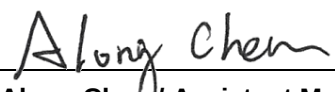


FCC Test Report

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 24 Subpart E
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:


Along Chen / Assistant Manager

Approved by:

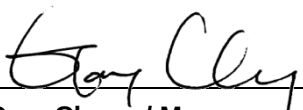

Gary Chang / Manager

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Appendix A. Effective Isotropically Radiated Power

Appendix B. Radiated Emissions

Appendix C. Out of Band Emissions & Band Edge

Appendix D. Occupied and 26 dB Bandwidth

Appendix E. Peak to Average Power Ratio

Appendix F. Frequency Stability

Release Record

Report No.	Version	Description	Issued Date
FG3D1504P24	Rev. 01	Initial issue	Mar. 22, 2024

Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 / 24.232(c)	Equivalent Isotropically Radiated Power	Power[dBm]: 27.38	Pass
2.1053 / 24.238(a)	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 / 24.238(a)	Conducted Emissions	Meet the requirement of limit	Pass
2.1051 / 24.238(a)	Band Edge	Meet the requirement of limit	Pass
2.1049	Occupied Bandwidth	Meet the requirement of limit	Pass
24.232(d)	Peak to Average Power Ratio	Meet the requirement of limit	Pass
2.1055 / 24.235	Frequency Stability	Meet the requirement of limit	Pass

Declaration of Conformity:

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

Comments and Explanations:

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

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

Operating Frequency	Band 2: 1850 MHz – 1910 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	3.63	---

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 EIRP and Emission Designator

LTE-M1 Band 2			
Channel Bandwidth	Modulation	Maximum EIRP (W)	Emission Designator
20 MHz	QPSK	0.538	1M10G7D
20 MHz	16QAM	0.537	1M14W7D
15 MHz	QPSK	0.535	1M12G7D
15 MHz	16QAM	0.532	1M13W7D
10 MHz	QPSK	0.540	1M09G7D
10 MHz	16QAM	0.542	1M11W7D
5 MHz	QPSK	0.547	1M10G7D
5 MHz	16QAM	0.532	1M11W7D

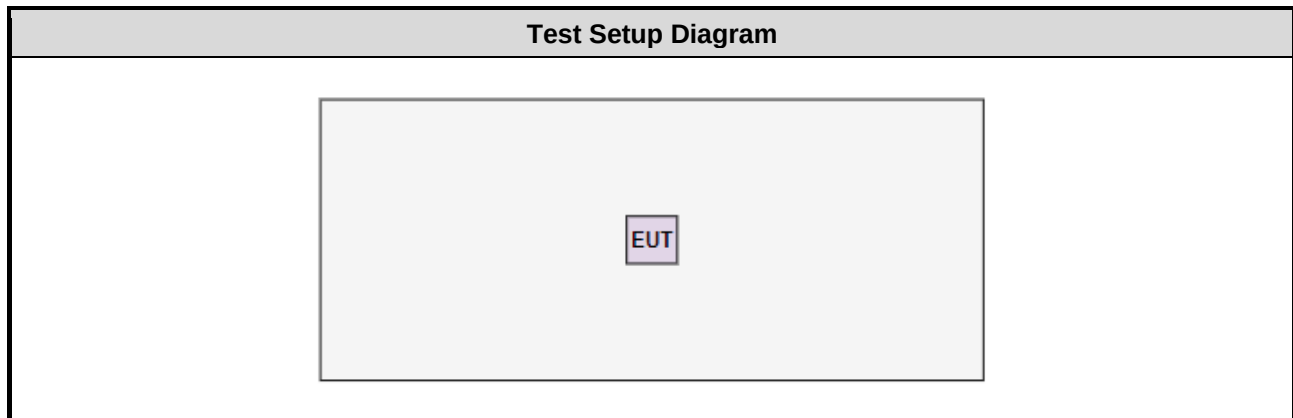
NB-IoT Band 2		
Modulation	Maximum EIRP (W)	Emission Designator
BPSK	0.509	134KG7D
QPSK	0.518	202KG7D

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



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-N W-11000	200801	Oct. 03, 2023	Oct. 02, 2024
LF cable 1M	EMC	EMCCFD400-NM-N M-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 24 Subpart E
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 v02r02

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	±1x10 ⁻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
- ISSED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

LTE-M1 Band 2			
Test item	Channel Bandwidth	Modulation	Test Frequency (MHz)
E.I.R.P.	5 MHz	QPSK / 16QAM	1852.5 / 1880.0 / 1907.5
	10 MHz	QPSK / 16QAM	1855.0 / 1880.0 / 1905.0
	15 MHz	QPSK / 16QAM	1857.5 / 1880.0 / 1902.5
	20 MHz	QPSK / 16QAM	1860.0 / 1880.0 / 1900.0
Radiated Emission ≤ 1GHz	5 MHz	QPSK	1852.5
Radiated Emission > 1GHz	5 MHz	QPSK	1852.5 / 1880.0 / 1907.5
Out of Band Emissions	5 MHz	QPSK	1852.5 / 1880.0 / 1907.5
	10 MHz	QPSK	1855.0 / 1880.0 / 1905.0
	15 MHz	QPSK	1857.5 / 1880.0 / 1902.5
	20 MHz	QPSK	1860.0 / 1880.0 / 1900.0
Band Edge	5 MHz	QPSK / 16QAM	1852.5 / 1907.5
	10 MHz	QPSK / 16QAM	1855.0 / 1905.0
	15 MHz	QPSK / 16QAM	1857.5 / 1902.5
	20 MHz	QPSK / 16QAM	1860.0 / 1900.0
Occupied Bandwidth Peak to Average Ratio	5 MHz	QPSK / 16QAM	1880.0
	10 MHz	QPSK / 16QAM	1880.0
	15 MHz	QPSK / 16QAM	1880.0
	20 MHz	QPSK / 16QAM	1880.0
Frequency Stability	5 MHz	QPSK	1852.5 / 1907.5
	10 MHz	QPSK	1855.0 / 1905.0
	15 MHz	QPSK	1857.5 / 1902.5
	20 MHz	QPSK	1860.0 / 1900.0

NOTE:

- 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 2			
Test item	Sub-carrier Spacing(kHz)	Modulation	Test Frequency (MHz)
E.I.R.P. Band Edge Occupied Bandwidth Peak to Average Ratio	3.75kHz / 15kHz	BPSK / QPSK	1850.2 / 1880.0 / 1909.8
Radiated Emission ≤ 1GHz	15kHz	QPSK	1909.8
Radiated Emission > 1GHz	15kHz	QPSK	1850.2 / 1880.0 / 1909.8
Out of Band Emissions	15kHz	QPSK	1850.2 / 1880.0 / 1909.8
Frequency Stability	3.75kHz / 15kHz	QPSK	1850.2 / 1909.8
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 Equivalent Isotropically Radiated Power

3.1.1 Limit of Equivalent Isotropically Radiated Power

Mobile and portable stations are limited to 2 watts EIRP.

3.1.2 Test Procedures

For E.I.R.P measurement

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

1. $EIRP = P_T + G_T - L_C$

P_T = transmitter output power, in dBm.

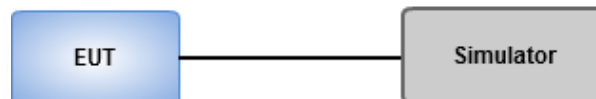
G_T = gain of the transmitting antenna, in dBi (EIRP).

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

For Conducted power measurement

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

3.1.3 Test Setup



3.1.4 Test Results

Ambient Condition	20~24°C / 62~67%	Tested By	Aska Huang
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Refer to Appendix A.

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

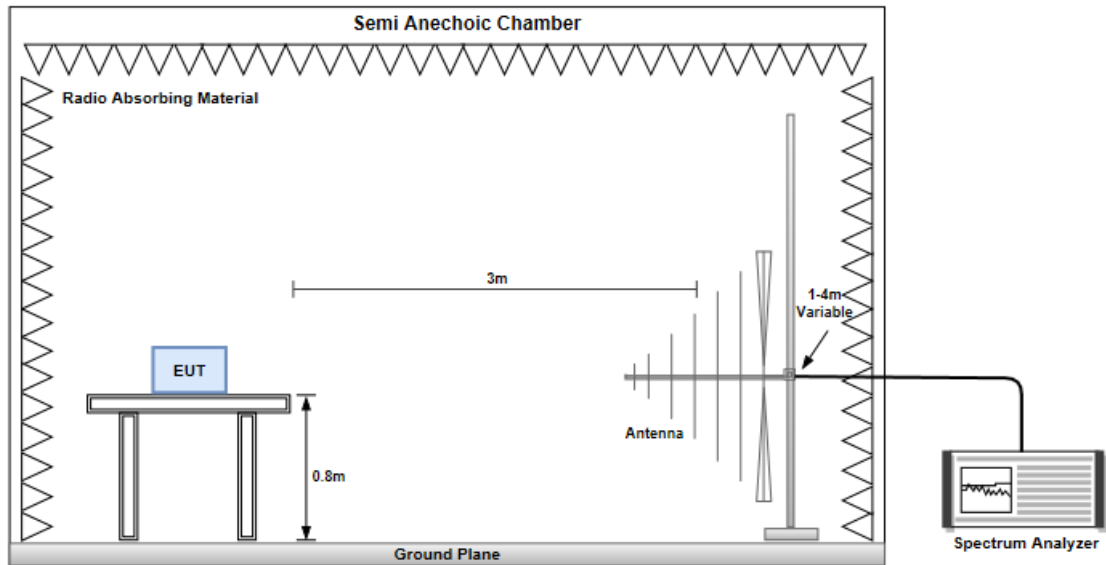
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB equal to -13dBm.

3.2.2 Test Procedures

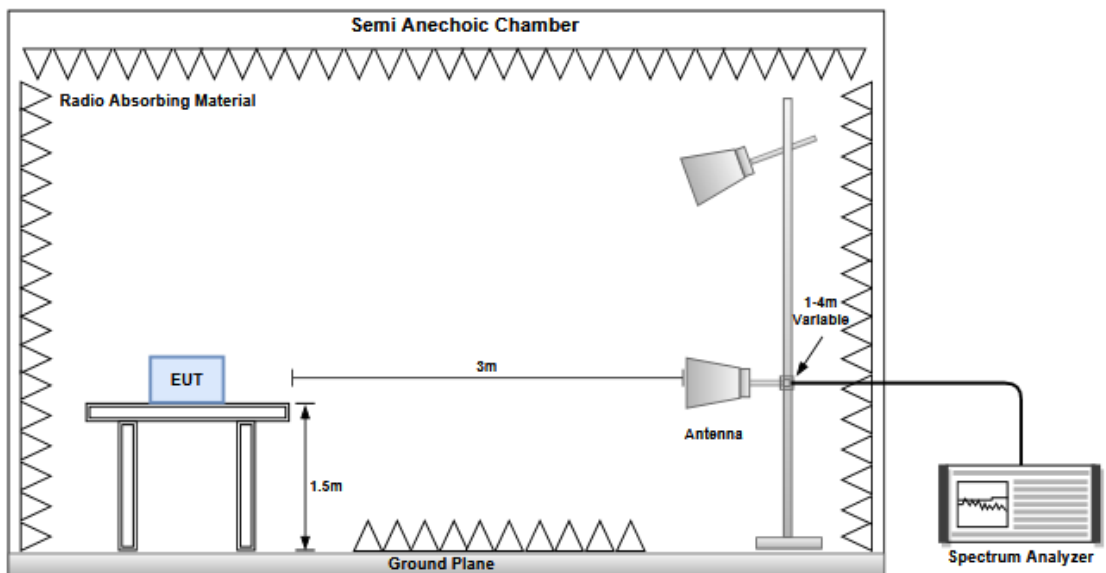
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

3.2.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.2.4 Test Results

Ambient Condition	22~23°C / 63~66%	Tested By	Akun Chung
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Refer to Appendix B.

3.3 Out of Band Emissions & Band Edge

3.3.1 Limit of Out of Band Emissions & Band Edge

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

3.3.2 Test Procedures

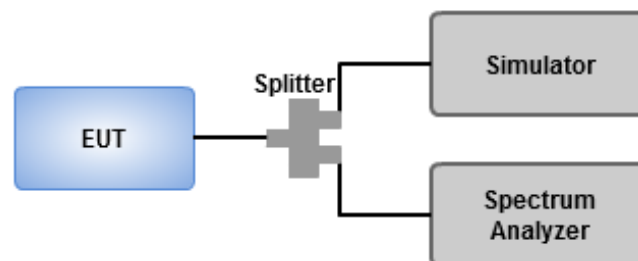
Out of band emission

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz ~ 20 GHz.
3. Set RBW = 1 MHz, VBW = 3 MHz, 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.

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	20~24°C / 62~67%	Tested By	Aska Huang
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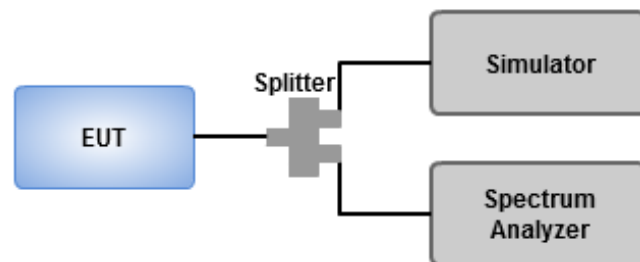
Refer to Appendix C.

3.4 Occupied and 26 dB 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
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Refer to Appendix D.

3.5 Peak to Average Power Ratio

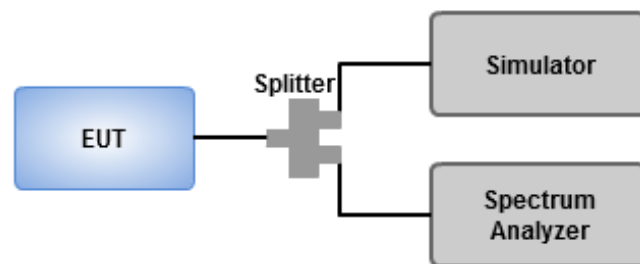
3.5.1 Limit of Peak to Average Power Ratio

Peak-to-average power ratio of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. Set resolution/measurement bandwidth $\geq$ 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
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Refer to Appendix E.

3.6 Frequency Stability

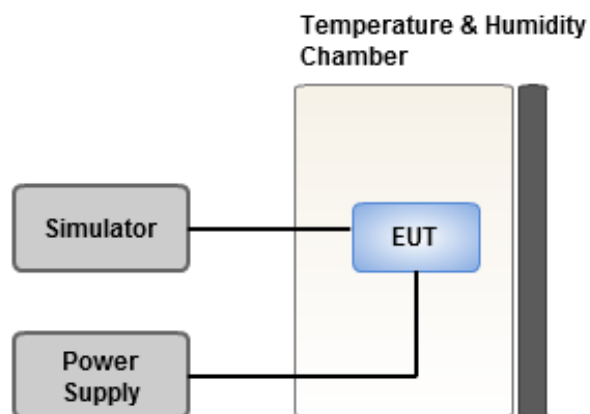
3.6.1 Limit of Frequency Stability

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

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
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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 24E M1 Band 2 Maximum Average Power [dBm](GT-LC= 3.63 dB)								
BW (MHz)	Modulation	RB size#	RB Index	Lowest	Middle	Highest	-	
		RB start						
Channel				18700	18900	19100	EIRP (dBm)	EIRP (W)
Frequency				1860	1880	1900		
20	QPSK	1#0	0	23.68	23.63	23.55	27.31	0.538
20	QPSK	1#5	15	23.53	23.44	23.38		
20	QPSK	6#0	0	23.58	23.49	23.52		
20	QPSK	6#0	15	23.42	23.34	23.32		
20	16QAM	1#0	0	23.67	23.53	23.53	27.3	0.537
20	16QAM	1#5	15	23.53	23.33	23.38		
20	16QAM	6#0	0	23.58	23.43	23.37		
20	16QAM	6#0	15	23.41	23.23	23.15		
Channel				18675	18900	19125	EIRP (dBm)	EIRP (W)
Frequency				1857.5	1880	1902.5		
15	QPSK	1#0	0	23.58	23.65	23.63	27.28	0.535
15	QPSK	1#0	11	23.49	23.57	23.48		
15	QPSK	6#0	0	23.51	23.61	23.58		
15	QPSK	6#0	11	23.39	23.44	23.41		
15	16QAM	1#0	0	23.53	23.63	23.58	27.26	0.532
15	16QAM	1#0	11	23.48	23.48	23.45		
15	16QAM	6#0	0	23.42	23.51	23.41		
15	16QAM	6#0	11	23.29	23.32	23.28		

Channel				18650	18900	19150	EIRP (dBm)	EIRP (W)
Frequency				1855	1880	1905		
10	QPSK	1#0	0	23.69	23.61	23.62	27.32	0.540
10	QPSK	1#5	7	23.68	23.58	23.58		
10	QPSK	6#0	0	22.97	22.54	22.95		
10	QPSK	6#0	7	22.85	22.41	22.84		
10	16QAM	1#0	0	23.61	23.04	23.62	27.34	0.542
10	16QAM	1#5	7	23.71	22.93	23.58		
10	16QAM	6#0	0	22.07	22.06	22.15		
10	16QAM	6#0	7	21.98	21.91	22.03		
Channel				18625	18900	19175	EIRP (dBm)	EIRP (W)
Frequency				1852.5	1880	1907.5		
5	QPSK	1#0	0	23.75	23.62	23.62	27.38	0.547
5	QPSK	1#5	3	23.68	23.58	23.59		
5	QPSK	6#0	0	22.86	22.86	22.92		
5	QPSK	6#0	3	22.81	22.8	22.86		
5	16QAM	1#0	0	23.63	23.61	23.59	27.26	0.532
5	16QAM	1#5	3	23.62	23.56	23.58		
5	16QAM	6#0	0	21.99	22.02	22.09		
5	16QAM	6#0	3	21.92	21.98	22.02		
Limit	EIRP < 2 W			Result			Pass	

Part24E Band 2 Maximum Average Power [dBm](GT-LC= 3.63 dB)								
NB-IoT	Modulation	Sub-carrier Spacing(kHz)	Ntones	Lowest	Middle	Highest	-	
Channel				18602	18900	19198	EIRP	EIRP
Frequency				1850.2	1880	1909.8	(dBm)	(W)
Standalone	BPSK	3.75	1@0	22.91	23.17	23.22	27.07	0.509
			1@47	22.93	23.18	23.26		
		15	1@0	22.91	23.28	23.4		
			1@11	22.82	23.36	23.44		
	QPSK	3.75	1@0	22.81	23.17	23.27	27.14	0.518
			1@47	22.82	23.22	23.21		
		15	1@0	22.96	23.35	23.44		
			1@11	22.99	23.37	23.51		
		15	12@0	23.31	23.34	23.42		
		Limit	EIRP < 2 W			Result		

Below 1GHz

Mode	LTE-M1 Band 2, QPSK, CB:5 MHz, Channel: 1909.8MHz						
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)
183.26	H	-33.43	-13.00	-20.43	-32.65	-33.65	0.22
187.14	H	-35.44	-13.00	-22.44	-34.56	-36.20	0.76
195.87	H	-35.63	-13.00	-22.63	-34.52	-37.60	1.97
199.75	H	-34.23	-13.00	-21.23	-33.03	-36.74	2.51
248.25	H	-35.82	-13.00	-22.82	-36.37	-38.57	2.75
255.04	H	-34.89	-13.00	-21.89	-35.49	-37.67	2.78
124.09	V	-43.73	-13.00	-30.73	-46.89	-40.57	-3.16
127.00	V	-43.44	-13.00	-30.44	-46.88	-40.23	-3.21
183.26	V	-40.57	-13.00	-27.57	-44.33	-40.79	0.22
187.14	V	-41.67	-13.00	-28.67	-45.01	-42.43	0.76
255.04	V	-44.29	-13.00	-31.29	-44.34	-47.07	2.78
267.65	V	-45.35	-13.00	-32.35	45.79	-48.18	2.83

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

Above 1GHz

Mode	LTE-M1 Band 2, QPSK, CB:5 MHz, Channel: 1850.2MHz						
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)
3704.86	H	-38.22	-13.00	-25.22	-47.62	-56.37	18.15
5557.29	H	-43.58	-13.00	-30.58	-55.27	-64.43	20.85
7409.72	H	-55.33	-13.00	-42.33	-70.52	-75.37	20.04
3704.86	V	-39.22	-13.00	-26.22	-48.90	-57.37	18.15
5557.29	V	-43.66	-13.00	-30.66	-55.58	-64.51	20.85
7409.72	V	-54.66	-13.00	-41.66	-70.55	-74.70	20.04

Mode	LTE-M1 Band 2, QPSK, CB:5 MHz, Channel: 1880MHz						
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)
3759.86	H	-37.35	-13.00	-24.35	-46.71	-55.62	18.27
5639.79	H	-42.67	-13.00	-29.67	-54.51	-63.59	20.92
7519.72	H	-54.44	-13.00	-41.44	-69.86	-74.60	20.16
3759.86	V	-38.36	-13.00	-25.36	-48.06	-56.63	18.27
5639.79	V	-42.72	-13.00	-29.72	-54.75	-63.64	20.92
7519.72	V	-53.72	-13.00	-40.72	-69.64	-73.88	20.16

Mode	LTE-M1 Band 2, QPSK, CB:5 MHz, Channel: 1909.8MHz						
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)
3814.86	H	-38.22	-13.00	-25.22	-47.58	-56.59	18.37
5722.29	H	-43.52	-13.00	-30.52	-55.89	-64.46	20.94
7629.72	H	-55.27	-13.00	-42.27	-70.78	-75.57	20.30
3814.86	V	-39.22	-13.00	-26.22	-48.94	-57.59	18.37
5722.29	V	-43.54	-13.00	-30.54	-55.90	-64.48	20.94
7629.72	V	-54.63	-13.00	-41.63	-70.53	-74.93	20.30

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

Below 1GHz

Mode	NB-IoT Band 2, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 1852.5MHz						
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)
183.26	H	-33.54	-13.00	-20.54	-32.76	-33.76	0.22
187.14	H	-31.74	-13.00	-18.74	-30.86	-32.50	0.76
195.87	H	-30.36	-13.00	-17.36	-29.25	-32.33	1.97
199.75	H	-30.14	-13.00	-17.14	-28.94	-32.65	2.51
207.51	H	-34.46	-13.00	-21.46	-33.52	-37.03	2.57
211.39	H	-36.72	-13.00	-23.72	-35.92	-39.31	2.59
111.48	V	-40.11	-13.00	-27.11	-41.92	-37.25	-2.86
124.09	V	-39.64	-13.00	-26.64	-42.80	-36.48	-3.16
127.00	V	-39.86	-13.00	-26.86	-43.30	-36.65	-3.21
183.26	V	-36.00	-13.00	-23.00	-39.76	-36.22	0.22
187.14	V	-36.13	-13.00	-23.13	-39.47	-36.89	0.76
195.87	V	-36.89	-13.00	-23.89	-39.28	-38.86	1.97

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

Above 1GHz

Mode	NB-IoT Band 2, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 1852.5MHz						
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)
3700.40	H	-42.93	-13.00	-29.93	-52.33	-61.07	18.14
5550.60	H	-46.54	-13.00	-33.54	-58.25	-67.39	20.85
7400.80	H	-55.16	-13.00	-42.16	-70.33	-75.19	20.03
3700.40	V	-42.01	-13.00	-29.01	-51.68	-60.15	18.14
5550.60	V	-42.85	-13.00	-29.85	-54.77	-63.70	20.85
7400.80	V	-52.77	-13.00	-39.77	-68.66	-72.80	20.03

Mode	NB-IoT Band 2, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 1880MHz						
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)
3761.80	H	-41.75	-13.00	-28.75	-51.11	-60.02	18.27
5642.70	H	-46.07	-13.00	-33.07	-57.91	-66.99	20.92
7523.60	H	-54.46	-13.00	-41.46	-69.88	-74.62	20.16
3761.80	V	-41.25	-13.00	-28.25	-50.95	-59.52	18.27
5642.70	V	-41.93	-13.00	-28.93	-53.96	-62.85	20.92
7523.60	V	-51.93	-13.00	-38.93	-67.85	-72.09	20.16

Mode	NB-IoT Band 2, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 1907.5MHz						
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)
3821.40	H	-42.95	-13.00	-29.95	-52.33	-61.33	18.38
5732.10	H	-46.44	-13.00	-33.44	-58.85	-67.38	20.94
7642.80	H	-55.07	-13.00	-42.07	-70.55	-75.38	20.31
3821.40	V	-42.16	-13.00	-29.16	-51.89	-60.54	18.38
5732.10	V	-42.48	-13.00	-29.48	-54.87	-63.42	20.94
7642.80	V	-52.57	-13.00	-39.57	-68.46	-72.88	20.31

