FCC Test Report

FCC ID	:	**2AV5ZGNLR1**
Equipment	:	**Cellular Tracker**
Model No.	:	**GNLR1**
Brand Name	:	**Cox2M**
Applicant	:	**Cox Communications, Inc.**
Address	:	**6205 Peachtree Dunwoody Rd Attn Legal Regulatory, Atlanta, Georgia, United States.**
Standard	:	**47 CFR FCC Part 27**
Received Date	:	**Dec. 15, 2023**
Tested Date	:	**Jan. 10 ~ Jan. 18, 2024**

We, International Certification Corporation, 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 shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

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

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Release Record

Report No.	Version	Description	Issued Date
FG3D1504P27-1	Rev. 01	Initial issue	Mar. 22, 2024

Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 27.50(b)(10) 27.50(c)(10) 27.50(d)(4)	Effective Radiated Power	Power[dBm]: LTE Band 12: 23.88 LTE Band 13: 23.91	Pass
2.1053 27.53(c) 27.53(g) 27.53(h)	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) 27.53(h)	Conducted Emissions	Meet the requirement of limit	Pass
2.1051 27.53(c) 27.53(g) 27.53(h)	Band Edge	Meet the requirement of limit	Pass
2.1049 / 27.53(h)	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	LTE Band 12: 699 MHz – 716 MHz LTE Band 13: 777 MHz – 787 MHz
LTE-M	
LTE-M Category	M1
Modulation Type	QPSK, 16QAM
NB-IoT	
NB-IoT Category	NB1
Modulation Type	BPSK, QPSK
Subcarrier Spacing	3.75kHz, 15kHz

1.1.2 Antenna Details

Ant. No.	Type	Connector	Gain (dBi)	Remark
1	Chip	No	2.17	---

1.1.3 Power Supply Type of Equipment under Test (EUT)

Supply Voltage	3.6Vdc from battery		
Operational Climatic	☒ Tnom (20°C)	☒ Tmax (70°C)	☒ Tmin (-30°C)

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	Lithium battery	Brand: EVE Model: ER14505 Rating: 3.6Vdc

1.1.5 Maximum ERP and Emission Designator

LTE-M1 Band 12			
Channel Bandwidth	**Modulation**	**Maximum ERP (W)**	**Emission Designator**
10 MHz	QPSK	0.243	1M10G7D
10 MHz	16QAM	0.242	1M11W7D
5 MHz	QPSK	0.244	1M10G7D
5 MHz	16QAM	0.238	1M10W7D

NB-IoT Band 12		
Modulation	**Maximum ERP (W)**	**Emission Designator**
BPSK	0.211	127KG7D
QPSK	0.225	198KG7D

LTE-M1 Band 13			
Channel Bandwidth	**Modulation**	**Maximum ERP (W)**	**Emission Designator**
10 MHz	QPSK	0.244	1M11G7D
10 MHz	16QAM	0.244	1M12W7D
5 MHz	QPSK	0.245	1M10G7D
5 MHz	16QAM	0.244	1M11W7D

NB-IoT Band 13		
Modulation	**Maximum ERP (W)**	**Emission Designator**
BPSK	0.233	127KG7D
QPSK	0.246	206KG7D

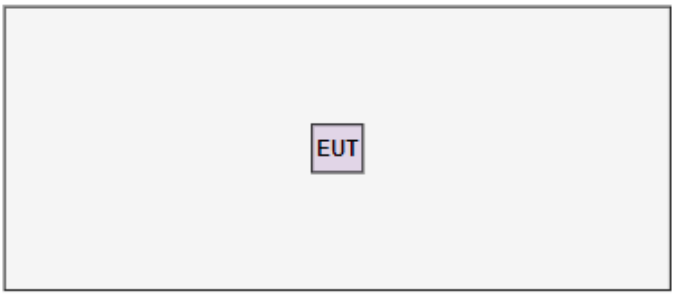
1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Laptop	DELL	Latitude 5400	DoC	---
2	Fixture	---	---	---	Provided by applicant.

Note: The above support units, were disconnected from EUT and were removed from testing table after sending command to EUT to transmit continuously.

1.3 Test Setup Chart

Test Setup Diagram



1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Jan. 10 ~ Jan. 16, 2024				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Wideband Radio Communication Tester	R&S	CMW500	106070	Mar. 24, 2023	Mar. 23, 2024
Receiver	R&S	ESR3	101657	Mar. 03, 2023	Mar. 02, 2024
Spectrum Analyzer	R&S	FSV40	101498	Nov. 23, 2023	Nov. 22, 2024
Loop Antenna	R&S	HFH2-Z2	100330	Oct. 31, 2023	Oct. 30, 2024
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 31, 2023	Jul. 30, 2024
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Nov. 27, 2023	Nov. 26, 2024
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 30, 2023	Oct. 29, 2024
Preamplifier	EMC	EMC02325	980225	Jun. 28, 2023	Jun. 27, 2024
Preamplifier	EMC	EMC118A45SE	980898	Jul. 14, 2023	Jul. 13, 2024
Preamplifier	EMC	EMC184045SE	980903	Jul. 17, 2023	Jul. 16, 2024
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 03, 2023	Oct. 02, 2024
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 03, 2023	Oct. 02, 2024
LF cable 11M	EMC	EMCCFD400-NW-NW-11000	200801	Oct. 03, 2023	Oct. 02, 2024
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 03, 2023	Oct. 02, 2024
RF Cable	EMC	EMC104-35M-35M-8000	210920	Oct. 03, 2023	Oct. 02, 2024
RF Cable	EMC	EMC104-35M-35M-3000	210922	Oct. 03, 2023	Oct. 02, 2024
HIGHPASS FILTER 1-6G	WHK	WHKS1000-6SS	12	Oct. 05, 2023	Oct. 04, 2024
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 05, 2023	Oct. 04, 2024
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)				
Tested Date	Jan. 10 ~ Jan. 18, 2024				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	Agilent	N9010A	MY54200247	Oct. 24, 2023	Oct. 23, 2024
Power Meter	Anritsu	ML2495A	1241002	Nov. 21, 2023	Nov. 20, 2024
Power Sensor	Anritsu	MA2411B	1207366	Nov. 21, 2023	Nov. 20, 2024
DC POWER SOURCE	GW INSTEK	GPC-6030D	GES855395	Nov. 03, 2023	Nov. 02, 2024
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Jun. 21, 2023	Jun. 20, 2024
Attenuator	woken	PE7013-20	20-1	Oct. 13, 2023	Oct. 12, 2024
Measurement Software	Sporton	SENSE-FCC_2G-4G	V6.1	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

1.6 Reference Guidance

FCC KDB 412172 D01 Determining ERP and EIRP v01r01
FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
FCC KDB 971168 D02 Misc Rev Approv License Devices v02r01

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 ≤ 1GHz	±3.41 dB
Radiated emission > 1GHz	±4.59 dB
Temperature	±0.4 °C

2 Test Configuration

2.1 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 33381, Taiwan, R.O.C.

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

2.2 The Worst Test Modes and Channel Details

LTE-M1 Band 12			
Test item	**Channel Bandwidth**	**Modulation**	**Test Frequency (MHz)**
E.R.P.	5 MHz 10 MHz	QPSK / 16QAM QPSK / 16QAM	701.5 / 707.5 / 713.5 704.0 / 707.5 / 711.0
Radiated Emission ≤ 1GHz	5 MHz	QPSK	713.5
Radiated Emission > 1GHz	5 MHz	QPSK	701.5 / 707.5 / 713.5
Out of Band Emissions	5 MHz 10 MHz	QPSK QPSK	701.5 / 707.5 / 713.5 704.0 / 707.5 / 711.0
Band Edge	5 MHz 10 MHz	QPSK / 16QAM QPSK / 16QAM	701.5 / 713.5 704.0 / 711.0
Occupied Bandwidth Peak to Average Ratio	5 MHz 10 MHz	QPSK / 16QAM QPSK / 16QAM	707.5 707.5
Frequency Stability	5 MHz 10 MHz	QPSK QPSK	701.5 / 713.5 704.0 / 711.0
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.			

LTE-M1 Band 13			
Test item	**Channel Bandwidth**	**Modulation**	**Test Frequency (MHz)**
E.R.P.	5 MHz 10 MHz	QPSK / 16QAM QPSK / 16QAM	779.5 / 782.0 / 784.5 782.0
Radiated Emission ≤ 1GHz	5 MHz	QPSK	784.5
Radiated Emission > 1GHz	5 MHz	QPSK	779.5 / 782.0 / 784.5
Out of Band Emissions	5 MHz 10 MHz	QPSK QPSK	779.5 / 782.0 / 784.5 782.0
Band Edge	5 MHz 10 MHz	QPSK / 16QAM QPSK / 16QAM	779.5 / 784.5 782.0
Occupied Bandwidth Peak to Average Ratio	5 MHz 10 MHz	QPSK / 16QAM QPSK / 16QAM	782.0 782.0
Frequency Stability	5 MHz 10 MHz	QPSK QPSK	779.5 / 784.5 782.0
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.			

NB-IoT Band 12			
Test item	**Sub-carrier Spacing(kHz)**	**Modulation**	**Test Frequency (MHz)**
E.R.P.	3.75kHz / 15kHz	BPSK / QPSK	699.2 / 707.5 / 715.8
Radiated Emission ≤ 1GHz	15kHz	QPSK	715.8
Radiated Emission > 1GHz	15kHz	QPSK	699.2 / 707.5 / 715.8
Out of Band Emissions	15kHz	QPSK	699.2 / 707.5 / 715.8
Occupied Bandwidth Peak to Average Ratio	3.75kHz / 15kHz	QPSK	707.5
Band Edge	3.75kHz / 15kHz	BPSK / QPSK	699.2 / 715.8
Frequency Stability	3.75kHz / 15kHz	QPSK	699.2 / 715.8

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.

NB-IoT Band 13			
Test item	**Sub-carrier Spacing(kHz)**	**Modulation**	**Test Frequency (MHz)**
E.R.P.	3.75kHz / 15kHz	BPSK / QPSK	777.2 / 782.0 / 786.8
Radiated Emission ≤ 1GHz	15kHz	QPSK	782.0
Radiated Emission > 1GHz	15kHz	QPSK	777.2 / 782.0 / 786.8
Out of Band Emissions	15kHz	QPSK	777.2 / 782.0 / 786.8
Occupied Bandwidth Peak to Average Ratio	3.75kHz / 15kHz	QPSK	782.0
Band Edge	3.75kHz / 15kHz	BPSK / QPSK	777.2 / 786.8
Frequency Stability	3.75kHz / 15kHz	QPSK	777.2 / 786.8

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).

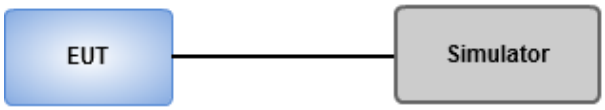
   L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

2. ERP = EIRP – 2.15 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



3.1.4 Test Results

Ambient Condition	20~24°C / 62~67%	**Tested By**	Aska Huang

Refer to Appendix A.

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

LTE Band 12 /13
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.

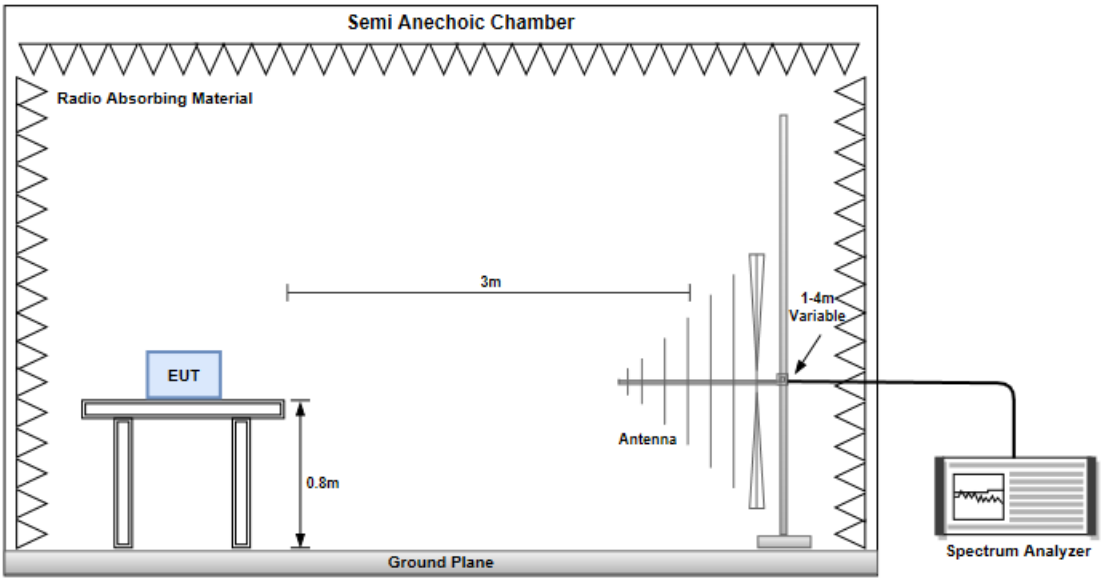
LTE Band 13
For operations in the 775-788 MHz emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

3.2.2 Test Procedures

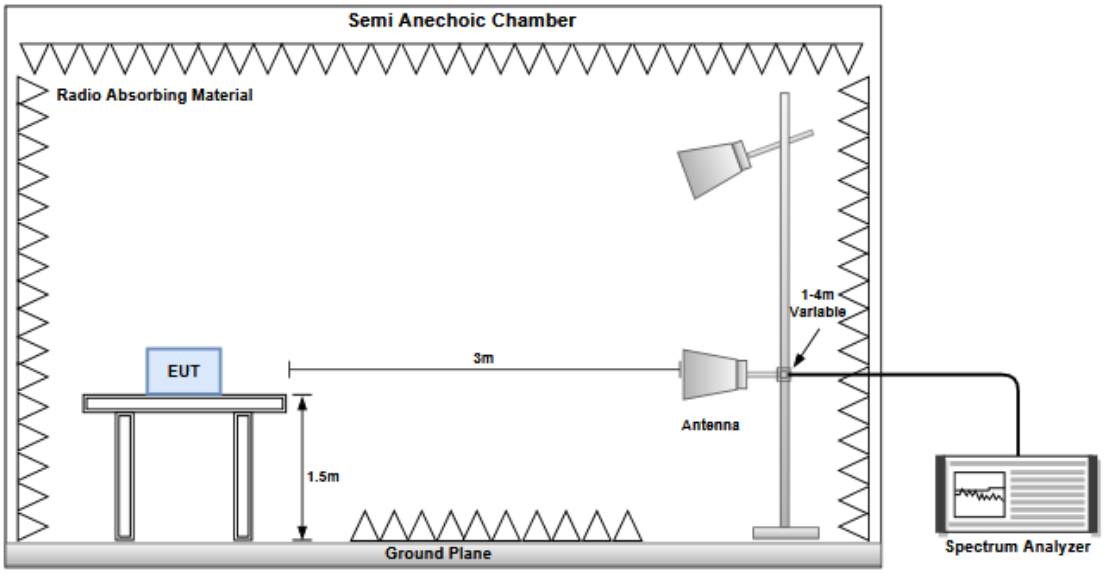
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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 and4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.
4. After finding the max radiated emission, substitution method will be used for getting effective radiated power. EUT will be removed and substitution antenna will be placed at same position. Signal generator will output CW signal to substitution antenna through a RF cable. Rotate turntable and move antenna to find maximum radiated emission. Adjust output power of signal generator to let the maximum radiated emission is same as step 3. Record the output power level.
5. E.I.R.P = output power of step 4 + gain of substitution antenna – cable loss of RF cable. 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



3.2.4 Test Results

Ambient Condition	22~23°C / 63~66%	**Tested By**	Akun Chung

Refer to Appendix B.

3.3 Out of Band Emissions& Band Edge

3.3.1 Limit of Out of Band Emissions& Band Edge

LTE Band 12 / 13
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.

LTE Band 13
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 = 100 kHz, VBW = 300kHz, detector = RMS, 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.

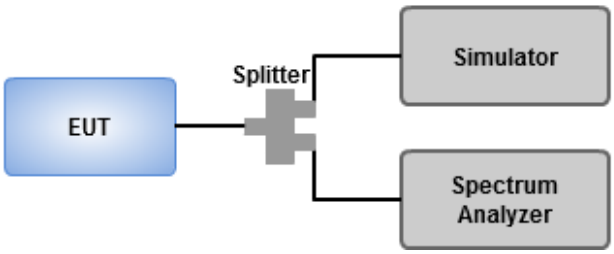
763 ~ 775 MHz / 793 ~ 805 MHz

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

2 Scan frequency range is from 763 MHz ~ 806 MHz.

3 Set RBW = 10 kHz, VBW = 30 kHz, detector = rms, sweep time = auto.

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	20~24°C / 62~67%	**Tested By**	Aska Huang

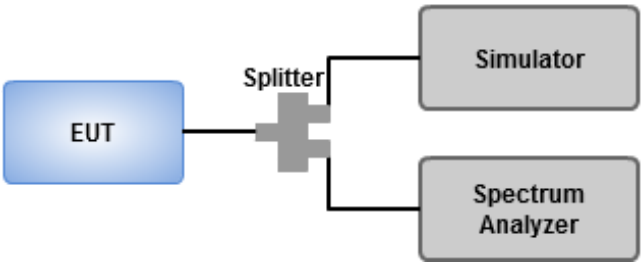
Refer to Appendix C.

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



3.4.3 Test Results

Ambient Condition	20~24°C / 62~67%	**Tested By**	Aska Huang

Refer to Appendix D.

3.5 Peak to Average Power Ratio

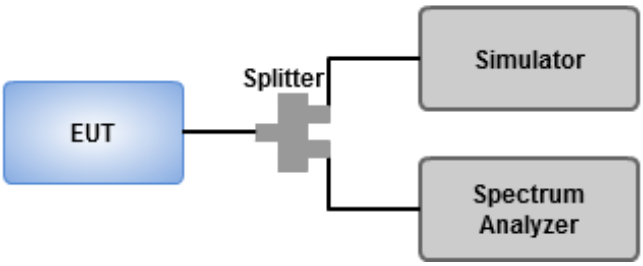
3.5.1 Limit of Peak to Average Power Ratio

The Peakto-average power ratio of the transmiss ion may not exceed 13 dB.

3.5.2 Test Procedures

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

3.5.3 Test Setup



3.5.4 Test Results

Ambient Condition	20~24°C / 62~67%	**Tested By**	Aska Huang

Refer to Appendix E.

3.6 Frequency Stability

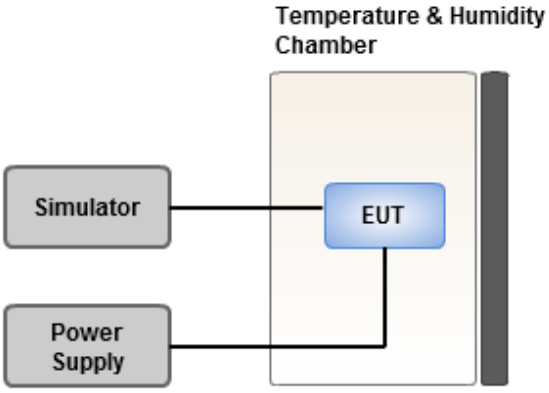
3.6.1 Limit of Frequency Stability

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



3.6.4 Test Results

Ambient Condition	20~24°C / 62~67%	**Tested By**	Aska Huang

Refer to Appendix F.

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

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

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan (R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

No.2-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

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

Tel: 886-3-271-8666
Fax: 886-3-318-0345
Email: ICC_Service@icertifi.com.tw

═END═

Part 27H M1 Band 12 Maximum Average Power [dBm](GT-LC= 2.17 dB)								
BW (MHz)	Modulation	RB size# / RB start	RB Index	Lowest	Middle	Highest	-	
Channel				23060	23095	23130	ERP (dBm)	ERP (W)
Frequency				704	707.5	711		
10	QPSK	1#0	0	23.71	23.69	23.66	23.85	0.243
10	QPSK	1#5	7	23.83	23.79	23.82		
10	QPSK	6#0	0	22.73	22.78	22.72		
10	QPSK	6#0	7	22.89	22.93	22.89		
10	16QAM	1#0	0	23.58	23.62	23.52	23.83	0.242
10	16QAM	1#5	7	23.81	23.77	23.79		
10	16QAM	6#0	0	21.82	21.98	21.95		
10	16QAM	6#0	7	21.99	22.17	22.12		
Channel				23035	23095	23155	ERP (dBm)	ERP (W)
Frequency				701.5	707.5	713.5		
5	QPSK	1#0	0	23.64	23.67	23.72	23.88	0.244
5	QPSK	1#5	3	23.71	23.81	23.86		
5	QPSK	6#0	0	22.71	22.82	22.79		
5	QPSK	6#0	3	22.81	22.89	22.87		
5	16QAM	1#0	0	23.59	23.64	23.65	23.76	0.238
5	16QAM	1#5	3	23.74	23.74	23.74		
5	16QAM	6#0	0	21.83	22.01	22.01		
5	16QAM	6#0	3	21.99	22.09	22.04		
Limit	ERP < 3 W			Result			Pass	

Part 27F M1 Band 13 Maximum Average Power [dBm](GT-LC= 2.17 dB)								
BW (MHz)	Modulation	RB size# / RB start	RB Index	Lowest	Middle	Highest	-	
Channel				-	23230	-	ERP (dBm)	ERP (W)
Frequency				-	782	-		
10	QPSK	1#0	0	-	23.78	-	23.88	0.244
10	QPSK	1#5	7	-	23.86	-		
10	QPSK	6#0	0	-	22.93	-		
10	QPSK	6#0	7	-	23.13	-		
10	16QAM	1#0	0	-	23.76	-	23.87	0.244
10	16QAM	1#5	7	-	23.85	-		
10	16QAM	6#0	0	-	22.18	-		
10	16QAM	6#0	7	-	22.34	-		
Channel				23205	23230	23255	ERP (dBm)	ERP (W)
Frequency				779.5	782	784.5		
5	QPSK	1#0	0	23.71	23.74	23.78	23.9	0.245
5	QPSK	1#5	3	23.88	23.81	23.88		
5	QPSK	6#0	0	22.91	22.99	23.05		
5	QPSK	6#0	3	23.01	23.09	23.14		
5	16QAM	1#0	0	23.66	23.68	23.78	23.87	0.244
5	16QAM	1#5	3	23.78	23.82	23.85		
5	16QAM	6#0	0	22.12	22.22	22.21		
5	16QAM	6#0	3	22.28	22.29	22.28		
Limit	ERP < 3 W			Result			Pass	

Part27H Band 12 Maximum Average Power [dBm](GT-LC= 2.17 dB)								
NB-IoT	**Modulation**	**Sub-carrier Spacing(kHz)**	**Ntones**	**Lowest**	**Middle**	**Highest**	**-**	
Channel				**23012**	**23095**	**23178**	**ERP**	**ERP**
Frequency				**699.2**	**707.5**	**715.8**	**(dBm)**	**(W)**
Standalone	BPSK	3.75	1@0	23.19	23.19	23.22	23.25	0.211
			1@47	23.2	23.21	23.23		
		15	1@0	23.15	23.08	23.16		
			1@11	23.16	23.15	23.18		
	QPSK	3.75	1@0	23.18	23.21	23.23	23.53	0.225
			1@47	23.21	23.22	23.24		
		15	1@0	23.18	23.15	23.18		
			1@11	23.21	23.17	23.19		
		15	12@0	23.44	23.39	23.51		
Limit	**ERP < 3 W**			**Result**			**Pass**	

Part27F Band 13 Maximum Average Power [dBm](GT-LC= 2.17 dB)								
NB-IoT	**Modulation**	**Sub-carrier Spacing(kHz)**	**Ntones**	**Lowest**	**Middle**	**Highest**	**-**	
Channel				**23182**	**23230**	**23278**	**ERP**	**ERP**
Frequency				**777.2**	**782**	**786.8**	**(dBm)**	**(W)**
Standalone	BPSK	3.75	1@0	23.45	23.62	23.44	23.67	0.233
			1@47	23.47	23.65	23.45		
		15	1@0	23.43	23.51	23.41		
			1@11	23.44	23.53	23.42		
	QPSK	3.75	1@0	23.51	23.64	23.5	23.91	0.246
			1@47	23.53	23.66	23.51		
		15	1@0	23.45	23.53	23.43		
			1@11	23.48	23.56	23.46		
		15	12@0	23.75	23.89	23.72		
Limit	**ERP < 3 W**			**Result**			**Pass**	

Below 1GHz

Mode	LTE-M1 Band 12, QPSK, CB:5 MHz, Channel: 713.5MHz						
Frequency (MHz)	**Antenna Polarity**	**E.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**
112.45	H	-46.12	-13.00	-33.12	-40.62	-41.09	-2.88
116.33	H	-45.62	-13.00	-32.62	-40.41	-40.48	-2.99
188.11	H	-40.64	-13.00	-27.64	-37.59	-39.38	0.89
195.87	H	-40.59	-13.00	-27.59	-37.33	-40.41	1.97
256.01	H	-38.64	-13.00	-25.64	-37.09	-39.27	2.78
259.89	H	-39.18	-13.00	-26.18	-37.63	-39.83	2.80
112.45	V	-40.00	-13.00	-27.00	-39.77	-34.97	-2.88
116.33	V	-39.14	-13.00	-26.14	-39.33	-34.00	-2.99
127.97	V	-31.24	-13.00	-18.24	-42.62	-25.87	-3.22
188.11	V	-39.37	-13.00	-26.37	-40.45	-38.11	0.89
195.87	V	-41.69	-13.00	-28.69	-41.93	-41.51	1.97
256.01	V	-49.09	-13.00	-36.09	-47.02	-49.72	2.78

Mode	LTE-M1 Band 13, QPSK, CB:5 MHz, Channel: 784.5MHz						
Frequency (MHz)	**Antenna Polarity**	**E.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**
116.33	H	-45.46	-13.00	-32.46	-40.25	-40.32	-2.99
188.11	H	-40.25	-13.00	-27.25	-37.20	-38.99	0.89
195.87	H	-40.49	-13.00	-27.49	-37.23	-40.31	1.97
256.01	H	-39.32	-13.00	-26.32	-37.77	-39.95	2.78
259.89	H	-39.64	-13.00	-26.64	-38.09	-40.29	2.80
267.65	H	-41.40	-13.00	-28.40	-39.84	-42.08	2.83
112.45	V	-40.11	-13.00	-27.11	-39.88	-35.08	-2.88
116.33	V	-39.09	-13.00	-26.09	-39.28	-33.95	-2.99
188.11	V	-39.97	-13.00	-26.97	-41.05	-38.71	0.89
195.87	V	-41.36	-13.00	-28.36	-41.60	-41.18	1.97
256.01	V	-49.06	-13.00	-36.06	-46.99	-49.69	2.78
259.89	V	-49.64	-13.00	-36.64	-47.69	-50.29	2.80

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

Above 1GHz

Mode	LTE-M1 Band 12, QPSK, CB:5 MHz, Channel: 701.5MHz						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1402.86	H	-50.03	-13.00	-37.03	-52.74	-58.62	10.74
2104.29	H	-46.67	-13.00	-33.67	-50.53	-58.54	14.02
2805.72	H	-47.92	-13.00	-34.92	53.73	-62.00	16.23
1402.86	V	-51.90	-13.00	-38.90	-54.50	-60.49	10.74
2104.29	V	-54.86	-13.00	-41.86	-58.69	-66.73	14.02
2805.72	V	-53.81	-13.00	-40.81	-60.02	-67.89	16.23

Mode	LTE-M1 Band 12, QPSK, CB:5 MHz, Channel: 707.5MHz						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1414.86	H	-48.94	-13.00	-35.94	-51.60	-57.67	10.88
2122.29	H	-45.49	-13.00	-32.49	-49.55	-57.28	13.94
2829.72	H	-47.08	-13.00	-34.08	-52.91	-61.20	16.27
1414.86	V	-51.07	-13.00	-38.07	-53.63	-59.80	10.88
2122.29	V	-54.03	-13.00	-41.03	-58.08	-65.82	13.94
2829.72	V	-52.95	-13.00	-39.95	-59.18	-67.07	16.27

Mode	LTE-M1 Band 12, QPSK, CB:5 MHz, Channel: 713.5MHz						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1426.86	H	-49.81	-13.00	-36.81	-52.41	-58.67	11.01
2140.29	H	-46.40	-13.00	-33.40	-50.66	-58.11	13.86
2853.72	H	-47.78	-13.00	-34.78	-53.64	-61.95	16.32
1426.86	V	-51.78	-13.00	-38.78	-54.31	-60.64	11.01
2140.29	V	-54.90	-13.00	-41.90	-59.18	-66.61	13.86
2853.72	V	-53.87	-13.00	-40.87	-60.12	-68.04	16.32

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

Mode	LTE-M1 Band 13, QPSK, CB:5 MHz, Channel: 779.5MHz						
Frequency (MHz)	**Antenna Polarity**	**E.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**
1558.86	H	-56.92	-13.00	-43.92	-58.93	-67.31	12.54
2338.29	H	-43.90	-13.00	-30.90	-48.73	-56.48	14.73
6235.44	H	-40.07	-13.00	-27.07	-51.72	-58.77	20.85
1558.86	V	-63.86	-13.00	-50.86	-66.06	-74.25	12.54
2338.29	V	-41.69	-13.00	-28.69	-46.58	-54.27	14.73
6235.44	V	-44.48	-13.00	-31.48	-55.92	-63.18	20.85

Mode	LTE-M1 Band 13, QPSK, CB:5 MHz, Channel: 782.0MHz						
Frequency (MHz)	**Antenna Polarity**	**E.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**
2345.79	H	-43.01	-13.00	-30.01	-47.84	-55.59	14.73
3127.72	H	-57.16	-13.00	-44.16	-63.18	-71.90	16.89
6255.44	H	-39.23	-13.00	-26.23	-50.89	-57.92	20.84
2345.79	V	-40.98	-13.00	-27.98	-45.87	-53.56	14.73
3127.72	V	-61.28	-13.00	-48.28	-68.16	-76.02	16.89
6255.44	V	-43.64	-13.00	-30.64	-55.10	-62.33	20.84

Mode	LTE-M1 Band 13, QPSK, CB:5 MHz, Channel: 784.5MHz						
Frequency (MHz)	**Antenna Polarity**	**E.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**
2353.29	H	-43.87	-13.00	-30.87	-48.70	-56.51	14.79
3137.72	H	-58.08	-13.00	-45.08	-64.10	-72.84	16.91
6275.44	H	-40.08	-13.00	-27.08	-51.77	-58.71	20.78
2353.29	V	-41.87	-13.00	-28.87	-46.76	-54.51	14.79
3137.72	V	-62.10	-13.00	-49.10	69.03	-76.86	16.91
6275.44	V	-44.51	-13.00	-31.51	-56.06	-63.14	20.78

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

Radiated Emissions in the 1559-1610MHz band

Mode	LTE-M1 Band 13, QPSK, CB:5 MHz, Channel: 782.0MHz						
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)**
1563.86	H	-53.85	-40.00	-13.85	-58.01	-66.40	12.55
1563.86	V	-60.90	-40.00	-20.90	-65.25	-73.45	12.55

Mode	LTE-M1 Band 13, QPSK, CB:5 MHz, Channel: 784.5MHz						
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)**
1568.86	H	-54.72	-40.00	-14.72	-58.85	-67.32	12.60
1568.86	V	-60.63	-40.00	-20.63	-64.96	-73.23	12.60

NOTE: EIRP = S.G power value + correction factor

Below 1GHz

Mode	NB-IoT Band 12, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 23178						
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)**
183.55	H	-35.81	-13.00	-22.81	-32.87	-33.92	0.26
187.52	H	-33.67	-13.00	-20.67	-30.63	-32.33	0.81
195.45	H	-32.71	-13.00	-19.71	-29.46	-32.47	1.91
199.25	H	-32.78	-13.00	-19.78	-29.44	-33.07	2.44
208.54	H	-36.73	-13.00	-23.73	-33.68	-37.16	2.58
211.85	H	-38.78	-13.00	-25.78	-35.85	-39.22	2.59
111.55	V	-42.48	-13.00	-29.48	-42.15	-37.47	-2.86
124.56	V	-41.66	-13.00	-28.66	-42.71	-36.34	-3.17
127.78	V	-41.78	-13.00	-28.78	-43.14	-36.41	-3.22
183.55	V	-38.67	-13.00	-25.67	-40.25	-36.78	0.26
187.66	V	-38.03	-13.00	-25.03	-39.16	-36.71	0.83
195.58	V	-39.05	-13.00	-26.05	-39.32	-38.83	1.93

Mode	NB-IoT Band 13, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@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)**
184.11	H	-35.00	-13.00	-22.00	-32.05	-33.19	0.34
188.55	H	-32.37	-13.00	-19.37	-29.31	-31.17	0.95
196.63	H	-31.85	-13.00	-18.85	-28.57	-31.77	2.07
198.58	H	-31.67	-13.00	-18.67	-28.35	-31.86	2.34
206.11	H	-35.48	-13.00	-22.48	-32.34	-35.90	2.57
209.66	H	-37.63	-13.00	-24.63	-34.62	-38.06	2.58
110.58	V	-41.37	-13.00	-28.37	-40.93	-36.39	-2.83
123.32	V	-40.56	-13.00	-27.56	-41.49	-35.27	-3.14
128.52	V	-40.69	-13.00	-27.69	-42.13	-35.31	-3.23
182.15	V	-37.17	-13.00	-24.17	-38.90	-35.09	0.07
186.36	V	-37.37	-13.00	-24.37	-38.64	-35.87	0.65
194.54	V	-37.90	-13.00	-24.90	-38.28	-37.53	1.78

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

Above 1GHz

Mode	NB-IoT Band 12, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 23012						
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)
1398.40	H	-48.91	-13.00	-35.91	-51.63	-57.46	10.70
2097.60	H	-45.74	-13.00	-32.74	-49.53	-57.64	14.05
2796.80	H	-46.63	-13.00	-33.63	-52.42	-60.70	16.22
1398.40	V	-51.04	-13.00	-38.04	-53.63	-59.59	10.70
2097.60	V	-54.43	-13.00	-41.43	-58.18	-66.33	14.05
2796.80	V	-53.56	-13.00	-40.56	-59.75	-67.63	16.22

Mode	NB-IoT Band 12, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 23095						
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)
1415.00	H	-48.00	-13.00	-35.00	-50.66	-56.73	10.88
2122.50	H	-44.57	-13.00	-31.57	-48.63	-56.36	13.94
2830.00	H	-46.05	-13.00	-33.05	-51.88	-60.17	16.27
1415.00	V	-50.21	-13.00	-37.21	-52.77	-58.94	10.88
2122.50	V	-53.79	-13.00	-40.79	-57.85	-65.58	13.94
2830.00	V	-52.55	-13.00	-39.55	-58.78	-66.67	16.27

Mode	NB-IoT Band 12, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 23178						
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)
1431.60	H	-48.66	-13.00	-35.66	-51.25	-57.57	11.06
2147.40	H	-45.13	-13.00	-32.13	-49.47	-56.81	13.83
2863.20	H	-46.84	-13.00	-33.84	-52.71	-61.02	16.33
1431.60	V	-50.95	-13.00	-37.95	-53.48	-59.86	11.06
2147.40	V	-54.32	-13.00	-41.32	-58.69	-66.00	13.83
2863.20	V	-53.37	-13.00	-40.37	-59.63	-67.55	16.33

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

Mode	NB-IoT Band 13, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 23182						
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)**
1554.40	H	-53.51	-13.00	-40.51	-55.56	-63.80	12.44
2331.60	H	-43.74	-13.00	-30.74	-48.58	-56.21	14.62
6217.60	H	-39.71	-13.00	-26.71	-51.31	-58.52	20.96
1554.40	V	-62.02	-13.00	-49.02	-64.25	-72.31	12.44
2331.60	V	-43.74	-13.00	-30.74	-45.53	-56.21	14.62
6217.60	V	-44.06	-13.00	-31.06	-55.33	-62.87	20.96

Mode	NB-IoT Band 13, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@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)**
2346.00	H	-43.02	-13.00	-30.02	-47.85	-55.60	14.73
3128.00	H	-57.23	-13.00	-44.23	-63.25	-71.97	16.89
6256.00	H	-38.62	-13.00	-25.62	-50.28	-57.31	20.84
2346.00	V	-39.87	-13.00	-26.87	-44.76	-52.45	14.73
3128.00	V	-60.22	-13.00	-47.22	-67.11	-74.96	16.89
6256.00	V	-43.27	-13.00	-30.27	-54.73	-61.96	20.84

