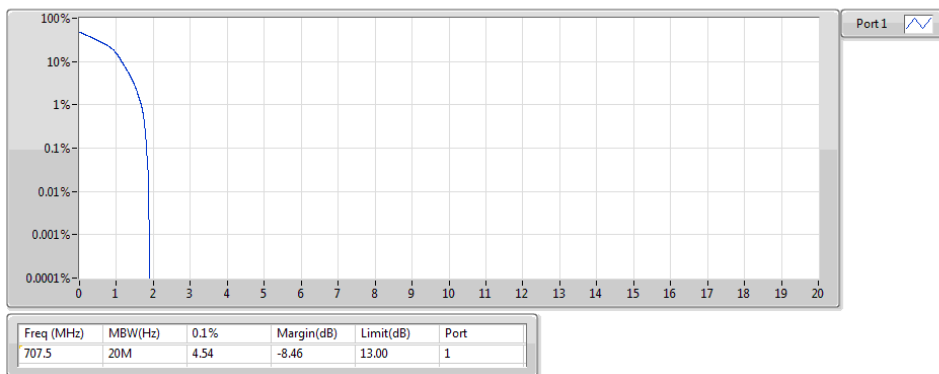
704MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

PAR

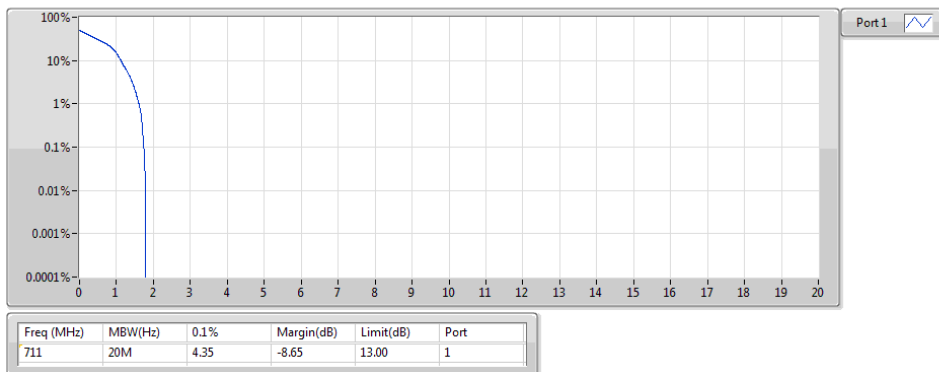
707.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX

PAR

711MHz_16QAM_RB 5,#RB 0,NB 7



Band 13

3.5.5 Test Result of Peak to Average Ratio

Summary

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 13	-	-	-	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	782	13.00	5.28	1
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	782	13.00	5.58	1
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	782	13.00	5.03	1
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	782	13.00	4.67	1

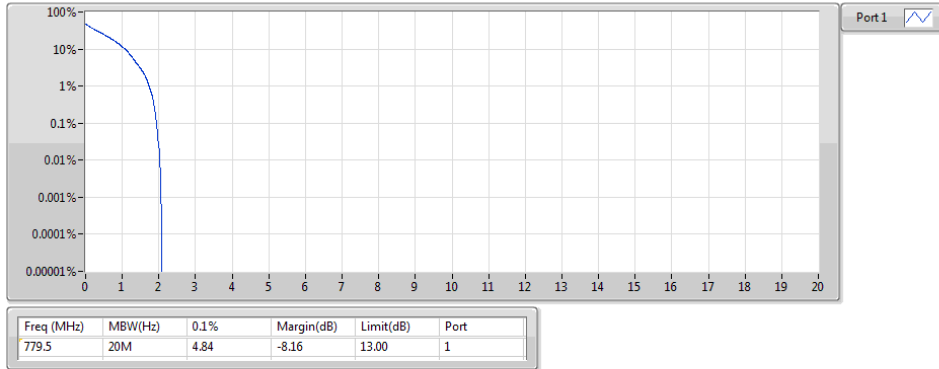
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 13_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-
779.5MHz_QPSK_RB 6,#RB 0,NB 0	Pass	779.5	13.00	4.84	1
782MHz_QPSK_RB 6,#RB 0,NB 0	Pass	782	13.00	5.28	1
784.5MHz_QPSK_RB 6,#RB 0,NB 3	Pass	784.5	13.00	4.87	1
779.5MHz_16QAM_RB 5,#RB 0,NB 0	Pass	779.5	13.00	5.25	1
782MHz_16QAM_RB 5,#RB 0,NB 0	Pass	782	13.00	5.58	1
784.5MHz_16QAM_RB 5,#RB 0,NB 3	Pass	784.5	13.00	5.33	1
Band 13_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-
782MHz_QPSK_RB 6,#RB 0,NB 0	Pass	782	13.00	5.03	1
782MHz_16QAM_RB 5,#RB 0,NB 0	Pass	782	13.00	4.67	1