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

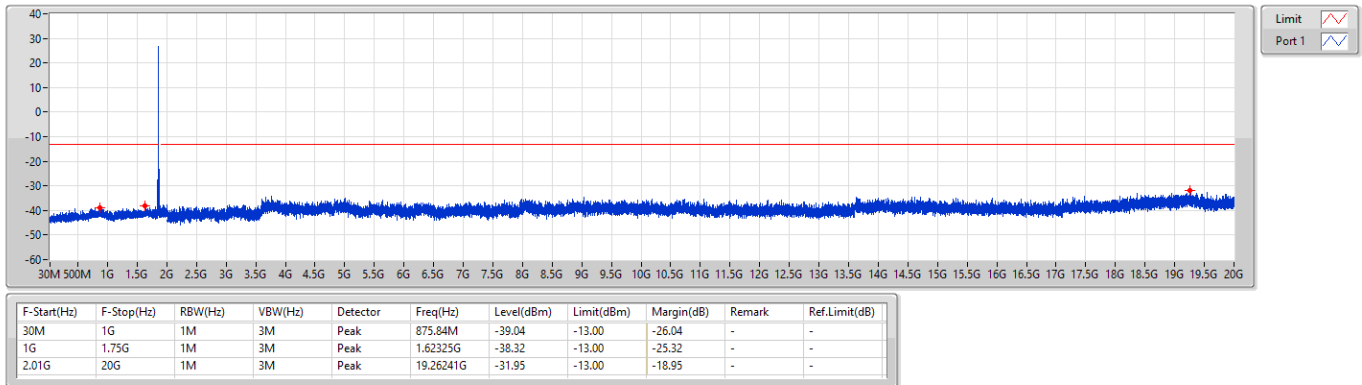


Summary

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 2	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_20MHz_Nss1,QPSK_1TX	Pass	2.01G	20G	1M	3M	Peak	19.26241G	-31.95	-13.00	-18.95	-	-
LTE-M1_15MHz_Nss1,QPSK_1TX	Pass	2.01G	20G	1M	3M	Peak	19.19551G	-31.62	-13.00	-18.62	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	2.01G	20G	1M	3M	Peak	19.14716G	-32.18	-13.00	-19.18	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	2.01G	20G	1M	3M	Peak	19.31188G	-31.58	-13.00	-18.58	-	-

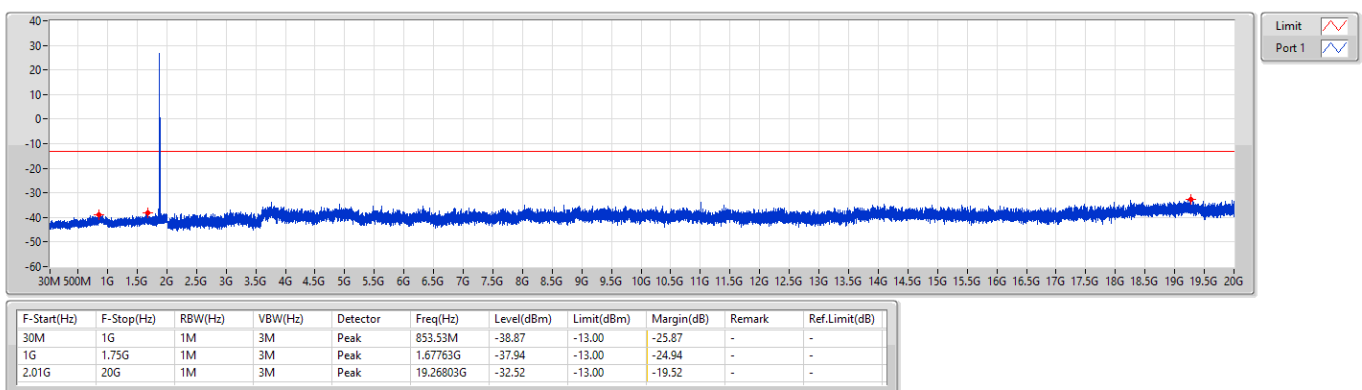
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CSE-TX-Sum



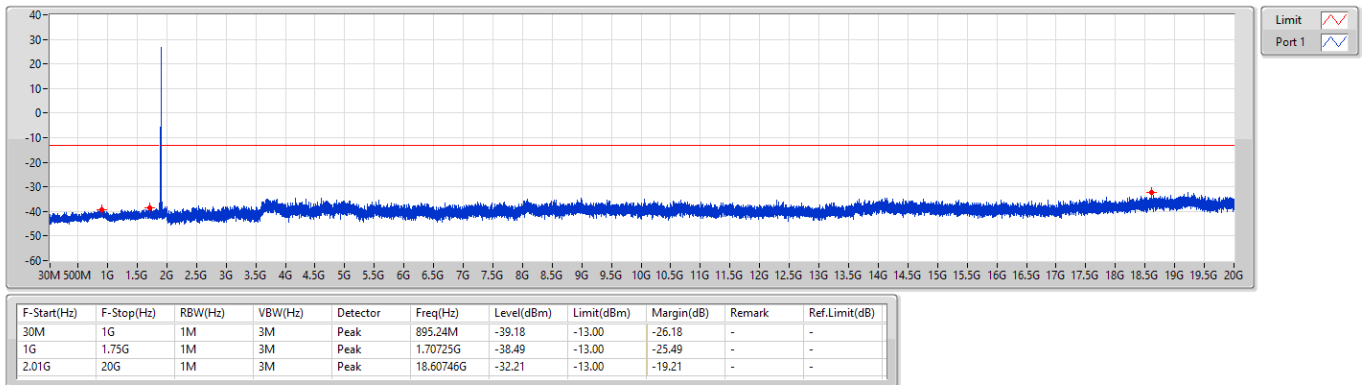
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CSE-TX-Sum



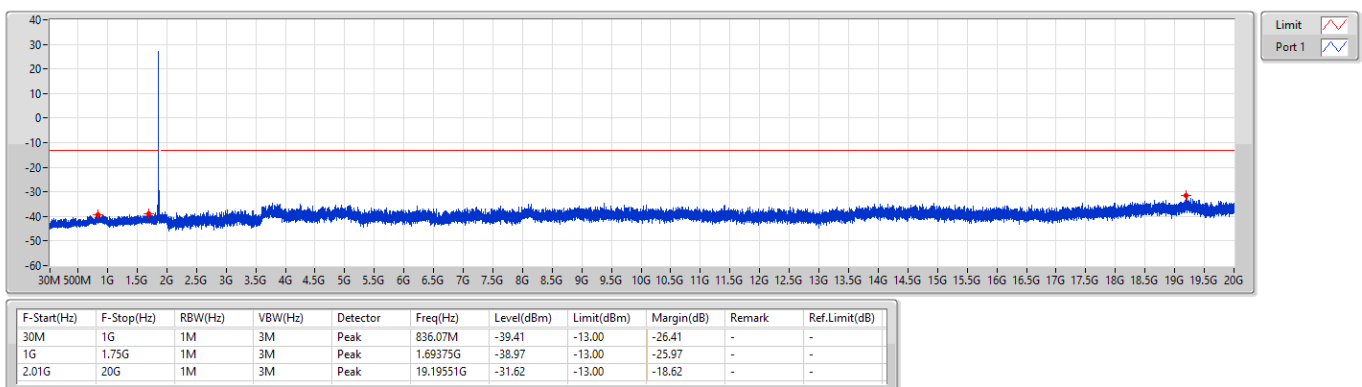
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CSE-TX-Sum



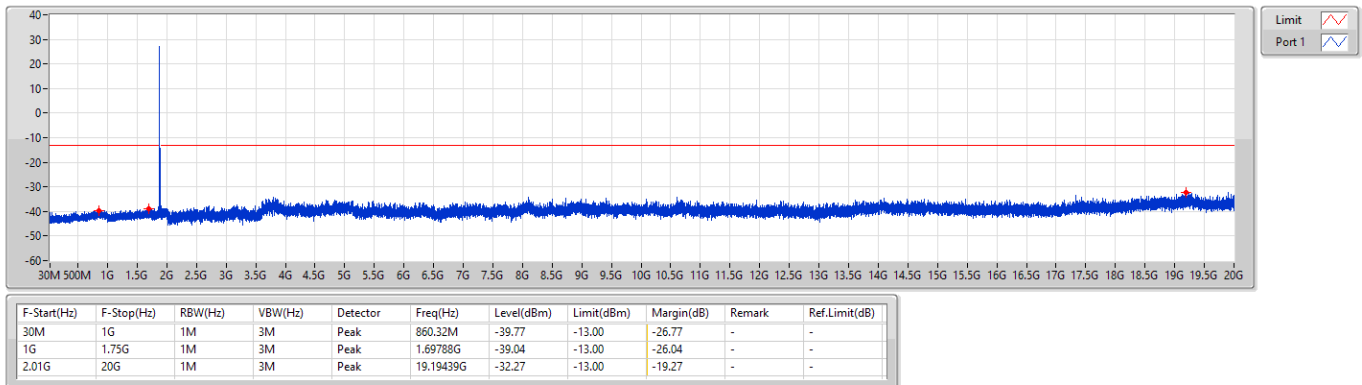
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CSE-TX-Sum



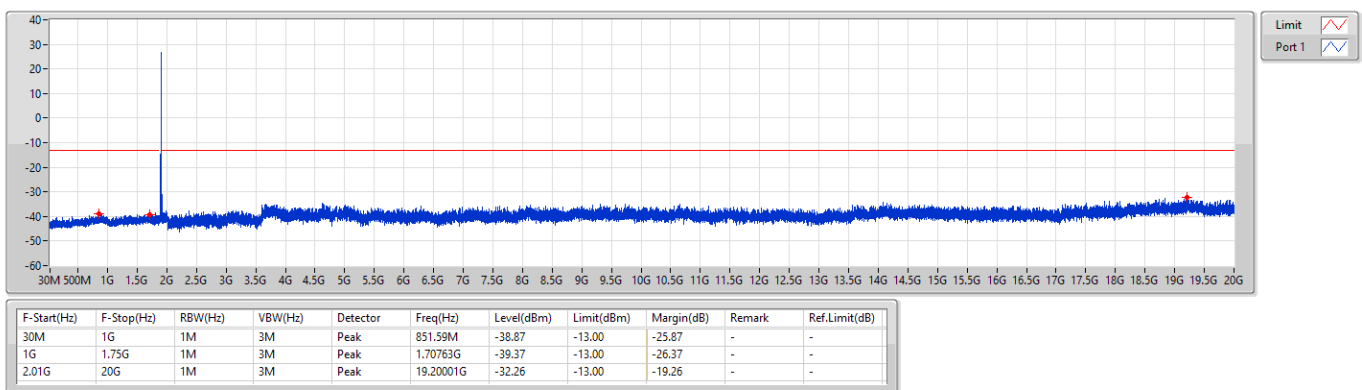
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CSE-TX-Sum



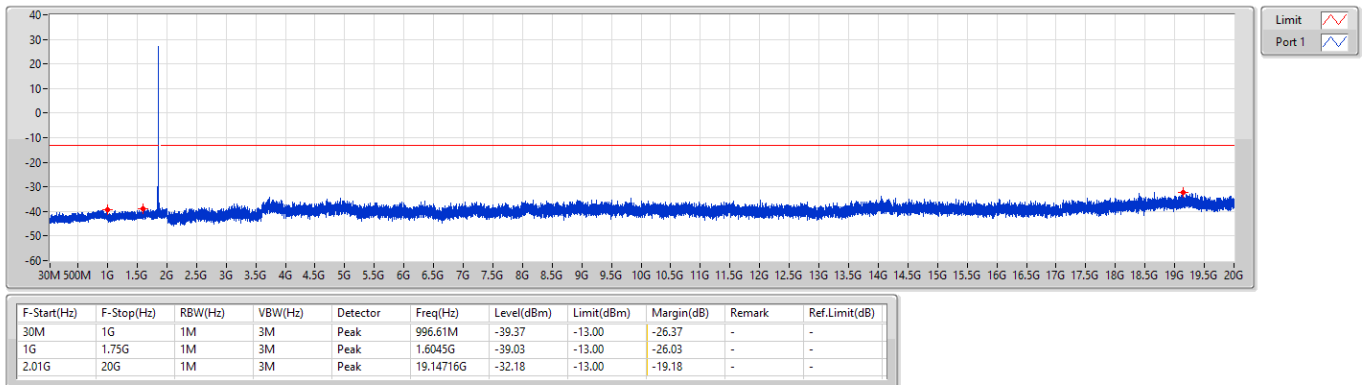
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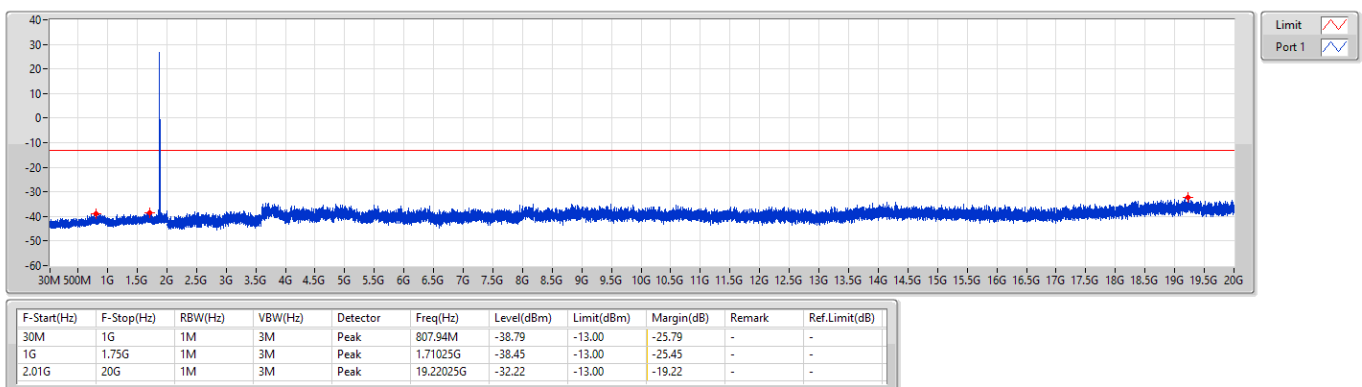
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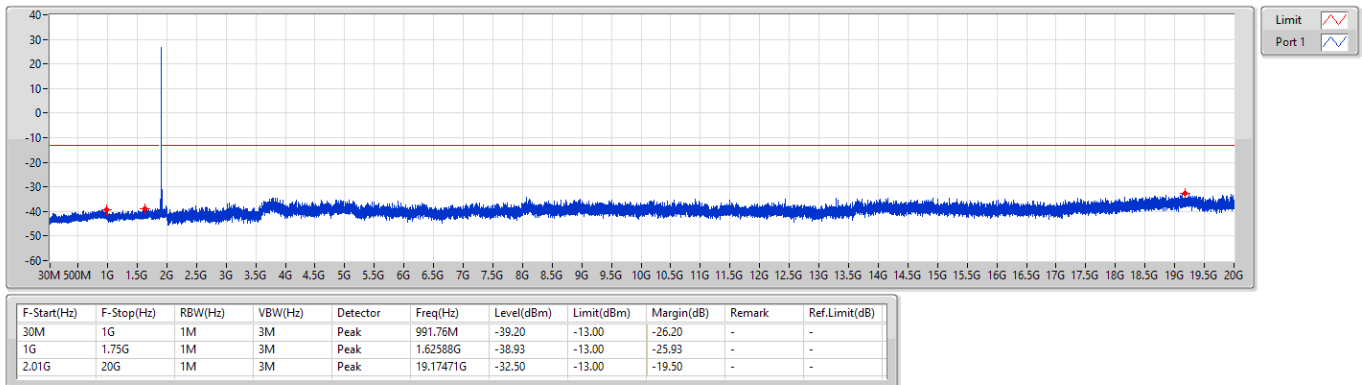
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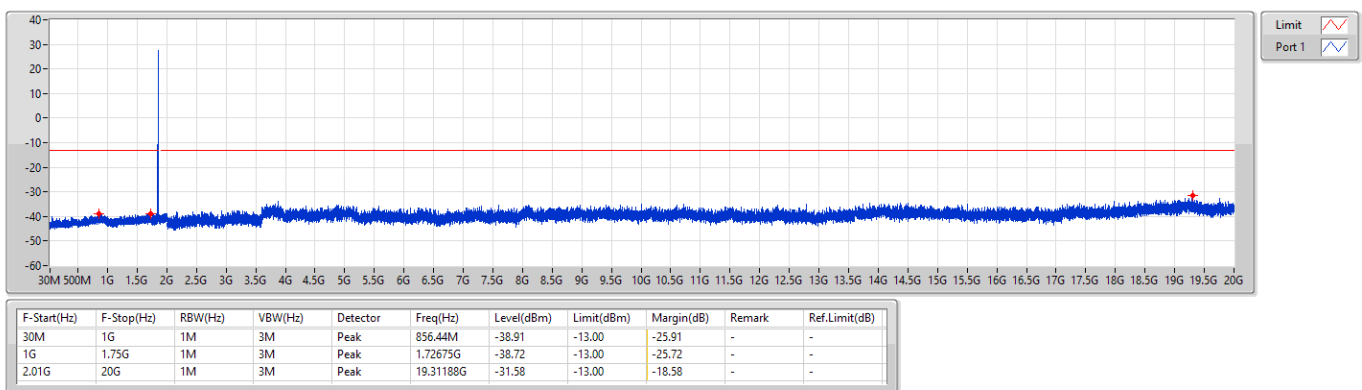
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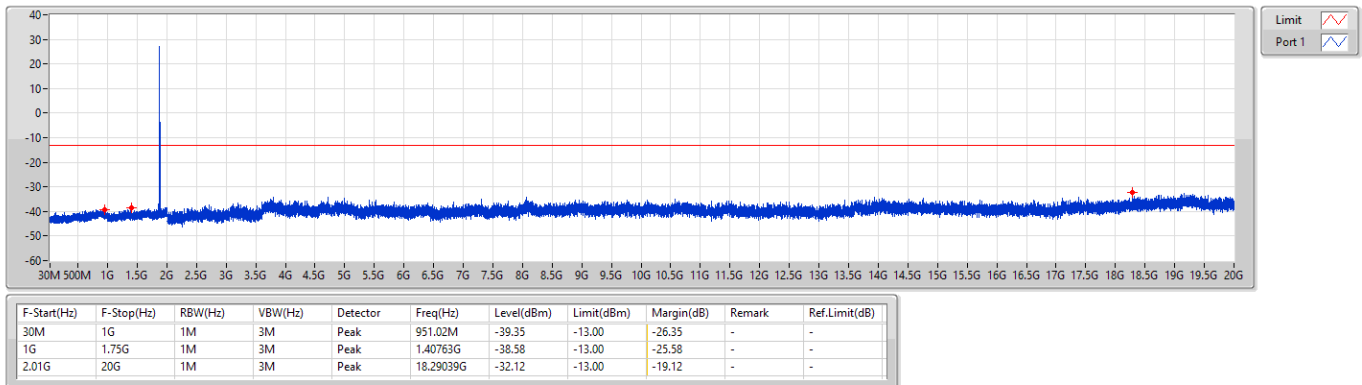
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CSE-TX-Sum



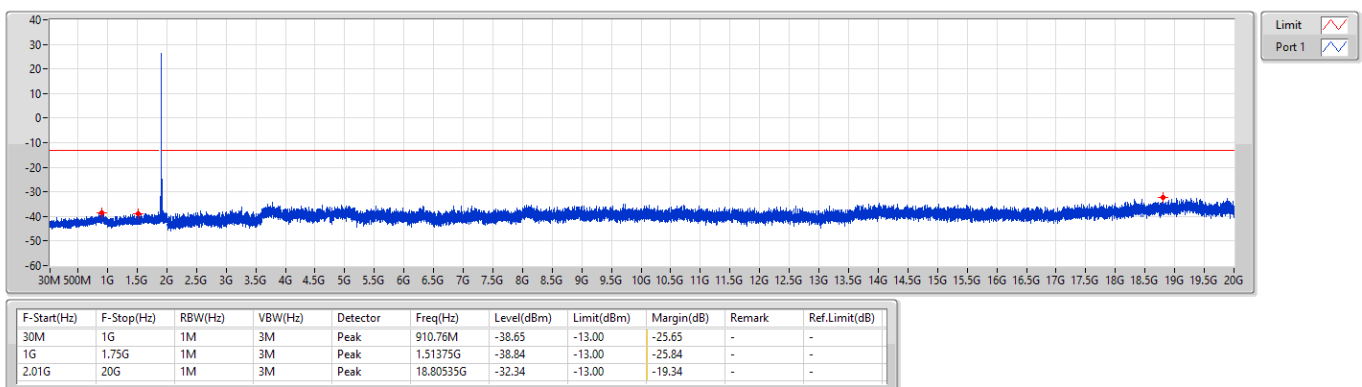
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CSE-TX-Sum



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CSE-TX-Sum

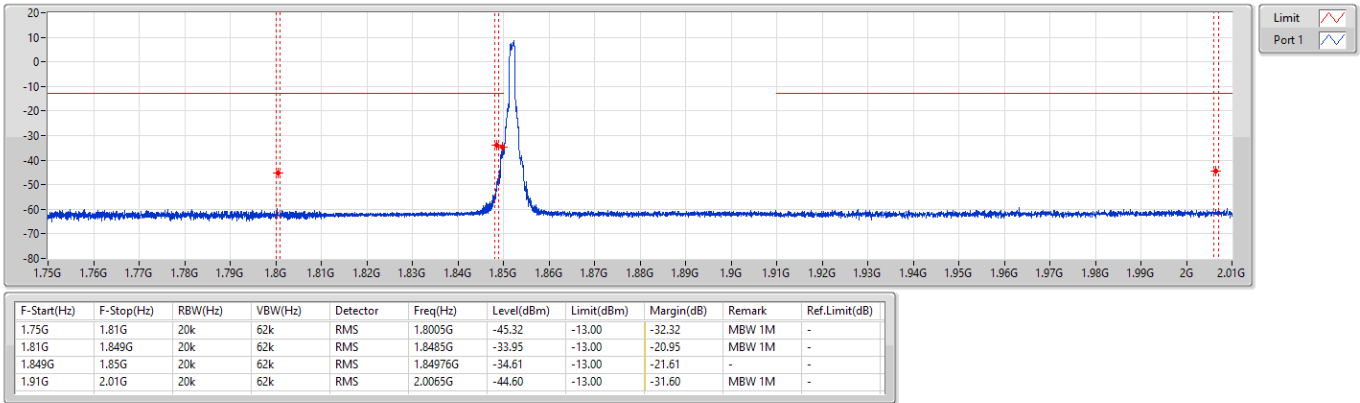


Summary

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 2	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_20MHz_Nss1,QPSK_1TX	Pass	1.81G	1.849G	20k	62k	RMS	1.8485G	-33.95	-13.00	-20.95	MBW 1M	-
LTE-M1_20MHz_Nss1,16QAM_1TX	Pass	1.81G	1.849G	20k	62k	RMS	1.8485G	-31.11	-13.00	-18.11	MBW 1M	-
LTE-M1_15MHz_Nss1,QPSK_1TX	Pass	1.849G	1.85G	20k	62k	RMS	1.85G	-28.39	-13.00	-15.39	-	-
LTE-M1_15MHz_Nss1,16QAM_1TX	Pass	1.849G	1.85G	20k	62k	RMS	1.84999G	-25.69	-13.00	-12.69	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	1.91G	1.911G	20k	62k	RMS	1.91004G	-26.47	-13.00	-13.47	-	-
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	1.91G	1.911G	20k	62k	RMS	1.91G	-26.76	-13.00	-13.76	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	1.91G	1.911G	20k	62k	RMS	1.91014G	-19.08	-13.00	-6.08	-	-
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	1.91G	1.911G	20k	62k	RMS	1.91G	-20.98	-13.00	-7.98	-	-

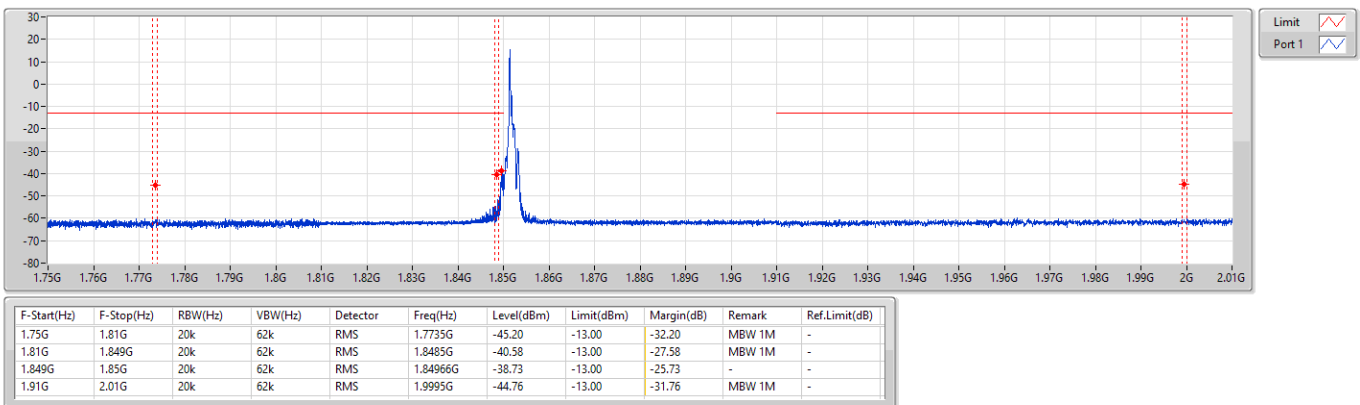
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CSE-TX-Sum