Mode	NB-IoT Band 13, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 23278						
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)**
2360.40	H	-43.65	-13.00	-30.65	-48.47	-56.35	14.85
3147.20	H	-58.21	-13.00	-45.21	-64.23	-72.99	16.93
6294.40	H	-39.42	-13.00	-26.42	-51.15	-57.99	20.72
2360.40	V	-40.57	-13.00	-27.57	-45.45	-53.27	14.85
3147.20	V	-60.92	-13.00	-47.92	-67.88	-75.70	16.93
6294.40	V	-44.04	-13.00	-31.04	-55.69	-62.61	20.72

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

Radiated Emissions in the 1559-1610MHz band

Mode	NB-IoT Band 13, QPSK, CB:5 MHz, 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)**
1564.00	H	-50.38	-40.00	-10.38	-54.54	-62.93	12.55
1564.00	V	-58.98	-40.00	-18.98	-63.33	-71.53	12.55

Mode	NB-IoT Band 13, QPSK, CB:5 MHz, Channel: 23278						
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)**
1573.60	H	-51.55	-40.00	-11.55	-55.67	-64.20	12.65
1573.60	V	-59.93	-40.00	-19.93	-64.25	-72.58	12.65

NOTE: EIRP = S.G power value + correction factor

Summary

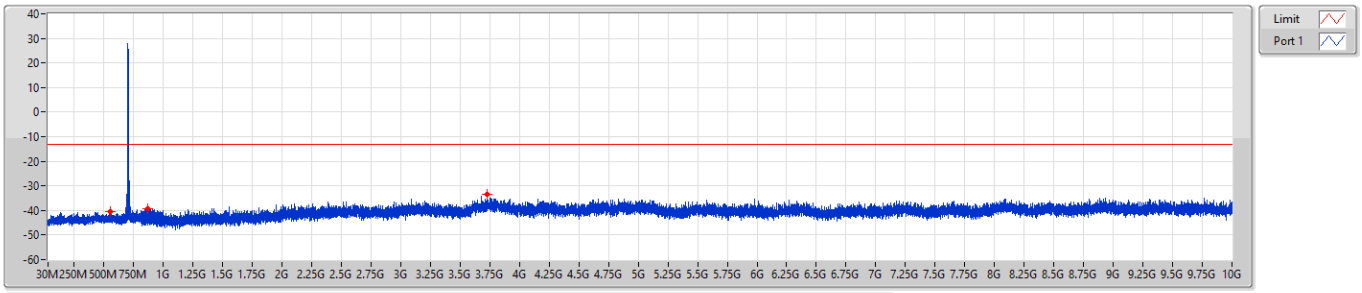
Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 12	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	3.73094G	-33.28	-13.00	-20.28	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	4.72178G	-33.92	-13.00	-20.92	-	-

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 12_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
704MHz_QPSK_RB 1	Pass	30M	598M	1M	3M	Peak	551.71M	-40.63	-13.00	-27.63	-	-
704MHz_QPSK_RB 1	Pass	816M	1G	1M	3M	Peak	873.13M	-39.13	-13.00	-26.13	-	-
704MHz_QPSK_RB 1	Pass	1G	10G	1M	3M	Peak	3.73094G	-33.28	-13.00	-20.28	-	-
707.5MHz_QPSK_RB 1	Pass	30M	598M	1M	3M	Peak	544.32M	-40.72	-13.00	-27.72	-	-
707.5MHz_QPSK_RB 1	Pass	816M	1G	1M	3M	Peak	927.49M	-39.23	-13.00	-26.23	-	-
707.5MHz_QPSK_RB 1	Pass	1G	10G	1M	3M	Peak	3.77594G	-34.71	-13.00	-21.71	-	-
711MHz_QPSK_RB 1	Pass	30M	598M	1M	3M	Peak	300.94M	-39.95	-13.00	-26.95	-	-
711MHz_QPSK_RB 1	Pass	816M	1G	1M	3M	Peak	860.26M	-39.89	-13.00	-26.89	-	-
711MHz_QPSK_RB 1	Pass	1G	10G	1M	3M	Peak	4.96534G	-34.32	-13.00	-21.32	-	-
Band 12_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
701.5MHz_QPSK_RB 1	Pass	30M	598M	1M	3M	Peak	596.58M	-40.50	-13.00	-27.50	-	-
701.5MHz_QPSK_RB 1	Pass	816M	1G	1M	3M	Peak	817.67M	-39.18	-13.00	-26.18	-	-
701.5MHz_QPSK_RB 1	Pass	1G	10G	1M	3M	Peak	4.72178G	-33.92	-13.00	-20.92	-	-
707.5MHz_QPSK_RB 1	Pass	30M	598M	1M	3M	Peak	475.6M	-40.34	-13.00	-27.34	-	-
707.5MHz_QPSK_RB 1	Pass	816M	1G	1M	3M	Peak	916.39M	-37.18	-13.00	-24.18	-	-
707.5MHz_QPSK_RB 1	Pass	1G	10G	1M	3M	Peak	8.1505G	-34.60	-13.00	-21.60	-	-
713.5MHz_QPSK_RB 1	Pass	30M	598M	1M	3M	Peak	470.2M	-40.02	-13.00	-27.02	-	-
713.5MHz_QPSK_RB 1	Pass	816M	1G	1M	3M	Peak	847.68M	-37.85	-13.00	-24.85	-	-
713.5MHz_QPSK_RB 1	Pass	1G	10G	1M	3M	Peak	3.77003G	-34.35	-13.00	-21.35	-	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

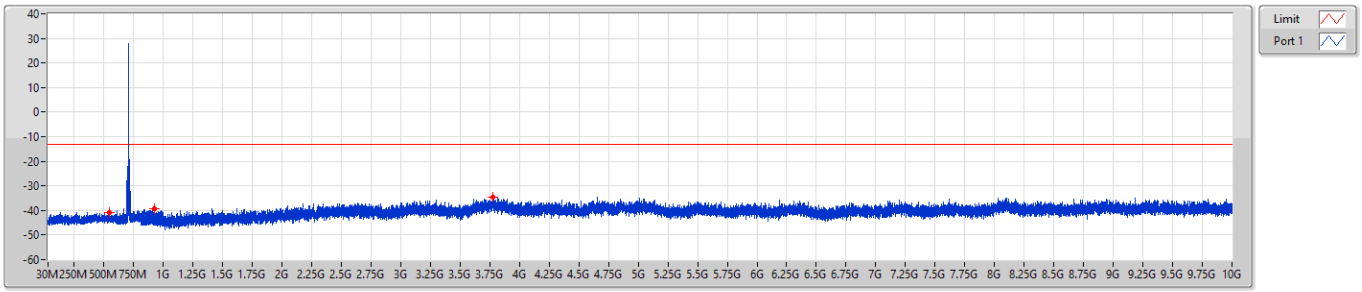
704MHz_QPSK_RB 1



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	551.71M	-40.63	-13.00	-27.63	-	-
816M	1G	1M	3M	Peak	873.13M	-39.13	-13.00	-26.13	-	-
1G	10G	1M	3M	Peak	3.73094G	-33.28	-13.00	-20.28	-	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

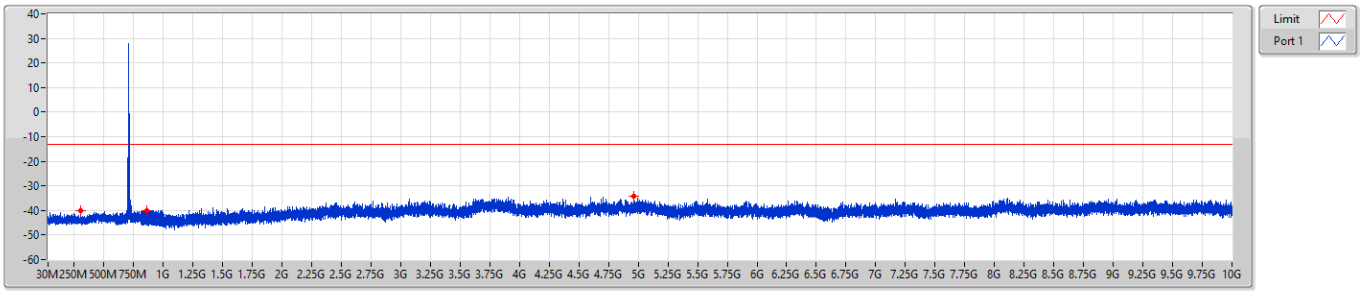
707.5MHz_QPSK_RB 1



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	544.32M	-40.72	-13.00	-27.72	-	-
816M	1G	1M	3M	Peak	927.49M	-39.23	-13.00	-26.23	-	-
1G	10G	1M	3M	Peak	3.77594G	-34.71	-13.00	-21.71	-	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

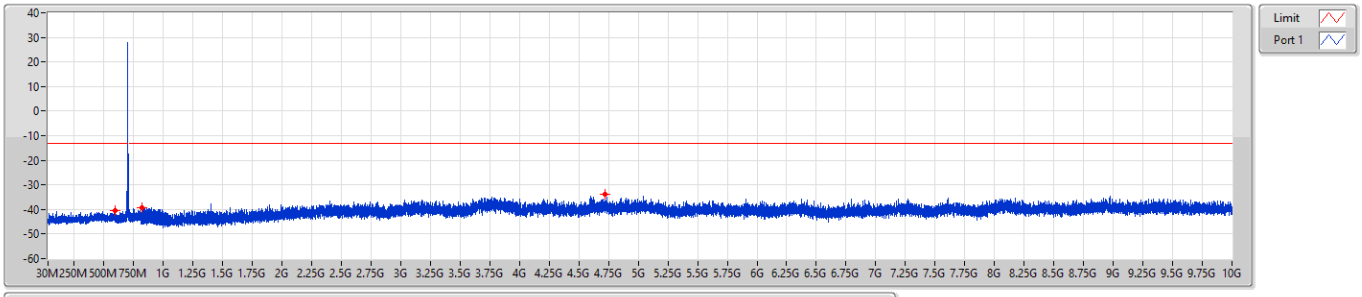
711MHz_QPSK_RB 1



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	300.94M	-39.95	-13.00	-26.95	-	-
816M	1G	1M	3M	Peak	860.26M	-39.89	-13.00	-26.89	-	-
1G	10G	1M	3M	Peak	4.96534G	-34.32	-13.00	-21.32	-	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

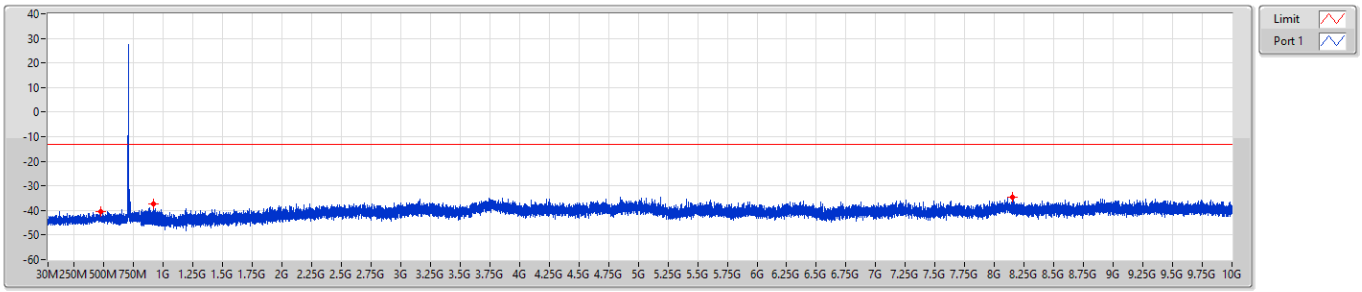
701.5MHz_QPSK_RB 1



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	596.58M	-40.50	-13.00	-27.50	-	-
816M	1G	1M	3M	Peak	817.67M	-39.18	-13.00	-26.18	-	-
1G	10G	1M	3M	Peak	4.72178G	-33.92	-13.00	-20.92	-	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

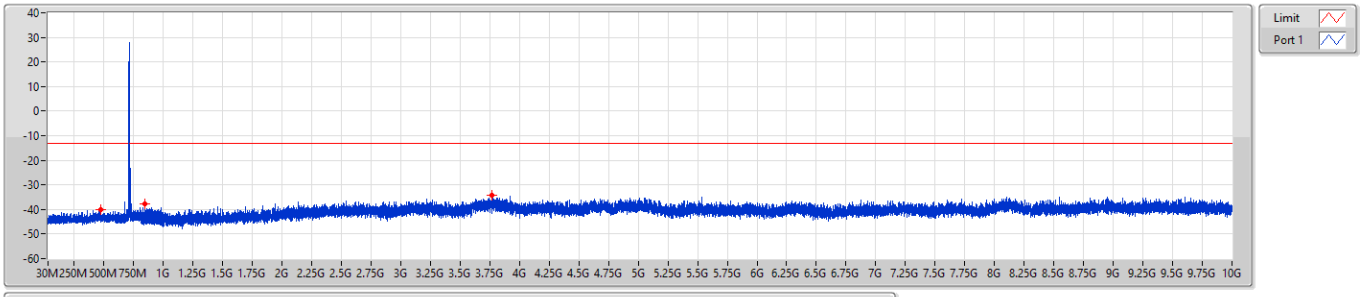
707.5MHz_QPSK_RB 1



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	475.6M	-40.34	-13.00	-27.34	-	-
816M	1G	1M	3M	Peak	916.39M	-37.18	-13.00	-24.18	-	-
1G	10G	1M	3M	Peak	8.1505G	-34.60	-13.00	-21.60	-	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

713.5MHz_QPSK_RB 1



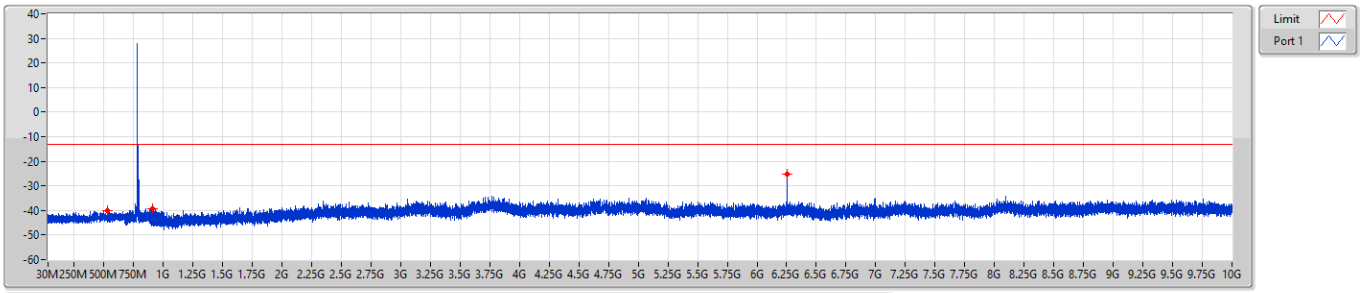
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	470.2M	-40.02	-13.00	-27.02	-	-
816M	1G	1M	3M	Peak	847.68M	-37.85	-13.00	-24.85	-	-
1G	10G	1M	3M	Peak	3.77003G	-34.35	-13.00	-21.35	-	-

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 13	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	6.25263G	-25.28	-13.00	-12.28	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	6.23238G	-24.44	-13.00	-11.44	-	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

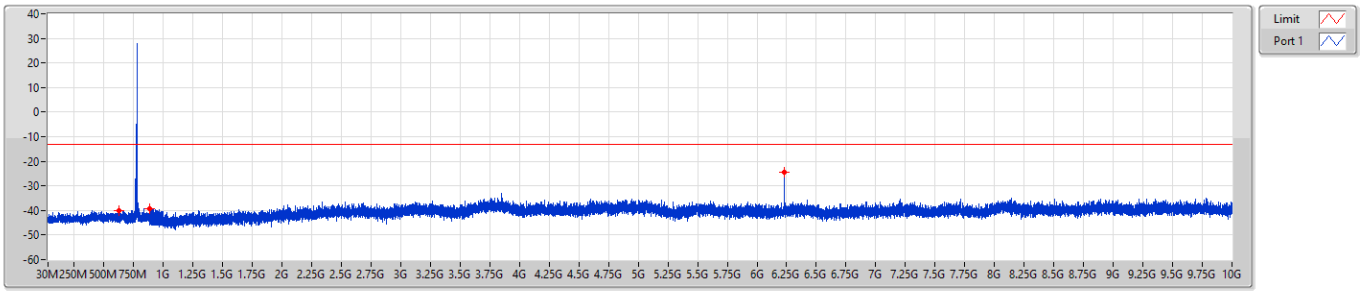
782MHz_QPSK_RB 1



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	677M	1M	3M	Peak	532.07M	-39.89	-13.00	-26.89	-	-
887M	1G	1M	3M	Peak	908.02M	-39.28	-13.00	-26.28	-	-
1G	10G	1M	3M	Peak	6.25263G	-25.28	-13.00	-12.28	-	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

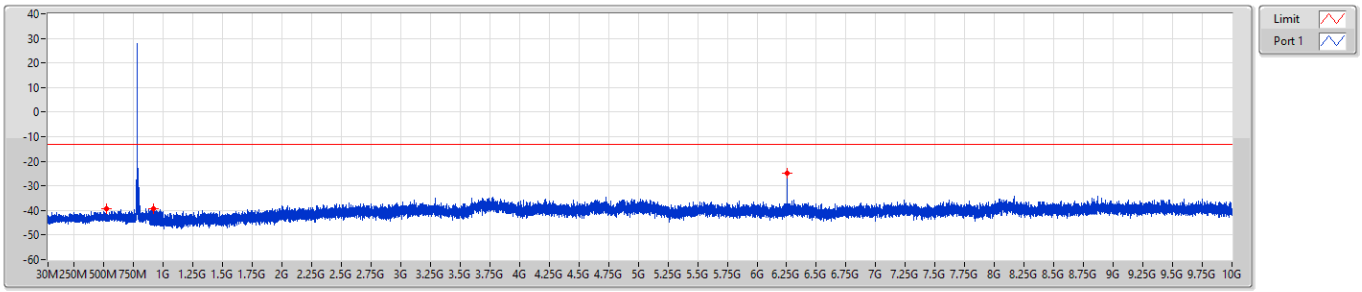
779.5MHz_QPSK_RB 1



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	677M	1M	3M	Peak	624.59M	-40.00	-13.00	-27.00	-	-
887M	1G	1M	3M	Peak	887.42M	-39.24	-13.00	-26.24	-	-
1G	10G	1M	3M	Peak	6.23238G	-24.44	-13.00	-11.44	-	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

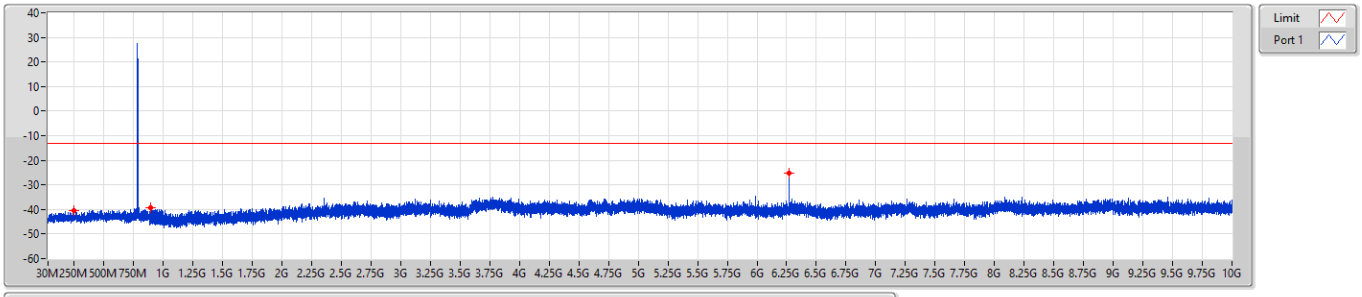
782MHz_QPSK_RB 1



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	677M	1M	3M	Peak	519.13M	-39.20	-13.00	-26.20	-	-
887M	1G	1M	3M	Peak	915.64M	-39.35	-13.00	-26.35	-	-
1G	10G	1M	3M	Peak	6.25178G	-24.76	-13.00	-11.76	-	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

784.5MHz_QPSK_RB 1



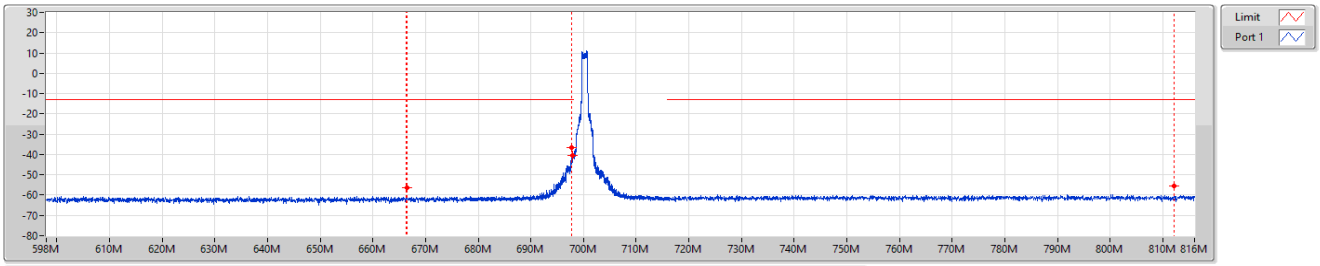
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	677M	1M	3M	Peak	245.13M	-40.44	-13.00	-27.44	-	-
887M	1G	1M	3M	Peak	895.88M	-39.40	-13.00	-26.40	-	-
1G	10G	1M	3M	Peak	6.27203G	-25.39	-13.00	-12.39	-	-

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 12	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	716.1M	736M	30k	100k	RMS	716.15M	-22.65	-13.00	-9.65	MBW 100k	-
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	716.1M	736M	30k	100k	RMS	716.15M	-23.75	-13.00	-10.75	MBW 100k	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	716.1M	726M	30k	100k	RMS	716.15M	-15.09	-13.00	-2.09	MBW 100k	-
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	716.1M	726M	30k	100k	RMS	716.15M	-18.77	-13.00	-5.77	MBW 100k	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

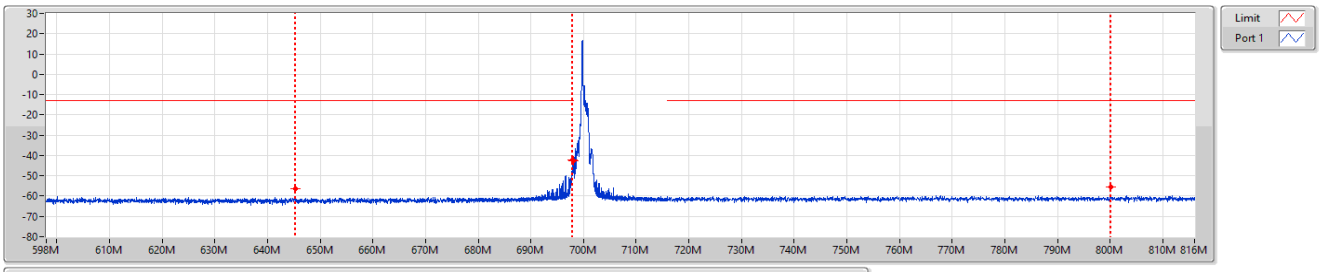
704MHz_QPSK_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	678M	30k	100k	RMS	666.45M	-56.42	-13.00	-43.42	MBW 100k	-
678M	697.9M	30k	100k	RMS	697.75M	-36.48	-13.00	-23.48	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.99M	-40.33	-13.00	-27.33	-	-
716M	816M	30k	100k	RMS	812.15M	-55.41	-13.00	-42.41	MBW 100k	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

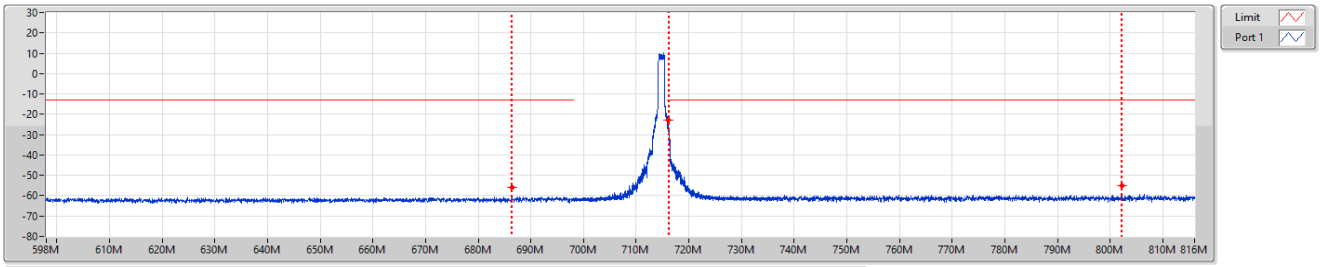
704MHz_QPSK_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	678M	30k	100k	RMS	645.25M	-56.22	-13.00	-43.22	MBW 100k	-
678M	697.9M	30k	100k	RMS	697.85M	-42.12	-13.00	-29.12	MBW 100k	-
697.9M	698M	30k	100k	RMS	698M	-42.43	-13.00	-29.43	-	-
716M	816M	30k	100k	RMS	800.05M	-55.43	-13.00	-42.43	MBW 100k	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

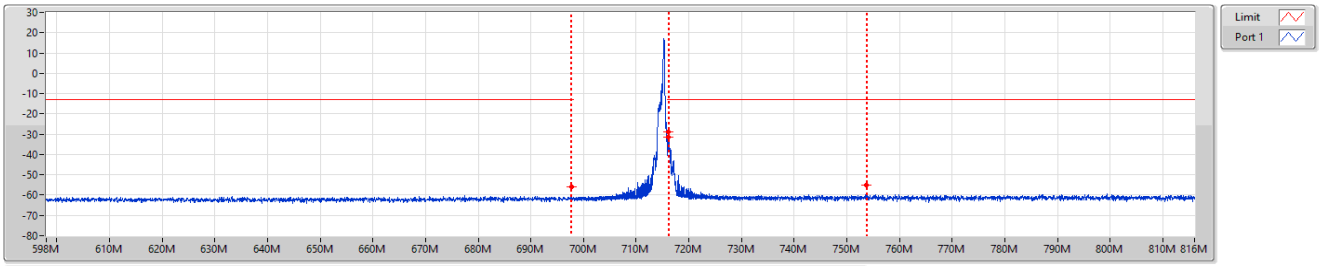
711MHz_QPSK_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	686.35M	-56.13	-13.00	-43.13	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.01M	-22.93	-13.00	-9.93	-	-
716.1M	736M	30k	100k	RMS	716.15M	-22.65	-13.00	-9.65	MBW 100k	-
736M	816M	30k	100k	RMS	802.15M	-55.20	-13.00	-42.20	MBW 100k	-

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

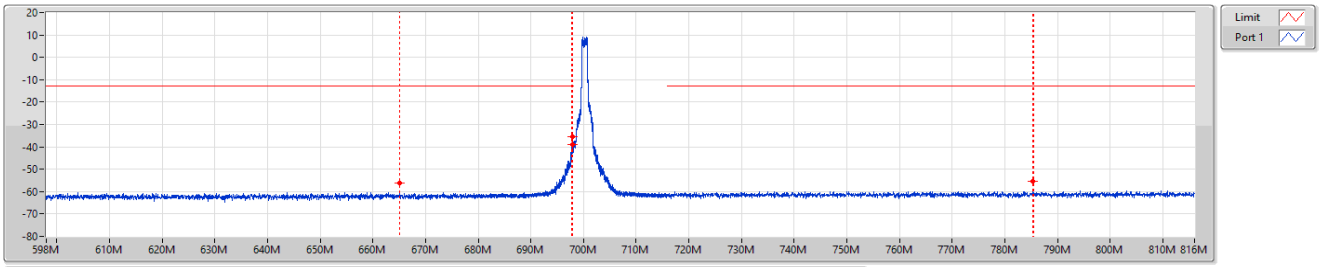
711MHz_QPSK_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	697.65M	-55.96	-13.00	-42.96	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.07M	-31.36	-13.00	-18.36	-	-
716.1M	736M	30k	100k	RMS	716.15M	-29.06	-13.00	-16.06	MBW 100k	-
736M	816M	30k	100k	RMS	753.75M	-55.03	-13.00	-42.03	MBW 100k	-

Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

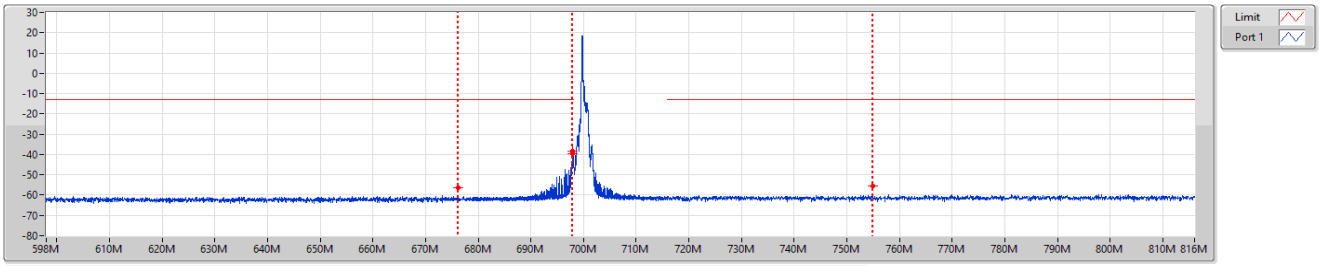
704MHz_16QAM_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	678M	30k	100k	RMS	665.05M	-56.17	-13.00	-43.17	MBW 100k	-
678M	697.9M	30k	100k	RMS	697.85M	-35.64	-13.00	-22.64	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.9M	-39.01	-13.00	-26.01	-	-
716M	816M	30k	100k	RMS	785.35M	-55.20	-13.00	-42.20	MBW 100k	-

Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

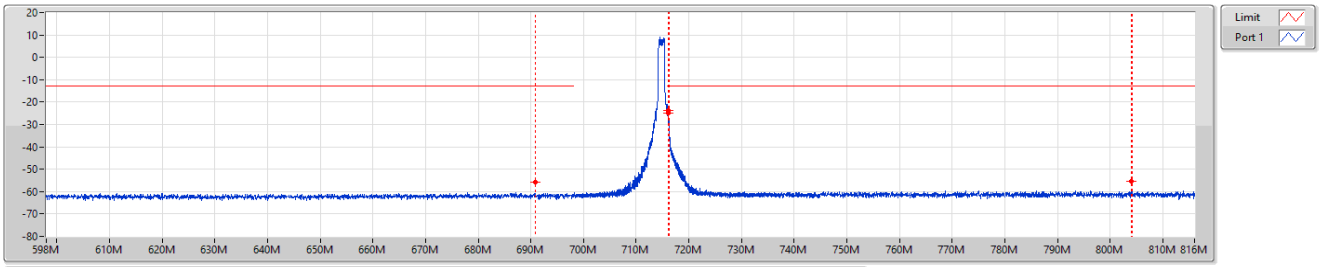
704MHz_16QAM_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	678M	30k	100k	RMS	676.15M	-56.32	-13.00	-43.32	MBW 100k	-
678M	697.9M	30k	100k	RMS	697.85M	-39.44	-13.00	-26.44	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.99M	-38.34	-13.00	-25.34	-	-
716M	816M	30k	100k	RMS	754.85M	-55.51	-13.00	-42.51	MBW 100k	-

Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

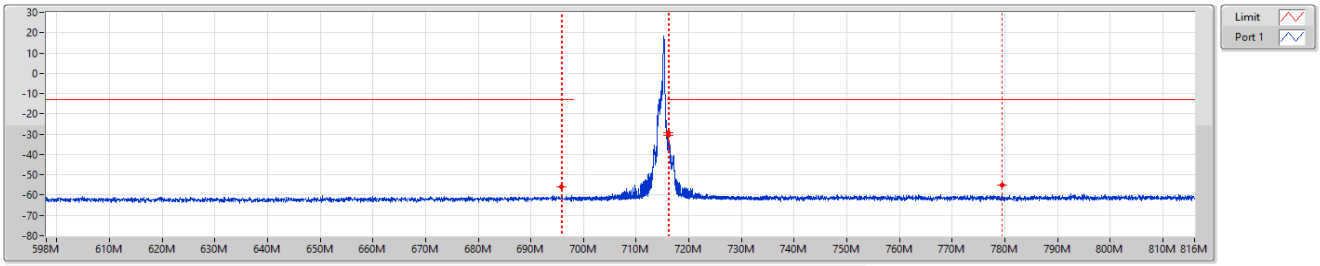
711MHz_16QAM_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	690.85M	-55.91	-13.00	-42.91	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.06M	-24.78	-13.00	-11.78	-	-
716.1M	736M	30k	100k	RMS	716.15M	-23.75	-13.00	-10.75	MBW 100k	-
736M	816M	30k	100k	RMS	804.05M	-55.25	-13.00	-42.25	MBW 100k	-

Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

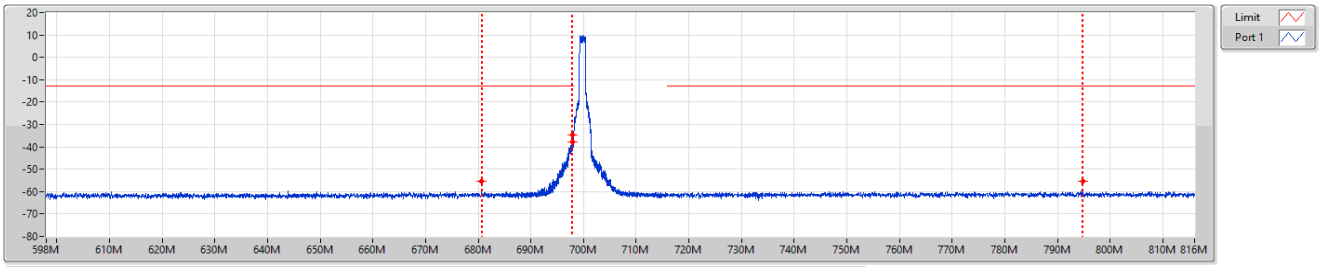
711MHz_16QAM_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	695.85M	-55.99	-13.00	-42.99	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.03M	-30.43	-13.00	-17.43	-	-
716.1M	736M	30k	100k	RMS	716.15M	-29.25	-13.00	-16.25	MBW 100k	-
736M	816M	30k	100k	RMS	779.45M	-55.25	-13.00	-42.25	MBW 100k	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

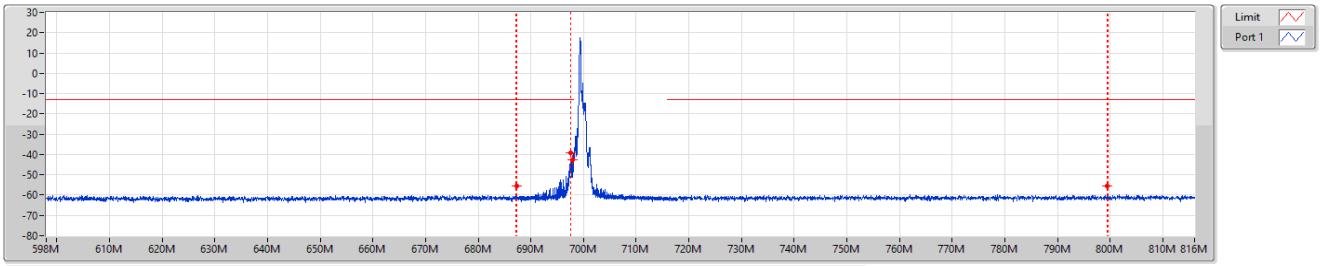
701.5MHz_QPSK_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	688M	30k	100k	RMS	680.65M	-55.57	-13.00	-42.57	MBW 100k	-
688M	697.9M	30k	100k	RMS	697.85M	-34.59	-13.00	-21.59	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.99M	-37.92	-13.00	-24.92	-	-
716M	816M	30k	100k	RMS	794.75M	-55.29	-13.00	-42.29	MBW 100k	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