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

PAR

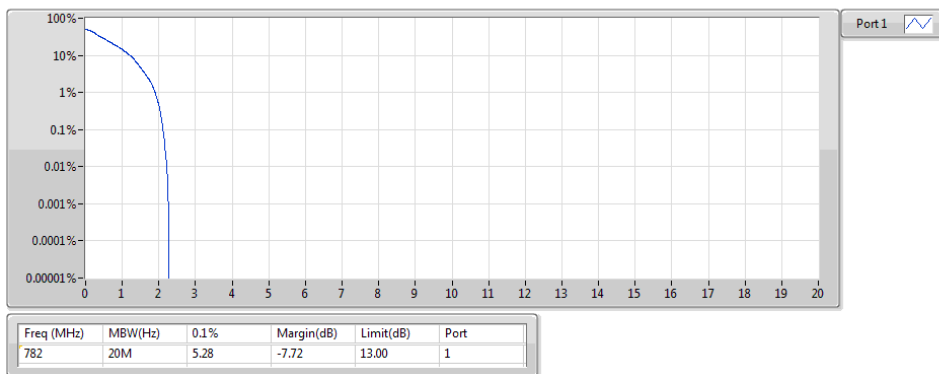
779.5MHz_QPSK_RB 6,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

PAR

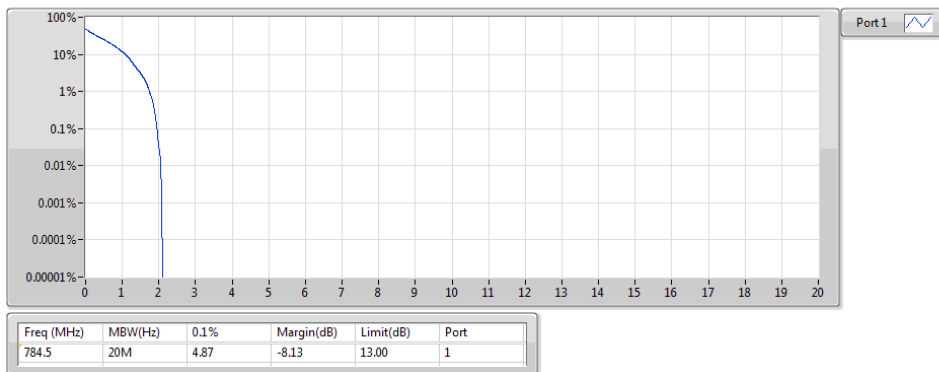
782MHz_QPSK_RB 6,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX