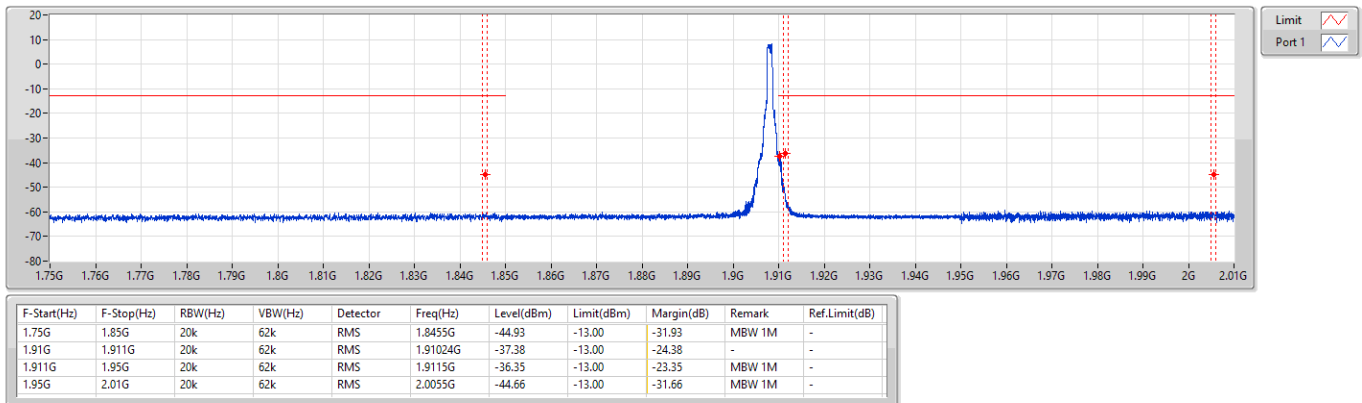
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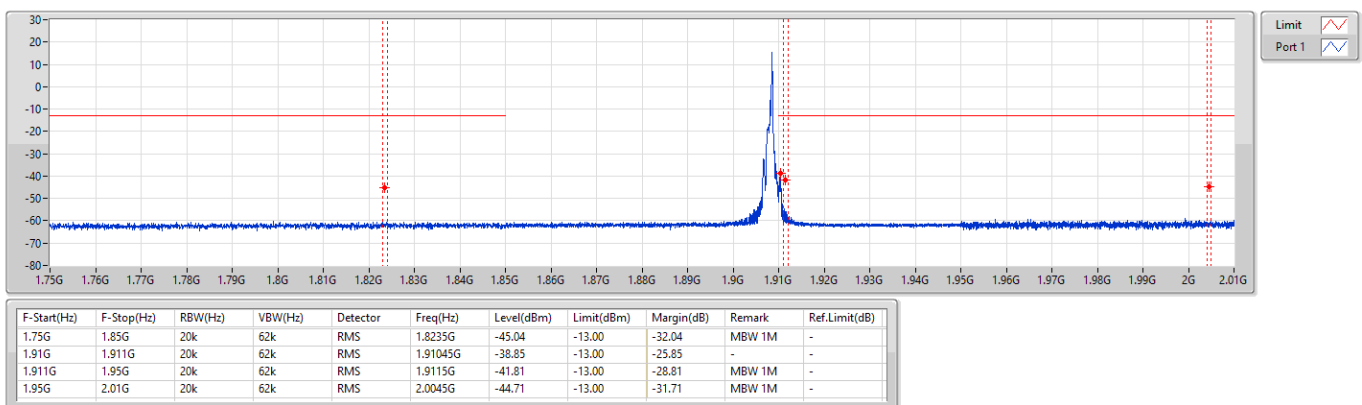
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CSE-TX-Sum



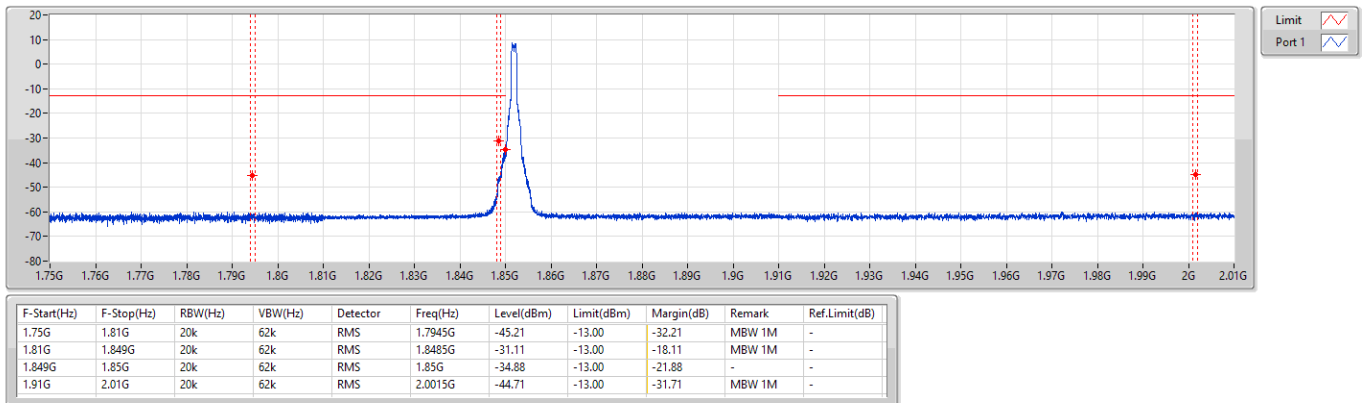
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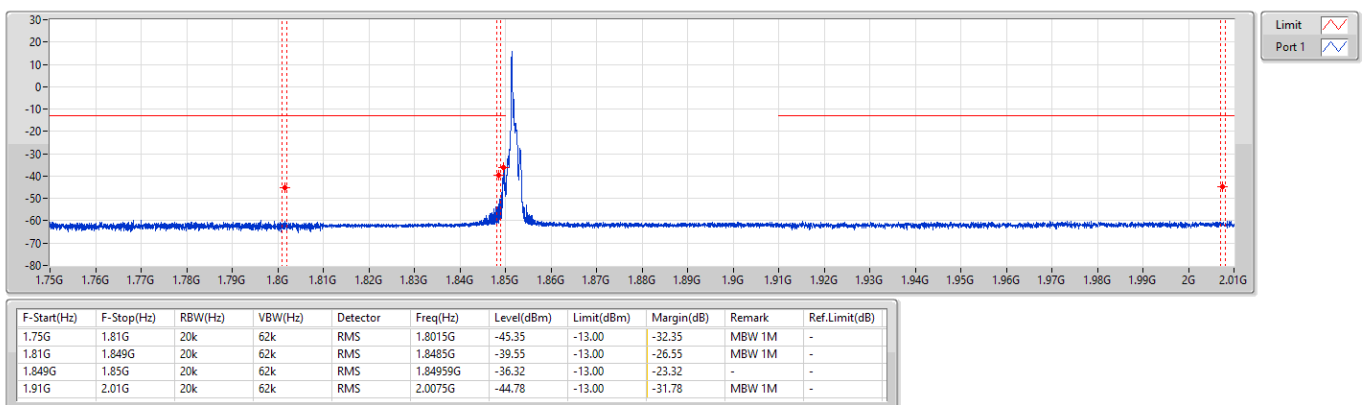
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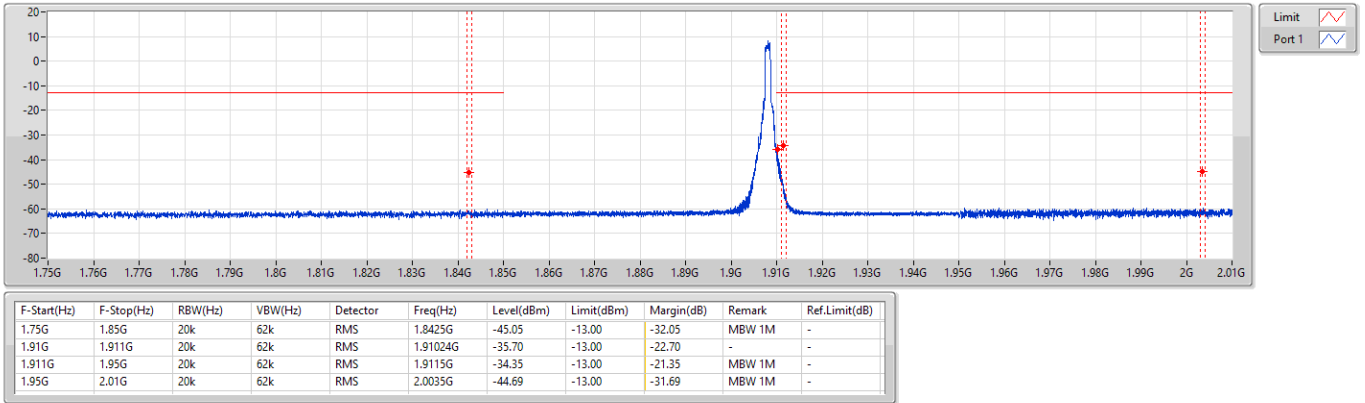
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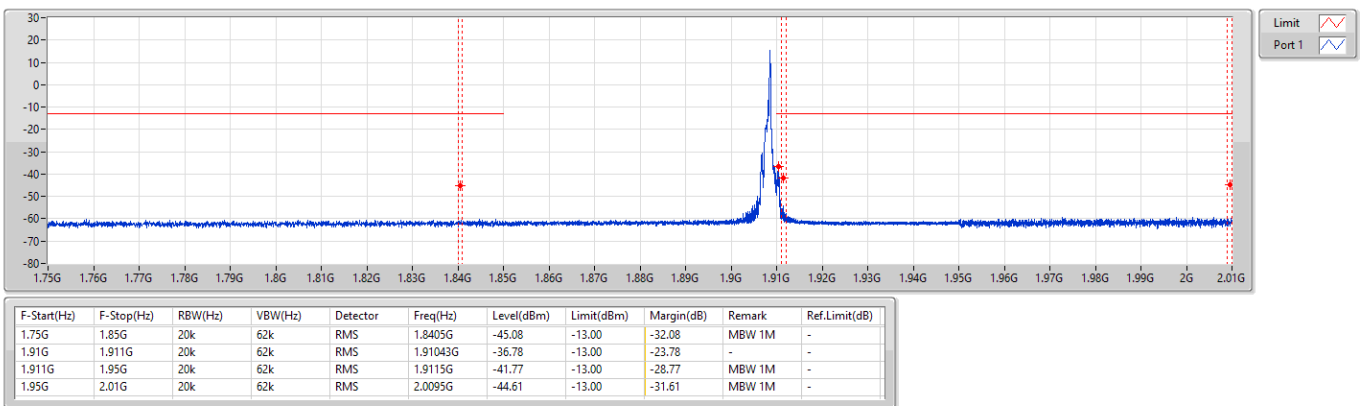
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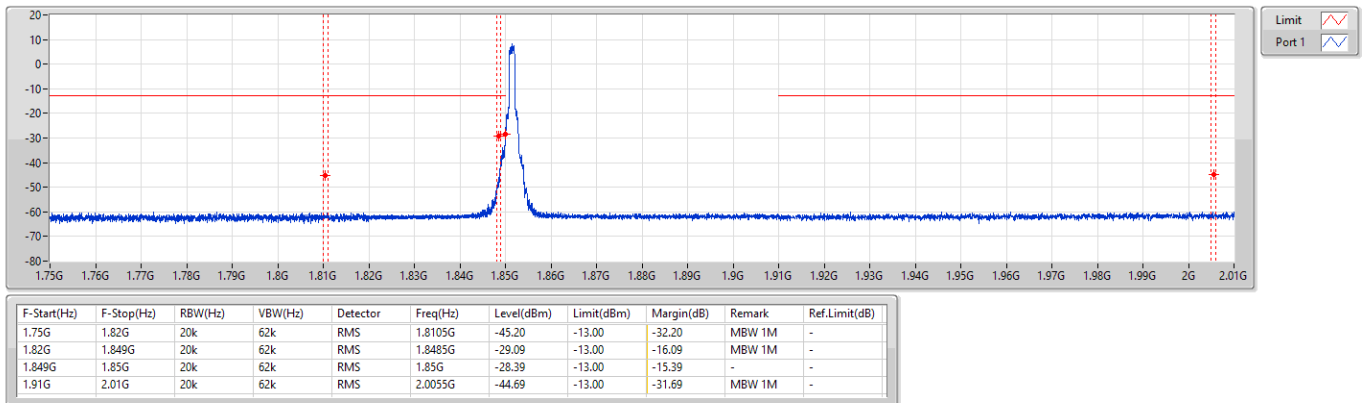
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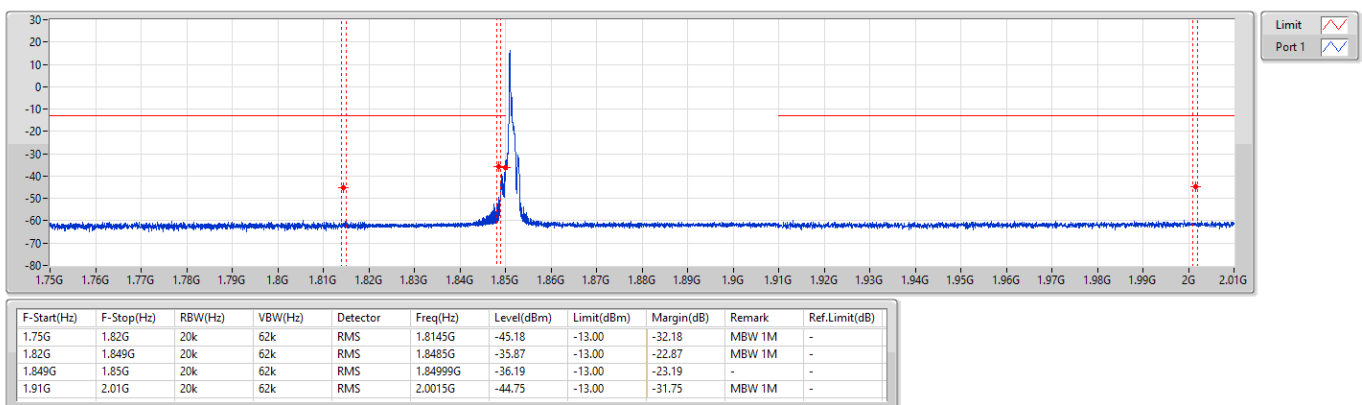
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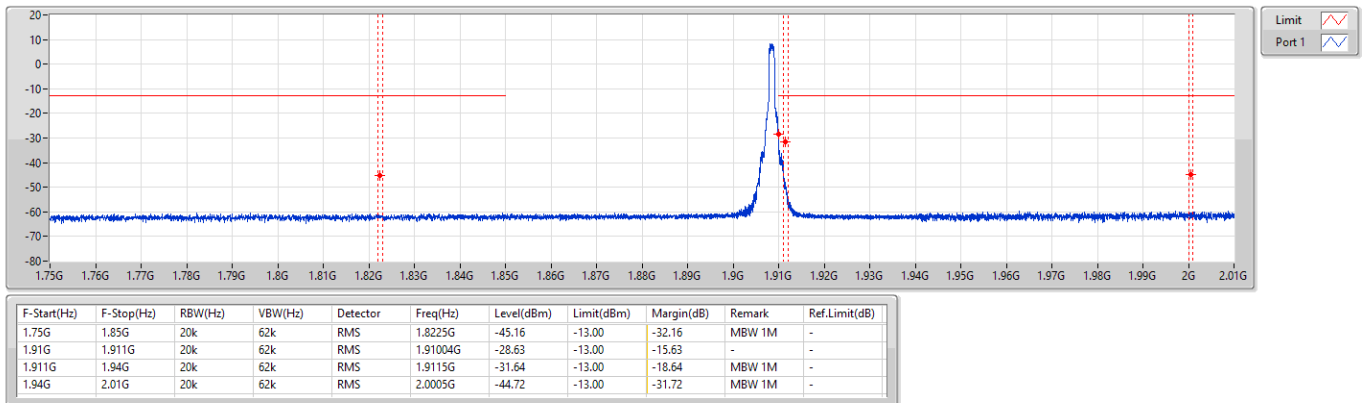
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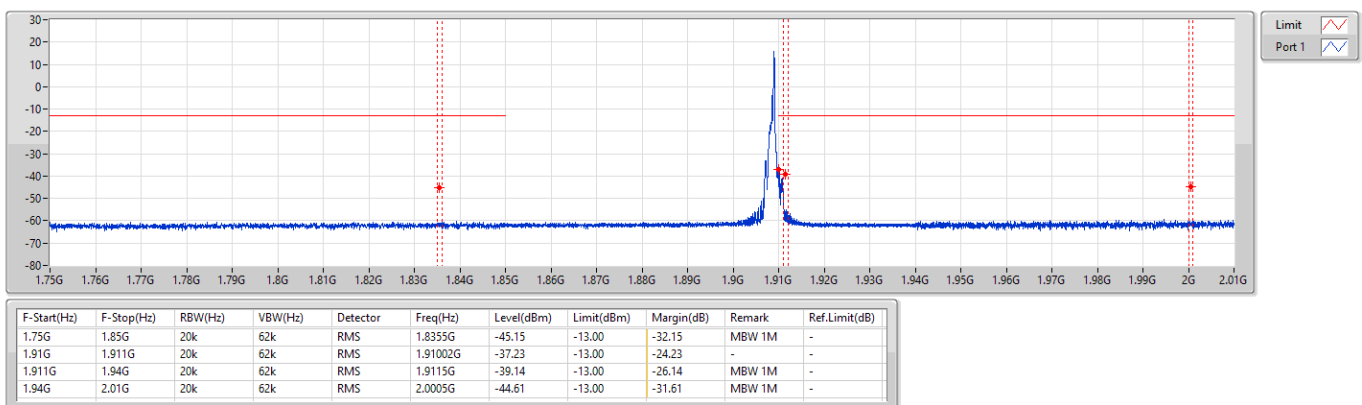
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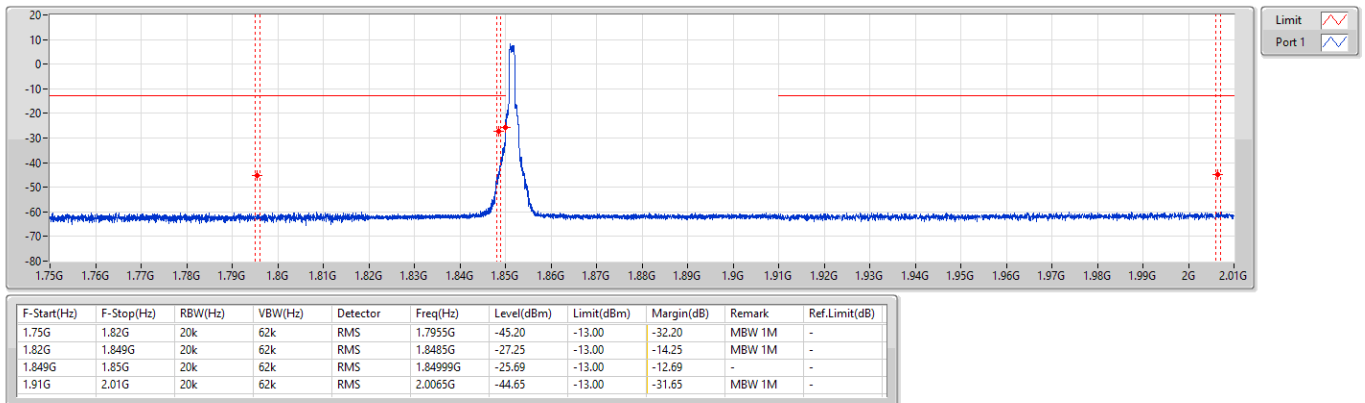
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CSE-TX-Sum



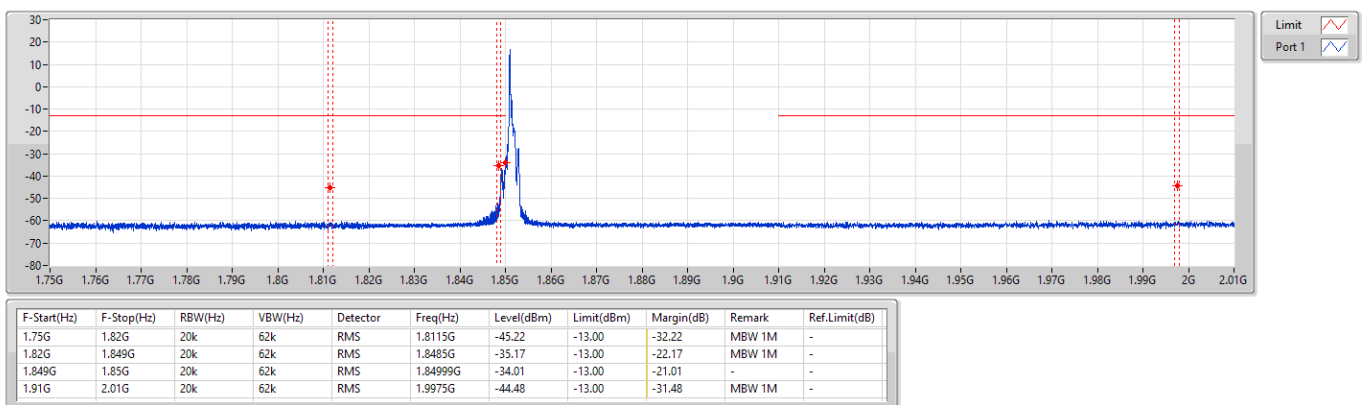
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CSE-TX-Sum



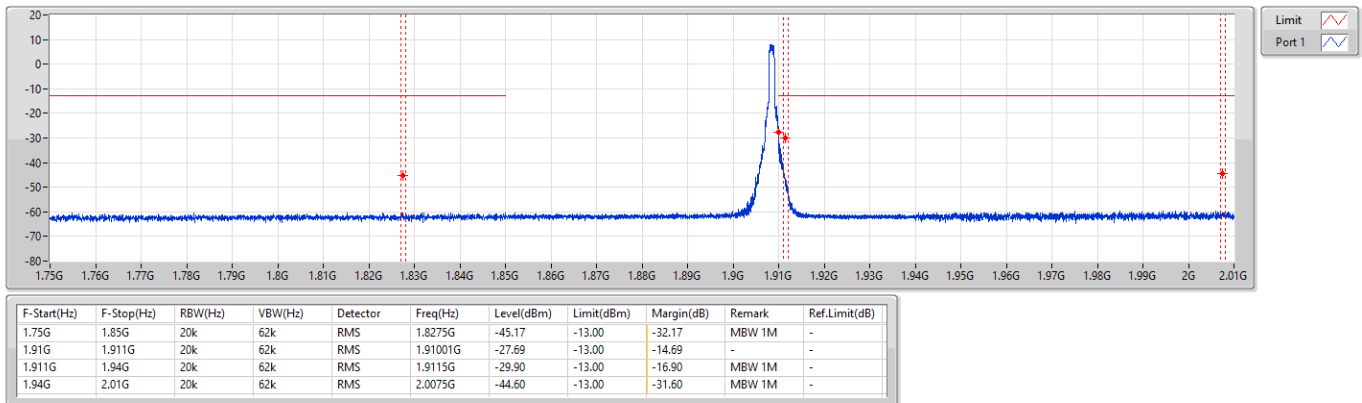
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CSE-TX-Sum



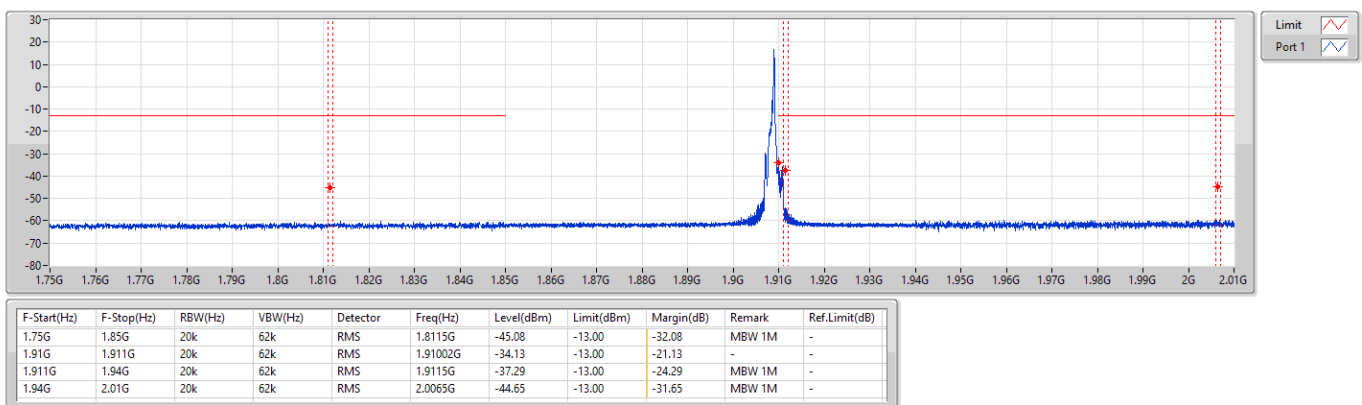
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CSE-TX-Sum