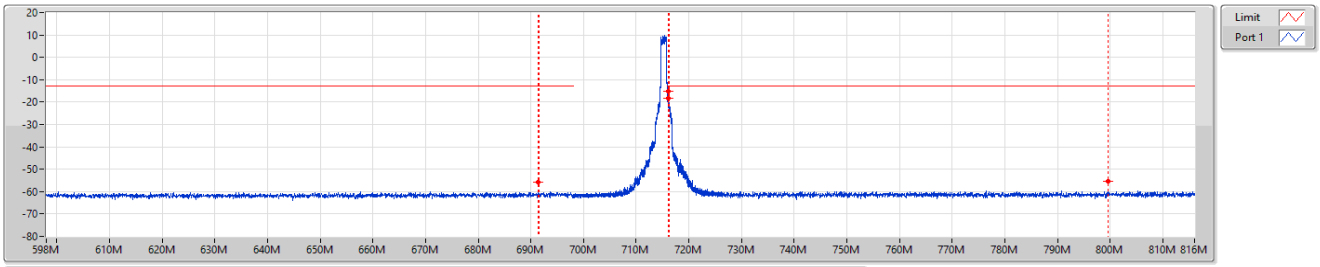
701.5MHz_QPSK_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	688M	30k	100k	RMS	687.25M	-55.38	-13.00	-42.38	MBW 100k	-
688M	697.9M	30k	100k	RMS	697.55M	-39.02	-13.00	-26.02	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.91M	-42.69	-13.00	-29.69	-	-
716M	816M	30k	100k	RMS	799.45M	-55.37	-13.00	-42.37	MBW 100k	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

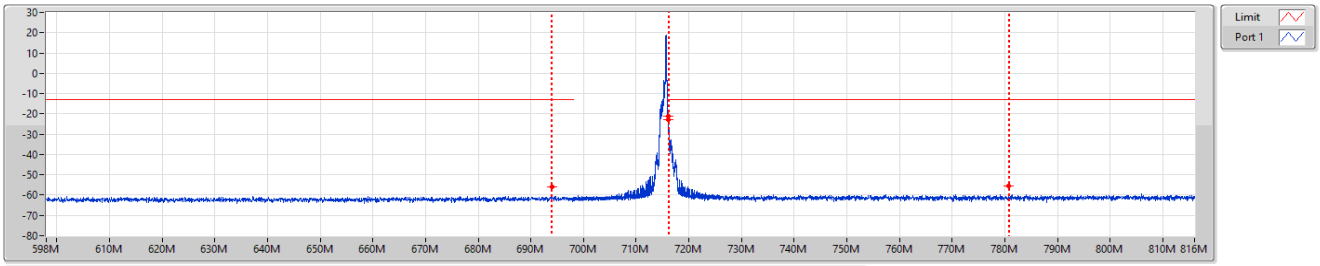
713.5MHz_QPSK_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	691.45M	-55.65	-13.00	-42.65	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.06M	-18.23	-13.00	-5.23	-	-
716.1M	726M	30k	100k	RMS	716.15M	-15.09	-13.00	-2.09	MBW 100k	-
726M	816M	30k	100k	RMS	799.55M	-55.31	-13.00	-42.31	MBW 100k	-

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

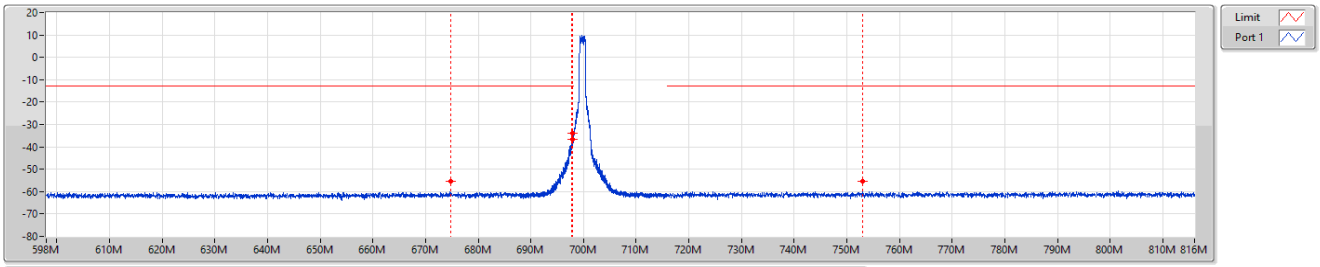
713.5MHz_QPSK_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	693.95M	-56.01	-13.00	-43.01	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.01M	-21.20	-13.00	-8.20	-	-
716.1M	726M	30k	100k	RMS	716.15M	-22.83	-13.00	-9.83	MBW 100k	-
726M	816M	30k	100k	RMS	780.75M	-55.33	-13.00	-42.33	MBW 100k	-

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

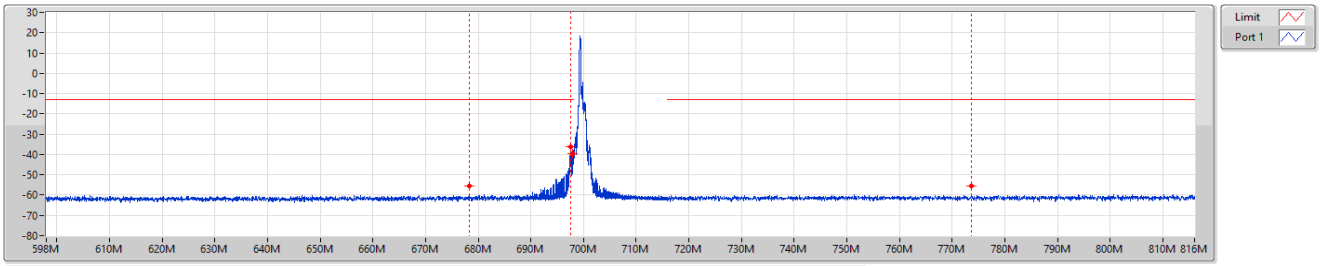
701.5MHz_16QAM_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	688M	30k	100k	RMS	674.75M	-55.41	-13.00	-42.41	MBW 100k	-
688M	697.9M	30k	100k	RMS	697.85M	-33.84	-13.00	-20.84	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.93M	-36.50	-13.00	-23.50	-	-
716M	816M	30k	100k	RMS	752.95M	-55.44	-13.00	-42.44	MBW 100k	-

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

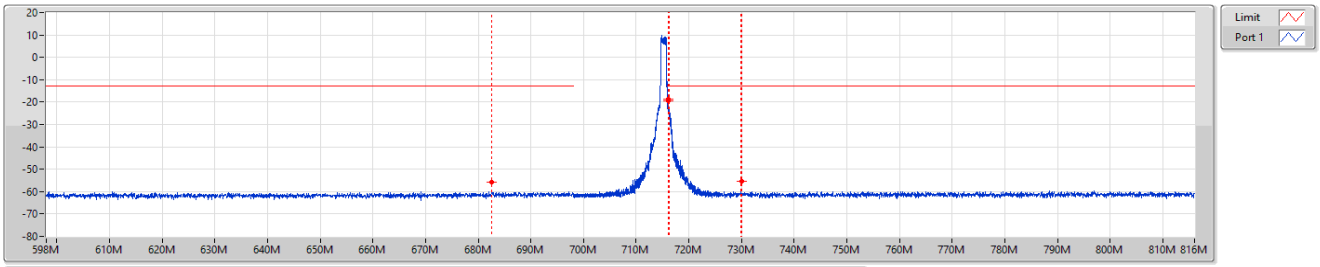
701.5MHz_16QAM_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	688M	30k	100k	RMS	678.35M	-55.57	-13.00	-42.57	MBW 100k	-
688M	697.9M	30k	100k	RMS	697.55M	-36.08	-13.00	-23.08	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.98M	-39.73	-13.00	-26.73	-	-
716M	816M	30k	100k	RMS	773.65M	-55.33	-13.00	-42.33	MBW 100k	-

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

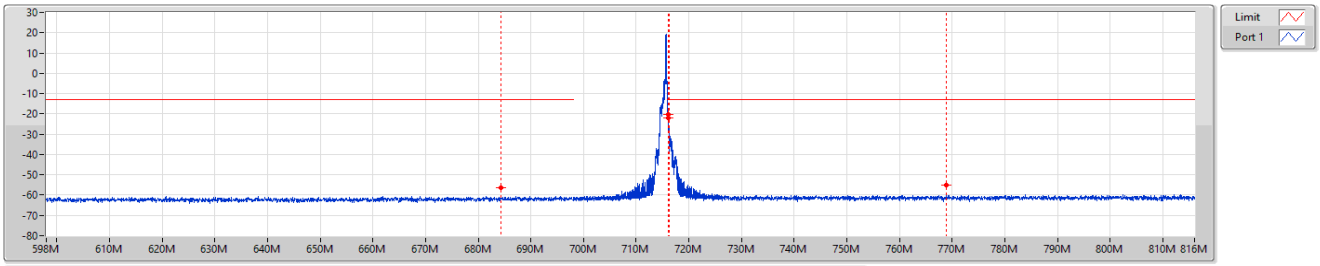
713.5MHz_16QAM_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	682.55M	-55.59	-13.00	-42.59	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.02M	-19.60	-13.00	-6.60	-	-
716.1M	726M	30k	100k	RMS	716.15M	-18.77	-13.00	-5.77	MBW 100k	-
726M	816M	30k	100k	RMS	729.95M	-55.35	-13.00	-42.35	MBW 100k	-

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

713.5MHz_16QAM_RB 1,#RB H,NB H



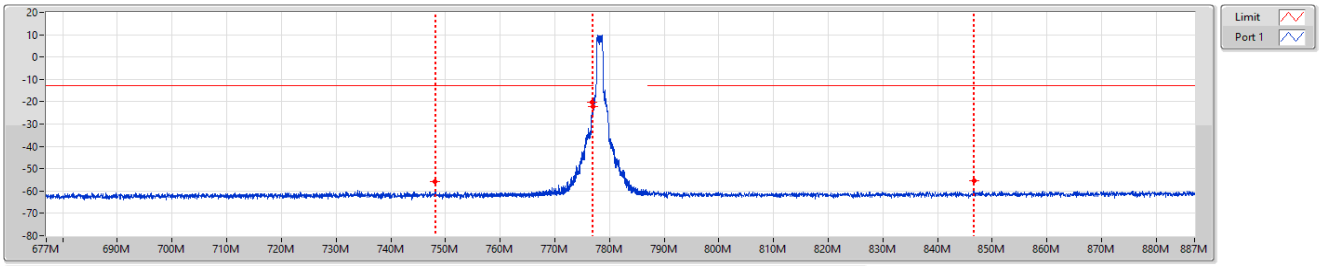
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	684.35M	-56.17	-13.00	-43.17	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.01M	-20.45	-13.00	-7.45	-	-
716.1M	726M	30k	100k	RMS	716.15M	-22.02	-13.00	-9.02	MBW 100k	-
726M	816M	30k	100k	RMS	768.85M	-55.10	-13.00	-42.10	MBW 100k	-

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 13	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	787.1M	807M	30k	100k	RMS	787.15M	-19.29	-13.00	-6.29	MBW 100k	-
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	787.1M	807M	30k	100k	RMS	787.15M	-18.99	-13.00	-5.99	MBW 100k	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	787.1M	797M	30k	100k	RMS	787.15M	-13.19	-13.00	-0.19	MBW 100k	-
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	787.1M	797M	30k	100k	RMS	787.15M	-14.66	-13.00	-1.66	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

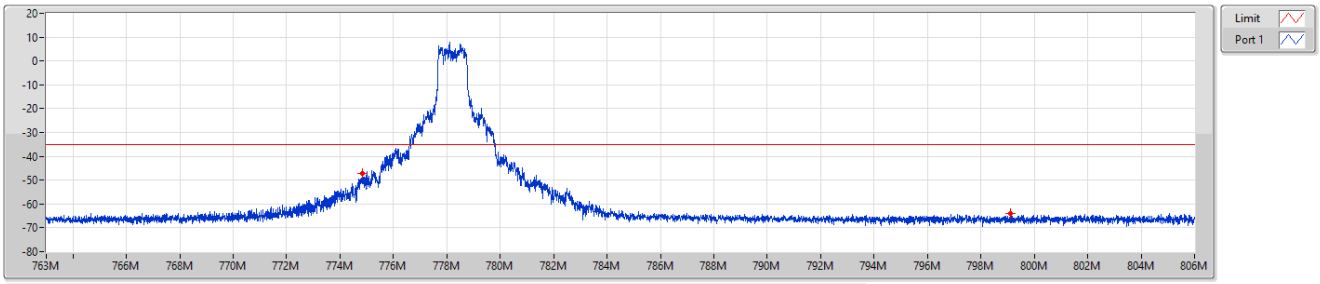
782MHz_QPSK_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	757M	30k	100k	RMS	748.15M	-55.88	-13.00	-42.88	MBW 100k	-
757M	776.9M	30k	100k	RMS	776.85M	-20.37	-13.00	-7.37	MBW 100k	-
776.9M	777M	30k	100k	RMS	776.98M	-22.33	-13.00	-9.33	-	-
787M	887M	30k	100k	RMS	846.65M	-55.25	-13.00	-42.25	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

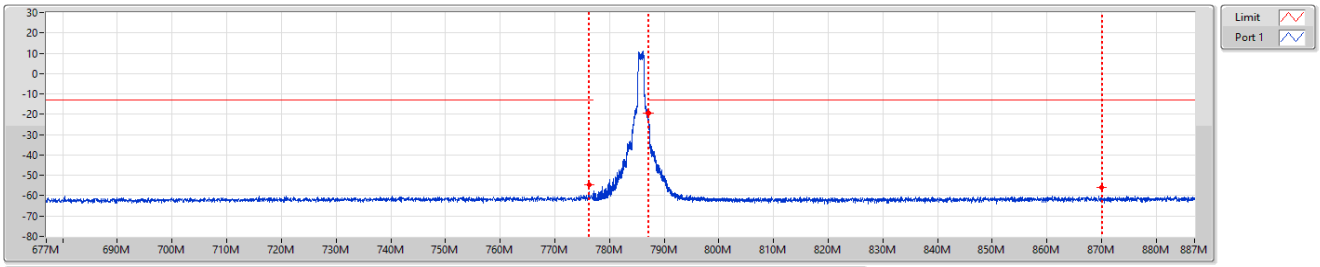
782MHz_QPSK_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.85M	-47.05	-35.00	-12.05	-	-
793M	806M	10k	30k	RMS	799.12M	-64.02	-35.00	-29.02	-	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

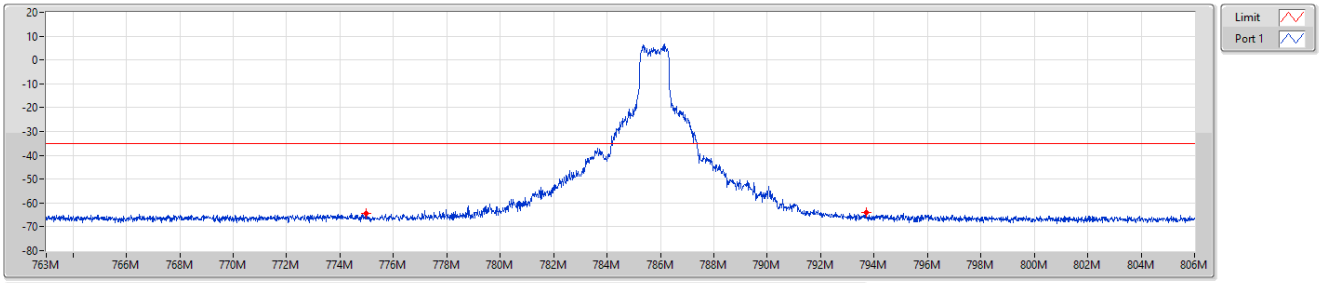
782MHz_QPSK_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	776.25M	-54.68	-13.00	-41.68	MBW 100k	-
787M	787.1M	30k	100k	RMS	787.01M	-19.31	-13.00	-6.31	-	-
787.1M	807M	30k	100k	RMS	787.15M	-19.29	-13.00	-6.29	MBW 100k	-
807M	887M	30k	100k	RMS	870.05M	-55.83	-13.00	-42.83	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

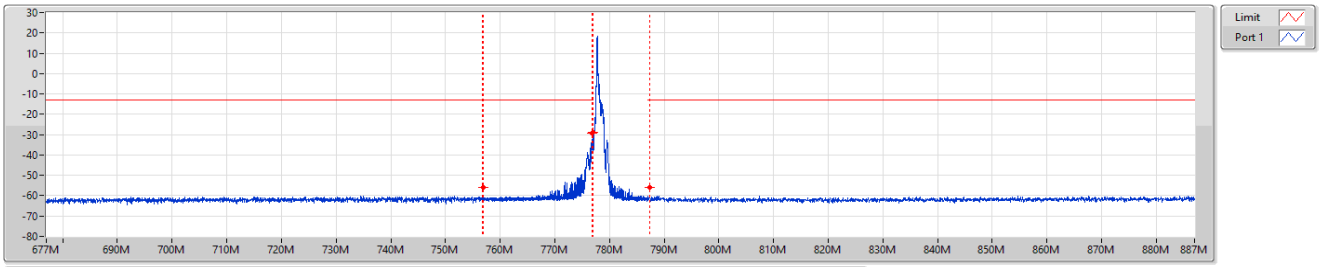
782MHz_QPSK_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.99M	-64.40	-35.00	-29.40	-	-
793M	806M	10k	30k	RMS	793.7M	-63.95	-35.00	-28.95	-	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

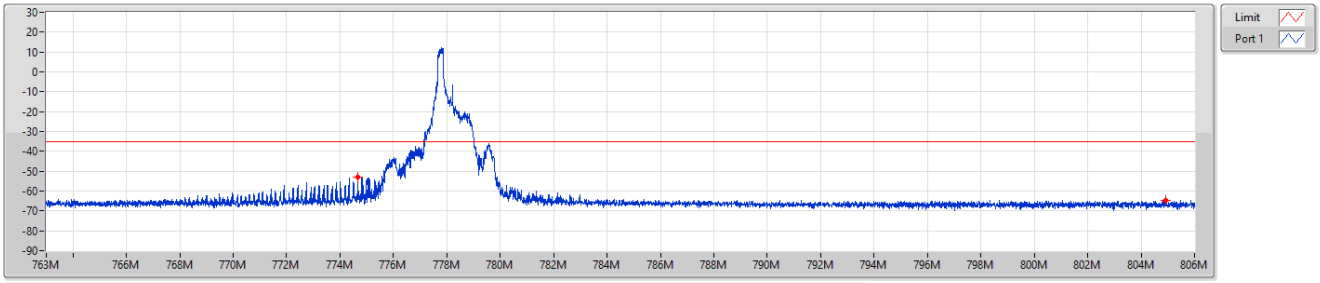
782MHz_QPSK_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	757M	30k	100k	RMS	756.85M	-55.95	-13.00	-42.95	MBW 100k	-
757M	776.9M	30k	100k	RMS	776.85M	-29.19	-13.00	-16.19	MBW 100k	-
776.9M	777M	30k	100k	RMS	777M	-28.99	-13.00	-15.99	-	-
787M	887M	30k	100k	RMS	787.35M	-55.78	-13.00	-42.78	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

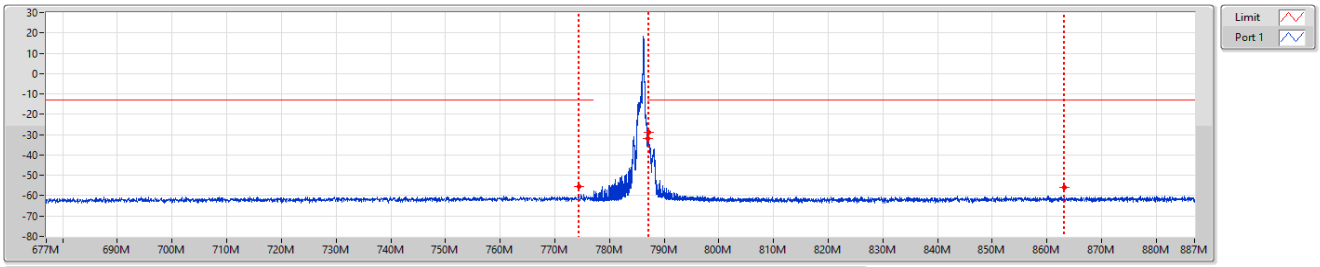
782MHz_QPSK_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.66M	-53.05	-35.00	-18.05	-	-
793M	806M	10k	30k	RMS	804.93M	-64.75	-35.00	-29.75	-	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

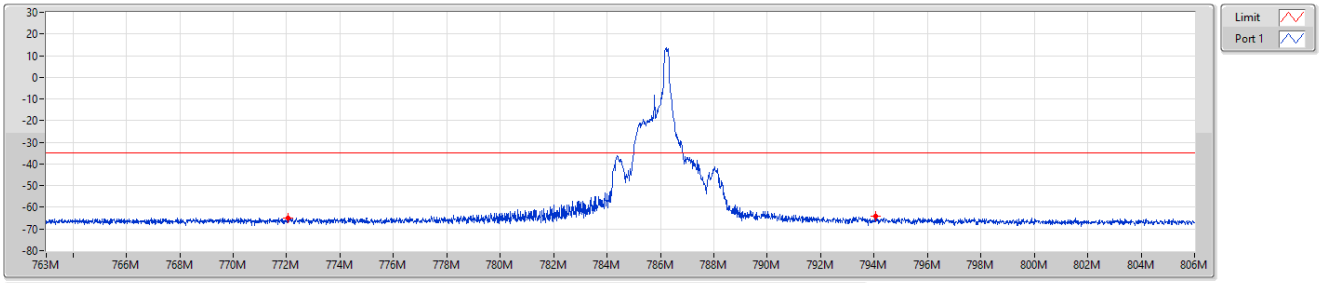
782MHz_QPSK_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	774.35M	-55.30	-13.00	-42.30	MBW 100k	-
787M	787.1M	30k	100k	RMS	787.08M	-32.08	-13.00	-19.08	-	-
787.1M	807M	30k	100k	RMS	787.15M	-28.96	-13.00	-15.96	MBW 100k	-
807M	887M	30k	100k	RMS	863.15M	-55.90	-13.00	-42.90	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

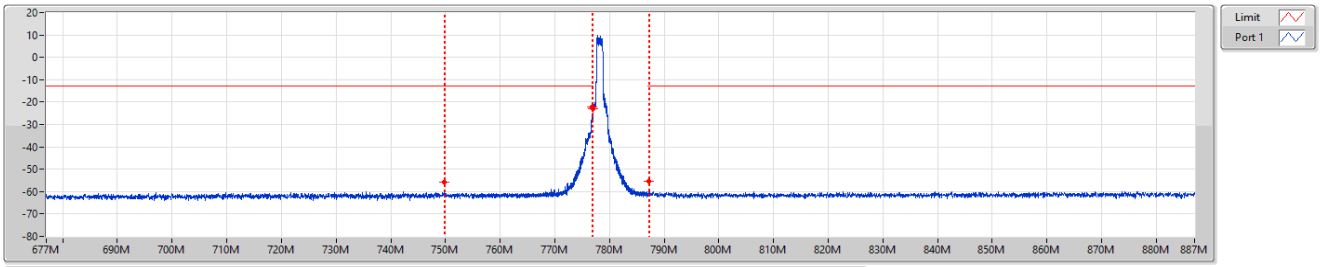
782MHz_QPSK_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	772.06M	-64.76	-35.00	-29.76	-	-
793M	806M	10k	30k	RMS	794.05M	-63.93	-35.00	-28.93	-	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

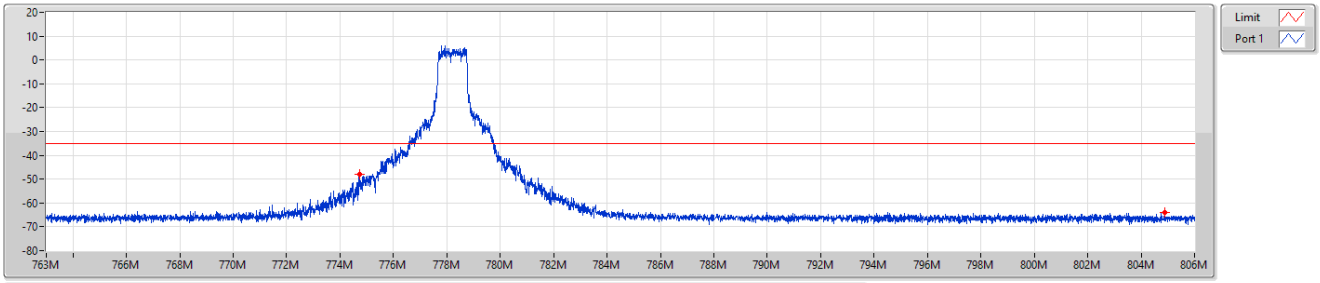
782MHz_16QAM_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	757M	30k	100k	RMS	749.85M	-55.79	-13.00	-42.79	MBW 100k	-
757M	776.9M	30k	100k	RMS	776.85M	-22.18	-13.00	-9.18	MBW 100k	-
776.9M	777M	30k	100k	RMS	776.91M	-22.97	-13.00	-9.97	-	-
787M	887M	30k	100k	RMS	787.25M	-55.38	-13.00	-42.38	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

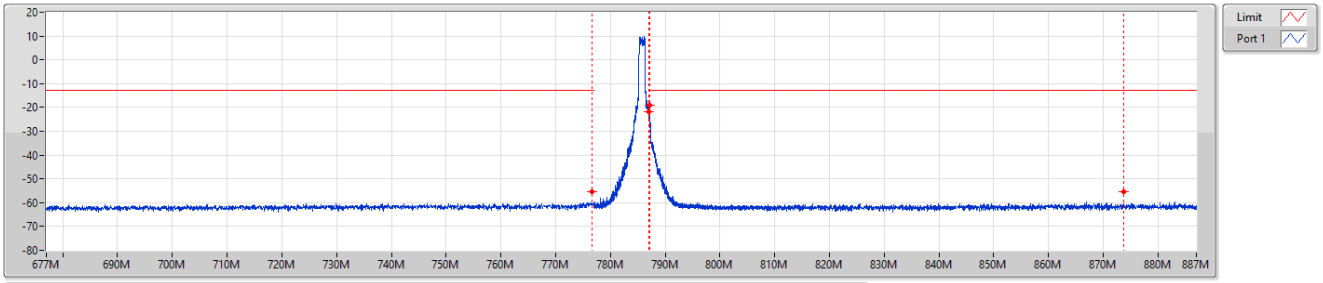
782MHz_16QAM_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.72M	-47.82	-35.00	-12.82	-	-
793M	806M	10k	30k	RMS	804.89M	-64.04	-35.00	-29.04	-	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

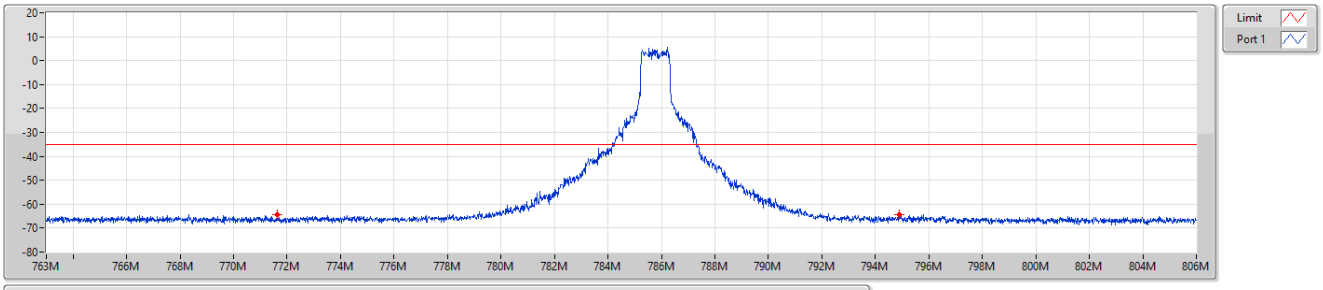
782MHz_16QAM_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	776.65M	-55.54	-13.00	-42.54	MBW 100k	-
787M	787.1M	30k	100k	RMS	787.01M	-21.61	-13.00	-8.61	-	-
787.1M	807M	30k	100k	RMS	787.15M	-18.99	-13.00	-5.99	MBW 100k	-
807M	887M	30k	100k	RMS	873.75M	-55.57	-13.00	-42.57	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

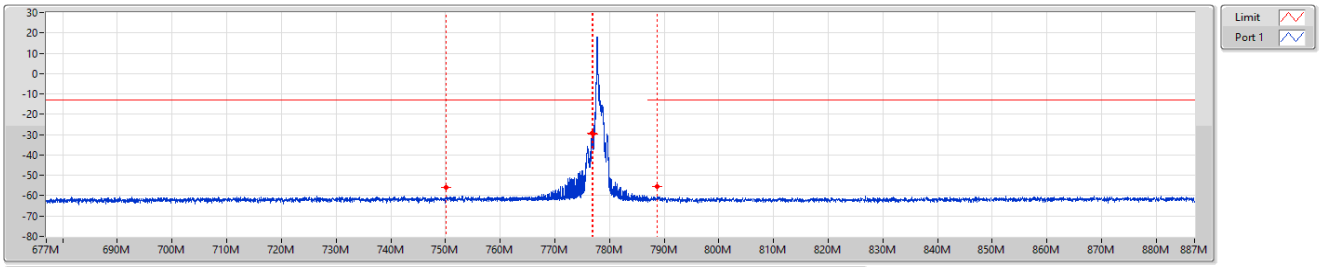
782MHz_16QAM_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	771.64M	-64.48	-35.00	-29.48	-	-
793M	806M	10k	30k	RMS	794.89M	-64.38	-35.00	-29.38	-	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

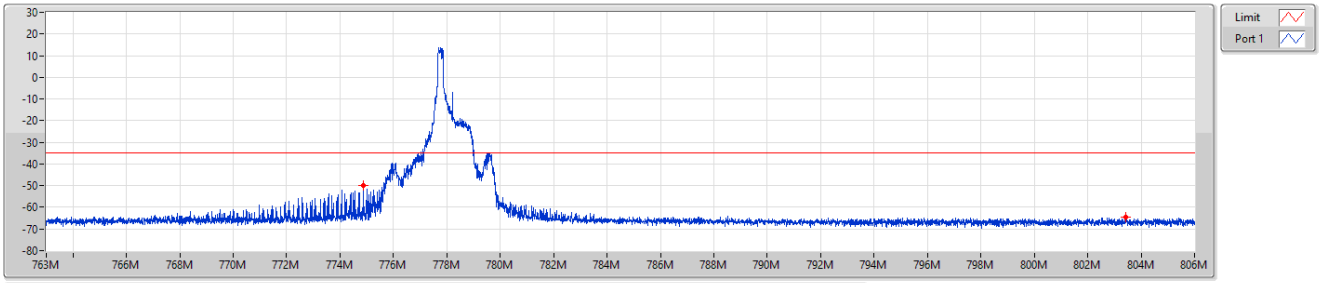
782MHz_16QAM_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	757M	30k	100k	RMS	750.15M	-56.00	-13.00	-43.00	MBW 100k	-
757M	776.9M	30k	100k	RMS	776.85M	-29.14	-13.00	-16.14	MBW 100k	-
776.9M	777M	30k	100k	RMS	776.99M	-29.69	-13.00	-16.69	-	-
787M	887M	30k	100k	RMS	788.75M	-55.58	-13.00	-42.58	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

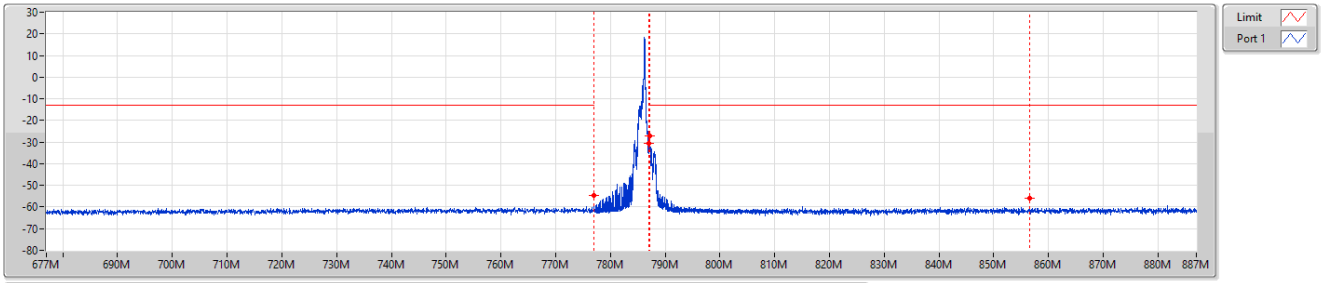
782MHz_16QAM_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.88M	-50.05	-35.00	-15.05	-	-
793M	806M	10k	30k	RMS	803.42M	-64.61	-35.00	-29.61	-	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

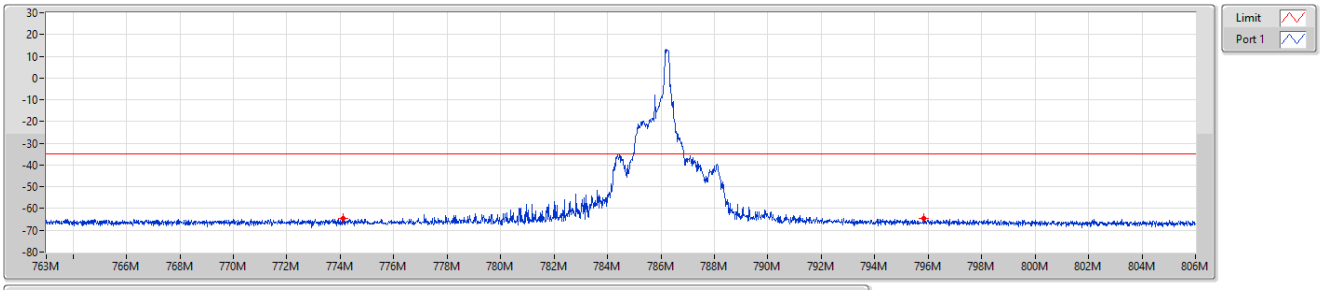
782MHz_16QAM_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	776.95M	-54.76	-13.00	-41.76	MBW 100k	-
787M	787.1M	30k	100k	RMS	787.09M	-30.72	-13.00	-17.72	-	-
787.1M	807M	30k	100k	RMS	787.15M	-27.09	-13.00	-14.09	MBW 100k	-
807M	887M	30k	100k	RMS	856.55M	-55.78	-13.00	-42.78	MBW 100k	-

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

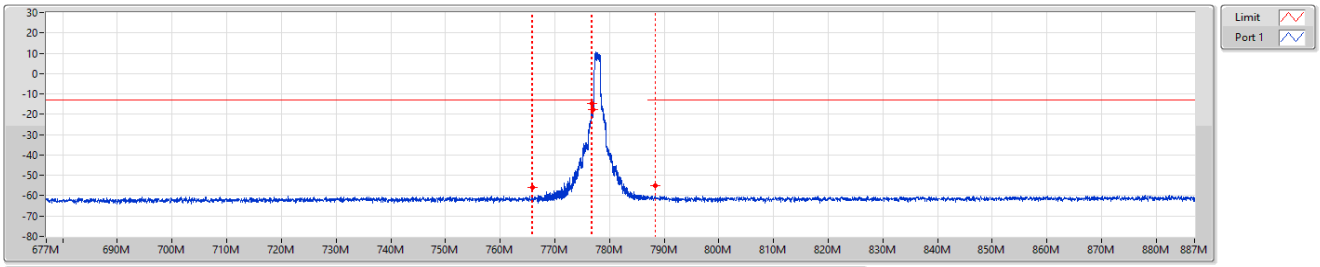
782MHz_16QAM_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.12M	-64.73	-35.00	-29.73	-	-
793M	806M	10k	30k	RMS	795.85M	-64.67	-35.00	-29.67	-	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

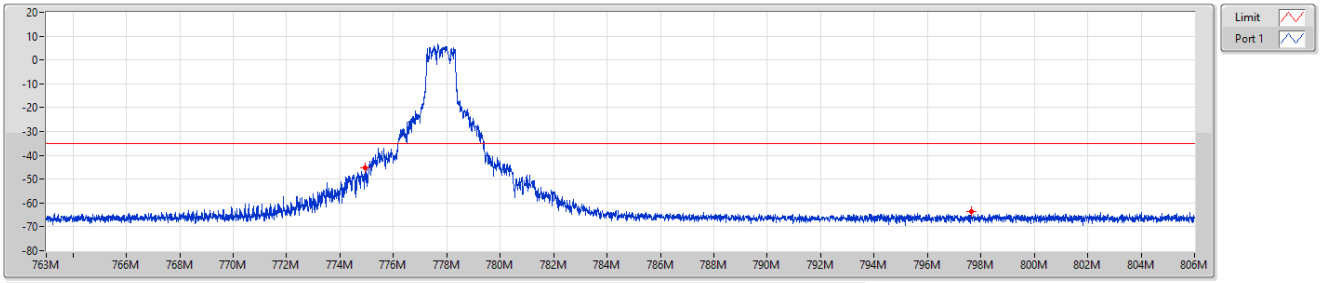
779.5MHz_QPSK_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	767M	30k	100k	RMS	765.85M	-55.87	-13.00	-42.87	MBW 100k	-
767M	776.9M	30k	100k	RMS	776.75M	-14.70	-13.00	-1.70	MBW 100k	-
776.9M	777M	30k	100k	RMS	776.99M	-17.55	-13.00	-4.55	-	-
787M	887M	30k	100k	RMS	788.35M	-55.15	-13.00	-42.15	MBW 100k	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