PAR

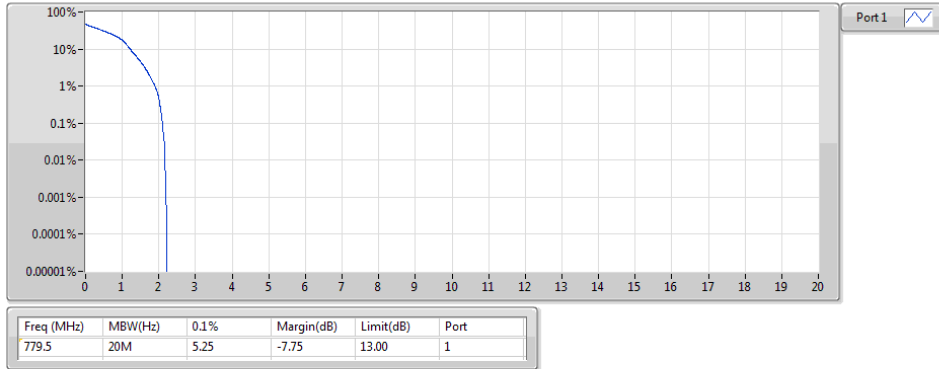
784.5MHz_QPSK_RB 6,#RB 0,NB 3



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

PAR

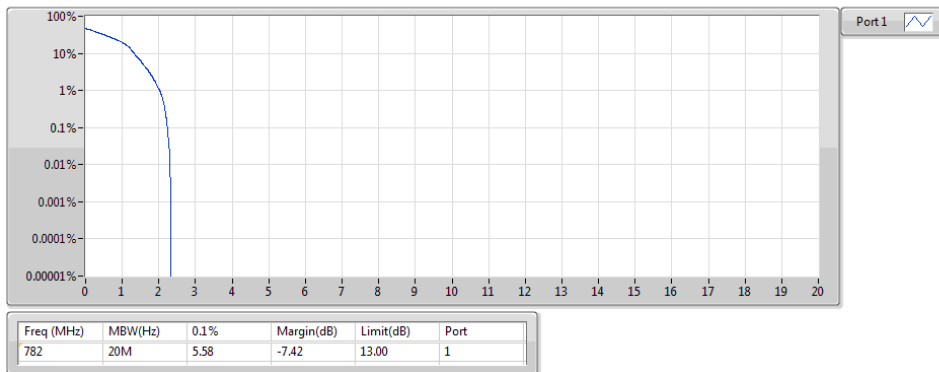
779.5MHz_16QAM_RB 5,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