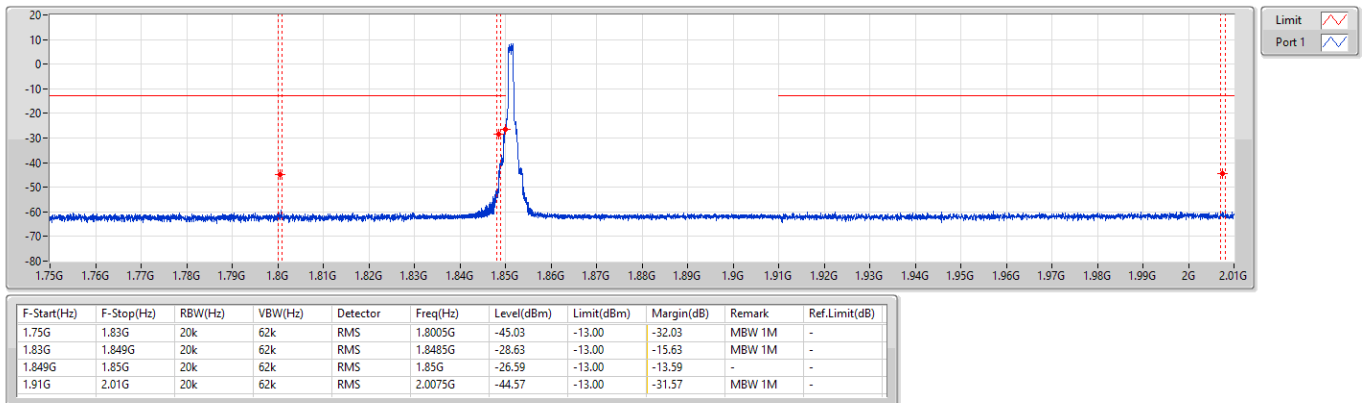
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CSE-TX-Sum



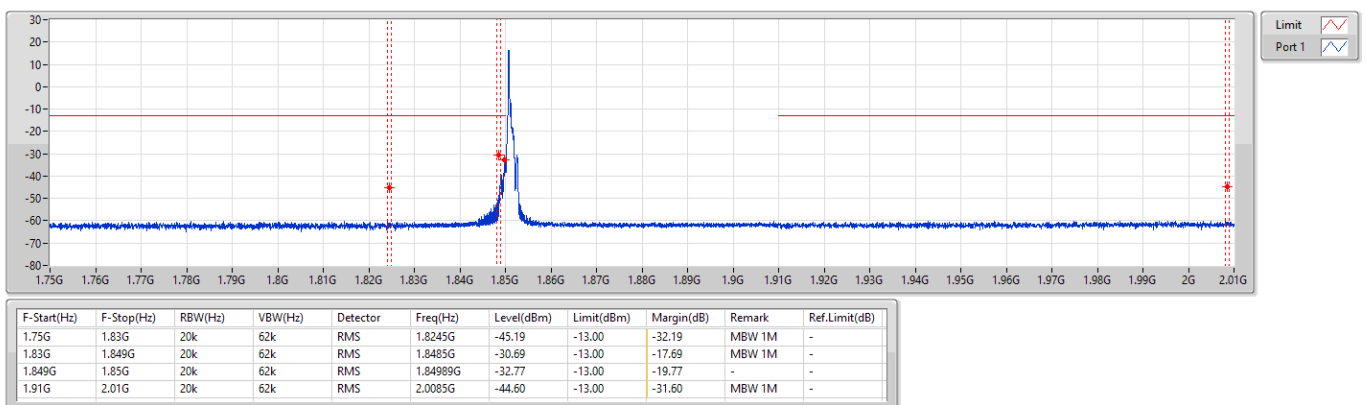
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CSE-TX-Sum



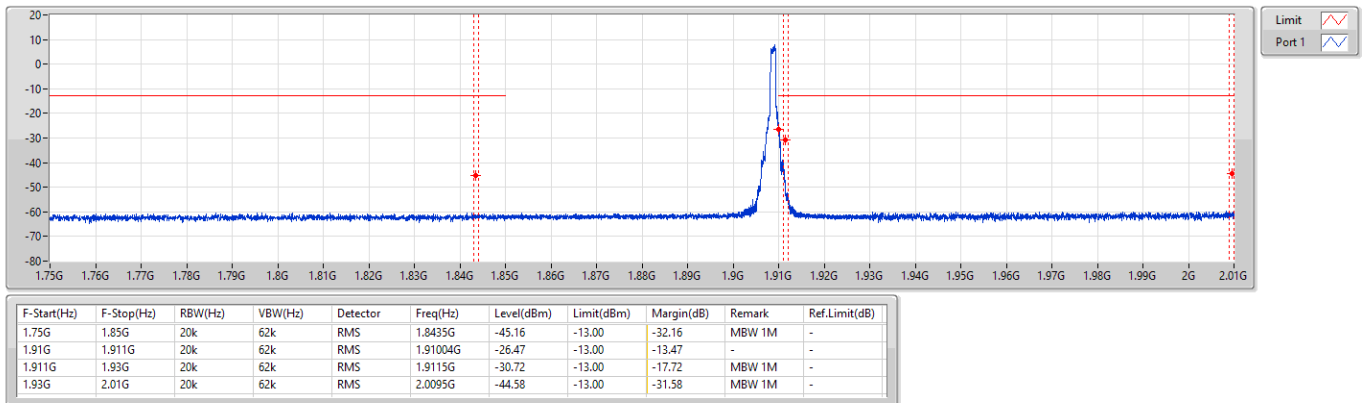
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CSE-TX-Sum



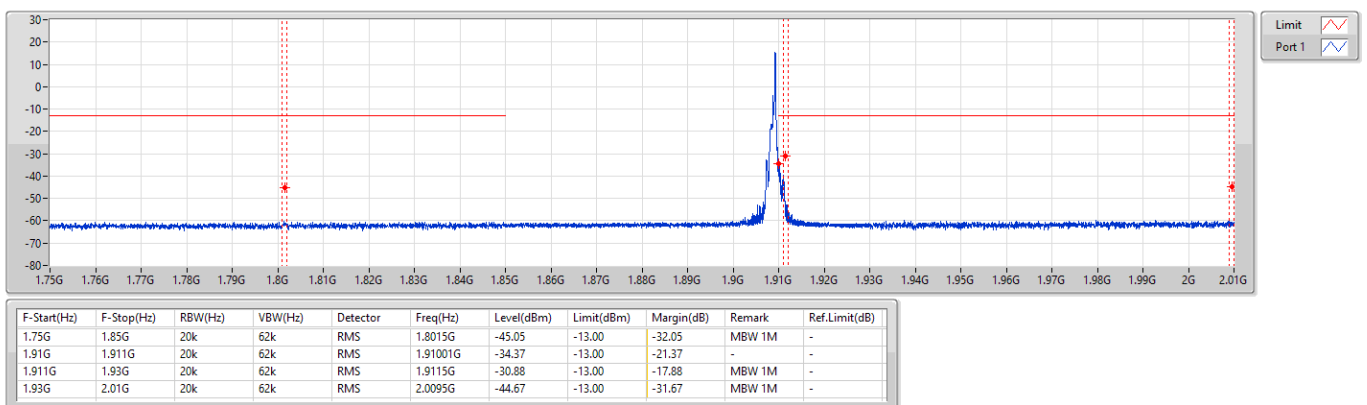
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CSE-TX-Sum



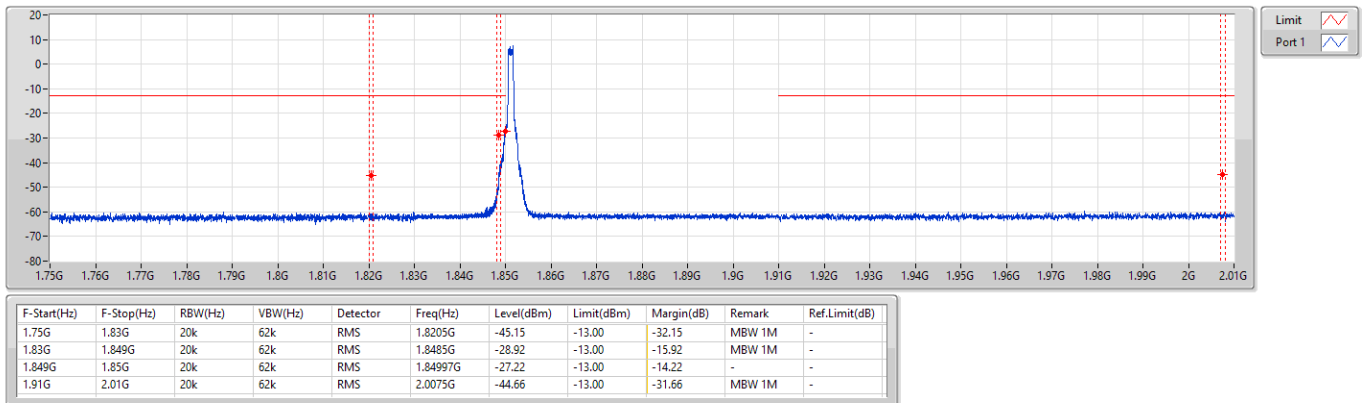
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CSE-TX-Sum



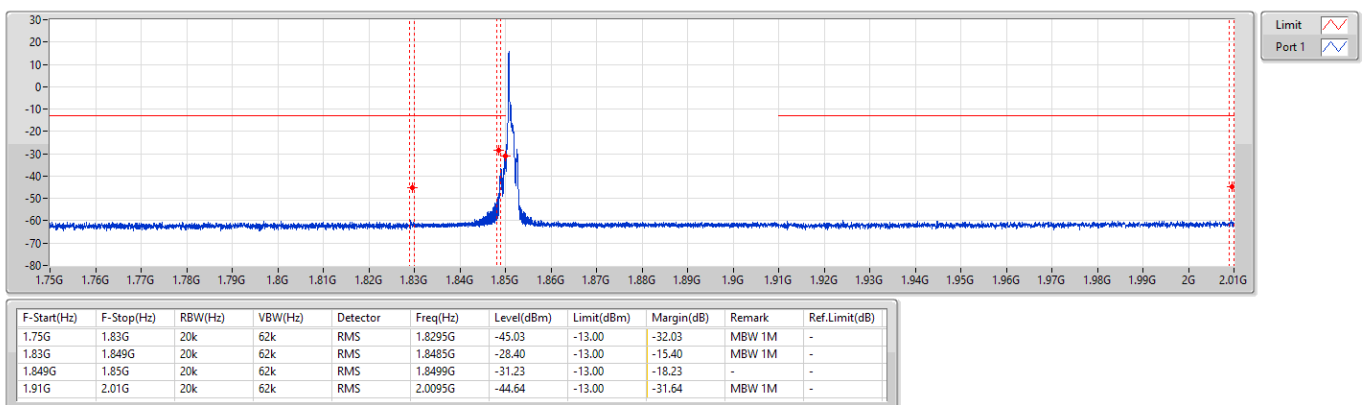
Band 2_LTE-M1_10MHz_Nss1,16QAM_1TX 1855MHz_16QAM_RB 6,#RB L,NB L

CSE-TX-Sum



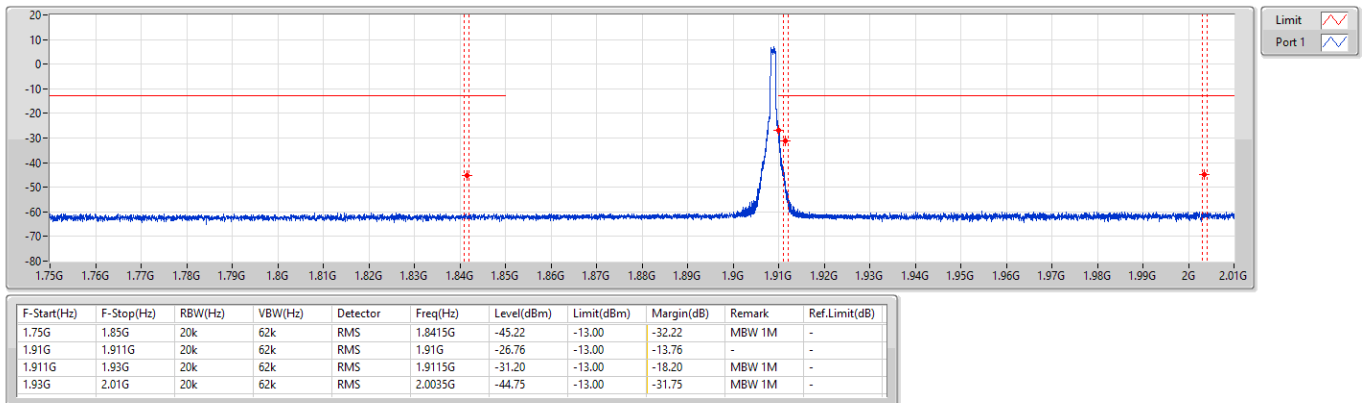
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CSE-TX-Sum



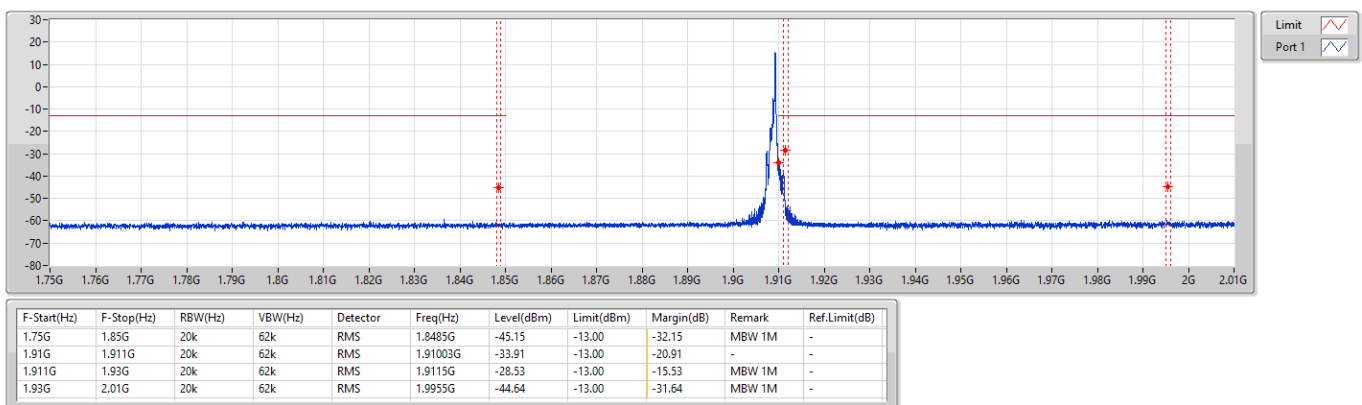
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1905MHz_16QAM_RB 6,#RB H,NB H

CSE-TX-Sum



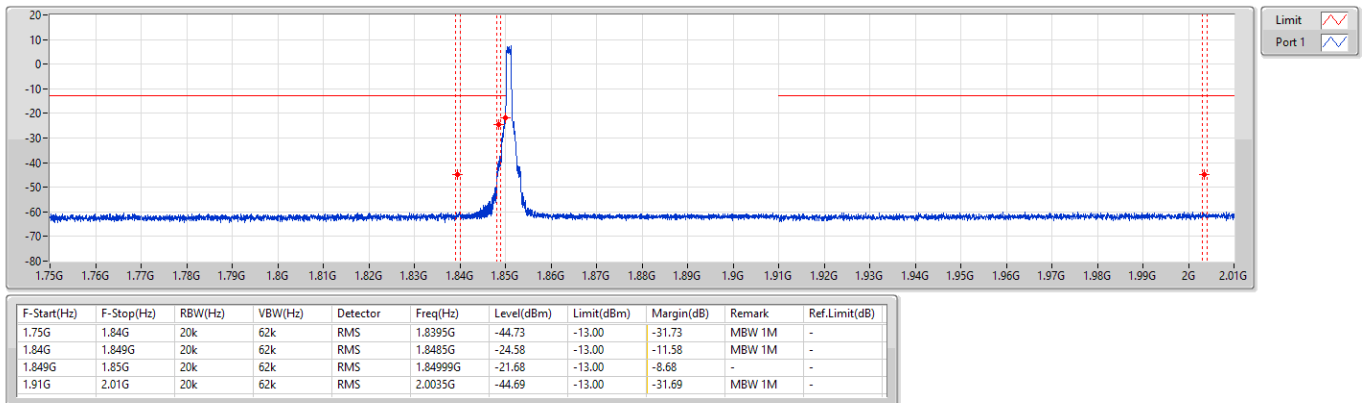
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1905MHz_16QAM_RB 1,#RB H,NB H

CSE-TX-Sum



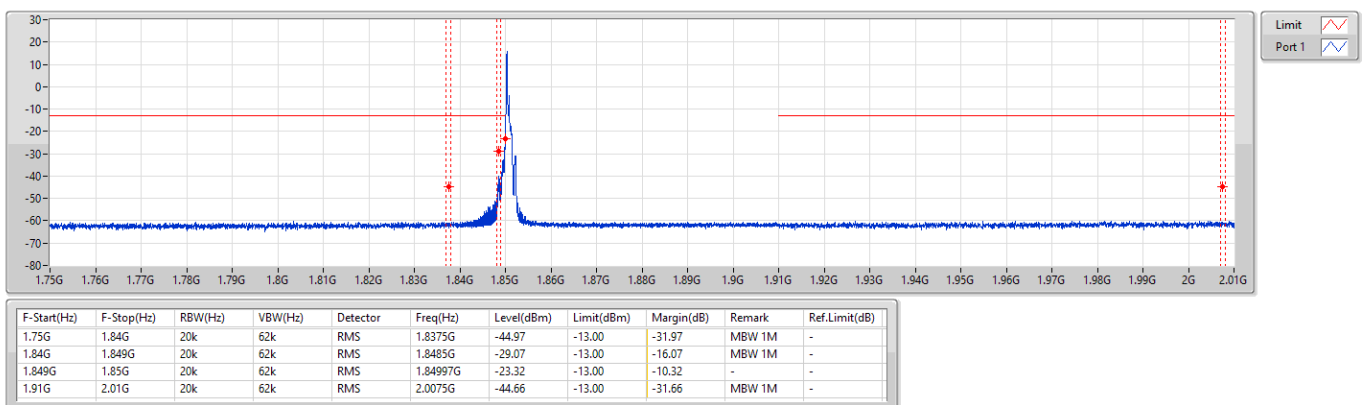
Band 2_LTE-M1_5MHz_Nss1,QPSK_1TX
1852.5MHz_QPSK_RB 6,#RB L,NB L

CSE-TX-Sum



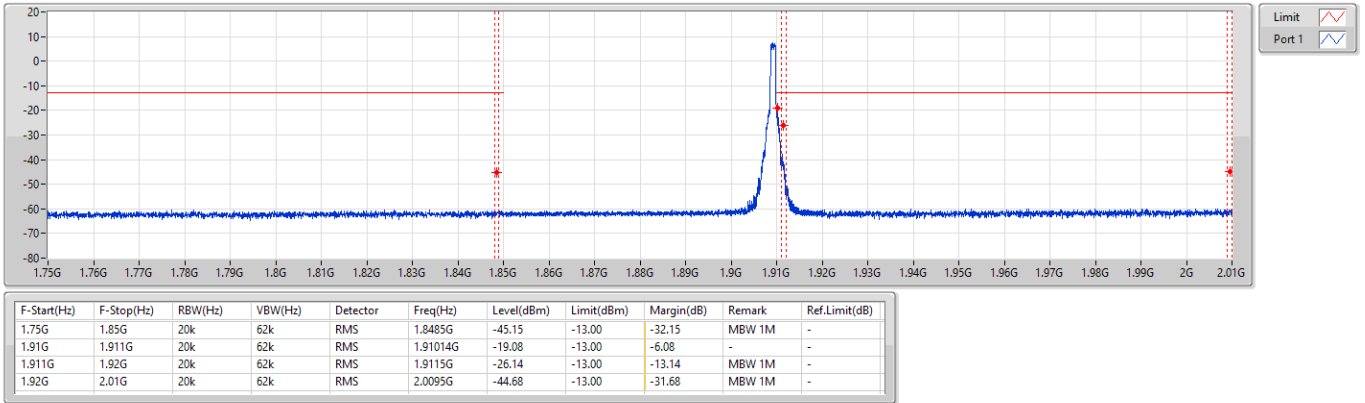
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CSE-TX-Sum



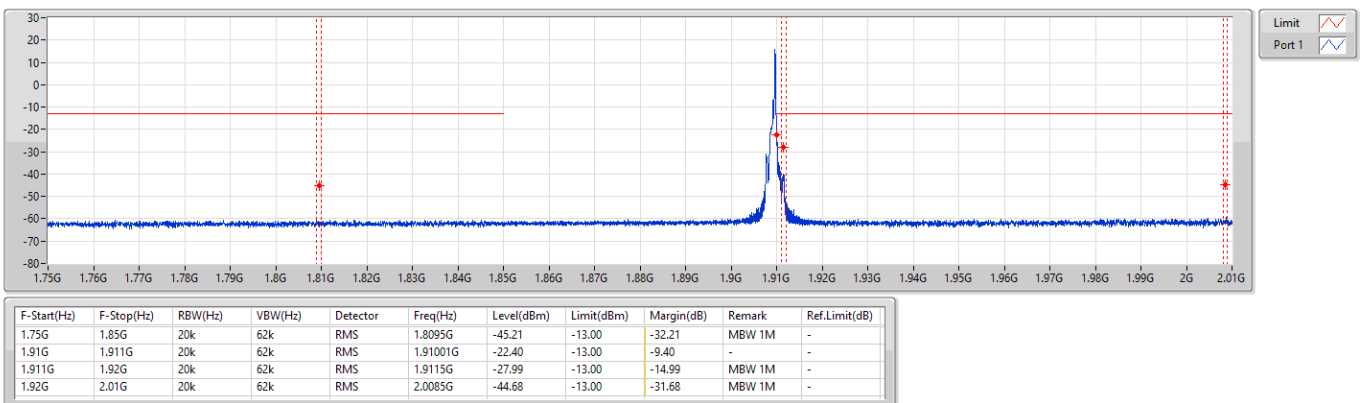
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CSE-TX-Sum



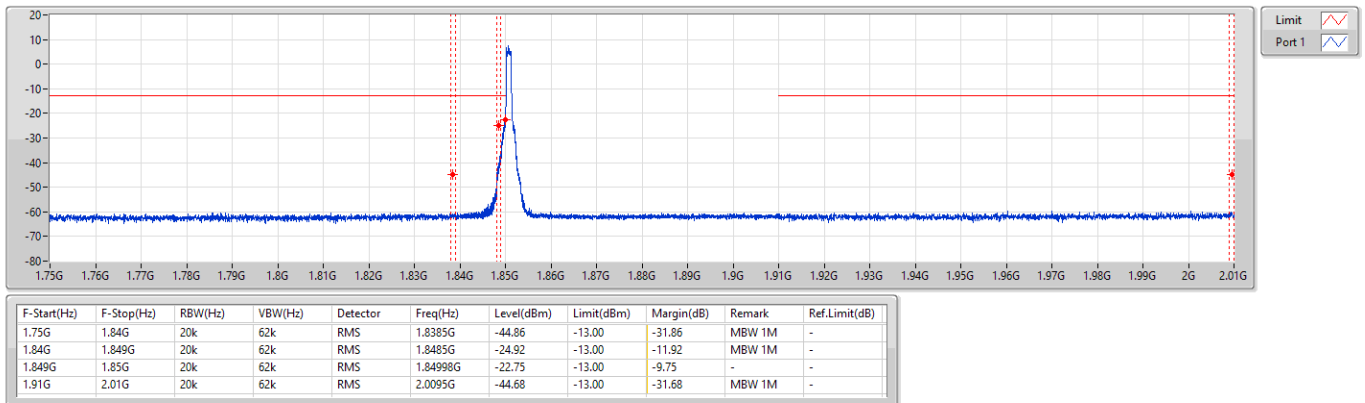
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CSE-TX-Sum



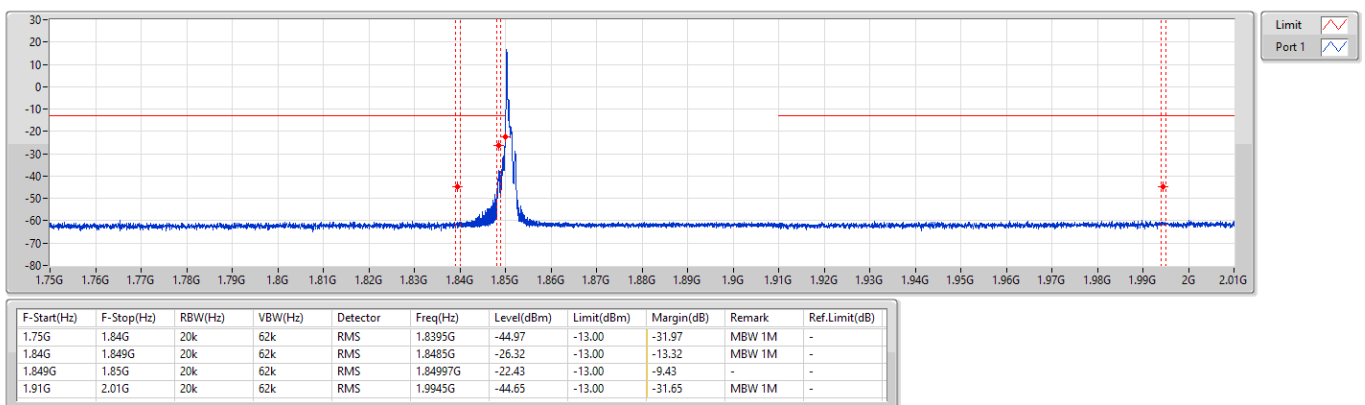
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1852.5MHz_16QAM_RB 6,#RB L,NB L