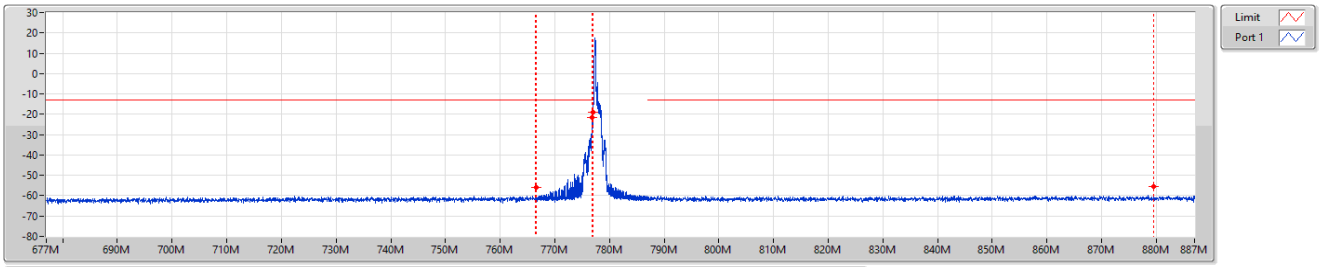
779.5MHz_QPSK_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.94M	-45.14	-35.00	-10.14	-	-
793M	806M	10k	30k	RMS	797.63M	-63.74	-35.00	-28.74	-	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

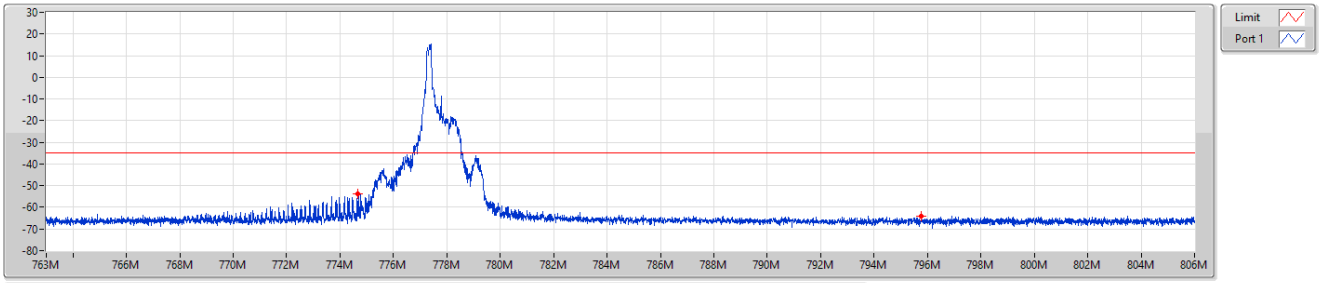
779.5MHz_QPSK_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	767M	30k	100k	RMS	766.55M	-55.74	-13.00	-42.74	MBW 100k	-
767M	776.9M	30k	100k	RMS	776.85M	-21.71	-13.00	-8.71	MBW 100k	-
776.9M	777M	30k	100k	RMS	777M	-18.99	-13.00	-5.99	-	-
787M	887M	30k	100k	RMS	879.55M	-55.48	-13.00	-42.48	MBW 100k	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

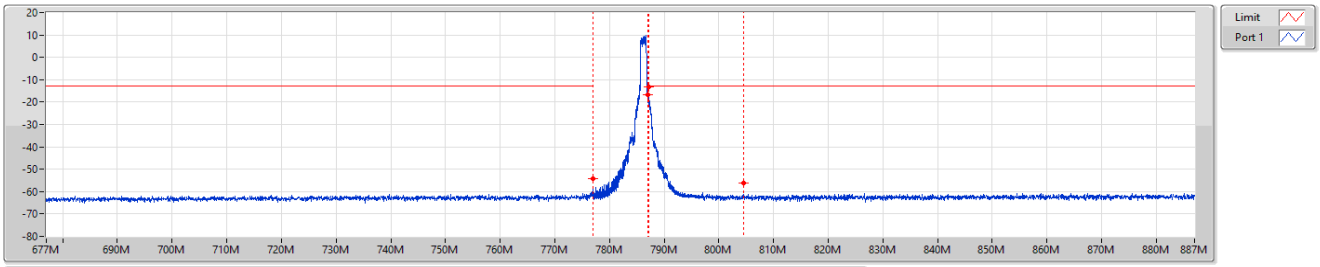
779.5MHz_QPSK_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.68M	-53.70	-35.00	-18.70	-	-
793M	806M	10k	30k	RMS	795.76M	-64.24	-35.00	-29.24	-	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

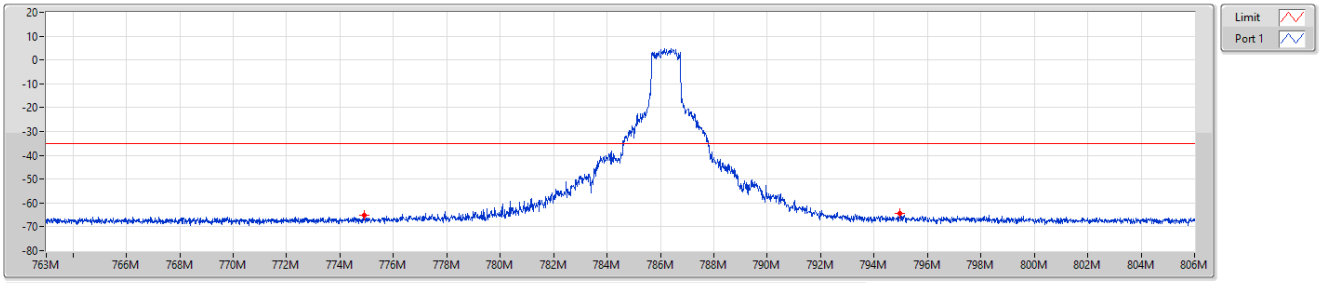
784.5MHz_QPSK_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	776.95M	-54.26	-13.00	-41.26	MBW 100k	-
787M	787.1M	30k	100k	RMS	787.02M	-16.62	-13.00	-3.62	-	-
787.1M	797M	30k	100k	RMS	787.15M	-13.19	-13.00	-0.19	MBW 100k	-
797M	887M	30k	100k	RMS	804.55M	-56.34	-13.00	-43.34	MBW 100k	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

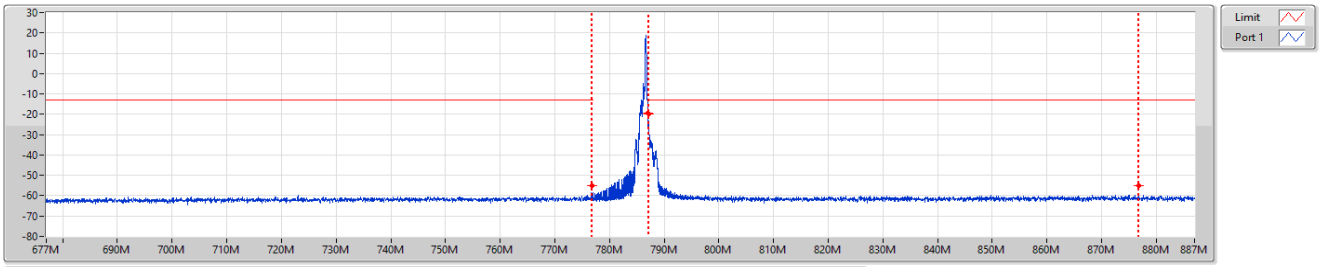
784.5MHz_QPSK_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.9M	-65.12	-35.00	-30.12	-	-
793M	806M	10k	30k	RMS	794.98M	-64.35	-35.00	-29.35	-	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

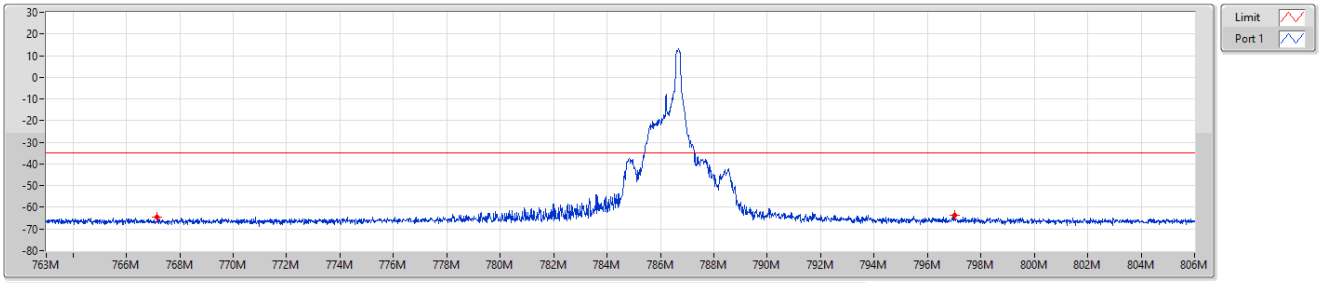
784.5MHz_QPSK_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	776.75M	-54.93	-13.00	-41.93	MBW 100k	-
787M	787.1M	30k	100k	RMS	787.03M	-19.22	-13.00	-6.22	-	-
787.1M	797M	30k	100k	RMS	787.15M	-19.90	-13.00	-6.90	MBW 100k	-
797M	887M	30k	100k	RMS	876.75M	-55.29	-13.00	-42.29	MBW 100k	-

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **CSE-TX-Sum**

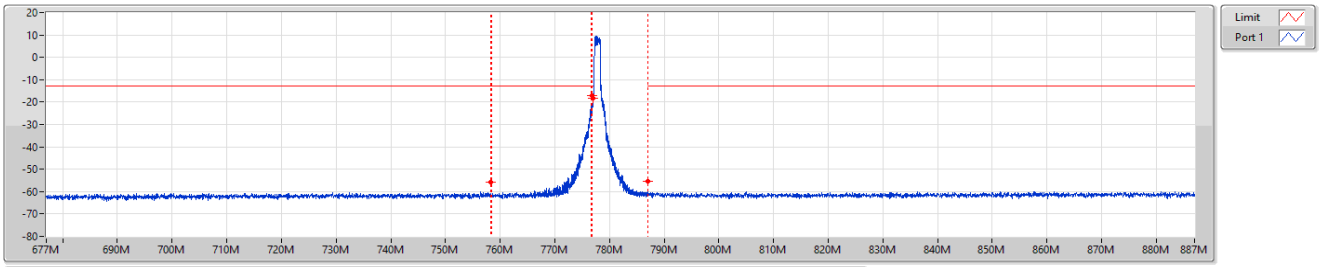
784.5MHz_QPSK_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	767.14M	-64.54	-35.00	-29.54	-	-
793M	806M	10k	30k	RMS	797M	-63.67	-35.00	-28.67	-	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

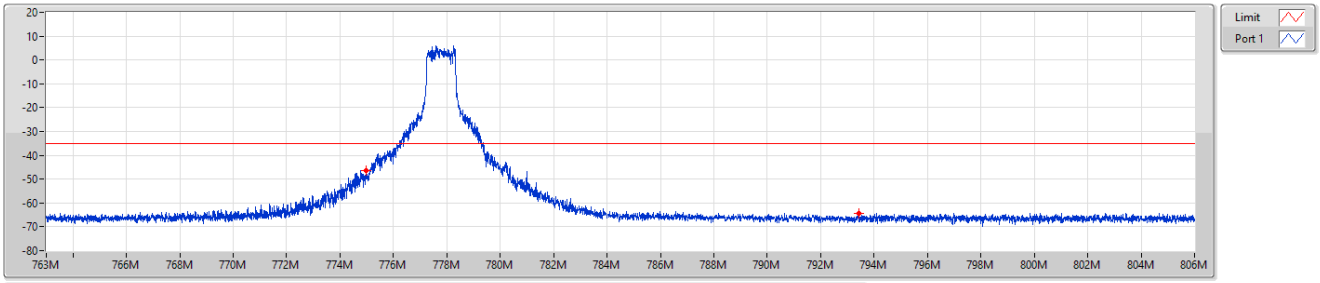
779.5MHz_16QAM_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	767M	30k	100k	RMS	758.35M	-55.92	-13.00	-42.92	MBW 100k	-
767M	776.9M	30k	100k	RMS	776.75M	-17.27	-13.00	-4.27	MBW 100k	-
776.9M	777M	30k	100k	RMS	776.93M	-18.35	-13.00	-5.35	-	-
787M	887M	30k	100k	RMS	787.05M	-55.50	-13.00	-42.50	MBW 100k	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

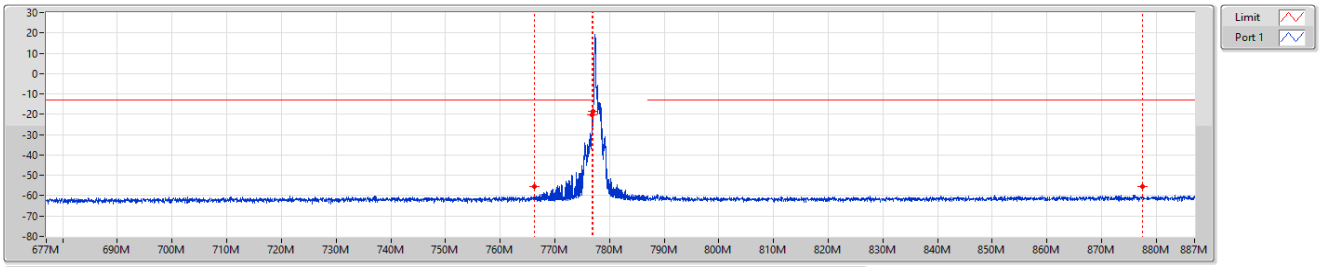
779.5MHz_16QAM_RB 6,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.99M	-46.29	-35.00	-11.29	-	-
793M	806M	10k	30k	RMS	793.43M	-64.30	-35.00	-29.30	-	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

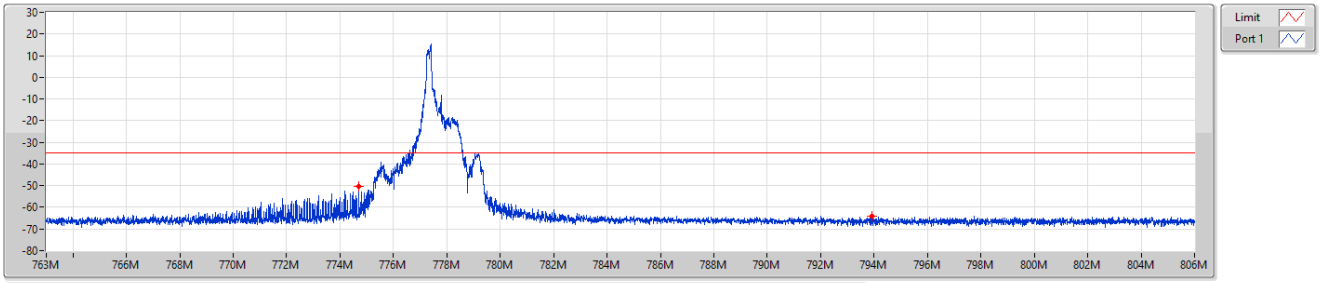
779.5MHz_16QAM_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	767M	30k	100k	RMS	766.25M	-55.72	-13.00	-42.72	MBW 100k	-
767M	776.9M	30k	100k	RMS	776.85M	-20.16	-13.00	-7.16	MBW 100k	-
776.9M	777M	30k	100k	RMS	777M	-18.41	-13.00	-5.41	-	-
787M	887M	30k	100k	RMS	877.45M	-55.40	-13.00	-42.40	MBW 100k	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

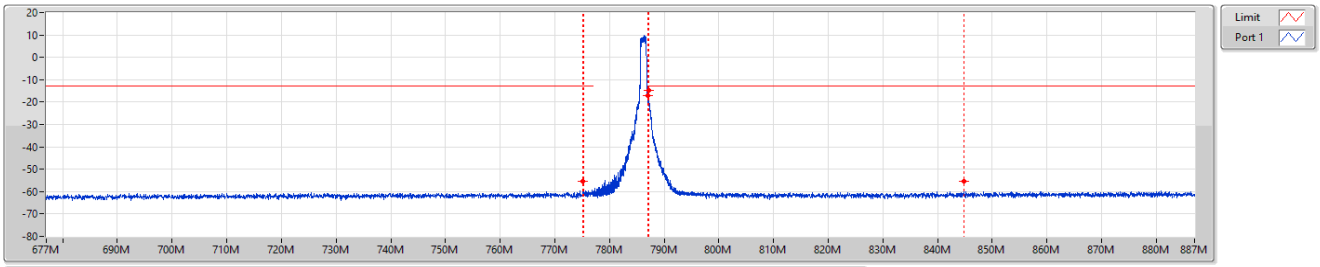
779.5MHz_16QAM_RB 1,#RB L,NB L



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.69M	-50.52	-35.00	-15.52	-	-
793M	806M	10k	30k	RMS	793.92M	-64.22	-35.00	-29.22	-	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

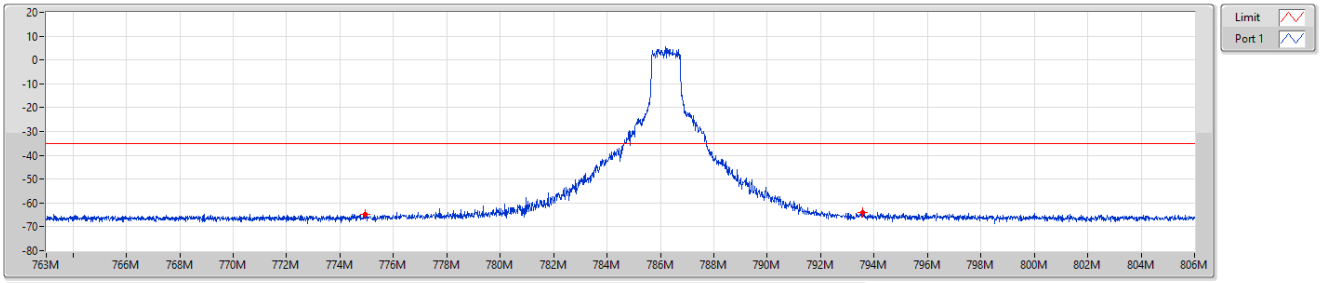
784.5MHz_16QAM_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	775.15M	-55.31	-13.00	-42.31	MBW 100k	-
787M	787.1M	30k	100k	RMS	787.07M	-17.00	-13.00	-4.00	-	-
787.1M	797M	30k	100k	RMS	787.15M	-14.66	-13.00	-1.66	MBW 100k	-
797M	887M	30k	100k	RMS	844.85M	-55.39	-13.00	-42.39	MBW 100k	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

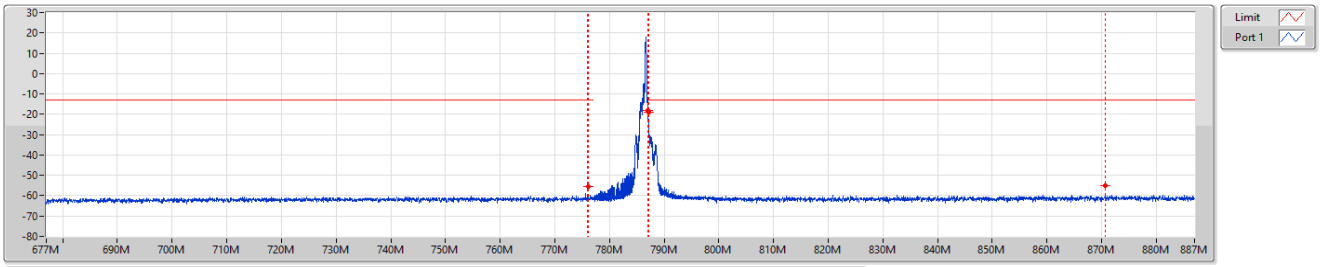
784.5MHz_16QAM_RB 6,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.93M	-64.63	-35.00	-29.63	-	-
793M	806M	10k	30k	RMS	793.56M	-64.15	-35.00	-29.15	-	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

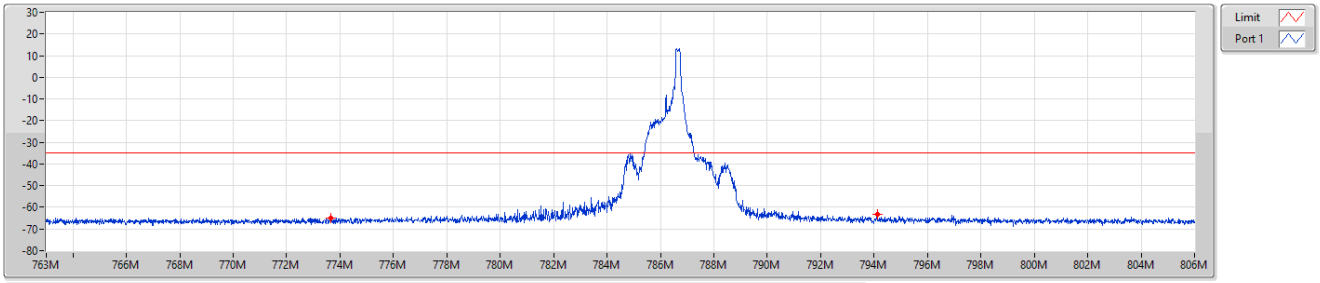
784.5MHz_16QAM_RB 1,#RB H,NB H



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	776.05M	-55.70	-13.00	-42.70	MBW 100k	-
787M	787.1M	30k	100k	RMS	787.01M	-18.27	-13.00	-5.27	-	-
787.1M	797M	30k	100k	RMS	787.15M	-18.97	-13.00	-5.97	MBW 100k	-
797M	887M	30k	100k	RMS	870.65M	-54.90	-13.00	-41.90	MBW 100k	-

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **CSE-TX-Sum**

784.5MHz_16QAM_RB 1,#RB H,NB H



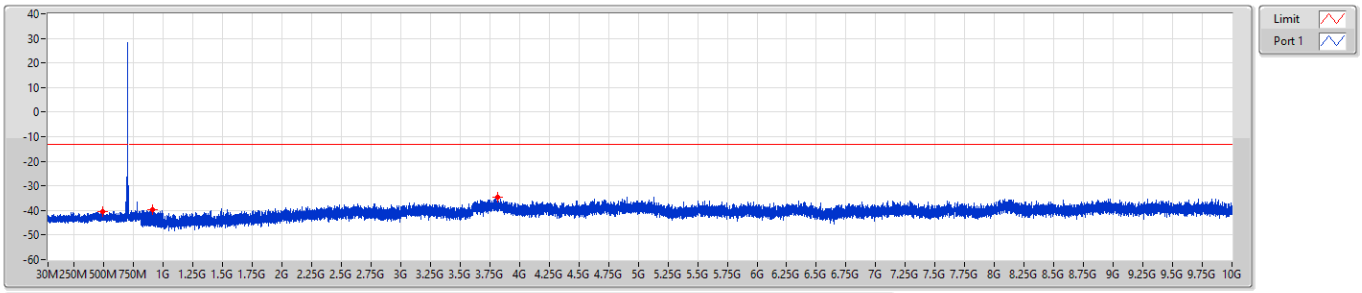
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	773.67M	-64.76	-35.00	-29.76	-	-
793M	806M	10k	30k	RMS	794.12M	-63.42	-35.00	-28.42	-	-

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 12	-	-	-	-	-	-	-	-	-	-	-	-
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	3.62153G	-34.23	-13.00	-21.23	-	-

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

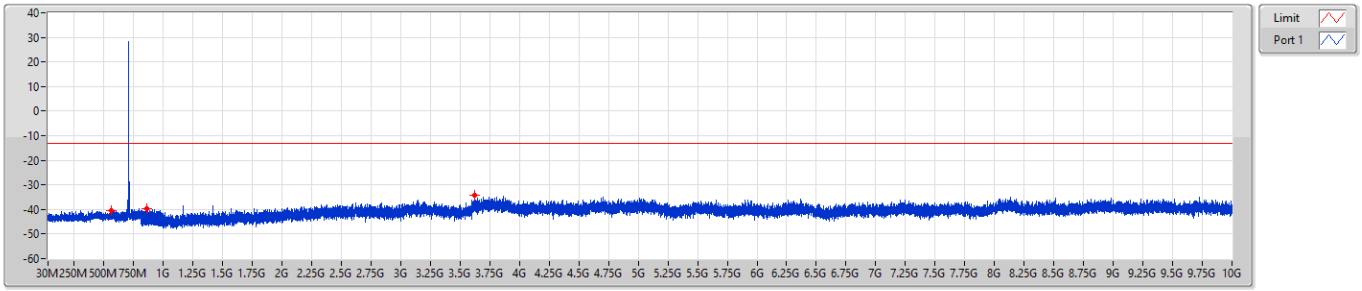
699.2MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	494.06M	-40.46	-13.00	-27.46	-	-
816M	1G	1M	3M	Peak	912.71M	-39.75	-13.00	-26.75	-	-
1G	10G	1M	3M	Peak	3.81616G	-34.67	-13.00	-21.67	-	-

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

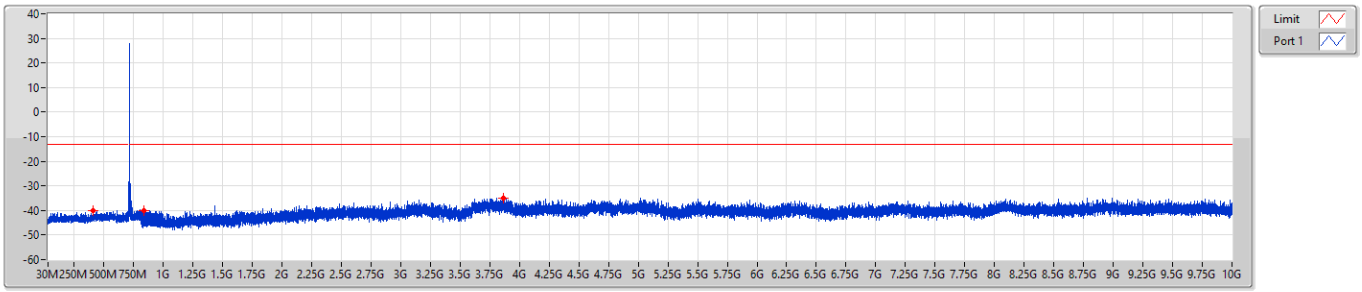
707.5MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	564.49M	-40.52	-13.00	-27.52	-	-
816M	1G	1M	3M	Peak	859.65M	-39.82	-13.00	-26.82	-	-
1G	10G	1M	3M	Peak	3.62153G	-34.23	-13.00	-21.23	-	-

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

715.8MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	598M	1M	3M	Peak	413.12M	-40.17	-13.00	-27.17	-	-
816M	1G	1M	3M	Peak	839.6M	-39.94	-13.00	-26.94	-	-
1G	10G	1M	3M	Peak	3.86509G	-34.89	-13.00	-21.89	-	-

Summary

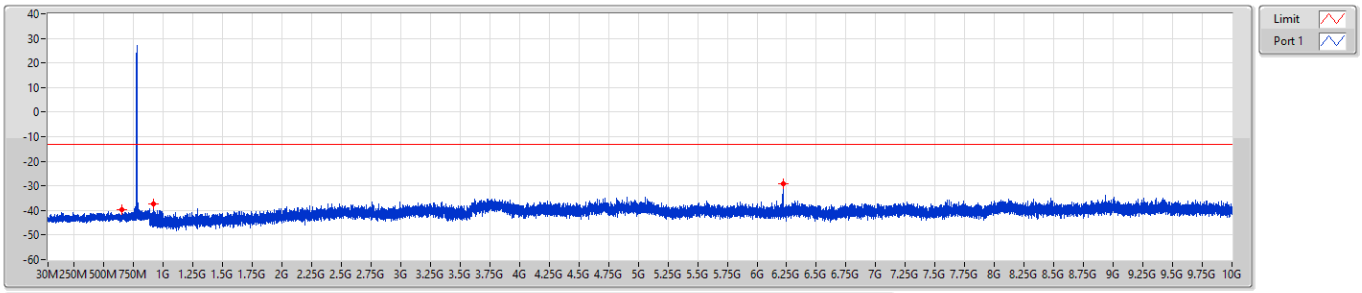
Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 13	-	-	-	-	-	-	-	-	-	-	-	-
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	1G	10G	1M	3M	Peak	6.29453G	-28.37	-13.00	-15.37	-	-

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 13_NB-IoT_15kHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
777.2MHz_QPSK_Tone 12@0	Pass	30M	677M	1M	3M	Peak	651.12M	-39.83	-13.00	-26.83	-	-
777.2MHz_QPSK_Tone 12@0	Pass	887M	1G	1M	3M	Peak	917.46M	-37.19	-13.00	-24.19	-	-
777.2MHz_QPSK_Tone 12@0	Pass	1G	10G	1M	3M	Peak	6.21859G	-29.01	-13.00	-16.01	-	-
782.0MHz_QPSK_Tone 12@0	Pass	30M	677M	1M	3M	Peak	477.4M	-40.13	-13.00	-27.13	-	-
782.0MHz_QPSK_Tone 12@0	Pass	887M	1G	1M	3M	Peak	937.7M	-40.13	-13.00	-27.13	-	-
782.0MHz_QPSK_Tone 12@0	Pass	1G	10G	1M	3M	Peak	6.25656G	-32.08	-13.00	-19.08	-	-
786.8MHz_QPSK_Tone 12@0	Pass	30M	677M	1M	3M	Peak	555.69M	-40.04	-13.00	-27.04	-	-
786.8MHz_QPSK_Tone 12@0	Pass	887M	1G	1M	3M	Peak	925.2M	-39.84	-13.00	-26.84	-	-
786.8MHz_QPSK_Tone 12@0	Pass	1G	10G	1M	3M	Peak	6.29453G	-28.37	-13.00	-15.37	-	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

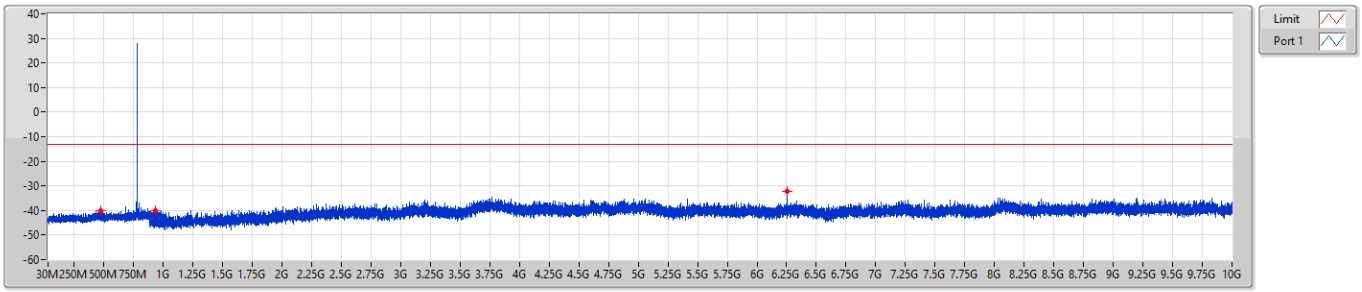
777.2MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	677M	1M	3M	Peak	651.12M	-39.83	-13.00	-26.83	-	-
887M	1G	1M	3M	Peak	917.46M	-37.19	-13.00	-24.19	-	-
1G	10G	1M	3M	Peak	6.21859G	-29.01	-13.00	-16.01	-	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

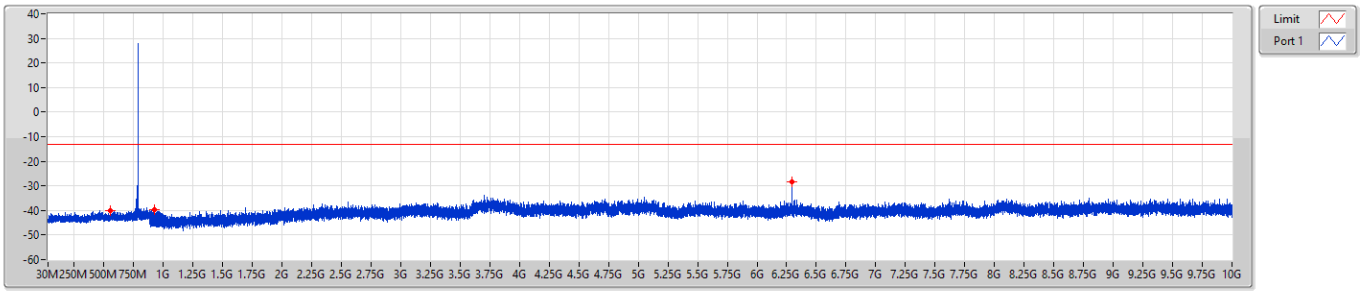
782.0MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	677M	1M	3M	Peak	477.4M	-40.13	-13.00	-27.13	-	-
887M	1G	1M	3M	Peak	937.7M	-40.13	-13.00	-27.13	-	-
1G	10G	1M	3M	Peak	6.25656G	-32.08	-13.00	-19.08	-	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

786.8MHz_QPSK_Tone 12@0



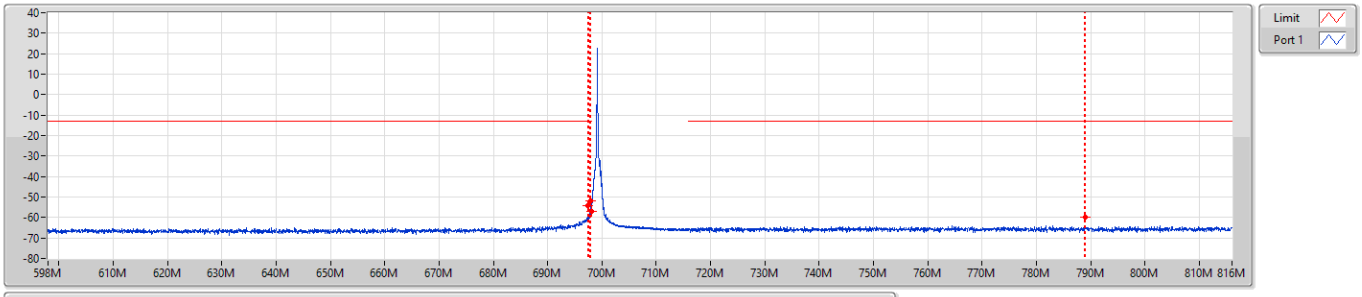
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	677M	1M	3M	Peak	555.69M	-40.04	-13.00	-27.04	-	-
887M	1G	1M	3M	Peak	925.2M	-39.84	-13.00	-26.84	-	-
1G	10G	1M	3M	Peak	6.29453G	-28.37	-13.00	-15.37	-	-

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 12	-	-	-	-	-	-	-	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	Pass	716M	716.1M	30k	100k	RMS	716M	-23.00	-13.00	-10.00	-	-
NB-IoT_3.75kHz_Nss1,QPSK_1TX	Pass	716M	716.1M	30k	100k	RMS	716.01M	-23.52	-13.00	-10.52	-	-
NB-IoT_15kHz_Nss1,BPSK_1TX	Pass	716M	716.1M	30k	100k	RMS	716M	-18.88	-13.00	-5.88	-	-
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	716M	716.1M	5.1k	16k	RMS	716.015M	-15.05	-13.00	-2.05	MBW 30k	-