PAR

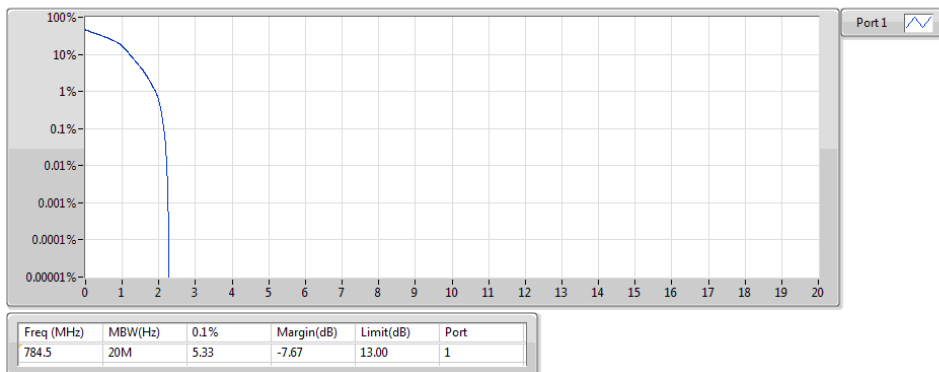
782MHz_16QAM_RB 5,#RB 0,NB 0



Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX

PAR

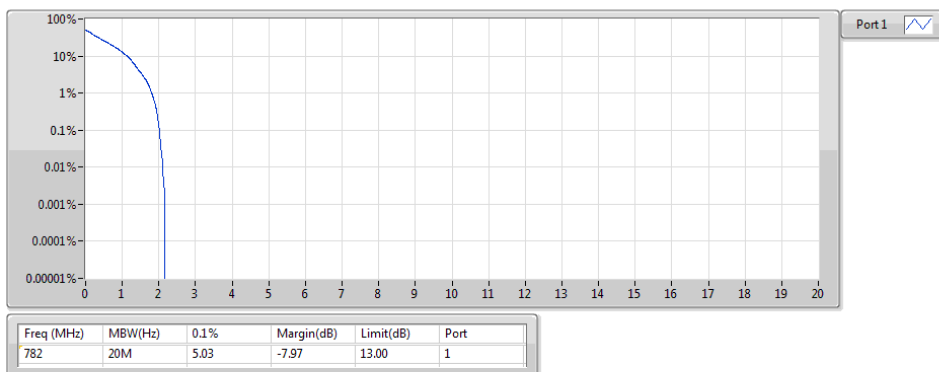
784.5MHz_16QAM_RB 5,#RB 0,NB 3



Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX

PAR

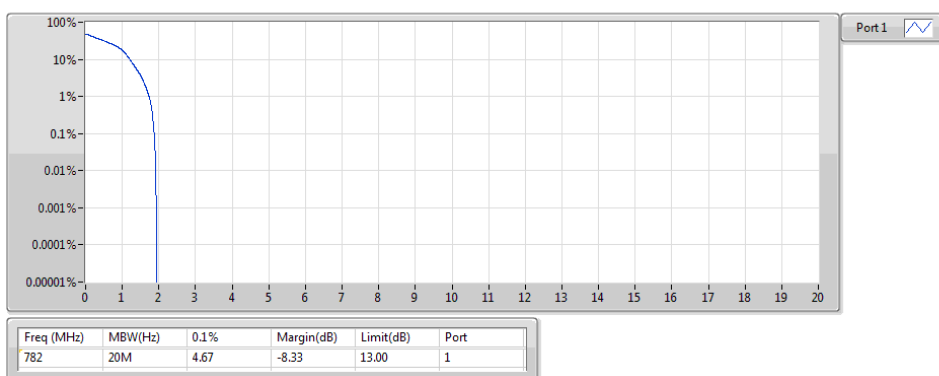
782MHz_QPSK_RB 6,#RB 0,NB 0



Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX

PAR

782MHz_16QAM_RB 5,#RB 0,NB 0



3.6 Frequency Stability

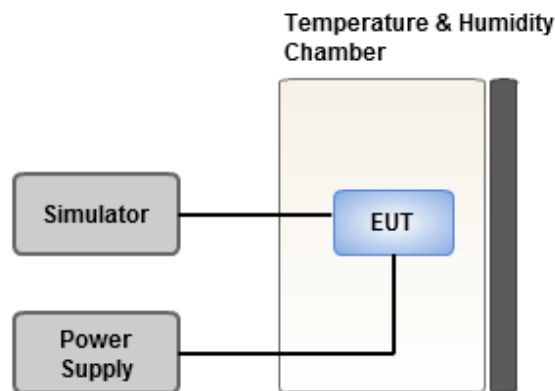
3.6.1 Limit of Frequency Stability

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

3.6.2 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. The test shall be performed under normal and extreme condition for temperature and voltage.
4. Link up EUT and simulator. Confirm frequency drift value of simulator and record it.

3.6.3 Test Setup



Band 12

3.6.4 Test Result of Frequency Stability

CB: 1.4MHz				
Temperature (°C)	699.7MHz		715.3MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°CVmax	-0.009	699.153988	-0.008	715.838384
T20°CVmin	-0.009	699.153989	-0.007	715.838385
T85°CVnom	-0.004	699.153990	-0.004	715.838387
T80°CVnom	-0.006	699.153991	-0.007	715.838385
T70°CVnom	-0.006	699.153992	-0.006	715.838386
T60°CVnom	-0.004	699.153993	-0.006	715.838386
T50°CVnom	-0.007	699.153994	-0.006	715.838386
T40°CVnom	-0.009	699.153995	-0.007	715.838385
T30°CVnom	-0.009	699.153996	-0.007	715.838385
T20°CVnom	-0.009	699.153997	-0.008	715.838384
T10°CVnom	-0.007	699.153998	-0.008	715.838384
T0°CVnom	-0.007	699.153999	-0.007	715.838385
T-10°CVnom	-0.006	699.154000	-0.006	715.838386
T-20°CVnom	-0.006	699.154001	-0.006	715.838386
T-30°CVnom	-0.009	699.154002	-0.007	715.838385
T-40°CVnom	-0.007	699.154003	-0.008	715.838384
Limit	>698MHz		<716MHz	

CB: 3MHz				
Temperature (°C)	700.5MHz		714.5MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°CVmax	-0.007	699.325039	-0.007	715.671668
T20°CVmin	-0.009	699.325040	-0.007	715.671668
T85°CVnom	-0.006	699.325041	-0.006	715.671669
T80°CVnom	-0.004	699.325042	-0.007	715.671668
T70°CVnom	-0.006	699.325043	-0.006	715.671669
T60°CVnom	-0.007	699.325044	-0.008	715.671667
T50°CVnom	-0.006	699.325045	-0.007	715.671668
T40°CVnom	-0.007	699.325046	-0.007	715.671668
T30°CVnom	-0.007	699.325047	-0.008	715.671667
T20°CVnom	-0.009	699.325048	-0.007	715.671668
T10°CVnom	-0.006	699.325049	-0.007	715.671668
T0°CVnom	-0.006	699.325050	-0.007	715.671668
T-10°CVnom	-0.007	699.325051	-0.007	715.671668
T-20°CVnom	-0.006	699.325052	-0.007	715.671668
T-30°CVnom	-0.007	699.325053	-0.007	715.671668
T-40°CVnom	-0.009	699.325054	-0.007	715.671668
Limit	>698MHz		<716MHz	