CSE-TX-Sum



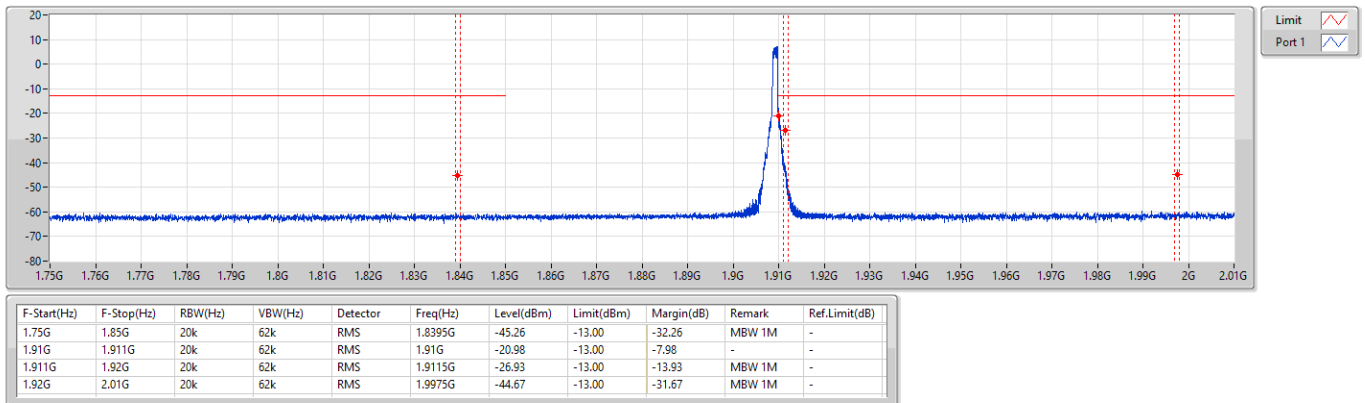
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CSE-TX-Sum



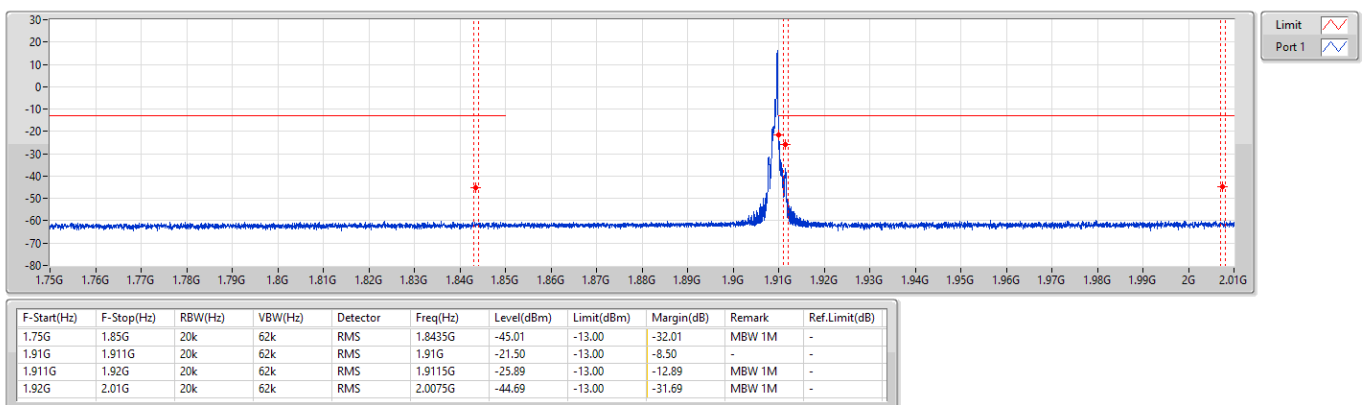
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1907.5MHz_16QAM_RB 6,#RB H,NB H

CSE-TX-Sum



Band 2_LTE-M1_5MHz_Nss1,16QAM_1TX
1907.5MHz_16QAM_RB 1,#RB H,NB H

CSE-TX-Sum



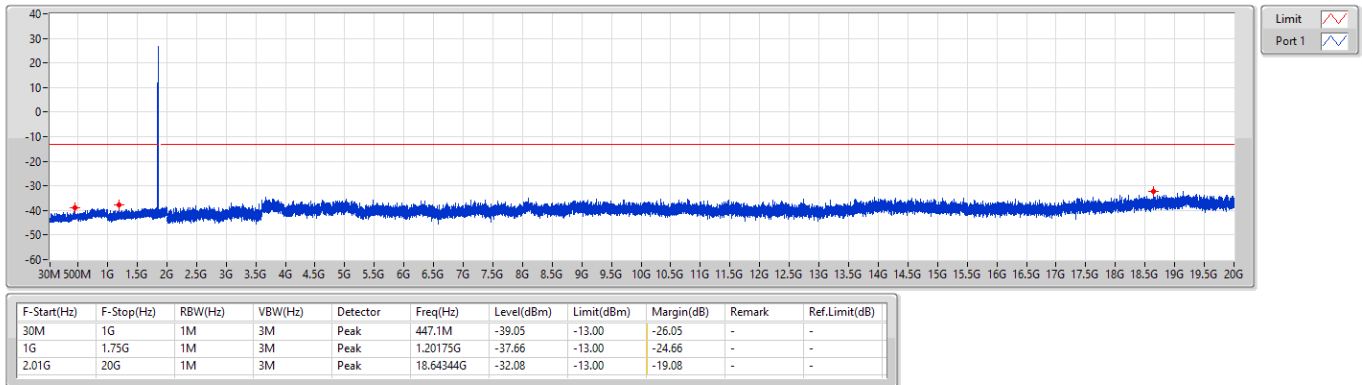


Summary

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 2	-	-	-	-	-	-	-	-	-	-	-	-
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	2.01G	20G	1M	3M	Peak	18.64344G	-32.08	-13.00	-19.08	-	-

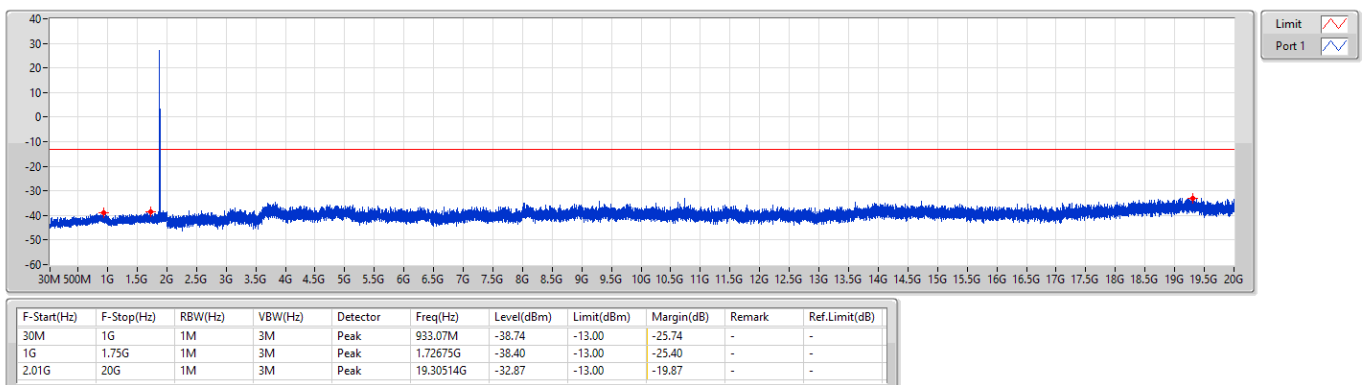
Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX
1850.2MHz_QPSK_Tone 12@0

CSE-TX-Sum



Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX
1880.0MHz_QPSK_Tone 12@0

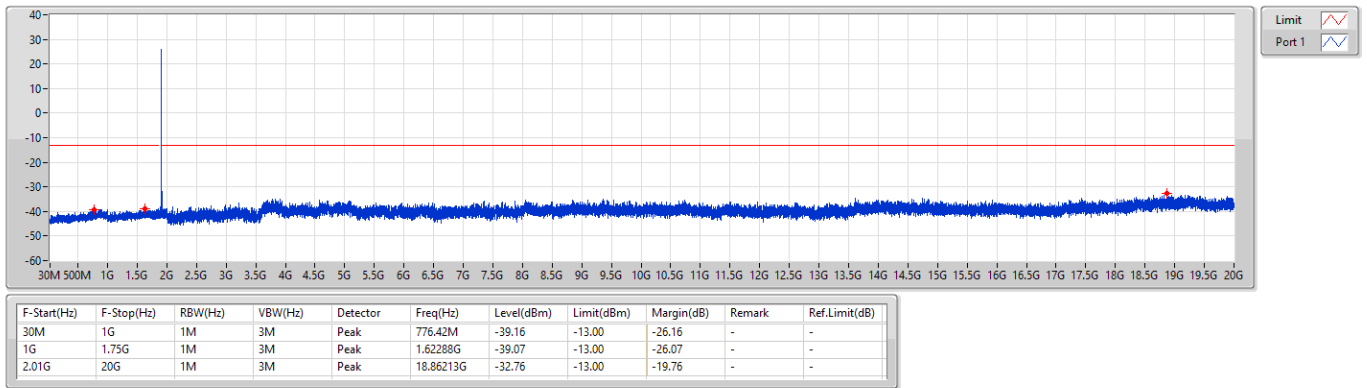
CSE-TX-Sum





Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX
1909.8MHz_QPSK_Tone 12@0

CSE-TX-Sum



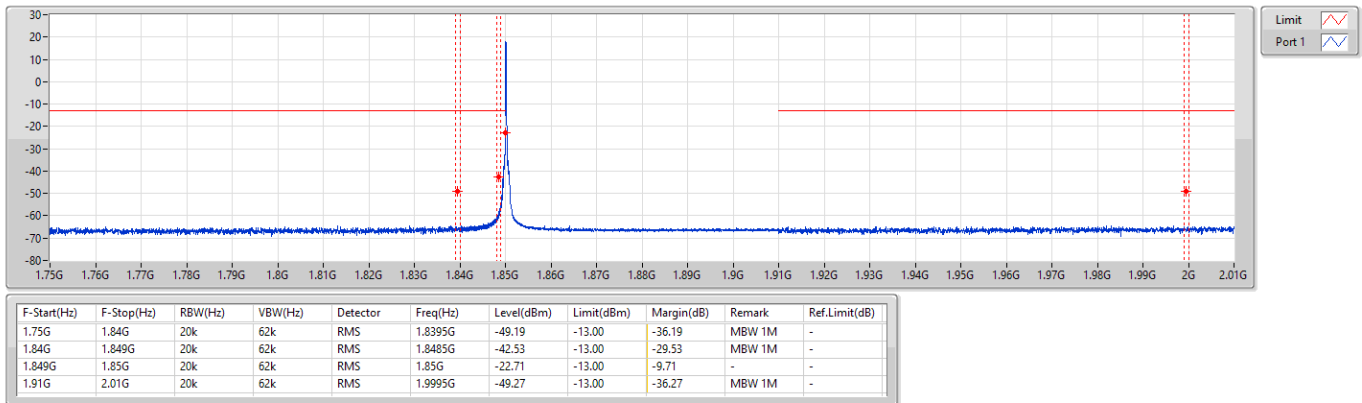
Summary

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 2	-	-	-	-	-	-	-	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	Pass	1.91G	1.911G	20k	62k	RMS	1.91006G	-21.15	-13.00	-8.15	-	-
NB-IoT_3.75kHz_Nss1,QPSK_1TX	Pass	1.91G	1.911G	20k	62k	RMS	1.91006G	-21.26	-13.00	-8.26	-	-
NB-IoT_15kHz_Nss1,BPSK_1TX	Pass	1.91G	1.911G	20k	62k	RMS	1.91G	-18.63	-13.00	-5.63	-	-
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	1.849G	1.85G	20k	62k	RMS	1.85G	-16.59	-13.00	-3.59	-	-

Band 2_NB-IoT_3.75kHz_Nss1,BPSK_1TX

CSE-TX-Sum

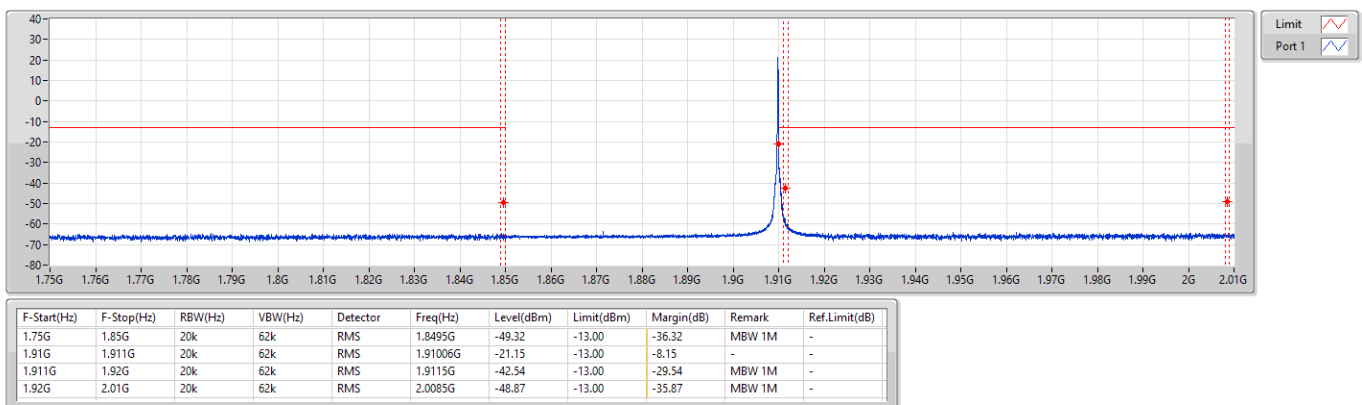
1850.2MHz_BPSK_Tone 1@0



Band 2_NB-IoT_3.75kHz_Nss1,BPSK_1TX

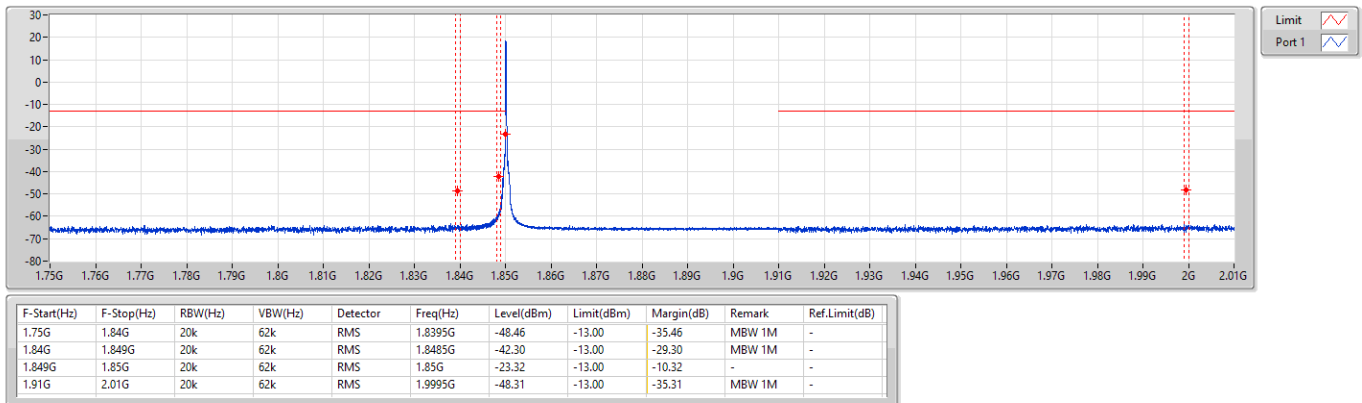
CSE-TX-Sum

1909.8MHz_BPSK_Tone 1@47



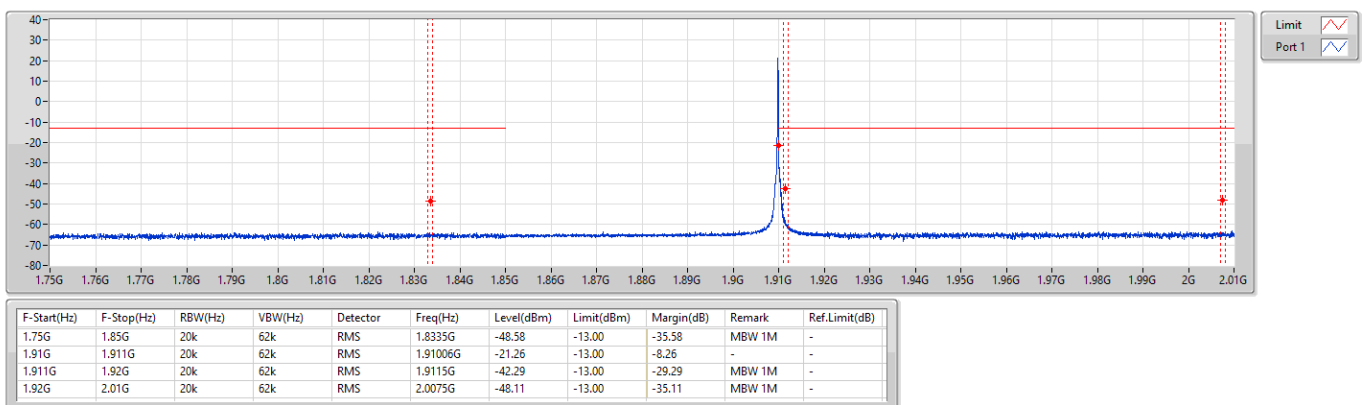
Band 2_NB-IoT_3.75kHz_Nss1,QPSK_1TX 1850.2MHz_QPSK_Tone 1@0

CSE-TX-Sum



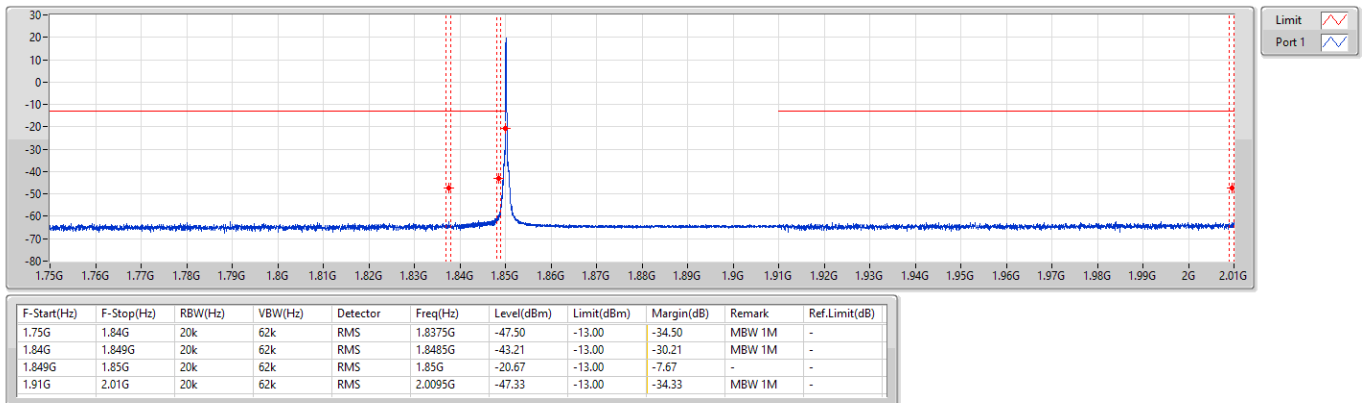
Band 2_NB-IoT_3.75kHz_Nss1,QPSK_1TX 1909.8MHz_QPSK_Tone 1@47

CSE-TX-Sum



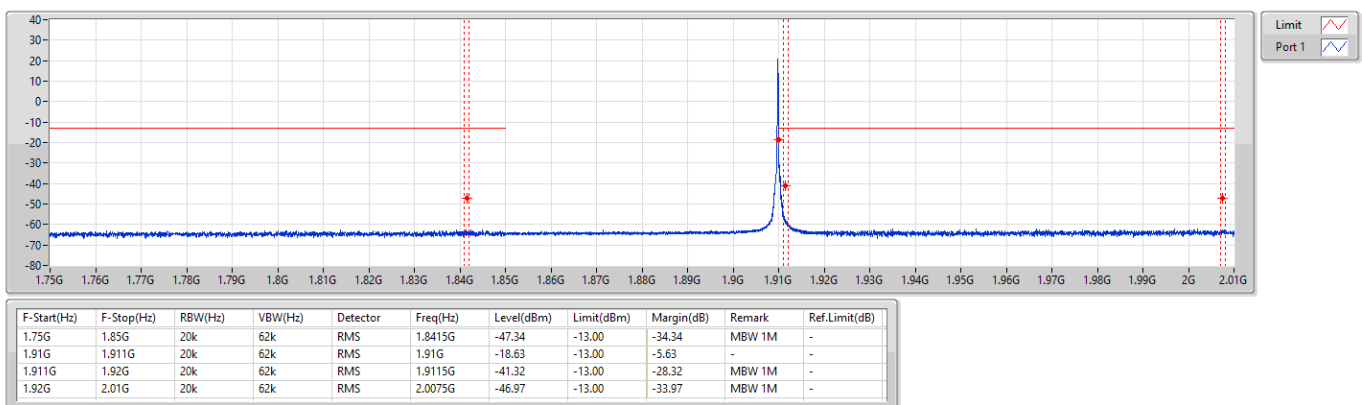
Band 2_NB-IoT_15kHz_Nss1,BPSK_1TX 1850.2MHz_BPSK_Tone 1@0

CSE-TX-Sum



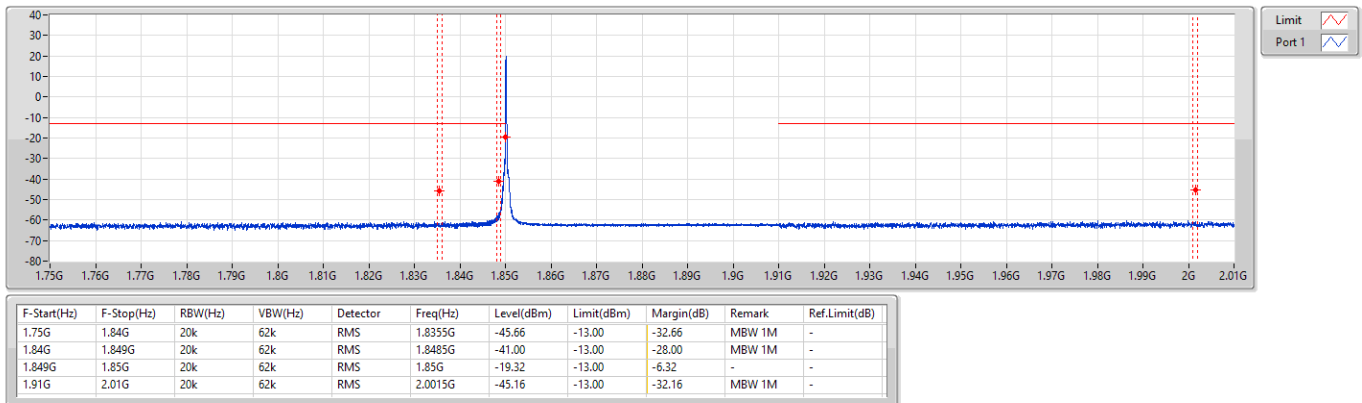
Band 2_NB-IoT_15kHz_Nss1,BPSK_1TX 1909.8MHz_BPSK_Tone 1@11

CSE-TX-Sum



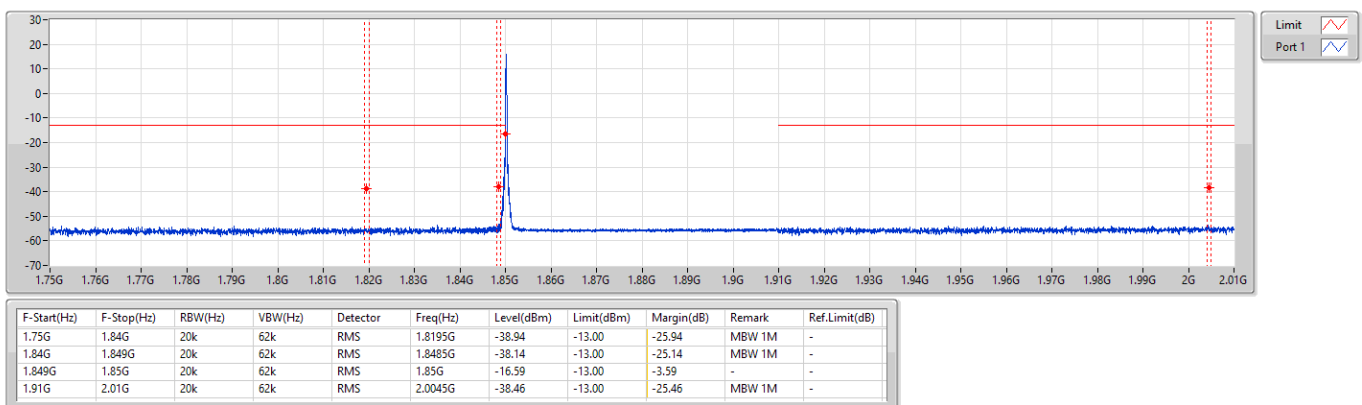
Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX 1850.2MHz_QPSK_Tone 1@0