Band 12_NB-IoT_3.75kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

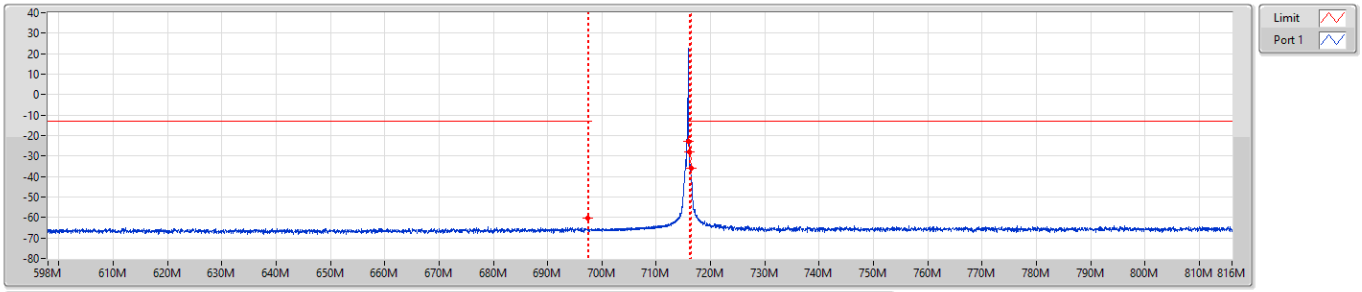
699.2MHz_BPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	697.6M	30k	100k	RMS	697.45M	-54.37	-13.00	-41.37	MBW 100k	-
697.6M	697.9M	30k	100k	RMS	697.85M	-51.97	-13.00	-38.97	MBW 100k	-
697.9M	698M	30k	100k	RMS	698M	-56.88	-13.00	-43.88	-	-
716M	816M	30k	100k	RMS	788.95M	-59.83	-13.00	-46.83	MBW 100k	-

Band 12_NB-IoT_3.75kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

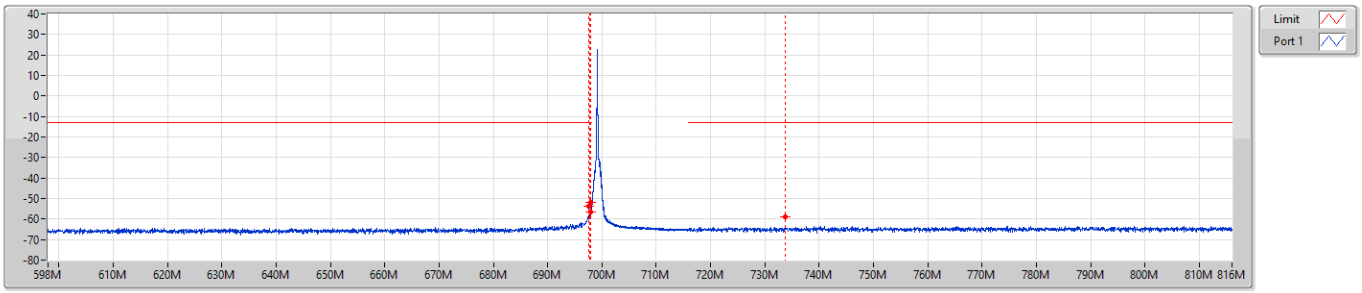
715.8MHz_BPSK_Tone 1@47



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	697.45M	-60.26	-13.00	-47.26	MBW 100k	-
716M	716.1M	30k	100k	RMS	716M	-23.00	-13.00	-10.00	-	-
716.1M	716.4M	30k	100k	RMS	716.15M	-27.86	-13.00	-14.86	MBW 100k	-
716.4M	816M	30k	100k	RMS	716.45M	-35.73	-13.00	-22.73	MBW 100k	-

Band 12_NB-IoT_3.75kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

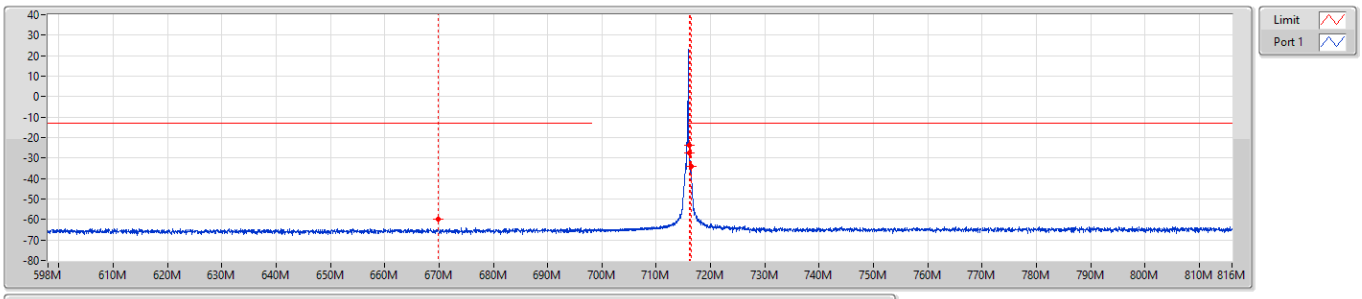
699.2MHz_QPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	697.6M	30k	100k	RMS	697.55M	-53.56	-13.00	-40.56	MBW 100k	-
697.6M	697.9M	30k	100k	RMS	697.85M	-51.92	-13.00	-38.92	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.93M	-56.67	-13.00	-43.67	-	-
716M	816M	30k	100k	RMS	733.75M	-59.14	-13.00	-46.14	MBW 100k	-

Band 12_NB-IoT_3.75kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

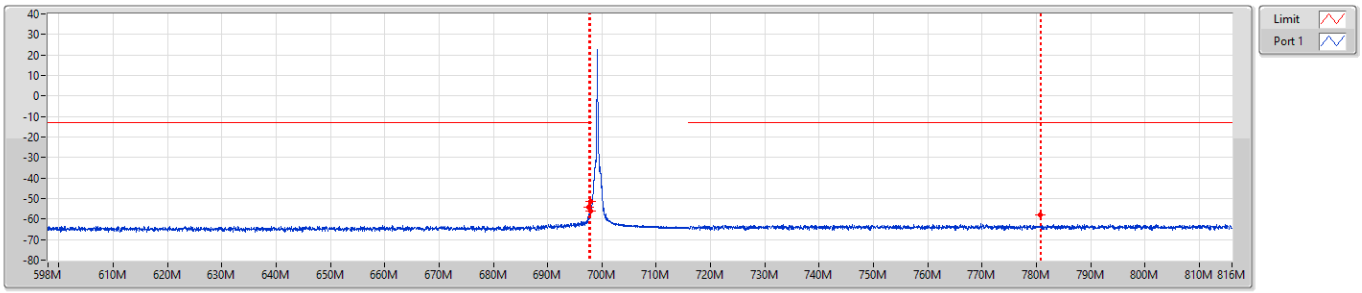
715.8MHz_QPSK_Tone 1@47



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	669.85M	-59.70	-13.00	-46.70	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.01M	-23.52	-13.00	-10.52	-	-
716.1M	716.4M	30k	100k	RMS	716.15M	-27.65	-13.00	-14.65	MBW 100k	-
716.4M	816M	30k	100k	RMS	716.45M	-34.17	-13.00	-21.17	MBW 100k	-

Band 12_NB-IoT_15kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

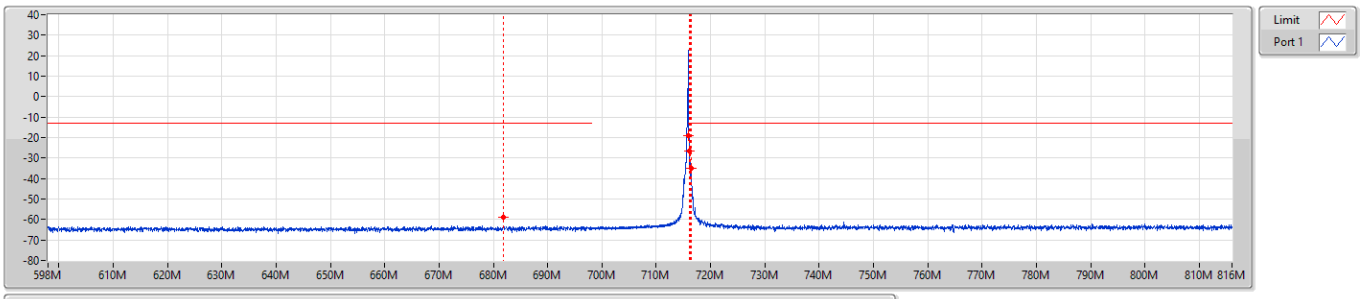
699.2MHz_BPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	697.6M	30k	100k	RMS	697.55M	-54.13	-13.00	-41.13	MBW 100k	-
697.6M	697.9M	30k	100k	RMS	697.85M	-51.63	-13.00	-38.63	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.98M	-56.19	-13.00	-43.19	-	-
716M	816M	30k	100k	RMS	780.75M	-58.14	-13.00	-45.14	MBW 100k	-

Band 12_NB-IoT_15kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

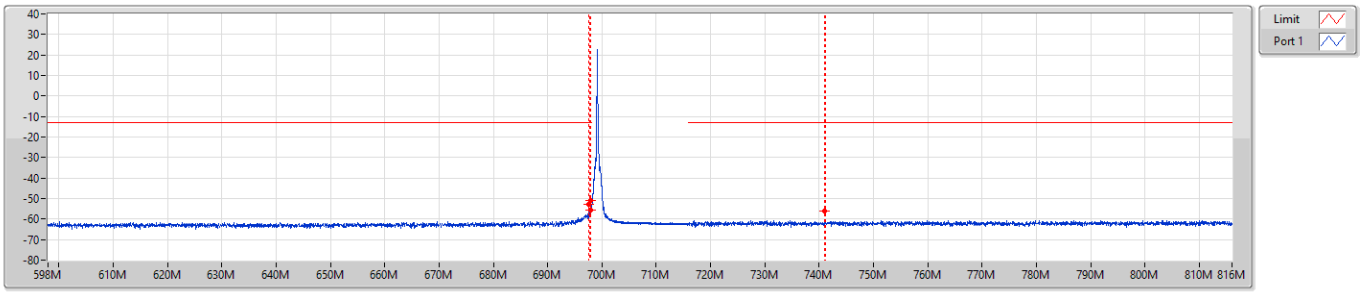
715.8MHz_BPSK_Tone 1@11



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	681.85M	-58.71	-13.00	-45.71	MBW 100k	-
716M	716.1M	30k	100k	RMS	716M	-18.88	-13.00	-5.88	-	-
716.1M	716.4M	30k	100k	RMS	716.15M	-26.53	-13.00	-13.53	MBW 100k	-
716.4M	816M	30k	100k	RMS	716.45M	-35.02	-13.00	-22.02	MBW 100k	-

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

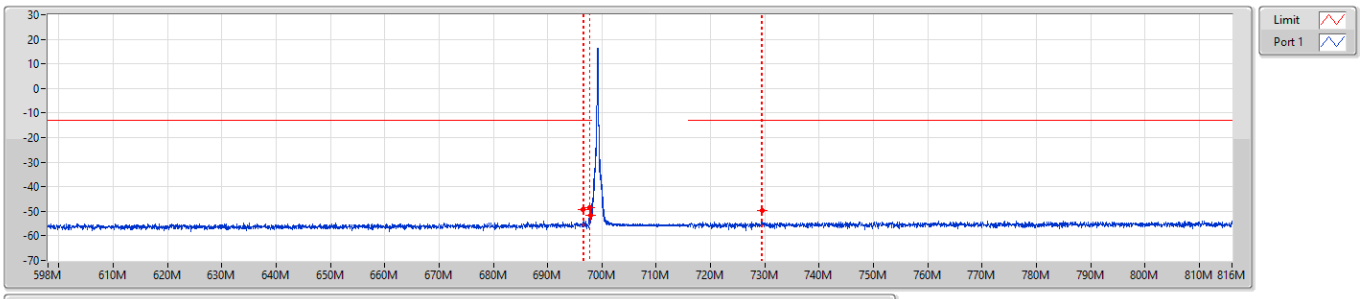
699.2MHz_QPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	697.6M	30k	100k	RMS	697.55M	-52.65	-13.00	-39.65	MBW 100k	-
697.6M	697.9M	30k	100k	RMS	697.85M	-51.10	-13.00	-38.10	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.98M	-55.65	-13.00	-42.65	-	-
716M	816M	30k	100k	RMS	741.05M	-56.26	-13.00	-43.26	MBW 100k	-

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

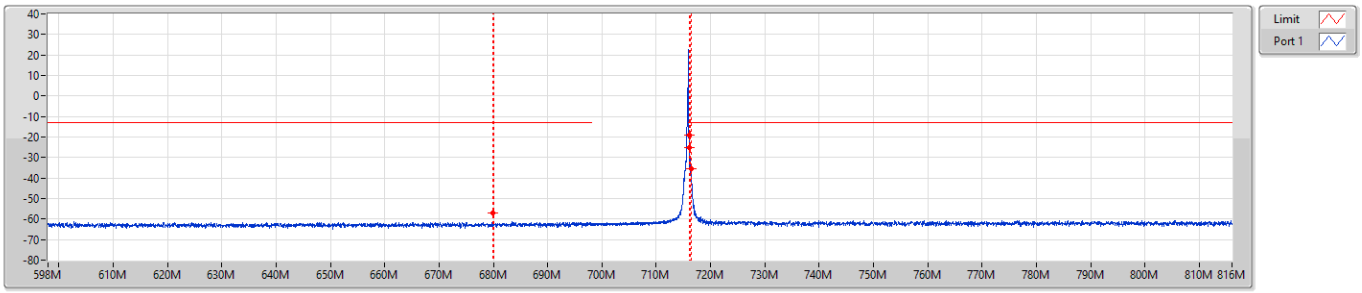
699.2MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	697.6M	30k	100k	RMS	696.55M	-49.26	-13.00	-36.26	MBW 100k	-
697.6M	697.9M	30k	100k	RMS	697.75M	-48.40	-13.00	-35.40	MBW 100k	-
697.9M	698M	30k	100k	RMS	697.97M	-51.47	-13.00	-38.47	-	-
716M	816M	30k	100k	RMS	729.45M	-49.53	-13.00	-36.53	MBW 100k	-

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

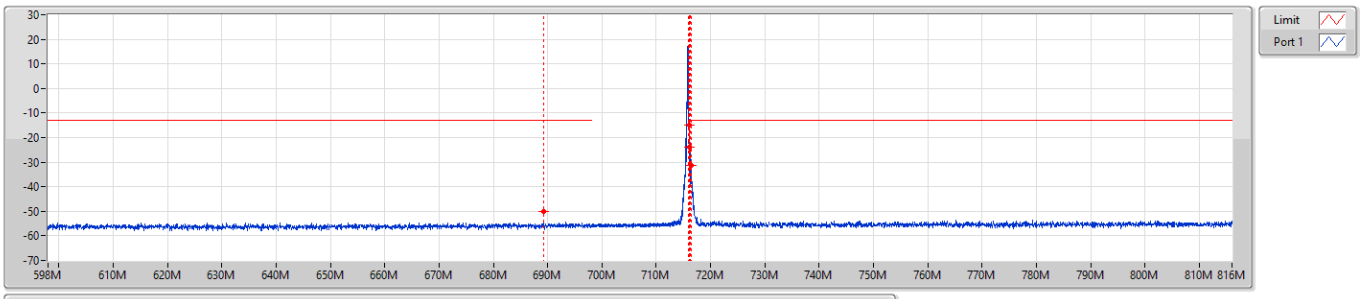
715.8MHz_QPSK_Tone 1@11



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	679.95M	-56.98	-13.00	-43.98	MBW 100k	-
716M	716.1M	30k	100k	RMS	716.01M	-19.03	-13.00	-6.03	-	-
716.1M	716.4M	30k	100k	RMS	716.15M	-25.17	-13.00	-12.17	MBW 100k	-
716.4M	816M	30k	100k	RMS	716.45M	-35.48	-13.00	-22.48	MBW 100k	-

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

715.8MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
598M	698M	30k	100k	RMS	689.25M	-50.04	-13.00	-37.04	MBW 100k	-
716M	716.1M	5.1k	16k	RMS	716.015M	-15.05	-13.00	-2.05	MBW 30k	-
716.1M	716.4M	30k	100k	RMS	716.15M	-24.01	-13.00	-11.01	MBW 100k	-
716.4M	816M	30k	100k	RMS	716.45M	-31.41	-13.00	-18.41	MBW 100k	-

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 13	-	-	-	-	-	-	-	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	Pass	787M	787.1M	30k	100k	RMS	787M	-22.05	-13.00	-9.05	-	-
NB-IoT_3.75kHz_Nss1,QPSK_1TX	Pass	787M	787.1M	30k	100k	RMS	787M	-21.54	-13.00	-8.54	-	-
NB-IoT_15kHz_Nss1,BPSK_1TX	Pass	787M	787.1M	30k	100k	RMS	787M	-19.15	-13.00	-6.15	-	-
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	787M	787.1M	5.1k	16k	RMS	787.015M	-13.21	-13.00	-0.21	MBW 30k	-

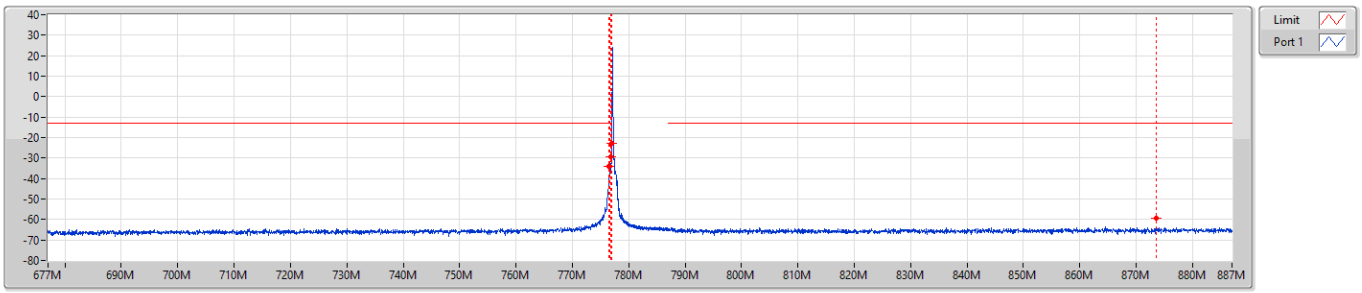
Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
Band 13_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
777.2MHz_BPSK_Tone 1@0	Pass	677M	776.6M	30k	100k	RMS	776.55M	-33.92	-13.00	-20.92	MBW 100k	-
777.2MHz_BPSK_Tone 1@0	Pass	776.6M	776.9M	30k	100k	RMS	776.85M	-29.41	-13.00	-16.41	MBW 100k	-
777.2MHz_BPSK_Tone 1@0	Pass	776.9M	777M	30k	100k	RMS	776.99M	-22.62	-13.00	-9.62	-	-
777.2MHz_BPSK_Tone 1@0	Pass	787M	887M	30k	100k	RMS	873.55M	-59.52	-13.00	-46.52	MBW 100k	-
777.2MHz_BPSK_Tone 1@0	Pass	763M	775M	10k	30k	RMS	774.92M	-64.94	-35.00	-29.94	-	-
777.2MHz_BPSK_Tone 1@0	Pass	793M	806M	10k	30k	RMS	794.37M	-68.33	-35.00	-33.33	-	-
786.8MHz_BPSK_Tone 1@47	Pass	677M	777M	30k	100k	RMS	776.65M	-59.60	-13.00	-46.60	MBW 100k	-
786.8MHz_BPSK_Tone 1@47	Pass	787M	787.1M	30k	100k	RMS	787M	-22.05	-13.00	-9.05	-	-
786.8MHz_BPSK_Tone 1@47	Pass	787.1M	787.4M	30k	100k	RMS	787.15M	-27.42	-13.00	-14.42	MBW 100k	-
786.8MHz_BPSK_Tone 1@47	Pass	787.4M	887M	30k	100k	RMS	787.45M	-35.17	-13.00	-22.17	MBW 100k	-
786.8MHz_BPSK_Tone 1@47	Pass	763M	775M	10k	30k	RMS	772.49M	-68.58	-35.00	-33.58	-	-
786.8MHz_BPSK_Tone 1@47	Pass	793M	806M	10k	30k	RMS	794.38M	-67.47	-35.00	-32.47	-	-
777.2MHz_QPSK_Tone 1@0	Pass	677M	776.6M	30k	100k	RMS	776.55M	-34.84	-13.00	-21.84	MBW 100k	-
777.2MHz_QPSK_Tone 1@0	Pass	776.6M	776.9M	30k	100k	RMS	776.85M	-26.35	-13.00	-13.35	MBW 100k	-
777.2MHz_QPSK_Tone 1@0	Pass	776.9M	777M	30k	100k	RMS	777M	-21.93	-13.00	-8.93	-	-
777.2MHz_QPSK_Tone 1@0	Pass	787M	887M	30k	100k	RMS	787.35M	-58.34	-13.00	-45.34	MBW 100k	-
777.2MHz_QPSK_Tone 1@0	Pass	763M	775M	10k	30k	RMS	774.84M	-63.38	-35.00	-28.38	-	-
777.2MHz_QPSK_Tone 1@0	Pass	793M	806M	10k	30k	RMS	802.99M	-67.37	-35.00	-32.37	-	-
786.8MHz_QPSK_Tone 1@47	Pass	677M	777M	30k	100k	RMS	766.55M	-58.89	-13.00	-45.89	MBW 100k	-
786.8MHz_QPSK_Tone 1@47	Pass	787M	787.1M	30k	100k	RMS	787M	-21.54	-13.00	-8.54	-	-
786.8MHz_QPSK_Tone 1@47	Pass	787.1M	787.4M	30k	100k	RMS	787.15M	-28.01	-13.00	-15.01	MBW 100k	-
786.8MHz_QPSK_Tone 1@47	Pass	787.4M	887M	30k	100k	RMS	787.45M	-34.25	-13.00	-21.25	MBW 100k	-
786.8MHz_QPSK_Tone 1@47	Pass	763M	775M	10k	30k	RMS	767.57M	-67.96	-35.00	-32.96	-	-
786.8MHz_QPSK_Tone 1@47	Pass	793M	806M	10k	30k	RMS	793.57M	-66.99	-35.00	-31.99	-	-
Band 13_NB-IoT_15kHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
777.2MHz_BPSK_Tone 1@0	Pass	677M	776.6M	30k	100k	RMS	776.55M	-33.08	-13.00	-20.08	MBW 100k	-
777.2MHz_BPSK_Tone 1@0	Pass	776.6M	776.9M	30k	100k	RMS	776.85M	-26.66	-13.00	-13.66	MBW 100k	-
777.2MHz_BPSK_Tone 1@0	Pass	776.9M	777M	30k	100k	RMS	777M	-19.26	-13.00	-6.26	-	-
777.2MHz_BPSK_Tone 1@0	Pass	787M	887M	30k	100k	RMS	787.05M	-57.66	-13.00	-44.66	MBW 100k	-
777.2MHz_BPSK_Tone 1@0	Pass	763M	775M	10k	30k	RMS	774.77M	-63.67	-35.00	-28.67	-	-
777.2MHz_BPSK_Tone 1@0	Pass	793M	806M	10k	30k	RMS	799.47M	-66.35	-35.00	-31.35	-	-
786.8MHz_BPSK_Tone 1@11	Pass	677M	777M	30k	100k	RMS	757.25M	-57.98	-13.00	-44.98	MBW 100k	-

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	VBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Remark	Ref.Limit (dB)
786.8MHz_BPSK_Tone 1@11	Pass	787M	787.1M	30k	100k	RMS	787M	-19.15	-13.00	-6.15	-	-
786.8MHz_BPSK_Tone 1@11	Pass	787.1M	787.4M	30k	100k	RMS	787.15M	-26.97	-13.00	-13.97	MBW 100k	-
786.8MHz_BPSK_Tone 1@11	Pass	787.4M	887M	30k	100k	RMS	787.45M	-35.21	-13.00	-22.21	MBW 100k	-
786.8MHz_BPSK_Tone 1@11	Pass	763M	775M	10k	30k	RMS	772.4M	-66.75	-35.00	-31.75	-	-
786.8MHz_BPSK_Tone 1@11	Pass	793M	806M	10k	30k	RMS	793.86M	-66.46	-35.00	-31.46	-	-
777.2MHz_QPSK_Tone 1@0	Pass	677M	776.6M	30k	100k	RMS	776.55M	-33.59	-13.00	-20.59	MBW 100k	-
777.2MHz_QPSK_Tone 1@0	Pass	776.6M	776.9M	30k	100k	RMS	776.85M	-25.73	-13.00	-12.73	MBW 100k	-
777.2MHz_QPSK_Tone 1@0	Pass	776.9M	777M	30k	100k	RMS	777M	-19.29	-13.00	-6.29	-	-
777.2MHz_QPSK_Tone 1@0	Pass	787M	887M	30k	100k	RMS	865.15M	-55.89	-13.00	-42.89	MBW 100k	-
777.2MHz_QPSK_Tone 1@0	Pass	763M	775M	10k	30k	RMS	774.98M	-61.34	-35.00	-26.34	-	-
777.2MHz_QPSK_Tone 1@0	Pass	793M	806M	10k	30k	RMS	805.9M	-64.66	-35.00	-29.66	-	-
777.2MHz_QPSK_Tone 12@0	Pass	677M	776.6M	30k	100k	RMS	776.55M	-33.56	-13.00	-20.56	MBW 100k	-
777.2MHz_QPSK_Tone 12@0	Pass	776.6M	776.9M	30k	100k	RMS	776.85M	-20.09	-13.00	-7.09	MBW 100k	-
777.2MHz_QPSK_Tone 12@0	Pass	776.9M	777M	5.1k	16k	RMS	776.985M	-13.29	-13.00	-0.29	MBW 30k	-
777.2MHz_QPSK_Tone 12@0	Pass	787M	887M	30k	100k	RMS	883.15M	-49.10	-13.00	-36.10	MBW 100k	-
777.2MHz_QPSK_Tone 12@0	Pass	763M	775M	10k	30k	RMS	774.96M	-56.58	-35.00	-21.58	-	-
777.2MHz_QPSK_Tone 12@0	Pass	793M	806M	10k	30k	RMS	801.19M	-56.89	-35.00	-21.89	-	-
786.8MHz_QPSK_Tone 1@11	Pass	677M	777M	30k	100k	RMS	772.35M	-56.25	-13.00	-43.25	MBW 100k	-
786.8MHz_QPSK_Tone 1@11	Pass	787M	787.1M	30k	100k	RMS	787M	-16.60	-13.00	-3.60	-	-
786.8MHz_QPSK_Tone 1@11	Pass	787.1M	787.4M	30k	100k	RMS	787.15M	-27.09	-13.00	-14.09	MBW 100k	-
786.8MHz_QPSK_Tone 1@11	Pass	787.4M	887M	30k	100k	RMS	787.45M	-33.87	-13.00	-20.87	MBW 100k	-
786.8MHz_QPSK_Tone 1@11	Pass	763M	775M	10k	30k	RMS	774.75M	-64.90	-35.00	-29.90	-	-
786.8MHz_QPSK_Tone 1@11	Pass	793M	806M	10k	30k	RMS	795.59M	-64.17	-35.00	-29.17	-	-
786.8MHz_QPSK_Tone 12@0	Pass	677M	777M	30k	100k	RMS	746.85M	-51.13	-13.00	-38.13	MBW 100k	-
786.8MHz_QPSK_Tone 12@0	Pass	787M	787.1M	5.1k	16k	RMS	787.015M	-13.21	-13.00	-0.21	MBW 30k	-
786.8MHz_QPSK_Tone 12@0	Pass	787.1M	787.4M	30k	100k	RMS	787.15M	-21.87	-13.00	-8.87	MBW 100k	-
786.8MHz_QPSK_Tone 12@0	Pass	787.4M	887M	30k	100k	RMS	787.45M	-31.68	-13.00	-18.68	MBW 100k	-
786.8MHz_QPSK_Tone 12@0	Pass	763M	775M	10k	30k	RMS	769.86M	-59.78	-35.00	-24.78	-	-
786.8MHz_QPSK_Tone 12@0	Pass	793M	806M	10k	30k	RMS	795.16M	-59.39	-35.00	-24.39	-	-

Band 13_NB-IoT_3.75kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

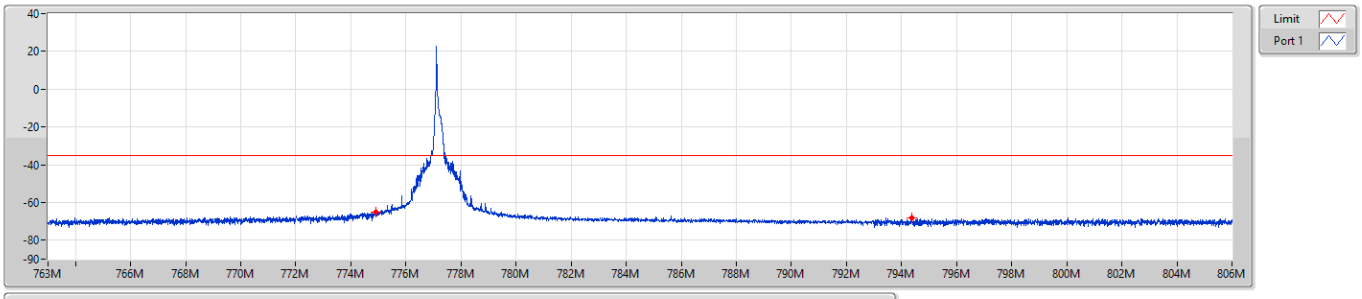
777.2MHz_BPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	776.6M	30k	100k	RMS	776.55M	-33.92	-13.00	-20.92	MBW 100k	-
776.6M	776.9M	30k	100k	RMS	776.85M	-29.41	-13.00	-16.41	MBW 100k	-
776.9M	777M	30k	100k	RMS	776.99M	-22.62	-13.00	-9.62	-	-
787M	887M	30k	100k	RMS	873.55M	-59.52	-13.00	-46.52	MBW 100k	-

Band 13_NB-IoT_3.75kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

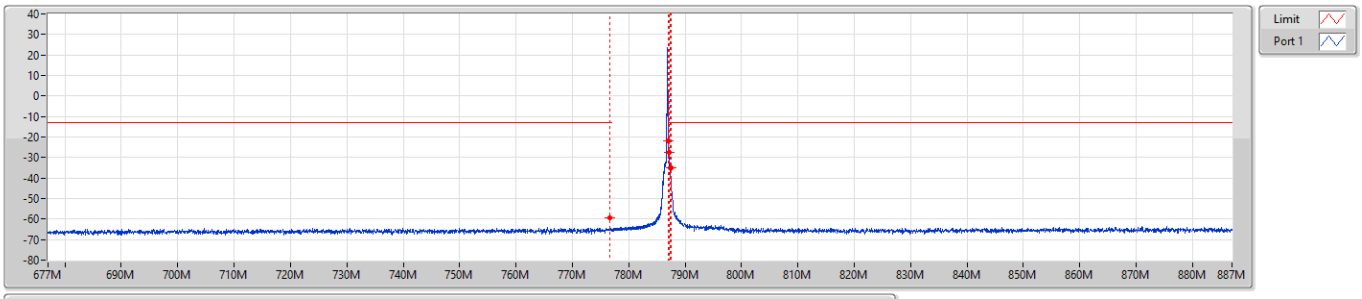
777.2MHz_BPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.92M	-64.94	-35.00	-29.94	-	-
793M	806M	10k	30k	RMS	794.37M	-68.33	-35.00	-33.33	-	-

Band 13_NB-IoT_3.75kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

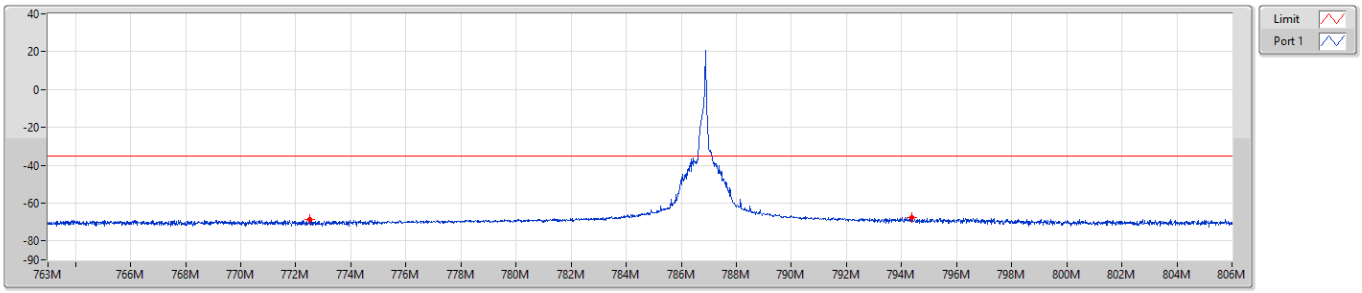
786.8MHz_BPSK_Tone 1@47



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	776.65M	-59.60	-13.00	-46.60	MBW 100k	-
787M	787.1M	30k	100k	RMS	787M	-22.05	-13.00	-9.05	-	-
787.1M	787.4M	30k	100k	RMS	787.15M	-27.42	-13.00	-14.42	MBW 100k	-
787.4M	887M	30k	100k	RMS	787.45M	-35.17	-13.00	-22.17	MBW 100k	-

Band 13_NB-IoT_3.75kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

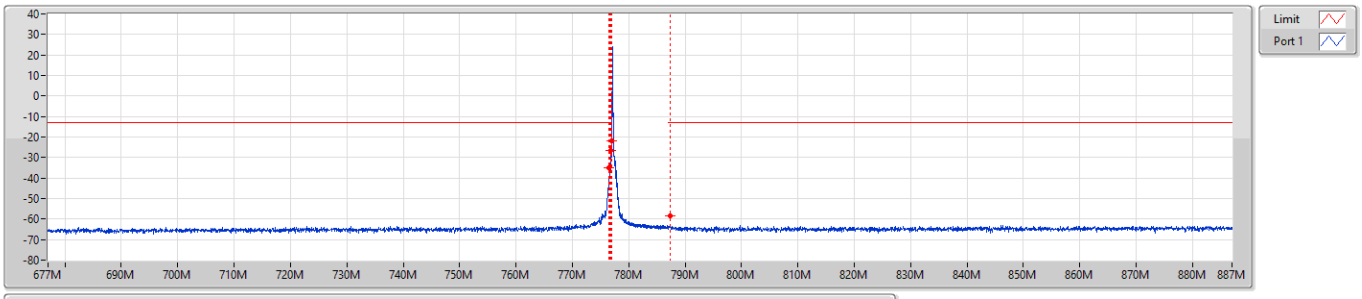
786.8MHz_BPSK_Tone 1@47



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	772.49M	-68.58	-35.00	-33.58	-	-
793M	806M	10k	30k	RMS	794.38M	-67.47	-35.00	-32.47	-	-

Band 13_NB-IoT_3.75kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

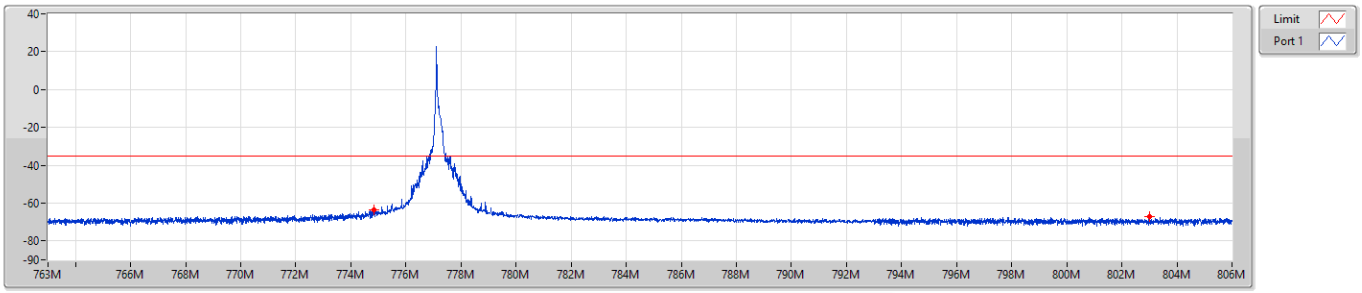
777.2MHz_QPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	776.6M	30k	100k	RMS	776.55M	-34.84	-13.00	-21.84	MBW 100k	-
776.6M	776.9M	30k	100k	RMS	776.85M	-26.35	-13.00	-13.35	MBW 100k	-
776.9M	777M	30k	100k	RMS	777M	-21.93	-13.00	-8.93	-	-
787M	887M	30k	100k	RMS	787.35M	-58.34	-13.00	-45.34	MBW 100k	-