CB: 5MHz				
Temperature (°C)	701.5MHz		711MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°CVmax	-0.007	699.243530	-0.007	715.752357
T20°CVmin	-0.009	699.243531	-0.007	715.752357
T85°CVnom	-0.006	699.243532	-0.006	715.752358
T80°CVnom	-0.007	699.243533	-0.008	715.752356
T70°CVnom	-0.006	699.243534	-0.007	715.752357
T60°CVnom	-0.006	699.243535	-0.007	715.752357
T50°CVnom	-0.009	699.243536	-0.007	715.752357
T40°CVnom	-0.007	699.243537	-0.008	715.752356
T30°CVnom	-0.007	699.243538	-0.006	715.752358
T20°CVnom	-0.007	699.243539	-0.008	715.752356
T10°CVnom	-0.007	699.243540	-0.008	715.752356
T0°CVnom	-0.006	699.243541	-0.006	715.752358
T-10°CVnom	-0.007	699.243542	-0.006	715.752358
T-20°CVnom	-0.009	699.243543	-0.007	715.752357
T-30°CVnom	-0.007	699.243544	-0.006	715.752358
T-40°CVnom	-0.006	699.243545	-0.007	715.752357
Limit	>698MHz		<716MHz	

CB: 10MHz				
Temperature (°C)	704MHz		711MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°CVmax	-0.009	699.667150	-0.007	715.322082
T20°CVmin	-0.007	699.667151	-0.007	715.322082
T85°CVnom	-0.006	699.667152	-0.006	715.322083
T80°CVnom	-0.007	699.667153	-0.006	715.322083
T70°CVnom	-0.007	699.667154	-0.006	715.322083
T60°CVnom	-0.006	699.667155	-0.006	715.322083
T50°CVnom	-0.007	699.667156	-0.006	715.322083
T40°CVnom	-0.006	699.667157	-0.007	715.322082
T30°CVnom	-0.007	699.667158	-0.007	715.322082
T20°CVnom	-0.007	699.667159	-0.007	715.322082
T10°CVnom	-0.007	699.667160	-0.007	715.322082
T0°CVnom	-0.007	699.667161	-0.008	715.322081
T-10°CVnom	-0.009	699.667162	-0.007	715.322082
T-20°CVnom	-0.006	699.667163	-0.007	715.322082
T-30°CVnom	-0.006	699.667164	-0.006	715.322083
T-40°CVnom	-0.007	699.667165	-0.007	715.322082
Limit	>698MHz		<716MHz	

Band 13

CB: 5MHz				
Temperature (°C)	779.5MHz		784.5MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°CVmax	-0.010	777.242718	-0.009	786.754280
T20°CVmin	-0.010	777.242719	-0.010	786.754279
T85°CVnom	-0.006	777.242720	-0.008	786.754281
T80°CVnom	-0.008	777.242721	-0.006	786.754282
T70°CVnom	-0.008	777.242722	-0.006	786.754282
T60°CVnom	-0.009	777.242723	-0.008	786.754281
T50°CVnom	-0.008	777.242724	-0.008	786.754281
T40°CVnom	-0.009	777.242725	-0.009	786.754280
T30°CVnom	-0.008	777.242726	-0.008	786.754281
T20°CVnom	-0.010	777.242727	-0.009	786.754280
T10°CVnom	-0.006	777.242728	-0.005	786.754283
T0°CVnom	-0.008	777.242729	-0.006	786.754282
T-10°CVnom	-0.008	777.242730	-0.006	786.754282
T-20°CVnom	-0.006	777.242731	-0.008	786.754281
T-30°CVnom	-0.008	777.242732	-0.006	786.754282
T-40°CVnom	-0.010	777.242733	-0.009	786.754280
Limit	>776MHz		<788MHz	

CB: 10MHz				
Temperature (°C)	782MHz		782MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°CVmax	-0.009	777.667426	-0.010	786.322079
T20°CVmin	-0.009	777.667427	-0.009	786.322080
T85°CVnom	-0.008	777.667428	-0.008	786.322081
T80°CVnom	-0.006	777.667429	-0.008	786.322081
T70°CVnom	-0.008	777.667430	-0.006	786.322082
T60°CVnom	-0.008	777.667431	-0.006	786.322082
T50°CVnom	-0.006	777.667432	-0.006	786.322082
T40°CVnom	-0.008	777.667433	-0.008	786.322081
T30°CVnom	-0.008	777.667434	-0.009	786.322080
T20°CVnom	-0.009	777.667435	-0.008	786.322081
T10°CVnom	-0.008	777.667436	-0.006	786.322082
T0°CVnom	-0.006	777.667437	-0.005	786.322083
T-10°CVnom	-0.008	777.667438	-0.008	786.322081
T-20°CVnom	-0.008	777.667439	-0.006	786.322082
T-30°CVnom	-0.006	777.667440	-0.008	786.322081
T-40°CVnom	-0.009	777.667441	-0.009	786.322080
Limit	>776MHz		<788MHz	

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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City 333, Taiwan, R.O.C..

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

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