CSE-TX-Sum



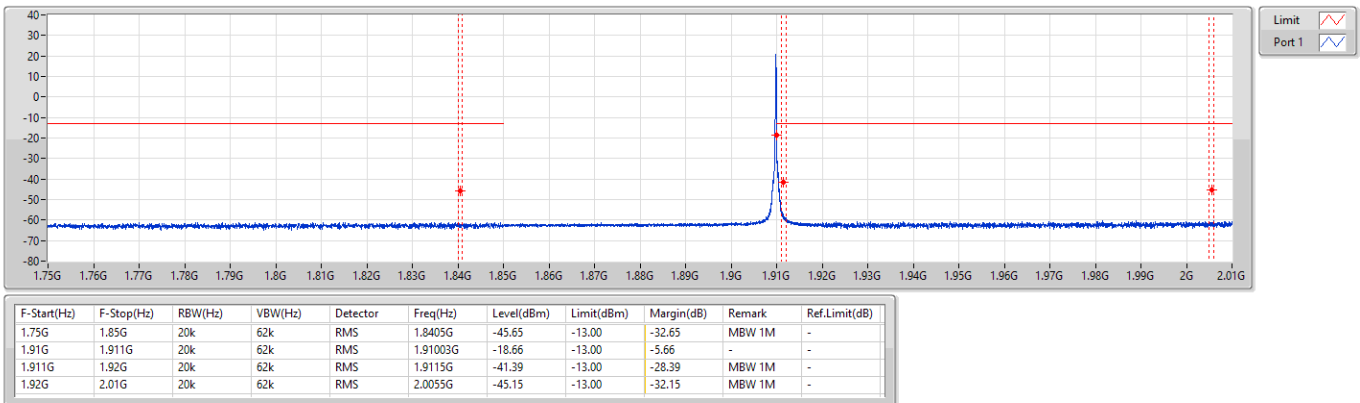
Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX 1850.2MHz_QPSK_Tone 12@0

CSE-TX-Sum



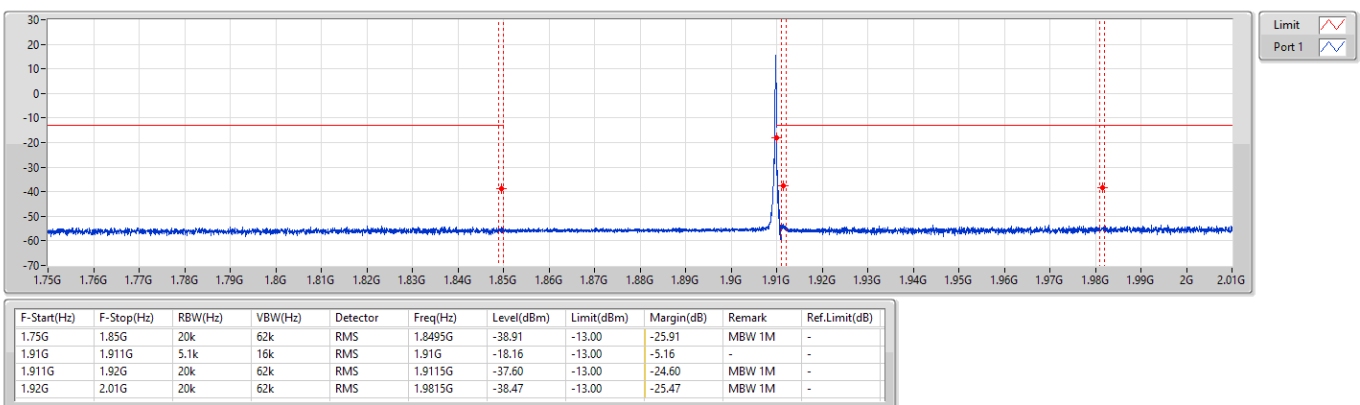
Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX 1909.8MHz_QPSK_Tone 1@11

CSE-TX-Sum



Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX 1909.8MHz_QPSK_Tone 12@0

CSE-TX-Sum



Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 2	-	-	-	-	-
LTE-M1_20MHz_Nss1,QPSK_1TX	1.375M	1.099M	1M10G7D	1.375M	1.099M
LTE-M1_20MHz_Nss1,16QAM_1TX	1.675M	1.14M	1M14W7D	1.675M	1.14M
LTE-M1_15MHz_Nss1,QPSK_1TX	1.369M	1.119M	1M12G7D	1.369M	1.119M
LTE-M1_15MHz_Nss1,16QAM_1TX	1.8M	1.13M	1M13W7D	1.8M	1.13M
LTE-M1_10MHz_Nss1,QPSK_1TX	1.338M	1.094M	1M09G7D	1.338M	1.094M
LTE-M1_10MHz_Nss1,16QAM_1TX	1.4M	1.113M	1M11W7D	1.4M	1.113M
LTE-M1_5MHz_Nss1,QPSK_1TX	1.35M	1.104M	1M10G7D	1.35M	1.104M
LTE-M1_5MHz_Nss1,16QAM_1TX	1.381M	1.107M	1M11W7D	1.381M	1.107M

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

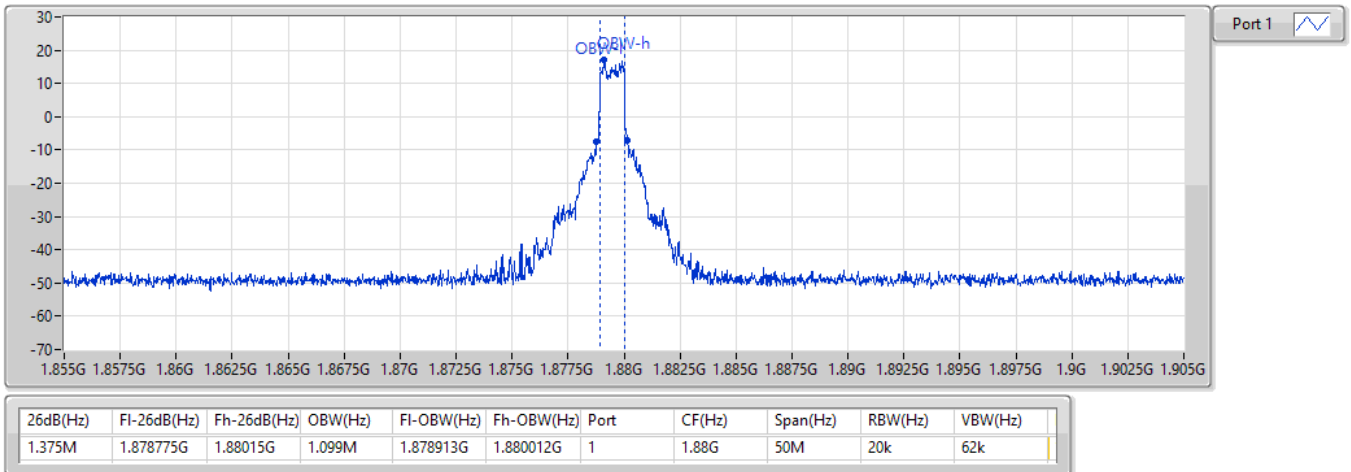
Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 2_LTE-M1_20MHz_Nss1_1TX	-	-	-	-
1880MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.375M	1.099M	Inf
1880MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.675M	1.14M	Inf
Band 2_LTE-M1_15MHz_Nss1_1TX	-	-	-	-
1880MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.369M	1.119M	Inf
1880MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.8M	1.13M	Inf
Band 2_LTE-M1_10MHz_Nss1_1TX	-	-	-	-
1880MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.338M	1.094M	Inf
1880MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.4M	1.113M	Inf
Band 2_LTE-M1_5MHz_Nss1_1TX	-	-	-	-
1880MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.35M	1.104M	Inf
1880MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.381M	1.107M	Inf

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

Band 2_LTE-M1_20MHz_Nss1,QPSK_1TX

EBW

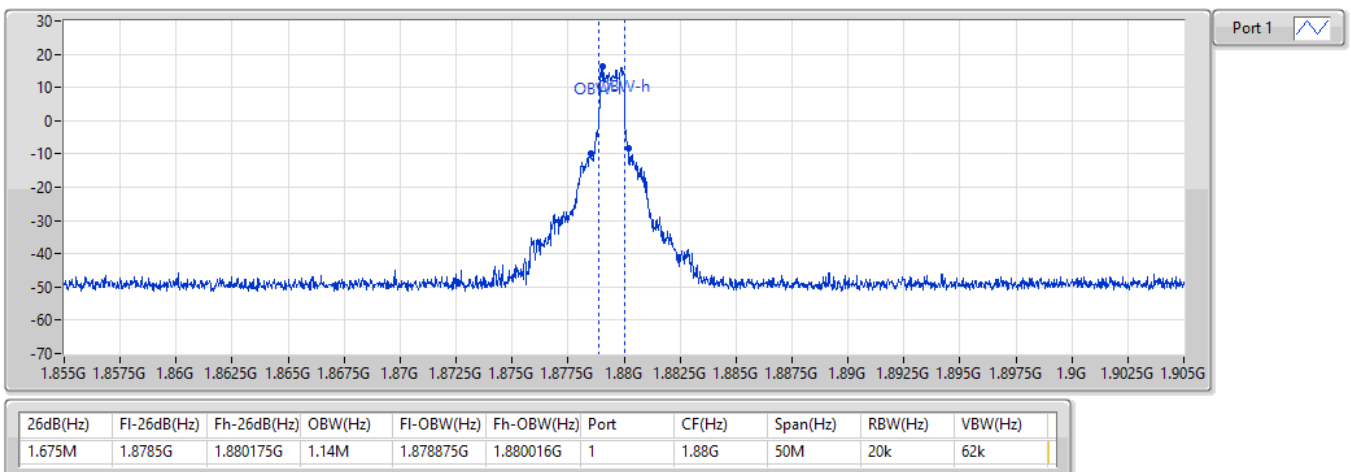
1880MHz_QPSK_RB 6,#RB 0,NB M



Band 2_LTE-M1_20MHz_Nss1,16QAM_1TX

EBW

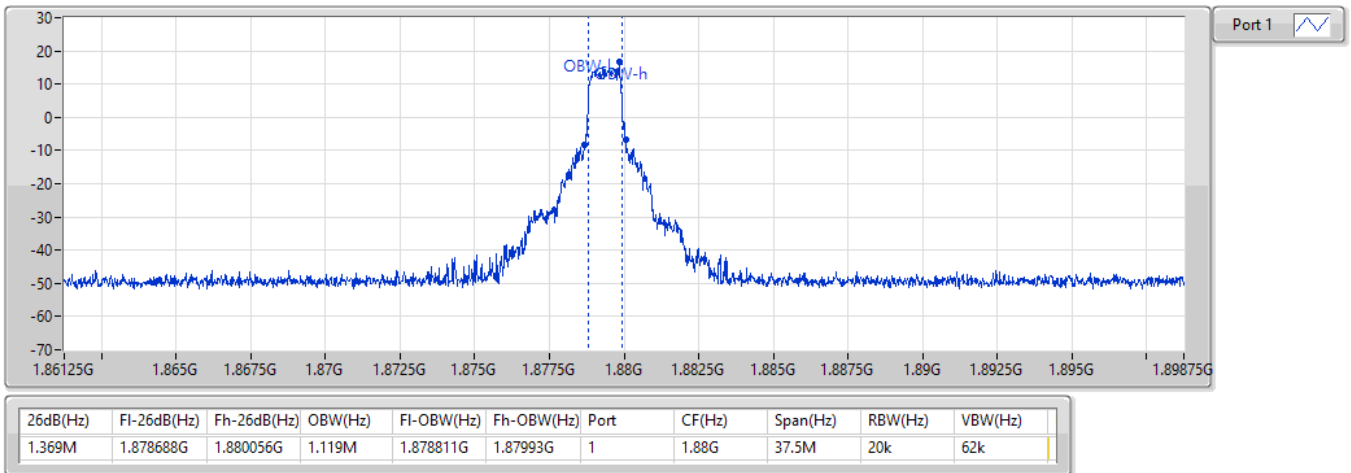
1880MHz_16QAM_RB 6,#RB 0,NB M



Band 2_LTE-M1_15MHz_Nss1,QPSK_1TX

EBW

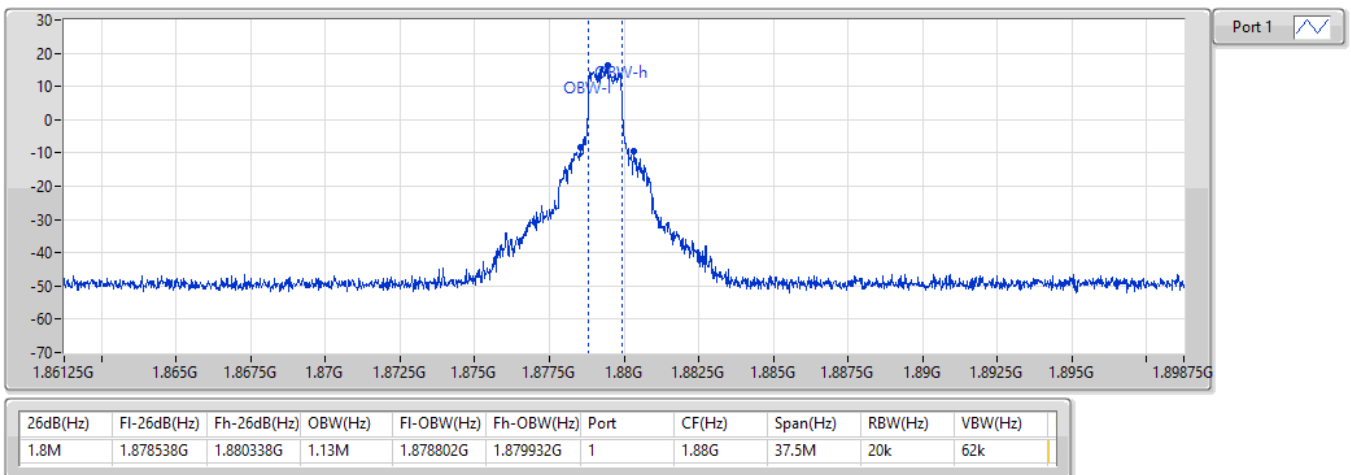
1880MHz_QPSK_RB 6,#RB 0,NB M



Band 2_LTE-M1_15MHz_Nss1,16QAM_1TX

EBW

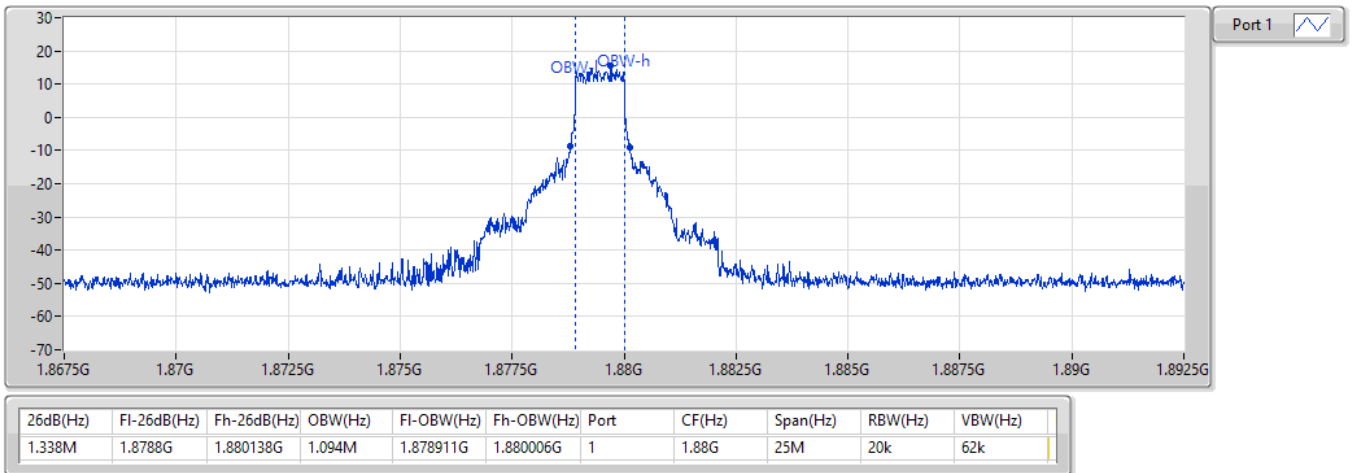
1880MHz_16QAM_RB 6,#RB 0,NB M



Band 2_LTE-M1_10MHz_Nss1,QPSK_1TX

EBW

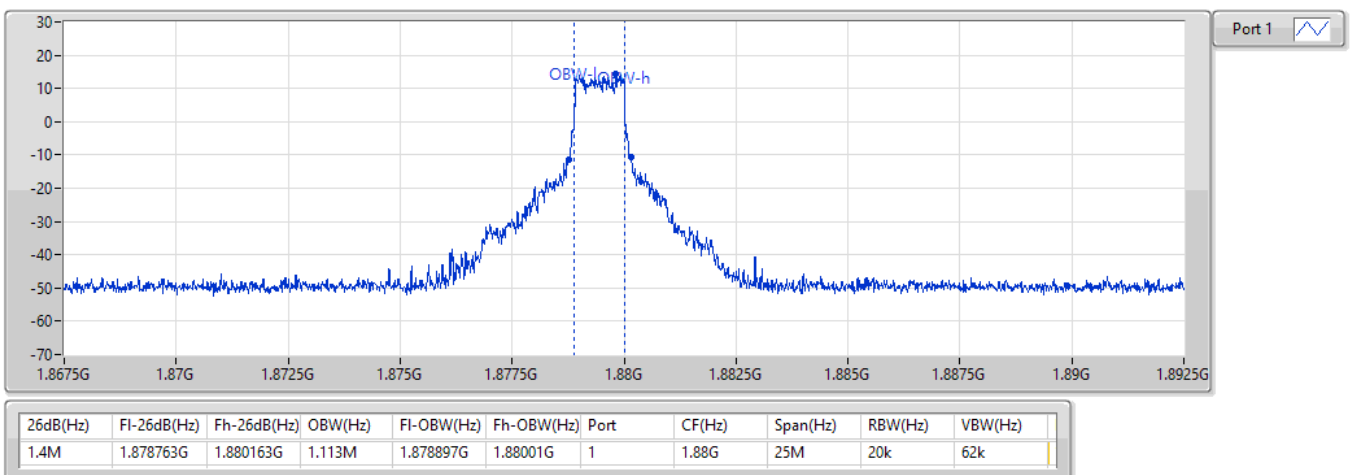
1880MHz_QPSK_RB 6,#RB 0,NB M



Band 2_LTE-M1_10MHz_Nss1,16QAM_1TX

EBW

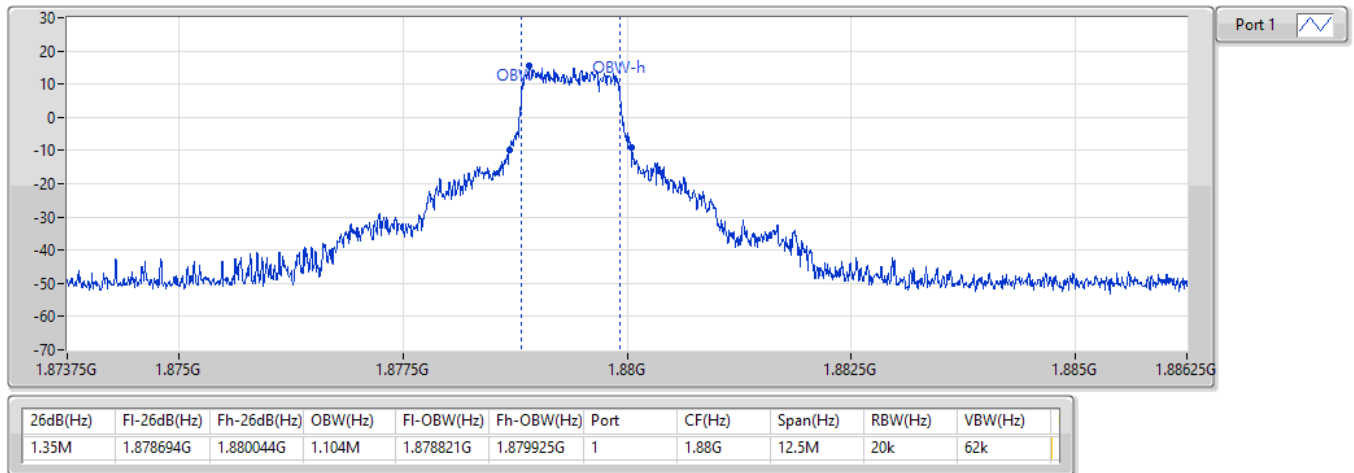
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Band 2_LTE-M1_5MHz_Nss1,QPSK_1TX

EBW

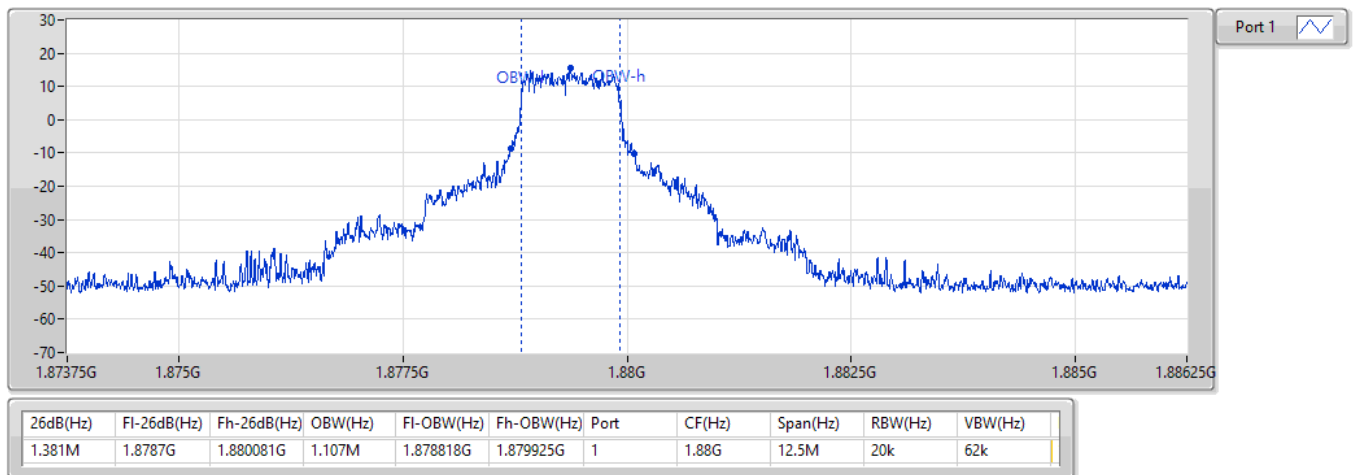
1880MHz_QPSK_RB 6,#RB 0,NB M



Band 2_LTE-M1_5MHz_Nss1,16QAM_1TX

EBW

1880MHz_16QAM_RB 6,#RB 0,NB M



Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 2	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	36.5k	57.028k	57K0G7D	36.5k	57.028k
NB-IoT_3.75kHz_Nss1,QPSK_1TX	41.5k	61.203k	61K3G7D	41.5k	61.203k
NB-IoT_15kHz_Nss1,BPSK_1TX	138.5k	134.465k	134KG7D	138.5k	134.465k
NB-IoT_15kHz_Nss1,QPSK_1TX	348k	201.801k	202KG7D	155.5k	130.536k