Band 13_NB-IoT_3.75kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

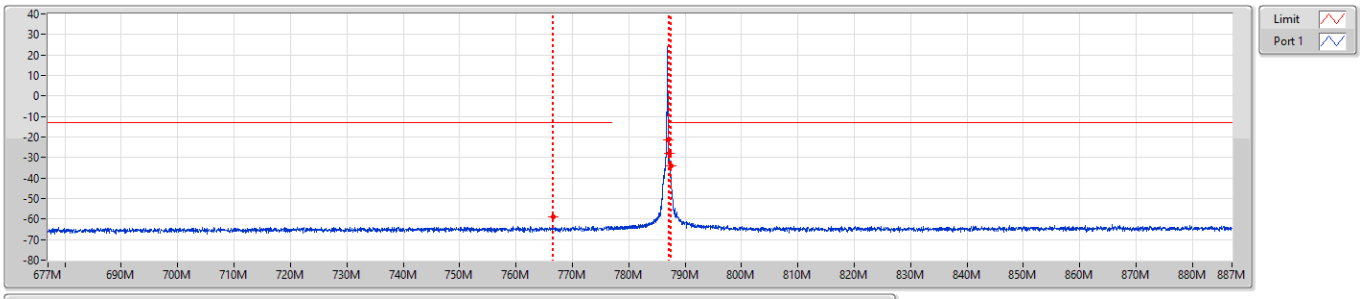
777.2MHz_QPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.84M	-63.38	-35.00	-28.38	-	-
793M	806M	10k	30k	RMS	802.99M	-67.37	-35.00	-32.37	-	-

Band 13_NB-IoT_3.75kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

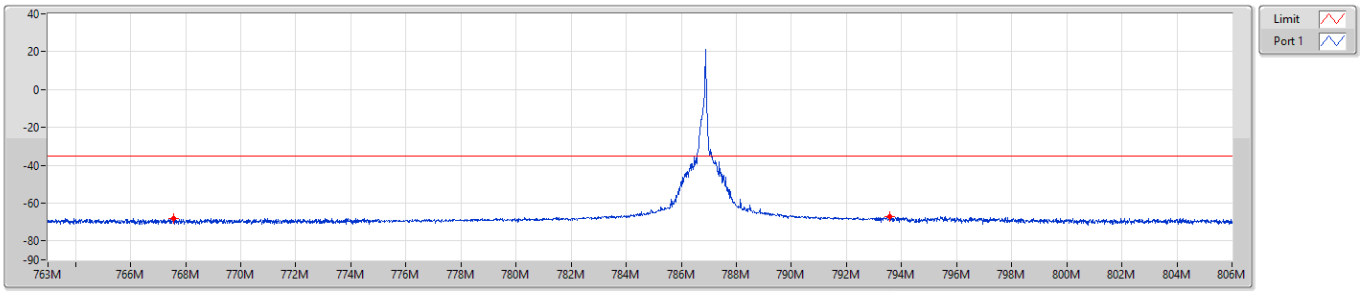
786.8MHz_QPSK_Tone 1@47



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	766.55M	-58.89	-13.00	-45.89	MBW 100k	-
787M	787.1M	30k	100k	RMS	787M	-21.54	-13.00	-8.54	-	-
787.1M	787.4M	30k	100k	RMS	787.15M	-28.01	-13.00	-15.01	MBW 100k	-
787.4M	887M	30k	100k	RMS	787.45M	-34.25	-13.00	-21.25	MBW 100k	-

Band 13_NB-IoT_3.75kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

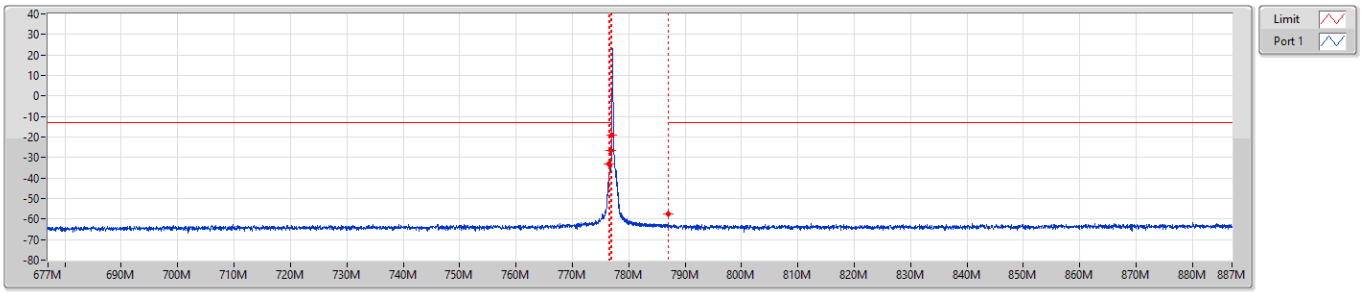
786.8MHz_QPSK_Tone 1@47



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	767.57M	-67.96	-35.00	-32.96	-	-
793M	806M	10k	30k	RMS	793.57M	-66.99	-35.00	-31.99	-	-

Band 13_NB-IoT_15kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

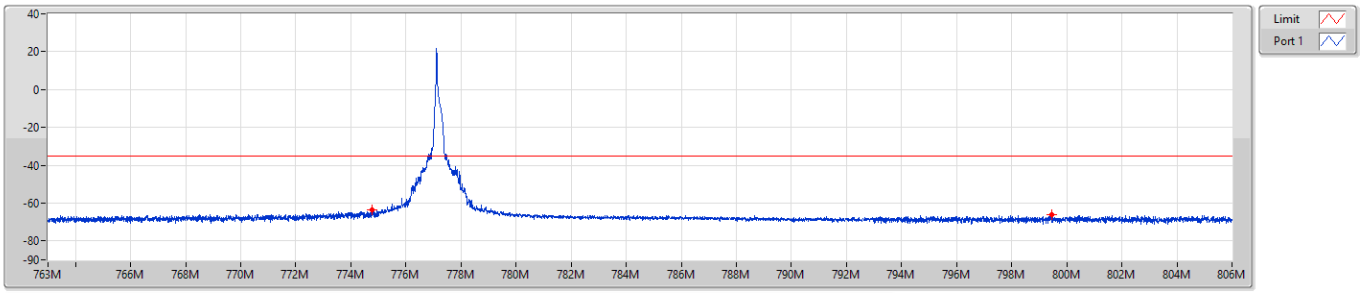
777.2MHz_BPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	776.6M	30k	100k	RMS	776.55M	-33.08	-13.00	-20.08	MBW 100k	-
776.6M	776.9M	30k	100k	RMS	776.85M	-26.66	-13.00	-13.66	MBW 100k	-
776.9M	777M	30k	100k	RMS	777M	-19.26	-13.00	-6.26	-	-
787M	887M	30k	100k	RMS	787.05M	-57.66	-13.00	-44.66	MBW 100k	-

Band 13_NB-IoT_15kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

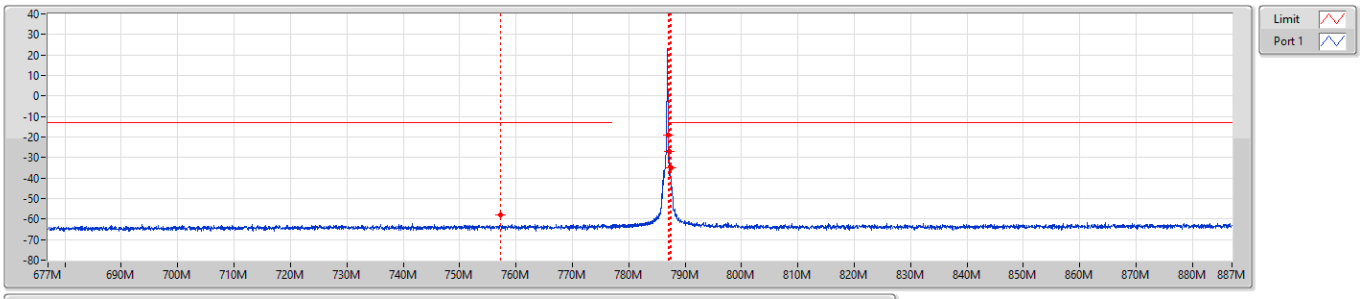
777.2MHz_BPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.77M	-63.67	-35.00	-28.67	-	-
793M	806M	10k	30k	RMS	799.47M	-66.35	-35.00	-31.35	-	-

Band 13_NB-IoT_15kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

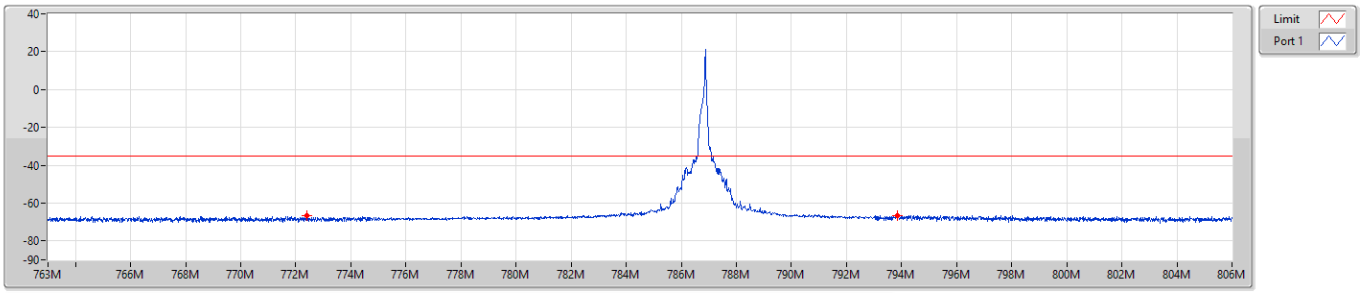
786.8MHz_BPSK_Tone 1@11



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	757.25M	-57.98	-13.00	-44.98	MBW 100k	-
787M	787.1M	30k	100k	RMS	787M	-19.15	-13.00	-6.15	-	-
787.1M	787.4M	30k	100k	RMS	787.15M	-26.97	-13.00	-13.97	MBW 100k	-
787.4M	887M	30k	100k	RMS	787.45M	-35.21	-13.00	-22.21	MBW 100k	-

Band 13_NB-IoT_15kHz_Nss1,BPSK_1TX **CSE-TX-Sum**

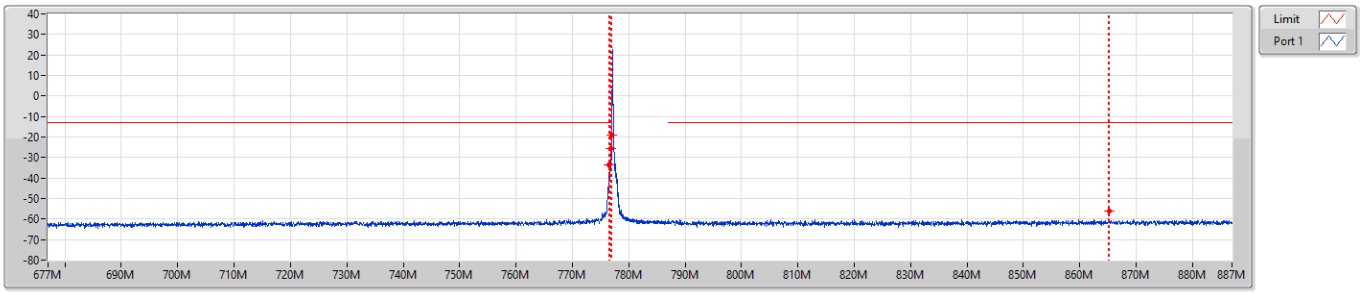
786.8MHz_BPSK_Tone 1@11



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	772.4M	-66.75	-35.00	-31.75	-	-
793M	806M	10k	30k	RMS	793.86M	-66.46	-35.00	-31.46	-	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

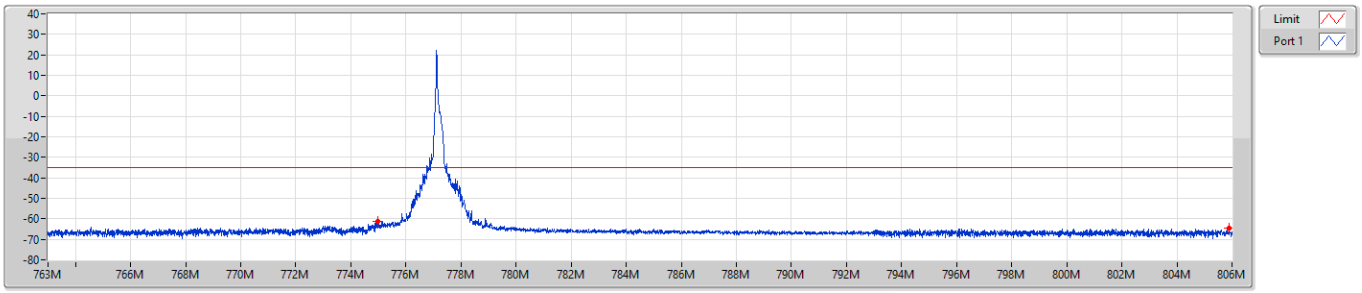
777.2MHz_QPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	776.6M	30k	100k	RMS	776.55M	-33.59	-13.00	-20.59	MBW 100k	-
776.6M	776.9M	30k	100k	RMS	776.85M	-25.73	-13.00	-12.73	MBW 100k	-
776.9M	777M	30k	100k	RMS	777M	-19.29	-13.00	-6.29	-	-
787M	887M	30k	100k	RMS	865.15M	-55.89	-13.00	-42.89	MBW 100k	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

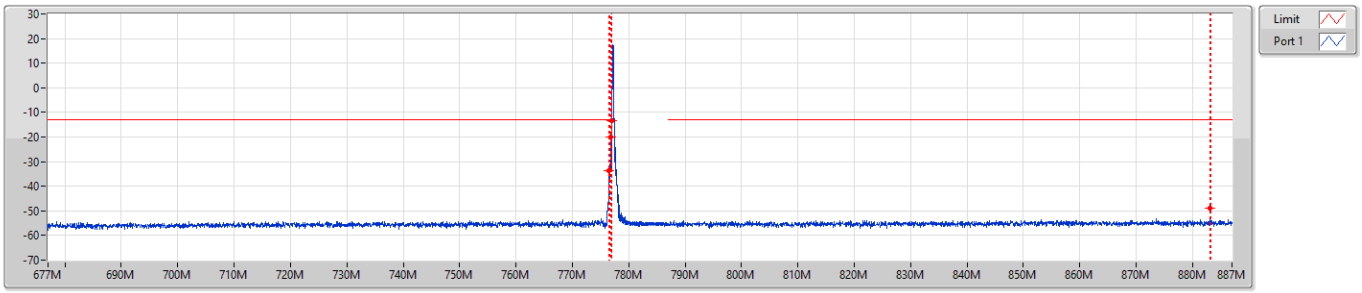
777.2MHz_QPSK_Tone 1@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.98M	-61.34	-35.00	-26.34	-	-
793M	806M	10k	30k	RMS	805.9M	-64.66	-35.00	-29.66	-	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

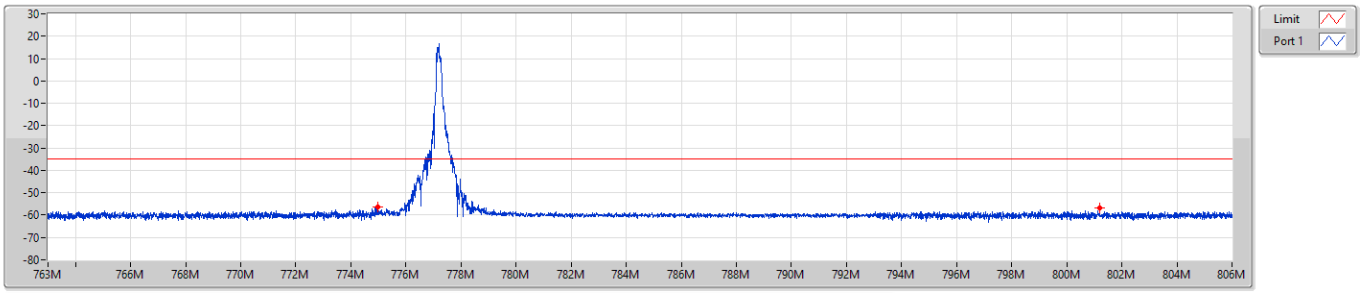
777.2MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	776.6M	30k	100k	RMS	776.55M	-33.56	-13.00	-20.56	MBW 100k	-
776.6M	776.9M	30k	100k	RMS	776.85M	-20.09	-13.00	-7.09	MBW 100k	-
776.9M	777M	5.1k	16k	RMS	776.985M	-13.29	-13.00	-0.29	MBW 30k	-
787M	887M	30k	100k	RMS	883.15M	-49.10	-13.00	-36.10	MBW 100k	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

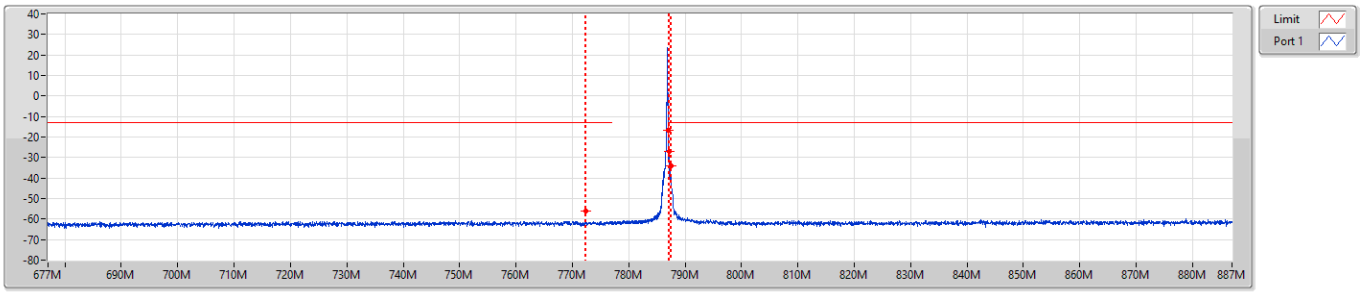
777.2MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.96M	-56.58	-35.00	-21.58	-	-
793M	806M	10k	30k	RMS	801.19M	-56.89	-35.00	-21.89	-	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

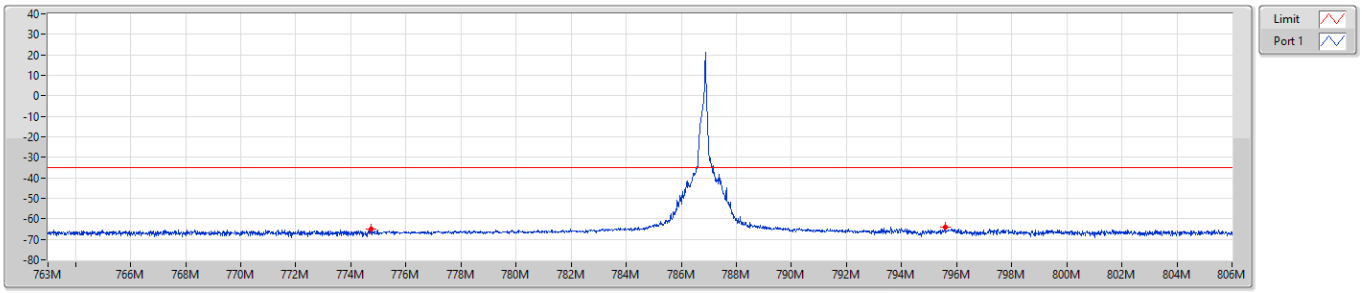
786.8MHz_QPSK_Tone 1@11



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	772.35M	-56.25	-13.00	-43.25	MBW 100k	-
787M	787.1M	30k	100k	RMS	787M	-16.60	-13.00	-3.60	-	-
787.1M	787.4M	30k	100k	RMS	787.15M	-27.09	-13.00	-14.09	MBW 100k	-
787.4M	887M	30k	100k	RMS	787.45M	-33.87	-13.00	-20.87	MBW 100k	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

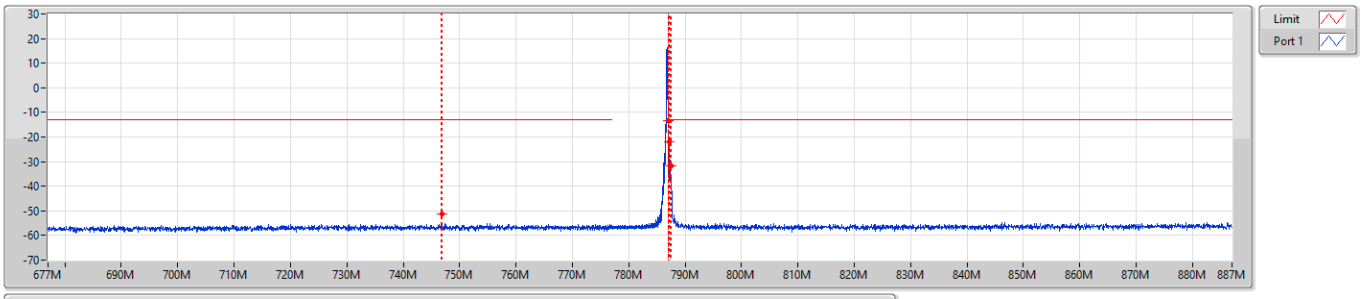
786.8MHz_QPSK_Tone 1@11



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	774.75M	-64.90	-35.00	-29.90	-	-
793M	806M	10k	30k	RMS	795.59M	-64.17	-35.00	-29.17	-	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

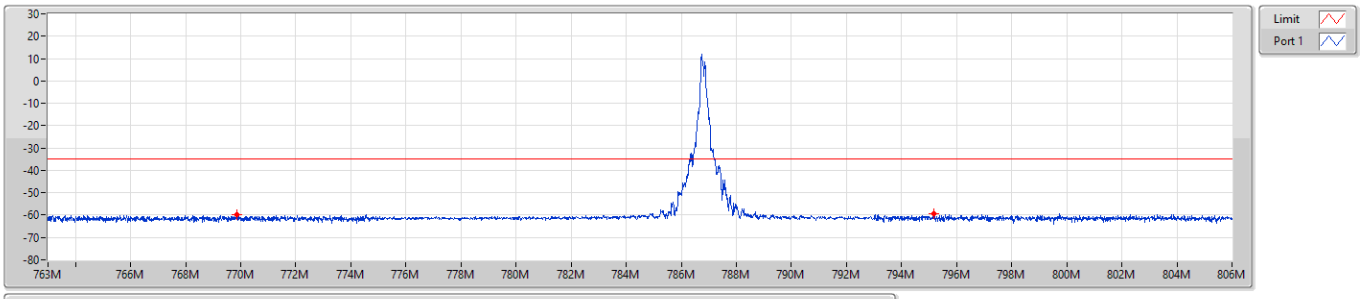
786.8MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
677M	777M	30k	100k	RMS	746.85M	-51.13	-13.00	-38.13	MBW 100k	-
787M	787.1M	5.1k	16k	RMS	787.015M	-13.21	-13.00	-0.21	MBW 30k	-
787.1M	787.4M	30k	100k	RMS	787.15M	-21.87	-13.00	-8.87	MBW 100k	-
787.4M	887M	30k	100k	RMS	787.45M	-31.68	-13.00	-18.68	MBW 100k	-

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **CSE-TX-Sum**

786.8MHz_QPSK_Tone 12@0



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
763M	775M	10k	30k	RMS	769.86M	-59.78	-35.00	-24.78	-	-
793M	806M	10k	30k	RMS	795.16M	-59.39	-35.00	-24.39	-	-

Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 12	-	-	-	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	1.338M	1.099M	1M10G7D	1.338M	1.099M
LTE-M1_10MHz_Nss1,16QAM_1TX	1.425M	1.114M	1M11W7D	1.425M	1.114M
LTE-M1_5MHz_Nss1,QPSK_1TX	1.356M	1.095M	1M10G7D	1.356M	1.095M
LTE-M1_5MHz_Nss1,16QAM_1TX	1.344M	1.096M	1M10W7D	1.344M	1.096M

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

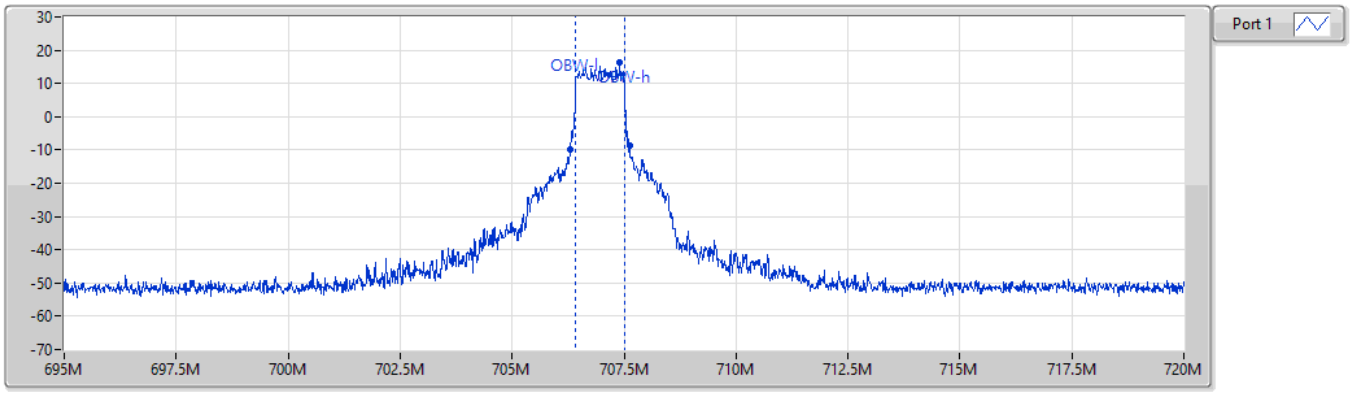
Result

Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 12_LTE-M1_10MHz_Nss1_1TX	-	-	-	-
707.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.338M	1.099M	Inf
707.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.425M	1.114M	Inf
Band 12_LTE-M1_5MHz_Nss1_1TX	-	-	-	-
707.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.356M	1.095M	Inf
707.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.344M	1.096M	Inf

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

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **EBW**

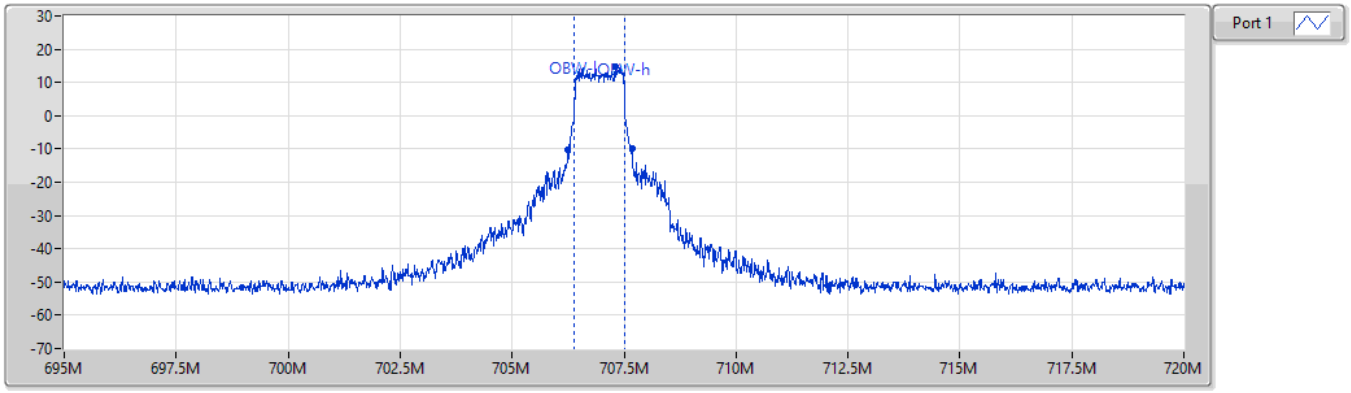
707.5MHz_QPSK_RB 6,#RB 0,NB M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
1.338M	706.2875M	707.625M	1.099M	706.408684M	707.507528M	1	707.5M	25M	20k	62k

Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX **EBW**

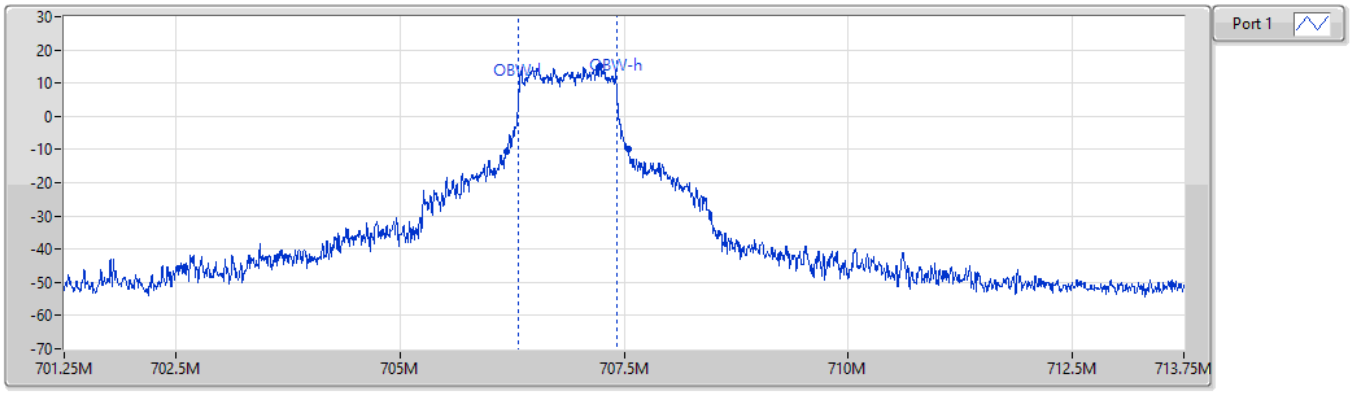
707.5MHz_16QAM_RB 6,#RB 0,NB M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
1.425M	706.25M	707.675M	1.114M	706.397106M	707.511016M	1	707.5M	25M	20k	62k

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **EBW**

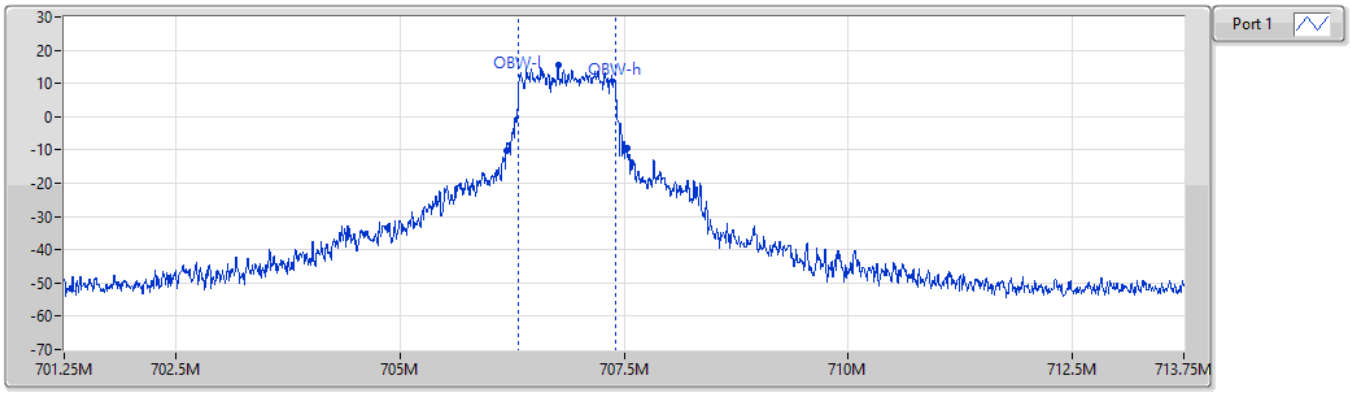
707.5MHz_QPSK_RB 6,#RB 0,NB M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
1.356M	706.1875M	707.54375M	1.095M	706.325623M	707.421064M	1	707.5M	12.5M	20k	62k

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX **EBW**

707.5MHz_16QAM_RB 6,#RB 0,NB M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
1.344M	706.1875M	707.53125M	1.096M	706.316034M	707.412035M	1	707.5M	12.5M	20k	62k

Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 13	-	-	-	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	1.663M	1.105M	1M11G7D	1.663M	1.105M
LTE-M1_10MHz_Nss1,16QAM_1TX	1.438M	1.119M	1M12W7D	1.438M	1.119M
LTE-M1_5MHz_Nss1,QPSK_1TX	1.406M	1.1M	1M10G7D	1.406M	1.1M
LTE-M1_5MHz_Nss1,16QAM_1TX	1.394M	1.11M	1M11W7D	1.394M	1.11M

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

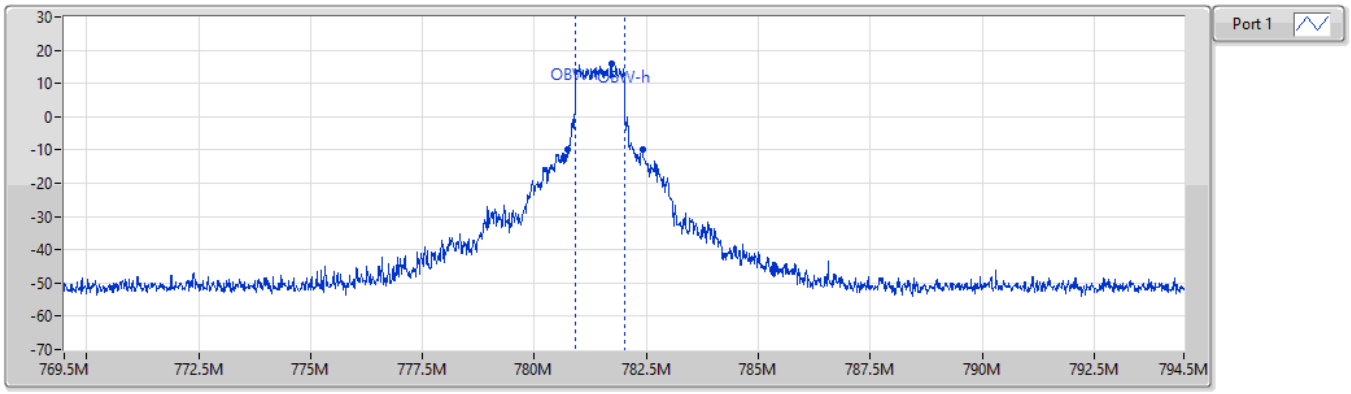
Result

Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 13_LTE-M1_10MHz_Nss1_1TX	-	-	-	-
782MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.663M	1.105M	Inf
782MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.438M	1.119M	Inf
Band 13_LTE-M1_5MHz_Nss1_1TX	-	-	-	-
782MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.406M	1.1M	Inf
782MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.394M	1.11M	Inf

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

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **EBW**

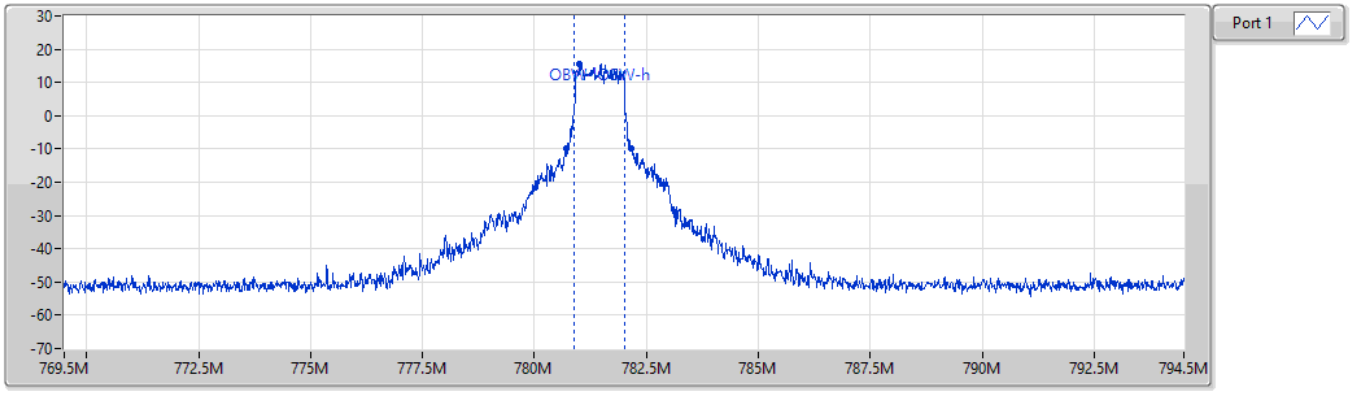
782MHz_QPSK_RB 6,#RB 0,NB M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
1.663M	780.75M	782.4125M	1.105M	780.905813M	782.010337M	1	782M	25M	20k	62k