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

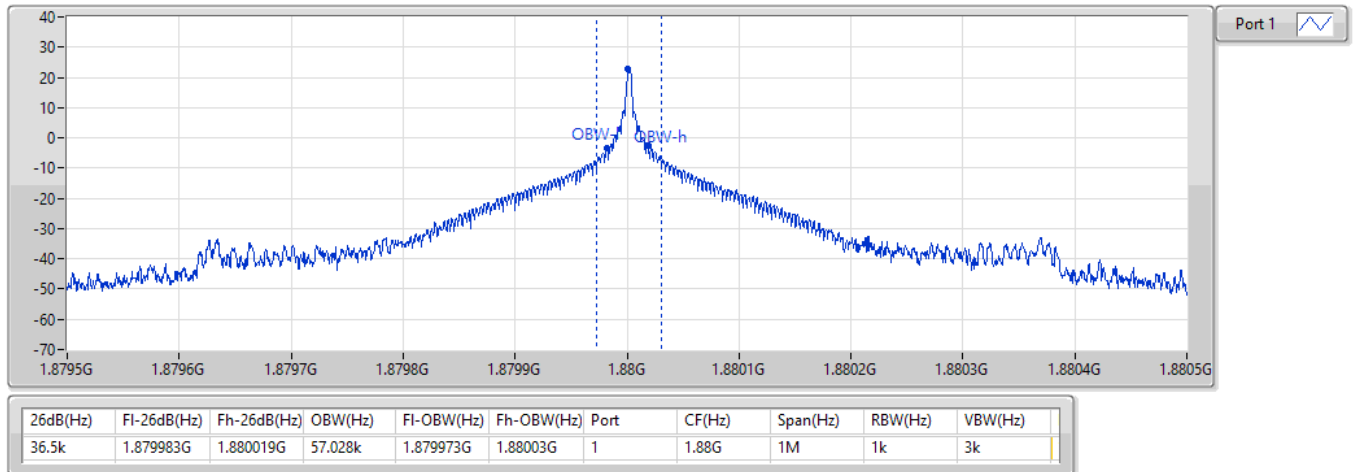
Result

Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 2_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-
1880.0MHz_BPSK_Tone 1@M	Pass	36.5k	57.028k	Inf
1880.0MHz_QPSK_Tone 1@M	Pass	41.5k	61.203k	Inf
Band 2_NB-IoT_15kHz_Nss1_1TX	-	-	-	-
1880.0MHz_BPSK_Tone 1@M	Pass	138.5k	134.465k	Inf
1880.0MHz_QPSK_Tone 1@M	Pass	155.5k	130.536k	Inf
1880.0MHz_QPSK_Tone 12@0	Pass	348k	201.801k	Inf

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

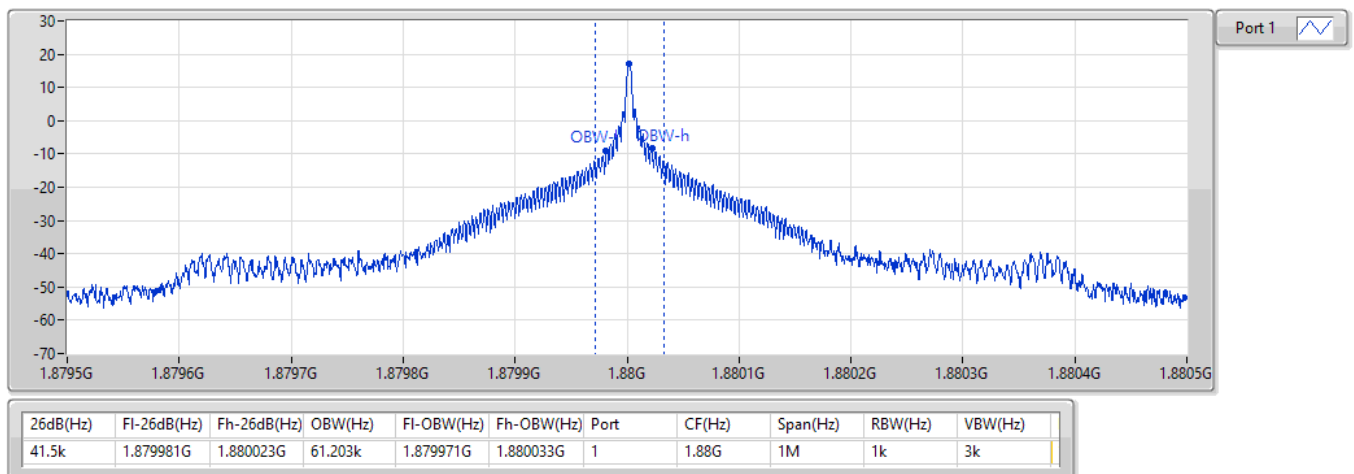
Band 2_NB-IoT_3.75kHz_Nss1,BPSK_1TX
1880.0MHz_BPSK_Tone 1@M

EBW



Band 2_NB-IoT_3.75kHz_Nss1,QPSK_1TX
1880.0MHz_QPSK_Tone 1@M

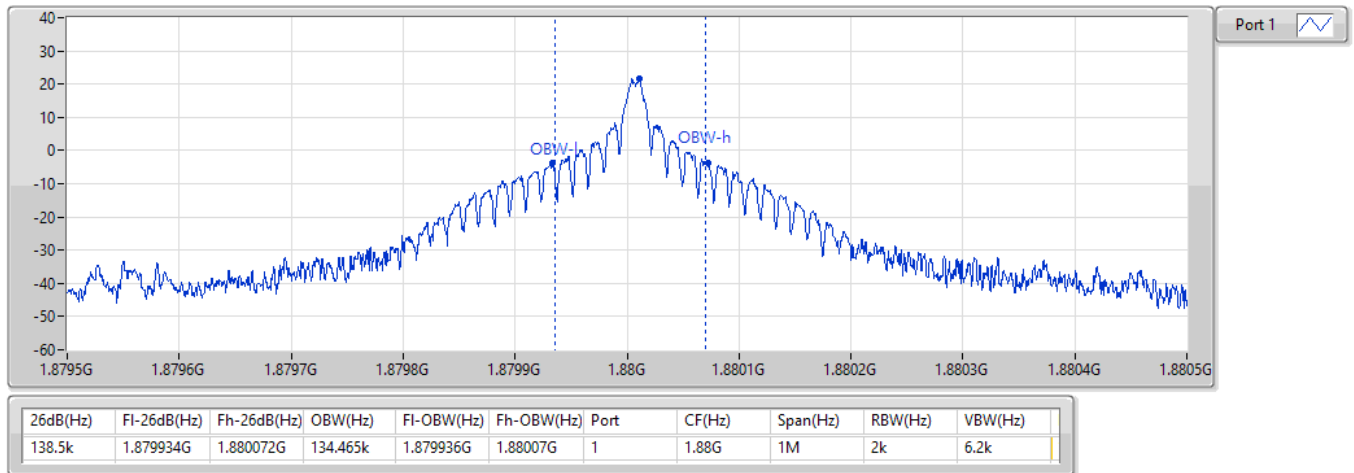
EBW



Band 2_NB-IoT_15kHz_Nss1,BPSK_1TX

EBW

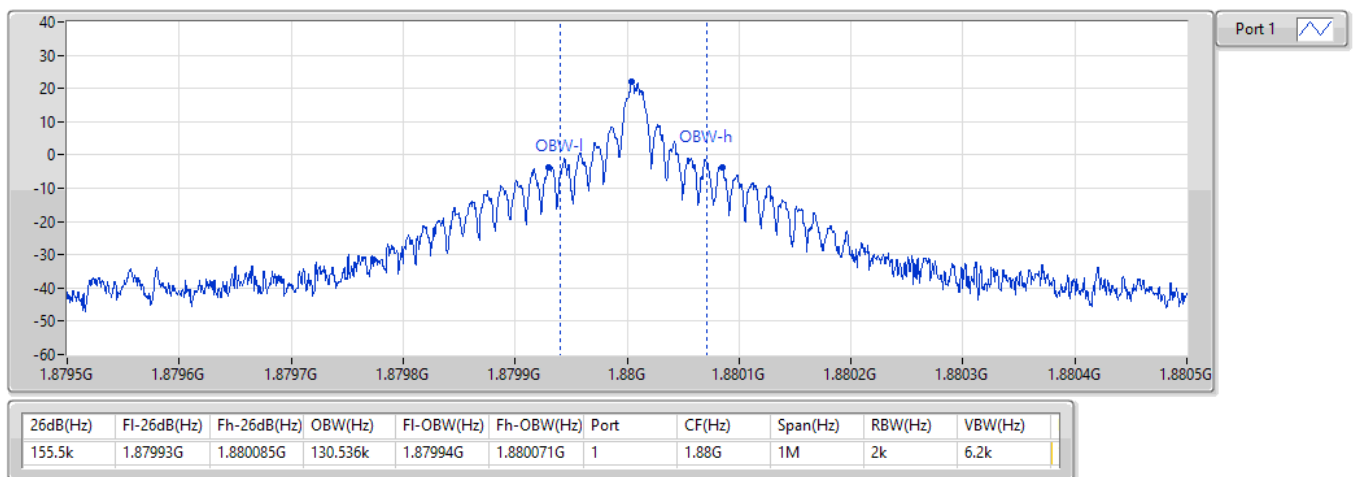
1880.0MHz_BPSK_Tone 1@M



Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX

EBW

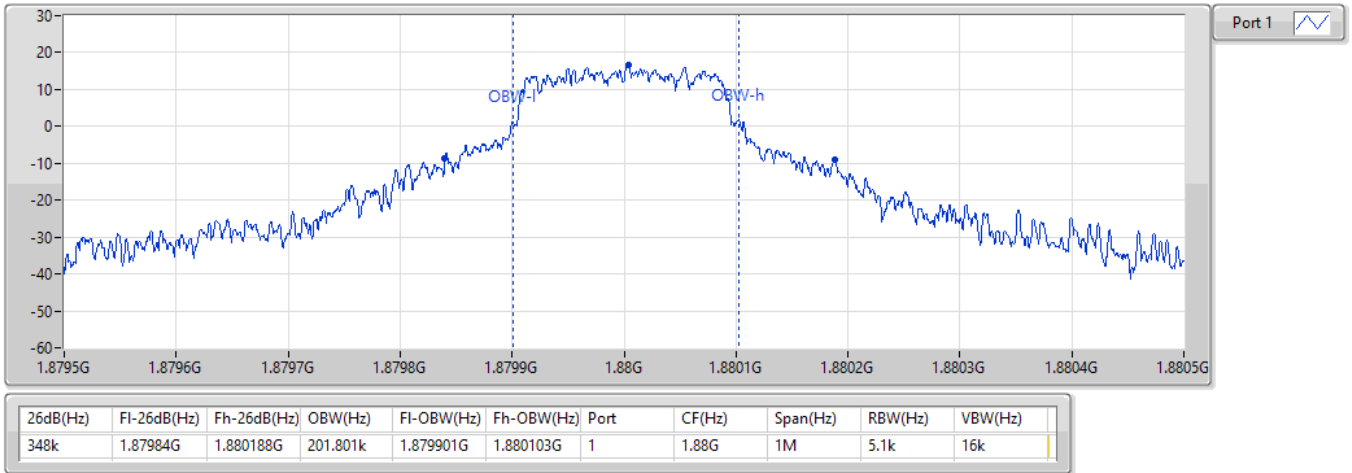
1880.0MHz_QPSK_Tone 1@M



Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX

EBW

1880.0MHz_QPSK_Tone 12@0



Summary

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 2	-	-	-	-	-
LTE-M1_20MHz_Nss1,QPSK_1TX	Pass	1880	13.00	3.60	1
LTE-M1_20MHz_Nss1,16QAM_1TX	Pass	1880	13.00	3.69	1
LTE-M1_15MHz_Nss1,QPSK_1TX	Pass	1880	13.00	3.50	1
LTE-M1_15MHz_Nss1,16QAM_1TX	Pass	1880	13.00	3.65	1
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	1880	13.00	3.72	1
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	1880	13.00	4.70	1
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	1880	13.00	3.85	1
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	1880	13.00	3.79	1

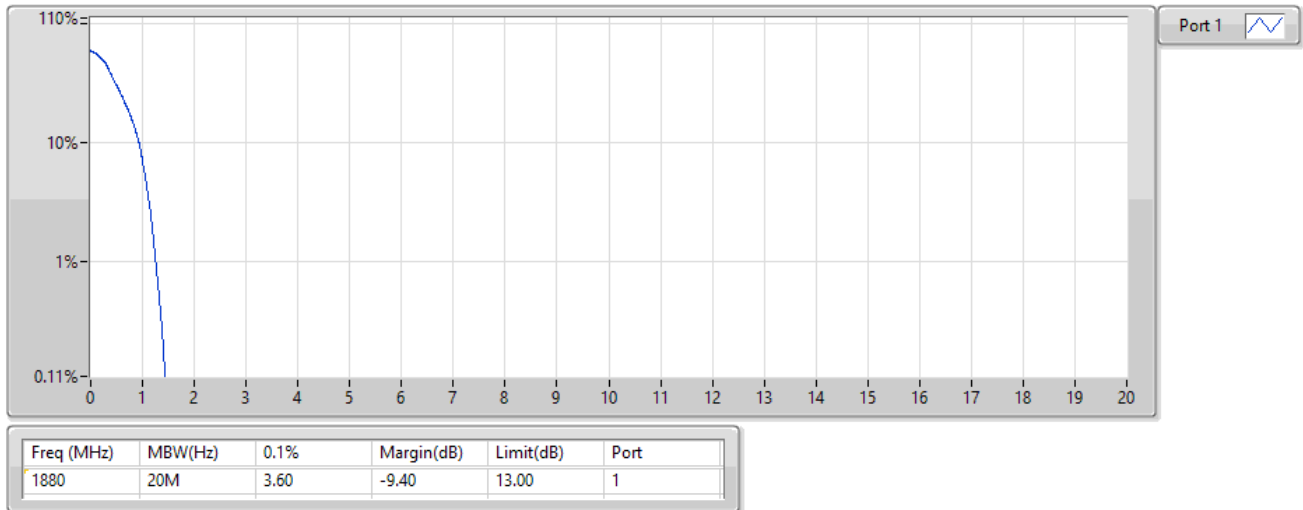
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 2_LTE-M1_20MHz_Nss1_1TX	-	-	-	-	-
1880MHz_QPSK_RB 6,#RB 0,NB M	Pass	1880	13.00	3.60	1
1880MHz_16QAM_RB 6,#RB 0,NB M	Pass	1880	13.00	3.69	1
Band 2_LTE-M1_15MHz_Nss1_1TX	-	-	-	-	-
1880MHz_QPSK_RB 6,#RB 0,NB M	Pass	1880	13.00	3.50	1
1880MHz_16QAM_RB 6,#RB 0,NB M	Pass	1880	13.00	3.65	1
Band 2_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-
1880MHz_QPSK_RB 6,#RB 0,NB M	Pass	1880	13.00	3.72	1
1880MHz_16QAM_RB 6,#RB 0,NB M	Pass	1880	13.00	4.70	1
Band 2_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-
1880MHz_QPSK_RB 6,#RB 0,NB M	Pass	1880	13.00	3.85	1
1880MHz_16QAM_RB 6,#RB 0,NB M	Pass	1880	13.00	3.79	1

Band 2_LTE-M1_20MHz_Nss1,QPSK_1TX

PAPR

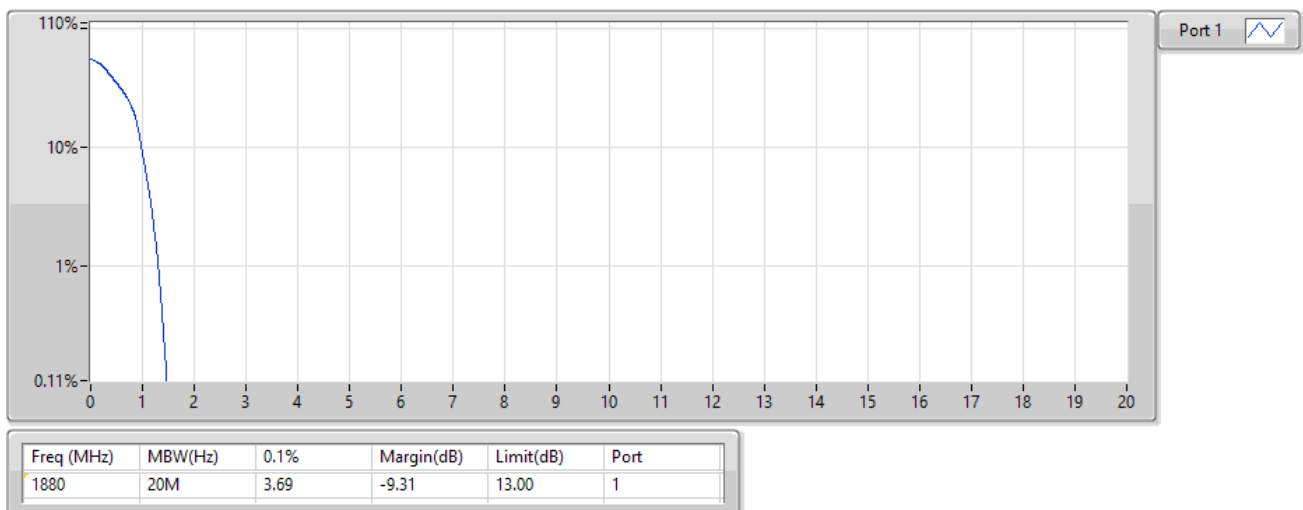
1880MHz_QPSK_RB 6,#RB 0,NB M



Band 2_LTE-M1_20MHz_Nss1,16QAM_1TX

PAPR

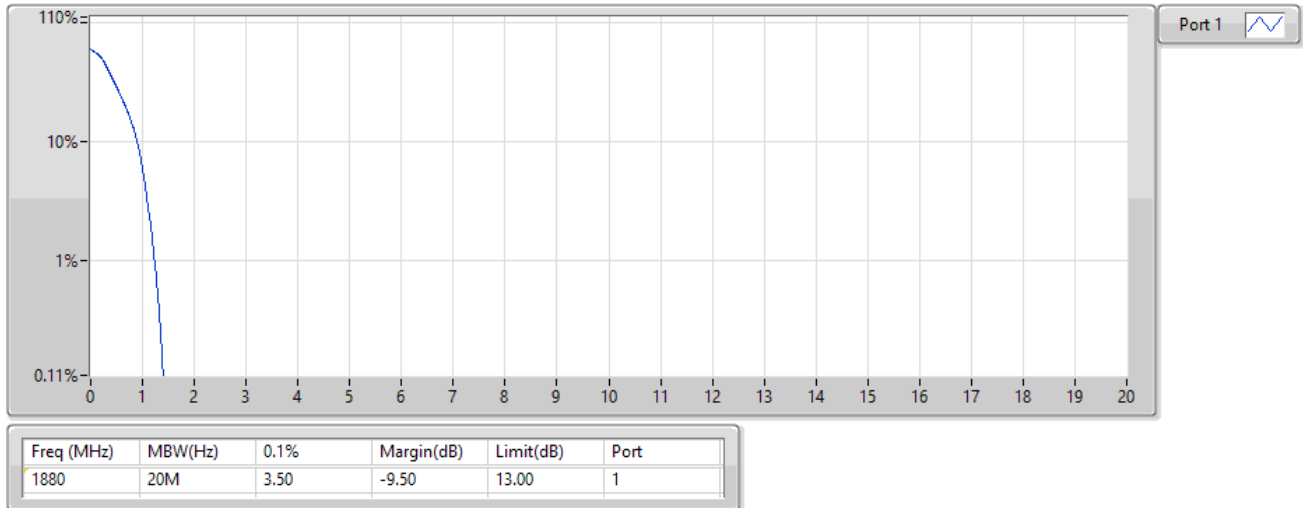
1880MHz_16QAM_RB 6,#RB 0,NB M



Band 2_LTE-M1_15MHz_Nss1,QPSK_1TX

PAPR

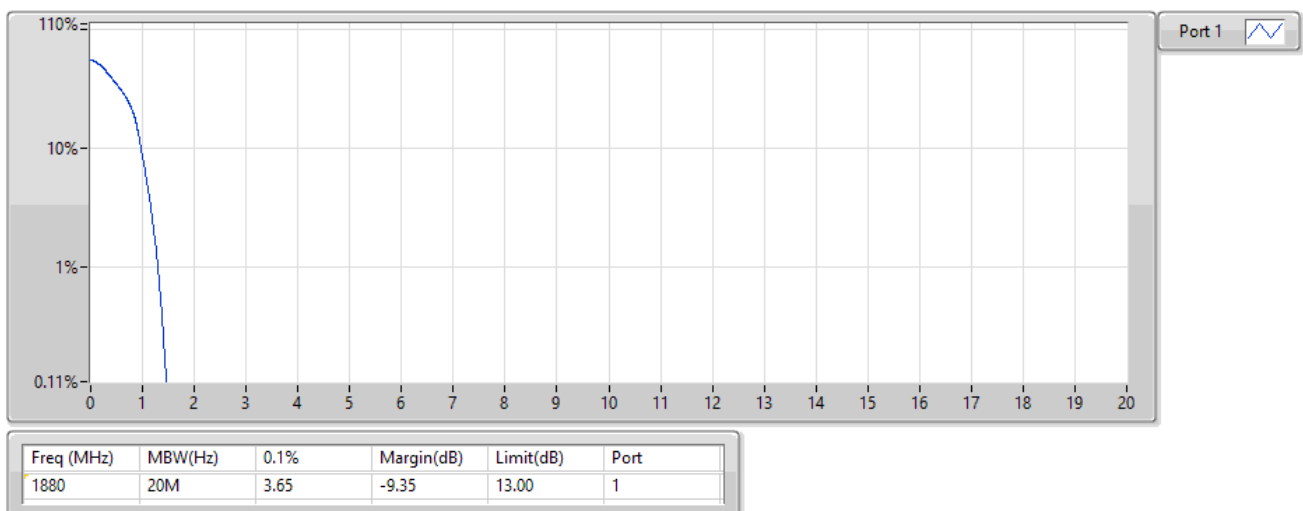
1880MHz_QPSK_RB 6,#RB 0,NB M



Band 2_LTE-M1_15MHz_Nss1,16QAM_1TX

PAPR

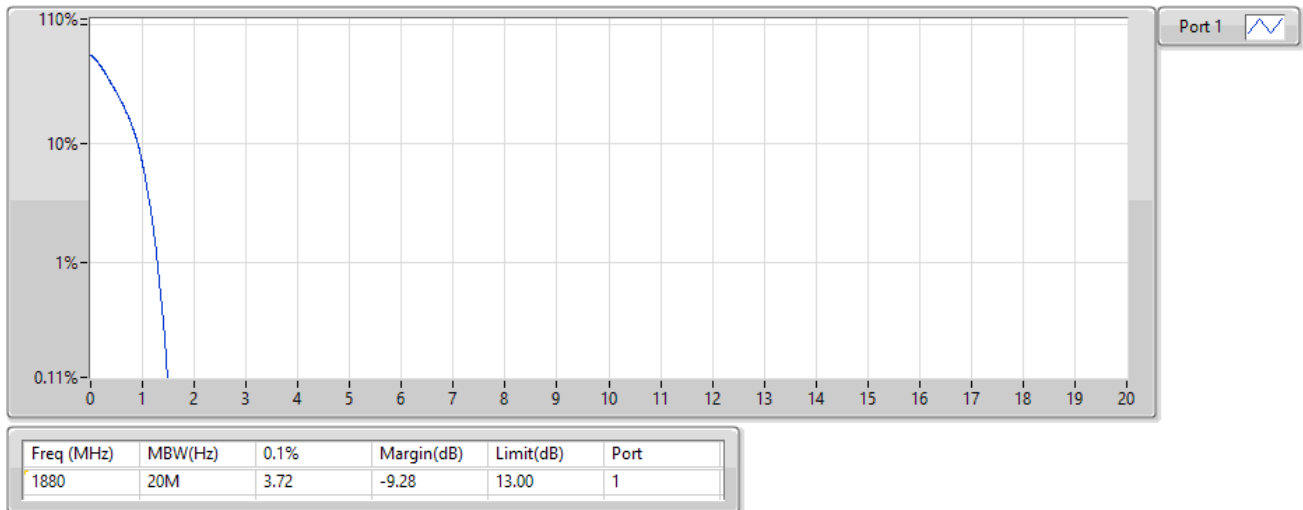
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Band 2_LTE-M1_10MHz_Nss1,QPSK_1TX

PAPR

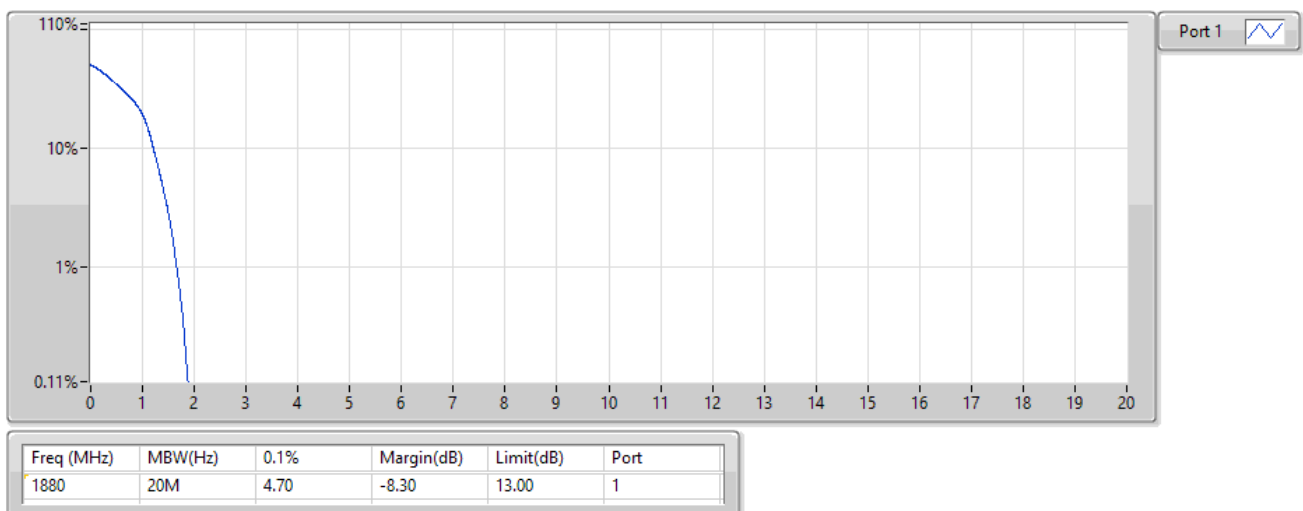
1880MHz_QPSK_RB 6,#RB 0,NB M



Band 2_LTE-M1_10MHz_Nss1,16QAM_1TX

PAPR

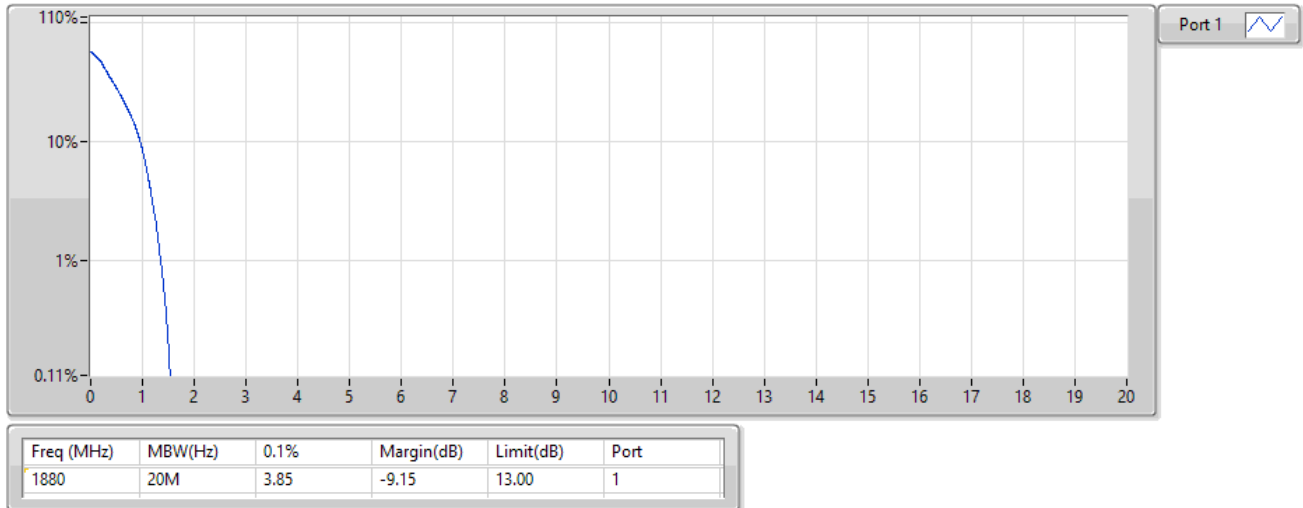
1880MHz_16QAM_RB 6,#RB 0,NB M



Band 2_LTE-M1_5MHz_Nss1,QPSK_1TX

PAPR

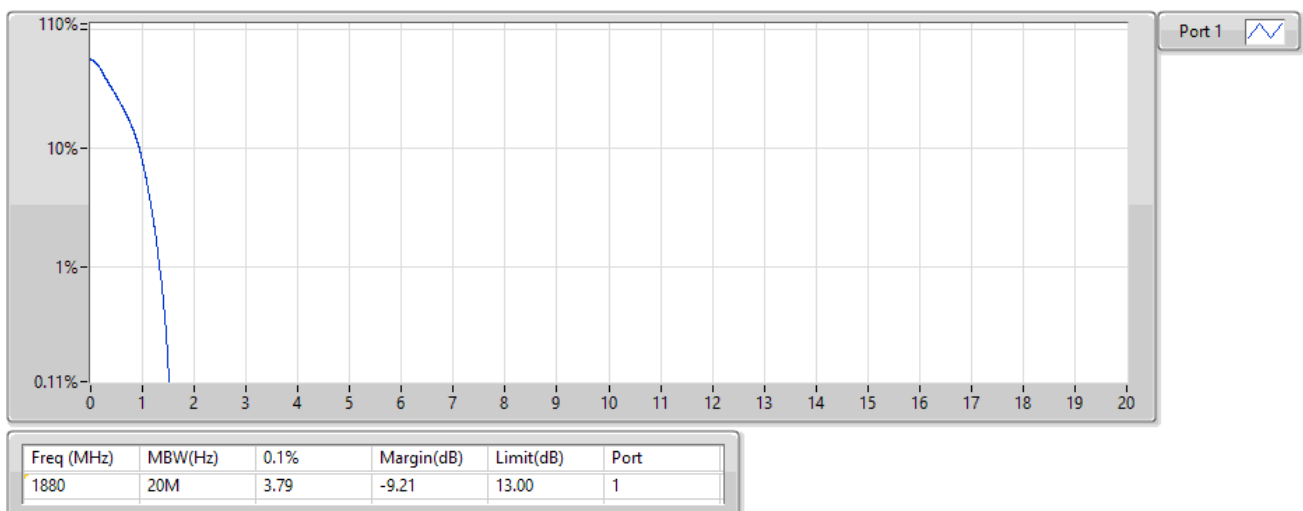
1880MHz_QPSK_RB 6,#RB 0,NB M



Band 2_LTE-M1_5MHz_Nss1,16QAM_1TX

PAPR

1880MHz_16QAM_RB 6,#RB 0,NB M



Summary

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 2	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	Pass	1880.0	13.00	0.84	1
NB-IoT_3.75kHz_Nss1,QPSK_1TX	Pass	1880.0	13.00	1.08	1
NB-IoT_15kHz_Nss1,BPSK_1TX	Pass	1880.0	13.00	1.12	1
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	1880.0	13.00	3.24	1

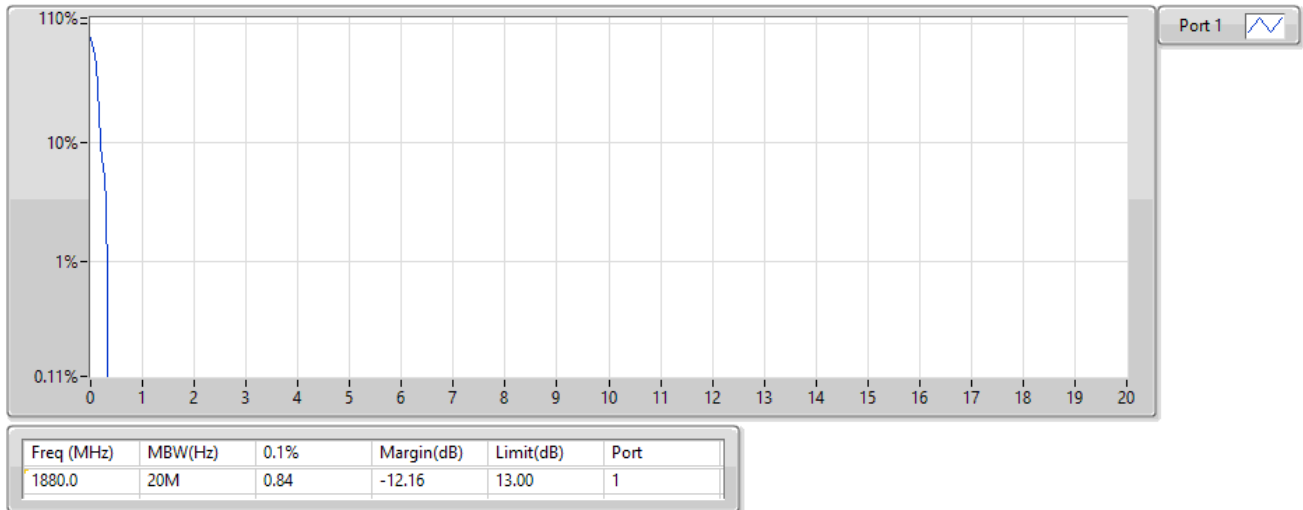
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 2_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-	-
1880.0MHz_BPSK_Tone 1@M	Pass	1880.0	13.00	0.84	1
1880.0MHz_QPSK_Tone 1@M	Pass	1880.0	13.00	1.08	1
Band 2_NB-IoT_15kHz_Nss1_1TX	-	-	-	-	-
1880.0MHz_BPSK_Tone 1@M	Pass	1880.0	13.00	1.12	1
1880.0MHz_QPSK_Tone 1@M	Pass	1880.0	13.00	0.96	1
1880.0MHz_QPSK_Tone 12@0	Pass	1880.0	13.00	3.24	1

Band 2_NB-IoT_3.75kHz_Nss1,BPSK_1TX

PAPR

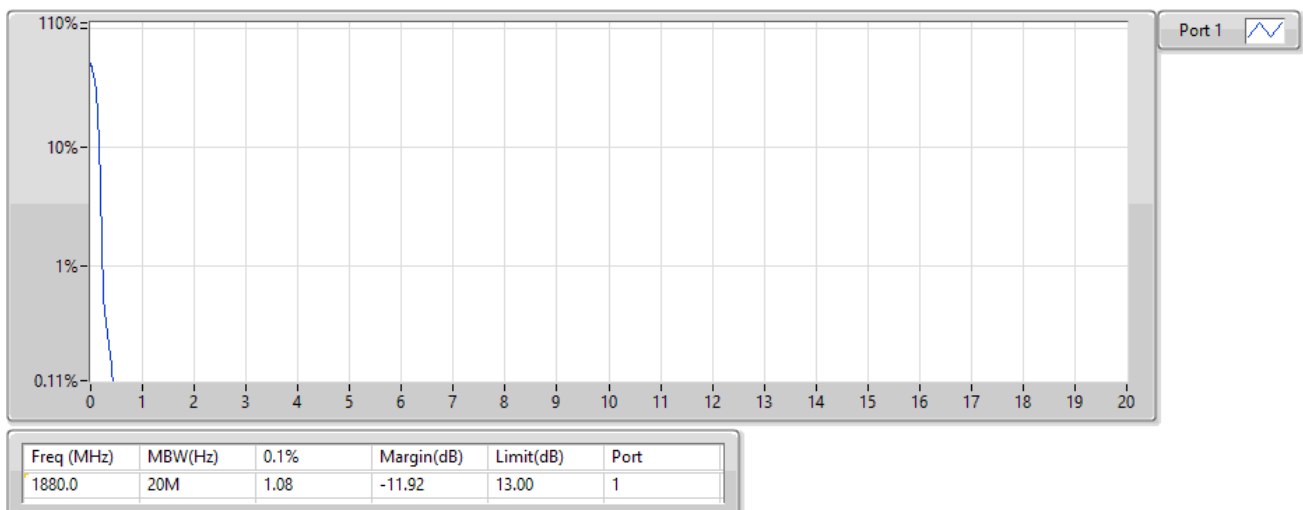
1880.0MHz_BPSK_Tone 1@M



Band 2_NB-IoT_3.75kHz_Nss1,QPSK_1TX

PAPR

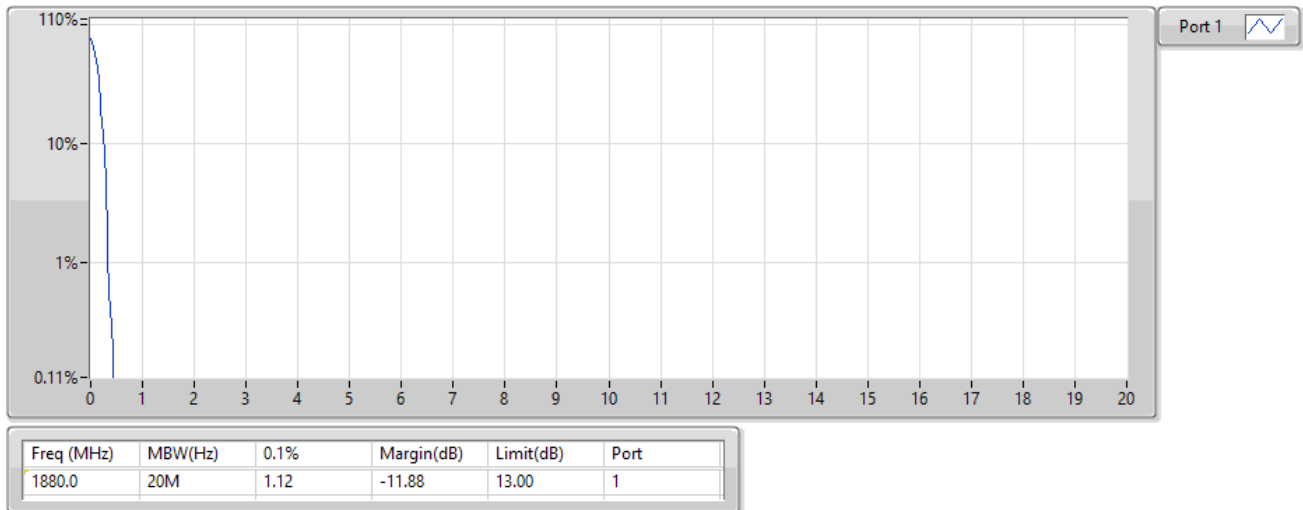
1880.0MHz_QPSK_Tone 1@M



Band 2_NB-IoT_15kHz_Nss1,BPSK_1TX

PAPR

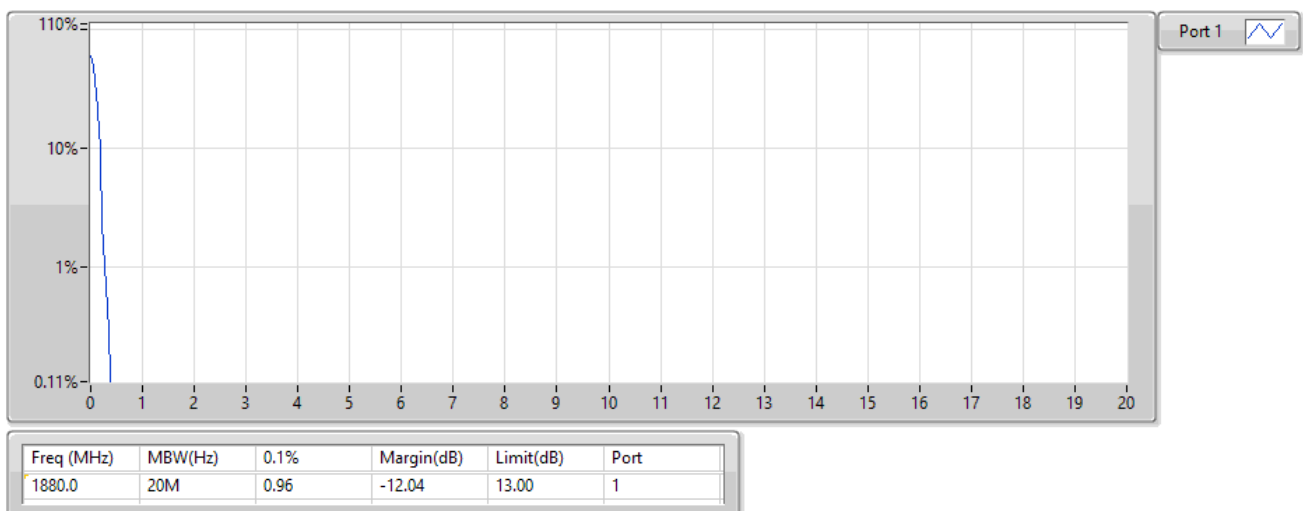
1880.0MHz_BPSK_Tone 1@M



Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX

PAPR

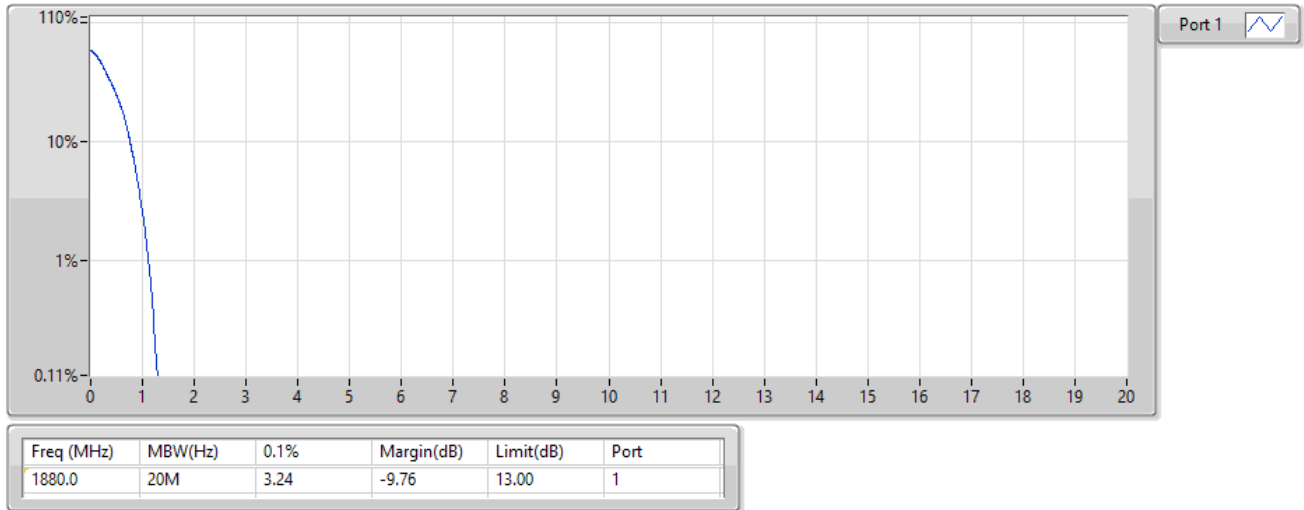
1880.0MHz_QPSK_Tone 1@M



Band 2_NB-IoT_15kHz_Nss1,QPSK_1TX

PAPR

1880.0MHz_QPSK_Tone 12@0



LTE Band 2, CB: 20MHz				
Temperature (°C)	1860MHz		1900MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.008	1851.333015	0.008	1908.676016
T20°C V _{min}	0.009	1851.333016	0.008	1908.676015
T70°C V _{nom}	0.011	1851.333020	0.011	1908.676020
T60°C V _{nom}	0.010	1851.333018	0.009	1908.676018
T50°C V _{nom}	0.010	1851.333019	0.010	1908.676019
T40°C V _{nom}	0.009	1851.333017	0.009	1908.676017
T30°C V _{nom}	0.009	1851.333017	0.008	1908.676016
T20°C V _{nom}	0.010	1851.333018	0.010	1908.676019
T10°C V _{nom}	0.008	1851.333015	0.008	1908.676016
T0°C V _{nom}	0.010	1851.333018	0.008	1908.676016
T-10°C V _{nom}	0.008	1851.333015	0.008	1908.676016
T-20°C V _{nom}	0.008	1851.333015	0.008	1908.676016
T-30°C V _{nom}	0.009	1851.333016	0.008	1908.676015
Limit		>1850MHz		<1910MHz
V _{nom} [V]: 3.6	V _{max} [V]: 4		V _{min} [V]: 2.8	
T _{nom} [°C]: 20	T _{max} [°C]: 70		T _{min} [°C]: -30	



LTE Band 2, CB: 15MHz				
Temperature (°C)	1857.5MHz		1902.5MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.010	1850.874018	0.009	1909.107017
T20°C V _{min}	0.008	1850.874015	0.009	1909.107018
T70°C V _{nom}	0.010	1850.874018	0.009	1909.107017
T60°C V _{nom}	0.009	1850.874017	0.008	1909.107015
T50°C V _{nom}	0.009	1850.874016	0.008	1909.107015
T40°C V _{nom}	0.009	1850.874016	0.008	1909.107016
T30°C V _{nom}	0.009	1850.874017	0.009	1909.107018
T20°C V _{nom}	0.009	1850.874016	0.008	1909.107015
T10°C V _{nom}	0.010	1850.874018	0.009	1909.107018
T0°C V _{nom}	0.008	1850.874014	0.008	1909.107015
T-10°C V _{nom}	0.008	1850.874015	0.008	1909.107016
T-20°C V _{nom}	0.009	1850.874017	0.009	1909.107018
T-30°C V _{nom}	0.009	1850.874017	0.008	1909.107016
Limit		>1850MHz		<1910MHz
V _{nom} [V]: 3.6	V _{max} [V]: 4		V _{min} [V]: 2.8	
T _{nom} [°C]: 20	T _{max} [°C]: 70		T _{min} [°C]: -30	

LTE Band 2, CB: 10MHz				
Temperature (°C)	1855MHz		1905MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.009	1850.651017	0.008	1909.341016
T20°C V _{min}	0.009	1850.651017	0.009	1909.341017
T70°C V _{nom}	0.009	1850.651016	0.009	1909.341018
T60°C V _{nom}	0.009	1850.651016	0.008	1909.341016
T50°C V _{nom}	0.009	1850.651017	0.009	1909.341018
T40°C V _{nom}	0.009	1850.651016	0.009	1909.341017
T30°C V _{nom}	0.009	1850.651016	0.008	1909.341015
T20°C V _{nom}	0.008	1850.651015	0.008	1909.341016
T10°C V _{nom}	0.009	1850.651017	0.008	1909.341016
T0°C V _{nom}	0.008	1850.651015	0.008	1909.341016
T-10°C V _{nom}	0.009	1850.651016	0.009	1909.341017
T-20°C V _{nom}	0.010	1850.651018	0.009	1909.341017
T-30°C V _{nom}	0.010	1850.651018	0.009	1909.341017
Limit		>1850MHz		<1910MHz
V _{nom} [V]: 3.6	V _{max} [V]: 4		V _{min} [V]: 2.8	
T _{nom} [°C]: 20	T _{max} [°C]: 70		T _{min} [°C]: -30	

LTE Band 2, CB: 5MHz				
Temperature (°C)	1852.5MHz		1907.5MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.009	1850.235017	0.008	1909.765016
T20°C V _{min}	0.009	1850.235017	0.009	1909.765017
T70°C V _{nom}	0.009	1850.235016	0.009	1909.765018
T60°C V _{nom}	0.009	1850.235016	0.008	1909.765016
T50°C V _{nom}	0.009	1850.235017	0.009	1909.765018
T40°C V _{nom}	0.009	1850.235016	0.009	1909.765017
T30°C V _{nom}	0.009	1850.235016	0.008	1909.765015
T20°C V _{nom}	0.008	1850.235015	0.008	1909.765016
T10°C V _{nom}	0.009	1850.235017	0.008	1909.765016
T0°C V _{nom}	0.008	1850.235015	0.008	1909.765016
T-10°C V _{nom}	0.009	1850.235016	0.009	1909.765017
T-20°C V _{nom}	0.010	1850.235018	0.009	1909.765017
T-30°C V _{nom}	0.010	1850.235018	0.009	1909.765017
Limit		>1850MHz		<1910MHz
V _{nom} [V]: 3.6	V _{max} [V]: 4		V _{min} [V]: 2.8	
T _{nom} [°C]: 20	T _{max} [°C]: 70		T _{min} [°C]: -30	

Band 2_NB-IoT_3.75kHz				
Temperature (°C)	1850.2MHz		1909.8MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.009	1850.171016	0.008	1909.833015
T20°C V _{min}	0.009	1850.171017	0.008	1909.833016
T70°C V _{nom}	0.009	1850.171016	0.009	1909.833017
T60°C V _{nom}	0.009	1850.171016	0.009	1909.833017
T50°C V _{nom}	0.010	1850.171018	0.009	1909.833018
T40°C V _{nom}	0.009	1850.171016	0.008	1909.833016
T30°C V _{nom}	0.009	1850.171016	0.009	1909.833017
T20°C V _{nom}	0.009	1850.171016	0.009	1909.833018
T10°C V _{nom}	0.009	1850.171016	0.008	1909.833015
T0°C V _{nom}	0.009	1850.171017	0.009	1909.833017
T-10°C V _{nom}	0.008	1850.171015	0.008	1909.833016
T-20°C V _{nom}	0.009	1850.171016	0.008	1909.833015
T-30°C V _{nom}	0.008	1850.171015	0.008	1909.833015
Limit		>1850MHz		<1910MHz
V _{nom} [V]: 3.6	V _{max} [V]: 4		V _{min} [V]: 2.8	
T _{nom} [°C]: 20	T _{max} [°C]: 70		T _{min} [°C]: -30	

Band 2_NB-IoT_15kHz				
Temperature (°C)	1850.2MHz		1909.8MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.008	1850.101015	0.008	1909.903016
T20°C V _{min}	0.010	1850.101018	0.009	1909.903017
T70°C V _{nom}	0.008	1850.101015	0.008	1909.903016
T60°C V _{nom}	0.009	1850.101016	0.008	1909.903016
T50°C V _{nom}	0.008	1850.101015	0.009	1909.903017
T40°C V _{nom}	0.009	1850.101017	0.008	1909.903015
T30°C V _{nom}	0.008	1850.101015	0.008	1909.903016
T20°C V _{nom}	0.009	1850.101016	0.009	1909.903017
T10°C V _{nom}	0.009	1850.101016	0.008	1909.903016
T0°C V _{nom}	0.008	1850.101015	0.009	1909.903017
T-10°C V _{nom}	0.009	1850.101016	0.008	1909.903015
T-20°C V _{nom}	0.008	1850.101015	0.008	1909.903016
T-30°C V _{nom}	0.009	1850.101017	0.009	1909.903018
Limit		>1850MHz		<1910MHz
V _{nom} [V]: 3.6	V _{max} [V]: 4		V _{min} [V]: 2.8	
T _{nom} [°C]: 20	T _{max} [°C]: 70		T _{min} [°C]: -30	