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **EBW**

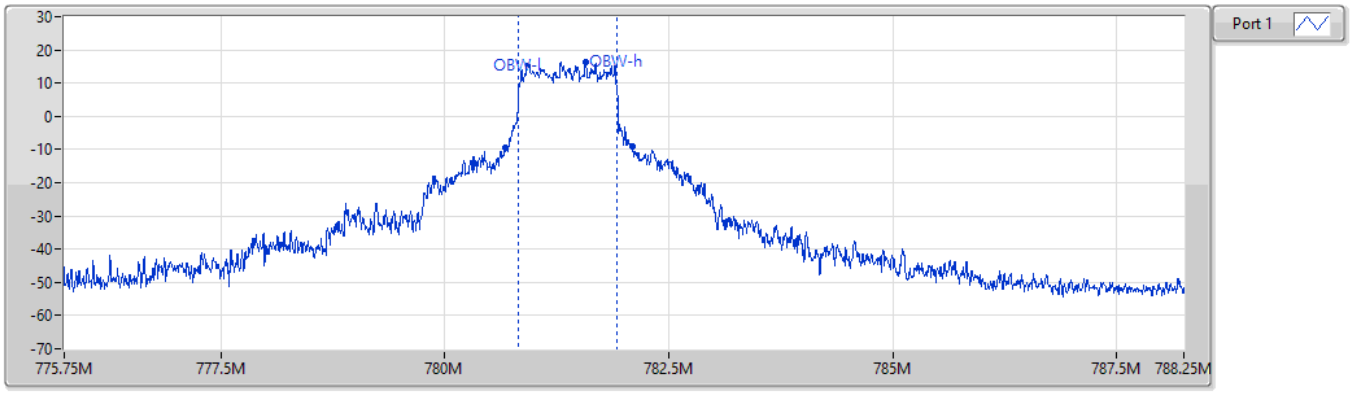
782MHz_16QAM_RB 6,#RB 0,NB M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
1.438M	780.725M	782.1625M	1.119M	780.894524M	782.013671M	1	782M	25M	20k	62k

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **EBW**

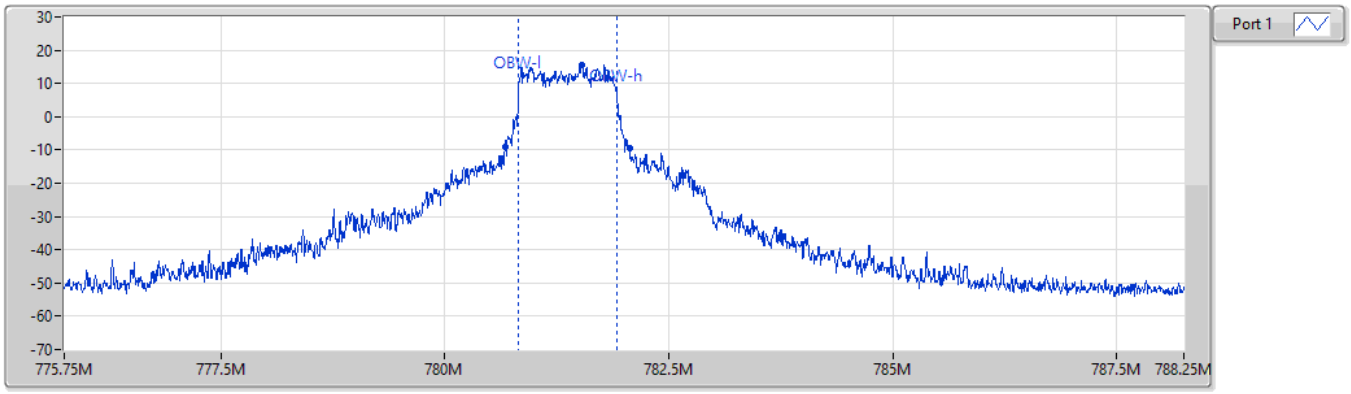
782MHz_QPSK_RB 6,#RB 0,NB M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
1.406M	780.68125M	782.0875M	1.1M	780.823946M	781.924312M	1	782M	12.5M	20k	62k

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **EBW**

782MHz_16QAM_RB 6,#RB 0,NB M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
1.394M	780.66875M	782.0625M	1.11M	780.816062M	781.926054M	1	782M	12.5M	20k	62k

Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 12	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	34.5k	54.801k	54K9G7D	34.5k	54.801k
NB-IoT_3.75kHz_Nss1,QPSK_1TX	40.5k	60.492k	60K5G7D	40.5k	60.492k
NB-IoT_15kHz_Nss1,BPSK_1TX	134k	127.04k	127KG7D	134k	127.04k
NB-IoT_15kHz_Nss1,QPSK_1TX	275k	198.2k	198KG7D	141k	125.321k

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

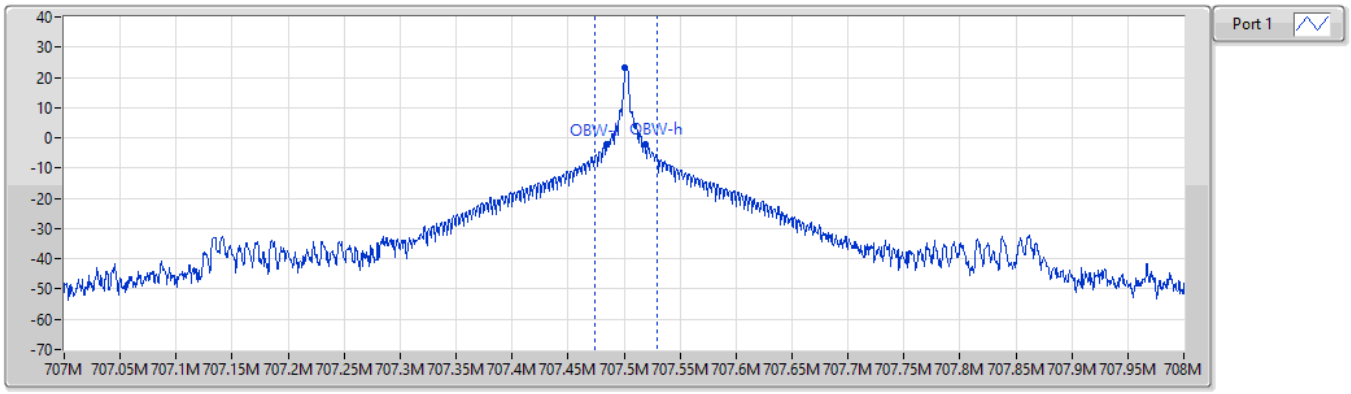
Result

Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 12_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-
707.5MHz_BPSK_Tone 1@M	Pass	34.5k	54.801k	Inf
707.5MHz_QPSK_Tone 1@M	Pass	40.5k	60.492k	Inf
Band 12_NB-IoT_15kHz_Nss1_1TX	-	-	-	-
707.5MHz_BPSK_Tone 1@M	Pass	134k	127.04k	Inf
707.5MHz_QPSK_Tone 1@M	Pass	141k	125.321k	Inf
707.5MHz_QPSK_Tone 12@0	Pass	275k	198.2k	Inf

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

Band 12_NB-IoT_3.75kHz_Nss1,BPSK_1TX **EBW**

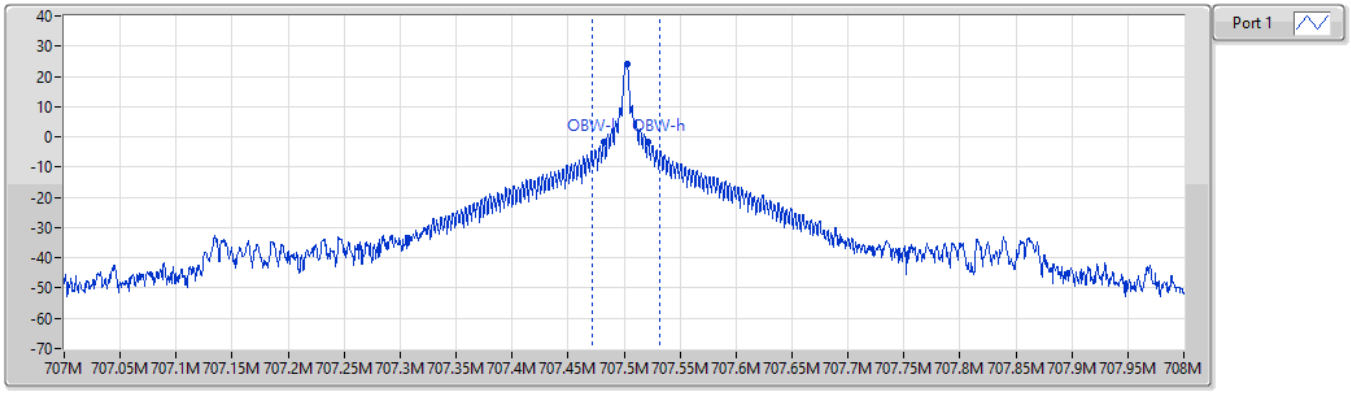
707.5MHz_BPSK_Tone 1@M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
34.5k	707.4845M	707.519M	54.801k	707.474278M	707.529079M	1	707.5M	1M	1k	3k

Band 12_NB-IoT_3.75kHz_Nss1,QPSK_1TX **EBW**

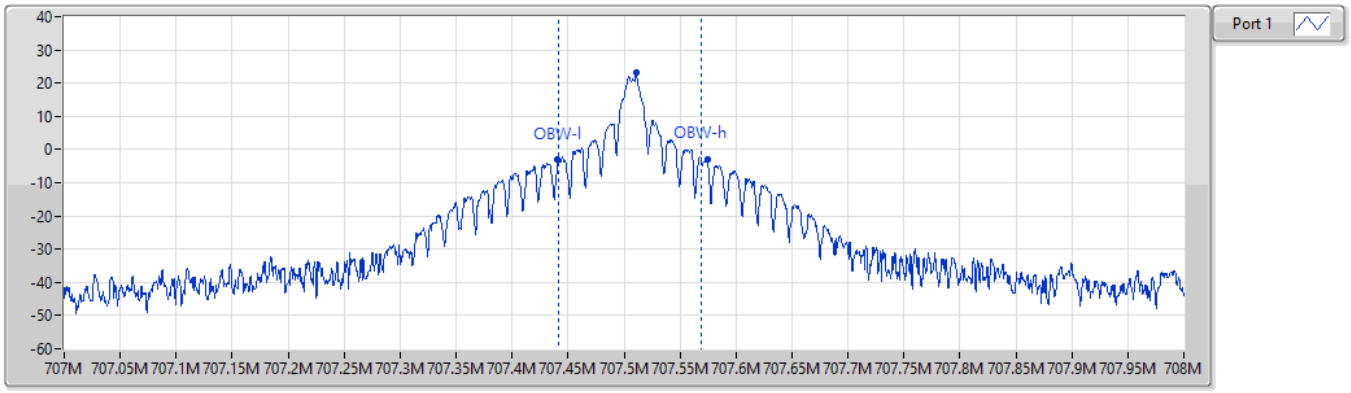
707.5MHz_QPSK_Tone 1@M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
40.5k	707.4815M	707.522M	60.492k	707.471684M	707.532176M	1	707.5M	1M	1k	3k

Band 12_NB-IoT_15kHz_Nss1,BPSK_1TX **EBW**

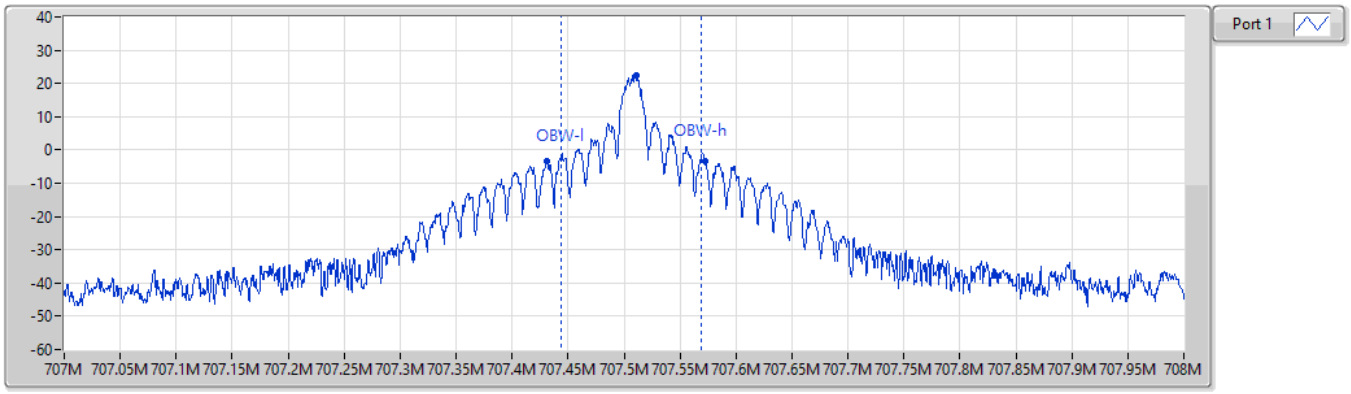
707.5MHz_BPSK_Tone 1@M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
134k	707.4405M	707.5745M	127.04k	707.441497M	707.568537M	1	707.5M	1M	2k	6.2k

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **EBW**

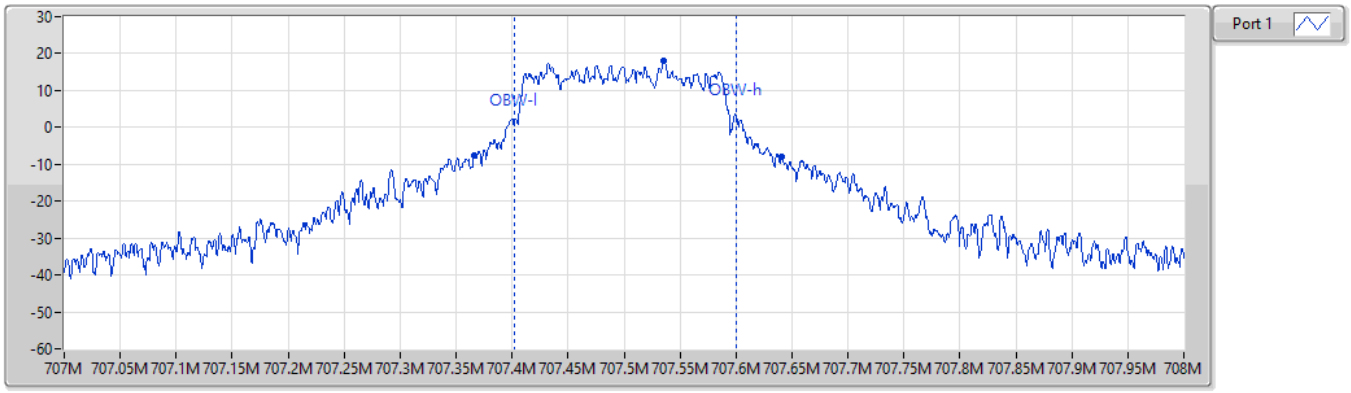
707.5MHz_QPSK_Tone 1@M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
141k	707.4315M	707.5725M	125.321k	707.44367M	707.568991M	1	707.5M	1M	2k	6.2k

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **EBW**

707.5MHz_QPSK_Tone 12@0



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
275k	707.366M	707.641M	198.2k	707.401878M	707.600078M	1	707.5M	1M	5.1k	16k

Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 13	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	35k	56.086k	56K1G7D	35k	56.086k
NB-IoT_3.75kHz_Nss1,QPSK_1TX	41.5k	62.561k	62K6G7D	41.5k	62.561k
NB-IoT_15kHz_Nss1,BPSK_1TX	127.5k	127.271k	127KG7D	127.5k	127.271k
NB-IoT_15kHz_Nss1,QPSK_1TX	354k	206.031k	206KG7D	156.5k	126.647k

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

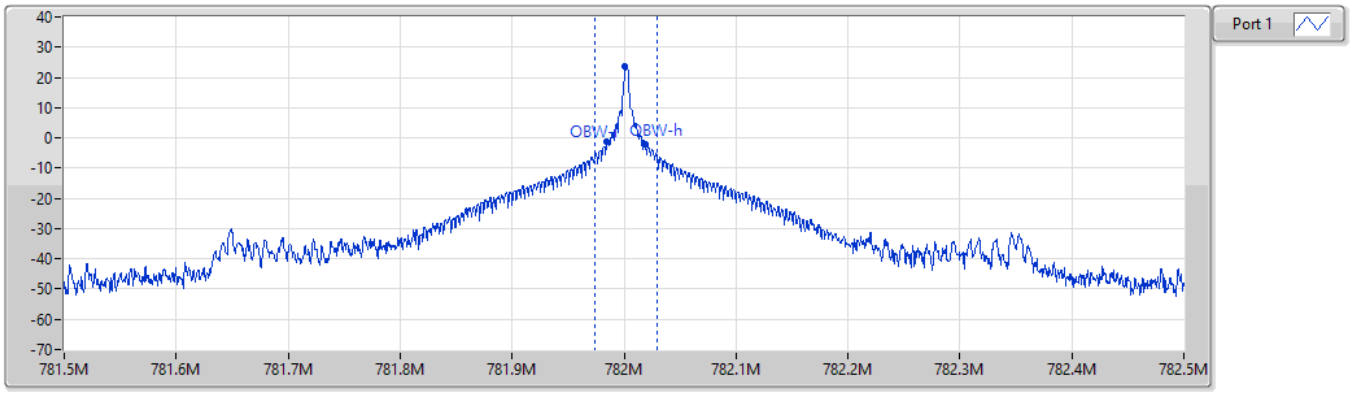
Result

Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 13_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-
782.0MHz_BPSK_Tone 1@M	Pass	35k	56.086k	Inf
782.0MHz_QPSK_Tone 1@M	Pass	41.5k	62.561k	Inf
Band 13_NB-IoT_15kHz_Nss1_1TX	-	-	-	-
782.0MHz_BPSK_Tone 1@M	Pass	127.5k	127.271k	Inf
782.0MHz_QPSK_Tone 1@M	Pass	156.5k	126.647k	Inf
782.0MHz_QPSK_Tone 12@0	Pass	354k	206.031k	Inf

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

Band 13_NB-IoT_3.75kHz_Nss1,BPSK_1TX **EBW**

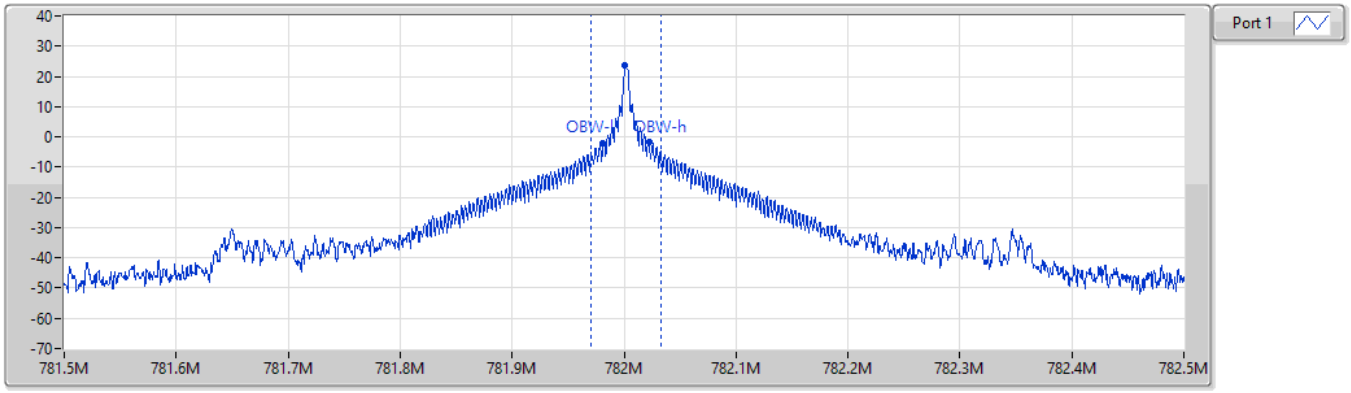
782.0MHz_BPSK_Tone 1@M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
35k	781.9845M	782.0195M	56.086k	781.97342M	782.029506M	1	782M	1M	1k	3k

Band 13_NB-IoT_3.75kHz_Nss1,QPSK_1TX **EBW**

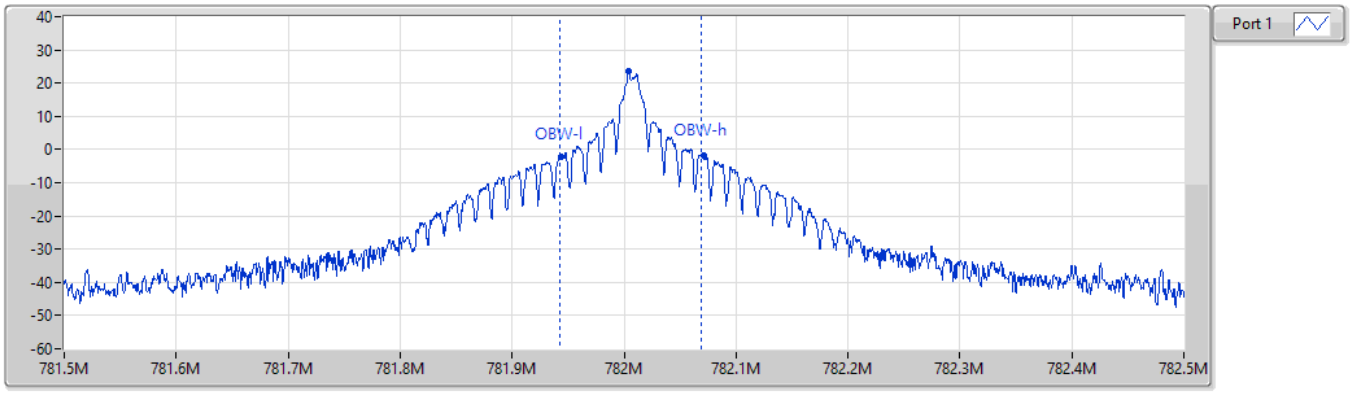
782.0MHz_QPSK_Tone 1@M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
41.5k	781.981M	782.0225M	62.561k	781.970596M	782.033158M	1	782M	1M	1k	3k

Band 13_NB-IoT_15kHz_Nss1,BPSK_1TX **EBW**

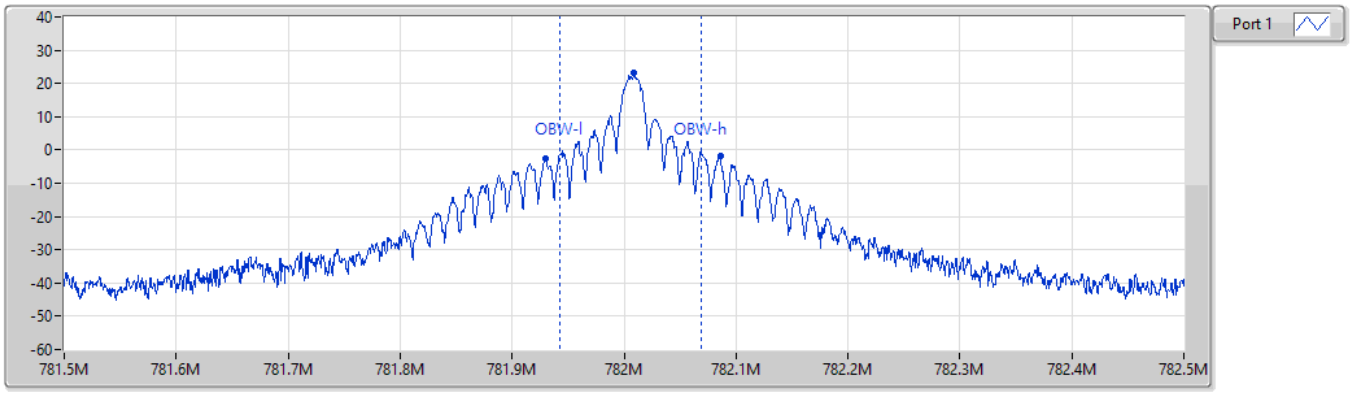
782.0MHz_BPSK_Tone 1@M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
127.5k	781.9435M	782.071M	127.271k	781.94207M	782.069341M	1	782M	1M	2k	6.2k

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **EBW**

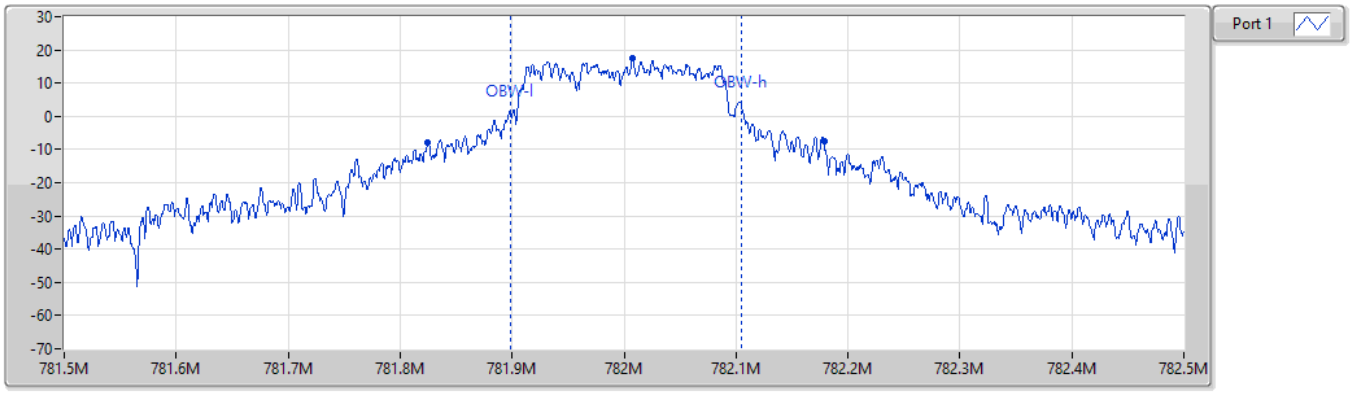
782.0MHz_QPSK_Tone 1@M



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
156.5k	781.9295M	782.086M	126.647k	781.942605M	782.069252M	1	782M	1M	2k	6.2k

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **EBW**

782.0MHz_QPSK_Tone 12@0



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
354k	781.8245M	782.1785M	206.031k	781.898873M	782.104904M	1	782M	1M	5.1k	16k

Summary

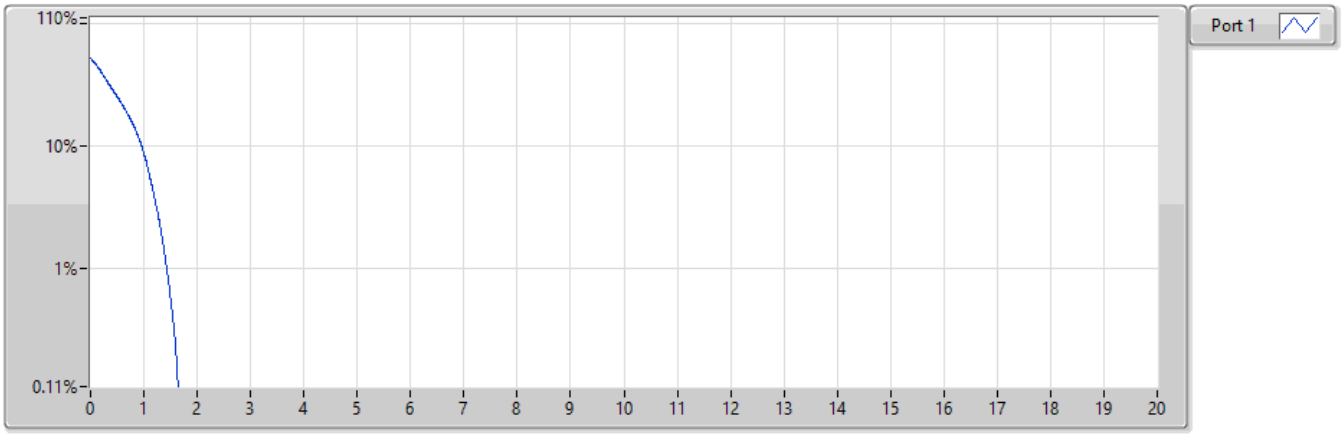
Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 12	-	-	-	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	707.5	13.00	4.11	1
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	707.5	13.00	4.87	1
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	707.5	13.00	4.13	1
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	707.5	13.00	4.88	1

Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 12_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-
707.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	707.5	13.00	4.11	1
707.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	707.5	13.00	4.87	1
Band 12_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-
707.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	707.5	13.00	4.13	1
707.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	707.5	13.00	4.88	1

Band 12_LTE-M1_10MHz_Nss1,QPSK_1TX **PAPR**

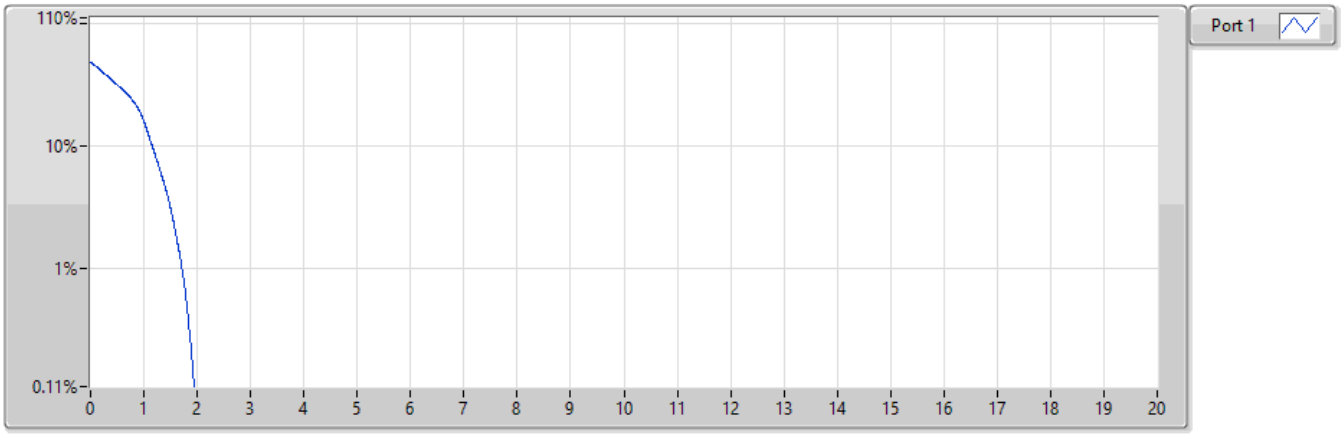
707.5MHz_QPSK_RB 6,#RB 0,NB M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	4.11	-8.89	13.00	1

Band 12_LTE-M1_10MHz_Nss1,16QAM_1TX **PAPR**

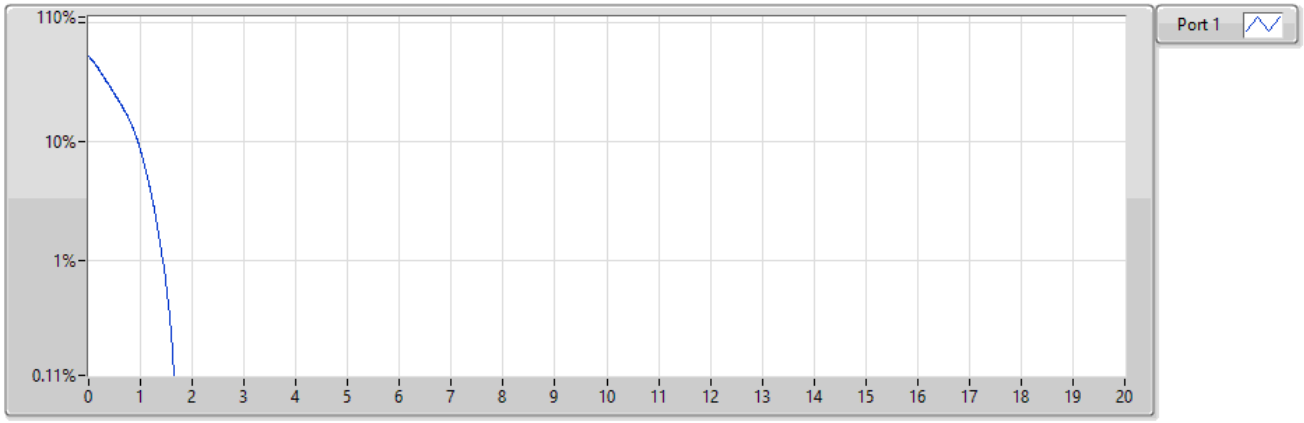
707.5MHz_16QAM_RB 6,#RB 0,NB M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	4.87	-8.13	13.00	1

Band 12_LTE-M1_5MHz_Nss1,QPSK_1TX **PAPR**

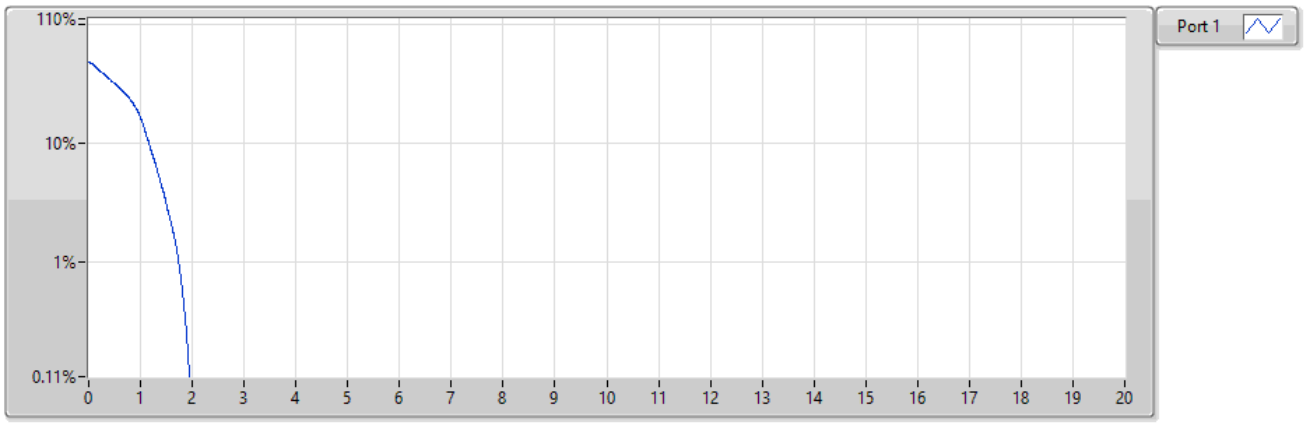
707.5MHz_QPSK_RB 6,#RB 0,NB M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	4.13	-8.87	13.00	1

Band 12_LTE-M1_5MHz_Nss1,16QAM_1TX **PAPR**

707.5MHz_16QAM_RB 6,#RB 0,NB M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	4.88	-8.12	13.00	1

Summary

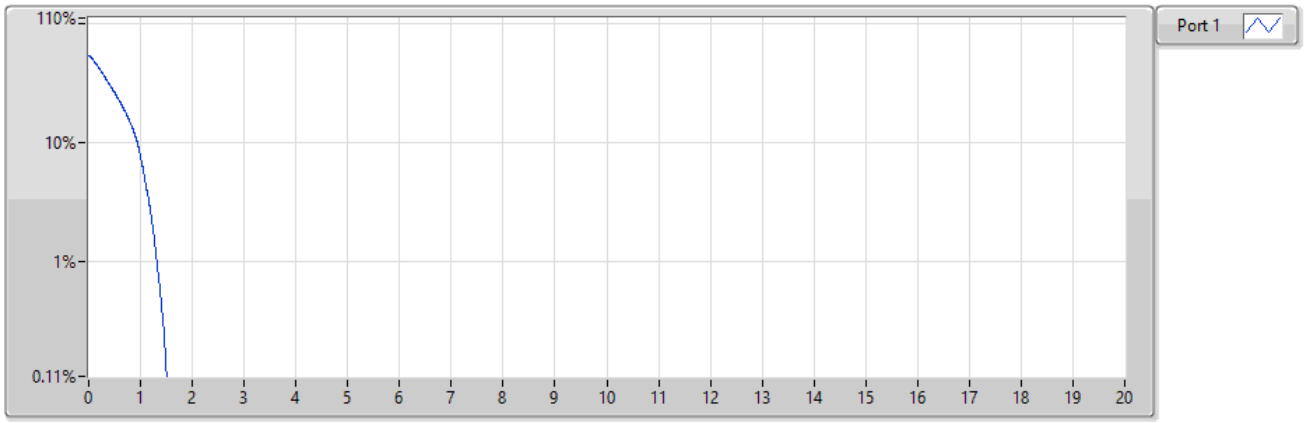
Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 13	-	-	-	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	782	13.00	3.77	1
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	782	13.00	4.51	1
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	782	13.00	3.80	1
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	782	13.00	4.46	1

Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 13_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-
782MHz_QPSK_RB 6,#RB 0,NB M	Pass	782	13.00	3.77	1
782MHz_16QAM_RB 6,#RB 0,NB M	Pass	782	13.00	4.51	1
Band 13_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-
782MHz_QPSK_RB 6,#RB 0,NB M	Pass	782	13.00	3.80	1
782MHz_16QAM_RB 6,#RB 0,NB M	Pass	782	13.00	4.46	1

Band 13_LTE-M1_10MHz_Nss1,QPSK_1TX **PAPR**

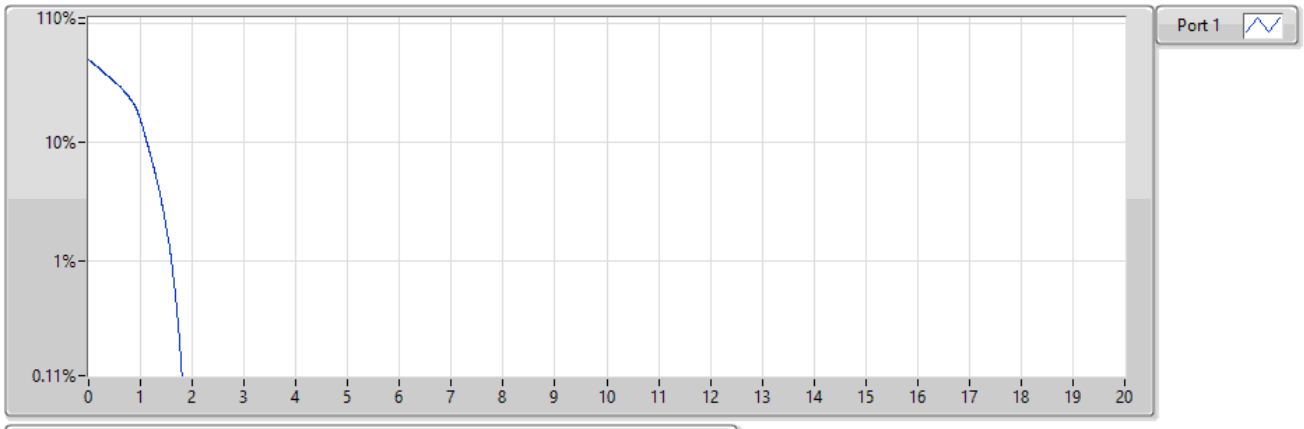
782MHz_QPSK_RB 6,#RB 0,NB M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782	20M	3.77	-9.23	13.00	1

Band 13_LTE-M1_10MHz_Nss1,16QAM_1TX **PAPR**

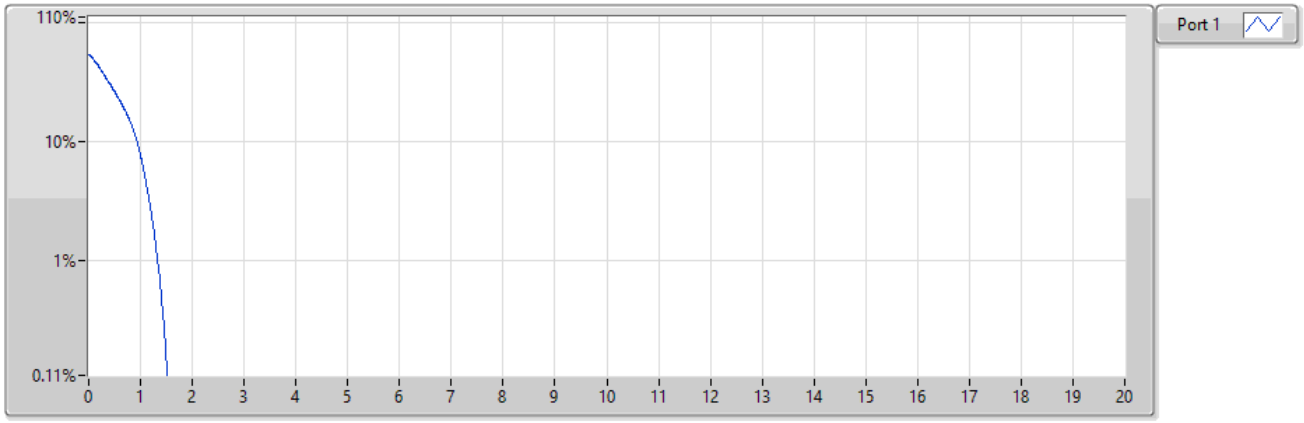
782MHz_16QAM_RB 6,#RB 0,NB M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782	20M	4.51	-8.49	13.00	1

Band 13_LTE-M1_5MHz_Nss1,QPSK_1TX **PAPR**

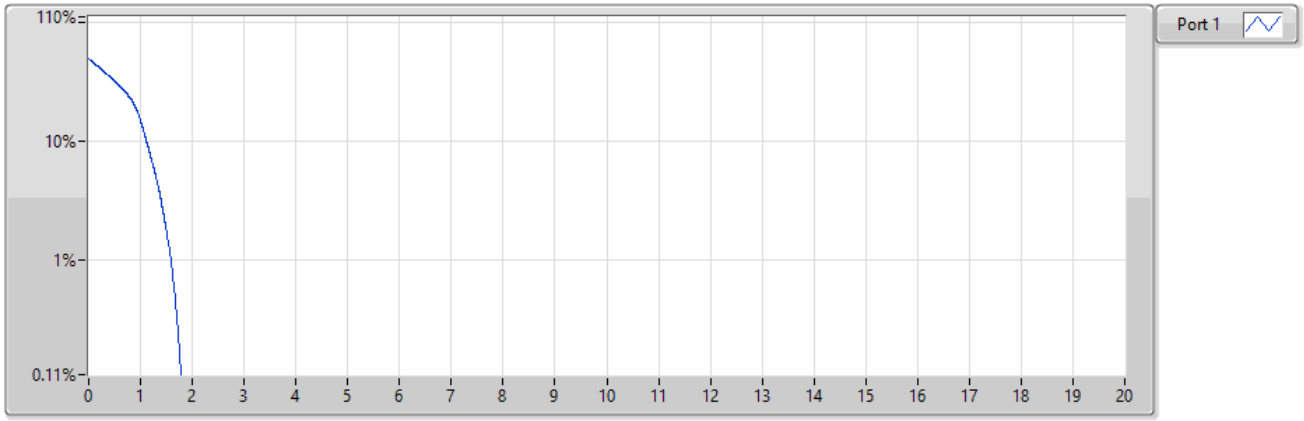
782MHz_QPSK_RB 6,#RB 0,NB M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782	20M	3.80	-9.20	13.00	1

Band 13_LTE-M1_5MHz_Nss1,16QAM_1TX **PAPR**

782MHz_16QAM_RB 6,#RB 0,NB M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782	20M	4.46	-8.54	13.00	1

Summary

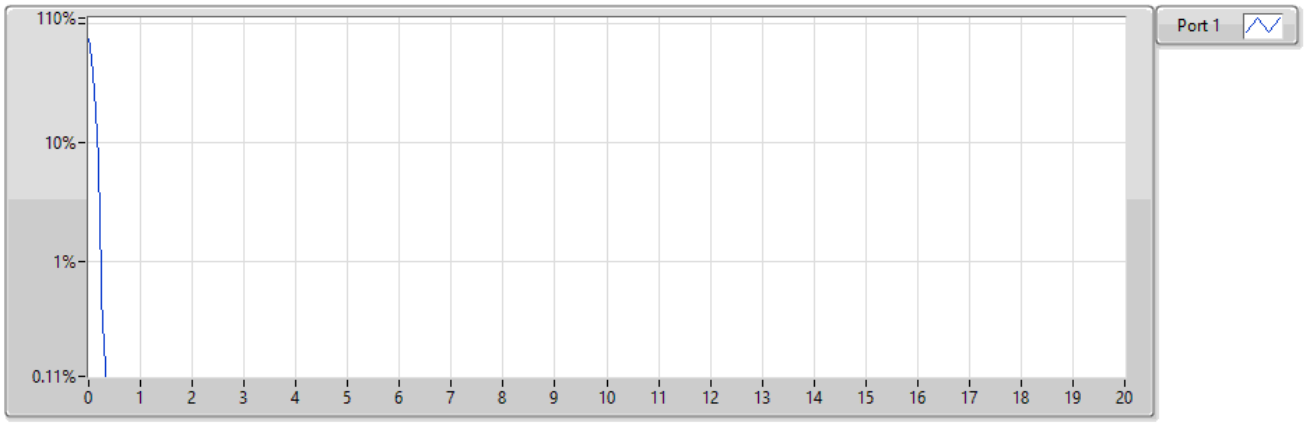
Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 12	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	Pass	707.5	13.00	0.82	1
NB-IoT_3.75kHz_Nss1,QPSK_1TX	Pass	707.5	13.00	1.01	1
NB-IoT_15kHz_Nss1,BPSK_1TX	Pass	707.5	13.00	0.90	1
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	707.5	13.00	3.53	1

Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 12_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-	-
707.5MHz_BPSK_Tone 1@M	Pass	707.5	13.00	0.82	1
707.5MHz_QPSK_Tone 1@M	Pass	707.5	13.00	1.01	1
Band 12_NB-IoT_15kHz_Nss1_1TX	-	-	-	-	-
707.5MHz_BPSK_Tone 1@M	Pass	707.5	13.00	0.90	1
707.5MHz_QPSK_Tone 1@M	Pass	707.5	13.00	1.08	1
707.5MHz_QPSK_Tone 12@0	Pass	707.5	13.00	3.53	1

Band 12_NB-IoT_3.75kHz_Nss1,BPSK_1TX **PAPR**

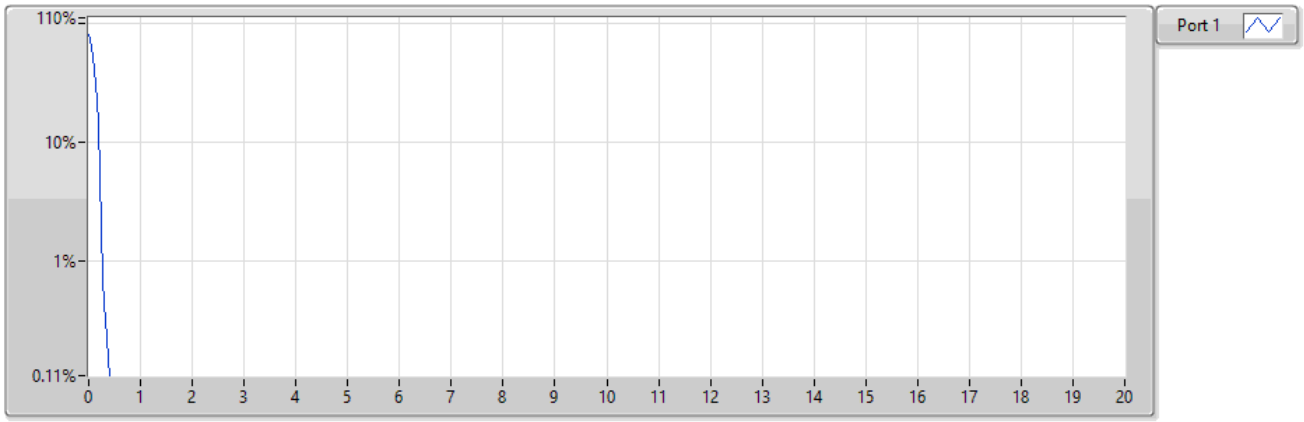
707.5MHz_BPSK_Tone 1@M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	0.82	-12.18	13.00	1

Band 12_NB-IoT_3.75kHz_Nss1,QPSK_1TX **PAPR**

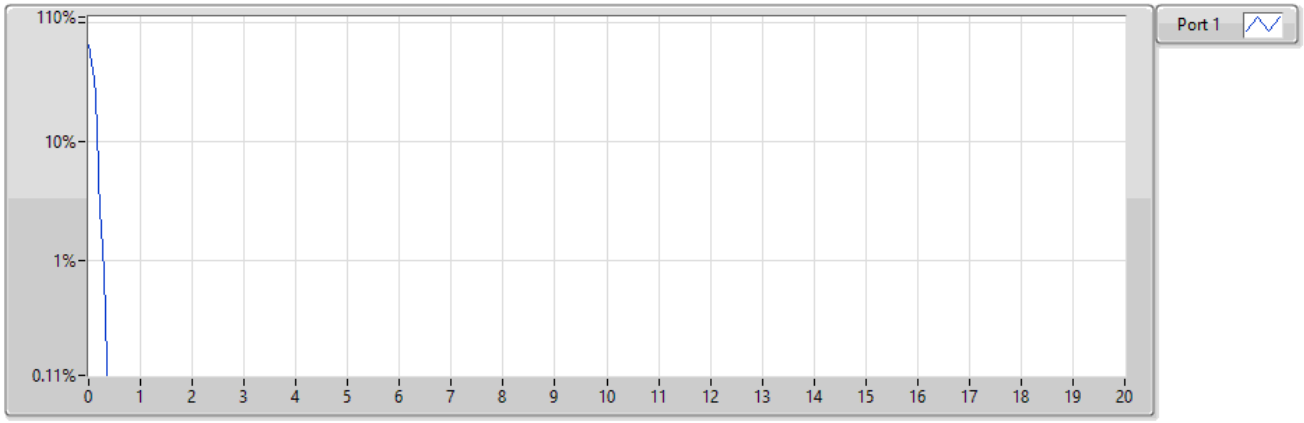
707.5MHz_QPSK_Tone 1@M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	1.01	-11.99	13.00	1

Band 12_NB-IoT_15kHz_Nss1,BPSK_1TX **PAPR**

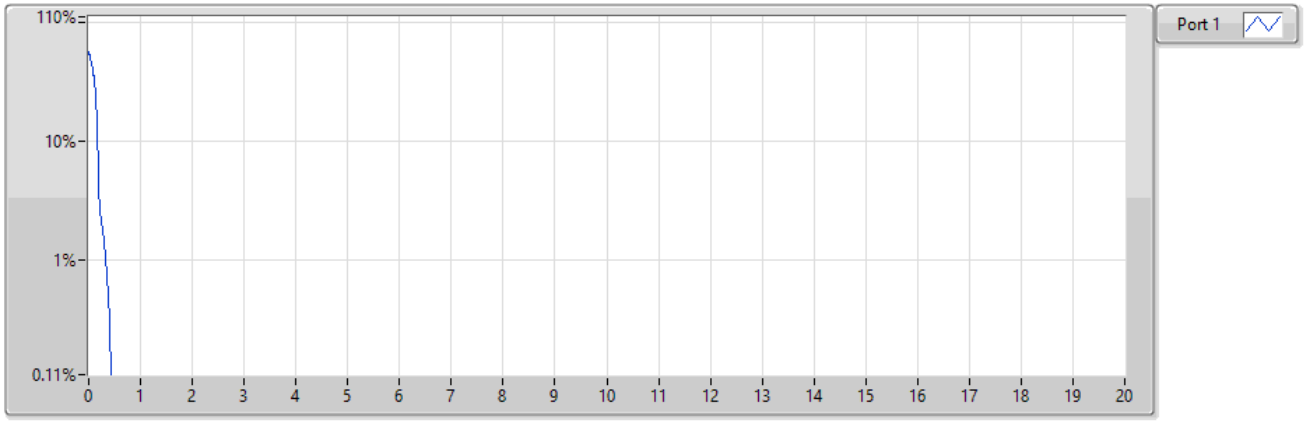
707.5MHz_BPSK_Tone 1@M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	0.90	-12.10	13.00	1

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **PAPR**

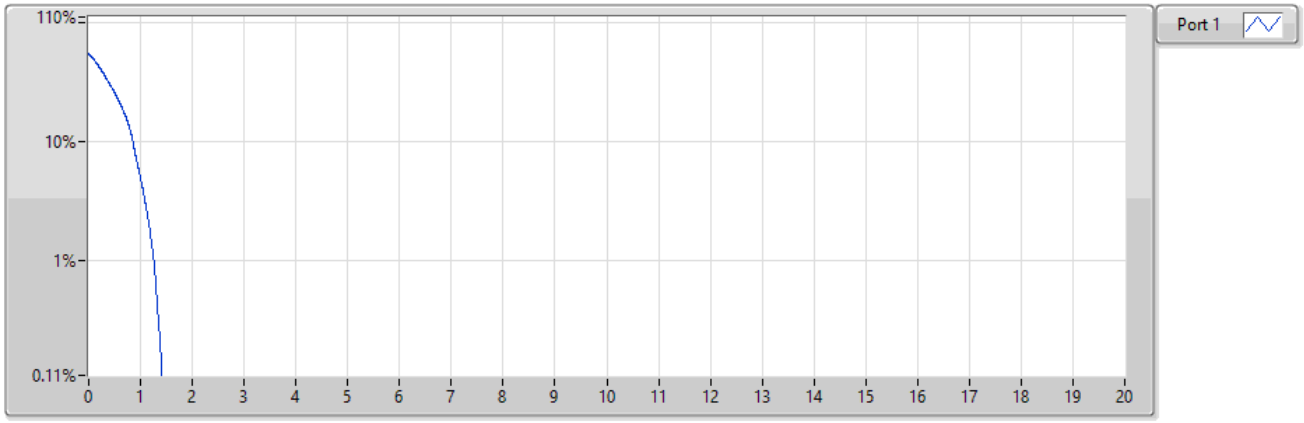
707.5MHz_QPSK_Tone 1@M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	1.08	-11.92	13.00	1

Band 12_NB-IoT_15kHz_Nss1,QPSK_1TX **PAPR**

707.5MHz_QPSK_Tone 12@0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
707.5	20M	3.53	-9.47	13.00	1

Summary

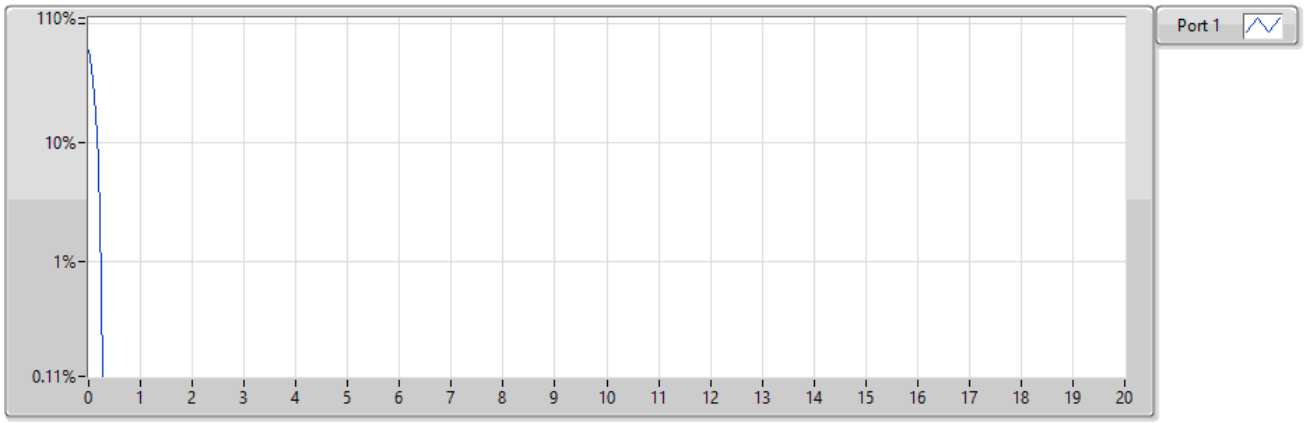
Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 13	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	Pass	782.0	13.00	0.71	1
NB-IoT_3.75kHz_Nss1,QPSK_1TX	Pass	782.0	13.00	1.02	1
NB-IoT_15kHz_Nss1,BPSK_1TX	Pass	782.0	13.00	0.92	1
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	782.0	13.00	3.29	1

Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 13_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-	-
782.0MHz_BPSK_Tone 1@M	Pass	782.0	13.00	0.71	1
782.0MHz_QPSK_Tone 1@M	Pass	782.0	13.00	1.02	1
Band 13_NB-IoT_15kHz_Nss1_1TX	-	-	-	-	-
782.0MHz_BPSK_Tone 1@M	Pass	782.0	13.00	0.92	1
782.0MHz_QPSK_Tone 1@M	Pass	782.0	13.00	1.03	1
782.0MHz_QPSK_Tone 12@0	Pass	782.0	13.00	3.29	1

Band 13_NB-IoT_3.75kHz_Nss1,BPSK_1TX **PAPR**

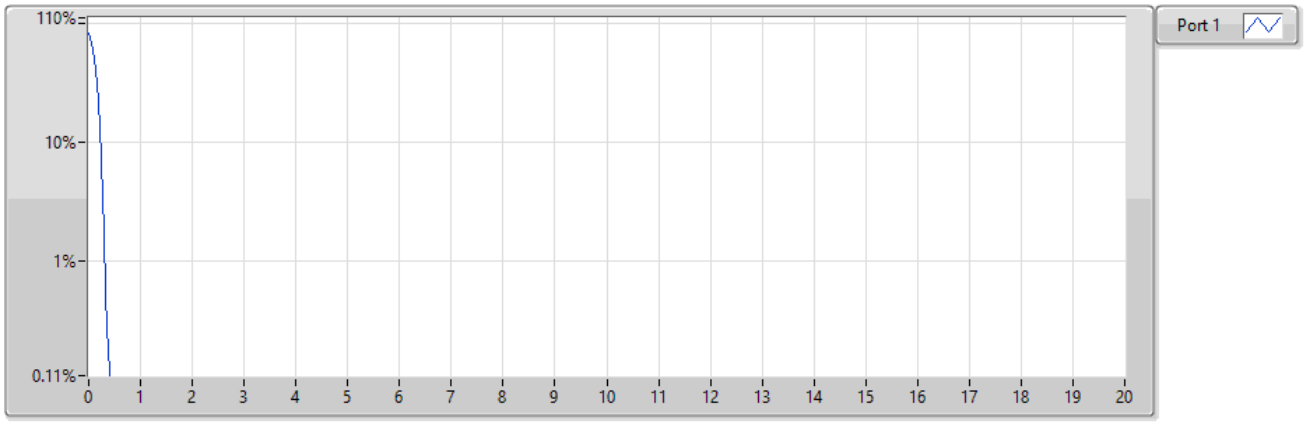
782.0MHz_BPSK_Tone 1@M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782.0	20M	0.71	-12.29	13.00	1

Band 13_NB-IoT_3.75kHz_Nss1,QPSK_1TX **PAPR**

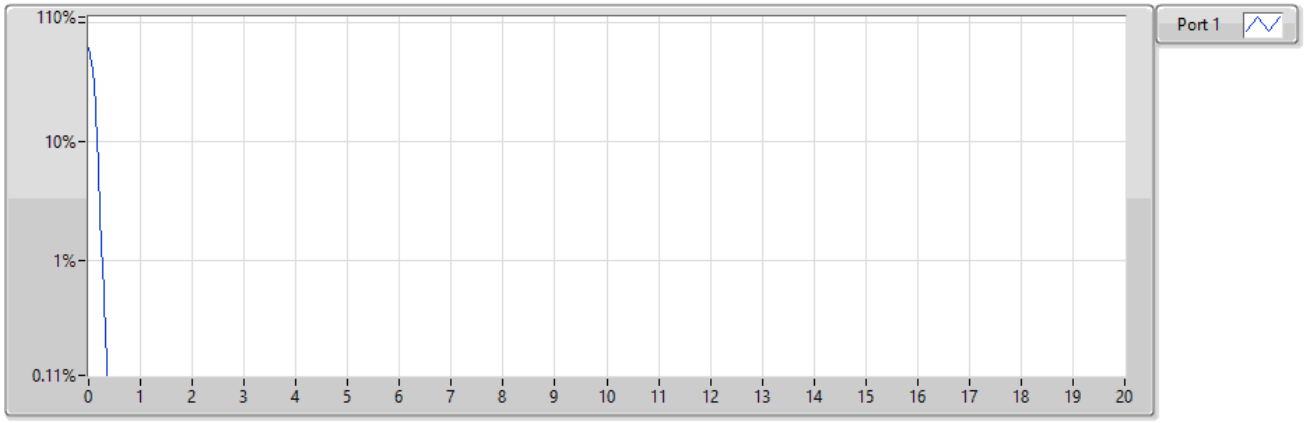
782.0MHz_QPSK_Tone 1@M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782.0	20M	1.02	-11.98	13.00	1

Band 13_NB-IoT_15kHz_Nss1,BPSK_1TX **PAPR**

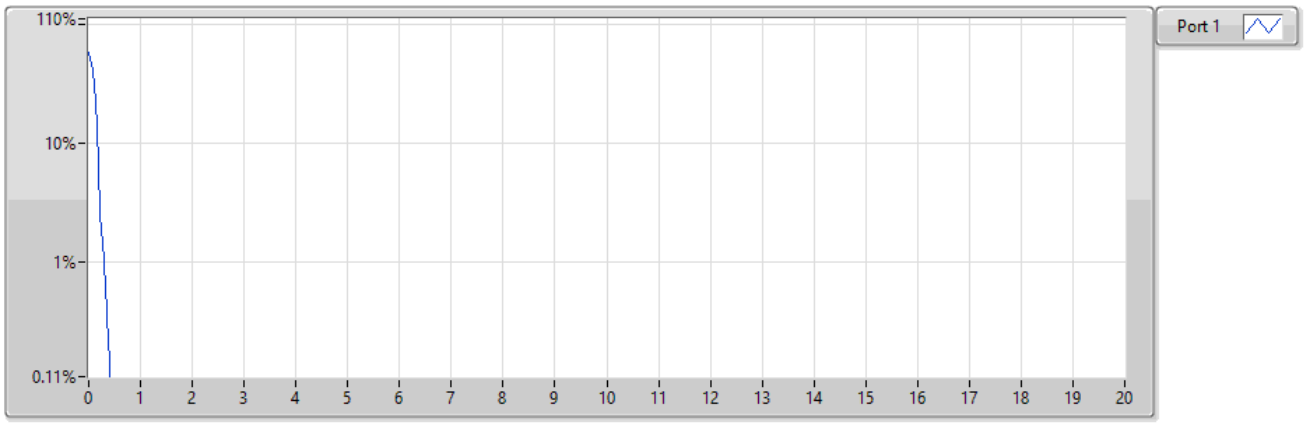
782.0MHz_BPSK_Tone 1@M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782.0	20M	0.92	-12.08	13.00	1

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **PAPR**

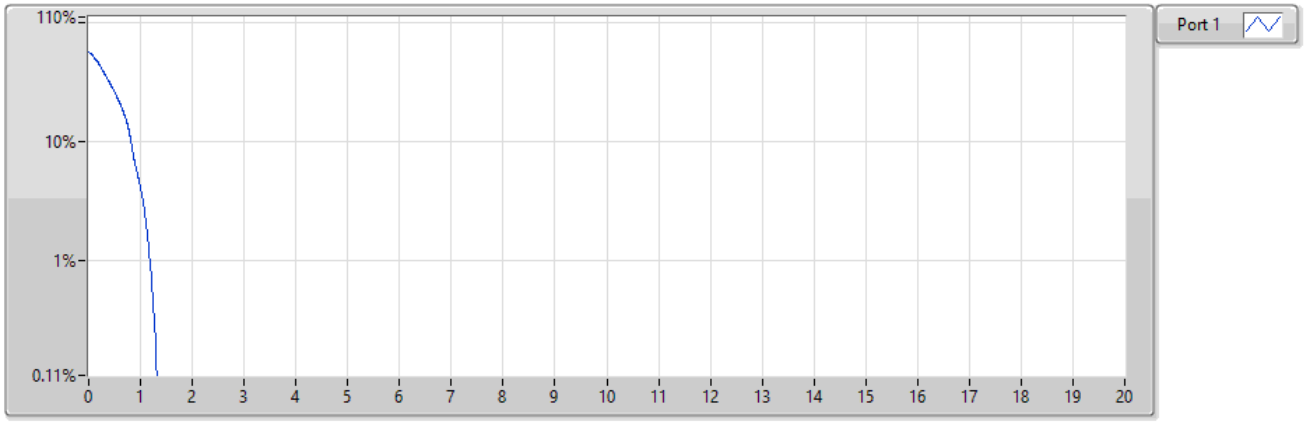
782.0MHz_QPSK_Tone 1@M



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782.0	20M	1.03	-11.97	13.00	1

Band 13_NB-IoT_15kHz_Nss1,QPSK_1TX **PAPR**

782.0MHz_QPSK_Tone 12@0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
782.0	20M	3.29	-9.71	13.00	1

LTE Band 12, CB: 10MHz				
Temperature (ºC)	**704MHz**		**711MHz**	
	Frequency Drift (ppm)	**F_L (MHz)**	**Frequency Drift (ppm)**	**F_H (MHz)**
T20°CVmax	0.021	699.660843	0.023	715.334962
T20°CVmin	0.023	699.660844	0.024	715.334963
T70°CVnom	0.021	699.660843	0.025	715.334964
T60°CVnom	0.023	699.660844	0.023	715.334962
T50°CVnom	0.024	699.660845	0.024	715.334963
T40°CVnom	0.021	699.660843	0.021	715.334961
T30°CVnom	0.021	699.660843	0.023	715.334962
T20°CVnom	0.023	699.660844	0.024	715.334963
T10°CVnom	0.021	699.660843	0.021	715.334961
T0°CVnom	0.023	699.660844	0.023	715.334962
T-10°CVnom	0.021	699.660843	0.024	715.334963
T-20°CVnom	0.021	699.660843	0.023	715.334962
T-30°CVnom	0.023	699.660844	0.023	715.334962
Limit		>698MHz		<716MHz
Vnom [V]: 3.6	Vmax [V]: 4		Vmin [V]: 2.8	
Tnom [°C]: 20	Tmax [°C]: 70		Tmin [°C]: -30	

LTE Band 12, CB: 5MHz				
Temperature (ºC)	**701.5MHz**		**713.5MHz**	
	Frequency Drift (ppm)	**F_L (MHz)**	**Frequency Drift (ppm)**	**F_H (MHz)**
T20°CVmax	0.023	699.237365	0.021	715.766971
T20°CVmin	0.021	699.237364	0.022	715.766972
T70°CVnom	0.023	699.237365	0.024	715.766973
T60°CVnom	0.024	699.237366	0.021	715.766971
T50°CVnom	0.023	699.237365	0.022	715.766972
T40°CVnom	0.023	699.237365	0.022	715.766972
T30°CVnom	0.023	699.237365	0.021	715.766971
T20°CVnom	0.024	699.237366	0.022	715.766972
T10°CVnom	0.023	699.237365	0.024	715.766973
T0°CVnom	0.021	699.237364	0.021	715.766971
T-10°CVnom	0.023	699.237365	0.022	715.766972
T-20°CVnom	0.023	699.237365	0.024	715.766973
T-30°CVnom	0.024	699.237366	0.022	715.766972
Limit		>698MHz		<716MHz
Vnom [V]: 3.6	Vmax [V]: 4		Vmin [V]: 2.8	
Tnom [°C]: 20	Tmax [°C]: 70		Tmin [°C]: -30	

Band 12_NB-IoT_3.75kHz				
Temperature (ºC)	**699.2MHz**		**715.8MHz**	
	Frequency Drift (ppm)	**F_L (MHz)**	**Frequency Drift (ppm)**	**F_H (MHz)**
T20°CVmax	0.023	699.171700	0.021	715.832191
T20°CVmin	0.021	699.171699	0.022	715.832192
T70°CVnom	0.021	699.171699	0.024	715.832193
T60°CVnom	0.023	699.171700	0.021	715.832191
T50°CVnom	0.021	699.171699	0.024	715.832193
T40°CVnom	0.020	699.171698	0.022	715.832192
T30°CVnom	0.023	699.171700	0.021	715.832191
T20°CVnom	0.021	699.171699	0.021	715.832191
T10°CVnom	0.020	699.171698	0.020	715.832190
T0°CVnom	0.021	699.171699	0.022	715.832192
T-10°CVnom	0.021	699.171699	0.021	715.832191
T-20°CVnom	0.023	699.171700	0.021	715.832191
T-30°CVnom	0.021	699.171699	0.022	715.832192
Limit		>698MHz		<716MHz
Vnom [V]: 3.6	Vmax [V]: 4		Vmin [V]: 2.8	
Tnom [°C]: 20	Tmax [°C]: 70		Tmin [°C]: -30	

Band 12_NB-IoT_15kHz				
Temperature (ºC)	**699.2MHz**		**715.8MHz**	
	Frequency Drift (ppm)	**F_L (MHz)**	**Frequency Drift (ppm)**	**F_H (MHz)**
T20°CVmax	0.021	699.101893	0.024	715.900095
T20°CVmin	0.023	699.101894	0.021	715.900093
T70°CVnom	0.021	699.101893	0.022	715.900094
T60°CVnom	0.021	699.101893	0.020	715.900092
T50°CVnom	0.023	699.101894	0.022	715.900094
T40°CVnom	0.021	699.101893	0.021	715.900093
T30°CVnom	0.021	699.101893	0.022	715.900094
T20°CVnom	0.023	699.101894	0.021	715.900093
T10°CVnom	0.021	699.101893	0.022	715.900094
T0°CVnom	0.023	699.101894	0.021	715.900093
T-10°CVnom	0.024	699.101895	0.021	715.900093
T-20°CVnom	0.021	699.101893	0.022	715.900094
T-30°CVnom	0.023	699.101894	0.021	715.900093
Limit		>698MHz		<716MHz
Vnom [V]: 3.6	Vmax [V]: 4		Vmin [V]: 2.8	
Tnom [°C]: 20	Tmax [°C]: 70		Tmin [°C]: -30	

Band 13_NB-IoT_3.75kHz				
Temperature (ºC)	**777.2MHz**		**786.8MHz**	
	Frequency Drift (ppm)	**F_L (MHz)**	**Frequency Drift (ppm)**	**F_H (MHz)**
T20°CVmax	0.019	777.170611	0.020	786.833174
T20°CVmin	0.021	777.170612	0.019	786.833173
T70°CVnom	0.019	777.170611	0.019	786.833173
T60°CVnom	0.018	777.170610	0.020	786.833174
T50°CVnom	0.021	777.170612	0.019	786.833173
T40°CVnom	0.019	777.170611	0.019	786.833173
T30°CVnom	0.019	777.170611	0.018	786.833172
T20°CVnom	0.018	777.170610	0.020	786.833174
T10°CVnom	0.021	777.170612	0.019	786.833173
T0°CVnom	0.019	777.170611	0.019	786.833173
T-10°CVnom	0.021	777.170612	0.020	786.833174
T-20°CVnom	0.019	777.170611	0.019	786.833173
T-30°CVnom	0.018	777.170610	0.019	786.833173
Limit		>777MHz		<787MHz
Vnom [V]: 3.6	Vmax [V]: 4		Vmin [V]: 2.8	
Tnom [°C]: 20	Tmax [°C]: 70		Tmin [°C]: -30	

Band 13_NB-IoT_15kHz				
Temperature (ºC)	**777.2MHz**		**786.8MHz**	
	Frequency Drift (ppm)	**F_L (MHz)**	**Frequency Drift (ppm)**	**F_H (MHz)**
T20°CVmax	0.021	777.098889	0.019	786.904919
T20°CVmin	0.019	777.098888	0.020	786.904920
T70°CVnom	0.021	777.098889	0.022	786.904921
T60°CVnom	0.021	777.098889	0.019	786.904919
T50°CVnom	0.019	777.098888	0.019	786.904919
T40°CVnom	0.018	777.098887	0.020	786.904920
T30°CVnom	0.019	777.098888	0.022	786.904921
T20°CVnom	0.018	777.098887	0.020	786.904920
T10°CVnom	0.021	777.098889	0.019	786.904919
T0°CVnom	0.019	777.098888	0.022	786.904921
T-10°CVnom	0.019	777.098888	0.020	786.904920
T-20°CVnom	0.021	777.098889	0.019	786.904919
T-30°CVnom	0.022	777.098890	0.020	786.904920
Limit		>777MHz		<787MHz
Vnom [V]: 3.6	Vmax [V]: 4		Vmin [V]: 2.8	
Tnom [°C]: 20	Tmax [°C]: 70		Tmin [°C]: -30	